Errata

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HP References in this Manual

This manual may contain references to HP or Hewlett-Packard. Please note that Hewlett-Packard's former test and measurement, semiconductor products and chemical analysis businesses are now part of Agilent Technologies. We have made no changes to this manual copy. The HP XXXX referred to in this document is now the Agilent XXXX. For example, model number HP8648A is now model number Agilent 8648A.

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HP 8130A/HP 8131A Programmable Pulse Generator Service Manual Including Options 001 and 020

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Printing History

New editions are complete revisions of the manual. Update packages, which are issued between editions contain additional and replacement pages to be merged into the manual by the customer. The date on the title page and back cover of the manual, only changes when a new edition is published. When an edition is reprinted, all the prior updates to the edition are incorporated. No information is incorporated into a new edition unless it appears in a prior update.

Control Serial Number: Edition 1 applies directly to all instruments.

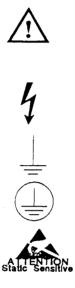
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Safety Considerations	The HP 8130A/HP8131A is a Safety Class 1 instrument (instrument with an exposed metal chassis that is directly connected to earth via the power supply cable). The symbol used to indicate a protective earth terminal in the instrument is $$.
Operational Safety	The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. Hewlett- Packard Company assumes no liability for the customer's failure to comply with these requirements.
	DO NOT operate the product in an explosive atmosphere or in the presence of flammable gases or fumes.
	Keep away from live circuits: Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers or shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off.
	To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.
	DO NOT operate damaged equipment: Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to a Hewlett-Packard Sales and Service Office for service and repair to ensure that safety features are maintained.

DO NOT service or adjust alone: Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.

DO NOT substitute parts or modify equipment: Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the product. Return the product to a Hewlett-Packard Sales and Service Office for service and repair to ensure that safety features are maintained.

Safety Symbols



The apparatus will be marked with this symbol when it is necessary for the user to refer to the instruction manual in order to protect the apparatus against damage.

Indicates dangerous voltages.

Earth terminal.

Protective earth.

Affixed to a product containing static sensitive devices - use anti-static handling procedures to prevent electrostatic discharge damage to components.

Warning



The WARNING sign denotes a hazard. It calls attention to a procedure, practice or the like, which, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.

Caution

The CAUTION sign denotes a hazard. It calls attention to an operating procedure, practice or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the equipment. Do not proceed beyond a CAUTION sign until the indicated conditions are fully understood and met.

Notices

Subject Matter The information in this document is subject to change without notice.

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Limited Warranty

Warranty	This Hewlett-Packard instrument product is warranted against defects in material and workmanship for a period of one year from date of shipment. During the warranty period, HP will, at its option, either repair or replace products which prove to be defective.
	For warranty service or repair, this product must be returned to a service facility designated by HP. Buyer shall pre-pay shipping charges to HP and HP shall pay shipping charges to return the product to Buyer. However, Buyer shall pay all shipping charges, duties, and taxes for products returned to HP from another country.
	HP warrants that its software and firmware designated by HP for use with an instrument will execute its programming instructions when properly installed on that instrument. HP does not warrant that the operation of the instrument, software, or firmware will be uninterrupted or error free.
Limitation of Warranty	The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by Buyer, Buyer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation or maintenance.
	No other warranty is expressed or implied. Hewlett Packard specifically disclaims the implied warranties of Merchantability and Fitness for a Particular Purpose.
Exclusive Remedies	The remedies provided herein are Buyer's sole and exclusive remedies. Hewlett Packard shall not be liable for any direct, indirect, special, incidental, or consequential damages whether based on contract, tort, or any other legal theory.
Assistance	Product maintenance agreements and other customer assistance agreements are available for Hewlett-Packard products. For any assistance contact your nearest Hewlett-Packard Sales and Service Office. Addresses are provided at the back of this manual.
Certification	Hewlett-Packard Company certifies that this product met its published specifications at the time of shipment from the factory.
	Hewlett-Packard further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology, NIST (formerly the United States National Bureau of Standards, NBS) to the extent allowed by the Institute's calibration facility, and to the calibration facilities of other International Standards Organization members.

Radio Frequency Interference Statement Deutsche Bundespost

(Federal Republic of Germany only)

Hersteller Bescheinigung

Hiermit wird bescheinigt, daß das Gerät, HP 8130A/HP 8131A Pulsgenerator, in Übereinstimmung mit den Bestimmungen der Postverfügung 1046/1984 funkentstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Zusatzinformation für Meß- und Testgeräte: Werden Meß- und Testgeräte mit ungeschirmten Kabeln und/oder in offenen Meßaufbauten verwendet, so ist vom Betreiber sicherzustellen, daß die Funkenstörbestimmungen unter Betriebsbedingungen an seiner Grundstücksgrenze eingehalten werden.

Manufacturers Declaration

This is to certify that the HP 8130A/HP 8131A Pulse Generator operates in accordance with the radio frequency interference requirements of Deutsche Bundespost (German Post Office) Directive FTZ 1046/1984.

The German Post Office was notified that this equipment was put into circulation. The German Post Office retains the right to check future Hewlett-Packard model HP 8130A/HP 8131A instruments for compliance with directive FTZ 1046/1984.

Additional information for test and measurement equipment: If test and measurement equipment is operated with unshielded cables and/or used for measurements on open set-ups, the user must assure that, under operating conditions, the radio interference limits are still met at the border of his premises.

Introduction

This manual is arranged into five categories:

General Information

Descriptions of selected operating principles and installation/removal procedures - Chapters 1 and 2.

Adjustments and performance tests

Setting up procedures for replaced parts and complete performance tests for the instrument - Chapters 3 and 4.

Replaceable Parts

Lists of replaceable/exchangeable parts -Chapter 5, and full parts lists - Appendices B (HP8130A) and C (HP8131A).

Service Information Theory of operation, trouble shooting charts, and circuit descriptions -Chapter 6

Customer Assistance

Sales and Service information: Appendix A.

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General Information

Introduction

This service manual contains information for testing and servicing the HP 8130A/HP 8131A Pulse Generator; it includes installation procedures and a list of recommended test equipment.

The manual is divided into six chapters and three appendices as follows:

- Chapter 1 General Information
- Chapter 2 Installation
- Chapter 3 Performance Tests
- Chapter 4 Adjustments
- Chapter 5 Replaceable Parts
- Chapter 6 Service Information
- Appendix A Sales and Service Offices, directory
- Appendix B Parts Lists

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Appendix C Backdating Information

Information for operating, programming and interfacing the HP 8130A/HP 8131A is contained in the Operating and Programming manual supplied with the instrument.

This General Information includes safety requirements, a product description and a list of accessories. Essential information on the specifications and operating characteristics are also supplied.

The title page of this manual contains a microfiche part number. This number can be used to order $4 \ge 6$ inch microfilm transparencies of this manual. Each of the microfiche transparencies, holds up to 96 photo duplicates of manual pages and illustrations.

Instruments Covered By This Manual

The information contained in this manual applies to both versions of the HP $8130A/HP \ 8131A$ Pulse Generator that is, it covers the both the single and double (option 020) channel instruments.

In addition to the change information, there may be other supplementary information included where appropriate. To keep this manual as current and as accurate as possible, Hewlett- Packard recommends that you periodically request the latest Manual Changes Supplement.

Safety Requirements

Specific warnings, cautions and instructions, are placed wherever necessary in the manual. These must be observed during all phases of operation, service and repair of the instrument. Failure to comply with these instructions could cause violation of the safety standards of design and intended use of the HP 8130A/HP 8131A Pulse Generator. Hewlett-Packard assumes no liability for any failure of the customer to comply with these safety requirements.

Product Description

General

The standard instrument contains one channel; a second channel option is available but this can not be fitted retrospectively. The HP 8130A/HP 8131A Pulse Generator must be ordered as a single or double channel model. There are two methods of control available for the instrument:

- Local mode Where all operations are set up or changed via the manual controls of the front panel.
- **Remote Mode** Where the instrument is controlled by an external computer via suitable programming.

The HP 8130A Pulse Generator

The HP 8130A is a programmable 300 MHz pulse generator. It provides output signals with an amplitude ranging from 100 mVp-p to 5.00 Vp-p and variable transition times from 1 ns to 100 μ s.

The HP 8131A Pulse Generator

The HP 8131A is a programmable 500 MHz pulse generator. It provides differential output signals having an amplitude ranging from 100 mVp-p to 5.00 Vp-p. The signals have fixed transition times of \leq 200 ps.

Instrument Controls and Indicators

The front control panel of the instrument has groups of control keys and indicators, as shown and described below. In many cases a key has multiple duties, successive depressions of a key will cycle through optional duties or selections, available for that key. Those options are indicated by illumination of an adjacent lamp and/or the key top. For example, successive depression of the key below the HIGH lamp, selects the upper amplitude or offset limit, for adjustment.

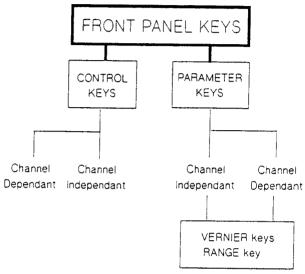


Figure 1-1. Control Relationships

General Purpose

The general purpose indicators and keys are located on the upper part of the instrument front panel. The main display is a four position digital display which shows values and addresses according to operating mode of the HP 8130A/HP 8131A. One of six indicator lamps displays the units (μ s, volts etc.) for the digital display. When a displayed value is to be altered, the range keys and vernier keys beside the display may be used.

Mode

There are eight (HP 8130A) or nine (HP 8131A) mode indicator lamps accompanied by two push button keys, which control mode of operation. The indicator lamps illuminate when the HP 8130A/HP 8131A Pulse Generator is operating in isolation and also when being remotely controlled from a computer.

Setting up

This group of keys is used to enter the initial settings for the HP 8130A/HP 8131A. The settings can be entered into memory and previously saved parameters can be recalled from memory if required.

Waveform Controls

The waveform controls enable an operator to set up all the necessary parameters for the output signal. The two channel option has two identical groups of wave form controls.

Options and Accessories

Options

- 001 Rear panel connectors
- 020 Second Channel
- 908 Rack Mounting Flange Kit (P/N 5062-3977)
- 910 One Operating and Programming Manual and one Service Manual
- 915 One Service Manual (P/N 08131-90001)
- 916 One Operating and Programming Manual (P/N 08130-90011/08131-90011)
- W30 Total of three years of "Return-to-HP" repair service
- W32 Total of three years of "Return-to-HP" calibration service

Accessories

Туре	Part Number
Adapter, APC 3.5(m) to APC 3.5(m)	1250-1748
Adapter, APC $3.5(f)$ to APC $3.5(f)$	1250-1749
Adapter, APC 3.5(m) to APC 3.5(f)	1250-1866
Adapter, $SMA(m)$ to $SMA(m)$	1250-1158
Adapter, $SMA(f)$ to $SMA(f)$	1250-1159
Adapter, $SMA(m)$ to $SMA(f)$	1250-1200
Attenuator, 10 dB, SMA	8493A #10
Attenuator, 20 dB, SMA	8493A #20
Cable, co-axial, SMA(m) to SMA(m)	8120-4948
End Cap, Precision, 3.5 and SMA, female	1401-0202
End Cap, Precision, 3.5 and SMA, male	1401-0208
Manual, Microwave Connector Care	08510-90064

8710-1765
8710-1582
15432A
15433A
15434A

Transition Time Converter (HP 8131A only)

General Information



Figure 1-2. Time Converters

The transition time converter, converts the fixed transition time of a HP 8131A (normally less than 200 ps) to a fixed transition time of 300, 500 or 1000 ps according to the model used. The design of the converter and the slower transition time, result in a better pulse performance, so that reflection and overshoot sensitive applications can be satisfied.

Connector Characteristics

The transition time converter has SMA (m,f) connectors. Connect carefully to the HP 8131A. When a converter is not in use, protect the end connectors with the protective caps.

Typical Performance Characteristics

	15432A	15433A	15434A
Output Transition Times	300 ps	500 ps	1000 ps
Intrinsic Transition Times	260 ps	480 ps	990 ps
3 dB Corner Frequency	1120 MHz	660 MHz	330 MHz
Input Voltage	<	10.0 V peak-to-peak	
Insertion Loss		<0.2 dB	
Overshoot and Ringing		<5%	
VSWR		<2.0	

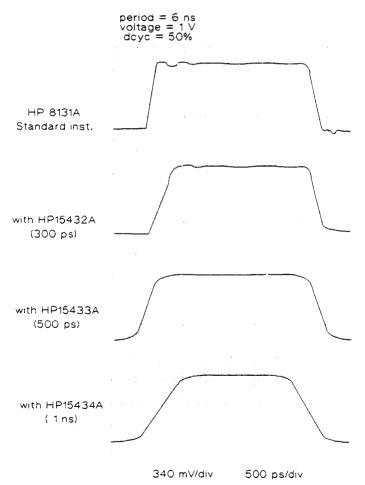


Figure 1-3. Transition Time Converter Waveforms

HP 8130A

Specifications

Specifications describe the instruments warranted performance. Non-warranted values are described as "typical".

All specifications apply after a 30 minute warm-up phase with 50Ω load resistance at all outputs, and are valid at ambient temperatures in the range 0°C to 55°C.

Error Detection

An error display indicates that a programmed setting exceeds the specified range, and that the output may be invalid. If the limiting condition is important in the application the output should be verified on an oscilloscope. In other cases, the timing should be adjusted until the error display turns off, indicating that all outputs are valid.

Table 1-1. Maximum Values of WIDTH, DCYC, and DELAY versus PERIOD

PERIOD(ns)	On-Time	DELAY
3.33 4.99	0.5×PERIOD	0.5×PERIOD-1ns
5.00 19.9	$0.7 \times \text{PERIOD-1ns}$	0.7×PERIOD-2ns
≥ 20.0	0.9×PERIOD-5ns	0.9×PERIOD-6ns



On-Time in this table refers to the value set by DCYC (duty cycle) as well as by WIDTH.

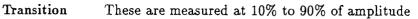
Table 1-2. Maximum Values of DOUB versus PERIOD

PERIOD(ns)	DOUB
3.33 7.19	n/a
7.20 9.99	0.5×PERIOD
≥ 10.0	0.9×PERIOD-4ns

Timing Parameters

Measurement Conditions	Automatic operating mode, measured at 50% of amplitude and using the fastest transition times.		
	Resolution: Repeatabili RMS-Jitter	ty: Factor of 4 better than accuracy.	
Period	Range: Accuracy:	3.33 ns to 99.9ms $\pm 5\%$ of programmed value ± 100 ps	

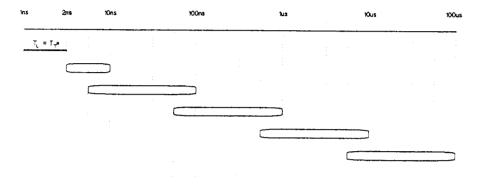
Range: Accuracy:	1.5ns to 99.9ms (See Table 1-1 for the maximum) $\pm 5\%$ of programmed value ± 250 ps.		
	This value is measured between the trigger output at TRIG OUTPUT and the pulse at OUTPUT or OUTPUT.		
Double Pulse and Delay are mutually exclusive.			
•			
Period ≥7.20ns			
Double Pulse and Delay are mutually exclusive.			
Range: Accuracy:	3.33ns to 99.9ms (see Table 1-2 for maximum) $\pm 5\%$ of programmed value ± 250 ps		
	Accuracy: This value i the pulse at Double Puls Fixed Delay Variable Ra Accuracy: Period ≥7.2 Double Puls Range:		





lns to $100\mu s$ The range at 20% to 80% of amplitude has a typical lower limit of 600ps.

Leading and trailing edges are independently programmable within the following ranges



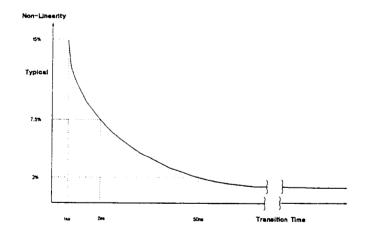
* Leading and trailing edges are assigned the same value.



Range:

 $\pm 10\%$ of programmed value ± 300 ps

Linearity:



Conflict with other timing parameters may cause Maximum values: amplitude clipping and is indicated by the "Excessive" display.

Output Levels

Output levels double when driving into open circuits. The instrument disables outputs if levels exceed $\pm 6.5V$ or if the amplitude exceeds 6.5Vp-p.

Resolution:	3 Digits, best case: 10mV .
Level Accuracy	$\pm 1\%$ of programmed value $\pm 3\%$ of amplitude $\pm 40 \text{mV}$
Repeatability:	Factor of 4 better than accuracy
Settling Time:	20ns (at the fastest transition time)
High Level:	-4.90V to +5.00V
Low Level:	-5.00V to +4.90V
Pulse Performance	$\begin{array}{llllllllllllllllllllllllllllllllllll$

Operating Characteristics

Operating characteristics describe typical, non-warranted performance.

Timing Parameters

Duty Cycle	Width and duty cycle are mutually exclusive		
	Range:	1% to $90%$	
	Resolution:	1% Subject to width and period specifications	

Inputs and Outputs

All inputs and outputs have BNC connectors on the front panel. Rear panel connectors are optional.

Main Outputs These are differential outputs.

Amplitude: Offset: Source Impedance: Maximum External Voltage: Short Circuit Current (I _{SC}): Skew:	100mVp-p to 5Vp-p into 50 Ω For pulse widths less than settling time, the amplitude may decrease by 10% of the programmed value. -4.95V to 4.95V into 50 Ω 50 $\Omega \pm 1\Omega$ $\pm 5V$ -200mA $\leq I_{SC} \leq +200$ mA The skew between differential outputs of the
Skew:	The skew between differential outputs of the same channel <100 ps

External Input This input is used in trigger, gate, burst, and external width operating modes.

Trigger slopes	can	be	selected	positive or	negative.

Input Impedance:		$50\Omega \pm 2.5\Omega$
Threshold:		-5V to +5V
Resolution:		100mV
Maximum Input Voltage	e:	$\pm 10V$
Input Transition:		<50ns
Input Frequency:		dc to 300MHz
Minimum Pulse Width:		1.5ns
Input Sensitivity:		≥300mVp-p
Levels:	Hi	gh at 2.4V, low at 0.3V into 50 Ω
Trigger Pulse Width:		

Trigger Output

Pulse Width	
50% of Period	
95% of Period	
99.5% of Period	
99.95% of Period	

Transition Times: Source Impedance:	<1ns 50Ω ±2.5Ω
Delay:	From external input to trigger output In trigger and external width operating mode: 16ns In Gate and burst operating mode: 18.5ns
Max/Min External Voltage:	+7/-2V

Trigger Modes	Manual:	Simulates an external input signal.
	1 Pulse:	In trigger gate and burst operating mode one pulse or double pulse is generated.
	Auto:	Continuous pulse stream
	Trigger:	Each active input transition generates a single output pulse or double pulse
	Gate:	External signal enables period generator. The first output pulse is synchronous with active edge. The last pulse is always completed. The width and period of the first pulse may deviate 10% from subsequent pulses.
	External Burst:	Each active input transition generates a preprogrammed number of pulses (1 to 9999). The minimum burst period is 5ns. The width and period of the first pulse may deviate 10% from subsequent pulses.
	External Width:	Pulse recovery, the external edges toggle the output. Output levels and transition times can be selected.

Output Capabilities

Limit	The maximum high and low levels into 50Ω can be limited to protect the device under test.
Complement	Normal or complemented outputs can be selected.
Disable	Relays are used to connect or disconnect the outputs.
Set	This function will set the parameters to fixed ratio relative to period. (Delay=0ns; width=50% of period; transitions - 10% of period, limited to 1ns; period, high level and low level = current values).

Additional Features

HP-IB capabilities

All modes and parameters are programmable , downloadable and uploadable. ASCII and binary formats are supported.

HP-IB Interface Code: SH1, AH1, T6, TE0, L4, LE0, SR1, RL1, PP0, DC1, DT1, C0.

Non-Volatile Memory

Current settings are saved on power-down. Additionally, 19 complete set-ups can be stored.

General Environmental

Storage Temperature

-40°C to $+65^{\circ}C$

Operating Temperature

 $0^{\circ}\mathrm{C}$ to $55^{\circ}\mathrm{C}$

Humidity

(0°C to 40°C):95% R.H.

Power

100/200/220/240 Vrms, ±10% 250VA max. 50-60Hz

Weight

Net: 20kg (44.4lb) Shipping: 28kg (62.2lb)

Dimensions

 $(H \times W \times D)$: 145mm × 426mm × 525mm (5.70in × 16.75 × 20.65in.)

Recalibration Period:

1 year recommended.

HP 8131A

Specifications

Specifications describe the instruments warranted performance. Non-warranted values are described as "typical".

All specifications apply after a 30 minute warm-up phase with 50Ω load resistance at all outputs, and are valid at ambient temperatures in the range 0°C to 55°C.

Timing Parameters

Common Specification:	Resolution: Repeatability RMS-Jitter:	 3 digits, best case: 10ps. Factor of 4 better than accuracy. 0.025% of programmed value + 15ps (0.05% of programmed value +15ps for the range from 10ns to 100ns) 	
Period	0	2ns to 99.9ms $\pm 5\%$ of programmed value ± 100 ps	

Delay	This value is measured between the trigger output at TRIG OUTPUT and the pulse at OUTPUT or OUTPUT.	
	Fixed Delay: Variable Range: Accuracy:	20ns Ons to 99.9ms (See Table 1-1 for maximum) $\pm 5\%$ if programmed value ± 1.5 ns.
Double Pulse		ns to 99.9ms (see Table 1-2 for maximum) $\pm 5\%$ of programmed value $\pm 250\mathrm{ps}$

Double Pulse: Maximum Values

PERiods (ns)	Double Pulse
2.00 4.99	n/a
5.00 9.99	50% of PER**
≥10.0	(90% of PER)-4ns

**PERiod<5.72ns: Double Pulse <50% of PER

Width	Range:	500ps to 99.9ms
	Accuracy:	$\pm 5\%$ of programmed value ± 250 ps.

Width and Delay: Maximum Values

PERiod (ns)	Width	Delay		
2.00	500ps or 1ns	Ons		
2.01 2.99	50% of PER [*]	(50% of PER)-1ns		
3.00 4.99	50% of PER	(50% of PER)-1ns		
5.00 19.99	70% of PER	(70% of PER)-1ns		
≥20.0	90% of PER	(90% of PER)-1ns		

*Width <1ns: maximum width is (50% of PER)-0.5ns

Output Levels

Common	Resolution:	3 Digits, best case: 10mV.
Specifications:	Level Accuracy:	$\pm 1\%$ of programmed value
		$\pm 3\%$ of amplitude $\pm 40 \text{mV}$
	Repeatability:	Factor of 4 better than accuracy
	Settling Time:	10ns (typical)
	High Level	-4.90V to +5.00V
	Low Level	-5.00V to +4.90V

Pulse	Overshoot:	$<15\%$ of amplitude $\pm 20 \text{mV}$
Performance	Ringing:	$<15\%$ of amplitude $\pm20\mathrm{mV}$
	Reflections:	<10% at $1 m GHz$

Operating Characteristics

Operating characteristics describe typical, non-warranted performance.

Differential Outputs

Duty Cycle	Range: Resolution: Amplitude:	1% to 99% 1% 100mVp-p to 5Vp-p into 50Ω
		The output levels double when the output drives into an open circuit
	Offset: Source Impedance: Skew:	The outputs are disabled if the output voltage > $\pm 6.5V$ -4.95V to 4.95V into 50Ω 50Ω $\pm 1\%$ The skew between differential outputs of the same channel <100ps
Trigger Output		
	Levels: Impedance: Delay: External Voltage:	High at 0.0V, low at -0.6V 50Ω±10% From external input to trigger output 16ns ±5V Maximum
External Input		
Trigger, Gate, Burst, and External Width Operating Modes.	Input Impedance: Threshold: Resolution: Maximum Input Volt Input Transition: Input Frequency: Minimum Pulse Widt Input Sensitivity:	<50ns dc to 500MHz
Transducer Operating Mode	Input Impedance: Input Transition: Input Frequency: Input Sensitivity:	$50\Omega \pm 5\%$ $<50 \text{ ns}$ 10 MHz to 1 GHz $\geq 600 \text{ mVp-p}$

Additional Features

HP-IB capabilities

HP-IB conforms to IEEE standard 488.1-1987, Digital Interface for Programmabel Information.

For information regarding interface codes, formats, protocols and common commands, use IEEE Standard 488.2-1987, Codes, Formats, Protocols, and Common Commands as a quide. No claim of conformance is made.

Code	Binary				ASCII*		
upload		download		download of parameters			
		of a complete parameter set		one	two	three	
	transfer	transfer	implementation	total	trans	sfer+i	mplementation
HP 8131A Version							
1 Channel	110	30	140	170	<60	<90	<110
2 Channel	110	30	190	220	-	-	-

Programming Times

All times in milliseconds *Add 25ms for "enable output" statements

Battery

Memory is supported for 7 years

General Environmental

Storage Temperature:	-40°C to +65°C
Operating Temperature:	0°C to 55°C
_	
Humidity:	(0°C to 40°C):95% R.H.
Power:	100/120//220/240Vrms±10% 250VA max. 48-66Hz Single Phase

Weight

Net: 20kg (44.4lb) Shipping: 28kg (62.2lb)

Dimensions

 $(H \times W \times D)$: 145mm × 426mm × 525mm (5.70in × 16.75 × 20.65in.)

Recalibration Period:

1 year recommended.

Installation

Safety Considerations

The HP 8130A/HP 8131A is a Safety Class 1 instrument (instrument with an exposed metal chassis that is directly connected to earth via the power supply cable).

Before commencing work on the HP 8130A/HP 8131A, the instrument and this manual, including the red safety page, should be reviewed for safety markings and instructions. These must then be followed to ensure safe operation and to maintain the instrument in a safe condition.

Power is present in some of the HP 8130A/HP 8131A circuits whenever the instrument is connected to the AC power source.

To disconnect from the line power, disconnect the power cord either at the rear power-inlet or at the AC line-power source (receptacle). One of these must be accessible at all times. If the instrument is installed in a cabinet, it must be disconnected from the line power by means of the systems line-power switch.

Initial Inspection

Inspect the shipping container for damage. If the container or cushioning is damaged, it should be kept until the contents of the shipment have been checked for completeness and the instrument has been verified both mechanically and electrically.

Procedures for checking the operation of the instrument are given in the Performance Tests. If the instrument package contents are incomplete, mechanical damage or defect is apparent, or if an instrument does not pass the operator checks, notify the nearest Hewlett-Packard office. Keep the shipping materials for inspection by the carrier. The HP office will arrange for repair or replacement without awaiting settlement.

Warning

To avoid hazardous electrical shock, do not perform electrical tests when there are signs of shipping damage to any portion of the outer enclosure (covers, panels, etc.).

Power Requirements		
Caution	Before applying AC line power to the HP 8130A/HP 8131A, ensure that: the voltage selector on the HP 8130A/HP 8131A's rear panel is correctly set the correct line fuse is installed.	
	Procedures for changing the line voltage selector and fuse are contained in the following section "Line Voltage Selection".	

The HP 8130A/HP 8131A can operate from any single-phase AC power source supplying

100 V, 120 V, 220 V or 240 V in the frequency range from 50 to 60 Hz. The maximum power consumption is 250 VA with all options installed.

Table 2-1. Line Voltage Ranges

Selector Voltage	AC Voltage Range
100	90 - 110 V
120	108 – 132 V
220	198 – 242 V
240	216 – 264 V

Line Voltage Selection

The line voltage selector is set at the factory to correspond to the most commonly used line voltage of the country of destination. The switch is combined with the power line voltage receptacle on the rear panel. Refer to the table below for the line voltage ranges and their corresponding fuse.

Line Voltage	Fuse Type	HP Part Number	
100 V / 120 V	T 3A, 250 V	2110-0029	
220 V / 240 V	T 1.5A, 250 V	2110-0304	

Table 2-2. Line Voltage and Fuse Selection

To change the line voltage and fuse:

- 1. Switch OFF and remove the power cord.
- 2. Insert a screwdriver into the recess at the top of the assembly (see Figure 2-1) and "flip" cover down.
- 3. To change the voltage setting, the selector must be removed and then replaced with the new setting value displayed.
- 4. If necessary, change the fuse in accordance with the new voltage setting.

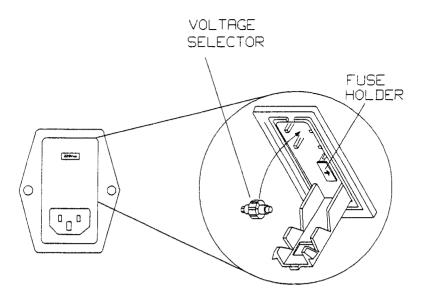


Figure 2-1. Line Voltage Switch Assembly

Power Cable

In accordance with international safety standards, this instrument is equipped with a three-wire power cable. When connected to an appropriate AC power receptacle, this cable grounds the instrument cabinet. The type of power cable shipped with each instrument depends on the country of destination. Refer to Figure 2-2 for the part numbers of available power cables.

Warning

To avoid the possibility of injury or death, the following precautions must be followed before the instrument is switched on.

- If this instrument is to be energized via an autotransformer for voltage reduction, ensure that the Common terminal is connected to the grounded pole of the power source.
- The power cable plug shall only be inserted into a socket outlet provided with a protective ground contact. The protective action must not be negated by the use of an extension cord without a protective conductor.
- Before switching on the instrument, the protective ground terminal of the instrument must be connected to a protective conductor. This is ensured by using the power cord which is supplied with the instrument.
- Intentional interruption of the protective ground connection is prohibited.

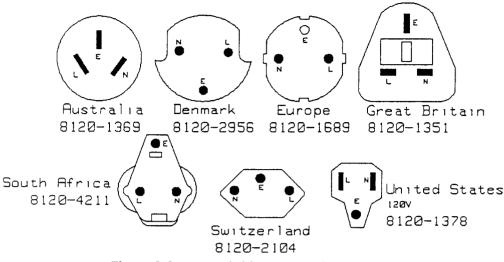


Figure 2-2. Power Cables - Plug Identification

The following work should be carried out by a qualified electrician - all local electrical codes being strictly observed. If the plug on the cable does not fit the power outlet, or the cable is to be attached to a terminal block, cut the cable at the plug end and re-wire it.

The color coding used in the cable will depend on the cable supplied. If a new plug is to be connected, it should meet local safety requirements and include the following features:

- Adequate load-carrying capacity (see table of specifications).
- Ground connection.
- Cable clamp.

Operating Environment

The following summarizes the HP 8130A/HP 8131A operating environment ranges. In order for the HP 8130A/HP 8131A to meet specifications, the operating environment must be within these limits.

Warning The HP 8130A/HP 8131A is not designed for outdoor use, or in conditions that could cause moisture to enter the HP 8130A/HP 8131A.

Temperature

The HP 8130A/HP 8131A may be operated in temperatures from 0 °C to 55 °C.

Humidity

The HP 8130A/HP 8131A may be operated in environments with humidity up to 95% (0 °C to +40 °C). However, the HP 8130A/HP 8131A should be protected from temperatures or temperature changes which could cause condensation within the instrument.

Instrument Cooling

The HP 8130A/HP 8131A is equipped with a cooling fan mounted inside the rear panel. The instrument should be mounted so that air can freely circulate through it. When operating the HP 8130A/HP 8131A, choose a location that provides at least 75 mm (3 inches) of clearance at the rear, and at least 25 mm (1 inch) of clearance at each side. Failure to provide adequate air clearance will result in excessive internal temperature, thus reducing instrument reliability.

HP-IB Interface

Networks

The network may be:

- A star network
- A linear network
- A combination star and linear network.

Limitations:

- The maximum cable length per device is 2 m
- The total cable length must not exceed 20 m
- No more than 15 devices may be interconnected on one bus.

Caution

It is recommended that no more than three connectors be stacked one on top of the other.

Hand tighten the connector lock screws. Do not use a screwdriver.

Cables and Adapters

The HP-IB connector is compatible with the connectors on the following cables and adapter.

- HP-IB Cable, 10833A, 1 m (3.3 ft.)
- HP-IB Cable, 10833B, 2 m (6.6 ft.)
- HP-IB Cable, 10833C, 4 m (13.2 ft.)
- HP-IB Cable, 10833D, 0.5 m (1.6 ft.)
- HP-IB Adapter, 10834A, 2.3 cm extender.

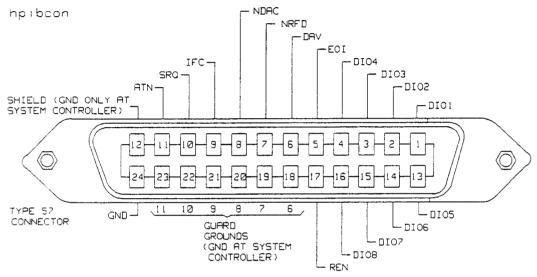


Figure 2-3. HP-IB Connector

Connector Lock Screw Compatibility

CautionHP products are currently delivered equipped with connectors having ISO
metric-threaded lock screws and stud mounts (ISO M3.5x0.6), which are black
in color.Earlier connectors may have lock screws and stud mounts with English-
threaded lock screws and stud mounts (6-32 UNC) which have a shiny nickel
finish.

Removal and Replacement Instructions

The HP 8130A/HP 8131A is of modular construction, which allows removal and replacement of major assemblies with minimum disturbance to other units. Instructions are detailed below for each subassembly.

Note

After replacement of the output board and/or timing board, carry out the adjustment procedures decribed in Chapter 3 of this manual.



Electrostatic sensitive devices are fitted to the circuit boards within the HP 8130A/HP 8131A. Ensure that standard precautions are taken to prevent static electricity discharge.

Tools required

The following tools are required for dismantling the HP 8130A/HP 8131A Pulse Generator.

Item	Part Number	Usage
Torque wrench 5/16inch	8710-1582	SMA connectors
5lb-inch/56N-cm		
Screwdriver medium		Cover and fixing screws
size, cruciform		
Screwdriver small		Board fixing screws
size, cruciform		
Screwdriver small		Switch operating lever
(jewelers), cruciform		SMA relay removal
Screwdriver small		Switch operating lever
flat		(power supply only)
Soldering iron		
and fluxed solder		
Non-setting		
sealing compound		Mains switch assy.

Table 2-3.



The part identification codes referred to in these procedures, are compatible with those contained in Chapter 5 of this manual *Replaceable Parts*.

HG

The part identification codes referred to in these procedures, are compatible with those contained in Chapter 5 of this manual *Replaceable Parts*.

Installation of Output Board

- 1. With the HP 8130A/HP 8131A switched OFF, disconnect the power cord
- 2. Remove the following:
 - a. The four rear frame feet
 - b. The cover top cabinet MP8 one screw center rear, then slide cover to rear
 - c. The left cover side (with the strap handle) two screws each end of handle, then slide cover to rear
 - d. The cover top MP7 screws round the periphery (counter sunk on handle side rail)
 - e. The cover top card cage MP6 fourteen screws around periphery
 - f. The two board keepers at the rear, by twisting them inwards and set them aside for re-fitting.
- 3. Note the color coding of the two SMA cables connected to the large SMD board (HP 8130A) or transducer board (HP 8131A) at the front end of the output board (to aid correct replacement).
- 4. Using the torque wrench, disconnect these two small SMA cables connected to the SMD board .
- 5. Free the two other screened cables from their fastener clips on the output board. Do not disconnect them unless the output board is to be replaced.
- 6. Slide the output board rearward to disengage it from the motherboard.
- 7. Fold the output board over the front of the instrument.
- 8. Place it in front of the instrument and protect the front frame and board against damage with a sheet of paper.
- 9. If option 020 is fitted, repeat steps 3 to 8 for the channel 1 output board located below the channel 2 output board.
- 10. Fit the exchange output board.
- 11. Reconnect SMA cables to the board (correct colors!).
- 12. Carry out adjustment procedures for the board(s) as detailed in Chapter 3 of this manual.
- 13. Switch OFF and disconnect the HP 8130A/HP 8131A.
- 14. Ensure that the output board is firmly engaged in the motherboard connector.
- 15. Refit the board keepers:
 - a. Insert small tab end into the hole at bottom rear of the card cage with straight edge of keeper facing towards the nearest side of the instrument.
 - b. Twist the keeper so that its straight edge is towards the rear of the instrument and the keeper is upright, with board resting on the support cutout.
- 16. Fit top cover top card cage MP6 with the right hand edge under the card cage side lips. The earthing fingers resting against the left hand side of the card cage, and with both board keepers engaged correctly in their slots at the rear of the cover.

2-8 Installation

Take care not to trap the CPU Board ribbon cable under the cover.



- 17. Fit ALL the cover screws.
- 18. Fit the cover top MP7 and the screwws arond the edge.
- 19. Engage the bottom of the left (Handle side) cover over the flange of the bottom cover and slide the cover into position.
- 20. Fit the handle using the two counter sunk screws, which also secure the cover.
- 21. Fit top cover MP8.

Installation of SMA Relays

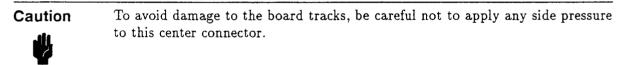
To replace a SMA relay on an output board, proceed as follows:

1. Dismantle the HP 8130A/HP 8131A and remove the output board(s) as detailed in the Output Board Installation instructions above.

Note

The output board does not need to be removed in order to fit a new relay, but if option 020 is fitted, the upper output board must be removed to gain access to channel 1 board.

- 2. Using the torque wrench:
 - a. disconnect the screened cable from the relay.
 - b. slacken off the SMA securing collett from the relay center pole earth connector and make sure it is completely free from the connector threads. Do not attempt to withdraw the earth connector from the relay center pole.

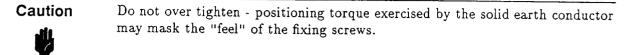


- 3. Unsolder the relay coil wires from the tags on the relay casing.
- 4. Using the jewelers screwdriver, detach the relay from the board.

To fit a new relay proceed as follows:

- 1. When tightening SMA connectors, always use the torque wrench.
- 2. Remove the 50 Ω load from the discarded relay and fit it to the normally open contact of the replacement relay.
- 3. Place the relay on the board checking that the coil connector tags are adjacent to the connecting wires (Only the right hand relay has the label uppermost).
- 4. Lightly engage (one half turn) the center connector collett.
- 5. Fit the two fixing screws but do not finally tighten.

6. Tighten the collett, then tighten the fixing screws carefully.



- 7. Reconnect the coil energizing wires. Ensure that the positive coil wire (+ on board tracking) connects to the upper tag.
- 8. Carry out checks as detailed in Chapter 3.
- 9. Re-assemble other instrument components and covers by reversing the Output Board Installation procedure .

Installation of Timing board

Caution HP 8131A Only As a result of Hewlett-Packard's policy of continued improvement of products, in rare cases, there may be incompatibility between a replacement Timing Board and other boards in your instrument. Make the following checks on the CPU board in the instrument, before installing an exchange Timing Board: ■ Integrated Circuits (ROM) U204/U205 should bear a label 08131-13703/13704 Rev 1.3. • If they are labeled Rev 1.1 or 1.2, then you will need to replace them with Rev 1.3 ROMs (part numbers as above) as well as the Timing Board. If they are labeled 08130-13705/13706 Rev 1.4, contact the factory. The manufacturing factory to contact is: Hewlett-Packard GmbH. Boeblingen Instruments Division, Herrenberger Strasse 130. D-7030 Boeblingen, Federal Republic of Germany

To replace a timing board, proceed as follows:

- 1. Dismantle the HP 8130A/HP 8131A and remove the output board(s) as detailed in the Output Board Installation instructions above.
- 2. Remove the timing board from the motherboard connector and fit a replacement.
- 3. Refit and connect the output board(s).
- 4. Temporarily replace the instrument top cover MP7.
- 5. Carry out adjustment procedures for the output board(s), as detailed in Chapter 3 of this manual.
- 6. Reassemble other instrument components and covers by reversing the Output Board Installation procedure.

Installation of CPU Board

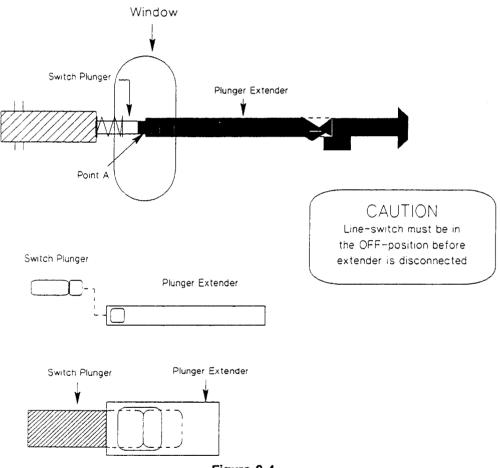
To replace a CPU board, proceed as follows:

- 1. Switch OFF the HP 8130A/HP 8131A and disconnect the power cord
- 2. Remove the following:
 - a. The four rear frame feet
 - b. The cover top cabinet MP8 one screw center rear, then slide cover to rear
 - c. The left cover side (with the strap handle) two screws each end of handle, then slide cover to rear
 - d. The cover top MP7 screws round the periphery (counter sunk on handle side rail).
- 3. Disconnect the two pin fan supply lead (lift centre clip) and the ribbon cable (swing end levers outwards) from the CPU board.
- 4. Remove six long screws with pillars which attach the CPU board to the power supply unit.
- 5. Slide the CPU board rearward to disengage it from the motherboard.
- 6. There are no adjustments to be made after replacement of a CPU board.

Installation of Power Supply Unit

First remove and set aside the CPU board following the above instructions and then proceed as follows:

- 1. Remove six screws (two at each end and two center) and lift away the rear panel.
- 2. Make sure the instrument ON/OFF switch is set to OFF (protruding from the front panel).
- 3. Insert the small flat screwdriver through the elongated slot in the side frame adjacent to the ON/OFF switch assembly.
- 4. The switch operating rod is a tight push fit over the switch lever and may have non-setting adhesive applied.





- 5. Using the flat screwdriver, carefully prise the switch operating rod forwards, free from the switch, and withdraw it through the front cover.
- 6. Remove eleven power supply unit fixing screws from the side frame.
- 7. Slide the power supply unit rearward to disengage it from the motherboard.
- 8. Supporting the rear end of the power supply, carefully lift the front end upwards and forwards to remove the unit clear from the instrument main chassis. The power supply cannot be removed through the rear of the instrument.

2-12 Installation

Caution	When re-fitting the power supply unit and when mating up with the motherboard connector, be careful not to damage the earthing strip fingers on the top rear of the power supply.		
Note	Ensure that the switch operating rod is securely re-fitted onto the switch lever. Press the switch ON/OFF button several times to ensure correct and secure operation of the switch mechanism, then apply a little non-setting sealant to the junction.		

Installation of Motherboard

To gain access to the motherboard, or to remove and replace it, ALL circuit boards and the power supply unit must first be removed using the procedures detailed above.

Remove the motherboard as follows:

- 1. Disconnect the keyboard ribbon cable.
- 2. Remove eight securing screws and lift the motherboard from its mounting pillars.



Do not forget to connect the keyboard ribbon cable before re-fitting all other subassemblies.

Installation of Keyboard Assembly

Individual components such as the seven segment displays and key switches may be removed and replaced if faulty, instead of replacing the complete keyboard. However the keyboard must still be removed for access as follows:

- 1. Switch OFF the HP 8130A/HP 8131A and disconnect the power cord.
- 2. Turn the instrument onto its right hand side and remove six keyboard fixing screws from the bottom rail. Working down from the top, the screws to be removed are numbered 1, 4, 8, 11 and 14.
- 3. Turn the instrument back to a normal upright operational position.
- 4. Prise the thin plastic trim strip from the front top rail to expose fixing screws.
- 5. Working from the left, screws numbered 2, 5, 8, 11 and 14 must be removed.
- 6. The keyboard can now be pulled away from the front of the instrument for access .

Parts Ordering

A list of replaceable parts is given in Chapter 5 of this manual, together with ordering information.

Storage and Shipment

The instrument and its separate subassemblies can be stored or shipped at temperatures between -40 °C and +75 °C. The instrument should be protected from temperature extremes which may cause condensation within it.

Return Shipping an Instrument to HP

If the instrument or subassembly is to be shipped to a Hewlett-Packard Sales/Service Office (see Appendix A), attach a tag showing owner, return address, model number and full serial number and the type of service required.

The original shipping carton and packing material may be used again, but the Hewlett-Packard Sales/Service Office will also provide information and recommendations on materials to be used if the original packing is no longer available or reusable. General instructions for repacking are as follows:

Packing

- 1. Wrap instrument in heavy paper or plastic.
- 2. Use strong shipping container. A double wall carton is adequate.
- 3. Use enough shock-absorbing material (3 to 4 inch layer) around all sides of the instrument to provide a firm cushion and prevent movement inside container.
- 4. Seal shipping container securely.
- 5. Mark shipping container FRAGILE to encourage careful handling.
- 6. In any correspondence, refer to item by model number and serial number.

Returning a Circuit Board to HP

If the instrument or subassembly is to be shipped to a Hewlett- Packard Sales/Service Office (see Appendix A), attach a tag showing owner, return address, model number and full serial number and the type of service required.

Packing a board

A circuit board must be carefully packed as follows:

- 1. The board should be first placed in a ESD protective envelope and then into a padded envelope suitable marked and identified.
- 2. Place the envelope in a cardboard container with further shock- absorbing material
- 3. Mark shipping container FRAGILE to encourage careful handling.
- 4. In any correspondence, refer to item by type number and serial number.

Adjustments

Adjustments to the HP 8130A Output Board

The Output Board(s) must be checked and adjusted after replacement or after replacement of a timing board.

To check the Output Board setting, proceed as follows:

- 1. Switch the instrument ON and allow to warm up for 30 minutes.
- 2. Set the HP 8130A:

Control	Setting	Chan 1	Chan 2
TIMING	PERIOD	10 ns	
	DEL	0.0 ns	0.0 ns
	WID	1.5 ns	1.5 ns
	LEAD	670 ps	670 ps
	TRA	670 ps	670 ps
OUTPUT	HIGH	+2 V	+2 V
	LOW	0 V	0 V
		NORM	NORM
		ENABLE	ENABLE

- 3. If channel 2 is fitted, commence adjustments for that channel's board.
- 4. Connect the HP 8130A TRIG OUTPUT via a cable assy-coax SMA (m-m) and APC 3.5 mm 20 dB attenuator (f-m), to the TRIG input of an HP 54121A oscilloscope.
- 5. Connect the HP 8130A Channel 2 OUT via a similar accessory to the Input 4 of the HP 54121A.
- 6. Setup HP 54121A Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the Number of Averages to 16
 - c. set DELAY so that one pulse is positioned in the center of the screen
 - d. press MORE
 - e. press the +width function.
- 7. With WID = 1.5 ns check the NORMal and COMPlement Outputs = 1.5 ns ± 50 ps. For NORMal pulse press +width on the oscilloscope, for COMPlement pulse press -width.

- 8. If necessary, carefully adjust RV100 on the large SMD board to obtain the best compromise. The width of the COMPlement is typically 80-100 ps less than the NORMal signal.
- 9. Switch the HP 8130A OFF and remove the channel 2 board if fitted. Ignore the displayed ERROR 504!
- 10. Switch the HP 8130A back on and repeat the above procedure for the channel 1 OUT signal.

Note For this test the channel 1 control keys are inactive: use the channel 2 control keys.

11. Set HP 8130A:

a. PERIOD = 3 nsb. WID = 1.2 ns.

- 0. WID = 1.2 Hs.
- 12. Connect the HP 8130A channel 1 OUT to the HP 54121A's TRIG IN.
- 13. Connect the HP 8130A TRIG OUTPUT to the HP 54121A's Input 4.
- 14. Check the trigger signal for a duty cycle of $50\% \pm 4\%$.
- 15. If necessary carefully adjust RV400 on the large SMD board.
- 16. Change the HP 8130A's PERIOD from 4 ns to 5 ns and then, in steps, up to 9 ns. At each step check the duty cycle is 50%.
- 17. Reassemble the HP 8130A.
- 18. Carry out the functional checks on both channels.

Adjustments to the HP 8131A Output Board

The Output Board(s) must checked and adjusted after replacement or after a timing board has been replaced.

To check Output Board setting, proceed as follows:

1. Switch the instrument ON and allow to warm up for 30 minutes.

2. Set the HP 8131A:

Control	Setting	Chan 1	Chan 2
TIMING	PERIOD	20 ns	
	DEL	0.0 ns	0.0 ns
	WID	l ns	l ns
OUTPUT	AMPL	+5 V	+5 V
	OFFS	0 V	0 V
		ENABLE	ENABLE

- 3. If channel 2 is fitted, start adjustments with the board for that channel.
- 4. Connect the HP 8131A TRIG OUTPUT via a cable assy-coax SMA (m-m) and APC 3.5 mm 20 dB attenuator (f-m), to the TRIG input of an HP 54121A oscilloscope.
- 5. Connect the HP 8131A Channel 2 OUT via a similar accessory to the Input 4 of the HP 54121A.
- 6. Setup HP 54121A Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the Number of Averages to 16
 - c. set DELAY to approx 20 ns so that pulse will be positioned in the center of the screen
 - d. select MORE and then select the channel to be measured (CH4)
 - e. select Position FINE
 - f. press MORE to obtain \pm Width function
 - g. select the Delta V menu and turn the voltage markers On
 - h. set Preset Levels = 50-50% and press Auto Level Set
 - i. select the Delta t menu and turn the time markers On
 - j. set START ON EDGE = POS1 and STOP ON EDGE = NEG1.

Note

Press the Precise Edge Find key for each Width test.

7. With WID = 1 ns check the NORMal and COMPlement Outputs to be 940 ps ± 30 ps. For NORMal pulse press +width, for COMPlement pulse press -width. 8. If adjustment is necessary, carefully alter RV200 on the A18 Transducer Board, ensuring the width is set as close as possible to 960 ps. Turning RV200 clockwise increases width, counter clockwise reduces width.

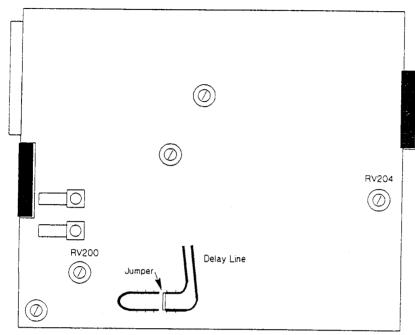


Figure 3-1. Transducer Board Layout

9. If the difference between NORM and COMP is greater than 40 ps, slightly adjust RV204 on the Transducer Board, A18.

Note

There is no *preferred* direction for this initial movement, so it is important to note the direction of adjustment. You can then decide direction of adjustment for a subsequent compensation if required.

- 10. Change the HP 8131A Width to 500 ps.
- 11. Check the pulse width in NORM/COMP for 510 ps ± 30 ps.
- 12. If adjustment is necessary, carefully alter RV200 again on the A18 Transducer Board but use care, because it will have an effect on RV204 setting and vice-versa see steps 8 and 9.
- 13. Repeat steps 7 to 12 to achieve the best compromise at WID = 1 ns and WID = 500 ps. i.e. adjust for a minimum difference when switching between NORMal and COMPlement outputs at WID = 500 ps.
- 14. If it is not possible to get the pulse width within 480 ps to 540 ps, the delay line on the A18 Transducer Board must be altered as follows:
 - a. Change the position of the SMT jumper, desolder and reconnect at another marker on the delay line
 - b. Delay line longer = smaller width
 - c. Delay line shorter = greater width.

3-4 Adjustments

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- 15. Repeat steps 7 to 13.
- 16. At WID = 500 ps, switch between NORM and COMP.
- 17. Set HP 8131A:
 - a. Period = 2 ns
 - b. WID = 500 ps.
- 18. Using the Vernier keys, change WID to 300 ps (\leq 500 ps).
- 19. Check in NORM/COMP for a stable output signal (no missing pulse or double pulse) with WID = ≤ 500 ps. If necessary repeat step 11 for a lower value.
- 20. Set HP 8131A:
 - a. Period = 5 ns
 - b. WID = 500 ps
 - c. DOUB = 2 ns.
- 21. Using the Vernier keys, change PER to 10 ns.
- 22. Check in NORM/COMP for a stable output signal (no missing pulse).
- 23. Repeat the check with DOUB set to 2.14 ns.
- 24. If necessary repeat steps 1 to 23 (using the range \pm 40 ps in steps 7 and 11.
- 25. Switch the HP 8131A OFF.
- 26. If option 020 is fitted, remove output board 2 to gain access to channel 1 board and fold it over the front of the instrument.
- 27. Switch ON the HP 8131A, ERROR 504 may be displayed, ignore it.
- 28. Repeat steps 1 to 24 for Chan 1 OUT.



For this test, the keys for channel 1 are not active. Use Channel 2 control keys.

- 29. Re-assemble the instrument.
- 30. Carry out functional checks on both channels in:
 - a. AUTO operating mode
 - b. EXT INPUT mode
 - c. TRANSducer operating mode.

Adjustments to the HP 8130A and HP 8131A Timing Board

There are EEPROMs on the timing boards of the HP 8130A and the HP 8131A, containing the calibration factors for these boards. Calibration factors are measured by a special adjustment program during production. Further adjustment of these boards can only be carried out in the factory.

Performance Tests

Introduction

The performance tests verify the HP 8130A/HP 8131A's specified performance characteristics.

They are suitable for incoming inspection, preventative maintenance, troubleshooting, and final test.

Carry out the performance tests in the same sequence as they appear in the manual.

Note

Recommended test equipment is listed in Table 4.1.

Safety

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The HP 8130A/HP 8131A is a Safety Class 1 instrument. It has an exposed metal chassis that is directly connected to earth potential through the line power cord.

Before testing the instrument review:

- 1. The Safety Summary (red page)
- 2. The Instrument Reference Manuals
- 3. The instrument safety markings.

Test Record

A test record is located at the end of this chapter.

The test results are identified as TR Entrys in the performance tests and on the test record.

Recommended Test equipment

Other equipment can be used provided it meets the specifications of this equipment.

Table 4-1.					
Type (Quantity)	Model	Specifications			
1:1 Probe (1)	HP 10026A	100 V max, 1:1, 50 Ω.			
10:1 Probe (1) 50 Ω feedthrough (1) termination	HP 10017A HP 10100C	300 V max, 10:1, 1 MΩ, 8 pF. 50 Ω, 2 W, 1%.			
50 Ω feedthrough (1) termination	See Figure 4-1.	50 Ω, 10 W, 0.1%.			
Adapter, (1) BNC to Banana	HP 1251-2277	BNC(f) to dual banana plug, 50 Ω			
Cable Assembly (5)	HP 8120-1839	50 Ω, 24 inches, coax, 2 BNC (m).			
Counter (1)	HP 5335A/ HP 5370B	 50 μHz to 50 MHz; 8 digit display; INPUT: 50 Ω/1 MΩ, X1/X10, AC/DC, separate/common; variable trigger level; TI/PERIOD/FREQUENCY. 			
Isolation Transformer (1)		Suitable for use with the variac.			

Type (Quantity)	Model	Specifications
Multimeter (1)	HP 3478A/	4 1/2 digit display
	HP 3456A	VDC: 30 mV to 300 V;
		30 to 35 readings/second;
		external trigger;
		input resistance: >10 M Ω
Oscilloscope (1)	HP 54121T	20 GHz
(Sampling)		
Sampling Oscilloscope Accessorie	es	
Attenuator (3)	33340C	APC 3.5 mm (f-m),
		20 dB
Adapter (2)	1250-1200	SMA (m) to BNC (f)
Cable (3)	8120-4948	SMA (m-m) coaxial
Adapter (1)	1250-1159	SMA (m-m)
Adapter (2)	1250-1700	SMA (f) to BNC (m)
Power Splitter (1)	11667B	APC 3.5 mm
Variac (1)		≥5 A, 0-300 VAC
(Variable AC Power Supply)		
Power Supply (1)	HP 6205A or	
	HP 6237A	0-60 VDC, 0-3A.
Pulse Generator (1)	HP 8112A/	1 Hz to 50 MHz;
	HP 8161A	variable delay;
		variable width;
		variable pulseq;
		external trigger;
		output amplitude: > 5 V.
ΓΕΕ (1)	HP 1250-0781	50 Ω , BNC(m)(f)(f).

Table 4-1. (continued)

Feedthrough Termination

This feedthrough must be used only where specified for DC voltage measurements.

The following figure provides a schematic and a parts list except for the case. The case must provide shielding and maintain grounding integrity.

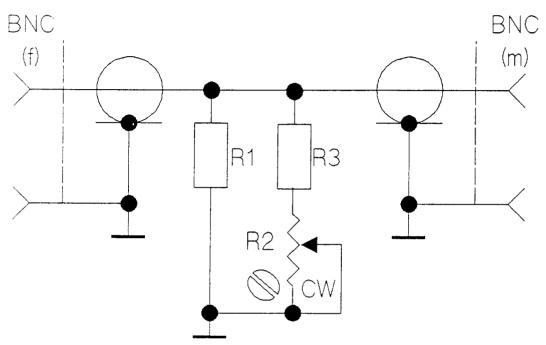


Figure 4-1. 50 Ω , 0.1%, 10 W Feedthrough Termination

 $R1 = 53.6 \Omega$, 1%, 10 W; HP Part Number: 0699-0146.

 $R2 = 200 \Omega$, 10%, 0.5 W, Variable trimmer; HP Part Number: 2100-3350.

 $R3 = 681 \Omega, 1\%, 0.5 W; HP Part Number: 0757-0816.$

- BNC (M): HP Part Number: 1250-0045.
- BNC (F): HP Part Number: 1250-0083.

1. Period Test

Specifications

Range: 3.33 ns to 99.9 ms for HP 8130A; 2 ns to 99.9 ms for HP 8131A Resolution: 3 digits (best case: 10 ps) Accuracy: 5% of programmed value ±100 ps rms Jitter: 10 ns to 100 ns range: 0.05% of programmed value +15 ps all other ranges: 0.025% of programmed value +15 ps Repeatability: Factor 4 better than accuracy

Equipment

- 1. Counter (HP 5335A/HP 5370B).
- 2. Cable, 50 Ω , BNC to BNC, coaxial (HP8120-1839).

Setup

- 1. Connect the HP 8130A/HP 8131A's OUTPUT 1/2 to the counter's channel A input (HP 5335A). FREQ input (HP 5370B).
- 2. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8	3131A
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	3.33 ns		2.00 ns	
	DEL	0 ns	0 ns	0 ns	0 ns
	DCYC	50%	50%	50%	50%
	LEAD	1.00 ns	1.00 ns		-
	TRA	1.00 ns	1.00 ns	—	—
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

3. Set Counter:

- a. Function = PERIOD
- b. Channel A = 50 Ω
- c. Trigger Level = Preset

Procedure

Check the HP 8130A/HP 8131A period at the following settings:

Period	Acceptable Range	TR entry
3.33 ns*	3.06 ns to 3.56 ns	1-1 (HP 8130A)
2.00 ns	1.80 ns to 2.20 ns	1-1 (HP 8131A)
5.00 ns	4.65 ns to 5.35 ns	1-2
10.0 ns	9.4 ns to 10.6 ns	1-3
50.0 ns	47.4 ns to 52.6 ns	1-4
100 ns	94.9 ns to 105.1 ns	1-5
500 ns	474.9 ns to 525.1 ns	1-6
1.00 μs	949.9 ns to 1.05 μ s	1-7
$5.00 \ \mu s$	4.75 μ s to 5.25 μ s	1-8
10.0 μs	9.5 μ s to 10.5 μ s	1-9
50.0 μs	47.5 μ s to 52.5 μ s	1-10
100 μs	95 μ s to 105 μ s	1-11
$500~\mu s$	475 μ s to 525 μ s	1-12
1.00 ms	950 μ s to 1.05 ms	1-13
5.00 ms	4.75 ms to 5.25 ms	1-14
10.0 ms	9.5 ms to 10.5 ms	1-15
50.0 ms	47.5 ms to 52.5 ms	1-16
99.9 ms	94.9 ms to 104.9 ms	1-17

* To meet this specification it is acceptable to program the value to less than 3.33 ns.

2. Delay Test

This test consists of two parts:

- 1. Short Delay Test
- 2. Long Delay Test

Note

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Repeat the entire delay test procedure for the second channel, if installed.

The specifications and tests are for the 50% point of amplitude.

Specifications

Range:	0 ns to 99.9 ms
	Fixed Delay (Trigger Output to Main Output):
	18 ns for the HP 8130A; 20 ns (nominal) for the HP8131A
Maximum Delay	$3.33 \text{ ns} \leq \text{Period} < 4.99 \text{ ns: Max. Delay} = (50\% \text{ of Period}) - 1.00 \text{ ns}$
	$5.00 \text{ ns} \leq \text{Period} < 19.9 \text{ ns}$: Max. Delay = (70% of Period) - 2.00 ns
	Period ≥ 20.0 ns: Max. Delay = (90% of Period) - 6.00 ns
Maximum Delay	
(HP 8131A):	Period \geq 20.0 ns: Max. Delay = (90% of Period) - 6.00 ns
	5% of programmed value ± 1.5 ns
rms Jitter:	10 ns to 100 ns range: 0.05% of programmed value +15 ps
	All other ranges: 0.025% of programmed value +15 ps
Repeatability:	Factor 4 better than accuracy

Equipment

- Digitizing Oscilloscope with Accessory (HP 54121T)
- Pulse Generator (HP 8112A/HP 8161A)
- Counter (HP 5335A/ HP 5370B)
- Cable, 50 Ω , BNC to BNC, coaxial, 2 each (HP 8120-1839).

Delay Test, Part 1: Short Delay Test

Setup

- 1. Set Pulse Generator:
 - PER = 500 nsWID = 100 nsHIL = 0.5 VLOL = -0.5 V

Fixed Transition Time

2. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	TRIG				
	Positive slope				
TIMING	DEL	0 ns	0 ns	0 ns	0 ns
	WIDTH	100 ns	10 ns	100 ns	10 ns
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		—
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 3. Connect the Pulse Generator's Output via a 50 Ω feedthrough to the HP 8130A/HP 8131A's EXT INPUT.
- 4. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a BNC(m) to SMA(f) adapter (HP 8130A only)
 - an SMA(m-m) coaxial cable assembly
 - an APC 3.5 mm 20 dB Attenuator (f-m)

to the Input 3 of the HP 54121A.

- 5. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a second similar accessory assembly to Input 4 of the HP 54121A.
- 6. Connect the Pulse Generator's Trigger Output via a third similar accessory assembly to the TRIG input of the HP 54121A.

Procedure

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- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. set TIME/DIV = 20 ns/div
 - c. select the Display menu and set the Screen function to Single; set the Number of Averages to 64
 - d. select the delta V menu and turn the voltage markers On and assign marker 1 to channel 3 and marker 2 to channel 4
 - e. set Preset Levels = 50-50% and press Auto Level Set
 - f. select the delta t menu and turn the time markers On
 - g. set START ON EDGE = POS1 and STOP ON EDGE = POS1.
 - h. Press the Precise Edge Find key.
- 2. Press the Precise Edge Find key for each new Delay setting.
- 3. Check the HP 8130A/HP 8131A delay at the following settings:

	Delay	Acceptable Range	TR entry
C).0 ns	fixed delay	2-1
1	10.0 ns	8.0 ns to 12.0 ns	2-2
2	20.0 ns	17.5 ns to 22.5 ns	2-3
5	0.0 ns	46.0 ns to 54.0 ns	2-4
8	0.0 ns	74.5 ns to 85.5 ns	2-5
9	9.9 ns	93.4 ns to 106.4 ns	2-6

Record the value of the fixed delay, and subtract it from the other readings.

4. Step with the Vernier up keys from:

a. 0 ps to 100 ps in 10 ps steps

- b. 100 ps to 1 ns in 100 ps steps
- c. 1 ns to 10 ns in 1 ns steps

Check the function/variation on the oscilloscope.

Delay Test, Part 2: Long Delay Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	95 μs		95 μs	
	DEL	100 ns	0 ns	100 ns	10 ns
	WIDTH	100 ns	10 ns	100 ns	1 ns
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Set the counter:
 - a. FUNCTION = TI A to B
 - b. START = 50 Ω , POS (+) slope, DC, X1
 - c. STOP = 50 Ω , POS (+) slope, DC, X1
 - d. Gate Time = as necessary
 - e. INPUT MODE = SEP (SEPARATE)
 - f. START/STOP trigger levels = preset.
- 3. Connect the HP 8130A/HP 8131A TRIG OUTPUT to the counter's START input.
- 4. Connect the HP 8130A/HP 8131A OUTPUT 1/2 to the counter's STOP input.

Procedure

Check the HP 8130A/HP 8131A delay at the following Period and Delay settings:

Period	Delay	Acceptable Range	TR entry
*95.0 μs	100 ns	93.5 ns to 106.5 ns	2-7
*95.0 μs	500 ns	473.5 ns to 526.5 ns	2-8
*95.0 µs	999 ns	947.55 ns to 1.051 μs	2-9
99.9 ms	100 μs	95.00 μ s to 105 μ s	2-10
99.9 ms	1 ms	950.00 μs to 1.050 ms	2-11
99.9 ms	80 ms	76.00 ms to 84.000 ms	2-12

Note

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*Take the fixed delay into account.

3. Double Pulse Test

This test consists of two parts:

- 1. Short Double Pulse Test
- 2. Long Double Pulse Test

Note

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Repeat the entire double pulse test procedure for the second channel, if installed.

The specifications and tests are for the 50% point of amplitude.

Specifications

Range: 3.33 ns to 99.9 ms for HP 8130A; 2 ns to 9.99 ms for HP 8131A
Maximum Period < 7.1 ns: Max Double Pulse = n/a (HP 8130A only)
Double Pulse: 7.2 ns ≤ Period ≤ 9.99 ns: Max Double Pulse = 50% of Period (HP8130A only)
Period ≥ 10.0 ns: (90% of Period) - 4.00 ns
Resolution: 3 digits (best case: 10 ps)
Accuracy: 5% of programmed value ±250 ps
rms Jitter: 10 ns to 100 ns range: 0.05% of programmed value +15 ps
All other ranges: 0.025% of programmed value +15 ps
Repeatability: Factor 4 better than accuracy

Equipment

- Digitizing Oscilloscope with Accessory (HP 54121T)
- Counter (HP 5335A/HP 5370B)
- Cable, 50 Ω , BNC to BNC, coaxial, 2 each (HP 8120-1839).

Double Pulse Test, Part 1: Short Double Pulse Test

Setup

1. Set the HP 8130A/HP 8131A:

	•	HP 8130A		HP	31 3 1A
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	200 ns		200 ns	
	DOUB	20 ns	2 ns	20 ns	2 ns
	WIDTH	10 ns	1.5 ns	10 ns	1.00 ns
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a. a BNC(m) to SMA(f) adapter (HP 8130A only)
 - b. SMA(m-m) coaxial cable assembly
 - c. an APC 3.5 mm 20 dB Attenuator (f-m)
 - to the TRIG Input of the HP 54121A.
- Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a similar accessory assembly to the Input 4 of the HP 54121A.

Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the Number of Averages to 64
 - c. select the delta V menu and turn the voltage markers On
 - d. set Preset Levels = 50-50% and press Auto Level Set
 - e. select the delta t menu and turn the time markers On
 - f. set START ON EDGE = POS1 and STOP ON EDGE = POS2.
- 2. Press the Precise Edge Find key for each new Double setting.

Double	Acceptable Range	TR entry
20.0 ns	18.75 ns to 21.25 ns	3-1
50.0 ns	47.25 ns to 52.75 ns	3-2
80.0 ns	75.75 ns to 84.25 ns	3-3
99.9 ns	94.65 ns to 105.15 ns	3-4

3. Check the HP 8130A/HP 8131A double pulse delay at the following settings:

- 4. Change the HP 8130A Width to 1.5 ns, and Double to $3.33\ \text{ns.}$
- 5. Change the HP 8131A Width to 1 ns, and Double to 2 ns.
- 6. Check the HP 8130A/HP 8131A double pulse delay at the following settings:

Double	Acceptable Range	TR entry
3.33 ns	2.51 ns to 3.75 ns	3-5 (HP 8130A only)
2.00 ns	1.65 ns to 2.35 ns	3-5 (HP 8131A only)
5.0 ns	4.50 ns to 5.50 ns	3-6
10.0 ns	9.25 ns to 10.75 ns	3-7

Double Pulse Test, Part 2: Long Double Pulse Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	95 μs		95 μs	
	DOUB	200 ns	2 ns	200 ns	2 ns
	WIDTH	100 ns	1.5 ns	100 ns	l ns
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns	_	
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

2. Set the counter:

FUNCTION = TI A to B START = 50 Ω , POS (+) slope, DC, X1 STOP = 50 Ω , POS (+) slope, DC, X1 Gate Time = as necessary INPUT MODE = COM START/STOP trigger levels = Preset

3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 to the counter's START input.

Procedure

Check the HP $8130\mathrm{A}/\mathrm{HP}$ $8131\mathrm{A}$ double pulse delay at the following Period and Double settings:

Period	Double	Acceptable Range	TR entry
95.0 μs	200 ns	189.75 ns to 210.25 ns	3-8
95.0 μs	1 μs	950.00 ns to 1.05 μ s	3-9
95.0 μs	10 µs	9.50 μ s to 10.5 μ s	3-10
99.9 ms	100 µs	95 μ s to 105.00 μ s	3-11
99.9 ms	l ms	950 μ s to 1.05 ms	3-12
99.9 ms	10 ms	9.5 ms to 10.50 ms	3-13
99.9 ms	80 ms	76 ms to 84.00 ms	3-14

4. Width Test

This test consists of two parts.

- 1. Short Width Test
- 2. Long Width Test

Note

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Repeat the entire width test procedure for the second channel, if installed.

The specifications and tests are for the 50% point of amplitude.

Specifications

Range:	1.5 ns to 99.9 ms for the HP 8130A; 500 ps to 99.9 ms for the HP 8131A
Maximum Width:	3.33 ns \leq Period \leq 4.99 ns: Max Width = 50% of period (HP 8130A only)
	$5.00 \leq Period \leq 19.9$: Max Width = (70% of Period) - 1 ns (HP8130A only)
	Period ≥ 20.0 ns: (90% of Period) - 5.00 ns
Resolution:	3 digits (best case: 10 ps)
Accuracy:	5% of programmed value ± 250 ps
rms Jitter:	10 ns to 100 ns range: 0.05% of programmed value +15 ps
	All other ranges: 0.025% of programmed value $+15$ ps
Repeatability:	Factor 4 better than accuracy

Equipment

- Digitizing Oscilloscope with Accessory (HP 54121T)
- Counter (HP 5335A/HP 5370B)
- Cable, 50 Ω , BNC to BNC, coaxial, 2 each (HP 8120-1839)

Width Test, Part 1: Short Width Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		нр 8	3131A
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	200 ns		200 ns	
	DEL	0 ns	0 ns	0 ns	0 ns
	WIDTH	10 ns	15 ns	10 ns	15 ns
	LEAD	1.00 ns	1.00 ns		—
	TRA	1.00 ns	1.00 ns		—
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a. a BNC(m) to SMA(f) adapter (HP 8130A only)
 - b. SMA(m-m) coaxial cable assembly
 - c. an APC 3.5 mm 20 dB Attenuator (f-m)
 - to the TRIG Input of the HP 54121A.
- 3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a similar accessory assembly to the Input 4 of the HP 54121A.

Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the Number of Averages to 64
 - c. select the delta V menu and turn the voltage markers On
 - d. set Preset Levels = 50-50% and press Auto Level Set
 - e. select the delta t menu and turn the time markers On
 - f. set START ON EDGE = POS1 and STOP ON EDGE = NEG1.
- 2. Change the oscilloscope timebase to 500 ps/div.
- 3. Change the HP 8130A Width to 1.5 ns or the HP 8131A Width to 500 ps.
- 4. Press the Precise Edge Find key for each new Width setting.

Width	Acceptable Range	HP 8130A TR entry	HP 8131A TR entry
*500 ps	225 ps to 775 ps		4-1
800 ps	510 ps to 1.09 ns		4-2
**1.5 ns	1.175 ns to 1.825 ns	4-1	_
2.0 ns	1.650 ns to 2.350 ns	4-2	4-3
5.0 ns	4.500 ns to 5.500 ns	4-3	4-4
10.0 ns	9.250 ns to 10.750 ns	4-4	4-5
20.0 ns	18.750 ns to 21.250 ns	4-5	4-6
50.0 ns	47.250 ns to 52.750 ns	4-6	4-7
80.0 ns	75.750 ns to 84.250 ns	4-7	4-8
99.9 ns	94.650 ns to 105.150 ns	4-8	4-9

5. Check the HP 8130A/HP 8131A pulse width at the following settings:

- 6. For the HP 8130A step with the Vernier up keys from:
 - a. 1.5 ns to 1.6 ns in 10 ps steps
 - b. 1.6 ns to 2 ns in 100 ps steps
 - c. 2 ns to 10 ns in 1 ns steps
 - Check the function/variation on the oscilloscope.
- 7. For the HP 8131A step with the Vernier up keys from:
 - a. 500 ps to 600 ps in 10 ps steps
 - b. 600 ps to 1 ns in 100 ps steps
 - c. 1 ns to 10 ns in 1 ns steps

Check the function/variation on the oscilloscope.



* To meet this specification it is acceptable to program the value to less than 500 ps.

** To meet this specification it is acceptable to program the value to less than 1.5 ns.

Width Test, Part 2: Long Width Tests

Setup

1. Set the HP $8130\mathrm{A}/\mathrm{HP}$ $8131\mathrm{A}:$

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	95 μs		95 μs	
	DEL	0 ns	0 ns	0 ns	0 ns
	WIDTH	500 ns	1.5 ns	500 ns	1.0 ns
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		—
OUTPUT	HIGH	+1.5 V	+1.5 V	+1.5 V	+1.5 V
	LOW	-1.5 V	-1.5 V	-1.5 V	-1.5 V
		ENABLE	DISABLE	ENABLE	DISABLE

2. Set the counter:

FUNCTION = TI A to B START = 50 Ω , POS (+) slope, DC, X1 STOP = 50 Ω , NEG (-) slope, DC, X1 Gate Time = as necessary

INPUT MODE = COM

START/STOP trigger levels = Preset.

3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 to the counter's START input.

Procedure

Check the HP 8130A/HP 8131A pulse width at the following Period and Width settings:

p ---

Period	WIDTH	Acceptable Range	HP 8130A TR entry	HP 8131A TR entry
95.0 μs	500 ns	474.75 ns to 525.250 ns	4-9	4-10
95.0 μs	999 ns	948.80 ns to 1.049 μ s	4-10	4-11
95.0 μs	10 μs	9.50 μ s to 10.500 μ s	4-11	4-12
99.9 ms	100 μs	95.00 μ s to 105.000 μ s	4-12	4-13
99.9 ms	1 ms	950.00 μs to 1.050 ms	4-13	4-14
99.9 ms	80 ms	76.00 ms to 84.000 ms	4-14	4-15

5. Jitter Test

This test consists of three parts:

- 1. Period Jitter
- 2. Delay Jitter
- 3. Width Jitter

Note

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Repeat the tests for the second channel, if installed.

Specifications

rms Jitter: 10 ns to 100 ns range: 0.05% of programmed value +15 ps All other ranges: 0.025% of programmed value +15 ps

Equipment

HP 54121T Digitizing Oscilloscope with Accessory HP 54008A Delay Line (HP 8130A only)

Jitter Test, Part 1: Period Jitter Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	50 ns		50 ns	
	DEL	0 ns	0 ns	0 ns	0 ns
	WIDTH	25 ns	500 ps	25 ns	500 ps
	LEAD	1.00 ns	1.00 ns	_	
	TRA	1.00 ns	1.00 ns		
OUTPUT	HIGH	+1.0 V	+1.0 V	+1.0 V	+1.0 V
	LOW	0 V	0 V	0 V	0 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect an APC 3.5 mm 20 dB Attenuator (f-m) to the TRIG Input of the HP 54121A.
- 3. Connect (via an SMA (m-m) adapter) the APC 3.5 mm (f) output of the Power Splitter HP 11667B to the 20 dB Attenuator at the TRIG Input of the HP 54121A.
- 4. For the HP 8130A, connect the other output of the Power Splitter via an SMA(m-m) coaxial cable assembly to one of the SMA connectors on the HP 54008A. For the HP 8131A connect the other output of the Power Splitter via an SMA (m) BNC (f) adapter and connect four BNC (m-m) cables (61 cm) together to this adapter. Use three BNC adapters (f-f).
- 5. For the HP 8130A connect the free SMA Connector on the HP 54008A Delay Line to input 3 of the HP 54121A. For the HP 8131A connect the cable assembly via a BNC(f)-SMA(m) adapter to input 3 of the HP 54121A.
- 6. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via:
 - a. a BNC(m) to SMA(f) adapter (HP 8130A only)
 - b. a coaxial cable assembly SMA (m-m).
 - to the Input of the Power Splitter.

Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the Number of Averages to 128

- c. select the Timebase menu and set the TIME/DIV to 200 ps/div for the HP 8130A and to 10 ps/div for the HP 8131A
- d. center the first positive going edge of the signal (approximate Delay = 26.4 ns for the HP 8130A and 17.8 ns for the HP 8131A)
- e. select the channel menu and set the Attenuation factor to 10 (channel 3)
- f. set the VOLT/DIV to 10 mV/div
- g. select the delta V menu and turn the V Markers On
- h. set the Marker 1 Position to 240 mV and the Marker 2 Position to 245 mV
- i. select the delta t menu and turn the T Markers On
- j. set START ON EDGE = POS1 and STOP ON EDGE = POS1
- k. press the Precise Edge Find key.
- 2. RECORD the delta t! It is the rise time of the reference signal within a 1% amplitude window of the signal connected to Input 3. This value is needed later to calculate the correct jitter.
- 3. Select the oscilloscope's Timebase menu and center the second positive going edge of the signal (actual Delay +50.x ns = approximate Delay 66.x ns)
- 4. Press More and Histogram.
- 5. Select the Window submenu and set:
 - Source is channel 3

choose the time Histogram

press WINDOW MARKER 1 and set it to 240 mV

press WINDOW MARKER 2 and set it to 245 mV

- 6. Select the Acquire submenu and set the Number of Samples to 1000. Press Start Acquiring.
- 7. After the data for the time histogram has been acquired (#Samples = 100%), select the Result submenu.
- 8. Press Mean and Sigma. RECORD the value of Sigma!
- 9. The rms jitter is calculated as follows:

$$\frac{6\sigma - \Delta t_{ref signal}}{6}$$

- 10. Maximum rms jitter (period = 50 ns) is 40 ps TR entry 5-1
- 11. Set the HP 8130A/HP 8131A: PER 500 ns

12. Repeat steps 3 to 9.

Time/Div 100 ps/div Delay approximately 51x.x ns

NG.

Note

Maximum rms jitter (period = 500 ns) is 140 ps TR entry 5-2

Jitter Test, Part 2: Width Jitter Test

Setup

- 1. Same setup as in previous test.
- 2. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8	131A
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
TIMING	PERIOD	1.00 μs		1.00 μs	
	WIDTH	1.5 ns	1.5 ns	1.0 ns	500 ps

Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press the More key
 - b. select the Display menu and set the #Averages = 256
 - c. select the Timebase menu and center the first negative going edge of the signal (For the HP 8130A Time/Div 20 ps/div, approximate Delay = 28.x ns: for the HP 8131A Time/Div 10 ps/div, approximate Delay = 17.x ns).
 - d. select the delta V menu and set the Marker 1 Position to 260 mV and the Marker 2 Position to 255 mV
 - e. select the delta t menu and set START ON EDGE = NEG1 and STOP ON EDGE = NEG1
 - f. press the Precise Edge Find key.
- 2. RECORD delta t! It is the fall time of the signal within a 1% amplitude window of the signal connected to Input 3. This value is needed later to calculate the correct jitter.
- 3. Set the HP 8130A/HP 8131A: WID 50 ns
- 4. Select the oscilloscope's Timebase menu and center the first negative going edge of the signal (Time/Div 20 ps/div, Delay approximately 77.x ns for the HP 8130A and 66.x ns for the HP 8131A).
- 5. Press More = Histogram.
- 6. Select the Window submenu and press WINDOW MARKER 1 and set it to 260 mV press WINDOW MARKER 2 and set it to 255 mV.
- 7. Select the Acquire submenu and press Start Acquiring.
- 8. After the data for the time histogram is acquired (#Samples = 100%), select the Result submenu.
- 9. Press Mean and Sigma. RECORD the value of Sigma!

10. The rms jitter is calculated as follows:

$$\frac{6\sigma - \Delta t_{fall time}}{6}$$

11. Maximum rms jitter (width = 50 ns) is 40 ps TR entry 5-3

12. Set the HP 8130A/HP 8131A: WID 500 ns

13. Repeat steps 4 to 8.

Note Time/Div 100 ps/div, Delay 51x.x ns

Maximum rms jitter (width 500 ns) is 140 ps. **TR entry 5-4** 14. DISABLE THE HP 8130A/HP 8131A OUTPUTS !

Jitter Test, Part 3: Delay Jitter Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	500 ns		500 ns	
	DEL	250 ns	0 ns	250 ns	0 ns
	WIDTH	50 ns	500 ps	50 ns	500 ps
	LEAD	1.00 ns	1.00 ns	—	
	TRA	1.00 ns	1.00 ns		_
OUTPUT	HIGH	+5 V	+5 V	+5 V	+5 V
	LOW	0 V	0 V	0 V	0 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a. a BNC(m) to SMA(f) adapter (HP 8130A only)
 - b. an SMA(m-m) coaxial cable assembly
 - c. an APC 3.5 mm 20 dB Attenuator (f-m)

to the TRIG Input of the HP 54121A.

3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a similar second accessory assembly to Input 3 of the HP 54121A.

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4. ENABLE the output.

Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. select the Display menu and set the #Averages = 128
 - c. select the Timebase menu and set the TIME/DIV = 50 ps/div
 - d. center the first positive going edge of the signal (approximate Delay = 26x.x ns)
 - e. set the VOLT/DIV = 10 mV/div, Offset = 2.45 V;
- 2. Press More = Histogram.
- 3. Select the Window submenu and press WINDOW MARKER 1 and set it to 2.450 V press WINDOW MARKER 2 and set it to 2.445 V
- 4. Select the Acquire submenu and press Start Acquiring.
- 5. After the data for the time histogram has been acquired (#Samples = 100%), select the Result submenu.
- 6. Press Mean and Sigma. RECORD the value of Sigma!
- 7. The rms jitter is calculated as follows:

$$\frac{6\sigma - \Delta t_{ref signal}}{6}$$

8. Maximum rms jitter (delay = 250 ns) is 67.5 ps TR entry 5-5

6. High Level and Low Level Tests

Note

Repeat the high level and low level tests for the second channel, if installed.

Specifications

Note

ų

This specification applies to 50 Ω sources and 50 Ω loads.

High Level:	-4.90 V to 5.00 V.
Low Level:	-5.00 V to 4.90 V.
Resolution:	3 digits (best case: 10.0 mV).
Level Accuracy:	1% of programmed value $\pm 3\%$ of pulse
	amplitude, ±40 mV.
Repeatability:	Factor 4 better than accuracy
Settling time:	For the HP 8130A, 20 ns + transition time at
	fastest; for the HP 8131A, 10 ns + transition time
	at fastest

Equipment

- 1. Multimeter (HP 3478)
- 2. 50 Ω feedthrough termination, 0.1%, 10 W (see figure 4-1)
- 3. Adapter, BNC to dual banana plug (HP 1251-2277)
- 4. Cables, BNC to BNC, two each
- 5. Pulse Generator with a 50 Ω feed through termination

High Level Test

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	99.9 ms		99.9 ms	
	DEL	30 µs	0 ps	30 µs	0 ps
	WIDTH	50 ms	500 ps	50 ms	500 ps
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		
OUTPUT	HIGH	+5 V	+5 V	+5 V	+5 V
	LOW	0 V	0 V	0 V	0 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Set the Multimeter (HP 3478).
 - a. SGL TRIG = Single Trigger
 - b. Blue/AUTO ZERO = Auto Zero off
 - c. BLUE/4 = 4 digits
- 3. Set the Pulse Generator:
 - a. Mode: Trigger
 - b. Trigger slope positive
 - c. Width: 500 ns
 - d. HIL: 2.0 V
- 4. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via:
 - a. a SMA(m) to BNC(f) adapter (HP 8131A only)
 - b. a 50 Ω feedthrough (0.1%, 10 W)
 - c. a BNC (m-m) cable
 - d. a BNC to dual banana plug adapter
 - to the Multimeter's Input.
- 5. Connect the HP 8130A/HP 8131A TRIG OUTPUT to the Pulse Generator's External Input. This must be done via an SMA (m) to BNC (f) for the HP 8131A.
- 6. Connect the Pulse Generator's Output via a 50 Ω feedthrough terminator to the Multimeter's Trigger Input.

Procedure

Check the HP 8130A/HP 8131A high level at the following HIGH settings with the low level set to 0.00 V.

High Level	Acceptable Range	TR entry
5.0V	4.76 V to 5.24 V	6-1
3.0 V	2.84 V to 3.16 V	6-2
1.0 V	920 mV to 1.08 V	6-3
0.5 V	440 mV to 560 mV	6-4
0.1 V	56 mV to 144 mV	6-5

The low level 0.0 V may vary within $\pm 3\%$ of pulse amplitude, ± 40 mV.

Low Level Test

Setup

Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	99.9 ms		99.9 ms	
	DEL	30 ms	0 ps	30 ms	0 ps
	WIDTH	50 ms	500 ps	50 ms	500 ps
	LEAD	1.00 ns	1.00 ns		
	TRA	1.00 ns	1.00 ns		
OUTPUT	HIGH	0 V	0 V	0 V	0 V
	LOW	-0.1 V	-0.1 V	-0.1 V	-0.1 V
		ENABLE	DISABLE	ENABLE	DISABLE

Procedure

Check the HP 8130A/HP 8131A low level at the following low settings with the high level set to 0.00 V.

Low Level	Acceptable Range	TR entry
-0.1 V	56 mV to 144 mV	6-6
-0.5 V	440 mV to 560 mV	6-7
-1.0 V	920 mV to 1.08 V	6-8
-3.0 V	2.84 V to 3.16 V	6-9
-5.0 V	4.76 V to 5.24 V	6-10

The high level 0.0 V may vary within $\pm 3\%$ of pulse amplitude, ± 40 mV.

7. Transition Time Test

Note

Repeat the entire transition time test procedure for the second channel, if it is installed.

HP 8130A Specifications

Range: 1 ns to 100 μ s Resolution: 3 digits (best case 10 ps) Accuracy: $\pm 10\%$ of programmed value ± 300 ps

HP 8131A Specifications

10% - 90% amplitude: < 200 ps, 300 mV to 3 V range, PER \leq 1 μs 20% - 80% amplitude: < 200 ps, 100 mV to 5 V range

Equipment

HP 54121T Digitizing Oscilloscope with Accessory

Setup

1. Set the HP 8130A/HP 8131A:

	HP 8130A		HP 8131A		
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	500 μs		500 μs	
	DEL	10 ns	0 ps	10 ns	0 ps
	DCYC	50%	50%	50%	50%
OUTPUT	HIGH	+5 V	+5 V	+5 V	+5 V
	LOW	0 V	0 V	0 V	0 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a. a BNC(m) SMA(f) adapter (HP 8130A only)
 - b. cable assembly-coaxial SMA(m-m)
 - c. an APC 3.5 mm 20 dB Attenuator (f-m)
 - to the TRIG Input of the HP 54121A

3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a similar accessory assembly to Input 4 of the HP 54121A.

HP 8130A Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. Center one pulse horizontally and vertically on screen (for example, TIME/DIV = $50 \ \mu$ s/div, DELAY = $375 \ \mu$ s, VOLT/DIV = $800 \ mV/div$, Offset = $2.5 \ V$).
 - c. select the Display menu and set the Number of Averages to 64
 - d. select the channel menu and set the Attenuation factor to 10
 - e. select the delta V menu and turn the voltage markers On
 - f. set Preset Levels = 10-90% and press Auto Level Set
 - g. select the Timebase menu and set TIME/DIV = 2 ns, DELAY = 16 ns
 - h. select the delta t menu and turn the time markers On
 - i. set START ON EDGE = POS1 and STOP ON EDGE = POS1
- 2. Set HP 8130A: Period: $1\mu s$
- 3. After the averaging, while the Oscilloscope is in the delta t menu, press the Precise Edge Find Key.

Oscilloscope Time/Div	Period	Leading edge	Trailing edge	Acceptable Range	TR entry
2 ns	1 μs	1 ns*	1 ns to	1.31 ns	7-1
5 ns		10 ns	5 ns	8.7 ns to 11.3 ns	7-2
10 ns		50 ns	50 ns	44.7 ns to 55.3 ns	7-3
20 ns	5 μs	100 ns	500 ns	90 ns to 110 ns	7-4
100 ns		500 ns		400 ns to 550 ns	7-5
200 ns		1 μs		900 ns to 1.10 μ s	7-6
500 ns	50 µs	2 µs	5 µs	1.80 μ s to 2.20 μ s	7-7
1 µs		5 μs		4.50 μ s to 5.5 μ s	7-8
2 μ s	500 µs	10 µs		9 μ s to 11 μ s	7-9
10 μs		50 µs	50 μs	45 μ s to 55 μ s	7-10
20 µs		100 µs		90 µs to 110 µs	7-11

4. Check the HP 8130A rise times at the following leading edge settings

* Underprogramming to 670 ps is allowed to meet this specification.

5. Set the HP 8130A: Leading: 1 ns, Trailing: 1 ns

- 6. Select the oscilloscope's Timebase menu and set DELAY = 520ns Select the oscilloscope's delta t menu and set START ON EDGE = NEG1 and STOP ON EDGE = NEG1.
- 7. While the oscilloscope is in the delta t menu press the Precise Edge Find Key.
- 8. Check the HP 8130A output signal fall times at the following trailing edge settings

Oscilloscope Time/Div	Period	Trailing edge	Leading edge	Acceptable Range	TR entry
2 ns	1 μs	1 ns*	l ns	to 1.31 ns	7-12
5 ns	2 	10 ns	5 ns	8.7 ns to 11.3 ns	7-13
10 ns		50 ns	50 ns	44.7 ns to 55.3 ns	7-14
20 ns	$5 \ \mu s$	100 ns	500 ns	90 ns to 110 ns	7-15
100 ns		500 ns		400 ns to 550 ns	7-16
200 ns		1 μs		900 ns to 1.10 μ s	7-17
500 ns	50 µs	2 μs	5 µs	1.80 μ s to 2.20 μ s	7-18
1 μs		$5 \ \mu s$		4.50 μ s to 5.5 μ s	7-19
2 μs	500 μs	10 <i>µ</i> s		9 μs to 11 μs	7-20
10 µs		50 μ s	50 µs	45 μ s to 55 μ s	7-21
20 µs		100 μs		90 μ s to 110 μ s	7-22

* Underprogramming to 670 ps is allowed to meet this specification.

HP 8131A Procedure

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. Center one pulse horizontally and vertically on screen (for example, TIME/DIV = $50 \ \mu$ s/div, DELAY = 375 μ s, VOLT/DIV = 800 mV/div, Offset = 2.5 V).
 - c. select the Display menu and set the Number of Averages to 64
 - d. select the channel menu and set the Attenuation factor to 10
 - e. select the delta V menu and turn the voltage markers On
 - f. set Preset Levels = 20-80% and press Auto Level Set
 - g. select the Timebase menu and set TIME/DIV = 20 ns, DELAY = 16 ns
 - h. select the delta t menu and turn the time markers On
 - i. set START ON EDGE = POS1 and STOP ON EDGE = POS1
- 2. Set HP 8131A: Period: 250 ns
- 3. While the Oscilloscope is in the delta t menu, press the Precise Edge Find Key.
- 4. Check for rise time < 200 ps TR ENTRY 7-1.

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- 5. Select the oscilloscope delta t menu and set START ON EDGE = NEG1 and STOP ON EDGE = NEG1.
- 6. Press the Precise Edge Find Key
- 7. Check for Fall time < 200 ps TR ENTRY 7-2
- 8. Repeat steps 1 to 8 with HP 8131A set: HIGH = 3.0 V TR ENTRIES 7-3 and 7-4



Set the voltage marker in the delta V menu to the 10-90% levels. Take the oscilloscope trace flatness error (GaAs IC input circuit) into account.

8. Pulse Aberration Test

Note

Repeat this test for the second channel, if installed.

4

Specifications

Overshoot and Ringing: $\leq 10\%$ of the pulse amplitude ± 20 mV for the HP 8130A; $\leq 15\%$ of the pulse amplitude ± 20 mV for the HP 8131A.

Equipment

HP 54121T Digitizing Oscilloscope with Accessory

Setup

1. Set the HP 8130A/HP 8131A:

		HP 8130A		HP 8131A	
CONTROL	SETTING	CHANNEL 1	CHANNEL 2	CHANNEL 1	CHANNEL 2
MODE	AUTO				
TIMING	PERIOD	500 μs		500 μs	
	DEL	5 ns	0 ps	5 ns	0 ps
	DCYC	50%	50%	50%	50%
OUTPUT	HIGH	+5 V	+5 V	+5 V	+5 V
	LOW	0 V	0 V	0 V	0 V
		ENABLE	DISABLE	ENABLE	DISABLE

- 2. Connect the HP 8130A/HP 8131A's TRIG OUTPUT via:
 - a. a BNC(f) SMA(m) adapter (HP 8130A only)
 - b. cable assembly-coaxial SMA (m-m)
 - c. an APC 3.5 mm 20 dB Attenuator (f-m)

to the TRIG Input of the HP 54121A.

3. Connect the HP 8130A/HP 8131A OUTPUT 1/2 via a similar accessory assembly to the Input 4 of the HP 54121A.

Procedure

Note

- 1. Set the HP 54121T Oscilloscope:
 - a. press AUTOSCALE
 - b. Center one pulse horizontally and vertically on screen (e.g. TIME/DIV = 50 μ s/div; DELAY = 377 μ s for the HP 8130A and 350 μ s for the HP 8131A; VOLT/DIV = 800 mV/div)
 - c. select the Display menu and set the Number of Averages to 64
 - d. select the channel menu and set the Attenuation factor to $10\,$
 - e. select the delta V menu and turn the voltage markers On
 - f. set the VARIABLE LEVELS = 90-110% for the HP 8130A and 85-115% for the HP 8131A and press Auto Level Set
 - g. select the channel menu and center vertically the top pulse (Offset = 5 V)
 - h. set the VOLTS/DIV to 500 mV/div
 - i. select the Timebase menu and set TIME/DIV = 500 ps, DELAY = 21.5 ns for the HP 8130A and 17.x ns for the HP 8131A.
- 2. Set HP 8130A/HP 8131A: Period: 500 ns
- 3. Check the Overshoot and Ringing for $\leq 10\% \pm 20$ mV for the HP 8130A and $\leq 15\% \pm 20$ mV for the HP 8131A TR entry 8-1

Take the oscilloscope's trace flatness error (GaAs input circuit) into account.

4. Repeat steps 1 to 3. Set HP 8130A/HP 8131A; HIGH = 500 mV TR entry 8-2

The HP 8130A Performance Test Record

MODEL: HP 8130A	TESTED BY:
SERIAL NUMBER:	DATE:
CUSTOMER:	CSO#:

COMMENTS:

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Period:					
3.33 ns	3.06 ns	(1-1)	3.56 ns		
5.00 ns	4.65 ns	(1-2)	5.35 ns .		
10.0 ns	9.4 ns	(1-3)			
50.0 ns	47.4 ns	(1-4)	52.6 ns .		
100 ns	94.9 ns	(1-5)			
500 ns	474.9 ns	(1-6)	525.1 ns _		
$1.00 \ \mu s$	949.9 ns	(1-7)	1.05 μs _		
$5.00~\mu s$	$4.75~\mu s$	(1-8)			·
10.0 µs	9.5 μs	(1-9)			
$50.0~\mu s$	$47.5 \ \mu s$	(1-10)	$52.5~\mu s$ _		
$100 \ \mu s$	95 μs	(1-11)	$105~\mu s$ _		
$500~\mu s$	475 ms	(1-12)	$525~\mu { m s}$ _		
1.00 ms	950 ms	(1-13)	1.05 ms _		
5.00 ms	4.75 ms	(1-14)	5.25 ms _		
10.0 ms	9.5 ms	(1-15)	10.5 ms _		
50 ms	47.5 ms	(1-16)	52.5 ms _		<u> </u>
99.9 ms	94.9 ms	(1-17)	104.9 ms _		

Test	Limit Mininum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Short I	Delay:				
0.00 ns		(2-1)	-		
10.0 ns	8.0 ns	(2-2)	12.0 ns	<u></u>	
20.0 ns	17.5 ns	(2-3)	$22.5~{\rm ns}$	<u></u>	<u>. </u>
50.0 ns	46.0 ns	(2-4)	54.0 ns		
80.0 ns	74.5 ns	(2-5)	85.5 ns		
99.9 ns	93.4 ns	(2-6)	106.4 ns	·	

Long Delay:

93.5 ns	(2-7)	106.5 ns		
473.5 ns	(2-8)	526.5 ns		
947.55 ns	(2-9)	$1.051~\mu s$		
95 μs	(2-10)	$105 \ \mu s$		
950 ms	(2-11)	1.05 ms		
76 ms	(2-12)	84 ms		
	473.5 ns 947.55 ns 95 μs 950 ms	473.5 ns (2-8) 947.55 ns (2-9) 95 μs (2-10) 950 ms (2-11)	473.5 ns $(2-8)$ 526.5 ns 947.55 ns $(2-9)$ $1.051 \ \mu s$ 95 μs $(2-10)$ $105 \ \mu s$ 950 ms $(2-11)$ $1.05 \ m s$	93.5 ns $(2-7)$ 106.5 ns 473.5 ns $(2-8)$ 526.5 ns 947.55 ns $(2-9)$ $1.051 \ \mu s$ 95 μs $(2-10)$ $105 \ \mu s$ 950 ms $(2-11)$ $1.05 \ m s$ 76 ms $(2-12)$ 84 ms

Short Double Pulse:

20.0 ns	18.75 ns	(3-1)	21.25 ns	
50.0 ns	47.25 ns	(3-2)	52.75 ns	
80.0 ns	75.75 ns	(3-3)	84.25 ns	
99.9 ns	94.65 ns	(3-4)	105.15 ns	
3. 33 ns	2.91 ns	(3-5)	3.75 ns	
5.00 ns	4.5 ns	(3-6)	5.5 ns	
10.0 ns	9.25 ns	(3-7)	10.75 ns	

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Long D	ouble Pulse	2:			
$200 \ \mathrm{ns}$	189.75 ns	(3-8)	210.25 ns		
$1 \ \mu s$	950 ns	(3-9)	$1.05 \ \mu s$		
$10 \ \mu s$	$9.5~\mu s$	(3-10)	$10.5 \ \mu s$		
100 μs	95 μ s	(3-11)	$105 \ \mu s$		
1 ms	950 μs	(3-12)	1.05 ms		
10 ms	9.5 ms	(3-13)	10.5 ms		
80 ms	76 ms	(3-14)	84 ms		

Short Width:

1.5 ns	1.175 ns	(4-1)	1.825 ns	 · · · · · · · · · · · · · · · · · · ·
2.00 ns	1.65 ns	(4-2)	2.35 ns	
5.00 ns	4.5 ns	(4-3)	5.5 ns	
10.0 ns	9.25 ns	(4-4)	10.75 ns	
		(4-5)		
		(4-6)		
		(4-7)		
99.9 ns	94.65 ns	(4-8)	105.15 ns	

Long Width:

500 ns	474.75 ns	(4-10)	525.25 ns	
999 ns	948.8 ns	(4-11)	1.049 μs	
10 µs	9.5 μs	(4-12)	10.5 µs	
100 µs	95 μs	(4-13)	105 μs	
1 ms	950 μs	(4-14)	1.05 ms	
80 ms	76 ms	(4-15)	84 ms	

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fai
Period Jit	ter:				
\leq 40 ps		(5-1)			
$\leq 140 \text{ ps}$		(5-2)			
Width Jit	ter:				
\leq 40 ps		(5-3)			·
$\leq 140~{ m ps}$		(5-4)		· · · · · · · · · · · · · · · · · · ·	
Delay Jitt	er:				
\leq 67.5 ps		(5-5)			<u></u> _
High Leve	el:				
5.0 V	4.76 V	(6-1)	_ 5.24 V _		
3.0 V	2.84 V	(6-2)	3.16 V _		·
1.0 V	920 mV	(6-3)	1.08 V _		
0.5 V	440 mV	(6-4)	_ 560 mV _		<u> </u>
0.1 V	56 mV	(6-5)	_ 144 mV _		
Low Leve	1:				
-0.1 V	-56 mV	(6-6)	144 mV _		
-0.5 V	-440 mV	(6-7)	560 mV _		<u> </u>
-1.0 V	-920 mV	(6-8)			. <u> </u>
-3.0 V	-2.84 V	(6-9)			
-5.0 V	-4.76 V	(6-10)	5.24 V _		

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Leading edge:					
1 ns		7-1	1.31 ns _	· -	
10 ns	8.7 ns	7-2	11.3 ns _	· · · · · · · · · · · · · · · · · · ·	
50 ns	44.7 ns	7-3	_ 55.3 ns _	<u></u>	
100 ns	90 ns	7-4	110 ns _		
500 ns	400 ns	7-5	. 550 ns _		<u> </u>
1 µs	900 ns	7-6	1.10 μs _		
$2 \ \mu s$	1.80 µs	7-7	2.20 μs _		
$5 \ \mu s$	$4.50~\mu s$	7-8	. 5.5 μs _		
10 µs	9 μs	7-9	11 μs		
$50 \ \mu s$	$45 \ \mu s$	7-10	. 55 μs _		
$100 \ \mu s$	90 µs	7-11	. 110 µs _		
Trailing edge:					
1 ns		7-12	1.31 ns _		
10 ns	8.7 ns	7-13	. 11.3 ns _		
50 ns	44.7 ns	7-14	55.3 ns _		
100 ns	90 ns	7-15	110 ns _		
500 ns	400 ns	7-16	550 ns _		<u> </u>
$1 \ \mu s$	900 ns	7-17	1.10 μs _		
2 μs	1.80 µs	7-18			
$5 \ \mu s$	$4.50~\mu s$	7-19			
$10 \ \mu s$	9 μs	7-20			·
$50 \ \mu s$	$45 \ \mu s$	7-21			
100 μs	90 μs	7-22	110 μs _		
Pulse Aberration	ι				
$\leq 10\% \pm 20$ m V		(8-1)			<u></u>
\leq 10% ±20m V		(8-2)			

.

The HP 8131A Performance Test Record

MODEL: HP 8131A	TESTED BY:
SERIAL NUMBER:	DATE:
CUSTOMER:	CSO#:

COMMENTS:

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Period:					
$2.00 \ \mathrm{ns}$	1.80 ns	(1-1)	2.20 ns		
5.00 ns	4.65 ns	(1-2)	5.35 ns	····	
10.0 ns	9.4 ns	(1-3)	10.6 ns	 	
50.0 ns	47.4 ns	(1-4)			
100 ns	94.9 ns	(1-5)	105.1 ns		
500 ns	474.9 ns	(1-6)			
$1.00 \ \mu s$	949.9 ns	(1-7)			
$5.00~\mu s$	$4.75~\mu s$	(1-8)			<u> </u>
$10.0 \ \mu s$	9.5 μs	(1-9)	$10.5~\mu s$.		<u></u>
$50.0 \ \mu s$	47.5 μs	(1-10)	$52.5~\mu s$.		
100 μs	95 μ s	(1-11)	$105~\mu s$.		
500 μs	475 ms	(1-12)	$525~\mu { m s}$.		
1.00 ms	950 ms	(1-13)	1.05 ms _		······································
5.00 ms	4.75 ms	(1-14)	5.25 ms _		14
10.0 ms	9.5 ms	(1-15)	10.5 ms _		
50 ms	47.5 ms	(1-16)	52.5 ms _		
99.9 ms	94.9 ms	(1-17)	104.9 ms _		

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Short I	Delay:				
0.00 ns	_	(2-1)			
10.0 ns	8.0 ns	(2-2)	12.0 ns	······	- <u></u>
$20.0 \ \mathrm{ns}$	17.5 ns	(2-3)	22.5 ns		
50.0 ns	46.0 ns	(2-4)	54.0 ns		
80.0 ns	74.5 ns	(2-5)	85.5 ns		
99.9 ns	93.4 ns	(2-6)	106.4 ns		
Long D	elay:				
100 ns	93.5 ns	(2-7)	106.5 ns	<u></u>	
500 ns	473.5 ns	(2-8)	526.5 ns		
999 ns	947.55 ns	(2-9)	$1.051 \ \mu s$		
$100 \ \mu s$	95 μs	(2-10)	$105 \ \mu s$		
1 ms	950 ms	(2-11)	1.05 ms		·····
80 ms	76 ms	(2-12)	84 ms		
Short D	ouble Pulse				
20.0 ns	18.75 ns	(3-1)	21 25 nc		
50.0 ns		` ,			
80.0 ns		(3-3)			
99.9 ns	94.65 ns				
		(3-5)			
	4.5 ns				
0.0 ns	9.25 ns	(3-7)			
	0.20 113	(v=)	10.10 112		

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Long D	ouble Pulse	:			
$200 \ \mathrm{ns}$	189.75 ns	(3-8)	210.25 ns		
1 μs	950 ns	(3-9)	1.05 μs		·
10 µs	9.5 μs	(3-10)	10.5 μs		·
100 µs	$95~\mu s$	(3-11)	$105 \ \mu s$		
1 ms	950 μs	(3-12)	1.05 ms		
10 ms	9.5 ms	(3-13)	10.5 ms		·····
80 ms	76 ms	(3-14)	84 ms		
Short W	/idth:				
500 ps	225 ps	(4-1)	775 ps		
800 ps	510 ps	(4-2)	1.09 ns		-
.00 ns	1.65 ns	(4-3)	2.35 ns		
.00 ns	4.5 ns	(4-4)	5.5 ns		
0.0 ns	9.25 ns	(4-5)	10.75 ns		
0.0 ns	18.75 ns	(4-6)	21.25 ns	~	
0.0 ns	47.25 ns	(4-7)	52.75 ns		<u> </u>
0.0 ns	75.75 ns	(4-8)	84.25 ns		
9.9 ns	94.65 ns	(4-9)	105.15 ns		
long Wi		(
bull ns	4/4 75 nc	(4-10)	595 95 mg		

474.75 ns	(4-10)	525.25 ns	
948.8 ns	(4-11)	1.049 μs	
9.5 μs	(4-12)	10.5 μs	
95 μs	(4-13)	105 μs	
$950~\mu s$	(4-14)	1.05 ms	
76 ms	(4-15)	84 ms	
	948.8 ns 9.5 μs 95 μs 950 μs	948.8 ns (4-11) 9.5 μs (4-12) 95 μs (4-13) 950 μs (4-14)	474.75 ns (4-10) $525.25 ns$

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Period Ji	tter:				
\leq 40 ps		(5-1)			
\leq 140 ps		(5-2)		· · · - · · · · · · · · · · · · · · · ·	
Width Jit	ter:				
\leq 40 ps		(5-3)			<u> </u>
\leq 140 ps		(5-4)			
Delay Jitt	er:				
≤ 67.5 ps		(5-5)			. <u></u>
High Leve	el:				
5.0 V	4.76 V	(6-1)	5.24 V _		·
3.0 V	2.84 V	(6-2)	3.16 V _		
1.0 V	920m V	(6-3)	1.08 V _		
0.5 V	440m V	(6-4)	. 560m V _		
0.1 V	56m V	(6-5)	144m V _		
Low Level	:				
-0.1 V	-56m V	(6-6)	-144m V _		
-0.5 V	-440m V	(6-7)	-560m V _	·····	
-1.0 V	-920m V	(6-8)	-1.08 V _		
-3.0 V	-2.84 V	(6-9)	-3.16 V _		
-5.0 V	-4.76 V	(6-10)	-5.24 V _		

Test	Limit Minimum	Actual (TR Entry)	Limit Maximum	Pass	Fail
Transitions:					
$< 200 \ \mathrm{ps}$		7-1			
$< 200 \ \mathrm{ps}$		7-2		· ·	
$< 200 \ \mathrm{ps}$		7-3			
< 200 ps		7-4			
Pulse Aberration	1				
\leq 15% ±20m V		(8-1)			
\leq 15% ±20m V		(8-2)			

Replaceable Parts

Introduction

This section contains parts and ordering information for the HP 8130A/HP 8131A Pulse Generator. Table 5-1 lists the reference designators and abbreviations used throughout this manual. Table 5-2 lists the parts recommended for replacement.

Those components of major assemblies that are easily accessible for replacement, are also listed in Table 5-2 with the assembly to which they are related.

Repair philosophy is to board level, therefore individual components for sub assemblies are not listed. However Appendix B to this manual contains a full parts listing for those customers who require it.

Tables 5-3 and 5-4 list those parts that can be readily exchanged.

Replaceable Parts List

The organization of table 5-2, which lists replaceable parts, is as follows:

- Chassis mounted parts in alphanumeric order by reference designation
- Electrical assemblies and their components in alphanumeric order by reference designation



An electrical assembly is a cable or a printed circuit board and its components.

Replaceable parts for the assemblies

The information given for each part consists of the following:

- Complete reference designation
- Description of part
- Hewlett-Packard part number

Reference Designators

Reference designators are alphanumeric names for parts.

- 1. A1 = electrical assembly number 1
- 2. MP1 = mechanical part number 1
- 3. A5F2
 - a. A5 = electrical assembly number 5
 - b. F2 = fuse number 2 on A5

Ordering Information

To order a part listed in table 5-2, quote the Hewlett-Packard part number, quantity required, and address the order to your nearest Hewlett-Packard office as listed in Appendix A.

You may want to order a part that is not listed as replaceable. In this case, Include the instrument model number, instrument serial number (very important), with a description and function of the part.

Exchange Assemblies

Exchange assemblies are listed in a separate table; table 5-3. These exchange assemblies have a part number in the form xxxxx-695xx, whereas new part numbers are xxxxx665xx. Before ordering an exchange part, it is advisable to contact your local office or repair organization for current procedures and availability.

Direct Mail Order System

Within the USA, Hewlett-Packard can supply parts through direct mail order. The advantages are as follows:

- Direct ordering and shipment from Hewlett-Packard Parts Center in Mountain View, California.
- No maximum or minimum on any mail order (there is a minimum order for parts ordered through local Hewlett-Packard offices when orders require billing and invoicing).
- Prepaid transportation (there is a small handling charge for each order).
- No invoices to provide these advantages, check or money order must accompany each order. Mail order forms and specific ordering information are available through your local Hewlett-Packard offices.

Table 5-1. Reference Designators and Abbreviations

REFERENCE DESIGNATIONS

Α.	assembly						
AT	attenuator; isolator;						
termination							
В.,	fan; motor						
вт	battery						
С.	capacitor						
CP .	coupler						
CR .	diode; diode						
	thyristor; varactor						
DC.	directional coupler						
DL.	delay line						
DS .	annunciator;						
signaling device							
	(audible or visual);						
	lamp; LED						

ε								1	m	isc	;e	112	n	eoi	u S
electrical part															
F														fu	58
FI	-												1	filt	er
н											ħ	ar	d	wa	re
H'	Y										ci	٢c	u I	ato	or .
J					e		ct	rii	c a	1.	:0	n	ne	ett	٥r
			(\$	ta	tii	br	a	ry	Ρ	0	rti	0	n);	
			í	a	: k										
			1												
ĸ													7	ela	y
					•									ela cto	
				•	•			¢	: 0	ii I	; i	nc	lυ)r
L	•	•	:	:	•		:		: a	ił	; i	nc	iu m	cto	or er

P.,., electrical connector					
(movable portion);					
plug					
Q transistor: SCR;					
triode thyristor					
R resistor					
RT thermistor					
Sswitch					
Ttransformer					
TS terminal board					
TC thermocouple					
TP test point					
U integrated circuit;					
microcircuit					
V electron tube					

mechanical part V.... electron tube

ABBREVIATIONS

A ampere ac alternating current ACCESS accessory ADI
ac alternating current
ACCESS Accessory
ADJ adjustment
nov aujustment
A/D analog-to-digital
AF audio frequency
AFC automatic
frequency control
AGC automatic gain
control
AL aluminum
control
AM amplitude modula-
tion
AMPL amplifier
APC automatic phase
control
ASSYassembly
AUX auxiliary
avg average
AWG American wire
gauge
BAL balance
BCD binary coded
decimal
BD Doard
BD board BE CU beryllium
copper
BFO beat frequency
oscillator
BH binder head
BKDN breakdown
BP bandpass
BPF bandpass filter
oscillator
CAL calibrate
ccwcounter-clockwise
CER ceramie
CHAN
cm centimeter
CMO cabinet mount only
COAX coaxial
COAX coaxial
COEF coefficient
COM common
COMP composition
COMPL complete
CONN connector
CP cadmium plate
CRT cathode-ray tube
transistor logic

CW continuous wave	
cw clockwise	
cm centimeter	
D/Adigital-to-analog	
dB decibel	
dBm decibel referred	
to 1 mW	
dc direct current	
dc direct current deg degree (temperature	
interval or difference)	
⁰ degree (plane angle)	
°C degree Celsius	
(centiorade)	
OF degree Estrepheit	
°K degree Kelvin	
DEPC deposited carbon	
DET detector	
DET detector diam diameter	
DIA diameter (used in	
parts list)	
DIFF AMPL differential	
amplifier	
div division DPDT double-pole,	
DPDT double-pole,	
double-throw	
DR drive	
USB double sideband	
DTL diode transistor	
logic .	
DVM digital voltmeter	
FCL emitter coupled	
logic	
EMF electromotive force	
EDP electronic data	
processing	
ELECT electrolytic	
ENCAP encapsulated	
EXT external	
Ffarad FETfield-effect	
FET field-effect transistor	
F/Fflip-flop	
FH flatt head	
FH flatt head FIL H fillister head	
FM . frequency modulation	
FP front panel	
FREQ frequency	
FXD fixed	
FXD fixed g gram	
GE germanium	
GHz gigahertz	
GHz gigahertz GL glass	
GRD ground(ed)	
Hhenry	
NOTE	

hhour
HET heterodyne
HEI
HET heterodyne HEX hexagonal
HD head
HD head HDW hardware
HF high frequency
HGhigh
HP Hewlett-Packard HPF high pass filter
HR hour (used in
parts list)
HV high voltage
Hz Hertz
IC integrated circuit
ID inside diameter
IF intermediate
frequency
IMPG impregnated
in inch
INCD incandescent
INCL include(s)
INPinput
INS insulation
INT.
ke kilonem
INTinternal kgkilogram kHzkilohertz kΩkilohm
kHz kilohertz
kΩ
kV kilovolt
lbpound
LC inductance-
capacitance
LED . light-emitting diode
LF low frequency
IG long
LH left hand LIM limit
LIN linear taper (used
in parts list)
lin linear LK WASH tock washer
LK WASH lock washer
LO low; local oscillator
LOG logarithmic taper
(used in parts list)
log logarithm(ic) LPF low pass filter
LV low voltage
m meter (distance)
MA milliampere MAX maximum
M Ω megohm
MEG meg (10 ⁶) (used
in parts list)
MET FLM metal film

		breakdown diode
W		cable; transmission
		path; wire
х		
.¥		crystal unit (piezo-
		electric or quartz)
Z		tuned cavity; tuned

VR . . . voltage regulator;

circuit

MET OX metallic oxide
MF medium frequency;
microfarad (used in
parts list)
MFR manufacturer
mg milligram
MHz megahertz
mHmillihenry
mhomho
MIN minimum
min minute (time)
minute (plane
anole)
MINAT miniature
mm millimeter
MOD
MOM momentary
MOM momentary MOS metal-oxide
semiconductor
ms millisecond
MTG mounting
MTR meter (indicating
device)
mV millivolt
mVac millivolt, ac
nVdc millivolt dc
MVDK Millivolt peak
mVpk millivolt, peak mVp-p millivolt, peak-
mVac millivolt, ac mVdc millivolt, dc mVpk millivolt, peak mVp-p millivolt, peak- to-peak
to-peak nVrmsmillivolt.rms.
to-peak nVrmsmillivolt.rms.
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex
to-peak mVrmsmillivolt,rms mWmilliwatt MUXmultiplex MYmicroampere
to-peak mVrms millivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JFmicroampera
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JAmicrofarad JHmicrofarad
to-peak mVrmsmillivolt,rms mWmilliwatt MUXmultiplex MYmicroampere JFmicrofarad JHmicrohenry Jmhomicronho
to-peak mVrmsmillivolt,rms mWmilliwatt MUXmultiplex MYmicroampere JFmicrofarad JHmicrohenry Jmhomicronho
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JAmicrofarad JFmicrofarad JHmicromho Jsmicrovolt
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JAmicrofarad JHmicrofarad JHmicrowolt JNmicrovolt JVmicrovolt, ac
to-peak mVrms millivolt, rms mW milliwatt MUX multiplex MY microampere JF microfarad JH microfarad JH microbenry Jmho microsecond JV microvolt IVac microvolt, dc
to-peak mVrms millivolt, rms mW milliwatt MUX multiplex MY microampere JF microfarad JH microfarad JH microbenry Jmho microsecond JV microvolt IVac microvolt, dc
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampere JAmicroampere JFmicroampere JFmicroampore JFmicrosecond JFmicrovolt, ac IVacmicrovolt, ac IVp.pmicrovolt, peak- to-peak
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JAmicroampera JFmicroampera JFmicroampera JFmicroampera JFmicroampera JFmicroampera JMmicroampera JVmicroampera JVmicroampera JVmicroampera JVmicroampera JVmicroampera JVmicroampera JV
to-peak mVrms millivolt, rms mW milliwatt MUX multiplex MY microampers JF microfarad JH microfarad JH microfarad JH microsecond JV microvolt, ac IVac microvolt, dc IVdc microvolt, dc IVdrs microvolt, rms IV rms microvolt, rms
to-peak mVrms millivolt, rms mW milliwatt MUX multiplex MY microampers JF microfarad JH microfarad JH microfarad JH microsecond JV microvolt, ac IVac microvolt, dc IVdc microvolt, dc IVdrs microvolt, rms IV rms microvolt, rms
to-peak mVrms millivolt, rms MV millivolt, rms MUX multiplex MY multiplex MY
to-peak mVrmsmillivolt, rms mWmilliwatt MUXmultiplex MYmicroampera JAmicroampera JFmicrohenry Jmhomicrowenry Jmhomicrowenry Jmhomicrowenry JMomicrowolt, ac IVacmicrovolt, ac IVdcmicrovolt, ac IVdcmicrovolt, ac IVdcmicrovolt, ac IVdcmicrovolt, microwalt IVacmicrowalt, rms IWmicrowalt, rms IWmicrowalt Amicrowalt Amicrowalt Amicrowalt M
to-peak mVrms millivolt, rms mW millivolt, rms MUX multiplex MIX microampera JA microampera JF microfarad JH microfarad JH microwolt Imho microvolt JVac microvolt, ac IVdc microvolt, ac IVdc microvolt, dc IVdc microvolt, peak- to-peak IVrms microvolt, rms IW microvolt, rms IW microvolt, rms IW microvolt, rms IW
to-peak mVrms millivolt, rms MV
to-peak mVrmsmillivolt, rms mWmillivolt, rms MUXmultiplex MYmicroampera JAmicroampera JFmicroampera JFmicroampera JFmicroward JHmicrovolt, ac IVmicrovolt, ac IV
to-peak mVrmsmillivolt, rms mWmillivolt, rms MUXmultiplex MIXmicroampera JAmicroampera JFmicrotenry Jmhomicrotenry Jmhomicrovelt, ac JVmicrovolt, ac IVmicrovolt, ac IV
to-peak mVrms millivolt, rms mW millivolt, rms MUX multiplex MIX multiplex MY
to-peak mVrmsmillivolt, rms mWmillivolt, rms MUXmultiplex MYmicroampera JAmicroampera JFmicroampera JFmicroampera JFmicroward JHmicrovolt, ac IVmicrovolt, ac IV

- All abbreviations in the parts list will be in upper-case. -

Table 5-1. Reference Designators and Abbreviations (continued)

NORM normat NPN ... negative-positivenegative NPO . . . negative-positive zero (zero temperature coefficient) NRFR . . not recommended for field replacement NSR not separately replaceable ns.....nanosecond nW nanowatt OBD . order by description OD . . . outside diameter OH oval head OP AMPL operational amplifier. OPT OSC oscillator Ω_{X} axide Ω_{Z} ounce Ω_{Z} obm P . . . peak (used in parts list) PAM . . . pulse amplitude modulation PC printed circuit PCM . . pulse-code modulation; pulse-count modulation PDM pulse-duration modulation рF pF picofarad PH BRZ . phosphor bronze PHL Phillips PIN positive-intrinsicnegative PIV.... peak inverse voltage pk peak PL _____ phase lock PLO phase lock oscillator PM . . . phase modulation PNP. . . positive-negativepositive POS . . positive; position(s) (used in parts list) POSN position

POT potentiometer	s
P-P peak-to-peak	S
PP peak-to-peak (used	
in parts list)	S
PPM pulse-position	ŝ
modulation	
	S
PREAMPL preamplifier PRF pulse-repetition	
	s
frequency	s
PRR pulse repetition	
rate	s
ps picosecond	
PT	SS
PTM pulse time	S
modulation	S
PWM pulse-width	SI
modulation	S
PWV peak working	т
voltage	Ť.
•	т
RC , resistance-capacitance	
RECT rectifier REF reference	TI
REF reference	T
REG regulated	T
REPL replaceable	
RF radio frequency	т
RF radio frequency	ΤI
RFI radio frequency	TI
interference	TI
RH round head; right	т
hand	Ţ₽
RLC resistance-	TS
inductance	12 TT
capacitance	
RMO rack mount only	
rms root-mean-square	T١
RND round	T١
BOM read-only memory	T١
R&P rack and panel	U
RWV reverse working	
voltäge	U
S scattering parameter	
s second (time)	U
" second (plane angle)	U1
S-B slow-blow (fuse)	v
(used in parts list)	.v.
SCR silicon controlled	Va
rectifier; screw	v,
SE , , selenium SECT sections	V
SECT sections	
SEMICON semicon-	Ve
ductor	V
SHF superhigh fre-	
quency	V(

SI
SR
SSB single sideband SST stainless steel STL stainless steel SQ square SWR standing-wave ratio SYNC synchronize T timed (slow-blow fuse) TA tantalum TC temperature compensating TD TFT thin-film transistor TGL toggle THRU thread THRU titanium
TRIM tolerance TRIM trimmer TSTR transistor TTL transistor- transistor-transistor
TV
UHF ultrahigh frequency UNREG unregulated V volt VA
Vdc volts, dc VDCW volts, dc, working (used in parts list) V(F) volts, filtered

VFO . variable-frequency
oscillator
VHF very-high fre-
quency
Vpk voits, peak
Vp-p volts, peak-to-peak
Vrmsvolts, rms
VSWR voltage standing
wave ratio
VTO voltage-tuned
oscillator
VTVM Vacuum-tube
voltmeter
V(X) volts, switched
Wwatt
W
WIV working inverse
voltage
WW wirewound
W/O without
YIG yttrium-iron-garnet
Zo characteristic
impedance

MULTIPLIERS

Abbreviation	Prefix	Multiple
T G M k da d c m μ n p f a	rretix tera giga mega kilo deka deci centi milli micro nano pico femto atto	10 12 10 9 10 6 10 3 10 -1 10 -2 10 -3 10 -6 10 -9 10 -12 10 -15 10 -18

NOTE --- All abbreviations in the parts list will be in upper-case, ----

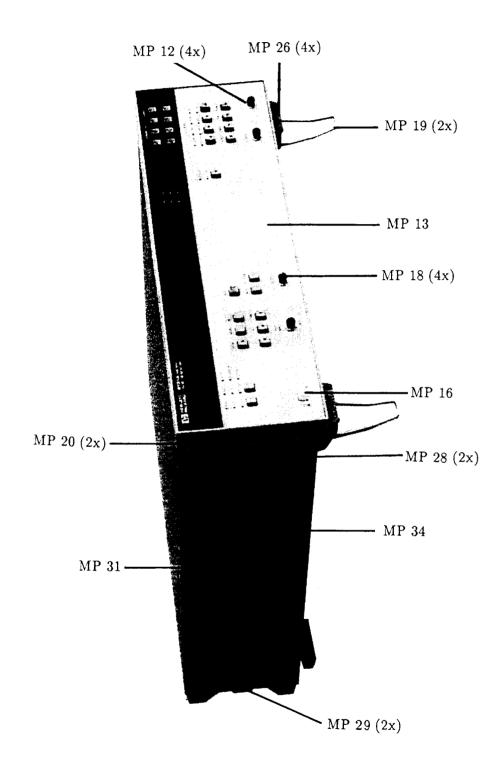


Figure 5-1. Parts Identification

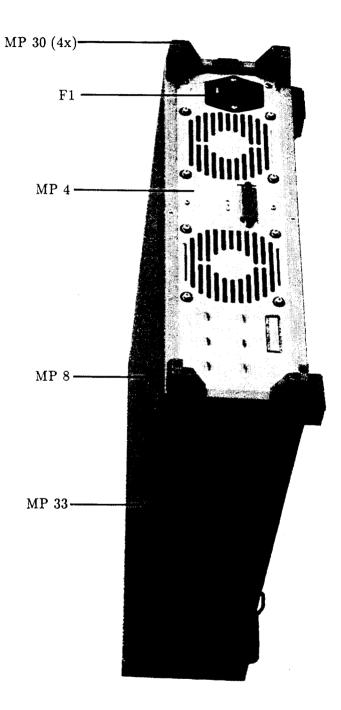


Figure 5-2. Parts Identification

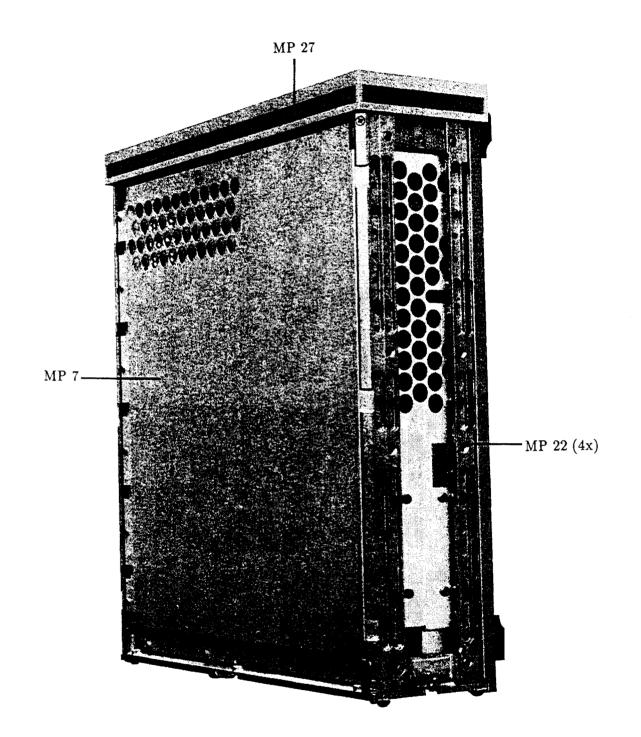
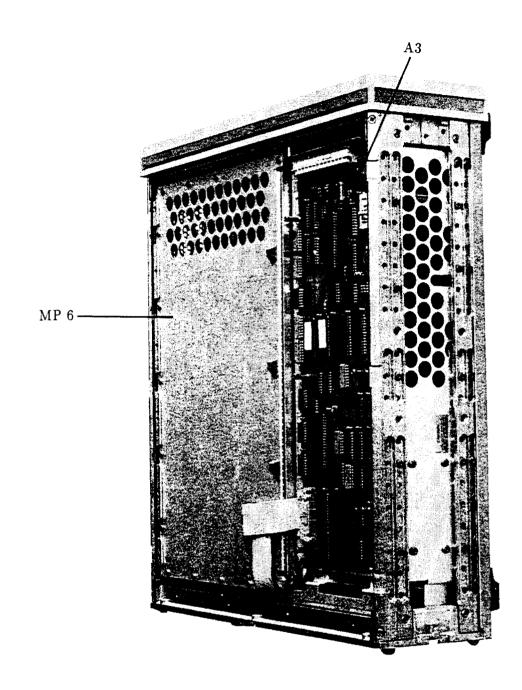


Figure 5-3. Parts Identification



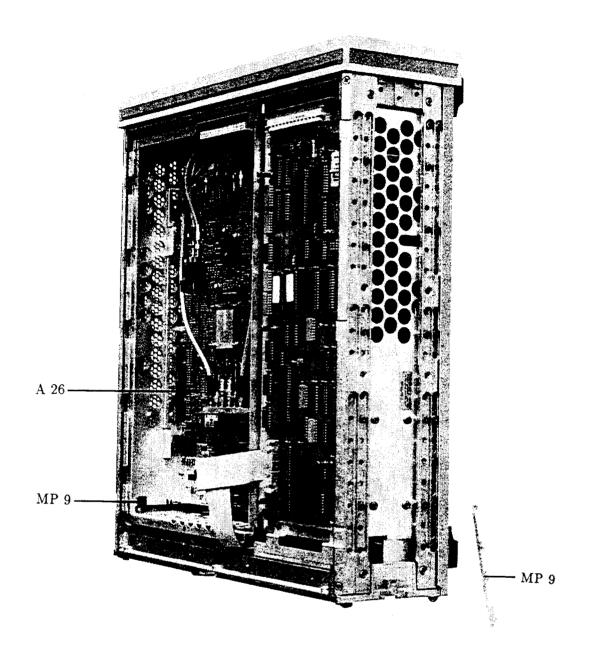


Figure 5-5. Parts Identification

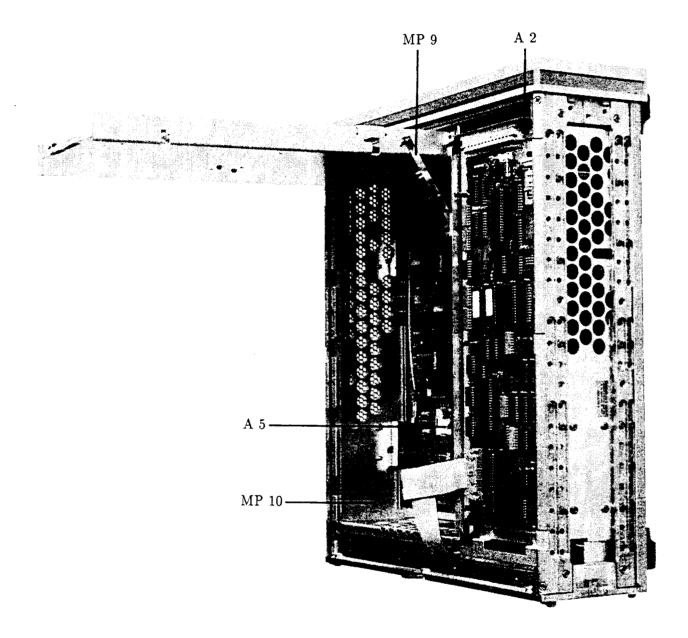


Figure 5-6. Parts Identification

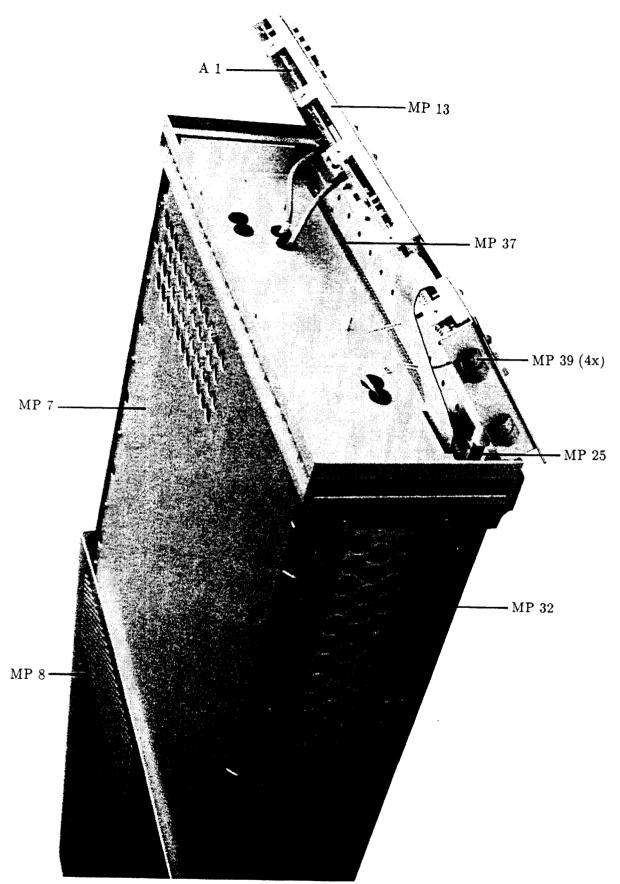


Figure 5-7. Parts Identification

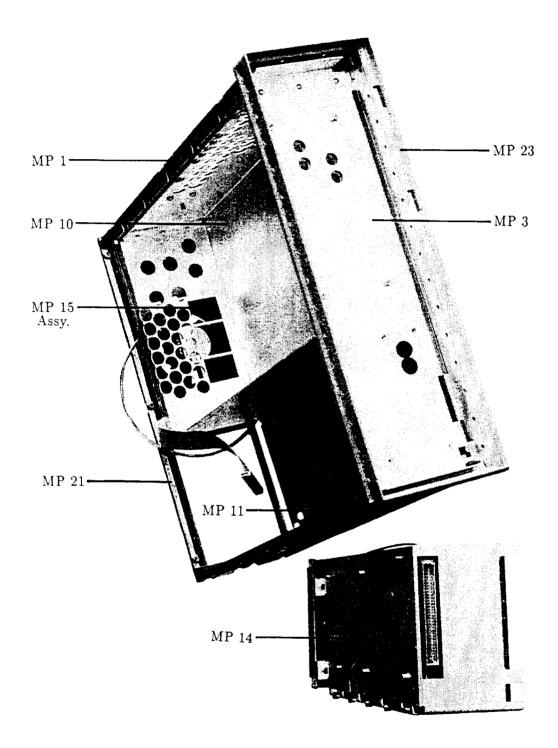


Figure 5-8. Parts Identification

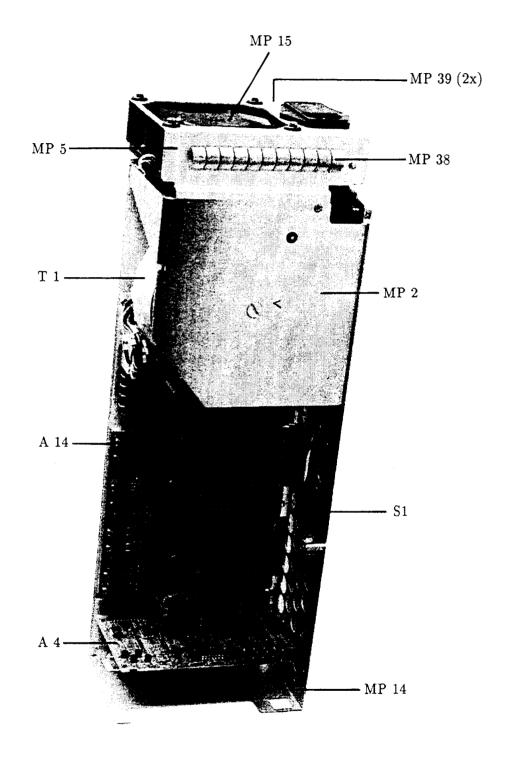


Figure 5-9. Parts Identification

Table	5-2.	Replaceable	Parts
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Reference	Part	HP 8130A Part	HP 8131A Part
Designator	Description	Number	Number
W10-W13	Cable assy, Output	08130-61603	08131-61603
W3/W4	Cable assy, Trig Out	08130-61604	08131-61604
W5	Cable assy, Ext Inp	08130-61605	08131-61605
W6	Cable assy, Trigger Int		08131-61651
W1	Cable assy, HPIB	5180-2462	5180-2462
	Label, CAUTION	08131-44301	08131-44301
	Partition Set	08131-49301	08131-49301
	Plate, corrugated	08131-49302	08131-49302
	Bumper Foot	0403-0374	0403-0374
	Adhesive, (bumper foot)	0403-0285	0403-0285
A1	Board Assy, Key Std.	08130-66501	08131-66501
A1	Board Assy, Key (Opt 020)	08130-66521	08131-66521
MP3	Keycap, plain	5041-0309	5041-0309
MP4	Keycap, green	5041-0507	5041-0507
MP5	Keycap, LCL	5041-0726	5041-0726
MP1	Keycap, vernier	5041-4707	5041-4707
MP2	Keycap, lit	5041-0318	5041-0318
	LED Lamp	1990-1254	1990-1254
	Key switch, single	5060-9436	5060-9436
	7-segment Display	1990-1253	1990-1253
	LED light bar	1990-1252	1990-1252
	LED lamp	1990-1252	1990-1252
	Board Assy, Mother		08131-66502
	Connector, Din type	1252-0027	1252-0027
	Cable to Keyboard		08131-61601
	EMI fingers		8160-0392
A3	Board Assy, UPCR (CPU)	08130-66503	08131-66503
	EPROM 1 (U204)		08131-13707
	EPROM 2 (U205)	08130-13702	08131-13708
	LED Green	1990-0485	1990-0485
A4	Board, Power Control	08131-66504	08131-66504

Reference	Part	HP 8130A Part	HP 8131A Part
Designator	Description	Number	Number
A5	Board, Timing (Std.)	08130-66505	08131-66505
	Board, Timing (Opt 020)	08130-66525	08131 - 66525
	LED Lamp	1990-1278	1990-1278
A14	Board, Main Power	08131-66514	08131-66514
	Fuse, 10A 125V	2110-0456	2110-0456
S1	Switch 4A/80A	3101-2992	3101-2992
A26	Board, Output 1 (Std.)	08130-66526	08131-66526
A26	Board, Output 1 (Opt. 020)		08131-66527
A27	Board, Output 2 (Opt. 020)	08130-66527	
A28	Board, Output 2 (Opt. 020)		08131-66528
	Switch, SMA Co-ax	0955-0452	0955-0452
F1	Fuse, 3 A, 250 V	2110-0029	2110-0029
	Fuse, 1.5 A	2110-0304	2110-0304
MP1	Chassis, main	08130-00101	08131-00101
MP2	Angle, power	08131-00111	08131-00111
MP3	Sub Panel	08130-00202	08131-00202
MP4	Rear Panel	08130-00203	08131-00203
MP5	Bracket, fan	08131-01212	08131-01212
NDA		00100 04101	00101 04101
MP6	Cover, top Cardcage	08130-04101	08131-04101
MP7	Cover, top Cabinet	08131-04102	08131-04102
MP8	Cover, top Instrument	08131-04103	08131-04103
MP9	Board Keeper	08131-04107	08131-04107
MP10	Card Cage	08131-04501	08131-04501
MP13	Front Panel Std.	08130-40204	08131-40204
MP13	Front Panel Opt 020	08130-40201	08131-40201
MP14	Cage assy., Pwr	08131-60110	08131-60110
MP15	Fan Assembly	08131-68502	08131-68502
MP16	Key Cap (ON/OFF)	08180-47401	08180-47401
MD10	Con Restanting Control Control		1401 0000
MP18 MD10	Cap Protective, Outp Connectors	1460 1945	1401-0202
MP19 MP20	Tilt Stand	1460-1345	1460-1345
MP20	Side Trim	5001-0539	5001-0539
MP21	Frame, rear	5021-5804	5021-5804
MP22	Strut, corner	5021-5837	5021-5837
MP23	Frame Front	5021-8403	5021-8403
MP24	Sleeve-blue	5040-0478	5040-0478
MP25	Shaft, power switch	5040-9319	5040-9319
MP26	Foot	5041-8801	5041-8801

Table 5-2. Replaceable Parts (continued)

Reference	Part	HP 8130A Part	HP 8131A Part
Designator	Description	Number	Number
MP27	Trim Strip, top	5041-8802	5041-8802
MP30	Foot, rear	5041-8821	5041-8821
MP31	Strap, handle	5062-3704	5062-3704
MP32	Cover, bottom	5062-3747	5062-3747
MP33	Cover, side, right	5062-3812	5062-3812
MP34	Cover, side, left	5062-3837	5062-3837
MP35	Button, plug	6960-0006	6960-0006
MP36	Label, Ground	7120-6153	7120-6153
MP39	EMI Fingers	8160-0392	8160-0392

Table 5-2. Replaceable Parts (continued)

Table 5-3. HP 8130A Exchange Items

Board Assy	Description	Exchange Assy
Part No.		Part No.
	Keyboard assy Std.	component repair
	Mother board assy.	throw away item
	CPU board assy.	08130-69503
08131-66504	Pwr supply control bd. assy.	component repair
08130-66505	Timing board assy. Std.	08130-69505
	Pwr supply main bd. assy.	component repair
	Keyboard assy Opt. 020	component repair
08130-66525	Timing board assy. Opt. 020	08130-69525
08130-66526	Output board assy. Std. or Bd1	08130-69526
	Output board assy. Opt. 020 (Bd2)	08130-69527

Board Assy Part No.	Description	Exchange Assy Part No.
	Keyboard assy Std.	component repair
	2 Mother board assy.	throw away item
	B CPU board assy.	08131-69503
	Pwr supply control bd. assy.	component repair
	Timing board assy. Std.	08131-69505
08131-66514	Pwr supply main bd. assy.	component repair
08131-66521	Keyboard assy Opt. 020	component repair
	Timing board assy. Opt. 020	08131-69525
08131-66526	Output board assy. Std. (Bd1)	08131-69526
08131-66527	Output board assy. Opt. 020 (Bd1)	08131-69527
08131-66528	Output board assy. Opt. 020 (Bd2)	08131-69528

Table 5-4. HP 8131A Exchange items

Instrument Block Diagrams

General

This chapter contains two overall block diagrams for the HP 8130A/HP 8131A instruments:

- Identifier Block Diagram
- Functional Block Diagram.

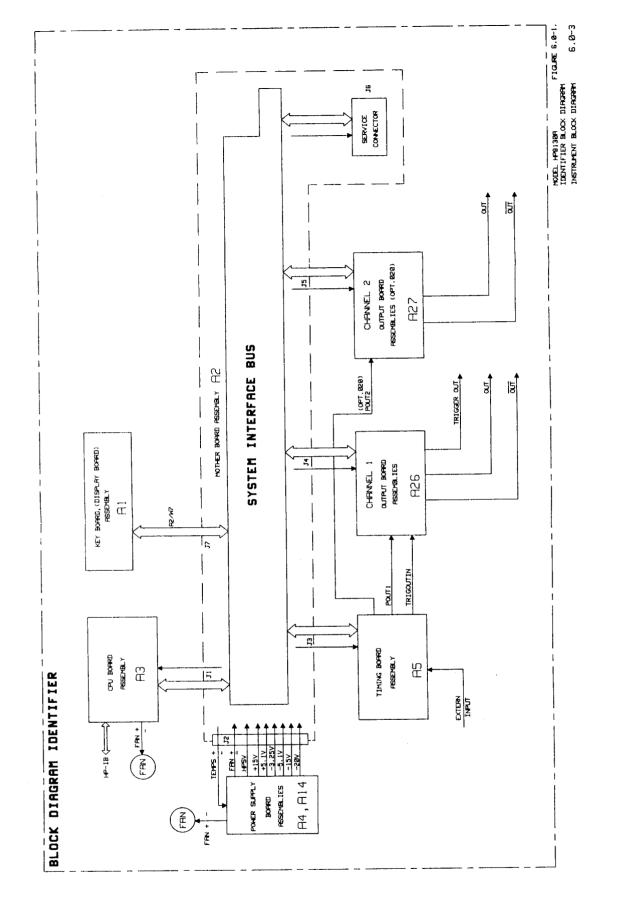
The diagrams provide an illustration of the interconnections and relationships, between the main assemblies and with the motherboard bus system.

These block diagrams should be used to assist the isolation of a malfunction to a specific assembly or circuit board. Further location of malfunctions may then continue, by referring to the appropriate subsection of chapter 6 for further details.

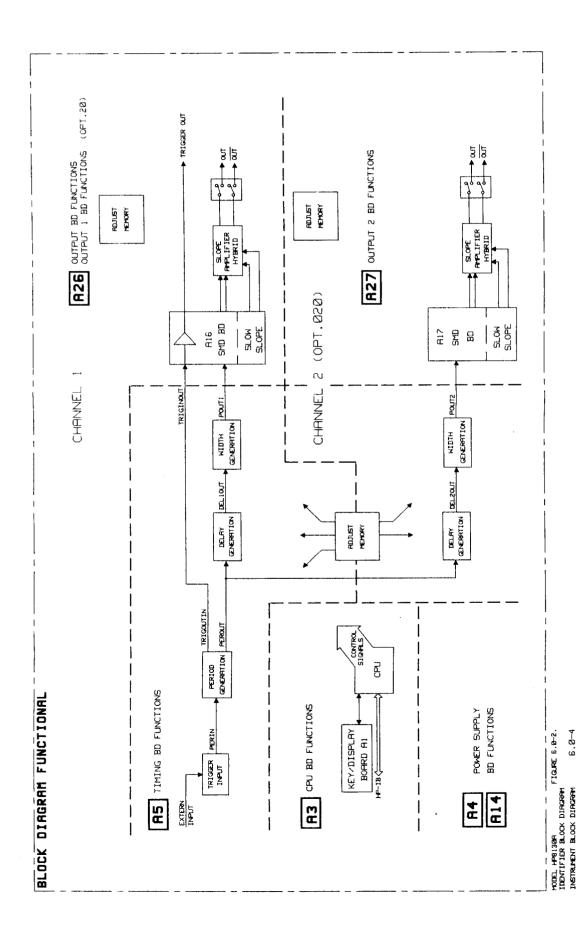
Chapter 6 Subsection details

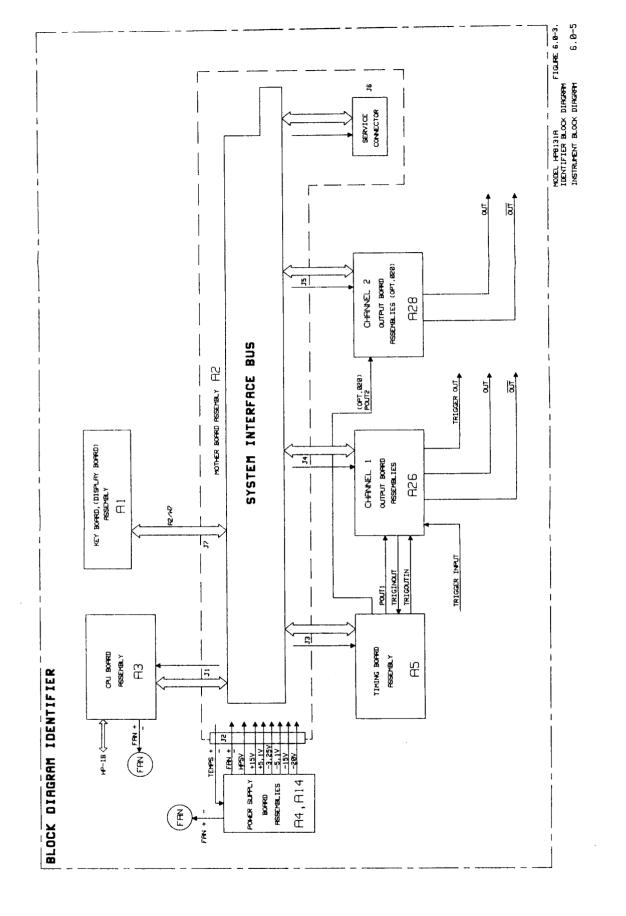
Chapter 6 is subdivided as follows:

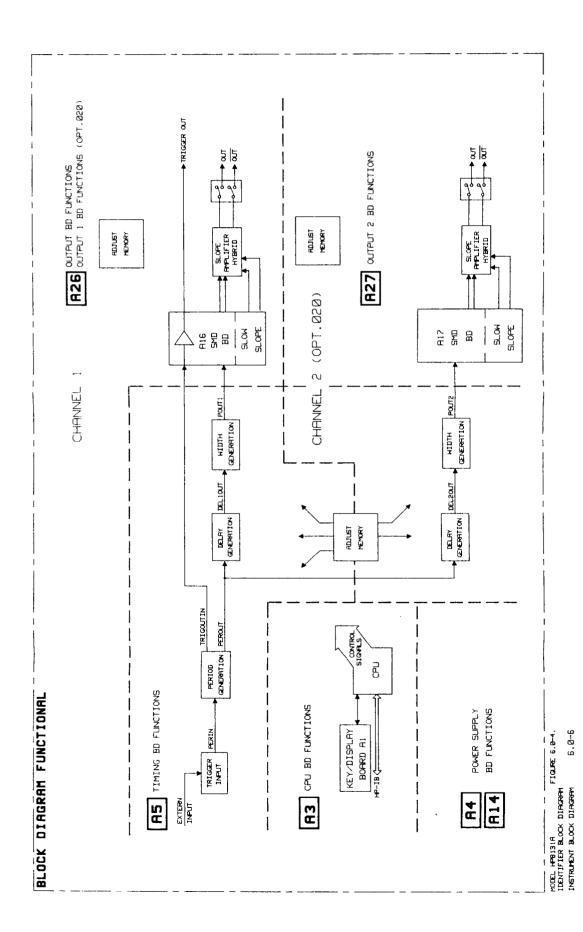
- **Chapter 6-0** This chapter
- Chapter 6-1 Motherboard
- Chapter 6-2 Power Supply
- Chapter 6-3 CPU board
- Chapter 6-4 Timing board
- Chapter 6-5 HP 8130A Output board
- Chapter 6-6 HP 8131A Output board
- Chapter 6-7 Troubleshooting



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Motherboard (A2)

Motherboard

All boards are interconnected via the motherboard. The connector identities and the devices that they connect to the motherboard, are listed in the table below.

Connector	Device
J1	CPU board
J2	power supply board
J3	timing board - slot 0 (lowest position)
J4	output board, channel 1 - slot 1
$\mathbf{J5}$	output board, channel 2 - slot 2
J6	service connector - slot 3
J7	keyboard

Table 6-1-1. motherboard Connectors

Special Interconnections

- Two lines from the temperature sensor to power supply connector (TEMPS+ and TEMPS-). The temperature sensor is located inside the card cage next to slot 0
- Two lines from the power supply connector to the CPU board connector for the two fans (FAN+ and FAN-).
- One line from the power supply connector to the CPU board connector (HPSV).
- Slot recognition LCEN on pin 24a of each signal board as follows:
 - 🗆 slot 0 LCS0 pin 10a on CPU board
 - □ slot 1 LCS1 pin 10c on CPU board
 - 🗆 slot 2 LCS2 pin 11a on CPU board
 - 🗆 slot 3 LCS3 pin 11c on CPU board
- -3.25V SENS from the power supply connector pin 14c to pin 8a on slots 0 and 3.

Grounds

- DGND ground for CPU board and keyboard only
- AGND ground for signal boards:
 - timing board
 output board channels 1 and 2
 service connector
- RGND reference ground for DACs and ADCs on the above signal boards
- SHGND shield-ground, no current.

DGND, AGND, RGND, and SHGND are commoned on the power supply board.

Voltages

- +5.1 V DIG for CPU board and keyboard only
- +5.1 V ANA for signal boards only

+5.1 V DIG and +5.1 V ANA are commoned on the power supply board.

D:	T	Row c	Row a
Pir	-+-		NC
-		NC	-20 V
4		-20 V	-15 V
		-15 V	-15 V
		-15 V	-15 V -5.1 V
	·	-5.1 V	-5.1 V -5.1 V
	- 1	-5.1 V -5.1 V	-5.1 V -5.1 V
	1	-3.25 V	-3.25 V SENS
		-3.25 V -3.25 V	-3.25 V
	1	-3.25 V -3.25 V	-3.25 V
1		-3.25 V -3.25 V	-3.25 V
1	- 1	AGND	AGND
1	1	AGND	AGND
1		AGND	AGND
1	- 1	AGND	AGND
		AGND	AGND
1		AGND	AGND
1		AGND	AGND
1	- 1	AGND	AGND
		RGND	RGND
1		+15 V	+15 V
		+5.1 V ANA	+5.1 V ANA
		SHGND	SHGND
		LDRQ	LCEN
		HDD6	HDD7
		HDD4	HDD5
		HDD2	HDD3
	28	HDD0	HDD1
		LRHW	LDBV
	30	HDA4	HDA5
	31	HDA2	HDA3
	32	HDA0	HDA1

Table 6-1-2. Pin definitions on Motherboard: Signal and Service Connectors

	Pin	Row c	Row a
	1	HDA1	HDA0
	2	HDA3	HDA2
	3	HDA5	HDA0
	4	LDBV	LRHW
	5	HDD1	HDD0
	6	HDD3	HDD2
	7	HDD5	HDD4
	8	HDD7	HDD6
	9	HPSV	LDRQ
	10	LCS1	LCS0
	11	LCS3	LCS2
		SHGND	SHGND
		+5.1 V DIG	1
		+5.1 V DIG	
		+5.1 V DIG	
		+5.1 V DIG	
		DGND	DGND
ļ		DGND	DGND
ŀ		DGND	DGND
		DGND	DGND
		FAN-	FAN+
		NC	NC
		SL2	SL3
		SL0	SL1
		RL6	RL7
		RL4 RL2	RL5
		RL2 RL0	RL3 RL1
	20 29		
	29 30		S7 S5
	31		S5 S3
	32		S1

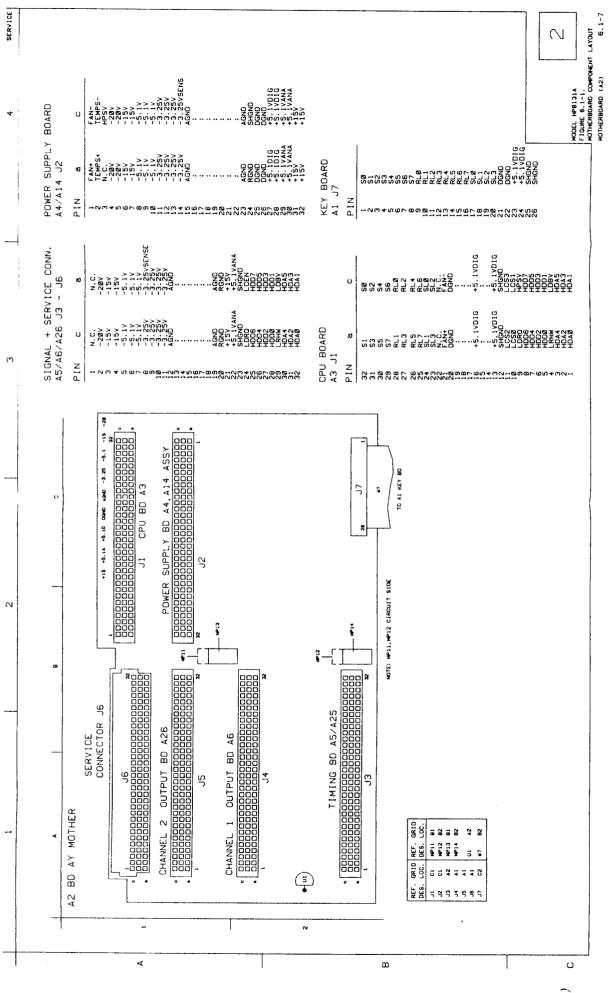
Table 6-1-3. Pin definitions on Motherboard: CPU Board Connector

	Pin	Row c	Row a
	1	FAN-	FAN+
	2	TEMPS-	TEMPS+
	3	NC	NC
	4	-20 V	-20 V
	5	-20 V	-20 V
	6	-15 V	-15 V
	7	-15 V	-15 V
	8	-5.1 V	-5.1 V
		-5.1 V	-5.1 V
		-5.1 V	-5.1 V
	11	-3.25 V	-3.25 V
		-3.25 V	-3.25 V
		-3.25 V	-3.25 V
	14	-3.25 V SENS	-3.25 V
	[AGND	AGND
		AGND	AGND
	1	AGND	AGND
		RGND	RGND
		DGND	DGND
		DGND	DGND
		+5.1 V DIG	+5.1 V DIG
		+5.1 V DIG	+5.1 V DIG
		+5.1 V ANA	+5.1 V ANA
	1	1	+5.1 V ANA
		+5.1 V	+5.1 V
L	32 -	+5.1 V	+5.1 V

Table 6-1-4. Pin definitions on Motherboard: Power Supply Connector

r	T
Pin	Row a
1	S0
2	S1
3	S2
4	S3
5	S4
6	S5
7	S6
8	S7
9	RL0
10	RL1
11	RL2
12	RL3
13	RL4
14	RL5
15	RL6
16	RL7
17	SLO
18	SL1
19	SL2
20	SL3
21	DGND
22	DGND
23	+5.1 V DIG
24	+5.1 V DIG
25	SHGND
26	SHGND

Table 6-1-5. Pin definitions on Motherboard: Power Supply Connector



Power Supply (A14)

Introduction

The power supply operates as an analog series regulator. Its main features are:

- primary 4-voltage tapping transformer
- additional secondary tapping, twice at each output level
- Schottky power rectifiers
- power MOSFETs with low resistance when on.

Block Theory of Operation

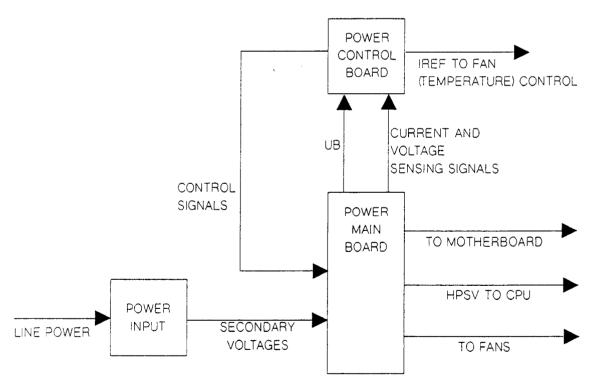


Figure 6-2-1. Modular Block Diagram

The following paragraphs contain basic block level theory of operation. A more detailed theory of operation follows after this section.

The power supply consists of three functional blocks:

- power input that includes a 50/60 Hz transformer
- power main board
- power control board.

Power Input

This block is responsible for:

- filtering the line voltage
- fusing
- selection
- on/off switching
- transforming the primary voltages to secondary voltage levels.

Power Main Board

This block is responsible for:

- rectification
- filtering
- series regulation of all secondary voltages and transmitting them to the motherboard
- generating the voltage and current sensing signals
- generating the control power +UB and transmitting it to the power control board
- fan control circuit
- power-on reset circuit which generates the HPSV signal to reset the MPU.

Power Control Board

This board is supplied from the power main board with:

- the control power +UB
- the voltage and current sensing signals.

It is responsible for:

- generating the required reference voltages and gate control signals. This enables the power main board to carry out voltage regulation (with foldback current limiting) and selection of secondary winding taps.
- supplying the reference current for the fan control circuit on the power main board.

Power Outputs

The power supply provides the following outputs:

- -3.25 V, 3.5 A
- -5.1 V, 1.5 A
- **•** +5.1 V, 2.7 A
- -15 V, 2.2 A
- +15 V, 1.8 A
- -20 V, 1.0 A
- fan(+) & (-)voltages
- HPSV:

 \square >4.35 V, 1.16 mA at +5.1 V > 4.85 V

 \square <0.40 V, 0.05 mA at +5.1 V < 4.85 V

Power Input

The AC line voltage is applied to the power input module F1 which consists of a:

- line filter for filtering RFI from the AC line voltage
- ∎ line fuse F1
- line voltage selector for 100/120/220/240 VAC operation.

The mains on/off switch S1, isolates the input power from the voltage selector. Depending on the voltage selector setting, the primary windings of the transformer are connected in one of the following four modes:

- 1. 100 V: the two 120 V windings are connected in parallel, but power is supplied to the 100 V tapping (A) orange wire.
- 2. 120 V: the two 120 V windings are connected in parallel and power is supplied to them (C), (D) black, black-green wires.
- 3. 220 V: the two 120 V windings are connected in series but power is supplied to the 100 V tapping (A) orange wire.
- 4. 240 V: the two 120 V windings are connected in series power is supplied to (C) black wire.

Caution	It is important to set the voltage selector according to the nominal line voltage supply. This is to prevent:
₩	 malfunction if the supply voltage is too low high power losses or blowing of fuse if the supply voltage is too high.

The transformer secondary windings are center tapped, and provide an additional high/low tapping for each of the four output voltage levels. They are all connected to the power main board.

Power Main Board

Regulation circuits are the same for all six output voltages, therefore only a description for the +15 V supply is given here.

+15 V Regulation

There are two complete regulation paths. They are applied together to:

- have a common output at J1(31A,C; 32A,C)
- have a common control by feedback signals generated at R113
- supply the power control board with:
 - \square a voltage sensing signal +15 V fed to J3(14) X3(14)
 - \square a current sensing signal R+15 fed to J3(15) X3(15)

The high tapping path is formed by:

- the Red 3 and Blue 3 wires of T1, J7(2,4)
- Schottky power diodes, CR101 and CR102, for full wave rectification
- filtering capacitor C101
- series voltage regulation via the power MOSFET Q101

The gate of Q101, is controlled by the voltage drop across R101, which is produced by controlling the current signal G+15H, from the power control board. Q101 is turned off when there is:

- no control current
- control current producing a voltage drop below the gate threshold voltage.

The low tapping path acts in a similar manner with the following components:

- Red 4 and Blue 4 wires of T1, J7(1,3)
- CR103 and CR104
- **C102**
- **Q**102
- **R**102

The unregulated low tapping path voltage UL+15 is fed, via J3(6) and X3(6), to the power control board. The function of this path is to select which tapping path is active (sometimes both). Line voltage tolerance, and to some degree the load state, determine which tapping path is active.

Generally, the high tapping is active at a line voltage that is below the nominal value, but still within tolerance. Low tapping is active when the line voltage is above the nominal value, but still within tolerance. Both are active at around nominal line voltage. This keeps series regulator voltage drop and power losses as low as possible.

Control Power +UB

The high tapping AC voltage (from T1 wires Red 1 and Blue 1) is used by diodes CR123 and CR124 to generate +UB. This unregulated voltage is applied to the power control board via J3(19).

Power-on Reset

This circuit provides correct resetting of the MPU during power on, power off and fail, by:

- monitoring the +5.1 V output with U101
- supplying the HPSV signal to the MPU via J1(3C).

The threshold voltage is approximately +4.85 V at R119. If the +5.1 V supply equals the threshold at power-on, the reset signal is delayed for approximately 40 ms by C120, HPSV then goes high (> 4.35 V). At power-down, the signal change to low is not delayed.

Fan Control

The fan control circuit supplies voltage for the two fans. The value of this voltage is dependent on the temperature detected by the sensor mounted on the motherboard. It is supplied from the unregulated low tapping voltages UL+15 and UL-15 and operates floating to ground.

The temperature sensor, U1, on the motherboard is supplied with a current of approximately 1 mA from R123. It generates a voltage drop directly proportional to the absolute temperature value - 10 mV/K. This voltage is compared with the threshold voltage drop across R125, which is supplied by a reference current of 1 mA from the power control board.

Comparator U103A controls the output voltage of the power regulator U104. The control gain is set by feedback to (R126/R125 + 1). Thus, the threshold point is approximately 300 K (27 °C) and its output voltage approximately 14 V, is determined by the voltage drop of VR103 and R125.

At temperatures below the threshold, the output voltage cannot fall below (approximately) 13.3 V and is determined by the sum of the volt drops of VR103, U103A pins 1-4, CR125 and U104 pins 1 and 2. If the temperature exceeds the limit condition the output of U103A, pin 1 is decoupled by CR125. Uout max is approximately 26.3 V.

Power Control Board

Bias and Reference Voltages

The unregulated +UB voltage from J3(19) is stabilized to +UBIAS by VR1, R66, Q15 and C15, this provides the bias for reference voltage generation and some control circuits.

By means of +UBIAS, U7 generates the reference voltage +5R, it is buffered by U8B, Q16 and C17. All other reference voltages are derived from +5R as follows:

- 1. -5R reference voltage is formed and buffered by U8A, R69, R70 and Q17.
- 2. Unregulated low tapping voltage UL-15 is stabilized by VR2, R72, and Q20 to the negative bias of U8A.
- 3. +10R reference voltage is formed by R67, R68 and U8D; it is buffered by C16.
- 4. The current source IREF is derived from the +10R reference by R71, U8C and Q18. The value of this current source is 1 mA and supplies the fan control circuit on the power main board.

Control Circuits

Most of the control circuits function in a similar way and the +15 V control is used to describe them all. The +5.1 V and -3.25 V control circuits are slightly different; these are described separately after the +15 V control.

+15 V Control

Voltage Control. The voltage sensing feedback signal +15 V from J3(14) and X3(14), is divided and compared to reference voltage -5R by R9, R10 and U1B.

If the voltage output goes high, the output at U1B pin 7 also rises, taking more current via R6 than that injected by R4 to the node of emitters Q1 and Q2. This lower emitter current lowers the gate control current signals, G+15H and G+15L, at the collectors of Q1 and Q2 and thus to the output MOSFETS on the power main board. C2 provides frequency compensation to prevent oscillation.

High/Low Tapping Path Control. Division of these two currents is controlled by the unregulated low tapping voltage UL+15 and the differential stage function of Q1, Q2, R1, R2, R3 and R5.

If the line voltage is operating at low tolerance, Q2 conducts and only the high tapping path is activated and controlled, the low tapping path being switched off. Around nominal line voltage both high and low tapping paths are activated because of the linear region operation of Q1 and Q2. This action is smoothed by C1 to damp ripple voltages. At high line voltage tolerance only Q1 is on and thus only the low tapping path is activated.

Foldback Current Limitation. Feedback signals R+15 and +15V represent the voltage drop of the output current sensing resistor. It is compared by U1A, to the limit threshold set by R7 and R8, and the output pin 1 of U1A. It achieves control in a similar manner to voltage regulation, but limits the output current when active. Diodes CR1 and CR2 decouple operation during the most positive control voltage, therefore the limiting function is active.

When below the current limit, the voltage of U1A pin 1 is close to -5R, therefore CR2 is reversed biased and has no influence on voltage control. The foldback characteristic is achieved by lowering the threshold. As the output voltage decreases, so does the R+15 voltage

in current limiting operation. At the output, the short circuit minimum foldback current limit is reached and R+15 is almost zero.

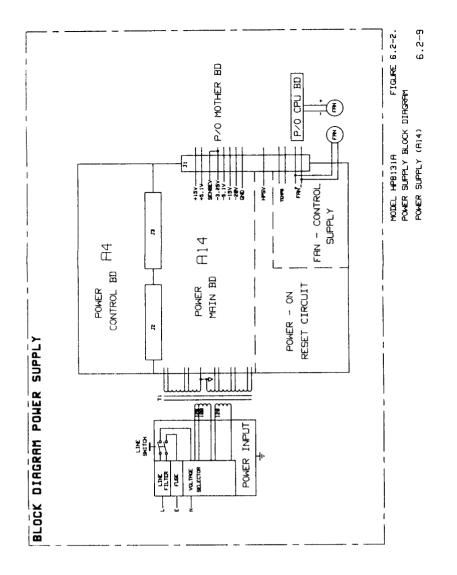
+5.1V Control

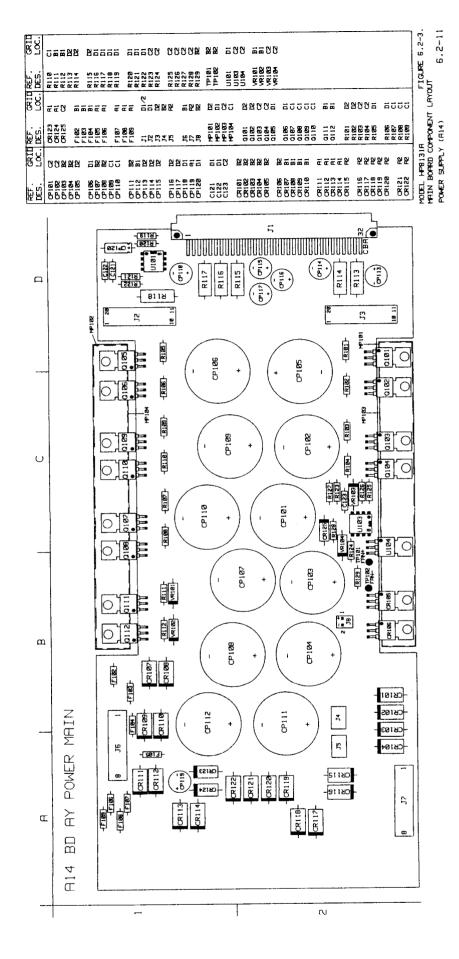
The output voltage of the operational amplifier U2 is buffered by Q6 and R19. The gate signals G+5H and G+5L are controlled by voltage rather than current, via R17 and R18. Therefore at differential stage Q4/Q5 the transistor which is not conducting, is that corresponding to the active tapping path; at the same time the conducting transistor switches the other tapping path off.

CR7 and CR8 lower the maximum output voltage, to prevent saturation of U2 at the highest gate voltage and conduction points. R73 prevents gate oscillation.

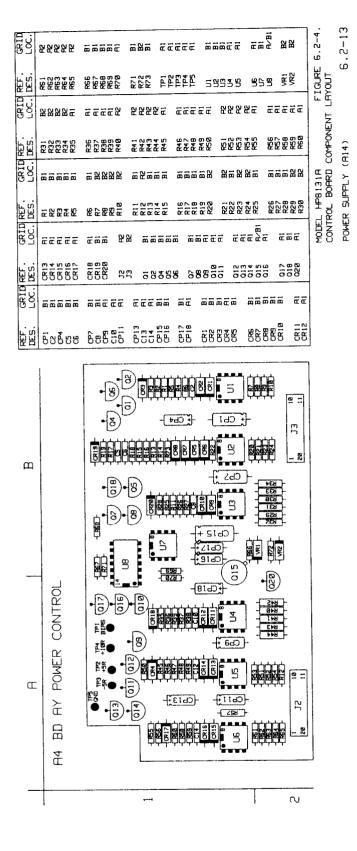
-3.25V Control

There is a separate voltage sensing signal, -3.25VSENS, from the motherboard, that compensates for voltage drops of up to 0.1 V. R34 in conjunction with the -3.25VSENS line is prevents the output voltage rising more than approximately 0.1 V if the -3.25VSENS line is open circuit.

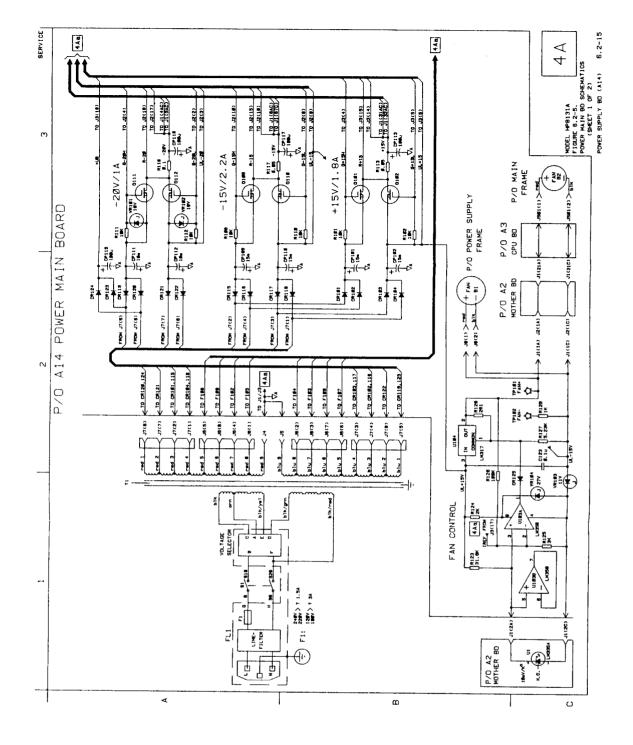




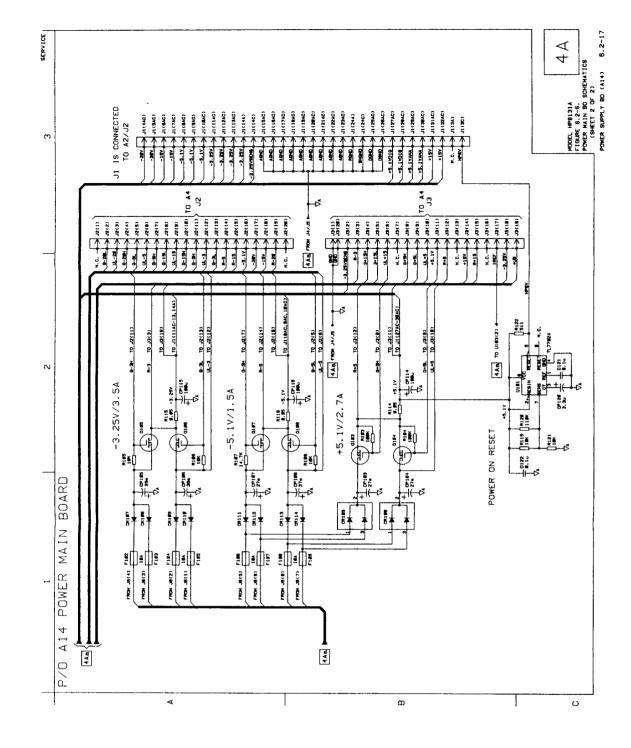
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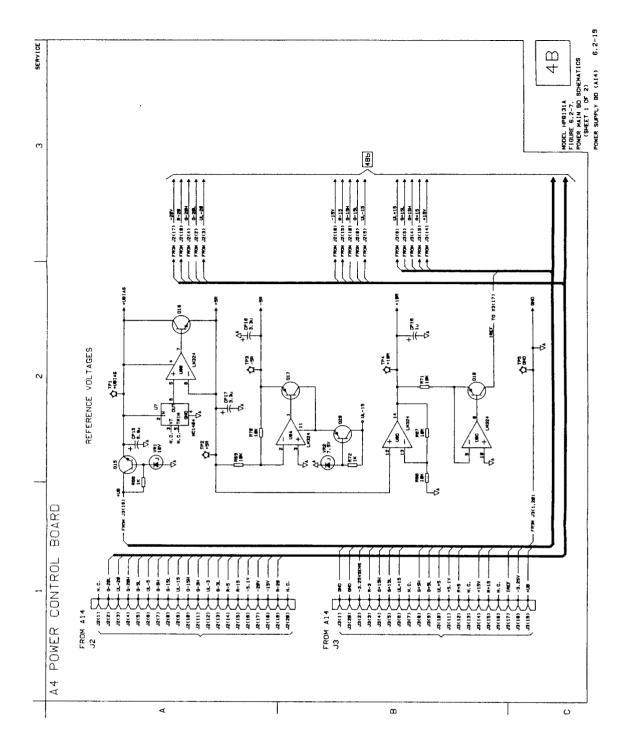


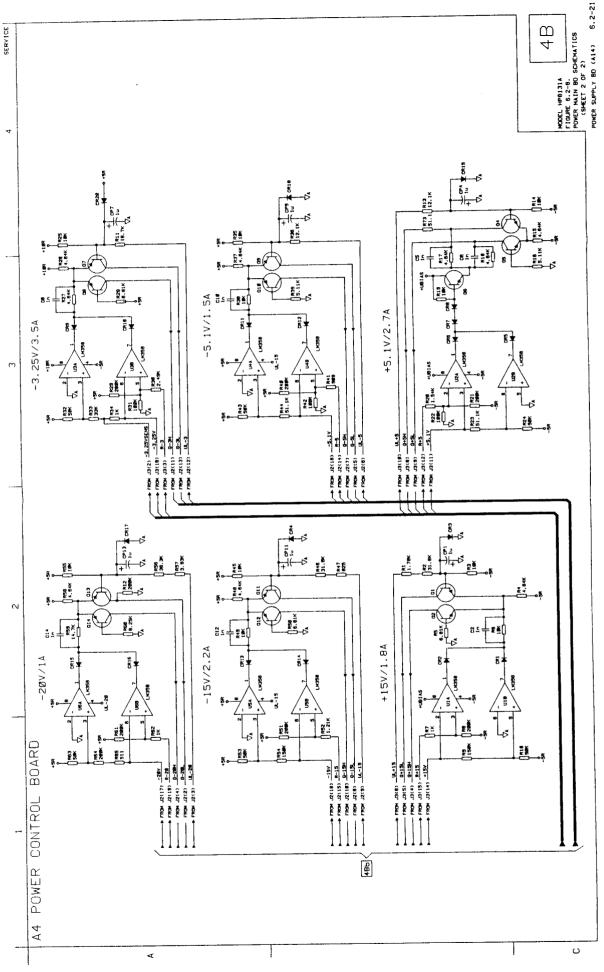
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CPU Board (A3)

Introduction

The CPU board houses a MC 68B09E microprocessor, with associated circuits and components. The following section provides basic block level theory of operation. A more detailed theory of operation follows this section.

Block Theory of Operation

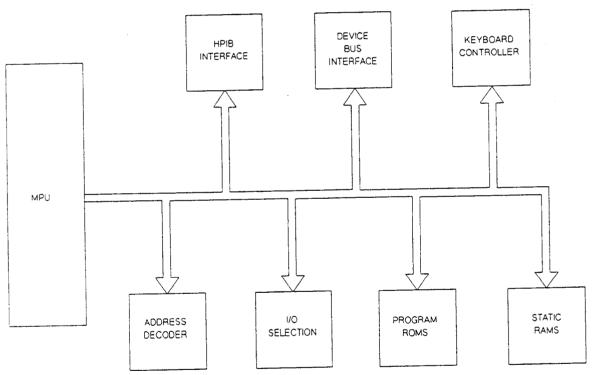


Figure 6-3-1. Module Block Diagram

Microprocessor (MPU)

The CPU board microprocessor is an MC 68B09E using an 8-bit bidirectional (buffered) data bus, a 16-bit unidirectional address bus and an interrupt line.

Address Decoder

This circuit generates the select lines.

I/O Selection

This circuit is used to address the I/O devices, RAM, and ROM on the CPU board.

Program ROMs

The two ROMs (32 Kword x 8 bit) used on this board contain instructions that are read by the MPU.

Static RAMs

The static RAMs (8K x 8-bit) provide information storage concerning the state of the instrument, plus other data. To ensure security of data when power is switched off, the two chips are buffered by a battery backup. This battery is activated each time the power is switched off.

Keyboard Controller

This block is responsible for scanning the keyboard and LEDs. The controller scans each row and column of the keyboard for a closed switch. When a change in the switch matrix is detected, the processor is sent an interrupt request.

The LEDs are scanned out of the internal RAM of the keyboard controller. These LEDs are used to indicate the active state of a parameter or a function.

Device Bus Interface

The CPU board communicates with, or controls the other boards within the HP 8130A/HP 8131A via the device bus. This bus consists of:

- 8-bit bidirectional device data bus
- 6-bit high device address bus
- 4 low card select lines
- 2 control lines.

HP-IB Interface

Communications between separate systems is achieved over a communications link known as the Hewlett-Packard Interface Bus (HP-IB). The HP-IB conforms to the IEEE 488 (1987) standard. The HP-IB connector on the rear panel of the HP 8130A/HP 8131A is connected to the CPU board by means of a ribbon cable.

Control Timing

This circuit provides the CPU board with its timing waveforms. Each waveform has a frequency of 1.25 MHz and a delay between each adjacent phase of 50 ns. For example, P1 leads P2 by 50 ns.

Reset Logic

About 50 ms after the +5 V supply exceeds +4.8 V the HPSV signal will become active indicating a stable supply i.e. a LOW level on this line indicates the reset mode. When the HPSV signal is valid a green LED, on the CPU board, will light up.

Microprocessor Unit (MPU)

The MC 68B09E microprocessor (MPU) uses an 8-bit bi-directional buffered data bus (HDBRW0 - HDBRW7), to communicate with other boards. The MPU is capable of addressing 64 Kbyte of memory. Clocking for the MPU E and Q clock inputs is provided by the Control Timing Section.

I/O Decoding and RAM/ROM Selection

This circuit generates the select lines used to address the I/O devices, RAM, and ROM, on the CPU board. 1024 bytes are reserved for the Device Bus used for communication between the CPU board and other boards within the HP 8130A/HP 8131A.

I/O Decoding

To select/enable an I/O operation and/or device, the I/O STROBE lines (LIS0 - LIS07) are used. These signals are generated by an addressable demultiplexer.

Strobe Mnemonics	I/O Function	Physical Address (hex)
LIS7	reset timer	000E0 - 000FF
LIS6	write interrupt mask	000C0 - 000DF
LIS5	read interrupt status	000A0 - 000BF
LIS4	write control latch	00080 - 0009F
LIS3	write keyboard controller	00060 - 0007F
LIS2	read keyboard controller	00040 - 0005F
LIS1	HP-IB controller	00020 - 0003F
LISO	NOT USED	00000 - 0001F

Table 6-3-1. I/O Functions Selection

RAM/ROM Selection

The chip select signals needed to select RAM, ROM etc are generated by 1 from 8 multiplexers, decoding the MPU address lines. To avoid glitches on the select lines, the multiplexers are enabled by gating two timing signals (P2 and P6).

Strobe Mnemonic	Function	Physical Address (hex)
LS6	ROM selection	08000 - 0FFFF
LS5	ROM selection	04000 - 07FFF
LS4	SRAM selection	02000 - 03FFF
LS3	SRAM selection	01000 - 01FFF
LS2	EEPROM selection	00800 - 00FFF
LS1	device bus selection	00400 - 007FF
LS0	I/O selection	00000 - 003FF

Table 6-3-2. RAM/ROM Selection

Control Latch

The MPU uses this latch to control and/or enable various functions on the CPU board. The MPU outputs control information onto the bidirectional data bus (HDBRW0 - HDBRW7) via the data bus buffer (U406). The information is then clocked into the control latch (U404) by the I/O select line, LIS4. The resultant 8 outputs are used to control various system functions as listed in the following table.

Control Bit	Position on Data Bus	Function
CL(7 - 4)	HDBRW(7 - 4)	used to stretch the device bus cycle in order to serve slow devices
CL3	HDBRW3	NOT USED
CL2	HDBRW2	used to expand the 4K addressable SRAM space
CL(1 - 0)	HDBRW(1 - 0)	used to expand the 16K addressable ROM space

Table 6-3-3. Control Latch Bit Assignment

Interrupt Processing

This circuit is responsible for sampling and masking all interrupts.

The MPU:

- sets the priority for each interrupt
- masks out lower priority interrupts
- services the interrupt with highest priority

Four different interrupts can be generated in the HP 8130A/HP 8131A as indicated by the table below.

Mnemonic	Interrupt	Function
HDBI	High Device Bus Interrupt	This is an interrupt signal derived from the common Low Device Bus Request (LDRQ) line used by the other boards to indicate a request to the MPU.
нкві	High KeyBoard Interrupt	This signal indicates a change in the keyboard matrix
НТІ	High Timer Interrupt	This is an interrupt signal from a timer used by a real-time Operating System
HIBI	High HP-IB	This is an interrupt request from the HP-IB controller

Table 6-3-4. Interrupts

HP-IB - Interface

The Hewlett Packard Interface Bus (HP-IB) is an implementation of the IEEE Std. 488.2. It is a bit-parallel/byte-serial asynchronous interface using a three wire handshake.

- The handshake signals are DAV, NRFD and NDAC
- The management signals are IFC, ATN, SRQ, REN and EOI

The interface function for each system component is performed within each component, thus, only passive cabling is needed to connect up the system. The cables connect all instruments, controllers and other components in parallel.

Data and commands are transferred between system components via 16 signal lines (HPA00 - HPA15).

The HP-IB controller carries out communication by means of 13 registers. Six of these registers are read from, and seven written to. The registers are used to send control data to, and receive status information from, system components. A LOW on the chip enable indicates that the processor is carrying out either a read or write from the selected register.

Keyboard Controller

The keyboard controller is used to scan:

- The keyboard
- The LEDs on the front panel, used to indicate the active state of a parameter or function. Each of these functions is programmed and controlled by the CPU.

The controller is always enabled.

Data flow between the MPU and the Keyboard controller registers and buffers, is controlled by two I/O select lines, LSI2 and LSI3, in conjunction with the address line HPA0 (see table below).

LIS2	LIS3	HPA0	Function
0	1	0	Write command to keyboard controller
0	1	1	Write data to keyboard controller
1	0	0	Read status of keyboard controller
1	0	1	Read data from keyboard controller

Table 6-3-5. Keyboard Controller Select Lines

Scanning the Keyboard

The keyboard controller uses the sensor matrix mode to scan the keyboard. Each switch corresponds to a specific location in an 8-bit by 8-bit sensor RAM. This sensor RAM keeps an image of the state of the sensor matrix switches.

Scanning the rows of the sensor matrix or keyboard is accomplished by a combination of the encoded scan lines SL2 -SL0. These lines count from zero to seven in binary thus enabling 1 of 8 outputs of a demultiplexer.

The eight outputs of the demultiplexer are connected to the row lines of the keyboard switches. Thus each byte, in the sensor matrix RAM corresponds to a row of switches.

The state of the eight columns in the sensor matrix is sampled via the eight keyboard-column lines. The result is loaded into the respective bit location of the byte addressed in the sensor RAM by the active row.

A closed switch is indicated by a LOW sensed on a column line. The interrupt request line (HKBI) goes HIGH if a key-location has a changed value. The processor services the interrupt and HKBI goes LOW.

Scanning the Front Panel LEDs

The keyboard controller has a 16-word by 8-bit internal display RAM (only 12 bytes are used) used to drive the front panel LEDs.

The keyboard controller BD output signal inhibits all LEDs while information on the data outputs is changing.

The contents of the display RAM are arranged in such a way that each RAM bit corresponds to one LED on the front panel. When a bit is set the corresponding LED lights up.

Device Bus Interface

The MPU communicates with, or controls, the other boards in the HP 8130A/HP 8131A via the Device Bus. This bus consists of address, data and control lines, that only change their state when data is exchanged.

The 8-bit bidirectional Device Data Bus is derived from HDBRW0 - HDBRW7, the processor data bus.

High Read (HR) active enables the buffer to read data to the MPU. High Write (HW) (the complement of HR) active enables data to be latched into the buffer and to be then sent to other boards. This two-way data transfer is carried out via HDRW0 - HDRW7.

The Device Bus Interface occupies 1 Kbyte of memory. This memory space is divided into 16 parts consisting of 64 locations addressed by address lines HPA5 - HPA0. To address one of these 16 parts, 4 address lines are decoded into eight select lines; each line can select one slot.

Mnemonic	Physical Address	Slot on Mother board
LCS0	0600 - 063F	slot 0 - timing board
LCS1	0640 - 067F	slot 1 - output board 1
LCS2	0680 - 06BF	slot 2 - optional output board 2
LCS3	06C0 - 06FF	slot 3 - service connector
LCS4-7	NOT USED	

Table 6-3-6. Device Bus Address Lines

Three control lines handle the Device Bus transaction as indicated by the table below.

Mnemonic	Function		
LRHW	Low Read/High Write used to control the direction of data flow		
LDBV	Low Device Bus Valid, this signal is used to synchronize the address and data exchange on the Device Bus		
LDRQ	Low Device bus ReQuest, used to indicate an interrupt from a board within the HP 8130A/HP 8131A		

Table 6-3-7. Device Bus Control Lines

Battery Back-up

Normal Operating Mode

VBAT is driven near to +5 V via a transistor on the CPU board. The battery is disconnected from VBAT and the SRAMs are supplied from the power supply; HPSV is active high.

Battery Back-up Mode

When the +5 V drops below 4.75 V HPSV goes LOW and the transistor that drives VBAT turns off. This results in the voltage level on VBSAT falling towards the battery level. Once the battery level is reached, it is made available to the SRAMs. The potential on the active LOW CS inputs of the SRAMs are pulled to the battery voltage and thus access is denied. The SRAMs are now buffered.

The SRAMs are driven by a Lithium battery.

Signal Mnemonics and their Functions

Mnemonic	Function
ATN	ATTention. HP-IB line that defines the type of data on the interface data bus (address/commands or data). See the HP-IB Interface section
BA00 - BA15	MPU Bus Address lines 0-16. MPU address bus
CL0 - CL7	Control Lines 0-7. Used by the MPU to control various system functions. See Control Latch section.
DAV	DAta Valid. HP-IB line that indicates availability and validity of the data on the interface bus. See HP-IB section.
DB0 - DB7	Device Bus lines 0-7. Bidirectional data bus used for communication between the MPU and the other boards.
EMAP0, EMAP1	EPROM MAP lines. Used to map a 32 Kbyte SRAM into two 16 Kbyte EPROM pages.
EOI	End Of Identity. HP-IB line; indicates end of data transfer on the interface bus. See HP-IB Interface section.
HIBI	High Interface Bus Interrupt. Used to inform the processor of a request from the HP-IB interface (if the signal can pass the interrupt mask).
HDA0 - HDA5	High Device bus Address lines 0-5. Static address bus used to select 1 of 64 locations on the board. Enabled by the active LCS line during a device bus operation.
HDB	High Device Bus. Derived from address information to indicate an MPU operation on the device bus.
HDBA	High Device Bus Address. Used to latch address information when the MPU is communicating via the device bus.
HDBI	High Device Bus Interrupt. Used to inform the processor of a request from another board (if the signal can pass the interrupt mask).
нкві	High KeyBoard Interrupt. Used to inform the processor of a request from the keyboard controller (if it can pass the interrupt mask).
HMR	High Master Reset. This signal will stay at the active LOW level for about 50 ms after power-on (see LMR).
HPSV	High Power Supply Valid. About 50 ms after the $+5$ V supply exceeds approximately $+4.8$ V, this signal will become active indicating a stable power supply.
HR	High Read. Indicates a data read operation. Used for devices on the CPU board.
HTI	High Timer Interrupt. This signal is used by the operating system to inform the MPU of a request.
HW	High Write. Indicates a data write operation. Used for devices on the CPU board.
HWDD	High Write Device bus Data. Used by the MPU to clock data into the device bus latch for a write operation.

Table 6-3-8. Signal Mnemonics and their Functions

Table 6-3-8. Signal Mnemonics and their Functions (continued)

Mnemonic	Function
IFC	InterFace Clear. HP-IB line; places I/O system into a known state.
LCEN	Low Card ENable. The LCEN input of each slot of the HP 8131A is connected to a different LCS line. This line indicates an access to the related board (slot) by the MPU.
LCS0 - LCS7	Low Card Select 0-7. Indicates which slot on the HP 8130A/HP 8131A has been addressed for a data exchange with the MPU.
LDBV	Low Device Bus Valid. This line is used by the MPU to indicate stable information (data, address) on the device bus. It is used for communication between the MPU and other boards
LDRQ	Low Device bus ReQuest. This line is used by boards to inform the MPU of a request.
LISO - LIS7	Low I/O Strobe lines 0-7. Signals from the I/O decoder used for read/write or enable operations on the MPU I/O devices.
LMR	Low Master Reset. This signal stays at the active LOW level for about 50 ms after power-on.
LRHW	Low Read/High Write. Used to indicate the direction of the device bus data flow.
LOE	Low Output Enable. Used to control the output of the EPROMs.
LROM0, LROM1	Low ROM select. Used to select ROM0 or ROM1 on the MPU board
LSRAM0, LSRAM1	Low SRAM select. Used to select SRAM0 or SRAM1 on the MPU board
LEEPROM	Low EEPROM select. Used to select the EEPROM on the MPU board.
LWE	Low Write Enable. Used to enable the RAMs.
NDAC	Not Data ACcepted. HP-IB handshake line indicating acceptance of data by all devices.
NFRD	Not Ready For Data. HP-IB handshake line indicating that devices are ready to accept data.
P0 -P7	Phase 0-7. Each phase is a 1.25 MHz signal from the control timing circuit.
RL0 - RL7	Return Lines 0-7. Return line inputs that are connected to the scan lines via the keys (input lines to key_ctrl).
S0 -S7	Segment lines. These lines form the output of the display refresh registers. The data from these outputs is synchronized with the scan lines (SL0 - SL3).
SLO - SL3	Scan Lines. These scan lines are used to scan the key switches or the display digits.
SMAP	SRAM MAP line. Used to map an 8 Kbyte SRAM in two 4 Kbyte SRAM pages.

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Pin Definitions

Motherboard Connector

Pin	Row a	Row c	Pin	Row a	Row c
32	S1	S0	16	+5.1 V	+5.1 V
31	S3	S2	15	+5.1 V	+5.1 V
30	S5	S4	14	+5.1 V	+5.1 V
29	S7	S6	13	+5.1 V	+5.1 V
28	RL1	RL0	12	SHGND	SHGND
27	RL3	RL2	11	LCS2	LCS3
26	RL5	RL4	10	LCS0	LCS1
25	RL7	RL6	09	LDRQ	HPSV
24	SL1	SL0	08	HDD6	HDD7
23	SL3	SL2	07	HDD4	HDD5
22	nc	nc	06	HDD2	HDD3
21	FAN+	FAN-	05	HDD0	HDD1
20	DGND	DGND	04	LRHW	LDBV
19	DGND	DGND	03	HDA4	HDA5
18	DGND	DGND	02	HDA2	HDA3
17	DGND	DGND	01	HDA0	HDA1

Table 6-3-9. Motherboard Connector Pin Definitions

Keyboard to CPU Board Connections

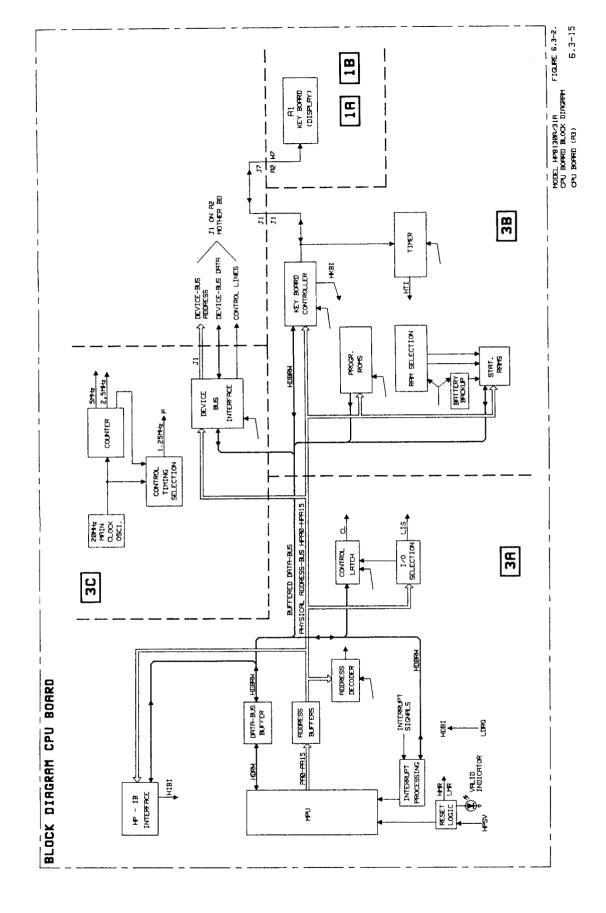
Signal	Keyboard Connector Pins	CPU Connector Pins
 S0	1	32c
S1	2	32a
S2	3	31c
S3	4	31a
S4	5	3 0c
S4	6	30a
S6	7	29c
S7	8	29a
RL0	9	28c
RL1	10	28a
RL2	11	27c
RL3	12	27a
RL4	13	26c
RL5	14	26a
RL6	15	25c
RL7	16	25a
SLO	17	24c
SL1	18	24a
SL2	19	23c
SL3	20	23a

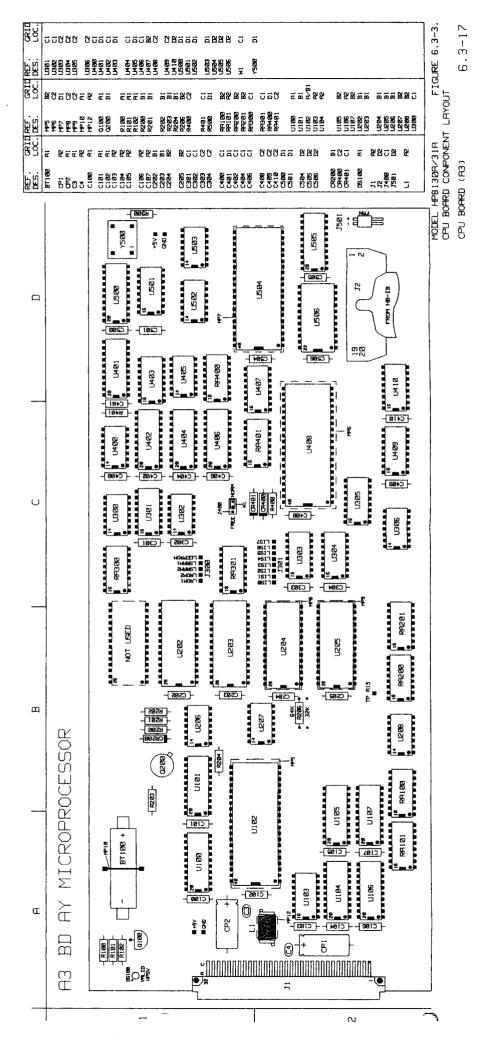
Table 6-3-10. Keyboard and CPU Pin Definitions

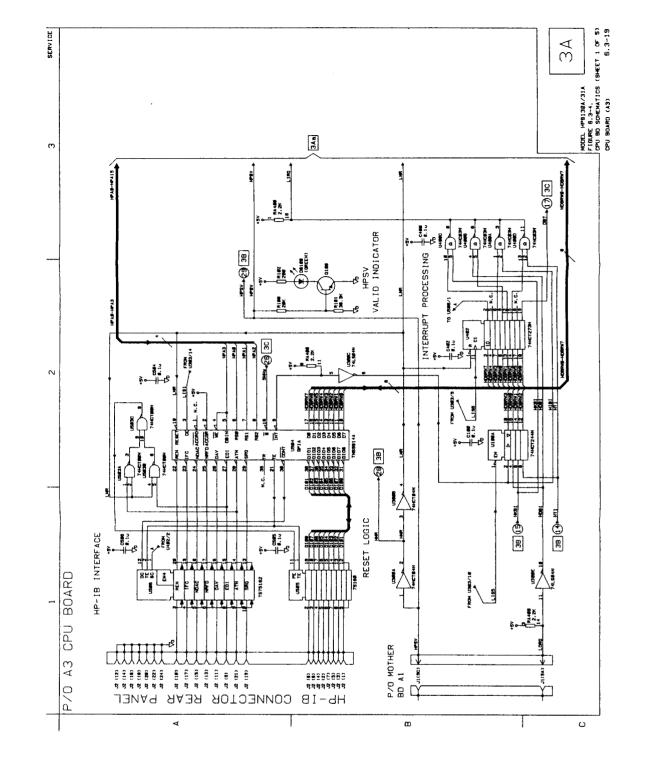
HP-IB to CPU Board Connections

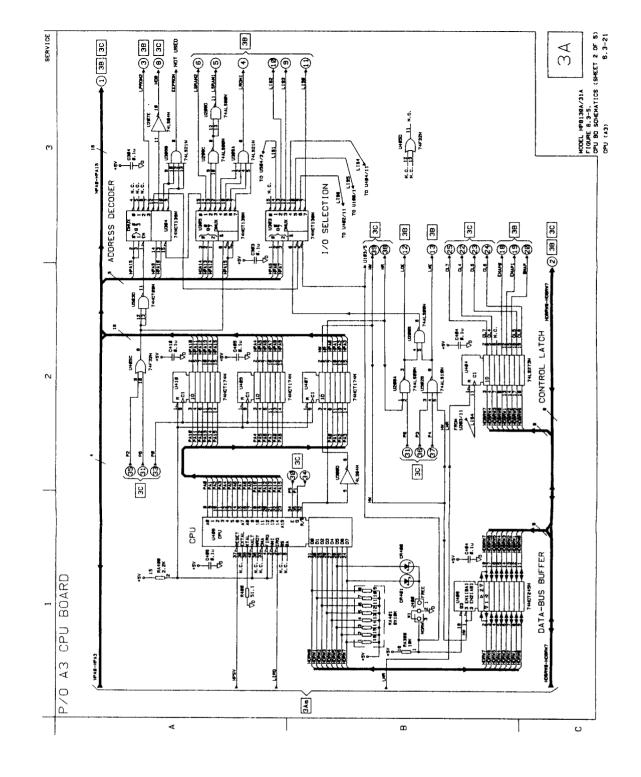
Signal	HP-IB Connector Pins	CPU Connector Pins
DIO1	1	1
DIO2	2	3
DIO3	3	5
DIO4	4	7
EOI	5	9
DAV	6	11
NRFD	7	13
NDAC	8	15
IFC	9	17
SRQ	10	19
ATN	11	21
SHIELD	12	23
DIO5	13	2
DIO6	14	4
DIO7	15	6
DIO8	16	8
REN	17	10
GND	18	12
GND	19	14
GND	20	16
GND	21	18
GND	22	20
GND	23	22
GND	24	24

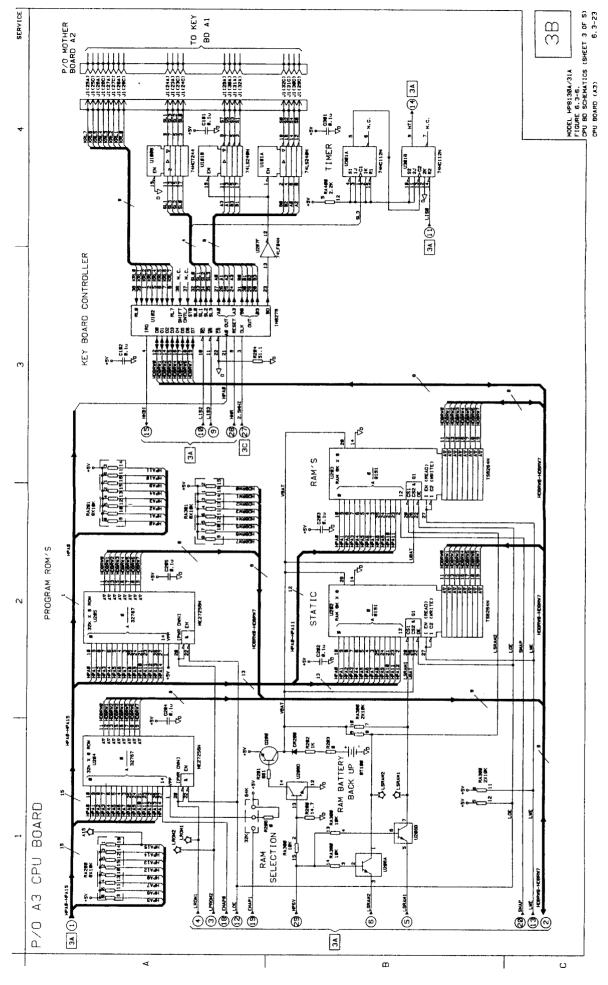
Table 6-3-11. HP-IB and CPU Pin Definitions



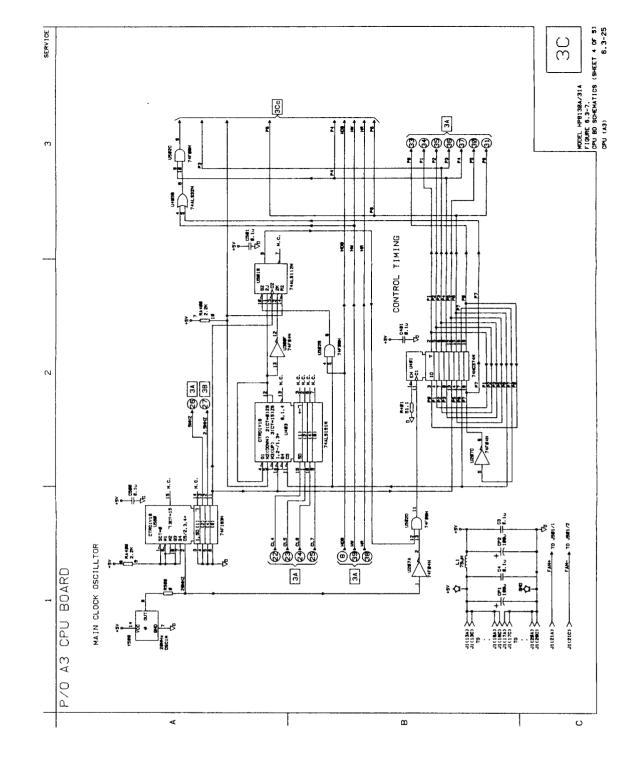




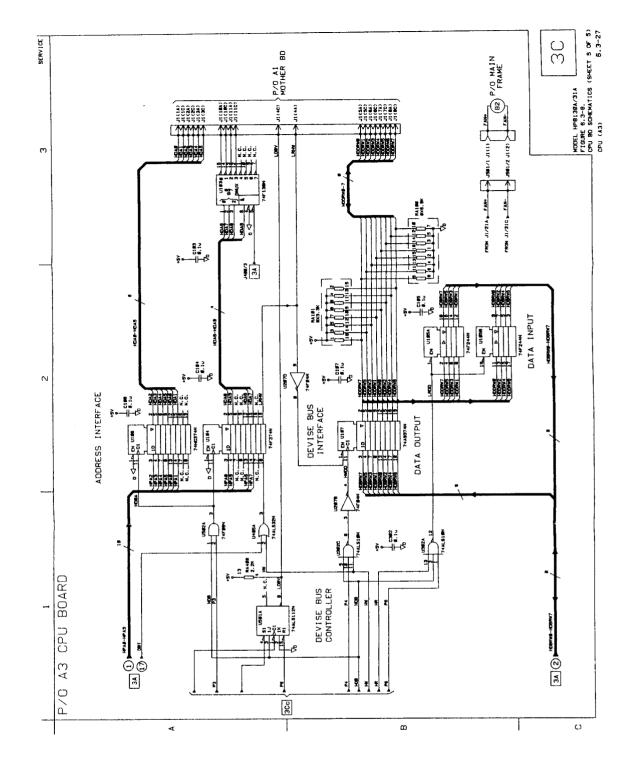




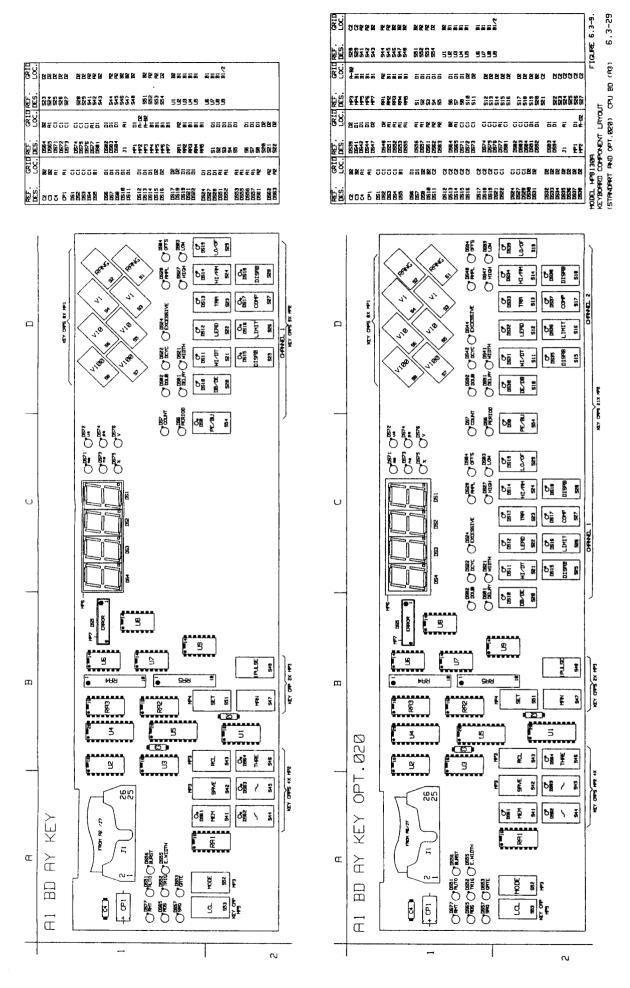
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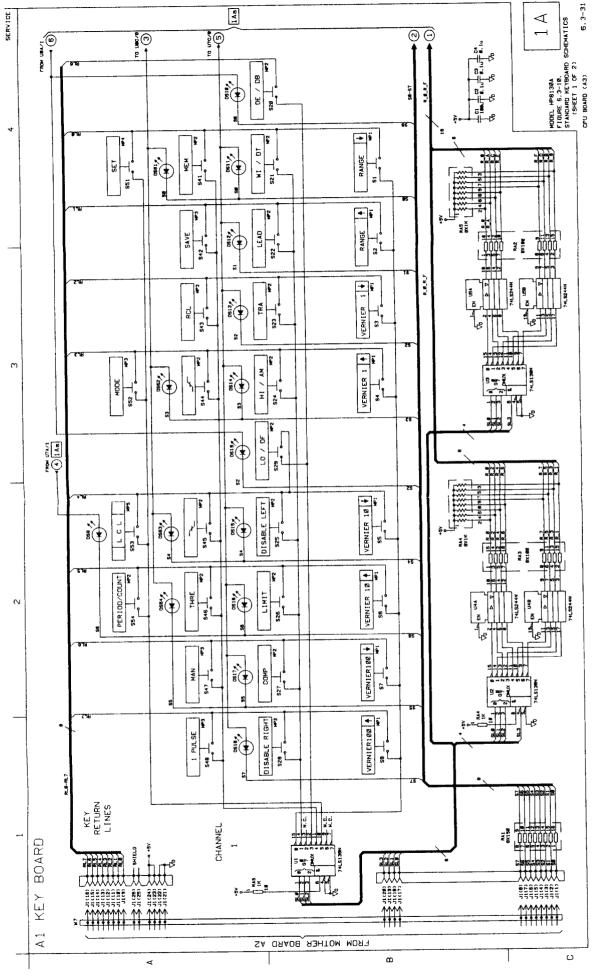
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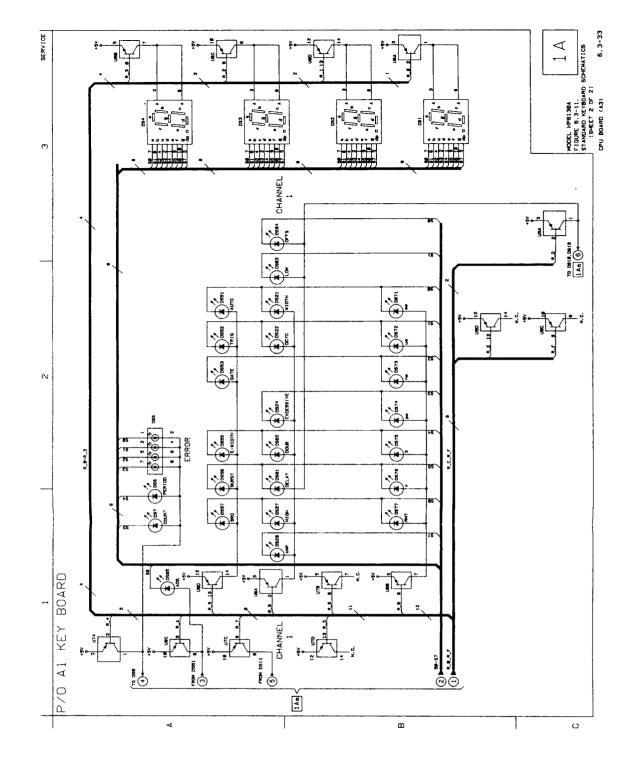
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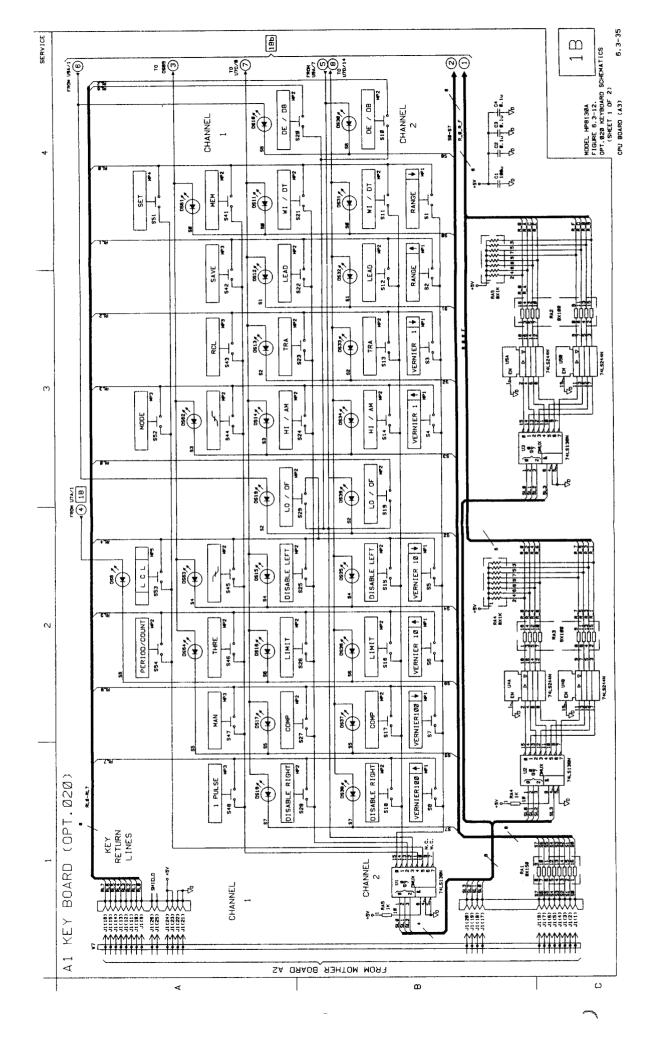
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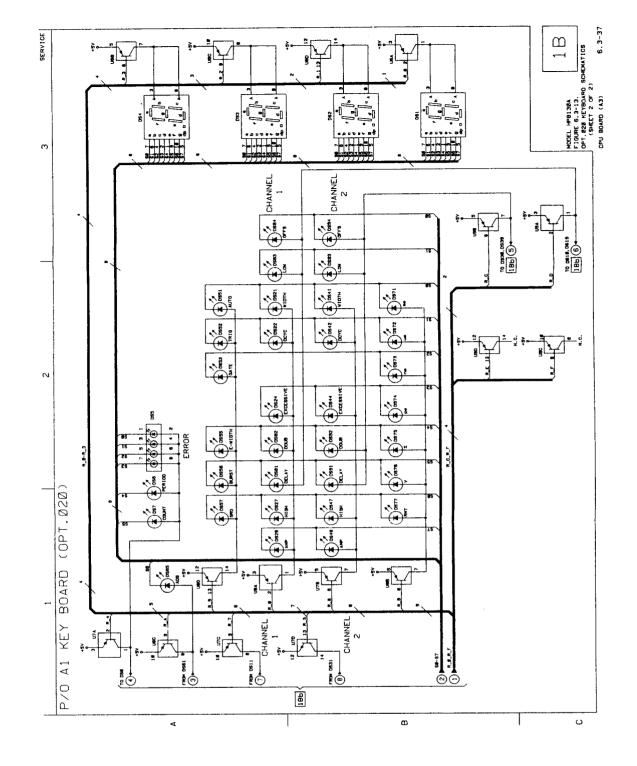


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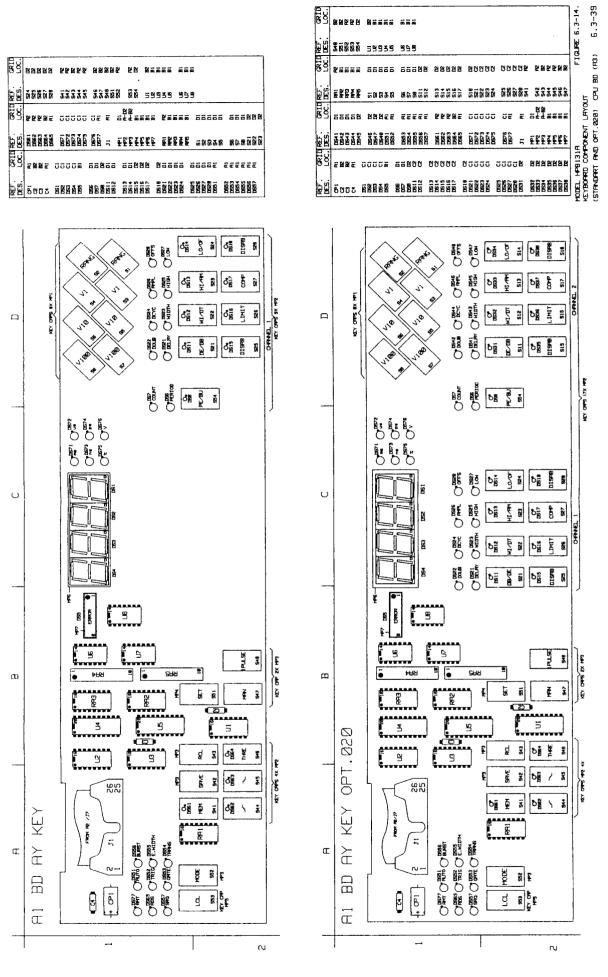


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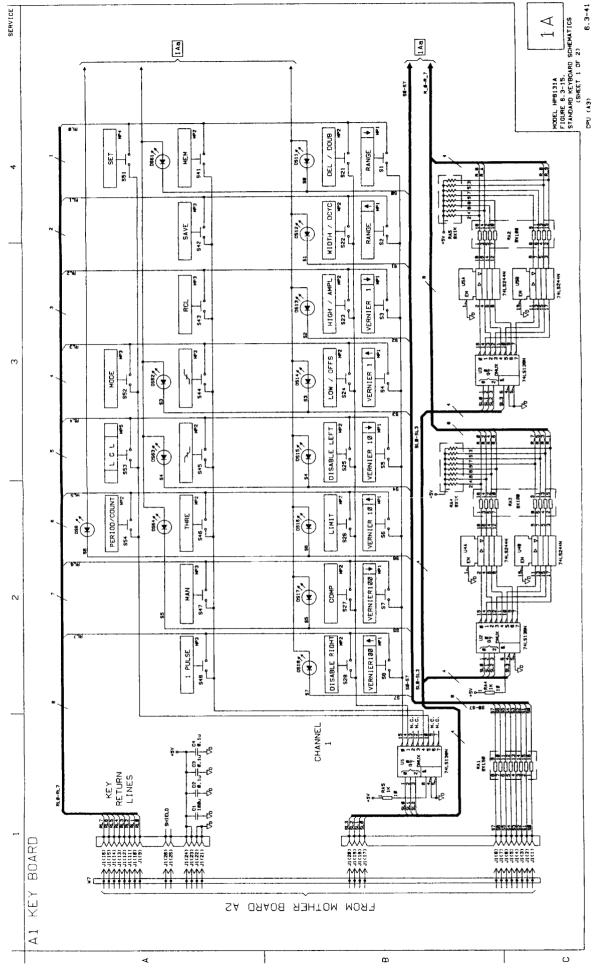


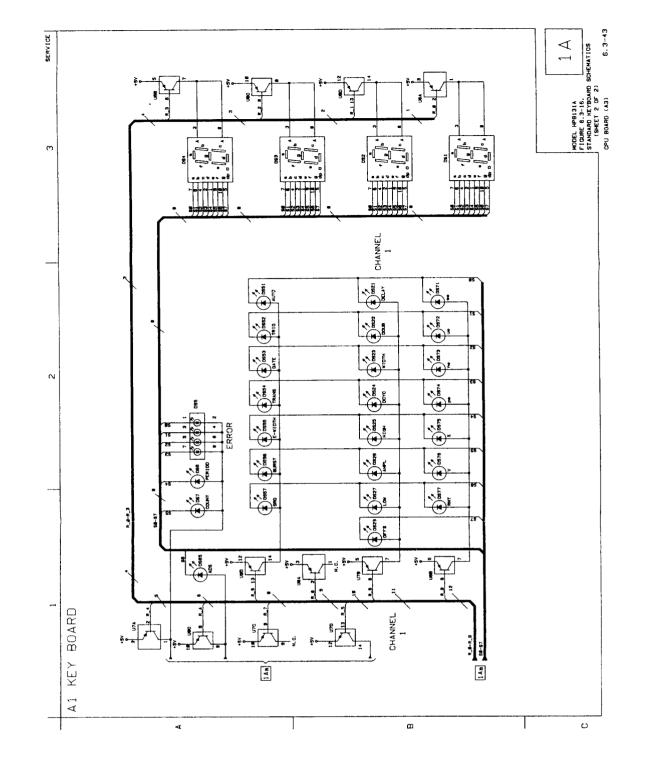


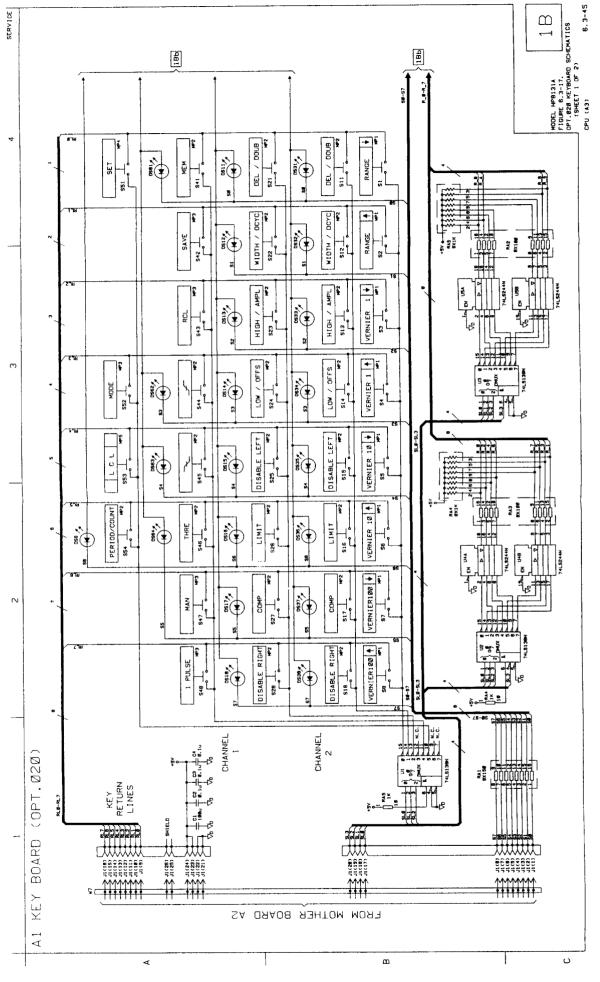
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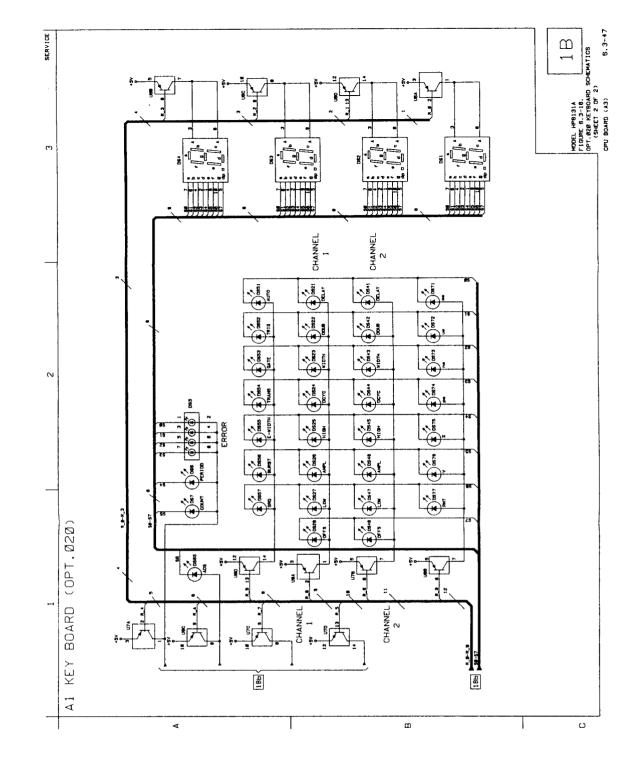


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# Timing Board (A5)

### Introduction

The complete timing generation for both the HP 8130A/HP 8131A 500 MHz channels is realized on one board.



The HP 8130A is a 300 MHz pulse generator, however, it uses the same 500 MHz channels as the HP 8131A.

The board consists of five main parts:

- three timing blocks to generate period, delay and width
- trigger input stage
- adjust memory.

The delay and width generators are duplicated in the optional second channel (option 020).

**Block Theory of Operation** 

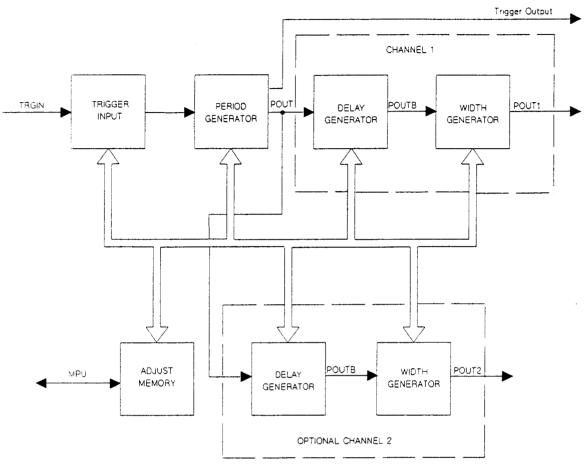


Figure 6-4-1. Module Block Diagram

#### **Trigger Input**

The external signal, with a frequency up to 300 MHz for the HP 8130A and 500 MHz for the HP 8131A, is transformed to an internal signal with an EECL format.

#### **Timing Blocks**

The three timing blocks (period, delay, and width) function in a similar manner, their main components being a 500 MHz triggerable oscillator and a 200 MHz counter. This enables a frequency range from 500 MHz down to 10 Hz to be covered. The delay and width timing blocks are duplicated in the optional channel 2.

#### **Adjust Memory**

The adjust information (found during a special test during production) is stored in an EEPROM within this block. The MPU uses this EEPROM data every time the timing parameter changes.

### **Trigger Input**

The trigger input stage transforms an external trigger signal with a frequency up to 300 MHz for the HP 8130A and 500 MHz for the HP 8131A to an internal trigger signal. The external levels can be in the range of  $\pm 5$  V with a peak-to-peak voltage down to 300 mV, the internal levels are EECL format.

The heart of the trigger input is a bipolar 500 MHz comparator mounted on a hybrid that can be internally inverted and disabled. To operate the comparator in its specified range, the input signal, TRGIN, is attenuated by 20 dB. The trigger threshold is generated by an 8-bit DAC.

### **Timing Block**

The timing block is the main part of the timing board. There are three timing blocks in the 1-channel version and five in the 2-channel version. They operate in a similar manner to generate period, delay, and width.

A timing block consists of:

- a 500 MHz bipolar timing generator (TIGER)
- a 200 MHz bipolar counter
- five current sources and one voltage source that are partially controlled by a DAC
- a digital interface for mode control
- a 10 MHz TTL-burst-counter for the period generator.

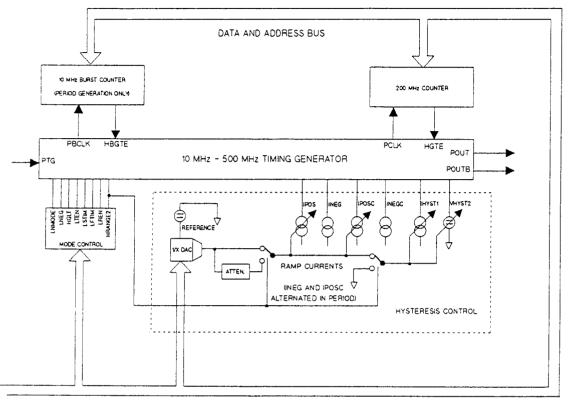


Figure 6-4-2. Timing Block Diagram

#### **Bipolar Timing Generator**

The TIGER-IC is a synchronously gateable and triggerable oscillator with a maximum frequency of 500 MHz or a minimum pulse width of 1 ns. It has a large analog timing range divided into two parts. The first part has a pulse width range from 1 ns to 10 ns, the second from 10 ns to 100 ns (or a 500 MHz to 100 MHz and 100 MHz to 10 MHz repetition rate). This analog timing range can be expanded by using an external decade counter.

#### Mode Control

The operation mode of the TIGER is controlled by the digital mode control. Each TIGER can operate in one of the following modes:

- a gateable oscillator
- a monostable that can be triggered on the rising edge or, the rising and falling edges
- a transparent IC (output signal = input signal).

There are some additional signals to enable the timing circuit and, to select either the first or second timing range.

#### Current Sources, Voltage Source and Hysteresis Control

The analog timing of the TIGER is controlled by five current sources and one voltage source, partially controlled by a DAC.

The current sources Ipos and Ineg supply the ramp oscillator load capacitor and hence define the charge and discharge cycles.

Iposc and Inegc are complements of Ipos and Ineg and are used for internal offset biasing.

Ihyst1 and Vhyst2 are used to adjust the ramp oscillator internal hysteresis and thus to compensate for high frequency effects.

Ipos, Iposc and the hysteresis control are varied by a 12-bit DAC used in the 1/x-mode. To enable both timing ranges to be covered by the same DAC and sources, the DAC can be switched to operate via an attenuator in the second timing range. The result is to set the current sources in a different manner; the hysteresis control is fixed.

#### **Decade Counter**

The decade counter is used to expand the analog timing range of the TIGER. It is a (14+2)-bit bipolar EECL counter that is able to operate in a frequency range up to 200 MHz and to count up to 3 276 801. When operating in the second timing range (10 ns to 100 ns) the counter, together with the TIGER, can expand the pulse width up to 100 ms (repetition rate of 10 Hz).

#### **Period Generation**

During period generation the fast counter operates in the burst mode to count the required number of bursts in the period range 5 ns to 99.9 ns. To provide a burst mode in slower ranges, where this counter is used to expand the period, an additional burst counter is realized using discrete TTL components.

### **Operation Modes**

The following sections describe the seven operation modes available with the HP 8130A and the eight modes with the HP 8131A. The information given, also applies to the optional second channel.

#### AUTO - Auto Mode

In this mode, the period, delay and width are generated internally and the trigger input disabled. The period generator operates as a free running oscillator and the delay and width generators as monostables. The delay generator is triggered by the rising edge of the period generator output signal (POUT). The delay generator produces a single negative pulse at its inverted output (POUTB); the (negative) pulse width corresponds to the expected delay. The width generator is triggered by the rising edge of the delay generator output (POUTB). The width generator output pulse (POUT1) with the required width.

#### TRIG - Triggered Mode

In TRIG mode the trigger input is enabled with all its functions. The period generator is in transparent mode and the delay and width generators are used as monostables. The delay and width generators function in the same way as in the AUTO mode. Triggering at the trigger input can be on the rising or falling edge.

#### GATE - Gate Mode

The internal configuration of the GATE mode is the same as for the AUTO mode, except the trigger input is enabled. Period, delay, and width are generated internally, in addition the period generator can be started or stopped by an external signal. The start of the period generator is synchronized to the external signal and is halted after the last period cycle has completed. The gate function at the trigger input can be selected either for positive or negative gate.

#### BURST - Burst Mode

In the BURST mode the period generator is configured as in the GATE mode, but the gate signal is internally generated by a burst counter. A trigger pulse at the period generator causes it to oscillate and a counter counts from the given number of burst pulses down to zero and then stops the period generator. If the period is lower than 100 ns, the fast counter is used to count the pulses otherwise the TTL counter is used. The delay and width generators again operate as monostables. The BURST function can be chosen, at the trigger input, to start on the rising or falling edge.

#### E. WIDTH - External Width Mode

In this mode the input signal TRGIN is transmitted to the output POUT1, thus all the generators (period, delay, and width) are in the transparent mode. In order to produce the correct signal at the HP 8130A/HP 8131A output, the input signal is first inverted at the trigger input stage and then again on the output board. The E. WIDTH mode can be selected, at the trigger input, to operate normally or inversely.

## TRANS - Transducer Mode (HP 8131A only)

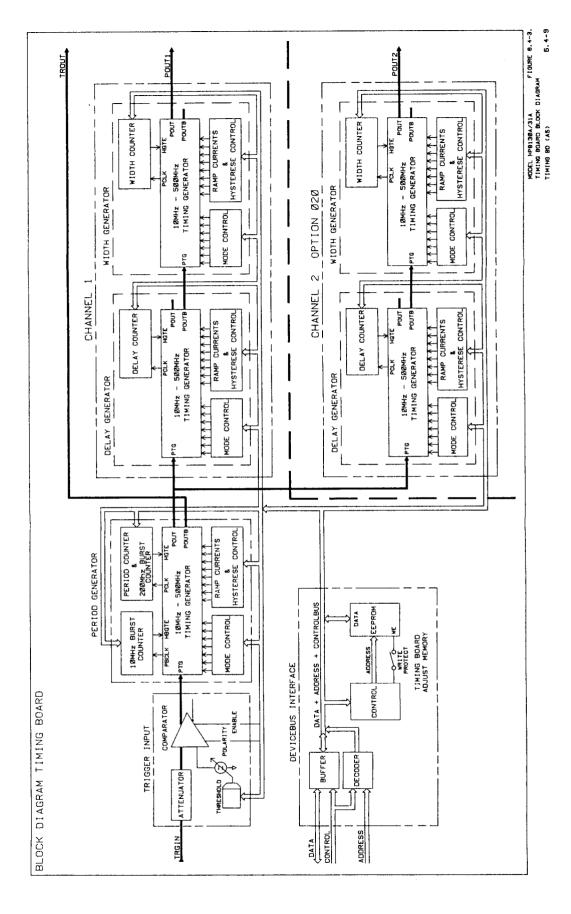
This mode does not involve the timing board; thus all generators and the trigger input are disabled.

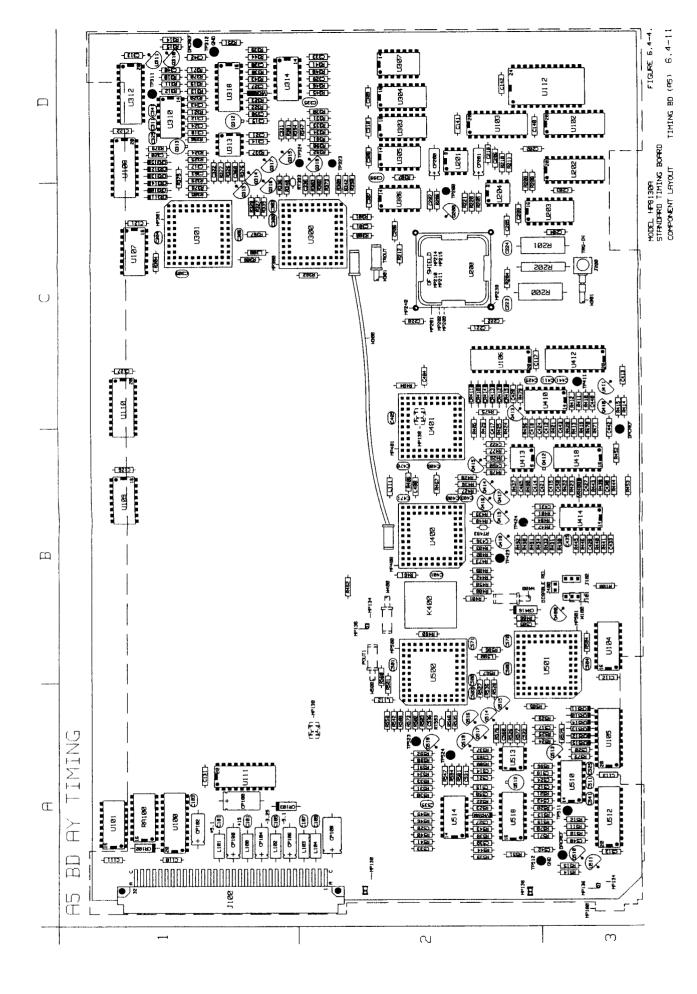
#### DCYC - Duty Cycle Mode

This mode can be selected in addition to the AUTO, GATE, and BURST modes. During this mode the firmware calculates and programs the width, corresponding to the given period, with respect to the desired duty cycle.

#### **DOUB - Double Pulse Mode**

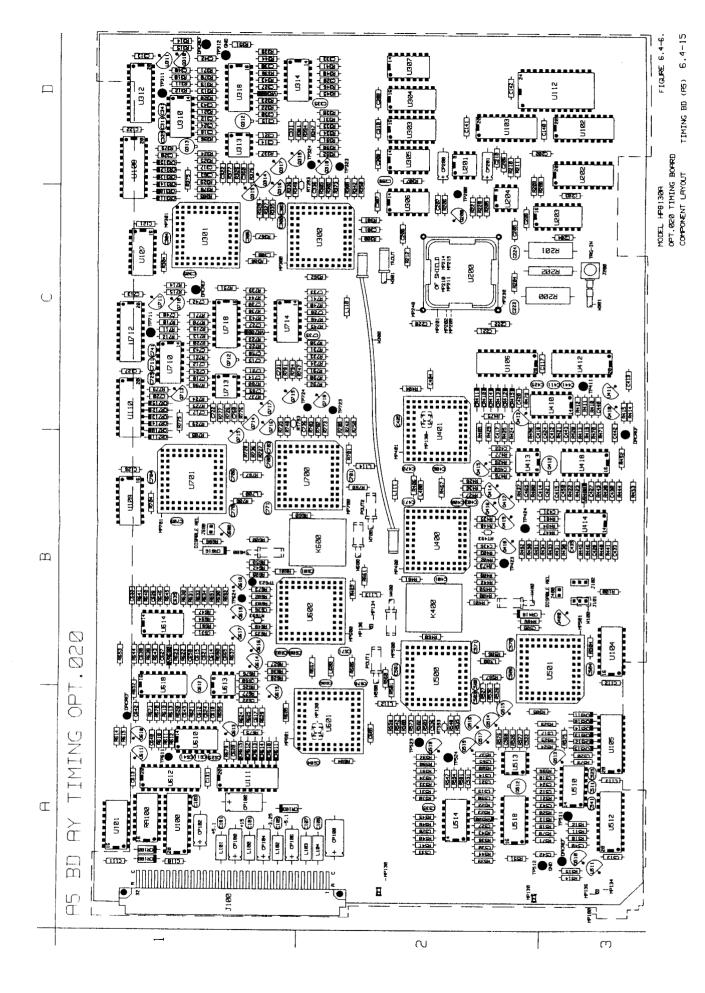
This mode can be selected in addition to AUTO, TRIG, GATE, and BURST modes. In this mode two pulses are generated for one trigger event or during one period. Both delay and width generators are in the monostable mode, but the width generator is now triggered on both the rising and falling edges of its input signal. Therefore, the pulse width of the delay generator defines the distance between the two output pulses. The (normal) delay function is not available in this mode.





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| 0.001       RF.       0.001       RF.       0.001         0.001       RF.       0.001       RF.       0.001       RF.       0.001         0.001       RF.       0.002       RF.       0.001       RF.       0.001       RF.       0.001         0.001       RF.       0.002       RF.       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001       0.001 | GRID.        |                                                                               |                                                                                                  | 7 8 8 8 8<br>1                               | នួលលោក អ                                                                                                                                                                                      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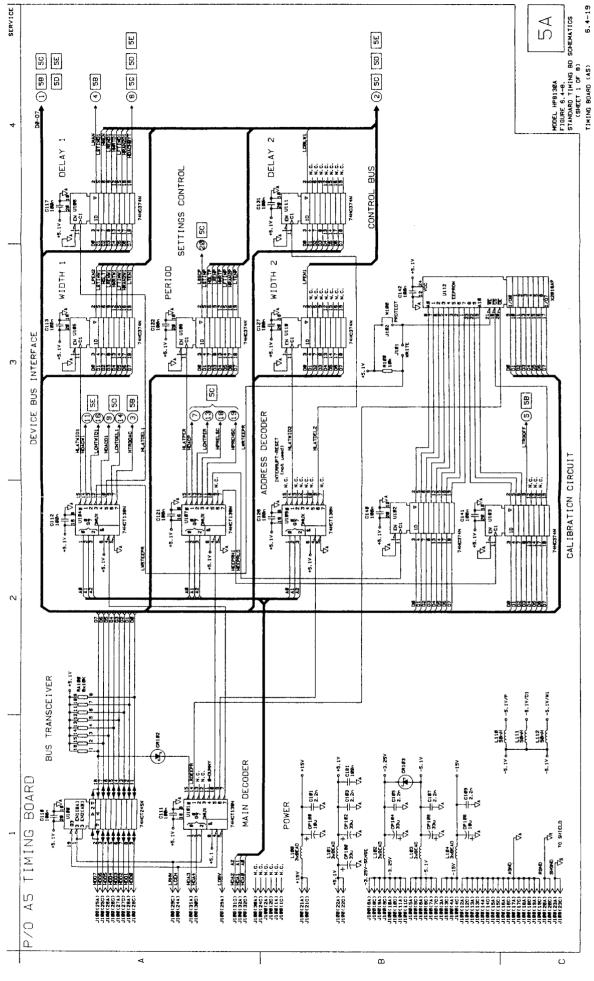
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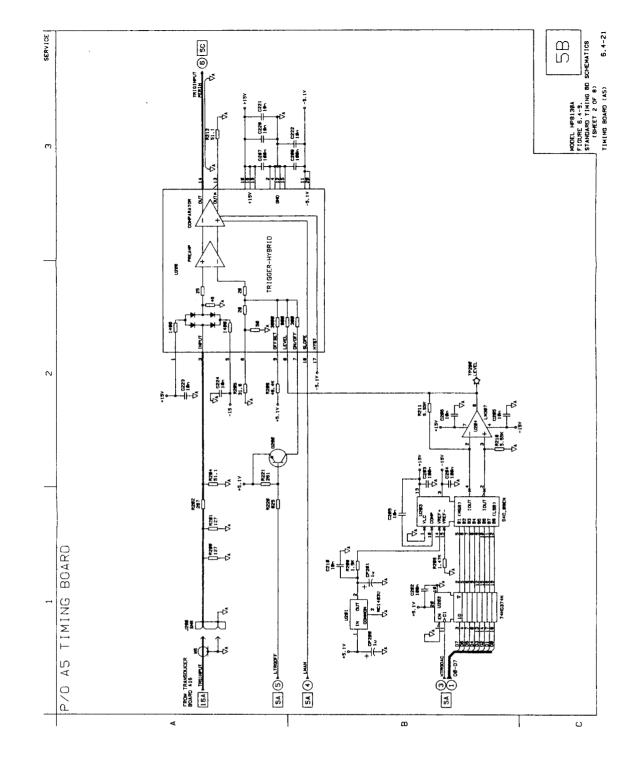
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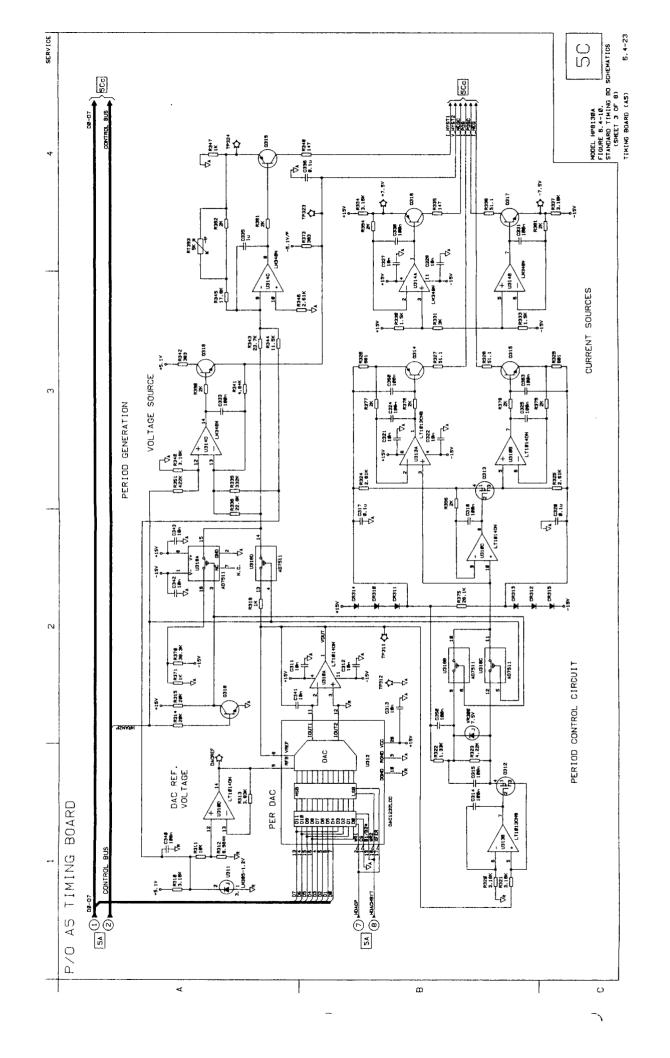
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| REF.<br>DES.         | R612<br>R613<br>R613<br>R613<br>R615<br>F615<br>F615                                                                                      | R622<br>R622<br>R622<br>R623<br>R623<br>R623<br>R623<br>R623                    | R626<br>R623<br>R623<br>R623<br>R623<br>R623<br>R623<br>R623                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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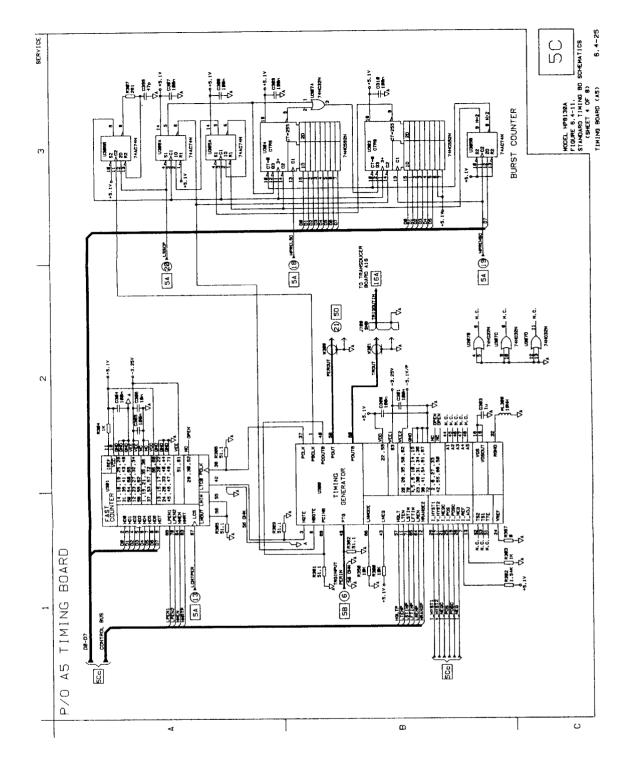
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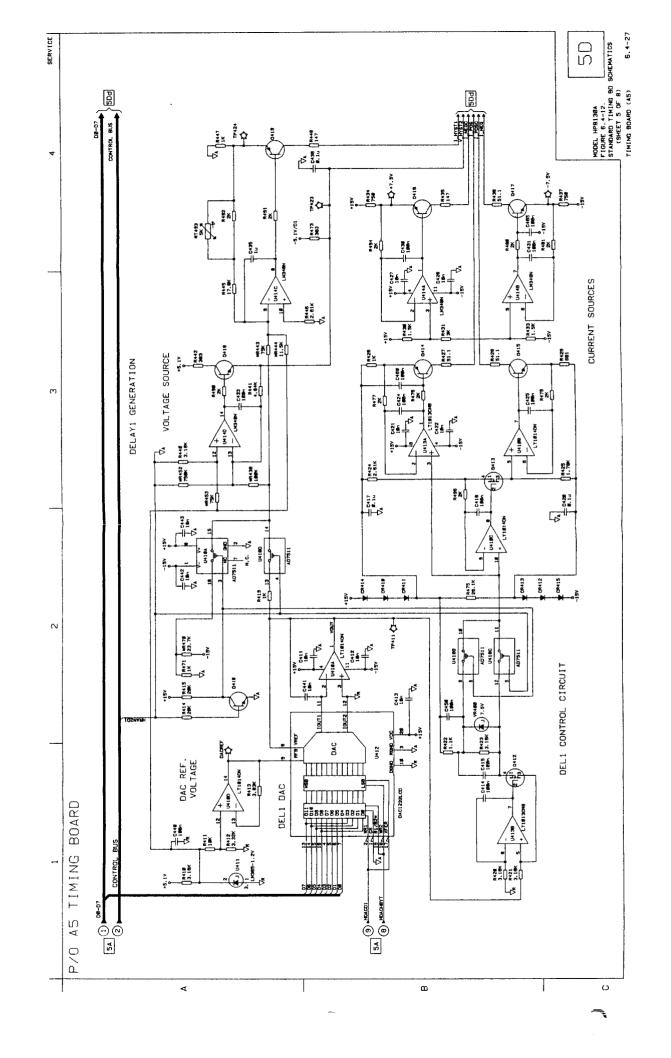
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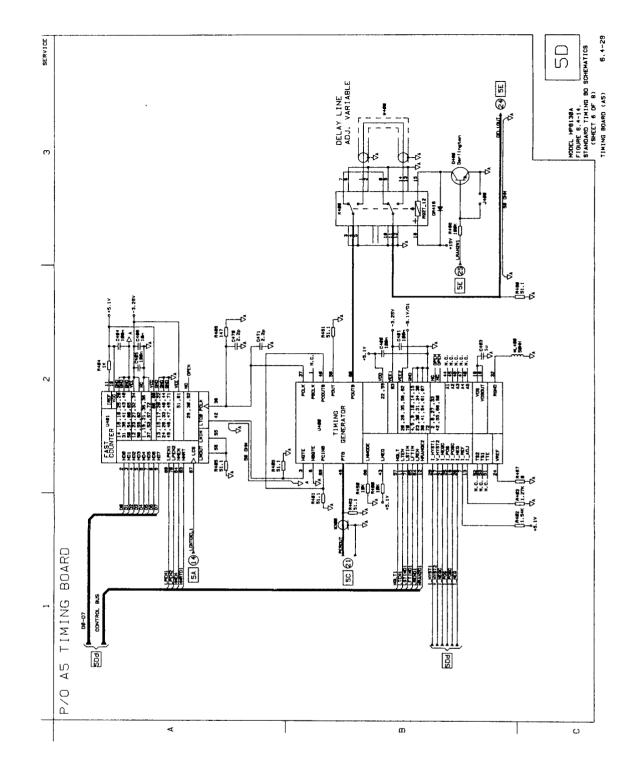




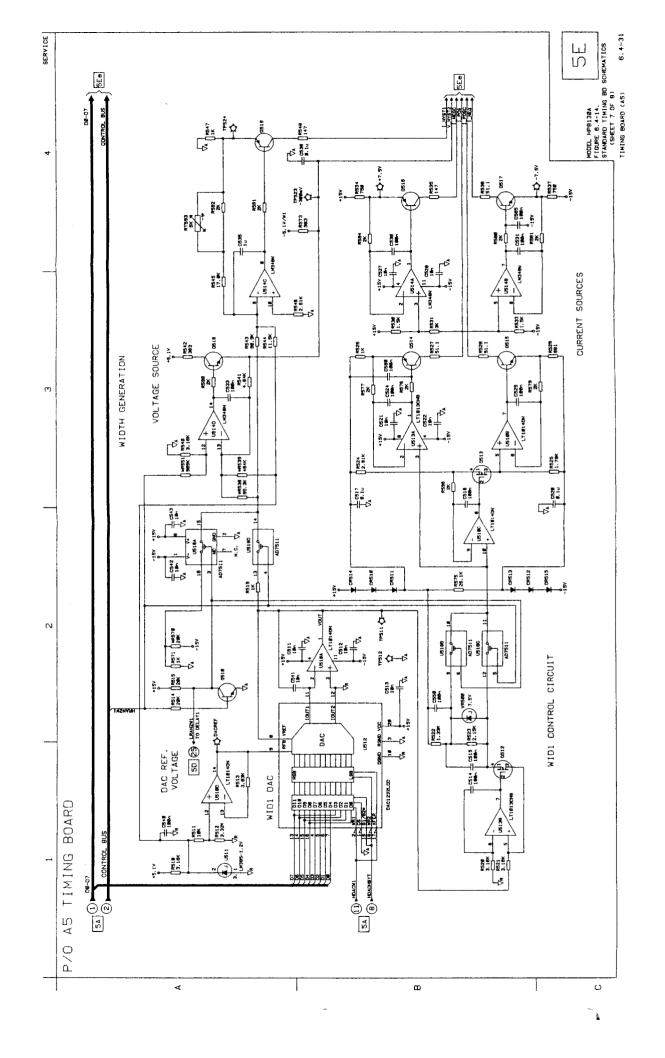


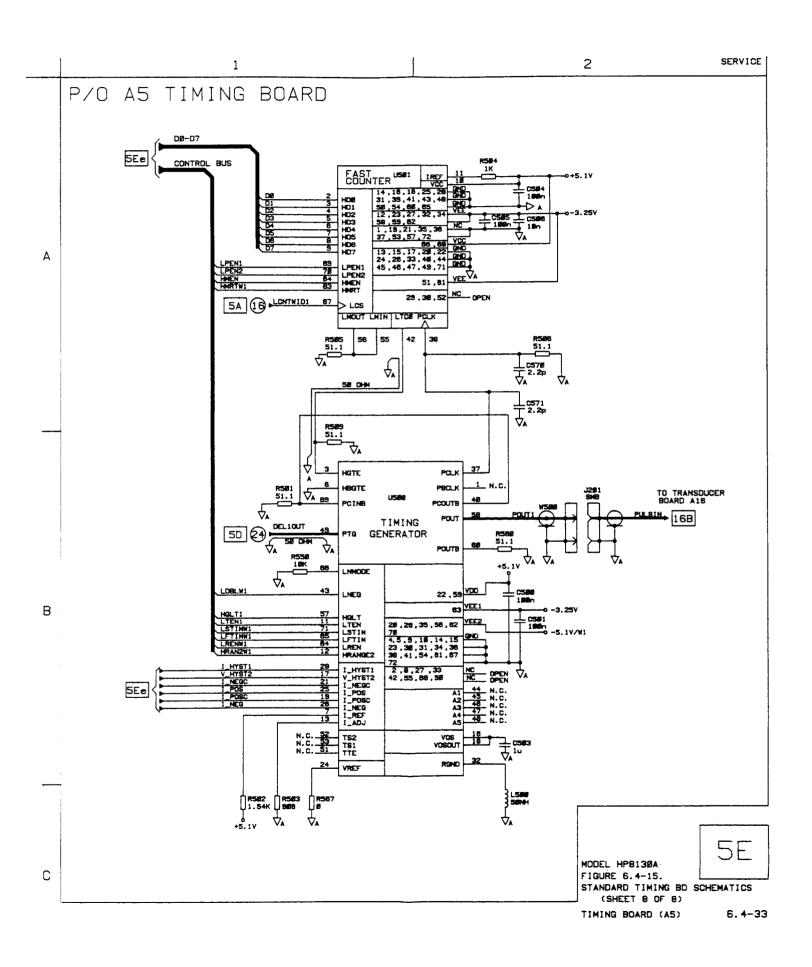
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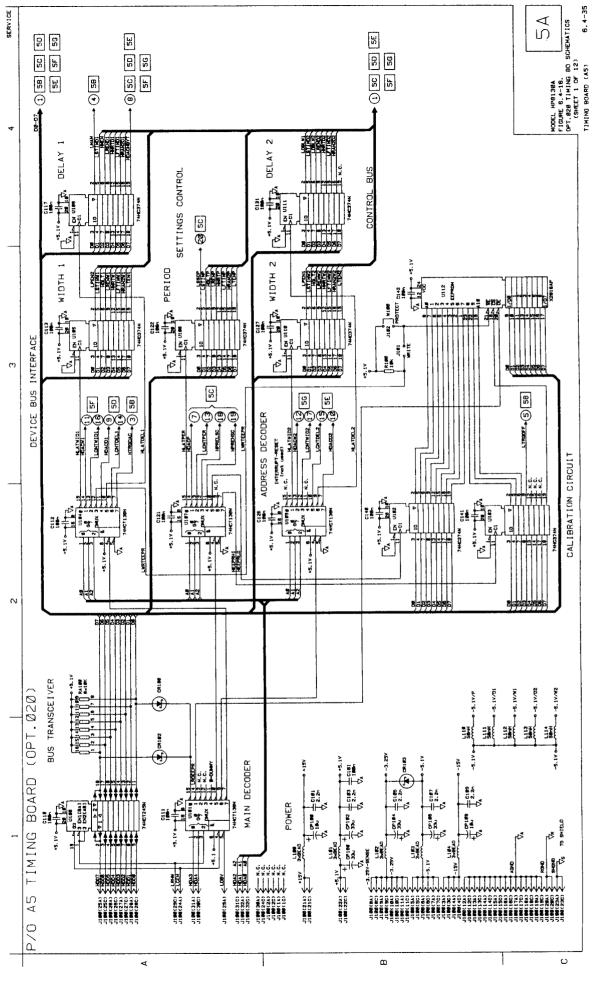


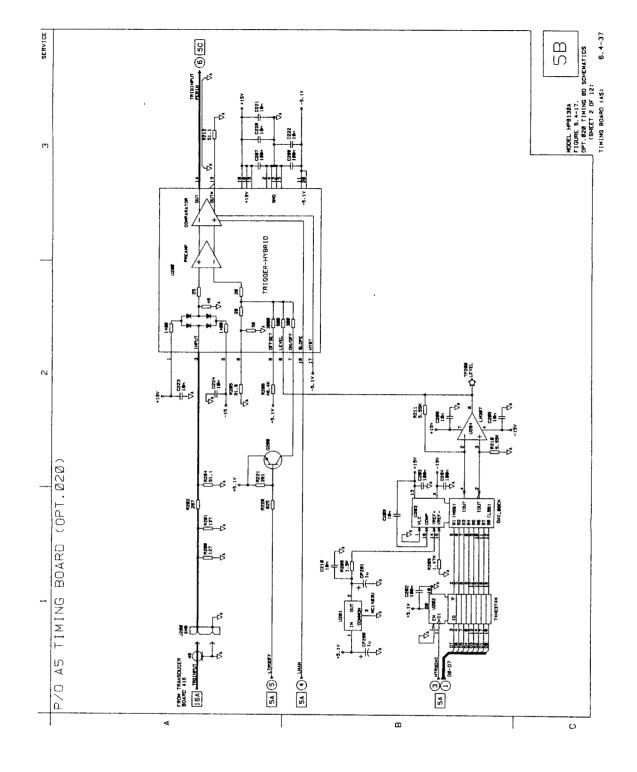


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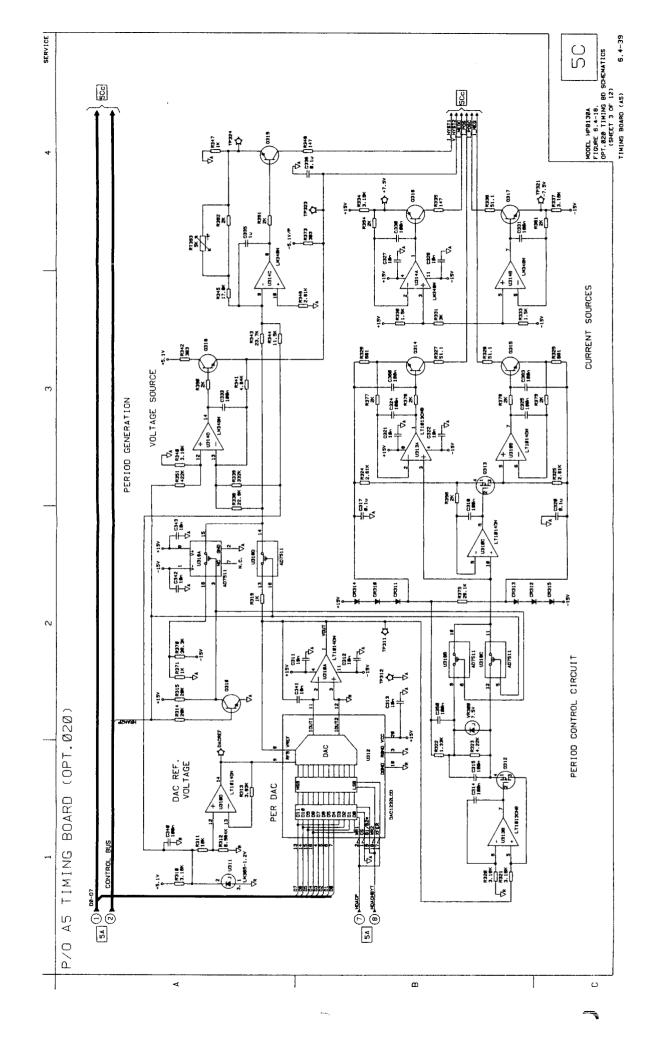


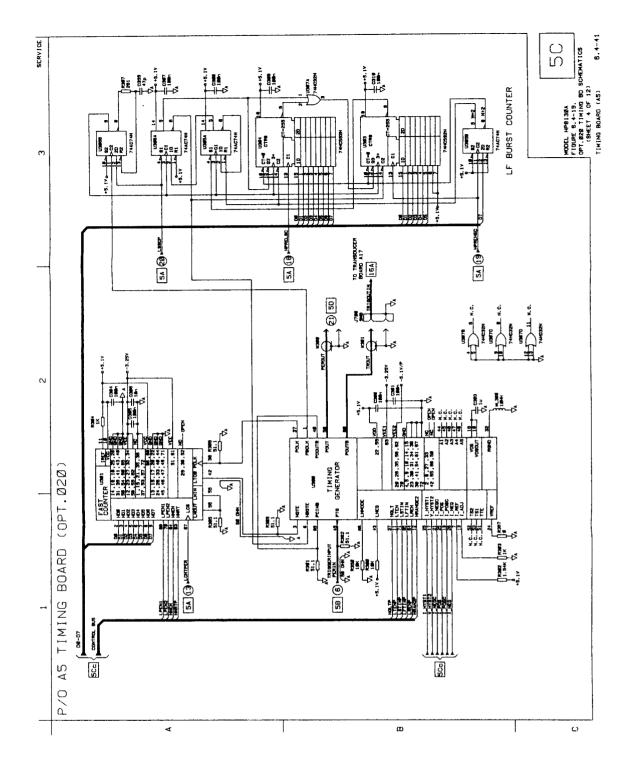


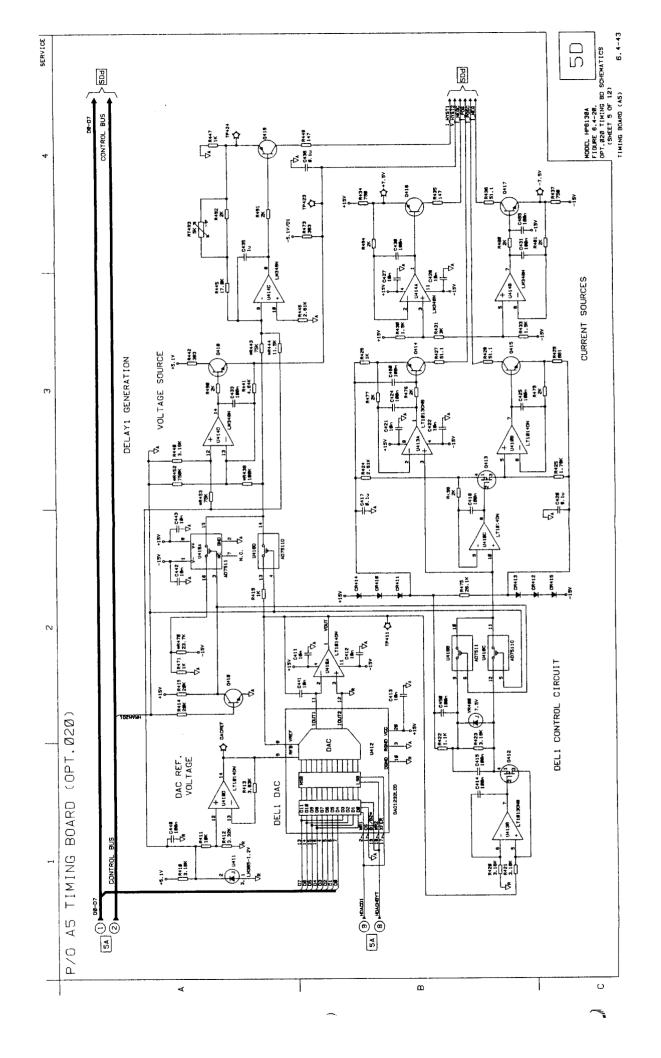


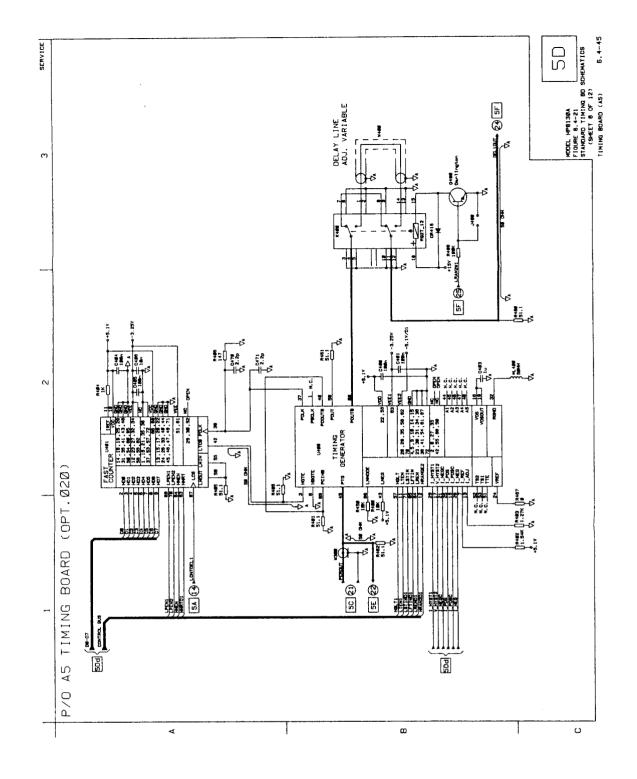


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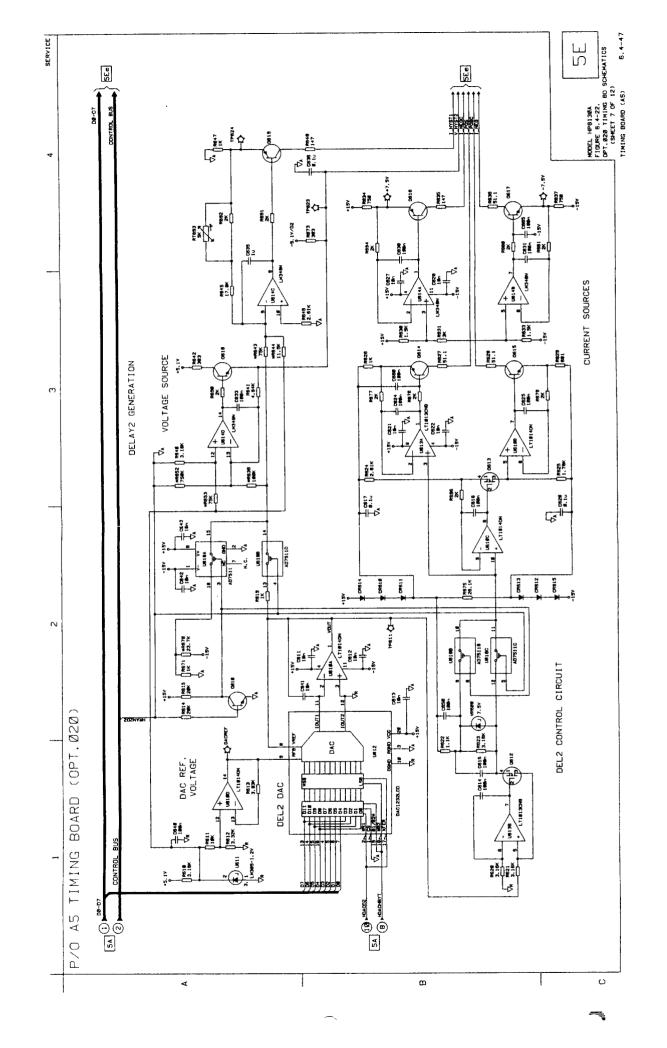


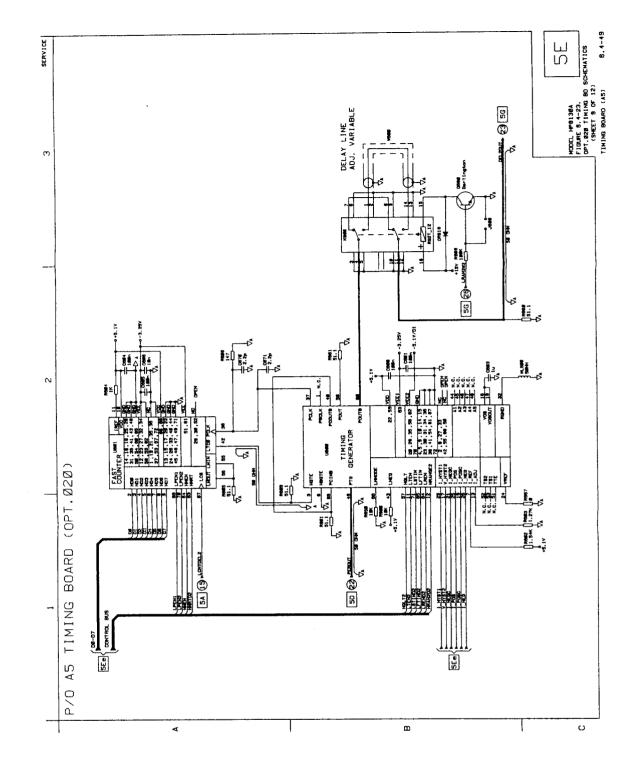


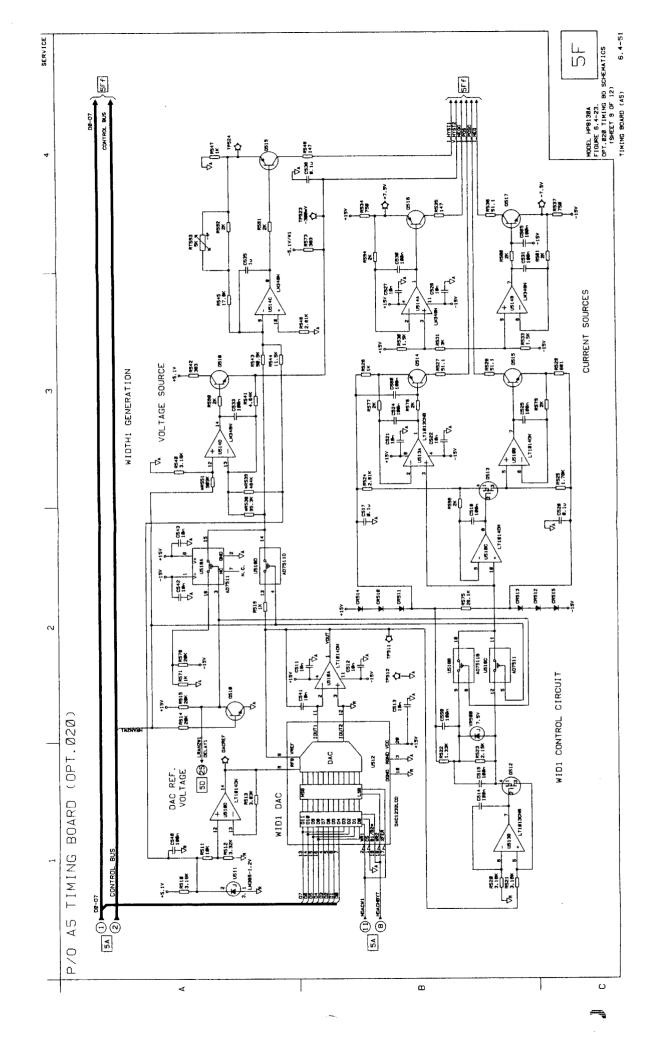


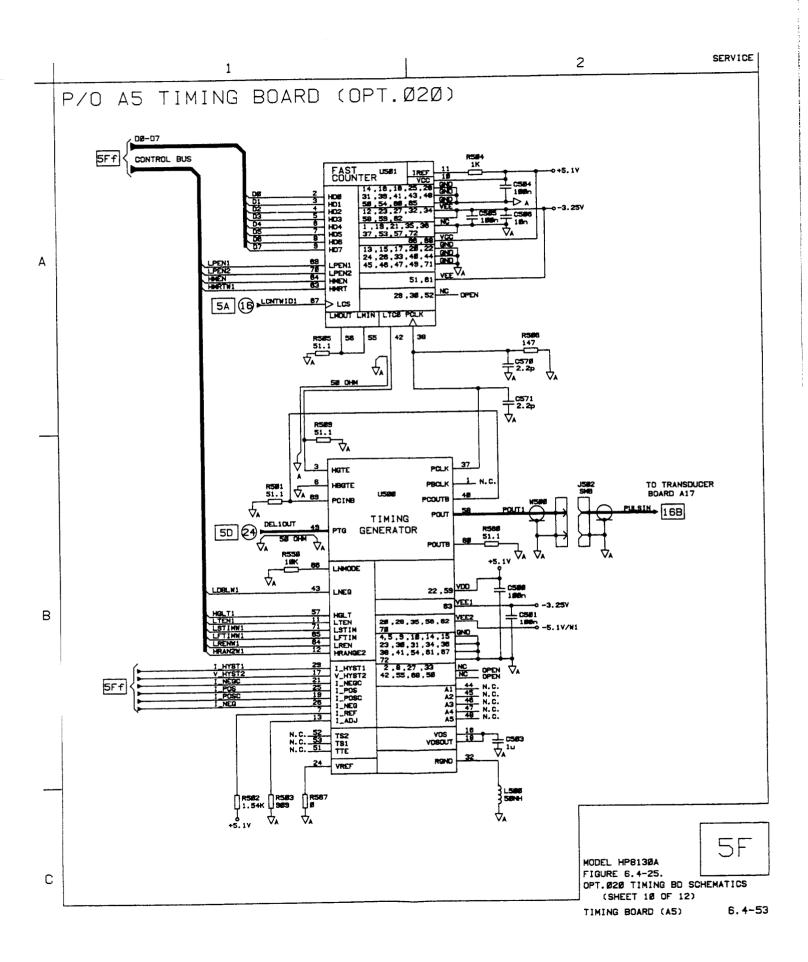


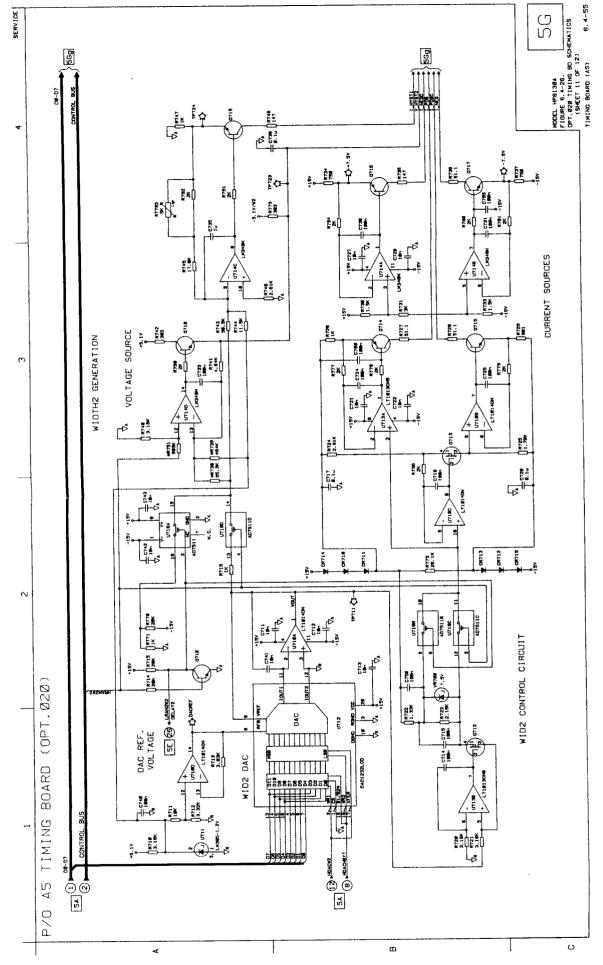
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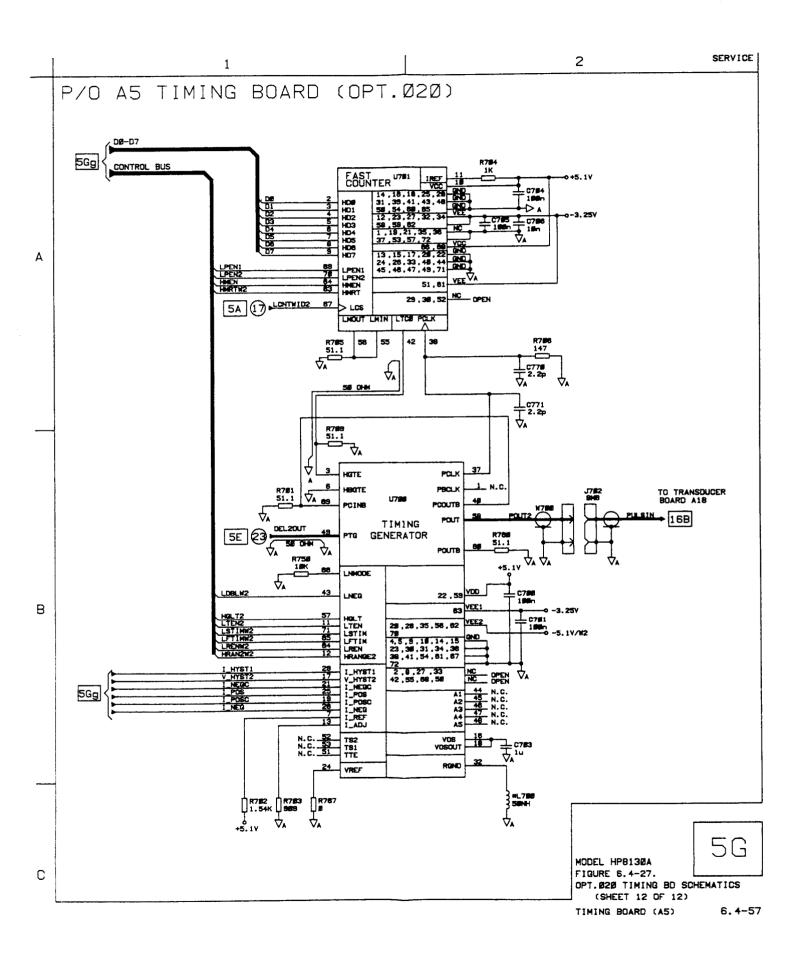


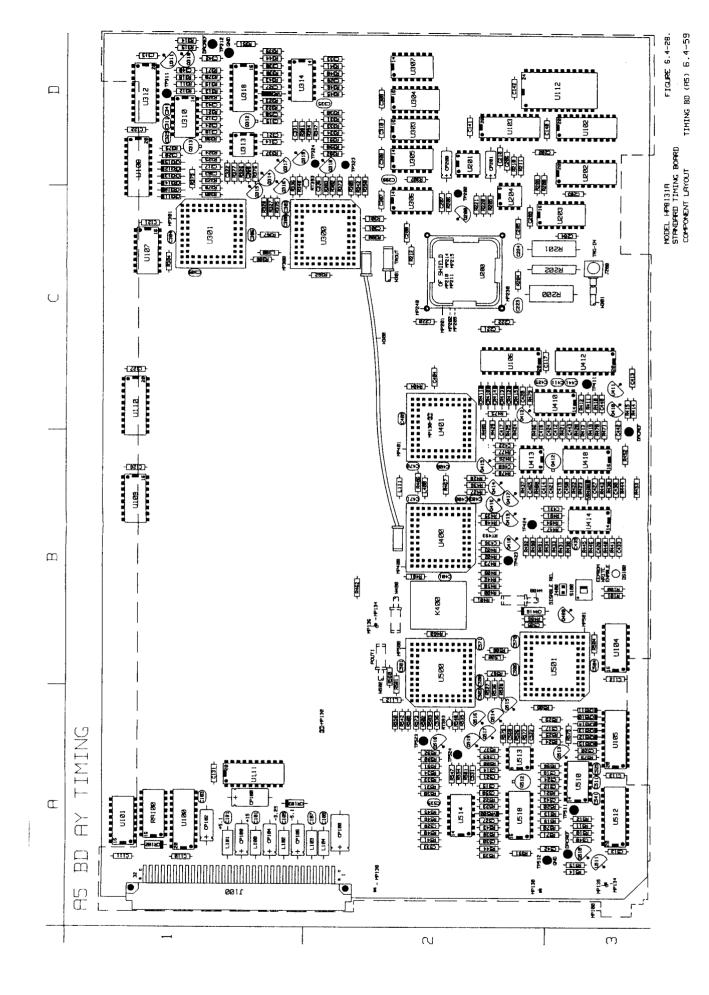






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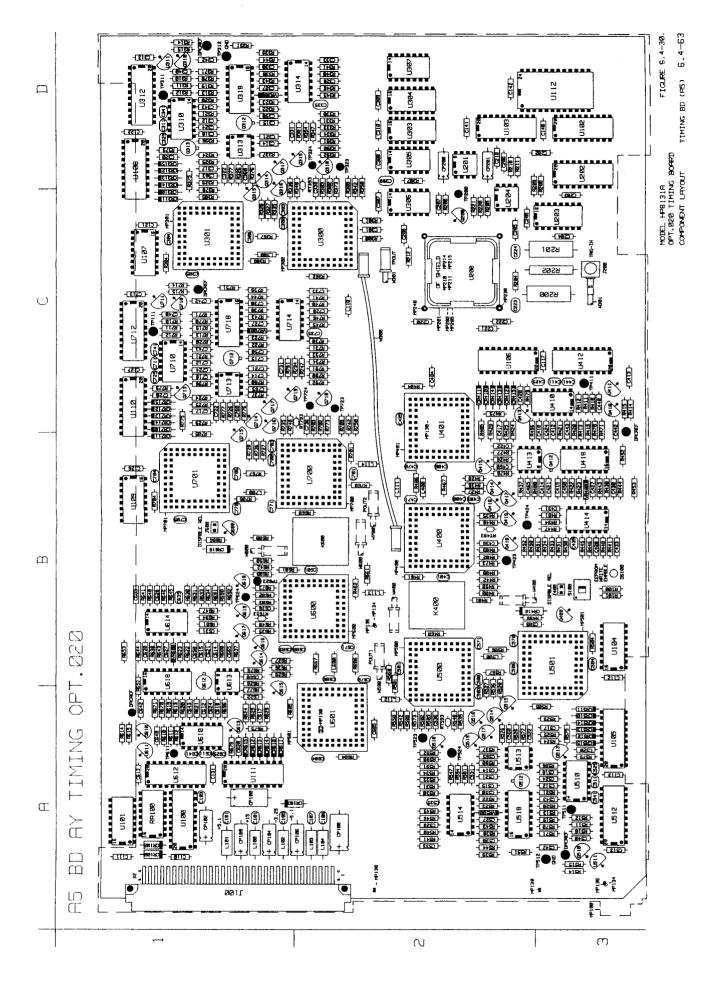




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| REF.<br>DES.  | R526<br>R527<br>R528<br>R529<br>R5333<br>R5333<br>R5333<br>R5333<br>R5333<br>R5333<br>R5333<br>R5348<br>R548<br>R5443<br>R5443<br>R5443<br>R5443<br>R5548<br>R5548<br>R5548<br>R5548<br>R5573<br>R5548<br>R5573<br>R5548<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5573<br>R5773<br>R5573<br>R5773<br>R5573<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R5773<br>R57773<br>R57773<br>R57773<br>R57773<br>R57773<br>R577773<br>R577777<br>R5 |                                                                   |
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| GRID<br>LOCI  | RROPE SERRE SERRE RREAD SERRE SERRE RRRADO RRADO COCCO CERCO RREAD RREAD RRRADO RRDOC COCCO CERCO RREAD RREAD R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | MODEL HP8131A<br>STANDARD TIMI<br>COMPONENT LOC                   |
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| REF.<br>DES.  | 0411<br>0412<br>0413<br>0413<br>0518<br>0518<br>0519<br>0519<br>05114<br>0519<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>05114<br>051150000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                   |
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| GRID<br>LOC.  | WERKE EEFFE EEFFE EFFFE EEFFE KEFFF KK EFFFF EFF FFF F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | X                                                                 |
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| GRID<br>LOC.  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                                                                 |
| REF.<br>DES.  | C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0223<br>C0                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                   |
| GRID<br>LOC.  | EFFER FFEED JEFIF BARFE BOORD 000000 JOJJA BARRE EFFEE FFE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
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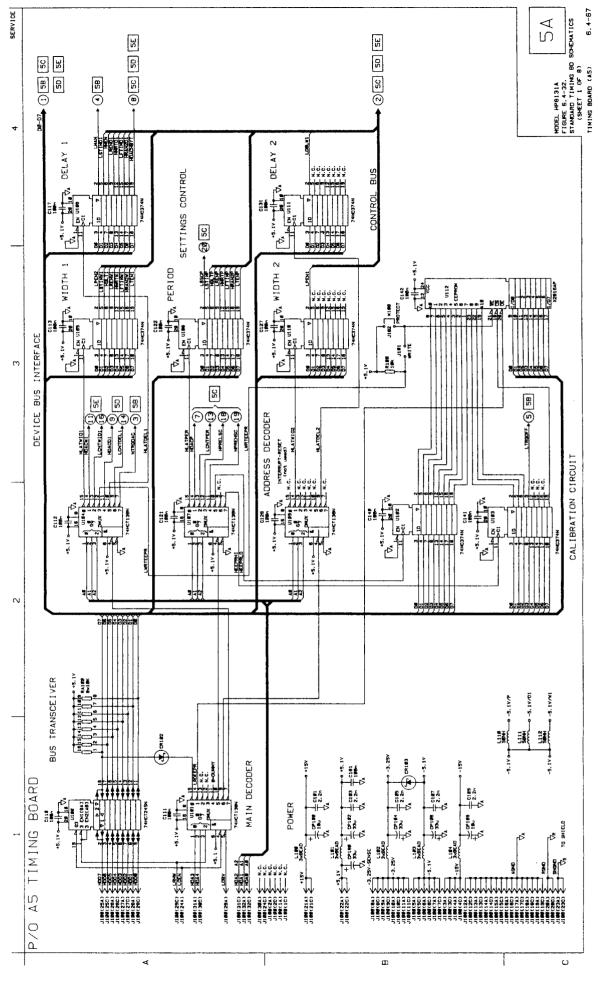


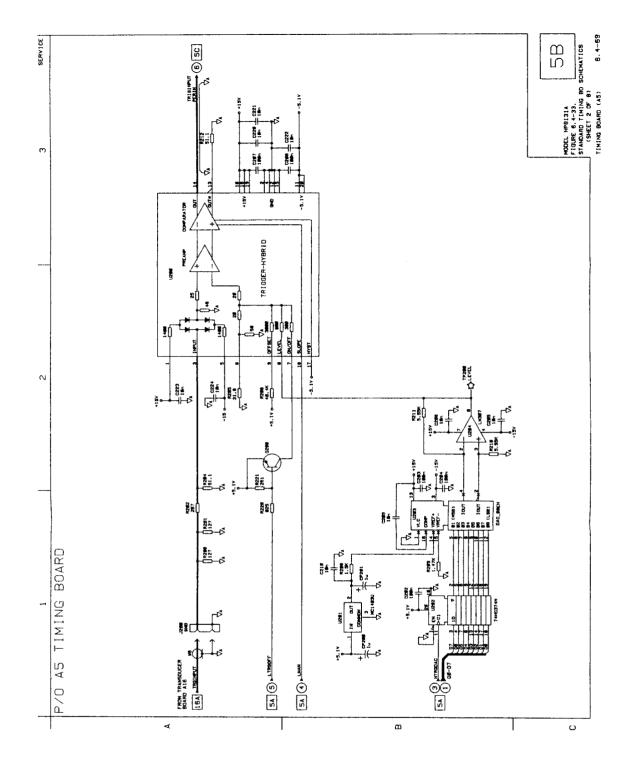
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| DES.                                                                                             | R741<br>R742<br>R743<br>R743<br>R743<br>R745                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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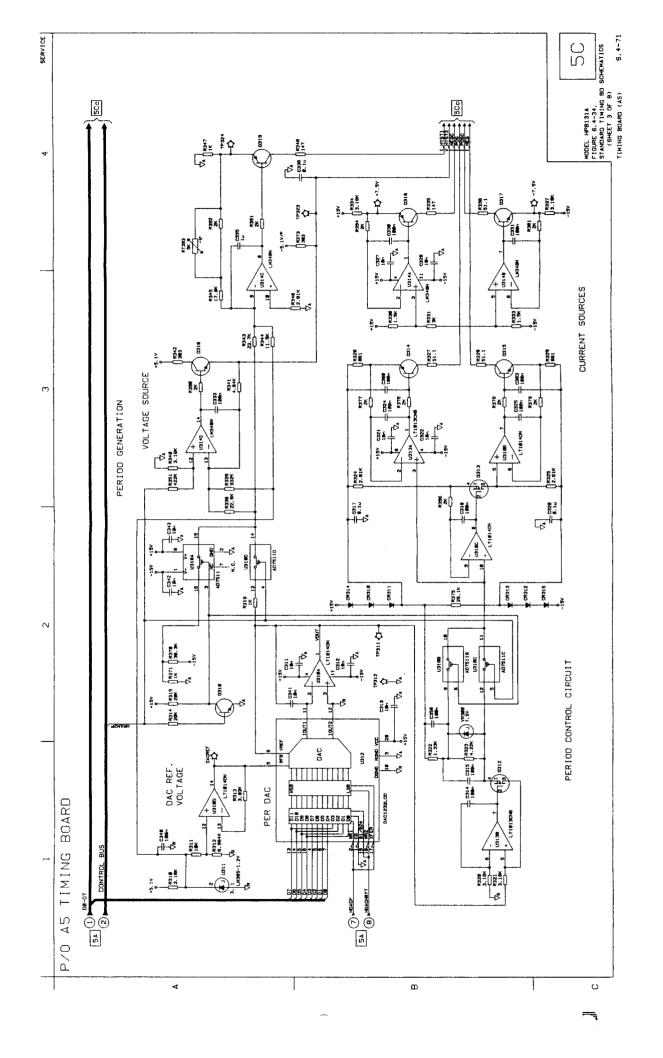
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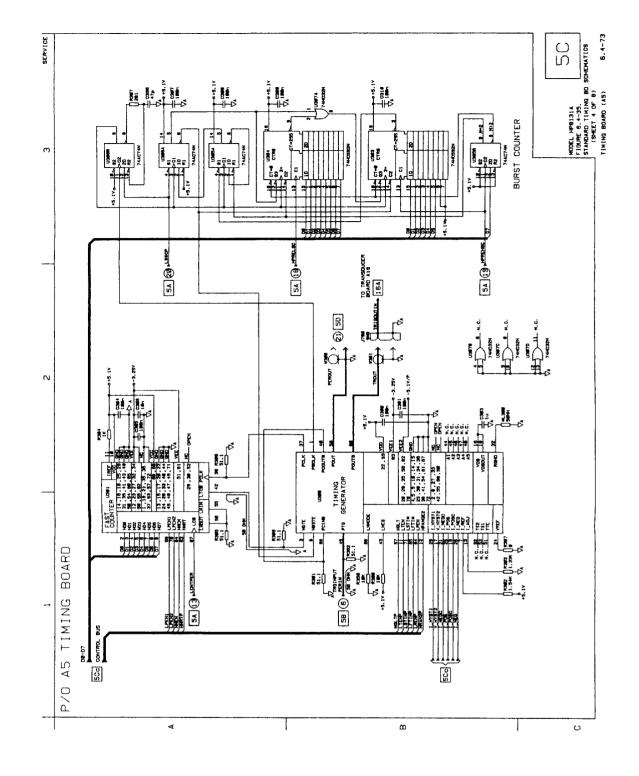
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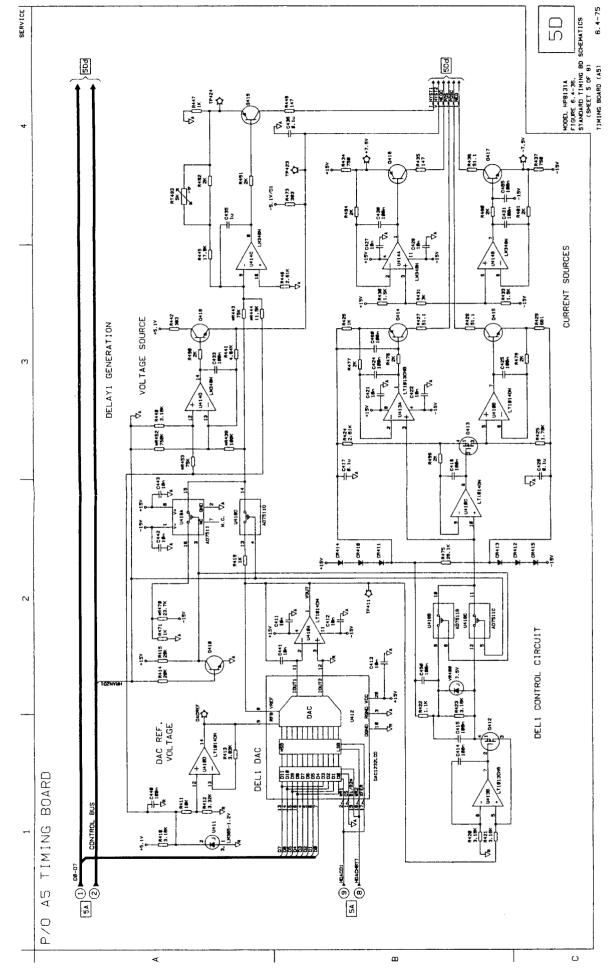


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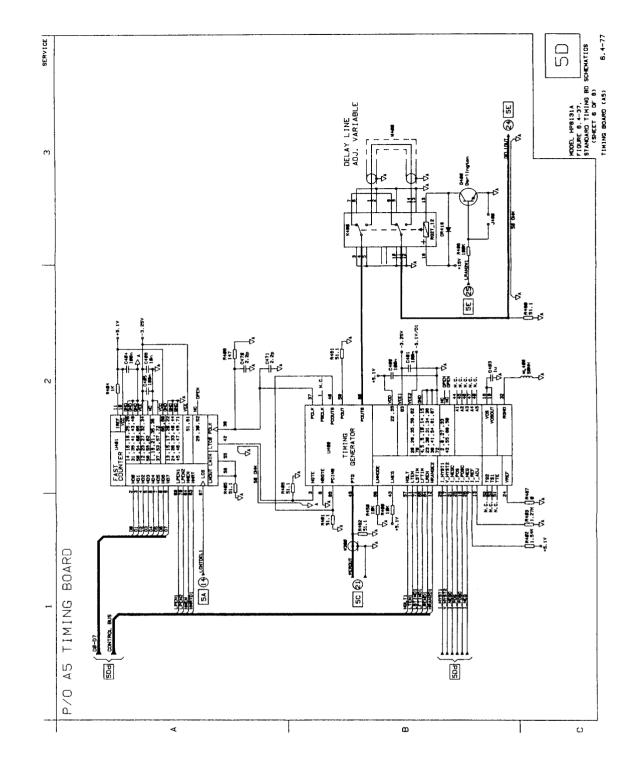


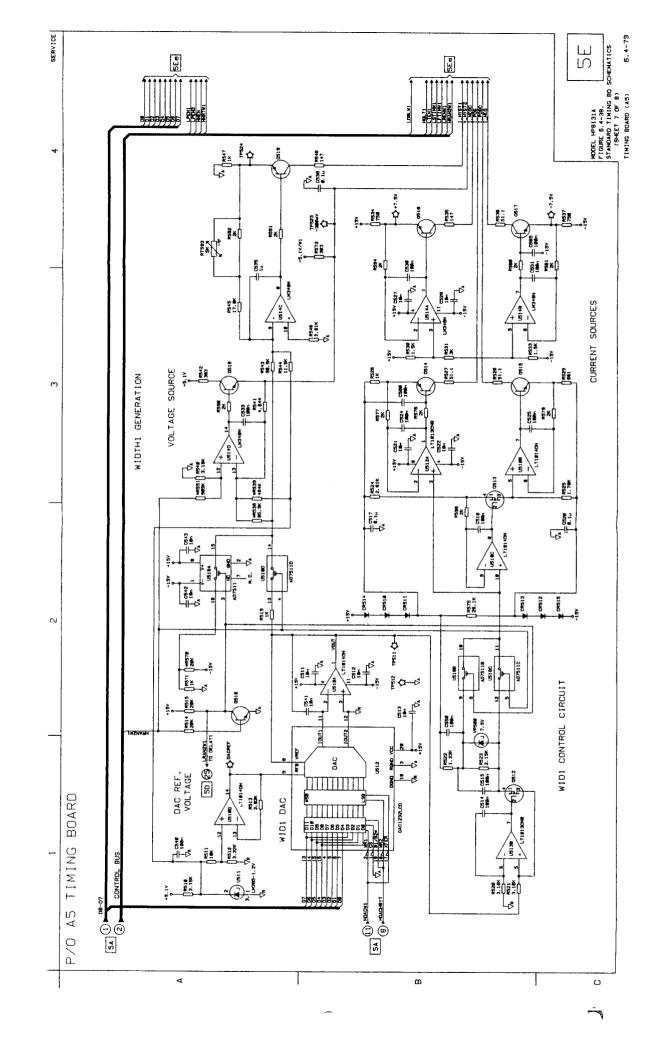
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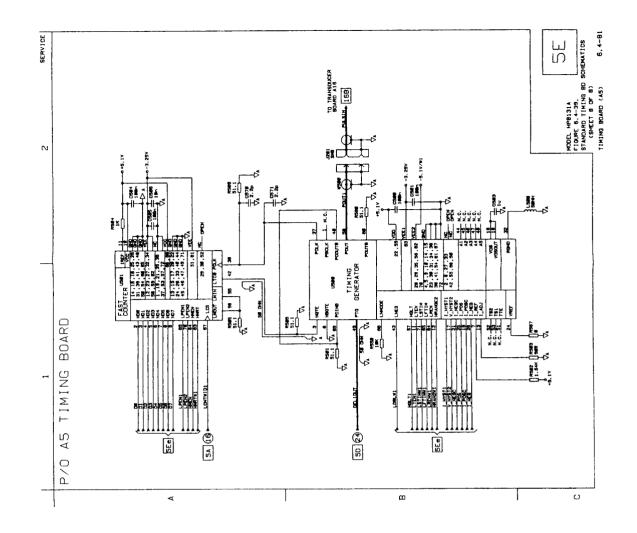


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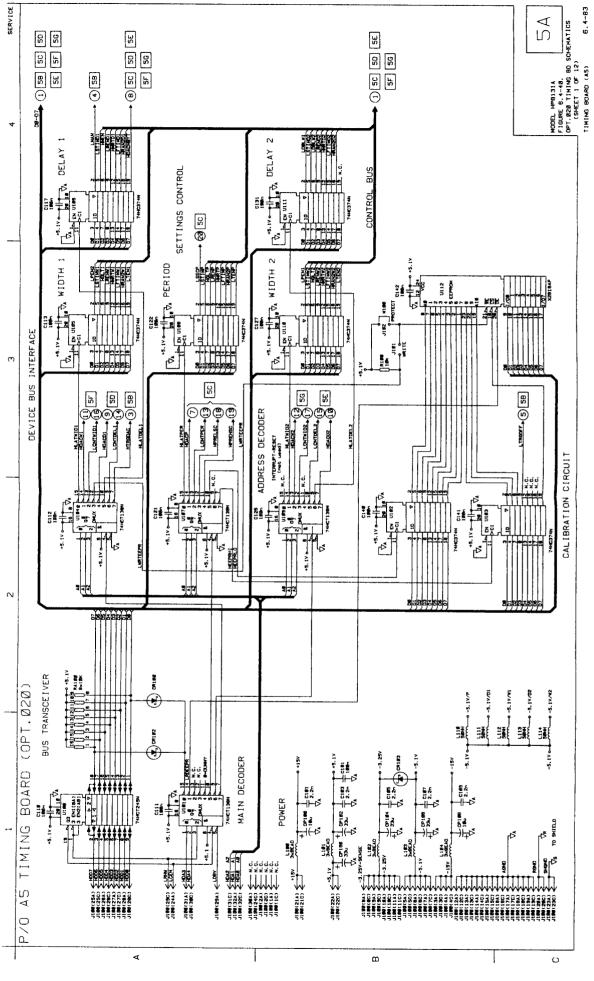
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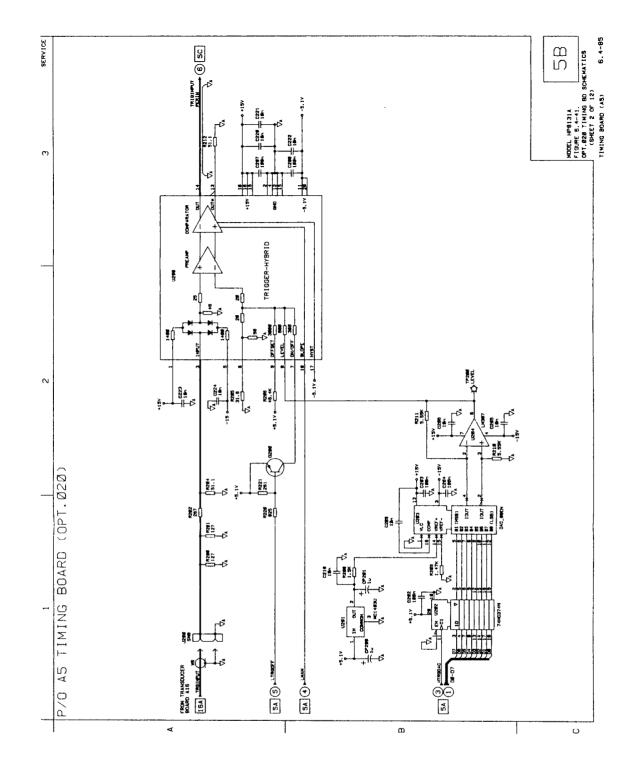






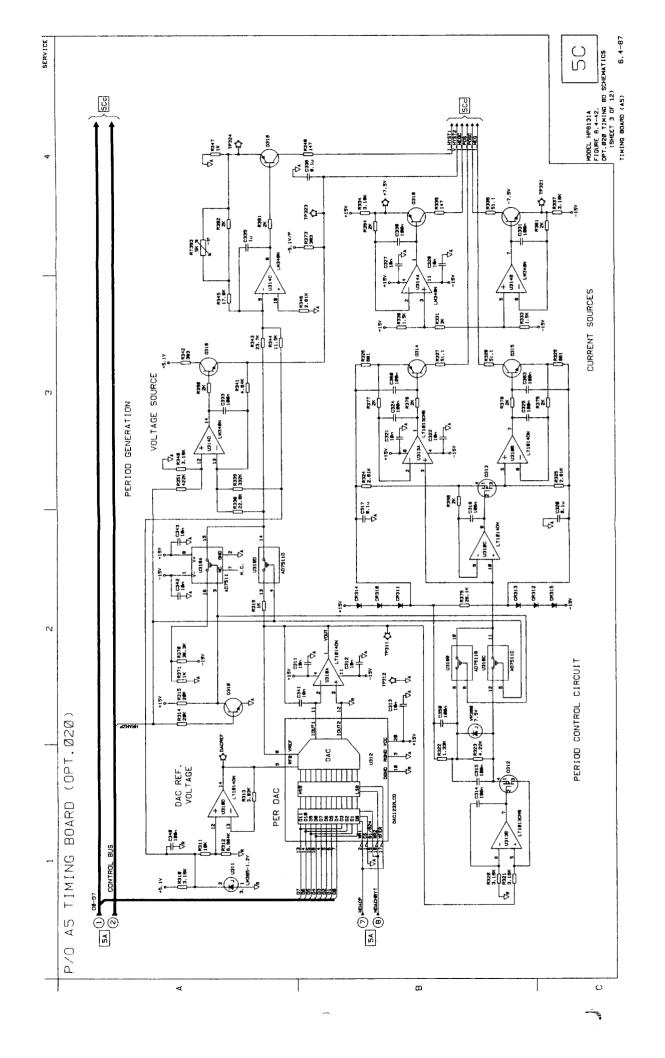
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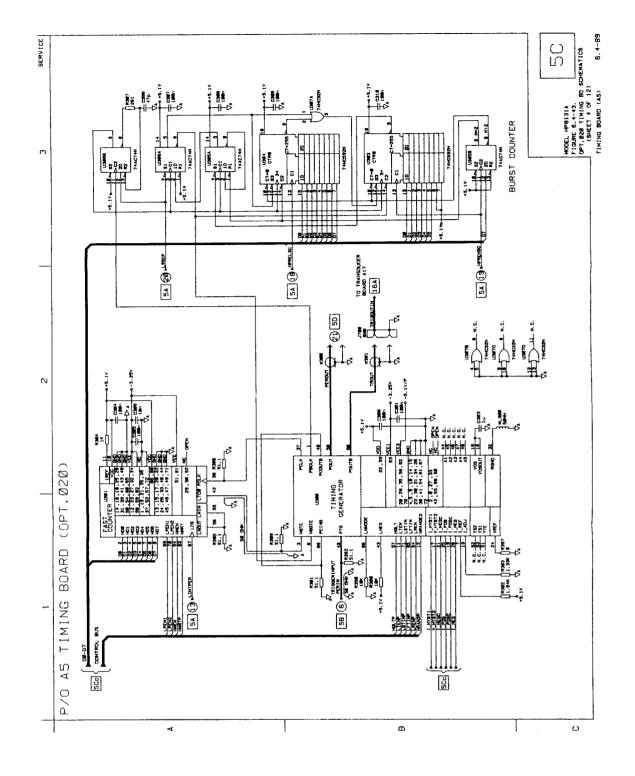


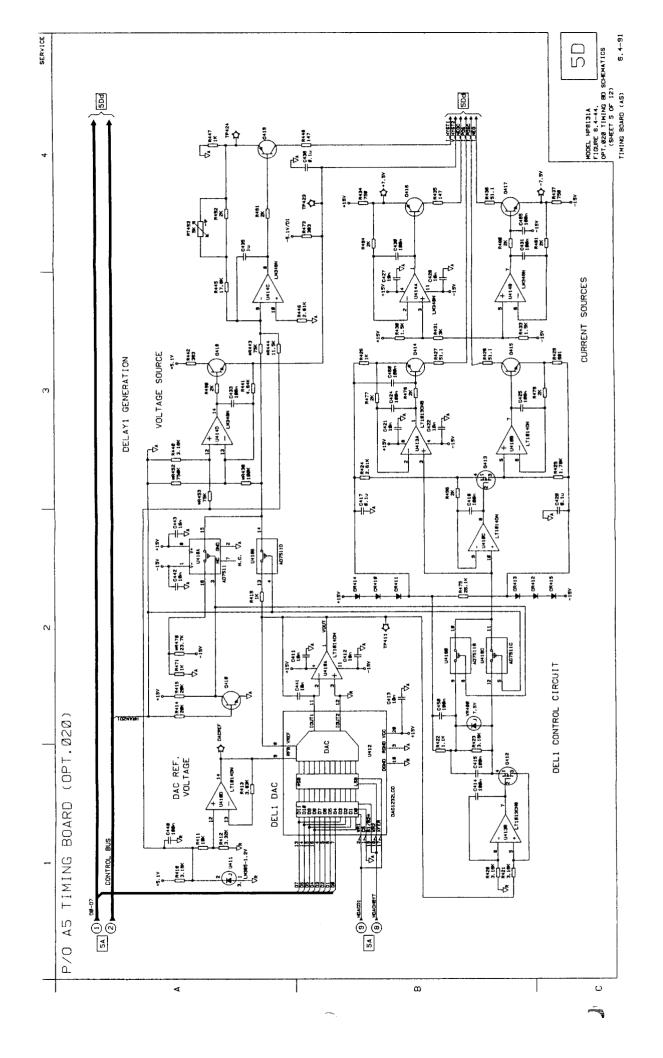


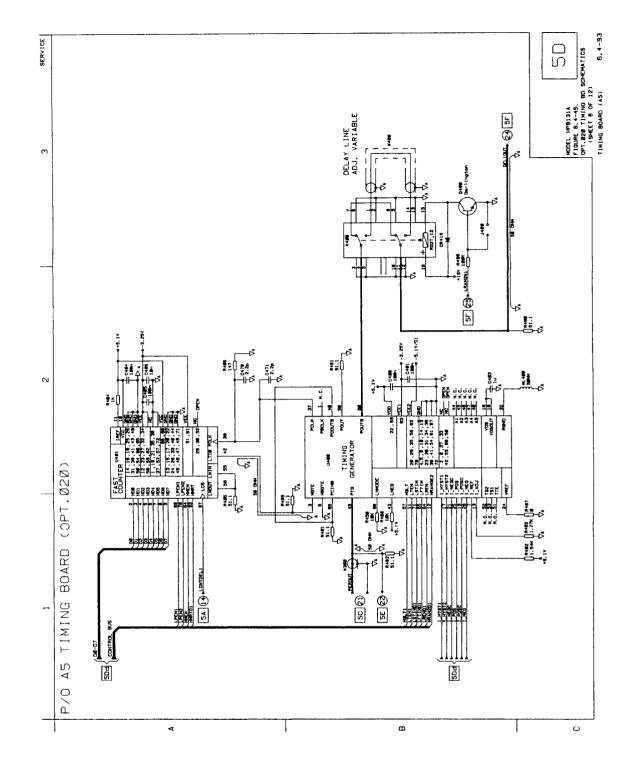
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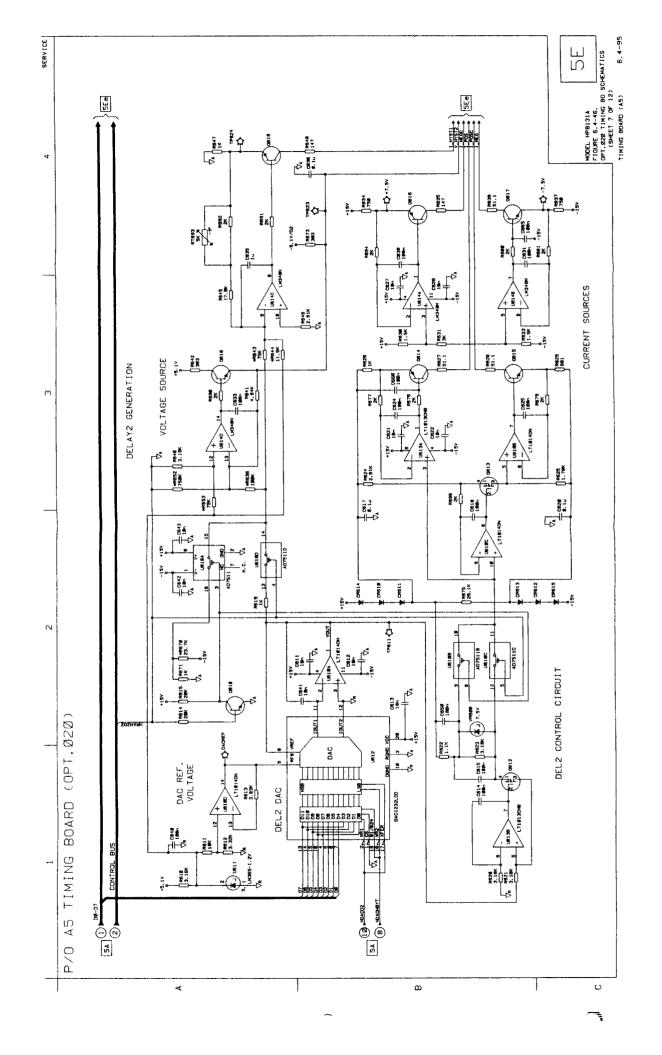


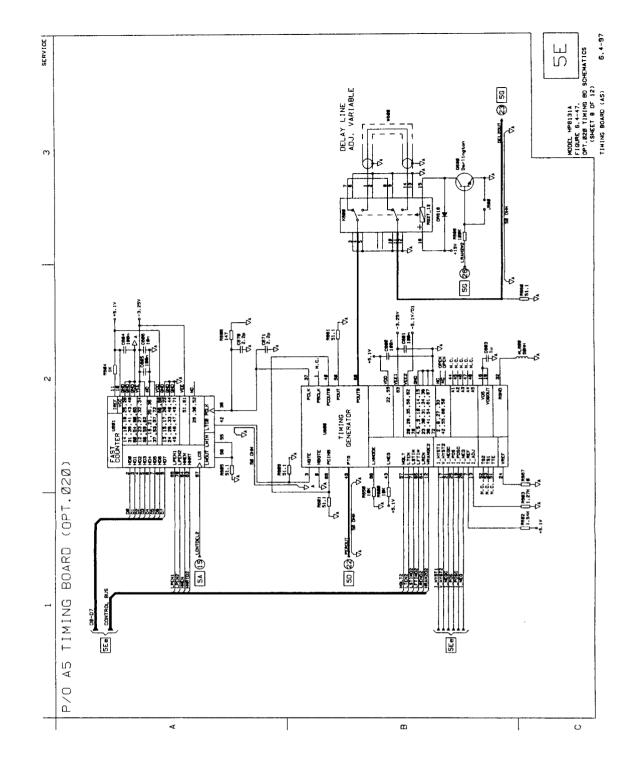


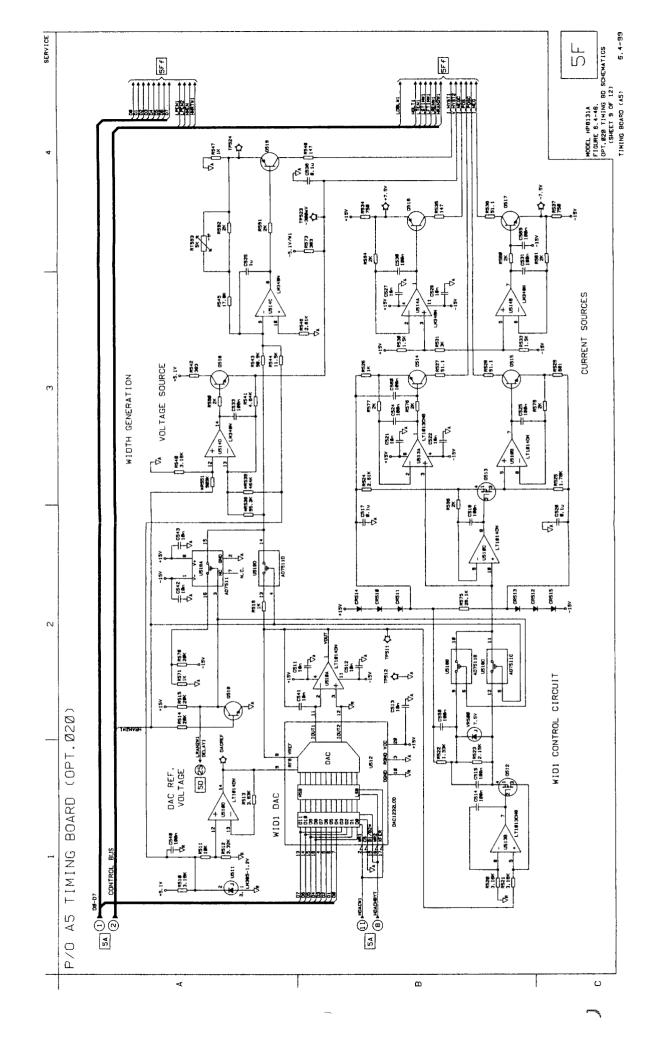


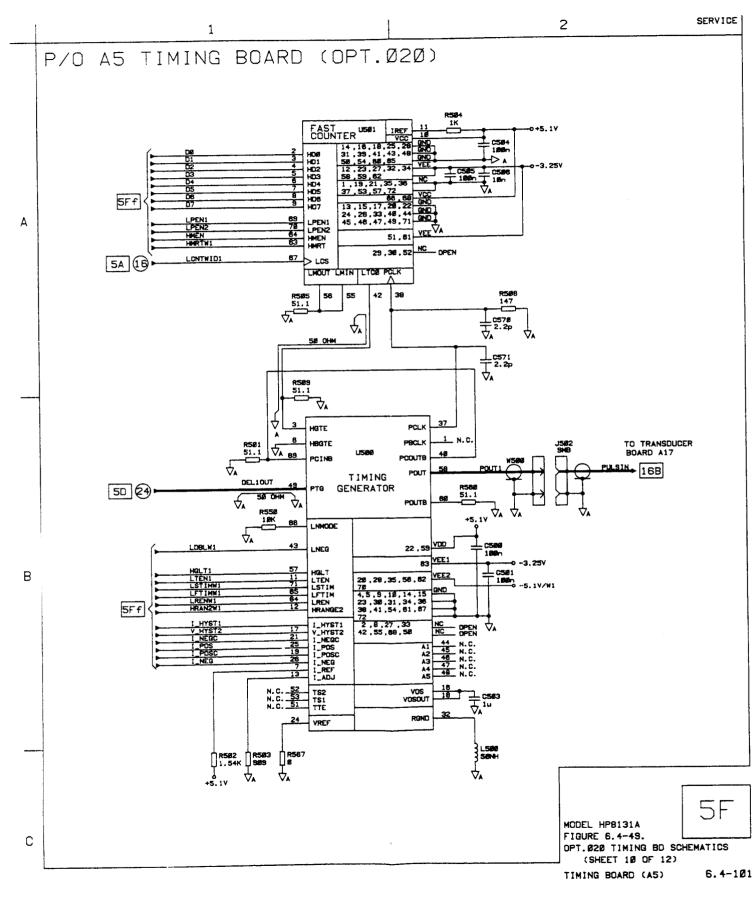
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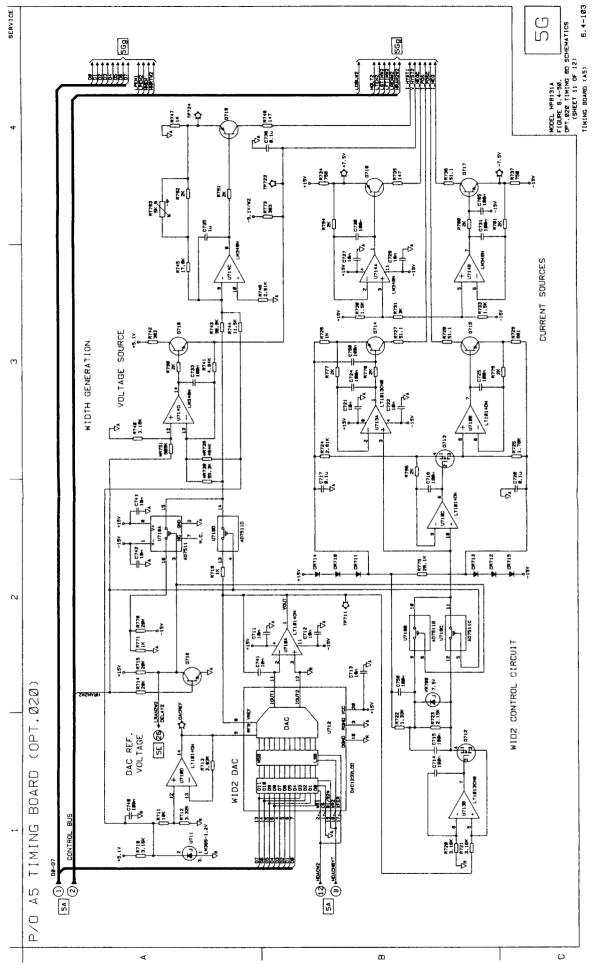
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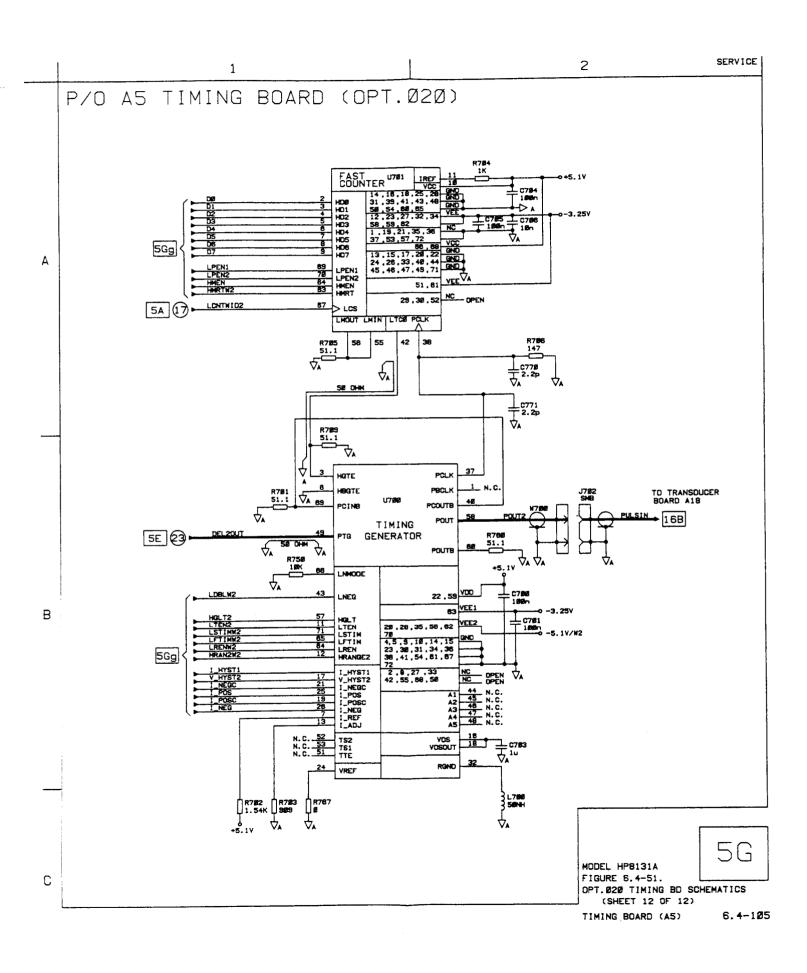












# HP 8130A Output Board (A26; option 020 - A27)

## **Block Theory of Operation**

### Introduction

This section provides a basic block level theory of operation. A more detailed theory of operation follows this section.

#### Slope Generation

The main function of the output board is slope generation, the resultant output is passed to the output amplifier. The slope generator circuit is divided into four main blocks:

- input buffer
- fast slope generator and slow slope interface
- slow slope generator
- level shift and impedance converter

The purpose of the slope generator is to generate a signal which combines stable amplitude with variable rise and fall times. The incoming signal from the timing board is single ended and has an EECL format.

The output signal to the output amplifier has programmable rise and fall times from 600 ps to 100  $\mu$ s. Output amplitude can be adjusted between 1.5 V to 1.8 V.

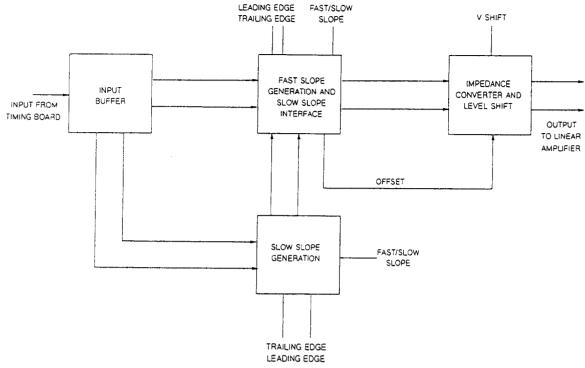


Figure 6-5-1. Slope Generator Module Block Diagram

### **Output Amplifier**

The output amplifier and offset generator are used to amplify the slope generator output signals to the required level. They are also used to add the necessary output offset as determined by the HIL and LOL requirements.

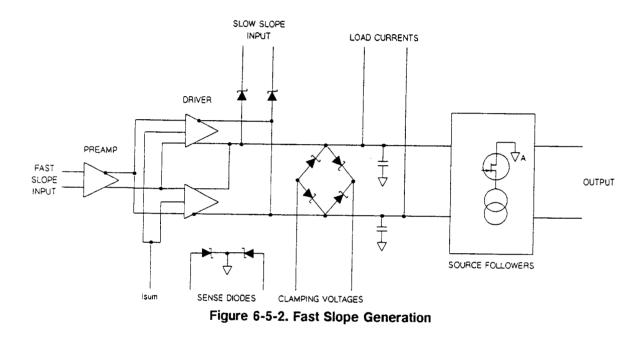
To avoid breakdown of the linear amplifier a Gallium Arsenide (GaAs) chip, serving as a cascode and having a breakdown voltage > 10 V, was added to the amplifier outputs.

## **Fast Slope Generator**

The fast slopes are generated by a fully customized GaAs IC. The IC consists of:

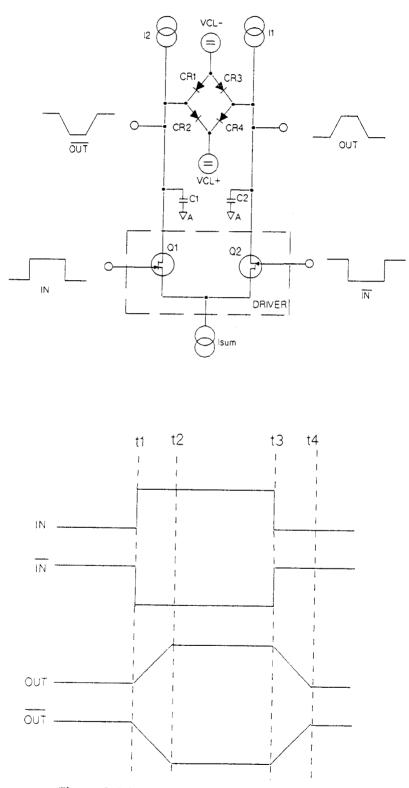
- two fully switched directly coupled differential amplifiers
- a diode bridge
- two sense diodes
- two diodes to input the slow slope signal
- source followers at the output

The IC is mounted on a thick film hybrid.



The driver consists of two fully switched differential amplifiers connected in parallel and scaled by 1:3. For slopes below 2 ns, both differential amplifiers will operate. For transition times between 2 ns and 10 ns, the "small" amplifier will switch the sum of the load currents. Slower transition times are generated on the board and both amplifiers are turned off.

## Theory of Fast Slope Generation



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Figure 6-5-3. Fast Slope Theory of Operation

Currents I1 and I2 determine the leading and trailing edge of the slopes respectively; Isum being the sum of I1 and I2. As shown in the Figure above, at time t1 Q1 turns ON and Q2 turns OFF. The constant current discharging from C1 being determined by:

$$I(C1)[t1,t2] = I2 - Isum$$
  
= -I1

This provides the slopes of  $\overline{OUT}$  from t1 to t2. Once the voltage has dropped to the level at t2, CR1 starts to conduct and prevents the voltage at  $\overline{OUT}$  from falling any further. The clamping voltage is:

 $V(\overline{OUT})[t2;t3] = VCL - VCR1$ 

Where VCR1 is the forward voltage across CR1.

At time t3 Q1 turns OFF and Q2 turns ON. Isum flows through Q2 and the current that recharges C1 from t3 to t4 is:

I(C1)[t3;t4] = I2

At t4 CR2 starts to conduct and prevents the voltage at  $\overline{OUT}$  from rising further than:

 $V(\overline{OUT})[>t4] = VCL+ + VCR2$ 

A similar procedure to that described above produces the different voltage levels at OUT by:

I(C2)[t1,t2] = I1V(OUT)[t2;t3] = VCL+ + VCR4I(C2)[t3;t4] = -I2V(OUT)[>t4] = VCL- - VCR3

To obtain an output voltage independent of the forward voltages of the clamping diodes; two further sense diodes, CRI1 and CRI2, have been integrated on the IC. The voltages VCL- and VCL+ are:

VCL- = V1 + V(CRI1)VCL+ = V2 - V(CRI2) The output amplitude is:

Vampl = V2 - V1

The differential offset at the output is:

Voff = V(CRI1) - V(CRI2)

To avoid level shift offset at the input of the linear amplifier, Voff is fed as an additional control signal. The result is that the difference between the shift voltages of OUT and  $\overline{OUT}$  is Voff. The output voltage swing is adjustable, from 1.5 V to 1.8 V, by varying the negative clamp voltage.

## Slow Slope/Fast Slope Interface

This interface is responsible for feeding the slow slope signal path into the fast slope signal path. It consists of two Schottky diodes (see Figure below). The diodes are reversed biased when the fast slope is in operation; if the fast slopes are not in operation the diodes are forward biased thus enabling the slow slopes. Enabling of the slow slopes causes the driver of the fast slopes to be turned OFF. The load currents II and I2 of the fast slope generator are equal, and bias the interface diodes.

## **Slow Slope Generator**

## Introduction

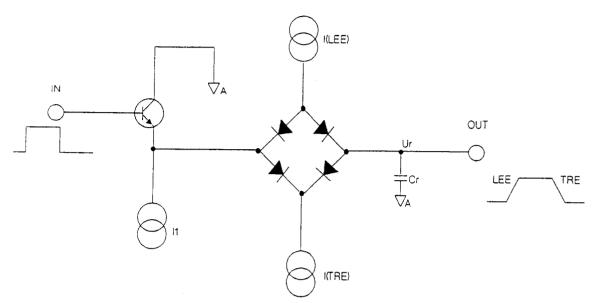


Figure 6-5-4. Basic Slope Generator

Normally, slopes are generated by charging a capacitor with a constant current. Thus, the charging current I(LEE) corresponds to the leading edge (LEE) of a pulse and the discharging current I(TRE) to the trailing edge (TRE).

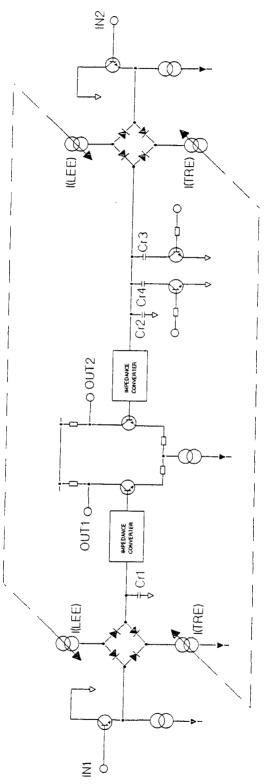
To avoid overloading the ramp capacitor (Cr), a diode bridge is placed in front. This bridge serves as a switch controlled by the input signal's step and is in balance when voltage Vr has reached its input level. The output of the signal source must have a low impedance to avoid exponential transition times, for this reason an emitter-follower output has been used.

## **Elimination of Offset**

The generated ramp is first decoupled by an impedance converter (see Figure below) to remove any errors caused by leakage and/or base currents.

The ramp is then fed to a differential amplifier with current feedback. Feedback in this stage is large enough to allow linear operation without degrading the slopes. The reference input of the differential amplifier is held at DC. Thus the single-ended input voltage is converted to differential output currents.

Any offset caused by series resistance in the bridge diodes, can be removed by varying I(LEE) and I(TRE). The other input to the differential amplifier, via the second diode bridge, (DC-side) is controlled in a similar manner. The remaining common mode offset at the amplifier inputs will not effect the outputs.



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Figure 6-5-5. Elimination of Offset

### Minimum Transition at Optimum Performance

To keep parasitics (series inductances, parallel stray-capacitances) low the circuit was engineered in SMD technology.

The time taken for the ramp capacitor, Cr, to be charged by a current I to some voltage V is given by:

 $t = (Cr \times V) \div I$ 

All three parameters (Cr, V, and I) contribute to the quality of a ramp.

The ramp can never be faster than the original input signal as this would cause the bridge to balance and the voltage at the ramp node would then follow the input signal. Satisfactory values of the three parameters were found to be:

$$Cr = 30 pF, V = 2.4 V, I = 12.5 mA$$
 which gives

 $tr = (0.8 \times 30 \times 2.4) \div 12.5 \text{ ns} = 4.6 \text{ ns}$ 

Transitions are measured between 10% and 90% of amplitude, giving a duty factor of 0.8.

The complete slope range of 5 ns to 100  $\mu$ s is generated by switching additional capacitors. Each successive range is 10 times higher than the previous one, thus the additional capacitor is also 10 times larger. An edge ratio of 1:20 within one range, can be achieved by setting the load currents to a ratio of 1:20, this leads to an overlap of the ranges by a factor of two.

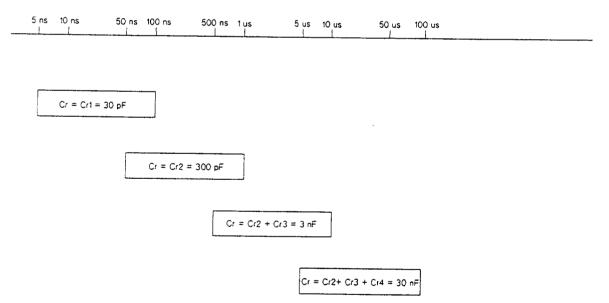


Figure 6-5-6. Slow Slope Range Assignment and Associated Ramp Capacitance

The additional capacitors are switched into the circuit by transistors. To keep the parasitic part of the residual ramp capacitor as low as possible the switches are connected at a non-sensitive node, namely the second diode bridge.

Slopes from 5 ns to 100 ns have the input signal applied to the slope generator's fast input, IN1, keeping the slow input, IN2, at DC. Slopes from 50 ns to 100  $\mu$ s have the input signal applied to IN2 with IN1 kept at DC. Additional range switching is done at the slow input IN2.

## **Capacitive Step**

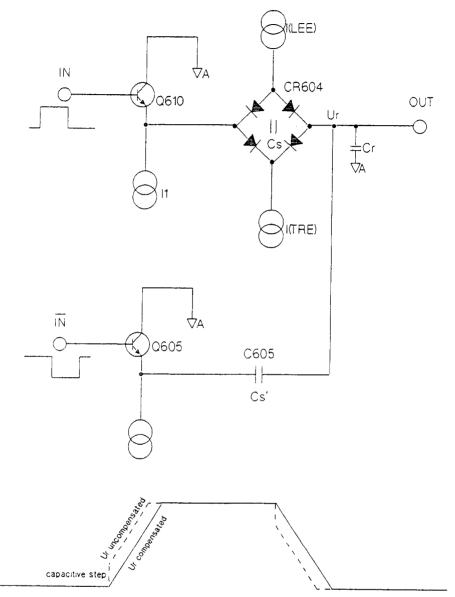


Figure 6-5-7. Compensation for Capacitive step

The diode bridge has across it some parasitic capacitance caused by the capacitance of each diode and the stray capacitance of the board. This capacitance causes the step as shown by the above Figure and is given by:

 $Vc = [Cs \div (Cs + Cr)] x Vin$ 

Suitable values are: Cs = 3 pF, Cr = 30 pF ==> Vc = 10% of Vin

To compensate for this effect the complement input signal is coupled directly to the ramp node via a capacitor having the same value as Cs.



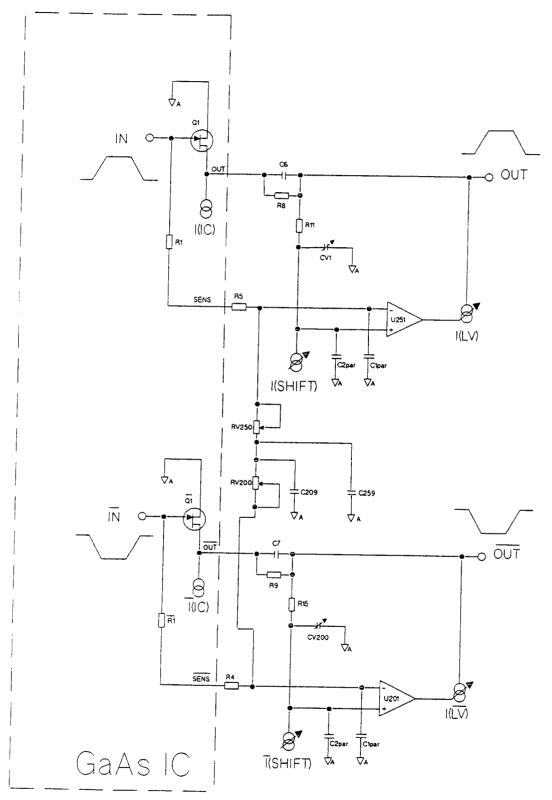


Figure 6-5-8. Level Shift

HP 8130A Output Board (A26; option 020 - A27) 6-5-11

Because the output amplifier is floating a level shift with a variable shift voltage was required. The input to the Level Shift is an FET used as a source follower. In order to achieve stable working conditions most of the source current flows through the on-chip current source. The current through R8 can be adjusted to provide variable shift voltages. The shift voltage is given by:

Vshift = V(R8) + VGS(Q1)= I(shift) x R11

The voltage drop across R1 and R5 can be neglected.

U251 forces a differential input voltage of 0 V at its inputs by controlling the current source, I(LV). The path R1, R5, RV250, RV200, R4, and  $\overline{R1}$  has its input voltage divided by RHFA (RHFA is the Reciprocal of the source follower's High Frequency Amplification factor). This is necessary, otherwise U251 would cause, by varying I(LV), the output swing to equal the input swing at low frequencies. U251 adjusts the low frequency amplification factor to that of the high frequency amplification factor of the level shift. In order to reduce distortions at the frequency at which U251 starts to operate, CV1 has been included in the circuit. It is adjusted to:

 $[R1 + R5] \times C1par = R11 \times [C2par + CV1]$ 

This means the time constants of both the operational amplifier inputs are equal.

C1par and C2par represent the parasitic capacitance caused by the board, U251, the hybrid and the current source. Because (R1 + R5) is larger than R11, an additional capacitor is always necessary at the negative input of U251 to equalize the time constants. C6 was necessary to reduce the dynamic output resistance at high frequencies. R1 was needed to decouple the signal path at high frequencies and to avoid parasitic oscillations. Because R1 on the IC varies with temperature an additional resistor, R5, ten times larger, was necessary to make RHFA more stable.

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# **Output Amplifier**

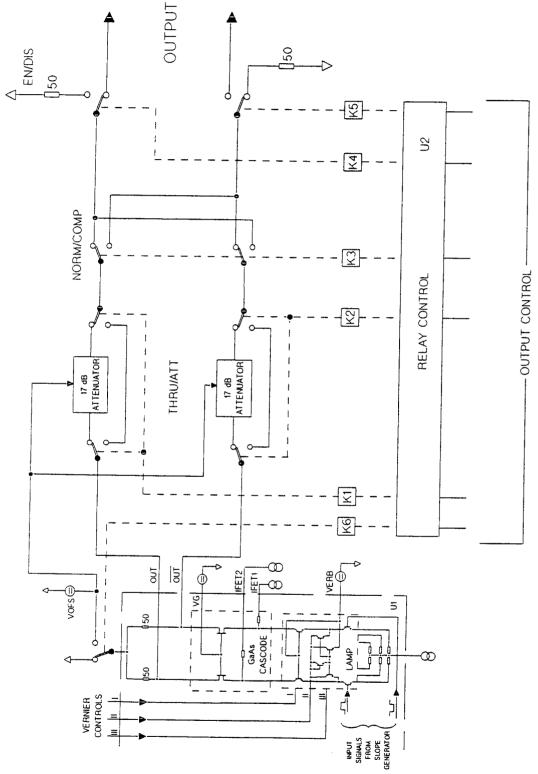


Figure 6-5-9. Output Amplifier Block Diagram

HP 8130A Output Board (A26; option 020 - A27) 6-5-13

## Introduction

The output amplifier and offset generator are used to amplify the slope generator's output signals to the required level. They are also used to add the necessary output offset as determined by the HIL and LOL requirements.

To avoid breakdown of the linear amplifier a GaAs chip, serving as a cascode and having a breakdown voltage > 10 V, was added to the amplifier's outputs.

### Linear Amplifier

The linear amplifier is responsible for generating the signals that appear at the instrument's output terminals.

#### Current Handling at Speed

The output pulses must be input to a 50  $\Omega$  external load in parallel with a 50  $\Omega$  back termination in the instrument. This means the amplifier must be able to produce output current swings of up to 200 mA. The additional offset (up to 5 V) can be generated by adding an offset voltage at the common node of the back termination. Thus, the IC only has to deal with the pulse part of the instrument's output.

Just as in earlier HP pulse generators, the HP 8130A's output amplifier is configured as a transconductance amplifier, i.e. turning an input voltage into an output current.

### **Amplitude Variation Range**

The linear amplifier is configured as an emitter-degenerated differential pair with a two-quadrant multiplier cell on top (see figure below). Its output amplitude is varied by sourcing a DC current into the multiplier cell's control input port, Iv. Any current fed into Iv is subtracted from the differential pair's collector currents on their way to the outputs OUT and  $\overline{OUT}$ .

Three binary-weighted amplifier/multiplier combinations are used in parallel. Each one runs at a gain of either 0 (OFF) or about 1/3 (ON). Their currents are 4/7, 2/7 and 1/7 of the 200 mA total. All three together cover amplitudes of 5 V to 2.16 V.

If the largest amplifier is switched off, amplitudes of  $3/7 \ge 5$  V = 2.15 V to 0.72 V are obtainable; with only the smallest one switched on amplitudes of 5 V/7 = 0.71 to 0.3 V are obtainable. An external attenuator produces the amplitudes down to the minimum amplitude of 0.1 V.

Amplitude/multiplier stages are switched OFF by sourcing enough current into their multiplier's control inputs to make their gain equal to 0.

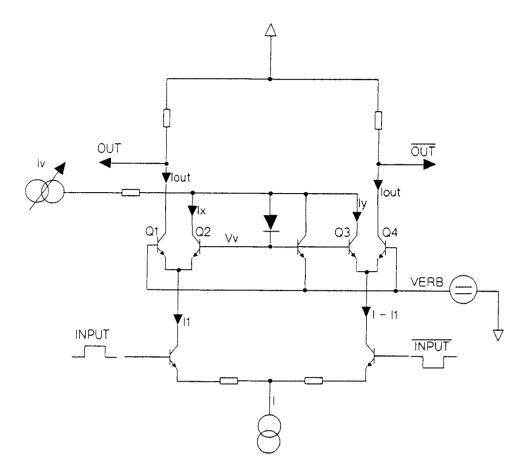


Figure 6-5-10. Differential Amplifier

In a differential amplifier the current flowing in each collector is proportional to the potential difference between the two bases. Thus, by varying the potential Vv on the base of one of the transistors, the current lout can be controlled. However, because of the characteristic of the base-emitter voltage of each transistor, the attenuation has a logarithmic characteristic.

The input signal controls the share of current source I, which flows through each input transistor. Similarly, Vv controls the current in both attenuator transistors Q1, Q2 or Q3, Q4.

Suppose that Vv sets an attenuation factor of 2 and, for simplicity, I = 1 mA. If the input is such that I is shared equally, then I1 = 0.5 mA and I - I1 = 0.5 mA. Also Ix = 0.5I1 = 0.25 mA and Iy = 0.5(I - I1) = 0.25 mA. Now, suppose that the input changes the sharing of current I, so that I1 = 0.2 mA, and I - I1 = 0.8 mA, then, Iy = 0.4 mA and Ix = 0.1 mA.

In either case, the sum (Ix + Iy) remains constant, this is true for all input signals and attenuation ratios. Therefore a constant current source (controlled by the amplitude setting) can be used to supply the current (Iy + Ix).

If Iv = I, then  $Iout = \overline{Iout} = 0$ 

Of Iv = 0, then  $Iout = \overline{Iout} = 0.5 \times I$ 

#### **Vernier Control Currents**

A variable reference voltage corresponding to the output amplitude is generated from a DAC. This is then converted by Q408 into a current which generates a secondary reference voltage across (R441 + R497). This voltage controls the current sources Q409, Q410 and Q411.

Digital signals HV10FF, HV20FF and HV30FF, from the latch U160, control the MUX U405. This enables a fixed voltage across (RV401 + R488), that can be switched to the reference inputs of the current sources, depending on which one of the verniers in the linear amplifier is switched off.

#### **Output Control**

| Table 6-5-1. | Ú2 | Signal | Definitions |
|--------------|----|--------|-------------|
|--------------|----|--------|-------------|

| Signal | Description                                                                                          |
|--------|------------------------------------------------------------------------------------------------------|
| HRELG  | High RELay to Ground; switches the back termination to ground instead of to VOFS                     |
| HTHRU  | High THRU (normal output); bypasses post attenuator on the OUT terminal                              |
| HPATT* | High Post ATTenuator (inverted output); adds post attenuator on the $\overline{\text{OUT}}$ terminal |
| HCOMP  | High COMPlement; activates complement mode                                                           |
| HENOUT | High ENable OUTput; enables the OUT terminal                                                         |
| HENOUT | High ENable $\overline{OUTput}$ ; enables the $\overline{OUT}$ terminal                              |

Note

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Signals on inputs of U2: H > 0 V; L < -10 V.

| Table 6-5-2. | Amplitude | Range | Truth | Table |  |
|--------------|-----------|-------|-------|-------|--|
|              |           |       |       |       |  |

| Amplitude Range            | HV10FF | HV2OFF | HV30FF | HTHRU | HPATT* | HRELG |
|----------------------------|--------|--------|--------|-------|--------|-------|
| $1$ : 5.00 to 2.16 $\rm V$ | L      | L      | L      | Н     | L      | L     |
| 2 : 2.15 to 0.72 V         | Н      | L      | L      | Н     | L      | L     |
| 3 : 0.71 to 0.30 V         | H      | Н      | L      | Н     | L      | L     |
| 4 : 0.29 to 0.10 V         | Н      | L      | L      | L     | Н      | Н     |

Note

#### On range 4:

- The post attenuators of both OUT and OUT are activated
- The linear amplifier runs as in range 2
- The common node of the back terminations is switched to ground
- The output offset is controlled at the post attenuator.

#### **Floating Output Amplifier**

Due to power dissipation/thermal considerations and to avoid breakdown, the output amplifier's supply voltages are floated simultaneously with the output offset. Only half the 10V window needs to be floated.

The output levels are set by controlling high level (HIL) and amplitude (AMP). HIL is derived from the offset voltage VOFS, where for external 50  $\Omega$ .

 $HIL = 0.5 \times (VOFS - 1.5 V)$ 

The primary reference VSHLAMP for all floating voltages is taken from VOFS (see figure below).



VSHLAMP is clamped for HIL </= 0 V; i.e. floating is only effective if HIL > 0 V.

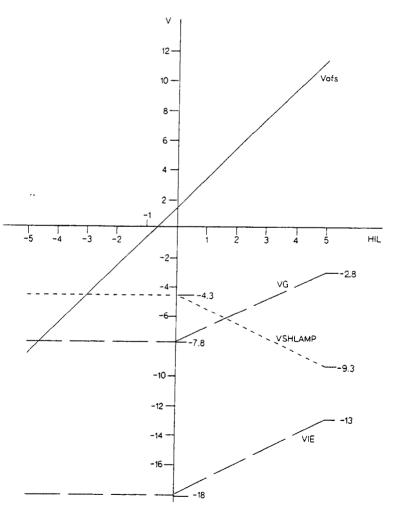
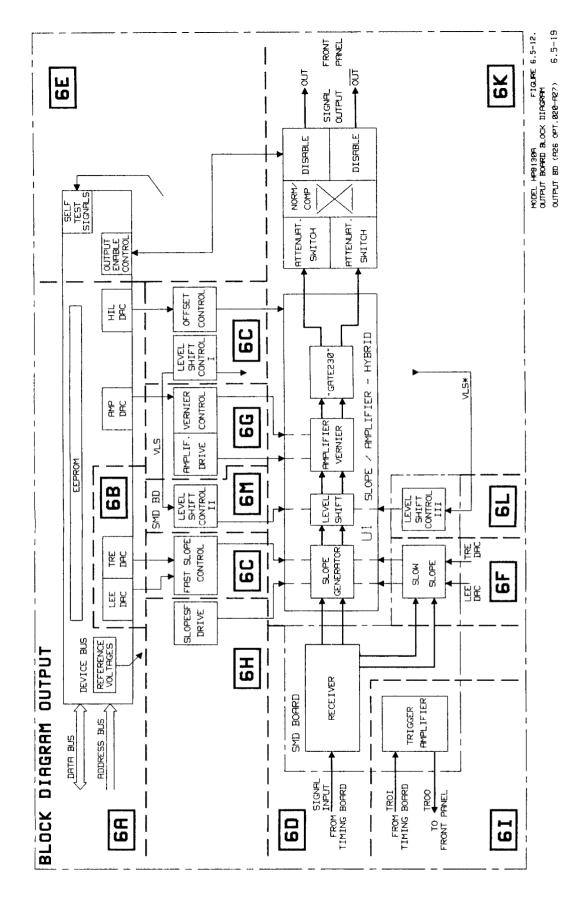
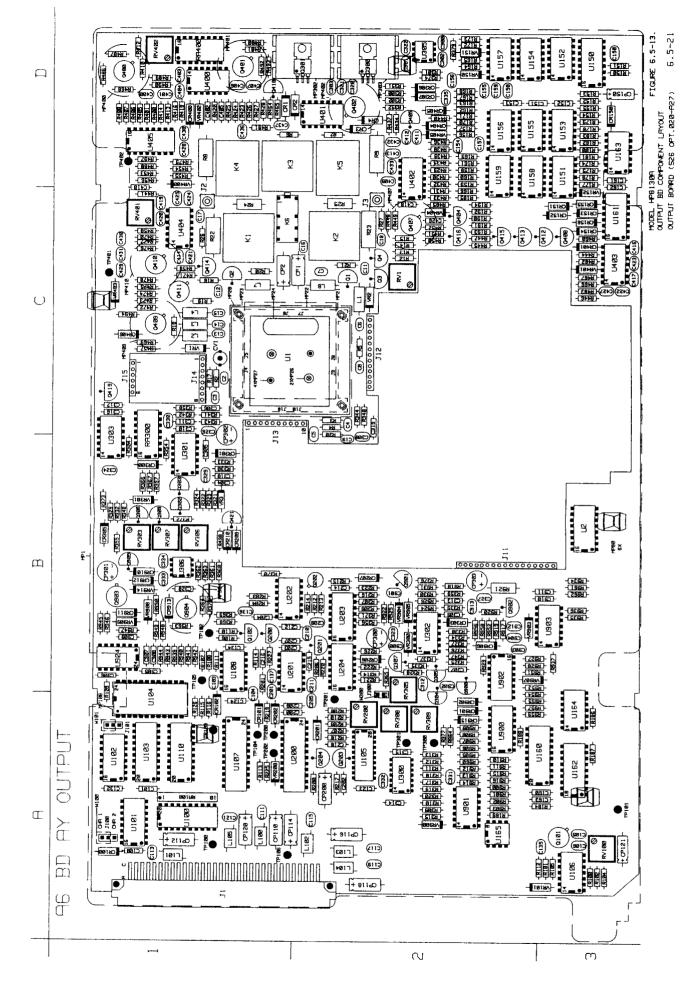


Figure 6-5-11. Floating Supplies



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                                                                          | R309<br>R309<br>R310                                                                             | R313<br>R313<br>R315<br>R315<br>R316                         |                                 |
|                | 28885                                                                  | 88823                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| DES.           | R26<br>R27<br>R30<br>R100<br>R101                                      | R102<br>R104<br>R105<br>8105                                                     | R108<br>R1188<br>R1188<br>R1118<br>R1118<br>R1118                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| DES.           | 0283<br>0284<br>0388<br>0381<br>0382<br>0382                           | 0385<br>0384<br>0385<br>0385<br>0385                                             | 0389<br>0488<br>0481<br>0481<br>0482                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| DES.           | CP388<br>CP381<br>CP382<br>CP383<br>CR1                                | 00,00,00<br>00,00<br>00,00                                                       | CRI82<br>CRI82<br>CRI58<br>CRI51<br>CRI51<br>CRI52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|                | C418<br>C418<br>C418<br>C418<br>C412<br>C412<br>C413                   | 0.415<br>0.415<br>0.417<br>0.413<br>0.413<br>0.413<br>0.413                      | C420<br>C421<br>C421<br>C422<br>C423<br>C423                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| DES.           | 00208                                                                  | 0800                                                                             | C14<br>C15<br>C15<br>C18<br>C18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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                                                                          | C155<br>C156<br>C157<br>C157<br>C158<br>C158                                                     | C168<br>C161<br>C162<br>C162<br>C163<br>C268                 | 2283<br>2283<br>2283            |

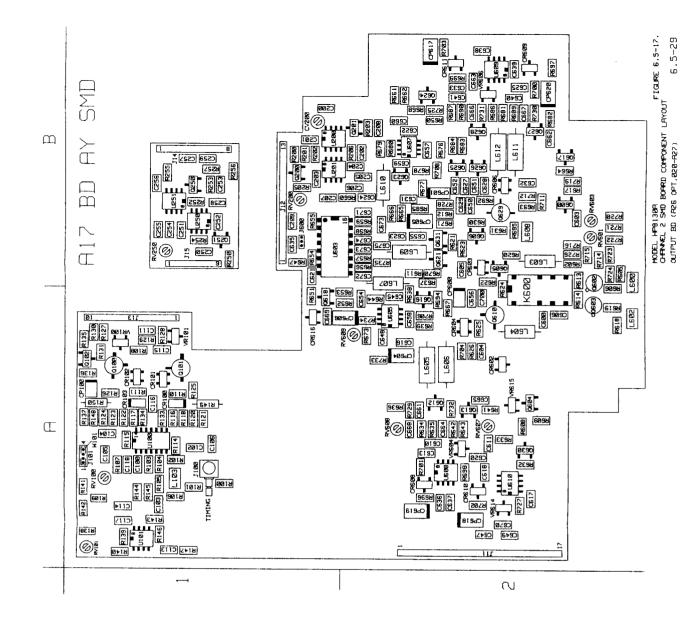
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| Loc.        | 228888                                                                                                         | 8           | 品品品品品                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 88888                                                                           | ይ፟፟፟፝፞፞፞፝ፚ፝ኇ                            | 2 2                                                                                         |                                                                                             | <b>H</b> HH             | 882                                                                             | 222                  | ee 88                                                                        |                         | 8228                                                               | 52 E           | 2 2 2 2 2            | ř č                                                               | 255                                                                              | 8<br>6<br>6<br>7<br>7<br>7<br>7<br>7<br>7 | Ē                                                                                           | 5-16.               |
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| ES.         | R706<br>R708<br>R711<br>R712                                                                                   | R714        | R715<br>R716<br>R720<br>R720<br>R721                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | R722<br>R723<br>R725<br>R725<br>R725                                            | R728<br>R728<br>R738                    | 16732                                                                                       | R733<br>R734<br>RV100<br>RV100                                                              | RV200<br>RV250<br>RV400 | RV601<br>RV603<br>RV603                                                         | RV608                | U100<br>U101<br>U101                                                         | U250                    | U400<br>U400                                                       |                |                      | URIDID                                                            | VR101<br>VR604                                                                   | VR614<br>VR615                            | 101M                                                                                        | FIGURE 6            |
|             | 22222                                                                                                          | 2           | 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>1 | 22 22                                   | 記記記                                                                                         | 28288                                                                                       | 8 22                    | 1 K K K K                                                                       | 22                   | 122 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2                                      | 88                      | 12222                                                              | 222            | 282                  | 282                                                               | 888                                                                              |                                           | 22 22                                                                                       |                     |
|             | R639<br>R641<br>R642<br>R642                                                                                   | R644        | R647<br>R652<br>R6551<br>R653<br>R653                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | R6554<br>R655<br>R6555<br>R657                                                  | R659<br>R653<br>R660<br>R661            | R662<br>R664                                                                                | R666<br>R6667<br>R668<br>R668                                                               | R671<br>R673<br>R673    | R673<br>R678<br>R679                                                            | R680<br>R681         | R683<br>R683<br>R683                                                         | REB5<br>REB5            | R687<br>R689<br>R698                                               | R692<br>R693   | R695<br>R695<br>R696 | R697<br>R698                                                      | R700                                                                             | R782                                      | R703<br>R704                                                                                | COMPONENT   OCATION |
| LOC.        | <u> </u>                                                                                                       | Ē           | <u>.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2252                                                                            | 8 823                                   | ĒĒ                                                                                          | E E E E E                                                                                   | E Bi                    | 86668                                                                           | r R                  | 影影影影                                                                         | 5                       | 形成的                                                                | 5 25           | ያይይ                  | 24 24                                                             | ይይ                                                                               | 8                                         | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | OMPONEN             |
| Ц<br>Ц<br>Ц | R422<br>R423<br>R424<br>R424                                                                                   | R426        | R427<br>R428<br>R428<br>R428<br>R428<br>R428<br>R428<br>R428<br>R428                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | R433<br>R433<br>R433<br>R433<br>R433<br>R433<br>R433<br>R433                    | R436<br>R437<br>R438                    | R440<br>R440                                                                                | R442<br>R4442<br>R4443<br>R4443<br>R4443<br>R4443<br>R4443                                  | 800                     | 2002<br>2002<br>2002<br>2002<br>2002<br>2002<br>2002<br>200                     | R611                 | R613<br>R613<br>F185<br>F185<br>F185<br>F185<br>F185<br>F185<br>F185<br>F185 | R618                    | R619<br>R620<br>R621                                               | R623           | R625<br>R625         | R631                                                              | R632<br>R633<br>R634                                                             | R635<br>P636                              | R637<br>R638                                                                                | E                   |
| 201         | 222a                                                                                                           | Ē           | ~~~~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                 | EE 888                                  | ĪZZ                                                                                         |                                                                                             | B1<br>B2<br>B2          | 18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>1 | 18<br>18<br>18       |                                                                              | ie e                    | E E 8                                                              | 88<br>8        | <u> </u>             | Ē                                                                 | 185<br>195                                                                       | 8 8                                       | ĒĒ                                                                                          | HP8130A             |
| DES.        | R127<br>R128<br>R129                                                                                           | 2           | R133<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86135<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86156<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>86155<br>861555<br>861555<br>861555<br>861555<br>861555<br>8615555<br>8615555<br>86155555<br>8615555 |                                                                                 |                                         | 141<br>141<br>141<br>141<br>141<br>141<br>141<br>141<br>141<br>141                          | R148<br>R148<br>R158<br>R288                                                                | R201<br>R202<br>R203    | R205<br>R206<br>R250                                                            | R252<br>R253         | R254<br>R255<br>R255                                                         | R257<br>R400            | R401<br>R402<br>R406                                               | R407<br>R408   | R409<br>R418<br>R418 | R412                                                              | 142<br>142<br>141<br>141<br>151<br>151<br>151<br>151<br>151<br>151<br>151<br>151 | R415<br>R417                              | R418<br>R419                                                                                | MODEL H             |
| LOC.        | <u>aa</u> ee                                                                                                   | ē           | 22228                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2 2222                                                                          | 122 B B B B B B B B B B B B B B B B B B | ਔ₽₩₩                                                                                        | 22222                                                                                       | 828                     | 路路路                                                                             | ĒË                   | <u>.</u><br>                                                                 | ĒĒ                      | <del>.</del> <del>.</del> <del>.</del> <del>.</del>                | ĒĒ             | <u>.</u>             | <u> </u>                                                          | 888                                                                              | ēē                                        | E ii                                                                                        |                     |
| DES.        | 0258<br>0482<br>0482                                                                                           | 0484        | 0485<br>0486<br>0486<br>0688                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 00683<br>0683<br>0683<br>0683<br>0683                                           | 0612<br>0612<br>0613                    | 8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 | 0621<br>0623<br>0624                                                                        | 0626<br>0627<br>0628    | 0638<br>0638<br>0631                                                            | R100<br>R101         | R102<br>R103<br>R103                                                         | R105<br>R106            | R107<br>R108<br>R109                                               |                | R114<br>R115<br>R116 | R117<br>R118                                                      | R120<br>R121<br>R122                                                             | R123<br>R124                              | R125<br>R126                                                                                |                     |
| Loc.        | 2222                                                                                                           | u cu<br>E B | ~~~~~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 22222                                                                         |                                         | 18                                                                                          | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | 2 2 2 C                 | E B                                                                             | 28 11                | ĬĒĒĒ                                                                         | 88                      | 2858                                                               | 2 22           | が現現                  | n n                                                               | 58<br>19                                                                         | ĒĒ                                        | B2<br>B2                                                                                    |                     |
| ES.         | CP606<br>CP617<br>CP618                                                                                        | CP628       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                 | CR610<br>CR610<br>CR611                 | CV2BB                                                                                       |                                                                                             | 1188<br>1188<br>1488    | J401<br>J600                                                                    | K600                 | L402<br>L402<br>L403                                                         |                         | 200<br>200<br>200<br>200<br>200<br>200<br>200<br>200<br>200<br>200 |                |                      | L611                                                              | L612<br>0100                                                                     | 0182                                      | 1920                                                                                        |                     |
|             | 82<br>83<br>83<br>83<br>83<br>83<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84<br>84 | B2          | 路路路路路                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8.256                                                                           |                                         | 76 62<br>26 62                                                                              | 形形取取                                                                                        | 8 88                    | ይጽይ                                                                             | 22 22                | **                                                                           | R R                     | 路路路                                                                | 12 B           | 888                  | 22                                                                | 588                                                                              | 285                                       | 55<br>12<br>12                                                                              |                     |
| DES.        | C621<br>C622<br>C623<br>C623<br>C623                                                                           | C625        | C623<br>C628<br>C628                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                 |                                         | C645<br>C645                                                                                | C648<br>C658<br>C658<br>C658                                                                | C654<br>C654<br>C6554   | C656<br>C657<br>C657                                                            | C659<br>C668         | C661<br>C662<br>C663                                                         | C664<br>C665            | C666<br>C6667<br>C6687                                             | 100            | C671<br>C672<br>C673 | C788                                                              | CP100<br>CP400                                                                   |                                           | CP6Ø4<br>CP6Ø5                                                                              |                     |
|             | <u>.</u>                                                                                                       | ā           | 22222                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 | <b>E</b> 22 E 22                        | 路路                                                                                          |                                                                                             |                         |                                                                                 | ANA                  | 5 2 2                                                                        | æ æ 8                   | āā                                                                 | 2 2 2<br>2 2 2 | 822                  | ያጜይ                                                               |                                                                                  | 88                                        |                                                                                             |                     |
| DES.        | C188<br>C183<br>C183<br>C183                                                                                   | C105        | C113<br>C113<br>C113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                 | C202<br>C203<br>C203<br>C203<br>C203    | C285<br>C286                                                                                | C283<br>C2288<br>C2288<br>C2288<br>C228                                                     | C252<br>C253<br>C253    | C255<br>C255                                                                    | C257<br>C258<br>C258 | C481                                                                         | 0.483<br>0.484<br>0.484 | 0489<br>0489                                                       | C688           |                      | 000<br>000<br>000<br>000<br>000<br>000<br>000<br>000<br>000<br>00 |                                                                                  | C615<br>C617                              | C618<br>C628                                                                                |                     |

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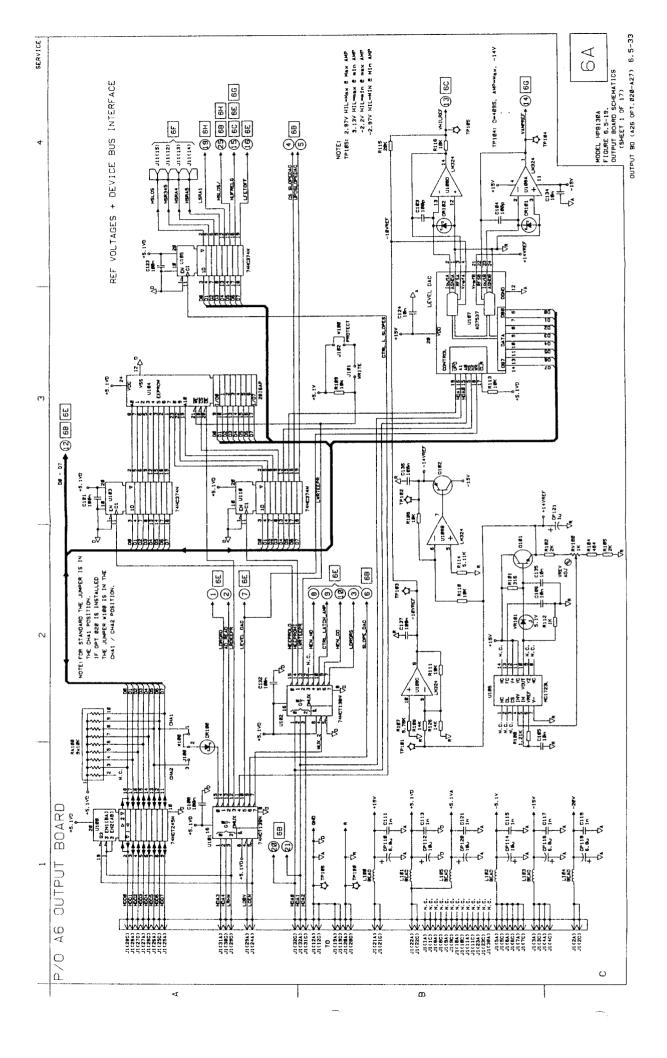


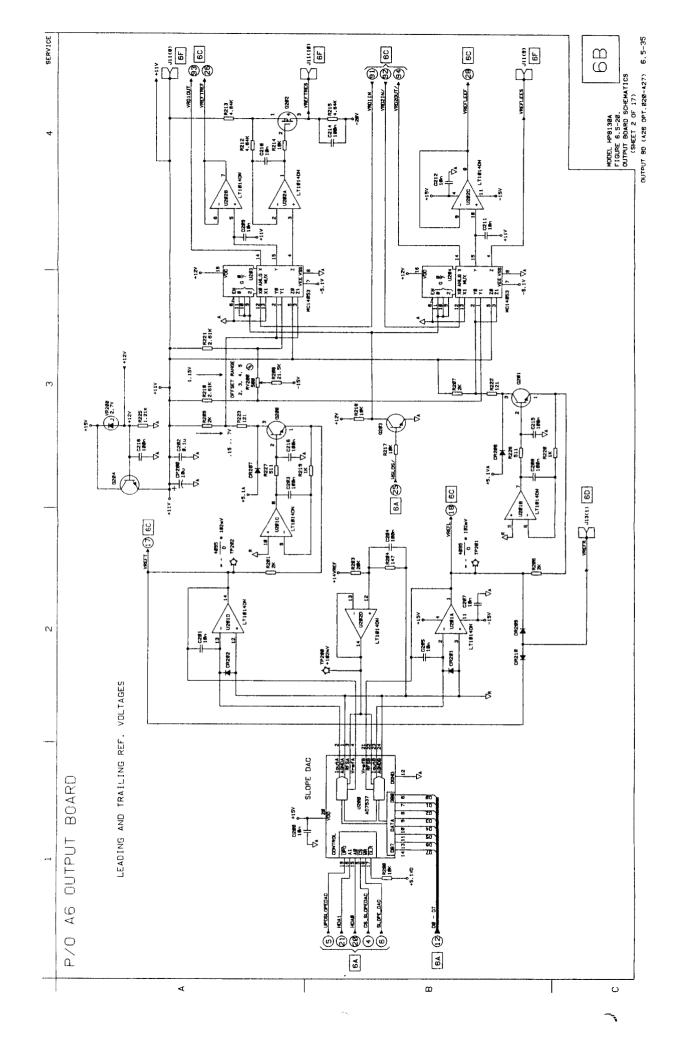
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LOC           C635         B1           C636         R2           C637         R2           C638         B2           C639         B2           C640         B2           C641         B2           C645         R2           C647         R2           C648         R2           C649         R2           C648         R2           C650         B2           C651         B2           C652         B2           C654         R2           C655         B2           C657         B2           C658         R2           C657         B2           C658         R2           C659         B2           C659         B2           C659         B2           C660         B2           C661         R2           C662         B2           C663         B2           C664         R2           C665         R2           C664         R2           C665         R2           C664 | DES.         LOC.           CR610         R2           CR611         B2           CR616         A1           CV200         B1           J11         R2           J12         B1           J13         A1           J14         B1           J15         B1           J100         A1           J101         A1           J600         B2           L602         R2           L603         B2           L604         R2           L605         R2           L606         R2           L607         B2           L608         B2           L609         B2           L609         B2           L609         B2           L609         B2           L609         B2           L610         B2           L611         B2 | DES. L<br>R100<br>R101<br>R102<br>R103<br>R104<br>R105<br>R106<br>R106<br>R107<br>R108<br>R109<br>R110<br>R110<br>R110<br>R110<br>R111<br>R114<br>R112<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120<br>R120 | LOC.         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R670         B2           R671         B2           R673         R2           R676         B2           R677         B2           R678         B2           R679         B2           R680         B2           R681         B2           R682         B2           R683         B2           R684         B2           R685         B2           R686         B2           R687         B2           R688         B2           R689         B2           R689         B2           R689         B2           R693         B2           R693         B2           R694         B2           R695         B2           R693         B2           R693         B2           R693         B2           R693         B2           R693         B2           R694         R2           R695         B2           R695         B2           R695         R2           R695 <td></td> |                                                          |
| C2Ø8 B2<br>C2Ø9 B1<br>C25Ø B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | C661         A2           C662         B2           C663         B2           C664         A2                                                     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| C625         B2           C627         B2           C628         B2           C629         B2           C631         B2           C632         B2           C633         B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CR101         A1           CR102         A1           CR103         A1           CR602         A2           CR603         B2           CR604         A2           CR606         B2           CR608         A2           CR608         B2           CR608         B2           CR608         B2           CR609         B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Q624         B2           Q625         B2           Q626         B2           Q627         B2           Q628         B2           Q629         B2           Q630         R2           Q631         B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | R2Ø2<br>R2Ø3<br>R2Ø5<br>R2Ø6<br>R25Ø<br>R252<br>R253                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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                                                                                                                                                                                                 | B2<br>B2<br>B2<br>B2<br>B2<br>F2<br>B2<br>B2                                                                             | R729         R2           R730         B2           R731         B2           R732         R2           R733         R2           R734         R2           R735         B2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FIGURE 6.5-18.                                           |

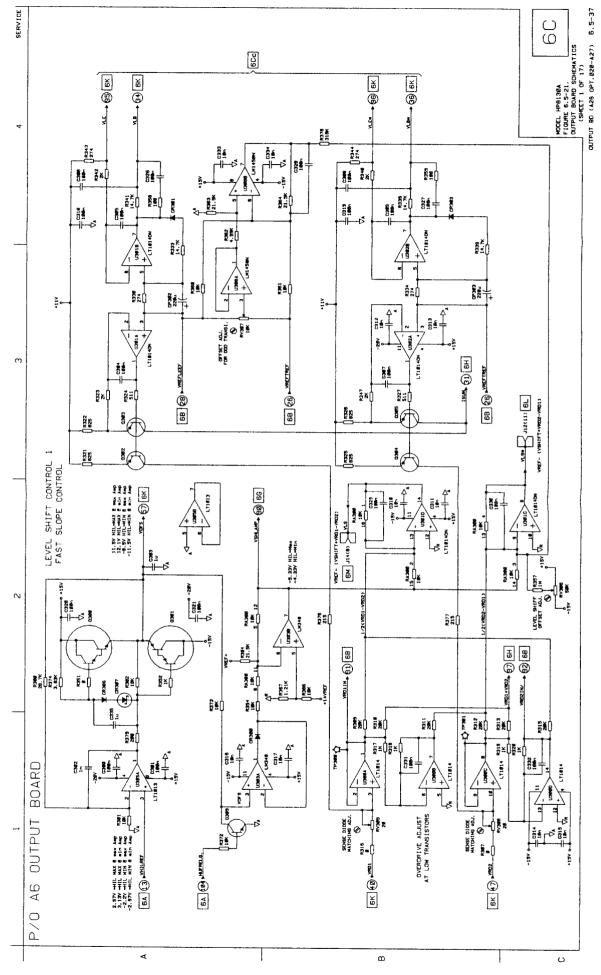
MODEL HP8130R

CHANNEL 2 SMD BD COMPONENT LOCATION CHART

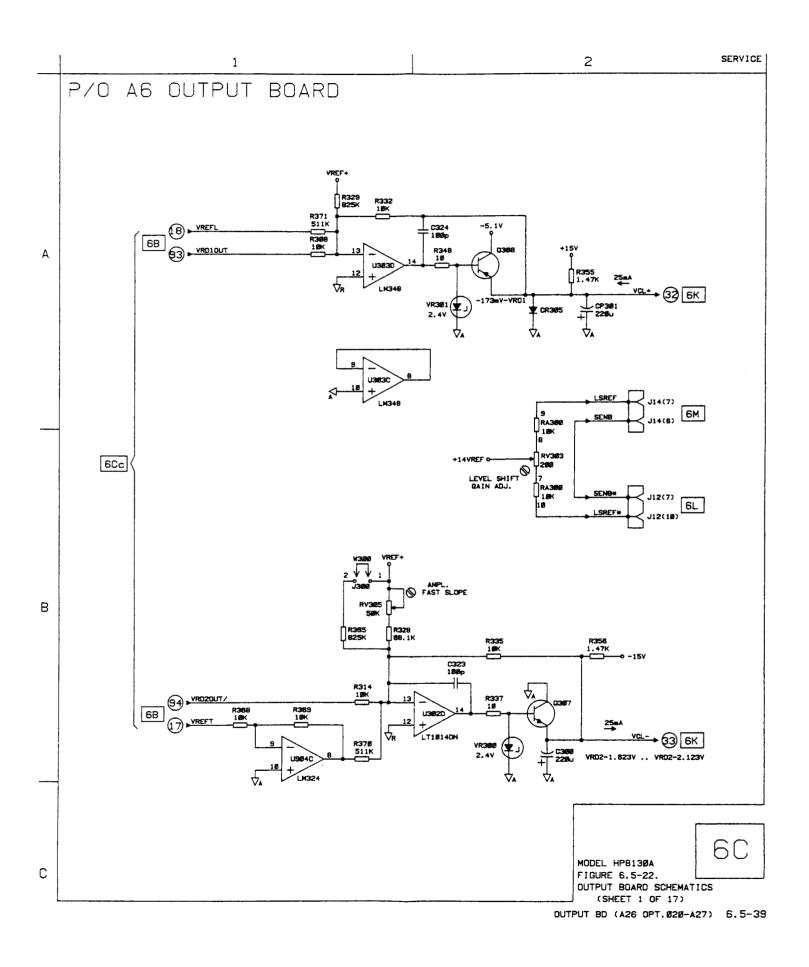
OUTPUT BD (R26 OPT.020-A27)

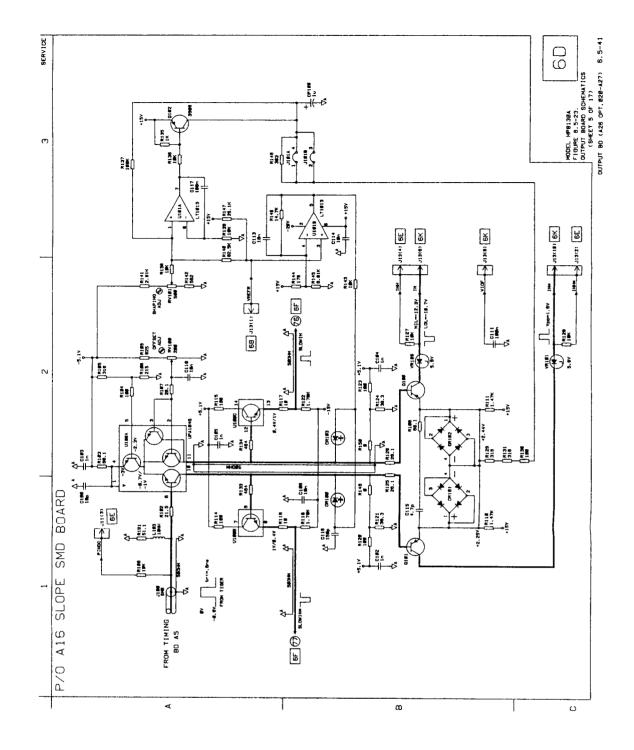






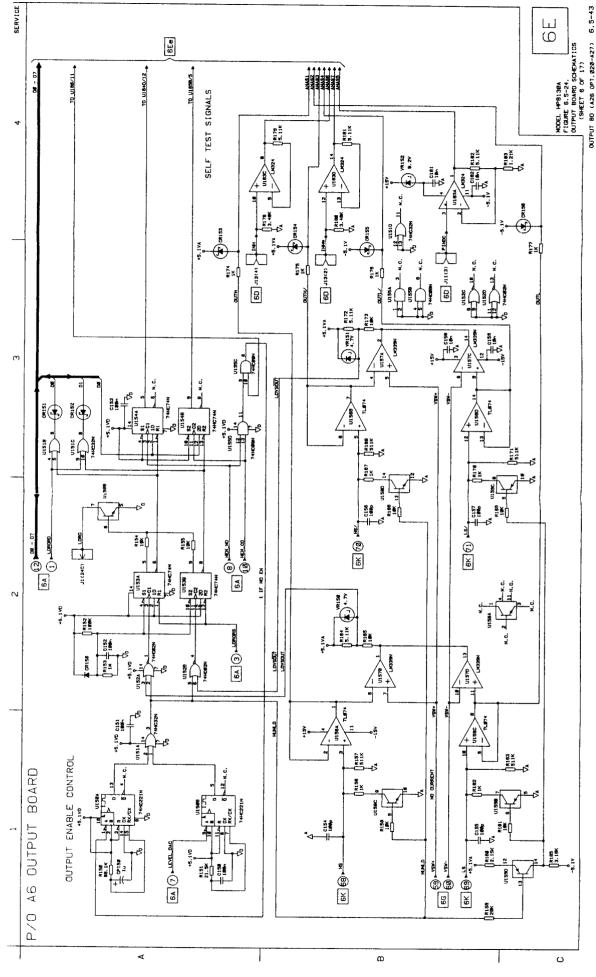


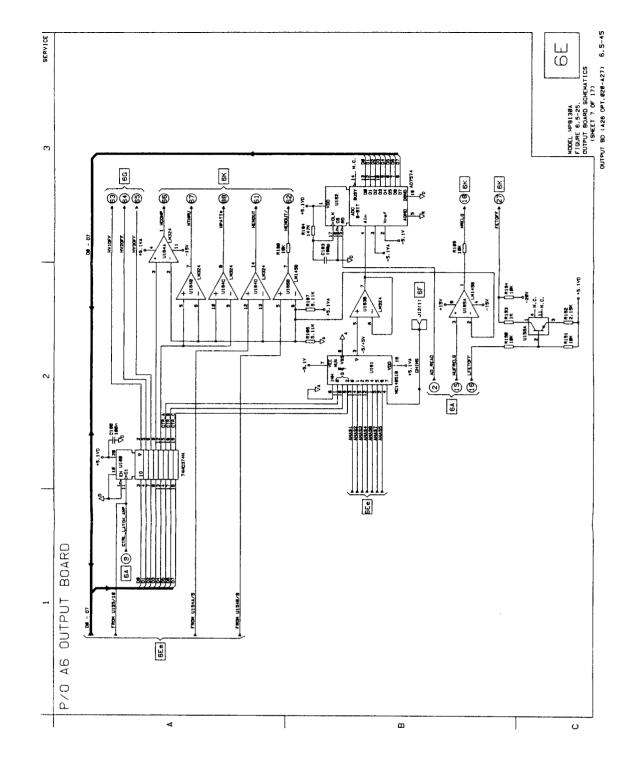




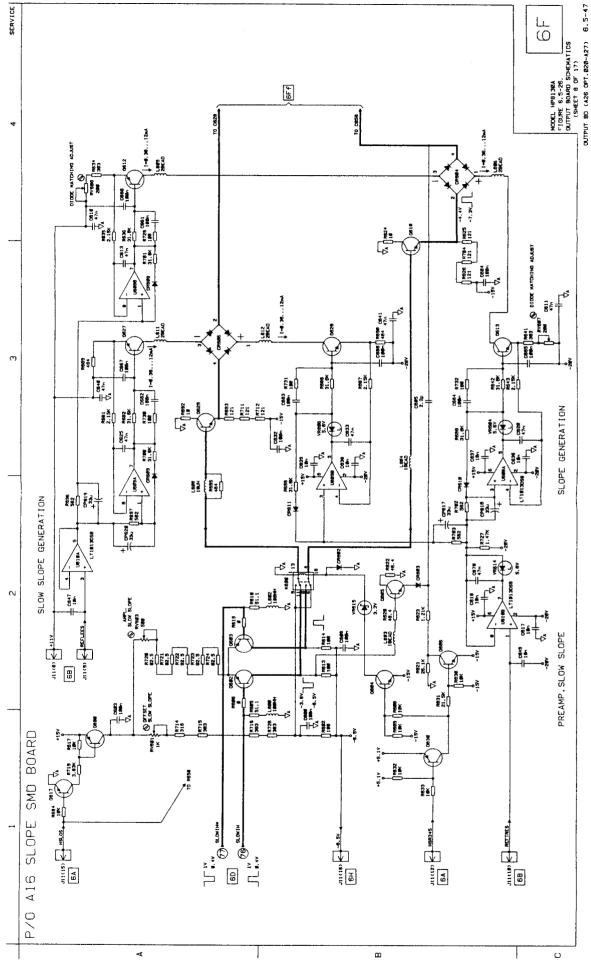
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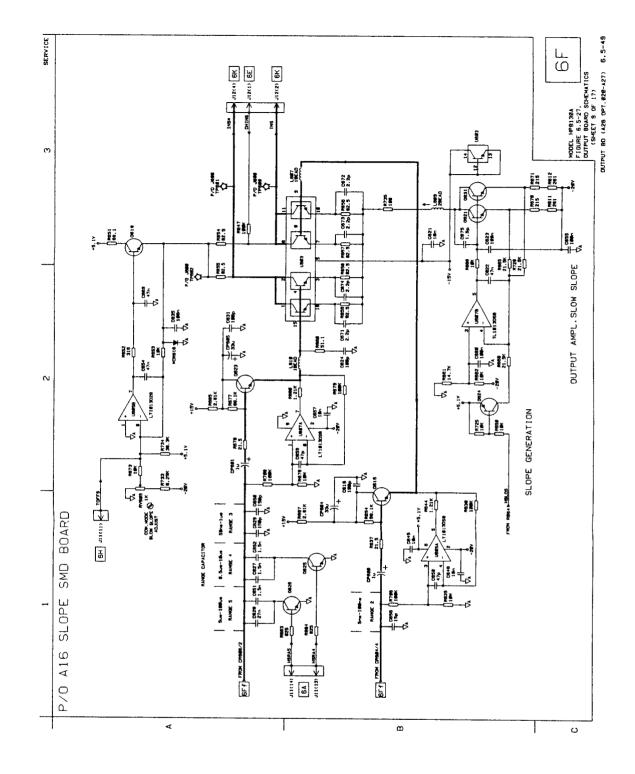
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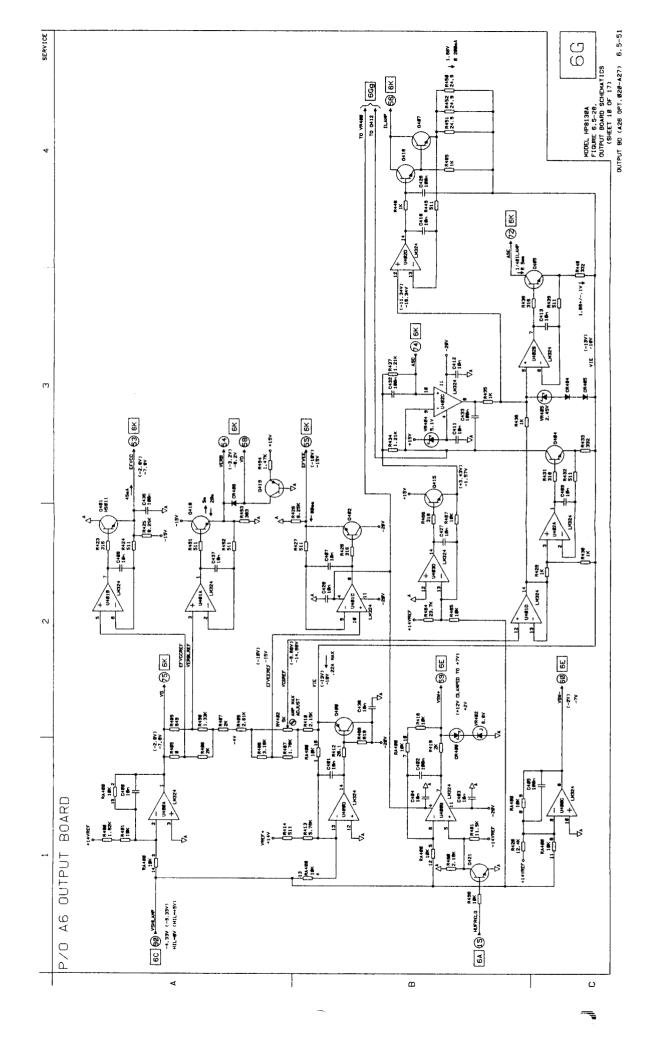
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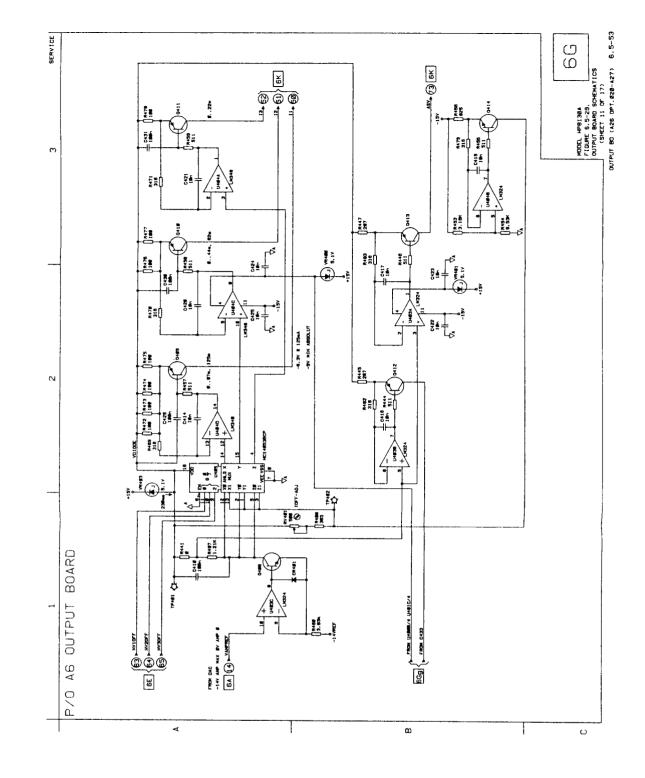




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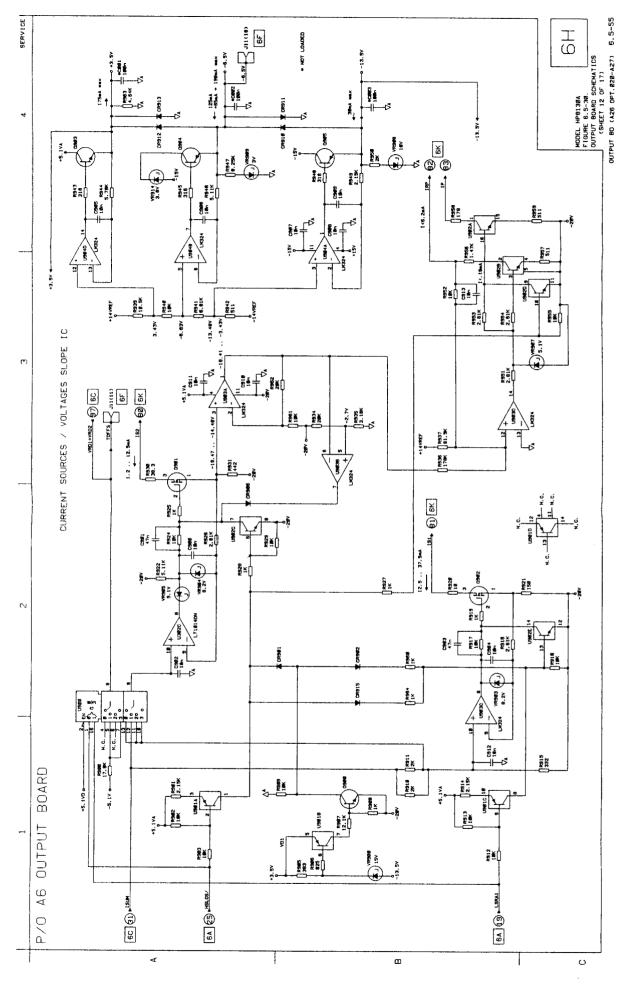
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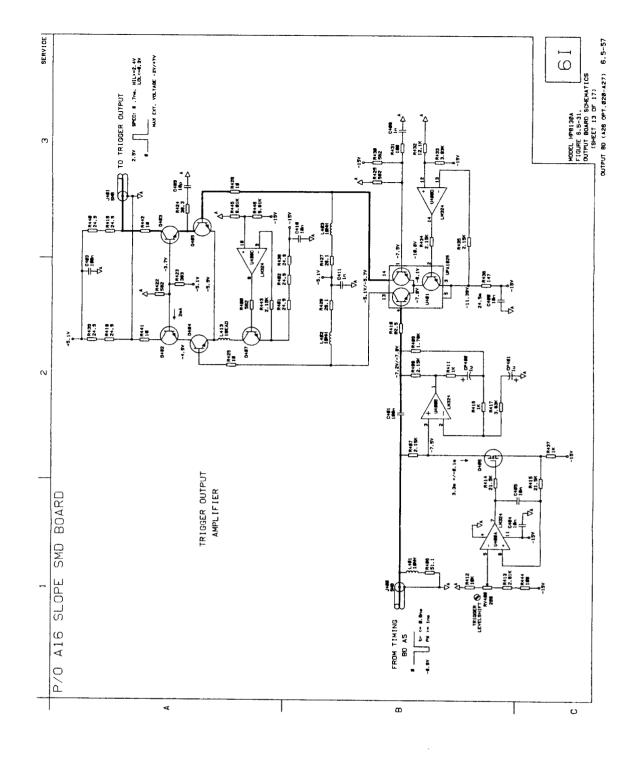




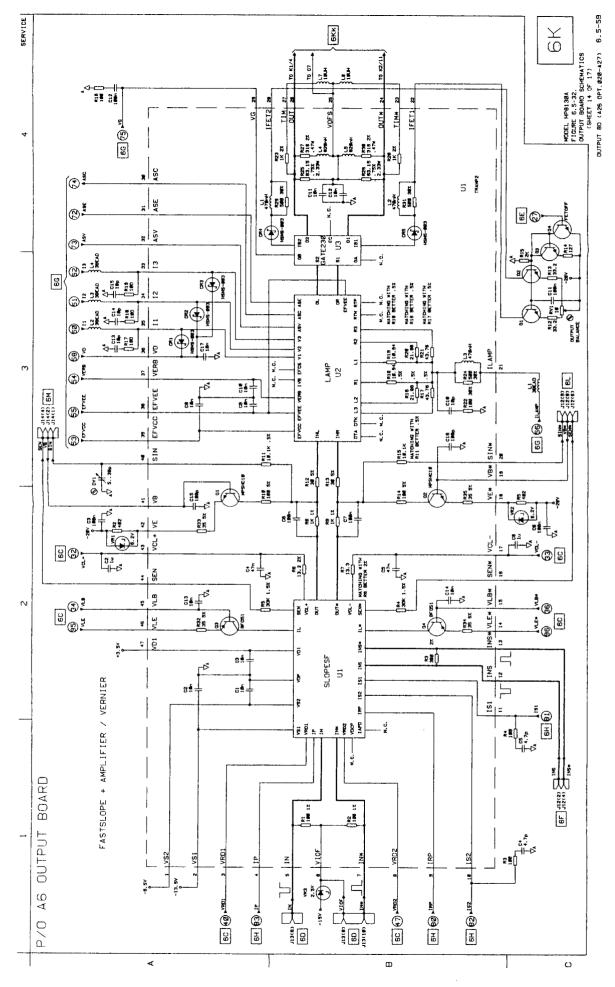
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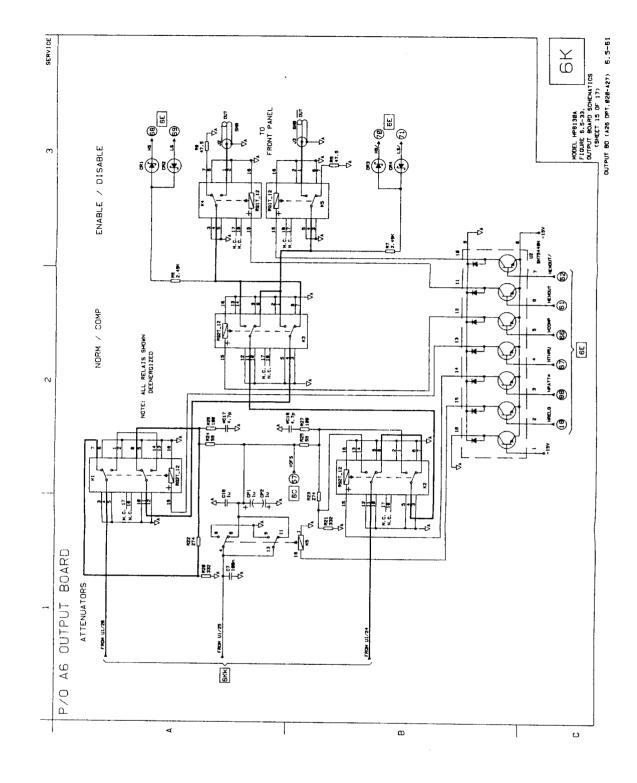
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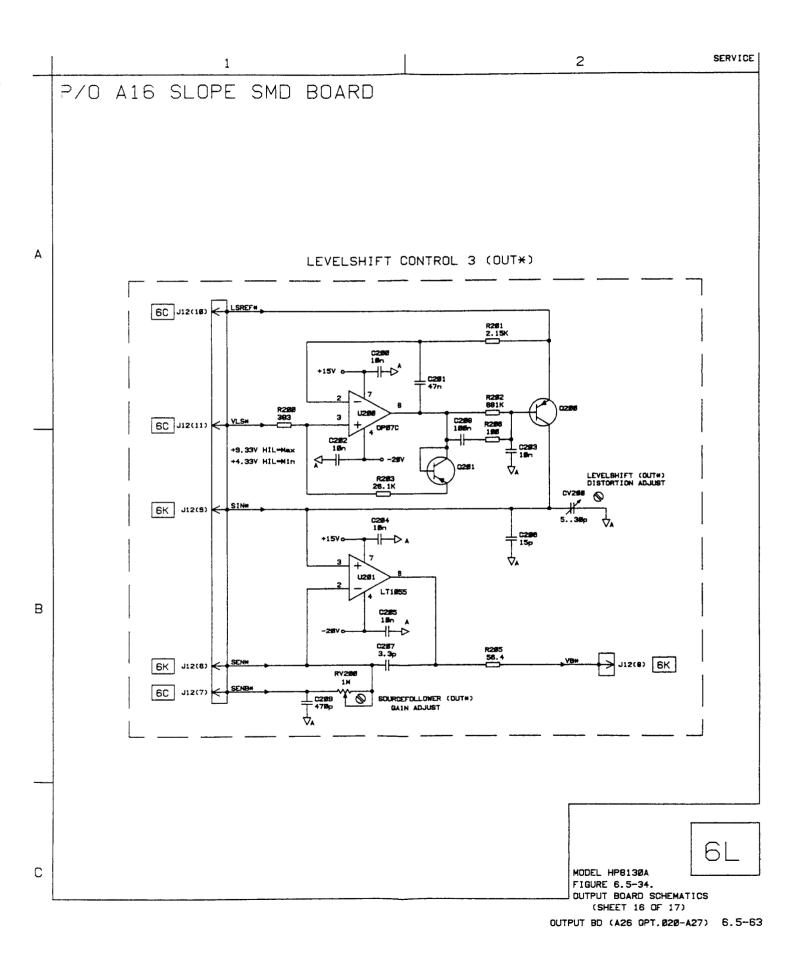
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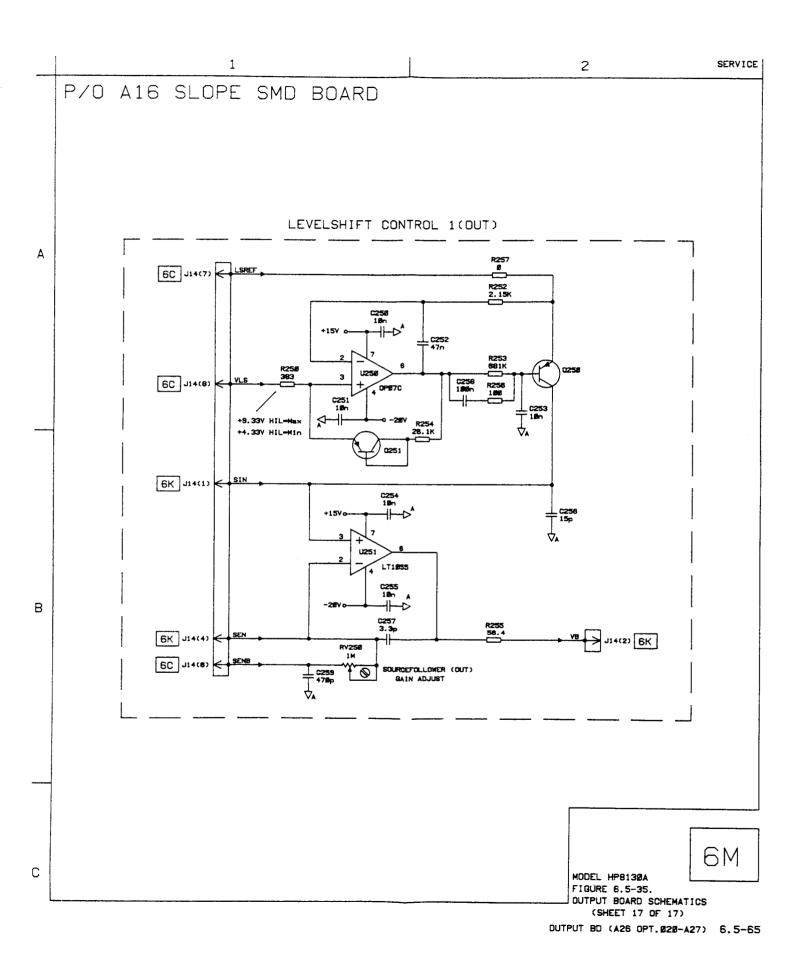




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# HP 8131A Output Board (A26; option 020 - A27/A28)

## Introduction

The output board consists of:

- the transducer board
- the output amplifier hybrid (GaAs, IC U401)
- the enable/disable switch

The input signal (PULSE IN) together with the period, delay, and width parameters is amplified by the transducer board and the output amplifier hybrid, to determine the output levels and the fixed fast transition time.

For a programmed width of less than 1 ns the transducer board reduces the input width by 500 ps. The normal/complement switch is part of the transducer board.

## **Block Theory of Operation**

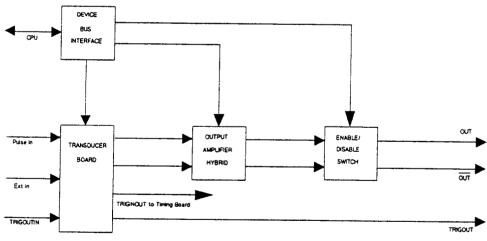


Figure 6-6-1. Module Block Diagram

## Transducer Board

The transducer board is the interface between the timing board and the output amplifier. The transducer board provides the following functions:

- shaping and refreshing of the input signals from the timing board
- normal/complement switching
- generation of a pulse width less than 1 ns
- restoration of an external sinewave signal (in transducer mode)

#### **Output Amplifier Hybrid**

This block is responsible for producing the final output signal at the HP 8131A front panel. The input signal, (from the transducer board) is amplified and shaped by the cascade of a bipolar differential amplifier and the Gallium Arsenide (GaAs) IC U401. The output amplitude is determined by control currents and the output HIgh Level (HIL) by a control voltage.

The bipolar differential amplifier and the IC U401 are AC coupled. The level shift control circuit bypasses the low frequency part of the signal spectrum including the negative DC offset voltage from the IC U401 inputs.

#### Enable/Disable Switch

During power-on, the hardware ensures the relays are disabled.

## Transducer Board

#### Transducer Mode

In the transducer mode, the timing board input is switched out. A sinewave signal from the external signal is applied to the transducer, which comprises two cascaded differential amplifiers, used as pre-shapers. A diode clamping circuit is used to protect the transducer input from a high voltage input. The shaped signal output from the transducer is applied to one input of a NOR-gate. The output of the NOR-gate is then processed by successive differential amplifier stages. These five stages ensure the output amplifier hybrid receives a rectangular signal with a transition time of less than 300 ps.

#### Short Pulse Mode

In this mode, pulses with a width between 500 ps and 990 ps can be generated.

The signal from the timing board (between 1.5 ns and 1 ns) is divided into two parts. The first part is fed directly to the first input of a NOR-gate. The second part is fed to the second input of the NOR-gate via a 500 ps delay line. Thus, the output from the NOR-gate is 500 ps shorter than the input from the timing board. The NOR-gate output is refreshed by two differential amplifier stages (see figure overleaf).

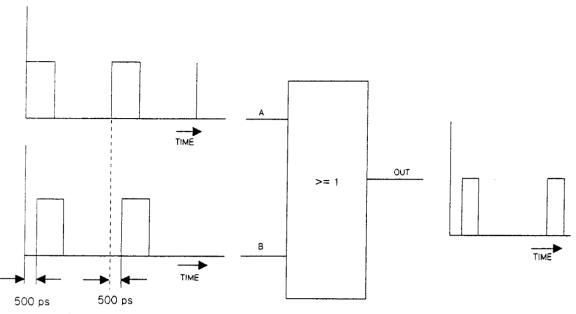


Figure 6-6-2. Short Pulse Mode

#### Norm/Complement Switch

After the NOR-gate mentioned above the signal can be switched from the normal mode to the complement mode by means of a relay.

## **Trigger Output Amplifier**

This circuit refreshes the trigger signal from the timing board and drives an external 50  $\Omega$  load with EECL levels (0.6 Vp-p). The output is voltage protected against external voltages that exceed a  $\pm 5$  V window. This is accomplished by a diode bridge.

# **Output Amplifier Hybrid**

#### Introduction

This block is responsible for producing the final output signal at the HP 8131A front panel. The input signal, (from the transducer board) is amplified and shaped by the cascade of a bipolar differential amplifier and the GaAs IC U401. The output amplitude is determined by control currents and the output HIgh Level (HIL) by a control voltage.

The ALADIN consists of three parts:

- PREAMPLIFIER: The differential input signal (1.2 Vp-p/350 ps) is amplified by a fully switched differential amplifier to obtain the logic levels (3.5 Vp-p/350 ps).
- SHAPER: A fully switched differential amplifier shapes the signal to provide 4 Vp-p/150 ps.

• LINE DRIVER: There are two line drivers in parallel, scaled by 1:7. For large amplitudes (5 V to 0.63 V) both drivers switch the drive current. For small amplitudes only the small amplifier switches the drive current.

#### Amplitude Control

The output amplitude is controlled by the large driver current (ID1) and the small driver current (ID2) within two ranges:

- Range 1:
  - $\square$  Vout = 5 V to 0.630 V, 50  $\Omega$  external load
  - $\square$  ID1 = 175 mA to 22.1 mA
  - $\Box$  ID2 = 25 mA to 3.2 mA
- **Range 2:** 
  - $\square$  Vout = 0.620 V to 0.100 V, 50  $\Omega$  external load
  - $\square \text{ ID1} = 0$
  - $\Box$  ID2 = 25 mA to 2 mA

The preamplifier and shaper voltage swings are reduced with the output amplitude to keep overdrive and output overshoot reasonably constant. The preamplifier voltage is controlled by the current IP and, that of the shaper by IS. They are both determined by the programmed amplitude and the on-chip resistors. The following figure shows the voltage swing as a function of the programmed amplitude.

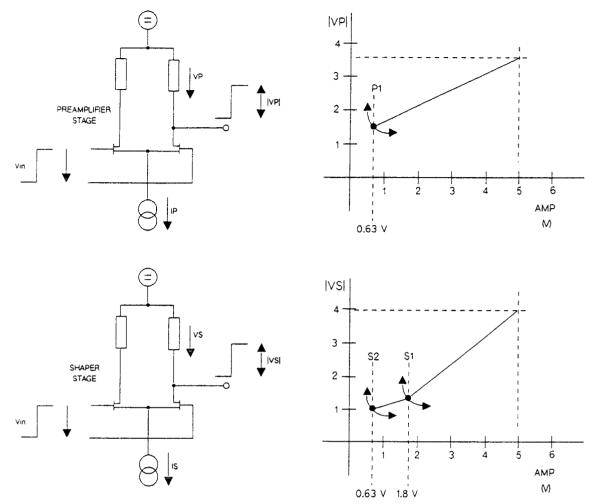


Figure 6-6-3. Preamplifier and Shaper Voltage Swings

To eliminate the influence of the on-chip resistors, a monitor resistor is biased with a reference current, (controlled by an operational amplifier) to obtain the desired voltage drop at the monitor resistor. This voltage drop and the programmed amplitude, control IP and IS.

During power-on the currents IP, IS, ID1, and ID2 are switched off until the difference between the most positive and most negative voltages of the hybrid (VD1 - VS1) is larger than 16 V (final value: 17 V). This is to avoid damage to the hybrid; during power-off the opposite is true.

Power-on forces the hybrid to stay in amplitude range 2 (time constant approximately10 ms) to avoid a HIL of -4.9 V and an AMP of 5 V due to random DAC data. After the 10 ms time constant the microprocessor is able to control the AMP-DAC and HIL-DAC.

#### High Level Control (HIL)

HIL is determined by controlling the voltage at the common node of the output resistors; for HIL > 0 V all IC U401 voltages must float with the output HIL.

## **Over voltage Protection**

The outputs are protected against voltages which exceed the permitted window. The over voltages can be caused by external currents, external voltages or loads other than 50  $\Omega$ .

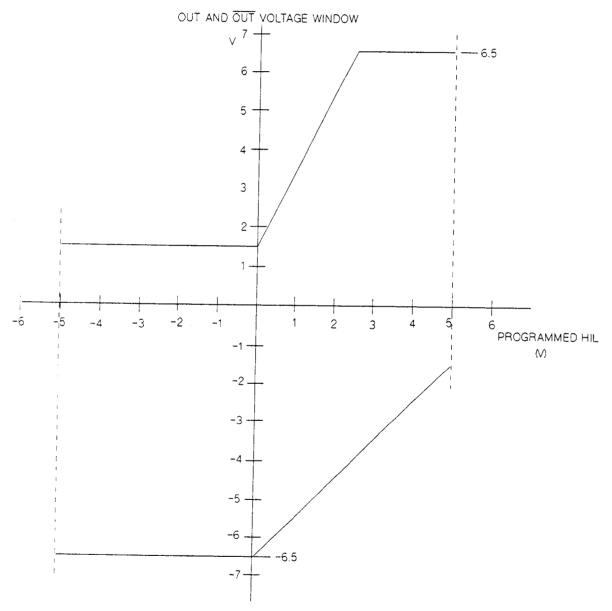


Figure 6-6-4. Over voltage Diagram

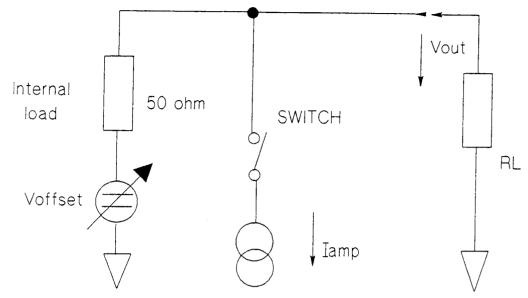


Figure 6-6-5. Load vs AMP/HIL

internal 50  $\Omega$  || RL = 50  $\Omega$ IAMP = 4 mA - Vout = 100 mV IAMP = 200 mA; Vout = 5 V at Vout = (50  $\Omega$  || RL) x Iamp HIL = (Voffset x RL) ÷ (50  $\Omega$  + RL) LOL = HIL - Vout

The output peak detector disables the output if over voltage occurs. Over voltage detection will be suppressed during programming ENABLE (relay switch time). During reduction of the HIL the peak detectors will be discharged and again over voltage is suppressed.

#### **Overshoot Adjust**

The overshoot of the hybrid, is a function of amplitude, duty cycle, and differential offset of the shaper and driver stages. The effect of the amplitude is compensated for by reducing the voltage swings of the shaper and preamplifier with amplitude.

The effect of the duty cycle is compensated by controlling the differential offset at the driver stage vs duty cycle.

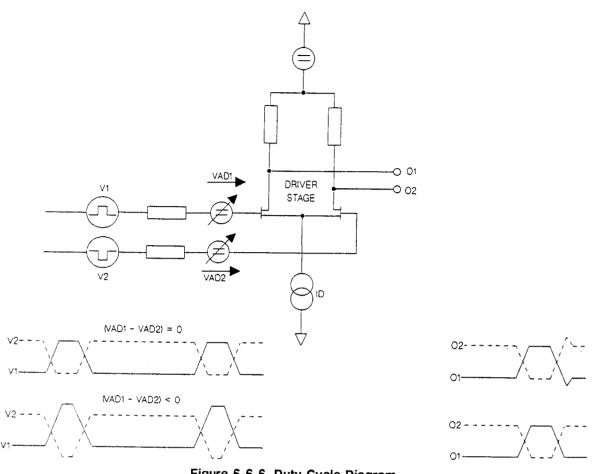


Figure 6-6-6. Duty Cycle Diagram

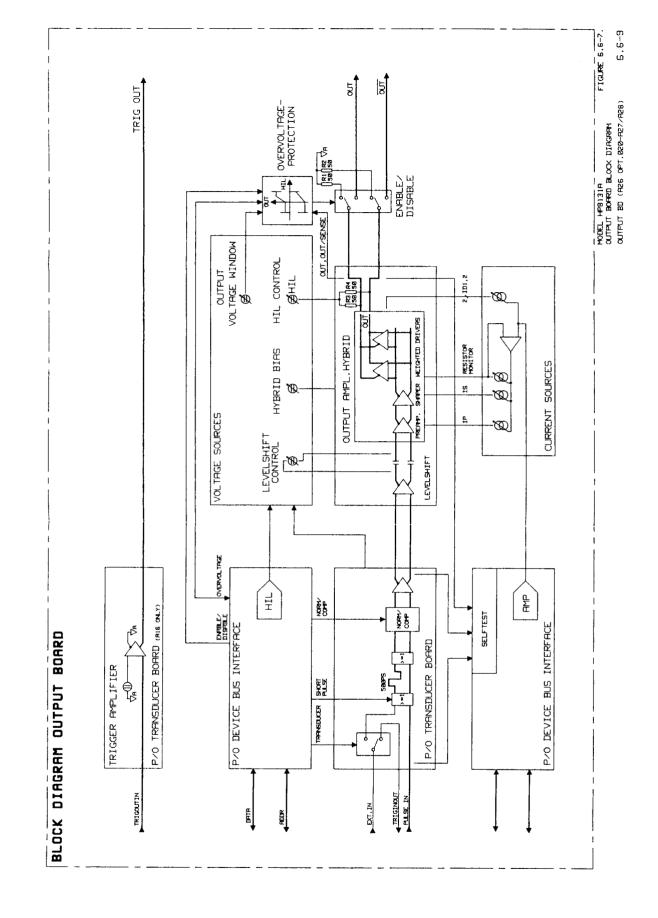
The differential offset of both driver and shaper stages has to be adjusted for small amplitudes.

## Enable/Disable Switch

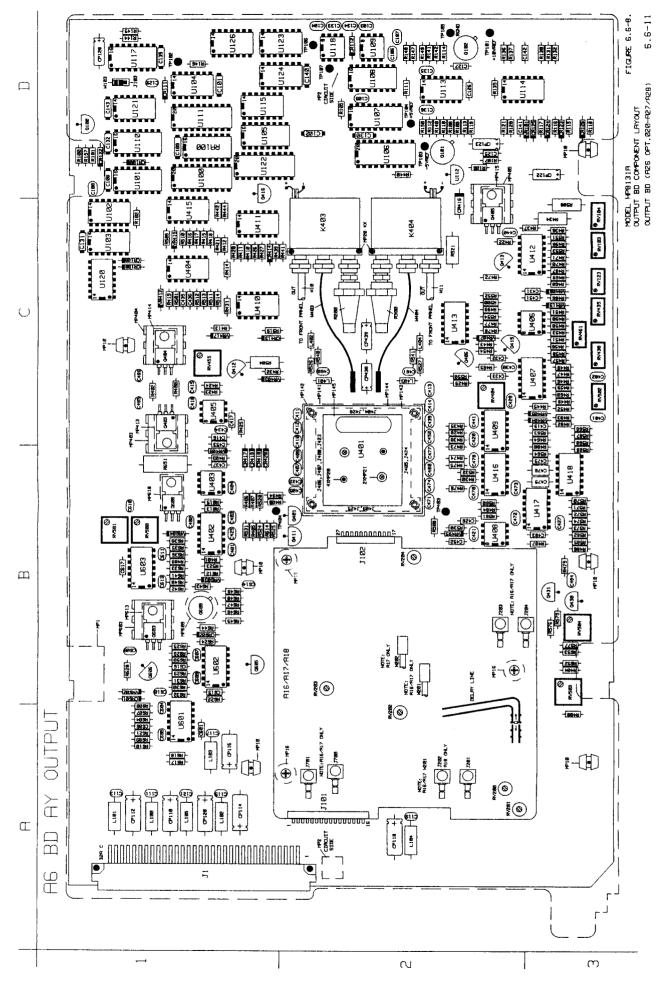
During power-on the hardware ensures the relays are disabled.

Before enable/disable is processed the microprocessor forces the output OFFSET to 0 V and the AMP to 0.1 V to ensure cold switching. After 20 ms (switch time) the old levels will be set. This level reduction occurs on both, the normal and complement output of the channel, even if only one relay enables/disables.

In the HPIB mode, the microprocessor waits for about 40 ms until a second relay has been energized. This is to reduce the current peaks caused by the switching on of two relays.



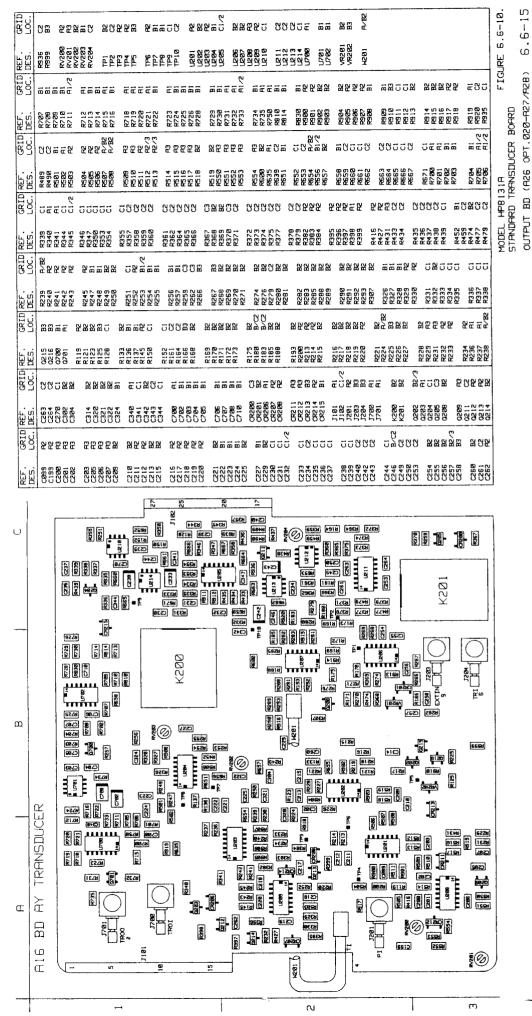
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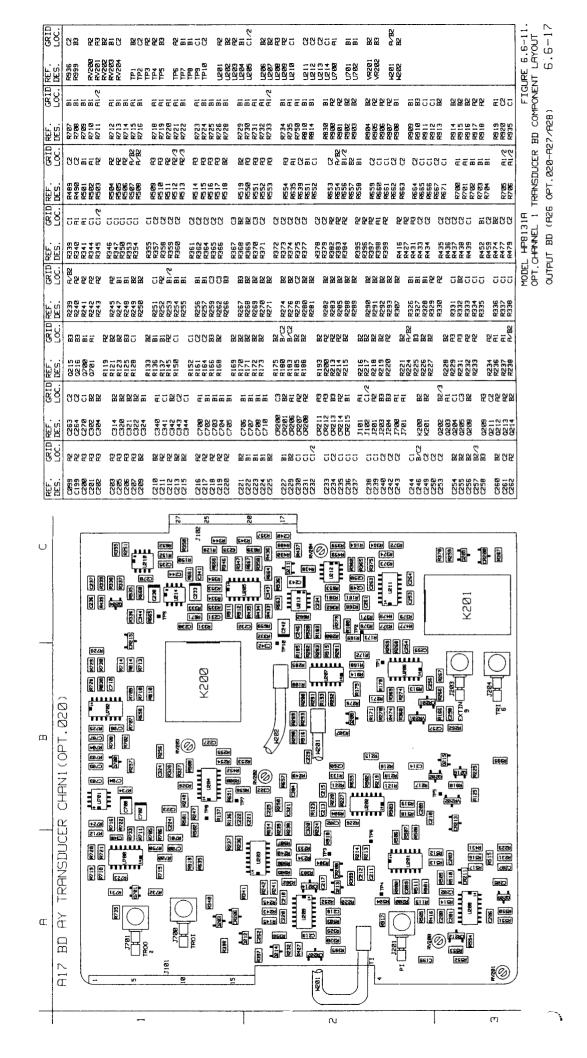


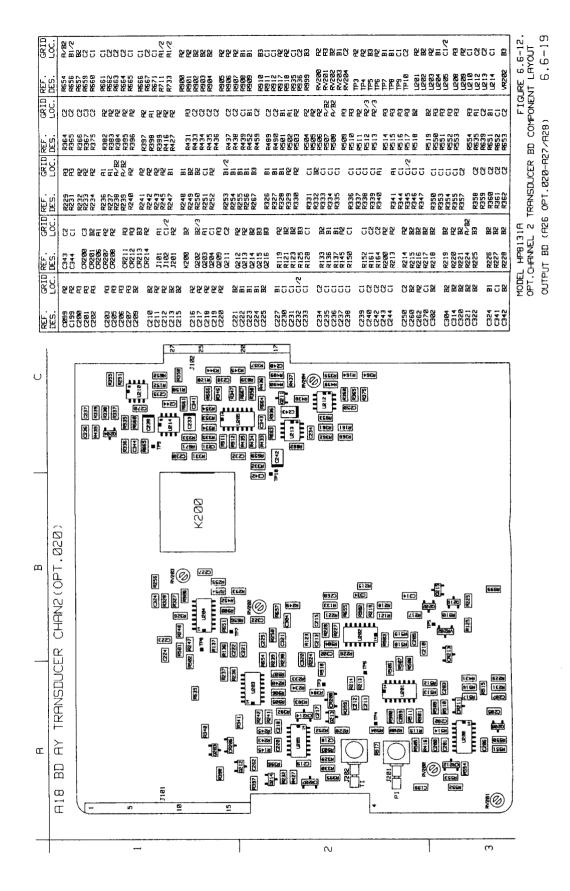
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| RAM RANGE EFFER FRANCE NOERN RAENE ERREN SSSSE SECON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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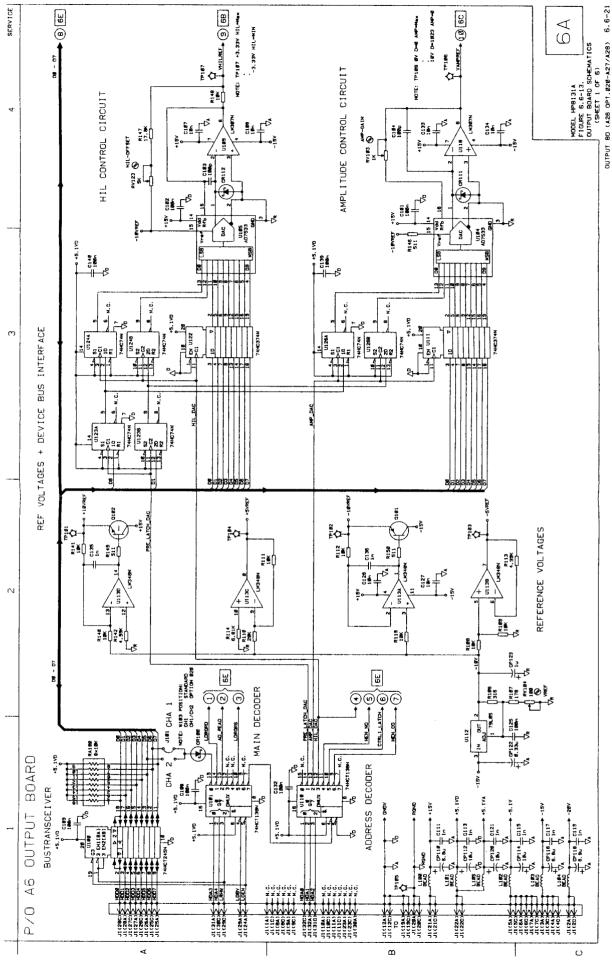
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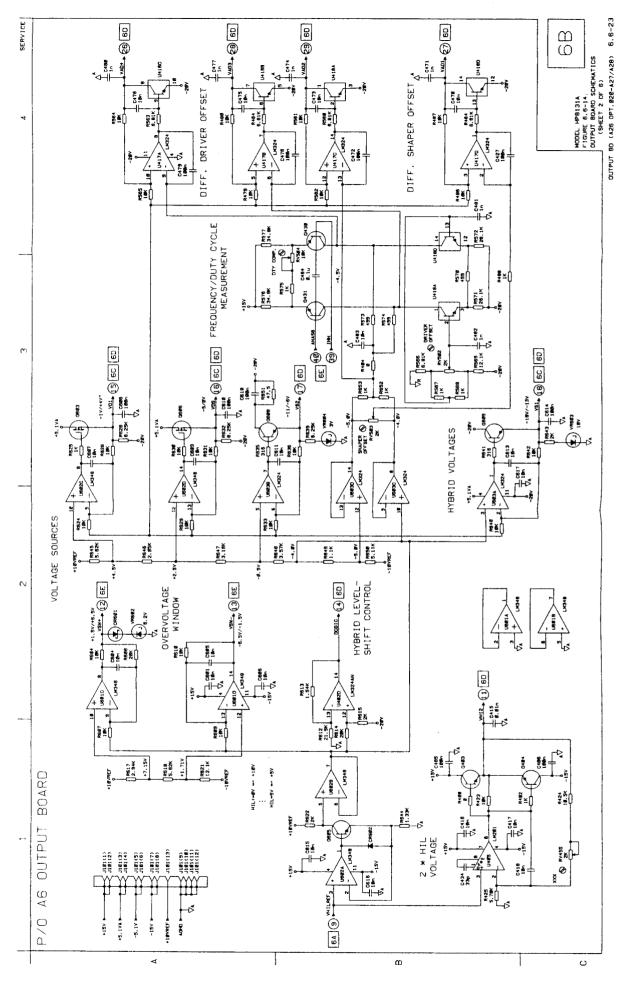




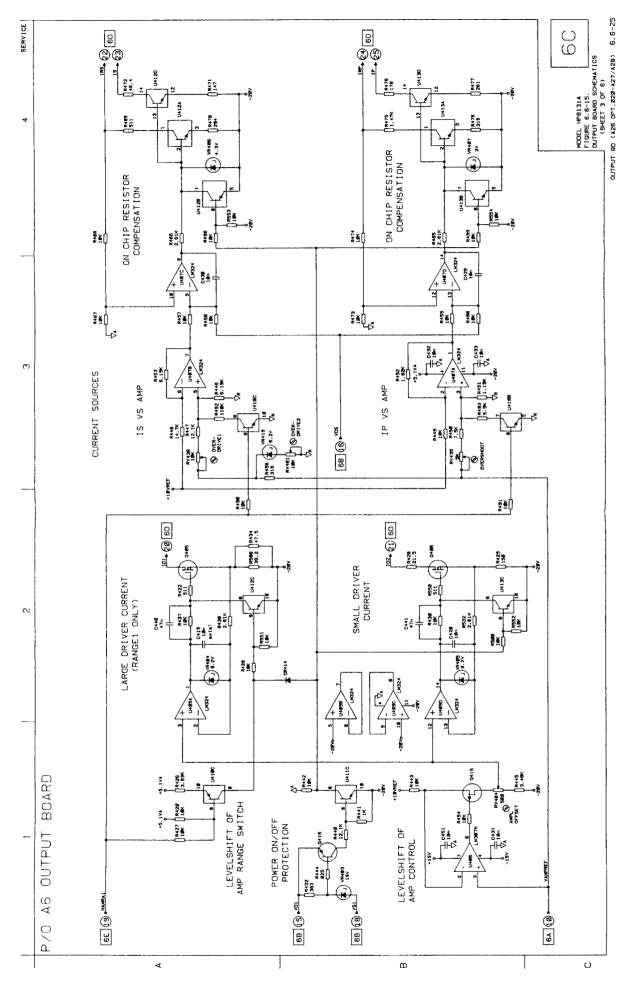


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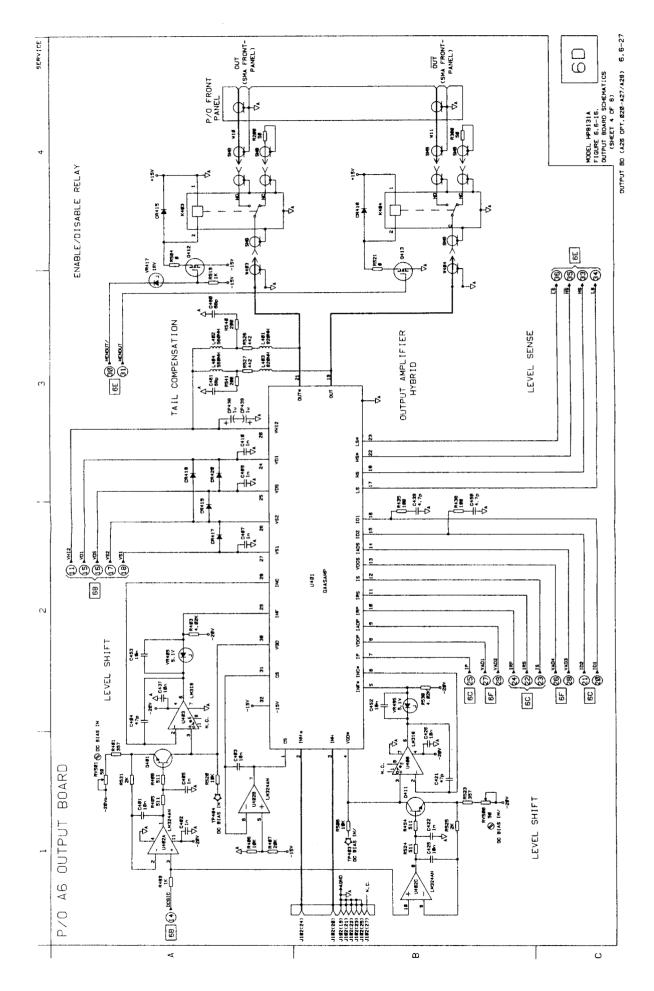


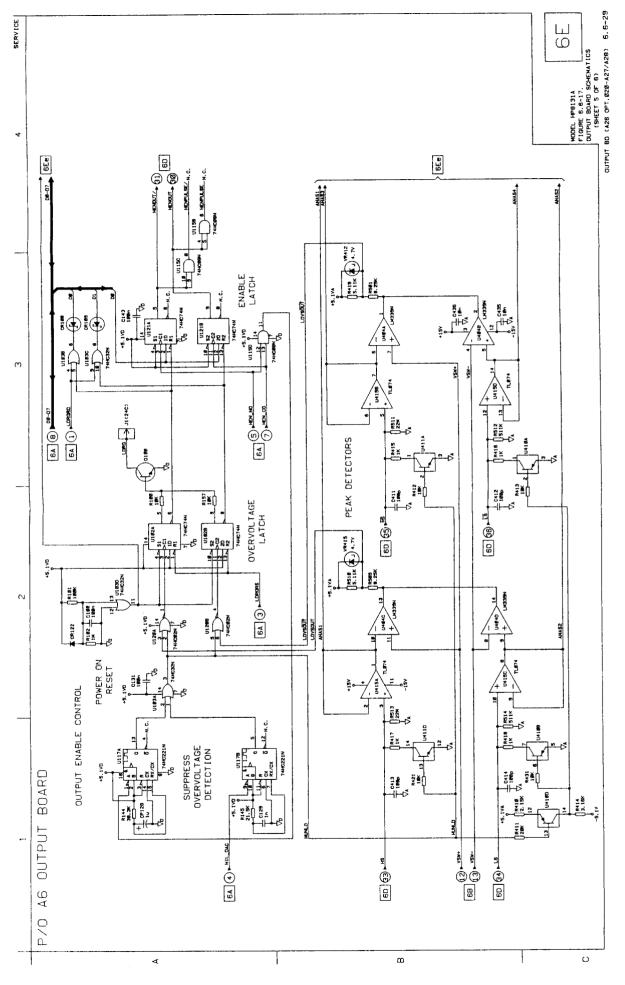


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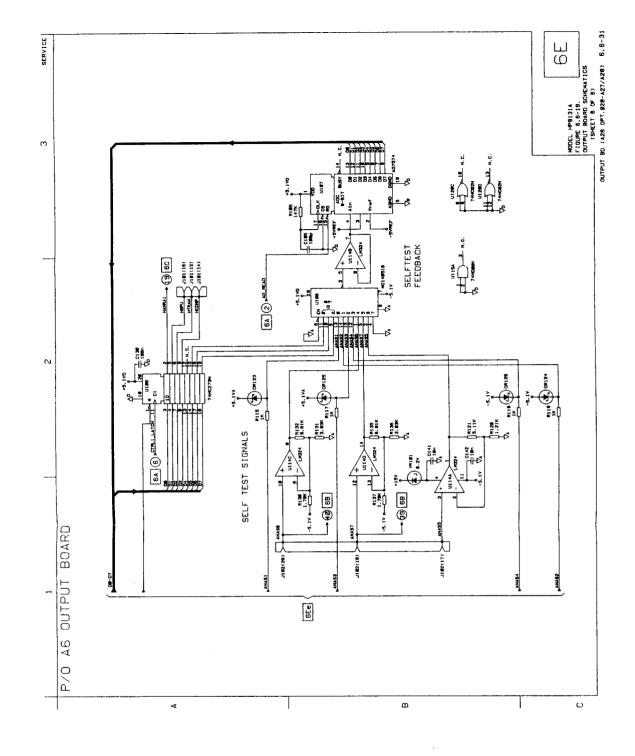


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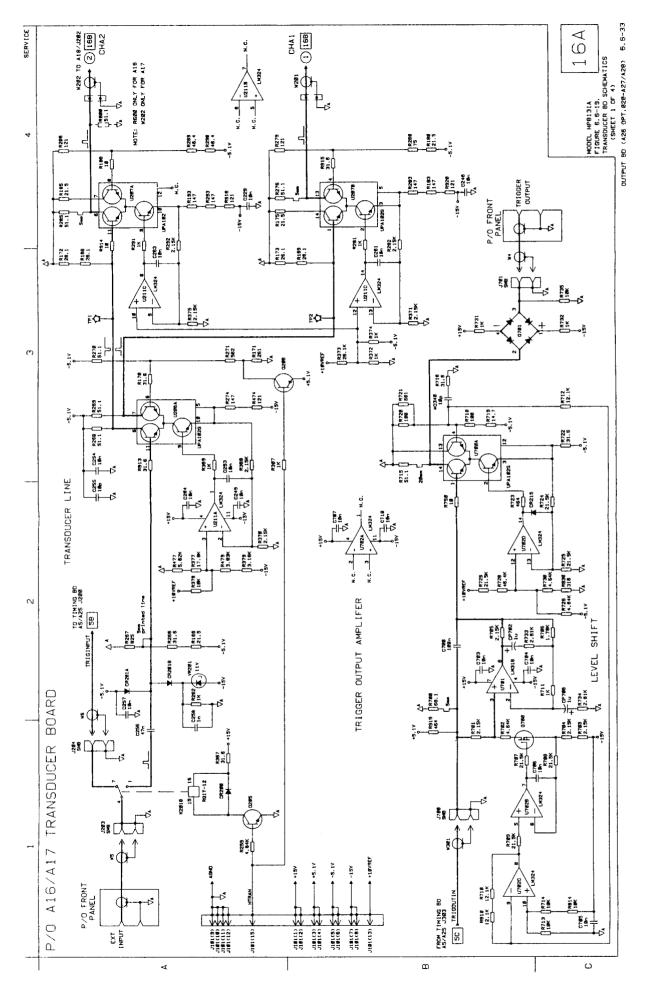


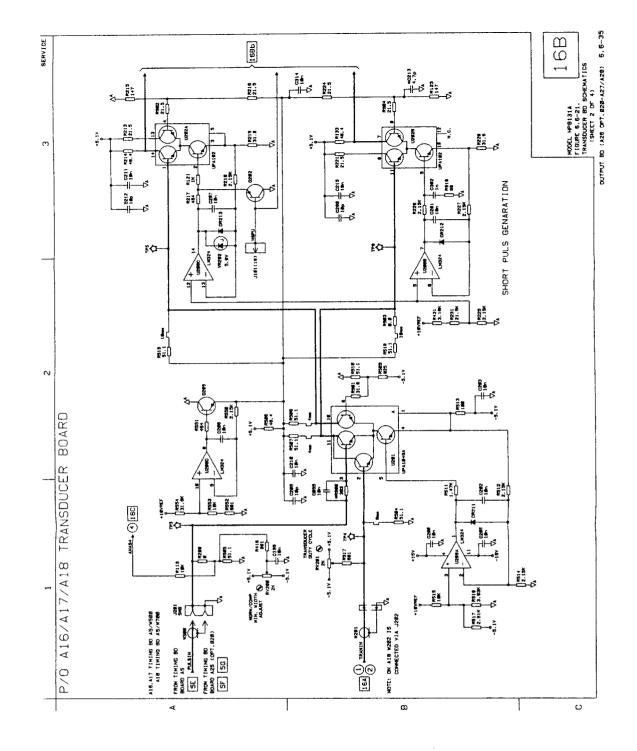
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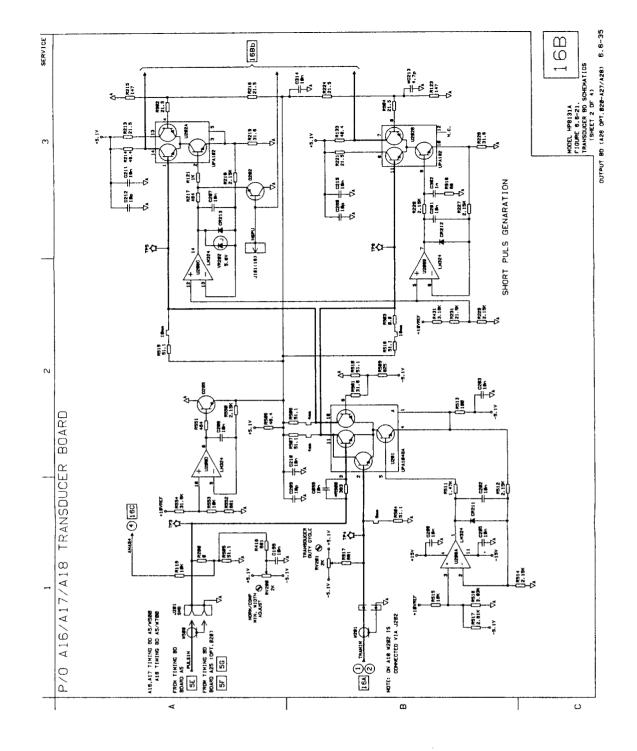


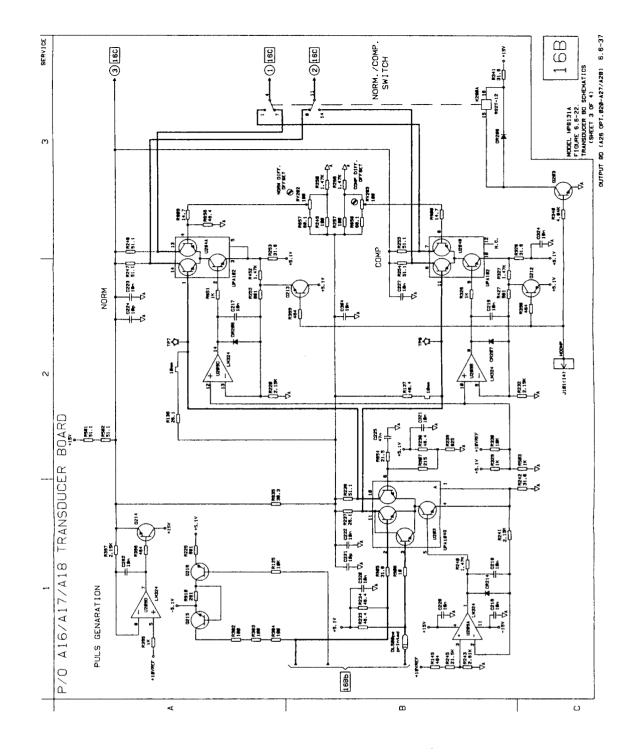
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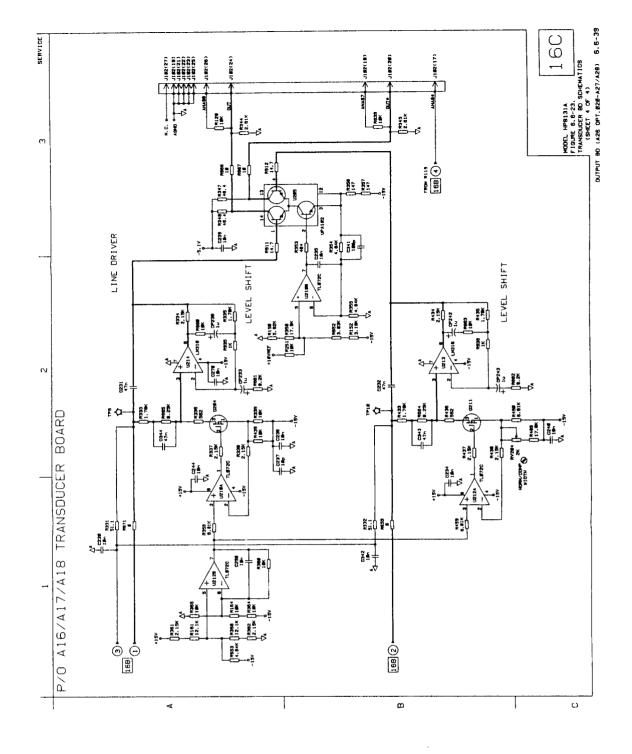
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# Troubleshooting

## HP 8130A Self-test

After power-on the HP 8130A's self-test circuit checks the following:

- Microprocessor board:
  - $\square$  keyboard controller
  - $\square$  static RAM
  - 🗆 ROM
  - $\Box$  timer cycle
  - $\Box$  device bus
- Timing board
  - □ EEPROM (contains the adjust values for the timing parameter)
- Output board
  - $\Box$  input levels from the timing board
  - $\square$  the SMD board output levels
  - $\square$  the hybrid output levels.
  - □ EEPROM (contains the adjust values for the level/slope parameter)

The following four pages of flow diagrams show the logical route followed by the program to derive particular error displays. These diagrams should assist in locating the cause of a fault.

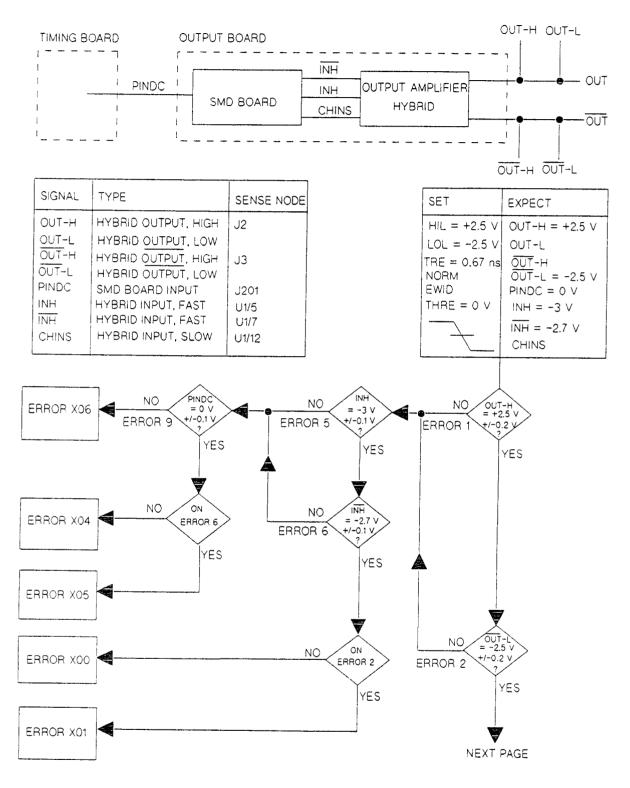


Figure 6-7-1. HP 8130A Flowchart - Part 1

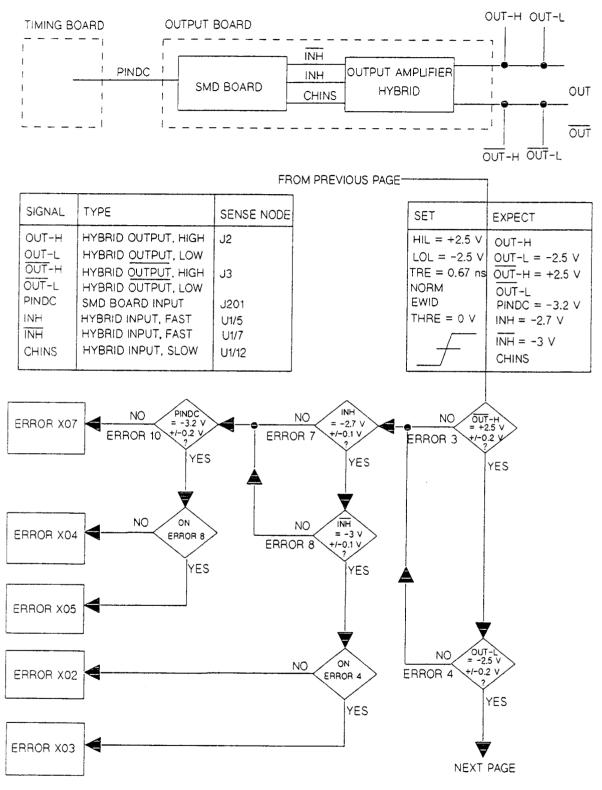
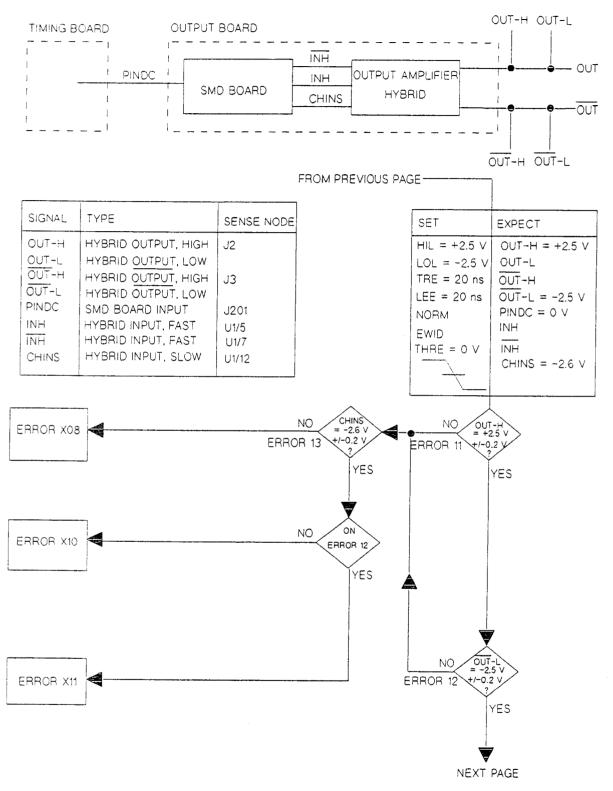


Figure 6-7-2. HP 8130A Flowchart - Part 2



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Figure 6-7-3. HP 8130A Flowchart - Part 3

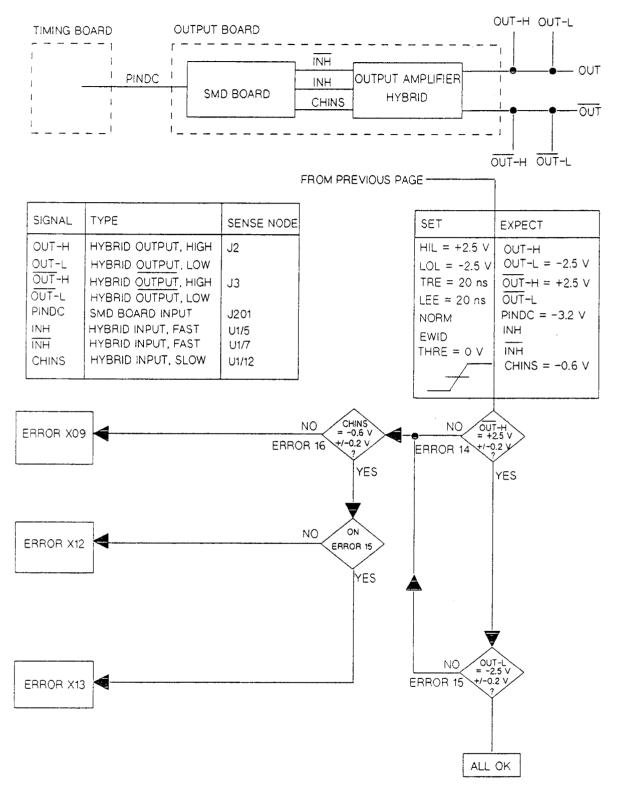


Figure 6-7-4. HP 8130A Flowchart - Part 4

#### **Error Messages**

The HP 8130A carries out its self-test at power-on. During this series of tests all the front panel LEDs are lit. If an error is detected an error message is indicated on the front panel display.

The first digit (left-hand side) of the error display is a letter:

- F displayed indicates a FATAL ERROR; the HP 8130A ceases operation
- E displayed indicates a MINOR ERROR; the HP 8130A continues to function with some restrictions. These restrictions are dependent on the type of fault.

The second digit has the following significance:

- 1 indicates an error on the CPU board
- $\blacksquare$  2 indicates an error on the timing board
- **\square** 3 indicates an error on the output board 1
- $\blacksquare$  4 indicates an error on the output board 2
- **5** indicates a configuration error.

The third and forth digits provide information about the exact fault.

#### **Fatal Error Messages**

| Error Code | CPU Board Error Message              |
|------------|--------------------------------------|
| F100       | Static RAM (number 2) error          |
| F101       | Static RAM (number 1) error          |
| F102       | EPROM (number 2) error               |
| F103       | EPROM (number 1) error               |
| F104       | Timer cycle error                    |
| F105       | Keyboard controller error            |
| F106       | Device bus error                     |
| F500       | Configuration error                  |
|            | An incorrect combination of timing   |
|            | and output boards has been installed |
|            | in the instrument.                   |

## Table 6-7-1. Power-On Self-Test Errors

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#### Minor Error Messages

| Error Code | Timing Board Error Message           |
|------------|--------------------------------------|
| E200       | The adjust values on the EEPROM have |
|            | been destroyed. Correct parametric   |
|            | timing is not possible.              |

| Channel 1<br>Error Code | Channel 2<br>Error Code | Output Board Error Message              |
|-------------------------|-------------------------|-----------------------------------------|
| E300                    | E400                    | The high-level of the normal output     |
|                         |                         | (differential signal) of the hybrid     |
|                         |                         | board has failed (fast slope input).    |
| E301                    | E401                    | The low-level of the complement output  |
|                         |                         | (differential signal) of the hybrid     |
|                         |                         | board has failed (fast slope input).    |
| E302                    | E402                    | The high-level of the complement output |
|                         |                         | (differential signal) of the hybrid     |
|                         |                         | board has failed (fast slope input).    |
| E303                    | E403                    | The low-level of the normal output      |
|                         |                         | (differential signal) of the hybrid     |
|                         |                         | board has failed (fast slope input).    |
| E304                    | E404                    | The fast slope normal output of the     |
|                         |                         | SMD board has failed.                   |
| E305                    | E405                    | The fast slope complement output of the |
|                         |                         | SMD board has failed.                   |
| E306                    | E406                    | The high-level of the SMD board input   |
|                         | :                       | signal has failed.                      |
| E307                    | E407 '                  | The low-level of the SMD board input    |
|                         | ٤                       | signal has failed.                      |
| E308                    | E408 (                  | The low-level of the slow slope output  |
|                         | f                       | from the SMD board has failed.          |
| E309                    | E409                    | The high-level of the slow slope output |
|                         | f                       | rom the SMD board has failed.           |

| Channel 1<br>Error Code E | Channel 2<br>Crror Code                         | Output Board Error Message               |  |  |
|---------------------------|-------------------------------------------------|------------------------------------------|--|--|
| E310                      | E410                                            | E410 The high-level of the normal output |  |  |
|                           |                                                 | (differential signal) of the hybrid      |  |  |
|                           |                                                 | board has failed (slow slope input).     |  |  |
| E311                      | E411                                            | The low-level of the complement output   |  |  |
|                           |                                                 | (differential signal) of the hybrid      |  |  |
|                           |                                                 | board has failed (slow slope input).     |  |  |
| E312                      | E412                                            | The high-level of the complement output  |  |  |
|                           |                                                 | (differential signal) of the hybrid      |  |  |
|                           |                                                 | board has failed (slow slope input).     |  |  |
| E313                      | E413                                            | The low-level of the normal output       |  |  |
|                           |                                                 | (differential signal) of the hybrid      |  |  |
|                           |                                                 | board has failed (slow slope input).     |  |  |
| E350                      | E450                                            | The adjust value on the EEPROM have      |  |  |
|                           |                                                 | been destroyed. Correct slopes and       |  |  |
|                           |                                                 | levels are not possible.                 |  |  |
| Error Code                | Configuration Error Message                     |                                          |  |  |
| E500                      | Dual Channel Instrument                         |                                          |  |  |
|                           | Each output board contains a trigger amplifier. |                                          |  |  |
|                           | The trigger amplifier is required in channel 1  |                                          |  |  |
|                           | and is not needed in channel 2.                 |                                          |  |  |
| E501                      | Dual Channel Instrument                         |                                          |  |  |
|                           | Neither output board contains trigger amplifier |                                          |  |  |
|                           | capability.                                     |                                          |  |  |
| E502                      | Single Channel Instrument                       |                                          |  |  |
|                           | The outp                                        | ut board does not contain                |  |  |
|                           | trigger an                                      | nplifier capability.                     |  |  |
| E504                      | The Instr                                       | ument Contains a dual channel            |  |  |
|                           | timing bo                                       | ard but only one output board.           |  |  |
|                           |                                                 |                                          |  |  |

### HP 8131A Self-test

#### Structure

The self-test measures:

- the amplifier hybrid output levels (in disable mode).
- the transducer board output level
- the output board input level

The self-test program can recognize hybrid errors, transducer board errors, and input errors that cause the measured levels to exceed the allowed tolerance band. The following three pages of flow diagrams show the logical route followed by the program to derive particular error displays. These diagrams should assist in locating the cause of a fault.

#### General

Check at the sense node. Are the voltages are OK? => self test circuit.

#### Self-test Multiplexer (U108) Voltages

Table 6-7-2. U108 Voltages for First Page of Flow Diagram - NORM

| U108 signal | Voltage                  |
|-------------|--------------------------|
| ANAS1       | -                        |
| ANAS2       | -2.2 ±0.3 V              |
| ANAS3       | $+2.2 \pm 0.3 \text{ V}$ |
| ANAS4       | -                        |
| ANAS5       | 0 ±0.7 V                 |
| ANAS6       | 3 ±0.8 V                 |
| ANAS7       | 0.4 ±0.8 V               |

#### Table 6-7-3. U108 Voltages for Second Page of Flow Diagram - COMP

| U108 signal | Voltage                           |
|-------------|-----------------------------------|
| ANAS1       | $+2.2 \pm 0.3 \text{ V}$          |
| ANAS2       | -                                 |
| ANAS3       | -                                 |
| ANAS4       | -2.2 ±0.3 V                       |
| ANAS5       | 0 ±0.7 V                          |
| ANAS6       | $0.4 \text{ V} \pm 0.8 \text{ V}$ |
| ANAS7       | 3 V ±0.8 V                        |

| U108 signal | Voltage                  |
|-------------|--------------------------|
| ANAS1       | -                        |
| ANAS2       | $-2.2 \pm 0.3 \text{ V}$ |
| ANAS3       | $+2.2 \pm 0.3 V$         |
| ANAS4       | -                        |
| ANAS5       | -2.6 ±1.2 V              |
| ANAS6       | 3 V ±0.8 V               |
| ANAS7       | 0.4 ±0.8 V               |

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Table 6-7-4. U108 Voltages for Third Page of Flow Diagram - THRE = -5 V

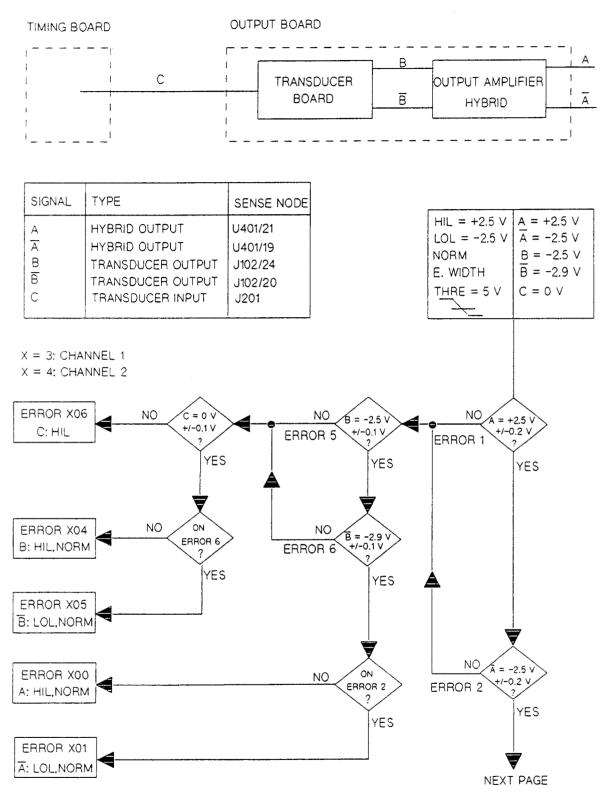


Figure 6-7-5. HP 8131A Flowchart - Part 1

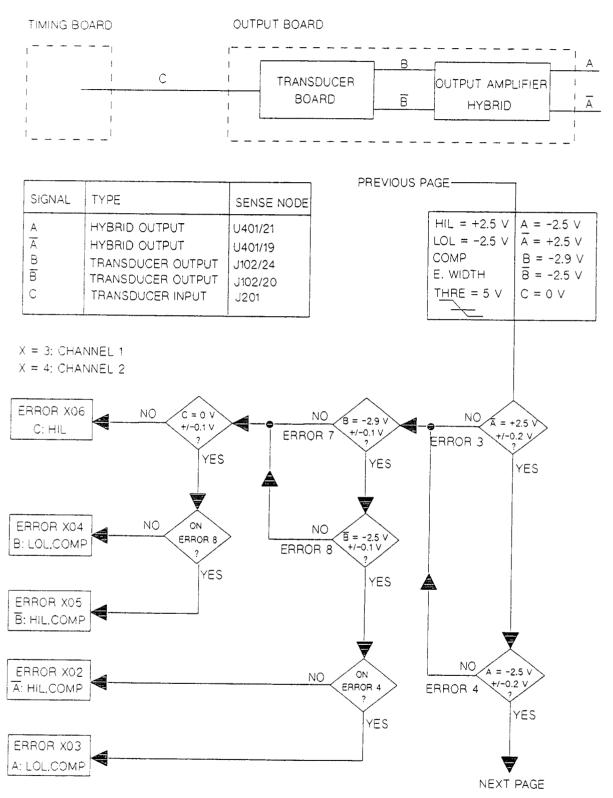


Figure 6-7-6. HP 8131A Flowchart - Part 2

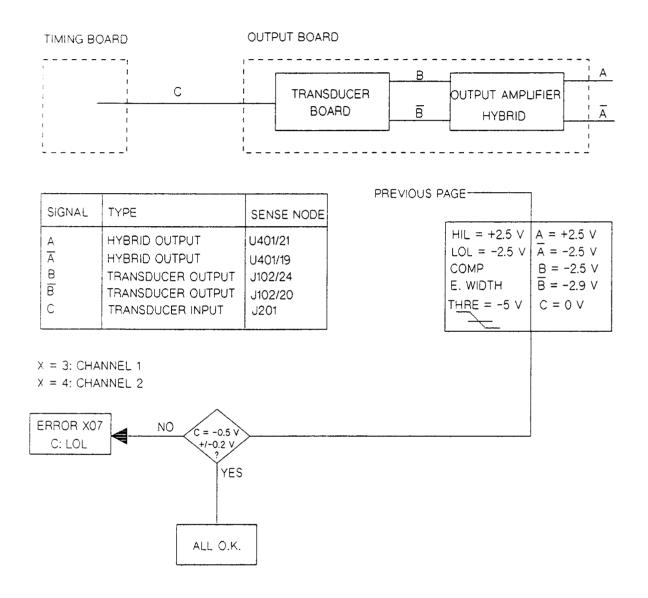


Figure 6-7-7. HP 8131A Flowchart - Part 3

### Errors

#### Errors X00 to X03

- 1. If the instrument functions correctly, but the voltages are wrong: check HIL adjustment and AMP adjustment.
- 2. Interconnecting frame failing?
- 3. Damaged pins on mother board connector?
- 4. Voltages on the hybrid pins are correct (see Table below)?
- 5. Check to see if ERROR is due to hybrid or circuit board.

| Pin | Mnemonic | Voltage           | Pin | Mnemonic      | Voltage                   |
|-----|----------|-------------------|-----|---------------|---------------------------|
| 1   | СВ       | -4.4 ±0.2 V       | 2   | INH           | $-2.5 \pm 0.1 \text{ V}$  |
| 3   | INH      | -2.3 ±0.1 V       | 4   | VGD           | $-15.2 \pm 0.2 \text{ V}$ |
| 5   | ĪNG      | -15.2 ±0.2 V      | 6   | ĪNF           | $-15.2 \pm 0.2 \text{ V}$ |
| 7   | IP       | $-15.5 \pm 0.5$ V | 8   | VAD1          | -13 ±1 V                  |
| 9   | VAD2     | -13 ±1 V          | 10  | IRP           | $-6.6 \pm 0.2$ V          |
| 11  | IRS      | -9.2 ±0.2 V       | 12  | IS            | $-13.7 \pm 0.5 V$         |
| 13  | VAD4     | -13 ±1 V          | 14  | VAD3          | -13 ±1 V                  |
| 15  | ID2      | -13.8 ±0.5 V      | 16  | ID1           | $-13.8 \pm 0.5 V$         |
| 17  | LS       | -4.5 ±0.3 V       | 18  | HS            | 0 ±0.3 V                  |
| 21  | OUT      | 0 ±0.1 V          | 22  | <del>HS</del> | $0 \pm 0.3 V$             |
| 23  | ĪS       | 0 ±0.3 V          | 24  | VD1           | -1 ±0.2 V                 |
| 25  | VDS      | $-5 \pm 0.2$ V    | 26  | VS2           | -11 ±0.4 V                |
| 27  | VS1      | -18 ±0.4 V        | 28  | INC           | $-16.4 \pm 0.2 \text{ V}$ |
| 29  | INF      | -16.4 ±0.2 V      | 30  | VGD           | $-16.4 \pm 0.2 V$         |
| 31  | CS       | -5 ±0.2 V         | 32  | VS3           | $-15 \pm 0.5 \text{ V}$   |

Table 6-7-5. Hybrid Pin Voltages

#### Errors X04 and X05

Check transducer board pins.

#### Errors X06 and X07

- 1. Check that the timing cable is correctly connected.
- 2. Check timing board.

#### 6-7-14 Troubleshooting

#### **Error Messages**

The HP 8131A carries out its self-test at power-on. During this series of tests all the front panel LEDs are lit. If an error is detected an error message is indicated on the front panel display.

The first digit (left-hand side) of the error display is a letter:

- F displayed indicates a FATAL ERROR; the HP 8131A ceases operation
- E displayed indicates a MINOR ERROR; the HP 8131A continues to function with some restrictions. These restrictions are dependent on the type of fault.

The second digit has the following significance:

- 1 indicates an error on the CPU board
- $\blacksquare$  2 indicates an error on the timing board
- **\blacksquare** 3 indicates an error on the output board 1
- 4 indicates an error on the output board 2
- **5** indicates a configuration error.

The third and forth digits provide information about the exact fault.

#### Fatal Error Messages

| lable 6    | -7-6. Power-On Self-Test Errors      |
|------------|--------------------------------------|
| Error Code | CPU Board Error Message              |
| F100       | Static RAM (number 2) error          |
| F101       | Static RAM (number 1) error          |
| F102       | EPROM (number 2) error               |
| F103       | EPROM (number 1) error               |
| F104       | Timer cycle error                    |
| F105       | Keyboard controller error            |
| F106       | Device bus error                     |
| F500       | Configuration error                  |
|            | An incorrect combination of timing   |
|            | and output boards has been installed |
|            | in the instrument.                   |

Table C.7.C. Dewen On Colf Test Errore

#### **Minor Error Messages**

Error Code Timing Board Error Message

E200 The adjust values on the EEPROM have been destroyed. Correct parametric timing is not possible.

| Channel 1<br>Error Code | Channel 2<br>Error Code | Output Board Error Message                      |
|-------------------------|-------------------------|-------------------------------------------------|
| E300                    | E400                    | OUTPUT channel: polarity error (normal path) on |
|                         |                         | the output board.                               |
| E301                    | E401                    | OUTPUT channel: polarity error (complement      |
|                         |                         | path) on the output board.                      |
| E302                    | E402                    | OUTPUT channel: polarity error                  |
|                         |                         | (complement path) on the output board.          |
| E303                    | E403                    | OUTPUT channel: polarity error                  |
|                         |                         | (normal path) on the output board.              |
| E304                    | E404                    | OUTPUT/OUTPUT channel: polarity error           |
|                         |                         | on the transducer board.                        |
| E305                    | E405                    | OUTPUT/OUTPUT channel: polarity error           |
|                         |                         | (complement path) on the transducer board.      |
| E306                    | E406                    | Polarity error at the input to the transducer   |
|                         |                         | board.                                          |
| E307                    | E407                    | Polarity error at the input to the transducer   |
|                         |                         | board.                                          |

| Error Code | Configuration Error Message             |
|------------|-----------------------------------------|
| E500       | Dual Channel Instrument                 |
|            | Each output board contains a transducer |
|            | The transducer is required in channel 1 |
|            | and is not needed in channel 2.         |
| E501       | Dual Channel Instrument                 |
|            | Neither output board has a transducer   |
|            | board.                                  |
| E502       | Single Channel Instrument               |
|            | The output board does not have a        |
|            | transducer board.                       |
| E504       | The Instrument Contains a dual channel  |
|            | timing board but only one output board. |

# HP 8130A Parts Lists

### Introduction

The parts lists are divided into two groups:

- 1. A parts list for the standard instrument, followed by a parts lists for each of the electrical assemblies within it.
- 2. A parts list for the two-channel instrument (Option 020) listing the additional/alternative parts fitted, followed by a parts list for each of the additional/alternative electrical assemblies.

The parts in each list are listed by reference designator.

## **Reference Designators**

Reference designators are alphanumeric names for parts. Examples are given below.

- 1. A1 = electrical assembly number 1
- 2. MP1 = mechanical part number 1
- 3. A5R9 = resistor 9 on assembly 5

## **Parts Information**

The following information is provided for each part in the parts list table:

- 1. Reference Designator
- 2. HP Part Number
- 3. CD = Check Digit
- 4. Description
- 5. Manufacturer's reference number. Table B-1 lists the manufacturers' names against their reference numbers.
- 6. Manufacturer's part number

# **Ordering Information**

Parts are ordered from the nearest Hewlett-Packard Sales and Support Office.

- A Sales and Support Office Directory is provided in Appendix A of this manual.
- 1. Provide the following information when ordering parts listed in the parts table.
  - a. Reference Designator
  - b. Hewlett-Packard part number
  - c. Check Digit
  - d. Quantity required.
- 2. Provide the following information when ordering parts not listed in the parts table.

í.

- a. Instrument model number
- b. Instrument serial number
- c. A physical description of the part
- d. A functional description of the part
- e. Quantity required.

| Reference | Name                             | Reference | Name                          |
|-----------|----------------------------------|-----------|-------------------------------|
| 00039     | NEC ELECTRONICS INC              | 03285     | ANALOG DEVICES INC            |
| 00046     | UNITRODE CORP                    | 03394     | METHODE ELECTRONICS INC       |
| 00075     | ARIZONA COIL INC                 | 03406     | NATIONAL SEMICONDUCTOR CORP   |
| 00359     | O'HARA METAL PRODUCTS CO         | 03418     | MOLEX INC                     |
| 00493     | UNITED CHEMI-CON INC             |           |                               |
|           |                                  | 03647     | INSTRUMENT SPECIALTIES CO INC |
| 00746     | ROHM CORP                        | 03744     | BOURNS INC                    |
| 01074     | HOLSWORTHY ELECTRONICS LTD       | 03799     | HARRIS CORP                   |
| 01125     | LEWIS SCREW CO                   | 03811     | INTEL CORP                    |
| 01339     | GETTIG ENGRG & MFG CO INC        | 03981     | PENN ENGINEERING & MFG CORP   |
| 01380     | AMP INC                          |           |                               |
|           |                                  | 04129     | ARIES ELECTRONICS INC         |
| 01417     | NEL FREQUENCY CONTROLS INC       | 04147     | FLUOROCARBON CO THE           |
| 01486     | MABI CO THE                      | 04200     | SPRAGUE ELECTRIC CO           |
| 01542     | HP DIV 01 SAN JOSE COMPONENTS    | 04225     | THOMAS & BETTS CORP           |
| 01607     | ALLEN-BRADLEY CO INC             | 04486     | ITT CORP                      |
| 01698     | TEXAS INSTRUMENTS INC            |           |                               |
|           |                                  | 04703     | LITTELFUSE INC                |
| 01850     | AROMAT CORP                      | 04726     | 3M CO                         |
| 02010     | AVX CORP                         | 04880     | ZIERICK MFG CO                |
| 02037     | MOTOROLA INC                     | 04939     | SCHNITZER ALLOY PRODUCTS CO   |
| 02062     | HP DIV 05 MSD                    | 05098     | VICTORY ENGINEERING CORP      |
| 02121     | LYN-TRON INC                     |           |                               |
|           |                                  | 05447     | BERGQUIST CO                  |
| 02170     | AMATOM ELEK HARDWARE DIV OF MITE | 05524     | DALE ELECTRONICS INC          |
| 02414     | BURNDY CORP                      | 05610     | CAMCAR SCREW & MFG CO         |
| 02419     | CELLOTAPE INC                    | 05769     | ITT SEALECTRO CORP            |
| 2483      | CTS CORP                         | 05879     | AMPHENOL CORPORATION          |
| 2499      | IRC INC                          |           |                               |
|           |                                  | 05947     | ASSMANN F W UND SOEHNE        |
| 2531      | CHICAGO RIVET & MACHINE CO       | 06113     | HIPP ESSLINGEN                |
| 2608      | THERMALLOY INC                   | 06118     | ROEDERSTEIN/RESISTA GMBH      |
| 2805      | COOPER INDUSTRIES INC            | 06121     | SIEMENS AG                    |
| 2883      | SILICONIX INC                    | 06137     | HANS KOLB WELLPAPPENWERKE     |
| 2910      | SIGNETICS CORP                   |           |                               |
|           |                                  | 06313     | WOELCO                        |
|           | DUPONT E I DE NEMOURS & CO       | 06352     | TDK CORPORATION OF AMERICA    |
|           | NORTH AMERICAN PHILIPS CORP      | 06354     | TOSHIBA CORP                  |
| 3000      | AVDEL DIV OF NEWMAN IND LTD      | 06653     | KLAR                          |
| 3038      | INTL RECTIFIER CORP              | 06665     | SAMTEC                        |
| 3232      | PRODUCT COMPONENT CORP           |           |                               |
| 3273      | GOWANDA ELECTRONICS CORP         |           |                               |

### Table B-1. HP 8130A Parts Manufacturers

| Reference | Name                          | Reference | Name                       |
|-----------|-------------------------------|-----------|----------------------------|
| 06691     | HOUSE OF METRICS LTD          | 10385     | WACKER GMBH                |
| 07029     | R BLESSING                    | 10572     | XICOR, INC                 |
| 08623     | WOLFLE & CO                   | 10803     | ADVANCED INTERCONNECT      |
| 08674     | FELLER AND NEUMAYER           | 10858     | LINEAR TECHNOLOGY CORP     |
| 08709     | PANASONIC INDUSTRIAL CO       | 11192     | HEYCO MOLDED PRODUCTS GMBH |
| 09538     | TUSONIX                       | 11808     | KITAGAWA INDUSTRIES CO LTD |
| 9809      | MATSUSHITA ELECTRIC WORKS LTD |           | HEWLETT PACKARD COMPANY    |
| 9922      | SHIN-ETSU POLYMER CO LTD      |           |                            |
| 0194      | PAP-O-PHAN                    |           |                            |
| 0358      | VOGT AG                       |           |                            |

Table B-1. HP 8130A Parts Manufacturers (continued)

# Standard Instrument Parts Lists

## Master List

| Reference | HP Part #   | CD | Qty | Description       | Manufr | Part #      |
|-----------|-------------|----|-----|-------------------|--------|-------------|
| A0 A1     | 08130-66501 | 3  | 1   | BD AY KEY STD     | 28480  | 08130-66501 |
| A0 A2     | 08131-66502 | 5  | 1   | BD AY MOTHER      | 28480  | 08131-66502 |
| A0 A3     | 08130-66503 | 5  | 1   | BD AY UPCR        | 28480  | 08130-66503 |
| A0 A4     | 08131-66504 | 7  | 1   | BD AY PWR CTL     | 28480  | 08131-66504 |
| A0 A5     | 08130-66505 | 7  | 1   | BD AY TIMING STD  | 28480  | 08130-66505 |
|           |             |    |     |                   |        |             |
| A0 A14    | 08131-66514 | 9  | 1   | BD AY PWR MAIN    | 28480  | 08131-66514 |
| A0 A26    | 08130-66526 | 2  | 1   | BD AY CHAN 1      | 28480  | 08130-66526 |
| A0 F1     | 2110-0304   | 4  | 1   | FUSE 1.5A 250V    | 02805  | MDX-1-1/2A  |
| A0 F1     | 2110-0029   | 0  | 1   | FUSE 3A 250V      | 02805  |             |
| A0 MP1    | 08130-00101 | 1  | 1   | CHASSIS MAIN      | 28480  | 08130-00101 |
| A0 MP2    | 08131-00111 | 4  | 1   | ANGLE PWR         | 28480  | 08131-00111 |
|           |             |    |     |                   |        |             |
| A0 MP3    | 08130-00202 | 3  | 1   | SUB PANEL         | 28480  | 08130-00202 |
| A0 MP4    | 08130-00203 | 4  | 1   | REAR PANEL        | 28480  | 08130-00203 |
| A0 MP5    | 08131-01212 | 8  | 1   | BRKT FAN          | 28480  | 08131-01212 |
| A0 MP6    | 08130-04101 | 9  | 1   | CVR TOP CARD CAGE | 28480  | 08130-04101 |
| A0 MP7    | 08131-04102 | 1  | 1   | CVR TOP CABINET   | 28480  | 08131-04102 |
|           |             | İ  |     |                   |        |             |
| A0 MP8    | 08131-04103 | 2  | 1   | CVR TOP INSTRUMEN | 28480  | 08131-04103 |
| A0 MP9    | 08131-04107 | 6  | 2   | BOARD-KEEPER      | 28480  | 08131-04107 |
| A0 MP10   | 08131-04501 | 4  | 1   | CARD CAGE         | 28480  | 08131-04501 |
| A0 MP11   | 08131-05402 | 6  | 1   | INSULATOR,BOTT    | 28480  | 08131-05402 |
| A0 MP13   | 08130-40204 | 9  | 1   | PANEL FRONT ST    | 28480  | 08130-40204 |
|           |             |    |     |                   |        |             |
| A0 MP14   | 08131-60110 | 9  | 1   | CAGE AY PWR       | 28480  | 08131-60110 |
| A0 MP15   | 08131-68502 |    | 1   | FAN AY            | 28480  | 08131-68502 |
| 1 1       | 08180-47401 | 2  | 1   | KEY CAP           | 28480  | 08180-47401 |
| A0 MP19   | 1460-1345   | 5  |     | TILT STAND        | 00359  |             |
| ! !       | 5001-0539   | 9  |     | SIDE TRIM         | 28480  | 5001-0539   |
| A0 MP21   | 5021-5804   | 3  | 1   | FRAME REAR 132    | 28480  | 5021-5804   |
|           |             |    |     |                   |        |             |
|           | 5021-5837   | 2  | 4   | STRUT CRNR 437    | 28480  | 5021-5837   |
|           | 5021-8403   | 4  |     | FRAME FRNT 132    | 28480  | 5021-8403   |
| 1 1       | 5040-0478   | 7  |     | SLEEVE-BLUE       | 28480  | 5040-0478   |
| 1         | 5040-9319   | 3  |     | SHAFT PWR SWITC   | 28480  | 5040-9319   |
| A0 MP26   | 5041-8801   | 8  | 4   | FOOT              | 28480  | 5041-8801   |

## Table B-2. 8130A Standard Instrument Parts List

| Reference | HP Part #   | CD | Qty | Description             | Manuf'r | Part #      |
|-----------|-------------|----|-----|-------------------------|---------|-------------|
| A0 MP27   | 5041-8802   | 9  | 1   | TRIM STRIP TOP          | 28480   | 5041-8802   |
| A0 MP28   | 5041-8819   | 8  | 1   | STP HNDL FRNT           | 28480   | 5041-8819   |
| A0 MP29   | 5041-8820   | 1  | 1   | STP HNDL REAR           | 28480   | 5041-8820   |
| A0 MP30   | 5041-8821   | 2  | 4   | FOOT REAR               | 28480   | 5041-8821   |
| A0 MP31   | 5062-3704   | 4  | 1   | STRAP HNDL 497          | 28480   | 5062-3704   |
|           |             |    |     |                         |         |             |
| A0 MP32   | 5062-3747   | 5  | 1   | CVR BOTTOM 497          | 28480   | 5062-3747   |
| A0 MP33   | 5062-3812   | 5  | 1   | COVER SIDE PERF         | 28480   | 5062-3812   |
| A0 MP34   | 5062-3837   | 4  | 1   | COVER SIDE PERF         | 28480   | 5062-3837   |
| A0 MP36   | 7120-6153   | 9  | 1   | LABEL-WARNING           | 06653   |             |
| A0 MP37   | 0363-0125   | 0  | 2   | RFI STRP-FINGERS        | 03647   | 97-555      |
|           |             |    |     |                         |         |             |
| A0 MP38   | 0363-0170   | 5  | 1   | RFI STRP-FINGERS        | 03647   | 97-520-A    |
| A0 MP39   | 8160-0392   | 1  | 1   | <b>RFI STRP-FINGERS</b> | 03647   | 97-500-SNPB |
| A0 MP100  | 08131-00602 | 8  | 1   | SHIELD                  | 28480   | 08131-00602 |
| A0 MP210  | 08131-21104 | 9  | 1   | H-SINK                  | 28480   | 08131-21104 |
| A0 MP214  | 0340-0433   | 5  | 1   | INSUL-FLG-BSHG          | 03232   |             |
|           |             |    |     |                         |         |             |
| A0 MP215  | 0340-1212   | 0  | 1   | INSULATOR               | 28480   | 0340-1212   |
| A0 S1     | 3101-2992   | 2  | 1   | SW 4A/80A 250V          | 04486   |             |
| A0 T1     | 9100-4739   | 3  | 1   | XFMR BV382149B          | 28480   | 9100-4739   |
| A0 W1     | 5180-2462   | 9  | 1   | CBL HP-IB               | 28480   | 5180-2462   |
| A0 W3     | 08130-61604 | 7  | 1   | CBL AY TRIG OUT         | 28480   | 08130-61604 |
|           |             |    |     |                         |         |             |
| A0 W5     | 08130-61605 | 8  | 1   | CBL AY EXT INP          | 28480   | 08130-61605 |
| A0 W10    | 08130-61603 | 6  | 1   | CBL AY OUTPUT           | 28480   | 08130-61603 |
| A0 W11    | 08130-61603 | 6  | 1   | CBL AY OUTPUT           | 28480   | 08130-61603 |

Table B-2. 8130A Standard Instrument Parts List (continued)

# Keyboard

| Reference | HP Part #   | CD | Qty | Description     | Manuf'r | Part #             |
|-----------|-------------|----|-----|-----------------|---------|--------------------|
| A1        | 08130-66501 | 3  | 1   | BD AY KEY STD   | 28480   | 08130-66501        |
| A1 C2     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
| A1 C3     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
| A1 C4     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
|           |             |    |     |                 |         |                    |
| A1 CP1    | 0180-2207   | 5  | 1   | CAP 100uF 10 V  | 04200   | 150D107X9010R2-DYS |
| A1 DS1    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 1       | HDSP-H101          |
| A1 DS2    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542   | HDSP-H101          |
| A1 DS3    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542   | HDSP-H101          |
|           |             |    |     |                 |         |                    |
| A1 DS4    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542   | HDSP-H101          |
| A1 DS5    | 1990-1252   | 6  | 1   | LED-LT BAR      | 01542   | HLCP-B100          |
| A1 DS6    | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS7    | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS8    | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
|           |             |    |     |                 |         |                    |
| A1 DS10   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS11   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS12   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS13   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS14   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
|           |             |    |     |                 |         |                    |
| A1 DS15   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS16   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS17   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS18   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS19   | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
|           |             |    |     |                 |         | •                  |
| A1 DS21   | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS22   | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS24   | 1990-1278   | 6  | 1   | LED-LMP         |         | HLMP-K155          |
|           | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS28   | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |

Table B-3. 8130A Standard Keyboard Parts List

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-----------|----|-----|------------------|---------|--------------------|
| A1 DS51   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS52   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS53   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS55   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS56   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
|           |           |    |     |                  |         |                    |
| A1 DS57   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS61   | 1990-1254 | 8  | 1   | LED-LMP          | 01542   | HLMP-Q150 SELECTED |
| A1 DS62   | 1990-1254 | 8  | 1   | LED-LMP          | 01542   | HLMP-Q150 SELECTED |
| A1 DS63   | 1990-1254 | 8  | 1   | LED-LMP          | 01542   | HLMP-Q150 SELECTED |
| A1 DS64   | 1990-1254 | 8  | 1   | LED-LMP          | 01542   | HLMP-Q150 SELECTED |
|           |           |    |     |                  |         |                    |
| A1 DS65   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS71   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS72   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS73   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS74   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
|           |           |    |     |                  |         |                    |
| A1 DS75   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS76   | 1990-1278 | 6  |     | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS77   | 1990-1278 | 6  | - 1 | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS81   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS82   | 1990-1278 | 6  | 1   | LED-LMP          | 01542   | HLMP-K155          |
|           |           |    | Í   |                  |         |                    |
| A1 DS83   | 1990-1278 | 6  |     | LED-LMP          | 01542   | HLMP-K155          |
| A1 DS84   | 1990-1278 | 6  |     | LED-LMP          | 01542   | HLMP-K155          |
| A1 J1     | 1252-0217 | 7  |     | CONN-POST-TP-HDR |         | 3429-5202          |
| A1 MP1    | 5041-4707 | 5  |     | QTR COBLK        |         | 5041-4707          |
| A1 MP2    | 5041-0318 | 6  | 5   | LK CAP PTY GRAY  | 28480   | 5041-0318          |
|           | -         |    |     |                  |         |                    |
|           | 5041-0309 | 5  |     | CAP KEY QUARTER  | 1       | 5041-0309          |
| 1         | 5041-0507 | 5  | 1   | QTR WGRN         | 1       | 5041-0507          |
|           | 5041-0726 | 0  |     | KEY CAP LCL      |         | 5041-0726          |
| 1         | 1200-0654 | 7  |     | SKT-IC 40-CONT   | 1       | 2-641606-1         |
| A1 MP7    | 1200-0899 | 2  | 1   | SKT-STRP 8-CONT  | 04129   | 8-0511-10          |

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Table B-3. 8130A Standard Keyboard Parts List (continued)

| Table B-3. 8130A | Standard Keyboard Parts | List (continued) |
|------------------|-------------------------|------------------|
|------------------|-------------------------|------------------|

| ·····     | Table 5-5. 6 150% Standard Reyboard Parts List (continued) |    |     |                 |         |            |  |  |  |
|-----------|------------------------------------------------------------|----|-----|-----------------|---------|------------|--|--|--|
| Reference |                                                            | CD | Qty | Description     | Manuf'r | Part #     |  |  |  |
| A1 RA1    | 1810-0325                                                  | 2  | 1   | NETWORK-RES DIP | 02483   | 761-3-R150 |  |  |  |
| A1 RA2    | 1810-0338                                                  | 7  | 1   | NETWORK-RES DIP | 02483   | 761-3-R100 |  |  |  |
| A1 RA3    | 1810-0338                                                  | 7  | 1   | NETWORK-RES DIP | 02483   | 761-3-R100 |  |  |  |
| A1 RA4    | 1810-0275                                                  | 1  | 1   | NETWORK-RES SIP | 02483   | 750-101    |  |  |  |
| A1 RA5    | 1810-0275                                                  | 1  | 1   | NETWORK-RES SIP | 02483   | 750-101    |  |  |  |
|           |                                                            |    |     |                 |         |            |  |  |  |
| A1 S1     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S2     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S3     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S4     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S5     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
|           |                                                            |    |     |                 |         |            |  |  |  |
| A1 S6     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S7     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S8     | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S20    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S21    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
|           |                                                            |    |     |                 |         |            |  |  |  |
| A1 S22    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S23    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S24    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S25    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S26    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
|           |                                                            |    |     |                 |         | ĺ          |  |  |  |
| A1 S27    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S28    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S29    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S41    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S42    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
|           |                                                            |    |     |                 |         |            |  |  |  |
| A1 S43    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S44    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S45    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S46    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |
| A1 S47    | 5060-9436                                                  | 7  | 1   | SW-PB SPST NO   | 04486   | 5560-9436  |  |  |  |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-----------|----|-----|------------------|---------|-------------|
| A1 S48    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 S51    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 S52    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 S53    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 S54    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 U1     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
| A1 U2     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
| A1 U3     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
| A1 U4     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U5     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U6     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U7     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U8     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U9     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |

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Table B-3. 8130A Standard Keyboard Parts List (continued)

## Motherboard

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #                 |
|-----------|-------------|----|-----|------------------|---------|------------------------|
| A2        | 08131-66502 | 5  | 1   | BD AY MOTHER     | 28480   | 08131-66502            |
| A2 J1     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J2     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J3     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J4     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
|           |             |    |     |                  |         |                        |
| A2 J5     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J6     | 1252-0027   | 7  | 1   | CONN-POST-TP-SKT | 05879   | 706-C143-CO96F-23A-204 |
| A2 MP11   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 MP12   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
|           |             |    |     |                  |         |                        |
| A2 MP13   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 MP14   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 U1     | 1826-0760   | 2  | 1   | IC 335           | 03406   | LM335AZ                |
| A2 W1     | 08131-61601 | 5  | 1   | CBL CONN KEY     | 28480   | 08131-61601            |

Table B-4. 8130A Motherboard Parts List

# Microprocessor Board

| Reference          | HP Part #              | CD     | Qty | Description                           | Manufr         | Part #           |
|--------------------|------------------------|--------|-----|---------------------------------------|----------------|------------------|
| A3                 | 08130-66503            | 5      | 1   | BD AY-UPCR                            | 28480          | 08130-66503      |
|                    |                        |        |     |                                       |                |                  |
| A3 BT100           | 1420-0273              | 2      | 1   | BAT 3V                                | 08709          | BR-2/3AT2P       |
|                    |                        |        |     |                                       |                |                  |
| A3 C3              | 0160-5746              | 1      | 1   | CAP 0.1uF 50 V                        | 06121          | B37987-T5104-M11 |
| A3 C4              | 0160-5746              | 1      | 1   | CAP 0.1uF 50 V                        | 06121          | B37987-T5104-M11 |
| A3 C100            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C101            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
|                    |                        |        |     |                                       |                |                  |
| A3 C102            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        |                | SA115C104MAAH    |
| A3 C103            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C104            | 0160-6623              | 5      | 1   |                                       | 02010          | SA115C104MAAH    |
| A3 C105            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C106            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C107            | 0100 0000              | _      |     |                                       |                |                  |
| A3 C107<br>A3 C202 | 0160-6623<br>0160-6623 | 5<br>5 | 1   | 1                                     | 02010          | SA115C104MAAH    |
| A3 C202            | 0160-6623              | э<br>5 | 1   |                                       | 02010          | SA115C104MAAH    |
| A3 C203            | 0160-6623              | 5      | 1   | i i i i i i i i i i i i i i i i i i i | 02010          | SA115C104MAAH    |
| A3 C205            | 0160-6623              | 5      | 1   |                                       | 02010<br>02010 | SA115C104MAAH    |
|                    | 0100-0020              |        |     | CAP 0.10F 50 V                        | 02010          | SA115C104MAAH    |
| A3 C301            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C302            | 0160-6623              | 5      | - 1 |                                       | 02010          | SA115C104MAAH    |
| A3 C303            | 0160-6623              | 5      |     |                                       |                | SA115C104MAAH    |
| A3 C304            | 0160-6623              | 5      |     |                                       |                | SA115C104MAAH    |
| A3 C400            | 0160-6623              | 5      | 1   |                                       |                | SA115C104MAAH    |
|                    |                        |        |     |                                       |                | SHIISCIOHMAAII   |
| A3 C401            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V                        | 02010          | SA115C104MAAH    |
| A3 C402            | 0160-6623              | 5      | 1   |                                       |                | SA115C104MAAH    |
| A3 C404            | 0160-6623              | 5      |     |                                       |                | SA115C104MAAH    |
| A3 C406            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V (                      |                | SA115C104MAAH    |
| A3 C408            | 0160-6623              | 5      | 1   | CAP 0.1uF 50 V (                      |                | SA115C104MAAH    |

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Table B-5. 8130A Microprocessorboard Parts List

| Table B-5. 8130A Microprocessorboard Parts List (    | continued) |
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| Table 2 of o rook mild oprocessor board Parts List ( | conunueu)  |

|                    | e HP Part #            | CD | Qty | Description      | Manuf'r | Part #               |
|--------------------|------------------------|----|-----|------------------|---------|----------------------|
| A3 C409            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C410            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C500            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C501            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C504            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
|                    |                        |    |     |                  |         |                      |
| A3 C505            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C506            | 0160-6623              | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 CP1             | 0180-2207              | 5  | 1   | CAP 100uF 10 V   | 04200   | 150D107X9010R2-DYS   |
| A3 CP2             | 0180-2207              | 5  | 1   | CAP 100uF 10 V   | 04200   | 150D107X9010R2-DYS   |
| A3 CR200           | ) 1901-0535            | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
|                    |                        |    |     |                  |         |                      |
|                    | ) 1901-0535            | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511             |
| A3 CR401           |                        | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| A3 DS100           | 1 1                    | 5  | 1   | LED-LMP          | 01542   | HLMP-1503            |
| A3 J1              | 1251-8324              | 1  | 1   | CONN-POST-TP-HDR |         | G06M96P4BEBL-004-715 |
| A3 J2              | 1252-1979              | 0  | 1   | CONN-POST-TP-HDR | 04726   | 3627-5202            |
| 1.0 T 100          |                        | _  |     |                  |         |                      |
| A3 J400            | 1251-4682              | 6  | 1   | CONN-POST-TP-HDR | 4       | 1102-1-103-02        |
| A3 J501            | 1251-7745              | 8  | 1   | CONN-POST-TP-HDR | 1       | 22-12-2024           |
| A3 L1              | 9100-3139              | 5  | 1   | L 75UH +-15%     | 00075   |                      |
| A3 MP5             | 1200-0654              | 7  | 1   | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
| A3 MP6             | 1200-0654              | 7  | 1   | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
| 12 107             | 1000.005.              | _  |     |                  |         |                      |
| A3 MP7<br>A3 MP8   | 1200-0654              | 7  |     | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
| A3 MP8<br>A3 MP9   | 1200-0567              | 1  |     | SKT-IC 28-CONT   | 01380   | 2-641605-1           |
| A3 MP9<br>A3 MP10  | 1200-0567              | 1  |     | SKT-IC 28-CONT   | 01380   | 2-641605-1           |
| A3 MP10<br>A3 Q100 | 1400-0824              | 7  |     | STRAP-CABLE      |         | TY-23M               |
| A3 Q100            | 1854-0583              | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18              |
| A3 Q200            | 1852 0901              |    |     | VOTE DUE OVOCOT  |         |                      |
| A3 Q200<br>A3 R100 | 1853-0281<br>0757-0449 | 9  |     | XSTR PNP 2N2907A |         | 2N2907A              |
| A3 R100<br>A3 R101 |                        | 6  |     | RES 20K 1% .125W |         | CRB14 OR CRB25       |
| A3 R101<br>A3 R102 | 0698-3161              | 9  |     | RES 38.3K 1% .12 |         | CRB14 OR CRB25       |
|                    | 0757-0407              | 6  |     | RES 200 1% .125W | 1       | CRB14 OR CRB25       |
| A3 R200            | 0698-3156              | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25       |

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #               |
|-----------|-------------|----|-----|------------------|---------|----------------------|
| A3 R201   | 0757-0419   | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25       |
| A3 R202   | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25       |
| A3 R203   | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1             |
| A3 R204   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25       |
| A3 R206   | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1             |
|           |             |    |     |                  |         |                      |
| A3 R400   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25       |
| A3 R401   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25       |
| A3 R500   | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1             |
| A3 RA100  | 1810-0243   | 3  | 1   | NETWORK-RES DIP  | 02483   | 761- <b>3-</b> R6.8K |
| A3 RA101  | 1810-0503   | 8  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R3.3K          |
|           |             |    |     |                  |         |                      |
| A3 RA200  | 1810-0316   | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K           |
|           | 1810-0316   | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K           |
| A3 RA300  | 1810-0316   | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K           |
| A3 RA301  | 1810-0316   | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K           |
| A3 RA400  | 1810-0470   | 8  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R2.2K          |
|           |             |    |     |                  |         |                      |
| A3 RA401  | 1810-0316   | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K           |
| A3 U100   | 1820-3456   | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N          |
| A3 U101   | 1820-2698   | 7  | 1   | IC-74F240PC      | 02910   | 74F240N              |
| A3 U102   | 1820-2150   | 6  | 1   | IC-8279-5        | 03811   | D8279-5              |
| A3 U103   | 1820-2861   | 6  | 1   | IC-74F138PC      | 01698   | SN74F138N            |
|           |             | Ì  |     |                  |         |                      |
| A3 U104   | 1820-2701   | 3  | 1   | IC-74F374PC      | 01698   | SN74F374N            |
| A3 U105   | 1820-2795   | 5  | 1   | IC-74F244PC      | 01698   | SN74F244N            |
| A3 U106   | 1820-3294   | 1  | 1   | IC-SN74ALS374N   | 01698   | SN74ALS374N          |
| A3 U107   | 1820-3294   | 1  | 1   | IC-SN74ALS374N   | 01698   | SN74ALS374N          |
| A3 U202   | 1818-3760   | 1  | 1   | IC TC5564APL-15  | 06354   | TC5564APL-15         |
|           |             |    |     |                  |         |                      |
|           | 1818-3760   | 1  | 1   | IC TC5564APL-15  | 06354   | TC5564APL-15         |
|           | 08130-13701 | 4  | 1   | EPROM 1          | 28480   | 08130-13701          |
|           | 08130-13702 | 5  | 1   | EPROM 2          | 28480   | 08130-13702          |
|           | 1858-0053   | 3  | 1   | XSTR ARY 14P-DIP | 02037   |                      |
| A3 U207   | 1820-2506   | 6  | 1   | IC-74F04PC       | 01698   | SN74F04N             |

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Table B-5. 8130A Microprocessorboard Parts List (continued)

# Table B-5. 8130A Microprocessorboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description    | Manufr | Part #       |
|-----------|-----------|----|-----|----------------|--------|--------------|
| A3 U208   | 1820-2656 | 7  | 1   | IC-SN74ALS00AN | 01698  | SN74ALS00AN  |
| A3 U300   | 1820-3629 | 6  | 1   | IC-MM74HCT04N  | 03406  | MM74HCT04N   |
| A3 U301   | 1820-3173 | 5  | 1   | IC-MM74HC112N  | 02037  | MC74HC112N   |
| A3 U302   | 1820-2775 | 1  | 1   | IC-SN74ALS10AN | 01698  | SN74ALS10AN  |
| A3 U303   | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698  | SN74HCT138N  |
|           |           |    |     |                |        |              |
| A3 U304   | 1820-3796 | 8  | 1   | IC-MM74HCT139N | 02910  | 74HCT139N    |
| A3 U305   | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698  | SN74HCT138N  |
| A3 U306   | 1820-5111 | 5  | 1   | IC-74HCT21N    | 02910  | 74HCT21N     |
| A3 U400   | 1820-3183 | 7  | 1   | IC-MC74HC03N   | 02037  | MC74HC03N    |
| A3 U401   | 1820-3848 | 1  | 1   | IC-MM74HCT374N | 01698  | SN74HCT374N  |
|           |           |    |     |                |        |              |
| A3 U402   | 1820-4086 | 1  | 1   | IC-74HCT273N   | 02910  | 74HCT273N    |
| A3 U403   | 1820-3505 | 7  | 1   | IC-SN74ALS191N | 01698  | SN74ALS191N  |
| A3 U404   | 1820-4086 | 1  | 1   | IC-74HCT273N   | 02910  | 74HCT273N    |
| A3 U405   | 1820-2690 | 9  | 1   | IC-74F32PC     | 01698  | SN74F32N     |
| A3 U406   | 1820-3665 | 0  | 1   | IC-MM74HCT245N | 01698  | SN74HCT245N  |
|           |           | 1  |     |                |        |              |
| A3 U407   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799  | CD74HCT174E  |
| A3 U408   | 1820-2854 | 7  | 1   | IC-68B09ES     | 02037  | MC68B09ES    |
| A3 U409   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799  | CD74HCT174E  |
| A3 U410   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799  | CD74HCT174E  |
| A3 U500   | 1820-3348 | 6  | 1   | IC-74F163APC   | 02910  | 74F163AN     |
|           |           |    |     |                |        |              |
| A3 U501   | 1820-2694 | 3  | 1   | IC-74F112PC    | 01698  | SN74F112N    |
| A3 U502   | 1820-2686 | 3  | 1   | IC-74F08PC     | 01698  | SN74F08      |
| A3 U503   | 1820-3664 | 9  |     | IC-MM74HCT00N  | 02910  | 74HCT00N     |
| A3 U504   | 1820-2548 | 6  |     | IC-9914        | 01698  |              |
| A3 U505   | 1820-3431 | 8  | 1   | IC-INTERFACE   | 03406  | DS75160AN    |
|           |           |    |     |                |        |              |
| A3 U506   | 1820-3518 | 2  |     |                |        | DS75162AN    |
| A3 W1     | 1258-0141 | 8  |     |                | 1      | 530153-2     |
| A3 Y500   | 1813-0285 | 9  | 1   | CLK-OSC-XTAL   | 01417  | HS-100-20MHZ |

#### **Power Control Board**

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-------------|----|-----|------------------|---------|--------------------|
| A4        | 08131-66504 | 7  | 1   | BD AY PWR CTL    | 28480   | 08131-66504        |
| A4 C2     | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C5     | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
|           |             |    |     |                  |         |                    |
| A4 C6     | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C8     | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C10    | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C12    | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C14    | 0160-4822   | 2  | 1   | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
|           |             |    |     |                  |         |                    |
| A4 CP1    | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP4    | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP7    | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP9    | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP11   | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
|           |             |    |     |                  |         |                    |
| A4 CP13   | 0180-4129   | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP15   | 0180-0116   | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A4 CP16   | 0180-4129   | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A4 CP17   | 0180-2690   | 0  | 1   | CAP 3.3uF 15 V   | 04200   | 150D335X9015A2     |
| A4 CP18   | 0180-2690   | 0  | 1   | CAP 3.3uF 15 V   | 04200   | 150D335X9015A2     |
|           |             |    |     |                  |         |                    |
| A4 CR1    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR2    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR3    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR4    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR5    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| 11000     | 1001 1000   |    | ,   |                  | 00740   |                    |
| A4 CR6    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR7    | 1901-1098   | 1  |     | DIO-1N4150       | 00746   |                    |
| A4 CR8    | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A4 CR9    | 1901-1098   | 1  |     | DIO-1N4150       | 00746   |                    |
| A4 CR10   | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                    |

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Table B-6. 8130A Power Control Board Parts List

| Table B-6. 8130A Power | Control Board | Parts List | (continued) |
|------------------------|---------------|------------|-------------|
|------------------------|---------------|------------|-------------|

| Table B-6. 8130A Power Control Board Parts List (continued) |            |           |    |     |                  |         |            |  |  |
|-------------------------------------------------------------|------------|-----------|----|-----|------------------|---------|------------|--|--|
| Ref                                                         | erence     | HP Part # | CD | Qty | Description      | Manuf'r | Part #     |  |  |
| A4 (                                                        | CR11       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR12       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR13       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR14       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR15       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR16       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR17       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR18       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR19       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 (                                                        | CR20       | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |            |  |  |
| A4 J                                                        | 12         | 1252-1506 | 9  | 1   | CONN-POST-TP-SKT | 01380   | 1-166592-0 |  |  |
| A4 J                                                        | 3          | 1252-1506 | 9  | 1   | CONN-POST-TP-SKT | 01380   | 1-166592-0 |  |  |
| A4 🤇                                                        | Q1         | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037   | 2N5088     |  |  |
| A4 🤇                                                        | Q2         | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18    |  |  |
| A4 (                                                        | <b>Q</b> 4 | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18    |  |  |
| A4 G                                                        | Q5         | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18    |  |  |
| A4 G                                                        | Q6         | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18    |  |  |
| A4 G                                                        | 27         | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037   |            |  |  |
| A4 G                                                        | 28         | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037   |            |  |  |
| A4 G                                                        | -          | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        | 010        | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        | · .        | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        |            | 1853-0569 | 6  |     | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        | - 1        | 1853-0569 | 6  |     | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        |            | 1853-0569 | 6  |     | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        | 15         | 1854-0637 | 1  | 1   | XSTR NPN 2N2219A | 02037   | 2N2219A    |  |  |
| A4 Q                                                        |            | 1854-0583 | 6  |     | XSTR NPN SI      |         | MPS-A18    |  |  |
| A4 Q                                                        |            | 1853-0569 | 6  |     | XSTR PNP SI      | 02037   | JAL D-ALO  |  |  |
| A4 Q                                                        | 1          | 1853-0569 | 6  |     | XSTR PNP SI      | 02037   |            |  |  |
| A4 Q                                                        |            | 1853-0569 | 6  | i   | XSTR PNP SI      | 02037   |            |  |  |

Table B-6. 8130A Power Control Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A4 R1     | 0757-0278 | 9  | 1   | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R2     | 0698-3160 | 8  | 1   | RES 31.6K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R3     | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R4     | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R5     | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R6     | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R7     | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A4 R8     | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R9     | 0698-6620 | 1  | 1   | RES 150K .1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R10    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R11    | 0698-4483 | 0  | 1   | RES 18.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R12    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R13    | 0757-0444 | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R14    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R15    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R16    | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R17    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R18    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R19    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R20    | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R21    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R22    | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R23    | 0699-0844 | 1  | 1   | RES 51.1K .1% .1 | 00746   | CRB14 OR CRB25 |
| A4 R24    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R25    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  | 1       |                |
| A4 R26    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R27    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R28 (  | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 |         | CRB14 OR CRB25 |
|           | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R30 (  | 0698-4435 | 2  | 1   | RES 2.49K 1% .12 | 00746   | CRB14 OR CRB25 |

 Table B-6. 8130A Power Control Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A4 R31    | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R32    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R33    | 0699-0721 | 3  | 1   | RES 33K .1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R34    | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A4 R35    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R36    | 0757-0444 | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R37    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R38    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R39    | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R40    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A 4 D 41  | 0757 0499 | F  | 1   | RES 909 1% .125W | 00746   | CDD14 OD CDD05 |
| A4 R41    | 0757-0422 | 5  | 1   |                  | 00746   | CRB14 OR CRB25 |
| A4 R42    | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R43    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R44    | 0699-0844 | 1  | 1   | RES 51.1K .1% .1 | 00746   | CRB14 OR CRB25 |
| A4 R45    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R46    | 0698-3160 | 8  | 1   | RES 31.6K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R47    | 0757-0421 | 4  | 1   | RES 825 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R48    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R49    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A4 R50    | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R51    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R52    | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R53    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |
| A4 R54    | 0698-6620 | 1  | 1   | RES 150K .1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R55    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A4 R56    | 0698-3161 | 9  | 1   | RES 38.3K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R57    | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R58    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R59    | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A4 R60    | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |

| Reference | HP Part # | CD | Qty | Description           | Manuf'r | Part #                           |
|-----------|-----------|----|-----|-----------------------|---------|----------------------------------|
| A4 R61    | 0757-0472 | 5  | 1   | RES 200K 1% .125      | 00746   | CRB14 OR CRB25                   |
| A4 R62    | 0757-0280 | 3  | 1   | RES 1K 1% .125W       | 00746   | CRB14 OR CRB25                   |
| A4 R63    | 0698-6353 | 7  | 1   | RES 50K .1% .125      | 00746   | CRB14 OR CRB25                   |
| A4 R64    | 0698-6376 | 4  | 1   | RES 200K .1% .12      | 00746   | CRB14 OR CRB25                   |
| A4 R65    | 0757-0416 | 7  | 1   | RES 511 1% .125W      | 00746   | CRB14 OR CRB25                   |
| A4 R66    | 0757-0280 | 3  | 1   | RES 1K 1% .125W       | 00746   | CRB14 OR CRB25                   |
| A4 R67    | 0698-6360 | 6  | 1   | RES 10K .1% .125      | 00746   | CRB14 OR CRB25<br>CRB14 OR CRB25 |
| A4 R68    | 0698-6360 | 6  | 1   | RES 10K .1% .125      | 00740   | CRB14 OR CRB25                   |
| A4 R69    | 0698-6360 | 6  | 1   | RES 10K .1% .125      | 00746   | CRB14 OR CRB25                   |
| A4 R70    | 0698-6360 | 6  | 1   | RES 10K .1% .125      | 00740   | CRB14 OR CRB25                   |
| ATTICIO   | 0030-0300 | Ů  | L.  | RES 10K .170 .125     | 00740   | UNDIA UN UND23                   |
| A4 R71    | 0698-6360 | 6  | 1   | RES 10K .1% .125      | 00746   | CRB14 OR CRB25                   |
| A4 R72    | 0757-0280 | 3  | 1   | RES 1K 1% .125W       | 00746   | CRB14 OR CRB25                   |
| A4 R73    | 0757-0394 | 0  | 1   | RES 51.1 1% .125      | 00746   | CRB14 OR CRB25                   |
| A4 TP1    | 0360-2264 | 6  | 1   | TERMTEST POINT        | 10358   | 1095D                            |
| A4 TP2    | 0360-2264 | 6  | 1   | TERMTEST POINT        | 10358   | 1095D                            |
|           |           | ĺ  |     |                       |         |                                  |
| A4 TP3    | 0360-2264 | 6  | 1   | TERMTEST POINT        | 10358   | 1095D                            |
| A4 TP4    | 0360-2264 | 6  | 1   | TERMTEST POINT        | 10358   | 1095D                            |
| A4 TP5    | 0360-2264 | 6  | 1   | TERMTEST POINT        | 10358   | 1095D                            |
| A4 U1     | 1826-0346 | 0  | 1   | IC 358                | 03406   | LM358N                           |
| A4 U2     | 1826-0346 | 0  | 1   | IC 358                | 03406   | LM358N                           |
| A4 U3     | 1826-0346 | 0  | 1   | IC 358                | 03406   | LM358N                           |
|           | 1826-0346 | 0  | 1   | IC 358                | 03400   | LM358N                           |
|           | 1826-0346 | 0  | 1   | IC 358<br>IC 358      | 03400   | LM358N                           |
| 1         | 1826-0346 | 0  |     | IC 358<br>IC 358      | 03406   | LM358N                           |
| } 1       | 1826-0718 | 0  |     | IC 358<br>IC MC1404U5 |         |                                  |
|           | 1020-0710 | ×  |     | 10 MO140409           | 02037   | MC1404U5                         |
| A4 U8     | 1826-0161 | 7  | 1   | IC 324                | 02037   | LM324N                           |
| A4 VR1    | 1902-0964 | 0  | 1   | DIO-ZNR 18V 5%        | 02037   |                                  |
| A4 VR2    | 1902-0955 | 9  | 1   | DIO-ZNR 7.5V 5%       | 02037   |                                  |

# Timing Board

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-------------|----|-----|------------------|---------|-------------------|
| A5        | 08130-66505 | 7  | 1   | BD AY TIMING STD | 28480   | 08130-66505       |
| A5 C101   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C103   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C105   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C107   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
|           |             |    |     |                  |         |                   |
| A5 C109   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C110   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C111   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C112   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C113   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |             |    |     |                  |         |                   |
| A5 C117   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C121   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C122   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C126   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C127   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |             | 1  |     |                  |         |                   |
| A5 C131   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C140   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C141   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C142   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C181   | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|           |             |    |     |                  |         |                   |
| 1         | 0160-6623   | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| 1         | 0160-6623   | 5  | 1   |                  | 02010   | SA115C104MAAH     |
| 1 1       | 0160-6623   | 5  |     |                  | 02010   | SA115C104MAAH     |
| 1 1       | 0160-6500   | 7  |     | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C206   | 0160-6500   | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |

Table B-7. 8130A Standard Timing Board Parts List

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A5 C207   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C208   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C209   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C210   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C220   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|           |           |    |     |                  |         |                   |
| A5 C221   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C222   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C223   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C224   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C300   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|           |           |    |     |                  |         |                   |
| A5 C301   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C303   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |
| A5 C304   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C305   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C306   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A5 C307   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C308   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C309   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C310   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C311   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A5 C312   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C313   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C314   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C315   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C317   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A5 C318   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C320   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C321   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C322   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C324   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |

Table B-7. 8130A Standard Timing Board Parts List (continued)

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A5 C325   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C327   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C328   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C330   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C331   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A5 C333   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C335   | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| A5 C336   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C340   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C341   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A5 C342   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C343   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C350   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C360   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C363   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A5 C399   | 0160-5741 | 6  | 1   | CAP 47pF 100 V   | 06121   | B37979-J1470-J034 |
| A5 C400   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C401   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C403   | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| A5 C404   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A5 C405   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C406   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C411   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C412   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C413   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|           |           |    |     |                  |         |                   |
| A5 C414   | 0160-6623 | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C415   | 0160-6623 | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C417   | 0160-6623 | 5  |     |                  | 02010   | SA115C104MAAH     |
| A5 C418   | 0160-6623 | 5  | 1   |                  | 02010   | SA115C104MAAH     |
| A5 C420   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A5 C421   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C422   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C424   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C425   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C427   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|           |           |    |     |                  |         |                   |
| A5 C428   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C430   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C431   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C433   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C435   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |
|           |           |    |     |                  |         |                   |
| A5 C436   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C440   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C441   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C442   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C443   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|           |           |    |     |                  |         |                   |
| A5 C450   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C460   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C465   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C470   | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C     |
| A5 C471   | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C     |
|           |           |    |     |                  |         |                   |
| A5 C500   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C501   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C503   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |
| A5 C504   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C505   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    | ĺ   |                  |         |                   |
| A5 C506   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C511   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C512   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C513   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C514   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |

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Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-----------|----|-----|------------------|---------|--------------------|
| A5 C515   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C517   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C518   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C520   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C521   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
|           |           |    |     |                  | 1       |                    |
| A5 C522   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C524   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C525   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11   |
| A5 C527   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C528   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
|           |           |    |     |                  |         |                    |
| A5 C530   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C531   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C533   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C535   | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH      |
| A5 C536   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
|           |           |    |     |                  |         |                    |
| A5 C540   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C541   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034  |
| A5 C542   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C543   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C550   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
|           |           |    |     |                  |         |                    |
| A5 C560   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   |         | SA115C104MAAH      |
| A5 C565   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   |         | SA115C104MAAH      |
| A5 C570   | 0160-3872 | 0  |     | CAP 2.2pF 200 V  |         | FD12C0G2D2R2C      |
| A5 C571   | 0160-3872 | 0  |     | CAP 2.2pF 200 V  | 1       | FD12C0G2D2R2C      |
| A5 CP100  | 0180-1974 | 1  | 1   | CAP 10uF 35 V    | 04200   | 150D106X9035R2-DYS |
| 45 CD100  | 0100 0000 | _  |     |                  |         |                    |
|           | 0180-0229 | 7  |     | CAP 33uF 10 V    |         | 150D336X9010B2-DYS |
| A5 CP104  | 1         | 7  |     | CAP 33uF 10 V    |         | 150D336X9010B2-DYS |
| 1         | 0180-0229 | 7  |     | CAP 33uF 10 V    |         | 150D336X9010B2-DYS |
|           | 0180-1974 | 1  |     | CAP 10uF 35 V    | 1       | 150D106X9035R2-DYS |
| A5 CP180  | 0180-0229 | 7  | 1   | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Refe         | erence | HP Part # | CD | Qty | Description       | Manuf'r | Part #               |
|--------------|--------|-----------|----|-----|-------------------|---------|----------------------|
| A5 (         | CP200  | 0180-4129 | 4  | 1   | CAP 1uF 35 V      | 04200   | 173D105X9035V        |
| A5 (         | CP201  | 0180-4129 | 4  | 1   | CAP 1uF 35 V      | 04200   | 173D105X9035V        |
| A5 (         | CR102  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM  | 02062   | 50825511             |
| A5 (         | CR103  | 1901-0734 | 0  | 1   | DIO-1N5818        | 02037   | 1N5818               |
| A5 (         | CR310  | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        |           |    |     |                   |         |                      |
| 1            |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
| A5 C         | CR315  | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        |           |    |     |                   |         |                      |
| 1            |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
| A5 C         | CR414  | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        |           |    |     |                   |         |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-0731 | 7  | 1   | DIO-PWR RECT      | 02037   | SR3010-3RL           |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
| A5 C         | CR512  | 1901-1098 | 1  | 1   | DIO-1N4150        | 00746   |                      |
| 1.50         |        |           |    |     |                   |         |                      |
| 1            |        | 1901-1098 | 1  |     | DIO-1N4150        | 00746   |                      |
|              |        | 1901-1098 | 1  |     | DIO-1N4150        | 00746   |                      |
| A5 C<br>A5 J |        | 1901-1098 | 1  |     | DIO-1N4150        | 00746   |                      |
| 1            |        | 1251-8324 | 1  | I   | CONN-POST-TP-HDR  |         | G06M96P4BEBL-004-715 |
| A5 J         | 101    | 1251-5380 | 3  | 1   | CONN-POST-TP-HDR  | 02946   | 68000-602            |
| A5 J         | 100    | 1051 5900 |    | ,   | CONN DOCT TO TO T | 000/0   |                      |
| A5 J<br>A5 J |        | 1251-5380 | 3  |     | CONN-POST-TP-HDR  |         | 68000-602            |
|              |        | 1250-0543 | 8  |     | CONN-RF SM-SNP    | 05769   | 51-053-0349-BE8      |
| A5 J4        |        | 1251-5380 | 3  | I   | CONN-POST-TP-HDR  | 02946   | 68000-602            |
| A5 K         |        | 0490-1667 | 6  |     | RLY 2C 12VDC      | 09809   | RG2T-12V             |
| A5 L         | 100    | 9100-1788 | 6  | 1   | CORE-FERRITE      | 02995   | VK200 20/4B          |

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Table B-7. 8130A Standard Timing Board Parts List (continued)

## Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-------------|----|-----|------------------|---------|-------------|
| A5 L101   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B |
| A5 L102   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B |
| A5 L103   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B |
| A5 L104   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B |
| A5 L110   | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
|           |             |    |     |                  |         |             |
| A5 L111   | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
| A5 L112   | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
| A5 L300   | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1    |
| A5 L400   | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1    |
| A5 L400   | 9100-2891   | 4  |     | L 50NH +-10%     | 03273   | 10M050K-1   |
|           |             |    |     |                  |         |             |
| A5 L500   | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
| A5 MP130  | 1400-1437   | 0  | 3   | CLAMP-CABLE      | 11808   |             |
| A5 MP134  | 1400-0082   | 9  | 2   | CLMP-CA          | 02414   | HP-2N       |
| A5 MP136  | 3050-0891   | 7  | 2   | WASHER-FL MTLC 3 | 06691   |             |
| A5 MP201  | 54100-29104 | 5  | 1   | SPRING           | 28480   | 54100-29104 |
|           |             |    |     |                  |         |             |
|           | 54100-29101 | 2  | 1   | CLAMP            | 28480   | 54100-29101 |
| A5 MP209  | 54100-21103 | 8  | 1   | SPRING           | 28480   | 54100-21103 |
| A5 MP214  | 0340-0433   | 5  | 1   | INSUL-FLG-BSHG   | 03232   |             |
| A5 MP215  | 0340-1212   | 0  | 1   | INSULATOR        | 28480   | 0340-1212   |
| A5 MP230  | 0380-1731   | 2  | 4   | SPCR-PRS-IN      | 03981   | YC3-4564    |
|           |             |    |     |                  |         |             |
|           | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610   |             |
|           | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
|           | 1200-1410   | 5  | 1   | SOCKET PGA 72PI  | 10803   | 1KS072-33TG |
|           | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
| A5 MP401  | 1200-1410   | 5  | 1   | SOCKET PGA 72PI  | 10803   | 1KS072-33TG |
|           |             |    |     |                  |         |             |
|           | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
| 1         | 1200-1410   | 5  | 1   | SOCKET PGA 72PI  | 10803   | 1KS072-33TG |
| A5 Q200   | 1853-0563   | 0  | 1   | XSTR PNP SI      | 02037   | 2N3906(SEL) |
| -         | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904      |
| A5 Q312   | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037   | 2N4352      |

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A5 Q313   | 1855-0309 | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352         |
| A5 Q314   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q315   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q316   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q317   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
|           |           |    |     |                  |        |                |
| A5 Q318   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q319   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q410   | 1854-1028 | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904         |
| A5 Q412   | 1855-0309 | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352         |
| A5 Q413   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
|           |           |    |     |                  |        |                |
| A5 Q414   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q415   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q416   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q417   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q418   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
|           |           |    |     |                  |        |                |
| A5 Q419   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q480   | 1854-0472 | 2  | 1   | XSTR NPN SI DARL |        | MPS-A14        |
| A5 Q510   | 1854-1028 | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904         |
| A5 Q512   | 1855-0309 | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352         |
| A5 Q513   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
|           |           |    |     |                  |        |                |
| A5 Q514   | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |                |
| A5 Q515   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q516   | 1853-0569 | 6  |     | XSTR PNP SI      | 02037  |                |
| A5 Q517   | 1854-0392 | 5  |     | XSTR NPN SI      | 02037  | 2N5088         |
| A5 Q518   | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088         |
|           | 1050 0500 |    |     | VOTE BUE ST      |        |                |
| A5 Q519   | 1853-0569 | 6  |     | XSTR PNP SI      | 02037  |                |
| A5 R100   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R200   | 0699-1206 | 1  |     | RES 127 1% 2W MO | 02499  | GS-3           |
| A5 R201   | 0699-1206 | 1  |     | RES 127 1% 2W MO | 02499  | GS-3           |
| A5 R202   | 0698-4855 | 0  | 1   | RES 267 1% .5W T | 01074  | H2             |

Table B-7. 8130A Standard Timing Board Parts List (continued)

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R204   | 0698-7205 | 0  | 1   | RES 51.1 1% .05W | 00746   | CRB20          |
| A5 R205   | 0757-0180 | 2  | 1   | RES 31.6 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R206   | 0698-3162 | 0  | 1   | RES 46.4K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R208   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R209   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  | [       |                |
| A5 R210   | 0698-6963 | 5  | 1   | RES 5.55K .1% .1 | 00746   | CRB14 OR CRB25 |
| A5 R211   | 0698-6963 | 5  | 1   | RES 5.55K .1% .1 | 00746   | CRB14 OR CRB25 |
| A5 R212   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R220   | 0757-0421 | 4  | 1   | RES 825 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R221   | 0698-3132 | 4  | 1   | RES 261 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R300   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R301   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R302   | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R303   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R304   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R305   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R306   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R307   | 0698-3132 | 4  | 1   | RES 261 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R309   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R310   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| 1         | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| 1 I       | 0699-1100 | 4  | 1   | RES 6.984K .1% . | 01074   | H8             |
| 1 1       | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1 1       | 0757-0449 | 6  |     | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R315   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| AS DOLO   | 0757 0000 |    |     | DDO 11/ 10/ 10/  | 007/0   |                |
| 2         | 0757-0280 | 3  |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           | 0757-0279 | 0  |     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|           | 0757-0279 | 0  |     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|           | 0757-0317 | 7  |     | RES 1.33K 1% .12 |         | CRB14 OR CRB25 |
| A5 R323   | 0698-3154 | 0  | 1   | RES 4.22K 1% .12 | 00746   | CRB14 OR CRB25 |

| Table B-7. 8130A | Standard | Timing | Board | Parts     | l ist | (continued)  |
|------------------|----------|--------|-------|-----------|-------|--------------|
|                  |          |        |       | 1 000 100 |       | (0011011000) |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R324   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R325   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R326   | 0757-0419 | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R327   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R328   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     | -<br>-           |         |                |
| A5 R329   | 0757-0419 | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R330   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R331   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R333   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R334   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R335   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R336   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R337   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R338   | 0757-0349 | 5  | 1   | RES 22.6K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R339   | 0757-0477 | 0  | 1   | RES 332K 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R340   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R341   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R342   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R343   | 0698-3158 | 4  | 1   | RES 23.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R344   | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R345   | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R346   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R347   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R348   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R350   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R351   | 0698-3460 | 1  | 1   | RES 422K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R362   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R367   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| A5 R370   | 0698-3161 | 9  | 1   | RES 38.3K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R371   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R373   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R375   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R376   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R377   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R378   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R379   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R381   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R390   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R391   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R392   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R394   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R396   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R400   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R401   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R402   | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R403   | 0698-4422 | 7  | 1   | RES 1.27K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R404   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R405   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R406   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R409   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R410   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R411   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R412   | 0699-1011 | 6  | 1   | RES 3.32K .1% .1 | 00746   | CRB14 OR CRB25 |
| A5 R413   | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R414   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R415   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R419   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R420   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R421   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R422   | 0757-0424 | 7  | 1   | RES 1.1K 1% .125 | 00746   | CRB14 OR CRB25 |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R423   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R424   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R425   | 0757-0278 | 9  | 1   | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R426   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R427   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R428   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R429   | 0757-0419 | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R430   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R431   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R433   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R434   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R435   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R436   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R437   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R438   | 0757-0465 | 6  |     | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R438*  | 0757-0463 | 4  | 1   | RES 82.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R440   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R441   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R442   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R443   | 0757-0462 | 3  | 1   | RES 75K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R444   | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R445   | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R446   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R447   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R448   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    | [   |                  |         |                |
| A5 R450   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R453   | 0757-0462 | 3  |     | RES 75K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R453*  | 0698-3243 | 8  | 1   | RES 178K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R460   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R461   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |

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Table B-7. 8130A Standard Timing Board Parts List (continued)

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R462   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R467   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| A5 R470   | 0698-3158 | 4  | 1   | RES 23.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R471   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R473   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R475   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R476   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R477   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R479   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R480   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| LE DIOI   |           |    |     |                  |         |                |
| A5 R481   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R486   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R490   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R491   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R492   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| AF DAGA   | 0757 0000 |    |     |                  |         |                |
| A5 R494   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R496   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| 1         | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| 1 1       | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R503   | 0757-0422 | 5  | 1   | RES 909 1% .125W | 00746   | CRB14 OR CRB25 |
| AF DEAL   |           |    |     |                  |         |                |
| 1 1       | 0757-0280 | 3  |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           | 0757-0394 | 0  |     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           | 0698-3438 | 3  |     | RES 147 1% .125W |         | CRB14 OR CRB25 |
|           | 0757-0394 | 0  | - 1 | RES 51.1 1% .125 |         | CRB14 OR CRB25 |
| A5 R510   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| AF DELL   |           |    |     |                  |         |                |
|           | 0698-6360 | 6  |     | RES 10K .1% .125 |         | CRB14 OR CRB25 |
|           | 0699-1011 | 6  |     | RES 3.32K .1% .1 |         | CRB14 OR CRB25 |
|           | 0698-3153 | 9  |     |                  | ,       | CRB14 OR CRB25 |
| 1         |           | 6  |     |                  |         | CRB14 OR CRB25 |
| A5 R515 ( | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |

Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R519   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R520   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R521   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R522   | 0757-0317 | 7  | 1   | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R523   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R524   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R525   | 0757-0278 | 9  | 1   | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R526   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R527   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R528   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R529   | 0757-0419 | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R530   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R531   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R533   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R534   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R535   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R536   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R537   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R538   | 0757-0978 | 6  | 1   | RES 95.3K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R539   | 0698-3260 | 9  | 1   | RES 464K 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R540   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R541   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R542   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R543   | 0757-0464 | 5  | 1   | RES 90.9K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R544   | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R545   | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R546   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R547   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R548   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R550   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |

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Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R551   | 0698-8961 | 7  | 1   | RES 909K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R560   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R567   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| A5 R570   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R571   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R573   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R575   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R576   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R577   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R579   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R580   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R581   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R590   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R591   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R592   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R594   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R596   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 RA100  | 1810-0316 | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K     |
| A5 RT393  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 RT493  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
|           |           |    |     |                  |         |                |
| A5 RT593  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 TP200  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP311  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP312  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP323  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
|           |           |    |     |                  |         |                |
| A5 TP324  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP411  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP423  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP424  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP511  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |

| Reference | HP Part # | CD | Qty | Description     | Manuf'r | Part #      |
|-----------|-----------|----|-----|-----------------|---------|-------------|
| A5 TP512  | 0360-2264 | 6  | 1   | TERMTEST POINT  | 10358   | 1095D       |
| A5 TP523  | 0360-2264 | 6  | 1   | TERMTEST POINT  | 10358   | 1095D       |
| A5 TP524  | 0360-2264 | 6  | 1   | TERMTEST POINT  | 10358   | 1095D       |
| A5 U100   | 1820-3665 | 0  | 1   | IC-MM74HCT245N  | 01698   | SN74HCT245N |
| A5 U101   | 1820-3847 | 0  | 1   | IC-MM74HCT138N  | 01698   | SN74HCT138N |
|           |           |    |     |                 |         |             |
| A5 U102   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U103   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U104   | 1820-3847 | 0  | 1   | IC-MM74HCT138N  | 01698   | SN74HCT138N |
| A5 U105   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U106   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
|           |           |    |     |                 |         |             |
| A5 U107   | 1820-3847 | 0  | 1   | IC-MM74HCT138N  | 01698   | SN74HCT138N |
| A5 U108   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U109   | 1820-3847 | 0  | 1   | IC-MM74HCT138N  | 01698   | SN74HCT138N |
| A5 U110   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U111   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
|           |           | _  |     |                 |         |             |
| A5 U112   | 1818-3164 | 9  | 1   | IC X2816BP      | 10572   | X2816BP     |
| A5 U200   | 1NB7-8008 | 1  | 1   |                 | 28480   | 1NB7-8008   |
| A5 U201   | 1826-0544 | 0  | 1   | IC-V RGLTR      | 02037   |             |
| A5 U202   | 1820-3082 | 5  | 1   | IC-MC74HC374N   | 01698   | SN74HC374N  |
| A5 U203   | 1826-0550 | 8  | 1   | D/A 8-BIT       | 02910   | DAC08EN     |
|           | j         | Í  |     |                 |         |             |
| A5 U204   | 1820-0493 | 6  | I   | IC 307          | 03406   | LM307N      |
| A5 U300   | 1DP9-0002 | 0  |     | IC T1671        | 28480   | 1DP9-0002   |
| A5 U301   | 1DP6-0001 | 3  |     | IC COUNTER 200M | 28480   | 1DP6-0001   |
| A5 U303   | 1820-4995 | 1  | 1   | IC-TC74HC592P   | 06354   | TC74HC592P  |
| A5 U304   | 1820-4995 | 1  | 1   | IC-TC74HC592P   | 06354   | TC74HC592P  |
|           |           |    |     |                 |         |             |
| 1 1       | 1820-5067 | 0  |     |                 | 03406   | 74AC74PC    |
|           | 1820-5067 | 0  |     | IC-74AC74PC     | 03406   | 74AC74PC    |
|           | 1820-3298 | 5  |     | 1               |         | MC74HC32N   |
| A5 U310   | 1826-1553 | 3  |     |                 |         | LT1014DN    |
| A5 U311   | 1826-0774 | 8  | 1   | IC LM385BZ-1.2  | 03406   | LM385BZ-1.2 |

Table B-7. 8130A Standard Timing Board Parts List (continued)

## Table B-7. 8130A Standard Timing Board Parts List (continued)

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-------------|----|-----|------------------|---------|-------------|
| A5 U312   | 1826-1341   | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U313   | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U314   | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U318   | 1826-0916   | 0  | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| A5 U400   | 1DP9-0001   | 9  | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
|           | ł           |    |     |                  |         |             |
| A5 U401   | 1DP6-0001   | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U410   | 1826-1553   | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U411   | 1826-0774   | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U412   | 1826-1341   | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U413   | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
|           |             |    |     |                  |         |             |
| A5 U414   | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U418   | 1826-0916   | 0  | 1   | ANLG SW AD7511DI |         | AD7511DIKN  |
| A5 U500   | 1DP9-0001   | 9  | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U501   | 1DP6-0001   | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U510   | 1826-1553   | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
|           |             |    |     |                  |         |             |
| A5 U511   | 1826-0774   | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U512   | 1826-1341   | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U513   | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U514   | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U518   | 1826-0916   | 0  | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| 1         |             |    |     |                  |         |             |
| A5 VR300  | 1           | 9  | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 VR400  |             | 9  | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 VR500  |             | 9  | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 W100   | 1258-0141   | 8  | 1   | JUMPER-REM       | 01380   | 530153-2    |
| A5 W300   | 08131-61650 | 4  | 1   | CBL AY PC 15CM   | 28480   | 08131-61650 |
|           |             |    |     |                  |         |             |
| A5 W301   | 08130-61655 | 8  | 1   | CBL AY TOUTIN    | 28480   | 08130-61655 |
| A5 W400   | 08131-61672 | 0  | 1   | CBL SET DELAY A  | 28480   | 08131-61672 |
| A5 W500   | 08130-61670 | 7  | 1   | CBL SET OUT 30-  | 28480   | 08130-61670 |

### Main Power Board

| Reference | HP Part #   | CD | Qty | Description    | Manuf'r | Part #               |
|-----------|-------------|----|-----|----------------|---------|----------------------|
| A14       | 08131-66514 | 9  | 1   | BD AY PWR MAIN | 28480   | 08131-66514          |
| A14C118   | 0180-3651   | 5  | 1   | CAP 100uF 50 V | 00493   | KM50VB101M           |
| A14C119   | 0180-3651   | 5  | 1   | CAP 100uF 50 V | 00493   | KM50VB101M           |
|           |             |    |     |                |         |                      |
| A14C121   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH        |
| A14C122   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH        |
| A14C123   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH        |
| A14CP101  | 0180-3411   | 5  | 1   | CAP 25 V       | 08709   | ECET 25R 153SW       |
| A14CP102  | 0180-3411   | 5  | 1   | CAP 25 V       | 08709   | ECET 25R 153SW       |
|           |             |    |     |                |         |                      |
| A14CP103  | 0180-4049   | 7  | 1   | CAP 16 V       | 00493   | KME16VNSN27000M30X50 |
| A14CP104  |             | 7  | 1   | CAP 16 V       | 00493   | KME16VNSN27000M30X50 |
| A14CP105  | 0180-4050   | 0  | 1   | CAP 10 V       | 00493   | KME10VNSN39000M30X50 |
| A14CP106  | 0180-4050   | 0  | 1   | CAP 10 V       | 00493   | KME10VNSN39000M30X50 |
| A14CP107  | 0180-4049   | 7  | 1   | CAP 16 V       | 00493   | KME16VNSN27000M30X50 |
|           |             |    |     |                |         |                      |
| A14CP108  |             | 7  | 1   | CAP 16 V       | 00493   | KME16VNSN27000M30X50 |
| A14CP109  | 0180-3411   | 5  | 1   | CAP 25 V       | 08709   | ECET 25R 153SW       |
| A14CP110  | 0180-3411   | 5  | 1   | CAP 25 V       | 08709   | ECET 25R 153SW       |
| A14CP111  | 0180-3006   | 4  | 1   | CAP 35 V       | 00493   | NM35VB10000Q         |
| A14CP112  | 0180-3006   | 4  | 1   | CAP 35 V       | 00493   | NM35VB10000Q         |
|           |             |    |     |                |         |                      |
| A14CP113  | 0180-3469   | 3  | 1   | CAP 100uF 25 V | 00493   | KMC25VB101M8X11LL    |
| A14CP114  | 0180-3469   | 3  | 1   | CAP 100uF 25 V | 00493   | KMC25VB101M8X11LL    |
| A14CP115  | 0180-3469   | 3  | 1   | CAP 100uF 25 V | 00493   | KMC25VB101M8X11LL    |
| A14CP116  | 0180-3469   | 3  | 1   | CAP 100uF 25 V | 00493   | KMC25VB101M8X11LL    |
| A14CP117  | 0180-3469   | 3  | 1   | CAP 100uF 25 V | 00493   | KMC25VB101M8X11LL    |

Table B-8. 8130A Main Power Board Parts List

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# Table B-8. 8130A Main Power Board Parts List (continued)

|    | Reference            | HP Part # | CD     | Qty | Description     | Manufr | Part #                 |
|----|----------------------|-----------|--------|-----|-----------------|--------|------------------------|
|    | A14CP120             |           | 0      | 1   | CAP 3.3uF 15 V  | 04200  | 150D335X9015A2         |
|    | A14CR101             |           | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR102             | 1         | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR103             | 1         | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR104             | 1901-1267 | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    |                      |           |        |     | 1               |        |                        |
|    | A14CR105             |           | 2      | 1   | DIO-CT-RECT 45V | 03038  | 12CTQ045               |
|    | A14CR106             |           | 2      | 1   | DIO-CT-RECT 45V | 03038  | 12CTQ045               |
|    | A14CR107             |           | 3      | 1   | DIO-PWR RECT    | 03038  | -                      |
|    | A14CR108             |           | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR109             | 1901-0935 | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    |                      |           |        |     |                 |        |                        |
|    | A14CR110             | •         | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR111             | 1901-0935 | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR112             | 1901-0935 | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR113             | 1901-0935 | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR114             | 1901-0935 | 3      | 1   | DIO-PWR RECT    | 03038  |                        |
|    | A14CR115             | 1901-1267 | 6      | ,   | DIO DIVD DDOT   |        |                        |
|    | A14CR115             | 1901-1267 | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR110<br>A14CR117 | 1901-1267 |        | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR117<br>A14CR118 | 1901-1267 | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR118<br>A14CR119 | 1901-1267 | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | AI4OAII9             | 1901-1207 | 6      | 1   | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR120             | 1001 1967 |        |     |                 |        |                        |
|    | A14CR120             | 1         | 6<br>6 |     | DIO-PWR RECT    | 03038  | 50SQ080                |
| 1  | A14CR121             |           | 6      |     | DIO-PWR RECT    | 03038  | 50SQ080                |
| I. | A14CR122             |           | 7      |     | DIO-PWR RECT    | 03038  | 50SQ080                |
|    | A14CR125             |           | 7      | _   | DIO-PWR RECT    | 02037  | SR3010-3RL             |
|    | A14011124            | 1901-0131 | '      |     | DIO-PWR RECT    | 02037  | SR3010-3RL             |
|    | A14CR125             | 1901-1098 | 1      | 1   | DIO-1N4150      | 00746  |                        |
|    | A14F102              | 2110-0713 | 9      |     |                 | 1      | R251010T1              |
| .  | A14F103              | 2110-0713 | 9      | - 1 | 1               | i i    | R251010T1              |
| J. |                      | 2110-0713 | 9      |     |                 |        | R251010T1              |
|    |                      | 2110-0713 | 9      | - 1 |                 |        | R25101011<br>R251010T1 |

| Reference | HP Part #   | CD  | Qty | Description      | Manuf'r | Part #               |
|-----------|-------------|-----|-----|------------------|---------|----------------------|
| A14F106   | 2110-0713   | 9   | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
| A14F107   | 2110-0713   | 9   | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
| A14F108   | 2110-0713   | 9   | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
| A14F109   | 2110-0713   | 9   | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
| A14J1     | 1251-8324   | 1   | 1   | CONN-POST-TP-HDR | 04486   | G06M96P4BEBL-004-715 |
|           |             |     |     |                  |         |                      |
| A14J2     | 1251-4547   | 2   | 1   | CONN-POST-TP-HDR | 01380   | 1-87227-0            |
| A14J3     | 1251-4547   | 2   | 1   | CONN-POST-TP-HDR | 01380   | 1-87227-0            |
| A14J4     | 1251-5153   | 8   | 1   | CONN-SGL CONT    | 04880   | 836                  |
| A14J5     | 1251-5153   | 8   | 1   | CONN-SGL CONT    | 04880   | 836                  |
| A14J6     | 1251-3751   | 8   | 1   | CONN-POST-TP-HDR | 03418   | 26-60-1080           |
|           |             |     |     |                  |         |                      |
| A14J7     | 1251-3751   | 8   | 1   | CONN-POST-TP-HDR | 03418   | 26-60-1080           |
| A14J8     | 1251-5383   | 6   | 1   | CONN-POST-TP-HDR | 03394   | 1102-8-102-01        |
| A14MP101  | 08131-21103 | 8   | 1   | H-SINK           | 28480   | 08131-21103          |
| A14MP102  |             | 8   | 1   | H-SINK           | 28480   | 08131-21103          |
| A14MP103  | 08131-45401 | 9   | 1   | INS 8XTO 220     | 28480   | 08131-45401          |
|           |             |     |     |                  |         |                      |
| A14MP104  | 08131-45401 | 9   | 1   | INS 8XTO 220     | 28480   | 08131-45401          |
| A14Q101   | 1855-0499   | 5   | 1   | MOSFET P-CHAN    | 03038   | IRF9531              |
| A14Q102   | 1855-0499   | 5   | 1   | MOSFET P-CHAN    | 03038   | IRF9531              |
| A14Q103   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| A14Q104   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
|           |             |     |     |                  |         |                      |
| A14Q105   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| A14Q106   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| A14Q107   | 1855-0548   | 5   | 1   | MOSFET N-CHAN    | 02037   | BUZ71A               |
| A14Q108   | 1855-0548   | 5   | 1   | MOSFET N-CHAN    | 1       | BUZ71A               |
| A14Q109   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    |         | BUZ11                |
|           |             | - 1 |     |                  |         |                      |
| A14Q110   | 1855-0645   | 3   | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| A14Q111   | 1855-0548   | 5   |     |                  |         | BUZ71A               |
| A14Q112   | 1855-0548   | 5   |     | Ĭ                |         | BUZ71A               |
| A14R101   | 0757-0442   | 9   |     | j                | 1       | CRB14 OR CRB25       |
| A14R102   | 0757-0442   | 9   |     |                  |         | CRB14 OR CRB25       |

Table B-8. 8130A Main Power Board Parts List (continued)

# Table B-8. 8130A Main Power Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A14R103   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746  | CRB14 OR CRB25 |
| A14R104   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746  | CRB14 OR CRB25 |
| A14R105   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R106   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R107   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A14R108   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R109   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R110   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R111   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R112   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A14R113   | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524  | RS-2B          |
| A14R114   | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524  | RS-2B          |
| A14R115   | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524  | RS-2B          |
| A14R116   | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524  | RS-2B          |
| A14R117   | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524  | RS-2B          |
|           |           |    |     |                  |        |                |
| A14R118   | 0811-3470 | 5  | 1   | RES .1 3% 3W PWI | 05524  | CW-2B-39       |
| A14R119   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A14R120   | 0757-0466 | 7  | 1   | RES 110K 1% .125 | 00746  | CRB14 OR CRB25 |
| A14R121   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A14R122   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A14R123   | 0698-3160 | 8  | 1   | RES 31.6K 1% .12 | 00746  | CRB14 OR CRB25 |
| A14R124   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A14R125   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746  | CRB14 OR CRB25 |
| A14R126   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746  | CRB14 OR CRB25 |
| A14R127   | 0698-0063 | 4  | 1   | RES 5.23K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A14R128   | 0698-3132 | 4  | 1   | RES 261 1% .125W | 00746  | CRB14 OR CRB25 |
| A14R129   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  |        | CRB14 OR CRB25 |
| A14TP101  | 0360-2264 | 6  | 1   | TERMTEST POINT   |        | 1095D          |
| A14TP102  | 0360-2264 | 6  | 1 1 | TERMTEST POINT   | 10358  | 1095D          |
| A14U101   | 1826-1245 | 0  | 1   | IC TL7702A       | 01698  | TL7702A        |

|   | Reference | HP Part # | CD | Qty | Description    | Manuf'r | Part #  |
|---|-----------|-----------|----|-----|----------------|---------|---------|
|   | A14U103   | 1826-0346 | 0  | 1   | IC 358         | 03406   | LM358N  |
|   | A14U104   | 1826-0393 | 7  | 1   | IC LM317T      | 01698   | LM317KC |
|   | A14VR101  | 1902-0964 | 0  | 1   | DIO-ZNR 18V 5% | 02037   |         |
|   | A14VR102  | 1902-0964 | 0  | 1   | DIO-ZNR 18V 5% | 02037   |         |
|   | A14VR103  | 1902-0959 | 3  | 1   | DIO-ZNR 11V 5% | 02037   |         |
|   |           |           |    |     |                |         |         |
| Ŀ | A14VR104  | 1902-0968 | 4  | 1   | DIO-ZNR 27V 5% | 02037   |         |

Table B-8. 8130A Main Power Board Parts List (continued)

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### Channel 1 Board

| Reference | HP Part #   | CD | Qty | Description     | Manuf'r | Part #            |
|-----------|-------------|----|-----|-----------------|---------|-------------------|
| A26       | 08130-66526 | 8  | 1   | BD AY CHAN 1    | 28480   | 08130-66526       |
|           |             |    |     |                 |         |                   |
| A26A16    | 08130-66416 | 8  | 1   | BD AY SLOPE SMD | 28480   | 08130-66416       |
| A26C2     | 0160-4535   | 4  | 1   | CAP 1uF 50 V    | 02010   | SR305C105KAAH     |
| A26C3     | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V  | 06121   | B37987-T5104-M11  |
| A26C4     | 0160-3873   | 1  | 1   | CAP 4.7pF 200 V | 06352   | FD12C0G2D4R7D     |
|           |             |    |     |                 |         |                   |
| A26C5     | 0160-3873   | 1  | 1   | CAP 4.7pF 200 V | 06352   | FD12C0G2D4R7D     |
| A26C6     | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V  | 06121   | B37987-T5104-M11  |
| A26C7     | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V  | 06121   | B37987-T5104-M11  |
| A26C8     | 0160-4535   | 4  | 1   | CAP luF 50 V    | 02010   | SR305C105KAAH     |
| A26C11    | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V  | 06121   | B37987-T5104-M11  |
|           |             |    |     |                 |         |                   |
| A26C12    | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V  | 06121   | B37987-T5104-M11  |
| A26C13    | 0160-5735   | 8  | 1   | CAP 10pF 100 V  | 06121   | B37979-J1100-J34  |
| A26C14    | 0160-5735   | 8  | 1   | CAP 10pF 100 V  | 06121   | B37979-J1100-J34  |
| A26C15    | 0160-5735   | 8  | 1   | CAP 10pF 100 V  | 06121   | B37979-J1100-J34  |
| A26C16    | 0160-4535   | 4  | 1   | CAP 1uF 50 V    | 02010   | SR305C105KAAH     |
|           |             |    |     |                 |         |                   |
| A26C17*   | 0160-3873   | 1  |     | CAP 4.7pF 200 V | 06352   | FD12C0G2D4R7D     |
| A26C18*   | 0160-3873   | 1  |     | CAP 4.7pF 200 V | 06352   | FD12C0G2D4R7D     |
| A26C101   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH     |
| A26C103   | 0160-5730   | 3  | 1   | CAP 100pF 100 V | 06121   | B37979-J1101-J034 |
| A26C104   | 0160-5730   | 3  | 1   | CAP 100pF 100 V | 06121   | B37979-J1101-J034 |

Table B-9. 8130A Channel 1 Board Parts List

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference          | HP Part #           | CD            | Qty | Description      | Manufr | Part #            |
|--------------------|---------------------|---------------|-----|------------------|--------|-------------------|
| A26C105            | 0160-5726           | 7             | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C106            | 0160-5726           | 7             | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C108            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C111            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C113            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|                    |                     |               |     |                  |        |                   |
| A26C115            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C117            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C119            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C121            | 0160-5728           | 9             | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C123            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|                    | ļ                   |               |     |                  |        |                   |
| A26C124            | 0160-6500           | 7             | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C132            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C134            | 0160-6500           | 7             | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C135            | 0160-5726           | 7             | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C136            | 0160-5746           | 1             | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|                    |                     |               |     |                  |        |                   |
| A26C137            | 0160-5746           | 1             | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C150            | 0160-5746           | 1             | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C151            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C152            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C153            | 0160-6623           | 5             | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| 1000154            | 0100 5700           |               | .   |                  |        |                   |
| A26C154            | 0160-5730           | 3             | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
| A26C155            | 0160-5730           | 3             | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
| A26C156            | 0160-5730           | 3             | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
| A26C157            | 0160-5730           | 3             | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
| A26C158            | 0160-5726           | 7             | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C159            | 0160 5700           | 7             |     |                  |        |                   |
| A26C159<br>A26C160 | 0160-5726 0160-6623 | 5             |     | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C160            | 0160-6500           | 5             |     | CAP 0.1uF 50 V   |        | SA115C104MAAH     |
| A26C161            | 0160-6500           | 7             |     | CAP 0.01uF 100 V | 1      | SA101C103KAAH     |
| A26C162<br>A26C163 |                     | $\frac{1}{7}$ | 1   |                  |        | SA101C103KAAH     |
| A200103            | 0160-4801           | ( ]           | 1   | CAP 100pF 100 V  | 02010  | SA102A101JAAH     |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| D.C       |           |   |     | T                | 1      | <u> </u>          |
|-----------|-----------|---|-----|------------------|--------|-------------------|
| Reference |           |   | Qty |                  | Manufr | //                |
| A26C200   |           | 7 | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |
| A26C201   |           | 7 | 1   | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
| A26C202   |           | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C203   |           | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C204   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|           |           |   |     | }                |        |                   |
| A26C205   |           | 7 | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C207   | 1         | 7 | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C208   |           | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C209   | -         | 7 | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C210   | 0160-5726 | 7 | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
|           |           |   |     |                  |        |                   |
| A26C211   |           | 7 | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C212   |           | 7 | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C214   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C215   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C216   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| 1000000   |           |   |     | _                |        |                   |
| A26C218   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C300   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C301   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C302   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A26C303   | 0160-4535 | 4 | 1   | CAP 1uF 50 V     | 02010  | SR305C105KAAH     |
|           |           |   |     |                  |        |                   |
| A26C304   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   |        | SA115C104MAAH     |
| A26C305   | 0160-6623 | 5 |     | CAP 0.1uF 50 V   | 1      | SA115C104MAAH     |
| A26C306   | 0160-6623 | 5 |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C307   | 0160-6623 | 5 |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C308   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| 1000000   |           |   |     |                  |        |                   |
| A26C309   | 0160-6623 | 5 |     |                  | 1      | SA115C104MAAH     |
| A26C310   | 0160-6500 | 7 |     |                  | 1      | SA101C103KAAH     |
| A26C311   | 0160-6500 | 7 |     |                  |        | SA101C103KAAH     |
| A26C312   | 0160-5726 | 7 |     |                  | 1      | B37987-J1103-M034 |
| A26C313   | 0160-6500 | 7 | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #            |
|-----------|-----------|----|-----|------------------|--------|-------------------|
| A26C314   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C315   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C316   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C317   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C318   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|           |           |    |     |                  | i      |                   |
| A26C319   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C320   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C321   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C323   | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
| A26C324   | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |
|           |           |    |     |                  |        |                   |
| A26C326   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C327   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C328   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C329   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C330   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           |           |    |     |                  |        |                   |
| A26C331   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C332   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C333   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C334   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C335   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010  | SR305C105KAAH     |
| }         |           |    |     |                  |        |                   |
| A26C400   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C401   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C402   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A26C403   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C404   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
|           |           |    |     |                  |        |                   |
| 1         | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   |        | SA115C104MAAH     |
|           | 0160-5726 | 7  | 1   | 1                | 06121  | B37987-J1103-M034 |
| 1 1       | 0160-5726 | 7  |     | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
| ł I       | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 1      | B37987-J1103-M034 |
| A26C410   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #            |
|-----------|-----------|----|-----|------------------|--------|-------------------|
| A26C411   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
| A26C412   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
| A26C413   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C414   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
| A26C416   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |        | B37987-J1103-M034 |
|           |           |    |     |                  |        |                   |
| A26C417   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C418   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A26C419   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C420   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C421   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
|           |           |    |     |                  |        |                   |
| A26C422   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C423   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C424   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C425   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C426   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|           |           |    |     |                  |        |                   |
| A26C427   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C428   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C429   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| 1 1       | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A26C431   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           |           |    |     |                  |        |                   |
|           | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           | 0160-5726 | 7  |     | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A26C438   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| 1000000   |           |    |     |                  |        |                   |
| 1         | 0160-5726 | 7  |     |                  |        | B37987-J1103-M034 |
|           | 0160-5747 | 2  |     |                  |        | B37987-J5473-M034 |
|           | 0160-5726 | 7  |     |                  |        | B37987-J1103-M034 |
| 1         | 0160-5747 | 2  |     |                  | 1      | B37987-J5473-M034 |
| A26C904   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-----------|----|-----|------------------|---------|--------------------|
| A26C905   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C906   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C907   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C908   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C909   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
|           |           |    |     |                  |         |                    |
| A26C910   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C911   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C912   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034  |
| A26C913   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034  |
| A26CP1    | 0180-4129 | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
|           |           |    |     |                  |         |                    |
| A26CP2    | 0180-4129 | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A26CP110  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A26CP112  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
| A26CP114  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
| A26CP116  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
|           |           |    |     |                  |         |                    |
| A26CP118  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A26CP120  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
| A26CP121  | 0180-4129 | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A26CP150  | 0180-4129 | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A26CP200  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
|           |           |    |     |                  |         |                    |
| A26CP300  | 0180-2979 | 8  | 1   | CAP 220uF 16 V   | 00493   | SM16VB221M10X12    |
| A26CP301  | 0180-2979 | 8  | 1   | CAP 220uF 16 V   | 00493   | SM16VB221M10X12    |
| A26CP302  | 0180-2979 | 8  | 1   | CAP 220uF 16 V   | 00493   | SM16VB221M10X12    |
| A26CP303  | 0180-2979 | 8  | 1   | CAP 220uF 16 V   | 00493   | SM16VB221M10X12    |
| A26CR1    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
|           |           |    |     |                  |         |                    |
| A26CR2    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR3    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR4    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
|           | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR101  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |

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|     | Reference  | HP Part # | CD | Qty | Description      | 116. 0  | <b>D</b> . #         |
|-----|------------|-----------|----|-----|------------------|---------|----------------------|
| 1   | A26CR102   |           | 9  | 1   |                  | Manuf'r | <i>''</i>            |
|     | A26CR102   |           | 2  |     | DIO- SCHOTTKY SM |         | 50825511             |
|     | A26CR151   |           | 9  |     | DIO-GEN PRP      | 03406   |                      |
|     | A26CR151   | 1         | 9  |     | DIO- SCHOTTKY SM |         | 50825511             |
|     | A26CR153   |           | 9  |     | DIO- SCHOTTKY SM |         | 50825511             |
|     | 1120010100 | 1301-0000 | 9  |     | DIO- SCHOTTKY SM | 02062   | 50825511             |
|     | A26CR154   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
|     | A26CR155   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511<br>50825511 |
|     | A26CR156   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511<br>50825511 |
|     | A26CR201   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511<br>50825511 |
|     | A26CR202   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511             |
|     |            |           |    | _   |                  | 02002   | 00020011             |
|     | A26CR206   | 1901-0376 | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595               |
| - 1 | A26CR207   | 1901-0376 | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595               |
|     | A26CR209   | 1901-0376 | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595               |
| 1   | A26CR210   | 1901-0376 | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595               |
|     | A26CR300   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
|     |            |           |    |     |                  |         |                      |
|     | A26CR301   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
|     | A26CR303   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
|     | A26CR305   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
| 1   | A26CR306   | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |                      |
| 1   | A26CR307   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
|     |            |           |    |     |                  |         |                      |
|     | A26CR400   | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| 1   | A26CR401   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
| +   | 26CR404    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
|     | 26CR405    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| A   | 26CR406    | 1901-0047 | 8  | 1   | DIO-SWITCHING    | 03406   |                      |
| Ι.  | OCC DOCT   |           |    |     |                  |         |                      |
| 1   |            | 1901-1098 | 1  |     | DIO-1N4150       | 00746   |                      |
| 1   |            | 1901-1098 | 1  |     | DIO-1N4150       | 00746   |                      |
| 1   |            | 1901-0033 | 2  |     |                  | 03406   |                      |
|     | 1          | 1901-1098 | 1  | 1   |                  | 00746   |                      |
| LA  | 26CR911    | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #                  |
|-----------|-----------|----|-----|------------------|---------|-------------------------|
| A26CR912  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A26CR913  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A26CR915  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A26CV1    | 0121-0491 | 1  | 1   | CAP 30pF 5pF 50  | 09538   | 518-003 A 5-30          |
| A26J1     | 1251-8324 | 1  | 1   | CONN-POST-TP-HDR | 04486   | G06M96P4BEBL-004-715    |
| A26J2     | 1250-2066 | 4  | 1   | CONN-RF SMB      | 05769   | 51-051-0359             |
| A26J3     | 1250-2066 | 4  | 1   | CONN-RF SMB      | 05769   | 51-051-0359             |
| A26J4     | 1252-3245 | 7  | 1   | CONN ELAST 38    | 09922   | NE 0.2P 38.5L 3.0H 3.6W |
| A26J5     | 1252-3244 | 6  | 1   | CONN ELAST 38    | 09922   | NE 0.4P 38.5L 3.5H 4.2W |
| A26J6     | 1252-2649 | 3  | 1   | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A26J7     | 1252-2647 | 1  | 1   | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
| A26J8     | 1252-3244 | 6  | 1   | CONN ELAST 38    | 09922   | NE 0.4P 38.5L 3.5H 4.2W |
| A26J9     | 1252-3245 | 7  | 1   | CONN ELAST 38    | 09922   | NE 0.2P 38.5L 3.0H 3.6W |
| A26J10    | 1252-2647 | 1  | 1   | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
| A26J11    | 1200-1475 | 2  | 1   | SKT-STRP 17-CONT | 06665   | SL-117-T-12             |
| A26J12    | 1200-1474 | 1  | 1   | SKT-STRP 13-CONT | 06665   | SL-113-T-12             |
| A26J13    | 1200-1473 | 0  | 1   | SKT-STRP 10-CONT | 06665   | SL-110-T-12             |
| A26J14    | 1200-1472 | 9  | 1   | SKT-STRP 8-CONT  | 06665   | SL-108-T-12             |
| A26J15    | 1200-1471 | 8  | 1   | SKT-STRP 6-CONT  | 06665   | SL-106-T-12             |
| A26J16    | 1252-2649 | 3  | 1   | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A26J100   | 1251-4682 | 6  | 1   | CONN-POST-TP-HDR | 03394   | 1102-1-103-02           |
| A26J101   | 1251-4682 | 6  | 1   | CONN-POST-TP-HDR | 03394   | 1102-1-103-02           |
| A26J300   | 1251-5380 | 3  |     | CONN-POST-TP-HDR | 02946   | 68000-602               |
| A26K1     | 0490-1667 | 6  |     | RLY 2C 12VDC     | 09809   | RG2T-12V                |
| A26K2     | 0490-1667 | 6  |     | RLY 2C 12VDC     |         | RG2T-12V                |
| A26K3     | 0490-1667 | 6  | 1   | RLY 2C 12VDC     | 09809   | RG2T-12V                |
| A26K4     | 0490-1665 | 4  |     | RLY 1C 12VDC     |         | RG1ET-12V               |
| A26K5     | 0490-1665 | 4  |     | RLY 1C 12VDC     | 1       | RG1ET-12V               |
| A26K6     | 0490-1405 | 0  | - ł | RLY 2C 12VDC     | 1       | DS2E-S-DC12V-C-H118     |
| A26L1     | 5081-1973 | 5  |     |                  |         | 5081-1973               |

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Table B-9. 8130A Channel 1 Board Parts List (continued)

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part #   | CD | Qty | Description      | Manufr | Part #          |
|-----------|-------------|----|-----|------------------|--------|-----------------|
| A26L2     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  |        | 5081-1973       |
| A26L3     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  |        | 5081-1973       |
| A26L4     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  |        | 5081-1973       |
| A26L7     | 9140-0114   | 4  | 1   | L 10UH +-10%     | 03273  | 15M102K         |
| A26L8     | 9140-0114   | 4  | 1   | L 10UH +-10%     | 03273  | 15M102K         |
|           |             |    |     |                  |        |                 |
| A26L100   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
| A26L101   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
| A26L102   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
| A26L103   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
| A26L104   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
|           |             |    |     |                  |        |                 |
| A26L105   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995  | VK200 20/4B     |
| A26MP1    | 08130-00601 | 6  | 1   | SHLD OUTP BD     | 28480  | 08130-00601     |
| A26MP20   | 08130-21101 | 5  | 1   | HEAT SINK        | 28480  | 08130-21101     |
| A26MP21   | 08130-40502 | 0  | 1   | HYBRID FRAME     | 28480  | 08130-40502     |
| A26MP23   | 0340-1236   | 8  | 1   | INSULATOR        | 28480  | 0340-1236       |
|           |             |    |     |                  |        |                 |
| A26MP26   | 3050-0960   | 1  | 2   | WASHER-SHLDR 3.0 | 05947  | V5359           |
| A26MP27   | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610  |                 |
| A26MP80   | 1400-1437   | 0  | 6   | CLAMP-CABLE      | 11808  |                 |
| A26MP108  | 1200-0541   | 1  | 1   | SKT-IC-DIP 24-CO | 01380  | 2-641604-1      |
| A26MP302  | 1205-0295   | 2  | 1   | HEAT SINK        | 02608  | 6107B-14        |
|           |             |    |     |                  |        |                 |
| A26MP303  |             | 2  | 1   | HEAT SINK        | 02608  | 6107B-14        |
| A26MP304  |             | 2  | 1   | INSUL-XSTR       | 05447  | 3223-07FR-58-AC |
| A26MP305  |             | 2  | 1   | INSUL-XSTR       | 05447  | 3223-07FR-58-AC |
| A26MP400  |             | 4  | 1   | HEAT SINK        | 02608  | 2228B           |
| A26MP401  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608  | 2228B           |
|           |             |    |     |                  |        |                 |
| A26MP402  |             | 4  | - 1 | HEAT SINK        | 02608  | 2228B           |
| A26MP403  |             | 0  |     | HEAT SINK        | 02608  | 2226B           |
| A26MP407  |             | 4  |     | HEAT SINK        | 02608  | 2228B           |
| A26MP409  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608  | 2228B           |
| A26MP904  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608  | 2228B           |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Referenc | e HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|----------|-------------|----|-----|------------------|---------|--------------------|
| A26Q1    | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q2    | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q3    | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q4    | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q101  | 1854-0039   | 7  | 1   | XSTR NPN 2N3053S | 02037   | 2N3053S            |
|          |             |    |     |                  |         |                    |
| A26Q102  |             | 6  | 1   | XSTR PNP SI      | 02037   |                    |
| A26Q200  |             | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18            |
| A26Q201  | 1854-0583   | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18            |
| A26Q202  | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037   | 2N4352             |
| A26Q203  | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
|          |             |    |     |                  |         |                    |
| A26Q204  | 1854-0477   | 7  | 1   | XSTR NPN 2N2222A |         | 2N2222A            |
| A26Q300  | 1854-0828   | 2  | 1   | XSTR NPN SI      | 00039   | NTD560             |
| A26Q301  | 1853-0468   | 4  | 1   | XSTR PNP SI DARL | 02037   | TIP-127            |
| A26Q302  | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037   |                    |
| A26Q303  | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037   |                    |
| A26Q304  | 1853-0569   | 6  |     | YCOD DND G       |         |                    |
| A26Q304  | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037   |                    |
| A26Q307  | 1853-0569   |    | 1   | XSTR PNP SI      | 02037   |                    |
| A26Q308  | 1853-0563   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q309  | 1 1         | 0  | 1   | XSTR PNP SI      | 02037   | 2N3906(SEL)        |
| A20Q309  | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904             |
| A26Q400  | 1853-0051   | 1  | 1   | XSTR PNP 2N4037  | 03799   | 2N4037             |
| A26Q401  | 1854-0637   | 1  |     | XSTR NPN 2N2219A |         | 2N4037<br>2N2219A  |
| A26Q402  | 1853-0314   | 9  |     | XSTR PNP 2N2905A |         | 2N2219A<br>2N2905A |
| A26Q404  | 1854-0392   | 5  |     | XSTR NPN SI      |         | 2N2905A<br>2N5088  |
| A26Q405  | 1854-0392   | 5  |     | XSTR NPN SI      |         | 2N5088             |
|          |             | Ĭ  | -   |                  | 02031   | 2113088            |
| A26Q407  | 1854-0597   | 2  | 1   | XSTR NPN 2N5943  | 02037   | 2N5943             |
| A26Q408  | 1854-0392   | 5  | 1   | XSTR NPN SI      |         | 2N5088             |
| A26Q409  | 1853-0314   | 9  | 1   |                  |         | 2N2905A            |
| A26Q410  | 1853-0314   | 9  | 1   |                  |         | 2N2905A            |
| A26Q411  | 1853-0314   | 9  | 1   |                  |         | 2N2905A            |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference      | HP Part #              | CD  | Qty | Description                          | Manufr | Part #         |
|----------------|------------------------|-----|-----|--------------------------------------|--------|----------------|
| A26Q412        | 1853-0569              | 6   | 1   | XSTR PNP SI                          | 02037  |                |
| A26Q413        | 1853-0569              | 6   | 1   | XSTR PNP SI                          | 02037  | ļ              |
| A26Q414        | 1854-0392              | 5   | 1   | XSTR NPN SI                          | 02037  | 2N5088         |
| A26Q415        | 1854-0392              | 5   | 1   | XSTR NPN SI                          | 02037  | 2N5088         |
| A26Q416        | 1854-1028              | 6   | 1   | XSTR NPN SI                          | 02037  | 2N3904         |
|                |                        |     |     |                                      |        |                |
| A26Q418        | 1853-0563              | 0   | 1   | XSTR PNP SI                          | 02037  | 2N3906(SEL)    |
| A26Q419        | 1853-0569              | 6   | 1   | XSTR PNP SI                          | 02037  |                |
| A26Q421        | 1854-1028              | 6   | 1   | XSTR NPN SI                          | 02037  | 2N3904         |
| A26Q900        | 1854-1028              | 6   | 1   | XSTR NPN SI                          | 02037  | 2N3904         |
| A26Q901        | 1855-0751              | 2   | 1   | MOSFET N-CHAN                        | 02883  | VN0808M        |
|                |                        |     |     |                                      |        |                |
| A26Q902        | 1855-0751              | 2   | 1   | MOSFET N-CHAN                        | 02883  | VN0808M        |
| A26Q903        | 1854-0637              | 1   | 1   | XSTR NPN 2N2219A                     | 02037  | 2N2219A        |
| A26Q904        | 1853-0051              | 1   | 1   | XSTR PNP 2N4037                      | 03799  | 2N4037         |
| A26Q905        | 1853-0563              | 0   | 1   | XSTR PNP SI                          | 02037  | 2N3906(SEL)    |
| A26R2          | 0698-4453              | 4   | 1   | RES 402 1% .125W                     | 00746  | CRB14 OR CRB25 |
|                |                        |     |     |                                      |        |                |
| A26R3          | 0757-0401              | 0   | 1   | RES 100 1% .125W                     | 00746  | CRB14 OR CRB25 |
| A26R4          | 0757-0401              | 0   | 1   | RES 100 1% .125W                     | 00746  | CRB14 OR CRB25 |
| A26R5          | 0698-4453              | 4   | 1   | RES 402 1% .125W                     | 00746  | CRB14 OR CRB25 |
| A26R6          | 0698-4435              | 2   | 1   | RES 2.49K 1% .12                     | 00746  | CRB14 OR CRB25 |
| A26R7          | 0698-4435              | 2   | 1   | RES 2.49K 1% .12                     | 00746  | CRB14 OR CRB25 |
| 10600          | 0757 0000              | .   |     |                                      |        |                |
| A26R8<br>A26R9 | 0757-0999<br>0757-0999 | 1   |     | RES 47.5 1% .5W                      | 01074  | H2             |
| A26R12         | 0757-0999              | 1 3 |     | RES 47.5 1% .5W                      | 01074  | H2             |
| A26R12         | 0757-0389              | 3   |     | RES 33.2 1% .125<br>RES 33.2 1% .125 | 00746  | CRB14 OR CRB25 |
| A26R14         | 0698-4409              | 0   |     | RES 127 1% .125<br>RES 127 1% .125W  | 00746  | CRB14 OR CRB25 |
| A201014        | 0030-1403              | ۲ I |     | RES 127 1% .125 W                    | 00746  | CRB14 OR CRB25 |
| A26R15         | 0757-0283              | 6   | 1   | RES 2K 1% .125W                      | 00746  | CRB14 OR CRB25 |
| A26R16         | 0757-0401              | 0   |     | 1                                    |        | CRB14 OR CRB25 |
| A26R17         | 0757-0401              | 0   | 1   |                                      | 1      | CRB14 OR CRB25 |
| A26R18         | 0757-0401              | 0   |     |                                      | 1      | CRB14 OR CRB25 |
| A26R19         | 0757-0401              | 0   |     |                                      | 1      | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #           |
|-----------|-----------|----|-----|------------------|--------|------------------|
| A26R20    | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R21    | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R22    | 0757-0807 | 0  | 1   | RES 274 1% .5W T | 01074  | H2               |
| A26R23    | 0757-0807 | 0  | 1   | RES 274 1% .5W T | 01074  | H2               |
| A26R24    | 0699-2732 | 0  | 1   | RES 59 1% 2W TF  | 05524  | CPF-2 5900 F T-1 |
|           |           |    |     |                  |        |                  |
| A26R25    | 0699-2732 | 0  | 1   | RES 59 1% 2W TF  | 05524  | CPF-2 5900 F T-1 |
| A26R26    | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R27    | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R100   | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746  | CRB14 OR CRB25   |
| A26R101   | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A26R102   | 0698-6624 | 5  | 1   | RES 2K .1% .125W | 00746  | CRB14 OR CRB25   |
| A26R104   | 0698-0082 | 7  | 1   | RES 464 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R105   | 0698-6624 | 5  | 1   | RES 2K .1% .125W | 00746  | CRB14 OR CRB25   |
| A26R106   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25   |
| A26R107   | 0698-4445 | 4  | 1   | RES 5.76K 1% .12 | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A26R108   | 0698-4479 | 4  | 1   | RES 14K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R109   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R110   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25   |
| A26R111   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R112   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25   |
|           |           |    | ĺ   |                  |        |                  |
| A26R113   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R114   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746  | CRB14 OR CRB25   |
| A26R115   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R116   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A26R126   | 0698-4479 | 4  | 1   | RES 14K 1% .125W | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A26R150   | 0757-0461 | 2  |     | RES 68.1K 1% .12 | 00746  | CRB14 OR CRB25   |
| A26R151   | 0757-0199 | 3  |     | RES 21.5K 1% .12 |        | CRB14 OR CRB25   |
| A26R152   | 0757-0465 | 6  |     | RES 100K 1% .125 | 00746  | CRB14 OR CRB25   |
| A26R153   | 0698-8827 | 4  |     |                  | 00746  | CRB14 OR CRB25   |
| A26R154   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference          | HP Part #              | CD       | Qty                                    | Description                         | Manuf'r | Part #         |
|--------------------|------------------------|----------|----------------------------------------|-------------------------------------|---------|----------------|
| A26R155            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A26R156            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R157            | 0698-8958              | 2        | 1                                      | RES 511K 1% .125                    | 00746   | CRB14 OR CRB25 |
| A26R158            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A26R159            | 0757-0449              | 6        | 1                                      | RES 20K 1% .125W                    | 00746   | CRB14 OR CRB25 |
|                    |                        |          |                                        |                                     |         |                |
| A26R160            | 0698-0084              | 9        | 1                                      | RES 2.15K 1% .12                    | 00746   | CRB14 OR CRB25 |
| A26R161            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A26R162            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R163            | 0698-8958              | 2        | 1                                      | RES 511K 1% .125                    | 00746   | CRB14 OR CRB25 |
| A26R164            | 0757-0438              | 3        | 1                                      | RES 5.11K 1% .12                    | 00746   | CRB14 OR CRB25 |
|                    |                        |          |                                        |                                     |         |                |
| A26R165            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    |         | CRB14 OR CRB25 |
| A26R166            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A26R167            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R168            | 0698-8958              | 2        | 1                                      | RES 511K 1% .125                    | 00746   | CRB14 OR CRB25 |
| A26R169            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| ADCD170            | 0757 0000              |          |                                        |                                     |         |                |
| A26R170            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R171            | 0698-8958              | 2        | 1                                      | RES 511K 1% .125                    | 00746   | CRB14 OR CRB25 |
| A26R172            | 0757-0438              | 3        | 1                                      | RES 5.11K 1% .12                    | 00746   | CRB14 OR CRB25 |
| A26R173            | 0757-0442              | 9        | 1                                      | RES 10K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A26R174            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R175            | 0757 0000              |          |                                        |                                     |         |                |
| A26R175<br>A26R176 | 0757-0280<br>0757-0280 | 3<br>3   | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R170            | 0757-0280              | 3        | 1                                      | RES 1K 1% .125W                     | 00746   | CRB14 OR CRB25 |
| A26R178            | 0698-3152              | 8        | $\begin{vmatrix} 1 \\ 1 \end{vmatrix}$ | RES 1K 1% .125W<br>RES 3.48K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R178            | 0098-3132              | о<br>3   |                                        |                                     | 00746   | CRB14 OR CRB25 |
| A2011179           | 0101-0400              | °        | 1                                      | RES 5.11K 1% .12                    | 00746   | CRB14 OR CRB25 |
| A26R180            | 0698-3152              | 8        | 1                                      | RES 3.48K 1% .12                    | 00746   | CRB14 OR CRB25 |
| A26R181            | 0757-0438              | 3        |                                        |                                     |         | CRB14 OR CRB25 |
| A26R182            | 0757-0438              | 3        |                                        | 1                                   |         | CRB14 OR CRB25 |
| A26R183            | 0757-0274              | 5        |                                        |                                     | 1       | CRB14 OR CRB25 |
| A26R184            | 0698-3452              | 1        |                                        |                                     |         | CRB14 OR CRB25 |
|                    | 0000-0402              | <u>+</u> | -                                      | 1110 1411 170 .120                  | 00140   | ULDIA UK UKB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A26R185   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R186   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R187   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R188   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R189   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R190   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R191   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R192   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R193   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R194   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R200   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R201   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R203   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R204   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R206   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R207   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R208   | 0757-0199 | 3  | 1   | RES 21.5K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R209   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R210   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R212   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           | ļ  |     |                  |        |                |
| A26R213   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R214   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R215   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R217   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R218   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R219   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R220   | 0757-0280 | 3  |     | RES 1K 1% .125W  |        | CRB14 OR CRB25 |
| A26R221   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 |        | CRB14 OR CRB25 |
| A26R222   | 0757-0403 | 2  |     | 1                | 4      | CRB14 OR CRB25 |
| A26R223   | 0757-0403 | 2  | 1   | RES 121 1% .125W | 00746  | CRB14 OR CRB25 |

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Table B-9. 8130A Channel 1 Board Parts List (continued)

| - [ | Pofeme-  | . UD D    |   |   | T                    |         |                |
|-----|----------|-----------|---|---|----------------------|---------|----------------|
| ╞   | Referenc |           |   | 1 |                      | Manuf'ı |                |
|     | A26R225  |           | 5 | 1 | RES 1.21K 1% .12     | 00746   | CRB14 OR CRB25 |
|     | A26R226  |           | 7 | 1 | RES 511 1% .125W     |         | CRB14 OR CRB25 |
|     | A26R227  |           | 7 | 1 | RES 511 1% .125W     |         | CRB14 OR CRB25 |
| - 1 | A26R276  |           | 8 | 1 | RES 215 1% .125W     | 00746   | CRB14 OR CRB25 |
|     | A26R300  | 0698-3449 | 6 | 1 | RES 28.7K 1% .12     | 00746   | CRB14 OR CRB25 |
|     |          |           |   |   |                      |         |                |
| - I | A26R301  | 0757-0442 | 9 | 1 | RES 10K 1% .125W     |         | CRB14 OR CRB25 |
| -   | A26R302  | 0757-0442 | 9 | 1 | RES 10K 1% .125W     | 00746   | CRB14 OR CRB25 |
|     | A26R304  | 0698-8799 | 9 | 1 | RES 21.5K .1% .1     | 00746   | CRB14 OR CRB25 |
|     | A26R307  | 8159-0005 | 0 | 1 | RES-ZERO OHMS        | 01339   | L-2007-1       |
| 1   | A26R308  | 0757-0442 | 9 | 1 | RES 10K 1% .125W     | 00746   | CRB14 OR CRB25 |
|     |          |           |   |   |                      |         |                |
|     | A26R309  | 0757-0449 | 6 | 1 | RES 20K 1% .125W     |         | CRB14 OR CRB25 |
|     | A26R310  | 0757-0449 | 6 | 1 | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
| 1   | A26R311  | 0757-0449 | 6 | 1 | RES 20K 1% .125W     |         | CRB14 OR CRB25 |
|     | A26R312  | 0757-0449 | 6 | 1 | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
|     | A26R313  | 0757-0449 | 6 | 1 | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
|     |          |           |   |   |                      |         |                |
|     | 26R314   | 0757-0442 | 9 | 1 | RES 10K 1% .125W     | 00746   | CRB14 OR CRB25 |
| 1   | 26R315   | 0757-0449 | 6 | 1 | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
| 1   | 26R316   | 8159-0005 | 0 | 1 | <b>RES-ZERO OHMS</b> | 01339   | L-2007-1       |
|     | 26R317   | 0757-0280 | 3 | 1 | RES 1K 1% .125W      | 00746   | CRB14 OR CRB25 |
| A   | 26R318   | 0757-0280 | 3 | 1 | RES 1K 1% .125W      | 00746   | CRB14 OR CRB25 |
| ĺ   |          |           |   |   |                      |         |                |
| 1   | .26R319  | 0757-0280 | 3 | 1 | RES 1K 1% .125W      | 00746   | CRB14 OR CRB25 |
|     | .26R320  | 0757-0280 | 3 | 1 | RES 1K 1% .125W      |         | CRB14 OR CRB25 |
|     | 26R321   | 0757-0421 | 4 | 1 | RES 825 1% .125W     | r       | CRB14 OR CRB25 |
| A   | 26R322   | 0699-1056 | 9 | 1 | RES 825 .1% .125     |         | CRB14 OR CRB25 |
| A   | 26R323   | 0757-0283 | 6 | 1 | RES 2K 1% .125W      |         | CRB14 OR CRB25 |
|     |          | 1         |   |   |                      |         |                |
|     | 1        | 0757-0416 | 7 | 1 | RES 511 1% .125W     | 00746   | CRB14 OR CRB25 |
|     |          | 0757-0421 | 4 | 1 | RES 825 1% .125W     | 1       | CRB14 OR CRB25 |
|     |          | 0699-1056 | 9 |   |                      |         | CRB14 OR CRB25 |
|     |          | 0757-0416 | 7 |   |                      | 1       | CRB14 OR CRB25 |
| A   | 26R328   | 0757-0461 | 2 |   |                      |         | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A26R329   | 0698-8826 | 3  | 1   | RES 825K 1% .125 | 00746  | CRB14 OR CRB25 |
| A26R330   | 0757-0409 | 8  | 1   | RES 274 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R332   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 1      | CRB14 OR CRB25 |
| A26R333   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R334   | 0757-0409 | 8  | 1   | RES 274 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R335   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R337   | 0757-0346 | 2  | 1   | RES 10 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R338   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R339   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R340   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R341   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R342   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R343   | 0699-2683 | 0  | 1   | RES 274 .1% .125 | 00746  | CRB14          |
| A26R344   | 0699-2683 | 0  | 1   | RES 274 .1% .125 | 00746  | CRB14          |
| A26R347   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R348   | 0757-0346 | 2  | 1   | RES 10 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R351   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339  | L-2007-1       |
| A26R352   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R354   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A26R355   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R356   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R357   | 0698-8827 | 4  | 1   | RES 1M 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R358   | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R359   | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R360   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| 1000000   |           |    |     |                  | ļ      |                |
| A26R361   | 0757-0442 | 9  |     |                  | 1      | CRB14 OR CRB25 |
| A26R362   | 0698-3279 | 0  |     | 1                | 00746  | CRB14 OR CRB25 |
| A26R363   | 0757-0199 | 3  |     |                  |        | CRB14 OR CRB25 |
| A26R364   | 0757-0199 | 3  |     |                  |        | CRB14 OR CRB25 |
| A26R365   | 0698-8826 | 3  | 1   | RES 825K 1% .125 | 00746  | CRB14 OR CRB25 |

# Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #            |
|-----------|-----------|----|-----|------------------|--------|-------------------|
| A26R366   | 0757-0442 | 9  | 1   | RES 10K 1% .125W |        | CRB14 OR CRB25    |
| A26R367   | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R368   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R369   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R370   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746  | CRB14 OR CRB25    |
|           |           |    | _   |                  |        | CILDIA OIL CILD23 |
| A26R371   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746  | CRB14 OR CRB25    |
| A26R372   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R373   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R374   | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R377   | 0698-3441 | 8  | 1   | RES 215 1% .125W | 00746  | CRB14 OR CRB25    |
|           |           |    |     |                  | -      |                   |
| A26R378   | 0698-3457 | 6  | 1   | RES 316K 1% .125 | 00746  | CRB14 OR CRB25    |
| A26R379   | 0757-0407 | 6  | - 1 | RES 200 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R400   | 0757-0428 | 1  | 1   | RES 1.62K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R401   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R405   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339  | L-2007-1          |
|           |           |    |     |                  |        |                   |
| A26R406   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25    |
| A26R407   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25    |
| A26R408   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R410   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R412   | 0698-3432 | 7  | 1   | RES 26.1 1% .125 | 00746  | CRB14 OR CRB25    |
|           |           |    |     |                  |        |                   |
| A26R413   | 0698-4445 | 4  | 1   | RES 5.76K 1% .12 | 00746  | CRB14 OR CRB25    |
| A26R414   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R416   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25    |
| A26R419   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25    |
| A26R420   | 0698-3519 | 1  | 1   | RES 12.4K 1% .12 | 00746  | CRB14 OR CRB25    |
|           |           |    |     |                  |        |                   |
| 1         | 0698-3444 | 1  |     |                  | 00746  | CRB14 OR CRB25    |
|           | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25    |
|           | 0757-0441 | 8  |     |                  | 00746  | CRB14 OR CRB25    |
|           | 0757-0441 | 8  | 1   |                  |        | CRB14 OR CRB25    |
| A26R427   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25    |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Г   | Reference                                                                                                      | HP Part # | CD |     | Devision         |         |                |
|-----|----------------------------------------------------------------------------------------------------------------|-----------|----|-----|------------------|---------|----------------|
| _   | A26R428                                                                                                        |           |    | Qty |                  | Manuf'ı |                |
|     |                                                                                                                | 0698-3444 |    |     | RES 316 1% .125W | 1       | CRB14 OR CRB25 |
|     | A26R429                                                                                                        | 0757-0280 | 3  | 1   | RES 1K 1% .125W  |         | CRB14 OR CRB25 |
| - 1 | A26R430                                                                                                        | 0757-0280 | 3  | 1   | RES 1K 1% .125W  |         | CRB14 OR CRB25 |
|     | A26R431                                                                                                        | 0698-3444 | 1  | 1   | RES 316 1% .125W |         | CRB14 OR CRB25 |
| A   | 26R432                                                                                                         | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 94D 400                                                                                                        |           |    |     |                  |         |                |
|     | 26R433                                                                                                         | 0757-0411 | 2  | 1   | RES 332 1% .125W | 1       | CRB14 OR CRB25 |
|     | 26R434                                                                                                         | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | 26R435                                                                                                         | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | 26R436                                                                                                         | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | .26R437                                                                                                        | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1.  |                                                                                                                |           |    |     |                  |         |                |
|     | 26R438                                                                                                         | 0698-3444 | 1  | 1   | RES 316 1% .125W |         | CRB14 OR CRB25 |
|     | 26R439                                                                                                         | 0757-0416 | 7  | 1   | RES 511 1% .125W | 1       | CRB14 OR CRB25 |
|     | 26R440                                                                                                         | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 26R441                                                                                                         | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| A   | 26R444                                                                                                         | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|     |                                                                                                                |           |    |     |                  |         |                |
| 1   | 26R445                                                                                                         | 0698-3443 | 0. | 1   | RES 287 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 26R446                                                                                                         | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| 1   | 26R447                                                                                                         | 0698-3443 | 0  | 1   | RES 287 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 26R448                                                                                                         | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A:  | 26R449                                                                                                         | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|     | }                                                                                                              |           |    |     |                  |         |                |
|     | 26R450                                                                                                         | 0757-0291 | 6  | 1   | RES 24.9 1% .125 | 00746   | CRB14 OR CRB25 |
|     | 1                                                                                                              | 0757-0291 | 6  | 1   | RES 24.9 1% .125 | 00746   | CRB14 OR CRB25 |
|     | 1                                                                                                              | 0757-0291 | 6  | 1   | RES 24.9 1% .125 |         | CRB14 OR CRB25 |
|     |                                                                                                                | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 |         | CRB14 OR CRB25 |
| A2  | 6R454                                                                                                          | 0698-4020 | 1  | 1   | RES 9.53K 1% .12 |         | CRB14 OR CRB25 |
|     | 1                                                                                                              |           |    |     |                  |         |                |
|     |                                                                                                                | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|     |                                                                                                                | 0757-0421 | 4  | 1   | RES 825 1% .125W |         | CRB14 OR CRB25 |
|     |                                                                                                                | 0757-0416 | 7  |     | 1                |         | CRB14 OR CRB25 |
|     | E CONTRACTOR OF CONTRACTOR | 0757-0416 | 7  | 1   | RES 511 1% .125W |         | CRB14 OR CRB25 |
| A2  | 6R459 (                                                                                                        | 0757-0416 | 7  | 1   | RES 511 1% .125W |         | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Potor              | HD D       | # 0p | To:          |                    |         |                |
|--------------------|------------|------|--------------|--------------------|---------|----------------|
|                    | ce HP Part |      | + * *        |                    | Manuf'n | Part #         |
| A26R46             |            |      | 1            | RES 3.83K 1% .12   | 00746   | CRB14 OR CRB25 |
| A26R46             | _          | 1    | 1            | RES 23.7K 1% .12   | 00746   | CRB14 OR CRB25 |
| A26R46             |            | -    | 1            | RES 10K 1% .125W   | 1       | CRB14 OR CRB25 |
| A26R46             |            |      | 1            | RES 316 1% .125W   | -       | CRB14 OR CRB25 |
| A26R46             | 7 0757-044 | 2 9  | 1            | RES 10K 1% .125W   | 00746   | CRB14 OR CRB25 |
| ADED 400           |            |      |              |                    |         |                |
| A26R468            |            |      | 1            | RES 619 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R469            |            | -    | 1            | RES 316 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R470            |            |      | 1            | RES 316 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R471            |            |      | 1            | RES 316 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R472            | 0698-6323  | 1    | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R473            | 0600 6000  |      |              |                    |         |                |
| A26R473            |            | 1 1  | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R474            |            |      | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R475            |            |      | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R476            |            | 1 1  | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A20R4//            | 0698-6323  | 1    | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R478            | 0600 6200  |      | ,            |                    |         |                |
| A26R478            | 0698-6323  |      | 1            | RES 100 .1% .125   | 00746   | CRB14 OR CRB25 |
| A26R479            |            |      | 1            | RES 316 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R480            | 0757-0279  | 0    | 1            | RES 3.16K 1% .12   | 00746   | CRB14 OR CRB25 |
| A26R481<br>A26R482 | 0698-3268  |      | 1            | RES 11.5K 1% .12   |         | CRB14 OR CRB25 |
| A200402            | 0698-3444  | 1    | 1            | RES 316 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R483            | 0698-3444  |      |              |                    |         |                |
| A26R485            | 0757-0280  |      |              | RES 316 1% .125W   |         | CRB14 OR CRB25 |
| A26R485            | 0757-0280  | 3    |              |                    |         | CRB14 OR CRB25 |
| A26R480<br>A26R487 | 1          | 0    |              |                    |         | CRB14 OR CRB25 |
| A26R487<br>A26R488 | 0757-0278  | 9    |              |                    |         | CRB14 OR CRB25 |
| A20A488            | 0698-3446  | 3    | 1            | RES 383 1% .125W   | 00746   | CRB14 OR CRB25 |
| A26R489            | 0698-4460  |      | ,  ,         |                    |         |                |
| A26R490            | 0757-0317  | 3    |              |                    |         | CRB14 OR CRB25 |
| A26R491            | 0757-0317  |      |              |                    |         | CRB14 OR CRB25 |
| A26R491            | 0757-0416  |      |              |                    |         | CRB14 OR CRB25 |
| A26R493            | 0698-3446  |      |              |                    |         | CRB14 OR CRB25 |
|                    | 0030-0440  | 101  | <u>1   1</u> | RES 383 1% .125W ( | 00746 0 | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Referenc | e HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|----------|-------------|----|-----|------------------|---------|----------------|
| A26R494  | 0757-1094   | 9  | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R497  | 0757-0274   | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R498  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R900  | 0698-3136   | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R901  | 0698-0084   | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
|          |             |    |     |                  |         |                |
| A26R902  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R903  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R905  |             | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R906  | 0757-0421   | 4  | 1   | RES 825 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R907  | 0757-0444   | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |
|          |             |    |     |                  |         |                |
| A26R908  | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R909  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R910  | 0698-6624   | 5  | 1   | RES 2K .1% .125W | 00746   | CRB14 OR CRB25 |
| A26R911  | 0698-6624   | 5  | 1   | RES 2K .1% .125W | 00746   | CRB14 OR CRB25 |
| A26R912  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|          |             | Í  |     |                  |         |                |
| A26R913  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R914  | 0698-0084   | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R915  | 0699-2684   | 1  | 1   | RES 332 .1% .125 | 00746   | CRB14          |
| A26R916  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R917  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|          |             |    |     |                  |         |                |
| A26R918  | 0698-0085   | 0  |     | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R919  | 0757-0280   | 3  |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R920  | 0757-0346   | 2  | 1   | RES 10 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R921  | 0757-0715   | 9  |     | RES 150 1% .25W  | 01074   | H4             |
| A26R922  | 0757-0438   | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|          |             |    |     |                  |         |                |
| A26R924  | 0757-0442   | 9  |     | RES 10K 1% .125W |         | CRB14 OR CRB25 |
| A26R925  | 0757-0280   | 3  |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R926  | 0698-0085   | 0  |     | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R927  | 0757-0280   | 3  | 1   |                  |         | CRB14 OR CRB25 |
| A26R928  | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Referen |     | HP Part # | CD  | Qt | y Description    | Manuf | r Part #       |
|---------|-----|-----------|-----|----|------------------|-------|----------------|
| A26R92  |     | 0757-0442 | 9   | 1  | RES 10K 1% .125V |       | CRB14 OR CRB25 |
| A26R93  | - 1 | 0698-3435 | 0   | 1  | RES 38.3 1% .125 | 00746 | CRB14 OR CRB25 |
| A26R93  |     | 0699-2731 | . 9 | 1  | RES 442 .1% .125 | 06118 | MK2            |
| A26R93  | - 1 | 0757-0449 | 6   | 1  | RES 20K 1% .125V |       | CRB14 OR CRB25 |
| A26R93  | 5   | 0757-0279 | 0   | 1  | RES 3.16K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |     |           |     |    |                  |       |                |
| A26R93  |     | 0698-3243 | 8   | 1  | RES 178K 1% .125 | 00746 | CRB14 OR CRB25 |
| A26R937 | - 1 | 0757-0460 | 1   | 1  | RES 61.9K 1% .12 | 00746 | CRB14 OR CRB25 |
| A26R939 | - 1 | 0698-4477 | 2   | 1  | RES 10.5K 1% .12 | 00746 | CRB14 OR CRB25 |
| A26R940 |     | 0757-0442 | 9   | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R941 |     | 0757-0439 | 4   | 1  | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |     |           |     |    |                  | 1     |                |
| A26R942 |     | 0757-0416 | 7   | 1  | RES 511 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R943 |     | 0698-3444 | 1   | 1  | RES 316 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R944 |     | 0698-4445 | 4   | 1  | RES 5.76K 1% .12 | 00746 | CRB14 OR CRB25 |
| A26R945 |     | 0698-3444 | 1   | 1  | RES 316 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R946 |     | 0757-0438 | 3   | 1  | RES 5.11K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |     |           |     |    |                  |       |                |
| A26R947 |     | )757-0441 | 8   | 1  | RES 8.25K 1% .12 | 00746 | CRB14 OR CRB25 |
| A26R948 |     | 698-3444  | 1   | 1  | RES 316 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R949 | 1   | 698-0084  | 9   | 1  | RES 2.15K 1% .12 | 00746 | CRB14 OR CRB25 |
| A26R950 | 1   | 757-0283  | 6   | 1  | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
| A26R951 | 0   | 698-0085  | 0   | 1  | RES 2.61K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |     |           |     |    |                  |       |                |
| A26R952 |     | 757-0442  | 9   | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A26R953 | 1   | 698-0085  | 0   | 1  | RES 2.61K 1% .12 |       | CRB14 OR CRB25 |
| A26R954 |     | 698-0085  | 0   | 1  | RES 2.61K 1% .12 |       | CRB14 OR CRB25 |
| A26R955 | +   | 757-0442  | 9   | 1  | RES 10K 1% .125W |       | CRB14 OR CRB25 |
| A26R956 | 0   | 757-1094  | 9   | 1  | RES 1.47K 1% .12 |       | CRB14 OR CRB25 |
| 1000    |     |           |     |    |                  |       |                |
| A26R957 |     | 757-0416  | 7   |    |                  | 00746 | CRB14 OR CRB25 |
| A26R958 |     | 598-3439  | 4   |    |                  |       | CRB14 OR CRB25 |
| A26R959 |     | 57-0416   | 7   |    |                  |       | CRB14 OR CRB25 |
| A26R960 | 1   | 57-0280   | 3   |    |                  |       | CRB14 OR CRB25 |
| A26R961 | 07  | 57-0442   | 9   | 1  | RES 10K 1% .125W |       | CRB14 OR CRB25 |

Table B-9. 8130A Channel 1 Board Parts List (continued)

|     | Reference | HP Part # | CD     | Qty | Description Manuf'r Part # |           |                |
|-----|-----------|-----------|--------|-----|----------------------------|-----------|----------------|
|     | A26R962   | 0757-0449 | 6      | 1   |                            | Manuf'r   | #              |
|     | A26R963   | 0698-3155 | 0      |     | RES 20K 1% .125W           | 00746     | CRB14 OR CRB25 |
|     | A26R964   | 0098-3135 |        | -   | RES 4.64K 1% .12           | 00746     | CRB14 OR CRB25 |
|     | A26RA10   |           | 8      |     | RES 1K 1% .125W            | 00746     | CRB14 OR CRB25 |
|     | A26RA30   |           | 5      |     | NETWORK-RES SIP            |           | 750-101        |
|     | A2011A00  | 1810-0091 | 5      | 1   | NETWORK-RES DIP            | 01607     | F16B103B       |
|     | A26RA40(  | 1810-0316 | 1      | 1   | NETWORK DR. DR.            |           |                |
|     | A26RV1    | 2100-3345 | 8      | 1   | NETWORK-RES DIP            |           | 761-3-R10K     |
| 1   | A26RV100  | 1         | 0<br>7 | 1   | RES-TRMR 10 10%            | 03744     | 3386P-Y46-100  |
|     | A26RV200  |           | 5      |     | RES-TRMR 1K 10%            | 03744     | 3386P-Y46-102  |
| - 1 | A26RV303  |           | 5<br>8 | 1   | RES-TRMR 500 10%           | 03744     | 3386P-Y46-501  |
|     | A2010 303 | 2100-3212 |        | 1   | RES-TRMR 200 10%           | 03744     | 3386P-Y46-201  |
|     | A26RV305  | 2100-3253 | -      |     |                            |           |                |
|     | A26RV305  | 2100-3253 | 7      | 1   | RES-TRMR 50K 10%           | 03744     | 3386P-Y46-503  |
|     | A26RV307  | 2100-3253 | 7      | 1   | RES-TRMR 50K 10%           | 03744     | 3386P-Y46-503  |
|     | A26RV307  | 2100-3210 | 6      | 1   | RES-TRMR 10K 10%           | 03744     | 3386P-Y46-103  |
|     | A26RV309  | 2100-3409 | 5      | 1   | RES-TRMR 20 10%            | 03744     | 3386P-Y46-200  |
| 1   | A2010 309 | 2100-3409 | 5      | 1   | RES-TRMR 20 10%            | 03744     | 3386P-Y46-200  |
|     | A26RV401  | 2100-0554 | -      |     |                            |           |                |
|     | A26RV401  |           | 5      | 1   | RES-TRMR 500 10%           | , ,       | 3386P-Y46-501  |
| 1   |           | 2100-3252 | 6      | 1   | RES-TRMR 5K 10%            |           | 3386P-Y46-502  |
|     | A26TP100  | 0360-2264 | 6      |     | TERMTEST POINT             | 1 1       | 1095D          |
|     | A26TP101  | 0360-2264 | 6      |     | TERMTEST POINT             | 10358     | 1095D          |
| ſ   | A26TP102  | 0360-2264 | 6      | 1   | TERMTEST POINT             | 10358     | 1095D          |
|     | 96777100  | 0000 000  |        |     |                            |           |                |
|     | 26TP103   | 0360-2264 | 6      |     | TERMTEST POINT             |           | 1095D          |
|     | 26TP104   | 0360-2264 | 6      |     | TERMTEST POINT             | 1         | 1095D          |
|     | 26TP105   | 0360-2264 | 6      | - 1 | TERMTEST POINT             | 10358     | 1095D          |
|     | 26TP106   | 0360-2264 | 6      |     | TERMTEST POINT             | 10358     | 1095D          |
| A   | 26TP108   | 0360-2264 | 6      | 1 / | TERMTEST POINT             | 10358 1   | .095D          |
|     |           |           |        |     |                            |           |                |
|     |           | 0360-2264 | 6      |     |                            | 10358 1   | .095D          |
|     |           | 0360-2264 | 6      |     |                            | 10358   1 | 095D           |
|     |           | 0360-2264 | 6      |     |                            | 10358 1   | 095D           |
|     |           | 1         | 1      |     |                            | 10358 1   | 095D           |
| A   | 26TP200   | 0360-2264 | 6      | 1 7 | TERMTEST POINT             | 10358 1   | 095D           |

| Table B-9. 8130A Ct | hannel 1 Board Part | s List (continued) |
|---------------------|---------------------|--------------------|
|                     |                     | s List (conunued)  |

|     |           | 1         | <u> </u> | T   |                |          |             |  |  |  |
|-----|-----------|-----------|----------|-----|----------------|----------|-------------|--|--|--|
|     | Reference |           |          | Qty | Description    | Manuf    | r Part #    |  |  |  |
|     | A26TP20   | 1         | 6        | 1   | TERMTEST POINT |          | 1095D       |  |  |  |
|     | A26TP20   |           | 6        | 1   | TERMTEST POINT |          | 1095D       |  |  |  |
|     | A26TP300  |           | 6        | 1   | TERMTEST POINT | 10358    | 1095D       |  |  |  |
|     | A26TP30   | 1         | 6        | 1   | TERMTEST POINT | 10358    | 1095D       |  |  |  |
|     | A26TP401  | 0360-2264 | 6        | 1   | TERMTEST POINT | 10358    | 1095D       |  |  |  |
|     |           |           |          |     |                |          |             |  |  |  |
|     | A26TP402  |           | 6        | 1   | TERMTEST POINT | 10358    | 1095D       |  |  |  |
|     | A26U1     | 1NB7-8201 | 6        | 1   |                | 28480    | 1NB7-8201   |  |  |  |
| ĺ   | A26U2     | 1820-2111 | 9        | 1   | IC-INTERFACE   | 01698    | SN75468N    |  |  |  |
|     | A26U100   | 1820-3665 | 0        | 1   | IC-MM74HCT245N | 01698    | SN74HCT245N |  |  |  |
|     | A26U101   | 1820-3847 | 0        | 1   | IC-MM74HCT138N | 01698    | SN74HCT138N |  |  |  |
|     |           |           |          |     |                |          |             |  |  |  |
|     | A26U102   | 1820-3847 | 0        | 1   | IC-MM74HCT138N | 01698    | SN74HCT138N |  |  |  |
|     | A26U103   | 1820-3082 | 5        | 1   | IC-MC74HC374N  | 01698    | SN74HC374N  |  |  |  |
| - 1 | A26U104   | 1818-3164 | 9        | 1   | IC X2816BP     | 10572    | X2816BP     |  |  |  |
| 1   | A26U105   | 1820-3082 | 5        | 1   | IC-MC74HC374N  | 01698    | SN74HC374N  |  |  |  |
|     | A26U106   | 1826-0409 | 6        | 1   | IC MC1723L     | 02037    | MC1723L     |  |  |  |
|     |           |           |          |     |                |          |             |  |  |  |
|     | A26U107   | 1826-1869 | 4        | 1   | D/A 12-BIT     | 03285    | AD7537JN    |  |  |  |
| 1   | A26U108   | 1826-0161 | 7        | 1   | IC 324         | 02037    | LM324N      |  |  |  |
|     | A26U110   | 1820-3082 | 5        | 1   | IC-MC74HC374N  | 01698    | SN74HC374N  |  |  |  |
|     | A26U150   | 1820-3373 | 7        |     | IC-MM74HC221AN | 03406    | MM74HC221AN |  |  |  |
|     | A26U151   | 1820-3298 | 5        |     | IC-MM74HC32N   | 02037    | MC74HC32N   |  |  |  |
|     |           |           |          |     |                |          |             |  |  |  |
| 4   | A26U152   | 1820-2924 | 2        | 1   | IC-MC74HC02N   | 01698    | SN74HC02N   |  |  |  |
| 4   | A26U153   | 1820-3081 | 4        |     | IC-MC74HC74N   |          | SN74HC74N   |  |  |  |
| 1   | A26U154   | 1820-3081 | 4        |     | IC-MC74HC74N   | 1        | SN74HC74N   |  |  |  |
| ł   | A26U155   | 1820-3097 | 2        |     | IC-MM74HC08N   | Í        | MC74HC08N   |  |  |  |
| A   | 26U156    | 1826-0600 | 9        |     | IC 074A        |          | TL074ACN    |  |  |  |
|     |           |           |          |     |                | 01030    | IL0/4ACN    |  |  |  |
|     |           | 1826-0138 | 8        | 1   | IC 339         | 01698    | LM339N      |  |  |  |
|     |           | 1858-0053 | 3        | 1   |                | 02037    |             |  |  |  |
| A   | 26U159    | 1858-0058 | 8        | I   |                |          | MPQ3906     |  |  |  |
| A   | 26U160    | 1820-3082 | 5        |     |                |          | SN74HC374N  |  |  |  |
| A   |           |           | 3        |     |                |          | MC14051BCP  |  |  |  |
|     |           |           |          |     | 1101101101101  | 04001 [] | MU14001BUP  |  |  |  |

Table B-9. 8130A Channel 1 Board Parts List (continued)

| Reference |           | CD | Qty | Description      | Manufr | Part #       |
|-----------|-----------|----|-----|------------------|--------|--------------|
| A26U162   | 1826-0877 | 2  | 1   | A/D 8-BIT        | 03285  | AD7574KN     |
| A26U163   | 1826-0161 | 7  | 1   | IC 324           | 02037  | LM324N       |
| A26U164   | 1826-0161 | 7  | 1   | IC 324           | 02037  | LM324N       |
| A26U165   | 1826-0139 | 9  | 1   | IC 1458          | 02037  | MC1458P1     |
| A26U200   | 1826-1869 | 4  | 1   | D/A 12-BIT       | 03285  | AD7537JN     |
|           |           |    |     |                  |        |              |
| A26U201   | 1826-1553 | 3  | 1   | IC 1014          | 10858  | LT1014DN     |
| A26U202   | 1826-1553 | 3  | 1   | IC 1014          | 10858  | LT1014DN     |
| A26U203   | 1826-0501 | 9  | 1   | ANLG MUXR MC1405 | 02037  | MC14053BCP   |
| A26U204   | 1826-0501 | 9  | 1   | ANLG MUXR MC1405 | 02037  | MC14053BCP   |
| A26U300   | 1826-1553 | 3  | 1   | IC 1014          | 10858  | LT1014DN     |
|           |           |    |     |                  |        |              |
| A26U301   | 1826-1553 | 3  | 1   | IC 1014          | 10858  | LT1014DN     |
| A26U302   | 1826-1553 | 3  | 1   | IC 1014          | 10858  | LT1014DN     |
| A26U303   | 1826-0315 | 3  | 1   | IC 348           | 03406  | LM348N       |
| A26U305   | 1826-1409 | 8  | 1   | IC 1013          | 10858  | LT1013CN8    |
| A26U306   | 1826-0139 | 9  | 1   | IC 1458          | 02037  | MC1458P1     |
|           |           |    |     |                  |        |              |
| A26U400   | 1826-0161 | 7  | 1   | IC 324           | 02037  | LM324N       |
| A26U401   | 1826-0161 | 7  |     | IC 324           | 02037  | LM324N       |
| A26U402   | 1826-0161 | 7  |     | IC 324           | 02037  | LM324N       |
| A26U403   | 1826-0161 | 7  |     | IC 324           | 02037  | LM324N       |
| A26U404   | 1826-0161 | 7  | 1   | IC 324           | 02037  | LM324N       |
|           |           |    | Í   |                  |        |              |
| A26U405   | 1826-0501 | 9  |     | ANLG MUXR MC1405 |        | MC14053BCP   |
| A26U900   | 1826-1617 | 0  |     | ANLG MUXR DG509A | 02883  | DG509ABK     |
| A26U901   | 1858-0058 | 8  |     | XSTR ARY 14P-DIP |        | MPQ3906      |
| A26U902   | 1858-0021 | 5  |     | XSTR ARY 16P-DIP |        | CA3083       |
| A26U903   | 1826-0161 | 7  | 1   | IC 324           | 02037  | LM324N       |
| ADETTOOA  | 1000 0101 | _  |     |                  |        |              |
| A26U904   | 1826-0161 | 7  |     | IC 324           |        | LM324N       |
| A26VR1    | 1902-0953 | 7  |     | DIO-ZNR 6.2V 5%  |        | SZ30035-11RL |
| A26VR2    | 1902-0953 | 7  |     | DIO-ZNR 6.2V 5%  |        | SZ30035-11RL |
| A26VR3    | 1902-0944 | 6  |     | DIO-ZNR 2.7V 5%  | 02037  |              |
| A26VR101  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5%  | 02037  | SZ30035-9RL  |

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|    | Reference | HP Part # | CD | Qty | Description     | Manuf'r | Part #      |
|----|-----------|-----------|----|-----|-----------------|---------|-------------|
|    | A26VR150  | 1902-0950 | 4  | 1   | DIO-ZNR 4.7V 5% | 02037   |             |
|    | A26VR151  | 1902-0950 | 4  | 1   | DIO-ZNR 4.7V 5% |         |             |
|    | A26VR152  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
|    | A26VR200  | 1902-0944 | 6  | 1   | DIO-ZNR 2.7V 5% | 1       |             |
|    | A26VR300  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
|    |           |           |    |     |                 |         |             |
|    | A26VR301  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
|    | A26VR400  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
|    | A26VR401  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
|    | A26VR402  | 1902-0954 | 8  | 1   | DIO-ZNR 6.8V 5% | 02037   |             |
|    | A26VR403  | 1902-0935 | 5  | 1   | DIO-ZNR 9.1V 5% | 02037   |             |
|    |           |           |    |     |                 |         |             |
|    | A26VR404  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
|    | A26VR405  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
|    | A26VR900  | 1902-0962 | 8  | 1   | DIO-ZNR 15V 5%  | 02037   |             |
|    | A26VR903  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
| 1  | A26VR904  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
|    |           |           |    |     |                 |         |             |
|    | A26VR905  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
|    | A26VR907  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
|    | A26VR908  | 1902-0958 | 2  | 1   | DIO-ZNR 10V 5%  | 02037   |             |
|    | A26VR909  | 1902-0945 | 7  | 1   | DIO-ZNR 3V 5%   | 02037   | SZ0035-3RL  |
| ]. | A26VR914  | 1902-1378 | 2  | 1   | DIO-ZNR 3.6V 5% | 02037   |             |
| ļ  |           |           |    |     |                 |         |             |
| 1  |           | 1258-0141 | 8  | 1   | JUMPER-REM      | 01380   | 530153-2    |
| -  | A26W101   | 1258-0141 | 8  | 1   | JUMPER-REM      |         | 530153-2    |
| Ŀ  | 426W300   | 1258-0141 | 8  | 1   | JUMPER-REM      |         | 530153-2    |

Table B-9. 8130A Channel 1 Board Parts List (continued)

# **Dual-channel Instrument Parts Lists**

### Master List Option 020

| Reference  | HP Part #   | CD | Qty | Description      | Manufr | Part #      |
|------------|-------------|----|-----|------------------|--------|-------------|
| <b>A</b> 0 | 8130A #     | 0  | 1   | PULSE GEN 2CHAN  | 28480  | 8130A #020  |
| A0 A1      | 08130-66521 | 7  | 1   | BD AY KEY OPT    | 28480  | 08130-66521 |
| A0 A5      | 08130-66525 | 1  | 1   | BD AY TIMING OPT | 28480  | 08130-66525 |
| A0 A27     | 08130-66527 | 3  | 1   | BD AY CHAN 2     | 28480  | 08130-66527 |
| A0 MP13    | 08130-40201 | 6  | 1   | PANEL FRONT OPT  | 28480  | 08130-40201 |
| A0 W12     | 08130-61603 | 6  | 1   | CBL AY OUTPUT    | 28480  | 08130-61603 |
| A0 W13     | 08130-61603 | 6  | 1   | CBL AY OUTPUT    | 28480  | 08130-61603 |

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Table B-10. 8130A Option 020 Instrument Parts List

## Keyboard Option 020

| Reference | HP Part #   | CD | Qty | Description     | Manufr | Part #             |
|-----------|-------------|----|-----|-----------------|--------|--------------------|
| A1        | 08130-66521 | 7  | 1   | BD AY KEY OPT   | 28480  | 08130-66521        |
| A1 C2     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
| A1 C3     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
| A1 C4     | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
|           |             |    |     |                 |        |                    |
| A1 CP1    | 0180-2207   | 5  | 1   | CAP 100uF 10 V  | 04200  | 150D107X9010R2-DYS |
| A1 DS1    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
| A1 DS2    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
|           |             |    |     |                 |        |                    |
| A1 DS3    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
| A1 DS4    | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
| A1 DS5    | 1990-1252   | 6  | 1   | LED-LT BAR      | 01542  | HLCP-B100          |
| A1 DS6    | 1990-1278   | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
| A1 DS7    | 1990-1278   | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
|           | 1000 107 /  |    |     |                 |        |                    |
| A1 DS8    | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS10   | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS11   | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS12   | 1990-1254   | 8  | - 1 | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS13   | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
|           |             |    |     |                 |        |                    |
| A1 DS14   | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| 1 1       | 1990-1254   | 8  |     | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| 1 1       | 1990-1254   | 8  |     | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| 1         | 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS18   | 1990-1254   | 8  | 1   | LED-LMP         |        | HLMP-Q150 SELECTED |
|           |             |    |     |                 |        |                    |
|           | 1990-1254   | 8  |     |                 | 01542  | HLMP-Q150 SELECTED |
|           | 1990-1278   | 6  |     |                 | 01542  | HLMP-K155          |
|           | 1990-1278   | 6  |     |                 | 01542  | HLMP-K155          |
|           | 1990-1278   | 6  |     |                 | 01542  | HLMP-K155          |
| A1 DS27   | 1990-1278   | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |

Table B-11. 8130A Option 020 Keyboard Parts List

| Table B-11. 8130A Option 020 Keyboard Parts List | (continued) |
|--------------------------------------------------|-------------|
|--------------------------------------------------|-------------|

| Reference | +         | CD | Qty | Description |       |                    |  |  |  |  |  |
|-----------|-----------|----|-----|-------------|-------|--------------------|--|--|--|--|--|
| A1 DS28   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS30   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS31   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS32   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS33   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
|           |           |    |     |             | 1     |                    |  |  |  |  |  |
| A1 DS34   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS35   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS36   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS37   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS38   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
|           |           |    |     |             |       |                    |  |  |  |  |  |
| A1 DS39   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS41   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS42   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS44   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS47   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
|           |           |    |     |             |       |                    |  |  |  |  |  |
| A1 DS48   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS51   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS52   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS53   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS55   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
|           |           |    | ĺ   |             |       |                    |  |  |  |  |  |
| A1 DS56   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS57   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS61   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS62   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS63   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
|           |           |    |     |             |       |                    |  |  |  |  |  |
| 1         | 1990-1254 | 8  | 1   | LED-LMP     | 01542 | HLMP-Q150 SELECTED |  |  |  |  |  |
| A1 DS65   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS71   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
|           | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |
| A1 DS73   | 1990-1278 | 6  | 1   | LED-LMP     | 01542 | HLMP-K155          |  |  |  |  |  |

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Table B-11. 8130A Option 020 Keyboard Parts List (continued)

| Re    | ference    | HP Part #              | CD         | Qty        | Description      | Manufr | Part #      |
|-------|------------|------------------------|------------|------------|------------------|--------|-------------|
| 1     | DS74       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
|       | DS75       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| A1    | DS76       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| A1    | DS77       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| A1    | DS81       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
|       |            |                        |            |            |                  |        |             |
| 1     | DS82       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
|       | DS83       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| 1     | DS84       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| 1     | DS91       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| A1    | DS92       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
|       |            |                        |            |            |                  |        |             |
| 1     | DS93       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
|       | DS94       | 1990-1278              | 6          | 1          | LED-LMP          | 01542  | HLMP-K155   |
| A1    |            | 1252-0217              | 7          | 1          | CONN-POST-TP-HDR |        | 3429-5202   |
|       | MP1        | 5041-4707              | 5          | 8          | QTR COBLK        | 28480  | 5041-4707   |
| AI    | MP2        | 5041-0318              | 6          | 5          | LK CAP PTY GRAY  | 28480  | 5041-0318   |
| 4.1   | MP3        | 5041 0200              | _          | _          |                  |        |             |
| 1     | MP3<br>MP4 | 5041-0309              | 5          | 5          | CAP KEY QUARTER  | 28480  | 5041-0309   |
|       |            | 5041-0507              | 5          | 1          | QTR WGRN         | 28480  | 5041-0507   |
|       | MP5        | 5041-0726              | 0          | 1          | KEY CAP LCL      | 28480  | 5041-0726   |
|       | MP6        | 1200-0654              | 7          | 1          | SKT-IC 40-CONT   | 01380  | 2-641606-1  |
|       | MP7        | 1200-0899              | 2          | 1          | SKT-STRP 8-CONT  | 04129  | 8-0511-10   |
| A 1 . | DAI        | 1910 0295              |            | .          |                  |        |             |
| 1     | RA1<br>RA2 | 1810-0325<br>1810-0338 | 2   7      |            | NETWORK-RES DIP  | 02483  | 761-3-R150  |
| 1     | RA3        | 1810-0338              | 7          | 1          | NETWORK-RES DIP  | 02483  | 761-3-R100  |
| ſ     |            | 1810-0275              | 1          |            | NETWORK-RES DIP  | 02483  | 761-3-R100  |
| A1    | 1          | 1810-0275              | 1          |            | NETWORK-RES SIP  | 02483  | 750-101     |
| TT I  |            | 1810-0275              |            |            | NETWORK-RES SIP  | 02483  | 750-101     |
| A1 5  | sı         | 5060-9436              | 7          | 1          | SW-PB SPST NO    | 04490  | FF 00 0 000 |
| A1 S  | 1          | 5060-9436              | 7          |            | SW-PB SPS1 NO    |        | 5560-9436   |
| Als   |            | 5060-9436              | 7          | 1          | SW-PB SPS1 NO    |        | 5560-9436   |
| A1 S  |            | 5060-9436              | 7          | - 1        | SW-PB SPST NO    |        | 5560-9436   |
| A1 S  |            | 5060-9436              | 7          |            | SW-PB SPST NO    |        | 5560-9436   |
|       |            | 00000100               | <u>'  </u> | <u>+ 1</u> | JH-LD JEJI NU    | 04486  | 5560-9436   |

Table B-11. 8130A Option 020 Keyboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description   | Manuf'r | Part #    |
|-----------|-----------|----|-----|---------------|---------|-----------|
| A1 S6     | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S7     | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S8     | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S10    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S11    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           |           |    |     |               |         |           |
| A1 S12    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S13    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S14    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S15    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S16    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           |           |    |     |               |         |           |
| A1 S17    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S18    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S19    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S20    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S21    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           |           |    |     |               |         |           |
| A1 S22    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S23    | 5060-9436 | 7  |     | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S24    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| 1 1       | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S26    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           |           | *  | ĺ   |               |         |           |
|           | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| ! !       | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
| A1 S42    | 5060-9436 | 7  | 1   | SW-PB SPST NO | 04486   | 5560-9436 |
|           |           | Í  |     |               |         |           |
|           | 5060-9436 | 7  |     |               |         | 5560-9436 |
|           | 5060-9436 | 7  |     |               | 04486   | 5560-9436 |
|           | 5060-9436 | 7  |     |               | 04486   | 5560-9436 |
|           | 5060-9436 | 7  |     | 1             |         | 5560-9436 |
| A1 S47    | 5060-9436 | 7  | 1 ! | SW-PB SPST NO | 04486   | 5560-9436 |

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| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #      |
|-----------|-----------|----|-----|------------------|--------|-------------|
| A1 S48    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486  | 5560-9436   |
| A1 S51    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486  | 5560-9436   |
| A1 S52    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486  | 5560-9436   |
| A1 S53    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486  | 5560-9436   |
| A1 S54    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486  | 5560-9436   |
|           |           |    |     |                  |        |             |
| A1 U1     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N |
| A1 U2     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N |
| A1 U3     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N |
| A1 U4     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698  | SN74HCT244N |
| A1 U5     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698  | SN74HCT244N |
|           |           |    |     |                  |        |             |
| A1 U6     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037  |             |
| A1 U7     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037  |             |
| A1 U8     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037  |             |
| A1 U9     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037  |             |

Table B-11. 8130A Option 020 Keyboard Parts List (continued)

### Timing Board Option 020

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-------------|----|-----|------------------|---------|-------------------|
| A5        | 08130-66525 | 1  | 1   | BD AY TIMING OPT | 28480   | 08130-66525       |
| A5 C101   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C103   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C105   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
|           |             |    |     |                  |         |                   |
| A5 C107   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C109   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |
| A5 C110   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C111   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C112   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |             |    |     |                  |         |                   |
| A5 C113   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C117   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C121   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C122   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C126   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |             |    |     |                  |         |                   |
| A5 C127   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C131   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C140   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C142   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |             |    |     |                  |         |                   |
|           | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| (         | 0160-6623   | 5  |     | CAP 0.1uF 50 V   |         | SA115C104MAAH     |
| 1         | 0160-6623   | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           | 0160-6623   | 5  |     |                  | 02010   | SA115C104MAAH     |
| A5 C205   | 0160-6500   | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |

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Table B-12. 8130A Option 020 Timing Board Parts List

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Dec       |                                       |          |     |                  |        |                   |
|-----------|---------------------------------------|----------|-----|------------------|--------|-------------------|
| Reference | · · · · · · · · · · · · · · · · · · · | <u> </u> | Qty |                  | Manufr |                   |
| A5 C206   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 1      | SA101C103KAAH     |
| A5 C207   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C208   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C209   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | I      | SA101C103KAAH     |
| A5 C210   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|           |                                       |          |     |                  | ]      |                   |
| A5 C220   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |
| A5 C221   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C222   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C223   | 0160-5726                             | 7        | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A5 C224   | 0160-5726                             | 7        | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
|           |                                       | 1        |     |                  |        |                   |
| A5 C300   | 0160-5746                             | 1        | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C301   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C303   | 0160-4535                             | 4        | 1   | CAP 1uF 50 V     | 02010  | SR305C105KAAH     |
| A5 C304   | 0160-5746                             | 1        | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C305   | 0160-5746                             | 1        | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
|           |                                       |          |     |                  |        |                   |
| A5 C306   | 0160-5726                             | 7        | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A5 C307   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C308   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C309   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C310   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|           |                                       |          |     |                  |        |                   |
| A5 C311   | 0160-5726                             | 7        | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A5 C312   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C313   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C314   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C315   | 0160-6623                             | 5        | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|           |                                       |          |     |                  | 1      |                   |
|           | 0160-6623                             | 5        | 1   |                  | 02010  | SA115C104MAAH     |
| ·         | 0160-6623                             | 5        |     |                  | 02010  | SA115C104MAAH     |
| J         | 0160-6623                             | 5        |     |                  | 02010  | SA115C104MAAH     |
|           | 0160-6500                             | 7        |     |                  | 02010  | SA101C103KAAH     |
| A5 C322   | 0160-6500                             | 7        | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |

| Referen | ce HP Part # | CD | Qty | Description      | Manufr | Part #            |
|---------|--------------|----|-----|------------------|--------|-------------------|
| A5 C324 |              | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C325 |              | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C327 | 0160-6500    | 7  | 1   | CAP 0.01uF 100 V | 1      | SA101C103KAAH     |
| A5 C328 | 0160-6500    | 7  | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |
| A5 C330 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|         |              |    |     |                  |        |                   |
| A5 C331 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C333 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C335 | 0160-4535    | 4  | 1   | CAP 1uF 50 V     | 02010  | SR305C105KAAH     |
| A5 C336 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C340 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|         |              |    |     |                  |        |                   |
| A5 C341 | 0160-5726    | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A5 C342 | 0160-6500    | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C343 | 0160-6500    | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
| A5 C350 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C360 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|         |              |    |     |                  |        |                   |
| A5 C363 | 0160-6623    | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C399 | 0160-5741    | 6  | 1   | CAP 47pF 100 V   | 06121  | B37979-J1470-J034 |
| A5 C400 | 0160-5746    | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C401 | 0160-5746    | 1  | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C403 | 0160-4535    | 4  | 1   | CAP 1uF 50 V     | 02010  | SR305C105KAAH     |
|         |              |    |     |                  |        |                   |
| A5 C404 | 0160-6623    | 5  |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
| A5 C405 | 0160-5746    | 1  |     | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |
| A5 C406 | 0160-5726    | 7  |     | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| A5 C411 | 0160-5726    | 7  |     | 1                | 06121  | B37987-J1103-M034 |
| A5 C412 | 0160-6500    | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|         |              |    |     |                  |        |                   |
| A5 C413 | 0160-6500    | 7  |     |                  |        | SA101C103KAAH     |
| A5 C414 | 0160-6623    | 5  |     |                  |        | SA115C104MAAH     |
| A5 C415 | 0160-6623    | 5  |     |                  |        | SA115C104MAAH     |
| A5 C417 | 0160-6623    | 5  |     |                  |        | SA115C104MAAH     |
| A5 C418 | 0160-6623    | 5  | 1 ( | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |

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Table B-12. 8130A Option 020 Timing Board Parts List (continued)

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Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| ſ   | Reference | e HP Part # | lon |     |                  |        |                   |  |  |  |
|-----|-----------|-------------|-----|-----|------------------|--------|-------------------|--|--|--|
| ┢   |           |             |     | Qty |                  | Manufr | n                 |  |  |  |
| _ I | A5 C420   |             | 5   |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
| - 1 | A5 C421   | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |  |  |  |
| 1   | A5 C422   | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |  |  |  |
|     | A5 C424   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     | A5 C425   | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11  |  |  |  |
|     |           |             |     |     |                  |        |                   |  |  |  |
|     | A5 C427   | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V |        | SA101C103KAAH     |  |  |  |
|     | A5 C428   | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |  |  |  |
|     | A5 C430   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
| -   | A5 C431   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
| 4   | A5 C433   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     |           |             |     |     | İ                | 1      |                   |  |  |  |
| 1   | 45 C435   | 0160-4535   | 4   | 1   | CAP 1uF 50 V     | 02010  | SR305C105KAAH     |  |  |  |
|     | 45 C436   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     | 45 C440   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     | 45 C441   | 0160-5726   | 7   | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |  |  |  |
| A   | 15 C442   | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |  |  |  |
|     |           |             |     |     |                  |        |                   |  |  |  |
|     | 5 C443    | 0160-6500   | 7   | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |  |  |  |
|     | 5 C450    | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
| 1   | 5 C460    | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     | 5 C465    | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
| A   | .5 C470   | 0160-3872   | 0   | 1   | CAP 2.2pF 200 V  | 06352  | FD12C0G2D2R2C     |  |  |  |
|     |           |             |     |     |                  |        |                   |  |  |  |
| ł.  | .5 C471   | 0160-3872   | 0   | 1   | CAP 2.2pF 200 V  | 06352  | FD12C0G2D2R2C     |  |  |  |
| 1   | 5 C500    | 0160-5746   | 1   |     | CAP 0.1uF 50 V   | 1      | B37987-T5104-M11  |  |  |  |
|     | 5 C501    | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | f .    | B37987-T5104-M11  |  |  |  |
|     | 5 C503    | 0160-4535   | 4   | 1   | CAP 1uF 50 V     |        | SR305C105KAAH     |  |  |  |
| A   | 5 C504    | 0160-5746   | 1   | 1   |                  |        | B37987-T5104-M11  |  |  |  |
|     |           |             |     |     |                  |        |                   |  |  |  |
| A   | 5 C505    | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |
|     | 5 C506    | 0160-5726   | 7   | 1   |                  |        | B37987-J1103-M034 |  |  |  |
|     | 5 C511    | 0160-5726   | 7   |     |                  |        | B37987-J1103-M034 |  |  |  |
|     |           | 0160-6500   | 7   |     |                  |        | SA101C103KAAH     |  |  |  |
| A   | 5 C513    | 0160-6500   | 7   |     | i i i            | 1      | SA101C103KAAH     |  |  |  |

| Referenc           | e HP Part # | CD       | Qty      | Description      | Manuf | Part #            |
|--------------------|-------------|----------|----------|------------------|-------|-------------------|
| A5 C514            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C515            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C517            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C518            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C520            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
|                    |             |          |          |                  |       |                   |
| A5 C521            | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C522            | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C524            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C525            | 0160-5746   | 1        | 1        | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |
| A5 C527            | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
|                    |             |          |          |                  |       |                   |
| A5 C528            | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C530            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C531            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C533            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C535            | 0160-4535   | 4        | 1        | CAP luF 50 V     | 02010 | SR305C105KAAH     |
| LE CERC            |             | _        |          | <b></b>          |       |                   |
| A5 C536            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C540<br>A5 C541 | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| 1                  | 0160-5726   | 7        | 1        | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |
| A5 C542<br>A5 C543 | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 U543            | 0160-6500   | 7        | 1        | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C550            | 0160-6623   | 5        | ,        | CID 0 1 D FO II  |       |                   |
| A5 C560            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C565            | 0160-6623   | 5        | 1        | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C505            | 4           | - F      |          | CAP 0.1uF 50 V   | i i   | SA115C104MAAH     |
| A5 C570<br>A5 C571 | 0160-3872   | 0        |          | CAP 2.2pF 200 V  |       | FD12C0G2D2R2C     |
| A9 C971            | 0160-3872   | 0        | 1        | CAP 2.2pF 200 V  | 06352 | FD12C0G2D2R2C     |
| A5 C600            | 0160-5746   | ,        |          | CADAL DEAT       |       |                   |
| A5 C600<br>A5 C601 | 0160-5746   | 1        |          |                  |       | B37987-T5104-M11  |
| A5 C601<br>A5 C603 | 0160-5746   | 1        |          |                  |       | B37987-T5104-M11  |
| A5 C603<br>A5 C604 | 0160-4535   | 4        |          |                  |       | SR305C105KAAH     |
| A5 C604<br>A5 C605 | 0160-6623   | 1 5      |          |                  | 1     | B37987-T5104-M11  |
| 110 0000           | 0100-0023   | <u> </u> | <u> </u> | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Re   | ference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|------|---------|-----------|----|-----|------------------|---------|-------------------|
| A5   | C606    | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5   | C611    | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|      | C612    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5   | C613    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5   | C614    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         |           |    |     |                  |         |                   |
| 1    | C615    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      | C617    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      | C618    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      | C620    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5   | C621    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|      |         |           |    |     |                  |         |                   |
| 1    | C622    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|      | C624    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| 1    | C625    | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|      | C627    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5   | C628    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|      |         |           |    |     |                  |         |                   |
| 1    | 1       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| 1    |         | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| 1    | 4       | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| A5 ( | C636    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         |           |    |     |                  |         |                   |
|      |         | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| ļ    |         | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| 1    | 1       | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|      |         | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 ( | C650    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         |           |    |     |                  |         |                   |
|      | 1       | 0160-6623 | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         | 0160-6623 | 5  |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|      |         | 0160-3872 | 0  |     | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C     |
|      |         | 0160-3872 | 0  |     | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C     |
| A5 ( | C700 (  | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

|         |       | HP Part # | CD | Qty | Description      | Manuf | Part #            |
|---------|-------|-----------|----|-----|------------------|-------|-------------------|
| A5 C7   |       | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |
| A5 C70  |       | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010 | SR305C105KAAH     |
| A5 C70  |       | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |
| A5 C70  |       | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |
| A5 C70  | 06    | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |
|         |       |           |    |     |                  |       |                   |
| A5 C71  |       | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |
| A5 C71  |       | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C71  |       | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C71  |       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C71  | .5    | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
|         |       |           | 1  |     |                  |       |                   |
| A5 C71  |       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C71  |       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C72  |       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C72  |       | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C72  | 2     | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
|         |       |           |    |     |                  |       |                   |
| A5 C72  | 1     | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C72  |       | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |
| A5 C72  | - 1   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C728 | 1     | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |
| A5 C730 | 0   ( | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
|         |       |           |    |     |                  |       |                   |
| A5 C731 |       | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C733 |       | 0160-6623 | 5  |     | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C735 |       | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010 | SR305C105KAAH     |
| A5 C736 | - 1   | )160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
| A5 C740 | ) (0  | )160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |
|         |       |           |    |     |                  | [     |                   |
| A5 C741 |       | )160-5726 | 7  |     |                  | 06121 | B37987-J1103-M034 |
| A5 C742 |       | 160-6500  | 7  |     |                  |       | SA101C103KAAH     |
| A5 C743 |       | 160-6500  | 7  |     |                  | 02010 | SA101C103KAAH     |
| A5 C750 |       | 160-6623  | 5  |     |                  |       | SA115C104MAAH     |
| A5 C760 | 0     | 160-6623  | 5  | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

|    |                      | HP Part # | CD | Qty | Description              | Manuf'r | Part #             |
|----|----------------------|-----------|----|-----|--------------------------|---------|--------------------|
|    | A5 C765              | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V           | 02010   | SA115C104MAAH      |
|    | A5 C770              | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V          | 06352   | FD12C0G2D2R2C      |
|    | A5 C771              | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V          | 06352   | FD12C0G2D2R2C      |
|    | A5 CP100             | 0180-1974 | 1  | 1   | CAP 10uF 35 V            | 04200   | 150D106X9035R2-DYS |
|    | A5 CP102             | 0180-0229 | 7  | 1   | CAP 33uF 10 V            | 04200   | 150D336X9010B2-DYS |
|    |                      |           |    |     |                          |         |                    |
|    |                      | 0180-0229 | 7  | 1   | CAP 33uF 10 V            | 04200   | 150D336X9010B2-DYS |
|    | A5 CP106             |           | 7  | 1   | CAP 33uF 10 V            | 04200   | 150D336X9010B2-DYS |
|    | A5 CP108             |           | 1  | 1   | CAP 10uF 35 V            | 04200   | 150D106X9035R2-DYS |
|    | A5 CP180             | 0180-0229 | 7  | 1   | CAP 33uF 10 V            | 04200   | 150D336X9010B2-DYS |
|    | A5 CP200             | 0180-4129 | 4  | 1   | CAP 1uF 35 V             | 04200   | 173D105X9035V      |
|    |                      |           |    | i   |                          |         |                    |
|    |                      | 0180-4129 | 4  | 1   | CAP 1uF 35 V             | 04200   | 173D105X9035V      |
|    | A5 CR100             |           | 9  | 1   | DIO- SCHOTTKY SM         |         | 50825511           |
|    | A5 CR102             | 1         | 9  | 1   | DIO- SCHOTTKY SM         |         | 50825511           |
|    | A5 CR103             |           | 0  | 1   | DIO-1N5818               | 02037   | 1N5818             |
|    | A5 CR310             | 1901-1098 | 1  | 1   | DIO-1N4150               | 00746   |                    |
|    | AE CD911             | 1001 1000 | .  |     | <b>BIO</b> (111)         |         |                    |
|    | A5 CR311<br>A5 CR312 |           | 1  | 1   | DIO-1N4150               | 00746   |                    |
|    | A5 CR312<br>A5 CR313 |           | 1  | 1   | DIO-1N4150               | 00746   |                    |
|    |                      |           | 1  |     | DIO-1N4150               | 00746   |                    |
|    | A5 CR314<br>A5 CR315 |           | 1  |     | DIO-1N4150               | 00746   |                    |
|    | AD CR315             | 1901-1098 | 1  | 1   | DIO-1N4150               | 00746   |                    |
|    | A5 CR410             | 1001 1008 | 1  | 1   | DIO-1N4150               | 00.00   |                    |
|    | A5 CR411             |           | 1  |     | DIO-1N4150<br>DIO-1N4150 | 00746   |                    |
| 1  | A5 CR412             |           | 1  |     | DIO-1N4150<br>DIO-1N4150 | 00746   |                    |
| ÷. | A5 CR413             |           | 1  |     | DIO-1N4150               | 00746   |                    |
|    | A5 CR414             | 1         | 1  |     | DIO-1N4150               | 00746   |                    |
|    |                      | 1001-1090 | *  | 1   | DIO-1114100              | 00746   |                    |
| .  | A5 CR415             | 1901-1098 | 1  | 1   | DIO-1N4150               | 00746   |                    |
|    | A5 CR416             |           | 7  |     |                          |         | SR3010-3RL         |
|    | A5 CR510             | 1         | 1  |     |                          | 00746   |                    |
|    | A5 CR511             | 1901-1098 | 1  |     |                          | 00746   |                    |
| Ŀ  | 45 CR512             | 1901-1098 | 1  | - F |                          | 00746   |                    |

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #               |
|-----------|-------------|----|-----|------------------|---------|----------------------|
|           | 3 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| 1         | 5 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                      |
| 1         | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| A5 CR611  | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           |             |    |     |                  |         |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   | ļ                    |
| 4         | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| 1         | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| A5 CR616  | 1901-0731   | 7  | 1   | DIO-PWR RECT     | 02037   | SR3010-3RL           |
|           |             |    |     |                  |         |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| 1         | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
| A5 CR714  | 1901-1098   | 1  | 1   | DIO-1N4150       | 00746   |                      |
|           |             |    |     |                  |         |                      |
| A5 CR715  | 1           | 1  | 1   | DIO-1N4150       | 00746   |                      |
| A5 J100   | 1251-8324   | 1  | 1   | CONN-POST-TP-HDR |         | G06M96P4BEBL-004-715 |
| A5 J101   | 1251-5380   | 3  | 1   | CONN-POST-TP-HDR | 1 1     | 68000-602            |
| A5 J102   | 1251-5380   | 3  | 1   | CONN-POST-TP-HDR |         | 68000-602            |
| A5 J200   | 1250-0543   | 8  | 1   | CONN-RF SM-SNP   | 05769   | 51-053-0349-BE8      |
| A.C. 1400 | 1051 5000   |    |     |                  |         |                      |
| A5 J400   | 1251-5380   | 3  |     | CONN-POST-TP-HDR |         | 68000-602            |
| A5 J600   | 1251-5380   | 3  |     | CONN-POST-TP-HDR |         | 68000-602            |
| A5 K400   | 0490-1667   | 6  |     | RLY 2C 12VDC     |         | RG2T-12V             |
| A5 K600   | 0490-1667   | 6  |     | RLY 2C 12VDC     |         | RG2T-12V             |
| A5 L100   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B          |
|           |             |    |     |                  |         |                      |
| A5 L101   | 9100-1788   | 6  | 1   | CORE-FERRITE     |         | VK200 20/4B          |
| A5 L102   | 9100-1788   | 6  | - 1 | CORE-FERRITE     | 02995   | VK200 20/4B          |
| A5 L103   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B          |
| A5 L104   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B          |
| A5 L110   | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1            |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

## Table B-12. 8130A Option 020 Timing Board Parts List (continued)

|    | Reference | HP Part #   | CD | Qty | Description      | Manufr  | Part #      |
|----|-----------|-------------|----|-----|------------------|---------|-------------|
| A  | 5 L111    | 9100-2891   | 4  | 1   | L 50NH + 10%     | 03273   | 10M050K-1   |
| A  | 5 L112    | 9100-2891   | 4  | 1   | L 50NH + 10%     | 03273   | 10M050K-1   |
| A  | 5 L113    | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
| A  | 5 L114    | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
| A  | 5 L300    | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
|    |           |             |    |     |                  |         |             |
| A  | 5 L400    | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1    |
| A  | 5 L400    | 9100-2891   | 4  |     | L 50NH +-10%     | 03273   | 10M050K-1   |
| A  | 5 L500    | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
|    | 5 L600    | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1    |
| A  | 5 L600    | 9100-2891   | 4  |     | L 50NH +-10%     | 03273   | 10M050K-1   |
|    |           |             |    |     |                  |         |             |
|    | 5 L700    | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1   |
|    | 5 MP130   | 1400-1437   | 0  | 4   | CLAMP-CABLE      | 11808   |             |
| 1  | 5 MP134   | 1400-0082   | 9  | 1   | CLMP-CA          | 02414   | HP-2N       |
|    | 5 MP136   |             | 7  | 1   | WASHER-FL MTLC 3 | 06691   |             |
| A  | 5 MP201   | 54100-29104 | 5  | 1   | SPRING           | 28480   | 54100-29104 |
|    |           |             |    |     |                  |         |             |
| F  | 5 MP202   |             | 2  | 1   | CLAMP            | 28480   | 54100-29101 |
| 1  | 5 MP209   |             | 8  | 1   | SPRING           | 28480   | 54100-21103 |
|    | 5 MP230   |             | 2  | 4   | SPCR-PRS-IN      | 03981   | YC3-4564    |
| 1  | 5 MP240   | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610   |             |
| A  | 5 MP300   | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
|    |           |             |    |     |                  |         |             |
|    | MP301     |             | 5  | 1   | SOCKET PGA 72PI  | 10803   | 1KS072-33TG |
| 1  | MP400     |             | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
| 1  | MP401     | 1200-1410   | 5  | 1   | SOCKET PGI 72PI  | 10803   | 1KS072-33TG |
|    | MP500     | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
| A5 | MP501     | 1200-1410   | 5  | 1   | SOCKET PGI 72PI  | 1       | 1KS072-33TG |
|    |           |             |    |     |                  |         |             |
|    | MP600     | 1200-1468   | 3  |     | SOCKET RGA72 CN  | 10803   | 1KS072-33TT |
|    |           | 1200-1410   | 5  | 1   | SOCKET PGI 72PI  | 10803   | 1KS072-33TG |
|    |           | 1200-1468   | 3  |     |                  | 10803   | 1KS072-33TT |
|    |           | 1200-1410   | 5  |     |                  | 10803   | 1KS072-33TG |
| A5 | Q200      | 1853-0563   | 0  | 1   | XSTR PNP SI      | 02037 2 | 2N3906(SEL) |

| A5       Q310       1854-1028       6       1       XSTR NPN SI       Q2037       2N3904         A5       Q312       1855-0309       6       1       MOSFET 2N4352 P-       Q2037       2N4352         A5       Q313       1855-0309       6       1       MOSFET 2N4352 P-       Q2037       2N4352         A5       Q314       1853-0569       6       1       XSTR PNP SI       Q2037       2N5088         A5       Q315       1854-0392       5       1       XSTR NPN SI       Q2037       2N5088         A5       Q317       1854-0392       5       1       XSTR NPN SI       Q2037       2N5088         A5       Q318       1854-0392       5       1       XSTR NPN SI       Q2037       2N5088         A5       Q318       1854-0392       5       1       XSTR NPN SI       Q2037       2N5088         A5       Q319       1853-0569       6       1       XSTR NPN SI       Q2037       2N3904         A5       Q410       1854-1028       6       1       XSTR NPN SI       Q2037       2N4352         A5       Q412       1854-0392       5       1       XSTR NPN SI       Q2037                                                                                                                                         |         |           |     |             |                  |        |         |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|-----|-------------|------------------|--------|---------|--|--|
| A5 Q312       1855-0309       6       1       MOSFET 2N4352 P-<br>02037       2N4352         A5 Q313       1855-0309       6       1       MOSFET 2N4352 P-<br>02037       2N4352         A5 Q314       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q315       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N3904         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q411       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q414       1854-0392       5       1       XSTR NPN SI       02037       2N5088                                                                                                         |         |           | 1   | 1 - · · · · |                  | Manufr | Part #  |  |  |
| A5 Q313       1855-0309       6       1       MOSFET 2N4352 P-<br>02037       2N4352         A5 Q314       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q315       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q316       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q414       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088                                                                                                           | _       |           |     | _           | 1                | i i    | 2N3904  |  |  |
| A5 Q314       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q315       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q316       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       XSTR PNP SI       02037       2N3904         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N50                                                                                                               |         |           | 1   | 1           |                  | 02037  | 2N4352  |  |  |
| A5 Q315       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q316       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N3904         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N4352         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q414       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N50                                                                                                               | -       |           |     | 1           |                  | 02037  | 2N4352  |  |  |
| A5 Q316       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N50                                                                                                               | -       |           | 6   | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1854-0392       5       1       XSTR NPN SI       02037       2N50                                                                                                               | A5 Q315 | 1854-0392 | 5   | 1           | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q317       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1854-0392       5       1       XSTR NPN SI       02037       2N50                                                                                                               |         |           |     |             |                  |        |         |  |  |
| A5 Q318       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q319       1853-0569       6       1       XSTR NPN SI       02037       2N3904         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N4352         A5 Q412       1855-0309       6       1       XSTR NPN SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q414       1353-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR NPN SI       02037       2N50                                                                                                               | 1       |           | 1 1 | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q319       1853-0569       6       1       XSTR PNP SI       02037       2N3904         A5 Q410       1854-1028       6       1       XSTR PNP SI       02037       2N3904         A5 Q412       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q415       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR PNP SI       02037       2N3904         A5 Q510       1854-0392       5       1       XSTR PNP SI       02037 <td< td=""><td>-</td><td>1</td><td>1 1</td><td>1</td><td>XSTR NPN SI</td><td>02037</td><td>2N5088</td></td<>        | -       | 1         | 1 1 | 1           | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q410       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q412       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q416       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1854-0472       2       1       XSTR NPN SI       02037       2N5088         A5 Q512       1854-029       6       1       XSTR NPN SI       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR NPN SI       02037                                                                                                                      |         | 4         |     |             | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q412       1855-0309       6       1       MOSFET 2N4352 P-<br>XSTR PNP SI       02037       2N4352         A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q415       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR NPN SI       02037       2N3904         A5 Q512       1854-0392       6       1       XSTR NPN SI       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR NPN SI       02037 <td>1</td> <td></td> <td></td> <td></td> <td>XSTR PNP SI</td> <td>02037</td> <td></td>               | 1       |           |     |             | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q413       1853-0569       6       1       XSTR PNP SI       02037       2114302         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q415       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q416       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR NPN SI       02037       2N3904         A5 Q512       1854-0392       6       1       XSTR NPN SI       02037       2N4352         A5 Q512       1854-0392       5       1       XSTR NPN SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR NPN SI       02037       2N5                                                                                                               | A5 Q410 | 1854-1028 | 6   | 1           | XSTR NPN SI      | 02037  | 2N3904  |  |  |
| A5 Q413       1853-0569       6       1       XSTR PNP SI       02037         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037         A5 Q414       1853-0569       6       1       XSTR PNP SI       02037         A5 Q415       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q416       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q510       1854-0472       2       1       XSTR NPN SI       02037       2N4352         A5 Q512       1854-0392       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0                                                                                                                       |         |           |     | ĺ           |                  |        |         |  |  |
| A5 Q414       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q415       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q416       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI DARL       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR NPN SI DARL       02037       2N3904         A5 Q512       1854-0392       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037                                                                                                                | -       | 1         |     | 1           | MOSFET 2N4352 P- | 02037  | 2N4352  |  |  |
| A5 Q415       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q416       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q410       1854-0472       2       1       XSTR NPN SI       02037       2N3904         A5 Q510       1854-1028       6       1       XSTR NPN SI       02037       2N4352         A5 Q512       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N50                                                                                                               | -       |           |     | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q416       1853-0569       6       1       XSTR PNP SI       02037       20503         A5 Q417       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-0472       2       1       XSTR NPN SI DARL       02037       2N3904         A5 Q510       1854-0472       2       1       XSTR NPN SI       02037       2N4352         A5 Q510       1854-0392       6       1       XSTR PNP SI       02037       2N4352         A5 Q512       1855-0309       6       1       XSTR PNP SI       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037                                                                                                                | -       | 4         |     | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q417       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       MPS-A14         A5 Q410       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-0472       2       1       XSTR NPN SI       02037       2N3904         A5 Q510       1854-0472       2       1       XSTR NPN SI       02037       2N4352         A5 Q512       1854-0399       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037                                                                                                              | -       | 1 1       |     | 1           | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q480       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-1028       6       1       XSTR NPN SI       02037       2N4352         A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037 <td>A5 Q416</td> <td>1853-0569</td> <td>6</td> <td>1</td> <td>XSTR PNP SI</td> <td>02037</td> <td></td> | A5 Q416 | 1853-0569 | 6   | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q418       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q419       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q480       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-1028       6       1       XSTR NPN SI       02037       2N4352         A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR NPN SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                   |         |           |     |             |                  |        |         |  |  |
| A5 Q419       1853-0569       6       1       XSTR PNP SI       02037       2037         A5 Q480       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-1028       6       1       XSTR NPN SI       DARL       02037       MPS-A14         A5 Q510       1854-1028       6       1       XSTR NPN SI       DARL       02037       2N4352         A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XS                                                                                                               | -       |           | 1   | 1           |                  | 02037  | 2N5088  |  |  |
| A5 Q480       1854-0472       2       1       XSTR NPN SI DARL       02037       MPS-A14         A5 Q510       1854-1028       6       1       XSTR NPN SI DARL       02037       2N3904         A5 Q512       1854-1028       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       0203                                                                                                      | -       | 1         | ſ   |             |                  | 02037  | 2N5088  |  |  |
| A5 Q510       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-<br>XSTR PNP SI       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       0203                                                                                                       | -       | 1         |     | - 1         |                  | 1 6    |         |  |  |
| A5 Q512       1855-0309       6       1       MOSFET 2N4352 P-       02037       2N4352         A5 Q513       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N4352         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q515       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                   | -       |           |     | 1           | XSTR NPN SI DARL | 02037  | MPS-A14 |  |  |
| A5 Q513       1853-0569       6       1       XSTR PNP SI       02037         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037         A5 Q515       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q516       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                             | A5 Q510 | 1854-1028 | 6   | 1           | XSTR NPN SI      | 02037  | 2N3904  |  |  |
| A5 Q513       1853-0569       6       1       XSTR PNP SI       02037         A5 Q514       1853-0569       6       1       XSTR PNP SI       02037         A5 Q515       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q516       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                             |         |           |     |             |                  |        |         |  |  |
| A5 Q514       1853-0569       6       1       XSTR PNP SI       02037         A5 Q515       1854-0392       5       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                           | -       | 1 1       |     | 1           |                  | 02037  | 2N4352  |  |  |
| A5 Q515       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q516       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -       | 1 1       | - ( |             |                  | 02037  |         |  |  |
| A5 Q516       1853-0569       6       1       XSTR PNP SI       02037       2N5088         A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         | 1 1       | 1   |             |                  | 02037  |         |  |  |
| A5 Q517       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -       | 1 1       |     | 1           | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A5 Q516 | 1853-0569 | 6   | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q518       1854-0392       5       1       XSTR NPN SI       02037       2N5088         A5 Q519       1853-0569       6       1       XSTR NPN SI       02037       2N5088         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |           |     |             |                  |        |         |  |  |
| A5 Q519       1853-0569       6       1       XSTR PNP SI       02037         A5 Q610       1854-1028       6       1       XSTR NPN SI       02037       2N3904         A5 Q612       1855-0202       6       1       XSTR NPN SI       02037       2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |           |     | 1           | XSTR NPN SI      | 02037  | 2N5088  |  |  |
| A5 Q610 1854-1028 6 1 XSTR NPN SI 02037 2N3904                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A5 Q518 |           | 5   | 1           |                  | 02037  | 2N5088  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -       | l f       | 6   | 1           | XSTR PNP SI      | 02037  |         |  |  |
| A5 Q612   1855-0309   6   1   MOSFET 2N4352 P-   02037   2N4352                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |           | 6   | 1           | XSTR NPN SI      | 02037  | 2N3904  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A5 Q612 | 1855-0309 | 6   | 1 1         | MOSFET 2N4352 P- | 02037  | 2N4352  |  |  |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

|     | Reference          | e HP Part # | CD         | Qty        | Description         | Manuf | Part #         |
|-----|--------------------|-------------|------------|------------|---------------------|-------|----------------|
|     | A5 Q613            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q614            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q615            |             | 5          | 1          | XSTR NPN SI         | 02037 | 2N5088         |
|     | A5 Q616            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q617            | 1854-0392   | 5          | 1          | XSTR NPN SI         | 02037 | 2N5088         |
|     |                    |             |            |            |                     |       |                |
|     | A5 Q618            | 1854-0392   | 5          | 1          | XSTR NPN SI         | 02037 | 2N5088         |
|     | A5 Q619            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q680            | 1854-0472   | 2          | 1          | XSTR NPN SI DARL    | 02037 | MPS-A14        |
|     | A5 Q710            | 1854-1028   | 6          | 1          | XSTR NPN SI         | 02037 | 2N3904         |
|     | A5 Q712            | 1855-0309   | 6          | 1          | MOSFET 2N4352 P-    | 02037 | 2N4352         |
|     |                    |             |            |            |                     |       |                |
|     | A5 Q713            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q714            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
| - t | A5 Q715            | 1854-0392   | 5          | 1          | XSTR NPN SI         | 02037 | 2N5088         |
|     | A5 Q716            | 1853-0569   | 6          | 1          | XSTR PNP SI         | 02037 |                |
|     | A5 Q717            | 1854-0392   | 5          | 1          | XSTR NPN SI         | 02037 | 2N5088         |
|     |                    |             |            |            |                     |       |                |
|     | A5 Q718            | 1854-0392   | 5          |            | XSTR NPN SI         | 02037 | 2N5088         |
| 1   | A5 Q719            | 1853-0569   | 6          |            | XSTR PNP SI         | 02037 |                |
| 1   | A5 R100            | 0757-0442   | 9          |            | RES 10K 1% .125W    | 00746 | CRB14 OR CRB25 |
|     | A5 R200            | 0699-1206   | 1          |            | RES 127 1% 2W MO    | 02499 | GS-3           |
| ŀ   | A5 R201            | 0699-1206   | 1          | 1          | RES 127 1% 2W MO    | 02499 | GS-3           |
|     | 15 D000            | 0000 1055   |            |            |                     |       |                |
|     | A5 R202            | 0698-4855   | 0          |            | RES 267 1% .5W T    | 01074 | H2             |
|     | A5 R204<br>A5 R205 | 0698-7205   | 0          |            | RES 51.1 1% .05W    | 00746 | CRB20          |
| 1   | A5 R205<br>A5 R206 | 0757-0180   | 2          |            | 1                   | 00746 | CRB14 OR CRB25 |
|     | 45 R208            | 0698-3162   | 0          |            |                     | 00746 | CRB14 OR CRB25 |
| 1   | 10 N200            | 0698-6347   | 9          | 1          | RES 1.5K .1% .12    | 00746 | CRB14 OR CRB25 |
|     | 45 R209            | 0757-1094   | 9          | 1          | RES 1.47K 1% .12    | 00740 |                |
|     | 45 R210            | 0698-6963   | 5          |            |                     |       | CRB14 OR CRB25 |
|     | 5 R211             | 0698-6963   | 5          |            |                     |       | CRB14 OR CRB25 |
|     | 5 R212             | 0757-0394   | 0          |            |                     |       | CRB14 OR CRB25 |
|     |                    | 0757-0421   | 4          | 1          |                     |       | CRB14 OR CRB25 |
| -   |                    |             | - <u>-</u> | <u>+ 1</u> | VID 020 170 .120 VV | 00140 | CRB14 OR CRB25 |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Reference                             | HP Part # | CD | Qty | Description                           | Manufr | Part #         |
|---------------------------------------|-----------|----|-----|---------------------------------------|--------|----------------|
| A5 R221                               | 0698-3132 | 4  | 1   | RES 261 1% .125W                      | 00746  | CRB14 OR CRB25 |
| A5 R300                               | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |
| A5 R301                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                      | 00746  | CRB14 OR CRB25 |
| A5 R302                               | 0698-4425 | 0  | 1   | RES 1.54K 1% .12                      | 00746  | CRB14 OR CRB25 |
| A5 R303                               | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |
|                                       |           |    |     |                                       |        |                |
| A5 R304                               | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |
| A5 R305                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                      | 00746  | CRB14 OR CRB25 |
| A5 R306                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                      | 00746  | CRB14 OR CRB25 |
| A5 R307                               | 0698-3132 | 4  | 1   | RES 261 1% .125W                      | 00746  | CRB14 OR CRB25 |
| A5 R309                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                      | 00746  | CRB14 OR CRB25 |
|                                       |           |    |     |                                       |        |                |
| A5 R310                               | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                      | 00746  | CRB14 OR CRB25 |
| A5 R311                               | 0698-6360 | 6  | 1   | RES 10K .1% .125                      | 00746  | CRB14 OR CRB25 |
| A5 R312                               | 0699-1100 | 4  | 1   | RES 6.984K .1% .                      | 01074  | H8             |
| A5 R313                               | 0698-3153 | 9  | 1   | RES 3.83K 1% .12                      | 00746  | CRB14 OR CRB25 |
| A5 R314                               | 0757-0449 | 6  | 1   | RES 20K 1% .125W                      | 00746  | CRB14 OR CRB25 |
|                                       |           |    |     |                                       |        |                |
| A5 R315                               | 0757-0449 | 6  | 1   | RES 20K 1% .125W                      | 00746  | CRB14 OR CRB25 |
| A5 R319                               | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |
| A5 R320                               | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                      | 00746  | CRB14 OR CRB25 |
| A5 R321                               | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                      | 00746  | CRB14 OR CRB25 |
| A5 R322                               | 0757-0317 | 7  | 1   | RES 1.33K 1% .12                      | 00746  | CRB14 OR CRB25 |
|                                       |           |    |     |                                       |        |                |
|                                       | 0698-3154 | 0  |     | RES 4.22K 1% .12                      | 00746  | CRB14 OR CRB25 |
| · · · · · · · · · · · · · · · · · · · | 0698-0085 | 0  | 1   |                                       | 00746  | CRB14 OR CRB25 |
|                                       | 0698-0085 | 0  |     |                                       | 00746  | CRB14 OR CRB25 |
| ' I                                   | 0757-0419 | 0  | 1   |                                       | 00746  | CRB14 OR CRB25 |
| A5 R327                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                      | 00746  | CRB14 OR CRB25 |
|                                       |           |    |     |                                       |        |                |
|                                       | 0757-0394 | 0  |     | i i i i i i i i i i i i i i i i i i i | 1      | CRB14 OR CRB25 |
|                                       | 0757-0419 | 0  |     |                                       |        | CRB14 OR CRB25 |
|                                       | 0698-6347 | 9  |     | 1                                     |        | CRB14 OR CRB25 |
|                                       | 0698-6348 | 0  | 1   |                                       |        | CRB14 OR CRB25 |
| A5 R333 (                             | 0698-6347 | 9  | 1   | RES 1.5K .1% .12                      | 00746  | CRB14 OR CRB25 |

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Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description          | Manufr | Part #         |
|-----------|-----------|----|-----|----------------------|--------|----------------|
| A5 R334   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R335   | 0698-3438 | 3  | 1   | RES 147 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R336   | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746  | CRB14 OR CRB25 |
| A5 R337   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R338   | 0757-0349 | 5  | 1   | RES 22.6K 1% .12     | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                      |        |                |
| A5 R339   | 0757-0477 | 0  | 1   | RES 332K 1% .125     | 00746  | CRB14 OR CRB25 |
| A5 R340   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R341   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R342   | 0698-3446 | 3  | 1   | RES 383 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R343   | 0698-3158 | 4  | 1   | RES 23.7K 1% .12     | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                      |        |                |
| A5 R344   | 0698-3268 | 7  | 1   | RES 11.5K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R345   | 0698-3136 | 8  | 1   | RES 17.8K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R346   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12     | 00746  | CRB14 OR CRB25 |
| A5 R347   | 0757-0280 | 3  | 1   | RES 1K 1% .125W      | 00746  | CRB14 OR CRB25 |
| A5 R348   | 0698-3438 | 3  | 1   | RES 147 1% .125W     | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                      |        |                |
| A5 R350   | 0757-0442 | 9  | 1   | RES 10K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R351   | 0698-3460 | 1  | 1   | RES 422K 1% .125     | 00746  | CRB14 OR CRB25 |
| A5 R362   | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746  | CRB14 OR CRB25 |
| A5 R367   | 8159-0005 | 0  | 1   | <b>RES-ZERO OHMS</b> | 01339  | L-2007-1       |
| A5 R370   | 0698-3161 | 9  | 1   | RES 38.3K 1% .12     | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                      |        |                |
|           | 0757-0280 | 3  | 1   | RES 1K 1% .125W      | 00746  | CRB14 OR CRB25 |
| 1         | 0698-3446 | 3  | 1   | RES 383 1% .125W     | 00746  | CRB14 OR CRB25 |
| 1         | 0698-3159 | 5  | 1   | RES 26.1K 1% .12     | 00746  | CRB14 OR CRB25 |
|           | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |
| A5 R377   | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |
|           |           |    |     |                      |        |                |
| 1         | 0757-0283 | 6  | 1   | RES 2K 1% .125W      | 00746  | CRB14 OR CRB25 |
|           | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |
|           | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |
|           | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |
| A5 R391   | 0757-0283 | 6  | 1   | RES 2K 1% .125W      |        | CRB14 OR CRB25 |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Reference | e HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-------------|----|-----|------------------|--------|----------------|
| A5 R392   | 2 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R394   | 0757-0283   | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R396   | 0757-0283   | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R400   | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R401   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        |                |
| A5 R402   |             | 0  | 1   | RES 1.54K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R403   |             | 7  | 1   | RES 1.27K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R404   | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R405   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R406   | 0698-3438   | 3  | 1   | RES 147 1% .125W | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        |                |
| A5 R409   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R410   | 0757-0279   | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R411   | 0698-6360   | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R412   | 0699-1011   | 6  | 1   | RES 3.32K .1% .1 | 00746  | CRB14 OR CRB25 |
| A5 R413   | 0698-3153   | 9  | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25 |
|           | 1           |    |     |                  |        |                |
| A5 R414   | 0757-0449   | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R415   | 0757-0449   | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R419   | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R420   | 0757-0279   | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R421   | 0757-0279   | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        |                |
| A5 R422   | 0757-0424   | 7  | 1   | RES 1.1K 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R423   | 0757-0279   | 0  | 1   | RES 3.16K 1% .12 |        | CRB14 OR CRB25 |
| A5 R424   | 0698-0085   | 0  | 1   | RES 2.61K 1% .12 |        | CRB14 OR CRB25 |
| A5 R425   | 0757-0278   | 9  | 1   | RES 1.78K 1% .12 | 1      | CRB14 OR CRB25 |
| A5 R426   | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 1      | CRB14 OR CRB25 |
|           |             |    |     |                  | [      |                |
| A5 R427   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R428   | 0757-0394   | 0  | 1   | RES 51.1 1% .125 |        | CRB14 OR CRB25 |
| A5 R429   | 0757-0419   | 0  | 1   | RES 681 1% .125W |        | CRB14 OR CRB25 |
| A5 R430   | 0698-6347   | 9  |     |                  |        | CRB14 OR CRB25 |
| A5 R431   | 0698-6348   | 0  | 1 1 | RES 3K .1% .125W |        | CRB14 OR CRB25 |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

|     | Reference  | HP Part # | CD | Qty | Description      | Manufr  | Part #         |
|-----|------------|-----------|----|-----|------------------|---------|----------------|
|     | A5 R433    | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R434    | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R435    | 0698-3438 | 3  | 1   | RES 147 1% .125W |         | CRB14 OR CRB25 |
|     | A5 R436    | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R437    | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
|     |            |           |    | [   |                  |         |                |
|     | A5 R438 10 |           | 6  |     | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R438*   | 0757-0463 | 4  | 1   | RES 82.5K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R440    | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R441    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R442    | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
|     |            |           |    |     |                  |         |                |
|     | A5 R443    | 0757-0462 | 3  | 1   | RES 75K 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R444    | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R445    | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| - 1 | A5 R446    | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R447    | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     |            |           | Í  |     |                  |         |                |
|     | A5 R448    | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R450    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R453    | 0757-0462 | 3  |     | RES 75K 1% .125W | 00746   | CRB14 OR CRB25 |
| 1   | A5 R453*   | 0698-3243 | 8  | 1   | RES 178K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R460    | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     |            |           |    |     |                  |         |                |
| 1   | A5 R461    | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| 1   | A5 R462    | 0757-0394 | 0  | 1   | RES 51.1 1% .125 |         | CRB14 OR CRB25 |
| 1   | A5 R467    | 8159-0005 | 0  | 1   | RES-ZERO OHMS    |         | L-2007-1       |
| L   | 45 R470    | 0698-3158 | 4  | 1   | RES 23.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| 4   | A5 R471    | 0757-0280 | 3  | 1   | RES 1K 1% .125W  |         | CRB14 OR CRB25 |
|     |            |           |    |     | ,                |         |                |
|     | 15 R473    | 0698-3446 | 3  |     | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 15 R475 .  | 0698-3159 | 5  |     | RES 26.1K 1% .12 |         | CRB14 OR CRB25 |
|     | 5 R476     | 0757-0283 | 6  |     |                  | 00746   | CRB14 OR CRB25 |
|     |            | 0757-0283 | 6  |     |                  | 00746 0 | CRB14 OR CRB25 |
| A   | 5 R479     | 0757-0283 | 6  | 1 1 | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Referenc | e HP Part # | CD | Qty | Description          | Manufr | Port II                          |
|----------|-------------|----|-----|----------------------|--------|----------------------------------|
| A5 R480  |             | 6  | 1   | RES 2K 1% .125W      |        |                                  |
| A5 R481  |             | 6  | 1   | RES 2K 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R486  |             | 6  | 1   | RES 100K 1% .125     | 00746  | CRB14 OR CRB25                   |
| A5 R490  |             | 6  | 1   | RES 2K 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R491  |             | 6  |     | RES 2K 1% .125W      | 1      | CRB14 OR CRB25                   |
|          | 0101-0200   |    |     | RES 2R 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R492  | 0757-0283   | 6  | 1   | RES 2K 1% .125W      | 00746  | CPP14 OP CPPs                    |
| A5 R494  |             | 6  | 1   | RES 2K 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R496  | 0757-0283   | 6  | 1   | RES 2K 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R501  | 0757-0394   | 0  | 1   | RES 51.1 1% .125     | 00746  | CRB14 OR CRB25<br>CRB14 OR CRB25 |
| A5 R502  | 0698-4425   | 0  | 1   | RES 1.54K 1% .12     | 00746  | 1                                |
|          |             | Ŭ  | -   | 1020 1.04K 170.12    | 00140  | CRB14 OR CRB25                   |
| A5 R503  | 0757-0422   | 5  | 1   | RES 909 1% .125W     | 00746  | CRB14 OR CRB25                   |
| A5 R504  | 0757-0280   | 3  | 1   | RES 1K 1% .125W      | 00746  | · · · · ·                        |
| A5 R505  | 0757-0394   | 0  | 1   | RES 51.1 1% .125     | 00746  | CRB14 OR CRB25                   |
| A5 R506  | 0698-3438   | 3  | 1   | RES 147 1% .125W     | 00746  | CRB14 OR CRB25                   |
| A5 R509  | 0757-0394   | 0  | 1   | RES 51.1 1% .125     | 00746  | CRB14 OR CRB25                   |
|          |             | Ĭ  | 1   | 1005 51.1 170 .125   | 00740  | CRB14 OR CRB25                   |
| A5 R510  | 0757-0279   | 0  | 1   | RES 3.16K 1% .12     | 00746  | CRB14 OR CRB25                   |
| A5 R511  | 0698-6360   | 6  | 1   | RES 10K .1% .125     | 00746  | CRB14 OR CRB25                   |
| A5 R512  | 0699-1011   | 6  | 1   | RES 3.32K .1% .1     | 00746  | CRB14 OR CRB25                   |
| A5 R513  | 0698-3153   | 9  | 1   | RES 3.83K 1% .12     | 00746  | CRB14 OR CRB25                   |
| A5 R514  | 0757-0449   | 6  | 1   | RES 20K 1% .125W     | 00746  | CRB14 OR CRB25                   |
|          |             |    | -   | 1020 2011 170 .12077 | 0110   | CRB14 OR CRB25                   |
| A5 R515  | 0757-0449   | 6  | 1   | RES 20K 1% .125W     | 00746  | CRB14 OR CRB25                   |
| A5 R519  | 0757-0280   | 3  | 1   | RES 1K 1% .125W      | 00746  | CRB14 OR CRB25                   |
| A5 R520  | 0757-0279   | 0  | 1   | RES 3.16K 1% .12     |        | CRB14 OR CRB25                   |
| A5 R521  | 0757-0279   | 0  |     | RES 3.16K 1% .12     |        | CRB14 OR CRB25                   |
| A5 R522  | 0757-0317   | 7  |     | RES 1.33K 1% .12     |        | CRB14 OR CRB25                   |
|          |             |    |     |                      |        |                                  |
| A5 R523  | 0698-0084   | 9  | 1   | RES 2.15K 1% .12     | 00746  | CRB14 OR CRB25                   |
| A5 R524  | 0698-0085   | 0  |     | RES 2.61K 1% .12     |        | CRB14 OR CRB25                   |
| A5 R525  | 0757-0278   | 9  |     |                      |        | CRB14 OR CRB25                   |
| A5 R526  | 0757-0280   | 3  |     |                      | 1      | CRB14 OR CRB25                   |
| A5 R527  | 0757-0394   | 0  |     |                      | 1      | CRB14 OR CRB25                   |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Refere  | nce   | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|---------|-------|-----------|----|-----|------------------|--------|----------------|
| A5 R5   | 28    | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R5   | 29    | 0757-0419 | 0  | 1   | RES 681 1% .125W |        | CRB14 OR CRB25 |
| A5 R53  | 30    | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R53  | 31    | 0698-6348 | 0  | 1   | RES 3K .1% .125W |        | CRB14 OR CRB25 |
| A5 R53  | 33    | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746  | CRB14 OR CRB25 |
|         | 1     |           |    |     |                  |        |                |
| A5 R53  | 34    | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R53  |       | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R53  |       | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R53  |       | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R53  | 8     | 0757-0978 | 6  | 1   | RES 95.3K 1% .12 | 00746  | CRB14 OR CRB25 |
|         |       |           |    |     |                  |        |                |
| A5 R53  | 1     | 0698-3260 | 9  | 1   | RES 464K 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R54  | 0     | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R54  | - I   | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R54  |       | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R54  | 3     | 0757-0464 | 5  | 1   | RES 90.9K 1% .12 | 00746  | CRB14 OR CRB25 |
|         |       |           |    |     |                  |        |                |
| A5 R54  | 4     | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R54  | 5     | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R54  | 6     | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R54' | 7     | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R548 | 8     | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746  | CRB14 OR CRB25 |
|         |       |           |    |     |                  |        |                |
| A5 R55( | )   i | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R551 | 1   I | 0698-8961 | 7  | 1   | RES 909K 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R560 | )   ( | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R567 | 7   8 | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339  | L-2007-1       |
| A5 R570 |       | 0757-0449 | 6  |     | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
|         |       |           |    |     |                  |        |                |
| A5 R571 |       | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R573 |       | 698-3446  | 3  | 1   | RES 383 1% .125W | 1      | CRB14 OR CRB25 |
| A5 R575 |       | 698-3159  | 5  | 1   | RES 26.1K 1% .12 | -      | CRB14 OR CRB25 |
| A5 R576 |       | )757-0283 | 6  | 1   | RES 2K 1% .125W  |        | CRB14 OR CRB25 |
| A5 R577 |       | 757-0283  | 6  |     | 1                |        | CRB14 OR CRB25 |

| Reference                             | HP Part # | CD | Qty | Description                        | Manuf'r | Dow! #         |
|---------------------------------------|-----------|----|-----|------------------------------------|---------|----------------|
| A5 R579                               | 0757-0283 | 6  | 1   | RES 2K 1% .125W                    | 00746   |                |
| A5 R580                               | 0757-0283 | 6  |     | RES 2K 1% .125W                    |         | CRB14 OR CRB25 |
| A5 R581                               | 0757-0283 | 6  | 1   |                                    | 00746   | CRB14 OR CRB25 |
| A5 R590                               | 0757-0283 | 6  | 1   | RES 2K 1% .125W<br>RES 2K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R591                               | 0757-0283 | 6  |     |                                    | 00746   | CRB14 OR CRB25 |
| A0 0.091                              | 0151-0285 | D  | 1   | RES 2K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A5 R592                               | 0757-0283 |    |     |                                    |         |                |
| A5 R592<br>A5 R594                    |           | 6  | 1   | RES 2K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| }                                     | 0757-0283 | 6  | 1   | RES 2K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A5 R596                               | 0757-0283 | 6  | 1   | RES 2K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A5 R600                               | 0757-0442 | 9  | 1   | RES 10K 1% .125W                   | 1       | CRB14 OR CRB25 |
| A5 R601                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                   | 00746   | CRB14 OR CRB25 |
| AF DCOO                               | 0000 1107 |    |     |                                    |         |                |
| A5 R602                               | 0698-4425 | 0  | 1   | RES 1.54K 1% .12                   | 00746   | CRB14 OR CRB25 |
| A5 R603                               | 0698-4422 | 7  | 1   | RES 1.27K 1% .12                   | 00746   | CRB14 OR CRB25 |
| A5 R604                               | 0757-0280 | 3  | 1   | RES 1K 1% .125W                    | 00746   | CRB14 OR CRB25 |
| A5 R605                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                   | 00746   | CRB14 OR CRB25 |
| A5 R606                               | 0698-3438 | 3  | 1   | RES 147 1% .125W                   | 00746   | CRB14 OR CRB25 |
|                                       |           |    |     |                                    |         |                |
| A5 R609                               | 0757-0394 | 0  | 1   | RES 51.1 1% .125                   | 00746   | CRB14 OR CRB25 |
| A5 R610                               | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                   | 00746   | CRB14 OR CRB25 |
| A5 R611                               | 0698-6360 | 6  | 1   | RES 10K .1% .125                   | 00746   | CRB14 OR CRB25 |
| A5 R612                               | 0699-1011 | 6  | 1   | RES 3.32K .1% .1                   | 00746   | CRB14 OR CRB25 |
| A5 R613                               | 0698-3153 | 9  | 1   | RES 3.83K 1% .12                   | 00746   | CRB14 OR CRB25 |
|                                       |           |    |     |                                    |         |                |
| A5 R614                               | 0757-0449 | 6  | 1   | RES 20K 1% .125W                   | 00746   | CRB14 OR CRB25 |
|                                       | 0757-0449 | 6  | 1   | RES 20K 1% .125W                   | 00746   | CRB14 OR CRB25 |
|                                       | 0757-0280 | 3  | 1   | RES 1K 1% .125W                    | 00746   | CRB14 OR CRB25 |
|                                       | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                   | 00746   | CRB14 OR CRB25 |
| A5 R621                               | 0757-0279 | 0  | 1   | RES 3.16K 1% .12                   | 00746   | CRB14 OR CRB25 |
|                                       |           |    |     |                                    |         |                |
|                                       | 0757-0424 | 7  |     | RES 1.1K 1% .125                   | 00746   | CRB14 OR CRB25 |
| · · · · · · · · · · · · · · · · · · · | 0757-0279 | 0  |     | RES 3.16K 1% .12                   | 00746   | CRB14 OR CRB25 |
|                                       | 0698-0085 | 0  |     | RES 2.61K 1% .12                   | 00746   | CRB14 OR CRB25 |
|                                       | 0757-0278 | 9  | 1   | RES 1.78K 1% .12                   | 00746   | CRB14 OR CRB25 |
| A5 R626                               | 0757-0280 | 3  | 1   | RES 1K 1% .125W                    | 00746   | CRB14 OR CRB25 |

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Table B-12. 8130A Option 020 Timing Board Parts List (continued)

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Reference | HP Part #   | CD                                    | Qty | Description      | 114 0   |                |
|-----------|-------------|---------------------------------------|-----|------------------|---------|----------------|
| A5 R627   | 0757-0394   | · · · · · · · · · · · · · · · · · · · |     |                  | Manuf'r |                |
| A5 R628   | 0757-0394   | 0                                     |     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R628   |             | 0                                     |     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R629   | 0757-0419   | 0                                     | 1   | RES 681 1% .125W |         | CRB14 OR CRB25 |
|           | 0698-6347   | 9                                     | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R631   | 0698-6348   | 0                                     | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R633   | 0000 00.1-  |                                       |     |                  |         |                |
| 1         | 0698-6347   | 9                                     | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R634   | 0698-6616   | 5                                     | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R635   | 0698-3438   | 3                                     | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R636   | 0757-0394   | 0                                     | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R637   | 0698-6616   | 5                                     | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R638   | 0757 0405   |                                       |     |                  |         |                |
| A5 R638*  | 0757-0465   | 6                                     |     | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| 1 1       | 0757-0463   | 4                                     | 1   | RES 82.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R640   | 0757-0279   | 0                                     | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R641   | 0698-3155   | 1                                     | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R642   | 0698-3446   | 3                                     | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| AE DC40   | 0.777 0.400 |                                       | _   |                  |         |                |
|           | 0757-0462   | 3                                     | 1   | RES 75K 1% .125W |         | CRB14 OR CRB25 |
| A5 R644   | 0698-3268   | 7                                     | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1 1       | 0698-3136   | 8                                     | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
|           | 0698-0085   | 0                                     | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R647   | 0757-0280   | 3                                     | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |             |                                       |     |                  |         |                |
|           | 0698-3438   | 3                                     |     | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
|           | 0757-0442   | 9                                     |     | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           | 0757-0462   | 3                                     |     | RES 75K 1% .125W | 00746   | CRB14 OR CRB25 |
|           | 0698-3243   | 8                                     |     | RES 178K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R660   | 0757-0394   | 0                                     | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |             |                                       |     |                  |         |                |
| 1         |             | 0                                     |     |                  | 00746   | CRB14 OR CRB25 |
|           | · · · · · · | 0                                     |     |                  | 01339   | L-2007-1       |
|           | 1           | 1                                     |     |                  | 00746   | CRB14 OR CRB25 |
|           |             |                                       |     |                  | 00746   | CRB14 OR CRB25 |
| A5 R673 0 | 0698-3446   | 3                                     | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |

| Reference | HP Part # | CD | Qty | Description      | Manufr | Port #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A5 R675   | 0698-3159 | 5  | 1   |                  |        |                |
| A5 R676   | 0757-0283 | 6  | 1   | RES 26.1K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           |    | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R677   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R679   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R680   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| AF DOL    | 0757 0000 |    |     |                  |        |                |
| A5 R681   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R686   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R690   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R691   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R692   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A5 R694   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R696   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R701   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R702   | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R703   | 0757-0422 | 5  | 1   | RES 909 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A5 R704   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R705   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R706   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R709   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R710   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A5 R711   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A5 R712   | 0699-1011 | 6  | 1   | RES 3.32K .1% .1 | 00746  | CRB14 OR CRB25 |
| A5 R713   | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R714   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R715   | 0757-0449 | 6  |     | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A5 R719   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R720   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 |        | CRB14 OR CRB25 |
| A5 R721   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 |        | CRB14 OR CRB25 |
| A5 R722   | 0757-0317 | 7  |     | RES 1.33K 1% .12 |        | CRB14 OR CRB25 |
| A5 R723   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 1      | CRB14 OR CRB25 |

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 Table B-12. 8130A Option 020 Timing Board Parts List (continued)

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| Ĺ | Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #                           |
|---|-----------|-----------|----|-----|------------------|---------|----------------------------------|
|   | A5 R724   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25                   |
|   | A5 R725   | 0757-0278 | 9  | 1   | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25                   |
|   | A5 R726   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25                   |
|   | A5 R727   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25                   |
|   | A5 R728   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25                   |
|   | A5 R729   | 0757-0419 | 0  | 1   | RES 681 1% .125W | 00746   | CRB14 OR CRB25                   |
|   | A5 R730   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25                   |
|   | A5 R731   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25                   |
|   | A5 R733   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25                   |
|   | A5 R734   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25                   |
| I | A5 R735   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25                   |
| A | 45 R736   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25                   |
| A | 15 R737   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25                   |
| A | 5 R738    | 0757-0978 | 6  | 1   | RES 95.3K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 5 R739    | 0698-3260 | 9  | 1   | RES 464K 1% .125 | 00746   | CRB14 OR CRB25                   |
| A | 5 R740    | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 5 R741    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 5 R742    | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25                   |
| A | .5 R743   | 0757-0464 | 5  | 1   | RES 90.9K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 5 R744    | 0698-3268 | 7  | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 5 R745    | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25                   |
| A | 1         | 0698-0085 | 0  |     | RES 2.61K 1% .12 |         | CRB14 OR CRB25                   |
| A |           | 0757-0280 | 3  |     | RES 1K 1% .125W  |         | · · · · · ·                      |
| A | 1         | 0698-3438 | 3  |     | RES 147 1% .125W |         | CRB14 OR CRB25                   |
| A |           | 0757-0442 | 9  |     | RES 10K 1% .125W | 1       | CRB14 OR CRB25<br>CRB14 OR CRB25 |
|   |           |           |    |     |                  |         |                                  |
|   |           | 0698-8961 | 7  | 1   | RES 909K 1% .125 | 00746   | CRB14 OR CRB25                   |
|   |           | 0757-0394 | 0  | 1   | RES 51.1 1% .125 |         | CRB14 OR CRB25                   |
|   | 1         | 8159-0005 | 0  | 1   | RES-ZERO OHMS    |         | L-2007-1                         |
|   |           | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25                   |
| A | 5 R771 (  | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25                   |

| Table B-12. 8130A Option 020 Timing Board Parts List (cont | tinued) |
|------------------------------------------------------------|---------|
|------------------------------------------------------------|---------|

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R773   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R775   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R776   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R777   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R779   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  | 1       |                |
| A5 R780   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R781   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R790   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R791   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R792   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  | ]       |                |
| A5 R794   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R796   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 RA100  | 1810-0316 | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K     |
| A5 RT393  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 RT493  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
|           |           |    |     |                  |         |                |
| A5 RT593  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 RT693  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 RT793  | 0837-0035 | 6  | 1   | THERMISTOR DISC  | 05098   | 35D24          |
| A5 TP200  |           | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP311  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
|           |           |    | Ì   |                  |         |                |
| A5 TP312  |           | 6  |     | TERMTEST POINT   |         | 1095D          |
| A5 TP323  | 0360-2264 | 6  | - 1 | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP324  | 0360-2264 | 6  | - F | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP411  | 0360-2264 | 6  |     | TERMTEST POINT   | 10358   | 1095D          |
| A5 TP423  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
|           | 0000 0001 |    |     |                  | 10075   |                |
| A5 TP424  |           | 6  |     | TERMTEST POINT   |         | 1095D          |
| A5 TP511  | 0360-2264 | 6  |     | TERMTEST POINT   |         | 1095D          |
| A5 TP512  | 0360-2264 | 6  | 1   | 1                | 1       | 1095D          |
| A5 TP523  | 0360-2264 | 6  |     |                  |         | 1095D          |
| A5 TP524  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |

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| Table D 40  | 04004 0-1- |             |              |                    |
|-------------|------------|-------------|--------------|--------------------|
| 14010 D-12. | BISUA Opuo | n uzu Timin | g Board Parl | s List (continued) |

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A5 TP611  |           | 6  | 1   | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP623  | 1         | 6  | 1   | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP624  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP711  | 1         | 6  | 1   | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP723  | 1         | 6  | 1   | TERMTEST POINT   | 10358  | 1035D<br>1095D |
|           |           |    | _   |                  | 10000  | 10301          |
| A5 TP724  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358  | 1095D          |
| A5 U100   | 1820-3665 | 0  | 1   | IC-MM74HCT245N   | 01698  | SN74HCT245N    |
| A5 U101   | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N    |
| A5 U102   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U103   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
|           |           |    |     |                  |        |                |
| A5 U104   | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N    |
| A5 U105   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U106   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U107   | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N    |
| A5 U108   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
|           |           |    |     |                  |        |                |
| A5 U109   | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N    |
| A5 U110   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U111   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U112   | 1818-3164 | 9  | 1   | IC X2816BP       | 10572  | X2816BP        |
| A5 U200   | 1NB7-8008 | 1  | 1   | SYNC COMP HYBRID | 28480  | 1NB7-8008      |
|           |           |    |     |                  |        | 1              |
| A5 U201   | 1826-0544 | 0  | 1   | IC-V RGLTR       | 02037  |                |
| A5 U202   | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698  | SN74HC374N     |
| A5 U203   | 1826-0550 | 8  | 1   | D/A 8-BIT        | 02910  | DAC08EN        |
| A5 U204   | 1820-0493 | 6  | 1   | IC 307           | 03406  | LM307N         |
| A5 U300   | 1DP9-0002 | 0  | 1   | IC T1671         | 28480  | 1DP9-0002      |
|           |           |    |     |                  |        |                |
|           | 1DP6-0001 | 3  | 1   | IĊ COUNTER 200M  | 28480  | 1DP6-0001      |
|           | 1820-4995 | 1  | 1   | IC-TC74HC592P    |        | TC74HC592P     |
| 1         | 1820-4995 | 1  | 1   | IC-TC74HC592P    | 06354  | TC74HC592P     |
| 1         | 1820-5067 | 0  |     | IC-74AC74PC      | 03406  | 74AC74PC       |
| A5 U306   | 1820-5067 | 0  | 1   | IC-74AC74PC      | 03406  | 74AC74PC       |

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| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-----------|----|-----|------------------|---------|-------------|
| A5 U307   | 1820-3298 | 5  | 1   | IC-MM74HC32N     | 02037   | MC74HC32N   |
| A5 U310   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U311   | 1826-0774 | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U312   | 1826-1341 | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U313   | 1826-1409 | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
|           |           |    |     |                  |         |             |
| A5 U314   | 1826-0315 | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U318   | 1826-0916 | 0  | 1   | ANLG SW AD7511DI |         | AD7511DIKN  |
| A5 U400   | 1DP9-0001 | 9  | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U401   | 1DP6-0001 | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U410   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
|           |           |    |     |                  |         |             |
| A5 U411   | 1826-0774 | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U412   | 1826-1341 | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U413   | 1826-1409 | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U414   | 1826-0315 | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U418   | 1826-0916 | 0  | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
|           |           |    |     |                  |         |             |
| A5 U500   | 1DP9-0001 | 9  | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U501   | 1DP6-0001 | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U510   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U511   | 1826-0774 | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U512   | 1826-1341 | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
|           |           |    |     |                  |         |             |
| A5 U513   | 1826-1409 | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U514   | 1826-0315 | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U518   | 1826-0916 | 0  | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| A5 U600   | 1DP9-0001 | 9  | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U601   | 1DP6-0001 | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
|           |           |    |     |                  | ĺ       |             |
|           | 1826-1553 | 3  |     |                  | 10858   | LT1014DN    |
|           | 1826-0774 | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| 1         | 1826-1341 | 7  | 1   | D/A 12-DGT       |         | DAC1232LCD  |
| 1         | 1826-1409 | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U614   | 1826-0315 | 3  | 1   | IC 348           | 03406   | LM348N      |

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Table B-12. 8130A Option 020 Timing Board Parts List (continued)

| r         |             | <del></del> | · — |                  | •       |             |
|-----------|-------------|-------------|-----|------------------|---------|-------------|
| Reference | "           | CD          | Qty | Description      | Manuf'r | Part #      |
| A5 U618   | 1826-0916   | 0           | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| A5 U700   | 1DP9-0001   | 9           | 1   | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U701   | 1DP6-0001   | 3           | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U710   | 1826-1553   | 3           | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U711   | 1826-0774   | 8           | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
|           |             |             |     |                  |         |             |
| A5 U712   | 1826-1341   | 7           | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U713   | 1826-1409   | 8           | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U714   | 1826-0315   | 3           | 1   | IC 348           | 03406   | LM348N      |
| A5 U718   | 1826-0916   | 0           | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| A5 VR300  | 1902-0955   | 9           | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
|           |             |             |     |                  |         |             |
| 1         | 1902-0955   | 9           | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 VR500  | 1902-0955   | 9           | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 VR600  | 1902-0955   | 9           | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 VR700  | 1902-0955   | 9           | 1   | DIO-ZNR 7.5V 5%  | 02037   | ľ           |
| A5 W100   | 1258-0141   | 8           | 1   | JUMPER-REM       | 01380   | 530153-2    |
|           |             |             |     |                  |         |             |
| A5 W300   | 08131-61650 | 4           | 1   | CBL AY PC 15CM   | 28480   | 08131-61650 |
| A5 W301   | 08130-61655 | 8           | 1   | CBL AY TOUTIN    | 28480   | 08130-61655 |
| A5 W400   | 08131-61672 | 0           | 1   | CBL SET DELAY A  | 28480   | 08131-61672 |
| A5 W500   | 08130-61670 | 7           | 1   | CBL SET OUT 30-  | 28480   | 08130-61670 |
| A5 W600   | 08131-61672 | 0           | 1   | CBL SET DELAY A  | 28480   | 08131-61672 |
|           |             |             |     |                  |         |             |
| A5 W700   | 08130-61671 | 8           | 1   | CBL SET DEL27-3  | 28480   | 08130-61671 |

Table B-12. 8130A Option 020 Timing Board Parts List (continued)

## Channel 2 Board Option 020

| Reference | HP Part #   | CD  | Qty | Description      | Manuf'r | Part #            |
|-----------|-------------|-----|-----|------------------|---------|-------------------|
| A27       | 08130-66527 | 3   | 1   | BD AY CHAN 2 SET | 28480   | 08130-66527       |
|           |             |     |     |                  |         |                   |
| A27A417   | 08130-66417 | 0   | 1   | BD AY SLP SMD O  | 28480   | 08130-66417       |
| A27C2     | 0160-4535   | 4   | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| A27C3     | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C4     | 0160-3873   | 1   | 1   | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
|           |             |     |     |                  |         |                   |
| A27C5     | 0160-3873   | 1   | 1   | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
| A27C6     | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C7     | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C8     | 0160-4535   | 4   | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| A27C11    | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|           |             |     |     |                  |         |                   |
| A27C12    | 0160-5746   | 1   | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C13    | 0160-5735   | 8   | 1   | CAP 10pF 100 V   | 06121   | B37979-J1100-J34  |
| A27C14    | 0160-5735   | 8   | 1   | CAP 10pF 100 V   | 06121   | B37979-J1100-J34  |
| A27C15    | 0160-5735   | 8   | 1   | CAP 10pF 100 V   | 06121   | B37979-J1100-J34  |
| A27C16    | 0160-4535   | 4   | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
|           |             | - 1 |     |                  |         |                   |
| A27C17*   | 0160-3873   | 1   | [   | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
| A27C18*   | 0160-3873   | 1   |     | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
| A27C101   | 0160-6623   | 5   | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C103   | 0160-5730   | 3   | 1   | CAP 100pF 100 V  |         | B37979-J1101-J034 |
| A27C104   | 0160-5730   | 3   |     |                  |         | B37979-J1101-J034 |

Table B-13. 8130A Option 020 Channel 2 Board Parts List

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| ReferenceHP Part #CDQtyDescriptionManufrPart #A27C1050160-572671CAP 0.01uF 100 V06121B37987-J1103-M0A27C1060160-572671CAP 0.01uF 100 V06121B37987-J1103-M0A27C1080160-662351CAP 0.1uF 50 V02010SA115C104MAA1A27C1110160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1130160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1170160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1170160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1210160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1230160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1240160-662351CAP 0.1uF 50 V02010SA115C104MAAFA27C1320160-662351CAP 0.1uF 50 V02010SA101C103KAAFA27C1340160-650071CAP 0.01uF 100 V02010SA101C103KAAFA27C1350160-572671CAP 0.01uF 100 V02010SA101C103KAAFA27C1360160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1300160-57461<                                                                                                                                                                                                                                                                                                             |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| A27C1060160-572671CAP 0.01uF 100 V06121B37987-J1103-M0A27C1080160-662351CAP 0.1uF 50 V02010SA115C104MAAIA27C1110160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1130160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1150160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1170160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1190160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1210160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1230160-662351CAP 0.01uF 50 V06121B37986-J1102-J03A27C1320160-662351CAP 0.1uF 50 V02010SA101C103KAAHA27C1340160-650071CAP 0.01uF 100 V02010SA101C103KAAHA27C1350160-572671CAP 0.01uF 100 V02010SA101C103KAAHA27C1360160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                           | M034 |
| A27C1110160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1130160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1150160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1170160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1190160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1210160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1230160-662351CAP 1000pF 100 V06121B37986-J1102-J03A27C1240160-662351CAP 0.1uF 50 V02010SA101C103KAAHA27C1340160-650071CAP 0.01uF 100 V02010SA101C103KAAHA27C1350160-572671CAP 0.01uF 100 V02010SA101C103KAAHA27C1360160-574611CAP 0.1uF 50 V06121B37987-J1103-M03A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |
| A27C1130160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1150160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1170160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1190160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1210160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1210160-572891CAP 1000pF 100 V06121B37986-J1102-J03A27C1230160-662351CAP 0.1uF 50 V02010SA115C104MAAHA27C1320160-662351CAP 0.1uF 50 V02010SA101C103KAAHA27C1340160-650071CAP 0.01uF 100 V02010SA101C103KAAHA27C1350160-572671CAP 0.01uF 100 V02010SA101C103KAAHA27C1360160-574611CAP 0.1uF 50 V06121B37987-J1103-M01A27C1370160-574611CAP 0.1uF 50 V06121B37987-T5104-M1A27C1500160-574611CAP 0.1uF 50 V06121B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | AH   |
| A27C115       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C117       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C119       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C119       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C121       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAF         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAF         A27C132       0160-6623       5       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C132       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C134       0160-65726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                         | J034 |
| A27C117       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C119       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C121       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAF         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAF         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAF         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1 <td< td=""><td>J034</td></td<>   | J034 |
| A27C117       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C119       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C121       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAF         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAF         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAF         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAF         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1 <td< td=""><td></td></td<>       |      |
| A27C119       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C121       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A27C124       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C135       0160-5746       1       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1 <td< td=""><td>J034  </td></td<> | J034 |
| A27C121       0160-5728       9       1       CAP 1000pF 100 V       06121       B37986-J1102-J03         A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAB         A27C124       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAB         A27C132       0160-6623       5       1       CAP 0.01uF 100 V       02010       SA101C103KAAB         A27C132       0160-6623       5       1       CAP 0.01uF 50 V       02010       SA101C103KAAB         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAB         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAB         A27C135       0160-5746       1       1       CAP 0.01uF 100 V       02010       SA101C103KAAB         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                     | 1034 |
| A27C123       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A27C124       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C132       0160-6623       5       1       CAP 0.01uF 50 V       02010       SA101C103KAAH         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C136       0160-5746       1       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                                                                                                                              | 1034 |
| A27C124       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                         | J034 |
| A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAE         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAE         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAE         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                | AH   |
| A27C132       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAE         A27C134       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAE         A27C135       0160-5726       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAE         A27C136       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |
| A27C134         0160-6500         7         1         CAP 0.01uF 100 V         02010         SA101C103KAAH           A27C135         0160-5726         7         1         CAP 0.01uF 100 V         06121         B37987-J1103-M03           A27C136         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C137         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C150         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1    |
| A27C135       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M02         A27C136       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C137       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A27C150       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |
| A27C136         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C137         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C137         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C150         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |
| A27C137         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1           A27C150         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
| A27C150 0160-5746 1 1 CAP 0.1uF 50 V 06121 B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | м11  |
| A27C150 0160-5746 1 1 CAP 0.1uF 50 V 06121 B37987-T5104-M1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
| 1497(3151,10100,0000,0,0,0,0,0,0,0,0,0,0,0,0,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |
| A27C151         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A27C152         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
| A27C153 0160-6623 5 1 CAP 0.1uF 50 V 02010 SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | AH   |
| A27C154 0160-5730 3 1 CAP 100pF 100 V 06121 B37979-J1101-J03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |
| A27C158 0160-5726 7 1 CAP 0.01uF 100 V 06121 B37987-J1103-M03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1034 |
| A27C159 0160-5726 7 1 CAP 0.01uF 100 V 06121 B37987-J1103-M03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1024 |
| A27C160 0160-6623 5 1 CAP 0.1uF 50 V 02010 SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |
| A27C161 0160-6500 7 1 CAP 0.01uF 100 V 02010 SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |
| A27C162 0160-6500 7 1 CAP 0.01uF 100 V 02010 SA101C103KAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |
| A27C163 0160-4801 7 1 CAP 100pF 100 V 02010 SA101C103RAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |

| Reference          | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|--------------------|-----------|----|-----|------------------|---------|-------------------|
| A27C200            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C201            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C202            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C203            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C204            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                    |           |    |     |                  |         |                   |
| A27C205            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C207            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C208            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C209            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C210            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|                    |           |    |     |                  |         |                   |
| A27C211            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C212            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C214            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C215            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C216            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                    |           |    |     |                  |         |                   |
| A27C218            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C300            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C301            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C302            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A27C303            | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
| 1070001            |           | _  |     |                  |         |                   |
| A27C304            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C305            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C306            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C307            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C308            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| 1270200            | 0160 6600 | _  |     | CADAL DEAL       | 00010   |                   |
| A27C309            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   |         | SA115C104MAAH     |
| A27C310<br>A27C311 | 0160-6500 | 7  |     | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
|                    | 0160-6500 | 7  |     | CAP 0.01uF 100 V |         | SA101C103KAAH     |
| A27C312            | 0160-5726 | 7  |     | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
| A27C313            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

 Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A27C314   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C315   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C316   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C317   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C318   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A27C319   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C320   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C321   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C323   | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A27C324   | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
|           |           |    |     |                  |         |                   |
| A27C326   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C327   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C328   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C329   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C330   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|           |           |    |     |                  |         |                   |
| A27C331   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C332   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C333   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C334   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C335   | 0160-4535 | 4  | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH     |
|           |           |    |     |                  |         |                   |
| A27C400   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C401   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C402   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A27C403   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C404   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A27C405   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   |         | SA115C104MAAH     |
| A27C406   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 1       | B37987-J1103-M034 |
| A27C407   | 0160-5726 | 7  |     | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
| A27C409   | 0160-5726 | 7  |     |                  |         | B37987-J1103-M034 |
| A27C410   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A27C411   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C412   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C413   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C414   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C416   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A27C417   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C418   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A27C419   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C420   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C421   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A27C422   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C423   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C424   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C425   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C426   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|           |           |    |     |                  |         |                   |
| A27C427   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C428   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C429   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C430   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C431   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|           |           |    |     |                  |         |                   |
| A27C432   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C433   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C436   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A27C437   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C438   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A27C900   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C901   | 0160-5747 | 2  | 1   | CAP 0.047uF 50 V | 06121   | B37987-J5473-M034 |
| A27C902   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A27C903   | 0160-5747 | 2  | 1   | CAP 0.047uF 50 V | 06121   | B37987-J5473-M034 |
| A27C904   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf | Part #             |
|-----------|-----------|----|-----|------------------|-------|--------------------|
| A27C905   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C906   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C907   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C908   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C909   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
|           |           |    |     |                  |       | SHIDIOIDURAAL      |
| A27C910   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C911   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH      |
| A27C912   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034  |
| A27C913   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034  |
| A27CP1    | 0180-4129 | 4  | 1   | CAP 1uF 35 V     | 04200 | 173D105X9035V      |
|           |           |    |     |                  |       |                    |
| A27CP2    | 0180-4129 | 4  | 1   | CAP 1uF 35 V     | 04200 | 173D105X9035V      |
| A27CP110  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200 | 150D685X9035B2-DYS |
| A27CP112  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200 | 150D106X9020B2-DYS |
| A27CP114  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200 | 150D106X9020B2-DYS |
| A27CP116  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200 | 150D685X9035B2-DYS |
|           |           |    |     |                  |       |                    |
| A27CP118  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200 | 150D685X9035B2-DYS |
| A27CP120  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200 | 150D106X9020B2-DYS |
| A27CP121  | 0180-4129 | 4  | 1   | CAP 1uF 35 V     | 04200 | 173D105X9035V      |
| A27CP150  | 0180-4129 | 4  | 1   | CAP luF 35 V     | 04200 | 173D105X9035V      |
| A27CP200  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200 | 150D106X9020B2-DYS |
|           |           |    |     |                  |       |                    |
| A27CP300  | 0180-2979 | 8  | -   | CAP 220uF 16 V   | 00493 | SM16VB221M10X12    |
| A27CP301  | 0180-2979 | 8  | - 1 | CAP 220uF 16 V   |       | SM16VB221M10X12    |
|           | 0180-2979 | 8  |     | CAP 220uF 16 V   |       | SM16VB221M10X12    |
| 1         | 0180-2979 | 8  |     | CAP 220uF 16 V   | 00493 | SM16VB221M10X12    |
| A27CR1    | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062 | 50825511           |
|           |           |    |     |                  |       |                    |
|           | 1901-0535 | 9  |     | DIO- SCHOTTKY SM | 02062 | 50825511           |
|           | 1901-0535 | 9  |     | DIO- SCHOTTKY SM | 02062 | 50825511           |
|           | 1901-0535 | 9  |     | DIO- SCHOTTKY SM | 02062 | 50825511           |
|           | 1901-0535 | 9  |     | DIO- SCHOTTKY SM | 02062 | 50825511           |
| A27CR101  | 1901-0535 | 9  | 1 1 | DIO- SCHOTTKY SM | 02062 | 50825511           |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #   |
|-----------|-----------|----|-----|------------------|---------|----------|
| A27CR102  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR150  | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |          |
| A27CR151  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR152  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR153  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
|           |           |    |     |                  |         |          |
| A27CR154  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR155  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR156  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR201  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR202  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
|           |           |    |     |                  |         |          |
| A27CR206  |           | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595   |
| A27CR207  |           | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595   |
| A27CR209  |           | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595   |
| A27CR210  |           | 6  | 1   | DIO-GEN PRP      | 00046   | 1N3595   |
| A27CR300  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
|           |           |    | 1   |                  |         |          |
| A27CR301  |           | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR303  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR305  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR306  | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |          |
| A27CR307  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
|           |           |    |     |                  |         |          |
| 1 1       | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM |         | 50825511 |
| A27CR401  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR404  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR405  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511 |
| A27CR406  | 1901-0047 | 8  | 1   | DIO-SWITCHING    | 03406   |          |
|           |           |    |     |                  |         |          |
|           | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR902  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR906  | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |          |
| A27CR910  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |
| A27CR911  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |          |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

HP 8130A Parts Lists B-107

| Reference       | HP Part # | CD | Qty | Description      | Manuf'r | Part #                  |
|-----------------|-----------|----|-----|------------------|---------|-------------------------|
| A27CR912        | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A27CR913        | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A27CR915        | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                         |
| A27CV1          | 0121-0491 | 1  | 1   | CAP 30pF 5pF 50  | 09538   | 518-003 A 5-30          |
| A27J1           | 1251-8324 | 1  | 1   | CONN-POST-TP-HDR |         | G06M96P4BEBL-004-715    |
| A27J2           | 1250-2066 | 4  | 1   | CONN-RF SMB      | 05769   | 51-051-0359             |
| A27J3           | 1250-2066 | 4  | 1   | CONN-RF SMB      | 05769   | 51-051-0359             |
| A27J4           | 1252-3245 | 7  | 1   | CONN ELAST 38    | 09922   | NE 0.2P 38.5L 3.0H 3.6W |
| A27J5           | 1252-3244 | 6  | 1   | CONN ELAST 38    | 09922   | NE 0.4P 38.5L 3.5H 4.2W |
| A27J6           | 1252-2649 | 3  | 1   | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A27J7           | 1252-2647 | 1  | 1   | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
| A27J8           | 1252-3244 | 6  | 1   | CONN ELAST 38    | 09922   | NE 0.4P 38.5L 3.5H 4.2W |
| A27J9           | 1252-3245 | 7  | 1   | CONN ELAST 38    | 09922   | NE 0.2P 38.5L 3.0H 3.6W |
| A27J10          | 1252-2647 | 1  | 1   | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
| A27 <b>J</b> 11 | 1200-1475 | 2  | 1   | SKT-STRP 17-CONT | 06665   | SL-117-T-12             |
| A27J12          | 1200-1474 | 1  | 1   | SKT-STRP 13-CONT | 06665   | SL-113-T-12             |
| A27J13          | 1200-1473 | 0  | 1   | SKT-STRP 10-CONT | 06665   | SL-110-T-12             |
| A27J14          | 1200-1472 | 9  | 1   | SKT-STRP 8-CONT  | 06665   | SL-108-T-12             |
| A27J15          | 1200-1471 | 8  | 1   | SKT-STRP 6-CONT  | 06665   | SL-106-T-12             |
| A27J16          | 1252-2649 | 3  | 1   | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A27J100         | 1251-4682 | 6  | 1   | CONN-POST-TP-HDR | 03394   | 1102-1-103-02           |
| A27J101         | 1251-4682 | 6  |     | CONN-POST-TP-HDR |         | 1102-1-103-02           |
| A27J300         | 1251-5380 | 3  |     | CONN-POST-TP-HDR |         | 68000-602               |
| A27K1           | 0490-1667 | 6  |     | RLY 2C 12VDC     | ł       | RG2T-12V                |
| A27K2           | 0490-1667 | 6  |     | RLY 2C 12VDC     | 1       | RG2T-12V                |
| A27K3           | 0490-1667 | 6  | 1   | RLY 2C 12VDC     | 09809   | RG2T-12V                |
| A27K4           | 0490-1665 | 4  | 1   | RLY 1C 12VDC     |         | RG1ET-12V               |
| A27K5           | 0490-1665 | 4  |     |                  |         | RG1ET-12V               |
| A27K6           | 0490-1405 | 0  | -   |                  |         | DS2E-S-DC12V-C-H118     |
| A27L1           | 5081-1973 | 5  |     | 1                |         | 5081-1973               |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | e HP Part # | CD | Qty | Description      | Manuf'r | Part #          |
|-----------|-------------|----|-----|------------------|---------|-----------------|
| A27L2     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  |         | 5081-1973       |
| A27L3     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  | 1       | 5081-1973       |
| A27L4     | 5081-1973   | 5  | 1   | INDUCTANCE 3BEA  |         | 5081-1973       |
| A27L7     | 9140-0114   | 4  | 1   | L 10UH +-10%     | 03273   | 15M102K         |
| A27L8     | 9140-0114   | 4  | 1   | L 10UH +-10%     | 03273   | 15M102K         |
|           |             |    | 1   |                  |         |                 |
| A27L100   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
| A27L101   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
| A27L102   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
| A27L103   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
| A27L104   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
|           |             |    |     |                  |         |                 |
| A27L105   | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B     |
| A27MP1    | 08130-00601 | 6  | 1   | SHLD OUTP BD     | 28480   | 08130-00601     |
| A27MP20   | 08130-21101 | 5  | 1   | HEAT SINK        | 28480   | 08130-21101     |
| A27MP21   | 08130-40502 | 0  | 1   | HYBRID FRAME     | 28480   | 08130-40502     |
| A27MP23   | 0340-1236   | 8  | 1   | INSULATOR        | 28480   | 0340-1236       |
|           |             |    |     |                  |         |                 |
| A27MP26   | 3050-0960   | 1  | 2   | WASHER-SHLDR 3.0 | 05947   | V5359           |
| A27MP27   | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610   |                 |
| A27MP80   | 1400-1437   | 0  | 6   | CLAMP-CABLE      | 11808   |                 |
| A27MP108  | 1200-0541   | 1  | 1   | SKT-IC-DIP 24-CO | 01380   | 2-641604-1      |
| A27MP302  | 1205-0295   | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
|           |             |    |     |                  |         |                 |
| A27MP303  |             | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
| A27MP304  |             | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A27MP305  |             | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A27MP400  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608   | 2228B           |
| A27MP401  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608   | 2228B           |
|           |             |    |     |                  |         |                 |
| A27MP402  | í J         | 4  |     |                  | 02608   | 2228B           |
| A27MP403  |             | 0  |     |                  |         | 2226B           |
| A27MP407  | 1205-0213   | 4  |     |                  | 1       | 2228B           |
| A27MP409  | 1205-0213   | 4  |     |                  |         | 2228B           |
| A27MP904  | 1205-0213   | 4  | 1   | HEAT SINK        | 02608   | 2228B           |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

|   | Reference | e HP Part # | CD     | Qty | Description      | Manufr | Part #      |
|---|-----------|-------------|--------|-----|------------------|--------|-------------|
|   | A27Q1     | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | A27Q2     | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | A27Q3     | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | A27Q4     | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | A27Q101   | 1854-0039   | 7      | 1   | XSTR NPN 2N3053S | 02037  | 2N3053S     |
|   |           |             |        |     |                  |        |             |
|   | A27Q102   | 1           | 6      | 1   | XSTR PNP SI      | 02037  |             |
|   | A27Q200   |             | 6      | 1   | XSTR NPN SI      | 02037  | MPS-A18     |
|   | A27Q201   | 1           | 6      | 1   | XSTR NPN SI      | 02037  | MPS-A18     |
|   | A27Q202   | 1855-0309   | 6      | 1   | MOSFET 2N4352 P- | 02037  | 2N4352      |
|   | A27Q203   | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   |           |             |        |     |                  |        |             |
|   | A27Q204   | 1854-0477   | 7      | 1   | XSTR NPN 2N2222A | 1      | 2N2222A     |
|   | A27Q300   | 1854-0828   | 2      | 1   | XSTR NPN SI      | 00039  | NTD560      |
|   | A27Q301   | 1853-0468   | 4      | 1   | XSTR PNP SI DARL |        | TIP-127     |
|   | A27Q302   | 1853-0569   | 6      | 1   | XSTR PNP SI      | 02037  |             |
|   | A27Q303   | 1853-0569   | 6      | 1   | XSTR PNP SI      | 02037  |             |
|   | 1020001   |             |        |     |                  |        |             |
|   | A27Q304   | 1853-0569   | 6      | 1   | XSTR PNP SI      | 02037  |             |
|   | A27Q305   | 1853-0569   | 6      | 1   | XSTR PNP SI      | 02037  |             |
|   | A27Q307   | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | A27Q308   | 1853-0563   | 0      | 1   | XSTR PNP SI      | 02037  | 2N3906(SEL) |
| ŀ | A27Q309   | 1854-1028   | 6      | 1   | XSTR NPN SI      | 02037  | 2N3904      |
|   | 1970100   | 1050 0051   |        |     |                  |        |             |
| 1 | A27Q400   | 1853-0051   | 1      |     | XSTR PNP 2N4037  |        | 2N4037      |
| 1 | A27Q401   | 1854-0637   | 1      |     | XSTR NPN 2N2219A | 1      | 2N2219A     |
| 1 | A27Q402   | 1853-0314   | 9      | 1   | XSTR PNP 2N2905A | 1      | 2N2905A     |
|   | A27Q404   | 1854-0392   | 5      |     | XSTR NPN SI      |        | 2N5088      |
| ľ | A27Q405   | 1854-0392   | 5      | 1   | XSTR NPN SI      | 02037  | 2N5088      |
|   | A27Q407   | 1854-0597   | 2      | ,   | VETD NDN ONFOAD  |        |             |
|   | 27Q408    | 1854-0392   | 5      |     |                  | 1      | 2N5943      |
|   |           | 1853-0314   | 5<br>9 |     |                  |        | 2N5088      |
|   |           | 1853-0314   |        |     |                  | 1      | 2N2905A     |
|   |           | 1853-0314   | 9      | 1   |                  |        | 2N2905A     |
|   | 1210711   | 1000-0014   | 9      | 1   | XSTR PNP 2N2905A | 02037  | 2N2905A     |

| Reference        | HP Part # | CD | Qty | Description                         | Manuf'r | Part #                           |
|------------------|-----------|----|-----|-------------------------------------|---------|----------------------------------|
| A27Q412          | 1853-0569 | 6  | 1   | XSTR PNP SI                         | 02037   |                                  |
| A27Q413          | 1853-0569 | 6  | 1   | XSTR PNP SI                         | 02037   |                                  |
| A27Q414          | 1854-0392 | 5  | 1   | XSTR NPN SI                         | 02037   | 2N5088                           |
| A27Q415          | 1854-0392 | 5  | 1   | XSTR NPN SI                         | 02037   | 2N5088                           |
| A27Q416          | 1854-1028 | 6  | 1   | XSTR NPN SI                         | 02037   | 2N3904                           |
|                  |           |    |     |                                     |         |                                  |
| A27Q418          | 1853-0563 | 0  | 1   | XSTR PNP SI                         | 02037   | 2N3906(SEL)                      |
| A27Q419          | 1853-0569 | 6  | 1   | XSTR PNP SI                         | 02037   |                                  |
| A27Q421          | 1854-1028 | 6  | 1   | XSTR NPN SI                         | 02037   | 2N3904                           |
| A27Q900          | 1854-1028 | 6  | 1   | XSTR NPN SI                         | 02037   | 2N3904                           |
| A27Q901          | 1855-0751 | 2  | 1   | MOSFET N-CHAN                       | 02883   | VN0808M                          |
|                  |           |    |     |                                     |         |                                  |
| A27Q902          | 1855-0751 | 2  | 1   | MOSFET N-CHAN                       | 02883   | VN0808M                          |
| A27Q903          | 1854-0637 | 1  | 1   | XSTR NPN 2N2219A                    | 02037   | 2N2219A                          |
| A27Q904          | 1853-0051 | 1  | 1   | XSTR PNP 2N4037                     | 03799   | 2N4037                           |
| A27Q905          | 1853-0563 | 0  | 1   | XSTR PNP SI                         | 02037   | 2N3906(SEL)                      |
| A27R2            | 0698-4453 | 4  | 1   | RES 402 1% .125W                    | 00746   | CRB14 OR CRB25                   |
|                  |           |    |     |                                     |         |                                  |
| A27R3            | 0757-0401 | 0  | 1   | RES 100 1% .125W                    | 00746   | CRB14 OR CRB25                   |
| A27R4            | 0757-0401 | 0  | 1   | RES 100 1% .125W                    | 00746   | CRB14 OR CRB25                   |
| A27R5            | 0698-4453 | 4  | 1   | RES 402 1% .125W                    | 00746   | CRB14 OR CRB25                   |
| A27R6            | 0698-4435 | 2  | 1   | RES 2.49K 1% .12                    | 00746   | CRB14 OR CRB25                   |
| A27R7            | 0698-4435 | 2  | 1   | RES 2.49K 1% .12                    | 00746   | CRB14 OR CRB25                   |
|                  |           |    |     |                                     |         |                                  |
| A27R8            | 0757-0999 | 1  | 1   | RES 47.5 1% .5W                     | 01074   | H2                               |
| A27R9            | 0757-0999 | 1  | 1   | RES 47.5 1% .5W                     | 01074   | H2                               |
| A27R12           | 0757-0389 | 3  | 1   | RES 33.2 1% .125                    | 00746   | CRB14 OR CRB25                   |
| A27R13           | 0757-0389 | 3  | 1   | RES 33.2 1% .125                    | 00746   | CRB14 OR CRB25                   |
| A27R14           | 0698-4409 | 0  | 1   | RES 127 1% .125W                    | 00746   | CRB14 OR CRB25                   |
| A27R15           | 0757-0283 | 6  | 1   | RES 2K 1% .125W                     | 00746   | CDD14 OD CDD0r                   |
| A27R15<br>A27R16 | 0757-0283 | 0  |     | RES 2K 1% .125W<br>RES 100 1% .125W | 00746   | CRB14 OR CRB25                   |
| A27R10<br>A27R17 | 0757-0401 | 0  |     | RES 100 1% .125W                    | 00746   | CRB14 OR CRB25                   |
| 1 1              | 0757-0401 | 0  |     | RES 100 1% .125W                    | 00746   | CRB14 OR CRB25                   |
|                  | 0757-0401 | 0  |     |                                     | 00746   | CRB14 OR CRB25<br>CRB14 OR CRB25 |

 Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #           |
|-----------|-----------|----|-----|------------------|--------|------------------|
| A27R20    | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R21    | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R22    | 0757-0807 | 0  | 1   | RES 274 1% .5W T | 01074  | H2               |
| A27R23    | 0757-0807 | 0  | 1   | RES 274 1% .5W T | 01074  | H2               |
| A27R24    | 0699-2732 | 0  | 1   | RES 59 1% 2W TF  | 05524  | CPF-2 5900 F T-1 |
|           |           |    |     |                  |        |                  |
| A27R25    | 0699-2732 | 0  | 1   | RES 59 1% 2W TF  | 05524  | CPF-2 5900 F T-1 |
| A27R26    | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R27    | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R100   | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746  | CRB14 OR CRB25   |
| A27R101   | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A27R102   | 0698-6624 | 5  | 1   | RES 2K .1% .125W | 00746  | CRB14 OR CRB25   |
| A27R104   | 0698-0082 | 7  | 1   | RES 464 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R105   | 0698-6624 | 5  | 1   | RES 2K .1% .125W | 00746  | CRB14 OR CRB25   |
| A27R106   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25   |
| A27R107   | 0698-4445 | 4  | 1   | RES 5.76K 1% .12 | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A27R108   | 0698-4479 | 4  | 1   | RES 14K 1% .125W |        | CRB14 OR CRB25   |
| A27R109   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R110   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25   |
| A27R111   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R112   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A27R113   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R114   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746  | CRB14 OR CRB25   |
| A27R115   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R116   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |
| A27R126   | 0698-4479 | 4  | 1   | RES 14K 1% .125W | 00746  | CRB14 OR CRB25   |
|           |           |    |     |                  |        |                  |
| A27R150   | 0757-0461 | 2  |     | RES 68.1K 1% .12 |        | CRB14 OR CRB25   |
| A27R151   | 0757-0199 | 3  |     | RES 21.5K 1% .12 | 00746  | CRB14 OR CRB25   |
| A27R152   | 0757-0465 | 6  |     | RES 100K 1% .125 |        | CRB14 OR CRB25   |
|           | 0698-8827 | 4  |     | RES 1M 1% .125W  |        | CRB14 OR CRB25   |
| A27R154   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25   |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A27R155   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R156   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R157   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R158   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R159   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R160   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R161   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R162   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R163   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R164   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R165   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R166   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R167   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R168   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R169   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R170   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R171   | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R172   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R173   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R174   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R175   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R176   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R177   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R178   | 0698-3152 | 8  | 1   | RES 3.48K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R179   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R180   | 0698-3152 | 8  |     | RES 3.48K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R181   | 0757-0438 | 3  |     | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R182   | 0757-0438 | 3  |     | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R183   | 0757-0274 | 5  | - 1 | RES 1.21K 1% .12 | 1       | CRB14 OR CRB25 |
| A27R184   | 0698-3452 | 1  | 1   | RES 147K 1% .125 | 00746   | CRB14 OR CRB25 |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

|   |           |           | T  | <u> </u> |                  |         |                |  |  |  |  |
|---|-----------|-----------|----|----------|------------------|---------|----------------|--|--|--|--|
|   | Reference |           | CD | Qty      |                  | Manuf'r | Part #         |  |  |  |  |
|   | A27R185   |           | 0  | 1        | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R186   |           | 3  | 1        | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R187   |           | 3  | 1        | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R188   | 0757-0442 | 9  | 1        | RES 10K 1% .125W |         | CRB14 OR CRB25 |  |  |  |  |
|   | A27R189   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |
|   | A27R190   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R191   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R192   | 0698-0084 | 9  | 1        | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R193   | 0757-0280 | 3  | 1        | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
| į | A27R194   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |
|   | A27R200   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R201   | 0757-0283 | 6  | 1        | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R203   | 0757-0449 | 6  | 1        | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R204   | 0698-3438 | 3  | 1        | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R206   | 0757-0283 | 6  | 1        | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |
|   | A27R207   | 0757-0283 | 6  | 1        | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R208   | 0757-0199 | 3  | 1        | RES 21.5K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   | A27R209   | 0757-0283 | 6  | 1        | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
| F | A27R210   | 0698-0085 | 0  | 1        | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
| l | A27R212   | 0698-3155 | 1  | 1        | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |
|   | A27R213   | 0698-3155 | 1  | 1        | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |  |
| 1 | A27R214   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | ,       | CRB14 OR CRB25 |  |  |  |  |
|   | A27R215   | 0698-3155 | 1  | 1        | RES 4.64K 1% .12 |         | CRB14 OR CRB25 |  |  |  |  |
|   | A27R217   | 0757-0442 | 9  | 1        | RES 10K 1% .125W |         | CRB14 OR CRB25 |  |  |  |  |
|   | A27R218   | 0757-0442 | 9  | 1        | RES 10K 1% .125W | 1       | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |
|   | A27R219   | 0757-0280 | 3  | 1        | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |  |
|   |           | 0757-0280 | 3  |          |                  | i i     | CRB14 OR CRB25 |  |  |  |  |
|   |           | 0698-0085 | 0  |          |                  |         | CRB14 OR CRB25 |  |  |  |  |
|   |           | 0757-0403 | 2  |          |                  |         | CRB14 OR CRB25 |  |  |  |  |
| ł | A27R223   | 0757-0403 | 2  |          |                  |         | CRB14 OR CRB25 |  |  |  |  |
|   |           |           |    |          |                  |         |                |  |  |  |  |

Reference HP Part # CD Qty Description Manuf'r Part # A27R225 0757-0274 5 1 RES 1.21K 1% .12 00746 CRB14 OR CRB25 A27R226 0757-0416 7 1 RES 511 1% .125W 00746 CRB14 OR CRB25 A27R227 0757-0416 RES 511 1% .125W 7 1 00746 CRB14 OR CRB25 A27R276 0698-3441 8 RES 215 1% .125W 1 00746 CRB14 OR CRB25 A27R300 0698-3449 6 RES 28.7K 1% .12 1 00746 CRB14 OR CRB25 A27R301 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R302 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R304 0698-8799 9 1 RES 21.5K .1% .1 00746 CRB14 OR CRB25 A27R307 8159-0005 0 1 **RES-ZERO OHMS** 01339 L-2007-1 A27R308 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R309 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 A27R310 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 A27R311 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 A27R312 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 A27R313 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 A27R314 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R315 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25 8159-0005 A27R316 0 1 **RES-ZERO OHMS** 01339 L-2007-1 A27R317 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R318 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R319 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R320 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R321 0757-0421 4 1 RES 825 1% .125W 00746 CRB14 OR CRB25 A27R322 0699-1056 9 1 RES 825 .1% .125 00746 CRB14 OR CRB25 A27R323 0757-0283 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A27R324 0757-0416 7 1 RES 511 1% .125W 00746 CRB14 OR CRB25 A27R325 0757-0421 4 1 RES 825 1% .125W 00746 CRB14 OR CRB25 A27R326 0699-1056 9 1 RES 825 .1% .125 CRB14 OR CRB25 00746 A27R327 0757-0416 7 1 RES 511 1% .125W 00746 CRB14 OR CRB25 A27R328

RES 68.1K 1% .12

00746

CRB14 OR CRB25

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

0757-0461

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Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A27R329   | 0698-8826 | 3  | 1   | RES 825K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R330   | 0757-0409 | 8  | 1   | RES 274 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R332   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R333   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R334   | 0757-0409 | 8  | 1   | RES 274 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R335   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R337   | 0757-0346 | 2  | 1   | RES 10 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R338   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R339   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R340   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    | -   |                  |         |                |
| A27R341   | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R342   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R343   | 0699-2683 | 0  | 1   | RES 274 .1% .125 | 00746   | CRB14          |
| A27R344   | 0699-2683 | 0  | 1   | RES 274 .1% .125 | 00746   | CRB14          |
| A27R347   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R348   | 0757-0346 | 2  | 1   | RES 10 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R351   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| A27R352   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R354   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R355   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           | Í  |     |                  |         |                |
| A27R356   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R357   | 0698-8827 | 4  | 1   | RES 1M 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R358   | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R359   | 0757-0401 | 0  | 1   | RES 100 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R360   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R361   | 0757-0442 | 9  | 1   |                  | 00746   | CRB14 OR CRB25 |
| A27R362   | 0698-3279 | 0  | 1   |                  | 00746   | CRB14 OR CRB25 |
| A27R363   | 0757-0199 | 3  |     |                  |         | CRB14 OR CRB25 |
| A27R364   | 0757-0199 | 3  |     |                  | 00746   | CRB14 OR CRB25 |
| A27R365   | 0698-8826 | 3  | 1   | RES 825K 1% .125 | 00746   | CRB14 OR CRB25 |

| Reference     HP Part # CD Qty     Description     Manufr     Part # |         |           |    |     |                  |         |                |
|----------------------------------------------------------------------|---------|-----------|----|-----|------------------|---------|----------------|
| - r                                                                  |         |           | CD | Qty |                  | Manuf'r |                |
| 1                                                                    | A27R366 | 0757-0442 | 9  | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25 |
| -                                                                    | A27R367 | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |
|                                                                      | A27R368 | 0757-0442 | 9  | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25 |
|                                                                      | A27R369 | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| 1                                                                    | A27R370 | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
|                                                                      |         |           |    |     |                  |         |                |
| 1                                                                    | A27R371 | 0698-8958 | 2  | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |
|                                                                      | A27R372 | 0757-0442 | 9  | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25 |
|                                                                      | A27R373 | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | A27R374 | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| I f                                                                  | A27R377 | 0698-3441 | 8  | 1   | RES 215 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      |         |           |    |     |                  |         |                |
|                                                                      | 27R378  | 0698-3457 | 6  | 1   | RES 316K 1% .125 | 00746   | CRB14 OR CRB25 |
| 1                                                                    | 27R379  | 0757-0407 | 6  | 1   | RES 200 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R400  | 0757-0428 | 1  | 1   | RES 1.62K 1% .12 | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R401  | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R405  | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |
| Ι.                                                                   |         |           |    |     |                  |         |                |
| 1                                                                    | 27R406  | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| 1                                                                    | 27R407  | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R408  | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1                                                                    | .27R410 | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
| A                                                                    | 27R412  | 0698-3432 | 7  | 1   | RES 26.1 1% .125 | 00746   | CRB14 OR CRB25 |
|                                                                      |         |           |    |     |                  |         |                |
|                                                                      | 27R413  | 0698-4445 | 4  | 1   | RES 5.76K 1% .12 | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R414  | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R416  | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | 27R419  | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A                                                                    | 27R420  | 0698-3519 | 1  | 1   | RES 12.4K 1% .12 | 00746   | CRB14 OR CRB25 |
|                                                                      |         |           |    |     |                  |         |                |
|                                                                      | 1       | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | ,       | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
|                                                                      | 1       | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 |         | CRB14 OR CRB25 |
|                                                                      | 1       | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 |         | CRB14 OR CRB25 |
| A:                                                                   | 27R427  | 0757-0416 | 7  | 1   | RES 511 1% .125W |         | CRB14 OR CRB25 |

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Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Table D-13. 6 130X Option 020 Channel 2 Board Parts List (continued) |           |    |     |                  |         |                |  |
|----------------------------------------------------------------------|-----------|----|-----|------------------|---------|----------------|--|
| Reference                                                            | +         | CD | Qty |                  | Manuf'r | Part #         |  |
| A27R428                                                              | 0698-3444 | 1  | 1   | RES 316 1% .125W |         | CRB14 OR CRB25 |  |
| A27R429                                                              | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |
| A27R430                                                              | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |
| A27R431                                                              | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |  |
| A27R432                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |  |
| }                                                                    |           |    |     |                  |         |                |  |
| A27R433                                                              | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746   | CRB14 OR CRB25 |  |
| A27R434                                                              | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |  |
| A27R435                                                              | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |
| A27R436                                                              | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |
| A27R437                                                              | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |  |
|                                                                      |           |    |     |                  |         |                |  |
| A27R438                                                              | 0698-3444 | 1  | 1   | RES 316 1% .125W | 1       | CRB14 OR CRB25 |  |
| A27R439                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W |         | CRB14 OR CRB25 |  |
| A27R440                                                              | 0757-0411 | 2  | 1   | RES 332 1% .125W | 00746   | CRB14 OR CRB25 |  |
| A27R441                                                              | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |  |
| A27R444                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |  |
|                                                                      |           |    |     |                  |         |                |  |
| A27R445                                                              | 0698-3443 | 0  | 1   | RES 287 1% .125W |         | CRB14 OR CRB25 |  |
| A27R446                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W |         | CRB14 OR CRB25 |  |
| A27R447                                                              | 0698-3443 | 0  | 1   | RES 287 1% .125W | 00746   | CRB14 OR CRB25 |  |
| A27R448                                                              | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |
| A27R449                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |  |
| 1050 150                                                             |           |    |     |                  |         |                |  |
| A27R450                                                              | 0757-0291 | 6  | 1   | RES 24.9 1% .125 | 00746   | CRB14 OR CRB25 |  |
| A27R451                                                              | 0757-0291 | 6  |     | RES 24.9 1% .125 | 00746   | CRB14 OR CRB25 |  |
| A27R452                                                              | 0757-0291 | 6  |     | RES 24.9 1% .125 | 00746   | CRB14 OR CRB25 |  |
| A27R453                                                              | 0757-0279 | 0  |     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |  |
| A27R454                                                              | 0698-4020 | 1  | 1   | RES 9.53K 1% .12 | 00746   | CRB14 OR CRB25 |  |
| 1070 155                                                             |           |    |     |                  |         |                |  |
|                                                                      | 0757-0416 | 7  |     | 1                | 00746   | CRB14 OR CRB25 |  |
|                                                                      | 0757-0421 | 4  |     |                  | 00746   | CRB14 OR CRB25 |  |
| 1                                                                    | 0757-0416 | 7  |     |                  | 1       | CRB14 OR CRB25 |  |
| 1                                                                    | 0757-0416 | 7  | - 1 |                  |         | CRB14 OR CRB25 |  |
| A27R459                                                              | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |  |

| Reference | HP Part # | CD  | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|-----|-----|------------------|---------|----------------|
| A27R460   | 0698-3153 | 9   | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R464   | 0698-3158 | 4   | 1   | RES 23.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R465   | 0757-0442 | 9   | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R466   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R467   | 0757-0442 | 9   | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |     |     |                  |         |                |
| A27R468   | 0757-0418 | 9   | 1   | RES 619 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R469   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R470   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R471   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R472   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |     |     |                  |         |                |
| A27R473   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R474   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R475   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R476   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R477   | 0698-6323 | 1   | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |     |     |                  |         |                |
| A27R478   | 0698-6323 | 1 · | 1   | RES 100 .1% .125 | 00746   | CRB14 OR CRB25 |
| A27R479   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R480   | 0757-0279 | 0   | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R481   | 0698-3268 | 7   | 1   | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R482   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |     |     |                  |         |                |
| A27R483   | 0698-3444 | 1   | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R485   | 0757-0280 | 3   | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R486   | 0757-0279 | 0   | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R487   | 0757-0278 | 9   | 1   | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R488   | 0698-3446 | 3   | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |     |     |                  |         |                |
| A27R489   | 0698-4460 | 3   | 1   | RES 649 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R490   | 0757-0317 | 7   | 1   | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R491   | 0757-0416 | 7   | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R492   | 0757-0416 | 7   | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R493   | 0698-3446 | 3   | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

Reference HP Part # CD Qtv Description Manuf'r Part # A27R494 0757-1094 1 9 RES 1.47K 1% .12 00746 CRB14 OR CRB25 A27R497 0757-0274 5 1 RES 1.21K 1% .12 00746 CRB14 OR CRB25 A27R498 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R900 0698-3136 8 RES 17.8K 1% .12 1 00746 CRB14 OR CRB25 A27R901 0698-0084 9 1 RES 2.15K 1% .12 00746 CRB14 OR CRB25 A27R902 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 0757-0442 A27R903 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R905 0698-3446 3 1 RES 383 1% .125W 00746 CRB14 OR CRB25 A27R906 0757-0421 4 1 RES 825 1% .125W 00746 CRB14 OR CRB25 A27R907 0757-0444 1 1 RES 12.1K 1% .12 00746 CRB14 OR CRB25 A27R908 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R909 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R910 0698-6624 5 1 RES 2K .1% .125W 00746 CRB14 OR CRB25 A27R911 0698-6624 5 1 RES 2K .1% .125W 00746 CRB14 OR CRB25 A27R912 0757-0442 9 RES 10K 1% .125W 00746 1 CRB14 OR CRB25 A27R913 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R914 0698-0084 9 1 RES 2.15K 1% .12 00746 CRB14 OR CRB25 A27R915 0699-2684 1 1 RES 332 .1% .125 00746 CRB14 A27R916 0757-0442 RES 10K 1% .125W 9 1 00746 CRB14 OR CRB25 A27R917 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A27R918 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A27R919 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R920 2 0757-0346 1 RES 10 1% .125W 00746 CRB14 OR CRB25 A27R921 0757-0715 9 1 RES 150 1% .25W 01074 H4 A27R922 0757-0438 3 1 RES 5.11K 1% .12 00746 CRB14 OR CRB25 A27R924 0757-0442 9 RES 10K 1% .125W 1 00746 CRB14 OR CRB25 A27R925 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R926 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A27R927 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A27R928 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A27R929   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R930   | 0698-3435 | 0  | 1   | RES 38.3 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R931   | 0699-2731 | 9  | 1   | RES 442 .1% .125 | 06118   | MK2            |
| A27R934   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R935   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R936   | 0698-3243 | 8  | 1   | RES 178K 1% .125 | 00746   | CRB14 OR CRB25 |
| A27R937   | 0757-0460 | 1  | 1   | RES 61.9K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R939   | 0698-4477 | 2  | 1   | RES 10.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R940   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R941   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R942   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R943   | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R944   | 0698-4445 | 4  | 1   | RES 5.76K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R945   | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R946   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R947   | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R948   | 0698-3444 | 1  | 1   | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R949   | 0698-0084 | 9  | 1   | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R950   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R951   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R952   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R953   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R954   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A27R955   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R956   | 0757-1094 | 9  | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A27R957   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R958   | 0698-3439 | 4  | 1   | RES 178 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R959   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A27R960   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A27R961   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Refe  | rence        | HP Part # | CD | Qty | Description            | Manufr | Part #         |
|-------|--------------|-----------|----|-----|------------------------|--------|----------------|
| A27R  |              | 0757-0449 | 6  | 1   | RES 20K 1% .125W       | 00746  | CRB14 OR CRB25 |
| A27R  |              | 0698-3155 | 1  | 1   | RES 4.64K 1% .12       | 00746  | CRB14 OR CRB25 |
| A27R  |              | 0757-0280 | 3  | 1   | RES 1K 1% .125W        | 00746  | CRB14 OR CRB25 |
| A27R  |              | 1810-0280 | 8  | 1   | NETWORK-RES SIP        | 02483  | 750-101        |
| A27R  | A300         | 1810-0691 | 5  | 1   | NETWORK-RES DIP        | 01607  | F16B103B       |
|       |              |           |    |     |                        |        |                |
| A27R  |              |           | 1  | 1   | NETWORK-RES DIP        | 02483  | 761-3-R10K     |
| A27R  | V1           | 2100-3345 | 8  | 1   | RES-TRMR 10 10%        | 03744  | 3386P-Y46-100  |
| A27R  | V100         | 2100-3211 | 7  | 1   | RES-TRMR 1K 10%        | 03744  | 3386P-Y46-102  |
| A27R  | V200         | 2100-0554 | 5  | 1   | RES-TRMR 500 10%       | 03744  | 3386P-Y46-501  |
| A27R  | V303         | 2100-3212 | 8  | 1   | RES-TRMR 200'10%       | 03744  | 3386P-Y46-201  |
|       |              |           |    |     |                        |        |                |
| A27R  |              | 2100-3253 | 7  | 1   | RES-TRMR 50K 10%       | 03744  | 3386P-Y46-503  |
| A27R  |              | 2100-3253 | 7  | 1   | RES-TRMR 50K 10%       | 03744  | 3386P-Y46-503  |
| A27R  |              | 2100-3210 | 6  | 1   | RES-TRMR 10K 10%       | 03744  | 3386P-Y46-103  |
| A27RV |              | 2100-3409 | 5  | 1   | <b>RES-TRMR 20 10%</b> | 03744  | 3386P-Y46-200  |
| A27RV | <b>V3</b> 09 | 2100-3409 | 5  | 1   | RES-TRMR 20 10%        | 03744  | 3386P-Y46-200  |
|       |              |           |    |     |                        |        |                |
| A27RV | 1            | 2100-0554 | 5  | 1   | RES-TRMR 500 10%       | 03744  | 3386P-Y46-501  |
| A27RV |              | 2100-3252 | 6  | 1   | RES-TRMR 5K 10%        | 03744  | 3386P-Y46-502  |
| A27TI |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TI |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TI | 2102         | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
|       |              |           |    |     |                        | Ì      |                |
| A27TH | 1            | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TF |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TF |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TF |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TF | 2108         | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
|       | ĺ            |           |    |     |                        |        |                |
| A27TF |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TF |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TP | 1            | 0360-2264 | 6  | i i |                        | 10358  | 1095D          |
| A27TP |              | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |
| A27TP | 200          | 0360-2264 | 6  | 1   | TERMTEST POINT         | 10358  | 1095D          |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Def      | TTR D + "   |   |     |                  |        |             |
|----------|-------------|---|-----|------------------|--------|-------------|
| Referenc |             | + | Qty |                  | Manufr |             |
| A27TP20  |             | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
| A27TP20  |             | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
| A27TP30  |             | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
| A27TP30  |             | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
| A27TP40  | 1 0360-2264 | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
|          |             |   |     |                  |        |             |
| A27TP40  |             | 6 | 1   | TERMTEST POINT   | 10358  | 1095D       |
| A27U1    | 1NB7-8201   | 6 | 1   |                  | 28480  | 1NB7-8201   |
| A27U2    | 1820-2111   | 9 | 1   | IC-INTERFACE     | 01698  | SN75468N    |
| A27U100  | 1820-3665   | 0 | 1   | IC-MM74HCT245N   | 01698  | SN74HCT245N |
| A27U101  | 1820-3847   | 0 | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N |
|          |             |   |     |                  |        |             |
| A27U102  | 1820-3847   | 0 | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N |
| A27U103  | 1820-3082   | 5 | 1   | IC-MC74HC374N    | 01698  | SN74HC374N  |
| A27U104  | 1818-3164   | 9 | 1   | IC X2816BP       | 10572  | X2816BP     |
| A27U105  | 1820-3082   | 5 | 1   | IC-MC74HC374N    | 01698  | SN74HC374N  |
| A27U106  | 1826-0409   | 6 | 1   | IC MC1723L       | 02037  | MC1723L     |
|          |             |   |     |                  |        |             |
| A27U107  | 1826-1869   | 4 | 1   | D/A 12-BIT       | 03285  | AD7537JN    |
| A27U108  | 1826-0161   | 7 | 1   | IC 324           | 02037  | LM324N      |
| A27U110  | 1820-3082   | 5 | 1   | IC-MC74HC374N    | 01698  | SN74HC374N  |
| A27U150  | 1820-3373   | 7 | 1   | IC-MM74HC221AN   | 03406  | MM74HC221AN |
| A27U151  | 1820-3298   | 5 | 1   | IC-MM74HC32N     | 02037  | MC74HC32N   |
|          |             |   |     |                  |        |             |
| A27U152  | 1820-2924   | 2 | 1   | IC-MC74HC02N     | 01698  | SN74HC02N   |
| A27U153  | 1820-3081   | 4 | 1   | IC-MC74HC74N     | 01698  | SN74HC74N   |
| A27U154  | 1820-3081   | 4 | 1   | IC-MC74HC74N     | 01698  | SN74HC74N   |
| A27U155  | 1820-3097   | 2 | 1   | IC-MM74HC08N     | 02037  | MC74HC08N   |
| A27U156  | 1826-0600   | 9 | 1   | IC 074A          |        | TL074ACN    |
|          |             |   |     |                  |        |             |
| A27U157  | 1826-0138   | 8 | 1   | IC 339           | 01698  | LM339N      |
| A27U158  | 1858-0053   | 3 | 1   | XSTR ARY 14P-DIP | 02037  |             |
| A27U159  | 1858-0058   | 8 | - 1 | XSTR ARY 14P-DIP |        | MPQ3906     |
| A27U160  | 1820-3082   | 5 | 1   | IC-MC74HC374N    |        | SN74HC374N  |
| A27U161  | 1820-1315   | 3 | 1   | ANLG MUXR MC1405 |        | MC14051BCP  |

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Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #       |
|-----------|-----------|----|-----|------------------|---------|--------------|
| A27U162   | 1826-0877 | 2  | 1   | A/D 8-BIT        | 03285   | AD7574KN     |
| A27U163   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U164   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U165   | 1826-0139 | 9  | 1   | IC 1458          | 02037   | MC1458P1     |
| A27U200   | 1826-1869 | 4  | 1   | D/A 12-BIT       | 03285   | AD7537JN     |
|           |           |    |     |                  |         |              |
| A27U201   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN     |
| A27U202   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN     |
| A27U203   | 1826-0501 | 9  | 1   | ANLG MUXR MC1405 | 02037   | MC14053BCP   |
| A27U204   | 1826-0501 | 9  | 1   | ANLG MUXR MC1405 | 02037   | MC14053BCP   |
| A27U300   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN     |
|           |           |    |     |                  |         |              |
| A27U301   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN     |
| A27U302   | 1826-1553 | 3  | 1   | IC 1014          | 10858   | LT1014DN     |
| A27U303   | 1826-0315 | 3  | 1   | IC 348           | 03406   | LM348N       |
| A27U305   | 1826-1409 | 8  | 1   | IC 1013          | 10858   | LT1013CN8    |
| A27U306   | 1826-0139 | 9  | 1   | IC 1458          | 02037   | MC1458P1     |
|           |           |    |     |                  |         |              |
| A27U400   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U401   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U402   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U403   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27U404   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
|           |           |    |     |                  |         |              |
| A27U405   | 1826-0501 | 9  | 1   | ANLG MUXR MC1405 | 02037   | MC14053BCP   |
| A27U900   | 1826-1617 | 0  | 1   | ANLG MUXR DG509A | 02883   | DG509ABK     |
| A27U901   | 1858-0058 | 8  | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3906      |
| A27U902   | 1858-0021 | 5  | 1   | XSTR ARY 16P-DIP | 03799   | CA3083       |
| A27U903   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
|           |           |    |     |                  |         |              |
| A27U904   | 1826-0161 | 7  | 1   | IC 324           | 02037   | LM324N       |
| A27VR1    | 1902-0953 | 7  | 1   | DIO-ZNR 6.2V 5%  | 02037   | SZ30035-11RL |
| A27VR2    | 1902-0953 | 7  | 1   | DIO-ZNR 6.2V 5%  | 02037   | SZ30035-11RL |
| A27VR3    | 1902-0944 | 6  | 1   | DIO-ZNR 2.7V 5%  | 02037   |              |
| A27VR101  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5%  | 02037   | SZ30035-9RL  |

Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description     | Manuf'r | Part #      |
|-----------|-----------|----|-----|-----------------|---------|-------------|
| A27VR150  | 1902-0950 | 4  | 1   | DIO-ZNR 4.7V 5% | 02037   |             |
| A27VR151  | 1902-0950 | 4  | 1   | DIO-ZNR 4.7V 5% | 02037   |             |
| A27VR152  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
| A27VR200  | 1902-0944 | 6  | 1   | DIO-ZNR 2.7V 5% | 02037   |             |
| A27VR300  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
|           |           |    |     |                 |         |             |
| A27VR301  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
| A27VR400  | 1902-0951 | 5  | · 1 | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
| A27VR401  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
| A27VR402  | 1902-0954 | 8  | 1   | DIO-ZNR 6.8V 5% | 02037   |             |
| A27VR403  | 1902-0935 | 5  | 1   | DIO-ZNR 9.1V 5% | 02037   |             |
|           |           |    |     |                 |         |             |
| A27VR404  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
| A27VR405  | 1902-0943 | 5  | 1   | DIO-ZNR 2.4V 5% | 02037   |             |
| A27VR900  | 1902-0962 | 8  | 1   | DIO-ZNR 15V 5%  | 02037   |             |
| A27VR903  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
| A27VR904  | 1902-0956 | 0  | 1   | DIO-ZNR 8.2V 5% | 02037   |             |
|           |           | 1  |     |                 |         |             |
| A27VR905  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
| A27VR907  | 1902-0951 | 5  | 1   | DIO-ZNR 5.1V 5% | 02037   | SZ30035-9RL |
| A27VR908  | 1902-0958 | 2  | 1   | DIO-ZNR 10V 5%  | 02037   |             |
| A27VR909  | 1902-0945 | 7  | 1   | DIO-ZNR 3V 5%   | 02037   | SZ0035-3RL  |
| A27VR914  | 1902-1378 | 2  | 1   | DIO-ZNR 3.6V 5% | 02037   |             |
|           |           |    |     |                 |         | Ì           |
| A27W100   | 1258-0141 | 8  | 1   | JUMPER-REM      | 01380   | 530153-2    |
| A27W101   | 1258-0141 | 8  | 1   | JUMPER-REM      | 01380   | 530153-2    |
| A27W300   | 1258-0141 | 8  | 1   | JUMPER-REM      | 01380   | 530153-2    |

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Table B-13. 8130A Option 020 Channel 2 Board Parts List (continued)

# HP 8131A Parts Lists

## Introduction

The parts lists are divided into two groups:

- 1. A parts list for the standard instrument, followed by a parts lists for each of the electrical assemblies within it.
- 2. A parts list for the dual-channel instrument (Option 020) listing the additional/alternative parts fitted, followed by a parts list for each of the additional/alternative electrical assemblies.

The parts in each list are listed by reference designator.

### **Reference Designators**

Reference designators are alphanumeric names for parts. Examples are given below.

- 1. A1 = electrical assembly number 1
- 2. MP1 = mechanical part number 1
- 3. A5R9 = resistor 9 on assembly 5

## Parts Information

The following information is provided for each part in the parts list table:

- 1. Reference Designator
- 2. HP Part Number
- 3. CD = Check Digit
- 4. Description
- 5. Manufacturer's reference number. Table C-1 lists the manufacturers' names against their reference numbers.
- 6. Manufacturer's part number

# **Ordering Information**

Parts are ordered from the nearest Hewlett-Packard Sales and Support Office.

- A Sales and Support Office Directory is provided in Appendix A of this manual.
- 1. Provide the following information when ordering parts listed in the parts table.
  - a. Reference Designator
  - b. Hewlett-Packard part number
  - c. Check Digit
  - d. Quantity required.
- 2. Provide the following information when ordering parts not listed in the parts table.
  - a. Instrument model number
  - b. Instrument serial number
  - c. A physical description of the part
  - d. A functional description of the part
  - e. Quantity required.

| Reference | Name                              | Reference | e Name                        |
|-----------|-----------------------------------|-----------|-------------------------------|
| 00039     | NEC ELECTRONICS INC               | 03000     | AVDEL DIV OF NEWMAN IND LTD   |
| 00075     | ARIZONA COIL INC                  | 03038     | INTL RECTIFIER CORP           |
| 00359     | O'HARA METAL PRODUCTS CO          | 03232     | PRODUCT COMPONENT CORP        |
| 00493     | UNITED CHEMI-CON INC              | 03273     | GOWANDA ELECTRONICS CORP      |
| 00746     | ROHM CORP                         | 03285     | ANALOG DEVICES INC            |
|           |                                   |           |                               |
| 01074     | HOLSWORTHY ELECTRONICS LTD        | 03394     | METHODE ELECTRONICS INC       |
| 01075     | ITT POMONA ELECTRONICS            | 03406     | NATIONAL SEMICONDUCTOR CORP   |
| 01125     | LEWIS SCREW CO                    | 03418     | MOLEX INC                     |
| 01339     | GETTIG ENGRG & MFG CO INC         | 03647     | INSTRUMENT SPECIALTIES CO INC |
| 01380     | AMP INC                           | 03744     | BOURNS INC                    |
|           |                                   |           |                               |
| 01417     | NEL FREQUENCY CONTROLS INC        | 03799     | HARRIS CORP                   |
| 01542     | HP DIV 01 SAN JOSE COMPONENTS     | 03811     | INTEL CORP                    |
| 01607     | ALLEN-BRADLEY CO INC              | 03981     | PENN ENGINEERING & MFG CORP   |
| 01698     | TEXAS INSTRUMENTS INC             | 04129     | ARIES ELECTRONICS INC         |
| 01808     | SMALL PARTS INC                   | 04200     | SPRAGUE ELECTRIC CO           |
| 2010      | AVX CORP                          |           |                               |
| 02037     | MOTOROLA INC                      | 04213     | STIMPSON EDWIN B CO INC       |
| 2062      | HP DIV 05 MSD                     | 04225     | THOMAS & BETTS CORP           |
|           | LYN-TRON INC                      | 04486     | ITT CORP                      |
| 02145     | RAYCHEM CORP                      | 04604     | FEDERAL SCREW PRODUCTS CO     |
|           |                                   | 04703     | LITTELFUSE INC                |
| 2170      | AMATOM ELEK HARDWARE DIV OF MITE  | 04726     | 3M CO                         |
| 2414      | BURNDY CORP                       | 04775     | NATIONAL LOCK WASHER CO       |
| 2419      | CELLOTAPE INC                     | 04880     | ZIERICK MFG CO                |
| 2483      | CTS CORP                          | 04939     | SCHNITZER ALLOY PRODUCTS CO   |
| 2499      | IRC INC                           | 05098     | VICTORY ENGINEERING CORP      |
|           |                                   |           |                               |
| 2531      | CHICAGO RIVET & MACHINE CO        | 05313     | SEASTROM MFG CO               |
| 2556      | MONTROSE PRODUCTS CO              | 05447     | BERGQUIST CO                  |
| 2574      | RLC ELECTRONICS INS               | 05524     | DALE ELECTRONICS INC          |
| 2608      | THERMALLOY INC                    | 05610     | CAMCAR SCREW & MFG CO         |
| 2738      | METRIC & MULTISTANDARD CMPNT CORP | 05769     | ITT SEALECTRO CORP            |
| 805 0     | CORER INDUCEDURA NO               |           |                               |
| 1         | COOPER INDUSTRIES INC             |           | AMPHENOL CORPORATION          |
|           | SILICONIX INC                     | 11 1      | ASSMANN F W UND SOEHNE        |
| 1         | SIGNETICS CORP                    |           | HIPP ESSLINGEN                |
|           | DUPONT E I DE NEMOURS & CO        |           | SIEMENS AG                    |
|           | VORTH AMERICAN PHILIPS CORP       |           | SIEMENS AG<br>WOELCO          |

### Table C-1. HP 8131A Parts Manufacturers

| Reference | Name                          | Reference | Name                          |
|-----------|-------------------------------|-----------|-------------------------------|
| 06352     | TDK CORPORATION OF AMERICA    | 10572     | XICOR, INC                    |
| 06354     | TOSHIBA CORP                  | 10803     | ADVANCED INTERCONNECT         |
| 06653     | KLAR                          | 10858     | LINEAR TECHNOLOGY CORP        |
| 06691     | HOUSE OF METRICS LTD          | 11040     | PRECISION PLASTICS & GRAPHICS |
| 07029     | R BLESSING                    | 11192     | HEYCO MOLDED PRODUCTS GMBH    |
| 08623     | WOLFLE & CO                   | 11808     | KITAGAWA INDUSTRIES CO LTD    |
| 08709     | PANASONIC INDUSTRIAL CO       | 12236     | PACK & LOEDE GMBH             |
| 9809      | MATSUSHITA ELECTRIC WORKS LTD | 28480     | HEWLETT PACKARD COMPANY       |
| 09922     | SHIN-ETSU POLYMER CO LTD      |           |                               |
| 0358      | VOGT AG                       |           |                               |

Table C-1. HP 8131A Parts Manufacturers (continued)

# Standard Instrument Parts Lists

#### Master List

| Reference | HP Part #   | CD | Qty | Description       | Manuf'r            | Part #      |
|-----------|-------------|----|-----|-------------------|--------------------|-------------|
| A0 A1     | 08131-66501 | 4  | 1   | BD AY KEY STD     | 28480              | 08131-66501 |
| A0 A2     | 08131-66502 | 5  | 1   | BD AY MOTHER      | 28480              | 08131-66502 |
| A0 A3     | 08131-66503 | 6. | 1   | BD AY UPCR        | 28480              | 08131-66503 |
| A0 A4     | 08131-66504 | 7  | 1   | BD AY PWR CTL     | 28480              | 08131-66504 |
| A0 A5     | 08131-66505 | 8  | 1   | BD AY TIMING STD  | 28480              | 08131-66505 |
|           |             |    |     |                   |                    |             |
| A0 A14    | 08131-66514 | 9  | 1   | BD AY PWR MAIN    | 28480              | 08131-66514 |
| A0 A26    | 08131-66526 | 3  | 1   | BD AY CHAN 1      | 28480              | 08131-66526 |
| A0 F1     | 2110-0304   | 4  | 1   | FUSE 1.5A 250V    | 02805              | MDX-1-1/2A  |
| A0 F1     | 2110-0029   | 0  | 1   | FUSE 3A 250V      | 02805              |             |
| A0 MP1    | 08131-00101 | 2  | 1   | CHASSIS MAIN      | 28480              | 08131-00101 |
| A0 MP2    | 08131-00111 | 4  | 1   | ANGLE PWR         | 28480              | 08131-00111 |
|           |             |    |     |                   |                    |             |
| A0 MP3    | 08131-00202 | 4  | 1   | SUB PANEL         | 28480              | 08131-00202 |
| A0 MP4    | 08130-00203 | 4  | 1   | REAR PANEL        | 28480              | 08130-00203 |
| A0 MP5    | 08131-01212 | 8  | 1   | BRKT FAN          | 284 <del>8</del> 0 | 08131-01212 |
| A0 MP6    | 08130-04101 | 9  | 1   | CVR TOP CARD CAGE | 28480              | 08130-04101 |
| A0 MP7    | 08131-04102 | 1  | 1   | CVR TOP CABINET   | 28480              | 08131-04102 |
|           |             |    |     |                   |                    |             |
| A0 MP8    | 08131-04103 | 2  | 1   | CVR TOP INSTRUMEN | 28480              | 08131-04103 |
| A0 MP9    | 08131-04107 | 6  | 2   | BOARD KEEPER      | 28480              | 08131-04107 |
| A0 MP10   | 08131-04501 | 4  | 1   | CARD CAGE         | -28480             | 08131-04501 |
| A0 MP11   | 08131-05402 | 6  | 1   | INSULATOR BOTTOM  | 28480              | 08131-05402 |
| A0 MP12   | 08131-21701 | 2  | 4   | SMA-BUSHING       | 28480              | 08131-21701 |
|           |             |    | .   |                   |                    |             |
| A0 MP13   | 08131-40204 | 0  | 1   | FRONT PANEL STD   | 28480              | 08131-40204 |
| A0 MP14   | 08131-60110 | 9  | 1   | CAGE AY PWR       | 28480              | 08131-60110 |
| A0 MP15   | 08131-68502 | 8  | 1   | FAN AY            | 28480              | 08131-68502 |
| A0 MP16   | 08180-47401 | 2  |     | KEY CAP           | 28480              | 08180-47401 |
| A0 MP18   | 1401-0202   | 7  | I   | CAP-PROT STR      | 11040              | .234-5      |
| A0 MP19   | 1460-1345   | 5  | 2   | TILT STAND        | 00359              |             |
| 10 MD90   | 5001 0520   |    | ,   | CIDE TRIM         | 00400              | F001 0500   |
|           | 5001-0539   | 9  |     | SIDE TRIM         | 28480              | 5001-0539   |
|           | 5021-5804   | 3  | 1   | FRAME REAR 132    | 28480              | 5021-5804   |
| !         | 5021-5837   | 2  | - 1 | STRUT CRNR 497    | 28480              | 5021-5837   |
| f 1       | 5021-8403   | 4  |     | FRAME FRNT 132    | 28480              | 5021-8403   |
| A0 MP24   | 5040-0478   | 7  | 2   | SLEEVE BLUE       | 28480              | 5040-0478   |

Table C-2. 8131A Standard Instrument Parts List

|   | Referenc           | e HP Part # |   |       |                         |       | ·            | _ |
|---|--------------------|-------------|---|-------|-------------------------|-------|--------------|---|
|   | A0 MP25            |             |   | + • • |                         | Manuf |              |   |
|   | A0 MP25<br>A0 MP26 |             | 3 | 1     | SHAFT PWR SWIT          |       | 5040-9319    | i |
|   |                    |             | 8 | 4     | FOOT                    | 28480 | 5041-8801    | ļ |
|   | A0 MP27            |             | 9 | 1     | TRIM STRIP TOP          | 28480 | 5041-8802    |   |
|   | A0 MP28            |             | 8 | 1     | STP HNDL FRNT           | 28480 | 5041-8819    |   |
|   | A0 MP29            | 5041-8820   | 1 | 1     | STP HNDL REAR           | 28480 | 5041-8820    |   |
|   |                    |             |   |       |                         |       |              |   |
|   | A0 MP30            | 5041-8821   | 2 | 4     | FOOT REAR               | 28480 | 5041-8821    |   |
|   | A0 MP31            | 5062-3704   | 4 | 1     | STRAP HNDL 497          | 28480 | 5062-3704    |   |
|   | A0 MP32            | 5062-3747   | 5 | 1     | CVR BOTTOM 497          | 28480 | 5062-3747    |   |
|   | A0 MP33            | 5062-3812   | 5 | 1     | COVER SIDE PERF         | 28480 | 5062-3812    |   |
|   | A0 MP34            | 5062-3837   | 4 | 1     | COVER SIDE PERF         | 28480 | 5062-3837    |   |
|   |                    |             |   |       |                         |       |              |   |
|   | A0 MP35            | 6960-0006   | 8 | 6     | PLUG-HOLE               | 04213 | D-2587-LCS   |   |
|   | A0 MP36            | 7120-6153   | 9 | 1     | LABEL-WARNING           | 06653 |              |   |
|   | A0 MP37            | 0363-0125   | 0 | 2     | <b>RFI STRP-FINGERS</b> | 03647 | 97-555       | l |
|   | A0 MP38            | 0363-0170   | 5 | 1     | <b>RFI STRP-FINGERS</b> | 03647 | 97-520-A     |   |
|   | A0 MP39            | 8160-0392   | 1 | 1     | <b>RFI STRP-FINGERS</b> | 03647 | 97-500-SNPB  | ł |
|   |                    | ļ           |   |       |                         |       |              |   |
|   | A0 MP100           | 08131-00602 | 8 | 1     | SHIELD                  | 28480 | 08131-00602  |   |
|   | A0 MP210           |             | 9 | 1     | H-SINK                  | 28480 | 08131-21104  |   |
| . | A0 MP214           | 0340-0433   | 5 | 1     | INSUL-FLG-BSHG          | 03232 | 20101 21101  |   |
| 1 | A0 MP215           | 0340-1212   | 0 |       | INSULATOR               | 28480 | 0340-1212    |   |
|   | A0 S1              | 3101-2992   | 2 | 1     | SW 4A/80A 250V          | 04486 | 0010 1212    |   |
|   |                    |             |   | Ì     | ,                       | 01100 |              |   |
| 1 | A0 T1              | 9100-4739   | 3 | 1     | XFMR BV382149B          | 28480 | 9100-4739    |   |
|   | 40 W1              | 5180-2462   | 9 |       | CBL HP-IB               |       | 5180-2462    |   |
| 4 | 40 W4              | 08131-61604 | 8 |       | CBL AY TRIG INP         |       | 08131-61604  |   |
| 4 | 40 W5              | 08131-61605 | 9 |       | CBL AY EXT INP          |       | 08131-61605  |   |
| A | 40 W6              | 08131-61651 | 5 | J     | CBL AY TRIG OUT         |       |              |   |
|   |                    |             |   |       |                         | 20400 | 08131-61651  |   |
| A | 10 W 10            | 08131-61603 | 7 | 1     | CBL AY OUTPUT           | 28480 | 00101 61 600 |   |
|   | 0 W11              | 08131-61603 | 7 |       |                         |       | 08131-61603  |   |
|   |                    | 11000       |   |       | JULAI OUIFUI            | 20480 | 08131-61603  |   |

Table C-2. 8131A Standard Instrument Parts List (continued)

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# Keyboard

| Reference         | HP Part #   | CD | Qty | Description     | Manufr  | Part #             |
|-------------------|-------------|----|-----|-----------------|---------|--------------------|
| A1                | 08131-66501 | 4  | 1   | BD AY KEY STD   | 28480   | 08131-66501        |
| A1 C2             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
| A1 C3             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
| A1 C4             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V  | 02010   | SA115C104MAAH      |
|                   |             |    |     |                 |         |                    |
| A1 CP1            | 0180-2207   | 5  | 1   | CAP 100uF 10 V  | 04200   | 150D107X9010R2-DYS |
| A1 DS1            | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG |         | HDSP-H101          |
| A1 DS2            | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG |         | HDSP-H101          |
| A1 DS3            | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542   | HDSP-H101          |
|                   |             |    |     |                 |         |                    |
| A1 DS4            | 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542   | HDSP-H101          |
| A1 DS5            | 1990-1252   | 6  | 1   | LED-LT BAR      | 01542   | HLCP-B100          |
| A1 DS6            | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS7            | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
| A1 DS8            | 1000 1954   |    | ,   |                 |         |                    |
| A1 D50<br>A1 DS11 | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| 1 1               | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS12           | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS13           | 1990-1254   | 8  |     | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS14           | 1990-1254   | 8  | 1   | LED-LMP         | 01542   | HLMP-Q150 SELECTED |
| A1 DS15           | 1000 1054   |    |     |                 |         |                    |
| 1                 | 1990-1254   | 8  |     | LED-LMP         |         | HLMP-Q150 SELECTED |
|                   | 1990-1254   | 8  | - 1 | LED-LMP         | 1       | HLMP-Q150 SELECTED |
| I F               | 1990-1254   | 8  |     | LED-LMP         |         | HLMP-Q150 SELECTED |
| 1                 | 1990-1254   | 8  |     | LED-LMP         | 1       | HLMP-Q150 SELECTED |
| A1 DS21           | 1990-1278   | 6  | 1   | LED-LMP         | 01542   | HLMP-K155          |
|                   | 1000 1000   |    |     |                 |         |                    |
|                   | 1990-1278   | 6  |     |                 | 1       | HLMP-K155          |
|                   | 1990-1278   | 6  |     |                 |         | HLMP-K155          |
|                   | 1990-1278   | 6  | 1   |                 | 1       | HLMP-K155          |
|                   | 1990-1278   | 6  | 1   |                 | 4       | HLMP-K155          |
| A1 DS26           | 1990-1278   | 6  | 1   | LED-LMP         | 01542 1 | HLMP-K155          |

Table C-3. 8131A Standard Keyboard Parts List

| Re   | ference | HP Part # | CD | Qty | Description      | Manufr | Part #             |
|------|---------|-----------|----|-----|------------------|--------|--------------------|
| A1   | DS27    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS28    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS51    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS52    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS53    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
|      |         |           |    |     |                  |        |                    |
| A1   | DS54    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS55    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS56    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS57    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1   | DS61    | 1990-1254 | 8  | 1   | LED-LMP          | 01542  | HLMP-Q150 SELECTED |
|      |         |           |    |     |                  |        |                    |
| A1   | DS62    | 1990-1254 | 8  | 1   | LED-LMP          | 01542  | HLMP-Q150 SELECTED |
| A1 ] | DS63    | 1990-1254 | 8  | 1   | LED-LMP          | 01542  | HLMP-Q150 SELECTED |
| A1 1 | DS64    | 1990-1254 | 8  | 1   | LED-LMP          | 01542  | HLMP-Q150 SELECTED |
| A1 I | DS65    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1 1 | DS71    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
|      |         |           |    |     |                  |        |                    |
| A1 1 | DS72    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1 I | DS73    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| 1    | DS74    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1 I | DS75    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1 I | DS76    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
|      |         |           |    |     |                  |        |                    |
| A1 I | DS77    | 1990-1278 | 6  | 1   | LED-LMP          | 01542  | HLMP-K155          |
| A1 J | 1       | 1252-0217 | 7  | 1   | CONN-POST-TP-HDR | ! !    | 3429-5202          |
| A1 M | AP1     | 5041-4707 | 5  | 8   | QTR COBLK        |        | 5041-4707          |
| A1 M | AP2     | 5041-0318 | 6  | 3   | LK CAP PTY GRAY  | 1 1    | 5041-0318          |
| A1 M | 4P3     | 5041-0309 | 5  | - E | CAP KEY QUARTER  |        | 5041-0309          |
|      |         |           |    |     | -                |        |                    |
| A1 M | 1P4     | 5041-0507 | 5  | 1   | QTR WGRN         | 28480  | 5041-0507          |
| A1 M | 1P5     | 5041-0726 | 0  | 1   | KEY CAP LCL      |        | 5041-0726          |
| A1 M | 1P6     | 1200-0654 | 7  | 1   | SKT-IC 40-CONT   | 1      | 2-641606-1         |
| A1 M | 1P7     | 1200-0899 | 2  | 1   | SKT-STRP 8-CONT  | 1      | 8-0511-10          |
| A1 R | A1      | 1810-0325 | 2  | 1   | NETWORK-RES DIP  | 1      | 761-3-R150         |

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Table C-3. 8131A Standard Keyboard Parts List (continued)

| Referenc | e HP Part # | CD | Qty | Description     | Manufr |            |
|----------|-------------|----|-----|-----------------|--------|------------|
| A1 RA2   |             | 7  | 1   | NETWORK-RES DIP |        |            |
| A1 RA3   | 1810-0338   | 7  |     |                 |        | 761-3-R100 |
| A1 RA4   | 1810-0338   | 1  | 1   | NETWORK-RES DIP |        | 761-3-R100 |
| AI RA5   | 1810-0275   |    |     | NETWORK-RES SIP | 02483  | 750-101    |
| A1 S1    | 5060-9436   |    | 1   | NETWORK-RES SIP | 02483  | 750-101    |
| AT DI    | 0000-9430   | '  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S2    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S3    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S4    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S5    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S6    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
|          |             |    |     |                 | 01100  | 0000 0100  |
| A1 S7    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S8    | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S21   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S22   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S23   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
|          |             |    |     |                 |        |            |
| A1 S24   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S25   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S26   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S27   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S28   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
|          |             |    |     |                 |        |            |
| A1 S41   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S42   | 5060-9436   | 7  |     | SW-PB SPST NO   | 04486  | 5560-9436  |
| A1 S43   | 5060-9436   | 7  |     |                 | 04486  | 5560-9436  |
| A1 S44   | 5060-9436   | 7  |     |                 | 04486  | 5560-9436  |
| A1 S45   | 5060-9436   | 7  | 1   | SW-PB SPST NO   | 04486  | 5560-9436  |
|          |             |    |     |                 |        |            |
| A1 S46   | 5060-9436   | 7  | 1   |                 |        | 5560-9436  |
| A1 S47   | 5060-9436   | 7  |     |                 | 1      | 5560-9436  |
| A1 S48   | 5060-9436   | 7  |     |                 |        | 5560-9436  |
| A1 S51   | 5060-9436   | 7  |     |                 | 1      | 5560-9436  |
| A1 S52   | 5060-9436   | 7  | 1 5 | SW-PB SPST NO   | 04486  | 5560-9436  |

Table C-3. 8131A Standard Keyboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-----------|----|-----|------------------|---------|-------------|
| A1 S53    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 S54    | 5060-9436 | 7  | 1   | SW-PB SPST NO    | 04486   | 5560-9436   |
| A1 U1     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
| A1 U2     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
| A1 U3     | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698   | SN74HCT138N |
|           |           |    |     |                  |         |             |
| A1 U4     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U5     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U6     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U7     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U8     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |

Table C-3. 8131A Standard Keyboard Parts List (continued)

### Motherboard

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #                 |
|-----------|-------------|----|-----|------------------|---------|------------------------|
| A2        | 08131-66502 | 5  | 1   | BD AY MOTHER     | 28480   | 08131-66502            |
| A2 J1     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J2     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J3     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J4     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
|           |             |    |     |                  |         |                        |
| A2 J5     | 1251-8320   | 7  | 1   | CONN-POST-TP-SKT | 04225   | FC064-031-2            |
| A2 J6     | 1252-0027   | 7  | 1   | CONN-POST-TP-SKT | 05879   | 706-C143-CO96F-23A-204 |
| A2 MP11   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 MP12   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
|           |             |    |     |                  |         |                        |
| A2 MP13   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 MP14   | 8160-0392   | 1  |     | RFI STRP-FINGERS | 03647   | 97-500-SNPB            |
| A2 U1     | 1826-0760   | 2  | 1   | IC 335           | 03406   | LM335AZ                |
| A2 W1     | 08131-61601 | 5  | 1   | CBL CONN KEY     | 28480   | 08131-61601            |

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Table C-4. 8131A Motherboard Parts List

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# Microprocessor Board

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #           |
|-----------|-------------|----|-----|------------------|---------|------------------|
| A3        | 08131-66503 | 6  | 1   | BD AY UPCR       | 28480   | 08131-66503      |
|           |             |    |     |                  |         |                  |
| A3 BT100  | 1420-0273   | 2  | 1   | BAT 3V           | 08709   | BR-2/3AT2P       |
| A3 C3     | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11 |
| A3 C4     | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11 |
| A3 C100   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
|           |             |    |     |                  |         |                  |
| A3 C101   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C102   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C103   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C104   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C105   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
|           |             | 1  |     |                  |         |                  |
| A3 C106   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C107   | 0160-6623   | 5  | 1   |                  | 02010   | SA115C104MAAH    |
| A3 C202   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C203   | 0160-6623   | 5  | 1   |                  | 02010   | SA115C104MAAH    |
| A3 C204   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
|           |             |    |     |                  |         |                  |
| A3 C205   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C301   | 0160-6623   | 5  | ł   |                  | 02010   | SA115C104MAAH    |
| A3 C302   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C303   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| A3 C304   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH    |
| -         |             | ·  |     |                  |         |                  |
| A3 C400   | 0160-6623   | 5  |     |                  | 02010   | SA115C104MAAH    |
| A3 C401   | 0160-6623   | 5  |     | i i              | - F     | SA115C104MAAH    |
| A3 C402   | 0160-6623   | 5  |     |                  |         | SA115C104MAAH    |
| A3 C404   | 0160-6623   | 5  |     |                  | F       | SA115C104MAAH    |
| A3 C406   | 0160-6623   | 5  | 1 ( | CAP 0.1uF 50 V ( | 2010    | SA115C104MAAH    |

Table C-5. 8131A Microprocessorboard Parts List

Table C-5. 8131A Microprocessorboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #               |
|-----------|-----------|----|-----|------------------|---------|----------------------|
| A3 C408   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C409   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C410   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C500   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C501   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
|           |           |    |     |                  |         |                      |
| A3 C504   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C505   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 C506   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH        |
| A3 CP1    | 0180-2207 | 5  | 1   | CAP 100uF 10 V   | 04200   | 150D107X9010R2-DYS   |
| A3 CP2    | 0180-2207 | 5  | 1   | CAP 100uF 10 V   | 04200   | 150D107X9010R2-DYS   |
|           |           |    |     |                  |         |                      |
| A3 CR200  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| A3 CR400  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| A3 CR401  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511             |
| A3 DS100  | 1990-0485 | 5  | 1   | LED-LMP          | 01542   | HLMP-1503            |
| A3 J1     | 1251-8324 | 1  | 1   | CONN-POST-TP-HDR | 04486   | G06M96P4BEBL-004-715 |
|           |           |    |     |                  |         |                      |
| A3 J2     | 1252-1979 | 0  | 1   | CONN-POST-TP-HDR | 04726   | 3627-5202            |
| A3 J400   | 1251-4682 | 6  | 1   | CONN-POST-TP-HDR | 03394   | 1102-1-103-02        |
| A3 J501   | 1251-7745 | 8  | 1   | CONN-POST-TP-HDR | 03418   | 22-12-2024           |
| A3 L1     | 9100-3139 | 5  | 1   | L 75UH +-15%     | 00075   |                      |
| A3 MP5    | 1200-0654 | 7  | 1   | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
|           |           |    |     |                  |         |                      |
| A3 MP6    | 1200-0654 | 7  | 1   | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
| A3 MP7    | 1200-0654 | 7  | 1   | SKT-IC 40-CONT   | 01380   | 2-641606-1           |
| A3 MP8    | 1200-0567 | 1  | 1   | SKT-IC 28-CONT   | 01380   | 2-641605-1           |
| A3 MP9    | 1200-0567 | 1  | 1   | SKT-IC 28-CONT   | 01380   | 2-641605-1           |
| A3 MP10   | 1400-0824 | 7  | 1   | STRAP-CABLE      | 04225   | TY-23M               |
|           |           |    |     |                  |         |                      |
| A3 Q100   | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18              |
| A3 Q200   | 1853-0281 | 9  | 1   | XSTR PNP 2N2907A | 02037   | 2N2907A              |
| A3 R100   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25       |
| A3 R101   | 0698-3161 | 9  | 1   | RES 38.3K 1% .12 |         | CRB14 OR CRB25       |
| A3 R102   | 0757-0407 | 6  | 1   | RES 200 1% .125W |         | CRB14 OR CRB25       |

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| ļ   | Reference | e HP Part # | CD               | Qty | Description      | 116 -   |                        |
|-----|-----------|-------------|------------------|-----|------------------|---------|------------------------|
| - ۲ | A3 R200   | 0698-3156   | $\frac{ CD }{2}$ | 1   |                  | Manuf'r | 11                     |
| 1   | A3 R201   | 0757-0419   |                  |     | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25         |
|     | A3 R202   | 0757-0419   | 03               |     | RES 681 1% .125W | 00746   | CRB14 OR CRB25         |
| - 1 | A3 R202   | 8159-0005   | 0                |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25         |
|     | A3 R204   | 0757-0394   | -                |     | RES-ZERO OHMS    | 01339   | L-2007-1               |
| 1   | 10 11204  | 0757-0394   | 0                | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25         |
|     | A3 R206   | 8159-0005   | 0                | 1   |                  |         | -                      |
|     | A3 R400   | 0757-0394   | 0                |     | RES-ZERO OHMS    | 01339   | L-2007-1               |
| 1   | A3 R400   | 0757-0394   | -                | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25         |
|     | 13 R500   |             | 0                | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25         |
| 1   | 13 RA100  | 8159-0005   | 0                | 1   | RES-ZERO OHMS    | 01339   | L-2007-1               |
|     | 13 RAIUU  | 1810-0243   | 3                | 1   | NETWORK-RES DIP  | 02483   | 761-3-R6.8K            |
|     | 3 RA101   | 1810-0503   | 8                | 1   | NETWORK DRO DE   |         |                        |
|     | 3 RA200   |             | 1                | 1   | NETWORK-RES DIP  |         | 761-3-R3.3K            |
|     | 3 RA201   |             | 1                | 1   | NETWORK-RES DIP  |         | 761-3-R10K             |
| 1   | 3 RA300   | 1810-0316   |                  | 1   | NETWORK-RES DIP  | 1       | 761-3-R10K             |
|     | .3 RA301  | 1810-0316   |                  | 1   | NETWORK-RES DIP  |         | 761-3-R10K             |
|     | .0 101001 | 1010-0510   |                  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K             |
| A   | 3 RA400   | 1810-0470   | 8                | 1   | NETWORK-RES DIP  | 02483   | 761 9 00 016           |
| 1   | 3 RA401   | 1810-0316   |                  | 1   | NETWORK-RES DIP  | 1 1     | 761-3-R2.2K            |
|     | 3 U100    | 1820-3456   | 7                |     | IC-MM74HCT244N   | 1 1     | 761-3-R10K             |
|     | 3 U101    | 1820-2698   | 7                | 1   | IC-74F240PC      |         | SN74HCT244N            |
|     | 3 U102    | 1820-2150   | 6                |     | IC-8279-5        | 1 1     | 74F240N                |
| ĺ   |           |             | Ŭ                |     | 10-0219-0        | 03911   | D8279-5                |
| A   | 3 U103    | 1820-2861   | 6                | 1   | IC-74F138PC      | 01698   | SN74F138N              |
| A   | 3 U104    | 1820-2701   | 3                |     | IC-74F374PC      |         | SN74F138N<br>SN74F374N |
| A   | 3 U105    | 1820-2795   | 5                |     | IC-74F244PC      |         | SN74F244N              |
| A   | 3 U106    | 1820-3294   | 1                |     | IC-SN74ALS374N   |         | 5N74ALS374N            |
| A   | 3 U107    | 1820-3294   | 1                |     | IC-SN74ALS374N   |         | SN74ALS374N            |
|     |           |             | -                |     |                  | 01030   | DIVITALOOIAN           |
| A   | 3 U202    | 1818-3760   | 1                | 1   | IC TC5564APL-15  | 06354   | C5564APL-15            |
| A3  | U203      | 1818-3760   | 1                |     | -                |         | C5564APL-15            |
| A3  | U204      | 08131-13707 | 1                |     | - 1              |         | 8131-13707             |
| A3  | U205      | 08131-13708 | 2                |     |                  | 1       | 8131-13708             |
| Δ 3 |           | 1858-0053   | 1                |     |                  | 02037   | 0101-10100             |

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Table C-5. 8131A Microprocessorboard Parts List (continued)

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| Reference | HP Part # | CD | Qty | Description    | Manuf'r | Part #       |
|-----------|-----------|----|-----|----------------|---------|--------------|
| A3 U207   | 1820-2506 | 6  | 1   | IC-74F04PC     | 01698   | SN74F04N     |
| A3 U208   | 1820-2656 | 7  | 1   | IC-SN74ALS00AN | 01698   | SN74ALS00AN  |
| A3 U300   | 1820-3629 | 6  | 1   | IC-MM74HCT04N  | 03406   | MM74HCT04N   |
| A3 U301   | 1820-3173 | 5  | 1   | IC-MM74HC112N  | 02037   | MC74HC112N   |
| A3 U302   | 1820-2775 | 1  | 1   | IC-SN74ALS10AN | 01698   | SN74ALS10AN  |
|           |           |    |     |                |         |              |
| A3 U303   | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698   | SN74HCT138N  |
| A3 U304   | 1820-3796 | 8  | 1   | IC-MM74HCT139N | 02910   | 74HCT139N    |
| A3 U305   | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698   | SN74HCT138N  |
| A3 U306   | 1820-5111 | 5  | 1   | IC-74HCT21N    | 02910   | 74HCT21N     |
| A3 U400   | 1820-3183 | 7  | 1   | IC-MC74HC03N   | 02037   | MC74HC03N    |
|           |           |    |     |                |         |              |
| A3 U401   | 1820-3848 | 1  | 1   | IC-MM74HCT374N | 01698   | SN74HCT374N  |
| A3 U402   | 1820-4086 | 1  | 1   | IC-74HCT273N   | 02910   | 74HCT273N    |
| A3 U403   | 1820-3505 | 7  | 1   | IC-SN74ALS191N | 01698   | SN74ALS191N  |
| A3 U404   | 1820-4086 | 1  | 1   | IC-74HCT273N   | 02910   | 74HCT273N    |
| A3 U405   | 1820-2690 | 9  | 1   | IC-74F32PC     | 01698   | SN74F32N     |
|           |           |    |     |                |         |              |
| A3 U406   | 1820-3665 | 0  | 1   | IC-MM74HCT245N | 01698   | SN74HCT245N  |
| A3 U407   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799   | CD74HCT174E  |
| A3 U408   | 1820-2854 | 7  | 1   | IC-68B09ES     | 02037   | MC68B09ES    |
| A3 U409   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799   | CD74HCT174E  |
| A3 U410   | 1820-3940 | 4  | 1   | IC-CD74HCT174E | 03799   | CD74HCT174E  |
|           |           |    |     |                |         |              |
| A3 U500   | 1820-3348 | 6  | 1   | IC-74F163APC   | 02910   | 74F163AN     |
| A3 U501   | 1820-2694 | 3  | 1   | IC-74F112PC    | 01698   | SN74F112N    |
| A3 U502   | 1820-2686 | 3  | 1   | IC-74F08PC     | 01698   | SN74F08      |
| A3 U503   | 1820-3664 | 9  | 1   | IC-MM74HCT00N  | 02910   | 74HCT00N     |
| A3 U504   | 1820-2548 | 6  | 1   | IC-9914        | 01698   |              |
|           |           |    |     |                |         |              |
| A3 U505   | 1820-3431 | 8  | 1   | IC-INTERFACE   | 03406   | DS75160AN    |
| A3 U506   | 1820-3518 | 2  | 1   | IC-INTERFACE   | 03406   | DS75162AN    |
| A3 W1     | 1258-0141 | 8  | 1   | JUMPER-REM     | 01380   | 530153-2     |
| A3 Y500   | 1813-0285 | 9  | 1   | CLK-OSC-XTAL   | 01417   | HS-100-20MHZ |

 Table C-5. 8131A Microprocessorboard Parts List (continued)

### Power Control Board

| Reference        | e HP Part # | CD | Qty  | Description      | Manuf'r | Part #             |
|------------------|-------------|----|------|------------------|---------|--------------------|
| A4               | 08131-66504 | 7  | 1    | BD AY PWR CTI    | 28480   | 08131-66504        |
| A4 C2            | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | / 02010 | SA201A102JAAH      |
| A4 C5            | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
|                  |             | ĺ  |      |                  |         |                    |
| A4 C6            | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C8            | 0160-4822   | 2  | 1    | CAP 1000pF 100 V |         | SA201A102JAAH      |
| A4 C10           | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C12           | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
| A4 C14           | 0160-4822   | 2  | 1    | CAP 1000pF 100 V | 02010   | SA201A102JAAH      |
|                  |             |    |      |                  |         |                    |
| A4 CP1           | 0180-4129   | 4  | 1    | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP4           | 0180-4129   | 4  | 1    | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A4 CP7           | 0180-4129   | 4  | 1    | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
| A4 CP9           | 0180-4129   | 4  | 1    | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A4 CP11          | 0180-4129   | 4  | 1    | CAP luF 35 V     | 04200   | 173D105X9035V      |
|                  |             |    |      |                  |         |                    |
| A4 CP13          | 0180-4129   | 4  | 1    | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A4 CP15          | 0180-0116   | 1  | 1    | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A4 CP16          | 0180-4129   | 4  |      | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A4 CP17          | 0180-2690   | 0  |      | CAP 3.3uF 15 V   | 04200   | 150D335X9015A2     |
| A4 CP18          | 0180-2690   | 0  | 1    | CAP 3.3uF 15 V   | 04200   | 150D335X9015A2     |
|                  |             |    |      |                  |         |                    |
| A4 CR1           | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
| A4 CR2           | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
| A4 CR3           | 1901-1098   | 1  |      | DIO-1N4150       | 00746   | -                  |
| A4 CR4           | 1901-1098   | 1  |      | DIO-1N4150       | 00746   |                    |
| A4 CR5           | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
| A4 CR6           | 1001 1000   |    | .  . |                  |         |                    |
| A4 CR6<br>A4 CR7 | 1901-1098   | 1  |      |                  | 00746   |                    |
|                  | 1901-1098   | 1  |      |                  | 00746   |                    |
| 1                | 1901-1098   | 1  |      | 1                | 00746   |                    |
|                  | 1901-1098   | 1  |      |                  | 00746   |                    |
| A4 CRIU          | 1901-1098   | 1  | 1 1  | DIO-1N4150       | 00746   |                    |

Table C-6. 8131A Power Control Board Parts List

| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #     |
|-----------|-----------|----|-----|------------------|--------|------------|
| A4 CR11   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR12   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR13   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR14   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR15   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR16   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR17   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR18   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR19   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
| A4 CR20   | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746  |            |
|           |           |    |     |                  |        |            |
| A4 J2     | 1252-1506 | 9  | 1   | CONN-POST-TP-SKT | 01380  | 1-166592-0 |
| A4 J3     | 1252-1506 | 9  | 1   | CONN-POST-TP-SKT | 01380  | 1-166592-0 |
| A4 Q1     | 1854-0392 | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088     |
| A4 Q2     | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037  | MPS-A18    |
| A4 Q4     | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037  | MPS-A18    |
| A4 Q5     | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037  | MPS-A18    |
| A4 Q6     | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037  | MPS-A18    |
| A4 Q7     | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q8     | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q9     | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q10    | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q11    | 1853-0569 | 6  |     | XSTR PNP SI      | 02037  |            |
|           | 1853-0569 | 6  |     | XSTR PNP SI      | 02037  | <i>,</i>   |
|           | 1853-0569 | 6  |     | XSTR PNP SI      | 02037  |            |
|           | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
|           |           | Ĭ  |     |                  | 02001  |            |
| -         | 1854-0637 | 1  | 1   | XSTR NPN 2N2219A | 02037  | 2N2219A    |
| •         | 1854-0583 | 6  | 1   | XSTR NPN SI      | 02037  | MPS-A18    |
| A4 Q17    | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q18    | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |
| A4 Q20    | 1853-0569 | 6  | 1   | XSTR PNP SI      | 02037  |            |

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Table C-6. 8131A Power Control Board Parts List (continued)

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Table C-6. 8131A Power Control Board Parts List (continued)

| Referen | nce HP Part 7 | # CD | Qty | 7 Description    | Manuf | Part #         |
|---------|---------------|------|-----|------------------|-------|----------------|
| A4 R1   | 0757-0278     | 9    | 1   | RES 1.78K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R2   | 0698-3160     | 8    | 1   | RES 31.6K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R3   | 0757-0442     | 9    | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A4 R4   | 0698-3155     | 1    | 1   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R5   | 0757-0439     | 4    | 1   | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |               |      |     |                  |       |                |
| A4 R6   | 0757-0442     | 9    | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A4 R7   | 0757-0280     | 3    | 1   | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |
| A4 R8   | 0757-0472     | 5    | 1   | RES 200K 1% .125 | 00746 | CRB14 OR CRB25 |
| A4 R9   | 0698-6620     | 1    | 1   | RES 150K .1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R10  | 0698-6353     | 7    | 1   | RES 50K .1% .125 | 00746 | CRB14 OR CRB25 |
|         |               |      |     |                  |       |                |
| A4 R11  | 0698-4483     | 0    | 1   | RES 18.7K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R12  | 0757-0472     | 5    | 1   | RES 200K 1% .125 | 00746 | CRB14 OR CRB25 |
| A4 R13  | 0757-0444     | 1    | 1   | RES 12.1K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R14  | 0757-0442     | 9    | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A4 R15  | 0698-3155     | 1    | 1   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |               |      |     |                  |       |                |
| A4 R16  | 0757-0438     | 3    | 1   | RES 5.11K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R17  | 0698-3155     | 1    | 1   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R18  | 0698-3155     | 1    | 1   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R19  | 0757-0442     | 9    | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| A4 R20  | 0698-4425     | 0    | 1   | RES 1.54K 1% .12 | 00746 | CRB14 OR CRB25 |
|         |               |      |     |                  |       |                |
| A4 R21  | 0757-0472     | 5    | 1   | RES 200K 1% .125 | 00746 | CRB14 OR CRB25 |
| A4 R22  | 0757-0465     | 6    | 1   | RES 100K 1% .125 | 00746 | CRB14 OR CRB25 |
| A4 R23  | 0699-0844     | 1    | 1   | RES 51.1K .1% .1 | 00746 | CRB14 OR CRB25 |
| A4 R24  | 0698-6353     | 7    |     | RES 50K .1% .125 | 00746 | CRB14 OR CRB25 |
| A4 R25  | 0757-0442     | 9    | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|         |               |      |     |                  |       |                |
| A4 R26  | 0698-3155     | 1    | +   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R27  | 0698-3155     | 1    |     | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R28  | 0757-0439     | 4    | 1   | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
| A4 R29  | 0757-0472     |      | 1   | RES 200K 1% .125 |       | CRB14 OR CRB25 |
| A4 R30  | 0698-4435     | 2    | 1   | RES 2.49K 1% .12 |       | CRB14 OR CRB25 |

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Table C-6. 8131A Power Control Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r |                |  |  |  |
|-----------|-----------|----|-----|------------------|---------|----------------|--|--|--|
| A4 R31    | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R32    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R33    | 0699-0721 | 3  | 1   | RES 33K .1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R34    | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R35    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |    |     |                  |         |                |  |  |  |
| A4 R36    | 0757-0444 | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R37    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R38    | 0757-0442 | 9  | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25 |  |  |  |
| A4 R39    | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R40    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |    |     |                  |         |                |  |  |  |
| A4 R41    | 0757-0422 | 5  | 1   | RES 909 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R42    | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R43    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R44    | 0699-0844 | 1  | 1   | RES 51.1K .1% .1 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R45    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           | 1  |     |                  |         |                |  |  |  |
| A4 R46    | 0698-3160 | 8  | 1   | RES 31.6K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R47    | 0757-0421 | 4  | 1   | RES 825 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R48    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R49    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R50    | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |    |     |                  |         |                |  |  |  |
| A4 R51    | 0757-0472 | 5  | 1   | RES 200K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R52    | 0757-0274 | 5  | 1   | RES 1.21K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R53    | 0698-6353 | 7  | 1   | RES 50K .1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R54    | 0698-6620 | 1  | 1   | RES 150K .1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R55    | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |    |     |                  |         |                |  |  |  |
| A4 R56    | 0698-3161 | 9  | 1   | RES 38.3K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R57    | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R58    | 0698-3155 | 1  | 1   | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R59    | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A4 R60    | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |

Table C-6. 8131A Power Control Board Parts List (continued)

| Reference | e HP Part # | CD | Qty          | Description      | Manuf'ı | Bont #          |
|-----------|-------------|----|--------------|------------------|---------|-----------------|
| A4 R61    | 0757-0472   | 5  | 1            | RES 200K 1% .125 | 00746   | 11              |
| A4 R62    | 0757-0280   | 3  | 1            | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25  |
| A4 R63    | 0698-6353   | 7  | 1            | RES 50K .1% .125 | 00746   | CRB14 OR CRB25  |
| A4 R64    | 0698-6376   | 4  | 1            | RES 200K .1% .12 | 00746   | CRB14 OR CRB25  |
| A4 R65    | 0757-0416   | 7  | 1            | RES 511 1% .125W | 00746   | CRB14 OR CRB25  |
|           |             |    | -            |                  | 00740   | CRB14 OR CRB25  |
| A4 R66    | 0757-0280   | 3  | 1            | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25  |
| A4 R67    | 0698-6360   | 6  | 1            | RES 10K .1% .125 | 00746   | CRB14 OR CRB25  |
| A4 R68    | 0698-6360   | 6  | 1            | RES 10K .1% .125 | 00746   | CRB14 OR CRB25  |
| A4 R69    | 0698-6360   | 6  | 1            | RES 10K .1% .125 | 00746   | CRB14 OR CRB25  |
| A4 R70    | 0698-6360   | 6  | 1            | RES 10K .1% .125 | 00746   | CRB14 OR CRB25  |
| 1         |             |    | _            |                  | 00140   | CILDIA OK CKD25 |
| A4 R71    | 0698-6360   | 6  | 1            | RES 10K .1% .125 | 00746   | CRB14 OR CRB25  |
| A4 R72    | 0757-0280   | 3  | 1            | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25  |
| A4 R73    | 0757-0394   | 0  | 1            | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25  |
| A4 TP1    | 0360-2264   | 6  | 1            | TERMTEST POINT   |         | 1095D           |
| A4 TP2    | 0360-2264   | 6  |              | TERMTEST POINT   |         | 1095D           |
|           |             |    |              |                  |         |                 |
| A4 TP3    | 0360-2264   | 6  | 1            | TERMTEST POINT   | 10358   | 1095D           |
| A4 TP4    | 0360-2264   | 6  | 1            | TERMTEST POINT   |         | 1095D           |
| A4 TP5    | 0360-2264   | 6  | 1            | TERMTEST POINT   |         | 1095D           |
| A4 U1     | 1826-0346   | 0  | 1            | IC 358           | 03406   | LM358N          |
| A4 U2     | 1826-0346   | 0  | 1            | IC 358           |         | LM358N          |
|           |             |    | ł            |                  |         |                 |
| A4 U3     | 1826-0346   | 0  | 1            | IC 358           | 03406   | LM358N          |
| A4 U4     | 1826-0346   | 0  | 1 1          | C 358            | 03406   | LM358N          |
| A4 U5     | 1826-0346   | 0  | 1  1         | C 358            | 03406   | LM358N          |
| A4 U6     | 1826-0346   | 0  | 1   I        | C 358            | 1       | LM358N          |
| A4 U7     | 1826-0718   | 0  | 1 1          | C MC1404U5       |         | MC1404U5        |
|           |             |    |              |                  |         |                 |
| A4 U8     | 1826-0161   | 1  | 1   I        | C 324            | 02037   | LM324N          |
| A4 VR1    | 1902-0964   |    | 1   I        | DIO-ZNR 18V 5%   | 02037   |                 |
| A4 VR2    | 1902-0955   | 9  | <u>1   I</u> | DIO-ZNR 7.5V 5%  | 02037   |                 |

# Timing Board

| Table C-7. 013 TA Standard Trining Board Parts List |             |    |     |                  |         |                   |  |  |
|-----------------------------------------------------|-------------|----|-----|------------------|---------|-------------------|--|--|
| Reference                                           | HP Part #   | CD | Qty | Description      | Manuf'r | Part #            |  |  |
| A5                                                  | 08131-66505 | 8  | 1   | BD AY TIMING STD | 28480   | 08131-66505       |  |  |
| A5 C101                                             | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |  |  |
| A5 C103                                             | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |  |  |
| A5 C105                                             | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |  |  |
| A5 C107                                             | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |  |  |
| A5 C109                                             | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121   | B37981-J1222-M034 |  |  |
| A5 C110                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C111                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C112                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C113                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C117                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C121                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C122                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C126                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C127                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| 45 C131                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C140                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C141                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| 45 C142                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| A5 C181                                             | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |  |  |
| 45 C202                                             | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |
| 45 C203                                             | 0160-6623   | 5  |     | 1                | 02010   | SA115C104MAAH     |  |  |
| 45 C204                                             | 0160-6623   | 5  | 1   | 1                | 02010   | SA115C104MAAH     |  |  |
| A5 C205                                             | 0160-6500   | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |

Table C-7. 8131A Standard Timing Board Parts List

| Reference         HP Part #           A5 C206         0160-6500           A5 C207         0160-6623 | CD<br>7 | Qty | Description      | Manufr  | Dent II           |
|-----------------------------------------------------------------------------------------------------|---------|-----|------------------|---------|-------------------|
|                                                                                                     | 7       |     | ·                |         | Part #            |
| A5 C207 0160-6623                                                                                   | _       | 1   | CAP 0.01uF 100 V |         | SA101C103KAAH     |
|                                                                                                     | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C208 0160-6623                                                                                   | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C209 0160-6500                                                                                   | 7       | 1   | CAP 0.01uF 100 V |         | SA101C103KAAH     |
| A5 C210 0160-6500                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|                                                                                                     |         |     |                  |         |                   |
| A5 C220 0160-6500                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
| A5 C221 0160-6500                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
| A5 C222 0160-6500                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A5 C223 0160-5726                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A5 C224 0160-5726                                                                                   | 7       | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|                                                                                                     |         |     |                  |         |                   |
| A5 C300 0160-5746                                                                                   | 1       | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C301 0160-6623                                                                                   | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C303 0160-4535                                                                                   | 4       | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |
| A5 C304 0160-5746                                                                                   | 1       | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A5 C305 0160-5746                                                                                   | 1       | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|                                                                                                     |         |     |                  |         |                   |
|                                                                                                     | 7       | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|                                                                                                     | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                                                                                                     | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                                                                                                     | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C310 0160-6623                                                                                   | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                                                                                                     |         |     |                  |         |                   |
|                                                                                                     | 7       | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|                                                                                                     | 7       |     | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|                                                                                                     | 7       |     | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| 1                                                                                                   | 5       |     | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A5 C315 0160-6623 5                                                                                 | 5       | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
|                                                                                                     |         |     |                  |         |                   |
| A5 C317 0160-6623                                                                                   |         |     |                  | 02010   | SA115C104MAAH     |
| A5 C318 0160-6623 5                                                                                 |         |     |                  | 02010   | SA115C104MAAH     |
| A5 C320 0160-6623 5                                                                                 | 1       |     | 1                | 02010 9 | SA115C104MAAH     |
| A5 C321 0160-6500 7                                                                                 |         |     |                  |         | SA101C103KAAH     |
| A5 C322 0160-6500 7                                                                                 |         | 1 ( | CAP 0.01uF 100 V | 02010 5 | SA101C103KAAH     |

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Table C-7. 8131A Standard Timing Board Parts List (continued)

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| Reference         HP Part #         CD         Qty         Description         Manufr         Part #           A5         C324         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C325         0160-5746         1         1         CAP 0.1uF 50 V         06121         B37987-T5104-M11           A5         C327         0160-6500         7         1         CAP 0.01uF 100 V         02010         SA101C103KAAH           A5         C330         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C330         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C333         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C334         0160-6623         5         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C341         0160-6726         7         1         CAP 0.1uF 50 V         02010         SA115C104MAAH           A5         C342         0160-6623         5         1         CAP 0.1uF 50 V                             | Та         | ble C-7. 813 | Table C-7. 8131A Stalidard Timing Content of Parts |     |                |         |               |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|----------------------------------------------------|-----|----------------|---------|---------------|--|--|--|--|--|--|
| A5C3240160-662351CAP 0.1uF 50 V02010SA113C104MAAHA5C3250160-574611CAP 0.1uF 50 V06121B37987-T5104-M11A5C3270160-650071CAP 0.01uF 100 V02010SA101C103KAAHA5C3300160-662351CAP 0.1uF 50 V02010SA101C103KAAHA5C3310160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3310160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3350160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3360160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3400160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3410160-572671CAP 0.01uF 100 V02010SA115C104MAAHA5C3420160-660351CAP 0.01uF 100 V02010SA115C104MAAHA5C3600160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1u                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Reference  | HP Part #    | CD                                                 | Qty | Description    | Manufr  | Part #        |  |  |  |  |  |  |
| A5C3250160-574611CAP0.1uF 50 V06121B37987-1106-1106AAHA5C3270160-650071CAP0.01uF 100 V02010SA101C103KAAHA5C3280160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3300160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3310160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3330160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3360160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3360160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3400160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3400160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3420160-650071CAP0.1uF 50 V02010SA115C104MAAHA5C3430160-650071CAP0.1uF 50 V02010SA115C104MAAHA5C3600160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF 50 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |              | _ 1                                                | 1   |                |         |               |  |  |  |  |  |  |
| A5C3270160-650071CAP0.01uF100V02010SA101C103KAAHA5C3280160-662351CAP0.01uF100V02010SA115C104MAAHA5C3300160-662351CAP0.1uF50V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50V02010SA115C104MAAHA5C3350160-662351CAP0.1uF50V02010SA115C104MAAHA5C3360160-662351CAP0.1uF50V02010SA115C104MAAHA5C3400160-662351CAP0.1uF50V02010SA115C104MAAHA5C3400160-662351CAP0.1uF100V02010SA115C104MAAHA5C3420160-662351CAP0.01uF100V02010SA115C104MAAHA5C3430160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C360                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |              | 1                                                  | 1   | CAP 0.1uF 50 V |         |               |  |  |  |  |  |  |
| A5C3280160-650071CAP0.01uF100V02010SA101C103KAAHA5C3300160-662351CAP0.1uF50V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50V02010SA115C104MAAHA5C3350160-453541CAP0.1uF50V02010SA115C104MAAHA5C3360160-662351CAP0.1uF50V02010SA115C104MAAHA5C3400160-662351CAP0.1uF50V02010SA101C103KAAHA5C3410160-650071CAP0.01uF100V02010SA101C103KAAHA5C3430160-650071CAP0.01uF100V02010SA101C103KAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-674611CAP0.1uF50V02010SA115C104MAAHA5C400<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |              | 7                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3300160-662351CAP0.1uF50V02010SA115C104MAAHA5C3310160-662351CAP0.1uF50V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50V02010SA115C104MAAHA5C3350160-453541CAP0.1uF50V02010SA115C104MAAHA5C3360160-662351CAP0.1uF50V02010SA115C104MAAHA5C3400160-662351CAP0.1uF50V02010SA115C104MAAHA5C3420160-662351CAP0.1uF100V02010SA115C104MAAHA5C3430160-662351CAP0.1uF100V02010SA115C104MAAHA5C3430160-662351CAP0.1uF100V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-674611CAP0.1uF50V02010SA115C104MAAHA5C4010160-574611CAP0.1uF50V02010SA115C104MAAHA5C402                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |              | 7                                                  | 1   |                | 1       |               |  |  |  |  |  |  |
| A5C3310160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3330160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3350160-453541CAP0.1uF50 V02010SA115C104MAAHA5C3360160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3400160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3420160-662351CAP0.01uF100 V02010SA101C103KAAHA5C3420160-650071CAP0.01uF100 V02010SA101C103KAAHA5C3430160-650071CAP0.1uF50 V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-574611CAP0.1uF50 V02010SA115C104MAAHA5C4040160-672671CAP0.1uF50 V02010SA115C104MAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | t            | 5                                                  | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH |  |  |  |  |  |  |
| A5C3310160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3330160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3360160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3400160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3400160-672671CAP 0.1uF 50 V02010SA115C104MAAHA5C3420160-650071CAP 0.01uF 100 V06121B37987-J1103-M034A5C3420160-650071CAP 0.01uF 100 V02010SA115C104MAAHA5C3430160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3600160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-574611CAP 0.1uF 50 V06121B37987-J5104-M11A5C4000160-574611CAP 0.1uF 50 V02010SA115C104MAAHA5C4030160-453541CAP 0.1uF 50 V02010SA115C104MAAHA5C4040160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C4050160-572671CAP 0.                                                                                                                                                                                                                                                                                                                                                                                                                                                    | N0 0000    |              |                                                    |     |                |         |               |  |  |  |  |  |  |
| A5C3330160-662351CAP0.1uF5002010SAT13C104MAAHA5C3350160-453541CAP1uF50V02010SR305C105KAAHA5C3360160-662351CAP0.1uF50V02010SAT13C104MAAHA5C3400160-662351CAP0.1uF50V02010SAT15C104MAAHA5C3400160-662351CAP0.1uF100V02010SAT15C104MAAHA5C3420160-650071CAP0.01uF100V02010SAT10C103KAAHA5C3430160-650071CAP0.1uF50V02010SAT15C104MAAHA5C3300160-662351CAP0.1uF50V02010SAT15C104MAAHA5C3600160-662351CAP0.1uF50V02010SAT15C104MAAHA5C3600160-674611CAP0.1uF50V02010SAT15C104MAAHA5C3600160-574611CAP0.1uF50V02010SAT15C104MAAHA5C4000160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4030160-453541CAP0.1uF50V02010SAT15C104MAAHA5C4040160-6623                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A5 C331    | 0160-6623    | 5                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3350160-453541CAP 1uF 50 V02010SR305C103KARHA5C3360160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3400160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3400160-672671CAP 0.01uF 100 V02010SA101C103KAAHA5C3420160-650071CAP 0.01uF 100 V02010SA101C103KAAHA5C3430160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3500160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3600160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3600160-574611CAP 0.1uF 50 V06121B37987-T5104-M11A5C4000160-574611CAP 0.1uF 50 V02010SA115C104MAAHA5C4030160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C4030160-574611CAP 0.1uF 50 V02010SA115C104MAAHA5C4040160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C4050160-572671CAP 0.1uF 50                                                                                                                                                                                                                                                                                                                                                                                                                                                    | l .        | •            | 5                                                  | 1   |                | 1       |               |  |  |  |  |  |  |
| A5C3360160-662351CAP0.1uF50V02010SATISC104MAAHA5C3400160-662351CAP0.1uF50V02010SATISC104MAAHA5C3410160-652371CAP0.01uF100V02010SATISC104MAAHA5C3420160-650071CAP0.01uF100V02010SATISC104MAAHA5C3430160-650071CAP0.01uF100V02010SATISC104MAAHA5C3500160-662351CAP0.1uF50V02010SATISC104MAAHA5C3600160-662351CAP0.1uF50V02010SATISC104MAAHA5C3630160-662351CAP0.1uF50V02010SATISC104MAAHA5C3630160-662351CAP0.1uF50V02010SATISC104MAAHA5C3630160-662351CAP0.1uF50V06121B37987-T5104-M17A5C4000160-574611CAP0.1uF50V02010SATISC104MAAHA5C4040160-662351CAP0.1uF50V02010SATISC104MAAHA5C4040160-662351CAP0.1uF50V02010SATISC104MAAHA5C404 <td></td> <td>1</td> <td>4</td> <td>1</td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | 1            | 4                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3400160-662351CAP 0.1uF 50 V02010SATISCIO4MAAAIA5C3410160-572671CAP 0.01uF 100 V06121B37987-J1103-M034A5C3420160-650071CAP 0.01uF 100 V02010SA101C103KAAHA5C3430160-650071CAP 0.01uF 100 V02010SA101C103KAAHA5C3500160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3600160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3630160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C3690160-574611CAP 0.1uF 50 V02010SA115C104MAAHA5C4000160-574611CAP 0.1uF 50 V06121B37987-T5104-M11A5C4010160-672611CAP 0.1uF 50 V02010SA115C104MAAHA5C4040160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C4040160-662351CAP 0.1uF 50 V02010SA115C104MAAHA5C4040160-672671CAP 0.1uF 50 V02010SA115C104MAAHA5C4050160-572671CAP 0.01uF 100 V06121B37987-J1103-M03A5C4120160-650071 <t< td=""><td></td><td>1</td><td>5</td><td>1</td><td>CAP 0.1uF 50 V</td><td>1</td><td></td></t<>                                                                                                                                                                                                                                                                                                                                                 |            | 1            | 5                                                  | 1   | CAP 0.1uF 50 V | 1       |               |  |  |  |  |  |  |
| A5C3410160-572671CAP0.01uF100 V06121B37987-J1103-M034A5C3420160-650071CAP0.01uF100 V02010SA101C103KAAHA5C3430160-650071CAP0.1uF50 V02010SA101C103KAAHA5C3500160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50 V02010SA115C104MAAHA5C3630160-574611CAP0.1uF50 V06121B37987-T5104-M11A5C4000160-574611CAP0.1uF50 V02010SA115C104MAAHA5C4030160-574611CAP0.1uF50 V02010SA115C104MAAHA5C4030160-574611CAP0.1uF50 V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50 V02010SA115C104MAAHA5C4050160-572671CAP0.1uF50 V02010SA115C104MAAHA5C4120160-650071CAP0.1uF100 V06121B379                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1          |              |                                                    | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH |  |  |  |  |  |  |
| A5C3410160-572671CAP0.0111100V02010SA101C103KAAHA5C3420160-650071CAP0.01uF100V02010SA101C103KAAHA5C3500160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4000160-574611CAP0.1uF50V02010SA115C104MAAHA5C4010160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4050160-572671CAP0.1uF50V02010SA115C104MAAHA5C4120160-650071CAP0.01uF100V06121B37987-J1103-M03A5C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | AJ 0340    |              |                                                    | 1   |                |         |               |  |  |  |  |  |  |
| A5C3420160-650071CAP0.01uF100V02010SA101C103KAAHA5C3430160-662351CAP0.01uF100V02010SA101C103KAAHA5C3500160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3090160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4000160-574611CAP0.1uF50V02010SA115C104MAAHA5C4030160-574611CAP0.1uF50V02010SA115C104MAAHA5C4030160-662351CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C412                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | A5 C241    | 0160-5726    | 7                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3430160-650071CAP0.01uF100V02010SA101C103KAAHA5C3500160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V06121B37979-J1470-J034A5C3090160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4010160-574611CAP0.1uF50V02010SA115C104MAAHA5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4050160-572671CAP0.1uF50V02010SA115C104MAAHA5C4120160-650071CAP0.1uF100V06121B37987-J1103-M03A5C4130160-650071CAP0.1uF100V02010SA101C103KAAHA5C4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |              | 7                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3500160-662351CAP0.1uF50V02010SA115C104MAAHA5C3600160-662351CAP0.1uF50V02010SA115C104MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3990160-574161CAP0.1uF50V06121B37979-J1470-J034A5C4000160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4010160-574611CAP0.1uF50V02010SR305C105KAAHA5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4050160-572671CAP0.1uF50V02010SA115C104MAAHA5C4120160-650071CAP0.1uF100V06121B37987-J1103-M03A5C4130160-650071CAP0.01uF100V02010SA101C103KAAHA5C4130160-662351CAP0.1uF50V02010SA101C103KAAHA5C41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1          | 1            | 7                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3600160-662351CAP0.1uF50V02010SATISCIO4MAAHA5C3630160-662351CAP0.1uF50V02010SA115C104MAAHA5C3990160-574161CAP47pF100V06121B37979-J1470-J034A5C4000160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4010160-574611CAP0.1uF50V06121B37987-T5104-M11A5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4030160-453541CAP0.1uF50V02010SA115C104MAAHA5C4040160-662351CAP0.1uF50V02010SA115C104MAAHA5C4050160-572671CAP0.1uF100V06121B37987-J1103-M03A5C4120160-650071CAP0.01uF100V02010SA101C103KAAHA5C4130160-650351CAP0.1uF50V02010SA101C103KAAHA5C4140160-662351CAP0.1uF50V02010SA115C104MAAHA5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |              | 5                                                  | 1   |                |         |               |  |  |  |  |  |  |
| A5C3630160-662351CAP $0.1uF$ 50 V $02010$ SA115C104MAAHA5C3990160-574161CAP $47pF$ 100 V06121B37979-J1470-J034A5C4000160-574611CAP $0.1uF$ 50 V06121B37987-T5104-M11A5C4010160-574611CAP $0.1uF$ 50 V06121B37987-T5104-M11A5C4030160-453541CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4030160-662351CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4040160-662351CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4050160-572671CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4060160-572671CAP $0.1uF$ 50 V06121B37987-J1103-M03A5C4110160-572671CAP $0.01uF$ 100 V06121B37987-J1103-M03A5C4120160-650071CAP $0.01uF$ 100 V02010SA101C103KAAHA5C4130160-662351CAP $0.1uF$ 50 V02010SA101C103KAAHA5C4140160-662351CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4150160-662351CAP $0.1uF$ </td <td>i</td> <td></td> <td>5</td> <td>1</td> <td>CAP 0.1uF 50 V</td> <td>02010</td> <td>SA115C104MAAH</td>                                                                                                                                                                                                                                                                                                                                                                                            | i          |              | 5                                                  | 1   | CAP 0.1uF 50 V | 02010   | SA115C104MAAH |  |  |  |  |  |  |
| A5 C363       0160-6623       5       1       CAP 47pF 100 V       06121       B37979-J1470-J034         A5 C399       0160-5746       1       1       CAP 47pF 100 V       06121       B37987-T5104-M11         A5 C400       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M11         A5 C401       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M11         A5 C403       0160-4535       4       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C404       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C405       0160-5726       7       1       CAP 0.1uF 50 V       06121       B37987-J103-M03         A5 C406       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.01uF 100 V       02010       SA101C103KAAH                                                                           | AJ 0300    | 0100 0100    |                                                    |     |                |         |               |  |  |  |  |  |  |
| A5C3990160-574161CAP $47pF 100 V$ 06121B37979-51470-3034A5C4000160-574611CAP0.1uF 50 V06121B37987-T5104-M11A5C4010160-574611CAP0.1uF 50 V06121B37987-T5104-M11A5C4030160-453541CAP0.1uF 50 V02010SR305C105KAAHA5C4030160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C4050160-574611CAP0.1uF 50 V06121B37987-T5104-M1A5C4050160-572671CAP0.1uF 50 V06121B37987-T5104-M1A5C4060160-572671CAP0.01uF 100 V06121B37987-J1103-M03A5C4120160-650071CAP0.01uF 100 V06121B37987-J1103-M03A5C4120160-650071CAP0.01uF 100 V02010SA101C103KAAHA5C4130160-650071CAP0.1uF 50 V02010SA101C103KAAHA5C4130160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C4150160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C4170160-662351CAP0.1uF 50 V02010SA115C104MAAHA5C4170160-662351CAP <td>A5 C363</td> <td>0160-6623</td> <td>5</td> <td>1</td> <td></td> <td>1</td> <td></td>                                                                                                                                                                                                                                                                                                                                                                                                          | A5 C363    | 0160-6623    | 5                                                  | 1   |                | 1       |               |  |  |  |  |  |  |
| A5C4000160-574611CAP $0.1uF$ 50 V06121B37987-T5104-M1A5C4010160-574611CAP $0.1uF$ 50 V06121B37987-T5104-M1A5C4030160-453541CAP $1uF$ 50 V02010SR305C105KAAHA5C4040160-662351CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4050160-574611CAP $0.1uF$ 50 V02010SA115C104MAAHA5C4060160-572671CAP $0.1uF$ 50 V06121B37987-T5104-M1A5C4060160-572671CAP $0.01uF$ 100 V06121B37987-J1103-M03A5C4120160-650071CAP $0.01uF$ 100 V06121B37987-J1103-M03A5C4120160-650071CAP $0.01uF$ 100 V02010SA101C103KAAFA5C4130160-662351CAP $0.1uF$ 50 V02010SA101C103KAAFA5C4140160-662351CAP $0.1uF$ 50 V02010SA115C104MAAFA5C4150160-662351CAP $0.1uF$ 50 V02010SA115C104MAAFA5C4170160-662351CAP $0.1uF$ 50 V02010SA115C104MAAFA5C4170160-662351CAP $0.1uF$ 50 V02010SA115C104MAAF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |              | 6                                                  | 1   | CAP 47pF 100 V |         |               |  |  |  |  |  |  |
| A5C4010160-574611CAP0.1uF50 V06121B37987-13104-M1A5C4030160-453541CAP1uF50 V02010SR305C105KAAHA5C4040160-662351CAP0.1uF50 V02010SA115C104MAAHA5C4050160-574611CAP0.1uF50 V06121B37987-T5104-M1A5C4060160-572671CAP0.01uF100 V06121B37987-J1103-M03A5C4120160-572671CAP0.01uF100 V06121B37987-J1103-M03A5C4120160-650071CAP0.01uF100 V02010SA101C103KAAHA5C4130160-650071CAP0.01uF100 V02010SA101C103KAAHA5C4130160-662351CAP0.1uF50 V02010SA101C103KAAHA5C4150160-662351CAP0.1uF50 V02010SA101C103KAAHA5C4150160-662351CAP0.1uF50 V02010SA115C104MAAHA5C4170160-662351CAP0.1uF50 V02010SA115C104MAAHA5C4170160-662351CAP0.1uF50 V02010SA115C104MAAHA5C4170160-662351CAP0.1uF50 V02010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1          | 1            | 1                                                  | 1   | CAP 0.1uF 50 V | [       |               |  |  |  |  |  |  |
| A5       C403       0160-4535       4       1       CAP 1uF 50 V       02010       SR305C103KAAH         A5       C403       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5       C405       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A5       C406       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5       C411       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5       C412       0160-6500       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5       C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5       C413       0160-6623       5       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5       C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5       C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5       C417 <t< td=""><td>1</td><td>1</td><td>1</td><td>1</td><td>CAP 0.1uF 50 V</td><td>06121</td><td></td></t<> | 1          | 1            | 1                                                  | 1   | CAP 0.1uF 50 V | 06121   |               |  |  |  |  |  |  |
| A5 C403       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C405       0160-5746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A5 C405       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C411       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                    |            |              |                                                    | 1   | CAP luF 50 V   | 02010   | SR305C105KAAH |  |  |  |  |  |  |
| A5 C404       0160-6623       5       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A5 C405       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-T5104-M1         A5 C406       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C411       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                        | A5 0405    | 0100-1000    |                                                    |     |                |         |               |  |  |  |  |  |  |
| A5 C404       0100-05746       1       1       CAP 0.1uF 50 V       06121       B37987-T5104-M1         A5 C405       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C411       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                         | A5 C404    | 0160-6623    | 5                                                  | 1   | CAP 0.1uF 50 V |         |               |  |  |  |  |  |  |
| A5 C406       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C411       0160-5726       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA101C103KAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1          |              | L L                                                | 1   | CAP 0.1uF 50 V | 1       |               |  |  |  |  |  |  |
| A5 C400       0100 0120       7       1       CAP 0.01uF 100 V       06121       B37987-J1103-M03         A5 C411       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |              |                                                    | L L |                | 1       |               |  |  |  |  |  |  |
| A5 C411       0100-0120       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1          |              |                                                    | 1   | CAP 0.01uF 100 | V 06121 |               |  |  |  |  |  |  |
| A5 C412       0160-6500       7       1       CAP 0.01uF 100 V       02010       SA101C103KAAH         A5 C413       0160-6623       5       1       CAP 0.01uF 50 V       02010       SA101C103KAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |              |                                                    |     |                |         | SA101C103KAAH |  |  |  |  |  |  |
| A5 C413       0160-6500       7       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | A5 0412    | . 0100-0000  |                                                    |     |                | •       |               |  |  |  |  |  |  |
| A5 C413       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C414       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | A.E. C.414 | 0160-6500    |                                                    |     | CAP 0.01uF 100 | V 02010 |               |  |  |  |  |  |  |
| A5 C414       0100-0623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C415       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH         A5 C417       0160-6623       5       1       CAP 0.1uF 50 V       02010       SA115C104MAAH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |              |                                                    |     |                | 02010   | SA115C104MAAI |  |  |  |  |  |  |
| A5 C415 0160-6623 5 1 CAP 0.1uF 50 V 02010 SA115C104MAAI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1          | 1            |                                                    |     | DELEAS DEON    | 02010   |               |  |  |  |  |  |  |
| A3 C411 0100 0000 5 L CAP 0 10F 50 V 02010 SA115C104MAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |              |                                                    |     | CADALE SO V    |         |               |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |              |                                                    | 1   |                |         | SA115C104MAA  |  |  |  |  |  |  |

Table C-7. 8131A Standard Timing Board Parts List (continued)

 Table C-7. 8131A Standard Timing Board Parts List (continued)

|     | D.C.    |         |        |            | T   | - <u></u>        |         | (································· |  |
|-----|---------|---------|--------|------------|-----|------------------|---------|------------------------------------|--|
|     | Referen |         | Part # |            | Qty |                  | Manuf   | r Part #                           |  |
|     | A5 C420 |         | -6623  | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     | A5 C42  |         | -6500  | 7          | 1   | CAP 0.01uF 100   |         | SA101C103KAAH                      |  |
|     | A5 C422 |         | -6500  | 7          | 1   | CAP 0.01uF 100   | V 02010 | SA101C103KAAH                      |  |
|     | A5 C424 |         | -6623  | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     | A5 C425 | 0160-   | -5746  | 1          | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                   |  |
|     |         |         |        |            |     |                  |         |                                    |  |
|     | A5 C427 |         |        | 7          | 1   | CAP 0.01uF 100 V | -       | SA101C103KAAH                      |  |
|     | A5 C428 |         |        | 7          | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                      |  |
|     | A5 C430 | 1       |        | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     | A5 C431 | 0160-   |        | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     | A5 C433 | 0160-   | 6623   | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     |         |         |        |            |     |                  |         |                                    |  |
|     | A5 C435 | 0160-   |        | 4          | 1   | CAP 1uF 50 V     | 02010   | SR305C105KAAH                      |  |
|     | A5 C436 | 0160-0  |        | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
|     | A5 C440 | 0160-0  | 1      | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
| - 1 | A5 C441 | 0160-8  |        | 7          | 1   | CAP 0.01uF 100 V | 1       | B37987-J1103-M034                  |  |
| 1   | A5 C442 | 0160-6  | 5500   | 7          | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                      |  |
|     |         |         |        |            |     |                  |         |                                    |  |
|     | 45 C443 | 0160-6  | 1      | 7          | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                      |  |
|     | 45 C450 | 0160-6  |        | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
| 1   | A5 C460 | 0160-6  | 1      | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
| 1   | A5 C465 | 0160-6  | 4      | 5          | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                      |  |
| ľ   | 15 C470 | 0160-3  | 872    | 0          | 1   | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C                      |  |
| .   | E 0471  | 0.00 -  |        |            |     | _                |         |                                    |  |
|     | 5 C471  | 0160-3  |        | 0          |     | CAP 2.2pF 200 V  |         | FD12C0G2D2R2C                      |  |
| •   | 5 C500  | 0160-5  |        | 1          |     | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                   |  |
|     | 5 C501  | 0160-5  |        |            |     | CAP 0.1uF 50 V   | ,       | B37987-T5104-M11                   |  |
|     | 5 C503  | 0160-4  |        |            | - 1 | CAP 1uF 50 V     |         | SR305C105KAAH                      |  |
| A   | .5 C504 | 0160-5  | 746    | 1          | 1   | CAP 0.1uF 50 V   |         | B37987-T5104-M11                   |  |
|     | E CEOF  | 0102 0  |        |            |     | _                |         |                                    |  |
|     | 5 C505  | 0160-66 |        | 1          |     |                  |         | SA115C104MAAH                      |  |
|     | 5 C506  | 0160-57 |        |            |     |                  | 06121   | B37987-J1103-M034                  |  |
|     | 5 C511  | 0160-57 | 1      |            |     |                  |         | B37987-J1103-M034                  |  |
|     | 5 C512  | 0160-65 | 1      |            |     |                  |         | SA101C103KAAH                      |  |
| A   | 5 C513  | 0160-65 | 00 7   | <u>  1</u> |     | CAP 0.01uF 100 V |         | SA101C103KAAH                      |  |

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Table C-7. 8131A Standard Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-----------|----|-----|------------------|---------|--------------------|
| A5 C514   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C515   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C517   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C518   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C520   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
|           |           |    |     |                  |         |                    |
| A5 C521   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C522   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C524   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C525   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11   |
| A5 C527   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
|           |           |    |     |                  |         |                    |
| A5 C528   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C530   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C531   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C533   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C535   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH      |
|           |           |    |     |                  |         |                    |
| A5 C536   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C540   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C541   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034  |
| A5 C542   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A5 C543   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
|           |           |    |     |                  |         |                    |
| A5 C550   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C560   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C565   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
| A5 C570   | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C      |
| A5 C571   | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C      |
|           |           |    |     |                  |         |                    |
| A5 CP100  | 0180-1974 | 1  | 1   | CAP 10uF 35 V    | 04200   | 150D106X9035R2-DYS |
| A5 CP102  | 0180-0229 | 7  | 1   | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
| A5 CP104  | 0180-0229 | 7  | 1   | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
| A5 CP106  | 0180-0229 | 7  | 1   | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
| A5 CP108  | 0180-1974 | 1  | 1   | CAP 10uF 35 V    | 04200   | 150D106X9035R2-DYS |

|   |          | e HP Part # | + | Qty | Description      | Manuf | r Part #             |
|---|----------|-------------|---|-----|------------------|-------|----------------------|
|   |          | 0 0180-0229 | 7 | 1   | CAP 33uF 10 V    | 04200 | 150D336X9010B2-DYS   |
|   |          | 0 0180-4129 | 4 | 1   | CAP luF 35 V     | 04200 | 173D105X9035V        |
|   |          | 1 0180-4129 | 4 | 1   | CAP luF 35 V     | 04200 | 173D105X9035V        |
|   |          | 2 1901-0535 | 9 | 1   | DIO- SCHOTTKY SM | 02062 | 50825511             |
|   | A5 CR10  | 3 1901-0734 | 0 | 1   | DIO-1N5818       | 02037 | 1N5818               |
|   |          |             |   |     |                  |       |                      |
|   |          | 0 1901-1098 | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | l 1901-1098 | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR312 | 2 1901-1098 | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR313 | 3 1901-1098 | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR314 | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          |             |   |     |                  |       |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR413 | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          |             |   |     |                  |       |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          | 1901-0731   | 7 | 1   | DIO-PWR RECT     | 02037 | SR3010-3RL           |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR511 | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   |          |             |   |     |                  |       |                      |
|   |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
| • |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
| 1 |          | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
|   | A5 CR515 | 1901-1098   | 1 | 1   | DIO-1N4150       | 00746 |                      |
| - | A5 J100  | 1251-8324   | 1 | 1   | CONN-POST-TP-HDR | 04486 | G06M96P4BEBL-004-715 |
|   |          |             |   |     |                  |       |                      |
| 4 | 45 J101  | 1251-5380   | 3 | 1   | CONN-POST-TP-HDR | 02946 | 68000-602            |
| 1 | 45 J102  | 1251-5380   | 3 | 1   |                  | 1     | 68000-602            |
| 4 | 45 J200  | 1250-0543   | 8 | 1   |                  |       | 51-053-0349-BE8      |
| 4 | 45 J400  | 1251-5380   | 3 | 1   |                  | 1     | 68000-602            |
| 4 | 15 K400  | 0490-1667   | 6 | 1   |                  |       | RG2T-12V             |

Table C-7. 8131A Standard Timing Board Parts List (continued)

## Table C-7. 8131A Standard Timing Board Parts List (continued)

| Reference           | HP Part #   | CD | Qty | Description      | Manuf'r | Part #       |
|---------------------|-------------|----|-----|------------------|---------|--------------|
| A5 L100             | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B  |
| A5 L101             | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B  |
| A5 L102             | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B  |
| A5 L103             | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B  |
| A5 L104             | 9100-1788   | 6  | 1   | CORE-FERRITE     | 02995   | VK200 20/4B  |
|                     |             |    | _   |                  | 02000   | 11200 207 12 |
| A5 L110             | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1    |
| A5 L111             | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1    |
| A5 L112             | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1    |
| A5 L300*            | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1    |
| A5 L400             | 9100-2891   | 4  |     | L 50NH +-10%     | 03273   | 10M050K-1    |
|                     |             |    |     |                  |         |              |
| A5 L400             | 8159-0005   | 0  | 1   | RES-ZERO OHMS    | 01339   | L-2007-1     |
| A5 L500             | 9100-2891   | 4  | 1   | L 50NH +-10%     | 03273   | 10M050K-1    |
| A5 MP130            | 1400-1437   | 0  | 3   | CLAMP-CABLE      | 11808   |              |
| A5 MP134            |             | 9  | 1   | CLMP-CA          | 02414   | HP-2N        |
| A5 MP136            | 3050-0891   | 7  | 1   | WASHER-FL MTLC 3 | 06691   |              |
|                     |             |    |     |                  |         |              |
|                     | 54100-29104 | 5  | 1   | SPRING           | 28480   | 54100-29104  |
|                     | 54100-29101 | 2  | 1   | CLAMP            | 28480   | 54100-29101  |
|                     | 54100-21103 | 8  | 1   | SPRING           | 28480   | 54100-21103  |
| A5 MP230            |             | 2  | 4   | SPCR-PRS-IN      | 03981   | YC3-4564     |
| A5 MP240            | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610   |              |
|                     |             |    | Ì   |                  |         |              |
| A5 MP300            |             | 3  | 1   | SOCKET RGA72 CN  | 10803   | 1KS072-33TT  |
|                     | 1200-1410   | 5  | 1   | SOCKET PGA 72PI  |         | 1KS072-33TG  |
|                     | 1200-1468   | 3  | 1   | SOCKET RGA72 CN  | 1       | 1KS072-33TT  |
| A5 MP401            | 1200-1410   | 5  |     | SOCKET RGA 72PI  |         | 1KS072-33TG  |
| A5 MP500            | 1200-1468   | 3  | 1   | SOCKET PGA72 CN  | 10803   | 1KS072-33TT  |
| A5 MP501            | 1200-1410   | _  | ,   | COLVER DO LES DI | 10000   |              |
| A5 MP501<br>A5 Q200 |             | 5  |     | SOCKET RGA72 PI  |         | 1KS072-33TG  |
| 1                   | 1853-0563   | 0  |     |                  | 1       | 2N3906(SEL)  |
| -                   | 1854-1028   | 6  |     |                  |         | 2N3904       |
|                     | 1855-0309   | 6  |     |                  |         | 2N4352       |
| A5 Q313             | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037   | 2N4352       |

Table C-7. 8131A Standard Timing Board Parts List (continued)

|   | Reference | e HP Part # | CD | Qty   | Description      | Manuf | r Part #       |  |
|---|-----------|-------------|----|-------|------------------|-------|----------------|--|
|   | A5 Q314   | 1           | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q315   |             | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q316   |             | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q317   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q318   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   |           |             |    |       |                  |       |                |  |
|   | A5 Q319   |             | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q410   |             | 6  | 1     | XSTR NPN SI      | 02037 | 2N3904         |  |
|   | A5 Q412   | 1           | 6  | 1     | MOSFET 2N4352 P- | 02037 | 2N4352         |  |
|   | A5 Q413   | 1           | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q414   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   |           |             |    |       |                  |       |                |  |
|   | A5 Q415   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q416   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q417   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q418   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q419   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   |           |             |    |       |                  |       |                |  |
|   | A5 Q480   | 1854-0472   | 2  | 1     | XSTR NPN SI DARL | 02037 | MPS-A14        |  |
|   | A5 Q510   | 1854-1028   | 6  | 1     | XSTR NPN SI      | 02037 | 2N3904         |  |
| 1 | A5 Q512   | 1855-0309   | 6  | 1     | MOSFET 2N4352 P- | 02037 | 2N4352         |  |
| 1 | A5 Q513   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
| ŀ | A5 Q514   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   |           |             |    |       |                  |       |                |  |
|   | A5 Q515   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
|   | A5 Q516   | 1853-0569   | 6  |       | XSTR PNP SI      | 02037 |                |  |
|   | A5 Q517   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
| 1 | A5 Q518   | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037 | 2N5088         |  |
| 4 | A5 Q519   | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037 |                |  |
|   |           |             |    |       |                  |       |                |  |
|   | 45 R100   | 0757-0442   | 9  |       | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |  |
|   | 45 R200   | 0699-1206   | 1  |       | RES 127 1% 2W MO |       | GS-3           |  |
|   | 45 R201   | 0699-1206   | 1  |       |                  | 02499 | GS-3           |  |
|   | 15 R202   | 0698-4855   | 0  |       |                  | 01074 | H2             |  |
| A | 15 R204   | 0698-7205   | 0  | 1   F | RES 51.1 1% .05W | 00746 | CRB20          |  |

Table C-7. 8131A Standard Timing Board Parts List (continued)

| Γ.  |           |           | 1 | 1.  | -T               |         |                |
|-----|-----------|-----------|---|-----|------------------|---------|----------------|
|     | Reference |           | 1 | Qty |                  | Manuf'ı | Part #         |
| 1   | 15 R205   | 0757-0180 | 2 | 1   | RES 31.6 1% .125 | 00746   | CRB14 OR CRB25 |
| 1   | 15 R206   | 0698-3162 | 0 | 1   | RES 46.4K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | 5 R208    | 0698-6347 | 9 | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
|     | 5 R209    | 0757-1094 | 9 | 1   | RES 1.47K 1% .12 | 00746   | CRB14 OR CRB25 |
| A   | 5 R210    | 0698-6963 | 5 | 1   | RES 5.55K .1% .1 | 00746   | CRB14 OR CRB25 |
|     |           |           |   |     |                  |         |                |
|     | .5 R211   | 0698-6963 | 5 | 1   | RES 5.55K .1% .1 | 00746   | CRB14 OR CRB25 |
|     | .5 R212   | 0757-0394 | 0 | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| 1   | 5 R220    | 0757-0421 | 4 | 1   | RES 825 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 5 R221    | 0698-3132 | 4 | 1   | RES 261 1% .125W | 00746   | CRB14 OR CRB25 |
| A   | 5 R300    | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|     |           |           |   |     |                  |         |                |
|     | 5 R301    | 0757-0394 | 0 | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | 5 R302    | 0698-4425 | 0 | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | 5 R303    | 0757-0317 | 7 | 1   | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |
| i i | 5 R304    | 0757-0280 | 3 | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A   | 5 R305    | 0757-0394 | 0 | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     |           |           |   |     |                  |         |                |
|     | 5 R306    | 0757-0394 | 0 | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| 1   | 5 R307    | 0698-3132 | 4 | 1   | RES 261 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 5 R309    | 0757-0394 | 0 | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | 5 R310    | 0757-0279 | 0 | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A   | 5 R311    | 0698-6360 | 6 | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
|     |           |           |   |     |                  |         |                |
|     | R312      | 0699-1100 | 4 | 1   | RES 6.984K .1% . | 01074   | H8             |
|     | R313      | 0698-3153 | 9 | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | R314      | 0757-0449 | 6 | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5  | R315      | 0757-0449 | 6 | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5  | R319      | 0757-0280 | 3 | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     |           |           |   |     |                  |         |                |
|     |           | 0757-0279 | 0 | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | J J       | 0757-0279 | 0 | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | ,         | 0757-0317 | 7 | 1   | RES 1.33K 1% .12 |         | CRB14 OR CRB25 |
| A5  |           | 0698-3154 | 0 | 1   | RES 4.22K 1% .12 |         | CRB14 OR CRB25 |
| A5  | R324      | 0698-0085 | 0 | 1   | RES 2.61K 1% .12 |         | CRB14 OR CRB25 |

Reference HP Part # CD Qty Description Manufr Part # A5 R325 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A5 R326 0757-0419 0 1 RES 681 1% .125W 00746 CRB14 OR CRB25 A5 R327 0757-0394 0 1 RES 51.1 1% .125 00746 CRB14 OR CRB25 A5 R328 0757-0394 RES 51.1 1% .125 0 1 00746 CRB14 OR CRB25 A5 R329 0757-0419 0 RES 681 1% .125W 1 00746 CRB14 OR CRB25 A5 R330 0698-6347 9 1 RES 1.5K .1% .12 00746 CRB14 OR CRB25 A5 R331 0698-6348 0 1 RES 3K .1% .125W 00746 CRB14 OR CRB25 A5 R333 0698-6347 9 1 RES 1.5K .1% .12 00746 CRB14 OR CRB25 A5 R334 0757-0279 0 1 RES 3.16K 1% .12 00746 CRB14 OR CRB25 A5 R335 0698-3438 3 1 RES 147 1% .125W 00746 CRB14 OR CRB25 A5 R336 0757-0394 0 1 RES 51.1 1% .125 00746 CRB14 OR CRB25 A5 R337 0757-0279 0 1 RES 3.16K 1% .12 00746 CRB14 OR CRB25 A5 R338 0757-0349 5 1 RES 22.6K 1% .12 00746 CRB14 OR CRB25 A5 R339 0757-0477 0 1 RES 332K 1% .125 CRB14 OR CRB25 00746 A5 R340 0757-0279 0 1 RES 3.16K 1% .12 00746 CRB14 OR CRB25 A5 R341 0698-3155 1 1 RES 4.64K 1% .12 00746 CRB14 OR CRB25 A5 R342 0698-3446 3 1 RES 383 1% .125W 00746 CRB14 OR CRB25 A5 R343 0698-3158 4 1 RES 23.7K 1% .12 00746 CRB14 OR CRB25 A5 R344 7 0698-3268 1 RES 11.5K 1% .12 00746 CRB14 OR CRB25 A5 R345 0698-3136 8 1 RES 17.8K 1% .12 00746 CRB14 OR CRB25 A5 R346 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A5 R347 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A5 R348 0698-3438 3 RES 147 1% .125W 1 00746 CRB14 OR CRB25 A5 R350 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A5 R351 0698-3460 1 1 RES 422K 1% .125 00746 CRB14 OR CRB25 A5 R362 0757-0394 0 1 RES 51.1 1% .125 00746 CRB14 OR CRB25 A5 R367 8159-0005 0 1 RES-ZERO OHMS 01339 L-2007-1 A5 R370 0698-3161 9 1 RES 38.3K 1% .12 00746 CRB14 OR CRB25 A5 R371 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A5 R373 0698-3446 3 1 RES 383 1% .125W 00746 CRB14 OR CRB25

Table C-7. 8131A Standard Timing Board Parts List (continued)

Table C-7. 8131A Standard Timing Board Parts List (continued)

| A5R3750698-315951RES26.1K 1% .1200746CRB14 OR CRB25A5R3760757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3780757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3790757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3790757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3900757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3910757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3920757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3940757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R3940757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R4000757-028361RES 2K 1% .125W00746CRB14 OR CRB25A5R4010757-028361RES 10K 1% .125W00746CRB14 OR CRB25A5R4020698-442201RES 1.1 % .125W00746CRB14 OR CRB25A5R4030698-442271RES 1.1 % .125W00746CRB14 OR CRB25A5R4040757-028031RES 1.1 % .125W00746CRB14 OR CRB25A5R4050757-0394<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Reference | HP Part II | CD |   |                  |       |                |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|----|---|------------------|-------|----------------|--|--|--|--|
| A5       R376       0757-0283       6       1       RES       2K 1% .125W       00746       CRB14 OR CRB25         A5       R377       0757-0283       6       1       RES       2K 1% .125W       00746       CRB14 OR CRB25         A5       R378       0757-0283       6       1       RES       2K 1% .125W       00746       CRB14 OR CRB25         A5       R379       0757-0283       6       1       RES       2K 1% .125W       00746       CRB14 OR CRB25         A5       R390       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5       R390       0757-0283       6       1       RES 12K 1% .125W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES 11.1 % .125W       00746       CRB14 OR CRB25                                                                                                                                                   |           |            |    | 1 |                  |       | 1              |  |  |  |  |
| A5       R377       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R378       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R379       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R381       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R390       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R392       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES       1%       125W       00746       CRB14 OR CRB25         A5       R401       0757-0280       3       1                                                                                                                                                                                                                  |           |            |    |   | 1                |       |                |  |  |  |  |
| A5       R378       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R379       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R381       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R390       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R392       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES       1%       125W       00746       CRB14 OR CRB25         A5       R401       0757-0394       0       1                                                                                                                                                                                                                  | 4         | 1          | 1  |   |                  | 1     | CRB14 OR CRB25 |  |  |  |  |
| A5       R379       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R381       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R390       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R392       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES       2K       1%       125W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES       1%       125W       00746       CRB14 OR CRB25         A5       R401       0757-0280       3       1       RES       1.54K       1%       12       00746       CRB14 OR CRB25         A5       R402       0757-0280       3       1 <td< td=""><td></td><td>1</td><td></td><td>1</td><td></td><td>00746</td><td>CRB14 OR CRB25</td></td<>                                                                                                           |           | 1          |    | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5         R381         0757-0283         6         1         RES         R11         07115         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         0716         071                                                           |           |            | 6  | 1 | 1                | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5       R390       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R392       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R396       0757-0283       6       1       RES       1.25W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES       1.25W       00746       CRB14 OR CRB25         A5       R401       0757-0280       1       RES       1.54K       1.2       00746       CRB14 OR CRB25         A5       R404       0757-0280       3       1       RES       1.1%       1.25W       00746       CRB14 OR CRB25         A5       R404       0757-0280       3       1       RES       1.1%       1.25W       00746       CRB14 OR CRB25<                                                                                                                                                                                         | A5 R379   | 0757-0283  | 6  | 1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5       R390       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R391       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R392       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R394       0757-0283       6       1       RES       2K       1%       1.25W       00746       CRB14 OR CRB25         A5       R396       0757-0283       6       1       RES       1.25W       00746       CRB14 OR CRB25         A5       R400       0757-0283       6       1       RES       1.25W       00746       CRB14 OR CRB25         A5       R401       0757-0280       1       RES       1.54K       1.2       00746       CRB14 OR CRB25         A5       R404       0757-0280       3       1       RES       1.1%       1.25W       00746       CRB14 OR CRB25         A5       R404       0757-0280       3       1       RES       1.1%       1.25W       00746       CRB14 OR CRB25<                                                                                                                                                                                         |           |            |    |   |                  |       |                |  |  |  |  |
| A5 R391       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R392       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R394       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R396       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0283       6       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0394       0       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0698-4422       7       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R404       0757-0280       3       1       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R410                                                                                                                       | 1         | ſ          | 6  | 1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R392       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R394       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R396       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R396       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0283       6       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A5 R401       0757-0394       0       1       RES 1.1 % .125       00746       CRB14 OR CRB25         A5 R402       0698-4422       7       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0757-0280       3       1       RES 1.1 % .125       00746       CRB14 OR CRB25         A5 R404       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0394       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25 <td< td=""><td></td><td>0757-0283</td><td>6</td><td>1</td><td>RES 2K 1% .125W</td><td>00746</td><td>CRB14 OR CRB25</td></td<> |           | 0757-0283  | 6  | 1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R394       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R396       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0342       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A5 R401       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R402       0698-4422       7       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0698-4422       7       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R404       0757-0280       3       1       RES 1.1 % .125W       00746       CRB14 OR CRB25         A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R400       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0394       0       1       RES 3.16 1% .12       00746       CRB14 OR CRB25                                                                                                                            | 1         | 0757-0283  | 6  | 1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R396       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CRB25         A5 R400       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A5 R401       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R402       0698-4425       0       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0698-4422       7       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0698-4422       7       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R404       0757-0280       3       1       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R400       0757-0394       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB25         A5 R412       0699                                                                                                              | i         |            | 6  | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R4000757-044291RES 10K 1% .125W00746CRB14 OR CRB25A5 R4010757-039401RES 51.1 1% .12500746CRB14 OR CRB25A5 R4020698-442501RES 1.54K 1% .1200746CRB14 OR CRB25A5 R4030698-442271RES 1.54K 1% .1200746CRB14 OR CRB25A5 R4040757-028031RES 1.27K 1% .1200746CRB14 OR CRB25A5 R4050757-039401RES 51.1 1% .125W00746CRB14 OR CRB25A5 R4060698-343831RES 147 1% .125W00746CRB14 OR CRB25A5 R4090757-039401RES 51.1 1% .125W00746CRB14 OR CRB25A5 R4100757-027901RES 10K .1% .12500746CRB14 OR CRB25A5 R4110698-636061RES 10K .1% .12500746CRB14 OR CRB25A5 R4120699-101161RES 3.32K .1% .100746CRB14 OR CRB25A5 R4130698-315391RES 20K 1% .125W00746CRB14 OR CRB25A5 R4140757-024961RES 20K 1% .125W00746CRB14 OR CRB25A5 R4190757-028031RES 11K 1% .125W00746CRB14 OR CRB25A5 R4190757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4200757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4200757-0279 <td>A5 R394</td> <td>0757-0283</td> <td>6</td> <td>1</td> <td>RES 2K 1% .125W</td> <td>00746</td> <td>CRB14 OR CRB25</td>                                                                                                                                                                                                                                                                          | A5 R394   | 0757-0283  | 6  | 1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R4000757-044291RES 10K 1% .125W00746CRB14 OR CRB25A5 R4010757-039401RES 51.1 1% .12500746CRB14 OR CRB25A5 R4020698-442501RES 1.54K 1% .1200746CRB14 OR CRB25A5 R4030698-442271RES 1.54K 1% .1200746CRB14 OR CRB25A5 R4040757-028031RES 1.27K 1% .1200746CRB14 OR CRB25A5 R4050757-039401RES 51.1 1% .125W00746CRB14 OR CRB25A5 R4060698-343831RES 147 1% .125W00746CRB14 OR CRB25A5 R4090757-039401RES 51.1 1% .125W00746CRB14 OR CRB25A5 R4100757-027901RES 10K .1% .12500746CRB14 OR CRB25A5 R4110698-636061RES 10K .1% .12500746CRB14 OR CRB25A5 R4120699-101161RES 3.32K .1% .100746CRB14 OR CRB25A5 R4130698-315391RES 20K 1% .125W00746CRB14 OR CRB25A5 R4140757-024961RES 20K 1% .125W00746CRB14 OR CRB25A5 R4190757-028031RES 11K 1% .125W00746CRB14 OR CRB25A5 R4190757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4200757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4200757-0279 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                                                                                                                                                                                                                                              |           |            |    |   |                  |       |                |  |  |  |  |
| A5R4010757-039401RES51.11%.12500746CRB14 OR CRB25A5R4020698-442501RES1.54K 1%.1200746CRB14 OR CRB25A5R4030698-442271RES1.27K 1%.1200746CRB14 OR CRB25A5R4040757-028031RES1.27K 1%.1200746CRB14 OR CRB25A5R4050757-039401RES1.1 %.12500746CRB14 OR CRB25A5R4060698-343831RES1.1 %.12500746CRB14 OR CRB25A5R4090757-039401RES1.1 %.12500746CRB14 OR CRB25A5R4100757-027901RES3.16K 1%.1200746CRB14 OR CRB25A5R4100757-027901RES3.32K .1%.100746CRB14 OR CRB25A5R4110698-636061RES1.25W00746CRB14 OR CRB25A5R4120699-101161RES3.32K .1% .100746CRB14 OR CRB25A5R4130698-315391RES2.0K 1% .125W00746CRB14 OR CRB25A5R4140757-024961RES3.16K 1% .125W00746CRB14 OR CRB25A5R4150757-027901RES3.16K 1% .1200746CRB14 OR CRB25 <td></td> <td></td> <td>1</td> <td>1</td> <td></td> <td>00746</td> <td>CRB14 OR CRB25</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |            | 1  | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R402       0698-4425       0       1       RES 1.54K 1% .12       00746       CRB14 OR CRB25         A5 R403       0698-4422       7       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R404       0757-0280       3       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.2K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                        | 1         | 1 1        | 9  | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R403       0698-4422       7       1       RES 1.27K 1% .12       00746       CRB14 OR CRB25         A5 R404       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       1       RES 147 1% .125W       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 10K .1% .12       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .12       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 2.0K 1% .125W       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 2.0K 1% .125W       00746       CRB14 OR CRB25                                                                                                                        |           |            | 1  | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R404       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       1       RES 147 1% .125W       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25                                                                                                                        |           | 1          |    | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       1       RES 147 1% .125W       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .12       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 116K 1% .12       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25                                                                                                                          | A5 R403   | 0698-4422  | 7  | 1 | RES 1.27K 1% .12 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R405       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R406       0698-3438       3       1       RES 147 1% .125W       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R409       0757-0394       0       1       RES 51.1 1% .125       00746       CRB14 OR CRB25         A5 R410       0757-0279       0       1       RES 1.1 1% .125       00746       CRB14 OR CRB25         A5 R411       0698-6360       6       1       RES 10K .1% .12       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 116K 1% .12       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25                                                                                                                          |           |            |    |   |                  |       |                |  |  |  |  |
| A5R4060698-343831RES1471%1.125W00746CRB14 OR CRB25A5R4090757-039401RES51.11%1.12500746CRB14 OR CRB25A5R4100757-027901RES3.16K1%1.1200746CRB14 OR CRB25A5R4110698-636061RES1.1%1.1200746CRB14 OR CRB25A5R4120699-101161RES3.32K1%00746CRB14 OR CRB25A5R4130698-315391RES3.83K1%1.200746CRB14 OR CRB25A5R4140757-044961RES20K1%1.25W00746CRB14 OR CRB25A5R4150757-028031RES1.1%1.25W00746CRB14 OR CRB25A5R4200757-027901RES3.16K1%1.200746CRB14 OR CRB25A5R4210757-027901RES3.16K1%1.200746CRB14 OR CRB25A5R4210757-027901RES3.16K1%1.200746CRB14 OR CRB25A5R4210757-027901RES3.16K1%1.200746CRB14 OR CRB25A5R4220757-042471RES1.1K1%1.2500746CRB14 OR CRB25A5R422 <td></td> <td></td> <td>3</td> <td>1</td> <td></td> <td>00746</td> <td>CRB14 OR CRB25</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |            | 3  | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5R4090757-039401RES51.11%.12500746CRB14 OR CRB25A5R4100757-027901RES3.16K1%.1200746CRB14 OR CRB25A5R4110698-636061RES1.1%.12500746CRB14 OR CRB25A5R4120699-101161RES3.32K.1%.100746CRB14 OR CRB25A5R4130698-315391RES3.83K 1%.1200746CRB14 OR CRB25A5R4140757-044961RES20K 1%.125W00746CRB14 OR CRB25A5R4150757-028031RES1.15W00746CRB14 OR CRB25A5R4200757-027901RES3.16K 1%.1200746CRB14 OR CRB25A5R4210757-027901RES3.16K 1%.1200746CRB14 OR CRB25A5R4210757-027901RES3.16K 1%.1200746CRB14 OR CRB25A5R4220757-027901RES3.16K 1%.1200746CRB14 OR CRB25A5R4220757-042471RES1.1K 1%.12500746CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |            |    | 1 |                  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R4100757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4110698-636061RES 10K .1% .12500746CRB14 OR CRB25A5 R4120699-101161RES 3.32K .1% .100746CRB14 OR CRB25A5 R4130698-315391RES 3.83K 1% .1200746CRB14 OR CRB25A5 R4140757-044961RES 20K 1% .125W00746CRB14 OR CRB25A5 R4150757-044961RES 20K 1% .125W00746CRB14 OR CRB25A5 R4190757-028031RES 1K 1% .125W00746CRB14 OR CRB25A5 R4200757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4210757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A5 R4220757-042471RES 1.1K 1% .12500746CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |            | 3  | 1 | RES 147 1% .125W | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R411       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB25         A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 3.83K 1% .12       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                               |           |            | 0  | 1 | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 3.83K 1% .12       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0244       7       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                | A5 R410   | 0757-0279  | 0  | 1 | RES 3.16K 1% .12 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R412       0699-1011       6       1       RES 3.32K .1% .1       00746       CRB14 OR CRB25         A5 R413       0698-3153       9       1       RES 3.83K 1% .12       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0244       7       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |            |    |   |                  |       |                |  |  |  |  |
| A5 R413       0698-3153       9       1       RES 3.83K 1% .12       00746       CRB14 OR CRB25         A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                | A5 R411   | 0698-6360  | 6  | 1 | RES 10K .1% .125 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R414       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A5 R412   | 0699-1011  | 6  | 1 | RES 3.32K .1% .1 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R415       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A5 R413   | 0698-3153  | 9  | 1 | RES 3.83K 1% .12 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R419       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A5 R414   | 0757-0449  | 6  | 1 | RES 20K 1% .125W | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A5 R415   | 0757-0449  | 6  | 1 | RES 20K 1% .125W | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R420       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |            |    |   |                  |       |                |  |  |  |  |
| A5 R421         0757-0279         0         1         RES 3.16K 1% .12         00746         CRB14 OR CRB25           A5 R422         0757-0424         7         1         RES 1.1K 1% .125         00746         CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |            | 3  | 1 | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R421       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A5 R422       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A5 R420   | 0757-0279  | 0  | 1 | RES 3.16K 1% .12 | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5 R422 0757-0424 7 1 RES 1.1K 1% .125 00746 CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A5 R421   | 0757-0279  | 0  | 1 | RES 3.16K 1% .12 | 1     | 1              |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A5 R422   | 0757-0424  | 7  | 1 | RES 1.1K 1% .125 | 00746 | CRB14 OR CRB25 |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A5 R423   | 0757-0279  | 0  | 1 | RES 3.16K 1% .12 | 1     | CRB14 OR CRB25 |  |  |  |  |

Table C-7. 8131A Standard Timing Board Parts List (continued)

| Referenc   | e HP Part # | CD | Qty | Deserieti        | n Manufin Dart II |                |  |  |  |
|------------|-------------|----|-----|------------------|-------------------|----------------|--|--|--|
| A5 R424    |             | 1  |     |                  | Manufr            |                |  |  |  |
| A5 R424    |             | 0  | 1   | RES 2.61K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| 1          |             | 9  | 1   | RES 1.78K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R426    |             | 3  | 1   | RES 1K 1% .125W  | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R427    |             | 0  | 1   | RES 51.1 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R428    | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A.F. D.490 |             |    |     |                  |                   |                |  |  |  |
| A5 R429    | 0757-0419   | 0  | 1   | RES 681 1% .125W |                   | CRB14 OR CRB25 |  |  |  |
| A5 R430    | 0698-6347   | 9  | 1   | RES 1.5K .1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R431    | 0698-6348   | 0  | 1   | RES 3K .1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R433    | 0698-6347   | 9  | 1   | RES 1.5K .1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R434    | 0698-6616   | 5  | 1   | RES 750 .1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
|            |             |    |     |                  |                   |                |  |  |  |
| A5 R435    | 0698-3438   | 3  | 1   | RES 147 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R436    | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R437    | 0698-6616   | 5  | 1   | RES 750 .1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R438    | 0757-0465   | 6  |     | RES 100K 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R438*   | 0757-0463   | 4  | 1   | RES 82.5K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
|            |             |    |     |                  |                   |                |  |  |  |
| A5 R440    | 0757-0279   | 0  | 1   | RES 3.16K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R441    | 0698-3155   | 1  | 1   | RES 4.64K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R442    | 0698-3446   | 3  | 1   | RES 383 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R443    | 0757-0462   | 3  | 1   | RES 75K 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R444    | 0698-3268   | 7  | 1   | RES 11.5K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
|            |             |    |     | i                |                   |                |  |  |  |
| A5 R445    | 0698-3136   | 8  | 1   | RES 17.8K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R446    | 0698-0085   | 0  |     | RES 2.61K 1% .12 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R447    | 0757-0280   | 3  |     | RES 1K 1% .125W  | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R448    | 0698-3438   | 3  |     | RES 147 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R450    | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
|            |             |    |     |                  |                   |                |  |  |  |
| A5 R453    | 0757-0462   | 3  |     | RES 75K 1% .125W | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R453*   | 0698-3243   | 8  |     | RES 178K 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R460    | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |
| A5 R461    | 0757-0394   | 0  | 1   |                  | 1                 | CRB14 OR CRB25 |  |  |  |
| A5 R462    | 0757-0394   | 0  | 1   | RES 51.1 1% .125 | 00746             | CRB14 OR CRB25 |  |  |  |

Table C-7. 8131A Standard Timing Board Parts List (continued)

| Referer | ice HP Part # | E CD | Qty | Description         | Manufr | Part #         |
|---------|---------------|------|-----|---------------------|--------|----------------|
| A5 R46  |               | 0    | 1   | RES-ZERO OHMS       |        | L-2007-1       |
| A5 R47  | 1             | 4    | 1   | RES 23.7K 1% .12    | 01339  | CRB14 OR CRB25 |
| A5 R47  |               | 3    | 1   | RES 1K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R47  |               | 3    | 1   | RES 383 1% .125W    | 1      | CRB14 OR CRB25 |
| A5 R47  | -             | 5    | 1   | RES 26.1K 1% .12    | 00746  | CRB14 OR CRB25 |
|         |               |      | -   | 1020 20.110 170 .12 | 00140  | CRD14 OR CRD25 |
| A5 R47  | 6 0757-0283   | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R47  | 7 0757-0283   | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R47  | 9 0757-0283   | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R48  | 0 0757-0283   | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R48  | 1 0757-0283   | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
|         |               |      |     |                     |        |                |
| A5 R486 | 6 0757-0465   | 6    | 1   | RES 100K 1% .125    | 00746  | CRB14 OR CRB25 |
| A5 R490 |               | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R491 |               | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R492 |               | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R494 | 0757-0283     | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
|         |               |      |     |                     |        |                |
| A5 R496 |               | 6    | 1   | RES 2K 1% .125W     | 00746  | CRB14 OR CRB25 |
| A5 R501 |               | 0    | 1   | RES 51.1 1% .125    | 00746  | CRB14 OR CRB25 |
| A5 R502 |               | 0    | 1   | RES 1.54K 1% .12    | 00746  | CRB14 OR CRB25 |
| A5 R503 |               | 5    | 1   | RES 909 1% .125W    | 00746  | CRB14 OR CRB25 |
| A5 R504 | 0757-0280     | 3    | 1   | RES 1K 1% .125W     | 00746  | CRB14 OR CRB25 |
|         |               |      |     |                     |        |                |
| A5 R505 |               | 0    |     | RES 51.1 1% .125    | 00746  | CRB14 OR CRB25 |
| A5 R506 |               | 3    | 1   | RES 147 1% .125W    | 00746  | CRB14 OR CRB25 |
| A5 R509 |               | 0    |     | RES 51.1 1% .125    | 00746  | CRB14 OR CRB25 |
| A5 R510 | 1             | 0    | 1   | RES 3.16K 1% .12    | 00746  | CRB14 OR CRB25 |
| A5 R511 | 0698-6360     | -6   | 1   | RES 10K .1% .125    | 00746  | CRB14 OR CRB25 |
|         |               |      |     |                     |        |                |
| A5 R512 | 0699-1011     | 6    |     | RES 3.32K .1% .1    | 1      | CRB14 OR CRB25 |
| A5 R513 | 0698-3153     | 9    |     | RES 3.83K 1% .12    |        | CRB14 OR CRB25 |
| A5 R514 | 0757-0449     | 6    |     | RES 20K 1% .125W    | 00746  | CRB14 OR CRB25 |
| A5 R515 | 0757-0449     | 6    |     | RES 20K 1% .125W    |        | CRB14 OR CRB25 |
| A5 R519 | 0757-0280     | 3    | 1   | RES 1K 1% .125W     | 00746  | CRB14 OR CRB25 |

Table C-7. 8131A Standard Timing Board Parts List (continued)

|      | eferenc |           |   | Qt |                    | Manuf | r Part #       |  |  |  |  |
|------|---------|-----------|---|----|--------------------|-------|----------------|--|--|--|--|
|      | 5 R520  | 0757-0279 | 0 | 1  | RES 3.16K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | 5 R521  | 0757-0279 | 0 | 1  | RES 3.16K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| - 1  | 5 R522  | 0757-0317 | 7 | 1  | RES 1.33K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | 5 R523  | 0698-0084 | 9 | 1  | RES 2.15K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A    | 5 R524  | 0698-0085 | 0 | 1  | RES 2.61K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         |           |   |    |                    |       |                |  |  |  |  |
| 1    | 5 R525  | 0757-0278 | 9 | 1  | RES 1.78K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | 5 R526  | 0757-0280 | 3 | 1  | RES 1K 1% .125W    | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | 5 R527  | 0757-0394 | 0 | 1  | RES 51.1 1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| 1    | 5 R528  | 0757-0394 | 0 | 1  | RES 51.1 1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5   | 5 R529  | 0757-0419 | 0 | 1  | RES 681 1% .125W   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         |           |   |    |                    |       |                |  |  |  |  |
| 1    | R530    | 0698-6347 | 9 | 1  | RES 1.5K .1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| 1    | R531    | 0698-6348 | 0 | 1  | RES 3K .1% .125W   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| 1    | R533    | 0698-6347 | 9 | 1  | RES 1.5K .1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| 1    | R534    | 0698-6616 | 5 | 1  | RES 750 .1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5   | R535    | 0698-3438 | 3 | 1  | RES 147 1% .125W   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         |           |   |    |                    |       |                |  |  |  |  |
| 1    | R536    | 0757-0394 | 0 | 1  | RES 51.1 1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| (    | R537    | 0698-6616 | 5 | 1  | RES 750 .1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| 1    | R538    | 0757-0978 | 6 | 1  | RES 95.3K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | R539    | 0698-3260 | 9 | 1  | RES 464K 1% .125   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5   | R540    | 0757-0279 | 0 | 1  | RES 3.16K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | _       |           |   |    |                    |       |                |  |  |  |  |
|      | R541    | 0698-3155 | 1 | 1  | RES 4.64K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | R542    | 0698-3446 | 3 |    | RES 383 1% .125W   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         | 0757-0464 | 5 |    | RES 90.9K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         | 0698-3268 | 7 |    | RES 11.5K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
| A5   | R545    | 0698-3136 | 8 | 1  | RES 17.8K 1% .12 - | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         |           |   |    |                    |       |                |  |  |  |  |
|      | 1       |           | 0 |    | RES 2.61K 1% .12   | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      |         | 1         | 1 |    |                    | 00746 | CRB14 OR CRB25 |  |  |  |  |
|      | 1       |           |   | 1  |                    |       | CRB14 OR CRB25 |  |  |  |  |
|      | 1       |           | 1 |    | 1                  |       | CRB14 OR CRB25 |  |  |  |  |
| A5 I | R551 (  | 0698-8961 | 7 | 1  | RES 909K 1% .125   |       | CRB14 OR CRB25 |  |  |  |  |

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Table C-7. 8131A Standard Timing Board Parts List (continued)

|   | Reference | HP Part #              | CD       | Qty | Description                      | Manuf'r | Part #         |
|---|-----------|------------------------|----------|-----|----------------------------------|---------|----------------|
|   | 45 R560   | 0757-0394              | 0        | 1   | RES 51.1 1% .125                 | 00746   | CRB14 OR CRB25 |
| 4 | 45 R567   | 8159-0005              | 0        | 1   | RES-ZERO OHMS                    | 01339   | L-2007-1       |
| A | 15 R570   | 0757-0449              | 6        | 1   | RES 20K 1% .125W                 | 00746   | CRB14 OR CRB25 |
| A | 15 R571   | 0757-0280              | 3        | 1   | RES 1K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A | 5 R573    | 0698-3446              | 3        | 1   | RES 383 1% .125W                 | 00746   | CRB14 OR CRB25 |
|   |           |                        |          |     |                                  |         |                |
| A | L5 R575   | 0698-3159              | 5        | 1   | RES 26.1K 1% .12                 | 00746   | CRB14 OR CRB25 |
| A | 5 R576    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| 1 | 5 R577    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
|   | .5 R579   | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A | 5 R580    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
|   |           |                        |          |     |                                  |         |                |
|   | 5 R581    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
|   | .5 R590   | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| 1 | 5 R591    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
|   | 5 R592    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A | 5 R594    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| . | 5 D500    | 0757 0000              |          |     |                                  |         |                |
|   | 5 R596    | 0757-0283              | 6        | 1   | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| 1 | 5 RA100   | 1810-0316              | 1        | 1   | NETWORK-RES DIP                  | 02483   | 761-3-R10K     |
|   | 5 RT393   | 0837-0035              | 6        | 1   | THERMISTOR DISC                  | 05098   | 35D24          |
| 1 | 5 RT493   | 0837-0035              | 6        |     | THERMISTOR DISC                  | 05098   | 35D24          |
| A | 5 RT593   | 0837-0035              | 6        | 1   | THERMISTOR DISC                  | 05098   | 35D24          |
|   | 5 TP200   | 0260 0064              | 6        | .   |                                  | 10050   |                |
| 1 | 5 TP200   | 0360-2264<br>0360-2264 | 6        | - 1 | TERMTEST POINT<br>TERMTEST POINT |         | 1095D          |
| 1 | 5 TP312   | 0360-2264              | 6        |     | TERMTEST POINT                   | 10358   | 1095D          |
| 1 | 5 TP323   | 0360-2264              | 6        |     | TERMTEST POINT                   | 10358   | 1095D          |
| 1 |           | 0360-2264              | 6        | 1   | TERMTEST POINT                   |         | 1095D          |
|   | 5 11 524  | 0300-2204              | 0        |     | IERMIESI POINT                   | 10358   | 1095D          |
| A | 5 TP411   | 0360-2264              | 6        | 1   | TERMTEST POINT                   | 10359   | 1095D          |
| I | 1         | 0360-2264              | 6        | 1   | TERMTEST POINT                   | 1       | 1095D          |
|   |           | 0360-2264              | 6        | - 1 | TERMTEST POINT                   |         | 1095D<br>1095D |
|   | -         | 0360-2264              | 6        |     | TERMTEST POINT                   |         | 1095D          |
|   | 1         | 0360-2264              | 6        |     | TERMTEST POINT                   |         | 1095D          |
|   |           |                        | <u> </u> | - 1 |                                  | 10000   | 1033D          |

|     | Reference HP Part #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             | # C1 |     | V Decemination                 | -       | · · · · · · · · · · · · · · · · · · · |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|-----|--------------------------------|---------|---------------------------------------|
|     | A5 TP52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |      |     |                                | Manuf   |                                       |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 0360-2264 | -    | 1 - |                                | 1       | 1095D                                 |
|     | A5 U100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |      |     |                                |         | 1095D                                 |
|     | A5 U101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3847   |      |     |                                | 01698   | SN74HCT245N                           |
|     | A5 U102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | -    | -   | -0                             | 01698   | SN74HCT138N                           |
|     | 110 0102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1020-3082   | 9    | 1   | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
|     | A5 U103                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | 5    | 1   | IC MCZATTORAN                  |         |                                       |
|     | A5 U104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3847   | 0    |     | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
|     | A5 U105                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3047   | 5    |     | IC-MM74HCT138N                 | 01698   | SN74HCT138N                           |
| 1   | A5 U106                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | 5    |     | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
| - 1 | A5 U107                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3847   | 0    |     | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1020-3041   |      |     | IC-MM74HCT138N                 | 01698   | SN74HCT138N                           |
|     | A5 U108                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | 5    | 1   | IC MCTATIONT IN                |         |                                       |
|     | 45 U109                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3847   | 0    |     | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
|     | 45 U110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | 5    |     | IC-MM74HCT138N                 | 01698   | SN74HCT138N                           |
|     | A5 U111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1820-3082   | 5    | 1   | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
| 1   | A5 U112                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1818-3164   | 9    |     | IC-MC74HC374N                  | 01698   | SN74HC374N                            |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1010-0104   | 9    |     | IC X2816BP                     | 10572   | X2816BP                               |
| A   | 5 U200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1NB7-8008   | 1    | 1   | SYNC COMP HYBRID               | 00400   |                                       |
|     | 5 U201                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1826-0544   |      | 1   | IC-V RGLTR                     |         | 1NB7-8008                             |
|     | 5 U202                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-3082   | 5    | 1   | IC-W RGLIR<br>IC-MC74HC374N    | 02037   |                                       |
|     | 5 U203                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1826-0550   | 8    | 1   | D/A 8-BIT                      | 1       | SN74HC374N                            |
|     | 5 U204                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-0493   | 6    | 1   | IC 307                         | 1 1     | DAC08EN                               |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |      | T   | 10 301                         | 03406   | LM307N                                |
| A   | 5 U300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1DP9-0002   | 0    | 1   | IC T1671                       | 20400   |                                       |
|     | 5 U301                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1DP6-0001   | 3    | 1   | IC COUNTER 200M                |         | 1DP9-0002                             |
|     | 5 U303                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-4995   | 1    | 1   | IC-TC74HC592P                  |         | 1DP6-0001                             |
|     | 5 U304                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-4995   | 1    | 1   | IC-TC74HC592P<br>IC-TC74HC592P |         | TC74HC592P                            |
| 1   | 5 U305                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-5067   | ō    | 1   | IC-74AC74PC                    |         | TC74HC592P                            |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             | Ĭ    | -   | 10-17A014FU                    | 03406   | 74AC74PC                              |
| A   | 5 U306                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1820-5067   | 0    | 1   | IC-74AC74PC                    | 03406 7 |                                       |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1820-3298   | 5    |     | IC-MM74HC32N                   | 1       | 4AC74PC                               |
| A   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1826-1553   | 3    |     | IC 1014                        |         | MC74HC32N                             |
| A   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1826-0774   | 8    |     | IC LM385BZ-1.2                 | 1       | T1014DN                               |
| A5  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1826-1341   | 7    |     |                                | I =     | M385BZ-1.2                            |
| •   | , <u></u> , <u></u> , <u></u> -, <u></u> , 1           |      | - 1 | ~/                             | 03400 1 | DAC1232LCD                            |

Table C-7. 8131A Standard Timing Board Parts List (continued)

Table C-7. 8131A Standard Timing Board Parts List (continued)

| Reference  | HP Part #   | CD | Qty | Description      | Manuf'r | Part #      |
|------------|-------------|----|-----|------------------|---------|-------------|
| A5 U313    | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U314    | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U318    | 1826-0916   | 0  | 1   | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
| A5 U400    | 1DP9-0001   | 9  | 1   | IC TIMG GEN 500M | 28480   | 1DP9-0001   |
| A5 U401    | 1DP6-0001   | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
|            |             |    |     |                  |         |             |
| A5 U410    | 1826-1553   | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U411    | 1826-0774   | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5 U412    | 1826-1341   | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U413    | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U414    | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
|            |             |    |     |                  |         |             |
| A5 U418    | 1826-0916   | 0  | 1   | ANLG SW AD7511DI | 4       | AD7511DIKN  |
| A5 U500    | 1DP9-0001   | 9  | 1   | IC TIMG GEN 500M | 28480   | 1DP9-0001   |
| A5 U501    | 1DP6-0001   | 3  | 1   | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U510    | 1826-1553   | 3  | 1   | IC 1014          | 10858   | LT1014DN    |
| A5 U511    | 1826-0774   | 8  | 1   | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
|            |             | _  |     | - / / /          |         |             |
| A5 U512    | 1826-1341   | 7  | 1   | D/A 12-DGT       | 03406   | DAC1232LCD  |
| A5 U513    | 1826-1409   | 8  | 1   | IC 1013          | 10858   | LT1013CN8   |
| A5 U514    | 1826-0315   | 3  | 1   | IC 348           | 03406   | LM348N      |
| A5 U518    | 1826-0916   | 0  | 1   | ANLG SW AD7511DI | i       | AD7511DIKN  |
| A5 VR300   | 1902-0955   | 9  | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
|            |             |    | .   |                  |         |             |
| A5 VR400   | 1           | 9  | ł   | DIO-ZNR 7.5V 5%  | 02037   | j           |
| A5 VR500   |             | 9  | 1   | DIO-ZNR 7.5V 5%  | 02037   |             |
| A5 W100    | 1258-0141   | 8  |     | JUMPER-REM       | 1       | 530153-2    |
| A5 W300    | 08131-61650 | 4  | 1   | CBL AY PC 15CM   | 1       | 08131-61650 |
| A5 W301    | 08131-61655 | 9  | 1   | CBL AY TROUT45C  | 28480   | 08131-61655 |
| A E 187400 | 00101 61670 |    | ,   | ORI CET DELAVA   | 00400   | 00101 01070 |
| A5 W400    | 08131-61672 | 0  | 1   | CBL SET DELAY A  |         | 08131-61672 |
| A5 W500    | 08131-61670 | 8  | 1   | CBL SET OUT30-5  | 28480   | 08131-61670 |

| Table C-6. 615 TA Main Power Board Parts List |             |    |     |                                                           |         |                      |  |  |  |  |  |
|-----------------------------------------------|-------------|----|-----|-----------------------------------------------------------|---------|----------------------|--|--|--|--|--|
| Reference                                     |             | CD | Qty | Description                                               | Manuf'r | Part #               |  |  |  |  |  |
| A14                                           | 08131-66514 | 9  | 1   | BD AY PWR MAIN                                            | 28480   | 08131-66514          |  |  |  |  |  |
| A14C118                                       | 0180-3651   | 5  | 1   | CAP 100uF 50 V                                            | 00493   | KM50VB101M           |  |  |  |  |  |
| A14C119                                       | 0180-3651   | 5  | 1   | CAP 100uF 50 V                                            | 00493   | KM50VB101M           |  |  |  |  |  |
|                                               |             |    |     |                                                           |         |                      |  |  |  |  |  |
| A14C121                                       | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V                                            | 02010   | SA115C104MAAH        |  |  |  |  |  |
| A14C122                                       | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V                                            | 02010   | SA115C104MAAH        |  |  |  |  |  |
| A14C123                                       | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V                                            | 02010   | SA115C104MAAH        |  |  |  |  |  |
| A14CP101                                      |             | 5  | 1   | CAP 25 V                                                  | 08709   | ECET 25R 153SW       |  |  |  |  |  |
| A14CP102                                      | 0180-3411   | 5  | 1   | CAP 25 V                                                  | 08709   | ECET 25R 153SW       |  |  |  |  |  |
|                                               |             |    |     |                                                           |         |                      |  |  |  |  |  |
|                                               | 0180-4049   | 7  | 1   | CAP 16 V                                                  | 00493   | KME16VNSN27000M30X50 |  |  |  |  |  |
| A14CP104                                      | 0180-4049   | 7  | 1   | CAP 16 V                                                  | 00493   | KME16VNSN27000M30X50 |  |  |  |  |  |
| A14CP105                                      | 0180-4050   | 0  | 1   | CAP 10 V                                                  | 00493   | KME10VNSN39000M30X50 |  |  |  |  |  |
| A14CP106                                      | 0180-4050   | 0  | 1   | CAP 10 V                                                  | 00493   | KME10VNSN39000M30X50 |  |  |  |  |  |
| A14CP107                                      | 0180-4049   | 7  | 1   | CAP 16 V                                                  | 00493   | KME16VNSN27000M30X50 |  |  |  |  |  |
|                                               |             |    |     |                                                           |         |                      |  |  |  |  |  |
| A14CP108                                      | 0180-4049   | 7  | 1   | CAP 16 V                                                  | 00493   | KME16VNSN27000M30X50 |  |  |  |  |  |
| A14CP109                                      | 0180-3411   | 5  | 1   | CAP 25 V                                                  | 08709   | ECET 25R 153SW       |  |  |  |  |  |
| A14CP110                                      | 0180-3411   | 5  | 1   | CAP 25 V                                                  | 08709   | ECET 25R 153SW       |  |  |  |  |  |
| A14CP111                                      | 0180-3006   | 4  | 1   | CAP 35 V                                                  | 00493   | NM35VB10000Q         |  |  |  |  |  |
| A14CP112                                      | 0180-3006   | 4  | 1   | CAP 35 V                                                  |         | NM35VB10000Q         |  |  |  |  |  |
|                                               |             |    |     |                                                           |         |                      |  |  |  |  |  |
| A14CP113                                      | 0180-3469   | 3  | 1   | CAP 100uF 25 V                                            | 00493   | KMC25VB101M8X11LL    |  |  |  |  |  |
| A14CP114                                      | 0180-3469   | 3  | 1   |                                                           |         | KMC25VB101M8X11LL    |  |  |  |  |  |
| A14CP115                                      | 0180-3469   | 3  |     |                                                           |         | KMC25VB101M8X11LL    |  |  |  |  |  |
| A14CP116                                      | 0180-3469   | 3  |     |                                                           |         | KMC25VB101M8X11LL    |  |  |  |  |  |
| A14CP117                                      | 0180-3469   | 3  | 1   | <b>-</b> · <b>-</b> · · · · · · · · · · · · · · · · · · · |         | KMC25VB101M8X11LL    |  |  |  |  |  |

Table C-8. 8131A Main Power Board Parts List

## Table C-8. 8131A Main Power Board Parts List (continued)

| A14CP120         0180-2690         0         1         CAP 3.3uF 15 V         04200         150D335X9015A2           A14CR101         1901-1267         6         1         DIO-PWR RECT         03038         50SQ080           A14CR102         1901-1267         6         1         DIO-PWR RECT         03038         50SQ080           A14CR103         1901-1267         6         1         DIO-PWR RECT         03038         50SQ080           A14CR104         1901-1267         6         1         DIO-PWR RECT         03038         50SQ080           A14CR105         1906-0265         2         1         DIO-CT-RECT 45V         03038         12CTQ045           A14CR106         1901-0935         3         1         DIO-PWR RECT         03038         12CTQ045           A14CR107         1901-0935         3         1         DIO-PWR RECT         03038         12CTQ045           A14CR101         1901-0935         3         1         DIO-PWR RECT         03038         12CTQ045           A14CR111         1901-0935         3         1         DIO-PWR RECT         03038         12CTQ045           A14CR113         1901-0935         3         1         DIO-PWR RECT         03038                               | Reference | HP Part #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CD  | Qty | Description                          | Manuf'r | Part #     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|--------------------------------------|---------|------------|
| A14CR101       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR102       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR103       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR104       1901-1267       6       1       DIO-CT-RECT 45V       03038       50SQ080         A14CR105       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR106       1906-0265       2       1       DIO-PWR RECT       03038       12CTQ045         A14CR108       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR114       1901-0935       3       1       DIO-P                                                                                                              | A14CP120  | 0180-2690                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0   | 1   | CAP 3.3uF 15 V                       | 04200   |            |
| A14CR102       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR103       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR104       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR105       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR107       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR108       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038       14CR114         1901-0935       3       1       DIO-PWR RECT       03038       50SQ080         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038                                                                                                              | A14CR101  | 1901-1267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6   | 1   | DIO-PWR RECT                         |         | 1          |
| A14CR103       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR104       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR105       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR106       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR107       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038       14CR114         1901-0935       3       1       DIO-PWR RECT       03038       14CR114         1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ0                                                                                                              | A14CR102  | 1901-1267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6   | 1   | DIO-PWR RECT                         | 03038   | -          |
| A14CR104       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR105       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR106       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR107       1901-0335       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR108       1901-0335       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0335       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR111       1901-0335       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0335       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR113       1901-0355       3       1       DIO-PWR RECT       03038       14CR114         1901-0355       3       1       DIO-PWR RECT       03038       50SQ080         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       0                                                                                                              | A14CR103  | 1901-1267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6   | 1   | DIO-PWR RECT                         | 03038   | 1 - 1      |
| A14CR105       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR106       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR107       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR108       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR110       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR111       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR113       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR114       1901-0355       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR114       1901-1267       6       1       DI                                                                                                              | A14CR104  | 1901-1267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR106       1906-0265       2       1       DIO-CT-RECT 45V       03038       12CTQ045         A14CR107       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR108       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038       12CTQ045         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038       12CSQ080         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PW                                                                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |                                      |         |            |
| A14CR107       1901-0935       3       1       DIO-PWR RECT       03038         A14CR108       1901-0935       3       1       DIO-PWR RECT       03038         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50                                                                                                                               | A14CR105  | 1906-0265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2 - | 1   | DIO-CT-RECT 45V                      | 03038   | 12CTQ045   |
| A14CR108       1901-0935       3       1       DIO-PWR RECT       03038         A14CR109       1901-0935       3       1       DIO-PWR RECT       03038         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT                                                                                                                                      |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2   | 1   | DIO-CT-RECT 45V                      | 03038   | 12CTQ045   |
| A14CR109       1901-0935       3       1       DIO-PWR RECT       03038         A14CR110       1901-0935       3       1       DIO-PWR RECT       03038         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-P                                                                                                                               | A14CR107  | 1901-0935                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR110       1901-0935       3       1       DIO-PWR RECT       03038         A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6 <td< td=""><td>A14CR108</td><td>1901-0935</td><td>3</td><td>1</td><td>DIO-PWR RECT</td><td>03038</td><td></td></td<>                | A14CR108  | 1901-0935                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731                                                                                                                               | A14CR109  | 1901-0935                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR111       1901-0935       3       1       DIO-PWR RECT       03038         A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731                                                                                                                               |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |                                      |         |            |
| A14CR112       1901-0935       3       1       DIO-PWR RECT       03038         A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123                                                                                                                                 |           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3   | 1   |                                      | 03038   |            |
| A14CR113       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080                                                                                                                                    |           | 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR114       1901-0935       3       1       DIO-PWR RECT       03038         A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037                                                                                                                      |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR115       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT                                                                                                                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150 </td <td>A14CR114</td> <td>1901-0935</td> <td>3</td> <td>1</td> <td>DIO-PWR RECT</td> <td>03038</td> <td></td> | A14CR114  | 1901-0935                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3   | 1   | DIO-PWR RECT                         | 03038   |            |
| A14CR116       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                     |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |                                      |         |            |
| A14CR117       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12 <td></td> <td>1</td> <td>1</td> <td></td> <td></td> <td>]  </td> <td>-</td>                                      |           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1   |     |                                      | ]       | -          |
| A14CR118       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR119       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       0                                                                                                              |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1   |     |                                      | 1 1     | -          |
| A14CR1191901-126761DIO-PWR RECT0303850SQ080A14CR1201901-126761DIO-PWR RECT0303850SQ080A14CR1211901-126761DIO-PWR RECT0303850SQ080A14CR1221901-126761DIO-PWR RECT0303850SQ080A14CR1221901-126761DIO-PWR RECT0303850SQ080A14CR1231901-073171DIO-PWR RECT02037SR3010-3RLA14CR1241901-073171DIO-PWR RECT02037SR3010-3RLA14CR1251901-109811DIO-1N415000746A14F1022110-071391FU-SUBMIN 10A 1204703R251010T1A14F1042110-071391FU-SUBMIN 10A 1204703R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1   | _   |                                      | 1       | - 1        |
| A14CR120       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |                                      | 1       | -          |
| A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                            | A14CR119  | 1901-1267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6   | 1   | DIO-PWR RECT                         | 03038   | 50SQ080    |
| A14CR121       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR122       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                            | 11400100  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |                                      |         |            |
| A14CR122       1901-1267       6       1       DIO-PWR RECT       03038       50SQ080         A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     | - 1 |                                      |         | -          |
| A14CR123       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     |                                      |         | -          |
| A14CR124       1901-0731       7       1       DIO-PWR RECT       02037       SR3010-3RL         A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -   |     |                                      |         |            |
| A14CR125       1901-1098       1       1       DIO-1N4150       00746         A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     | 1   |                                      | F       |            |
| A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A140K124  | 1901-0731                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 7   |     | DIO-PWR RECT                         | 02037   | SR3010-3RL |
| A14F102       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F103       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1         A14F104       2110-0713       9       1       FU-SUBMIN 10A 12       04703       R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ALACPINE  | 1001 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ,   | ,   |                                      | 00742   |            |
| A14F103         2110-0713         9         1         FU-SUBMIN 10A 12         04703         R251010T1           A14F104         2110-0713         9         1         FU-SUBMIN 10A 12         04703         R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           | E State      |     |                                      |         | Doriotori  |
| A14F104 2110-0713 9 1 FU-SUBMIN 10A 12 04703 R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     | 1   |                                      |         |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     | 1                                    | 1       | 1          |
| A14F105 2110-0713 9 1 FU-SUBMIN 10A 12 04703 R251010T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           | 2110-0713                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 9   |     | FU-SUBMIN 10A 12<br>FU-SUBMIN 10A 12 | 1       | 1          |

|     | Reference | HP Part #   | CI | Qty | Description      | Manuf   | Part #               |
|-----|-----------|-------------|----|-----|------------------|---------|----------------------|
|     | A14F106   | 2110-0713   | 9  | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
|     | A14F107   | 2110-0713   | 9  | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
|     | A14F108   | 2110-0713   | 9  | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
|     | A14F109   | 2110-0713   | 9  | 1   | FU-SUBMIN 10A 12 | 04703   | R251010T1            |
|     | A14J1     | 1251-8324   | 1  | 1   | CONN-POST-TP-HDF |         | G06M96P4BEBL-004-715 |
|     |           |             |    |     |                  |         |                      |
| - 1 | A14J2     | 1251-4547   | 2  | 1   | CONN-POST-TP-HDR | 01380   | 1-87227-0            |
|     | A14J3     | 1251-4547   | 2  | 1   | CONN-POST-TP-HDR | 01380   | 1-87227-0            |
| -   | A14J4     | 1251-5153   | 8  | 1   | CONN-SGL CONT    | 04880   | 836                  |
|     | A14J5     | 1251-5153   | 8  | 1   | CONN-SGL CONT    | 04880   | 836                  |
| -   | A14J6     | 1251-3751   | 8  | 1   | CONN-POST-TP-HDR | 03418   | 26-60-1080           |
|     |           |             |    |     |                  |         |                      |
| 1   | A14J7     | 1251-3751   | 8  | 1   | CONN-POST-TP-HDR | 1       | 26-60-1080           |
|     | A14J8     | 1251-5383   | 6  | 1   | CONN-POST-TP-HDR | 03394   | 1102-8-102-01        |
|     | A14MP101  |             | 8  | 1   | H-SINK           | 28480   | 08131-21103          |
|     | A14MP102  |             | 8  | 1   | H-SINK           | 28480   | 08131-21103          |
| 4   | A14MP103  | 08131-45401 | 9  | 1   | INS 8XTO 220     | 28480   | 08131-45401          |
|     | 1.000104  |             |    |     |                  |         |                      |
| 1   | 14MP104   | 1           | 9  | 1   | INS 8XTO 220     | 28480   | 08131-45401          |
| I 1 | 14Q101    | 1855-0499   | 5  | 1   | MOSFET P-CHAN    |         | IRF9531              |
|     | 14Q102    | 1855-0499   | 5  | 1   | MOSFET P-CHAN    | 03038   | IRF9531              |
|     | 14Q103    | 1855-0645   | 3  | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| A   | .14Q104   | 1855-0645   | 3  | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
|     | 140105    | 1055 00.5   |    |     |                  |         |                      |
|     | .14Q105   | 1           | 3  |     | MOSFET N-CHAN    | 02037   | BUZ11                |
|     | .14Q106   | 1855-0645   | 3  |     | MOSFET N-CHAN    | 02037   | BUZ11                |
|     | 14Q107    | 1855-0548   | 5  |     | MOSFET N-CHAN    | 02037   | BUZ71A               |
|     | 14Q108    | 1855-0548   | 5  |     | MOSFET N-CHAN    | 02037   | BUZ71A               |
| A   | 14Q109    | 1855-0645   | 3  | 1   | MOSFET N-CHAN    | 02037   | BUZ11                |
| ٨   | 140110    | 1055 0045   |    | .   |                  |         |                      |
|     |           | 1855-0645   | 3  |     |                  |         | BUZ11                |
|     |           | 1855-0548   | 5  |     |                  |         | BUZ71A               |
|     | 1         | 1855-0548   | 5  |     |                  |         | BUZ71A               |
|     | 1         | 0757-0442   | 9  | 1   |                  | 00746   | CRB14 OR CRB25       |
| A   | 14R102    | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 ( | CRB14 OR CRB25       |

Table C-8. 8131A Main Power Board Parts List (continued)

Table C-8. 8131A Main Power Board Parts List (continued)

| Reference           | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|---------------------|-----------|----|-----|------------------|---------|----------------|
| A14R103             | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A14R104             | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A14R105             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R106             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R100             | 0698-3156 | 2  | 1   | RES 14.7K 1% .12 | 00746   | CRB14 OR CRB25 |
| AIHUU               | 0000 0100 | _  |     |                  |         |                |
| A14R108             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R109             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R110             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R111             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R112             | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| 711110112           |           |    | ł   |                  |         |                |
| A14R113             | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524   | RS-2B          |
| A14R113             | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524   | RS-2B          |
| A14R114             | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524   | RS-2B          |
| A14R116             | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524   | RS-2B          |
| A14R110             | 0812-0111 | 7  | 1   | RES .05 3% 3W PW | 05524   | RS-2B          |
| ATHEIT              | 0012 0111 |    |     |                  |         |                |
| A14R118             | 0811-3470 | 5  | 1   | RES .1 3% 3W PWI | 05524   | CW-2B-39       |
| A14R119             | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A14R120             | 0757-0466 | 7  | 1   | RES 110K 1% .125 | 00746   | CRB14 OR CRB25 |
| A14R121             | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A14R121             | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| AIHUI22             | 0101 0110 |    |     |                  |         |                |
| A14R123             | 0698-3160 | 8  | 1   | RES 31.6K 1% .12 | 00746   | CRB14 OR CRB25 |
| A14R120             | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A14R121             | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A14R126             | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A14R127             | 0698-0063 | 4  | 1   | RES 5.23K 1% .12 | 00746   | CRB14 OR CRB25 |
| ALILLEI             |           |    |     |                  |         |                |
| A14R128             | 0698-3132 | 4  | 1   | RES 261 1% .125W | 00746   | CRB14 OR CRB25 |
| A14R120             | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A14TP101            | 1         | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A14TP101            |           | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| A1417102<br>A14U101 | 1826-1245 | 0  | 1   | IC TL7702A       | 01698   | TL7702A        |

| j | Reference | HP Part # | CD | Qty | Description    | Manuf'r | Part #    |
|---|-----------|-----------|----|-----|----------------|---------|-----------|
|   | A14U103   | 1826-0346 | 0  | 1   | IC 358         | 03406   | LM358N    |
|   | A14U104   | 1826-0393 | 7  | 1   | IC LM317T      |         | LM317KC   |
|   | A14VR101  | 1902-0964 | 0  | 1   | DIO-ZNR 18V 5% | 02037   | 211017110 |
|   | A14VR102  |           | 0  |     | DIO-ZNR 18V 5% |         |           |
|   | A14VR103  | 1902-0959 | 3  | 1   | DIO-ZNR 11V 5% |         |           |
|   |           |           |    |     |                |         |           |
| L | A14VR104  | 1902-0968 | 4  | 1   | DIO-ZNR 27V 5% | 02037   |           |

Table C-8. 8131A Main Power Board Parts List (continued)

r

## Channel 1 Board

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-------------|----|-----|------------------|---------|-------------------|
| A26       | 08131-66526 | 3  | 1   | BD AY CHAN 1     | 28480   | 08131-66526       |
|           |             |    |     |                  |         |                   |
| A26A416   | 08131-66416 | 0  | 1   | BD AY TRANSDUCE  | 28480   | 08131-66416       |
| A26C100   | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C101   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C102   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
|           |             |    |     |                  |         |                   |
| A26C103   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C104   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C105   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C106   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C107   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |             |    |     |                  |         |                   |
| A26C108   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C109   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C111   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A26C113   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A26C115   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |

Table C-9. 8131A Standard Channel 1 Board Parts List

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| _   |         | HP Part # | CD | Qty | Description      | Manufr | Part #            |
|-----|---------|-----------|----|-----|------------------|--------|-------------------|
|     | A26C117 | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| - 1 | A26C119 | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|     | A26C121 | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|     | A26C125 | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |
|     | A26C126 | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|     |         |           |    |     |                  |        |                   |
|     | A26C127 | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|     | A26C129 | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|     | A26C130 | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
|     | A26C131 | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
| A   | A26C132 | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
|     |         |           |    |     |                  |        |                   |
|     | A26C133 | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| 1   | 26C134  | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
|     | 26C135  | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|     | 26C136  | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| A   | 26C139  | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
| .   |         |           | 1  |     |                  |        |                   |
| 1   | 26C140  | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
|     | 26C141  | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|     | 26C142  | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |
|     | 26C143  | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V   | 02010  | MD015C104MABH     |
| A   | .26C401 | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| .   |         |           |    |     |                  |        |                   |
|     | 26C402  | 0160-5728 | 9  |     | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
|     | 26C403  | 0160-5726 | 7  |     | CAP 0.01uF 100 V | 06121  | B37987-J1103-M034 |
| 1   | 26C404  | 0160-5741 | 6  |     | CAP 47pF 100 V   | 06121  | B37979-J1470-J034 |
|     | 26C405  | 0160-5728 | 9  |     | -                | 06121  | B37986-J1102-J034 |
| A   | 26C407  | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121  | B37986-J1102-J034 |
| Ι.  |         |           |    |     |                  |        |                   |
|     |         | 0160-5728 | 9  |     |                  |        | B37986-J1102-J034 |
|     |         | 0160-5728 | 9  |     |                  |        | B37986-J1102-J034 |
|     |         | 0160-5730 | 3  |     | •                | 1      | B37979-J1101-J034 |
|     | 1       | 0160-5730 | 3  |     | - )              |        | B37979-J1101-J034 |
| A:  | 26C413  | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121  | B37979-J1101-J034 |

| Reference |           | CD | Qty | 7 Description    | Manuf | Part #                                 |
|-----------|-----------|----|-----|------------------|-------|----------------------------------------|
| A26C414   |           | 3  | 1   | CAP 100pF 100 V  | 06121 | B37979-J1101-J034                      |
| A26C415   | -         | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034                      |
| A26C416   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C417   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C418   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034                      |
| A26C419   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C420   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034                      |
| A26C421   | 0160-5741 | 6  | 1   | CAP 47pF 100 V   | 06121 | B37979-J1470-J034                      |
| A26C422   | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034                      |
| A26C425   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034                      |
| A26C426   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C427   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11                       |
| A26C429   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034                      |
| A26C430   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034                      |
| A26C431   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C432   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C433   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| 126C434   | 0160-5740 | 5  | 1   | CAP 33pF 100 V   | 06121 | B37979-J1330-J034                      |
| A26C435   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| A26C436   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| 26C437    | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| 26C439    | 0160-3873 | 1  |     | CAP 4.7pF 200 V  |       | FD12C0G2D4R7D                          |
| 26C440    | 0160-5747 | 2  |     | CAP 0.047uF 50 V |       | B37987-J5473-M034                      |
| 1         | 0160-5747 | 2  |     | CAP 0.047uF 50 V |       | B37987-J5473-M034                      |
|           | 1         | .1 |     | CAP 4.7pF 200 V  |       | FD12C0G2D4R7D                          |
| .26C451   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                          |
| 1         | 0160-6500 | 1  | 1   | CAP 0.01uF 100 V |       |                                        |
|           | 0160-6500 |    |     | CAP 0.01uF 100 V |       | SA10IC103KAAH                          |
|           | 0160-5737 |    |     | CAP 68pF 100 V   |       | SA101C103KAAH                          |
| 1         | _         |    | ļ   |                  |       | B37979-J1680-J034<br>B37979-J1680-J034 |

| Reference |           |   | Qty |                  | Manuf | r Part #          |  |  |  |  |
|-----------|-----------|---|-----|------------------|-------|-------------------|--|--|--|--|
| A26C470   | 0160-5726 | 7 | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034 |  |  |  |  |
| A26C471   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034 |  |  |  |  |
| A26C472   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |  |  |  |  |
| A26C473   | 0160-5726 | 7 | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034 |  |  |  |  |
| A26C474   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034 |  |  |  |  |
|           |           |   |     |                  |       |                   |  |  |  |  |
| A26C475   | 0160-6500 | 7 | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |  |  |  |  |
| A26C476   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |  |  |  |  |
| A26C477   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034 |  |  |  |  |
| A26C478   | 0160-5726 | 7 | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |  |  |  |  |
| A26C479   | 0160-6623 | 5 | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH     |  |  |  |  |
| 1000100   | 0100 775  | _ |     |                  |       |                   |  |  |  |  |
| A26C480   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034 |  |  |  |  |
| A26C481   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V | 06121 | B37986-J1102-J034 |  |  |  |  |
| A26C482   | 0160-5728 | 9 | 1   | CAP 1000pF 100 V |       | B37986-J1102-J034 |  |  |  |  |
| A26C483   | 0160-6500 | 7 | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |  |  |  |  |
| A26C484   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |  |  |  |  |
| 1000      |           |   |     |                  |       |                   |  |  |  |  |
| A26C485   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |  |  |  |  |
| A26C486   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |  |  |  |  |
| A26C601   | 0160-6500 | 7 |     | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |  |  |  |  |
| A26C604   | 0160-5726 | 7 |     | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |  |  |  |  |
| A26C605   | 0160-5726 | 7 | 1   | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034 |  |  |  |  |
| 1960000   | 0100 0700 | _ |     |                  |       |                   |  |  |  |  |
| A26C606   | 0160-6500 | 7 |     | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |  |  |  |  |
| A26C607   | 0160-5726 | 7 |     |                  | 06121 | B37987-J1103-M034 |  |  |  |  |
| A26C608   | 0160-5746 | 1 |     |                  | 06121 | B37987-T5104-M11  |  |  |  |  |
|           | 0160-5726 | 7 |     |                  |       | B37987-J1103-M034 |  |  |  |  |
| A26C610   | 0160-5746 | 1 | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11  |  |  |  |  |
| A26C611   | 0160-5726 | 7 |     |                  |       |                   |  |  |  |  |
| 1         | 0160-5726 | 7 | 1   |                  |       | B37987-J1103-M034 |  |  |  |  |
| 1         | 0160-5726 | · | 1   |                  |       | B37987-J1103-M034 |  |  |  |  |
| 1         | 0160-5746 | 1 |     |                  |       | B37987-T5104-M11  |  |  |  |  |
|           | 0160-6500 | 7 |     |                  |       | SA101C103KAAH     |  |  |  |  |
| 1200010   | 0100-0900 | 1 | 1 ( | CAP 0.01uF 100 V | 02010 | SA101C103KAAH     |  |  |  |  |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #             |
|-----------|-----------|----|-----|------------------|---------|--------------------|
| A26C617   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH      |
| A26C618   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11   |
| A26CP110  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A26CP112  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
| A26CP114  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
|           |           |    |     |                  |         |                    |
| A26CP116  | 0180-0116 | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A26CP118  |           | 1  | 1   | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS |
| A26CP120  | 0180-0374 | 3  | 1   | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS |
| A26CP122  | 0180-2205 | 3  | 1   | CAP 0.33uF 35 V  | 04200   | 150D334X9035A2-DYS |
| A26CP123  |           | 4  | 1   | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
|           |           |    |     |                  |         |                    |
| A26CP128  | 0180-4129 | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A26CP438  |           | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A26CP439  | 0180-4129 | 4  | 1   | CAP luF 35 V     | 04200   | 173D105X9035V      |
| A26CR100  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR108  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
|           |           |    |     |                  |         |                    |
| A26CR109  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR111  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR112  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR122  | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |                    |
| A26CR123  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
|           |           |    |     |                  |         |                    |
| A26CR124  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR125  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062   | 50825511           |
| A26CR126  | 1901-0535 | 9  | 1   | DIO- SCHOTTKY SM | 02062 - | 50825511           |
| A26CR414  | 1901-0033 | 2  | 1   | DIO-GEN PRP      | 03406   |                    |
| A26CR415  | 1901-0732 | 8  | 1   | DIO-PWR RECT     | 02037   | SR3010-4RL         |
|           |           |    |     |                  |         |                    |
| A26CR416  | 1901-0732 | 8  | 1   | DIO-PWR RECT     | 02037   | SR3010-4RL         |
| A26CR417  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A26CR418  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A26CR419  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                    |
| A26CR420  | 1901-1098 | 1  | 1   | DIO-1N4150       | 00746   |                    |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

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| Reference | ce HP Part : | #   CI | D Qty | Description      |         |                         |
|-----------|--------------|--------|-------|------------------|---------|-------------------------|
|           | 01 1901-0535 |        |       | DIO- SCHOTTKY SM | Manuf'ı |                         |
| A26CR6    |              | -      |       | DIO-1N4150       |         | 50825511                |
| A26J1     | 1251-8324    |        | -     | CONN-POST-TP-HDI | 00746   |                         |
| A26J101   | 1251-1556    | 7      | 4     | CONN-SGL CONT    | 1       | G06M96P4BEBL-004-715    |
| A26J102   | 1251-1556    | 7      | 4     | CONN-SGL CONT    | 01075   | 006-4844-00-0-990       |
|           |              |        |       | CONN-SGL CONT    | 01075   | 006-4844-00-0-990       |
| A26J103   | 1251-4682    | 6      | 1     | CONN-POST-TP-HDR | 03394   | 1102-1-103-02           |
| A26J403   | 1252-2649    | 3      | 1     | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A26J404   | 1252-2649    | 3      | 1     | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W |
| A26J405   | 1252-2650    | 6      | 1     | CONN ELAST 30LG  | 09922   | NE 0.2P 30.0L 3.0H 3.6W |
| A26J406   | 1252-2651    | 7      | 1     | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W  |
|           |              |        |       |                  | 00022   | 11D 0.21 0.0D 0.0H 0.0W |
| A26J407   | 1252-2651    | 7      | 1     | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W  |
| A26J408   | 1252-2651    | 7      | 1     | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W  |
| A26J423   | 1252-2648    | 2      | 1     | CONN ELAST 30LG  | 09922   | NE 0.4P 30.0L 3.5H 4.2W |
| A26J424   | 1252-2648    | 2      | 1     | CONN ELAST 30LG  | 09922   | NE 0.4P 30.0L 3.5H 4.2W |
| A26J425   | 1252-2647    | 1      | 1     | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
|           |              |        |       |                  |         |                         |
| A26J426   | 1252-2647    | 1      | 1     | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W |
| A26K403   | 0955-0452    | 1      | 1     | CONN-RF SMB      |         | S-4845                  |
| A26K404   | 0955-0452    | 1      | 1     | CONN-RF SMB      | 1 1     | S-4845                  |
| A26L100   | 9100-1788    | 6      | 1     | CORE-FERRITE     |         | VK200 20/4B             |
| A26L101   | 9100-1788    | 6      | 1     | CORE-FERRITE     |         | VK200 20/4B             |
|           |              |        |       |                  |         |                         |
| A26L102   | 9100-1788    | 6      | 1     | CORE-FERRITE     | 02995   | VK200 20/4B             |
| A26L103   | 9100-1788    | 6      | 1     | CORE-FERRITE     | 1       | VK200 20/4B             |
| A26L104   | 9100-1788    | 6      | 1     | CORE-FERRITE     |         | VK200 20/4B             |
| A26L105   | 9100-1788    | 6      | 1     | CORE-FERRITE     |         | VK200 20/4B             |
| A26L401   | 9100-2257    | 6      | 1 ]]  |                  |         | 10M820K                 |
|           |              |        |       |                  |         | 1011102010              |
| A26L402   | 9100-2256    | 5      | 1 1   | L 560NH +-10%    | 03273   | 0M560K                  |
| A26L403   | 9100-2257    | 6      |       |                  |         | 0M820K -                |
| A26L404   | 9100-2256    | 5      |       |                  |         | 0M560K                  |
| A26MP1    | 08131-00601  | 7      | 1     |                  | 1       | 8131-00601              |
| A26MP2    | 0403-0285    | 9      | 2 E   |                  |         | J-5018 GRAY             |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

 Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #          |
|-----------|-------------|----|-----|------------------|---------|-----------------|
| A26MP16   | 3050-0152   | 3  | 3   | WSHR-SHLDR       | 04604   | 1462            |
| A26MP20   | 0515-0659   | 8  | 4   | SCR-MACHINE      | 05610   |                 |
| A26MP21   | 3050-0960   | 1  | 2   | WASHER-SHLDR 3.0 | 05947   | V5359           |
| A26MP22   | 3050-0098   | 6  | 2   | WSHR-FL MTLC     | 04939   | AN960 C2        |
| A26MP141  | 0340-1212   | 0  | 1   | INSULATOR        | 28480   | 0340-1212       |
| A26MP142  | 08131-21101 | 6  | 1   | HEATSINK TUB     | 28480   | 08131-21101     |
|           |             |    |     |                  |         |                 |
| A26MP143  | 08131-40503 | 2  | 1   | FRAME PLASTIC    | 28480   | 08131-40503     |
| A26MP144  | 08131-04104 | 3  | 1   | COVER            | 28480   | 08131-04104     |
| A26MP145  | 08131-05401 | 5  | 1   | DUST HYBRD COV   | 28480   | 08131-05401     |
| A26MP403  | 1205-0295   | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
| A26MP404  | 1205-0295   | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
|           |             |    |     |                  |         |                 |
| A26MP405  |             | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
| A26MP413  | 0340-1074   | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A26MP414  | 0340-1074   | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A26MP415  | 0340-1074   | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A26MP603  | 1205-0295   | 2  | 1   | HEAT SINK        | 02608   | 6107B-14        |
|           |             |    |     |                  |         |                 |
| A26MP609  | 1           | 0  | 1   | HEAT SINK        | 02608   | 2226B           |
| A26MP613  |             | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A26MP618  |             | 2  | 1   | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| A26Q100   | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037   | 2N3904          |
| A26Q101   | 1853-0314   | 9  | 1   | XSTR PNP 2N2905A | 02037   | 2N2905A         |
|           |             |    |     |                  |         |                 |
| A26Q102   | 1854-0637   | 1  | 1   | XSTR NPN 2N2219A | 02037   | 2N2219A         |
| A26Q401   | 1854-0583   | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18         |
|           | 1854-0828   | 2  | 1   | XSTR NPN SI      | 00039   | NTD560          |
| A26Q404   | 1853-0468   | 4  | 1   | XSTR PNP SI DARL | 02037   | TIP-127         |
| A26Q405   | 1855-0548   | 5  | 1   | MOSFET N-CHAN    | 02037   | BUZ71A          |
|           |             |    |     |                  |         |                 |
| A26Q406   | 1855-0751   | 2. | 1   | MOSFET N-CHAN    | 02883   | VN0808M         |
| A26Q411   | 1854-0583   | 6  | 1   | XSTR NPN SI      | 02037   | MPS-A18         |
| A26Q412   | 1855-0751   | 2  | 1   | MOSFET N-CHAN    | 02883   | VN0808M         |
| A26Q413   | 1855-0751   | 2  | 1   | MOSFET N-CHAN    | 02883   | VN0808M         |
| A26Q415   | 1855-0689   | 5  | 1   | J-FET CHIP P-CHA | 02037   | 2N5461          |

|     | Reference | HP Part #                             | CD | Qty | Description       | Manuf | Dort -#                          |
|-----|-----------|---------------------------------------|----|-----|-------------------|-------|----------------------------------|
|     | A26Q416   | · · · · · · · · · · · · · · · · · · · | 0  | 1   | XSTR PNP SI       | 02037 | Part #<br>2N3906(SEL)            |
|     | A26Q430   | 1853-0563                             | 0  |     | XSTR PNP SI       | 02037 |                                  |
|     | A26Q431   | 1853-0563                             | 0  |     | XSTR PNP SI       | 1.    | 2N3906(SEL)                      |
|     | A26Q603   | 1855-0548                             | 5  | 1   |                   | 02037 | 2N3906(SEL)                      |
|     | A26Q605   | 1854-1028                             | 6  | 1   | MOSFET N-CHAN     | 02037 | BUZ71A                           |
|     | A20Q000   | 1054-1028                             | 0  | 1   | XSTR NPN SI       | 02037 | 2N3904                           |
|     | A26Q606   | 1855-0751                             | 2  | 1   | MOSFET N-CHAN     | 02883 | VNOODA                           |
|     | A26Q608   | 1853-0509                             | 4  | 1   | XSTR PNP          | 02883 | VN0808M                          |
| - 1 | A26Q609   | 1853-0314                             | 9  | 1   | XSTR PNP 2N2905A  |       | TIP42A                           |
|     | A26R100   | 0757-0442                             | 9  | 1   | RES 10K 1% .125W  |       | 2N2905A                          |
| - 1 | A26R101   | 0757-0465                             | 6  | 1   | RES 100K 1% .125W | 00746 | CRB14 OR CRB25                   |
|     | 112010101 | 0101-0400                             |    | T   | RES 100K 1% .125  | 00746 | CRB14 OR CRB25                   |
|     | A26R102   | 0698-8827                             | 4  | 1   | RES 1M 1% .125W   | 00746 | CRB14 OR CRB25                   |
|     | A26R105   | 0698-3452                             | 1  | 1   | RES 147K 1% .125  | 00740 | CRB14 OR CRB25<br>CRB14 OR CRB25 |
|     | A26R106   | 0698-3132                             | 4  | 1   | RES 261 1% .125W  | 00746 | CRB14 OR CRB25                   |
|     | A26R107   | 0698-3439                             | 4  | 1   | RES 178 1% .125W  | 00740 | CRB14 OR CRB25                   |
|     | A26R108   | 0698-6360                             | 6  | 1   | RES 10K .1% .125  | 00746 | CRB14 OR CRB25                   |
|     |           |                                       |    |     |                   | 00140 | CILDIA OR CRD23                  |
|     | A26R109   | 0698-6360                             | 6  | 1   | RES 10K .1% .125  | 00746 | CRB14 OR CRB25                   |
|     | A26R110   | 0698-6630                             | 3  | 1   | RES 20K .1% .125  | 00746 | CRB14 OR CRB25                   |
|     | A26R111   | 0698-6360                             | 6  | 1   | RES 10K .1% .125  | 00746 | CRB14 OR CRB25                   |
| 1   | A26R112   | 0757-0442                             | 9  | 1   | RES 10K 1% .125W  | 00746 | CRB14 OR CRB25                   |
| 4   | A26R113   | 0698-3279                             | 0  | 1   | RES 4.99K 1% .12  | 00746 | CRB14 OR CRB25                   |
|     |           |                                       |    |     |                   |       |                                  |
| I   | 26R114    | 0757-0439                             | 4  | 1   | RES 6.81K 1% .12  | 00746 | CRB14 OR CRB25                   |
| 1   | 1         | 0757-0280                             | 3  | 1   | RES 1K 1% .125W   |       | CRB14 OR CRB25                   |
| A   | 26R116    | 0757-0280                             | 3  | 1   | RES 1K 1% .125W   | 1     | CRB14 OR CRB25                   |
| A   | 26R117    | 0757-0280                             | 3  | 1   | RES 1K 1% .125W   |       | CRB14 OR CRB25                   |
| A   | 26R118    | 0757-0280                             | 3  | 1   | RES 1K 1% .125W   |       | CRB14 OR CRB25                   |
|     |           |                                       |    |     |                   |       |                                  |
| 1   |           | 0757-0442                             | 9  |     |                   | 00746 | CRB14 OR CRB25                   |
| 1   | 1         | 0757-0274                             | 5  | 1   | RES 1.21K 1% .12  |       | CRB14 OR CRB25                   |
| 1   |           | 0757-0438                             | 3  | 1   | RES 5.11K 1% .12  |       | CRB14 OR CRB25                   |
|     |           | 0757-0278                             | 9  |     |                   | 00746 | CRB14 OR CRB25                   |
| A   | 26R131    | 0698-3153                             | 9  | 1 ] | RES 3.83K 1% .12  | 00746 | CRB14 OR CRB25                   |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

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| Reference | HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-----------|----|-----|------------------|--------|----------------|
| A26R132   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R135   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R136   | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R137   | 0757-0278 | 9  | 1   | RES 1.78K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R140   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R141   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A26R142   | 0698-3279 | 0  | 1   | RES 4.99K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R144   | 0698-3161 | 9  | 1   | RES 38.3K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R145   | 0757-0199 | 3  | 1   | RES 21.5K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R146   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R147   | 0698-3136 | 8  | 1   | RES 17.8K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R148   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R149   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R150   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R157   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R200   | 1250-2206 | 4  | 1   | TERM 50 OHM      | 28480  | 1250-2206      |
| A26R300   | 1250-2206 | 4  | 1   | TERM 50 OHM      | 28480  | 1250-2206      |
| A26R400   | 8159-0005 | 0  | 1   | RES-ZERO OHMS    | 01339  | L-2007-1       |
| A26R401   | 0698-3242 | 7  | 1   | RES 357 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R402   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| A26R403   | 0698-3558 | 8  |     | RES 4.02K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R404   | 8159-0005 | 0  | - F | RES-ZERO OHMS    | 01339  | L-2007-1       |
| A26R405   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R406   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R407   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |           |    |     |                  |        |                |
| 1         | 0757-0416 | 7  | 1   |                  | 1      | CRB14 OR CRB25 |
|           | 0698-0084 | 9  | 1   |                  | 00746  | CRB14 OR CRB25 |
|           | 0757-0449 | 6  |     |                  | 00746  | CRB14 OR CRB25 |
|           | 0757-0442 | 9  |     |                  | 00746  | CRB14 OR CRB25 |
| A26R413   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| Reference | e HP Part # | CD  | Qty | Description      | Manufr | Dect //        |
|-----------|-------------|-----|-----|------------------|--------|----------------|
| A26R414   |             |     | +   | *****            |        | /              |
| A26R414   |             | 1 - | 1   | RES 3.16K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R415   |             | 3   | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| 1         | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R417   | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R418   | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |             |     |     |                  |        |                |
| A26R419   | 0757-0438   | 3   | 1   | RES 5.11K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R420   | 0757-0442   | 9   | 1   | RES 10K 1% .125W |        | CRB14 OR CRB25 |
| A26R421   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R422   | 0757-0416   | 7   | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R423   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |             |     |     |                  |        |                |
| A26R424   | 0698-4477   | 2   | 1   | RES 10.5K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R425   | 0698-4445   | 4   | 1   | RES 5.76K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R426   | 0698-3153   | 9   | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R427   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R428   | 0698-3430   | 5   | 1   | RES 21.5 1% .125 | 00746  | CRB14 OR CRB25 |
|           |             |     |     |                  |        |                |
| A26R429   | 0757-0284   | 7   | 1   | RES 150 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R430   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R431   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R432   | 0698-3446   | 3   | 1   | RES 383 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R434   | 0757-0999   | 1   | 1   | RES 47.5 1% .5W  | 01074  | H2             |
|           |             |     |     |                  |        |                |
| A26R435   | 0757-0401   | 0   | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R436   | 0698-0085   | 0   | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R437   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R438   | 0757-0401   | 0   | 1   | RES 100 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R439   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |             |     |     |                  |        |                |
| A26R440   | 0757-0444   | 1   | 1   |                  | 00746  | CRB14 OR CRB25 |
| A26R441   | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A26R442   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R443   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R444   | 0757-0421   | 4   | 1   | RES 825 1% .125W | 00746  | CRB14 OR CRB25 |

Reference | HP Part # CD Qty Description Manuf'r Part # A26R445 0698-3152 8 1 RES 3.48K 1% .12 00746 CRB14 OR CRB25 A26R446 0757-0290 5 1 RES 6.19K 1% .12 00746 CRB14 OR CRB25 A26R447 0757-0444 1 1 RES 12.1K 1% .12 00746 CRB14 OR CRB25 A26R448 0698-3156 2 1 RES 14.7K 1% .12 00746 CRB14 OR CRB25 A26R449 9 0757-0442 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R450 0757-0440 7 1 RES 7.5K 1% .125 00746 CRB14 OR CRB25 A26R451 0698-4469 2 1 RES 1.15K 1% .12 00746 CRB14 OR CRB25 0757-0428 A26R452 1 1 RES 1.62K 1% .12 00746 CRB14 OR CRB25 A26R453 0757-0290 5 1 RES 6.19K 1% .12 00746 CRB14 OR CRB25 A26R454 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R456 0698-3444 1 1 RES 316 1% .125W 00746 CRB14 OR CRB25 A26R457 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R458 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R459 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R460 9 0757-0442 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R464 0757-0439 4 RES 6.81K 1% .12 1 00746 CRB14 OR CRB25 A26R465 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A26R466 0698-0085 0 1 RES 2.61K 1% .12 00746 CRB14 OR CRB25 A26R467 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R468 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R469 0757-0416 7 1 RES 511 1% .125W 00746 CRB14 OR CRB25 A26R470 0698-4448 7 1 RES 294 1% .125W 00746 CRB14 OR CRB25 A26R471 0698-3438 3 RES 147 1% .125W 1 00746 CRB14 OR CRB25 A26R472 0698-4037 0 1 RES 46.4 1% .125 00746 CRB14 OR CRB25 A26R473 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R474 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25 A26R475 0757-1094 9 1 RES 1.47K 1% .12 00746 CRB14 OR CRB25 A26R476 0698-3439 4 1 RES 178 1% .125W 00746 CRB14 OR CRB25 A26R477 0698-3444 1 RES 316 1% .125W 1 00746 CRB14 OR CRB25 A26R478 0698-3444 1 1 RES 316 1% .125W 00746 CRB14 OR CRB25

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| D C       |           |   |     |                  |         |                |  |  |  |
|-----------|-----------|---|-----|------------------|---------|----------------|--|--|--|
| Reference |           |   | Qty |                  | Manuf'r | Part #         |  |  |  |
| A26R479   |           | 9 | 1   | RES 10K 1% .125W | 1       | CRB14 OR CRB25 |  |  |  |
| A26R480   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R484   | 0757-0439 | 4 | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R486   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R487   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |   |     |                  |         |                |  |  |  |
| A26R488   | 0757-0280 | 3 | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R489   | 0757-0280 | 3 | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R490   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 1       | CRB14 OR CRB25 |  |  |  |
| A26R491   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R492   | 0757-0466 | 7 | 1   | RES 110K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |   |     |                  |         |                |  |  |  |
| A26R493   | 0698-3515 | 7 | 1   | RES 5.9K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R494   | 0757-0416 | 7 | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R498   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R499   | 0757-0442 | 9 | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25 |  |  |  |
| A26R500   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |   |     |                  |         |                |  |  |  |
| A26R501   | 0757-0441 | 8 | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R504   | 8159-0005 | 0 | 1   | RES-ZERO OHMS    | 01339   | L-2007-1       |  |  |  |
| A26R508   | 0757-0442 | 9 | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R509   | 0757-0441 | 8 | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R510   | 0757-0438 | 3 | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |   |     |                  |         |                |  |  |  |
| A26R511   | 0683-2265 | 1 |     | RES 22M 5% .25W  | 01607   | CB2265         |  |  |  |
| A26R512   | 0698-8958 | 2 |     | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R513   | 0683-2265 | 1 |     | RES 22M 5% .25W  | 01607   | CB2265         |  |  |  |
| A26R514   | 0698-8958 | 2 | 1   | RES 511K 1% .125 | 00746   | CRB14 OR CRB25 |  |  |  |
| A26R519   | 0757-0280 | 3 | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |  |  |  |
|           |           |   |     |                  |         |                |  |  |  |
| A26R520   | 0757-0442 | 9 |     |                  | 00746   | CRB14 OR CRB25 |  |  |  |
| 1         | 8159-0005 | 0 |     |                  | 01339   | L-2007-1       |  |  |  |
|           | 0698-3242 | 7 |     |                  | 00746   | CRB14 OR CRB25 |  |  |  |
|           | 0757-0416 | 7 |     |                  |         | CRB14 OR CRB25 |  |  |  |
| A26R525   | 0757-0283 | 6 | 1   | RES 2K 1% .125W  |         | CRB14 OR CRB25 |  |  |  |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A26R526   | 0698-3488 | 3  | 1   | RES 442 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R527   | 0698-3488 | 3  | 1   | RES 442 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R530   | 0698-3558 | 8  | 1   | RES 4.02K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R531   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R532   | 0698-0085 | 0  | 1   | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A26R540   | 0757-0407 | 6  | 1   | RES 200 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R541   | 0757-0407 | 6  | 1   | RES 200 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R550   | 0757-0416 | 7  | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R551   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R552   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A26R553   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R554   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R560   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R561   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R562   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A26R563   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R564   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R565   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R566   | 0757-0439 | 4  | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R567   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A26R568   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A26R569   | 0757-0444 | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R570   | 0698-4123 | 5  | 1   | RES 499 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R571   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R572   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1960579   | 0600 4100 | _  | ,   | DEC 400 17 10575 | 00740   |                |
| A26R573   | 0698-4123 | 5  | 1   | 1                | 00746   | CRB14 OR CRB25 |
| A26R574   | 0698-4123 | 5  |     |                  | 1       | CRB14 OR CRB25 |
| A26R575   | 0757-0280 | 3  |     |                  |         | CRB14 OR CRB25 |
| A26R576   | 0757-0123 | 3  |     |                  | (       | CRB14 OR CRB25 |
| A26R577   | 0757-0123 | 3  | 1   | RES 34.8K 1% .12 | 00746   | CRB14 OR CRB25 |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

|     | Referenc | e HP Part # | CD | Qty | Deserietier      | 116 - |                  |  |  |
|-----|----------|-------------|----|-----|------------------|-------|------------------|--|--|
|     | A26R588  |             |    | +   |                  | Manuf | <i></i>          |  |  |
|     | A26R600  |             | 9  |     | RES 39.2 1% .5W  | 01074 | H2               |  |  |
|     | A26R600  |             | 0  | 1   | RES 51.1 1% .05W |       | CRB20            |  |  |
|     |          |             | 9  | 1   | RES 10K 1% .125W |       | CRB14 OR CRB25   |  |  |
|     | A26R607  | 1           | 9  | 1   | RES 10K 1% .125W | · ·   | CRB14 OR CRB25   |  |  |
|     | A26R608  | 0757-0449   | 6  | 1   | RES 20K 1% .125W |       | CRB14 OR CRB25   |  |  |
|     | A26R609  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
|     | 10000000 |             |    |     |                  |       |                  |  |  |
|     | A26R610  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R612  |             | 3  | 1   | RES 21.5K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R613  | 0698-4425   | 0  | 1   | RES 1.54K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R614  | 0698-6630   | 3  | 1   | RES 20K .1% .125 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R615  | 0698-6624   | 5  | 1   | RES 2K .1% .125W | 00746 | CRB14 OR CRB25   |  |  |
|     |          |             |    |     |                  |       |                  |  |  |
| - 1 | A26R617  | 0698-4437   | 4  | 1   | RES 2.94K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R618  | 0757-0200   | 7  | 1   | RES 5.62K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R621  | 0757-0444   | 1  | 1   | RES 12.1K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R622  | 0757-0283   | 6  | 1   | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25   |  |  |
|     | A26R624  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
|     |          |             |    |     |                  |       |                  |  |  |
|     | A26R625  | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25   |  |  |
| 1.  | A26R626  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
| -   | A26R628  | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
| 1   | A26R629  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
| 4   | A26R630  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
|     |          |             |    |     |                  |       |                  |  |  |
| 1   | A26R631  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746 | CRB14 OR CRB25   |  |  |
| ŀ   | A26R632  | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 4     | CRB14 OR CRB25   |  |  |
| 4   | A26R633  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | I     | CRB14 OR CRB25   |  |  |
| A   | 26R635   | 0698-3444   | 1  | 1   | RES 316 1% .125W | 1     | CRB14 OR CRB25   |  |  |
| A   | 26R636   | 0757-0442   | 9  |     |                  | 1     | CRB14 OR CRB25   |  |  |
|     |          |             |    |     |                  |       |                  |  |  |
| A   | 26R639   | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 00746 | CRB14 OR CRB25   |  |  |
| A   | 26R640   | 0757-0442   | 9  |     |                  |       | CRB14 OR CRB25   |  |  |
| A   | .26R641  | 0698-3444   | 1  | 1   |                  |       | CRB14 OR CRB25   |  |  |
| A   | 26R642   | 0757-0442   | 9  |     |                  |       | CRB14 OR CRB25   |  |  |
| A   | 26R643   | 0757-0283   |    |     |                  |       | CRB14 OR CRB25   |  |  |
|     |          |             |    |     |                  |       | OTEDIA OIL OUD20 |  |  |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

|    | Reference | HP Part # | CD | Qty | Description      | Manuf'r | Dert II        |
|----|-----------|-----------|----|-----|------------------|---------|----------------|
|    | A26R644   |           | 7  | 1   |                  |         |                |
|    | A26R645   | 1         | 1  |     | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | Ì         | 0757-0200 | 7  |     | RES 5.62K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | A26R646   | 0698-4431 | 8  | 1   | RES 2.05K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | A26R647   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | A26R648   | 0698-3496 | 3  | 1   | RES 3.57K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | 10000010  |           |    |     |                  |         |                |
|    | A26R649   | 0757-0424 | 7  | 1   | RES 1.1K 1% .125 | 00746   | CRB14 OR CRB25 |
|    | A26R650   | 0757-0438 | 3  | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|    | A26R651   | 0757-0999 | 1  | 1   | RES 47.5 1% .5W  | 01074   | H2             |
|    | A26R652   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|    | A26R653   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|    | A26R999   | 0699-1503 | 1  | 1   | RES .05 100% TKF | 00746   | MCR18EZHJW00E0 |
|    |           |           |    |     |                  |         |                |
| -t |           | 1810-0316 | 1  | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K     |
| ł  | A26RV103  | 2100-3352 | 7  | 1   | RES-TRMR 1K 10%  | 03744   | 3386X-Y46-102  |
| 1  | A26RV104  | 2100-3349 | 2  | 1   | RES-TRMR 100 10% | 03744   | 3386X-Y46-101  |
|    | A26RV123  | 2100-3207 | 1  | 1   | RES-TRMR 5K 10%  | 03744   | 3386X-Y46-502  |
|    | A26RV404  | 2100-0554 | 5  | 1   | RES-TRMR 500 10% | 03744   | 3386P-Y46-501  |
|    |           |           |    | [   |                  |         |                |
|    | A26RV435  | 2100-3207 | 1  | 1   | RES-TRMR 5K 10%  | 03744   | 3386X-Y46-502  |
|    | A26RV438  | 2100-3274 | 2  | 1   | RES-TRMR 10K 10% | 03744   | 3386X-Y46-103  |
|    | A26RV455  | 2100-0567 | 0  | 1   | RES-TRMR 2K 10%  | 03744   | 3386P-Y46-202  |
|    | A26RV461  | 2100-3274 | 2  | 1   | RES-TRMR 10K 10% | 03744   | 3386X-Y46-103  |
|    | A26RV500  | 2100-3383 | 4  | 1   | RES-TRMR 50 10%  | 03744   | 3386P-Y46-500  |
|    |           |           |    |     |                  |         |                |
| .  | A26RV501  | 2100-3383 | 4  | 1   | RES-TRMR 50 10%  | 03744   | 3386P-Y46-500  |
| .  | A26RV502  | 2100-3273 | 1  | 1   | RES-TRMR 2K 10%  | 1       | 3386X-Y46-202  |
|    | A26RV503  | 2100-0567 | 0  | 1   | RES-TRMR 2K 10%  |         | 3386P-Y46-202  |
| 4  | A26RV504  | 2100-3210 | 6  | 1   | RES-TRMR 10K 10% |         | 3386P-Y46-103  |
| 1  | A26TP101  | 0360-2264 | 6  | 1   | TERMTEST POINT   |         | 1095D          |
| I  |           |           |    |     |                  |         | · _            |
| ł  | A26TP102  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358   | 1095D          |
| ł  | A26TP103  | 0360-2264 | 6  | 1 / | TERMTEST POINT   |         | 1095D          |
| ł  | A26TP104  | 0360-2264 | 6  | 1   | TERMTEST POINT   |         | 1095D          |
| A  | 26TP105   | 0360-2264 | 6  | 1   |                  |         | 1095D          |
| Ā  | 26TP106   | 0360-2264 | 6  | 1   |                  | 1       | 1095D          |

|        | Reference | HP Part # | CD | Qty | Description      | Manuf | Part #      |
|--------|-----------|-----------|----|-----|------------------|-------|-------------|
| $\int$ | A26TP107  |           | 6  | 1   | TERMTEST POINT   | 10358 | 1095D       |
| 1      | A26TP403  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358 | 1035D       |
| A      | A26TP404  | 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358 | 1095D       |
| A      | A26U100   | 1820-3665 | 0  | 1   | IC-MM74HCT245N   | 01698 | SN74HCT245N |
| A      | A26U101   | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698 | SN74HCT138N |
|        |           |           |    |     |                  |       |             |
| A      | 26U102    | 1820-3081 | 4  | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
| A      | 26U103    | 1820-3298 | 5  | 1   | IC-MM74HC32N     | 02037 | MC74HC32N   |
| A      | 26U104    | 1826-0861 | 4  | 1   | D/A 10-BIT       | 03285 | AD7533LN    |
| A      | 26U105    | 1826-0861 | 4  | 1   | D/A 10-BIT       | 03285 | AD7533LN    |
| A      | .26U106   | 1820-3399 | 7  | 1   | IC-MC74HC273N    | 01698 | SN74HC273N  |
|        |           |           |    |     |                  |       |             |
| A      | .26U107   | 1826-0877 | 2  | 1   | A/D 8-BIT        | 03285 | AD7574KN    |
| A      | 26U108    | 1820-1315 | 3  | 1   | ANLG MUXR MC1405 | 02037 | MC14051BCP  |
| A      | 26U109    | 1820-0493 | 6  | 1   | IC 307           | 03406 | LM307N      |
| A      | 26U110    | 1820-3847 | 0  | 1   | IC-MM74HCT138N   | 01698 | SN74HCT138N |
| A      | 26U111    | 1820-3082 | 5  | 1   | IC-MC74HC374N    | 01698 | SN74HC374N  |
|        |           |           |    |     |                  |       |             |
| A      | 26U112    | 1826-0285 | 6  | 1   | IC MC79L05ACP    | 02037 | MC79L05ACP  |
| A      | 26U113    | 1826-0315 | 3  | 1   | IC 348           | 03406 | LM348N      |
| A      | 26U114    | 1826-0161 | 7  | 1   | IC 324           | 02037 | LM324N      |
| A      | 26U115    | 1820-3097 | 2  | 1   | IC-MM74HC08N     | 02037 | MC74HC08N   |
| A:     | 26U117    | 1820-3373 | 7  | 1   | IC-MM74HC221AN   | 03406 | MM74HC221AN |
|        |           |           | Í  |     |                  |       |             |
| A:     | 26U118    | 1820-0493 | 6  | 1   | IC 307           | 03406 | LM307N      |
| A2     | 26U120    | 1820-2924 | 2  | 1   | IC-MC74HC02N     |       | SN74HC02N   |
| A2     | 26U121    | 1820-3081 | 4  | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
|        | 1         | 1820-3082 | 5  | 1   | IC-MC74HC374N    |       | SN74HC374N  |
| A2     | 26U123    | 1820-3081 | 4  | 1   | IC-MC74HC74N     |       | SN74HC74N   |
|        |           |           |    |     |                  |       |             |
|        | ł         | 1820-3081 | 4  | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
|        |           | 1820-3081 |    | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
|        | 1         | 1NB7-8179 | 7  | 1   | HYRIDS           |       | 1NB7-8179   |
|        | 1         | 1826-0524 | -  | 1   | IC 324A          |       | LM324AN     |
| A2     | 6U403     | 1826-0207 | 2  | 1   | IC 318           | 01698 | LM318P      |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD  | Qty | Description      | Manuf'r | Part #       |
|-----------|-----------|-----|-----|------------------|---------|--------------|
| A26U404   | 1826-0138 | 8   | 1   | IC 339           | 01698   | LM339N       |
| A26U405   | 1826-1460 | 1   | 1   | IC 201           | 03406   | LM201AN      |
| A26U406   | 1820-0493 | 6   | 1   | IC 307           | 03406   | LM307N       |
| A26U407   | 1826-0161 | 7   | 1   | IC 324           | 02037   | LM324N       |
| A26U408   | 1826-0207 | 2   | 1   | IC 318           | 01698   | LM318P       |
|           |           |     |     |                  |         |              |
| A26U409   | 1826-0161 | 7   | 1   | IC 324           | 02037   | LM324N       |
| A26U410   | 1858-0058 | 8   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3906      |
| A26U411   | 1858-0087 | 3   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
| A26U412   | 1858-0087 | 3   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
| A26U413   | 1858-0087 | 3   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
|           |           |     |     |                  |         |              |
| A26U415   | 1826-0600 | 9   | 1   | IC 074A          | 01698   | TL074ACN     |
| A26U416   | 1858-0087 | 3   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
| A26U417   | 1826-0161 | 7   | 1   | IC 324           | 02037   | LM324N       |
| A26U418   | 1858-0087 | 3   | 1   | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
| A26U601   | 1826-0315 | 3   | 1   | IC 348           | 03406   | LM348N       |
|           |           |     |     |                  |         |              |
| A26U602   | 1826-0315 | 3   | 1   | IC 348           | 03406   | LM348N       |
| A26U603   | 1826-0161 | 7   | 1   | IC 324           | 02037   | LM324N       |
| A26VR101  | 1902-0956 | 0   | 1   | DIO-ZNR 8.2V 5%  | 02037   |              |
| A26VR403  | 1902-0963 | 9   | 1   | DIO-ZNR 16V 5%   | 02037   | SZ30035-21RL |
| A26VR404  | 1902-0956 | 0   | 1   | DIO-ZNR 8.2V 5%  | 02037   |              |
|           |           |     |     |                  |         |              |
| A26VR405  | 1902-0956 | 0   | 1   | DIO-ZNR 8.2V 5%  | 02037   |              |
| A26VR406  | 1902-0949 | 1   | 1   | DIO-ZNR 4.3V 5%  | 02037   |              |
| A26VR407  | 1902-0945 | 7   | 1   | DIO-ZNR 3V 5%    | 02037   | SZ0035-3RL   |
| A26VR409  | 1902-0951 | 5   | 1   | DIO-ZNR 5.1V 5%  | 02037   | SZ30035-9RL  |
| A26VR412  | 1902-0950 | • 4 | 1   | DIO-ZNR 4.7V 5%  | 02037   |              |
|           |           |     |     |                  |         |              |
| A26VR415  | 1902-0950 | 4   | 1   | DIO-ZNR 4.7V 5%  | 02037   |              |
| A26VR417  | 1902-0963 | 9   | 1   | DIO-ZNR 16V 5%   | 02037   | SZ30035-21RL |
| A26VR419  | 1902-0953 | 7   | 1   | DIO-ZNR 6.2V 5%  | 02037   | SZ30035-11RL |
| A26VR495  | 1902-0951 | 5   | 1   | DIO-ZNR 5.1V 5%  | 02037   | SZ30035-9RL  |
| A26VR602  | 1902-0953 | 7   | 1   | DIO-ZNR 6.2V 5%  | 02037   | SZ30035-11RL |

| Reference | HP Part #   | CD | Qty | Description    | Manuf'r | Part #      |
|-----------|-------------|----|-----|----------------|---------|-------------|
| A26VR603  | 1902-0958   | 2  | 1   | DIO-ZNR 10V 5% | 02037   |             |
| A26VR604  | 1902-0945   | 7  | 1   | DIO-ZNR 3V 5%  | 02037   | SZ0035-3RL  |
| A26W103   | 1258-0141   | 8  | 1   | JUMPER-REM     | 01380   | 530153-2    |
| A26W201   | 08131-61681 | 1  | 1   | CBL AY TRAN 1  | 28480   | 08131-61681 |
| A26W403   | 08131-61607 | 1  | 1   | CBL SEMI RIGID | 28480   | 08131-61607 |
| A26W404   | 08131-61607 | 1  |     | CBL SEMI RIGID | 28480   | 08131-61607 |

Table C-9. 8131A Standard Channel 1 Board Parts List (continued)

# Dual-channel Instrument Parts Lists

#### Master List Option 020

| Reference | HP Part #   | CD | Qty | Description      | Manufr | Part #      |
|-----------|-------------|----|-----|------------------|--------|-------------|
| A0 A1     | 08131-66521 | 8  | 1   | BD AY KEY OPT    | 28480  | 08131-66521 |
| A0 A5     | 08131-66525 | 2  | 1   | BD AY TIMING OPT | 28480  | 08131-66525 |
| A0 A26    | 08131-66527 | 4  | 1   | BD AY CHAN 1     | 28480  | 08131-66527 |
| A0 A28    | 08131-66528 | 5  | 1   | BD AY CHAN 2     | 28480  | 08131-66528 |
| A0 MP12   | 08131-21701 | 2  | 2   | SMA-BUSHING      | 28480  | 08131-21701 |
|           |             |    |     |                  |        |             |
| A0 MP13   | 08131-40201 | 7  | 1   | FRONT PANEL OPT  | 28480  | 08131-40201 |
| A0 W12    | 08131-61603 | 7  | 1   | CBL AY OUTPUT    | 28480  | 08131-61603 |
| A0 W13    | 08131-61603 | 7  | 1   | CBL AY OUTPUT    | 28480  | 08131-61603 |

Table C-10. 8131A Option 020 Instrument Parts List

## Keyboard Option 020

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| Refere  | nce HP Part # | CD | Qty | Description     | Manufr | Part #             |
|---------|---------------|----|-----|-----------------|--------|--------------------|
| A1      | 08131-6652    | 8  | 1   | BD AY KEY OPT   | 28480  | 08131-66521        |
| A1 C2   | 0160-6623     | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
| A1 C3   | 0160-6623     | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
| A1 C4   | 0160-6623     | 5  | 1   | CAP 0.1uF 50 V  | 02010  | SA115C104MAAH      |
| A1 CP   |               | 5  | 1   | CAP 100uF 10 V  | 04200  | 150D107X9010R2-DYS |
| A1 DS1  | 1 1990-1253   | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
|         |               |    |     |                 |        |                    |
| A1 DS2  |               | 7  | 1   | DISPLAY-NUM-SEG |        | HDSP-H101          |
| A1 DS3  |               | 7  | 1   | DISPLAY-NUM-SEG | 1      | HDSP-H101          |
| A1 DS4  |               | 7  | 1   | DISPLAY-NUM-SEG | 01542  | HDSP-H101          |
| A1 DS5  |               | 6  | 1   | LED-LT BAR      | 01542  | HLCP-B100          |
| A1 DS6  | 1990-1278     | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
|         |               |    |     |                 |        |                    |
| A1 DS7  |               | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
| A1 DS8  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  | 3 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
|         |               |    |     |                 |        |                    |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS1  |               | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
| A1 DS18 | 3 1990-1254   | 8  | 1   | LED-LMP         | 01542  | HLMP-Q150 SELECTED |
|         |               |    |     |                 |        |                    |
| A1 DS21 |               | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
| A1 DS22 |               | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
| A1 DS23 |               | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |
| A1 DS24 |               | 6  |     |                 | 01542  | HLMP-K155          |
| A1 DS25 | 1990-1278     | 6  | 1   | LED-LMP         | 01542  | HLMP-K155          |

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Table C-11. 8131A Option 020 Keyboard Parts List

Table C-11. 8131A Option 020 Keyboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description | Manuf'r | Part #             |
|-----------|-----------|----|-----|-------------|---------|--------------------|
| A1 DS26   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS27   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS28   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS31   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
| A1 DS32   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
|           |           |    |     |             |         |                    |
| A1 DS33   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
| A1 DS34   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
| A1 DS35   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
| A1 DS36   | 1990-1254 | 8  | 1   | LED-LMP     | 01542 . | HLMP-Q150 SELECTED |
| A1 DS37   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
|           |           |    |     |             |         |                    |
| A1 DS38   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |
| A1 DS41   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS42   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS43   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS44   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
|           |           | Ì  |     |             |         |                    |
| A1 DS45   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS46   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS47   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS48   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| AI DS51   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
|           |           |    |     |             |         |                    |
| A1 DS52   | 1990-1278 | 6  |     | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS53   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS54   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS55   | 1990-1278 | 6  |     | LED-LMP     | 01542   | HLMP-K155          |
| A1 DS56   | 1990-1278 | 6  | 1   | LED-LMP     | 01542   | HLMP-K155          |
|           |           |    | .   |             |         |                    |
| A1 DS57   | 1990-1278 | 6  |     | LED-LMP     |         | HLMP-K155          |
| A1 DS61   | 1990-1254 | 8  |     | LED-LMP     | J       | HLMP-Q150 SELECTED |
| A1 DS62   | 1990-1254 | 8  | [   |             |         | HLMP-Q150 SELECTED |
| A1 DS63   | 1990-1254 | 8  |     | LED-LMP     |         | HLMP-Q150 SELECTED |
| A1 DS64   | 1990-1254 | 8  | 1   | LED-LMP     | 01542   | HLMP-Q150 SELECTED |

| 1        | Referenc | e HP Part # | CD | Qty |                  | Manuf | · · · · · · · · · · · · · · · · · · · |
|----------|----------|-------------|----|-----|------------------|-------|---------------------------------------|
| T        | A1 DS65  | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | A1 DS71  | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 DS72   | 1990-1278   | 6  |     | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 DS73   | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 DS74   | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
|          |          |             |    |     |                  | 01012 | IIIIII -K155                          |
| A        | 1 DS75   | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 DS76   | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 DS77   | 1990-1278   | 6  | 1   | LED-LMP          | 01542 | HLMP-K155                             |
| A        | 1 J1     | 1252-0217   | 7  | 1   | CONN-POST-TP-HDR |       | 3429-5202                             |
| A        | 1 MP1    | 5041-4707   | 5  | 8   | QTR COBLK        | 28480 | 5041-4707                             |
|          |          |             |    |     |                  |       |                                       |
| A        | 1 MP2    | 5041-0318   | 6  | 1   | LK CAP PTY GRAY  | 28480 | 5041-0318                             |
| A        | 1 MP3    | 5041-0309   | 5  | 5   | CAP KEY QUARTER  | 28480 | 5041-0309                             |
|          | 1 MP4    | 5041-0507   | 5  | 1   | QTR WGRN         | 28480 | 5041-0507                             |
| A        | 1 MP5    | 5041-0726   | 0  | 1   | KEY CAP LCL      | 28480 | 5041-0726                             |
| A        | 1 MP6    | 1200-0654   | 7  | 1   | SKT-IC 40-CONT   | 01380 | 2-641606-1                            |
| 1        |          |             |    |     | ·                |       | j                                     |
| 1        | 1 MP7    | 1200-0899   | 2  | 1   | SKT-STRP 8-CONT  | 04129 | 8-0511-10                             |
|          | 1 RA1    | 1810-0325   | 2  | 1   | NETWORK-RES DIP  | 02483 | 761-3-R150                            |
|          | 1 RA2    | 1810-0338   | 7  | 1   | NETWORK-RES DIP  | 02483 | 761-3-R100                            |
|          | 1 RA3    | 1810-0338   | 7  | 1   | NETWORK-RES DIP  | 02483 | 761-3-R100                            |
| <b>A</b> | I RA4    | 1810-0275   | 1  | 1   | NETWORK-RES SIP  | 02483 | 750-101                               |
|          |          |             |    |     |                  |       |                                       |
| 1        | RA5      | 1810-0275   | 1  |     | NETWORK-RES SIP  | 02483 | 750-101                               |
|          | S1       | 5060-9436   | 7  |     | SW-PB SPST NO    | 04486 | 5560-9436                             |
| 1        | . S2     | 5060-9436   | 7  |     | SW-PB SPST NO    | 04486 | 5560-9436                             |
| 1        | S3       | 5060-9436   | 7  |     | SW-PB SPST NO    | 04486 | 5560-9436                             |
|          | S4       | 5060-9436   | 7  | 1   | SW-PB SPST NO    | 04486 | 5560-9436                             |
|          | 07       |             | _  |     |                  |       |                                       |
| 1        | S5       | 5060-9436   | 7  |     |                  | I I   | 5560-9436                             |
|          | S6       | 5060-9436   | 7  | 1   |                  |       | 5560-9436                             |
|          | S7       | 5060-9436   | 7  |     |                  |       | 5560-9436                             |
| 1        | S8       | 5060-9436   | 7  | 1   |                  |       | 5560-9436                             |
| AI       | S11      | 5060-9436   | 7  | 1 9 | SW-PB SPST NO    | 04486 | 5560-9436                             |

Table C-11. 8131A Option 020 Keyboard Parts List (continued)

Table C-11. 8131A Option 020 Keyboard Parts List (continued)

| Reference | HP Part # | CD | Qty | Description    | Manuf'r | Part #      |
|-----------|-----------|----|-----|----------------|---------|-------------|
| A1 S12    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S13    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S14    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S15    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S16    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
|           |           |    |     |                |         |             |
| A1 S17    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S18    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S21    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S22    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S23    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
|           |           |    |     |                |         |             |
| A1 S24    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S25    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S26    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S27    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S28    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
|           |           |    |     |                |         |             |
| A1 S41    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S42    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S43    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S44    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S45    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
|           |           |    |     |                |         |             |
| A1 S46    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S47    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S48    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S51    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S52    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
|           |           |    |     |                |         |             |
| A1 S53    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 S54    | 5060-9436 | 7  | 1   | SW-PB SPST NO  | 04486   | 5560-9436   |
| A1 U1     | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698   | SN74HCT138N |
| A1 U2     | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698   | SN74HCT138N |
| A1 U3     | 1820-3847 | 0  | 1   | IC-MM74HCT138N | 01698   | SN74HCT138N |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #      |
|-----------|-----------|----|-----|------------------|---------|-------------|
| A1 U4     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U5     | 1820-3456 | 7  | 1   | IC-MM74HCT244N   | 01698   | SN74HCT244N |
| A1 U6     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP |         |             |
| A1 U7     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |
| A1 U8     | 1858-0014 | 6  | 1   | XSTR ARY 14P-DIP | 02037   |             |

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Table C-11. 8131A Option 020 Keyboard Parts List (continued)

### Timing Board Option 020

| Reference | HP Part #   | CD | Qty | Description      | Manufr | Part #            |  |  |  |  |  |
|-----------|-------------|----|-----|------------------|--------|-------------------|--|--|--|--|--|
| A5        | 08131-66525 | 2  | 1   | BD AY TIMING OPT | 28480  | 08131-66525       |  |  |  |  |  |
| A5 C101   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121  | B37981-J1222-M034 |  |  |  |  |  |
| A5 C103   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121  | B37981-J1222-M034 |  |  |  |  |  |
| A5 C105   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121  | B37981-J1222-M034 |  |  |  |  |  |
|           |             |    |     |                  |        |                   |  |  |  |  |  |
| A5 C107   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121  | B37981-J1222-M034 |  |  |  |  |  |
| A5 C109   | 0160-5750   | 7  | 1   | CAP 2200pF 100 V | 06121  | B37981-J1222-M034 |  |  |  |  |  |
| A5 C110   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C111   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C112   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
|           |             |    |     |                  |        |                   |  |  |  |  |  |
| A5 C113   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C117   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C121   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C122   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C126   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
|           |             |    |     |                  |        |                   |  |  |  |  |  |
| A5 C127   | 0160-6623   | 5  |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C131   | 0160-6623   | 5  | - 1 | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C140   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C141   | 0160-6623   | 5  |     | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
| A5 C142   | 0160-6623   | 5  | 1   | CAP 0.1uF 50 V   | 02010  | SA115C104MAAH     |  |  |  |  |  |
|           | 1           |    |     |                  |        |                   |  |  |  |  |  |
|           | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   |        | B37987-T5104-M11  |  |  |  |  |  |
| 1         | 0160-6623   | 5  |     | CAP 0.1uF 50 V   |        | SA115C104MAAH     |  |  |  |  |  |
| 1         | 0160-6623   | 5  |     |                  |        | SA115C104MAAH     |  |  |  |  |  |
|           | 0160-6623   | 5  |     |                  |        | SA115C104MAAH     |  |  |  |  |  |
| A5 C205   | 0160-6500   | 7  | 1   | CAP 0.01uF 100 V | 02010  | SA101C103KAAH     |  |  |  |  |  |

Table C-12. 8131A Option 020 Timing Board Parts List

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|          | Referen            | ce H   | IP Part          | # C    | D                                     | Qty | Description      | Manuf | De-4                                     |
|----------|--------------------|--------|------------------|--------|---------------------------------------|-----|------------------|-------|------------------------------------------|
|          | A5 C206            |        | 160-6500         |        | 7                                     | 1   | CAP 0.01uF 100   |       | r         Part #           SA101C103KAAH |
|          | A5 C207            | 7 0    | 160-6623         |        | 5                                     | 1   | CAP 0.1uF 50 V   | 02010 | SA101C103KAAH<br>SA115C104MAAH           |
|          | A5 C208            | 1      | 160-6623         | - 1    | 5                                     | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH<br>SA115C104MAAH           |
|          | A5 C209            | 0      | 160-6500         | .   .  | 7                                     | 1   | CAP 0.01uF 100   |       | SA101C103KAAH                            |
|          | A5 C210            | )   01 | 160-6500         |        | 7                                     | 1   | CAP 0.01uF 100   |       | SA101C103KAAH                            |
|          |                    |        |                  |        |                                       |     |                  |       | SAIDICIUSKAAD                            |
|          | A5 C220            | 01     | 60-6500          | 17     | 7                                     | 1   | CAP 0.01uF 100 V | 02010 | SA101C103KAAH                            |
|          | A5 C221            | 01     | 60-6500          | 1      | ,                                     | 1   | CAP 0.01uF 100 V | _     | SA101C103KAAH                            |
|          | A5 C222            | 01     | 60-6500          | 7      | ·                                     | 1   | CAP 0.01uF 100 V |       | SA101C103KAAH                            |
|          | A5 C223            |        | 60-5726          | 7      | ·                                     | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034                        |
|          | A5 C224            | 01     | 60-5726          | 7      |                                       | 1   | CAP 0.01uF 100 V |       | B37987-J1103-M034                        |
|          |                    |        |                  |        |                                       |     |                  |       |                                          |
|          | A5 C300            |        | 60-5746          | 1      |                                       | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11                         |
|          | A5 C301            |        | 60-6623          | 5      |                                       | 1   | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH                            |
|          | A5 C303            |        | 60-4535          | 4      |                                       | 1   | CAP luF 50 V     | 02010 | SR305C105KAAH                            |
| - 1      | A5 C304            |        | 60-5746          | 1      |                                       |     | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11                         |
| 4        | 45 C305            | 016    | 30-5746          | 1      |                                       | 1   | CAP 0.1uF 50 V   | 06121 | B37987-T5104-M11                         |
|          |                    |        |                  |        |                                       |     |                  |       |                                          |
| - 1      | 45 C306            | 1      | 60-5726          | 7      |                                       |     | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034                        |
| 1        | 45 C307            |        | 50-6623          | 5      |                                       |     | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH                            |
|          | 15 C308<br>15 C309 |        | 0-6623           | 5      |                                       |     | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH                            |
|          | L5 C309            |        | 0-6623           | 5      |                                       |     | CAP 0.1uF 50 V   | 02010 | SÁ115C104MAAH                            |
|          | 19 (310            | 010    | 0-6623           | 5      | 1                                     |     | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH                            |
|          | 5 C311             | 010    | 0 5704           |        | .                                     |     |                  |       |                                          |
|          | 5 C311             |        | 0-5726           | 7      |                                       |     | CAP 0.01uF 100 V | 06121 | B37987-J1103-M034                        |
|          | .5 C312            |        | 0-6500           | 7      |                                       |     | CAP 0.01uF 100 V |       | SA101C103KAAH                            |
|          | 5 C313             |        | 0-6500<br>0-6623 | 7      |                                       |     | CAP 0.01uF 100 V |       | SA101C103KAAH                            |
| 1        | 5 C314             |        | 0-6623<br>0-6623 | 5<br>5 |                                       |     | CAP 0.1uF 50 V   |       | SA115C104MAAH                            |
|          | 0 (313             | 10100  | J-0023           | Э      | 1                                     |     | CAP 0.1uF 50 V   | 02010 | SA115C104MAAH                            |
| A        | 5 C317             | 0160   | )-6623           | 5      | 1                                     |     | ADO LET TO M     |       |                                          |
| 4        | 5 C318             | 1      | )-6623           | о<br>5 | $\begin{vmatrix} 1\\ 1 \end{vmatrix}$ | 1   |                  |       | SA115C104MAAH                            |
|          | 5 C320             | 1      | -6623            | 5<br>5 |                                       |     |                  |       | SA115C104MAAH                            |
| •        | 5 C321             |        | -6500            | 5<br>7 | 1                                     | 1   |                  |       | SA115C104MAAH                            |
| 1        | 5 C322             |        | -6500            | 7      | 1                                     | 1   |                  |       | SA101C103KAAH                            |
| <u> </u> |                    | 0100   | -0000            |        | 1                                     | 10  | AP 0.01uF 100 V  | 02010 | SA101C103KAAH                            |

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Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Bout -#                           |
|-----------|-----------|----|-----|------------------|---------|-----------------------------------|
| A5 C324   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | Part #<br>SA115C104MAAH           |
| A5 C325   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 02010   |                                   |
| A5 C327   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 1       | B37987-T5104-M11<br>SA101C103KAAH |
| A5 C328   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V |         | SA101C103KAAH<br>SA101C103KAAH    |
| A5 C330   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA101C103KAAH<br>SA115C104MAAH    |
|           | 0100 0020 | ľ  | 1   | OAT 0.141 50 V   | 02010   | SATISCIU4MAAH                     |
| A5 C331   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| A5 C333   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| A5 C335   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH                     |
| A5 C336   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| A5 C340   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
|           |           |    |     |                  |         |                                   |
| A5 C341   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                 |
| A5 C342   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                     |
| A5 C343   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                     |
| A5 C350   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| A5 C360   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
|           |           |    |     |                  |         |                                   |
| A5 C363   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| A5 C399   | 0160-5741 | 6  | 1   | CAP 47pF 100 V   | 06121   | B37979-J1470-J034                 |
| A5 C400   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                  |
| A5 C401   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                  |
| A5 C403   | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH                     |
|           |           |    | l   |                  |         |                                   |
|           | 0160-6623 | 5  | I   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |
| 1 1       | 0160-5746 | 1  |     | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                  |
|           | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121 - | B37987-J1103-M034                 |
|           | 0160-5726 | 7  |     | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                 |
| A5 C412   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                     |
|           |           |    |     |                  |         |                                   |
|           | 0160-6500 | 7  | 1   |                  |         | SA101C103KAAH                     |
|           | 0160-6623 | 5  |     |                  |         | SA115C104MAAH                     |
|           | 0160-6623 | 5  |     |                  |         | SA115C104MAAH                     |
|           |           | 5  |     |                  |         | SA115C104MAAH                     |
| A5 C418   | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                     |

| DC      | T      |           | T  |   |                                       |         |                   |
|---------|--------|-----------|----|---|---------------------------------------|---------|-------------------|
| Referen |        | HP Part # |    |   | · · · · · · · · · · · · · · · · · · · | Manuf   | r Part #          |
| A5 C42  |        | 0160-6623 | 5  | 1 | 0111 0111 00 1                        | 02010   | SA115C104MAAH     |
| A5 C42  |        | 0160-6500 | 7  | 1 | CAP 0.01uF 100                        | V 02010 | SA101C103KAAH     |
| A5 C42  |        | 0160-6500 | 7  | 1 | CAP 0.01uF 100 V                      | V 02010 | SA101C103KAAH     |
| A5 C42  |        | 0160-6623 | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C42  | 25   1 | 0160-5746 | 1  | 1 | CAP 0.1uF 50 V                        | 06121   | B37987-T5104-M11  |
|         |        |           |    |   |                                       |         |                   |
| A5 C42  |        | 0160-6500 | 7  | 1 | CAP 0.01uF 100 V                      |         | SA101C103KAAH     |
| A5 C42  | 1      | 0160-6500 | 7  | 1 | CAP 0.01uF 100 V                      | 02010   | SA101C103KAAH     |
| A5 C43  | ļ      | 0160-6623 | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C43  |        | )160-6623 | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C43  | 3   0  | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
|         |        |           |    |   |                                       |         |                   |
| A5 C43  |        | 160-4535  | 4  | 1 | CAP luF 50 V                          | 02010   | SR305C105KAAH     |
| A5 C436 | -      | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C440 | 1      | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C441 |        | 160-5726  | 7  | 1 | CAP 0.01uF 100 V                      | 06121   | B37987-J1103-M034 |
| A5 C442 | 2 0    | 160-6500  | 7  | 1 | CAP 0.01uF 100 V                      | 02010   | SA101C103KAAH     |
|         |        |           |    |   |                                       |         |                   |
| A5 C443 |        | 160-6500  | 7. | 1 | CAP 0.01uF 100 V                      | 02010   | SA101C103KAAH     |
| A5 C450 | ł      | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C460 |        | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C465 | E E    | 160-6623  | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C470 | 01     | 160-3872  | 0  | 1 | CAP 2.2pF 200 V                       | 1 1     | FD12C0G2D2R2C     |
|         |        |           |    |   |                                       |         |                   |
| A5 C471 |        | 60-3872   | 0  | 1 | CAP 2.2pF 200 V                       | 06352   | FD12C0G2D2R2C     |
| A5 C500 | f      | .60-5746  | 1  | 1 | CAP 0.1uF 50 V                        | 06121   | B37987-T5104-M11  |
| A5 C501 |        | .60-5746  | 1  | 1 | CAP 0.1uF 50 V                        |         | B37987-T5104-M11  |
| A5 C503 | 1      | 60-4535   | 4  | 1 | CAP luF 50 V                          | 1       | SR305C105KAAH     |
| A5 C504 | 01     | 60-5746   | 1  | 1 | CAP 0.1uF 50 V                        |         | B37987-T5104-M11  |
|         |        |           |    |   |                                       |         |                   |
| A5 C505 |        |           | 5  | 1 | CAP 0.1uF 50 V                        | 02010   | SA115C104MAAH     |
| A5 C506 | 1      |           | 7  | 1 | CAP 0.01uF 100 V                      |         | B37987-J1103-M034 |
| A5 C511 |        | 3         | 7  | 1 | CAP 0.01uF 100 V                      |         | B37987-J1103-M034 |
| A5 C512 |        |           | 7  | 1 | CAP 0.01uF 100 V                      |         | SA101C103KAAH     |
| A5 C513 | 010    | 60-6500   | 7  |   | -                                     | 1       | SA101C103KAAH     |

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Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference          | HP Part # | CD | Qty | Description                            | Manuf'r | Part #            |
|--------------------|-----------|----|-----|----------------------------------------|---------|-------------------|
| A5 C514            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C514            | 0160-6623 | 5  | 1   | CAP $0.1$ uF 50 V                      | 02010   | SA115C104MAAH     |
| A5 C515            | 0160-6623 | 5  | 1   | CAP 0.1 $uF$ 50 V                      | 02010   | SA115C104MAAH     |
| A5 C517<br>A5 C518 | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
|                    | 0160-6623 | 5  | 1   | CAP 0.1 $uF$ 50 V<br>CAP 0.1 $uF$ 50 V | 02010   | SA115C104MAAH     |
| A5 C520            | 0100-0023 | Э  | T   | CAP 0.10F JU V                         | 02010   | SATISCI04MAAH     |
| A5 C521            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
| A5 C521            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
| A5 C524            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C525            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V                         | 06121   | B37987-T5104-M11  |
| A5 C527            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
|                    |           |    | _   |                                        |         |                   |
| A5 C528            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
| A5 C530            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C531            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C533            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C535            | 0160-4535 | 4  | 1   | CAP 1uF 50 V                           | 02010   | SR305C105KAAH     |
|                    |           |    |     |                                        |         |                   |
| A5 C536            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C540            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C541            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V                       | 06121   | B37987-J1103-M034 |
| A5 C542            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
| A5 C543            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                       | 02010   | SA101C103KAAH     |
|                    |           |    |     |                                        |         |                   |
| A5 C550            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C560            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C565            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |
| A5 C570            | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V                        | 06352   | FD12C0G2D2R2C     |
| A5 C571            | 0160-3872 | 0  | 1   | CAP 2.2pF 200 V                        | 06352   | FD12C0G2D2R2C     |
|                    |           |    |     |                                        |         |                   |
| A5 C600            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V                         | 06121   | B37987-T5104-M11  |
| A5 C601            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V                         | 06121   | B37987-T5104-M11  |
| A5 C603            | 0160-4535 | 4  | 1   | CAP luF 50 V                           | 02010   | SR305C105KAAH     |
| A5 C604            | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V                         | 06121   | B37987-T5104-M11  |
| A5 C605            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                         | 02010   | SA115C104MAAH     |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Γ  | Referenc | e HP Part # | E CD | Qty | Description                      | Manufr  |                   |
|----|----------|-------------|------|-----|----------------------------------|---------|-------------------|
|    | A5 C606  | 0160-5726   | 7    | 1   | CAP 0.01uF 100                   |         | n                 |
|    | A5 C611  | 0160-5726   | 7    |     | CAP 0.01uF 100                   |         | B37987-J1103-M034 |
|    | A5 C612  | 0160-6500   | 7    |     | CAP 0.01uF 100                   |         | B37987-J1103-M034 |
| 1  | A5 C613  | 0160-6500   | 7    |     | CAP 0.01uF 100<br>CAP 0.01uF 100 | 1       | SA101C103KAAH     |
|    | A5 C614  | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | F       | SA101C103KAAH     |
|    |          | 0100 0020   |      |     | CAF U.IUF 50 V                   | 02010   | SA115C104MAAH     |
|    | A5 C615  | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   |                   |
|    | A5 C617  | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SA115C104MAAH     |
|    | A5 C618  | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SA115C104MAAH     |
| 1  | A5 C620  | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SA115C104MAAH     |
| 1  | A5 C621  | 0160-6500   | 7    | 1   | CAP 0.01uF 100 V                 | ſ       | SA115C104MAAH     |
|    |          | 0100 0000   | '    | 1   | CAP 0.010F 100 V                 | 02010   | SA101C103KAAH     |
| A  | 45 C622  | 0160-6500   | 7    | 1   | CAP 0.01uF 100 V                 | 02010   |                   |
|    | 5 C624   | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SA101C103KAAH     |
|    | 5 C625   | 0160-5746   | 1    | 1   | CAP 0.1uF 50 V                   | 02010   | SA115C104MAAH     |
|    | 5 C627   | 0160-6500   | 7    | 1   | CAP 0.01uF 100 V                 |         | B37987-T5104-M11  |
|    | 5 C628   | 0160-6500   | 7    | 1   | CAP 0.01uF 100 V                 | 1 1     | SA101C103KAAH     |
|    |          |             |      |     | 0.0101 100 V                     | 02010   | SA101C103KAAH     |
| A  | 5 C630   | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SALLECIONALT      |
|    | 5 C631   | 0160-6623   | 5    |     | CAP 0.1 $uF$ 50 V                | 1 1     | SA115C104MAAH     |
|    | 5 C633   | 0160-6623   | 5    |     | CAP $0.1$ uF 50 V                | 1 1     | SA115C104MAAH     |
| A  | 5 C635   | 0160-4535   | 4    |     | CAP luF 50 V                     | 1 1     | SA115C104MAAH     |
| A  | 5 C636   | 0160-6623   | 5    |     | CAP $0.1 \text{uF} 50 \text{ V}$ | 1 1     | SR305C105KAAH     |
|    |          | _           |      | -   | 0111 0.1111 00 0                 | 02010   | SA115C104MAAH     |
| A  | 5 C640   | 0160-6623   | 5    | 1   | CAP 0.1uF 50 V                   | 02010   | SA115C104MAAH     |
| A  | 5 C641   | 0160-5726   | 7    |     |                                  |         | B37987-J1103-M034 |
| A  | 5 C642   | 0160-6500   | 7    |     | CAP 0.01uF 100 V                 |         | SA101C103KAAH     |
| A  | 5 C643   | 0160-6500   | 7    |     | CAP 0.01uF 100 V                 |         | SA101C103KAAH     |
| A  |          | 0160-6623   | 5    |     | CAP 0.1uF 50 V                   |         | SA115C104MAAH     |
|    |          |             |      |     |                                  | 02010   | DATIOCIU4MAAH     |
| A5 | 5 C660   | 0160-6623   | 5    | 1 0 | CAP 0.1uF 50 V                   | 02010 5 | SA115C104MAAH     |
| A5 | 5 C665   | 0160-6623   | 5    |     | CAP 0.1uF 50 V                   |         | A115C104MAAH      |
| A5 | 1        | 0160-3872   | 0    | 1   |                                  | 1       | D12C0G2D2R2C      |
| A5 | C671     | 0160-3872   | 0    |     |                                  |         | D12C0G2D2R2C      |
| A5 | 1        | 0160-5746   | 1    |     |                                  |         | 337987-T5104-M11  |
| _  |          |             |      |     | 0.141 00 V                       |         | 51901-10104-M11   |

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| Table C-12. 8 | 131A Option | 020 Timing | <b>Board Parts List</b> | (continued) |
|---------------|-------------|------------|-------------------------|-------------|
|               |             |            |                         |             |

| Table C-12. 8131A Option 020 Timing Board Parts List (continued) |           |    |     |                  |         |                   |  |  |  |  |
|------------------------------------------------------------------|-----------|----|-----|------------------|---------|-------------------|--|--|--|--|
| Reference                                                        | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |  |  |  |  |
| A5 C701                                                          | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |  |  |  |  |
| A5 C703                                                          | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |  |  |  |  |
| A5 C704                                                          | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |  |  |  |  |
| A5 C705                                                          | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |  |  |  |  |
| A5 C706                                                          | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |  |  |  |  |
| A5 C711                                                          | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |  |  |  |  |
| A5 C712                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C713                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C714                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C715                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C717                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C718                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C720                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C721                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C722                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C724                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C725                                                          | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |  |  |  |  |
| A5 C727                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C728                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C730                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C731                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C733                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C735                                                          | 0160-4535 | 4  | 1   | CAP luF 50 V     | 02010   | SR305C105KAAH     |  |  |  |  |
| A5 C736                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C740                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C741                                                          | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |  |  |  |  |
| A5 C742                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C743                                                          | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |  |  |  |  |
| A5 C750                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |
| A5 C760                                                          | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |  |  |  |  |

|   | Referenc | e HP Part # | CD | Qty  | Decemination     | Nr. 6   | 1                  |
|---|----------|-------------|----|------|------------------|---------|--------------------|
|   | A5 C765  |             | 5  | 1    |                  | Manuf'r | //                 |
|   | A5 C770  | 0160-3872   |    |      | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH      |
|   | A5 C771  |             |    | 1    | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C      |
|   | A5 CP10  | 0160-3872   | 0  | 1    | CAP 2.2pF 200 V  | 06352   | FD12C0G2D2R2C      |
|   |          |             | 1  | 1    | CAP 10uF 35 V    | 04200   | 150D106X9035R2-DYS |
|   | A5 CP10  | 2 0180-0229 | 7  | 1    | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
|   | LE ODIA  |             |    |      |                  |         |                    |
|   |          | 4 0180-0229 | 7  | 1    | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
|   | A5 CP106 |             | 7  | 1    | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
|   | A5 CP108 | 1           | 1  | 1    | CAP 10uF 35 V    | 04200   | 150D106X9035R2-DYS |
|   | A5 CP180 |             | 7  | 1    | CAP 33uF 10 V    | 04200   | 150D336X9010B2-DYS |
|   | A5 CP200 | 0180-4129   | 4  | 1    | CAP 1uF 35 V     | 04200   | 173D105X9035V      |
|   |          |             |    |      |                  |         |                    |
|   | A5 CP201 |             | 4  | 1    | CAP luF 35 V     | 04200   | 173D105X9035V      |
|   | A5 CR100 |             | 9  | 1    | DIO- SCHOTTKY SM |         | 50825511           |
|   | A5 CR102 |             | 9  | 1    | DIO- SCHOTTKY SM | 02062   | 50825511           |
|   | A5 CR103 | 1 1         | 0  | 1    | DIO-1N5818       | 02037   | 1N5818             |
|   | A5 CR310 | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   |          |             |    |      |                  |         |                    |
|   |          | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   |          | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
| i | A5 CR313 |             | 1  |      | DIO-1N4150       | 00746   |                    |
|   | A5 CR314 |             | 1  |      | DIO-1N4150       | 00746   |                    |
|   | A5 CR315 | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   |          |             |    |      |                  |         |                    |
|   |          | 1901-1098   | 1  |      | DIO-1N4150       | 00746   |                    |
|   |          | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   |          | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   | A5 CR413 |             | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   | A5 CR414 | 1901-1098   | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   |          |             |    |      |                  |         |                    |
|   | A5 CR415 |             | 1  | 1    | DIO-1N4150       | 00746   |                    |
|   | A5 CR416 | 1901-0731   | 7  | 1 1  | 1                |         | SR3010-3RL         |
|   | A5 CR510 | 1901-1098   | 1  | 1 ]] |                  | 00746   |                    |
|   | A5 CR511 | 1901-1098   | 1  | 1 1  |                  | 00746   |                    |
|   | A5 CR512 | 1901-1098   | 1  |      |                  | 00746   |                    |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|   |          | e HP Part              | the second second | D   | Qty  | Description      | Manuf          | 'r Part #            |
|---|----------|------------------------|-------------------|-----|------|------------------|----------------|----------------------|
|   |          | 3 1901-1098            |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   |          | .4 1901-1098           |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   |          | .5 1901-1098           |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   |          | 0 1901-1098            |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   | A5 CR61  | 1 1901-1098            |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   |          |                        |                   |     |      |                  |                |                      |
|   |          | 2 1901-1098            |                   |     | 1    | DIO-1N4150       | 00746          |                      |
|   |          | 3 1901-1098            |                   |     | 1    | DIO-1N4150       | 00746          |                      |
|   |          | 4 1901-1098            |                   | 1   | 1    | DIO-1N4150       | 00746          |                      |
|   |          | 5 1901-1098            | 1                 | - 1 | 1    | DIO-1N4150       | 00746          |                      |
|   | A5 CR616 | 5 1901-0731            | 7                 |     | 1    | DIO-PWR RECT     | 02037          | SR3010-3RL           |
|   | AE ODTIC |                        |                   |     |      |                  |                |                      |
|   |          | 1901-1098              | 1                 |     | - 1  | DIO-1N4150       | 00746          |                      |
|   |          | 1901-1098              | 1                 |     |      | DIO-1N4150       | 00746          |                      |
|   |          | 1901-1098              | 1                 |     |      | DIO-1N4150       | 00746          |                      |
|   |          | 1901-1098<br>1901-1098 | 1                 | 1   |      | DIO-1N4150       | 00746          |                      |
|   | AJ UN114 | 1901-1098              | 1                 | 1   | L  . | DIO-1N4150       | 00746          |                      |
|   | A5 CR715 | 1901-1098              | 1                 | 1   |      | DIO-1N4150       | 00746          |                      |
|   | A5 J100  | 1251-8324              |                   | 1   | - 1  | CONN-POST-TP-HDR |                |                      |
|   | A5 J101  | 1251-5380              | 3                 | 1   |      | CONN-POST-TP-HDR |                | G06M96P4BEBL-004-715 |
|   | A5 J102  | 1251-5380              | 3                 | 1   |      | CONN-POST-TP-HDR |                | 68000-602            |
|   | A5 J200  | 1250-0543              | 8                 | 1   |      | CONN-RF SM-SNP   | 02946<br>05769 | 68000-602            |
|   |          |                        |                   |     |      |                  | 03109          | 51-053-0349-BE8      |
|   | A5 J400  | 1251-5380              | 3                 | 1   |      | CONN-POST-TP-HDR | 02946          | 68000-602            |
|   | A5 J600  | 1251-5380              | 3                 | 1   |      | CONN-POST-TP-HDR | 1 1            | 68000-602            |
|   | A5 K400  | 0490-1667              | 6                 | 1   |      | RLY 2C 12VDC     |                | RG2T-12V             |
|   | A5 K600  | 0490-1667              | 6                 | 1   |      | LY 2C 12VDC      | 1 1            | RG2T-12V             |
| 1 | A5 L100  | 9100-1788              | 6                 | 1   |      | ORE-FERRITE      |                | VK200 20/4B          |
|   |          |                        |                   |     |      |                  |                |                      |
| 4 | 45 L101  | 9100-1788              | 6                 | 1   | c    | ORE-FERRITE      | 02995          | VK200 20/4B          |
| ŀ | 45 L102  | 9100-1788              | 6                 | 1   |      | ORE-FERRITE      | 1              | VK200 20/4B          |
| 4 | A5 L103  | 9100-1788              | 6                 | 1   |      |                  | 1              | VK200 20/4B          |
| A | 15 L104  | 9100-1788              | 6                 | 1   |      |                  | 1              | VK200 20/4B          |
| A | 1        | 9100-2891              | 4                 | 1   | 1    |                  | ,              |                      |
|   |          |                        | l                 |     |      | 10/0             | 00210          | 10M050K-1            |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| ſ   | Reference      | e HP Part #            | CD     | Qty | Description      | Manufr | Part #      |
|-----|----------------|------------------------|--------|-----|------------------|--------|-------------|
| Γ   | A5 L111        | 9100-2891              | 4      | 1   | L 50NH + 10%     | 03273  | 10M050K-1   |
|     | A5 L112        | 9100-2891              | 4      | 1   | L 50NH +-10%     | 03273  | 10M050K-1   |
|     | A5 L113        | 9100-2891              | 4      | 1   | L 50NH +10%      | 03273  | 10M050K-1   |
|     | A5 L114        | 9100-2891              | 4      | 1   | L 50NH +10%      | 03273  | 10M050K-1   |
|     | 45 L300        | 9100-2891              | 4      | 1   | L 50NH + 10%     | 03273  | 10M050K-1   |
|     |                |                        |        |     |                  |        |             |
|     | 15 L300*       | 9100-2891              | 4      | 1   | L 50NH +-10%     | 03273  | 10M050K-1   |
|     | 5 L400         | 9100-2891              | 4      |     | L 50NH +-10%     | 03273  | 10M050K-1   |
|     | 5 L400         | 8159-0005              | 0      | 1   | RES-ZERO OHMS    | 01339  | L-2007-1    |
| - 1 | 5 L500         | 9100-2891              | 4      | 1   | L 50NH +10%      | 03273  | 10M050K-1   |
| A   | 5 L600         | 9100-2891              | 4      |     | L 50NH +-10%     | 03273  | 10M050K-1   |
|     |                |                        |        |     |                  |        |             |
|     | 5 L600         | 8159-0005              | 0      | 1   | RES-ZERO OHMS    | 01339  | L-2007-1    |
|     | 5 L700         | 9100-2891              | 4      | 1   | L 50NH +-10%     | 03273  | 10M050K-1   |
|     | 5 MP130        |                        | 0      | 4   | CLAMP-CABLE      | 11808  |             |
|     | 5 MP134        |                        | 9      | 1   | CLMP-CA          | 02414  | HP-2N       |
| A   | 5 MP136        | 3050-0891              | 7      | 1   | WASHER-FL MTLC 3 | 06691  |             |
|     |                |                        | _      |     |                  |        |             |
|     | 5 MP201        |                        | 5      | 1   | SPRING           | 28480  | 54100-29104 |
| 1   | 5 MP202        |                        | 2      | 1   | CLAMP            | 28480  | 54100-29101 |
|     | 5 MP209        |                        | 8      | 1   | SPRING           | 28480  | 54100-21103 |
|     | 5 MP230        |                        | 2      | 4   | SPCR-PRS-IN      | 03981  | YC3-4564    |
| A   | 5 MP240        | 0515-0659              | 8      | 4   | SCR-MACHINE      | 05610  |             |
|     |                | 1000 1 100             |        |     |                  |        |             |
|     |                | 1200-1468              | 3      |     | SOCKET RGA72 CN  | 1      | 1KS072-33TT |
| 1   | 5 MP301        | 1200-1410              | 5      |     | SOCKET PGA 72PI  | 1      | 1KS072-33TG |
|     | 5 MP400        | 1200-1468              | 3      |     | SOCKET RGA72 CN  |        | 1KS072-33TT |
|     | 5 MP401        | 1200-1410              | 5      |     | SOCKET PGA 72PI  |        | 1KS072-33TG |
| A   | 5 MP500        | 1200-1468              | 3      | 1   | SOCKET RGA72 CN  | 10803  | 1KS072-33TT |
| A 5 | MP501          | 1900 1410              | -      | .   |                  |        |             |
|     | MP501<br>MP600 | 1200-1410<br>1200-1468 | 5<br>3 |     | SOCKET PGA 72PI  | 1      | 1KS072-33TG |
|     | MP600          | 1200-1468              |        |     | SOCKET RGA72 CN  | 1      | 1KS072-33TT |
|     | MP700          | 1200-1410              | 5      |     |                  |        | 1KS072-33TG |
|     | MP700<br>MP701 | 1200-1468              | 3      |     |                  |        | 1KS072-33TT |
| H)  | MIF /01        | 1200-1410              | 9      | 1 ! | SOCKET PGA 72PI  | 10803  | 1KS072-33TG |

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| Table | C-12. 8131A | Option 020                            | ) Timing | Board | Parts List (continued) |
|-------|-------------|---------------------------------------|----------|-------|------------------------|
|       | 1 1 1 1     | · · · · · · · · · · · · · · · · · · · |          |       |                        |

|         | e HP Part # | CD | Qty | Description      | Manufr | Part #      |
|---------|-------------|----|-----|------------------|--------|-------------|
| A5 Q200 |             | 0  | 1   | XSTR PNP SI      | 02037  | 2N3906(SEL) |
| A5 Q310 | 1           | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904      |
| A5 Q312 | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352      |
| A5 Q313 | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352      |
| A5 Q314 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q315 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q316 | 1853-0569   | 6  | . 1 | XSTR PNP SI      | 02037  |             |
| A5 Q317 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q318 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q319 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
|         | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904      |
| A5 Q412 | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352      |
| A5 Q413 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q414 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q415 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q416 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q417 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q418 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q419 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q480 | 1854-0472   | 2  | 1   | XSTR NPN SI DARL | 02037  | MPS-A14     |
| A5 Q510 | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904      |
| A5 Q512 | 1855-0309   | 6  | 1   | MOSFET 2N4352 P- | 02037  | 2N4352      |
|         | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
|         | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| A5 Q515 | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| A5 Q516 | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
|         | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
| -       | 1854-0392   | 5  | 1   | XSTR NPN SI      | 02037  | 2N5088      |
|         | 1853-0569   | 6  | 1   | XSTR PNP SI      | 02037  |             |
| 5 Q610  | 1854-1028   | 6  | 1 2 | XSTR NPN SI      | 02037  | 2N3904      |

| R    | eference         | e HP Part # | CD | Qty   | Description      | Maria   |                |
|------|------------------|-------------|----|-------|------------------|---------|----------------|
|      | 5 Q612           | 1855-0309   | 6  | 1     | MOSFET 2N4352 P- | Manuf'i |                |
|      | 5 Q613           | 1853-0569   | 6  |       | XSTR PNP SI      | 02037   | 2N4352         |
| 1    | 5 Q614           | 1853-0569   | 6  | 1     |                  | 02037   |                |
| ł    | 5 Q615           | 1854-0392   | 5  | 1     | XSTR PNP SI      | 02037   |                |
| 1    | 5 Q616           |             |    |       | XSTR NPN SI      | 02037   | 2N5088         |
| A    | 0 Q010           | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037   |                |
| Δ =  | 5 Q617           | 1854-0392   | e  | 7     | YCTD NDN C       |         |                |
| 1    | 5 Q618           |             | 5  | 1     | XSTR NPN SI      | 02037   | 2N5088         |
|      | 5 Q619           | 1854-0392   |    | 1     | XSTR NPN SI      | 02037   | 2N5088         |
|      | 5 Q680           | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037   |                |
|      | 5 Q080<br>5 Q710 | 1854-0472   | 2  | 1     | XSTR NPN SI DARL | 1       | MPS-A14        |
| A    | 5 Q/10           | 1854-1028   | 6  | 1     | XSTR NPN SI      | 02037   | 2N3904         |
| 1.5  | Q712             | 1955 0200   |    |       |                  |         |                |
|      | Q712             | 1855-0309   | 6  | -1    | MOSFET 2N4352 P- | 02037   | 2N4352         |
| ſ    | -                | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037   |                |
|      | Q714             | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037   |                |
| 1    | Q715             | 1854-0392   | 5  | 1     | XSTR NPN SI      | 02037   | 2N5088         |
| A5   | Q716             | 1853-0569   | 6  | 1     | XSTR PNP SI      | 02037   |                |
| 15   | 0717             | 1954 0200   | -  | .     | VODD MDM of      |         |                |
| 1    | Q717             | 1854-0392   | 5  |       | XSTR NPN SI      | 02037   | 2N5088         |
| 1    | Q718             | 1854-0392   | 5  |       | XSTR NPN SI      | 02037   | 2N5088         |
| 1    | Q719             | 1853-0569   | 6  |       | XSTR PNP SI      | 02037   |                |
|      | R100             | 0757-0442   | 9  |       | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A5   | R200             | 0699-1206   | 1  | 1     | RES 127 1% 2W MO | 02499   | GS-3           |
|      | Dect             |             |    |       |                  |         |                |
|      | R201<br>R202     | 0699-1206   | 1  |       | RES 127 1% 2W MO | 02499   | GS-3           |
| 1    | R204             | 0698-4855   | 0  |       | RES 267 1% .5W T | 01074   | H2             |
|      | R204             | 0698-7205   | 0  |       | RES 51.1 1% .05W | 1       | CRB20          |
|      |                  | 0757-0180   | 2  |       | RES 31.6 1% .125 | 1       | CRB14 OR CRB25 |
| АJ   | R206             | 0698-3162   | 0  | 1     | RES 46.4K 1% .12 | 00746   | CRB14 OR CRB25 |
| 45   | R208             | 0698-6347   |    | ,  ,  |                  |         |                |
|      |                  |             | 9  | 1     |                  | 1       | CRB14 OR CRB25 |
|      |                  |             |    | 1     |                  |         | CRB14 OR CRB25 |
|      | 1                | 1           | 5  |       |                  |         | CRB14 OR CRB25 |
|      |                  | 1           | 5  |       |                  |         | CRB14 OR CRB25 |
| Að . | 11212            | 0757-0394   | 0  | 1   1 | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference          | HP Part # | CD | Qty | Description          | Manuf'r | Dent -         |
|--------------------|-----------|----|-----|----------------------|---------|----------------|
| A5 R220            | 0757-0421 | 4  | 1   | RES 825 1% .125W     |         | +              |
| A5 R220            | 0698-3132 | 4  |     |                      | 00746   | CRB14 OR CRB25 |
| A5 R221<br>A5 R300 | 0757-0442 | 9  |     | RES 261 1% .125W     | 00746   | CRB14 OR CRB25 |
| A5 R300<br>A5 R301 | 0757-0442 | 0  | 1   | RES 10K 1% .125W     |         | CRB14 OR CRB25 |
| A5 R301<br>A5 R302 |           |    | 1   | RES 51.1 1% .125     | 00746   | CRB14 OR CRB25 |
| A5 K302            | 0698-4425 | 0  | 1   | RES 1.54K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R303            | 0757-0317 | 7  | 1   | RES 1.33K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R304            | 0757-0280 | 3  | 1   | RES 1K 1% .125W      | 00746   | CRB14 OR CRB25 |
| A5 R305            | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746   | CRB14 OR CRB25 |
| A5 R306            | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00740   | CRB14 OR CRB25 |
| A5 R307            | 0698-3132 | 4  | 1   | RES 261 1% .125W     | 00740   | CRB14 OR CRB25 |
| 10 1000            | 0030-3132 | -  | T   | 1025 201 170 .125 44 | 00740   | CRB14 OR CRB25 |
| A5 R309            | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746   | CRB14 OR CRB25 |
| A5 R310            | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R311            | 0698-6360 | 6  | 1   | RES 10K .1% .125     | 00746   | CRB14 OR CRB25 |
| A5 R312            | 0699-1100 | 4  | 1   | RES 6.984K .1% .     | 01074   | H8             |
| A5 R313            | 0698-3153 | 9  | 1   | RES 3.83K 1% .12     | 00746   | CRB14 OR CRB25 |
|                    |           |    |     |                      |         |                |
| A5 R314            | 0757-0449 | 6  | 1   | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
| A5 R315            | 0757-0449 | 6  | 1   | RES 20K 1% .125W     | 00746   | CRB14 OR CRB25 |
| A5 R319            | 0757-0280 | 3  | 1   | RES 1K 1% .125W      | 00746   | CRB14 OR CRB25 |
| A5 R320            | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R321            | 0757-0279 | 0  | 1   | RES 3.16K 1% .12     | 00746   | CRB14 OR CRB25 |
|                    |           |    |     |                      |         |                |
| A5 R322            | 0757-0317 | 7  | 1   | RES 1.33K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R323            | 0698-3154 | 0  | 1   | RES 4.22K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R324            | 0698-0085 | 0  | 1   | RES 2.61K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R325            | 0698-0085 | 0  | 1   | RES 2.61K 1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R326            | 0757-0419 | 0  | 1   | RES 681 1% .125W     | 00746   | CRB14 OR CRB25 |
|                    |           |    |     |                      |         |                |
| A5 R327            | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746   | CRB14 OR CRB25 |
| A5 R328            | 0757-0394 | 0  | 1   | RES 51.1 1% .125     | 00746   | CRB14 OR CRB25 |
| A5 R329            | 0757-0419 | 0  | 1   | RES 681 1% .125W     | 00746   | CRB14 OR CRB25 |
| A5 R330            | 0698-6347 | 9  | 1   | RES 1.5K .1% .12     | 00746   | CRB14 OR CRB25 |
| A5 R331            | 0698-6348 | 0  | 1   | RES 3K .1% .125W     | 00746   | CRB14 OR CRB25 |

Reference | HP Part # CD Qty Description Manuf'r Part # A5 R333 0698-6347 9 RES 1.5K .1% .12 1 00746 CRB14 OR CRB25 A5 R334 0757-0279 0 1 RES 3.16K 1% .12 00746 CRB14 OR CRB25 A5 R335 0698-3438 3 1 RES 147 1% .125W 00746 CRB14 OR CRB25 A5 R336 0757-0394 0 1 RES 51.1 1% .125 00746 CRB14 OR CRB25 A5 R337 0757-0279 0 RES 3.16K 1% .12 1 CRB14 OR CRB25 00746 A5 R338 0757-0349 5 1 RES 22.6K 1% .12 00746 CRB14 OR CRB25 A5 R339 0757-0477 0 1 RES 332K 1% .125 00746 CRB14 OR CRB25 A5 R340 0757-0279 0 1 RES 3.16K 1% .12 00746 CRB14 OR CRB25 A5 R341 0698-3155 1 1 RES 4.64K 1% .12 00746 CRB14 OR CRB25 A5 R342 0698-3446 3 1 RES 383 1% .125W 00746 CRB14 OR CRB25 A5 R343 0698-3158 4 1 RES 23.7K 1% .12 00746 CRB14 OR CRB25 A5 R344 0698-3268 7 1 RES 11.5K 1% .12 00746 CRB14 OR CRB25 A5 R345 0698-3136 8 1 RES 17.8K 1% .12 00746 CRB14 OR CRB25 A5 R346 0698-0085 0 RES 2.61K 1% .12 1 00746 CRB14 OR CRB25 A5 R347 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A5 R348 0698-3438 3 1 RES 147 1% .125W 00746 CRB14 OR CRB25 A5 R350 0757-0442 9 RES 10K 1% .125W 1 00746 CRB14 OR CRB25 A5 R351 0698-3460 1 1 RES 422K 1% .125 00746 CRB14 OR CRB25 A5 R362 0757-0394 0 RES 51.1 1% .125 1 00746 CRB14 OR CRB25 A5 R367 8159-0005 0 1 **RES-ZERO OHMS** 01339 L-2007-1 A5 R370 0698-3161 9 1 RES 38.3K 1% .12 00746 CRB14 OR CRB25 A5 R371 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB25 A5 R373 0698-3446 3 1 RES 383 1% .125W 00746 CRB14 OR CRB25 A5 R375 0698-3159 5 RES 26.1K 1% .12 1 00746 CRB14 OR CRB25 0757-0283 A5 R376 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A5 R377 0757-0283 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A5 R378 0757-0283 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A5 R379 0757-0283 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A5 R381 0757-0283 6 1 RES 2K 1% .125W 00746 CRB14 OR CRB25 A5 R390 0757-0283 6 1 RES 2K 1% .125W

00746

CRB14 OR CRB25

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

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|     |         |           | · · · · · · · · · · · · · · · · · · · |       |                  |         | · · · ·        |
|-----|---------|-----------|---------------------------------------|-------|------------------|---------|----------------|
|     | Referen |           | # CD                                  | Qty   | 7 Description    | Manuf   | r Part #       |
|     | A5 R39  |           | 6                                     | 1     | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R392 | 1         | 6                                     | 1     | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R394 |           | 6                                     | 1     | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R396 |           | 6                                     | 1     | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R400 | 0757-0442 | 9                                     | 1     | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|     |         |           |                                       |       |                  |         |                |
|     | A5 R401 |           | 0                                     | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R402 | 1         | 0                                     | 1     | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R403 |           | 7                                     | 1     | RES 1.27K 1% .12 | 00746   | CRB14 OR CRB25 |
| ĺ   | A5 R404 |           | 3                                     | 1     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R405 | 0757-0394 | 0                                     | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     |         | -         |                                       |       |                  |         |                |
|     | A5 R406 | 0698-3438 | 3                                     | 1     | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R409 | 0757-0394 | 0                                     | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R410 | 0757-0279 | 0                                     | 1     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R411 | 0698-6360 | 6                                     | 1     | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R412 | 0699-1011 | 6                                     | 1     | RES 3.32K .1% .1 | 00746   | CRB14 OR CRB25 |
|     |         |           |                                       |       |                  |         |                |
| 1   | A5 R413 | 0698-3153 | 9                                     | 1     | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | A5 R414 | 0757-0449 | 6                                     | 1     | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R415 | 0757-0449 | 6                                     | 1     | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
|     | A5 R419 | 0757-0280 | 3                                     |       | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A5 R420 | 0757-0279 | 0                                     | 1     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     |         |           |                                       |       |                  |         |                |
|     | A5 R421 | 0757-0279 | 0                                     |       | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R422 | 0757-0424 | 7                                     |       | RES 1.1K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R423 | 0757-0279 | 0                                     |       | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| ł – | A5 R424 | 0698-0085 | 0                                     |       | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| 4   | 45 R425 | 0757-0278 | 9                                     | 1     | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25 |
|     |         |           |                                       |       |                  |         |                |
|     | 45 R426 | 0757-0280 | 3                                     |       |                  | 00746   | CRB14 OR CRB25 |
|     | 45 R427 | 0757-0394 |                                       |       |                  | 00746 0 | CRB14 OR CRB25 |
|     | 15 R428 | 0757-0394 |                                       |       |                  | 00746 ( | CRB14 OR CRB25 |
|     | 5 R429  | 0757-0419 | 1                                     |       |                  |         | CRB14 OR CRB25 |
| A   | 5 R430  | 0698-6347 | 9                                     | 1   1 | RES 1.5K .1% .12 | 00746 ( | CRB14 OR CRB25 |
|     |         |           |                                       |       |                  |         |                |

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R431   | 0698-6348 | 0  | 1   | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R433   | 0698-6347 | 9  | 1   | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R434   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R435   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R436   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R437   | 0698-6616 | 5  | 1   | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R438   | 0757-0465 | 6  |     | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R438*  | 0757-0463 | 4  | 1   | RES 82.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R440   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| AS DAAT   | 0000 01   |    | - 1 |                  |         |                |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|     | 110 10101 | 0030+0010   | 1 0 | 1 1 | RES 750 .1% .125 | 00746 | CRB14 OR CRB25 |
|-----|-----------|-------------|-----|-----|------------------|-------|----------------|
|     | A5 R435   | 0698-3438   | 3   | 1   | RES 147 1% .125W | 00746 | CRB14 OR CRB25 |
|     | A5 R436   | 0757-0394   | 0   | 1   | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|     |           |             | 1   |     |                  |       |                |
|     | A5 R437   | 0698-6616   | 5   | 1   | RES 750 .1% .125 | 00746 | CRB14 OR CRB25 |
|     | A5 R438   | 0757-0465   | 6   |     | RES 100K 1% .125 | 00746 | CRB14 OR CRB25 |
|     | A5 R438*  | * 0757-0463 | 4   | 1   | RES 82.5K 1% .12 | 00746 | CRB14 OR CRB25 |
| - 1 | A5 R440   | 0757-0279   | 0   | 1   | RES 3.16K 1% .12 | 00746 | CRB14 OR CRB25 |
|     | A5 R441   | 0698-3155   | 1   | 1   | RES 4.64K 1% .12 | 00746 | CRB14 OR CRB25 |
|     |           |             |     |     |                  |       |                |
|     | A5 R442   | 0698-3446   | 3   | 1   | RES 383 1% .125W | 00746 | CRB14 OR CRB25 |
|     | A5 R443   | 0757-0462   | 3   | 1   | RES 75K 1% .125W | 00746 | CRB14 OR CRB25 |
|     | A5 R444   | 0698-3268   | 7   | 1   | RES 11.5K 1% .12 | 00746 | CRB14 OR CRB25 |
|     | A5 R445   | 0698-3136   | 8   | 1   | RES 17.8K 1% .12 | 00746 | CRB14 OR CRB25 |
|     | A5 R446   | 0698-0085   | 0   | 1   | RES 2.61K 1% .12 | 00746 | CRB14 OR CRB25 |
|     |           |             |     |     |                  |       |                |
|     | A5 R447   | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |
|     | A5 R448   | 0698-3438   | 3   | 1   | RES 147 1% .125W | 00746 | CRB14 OR CRB25 |
|     | A5 R450   | 0757-0442   | 9   | 1   | RES 10K 1% .125W | 00746 | CRBI4 OR CRB25 |
| 4   | A5 R453   | 0757-0462   | 3   |     | RES 75K 1% .125W | 00746 | CRB14 OR CRB25 |
| 4   | 45 R453*  | 0698-3243   | 8   | 1   | RES 178K 1% .125 | 00746 | CRB14 OR CRB25 |
|     |           |             |     |     |                  |       |                |
| 1   | 45 R460   | 0757-0394   | 0   | 1   | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
| 4   | 45 R461   | 0757-0394   | 0   | 1   | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|     | A5 R462   | 0757-0394   | 0   | 1   | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|     | 45 R467   | 8159-0005   | 0   | 1   | RES-ZERO OHMS    | 01339 | L-2007-1       |
| A   | 15 R470   | 0698-3158   | 4   | 1   | RES 23.7K 1% .12 | 00746 | CRB14 OR CRB25 |
|     |           |             |     |     |                  |       |                |
| A   | 5 R471    | 0757-0280   | 3   | 1   | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |
| A   | 5 R473    | 0698-3446   | 3   | 1   | RES 383 1% .125W | 00746 | CRB14 OR CRB25 |
| A   | 5 R475    | 0698-3159   | 5   | 1   | RES 26.1K 1% .12 | 00746 | CRB14 OR CRB25 |
| A   | .5 R476   | 0757-0283   | 6   | 1   | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
| A   | .5 R477   | 0757-0283   | _6  | 1   | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|     |           |             |     |     |                  |       |                |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|   | Referen | HP Port     |   |    |                  | 1     |                |
|---|---------|-------------|---|----|------------------|-------|----------------|
|   |         | e HP Part # |   |    |                  | Manuf |                |
|   | A5 R479 | 1           | 6 | 1  | RES 2K 1% .125W  | _     | CRB14 OR CRB25 |
|   | A5 R480 |             | 6 | 1  | RES 2K 1% .125W  | 1     | CRB14 OR CRB25 |
|   | A5 R481 |             | 6 | 1  | RES 2K 1% .125W  | 1     | CRB14 OR CRB25 |
|   | A5 R486 |             | 6 | 1  | RES 100K 1% .125 | 00746 | CRB14 OR CRB25 |
|   | A5 R490 | 0757-0283   | 6 | 1  | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   |         |             |   |    |                  |       |                |
|   | A5 R491 | 0757-0283   | 6 | 1  | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   | A5 R492 | 0757-0283   | 6 | -1 | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   | A5 R494 | 0757-0283   | 6 | 1  | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   | A5 R496 | 0757-0283   | 6 | 1  | RES 2K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   | A5 R501 | 0757-0394   | 0 | 1  | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|   |         |             |   |    |                  |       |                |
|   | A5 R502 | 0698-4425   | 0 | 1  | RES 1.54K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A5 R503 | 0757-0422   | 5 | 1  | RES 909 1% .125W | 00746 | CRB14 OR CRB25 |
|   | A5 R504 | 0757-0280   | 3 | 1  | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   | A5 R505 | 0757-0394   | 0 | 1  | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|   | A5 R506 | 0698-3438   | 3 | 1  | RES 147 1% .125W | 00746 | CRB14 OR CRB25 |
|   |         |             |   |    |                  |       |                |
| 1 | A5 R509 | 0757-0394   | 0 | 1  | RES 51.1 1% .125 | 00746 | CRB14 OR CRB25 |
|   | A5 R510 | 0757-0279   | 0 | 1  | RES 3.16K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A5 R511 | 0698-6360   | 6 | 1  | RES 10K .1% .125 | 00746 | CRB14 OR CRB25 |
|   | A5 R512 | 0699-1011   | 6 | 1  | RES 3.32K .1% .1 | 00746 | CRB14 OR CRB25 |
|   | A5 R513 | 0698-3153   | 9 | 1  | RES 3.83K 1% .12 | 00746 | CRB14 OR CRB25 |
|   |         |             |   |    |                  |       |                |
| 1 | A5 R514 | 0757-0449   | 6 |    | RES 20K 1% .125W | 00746 | CRB14 OR CRB25 |
| £ | A5 R515 | 0757-0449   | 6 | 1  | RES 20K 1% .125W |       | CRB14 OR CRB25 |
| 1 | A5 R519 | 0757-0280   | 3 |    | RES 1K 1% .125W  |       | CRB14 OR CRB25 |
|   | A5 R520 | 0757-0279   | 0 | 1  | RES 3.16K 1% .12 |       | CRB14 OR CRB25 |
| 1 | 45 R521 | 0757-0279   | 0 | 1  | RES 3.16K 1% .12 |       | CRB14 OR CRB25 |
|   |         |             |   |    | Í                |       |                |
|   | A5 R522 | 0757-0317   | 7 | 1  | RES 1.33K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | 45 R523 | 0698-0084   | 9 | 1  | RES 2.15K 1% .12 |       | CRB14 OR CRB25 |
|   | 15 R524 | 0698-0085   | 0 |    | RES 2.61K 1% .12 | 1     | CRB14 OR CRB25 |
|   | 15 R525 | 0757-0278   | 9 |    |                  | 1     | CRB14 OR CRB25 |
| A | 5 R526  | 0757-0280   | 3 |    |                  |       | CRB14 OR CRB25 |
|   |         |             |   |    |                  |       |                |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|     | 2.6     |     |           |   |     |    | T                |         |                |
|-----|---------|-----|-----------|---|-----|----|------------------|---------|----------------|
|     | Referen | _   | HP Part   |   | D Q | ty |                  | Manuf   | 'r Part #      |
|     | A5 R52  |     | 0757-0394 | - |     | 1  | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R528 |     | 0757-0394 |   |     | 1  | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R529 | - 1 | 0757-0419 |   |     | L  | RES 681 1% .125W | V 00746 | CRB14 OR CRB25 |
|     | A5 R53( | - 1 | 0698-6347 | 9 |     | L  | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R531 |     | 0698-6348 | 0 | 1   | .  | RES 3K .1% .125W | 00746   | CRB14 OR CRB25 |
|     |         |     |           |   |     |    |                  |         |                |
|     | A5 R533 | - 1 | 0698-6347 | 9 | 1   |    | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R534 | - 1 | 0698-6616 | 5 | 1   |    | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R535 |     | 0698-3438 | 3 | 1   |    | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| - 1 | A5 R536 |     | 0757-0394 | 0 | 1   |    | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R537 |     | 0698-6616 | 5 | 1   |    | RES 750 .1% .125 | 00746   | CRB14 OR CRB25 |
|     |         |     |           |   |     |    |                  |         |                |
| 1   | A5 R538 |     | 0757-0978 | 6 | 1   |    | RES 95.3K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | A5 R539 |     | 0698-3260 | 9 | 1   |    | RES 464K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A5 R540 | 1   | 0757-0279 | 0 | 1   |    | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A5 R541 | 1   | 0698-3155 | 1 | 1   |    | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25 |
| 4   | 45 R542 |     | )698-3446 | 3 | 1   |    | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
|     |         |     |           |   |     |    |                  |         |                |
|     | 45 R543 |     | 757-0464  | 5 | 1   |    | RES 90.9K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | 15 R544 |     | 698-3268  | 7 | 1   | I  | RES 11.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | 15 R545 |     | 698-3136  | 8 | 1   | F  | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| 1   | 15 R546 | 1   | 698-0085  | 0 | 1   | F  | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25 |
| A   | 5 R547  | 0   | 757-0280  | 3 | 1   | F  | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     |         |     |           |   |     |    |                  |         |                |
|     | .5 R548 | 1   | 698-3438  | 3 | 1   | F  | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
|     | .5 R550 |     | 757-0442  | 9 | 1   | R  | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|     | 5 R551  |     | 698-8961  | 7 | 1   | R  | LES 909K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | 5 R560  | 4   | 757-0394  | 0 | 1   | R  | ES 51.1 1% .125  | 00746   | CRB14 OR CRB25 |
| A   | 5 R567  | 8:  | 159-0005  | 0 | 1   | R  | ES-ZERO OHMS     | 1       | L-2007-1       |
|     |         |     |           |   |     |    |                  |         |                |
|     | 5 R570  |     | 757-0449  | 6 | 1   | R  | ES 20K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | 5 R571  |     | 57-0280   | 3 | 1   | R  |                  |         | CRB14 OR CRB25 |
|     | 5 R573  |     | 98-3446   | 3 | 1   | R  |                  | 1       | CRB14 OR CRB25 |
| A   | 5 R575  |     | 98-3159   | 5 | 1   |    |                  |         | CRB14 OR CRB25 |
| A   | 5 R576  | 07  | 57-0283   | 6 | 1   |    |                  |         | CRB14 OR CRB25 |
|     |         |     |           |   |     |    |                  |         |                |

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Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference | HP Part #  |   |          | try Description 14 2 Description |         |                |  |  |  |
|-----------|------------|---|----------|----------------------------------|---------|----------------|--|--|--|
|           |            | 1 | <u> </u> |                                  | Manuf'r |                |  |  |  |
| A5 R577   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R579   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R580   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R581   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R590   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
|           |            |   | I        |                                  |         |                |  |  |  |
| A5 R591   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R592   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R594   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R596   | 0757-0283  | 6 | 1        | RES 2K 1% .125W                  | -       | CRB14 OR CRB25 |  |  |  |
| A5 R600   | 0757-0442  | 9 | 1        | RES 10K 1% .125W                 | 00746   | CRB14 OR CRB25 |  |  |  |
|           | 0777       |   |          |                                  |         |                |  |  |  |
| A5 R601   | 0757-0394  | 0 | 1        | RES 51.1 1% .125                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R602   | 0698-4425  | 0 | 1        | RES 1.54K 1% .12                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R603   | 0698-4422  | 7 | 1        | RES 1.27K 1% .12                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R604   | 0757-0280  | 3 | 1        | RES 1K 1% .125W                  | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R605   | 0757-0394  | 0 | 1        | RES 51.1 1% .125                 | 00746   | CRB14 OR CRB25 |  |  |  |
|           | 0000 0 100 |   | _ 1      |                                  |         |                |  |  |  |
| A5 R606   | 0698-3438  | 3 | 1        | RES 147 1% .125W                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R609   | 0757-0394  | 0 | 1        | RES 51.1 1% .125                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R610   | 0757-0279  | 0 | 1        | RES 3.16K 1% .12                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R611   | 0698-6360  | 6 | 1        | RES 10K .1% .125                 | 00746   | CRB14 OR CRB25 |  |  |  |
| A5 R612   | 0699-1011  | 6 | 1        | RES 3.32K .1% .1                 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |            |   |          |                                  |         |                |  |  |  |
| A5 R613   | 0698-3153  | 9 | 1        | RES 3.83K 1% .12                 |         | CRB14 OR CRB25 |  |  |  |
| A5 R614   | 0757-0449  | 6 |          | RES 20K 1% .125W                 | 1       | CRB14 OR CRB25 |  |  |  |
| A5 R615   | 0757-0449  | 6 |          | RES 20K 1% .125W                 |         | CRB14 OR CRB25 |  |  |  |
| A5 R619   | 0757-0280  | 3 | 1        | RES 1K 1% .125W                  |         | CRB14 OR CRB25 |  |  |  |
| A5 R620   | 0757-0279  | 0 | 1        | RES 3.16K 1% .12                 | 00746   | CRB14 OR CRB25 |  |  |  |
|           |            |   |          |                                  |         |                |  |  |  |
|           | 0757-0279  | 0 |          | RES 3.16K 1% .12                 |         | CRB14 OR CRB25 |  |  |  |
| í         | 0757-0424  | 7 |          | RES 1.1K 1% .125                 |         | CRB14 OR CRB25 |  |  |  |
|           | 0757-0279  | 0 |          | RES 3.16K 1% .12                 |         | CRB14 OR CRB25 |  |  |  |
| 1         | 0698-0085  | 0 |          | RES 2.61K 1% .12                 |         | CRB14 OR CRB25 |  |  |  |
| A5 R625   | 0757-0278  | 9 | 1        | RES 1.78K 1% .12                 | 00746   | CRB14 OR CRB25 |  |  |  |

| ļ  | Referenc | e HP Part # | CD | Qty | 7 Description      | Manuf   | Part #                           |
|----|----------|-------------|----|-----|--------------------|---------|----------------------------------|
|    | A5 R626  | 0757-0280   | 3  | 1   | RES 1K 1% .125W    | 00746   | CRB14 OR CRB25                   |
|    | A5 R627  | 0757-0394   | 0  | 1   | RES 51.1 1% .125   | 00746   | CRB14 OR CRB25                   |
|    | A5 R628  | 0757-0394   | 0  | 1   | RES 51.1 1% .125   | 00746   | CRB14 OR CRB25                   |
|    | A5 R629  | 0757-0419   | 0  | 1   | RES 681 1% .125W   | 00746   | CRB14 OR CRB25                   |
|    | A5 R630  | 0698-6347   | 9  | 1   | RES 1.5K .1% .12   | 00746   | CRB14 OR CRB25                   |
|    | A5 R631  | 0698-6348   | 0  | 1   | RES 3K .1% .125W   | 00746   | CRB14 OR CRB25                   |
| .  | A5 R633  | 0698-6347   | 9  | 1   | RES 1.5K .1% .12   | 00746   | CRB14 OR CRB25                   |
|    | A5 R634  | 0698-6616   | 5  | 1   | RES 750 .1% .125   | 00746   | CRB14 OR CRB25<br>CRB14 OR CRB25 |
|    | A5 R635  | 0698-3438   | 3  | 1   | RES 147 1% .125W   |         |                                  |
|    | 45 R636  | 0757-0394   | 0  | 1   | RES 51.1 1% .125   | 00746   | CRB14 OR CRB25                   |
|    |          |             | Ŭ  | 1   | 1005 01.1 170 .125 | 00740   | CRB14 OR CRB25                   |
|    | A5 R637  | 0698-6616   | 5  | 1   | RES 750 .1% .125   | 00746   | CRB14 OR CRB25                   |
| 1  | 15 R638  | 0757-0465   | 6  |     | RES 100K 1% .125   | 00746   | CRB14 OR CRB25                   |
|    | 15 R638* | 0757-0463   | 4  | 1   | RES 82.5K 1% .12   | 00746   | CRB14 OR CRB25                   |
|    | 15 R640  | 0757-0279   | 0  | 1   | RES 3.16K 1% .12   | 00746   | CRB14 OR CRB25                   |
| A  | 5 R641   | 0698-3155   | 1  | 1   | RES 4.64K 1% .12   | 00746   | CRB14 OR CRB25                   |
| A  | 5 R642   | 0698-3446   | 3  | 1   | RES 383 1% .125W   | 00746   | CRB14 OR CRB25                   |
| A  | .5 R643  | 0757-0462   | 3  | 1   | RES 75K 1% .125W   |         | CRB14 OR CRB25                   |
| A  | 5 R644   | 0698-3268   | 7  | 1   | RES 11.5K 1% .12   | 00746   | CRB14 OR CRB25                   |
| A  | 5 R645   | 0698-3136   | 8  | 1   | RES 17.8K 1% .12   | 00746   | CRB14 OR CRB25                   |
| A  | 5 R646   | 0698-0085   | 0  | 1   | RES 2.61K 1% .12   | 00746   | CRB14 OR CRB25                   |
|    |          |             |    |     |                    | 00140   | CRD14 OR CRB25                   |
|    | 5 R647   | 0757-0280   | 3  | 1   | RES 1K 1% .125W    | 00746   | CRB14 OR CRB25                   |
| A  | 5 R648   | 0698-3438   | 3  | 1   | RES 147 1% .125W   | 1 1     | CRB14 OR CRB25                   |
| A  | 5 R650   | 0757-0442   | 9  | 1   | RES 10K 1% .125W   |         | CRB14 OR CRB25                   |
| A  | 5 R653   | 0757-0462   | 3  |     | RES 75K 1% .125W   |         | CRB14 OR CRB25                   |
| A  | 5 R653*  | 0698-3243   | 8  | 1   | RES 178K 1% .125   |         | CRB14 OR CRB25                   |
|    | - Deco   |             |    |     |                    |         |                                  |
|    | 1        | 0757-0394   | 0  |     | RES 51.1 1% .125   |         | CRB14 OR CRB25                   |
| 1  |          | 0757-0394   | 0  |     | RES 51.1 1% .125   | 00746   | CRB14 OR CRB25                   |
|    | 1        | 8159-0005   | 0  |     | RES-ZERO OHMS      |         | L-2007-1                         |
| 1  | 1        | 0698-3158   | 1  |     | RES 23.7K 1% .12   |         | CRB14 OR CRB25                   |
| Ab | R671     | 0757-0280   | 3  | 1 ] | RES 1K 1% .125W    | 00746 ( | CRB14 OR CRB25                   |

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Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A5 R673   | 0698-3446 | 3  | 1   | RES 383 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R675   | 0698-3159 | 5  | 1   | RES 26.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R676   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R677   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R679   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R680   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R681   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R686   | 0757-0465 | 6  | 1   | RES 100K 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R690   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R691   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R692   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R694   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R696   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R701   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R702   | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R703   | 0757-0422 | 5  | 1   | RES 909 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R704   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R705   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R706   | 0698-3438 | 3  | 1   | RES 147 1% .125W | 00746   | CRB14 OR CRB25 |
| A5 R709   | 0757-0394 | 0  | 1   | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R710   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R711   | 0698-6360 | 6  | 1   | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A5 R712   | 0699-1011 | 6  | 1   | RES 3.32K .1% .1 | 00746   | CRB14 OR CRB25 |
| A5 R713   | 0698-3153 | 9  | 1   | RES 3.83K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R714   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A5 R715   | 0757-0449 | 6  |     | RES 20K 1% .125W | 1       | CRB14 OR CRB25 |
| A5 R719   | 0757-0280 | 3  |     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A5 R720   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R721   | 0757-0279 | 0  | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
| A5 R722   | 0757-0317 | 7  | 1   | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |

| Г                | Reference HP Part # |             |     |          | T     |                  |         | iot (contanded) |
|------------------|---------------------|-------------|-----|----------|-------|------------------|---------|-----------------|
| 1                |                     |             | _   | CD       | Qty   |                  | Manuf   | r Part #        |
|                  | A5 R72              | 1           |     | 9        | 1     | RES 2.15K 1% .12 | 00746   | CRB14 OR CRB25  |
| 1                | A5 R724             |             |     | 0        | 1     | RES 2.61K 1% .12 | 00746   | CRB14 OR CRB25  |
| 1                | A5 R725             | 1           |     | 9        | 1     | RES 1.78K 1% .12 | 00746   | CRB14 OR CRB25  |
| - 1              | A5 R726             |             |     | 3        | 1     | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25  |
| 4                | A5 R727             | 0757-039    | 4   | 0        | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25  |
|                  |                     |             |     |          |       |                  |         |                 |
|                  | 45 R728             |             |     | 0        | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25  |
| - 1              | 45 R729             | 1           | 1   | 0        | 1     | RES 681 1% .125W | 00746   | CRB14 OR CRB25  |
|                  | 15 R730             |             |     | 9        | 1     | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25  |
|                  | 15 R731             | 1           |     | 0        | 1     | RES 3K .1% .125W | 00746   | CRB14 OR CRB25  |
|                  | 5 R733              | 0698-6347   |     | 9        | 1     | RES 1.5K .1% .12 | 00746   | CRB14 OR CRB25  |
| .                | 5 D.00 -            |             |     |          |       |                  |         |                 |
| 1                | 5 R734              | 0698-6616   |     | 5        | 1     | RES 750 .1% .125 | 00746   | CRB14 OR CRB25  |
|                  | 5 R735              | 0698-3438   | - 1 | 3        | 1     | RES 147 1% .125W | 00746   | CRB14 OR CRB25  |
|                  | .5 R736             | 0757-0394   | 1   | 0        | 1     | RES 51.1 1% .125 | 00746   | CRB14 OR CRB25  |
|                  | 5 R737              | 0698-6616   | 1   | 5        | 1     | RES 750 .1% .125 | 00746   | CRB14 OR CRB25  |
|                  | 5 R738              | 0757-0978   |     | 6        | 1     | RES 95.3K 1% .12 | 00746   | CRB14 OR CRB25  |
|                  | 5 0790              | 0600 0000   |     |          | .     |                  |         |                 |
|                  | 5 R739<br>5 R740    | 0698-3260   |     | 9        | 1     | RES 464K 1% .125 | 00746   | CRB14 OR CRB25  |
|                  |                     | 0757-0279   |     |          | 1     | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25  |
| 1                | 5 R741              | 0698-3155   |     |          |       | RES 4.64K 1% .12 | 00746   | CRB14 OR CRB25  |
|                  | 5 R742              | 0698-3446   |     |          | 1     | RES 383 1% .125W | 00746   | CRB14 OR CRB25  |
| $ ^{\mathbf{A}}$ | 5 R743              | 0757-0464   | 5   | <b>)</b> | 1     | RES 90.9K 1% .12 | 00746   | CRB14 OR CRB25  |
|                  | 5 D744              | 0000 0000   | 1.  | .        |       |                  |         |                 |
| 1                | 5 R744<br>5 R745    | 0698-3268   | 7   |          |       | RES 11.5K 1% .12 |         | CRB14 OR CRB25  |
|                  |                     | 0698-3136   | 8   |          |       | RES 17.8K 1% .12 |         | CRB14 OR CRB25  |
|                  | R746                | 0698-0085   | 0   | - I.     | - F   | RES 2.61K 1% .12 |         | CRB14 OR CRB25  |
|                  | R747                | 0757-0280   | 3   |          |       | RES 1K 1% .125W  |         | CRB14 OR CRB25  |
| АJ               | R748                | 0698-3438   | 3   |          | 1   1 | RES 147 1% .125W | 00746   | CRB14 OR CRB25  |
|                  | D750                | 0757 0 1 10 | 1 - |          |       |                  |         |                 |
|                  | R750                | 0757-0442   | 9   |          |       |                  |         | CRB14 OR CRB25  |
|                  | R751                | 0698-8961   | 7   |          | 1     |                  |         | CRB14 OR CRB25  |
|                  | R760                | 0757-0394   | 0   |          |       |                  |         | CRB14 OR CRB25  |
|                  | R767                | 8159-0005   | 0   |          |       |                  |         | L-2007-1        |
| лэ               | R770                | 0757-0449   | 6   | 1        | F     | RES 20K 1% .125W | 00746 0 | CRB14 OR CRB25  |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

| Reference | HP Part # | CD | Qty  | Description      | Manufr | Part #         |
|-----------|-----------|----|------|------------------|--------|----------------|
| A5 R771   | 0757-0280 | 3  | 1    | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R773   | 0698-3446 | 3  | 1    | RES 383 1% .125W | 00746  | CRB14 OR CRB25 |
| A5 R775   | 0698-3159 | 5  | 1    | RES 26.1K 1% .12 | 00746  | CRB14 OR CRB25 |
| A5 R776   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R777   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |      |                  |        |                |
| A5 R779   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R780   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R781   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R790   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R791   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |           |    |      |                  |        |                |
| A5 R792   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R794   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 R796   | 0757-0283 | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A5 RA100  | 1810-0316 | 1  | 1    | NETWORK-RES DIP  | 02483  | 761-3-R10K     |
| A5 RT393  | 0837-0035 | 6  | 1    | THERMISTOR DISC  | 05098  | 35D24          |
|           |           |    |      |                  |        |                |
| A5 RT493  | 0837-0035 | 6  | 1    | THERMISTOR DISC  | 05098  | 35D24          |
| A5 RT593  | 0837-0035 | 6  | 1    | THERMISTOR DISC  | 05098  | 35D24          |
| A5 RT693  | 0837-0035 | 6  | 1    | THERMISTOR DISC  | 05098  | 35D24          |
| A5 RT793  | 0837-0035 | 6  | 1    | THERMISTOR DISC  | 05098  | 35D24          |
| A5 TP200  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
|           |           |    |      |                  |        |                |
| A5 TP311  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP312  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP323  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP324  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP411  | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
|           |           |    |      |                  |        |                |
| A5 TP423  |           | 6  |      | TERMTEST POINT   |        | 1095D          |
| A5 TP424  | •         | 6  | 1  ' | TERMTEST POINT   | 10358  | 1095D          |
|           | 0360-2264 | 6  | 1 /  | TERMTEST POINT   | 10358  | 1095D          |
|           | 0360-2264 | 6  | 1    | TERMTEST POINT   | 10358  | 1095D          |
| A5 TP523  | 0360-2264 | 6  | 1 1  | TERMTEST POINT   | 10358  | 1095D          |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|     | Referenc           | e HP Part # | CD | Qt  |                 |          | ······      |
|-----|--------------------|-------------|----|-----|-----------------|----------|-------------|
|     | A5 TP52            |             |    | +   |                 | Manufr   | <i>n</i>    |
|     | A5 1P52<br>A5 TP61 |             | 6  |     | TERMTEST POINT  | 1        | 1095D       |
|     | A5 TP62            |             | 6  | 1   | TERMTEST POINT  |          | 1095D       |
|     | A5 TP62<br>A5 TP62 |             | 6  |     | TERMTEST POINT  |          | 1095D       |
|     |                    |             | 6  | 1   | TERMTEST POINT  |          | 1095D       |
|     | A5 TP71.           | 1 0360-2264 | 6  | 1   | TERMTEST POINT  | 10358    | 1095D       |
|     |                    |             |    |     |                 |          |             |
|     | A5 TP72:           |             | 6  | 1   | TERMTEST POINT  |          | 1095D       |
|     | A5 TP724           |             | 6  | 1   | TERMTEST POINT  | 10358    | 1095D       |
|     | A5 U100            | 1820-3665   | 0  | 1   | IC-MM74HCT245N  | 01698    | SN74HCT245N |
|     | A5 U101            | 1820-3847   | 0  | 1   | IC-MM74HCT138N  | 01698    | SN74HCT138N |
|     | A5 U102            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
|     | 4 5 17100          |             |    |     |                 |          |             |
| 1   | A5 U103            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
|     | A5 U104            | 1820-3847   | 0  | 1   | IC-MM74HCT138N  | 01698    | SN74HCT138N |
| -   | A5 U105            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
|     | A5 U106            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
|     | A5 U107            | 1820-3847   | 0  | 1   | IC-MM74HCT138N  | 01698    | SN74HCT138N |
|     | 1 5 11100          | 1000 0000   | _  | _   |                 |          |             |
| 1   | A5 U108            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
| 1   | A5 U109            | 1820-3847   | 0  | 1   | IC-MM74HCT138N  |          | SN74HCT138N |
|     | A5 U110            | 1820-3082   | 5  | 1   | IC-MC74HC374N   |          | SN74HC374N  |
| 1   | A5 U111            | 1820-3082   | 5  | 1   | IC-MC74HC374N   | 01698    | SN74HC374N  |
| 1   | A5 U112            | 1818-3164   | 9  | 1   | IC X2816BP      | 10572    | X2816BP     |
|     | LE 11900           | 11000 0000  |    |     |                 |          |             |
| 1   | A5 U200            | 1NB7-8008   | 1  |     | SYNC COMP HYBRI |          | 1NB7-8008   |
| t t | A5 U201            | 1826-0544   | 0  | - 1 | IC-V RGLTR      | 02037    |             |
|     | 15 U202            | 1820-3082   | 5  |     |                 | 01698    | SN74HC374N  |
|     | 15 U203            | 1826-0550   | 8  |     |                 | 02910    | DAC08EN     |
| A   | 5 U204             | 1820-0493   | 6  | 1   | IC 307          | 03406    | LM307N      |
|     |                    |             |    |     |                 |          |             |
|     | 5 U300             | 1DP9-0002   | 0  |     |                 | 28480 1  | LDP9-0002   |
|     | .5 U301            | 1DP6-0001   | -  |     |                 | 28480 1  | LDP6-0001   |
|     | .5 U303            | 1820-4995   |    |     |                 | 06354 🗅  | IC74HC592P  |
|     | 1                  | 1820-4995   | 1  | 1   | IC-TC74HC592P   | 06354 ]] | CT4HC592P   |
| A   | .5 U305            | 1820-5067   | 0  | 1   | C-74AC74PC      |          | 4AC74PC     |

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# Table C-12. 8131A Option 020 Timing Board Parts List (continued)

|              | ference |           | CD | Qty  |                  | Manuf'r | Part #      |
|--------------|---------|-----------|----|------|------------------|---------|-------------|
|              | U306    | 1820-5067 | 0  | 1    | IC-74AC74PC      | 03406   | 74AC74PC    |
|              | U307    | 1820-3298 | 5  | 1    | IC-MM74HC32N     | 02037   | MC74HC32N   |
|              | U310    | 1826-1553 | 3  | 1    | IC 1014          | 10858   | LT1014DN    |
|              | U311    | 1826-0774 | 8  | 1    | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| A5           | U312    | 1826-1341 | 7  | 1    | D/A 12-DGT       | 03406   | DAC1232LCD  |
|              |         |           |    |      |                  |         |             |
|              | U313    | 1826-1409 | 8  | 1    | IC 1013          | 10858   | LT1013CN8   |
|              | U314    | 1826-0315 | 3  | 1    | IC 348           | 03406   | LM348N      |
|              | U318    | 1826-0916 | 0  | 1    | ANLG SW AD7511DI | 03285   | AD7511DIKN  |
|              | Ų400    | 1DP9-0001 | 9  | 1    | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5           | U401    | 1DP6-0001 | 3  | 1    | IC COUNTER 200M  | 28480   | 1DP6-0001   |
|              |         |           |    |      |                  |         |             |
| 1            | U410    | 1826-1553 | 3  | 1    | IC 1014          | 10858   | LT1014DN    |
| 1            | U411    | 1826-0774 | 8  | 1    | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
| 1            | U412    | 1826-1341 | 7  | 1    | D/A 12-DGT       | 03406   | DAC1232LCD  |
|              | U413    | 1826-1409 | 8  | 1    | IC 1013          | 10858   | LT1013CN8   |
| A5 U         | U414    | 1826-0315 | 3  | 1    | IC 348           | 03406   | LM348N      |
|              |         |           |    |      |                  |         |             |
| A5 U         | 1       | 1826-0916 | 0  | 1    | ANLG SW AD7511DI |         | AD7511DIKN  |
| A5 U         |         | 1DP9-0001 | 9  | 1    | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
| A5 U         |         | 1DP6-0001 | 3  | 1    | IC COUNTER 200M  | 28480   | 1DP6-0001   |
| A5 U         |         | 1826-1553 | 3  | 1    | IC 1014          | 10858   | LT1014DN    |
| A5 U         | 511     | 1826-0774 | 8  | 1    | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |
|              |         |           |    |      |                  |         |             |
| A5 U         |         | 1826-1341 | 7  |      | D/A 12-DGT       |         | DAC1232LCD  |
| A5 U         |         | 1826-1409 | 8  | 1    | IC 1013          |         | LT1013CN8   |
| A5 U         |         | 1826-0315 | 3  |      | IC 348           |         | LM348N      |
| A5 U         |         | 1826-0916 | 0  |      |                  |         | AD7511DIKN  |
| A5 U         | 600     | 1DP9-0001 | 9  | 1    | IC TIMG GEN 500  | 28480   | 1DP9-0001   |
|              | 601     |           |    |      |                  |         |             |
| A5 U<br>A5 U |         | 1DP6-0001 | 3  |      |                  | 4       | DP6-0001    |
| A5 U<br>A5 U |         | 1826-1553 | 3  | 1    |                  | 1       | LT1014DN    |
|              |         | 1826-0774 | 8  | - 1  |                  |         | LM385BZ-1.2 |
| A5 U         |         | 1826-1341 | 7  | 1    |                  | 1       | DAC1232LCD  |
| A5 U         | 013     | 1826-1409 | 8  | 1  1 | C 1013           | 10858 1 | LT1013CN8   |

|   | Referenc | A HP Part - |   |      |                  |         |             |   |
|---|----------|-------------|---|------|------------------|---------|-------------|---|
|   |          |             |   | +    |                  | Manuf   | r Part #    |   |
|   | A5 U614  | 0010        | 3 | 1    | IC 348           | 03406   | LM348N      | 7 |
|   | A5 U618  | 1826-0916   | 0 | 1    | ANLG SW AD7511D  | I 03285 | AD7511DIKN  |   |
|   | A5 U700  | 1DP9-0001   | 9 | 1    | IC TIMG GEN 500  | 28480   | 1DP9-0001   |   |
|   | A5 U701  | 1DP6-0001   | 3 | 1    | IC COUNTER 200M  | 28480   | 1DP6-0001   |   |
| 1 | A5 U710  | 1826-1553   | 3 | 1    | IC 1014          | 10858   | LT1014DN    |   |
|   |          |             | 1 |      |                  |         |             |   |
|   | A5 U711  | 1826-0774   | 8 | 1    | IC LM385BZ-1.2   | 03406   | LM385BZ-1.2 |   |
|   | A5 U712  | 1826-1341   | 7 | 1    | D/A 12-DGT       | 03406   | DAC1232LCD  |   |
|   | A5 U713  | 1826-1409   | 8 | 1    | IC 1013          | 10858   | LT1013CN8   |   |
|   | A5 U714  | 1826-0315   | 3 | 1    | IC 348           | 03406   | LM348N      |   |
|   | A5 U718  | 1826-0916   | 0 | 1    | ANLG SW AD7511DI |         | AD7511DIKN  |   |
|   |          |             |   |      |                  | 00200   | ADIJIDIKN   | İ |
|   | A5 VR300 | 1902-0955   | 9 | 1    | DIO-ZNR 7.5V 5%  | 02037   |             |   |
| . | A5 VR400 | 1902-0955   | 9 | 1    | DIO-ZNR 7.5V 5%  | 02037   |             |   |
|   | A5 VR500 | 1902-0955   | 9 | 1    | DIO-ZNR 7.5V 5%  | 02037   |             |   |
|   | A5 VR600 | 1902-0955   | 9 | 1    | DIO-ZNR 7.5V 5%  | 02037   |             |   |
| 4 | A5 VR700 | 1902-0955   | 9 |      | DIO-ZNR 7.5V 5%  | 02037   |             |   |
|   |          |             |   |      |                  | 02001   |             |   |
| 4 | A5 W100  | 1258-0141   | 8 | 1    | JUMPER-REM       | 01380   | 520159.0    |   |
| 4 | 45 W300  | 08131-61650 | 4 |      | CBL AY PC 15CM   |         | 530153-2    |   |
| A | A5 W301  | 08131-61655 | 9 |      |                  | 1       | 08131-61650 |   |
| A | 45 W400  | 08131-61672 | 0 |      |                  | 1       | 08131-61655 |   |
| A | 45 W500  | 08131-61670 | 8 |      |                  | 1       | 08131-61672 |   |
|   |          |             | Ĭ |      | ODD 3E1 00130-5  | 28480   | 08131-61670 |   |
| A | 5 W600   | 08131-61672 | 0 | 1    | CBL SET DELAY A  |         |             |   |
|   | 5 W700   | 08131-61671 | 9 |      |                  |         | 08131-61672 |   |
| - |          |             |   | - 10 | CBL SET DEL27-3  | 28480   | 08131-61671 |   |

Table C-12. 8131A Option 020 Timing Board Parts List (continued)

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### Channel 1 Board Option 020

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| Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-------------|----|-----|------------------|---------|-------------------|
| A26       | 08131-66527 | 4  | 1   | BD AY CHAN 1     | 28480   | 08131-66527       |
|           |             |    |     |                  |         |                   |
| A26A416   | 08131-66417 | 0  | 1   | BD AY TRANSDUCE  | 28480   | 08131-66416       |
| A26C100   | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C101   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C102   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
|           |             |    |     |                  |         |                   |
| A26C103   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C104   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C105   | 0160-5730   | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C106   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C107   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |             |    |     |                  |         |                   |
| A26C108   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C109   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V   | 02010   | MD015C104MABH     |
| A26C111   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A26C113   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A26C115   | 0160-5728   | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |

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Table C-13. 8131A Option 020 Channel 1 Board Parts List

|            |         | e HP Part | # CI | Qt  | y Description               | Man   | Manufr Part #      |  |
|------------|---------|-----------|------|-----|-----------------------------|-------|--------------------|--|
|            | A26C117 |           |      | 1   | CAP 1000pF 100              |       |                    |  |
|            | A26C119 | 1         | -    | 1   | CAP 1000pF 100              |       | B37986-J1102-J034  |  |
|            | A26C121 |           |      | 1   | CAP 1000pF 100              |       | B37986-J1102-J034  |  |
|            | A26C125 |           | -    |     | CAP 0.1uF 50 V              | 02010 | B37986-J1102-J034  |  |
|            | A26C126 |           | 7    | 1   | CAP 0.01uF 100 V            |       | SA115C104MAAH      |  |
|            |         |           |      |     | OAI 0.0101 100 V            | 02010 | SA101C103KAAH      |  |
|            | A26C127 | 0160-6500 | 7    | 1   | CAP 0.01uF 100 V            | 02010 | CA101 CLOOTE A 175 |  |
|            | A26C129 |           | 9    | 1   | CAP 1000pF 100 V            |       | SA101C103KAAH      |  |
|            | A26C130 |           | 1    | 1   | CAP 0.1uF 50 V              | 02010 | B37986-J1102-J034  |  |
|            | A26C131 |           | 1    | 1   | CAP $0.1$ uF 50 V           | 02010 | MD015C104MABH      |  |
|            | A26C132 | 0160-5332 | 1    | 1   | CAP 0.1uF 50 V              | 02010 | MD015C104MABH      |  |
|            |         |           |      |     |                             | 02010 | MD015C104MABH      |  |
|            | A26C133 | 0160-5726 | 7    | 1   | CAP 0.01uF 100 V            | 06121 | B37987-J1103-M034  |  |
|            | A26C134 | 0160-5726 | 7    | 1   | CAP 0.01uF 100 V            | 06121 | B37987-J1103-M034  |  |
|            | A26C135 | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            |       | B37986-J1102-J034  |  |
|            | A26C136 | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            | 06121 | B37986-J1102-J034  |  |
| 1          | A26C139 | 0160-5332 | 1    | 1   | CAP 0.1uF 50 V              | 02010 | MD015C104MABH      |  |
|            |         |           |      |     |                             | 02010 | MD013C104WADn      |  |
|            | A26C140 | 0160-5332 | 1    | 1   | CAP 0.1uF 50 V              | 02010 | MD015C104MABH      |  |
|            | A26C141 | 0160-6500 | 7    | 1   | CAP 0.01uF 100 V            | 02010 | SA101C103KAAH      |  |
|            | A26C142 | 0160-6500 | 7    | 1   | CAP 0.01uF 100 V            | 1     | SA101C103KAAH      |  |
| 1          | A26C143 | 0160-5332 | 1    | 1   | CAP 0.1uF 50 V              |       | MD015C104MABH      |  |
|            | 26C401  | 0160-5726 | 7    | 1   | CAP 0.01uF 100 V            |       | B37987-J1103-M034  |  |
|            |         |           |      |     |                             |       |                    |  |
| 1          | 26C402  | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            | 06121 | B37986-J1102-J034  |  |
|            | 26C403  | 0160-5726 | 7    | 1   | CAP 0.01uF 100 V            |       | B37987-J1103-M034  |  |
|            | 26C404  | 0160-5741 | 6    | 1   | CAP 47pF 100 V              | 1     | B37979-J1470-J034  |  |
|            | .26C405 | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            |       | B37986-J1102-J034  |  |
| A          | .26C407 | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            |       | B37986-J1102-J034  |  |
|            |         |           |      |     |                             |       |                    |  |
| 1          |         | 0160-5728 | 9    | 1   | CAP 1000pF 100 V            | 06121 | 337986-J1102-J034  |  |
| 1          | 1       | 0160-5728 | 9    | 1   | <b>-</b> · <b>-</b> · · · · |       | 337986-J1102-J034  |  |
| 1          |         | 0160-5730 | 3    | 1   |                             |       | B37979-J1101-J034  |  |
|            | 1       | 0160-5730 | 3    | 1 0 | <b>-</b> . <b>-</b>         |       | B37979-J1101-J034  |  |
| <u>A</u> : | 26C413  | 0160-5730 | 3    |     | ~                           |       | 337979-J1101-J034  |  |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #            |
|-----------|-----------|----|-----|------------------|---------|-------------------|
| A26C414   | 0160-5730 | 3  | 1   | CAP 100pF 100 V  | 06121   | B37979-J1101-J034 |
| A26C415   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C416   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C417   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C418   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A26C419   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C420   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C421   | 0160-5741 | 6  | 1   | CAP 47pF 100 V   | 06121   | B37979-J1470-J034 |
| A26C422   | 0160-5728 | 9  | 1   | CAP 1000pF 100 V | 06121   | B37986-J1102-J034 |
| A26C425   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
|           |           |    |     |                  |         |                   |
| A26C426   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C427   | 0160-5746 | 1  | 1   | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C429   | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C430   | 0160-5726 | 7  | 1 - | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C431   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| 1.000.000 |           | _  |     | <b></b>          |         |                   |
| A26C432   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C433   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C434   | 0160-5740 | 5  | 1   | CAP 33pF 100 V   | 06121   | B37979-J1330-J034 |
| A26C435   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C436   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| 1000107   | 0100 0500 | _  |     |                  |         |                   |
| A26C437   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C439   | 0160-3873 | 1  | 1   | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
| A26C440   | 0160-5747 | 2  | 1   | CAP 0.047uF 50 V | 06121   | B37987-J5473-M034 |
| A26C441   | 0160-5747 | 2  |     | CAP 0.047uF 50 V | 06121   | B37987-J5473-M034 |
| A26C450   | 0160-3873 | 1  | 1   | CAP 4.7pF 200 V  | 06352   | FD12C0G2D4R7D     |
| 1000151   | 0100 0500 | -  | .   |                  |         |                   |
| A26C451   | 0160-6500 | 7  |     | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
| A26C452   | 0160-6500 | 7  |     | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
| A26C453   | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V | 1       | SA101C103KAAH     |
| A26C460   | 0160-5737 | 0  | 1   | -                |         | B37979-J1680-J034 |
| A26C461   | 0160-5737 | 0  | 1   | CAP 68pF 100 V   | 06121   | B37979-J1680-J034 |

| Def                |                  | Tunn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         | 1_        |                  |         |                   |
|--------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|------------------|---------|-------------------|
|                    |                  | HP Part #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         | Qt        |                  | Manuf   | r Part #          |
| A26C4              |                  | 0160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
| A26C4              |                  | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V |         | B37986-J1102-J034 |
| A26C4              |                  | 0160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1       | 1         | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C47             |                  | 0160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
| A26C47             | 74               | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V | / 06121 | B37986-J1102-J034 |
| 1000-              | ,                | <b>A1 A1 A1 A1 A1 <b>A1 A1 <b>A1 <b>A1 <b>A1 A1 <b>A1A1 <b>A1A1 <b>A1A1 <b>A1A1 <b>A1A</b></b></b></b></b></b></b></b></b></b></b></b> |         |           |                  | 1       |                   |
| A26C47             |                  | 0160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V |         | SA101C103KAAH     |
| A26C47             | - 1              | 0160-6623                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5       | 1         | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| A26C47             |                  | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V | 1       | B37986-J1102-J034 |
| A26C47             | - 1              | 0160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C47             | 9                | 0160-6623                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5       | 1         | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH     |
| 10000              |                  | 0100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |           |                  |         |                   |
| A26C48             |                  | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V | 1       | B37986-J1102-J034 |
| A26C48             |                  | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V | 4       | B37986-J1102-J034 |
| A26C48             | 1                | 0160-5728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9       | 1         | CAP 1000pF 100 V | -       | B37986-J1102-J034 |
| A26C48:            |                  | 0160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C484            | 4   (            | 0160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1       | 1         | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| 100000             | .   .            | 100 5-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           |                  |         |                   |
| A26C485<br>A26C486 |                  | 0160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1       | 1         | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|                    |                  | 0160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1       | 1         | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C601<br>A26C604 | 1                | )160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7       | 1         | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| A26C604            |                  | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7       | 1         | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A20000             | ,   <sup>0</sup> | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7       | 1         | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034 |
| A26C606            |                  | 160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7       |           |                  |         |                   |
| A26C607            |                  | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7       |           |                  | ,       | SA101C103KAAH     |
| A26C608            |                  | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           | -                | 1       | B37987-J1103-M034 |
| A26C608            |                  | 160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 7     |           |                  |         | B37987-T5104-M11  |
| A26C610            |                  | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           | -                |         | B37987-J1103-M034 |
|                    |                  | 100-0140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1       | 1         | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
| A26C611            | 0                | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7       | 1 0       | CAP 0.01uF 100 V |         | D07007 74444      |
| A26C613            | •                | 160-5726                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           |                  |         | B37987-J1103-M034 |
| A26C614            |                  | 160-5746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           |                  |         | B37987-J1103-M034 |
| A26C615            | -                | 160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           |                  |         | B37987-T5104-M11  |
| A26C616            |                  | 160-6500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |           |                  |         | SA101C103KAAH     |
|                    |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <u></u> | <u>~ </u> |                  | 02010 5 | SA101C103KAAH     |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued) |
|---------------------------------------------------------------------|
|---------------------------------------------------------------------|

| Reference   | HP Part # | CD | Qty   | Description      | Manufr | Part #             |
|-------------|-----------|----|-------|------------------|--------|--------------------|
| A26C617     | 0160-6500 | 7  | 1     | CAP 0.01uF 100 V | 02010  | SA101C103KAAH      |
| A26C618     | 0160-5746 | 1  | 1     | CAP 0.1uF 50 V   | 06121  | B37987-T5104-M11   |
| A26CP110    | 0180-0116 | 1  | 1     | CAP 6.8uF 35 V   | 04200  | 150D685X9035B2-DYS |
| A26CP112    | 0180-0374 | 3  | 1     | CAP 10uF 20 V    | 04200  | 150D106X9020B2-DYS |
| A26CP114    | 0180-0374 | 3  | 1     | CAP 10uF 20 V    | 04200  | 150D106X9020B2-DYS |
|             |           |    |       |                  |        |                    |
| A26CP116    | 0180-0116 | 1  | 1     | CAP 6.8uF 35 V   | 04200  | 150D685X9035B2-DYS |
| A26CP118    |           | 1  | 1     | CAP 6.8uF 35 V   | 04200  | 150D685X9035B2-DYS |
| A26CP120    | 0180-0374 | 3  | 1     | CAP 10uF 20 V    | 04200  | 150D106X9020B2-DYS |
| A26CP122    |           | 3  | 1     | CAP 0.33uF 35 V  | 04200  | 150D334X9035A2-DYS |
| A26CP123    | 0180-4129 | 4  | 1     | CAP luF 35 V     | 04200  | 173D105X9035V      |
|             |           |    |       |                  |        |                    |
| A26CP128    |           | 4  | 1     | CAP luF 35 V     | 04200  | 173D105X9035V      |
| A26CP438    | 1         | 4  | 1     | CAP luF 35 V     | 04200  | 173D105X9035V      |
| A26CP439    | 0180-4129 | 4  | 1     | CAP luF 35 V     | 04200  | 173D105X9035V      |
| A26CR100    | 1901-0535 | 9  | 1     | DIO- SCHOTTKY SM | • •    | 50825511           |
| A26CR108    | 1901-0535 | 9  | 1     | DIO- SCHOTTKY SM | 02062  | 50825511           |
|             |           |    |       |                  |        |                    |
| A26CR109    |           | 9  |       | DIO- SCHOTTKY SM |        | 50825511           |
| A26CR111    | 1 1       | 9  |       | DIO- SCHOTTKY SM |        | 50825511           |
| A26CR112    |           | 9  |       | DIO- SCHOTTKY SM | 02062  | 50825511           |
| A26CR122    |           | 2  | 1     | DIO-GEN PRP      | 03406  |                    |
| A26CR123    | 1901-0535 | 9  | 1     | DIO- SCHOTTKY SM | 02062  | 50825511           |
|             |           |    |       |                  |        |                    |
| A26CR124    |           | 9  |       | DIO- SCHOTTKY SM | 02062  | 50825511           |
| A26CR125    |           | 9  |       |                  | 02062  | 50825511           |
| A26CR126    |           | 9  |       |                  | 02062  | 50825511           |
| A26CR414    |           | 2  | 1     |                  | 03406  |                    |
| A26CR415    | 1901-0732 | 8  | 1     | DIO-PWR RECT     | 02037  | SR3010-4RL         |
| A 96 CT 414 | 1001.0700 |    | .     |                  |        |                    |
| A26CR416    |           | 8  |       |                  | 1      | SR3010-4RL         |
| A26CR417    |           | 1  | 1     |                  | 00746  |                    |
| A26CR418    |           | 1  |       | 1                | 00746  |                    |
|             | 1901-1098 | 1  |       |                  | 00746  |                    |
| A26CR420    | 1901-1098 | 1  | 1   1 | DIO-1N4150       | 00746  |                    |

| Reference | e HP Part # | CD       | Qty      | Description      | Manufr  | Part #                      |
|-----------|-------------|----------|----------|------------------|---------|-----------------------------|
| A26CR60   | 1 1901-0535 | 9        | 1        | DIO- SCHOTTKY SM | 02062   | 50825511                    |
| A26CR60   | 2 1901-1098 | 1        | 1        | DIO-1N4150       | 00746   |                             |
| A26J1     | 1251-8324   | 1        | 1        | CONN-POST-TP-HDF | 2 04486 | G06M96P4BEBL-004-715        |
| A26J101   | 1251-1556   | 7        | 4        | CONN-SGL CONT    | 01075   | 006-4844-00-0-990           |
| A26J102   | 1251-1556   | 7        | 4        | CONN-SGL CONT    | 01075   | 006-4844-00-0-990           |
|           |             |          |          |                  |         |                             |
| A26J103   | 1251-4682   | 6        | 1        | CONN-POST-TP-HDR | 03394   | 1102-1-103-02               |
| A26J403   | 1252-2649   | 3        | 1        | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W     |
| A26J404   | 1252-2649   | 3        | 1        | CONN ELAST 43LG  | 09922   | NE 0.2P 43.0L 3.0H 3.6W     |
| A26J405   | 1252-2650   | 6        | 1        | CONN ELAST 30LG  | 09922   | NE 0.2P 30.0L 3.0H 3.6W     |
| A26J406   | 1252-2651   | 7        | 1        | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W      |
|           |             |          |          |                  |         |                             |
| A26J407   | 1252-2651   | 7        | 1        | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W      |
| A26J408   | 1252-2651   | 7        | 1        | CONN ELAST 5LG   | 09922   | NE 0.2P 5.0L 3.0H 3.6W      |
| A26J423   | 1252-2648   | 2        | 1        | CONN ELAST 30LG  | 09922   | NE 0.4P 30.0L 3.5H 4.2W     |
| A26J424   | 1252-2648   | 2        | 1        | CONN ELAST 30LG  | 09922   | NE 0.4P 30.0L 3.5H 4.2W     |
| A26J425   | 1252-2647   | 1        | 1        | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W     |
| A26J426   | 1252-2647   | ,        | ,        |                  |         |                             |
| A26K403   | 0955-0452   | 1        | 1        | CONN ELAST 0.4P  | 09922   | NE 0.4P 43.0L 3.5H 4.2W     |
| A26K404   | 0955-0452   | 1        | 1        | SW-COAX SMA      | 02574   | S-4845                      |
| A26L100   | 9100-1788   | 1        | 1        | SW-COAX SMA      |         | S-4845                      |
| A26L101   | 9100-1788   | 6        | 1        | CORE-FERRITE     |         | VK200 20/4B                 |
| AZULIUI   | 9100-1788   | 6        | 1        | CORE-FERRITE     | 02995   | VK200 20/4B                 |
| A26L102   | 9100-1788   | 6        | 1        | CORE-FERRITE     | 00005   | VK200 00 (AD                |
| A26L103   | 9100-1788   | 6        |          | CORE-FERRITE     | 1       | VK200 20/4B                 |
| A26L104   | 9100-1788   | 6        |          | CORE-FERRITE     | 1       | VK200 20/4B                 |
| A26L105   | 9100-1788   | 6        | I        |                  | 1       | VK200 20/4B                 |
| A26L401   | 9100-1788   |          |          | CORE-FERRITE     |         | VK200 20/4B                 |
| A201401   | 9100-2207   | 6        | 1        | L 820NH +-10%    | 03273   | 10M820K                     |
| A26L402   | 9100-2256   | 5 1      | 1        | L 560NH +-10%    | 02972   | 10 10 601                   |
| A26L403   | 9100-2257   | 6        |          |                  |         | 10M560K                     |
| A26L404   | 9100-2256   | 5        |          |                  |         | 10M820K                     |
| A26MP1    | 08131-00601 | 7        |          |                  | 1       | 10M560K                     |
| A26MP2    | 0403-0285   | 9        | 1        |                  | 4       | 08131-00601<br>5J-5018 GRAY |
| A26MP16   | 3050-0152   | 3        |          |                  | 1       | 1462                        |
| I         |             | <u> </u> | <u> </u> |                  | 04004   | 1402                        |

 Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

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Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

|     | Reference | HP Part #     | CD | Qt | <b>Description</b> | Manuf | Part #          |
|-----|-----------|---------------|----|----|--------------------|-------|-----------------|
|     | A26MP20   | 0515-0659     | 8  | 4  | SCR-MACHINE        | 05610 |                 |
|     | A26MP21   | 3050-0960     | 1  | 2  | WASHER-SHLDR 3.0   | 1     | V5359           |
|     | A26MP22   | 3050-0098     | 6  | 2  | WSHR-FL MTLC       | 04939 | AN960 C2        |
|     | A26MP14   | 1 0340-1212   | 0  | 1  | INSULATOR          | 28480 | 0340-1212       |
|     | A26MP14:  | 2 08131-21101 | 6  | 1  | HEATSINK TUB       | 28480 | 08131-21101     |
|     |           |               |    |    |                    |       |                 |
|     | A26MP143  | 1             | 2  | 1  | FRAME PLASTIC      | 28480 | 08131-40503     |
|     | A26MP144  |               | 3  | 1  | COVER              | 28480 | 08131-04104     |
|     | A26MP145  |               | 5  | 1  | DUST HYBRD COVE    | 28480 | 08131-05401     |
|     | A26MP403  |               | 2  | 1  | HEAT SINK          | 02608 | 6107B-14        |
|     | A26MP404  | 1205-0295     | 2  | 1  | HEAT SINK          | 02608 | 6107B-14        |
|     |           |               |    |    |                    |       |                 |
| - 1 |           | 1205-0295     | 2  | 1  | HEAT SINK          | 02608 | 6107B-14        |
| -   | A26MP413  |               | 2  | 1  | INSUL-XSTR         | 05447 | 3223-07FR-58-AC |
|     | A26MP414  | 1             | 2  | 1  | INSUL-XSTR         | 05447 | 3223-07FR-58-AC |
|     | A26MP415  | _             | 2  | 1  | INSUL-XSTR         | 05447 | 3223-07FR-58-AC |
|     | A26MP603  | 1205-0295     | 2  | 1  | HEAT SINK          | 02608 | 6107B-14        |
|     |           |               |    |    |                    |       |                 |
| 1   | A26MP609  |               | 0  | 1  | HEAT SINK          | 02608 | 2226B           |
|     | A26MP613  | 0340-1074     | 2  | 1  | INSUL-XSTR         | 05447 | 3223-07FR-58-AC |
| 1   | A26MP618  | 0340-1074     | 2  | 1  | INSUL-XSTR         | 05447 | 3223-07FR-58-AC |
| E.  | A26Q100   | 1854-1028     | 6  | 1  | XSTR NPN SI        | 02037 | 2N3904          |
| 1   | A26Q101   | 1853-0314     | 9  | 1  | XSTR PNP 2N2905A   | 02037 | 2N2905A         |
|     |           |               | ļ  |    |                    |       |                 |
|     | A26Q102   | 1854-0637     | 1  | 1  | XSTR NPN 2N2219A   | 02037 | 2N2219A         |
|     | A26Q401   | 1854-0583     | 6  | 1  | XSTR NPN SI        | 02037 | MPS-A18         |
|     | A26Q403   | 1854-0828     | 2  | 1  | XSTR NPN SI        | 00039 | NTD560          |
|     | 126Q404   | 1853-0468     | 4  | 1  | XSTR PNP SI DARL   | 02037 | TIP-127         |
| A   | 126Q405   | 1855-0548     | -5 | 1  | MOSFET N-CHAN      |       | BUZ71A          |
|     |           |               |    |    |                    |       |                 |
|     | 26Q406    | 1855-0751     | 2  | 1  | MOSFET N-CHAN      | 02883 | VN0808M         |
|     | 26Q411    | 1854-0583     | 6  | 1  |                    |       | MPS-A18         |
| A   | 26Q412    | 1855-0751     | 2  | 1  |                    |       | VN0808M         |
| A   | 26Q413    | 1855-0751     | 2  | 1  |                    |       | VN0808M         |
| A   | .26Q415   | 1855-0689     | 5  |    |                    | í I   | 2N5461          |

| Referenc           | UD Date "              | lan      | Te: |                                  | 1       |                   |
|--------------------|------------------------|----------|-----|----------------------------------|---------|-------------------|
|                    |                        | +        | +   |                                  | Manuf'ı |                   |
| A26Q416            |                        | 0        | 1   | XSTR PNP SI                      | 02037   | 2N3906(SEL)       |
| A26Q430            |                        | 0        | 1   | XSTR PNP SI                      | 02037   | 2N3906(SEL)       |
| A26Q431            | 1                      | 0        | 1   | XSTR PNP SI                      | 02037   | 2N3906(SEL)       |
| A26Q603            | -                      | 5        | 1   | MOSFET N-CHAN                    | 02037   | BUZ71A            |
| A26Q605            | 1854-1028              | 6        | 1   | XSTR NPN SI                      | 02037   | 2N3904            |
|                    |                        |          |     |                                  |         |                   |
| A26Q606            |                        | 2        | 1   | MOSFET N-CHAN                    | 02883   | VN0808M           |
| A26Q608            | 1853-0509              | 4        | 1   | XSTR PNP                         | 01698   | TIP42A            |
| A26Q609            | 1853-0314              | 9        | 1   | XSTR PNP 2N2905A                 | 02037   | 2N2905A           |
| A26R100            | 0757-0442              | 9        | 1   | RES 10K 1% .125W                 | 00746   | CRB14 OR CRB25    |
| A26R101            | 0757-0465              | 6        | 1   | RES 100K 1% .125                 | 00746   | CRB14 OR CRB25    |
|                    |                        | •        |     |                                  |         |                   |
| A26R102            | 0698-8827              | 4        | 1   | RES 1M 1% .125W                  | 00746   | CRB14 OR CRB25    |
| A26R105            | 0698-3452              | 1        | 1   | RES 147K 1% .125                 | 00746   | CRB14 OR CRB25    |
| A26R106            | 0698-3132              | 4        | 1   | RES 261 1% .125W                 | 00746   | CRB14 OR CRB25    |
| A26R107            | 0698-3439              | 4        | 1   | RES 178 1% .125W                 | 00746   | CRB14 OR CRB25    |
| A26R108            | 0698-6360              | 6        | 1   | RES 10K .1% .125                 | 00746   | CRB14 OR CRB25    |
| 4960100            |                        |          |     |                                  |         |                   |
| A26R109<br>A26R110 | 0698-6360              | 6        | 1   | RES 10K .1% .125                 | 00746   | CRB14 OR CRB25    |
| A26R110<br>A26R111 | 0698-6630<br>0698-6360 | 3        |     | RES 20K .1% .125                 | 00746   | CRB14 OR CRB25    |
| A26R112            | 0757-0442              | 6<br>9   |     | RES 10K .1% .125                 | 00746   | CRB14 OR CRB25    |
| A26R112            | 0698-3279              | 0        |     | RES 10K 1% .125W                 | 00746   | CRB14 OR CRB25    |
| A2010115           | 0090-3219              |          | 1   | RES 4.99K 1% .12                 | 00746   | CRB14 OR CRB25    |
| A26R114            | 0757-0439              | 4        | 1   | RES 6.81K 1% .12                 | 00740   |                   |
| A26R115            | 0757-0280              | 3        |     | RES 1K 1% .12<br>RES 1K 1% .125W |         | CRB14 OR CRB25    |
| A26R116            | 0757-0280              | 3        |     | RES 1K 1% .125W                  |         | CRB14 OR CRB25    |
| A26R117            | 0757-0280              | 3        |     | RES 1K 1% .125W                  |         | CRB14 OR CRB25    |
| A26R118            | 0757-0280              | 3        |     |                                  |         | CRB14 OR CRB25    |
|                    |                        | Ĭ        | -   | 120 III 170 .120 W               | 00740   | CRB14 OR CRB25    |
| A26R119            | 0757-0442              | 9        | 1 1 | RES 10K 1% .125W                 | 00746   | CRB14 OR CRB25    |
| A26R120            | 0757-0274              | 5        |     |                                  |         | CRB14 OR CRB25    |
| A26R121            | 0757-0438              | 3        |     |                                  |         | CRB14 OR CRB25    |
| 1                  | 0757-0278              | 9        | 1   |                                  |         | CRB14 OR CRB25    |
| 1                  |                        | 9        |     |                                  | 1       | CRB14 OR CRB25    |
|                    |                        | <b>L</b> |     |                                  |         | OILDIA OIL OILD20 |

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Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| A26R1320757-043941RES 6.81K 1% .1200746CRB14 OR CRB2A26R1350757-043941RES 6.81K 1% .1200746CRB14 OR CRB2A26R1360698-315391RES 3.83K 1% .1200746CRB14 OR CRB2A26R1400698-636061RES 1.78K 1% .1200746CRB14 OR CRB2A26R1410698-636061RES 10K .1% .12500746CRB14 OR CRB2A26R1420698-636061RES 10K .1% .12500746CRB14 OR CRB2A26R1420698-327901RES 4.99K 1% .1200746CRB14 OR CRB22A26R1440698-316191RES 38.3K 1% .1200746CRB14 OR CRB22A26R1450757-019931RES 21.5K 1% .1200746CRB14 OR CRB25A26R1460757-041671RES 511 1% .125W00746CRB14 OR CRB25A26R1480757-041671RES 511 1% .125W00746CRB14 OR CRB25A26R1490757-041671RES 511 1% .125W00746CRB14 OR CRB25A26R1400150-220641TERM 50 OHM284801250-2206A26R4011250-220641TERM 50 OHM284801250-2206A26R4020757-04291RES 1K 1% .125W00746CRB14 OR CRB25A26R4030698-355881RES 1K 1% .125W00746CRB14 OR CRB25A26R4048159-000501RES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ſ | D.f.    | TTD D · " | Te- |   |                  |         |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|-----------|-----|---|------------------|---------|----------------|
| A26R135       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 0R CRB2         A26R136       0698-3153       9       1       RES 3.83K 1% .12       00746       CRB14 0R CRB2         A26R137       0757-0278       9       1       RES 1.78K 1% .12       00746       CRB14 0R CRB2         A26R140       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 0R CRB2         A26R141       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 0R CRB2         A26R142       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 0R CRB2         A26R144       0698-3161       9       1       RES 21.5K 1% .12       00746       CRB14 0R CRB2         A26R145       0757-0199       3       1       RES 511 1% .125W       00746       CRB14 0R CRB2         A26R146       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 0R CRB25         A26R148       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 0R CRB25         A26R149       0757-0442       9       1       RES 511 1% .125W       00746       CRB14 0R CRB25 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th>Manuf'ı</th><th>Part #</th></td<>                                                                              |   |         |           |     |   |                  | Manuf'ı | Part #         |
| A26R136         0698-3153         9         1         RES 3.83K 1% .12         00746         CRB14 0R CRB2           A26R137         0757-0278         9         1         RES 1.78K 1% .12         00746         CRB14 0R CRB2           A26R140         0698-6360         6         1         RES 10K .1% .125         00746         CRB14 0R CRB2           A26R141         0698-6360         6         1         RES 10K .1% .125         00746         CRB14 0R CRB2           A26R142         0698-3279         0         1         RES 4.99K 1% .12         00746         CRB14 0R CRB2           A26R144         0698-3161         9         1         RES 21.5K 1% .12         00746         CRB14 0R CRB2           A26R145         0757-019         3         1         RES 21.5K 1% .12         00746         CRB14 0R CRB2           A26R146         0757-0416         7         1         RES 10K 1% .125W         00746         CRB14 0R CRB25           A26R149         0757-0416         7         1         RES 511 1% .125W         00746         CRB14 0R CRB25           A26R150         0757-0442         9         1         RES 511 1% .125W         00746         CRB14 0R CRB25           A26R150         0757-0442 <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td>00746</td><td>CRB14 OR CRB25</td></td<> |   |         |           |     | - |                  | 00746   | CRB14 OR CRB25 |
| A26R137       0757-0278       9       1       RES 1.78K 1% 12       00746       CRB14 OR CRB2         A26R140       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB2         A26R141       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 OR CRB2         A26R142       0698-3279       0       1       RES 4.99K 1% .12       00746       CRB14 OR CRB2         A26R144       0698-3161       9       1       RES 21.5K 1% .12       00746       CRB14 OR CRB2         A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 OR CRB2         A26R146       0757-0416       7       1       RES 111% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R402                                                                                                                                                                                         |   |         |           | 1   | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R140       0698-6360       6       1       RES 10K 176 12       00746       CRB14 0R CRB2         A26R141       0698-6360       6       1       RES 10K .1% .125       00746       CRB14 0R CRB2         A26R142       0698-3279       0       1       RES 4.99K 1% .12       00746       CRB14 0R CRB2         A26R142       0698-3161       9       1       RES 38.3K 1% .12       00746       CRB14 0R CRB2         A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 0R CRB2         A26R146       0757-0416       7       1       RES 17.8K 1% .12       00746       CRB14 0R CRB25         A26R148       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 0R CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 0R CRB25         A26R157       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 0R CRB25         A26R150       0757-0416       7       1       RES 510 K 1% .125W       00746       CRB14 0R CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R40                                                                                                                                                                             |   |         | 1         | 9   | 1 | 1                | 00746   | CRB14 OR CRB25 |
| A26R141       0698-6360       6       1       RES 10K 1% 125       00746       CRB14 OR CRB2         A26R142       0698-3279       0       1       RES 4.99K 1% .12       00746       CRB14 OR CRB2         A26R144       0698-3161       9       1       RES 38.3K 1% .12       00746       CRB14 OR CRB2         A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 OR CRB2         A26R146       0757-0416       7       1       RES 17.8K 1% .12       00746       CRB14 OR CRB2         A26R148       0757-0416       7       1       RES 17.8K 1% .12       00746       CRB14 OR CRB2         A26R149       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB2         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402 <td></td> <td></td> <td></td> <td>9</td> <td>1</td> <td></td> <td>00746</td> <td>CRB14 OR CRB25</td>                                                                           |   |         |           | 9   | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R1410698-636061RES 10K .1% .125<br>RES 4.99K 1% .1200746<br>00746CRB14 OR CRB22<br>CRB14 OR CRB24<br>OR46A26R1420698-316191RES 38.3K 1% .12<br>RES 38.3K 1% .1200746CRB14 OR CRB24<br>CRB14 OR CRB24<br>OR766A26R1450757-019931RES 21.5K 1% .12<br>RES 511 1% .125W00746CRB14 OR CRB24<br>CRB14 OR CRB25A26R1470698-313681RES 17.8K 1% .12<br>RES 10K 1% .125W00746CRB14 OR CRB25<br>CRB14 OR CRB25A26R1480757-044291RES 10K 1% .125W<br>RES 511 1% .125W00746CRB14 OR CRB25<br>CRB14 OR CRB25A26R1500757-041671RES 511 1% .125W<br>RES 511 1% .125W00746CRB14 OR CRB25<br>CRB14 OR CRB25A26R1570757-044291TERM 50 OHM<br>RES 10K 1% .125W284801250-2206A26R2001250-220641TERM 50 OHM<br>RES 357 1% .125W284801250-2206A26R4008159-000501RES 357 1% .125W00746CRB14 OR CRB25A26R4020757-028031RES 4.02K 1% .12<br>RES 357 1% .125W00746CRB14 OR CRB25A26R4030698-355881RES 4.02K 1% .12<br>RES 511 1% .125W00746CRB14 OR CRB25A26R4030698-355881RES 20K 1% .125W00746CRB14 OR CRB25A26R4048159-000501RES 20K 1% .125W00746CRB14 OR CRB25A26R4050757-041671RES 511 1% .125W<                                                                                                                                                                                                                                                                              |   | A26R140 | 0698-6360 | 6   | 1 | RES 10K .1% .125 | 00746   | CRB14 OR CRB25 |
| A26R142       0698-3279       0       1       RES 4.99K 1% .12       00746       CRB14 OR CRB24         A26R144       0698-3161       9       1       RES 38.3K 1% .12       00746       CRB14 OR CRB24         A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 OR CRB25         A26R146       0757-0416       7       1       RES 21.5K 1% .12       00746       CRB14 OR CRB25         A26R147       0698-3136       8       1       RES 17.8K 1% .12       00746       CRB14 OR CRB25         A26R148       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 111% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26                                                                                                                                                                             |   |         |           |     |   |                  |         |                |
| A26R144       0698-3161       9       1       RES 38.3K 1% .12       00746       CRB14 OR CRB22         A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 OR CRB22         A26R146       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB22         A26R147       0698-3136       8       1       RES 17.8K 1% .12       00746       CRB14 OR CRB25         A26R148       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES 2ERO OHMS       01339       L-2007-1         A26R401       0698-3558       8       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R403 <td></td> <td></td> <td></td> <td>6</td> <td>1</td> <td></td> <td>00746</td> <td>CRB14 OR CRB25</td>                                                                           |   |         |           | 6   | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R145       0757-0199       3       1       RES 21.5K 1% .12       00746       CRB14 OR CRB24         A26R146       0757-0416       7       1       RES 21.5K 1% .12       00746       CRB14 OR CRB25         A26R147       0698-3136       8       1       RES 17.8K 1% .12       00746       CRB14 OR CRB25         A26R148       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R100       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES 257 1% .125W       00746       CRB14 OR CRB25         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A                                                                                                                                                                             | 1 |         | ſ         | 1 1 | 1 | 1                | 00746   | CRB14 OR CRB25 |
| A26R146       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R147       0698-3136       8       1       RES 17.8K 1% .12       00746       CRB14 OR CRB25         A26R148       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R100       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 11 1% .125W       00746       CRB14 OR CRB25         A26R405                                                                                                                                                                                  | 1 |         |           |     | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R147       0698-3136       8       1       RES 17.8K 1% .12       00746       CRB14 OR CRB25         A26R148       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0422       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R100       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES-ZERO OHMS       01339       L-2007-1         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-04                                                                                                                                                                                      |   |         | 1         |     | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R148       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406 <td>ŀ</td> <td>A26R146</td> <td>0757-0416</td> <td>7</td> <td>1</td> <td>RES 511 1% .125W</td> <td>00746</td> <td>CRB14 OR CRB25</td>                                          | ŀ | A26R146 | 0757-0416 | 7   | 1 | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R148       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>                                                                                                 |   |         |           |     |   |                  |         |                |
| A26R148       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R300       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R406 <t< td=""><td></td><td></td><td>1</td><td></td><td>1</td><td>RES 17.8K 1% .12</td><td>00746</td><td>CRB14 OR CRB25</td></t<>                                                              |   |         | 1         |     | 1 | RES 17.8K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R149       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R150       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R300       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 20K 1% .12       00746       CRB14 OR CRB25         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406                                                                                                                                                                                             |   |         | 1 1       |     | 1 | RES 10K 1% .125W | 00746   |                |
| A26R157       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R401       0698-3242       7       1       RES 357 1% .125W       01339       L-2007-1         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R405       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R407<                                                                                                                                                                             |   |         | 1 1       |     | 1 |                  | 00746   | CRB14 OR CRB25 |
| A26R200       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R300       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416                                                                                                                                                                                             |   |         | 0757-0416 |     | 1 | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R300       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 72ERO OHMS       01339       L-2007-1         A26R404       8159-0005       0       1       RES 72ERO OHMS       00746       CRB14 OR CRB25         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410 <t< td=""><td>4</td><td>A26R157</td><td>0757-0442</td><td>9</td><td>1</td><td>RES 10K 1% .125W</td><td>00746</td><td>CRB14 OR CRB25</td></t<>                                             | 4 | A26R157 | 0757-0442 | 9   | 1 | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R300       1250-2206       4       1       TERM 50 OHM       28480       1250-2206         A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES 72ERO OHMS       01339       L-2007-1         A26R404       8159-0005       0       1       RES 72ERO OHMS       00746       CRB14 OR CRB25         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>                                                                                                   |   |         |           |     |   |                  |         |                |
| A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R410 <td></td> <td></td> <td></td> <td>4</td> <td>1</td> <td>TERM 50 OHM</td> <td>28480</td> <td>1250-2206</td>                                                                     |   |         |           | 4   | 1 | TERM 50 OHM      | 28480   | 1250-2206      |
| A26R400       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R401       0698-3242       7       1       RES 357 1% .125W       00746       CRB14 OR CRB25         A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 215K 1% .12       00746       CRB14 OR CRB25         A26R411       <                                                                                                                                                                                  | 1 |         |           | 4   | 1 | TERM 50 OHM      | 28480   | 1250-2206      |
| A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A                                                                                                                                                                             | 1 |         | 8159-0005 | 0   | 1 | RES-ZERO OHMS    | 01339   |                |
| A26R402       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0449       6       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A                                                                                                                                                                             | 1 |         | 0698-3242 | 7   | 1 | RES 357 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R403       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CRB25         A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 2.0K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25 <td>A</td> <td>26R402</td> <td>0757-0280</td> <td>3</td> <td>1</td> <td>RES 1K 1% .125W</td> <td>00746</td> <td></td>                                                               | A | 26R402  | 0757-0280 | 3   | 1 | RES 1K 1% .125W  | 00746   |                |
| A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                              |   |         |           |     |   |                  |         |                |
| A26R404       8159-0005       0       1       RES-ZERO OHMS       01339       L-2007-1         A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   | 1       | 0698-3558 | 8   | 1 | RES 4.02K 1% .12 | 00746   | CRB14 OR CRB25 |
| A26R405       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   | 1       | 8159-0005 | 0   | 1 | RES-ZERO OHMS    |         |                |
| A26R406       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRB25         A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ( |         | 0757-0416 | 7   | 1 | RES 511 1% .125W |         |                |
| A26R407       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R408       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRB25         A26R410       0698-0084       9       1       RES 2.15K 1% .12       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25         A26R411       0757-0449       6       1       RES 20K 1% .125W       00746       CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A | 26R406  | 0757-0442 | 9   | 1 | RES 10K 1% .125W |         |                |
| A26R408         0757-0416         7         1         RES 511 1% .125W         00746         CRB14 OR CRB25           A26R410         0698-0084         9         1         RES 2.15K 1% .12         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A | 26R407  | 0757-0449 | 6   | 1 | RES 20K 1% .125W |         |                |
| A26R410         0698-0084         9         1         RES 2.15K 1% .12         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |         |           |     |   |                  | -       |                |
| A26R410         0698-0084         9         1         RES 2.15K 1% .12         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25           A26R411         0757-0449         6         1         RES 20K 1% .125W         00746         CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Α | 26R408  | 0757-0416 | 7   | 1 | RES 511 1% .125W | 00746   | CRB14 OR CRB25 |
| A26R411 0757-0449 6 1 RES 20K 1% .125W 00746 CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A | 26R410  | 0698-0084 | 9   | 1 | RES 2.15K 1% .12 | 1       |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A | 26R411  | 0757-0449 | 6   | 1 | RES 20K 1% .125W | 1       |                |
| A2010412 0131-0442 9 1 KES 10K 1% .125W 00746 CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A | 26R412  | 0757-0442 | 9   |   |                  | 1       | CRB14 OR CRB25 |
| A26R413 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A | 26R413  | 0757-0442 | 9   |   |                  | 1       |                |

|     | Referen  | HDD / "     | 10- |              |                  | <u> </u> |                |
|-----|----------|-------------|-----|--------------|------------------|----------|----------------|
|     |          | e HP Part # | +   | Qt           |                  | Manuf    | r Part #       |
|     | A26R414  |             | 0   | 1            | RES 3.16K 1% .12 | 00746    | CRB14 OR CRB25 |
|     | A26R415  | 1           | 3   | 1            | RES 1K 1% .125W  | -        | CRB14 OR CRB25 |
|     | A26R416  |             | 3   | 1            | RES 1K 1% .125W  |          | CRB14 OR CRB25 |
|     | A26R417  |             | 3   | 1            | RES 1K 1% .125W  |          | CRB14 OR CRB25 |
|     | A26R418  | 0757-0280   | 3   | 1            | RES 1K 1% .125W  | 00746    | CRB14 OR CRB25 |
|     |          |             |     |              |                  |          |                |
|     | A26R419  | 0757-0438   | 3   | 1            | RES 5.11K 1% .12 | 00746    | CRB14 OR CRB25 |
|     | A26R420  | 0757-0442   | 9   | 1            | RES 10K 1% .125W | 1        | CRB14 OR CRB25 |
|     | A26R421  | 0757-0442   | 9   | 1            | RES 10K 1% .125W |          | CRB14 OR CRB25 |
|     | A26R422  | 0757-0416   | 7   | 1            | RES 511 1% .125W | 1        | CRB14 OR CRB25 |
|     | A26R423  | 0757-0442   | 9   | 1            | RES 10K 1% .125W | 00746    | CRB14 OR CRB25 |
|     |          |             |     |              |                  |          |                |
| 1   | A26R424  | 0698-4477   | 2   | 1            | RES 10.5K 1% .12 | 00746    | CRB14 OR CRB25 |
|     | A26R425  | 0698-4445   | 4   | 1            | RES 5.76K 1% .12 | 00746    | CRB14 OR CRB25 |
| 1   | A26R426  | 0698-3153   | 9   | 1            | RES 3.83K 1% .12 | 00746    | CRB14 OR CRB25 |
|     | A26R427  | 0757-0442   | 9   | 1            | RES 10K 1% .125W | 00746    | CRB14 OR CRB25 |
| -   | A26R428  | 0698-3430   | 5   | 1            | RES 21.5 1% .125 | 00746    | CRB14 OR CRB25 |
|     |          |             |     |              |                  |          |                |
|     | A26R429  | 0757-0284   | 7.  | 1            | RES 150 1% .125W | 00746    | CRB14 OR CRB25 |
|     | A26R430  | 0757-0442   | 9   | 1            | RES 10K 1% .125W | 00746    | CRB14 OR CRB25 |
|     | A26R431  | 0757-0442   | 9   | 1            | RES 10K 1% .125W | 00746    | CRB14 OR CRB25 |
|     | A26R432  | 0698-3446   | 3   | 1            | RES 383 1% .125W | 00746    | CRB14 OR CRB25 |
| A   | A26R434  | 0757-0999   | 1   | 1            | RES 47.5 1% .5W  | 01074    | H2             |
|     |          |             |     |              |                  |          |                |
|     |          | 0757-0401   | 0   | - 1          | RES 100 1% .125W | 00746    | CRB14 OR CRB25 |
| 1   | 1        | 0698-0085   | 0   | 1            | RES 2.61K 1% .12 |          | CRB14 OR CRB25 |
| - E |          | 0757-0442   | 9   |              | RES 10K 1% .125W |          | CRB14 OR CRB25 |
| 1   |          | 0757-0401   | 0   | I            | RES 100 1% .125W |          | CRB14 OR CRB25 |
| A   | 26R439   | 0757-0442   | 9   | 1            | RES 10K 1% .125W |          | CRB14 OR CRB25 |
|     |          |             |     |              |                  |          |                |
|     | 1        | 0757-0444   |     |              | RES 12.1K 1% .12 | 00746    | CRB14 OR CRB25 |
|     |          | 0757-0280   | - 1 | 1            | RES 1K 1% .125W  |          | CRB14 OR CRB25 |
|     |          |             | 9   | 1   1        | RES 10K 1% .125W |          | CRB14 OR CRB25 |
|     |          |             | 9   | 1   1        | RES 10K 1% .125W |          | CRB14 OR CRB25 |
| A   | 26R444 ( | 0757-0421   | 4   | <u>ı   1</u> | RES 825 1% .125W |          | CRB14 OR CRB25 |
|     |          |             |     |              |                  | I        |                |

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Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| Reference                             | HP Part #   | CD       | 0.  | Description      |        |                |
|---------------------------------------|-------------|----------|-----|------------------|--------|----------------|
| · · · · · · · · · · · · · · · · · · · | - <u>+"</u> | <u> </u> | Qty | 1                | Manufr | 0              |
| A26R445                               | 0698-3152   | 8        | 1   | RES 3.48K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R446                               | 0757-0290   | 5        | 1   | RES 6.19K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R447                               | 0757-0444   | 1        | 1   | RES 12.1K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R448                               | 0698-3156   | 2        | 1   | RES 14.7K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R449                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| 4.000 450                             | 0777 0110   |          | _   |                  |        |                |
| A26R450                               | 0757-0440   | 7        | 1   | RES 7.5K 1% .125 | 00746  | CRB14 OR CRB25 |
| A26R451                               | 0698-4469   | 2        | 1   | RES 1.15K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R452                               | 0757-0428   | 1        | 1   | RES 1.62K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R453                               | 0757-0290   | 5        | 1   | RES 6.19K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R454                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R456                               | 0600 2444   | ,        |     |                  |        |                |
| A26R456                               | 0698-3444   | 1        | 1   | RES 316 1% .125W | 00746  | CRB14 OR CRB25 |
| 1                                     | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R458                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R459                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R460                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| ADEDAGA                               | 0757 0490   |          |     |                  |        |                |
| A26R464<br>A26R465                    | 0757-0439   | 4        | 1   | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
|                                       | 0698-0085   | 0        | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R466                               | 0698-0085   | 0        | 1   | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
| A26R467                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R468                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|                                       | 0757 0410   | _        |     |                  |        |                |
| A26R469                               | 0757-0416   | 7        | 1   | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A26R470                               | 0698-4448   | 7        | 1   | RES 294 1% .125W | 1      | CRB14 OR CRB25 |
| A26R471                               | 0698-3438   | 3        | 1   | RES 147 1% .125W |        | CRB14 OR CRB25 |
| A26R472                               | 0698-4037   | 0        |     |                  | 1      | CRB14 OR CRB25 |
| A26R473                               | 0757-0442   | 9        | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A 96D 474                             | 0757 0 1 10 |          |     | DD0 1077 177     |        |                |
| A26R474                               | 0757-0442   | 9        |     |                  | 1      | CRB14 OR CRB25 |
| A26R475                               | 0757-1094   | 9        | 1   |                  |        | CRB14 OR CRB25 |
| A26R476                               | 0698-3439   | 4        |     |                  |        | CRB14 OR CRB25 |
|                                       | 0698-3444   | 1        |     |                  | 1      | CRB14 OR CRB25 |
| A26R478                               | 0698-3444   | 1        | 1   | RES 316 1% .125W | 00746  | CRB14 OR CRB25 |

| Referen   | ce HP Part  | # CD     |       |                                   |         |                |
|-----------|-------------|----------|-------|-----------------------------------|---------|----------------|
| A26R47    |             |          | +     |                                   | Manuf   |                |
| A26R48    |             |          |       | RES 10K 1% .125V                  |         | CRB14 OR CRB25 |
| A26R48    | 1           | 1 -      | 1     | RES 10K 1% .125V                  | -       | CRB14 OR CRB25 |
| A26R48    |             |          | 1     | RES 6.81K 1% .12                  | 00746   | CRB14 OR CRB25 |
|           |             | -        | 1     | RES 10K 1% .125W                  |         | CRB14 OR CRB25 |
| A26R48    | 7 0757-0442 | 9        | 1     | RES 10K 1% .125W                  | / 00746 | CRB14 OR CRB25 |
| A26R48    | 0757 0000   |          |       |                                   |         |                |
| A26R48    |             |          | 1     | RES 1K 1% .125W                   | 00746   | CRB14 OR CRB25 |
| A26R48    |             |          | 1     | RES 1K 1% .125W                   | 00746   | CRB14 OR CRB25 |
| A26R49    | 1           | 9        | 1     | RES 10K 1% .125W                  | -       | CRB14 OR CRB25 |
| A26R491   |             | 9        | 1     | RES 10K 1% .125W                  |         | CRB14 OR CRB25 |
| A20R492   | 2 0757-0466 | 7        | 1     | RES 110K 1% .125                  | 00746   | CRB14 OR CRB25 |
| A26R493   | 0600 2515   |          |       |                                   |         |                |
| A26R493   | 1           | 7        | 1     | RES 5.9K 1% .125                  | 00746   | CRB14 OR CRB25 |
| A26R494   |             | 7        | 1     | RES 511 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A26R498   |             | 9        | 1     | RES 10K 1% .125W                  |         | CRB14 OR CRB25 |
| A26R500   |             | 9        | 1     | RES 10K 1% .125W                  | 1       | CRB14 OR CRB25 |
| A200300   | 0757-0442   | 9        | 1     | RES 10K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A26R501   | 0757-0441   | 8        | 1     | DEC 9 DEV 107 10                  |         |                |
| A26R504   | 8159-0005   | 0        | 1     | RES 8.25K 1% .12<br>RES-ZERO OHMS | 00746   | CRB14 OR CRB25 |
| A26R508   | 0757-0442   | 9        |       |                                   |         | L-2007-1       |
| A26R509   | 0757-0441   | 8        |       | RES 10K 1% .125W                  |         | CRB14 OR CRB25 |
| A26R510   | 0757-0438   | 3        |       | RES 8.25K 1% .12                  |         | CRB14 OR CRB25 |
| 112010010 | 0101-0400   | l o l    |       | RES 5.11K 1% .12                  | 00746   | CRB14 OR CRB25 |
| A26R511   | 0683-2265   | 1        | 1     | RES 22M 5% .25W                   | 01607   | CDOOAT         |
| A26R512   | 0698-8958   | 2        | 1     |                                   | í       | CB2265         |
| A26R513   | 0683-2265   |          | 1     |                                   |         | CRB14 OR CRB25 |
| A26R514   | 0698-8958   | 2        |       |                                   |         | CB2265         |
| A26R519   | 0757-0280   | 3        |       |                                   | 1       | CRB14 OR CRB25 |
|           |             |          | -   - |                                   | 00740 1 | CRB14 OR CRB25 |
| A26R520   | 0757-0442   | 9        | 1   I | RES 10K 1% .125W                  | 00746   | CRB14 OR CRB25 |
| A26R521   | 8159-0005   | 0        |       |                                   |         | -2007-1        |
| A26R523   | 0698-3242   | 7        |       |                                   | 1       | CRB14 OR CRB25 |
| A26R524   | 0757-0416   | 7        | 1     |                                   |         | CRB14 OR CRB25 |
| A26R525   | 0757-0283   | 6        |       |                                   |         | CRB14 OR CRB25 |
|           |             | <b>I</b> |       |                                   |         | TIDIA ON UNB20 |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| Reference         HP Part #         CD         Qty         Description         Manuf'r         Part #           A26R526         0698-3488         3         1         RES 442 1% .125W         00746         CRB14 OR CR           A26R527         0698-3488         3         1         RES 442 1% .125W         00746         CRB14 OR CR           A26R530         0698-3558         8         1         RES 4.02K 1% .12         00746         CRB14 OR CR           A26R531         0757-0283         6         1         RES 2.K 1% .125W         00746         CRB14 OR CR           A26R532         0698-0085         0         1         RES 2.61K 1% .12         00746         CRB14 OR CR           A26R540         0757-0407         6         1         RES 200 1% .125W         00746         CRB14 OR CR           A26R550         0757-0407         6         1         RES 200 1% .125W         00746         CRB14 OR CR           A26R551         0757-0407         6         1         RES 11% .125W         00746         CRB14 OR CR           A26R551         0757-0442         9         1         RES 10K 1% .125W         00746         CRB14 OR CR           A26R552         0757-0442         9         1 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A26R527       0698-3488       3       1       RES 442 1% .125W       00746       CRB14 OR CR         A26R530       0698-3558       8       1       RES 4.02K 1% .12       00746       CRB14 OR CR         A26R531       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CR         A26R532       0698-0085       0       1       RES 2.61K 1% .12       00746       CRB14 OR CR         A26R540       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R551       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       07                                                                |
| A26R530       0698-3558       8       1       RES 4.02K 1% .125W       00746       CRB14 OR CR         A26R531       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CR         A26R532       0698-0085       0       1       RES 2.61K 1% .12       00746       CRB14 OR CR         A26R540       0757-0407       6       1       RES 2.00 1% .125W       00746       CRB14 OR CR         A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0416       7       1       RES 11 % .125W       00746       CRB14 OR CR         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0                                                                |
| A26R531       0757-0283       6       1       RES 2K 1% .125W       00746       CRB14 OR CR         A26R532       0698-0085       0       1       RES 2.61K 1% .12       00746       CRB14 OR CR         A26R540       0757-0407       6       1       RES 2.00 1% .125W       00746       CRB14 OR CR         A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R551       0757-0416       7       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R560       0                                                                |
| A26R532       0698-0085       0       1       RES 2.61K 1% .12       00746       CRB14 OR CR         A26R540       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR         A26R550       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CR         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR         A26R560       0                                                                |
| A26R540       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR.         A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR.         A26R550       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CR.         A26R550       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CR.         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR.         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR.         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR.         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR.         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CR.         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CR.                                                                                                                                                                                   |
| A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CRI         A26R550       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRI         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R560       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRI                                                                                                                                                                                   |
| A26R541       0757-0407       6       1       RES 200 1% .125W       00746       CRB14 OR CRI         A26R550       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRI         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R560       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRI                                                                                                                                                                                   |
| A26R550       0757-0416       7       1       RES 511 1% .125W       00746       CRB14 OR CRI         A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRI         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRI                                                                                                                                                                                                                                                                                                                                                                                               |
| A26R551       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| A26R552       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRH         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRH         A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRH         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRH         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| A26R553       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R554       0757-0442       9       1       RES 10K 1% .125W       00746       CRB14 OR CRE         A26R560       0757-0439       4       1       RES 6.81K 1% .12       00746       CRB14 OR CRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R554         0757-0442         9         1         RES 10K 1% .125W         00746         CRB14 OR CRE           A26R560         0757-0439         4         1         RES 6.81K 1% .12         00746         CRB14 OR CRE           A26R561         0757-0439         4         1         RES 6.81K 1% .12         00746         CRB14 OR CRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| A26R554         0757-0442         9         1         RES 10K 1% .125W         00746         CRB14 OR CRE           A26R560         0757-0439         4         1         RES 6.81K 1% .12         00746         CRB14 OR CRE           A26R561         0757-0439         4         1         RES 6.81K 1% .12         00746         CRB14 OR CRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| A26R560 0757-0439 4 1 RES 6.81K 1% .12 00746 CRB14 OR CRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A260561 0757 0440 2 1 125 0.011 170.12 00140 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A20K50     /57-  449     0     1   DEC   07/  107   107  107  107  107  107  10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A26R562 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A26R563 0757-0439 4 1 RES 6.81K 1% .12 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R564 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R565 0757-0442 9 1 RES 10K 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R566 0757-0439 4 1 RES 6.81K 1% .12 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R567 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A26R568 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| A26R569 0757-0444 1 1 RES 12.1K 1% .12 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R570 0698-4123 5 1 RES 499 1% .125W 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R571 0698-3159 5 1 RES 26.1K 1% .12 00746 CRB14 OR CRB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R572 0698-3159 5 1 RES 26.1K 1% .12 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A26R573 0698-4123 5 1 RES 499 1% .125W 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| A26R574 0698-4123 5 1 RES 499 1% .125W 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| A26R575 0757-0280 3 1 RES 1K 1% .125W 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| A26R576 0757-0123 3 1 RES 34.8K 1% .12 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| A26R577 0757-0123 3 1 RES 34.8K 1% .12 00746 CRB14 OR CRB2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

| Referenc | e HP Part # | CD | Qty | Description      | Manufr | Der H                                 |
|----------|-------------|----|-----|------------------|--------|---------------------------------------|
| A26R588  |             | 9  | 1   |                  |        | · · · · · · · · · · · · · · · · · · · |
| A26R604  |             | 9  |     | RES 39.2 1% .5W  | 01074  | H2                                    |
| 1        |             |    | 1   | RES 10K 1% .125W | 1      | CRB14 OR CRB25                        |
| A26R607  |             | 9  | 1   | RES 10K 1% .125W | 1      | CRB14 OR CRB25                        |
| A26R608  |             | 6  | 1   | RES 20K 1% .125W |        | CRB14 OR CRB25                        |
| A26R609  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
|          |             |    |     |                  | 1      |                                       |
| A26R610  |             | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R612  |             | 3  | 1   | RES 21.5K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R613  |             | 0  | 1   | RES 1.54K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R614  | 0698-6630   | 3  | 1   | RES 20K .1% .125 | 00746  | CRB14 OR CRB25                        |
| A26R615  | 0698-6624   | 5  | 1   | RES 2K .1% .125W | 00746  | CRB14 OR CRB25                        |
|          |             |    |     |                  |        |                                       |
| A26R617  | 0698-4437   | 4  | 1   | RES 2.94K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R618  | 0757-0200   | 7  | 1   | RES 5.62K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R621  | 0757-0444   | 1  | 1   | RES 12.1K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R622  | 0757-0283   | 6  | 1   | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25                        |
| A26R624  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
|          |             |    |     |                  |        |                                       |
| A26R625  | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25                        |
| A26R626  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R628  | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R629  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R630  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
|          |             |    |     |                  |        |                                       |
| A26R631  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R632  | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R633  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R635  | 0698-3444   | 1  | 1   | RES 316 1% .125W | 00746  | CRB14 OR CRB25                        |
| A26R636  | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25                        |
|          |             |    |     |                  |        |                                       |
| A26R639  | 0757-0441   | 8  | 1   | RES 8.25K 1% .12 | 00746  | CRB14 OR CRB25                        |
| A26R640  | 0757-0442   | 9  |     |                  |        | CRB14 OR CRB25                        |
| A26R641  | 0698-3444   | 1  |     |                  |        | CRB14 OR CRB25                        |
| A26R642  | 0757-0442   | 9  |     |                  |        | CRB14 OR CRB25                        |
| A26R643  | 0757-0283   | 6  | 1   |                  |        | CRB14 OR CRB25                        |
|          |             |    |     |                  |        | OLDIA OIL OILDZJ                      |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

|     | Reference | e HP Part # | E CD |     | Dentit           |         | т <u>т</u>     |
|-----|-----------|-------------|------|-----|------------------|---------|----------------|
|     | A26R644   |             |      | +   |                  | Manuf'r | <i>п</i>       |
|     | A26R645   |             | 7    |     | RES 1.33K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A26R646   | 0757-0200   | 7    | 1   | RES 5.62K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A26R647   | 0698-4431   | 8    |     | RES 2.05K 1% .12 | 00746   | CRB14 OR CRB25 |
|     |           | 0757-0279   | 0    | 1   | RES 3.16K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A26R648   | 0698-3496   | 3    | 1   | RES 3.57K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | ADODALO   |             |      |     |                  |         |                |
|     | A26R649   | 0757-0424   | 7    | 1   | RES 1.1K 1% .125 | 00746   | CRB14 OR CRB25 |
|     | A26R650   | 0757-0438   | 3    | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25 |
|     | A26R651   | 0757-0999   | 1    | 1   | RES 47.5 1% .5W  | 01074   | H2             |
|     | A26R652   | 0757-0280   | 3    | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A26R653   | 0757-0280   | 3    | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
|     | A26R999   | 0699-1503   | 1    | 1   | RES .05 100% TKF | 00746   | MCR18EZHJW00E0 |
|     |           |             |      |     |                  |         |                |
|     |           | 1810-0316   | 1    | 1   | NETWORK-RES DIP  | 02483   | 761-3-R10K     |
|     | A26RV103  |             | 7    | 1   | RES-TRMR 1K 10%  | 03744   | 3386X-Y46-102  |
|     | A26RV104  | 1           | 2    | 1   | RES-TRMR 100 10% | 03744   | 3386X-Y46-101  |
|     | A26RV123  |             | 1    | 1   | RES-TRMR 5K 10%  | 1 1     | 3386X-Y46-502  |
|     | A26RV404  | 2100-0554   | 5    | 1   | RES-TRMR 500 10% | 1       | 3386P-Y46-501  |
|     |           |             |      |     |                  |         |                |
|     | A26RV435  | 1           | 1    | 1   | RES-TRMR 5K 10%  | 03744   | 3386X-Y46-502  |
| - 1 | A26RV438  | 2100-3274   | 2    | 1   | RES-TRMR 10K 10% | 03744   | 3386X-Y46-103  |
|     | A26RV455  | 2100-0567   | 0    | 1   | RES-TRMR 2K 10%  | 1 1     | 3386P-Y46-202  |
|     | A26RV461  | 2100-3274   | 2    | 1   | RES-TRMR 10K 10% | 1 1     | 3386X-Y46-103  |
|     | A26RV500  | 2100-3383   | 4    | 1   | RES-TRMR 50 10%  | i (     | 3386P-Y46-500  |
|     |           |             |      |     |                  |         |                |
|     | A26RV501  | 2100-3383   | 4    |     | RES-TRMR 50 10%  | 03744 3 | 3386P-Y46-500  |
|     | A26RV502  | 2100-3273   | 1    | 1   | RES-TRMR 2K 10%  |         | 3386X-Y46-202  |
| - 1 | A26RV503  | 2100-0567   | 0    | 1   | RES-TRMR 2K 10%  |         | 386P-Y46-202   |
| 4   | A26RV504  | 2100-3210   | 6    | 1   | RES-TRMR 10K 10% | 1       | 386P-Y46-103   |
| A   | A26TP101  | 0360-2264   | 6    | 1   | TERMTEST POINT   |         | 095D           |
|     |           |             |      |     |                  |         |                |
| 1   | 1         | 0360-2264   | 6    | 1 / | TERMTEST POINT   | 10358 1 | 095D           |
|     | 1         | 0360-2264   | 6    | 1   | TERMTEST POINT   | 1       | 095D           |
| A   | 26TP104   | 0360-2264   | 6    | 1   |                  | 1       | 095D           |
|     |           | 0360-2264   | 6    |     |                  | 1       | 095D           |
| A   | 26TP106   | 0360-2264   | 6    |     |                  |         | 095D           |

| Reference | e HP Part # | CD | Qty | Description      | Manuf | Part #      |
|-----------|-------------|----|-----|------------------|-------|-------------|
| A26TP10   |             | 6  | 1   | TERMTEST POINT   | 10358 | 1095D       |
| A26TP40   | 3 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358 | 1095D       |
| A26TP404  | 4 0360-2264 | 6  | 1   | TERMTEST POINT   | 10358 | 1095D       |
| A26U100   | 1820-3665   | 0  | 1   | IC-MM74HCT245N   | 01698 | SN74HCT245N |
| A26U101   | 1820-3847   | 0  | 1   | IC-MM74HCT138N   | 01698 | SN74HCT138N |
|           |             |    |     |                  |       |             |
| A26U102   | 1820-3081   | 4  | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
| A26U103   | 1820-3298   | 5  | 1   | IC-MM74HC32N     | 02037 | MC74HC32N   |
| A26U104   | 1826-0861   | 4  | 1   | D/A 10-BIT       | 03285 | AD7533LN    |
| A26U105   | 1826-0861   | 4  | 1   | D/A 10-BIT       | 03285 | AD7533LN    |
| A26U106   | 1820-3399   | 7  | 1   | IC-MC74HC273N    | 01698 | SN74HC273N  |
|           |             |    |     |                  |       |             |
| A26U107   | 1826-0877   | 2  | 1   | A/D 8-BIT        | 03285 | AD7574KN    |
| A26U108   | 1820-1315   | 3  | 1   | ANLG MUXR MC1405 | 02037 | MC14051BCP  |
| A26U109   | 1820-0493   | 6  | 1   | IC 307           | 03406 | LM307N      |
| A26U110   | 1820-3847   | 0  | 1   | IC-MM74HCT138N   | 01698 | SN74HCT138N |
| A26U111   | 1820-3082   | 5  | 1   | IC-MC74HC374N    | 01698 | SN74HC374N  |
|           |             |    |     |                  |       |             |
| A26U112   | 1826-0285   | 6  | 1   | IC MC79L05ACP    | 02037 | MC79L05ACP  |
| A26U113   | 1826-0315   | 3  | 1   | IC 348           | 03406 | LM348N      |
| A26U114   | 1826-0161   | 7  | 1   | IC 324           | 02037 | LM324N      |
| A26U115   | 1820-3097   | 2  | 1   | IC-MM74HC08N     | 02037 | MC74HC08N   |
| A26U117   | 1820-3373   | 7  | 1   | IC-MM74HC221AN   | 03406 | MM74HC221AN |
|           |             |    |     |                  |       |             |
| A26U118   | 1820-0493   | 6  |     | IC 307           | 03406 | LM307N      |
| A26U120   | 1820-2924   | 2  |     | IC-MC74HC02N     | 01698 | SN74HC02N   |
| A26U121   | 1820-3081   | 4  |     | IC-MC74HC74N     | 01698 | SN74HC74N   |
| A26U122   | 1820-3082   | 5  |     | IC-MC74HC374N    | 01698 | SN74HC374N  |
| A26U123   | 1820-3081   | 4  | 1   | IC-MC74HC74N     | 01698 | SN74HC74N   |
|           |             |    |     |                  |       |             |
| A26U124   | 1820-3081   | 4  |     |                  | 1     | SN74HC74N   |
| A26U126   | 1820-3081   | 4  |     |                  | 01698 | SN74HC74N   |
| A26U401   | 1NB7-8179   | 7  |     |                  | 28480 | 1NB7-8179   |
| A26U402   | 1826-0524   | 6  | í   |                  | 03406 | LM324AN     |
| A26U403   | 1826-0207   | 2  | 1   | IC 318           | 01698 | LM318P      |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

|            | Reference | TDD       | <u>"</u> ]_~; |              |                  |         | · · · · · · · · · · · · · · · · · · · |
|------------|-----------|-----------|---------------|--------------|------------------|---------|---------------------------------------|
|            |           |           |               |              |                  | Manuf'r | Part #                                |
|            | A26U404   |           | 1 ~           | 1            | IC 339           | 01698   | LM339N                                |
|            | A26U405   | 1826-1460 |               | 1            | IC 201           | 03406   | LM201AN                               |
|            | A26U406   | 1820-0493 |               | 1            | IC 307           | 03406   | LM307N                                |
|            | A26U407   | 1826-0161 | 7             | 1            | IC 324           | 02037   | LM324N                                |
|            | A26U408   | 1826-0207 | 2             | 1            | IC 318           | 01698   | LM318P                                |
|            |           |           |               |              |                  | 1       |                                       |
|            | A26U409   | 1826-0161 | 7             | 1            | IC 324           | 02037   | LM324N                                |
|            | A26U410   | 1858-0058 | 8             | 1            | XSTR ARY 14P-DIP | 02037   | MPQ3906                               |
| - 1        | A26U411   | 1858-0087 | 3             | 1            | XSTR ARY 14P-DIP |         | MPQ3904                               |
| - 1        | A26U412   | 1858-0087 | 3             | 1            | XSTR ARY 14P-DIP | 02037   | MPQ3904                               |
|            | A26U413   | 1858-0087 | 3             | 1            | XSTR ARY 14P-DIP | 02037   | MPQ3904                               |
|            |           |           |               |              |                  |         | -                                     |
| - 1        | A26U415   | 1826-0600 | 9             | 1            | IC 074A          | 01698   | TL074ACN                              |
|            | A26U416   | 1858-0087 | 3             | 1            | XSTR ARY 14P-DIP | 02037   | MPQ3904                               |
| - 1        | A26U417   | 1826-0161 | 7             | 1            | IC 324           | 02037   | LM324N                                |
|            | A26U418   | 1858-0087 | 3             | 1            | XSTR ARY 14P-DIP | 02037   | MPQ3904                               |
| 4          | A26U601   | 1826-0315 | 3             | 1            | IC 348           | 03406   | LM348N                                |
|            |           |           |               |              |                  |         |                                       |
|            | A26U602   | 1826-0315 | 3             | 1            | IC 348           | 03406   | LM348N                                |
| 1          | A26U603   | 1826-0161 | 7             | 1            | IC 324           | 02037   | LM324N                                |
|            | A26VR101  | 1902-0956 | 0             | 1            | DIO-ZNR 8.2V 5%  | 02037   |                                       |
|            | A26VR403  | 1902-0963 | 9             | 1            | DIO-ZNR 16V 5%   | 02037   | SZ30035-21RL                          |
|            | 26VR404   | 1902-0956 | 0             | 1            | DIO-ZNR 8.2V 5%  | 02037   |                                       |
| .          |           |           |               |              |                  |         |                                       |
|            | 26VR405   |           | 0             |              | DIO-ZNR 8.2V 5%  | 02037   |                                       |
|            | 26VR406   |           | 1             |              |                  | 02037   |                                       |
|            | 26VR407   | 1902-0945 | 7             |              |                  | 02037   | SZ0035-3RL                            |
|            | 26VR409   | 1902-0951 | 5             |              |                  | 02037   | 5Z30035-9RL                           |
| A          | .26VR412  | 1902-0950 | 4             | 1            | DIO-ZNR 4.7V 5%  | 02037   |                                       |
| .          |           |           |               |              |                  |         |                                       |
|            | í         | 1902-0950 | 4             |              |                  | 02037   |                                       |
|            |           | 1902-0963 | 9             |              | 1                | 02037 S | Z30035-21RL                           |
|            | 1         | 1902-0953 | 7             | 1            |                  | 02037 S | Z30035-11RL                           |
|            | 1         | 1902-0951 | 5             |              |                  | 02037 S | Z30035-9RL                            |
| <u>A</u> : | 26VR602   | 1902-0953 | 7             | <u>1   I</u> | DIO-ZNR 6.2V 5%  | 02037 S | Z30035-11RL                           |

|   | Reference | HP Part #   | CD | Qty | Description      | Manuf'r | Part #      |
|---|-----------|-------------|----|-----|------------------|---------|-------------|
|   | A26VR603  | 1           | 2  | 1   | DIO-ZNR 10V 5%   | 02037   | <u> </u>    |
|   | A26VR604  | 1902-0945   | 7  | 1   | DIO-ZNR 3V 5%    | 02037   | SZ0035-3RL  |
|   | A26W103   | 1258-0141   | 8  | 1   | JUMPER-REM       |         | 530153-2    |
|   | A26W403   | 08131-61607 | 1  | 1   | CBL SEMI RIGID   |         | 08131-61607 |
| L | A26W404   | 08131-61607 | 1  |     | 077 07 0 0 0 0 0 |         | 08131-61607 |

Table C-13. 8131A Option 020 Channel 1 Board Parts List (continued)

#### Channel 2 Board Option 020

| Dic       |             | 1  | 1   | 1                                         |         | · · · · · · · · · · · · · · · · · · · |
|-----------|-------------|----|-----|-------------------------------------------|---------|---------------------------------------|
| Reference | 1           | CD | Qty | Description                               | Manuf'r | Part #                                |
| A28       | 08131-66528 | 4  | 1   | BD AY CHAN 2                              | 28480   | 08131-66528                           |
|           |             |    |     |                                           |         |                                       |
| A28A418   | 08131-66418 | 0  | 1   | BD AY TRANSDUCE                           | 28480   | 08131-66418                           |
| A28C100   | 0160-5746   | 1  | 1   | CAP 0.1uF 50 V                            | 06121   | B37987-T5104-M11                      |
| A28C101   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V                            | 02010   | MD015C104MABH                         |
| A28C102   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V                            | 02010   | MD015C104MABH                         |
|           |             |    | 1   |                                           |         |                                       |
| A28C103   | 0160-5730   | 3  | 1   | CAP 100pF 100 V                           | 06121   | B37979-J1101-J034                     |
| A28C104   | 0160-5730   | 3  | 1   | CAP 100pF 100 V                           | 06121   | B37979-J1101-J034                     |
| A28C105   | 0160-5730   | 3  | 1   | CAP 100pF 100 V                           | 06121   | B37979-J1101-J034                     |
| A28C106   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V                          | 06121   | B37987-J1103-M034                     |
| A28C107   | 0160-5726   | 7  | 1   | CAP 0.01uF 100 V                          | 06121   | B37987-J1103-M034                     |
|           | 1           |    |     |                                           |         | D01001-01100-W1004                    |
| A28C108   | 0160-5332   | 1  | 1   | CAP 0.1uF 50 V                            | 02010   | MD015C104MABH                         |
| A28C109   | 0160-5332   | 1  |     | CAP 0.1uF 50 V                            |         | MD015C104MABH                         |
| A28C111   | 0160-5728   | 9  | - 1 | CAP 1000pF 100 V                          |         | B37986-J1102-J034                     |
| A28C113   | 0160-5728   | 9  |     | a                                         |         | B37986-J1102-J034                     |
| A28C115   | 0160-5728   | 9  |     | 0 4 5 4 6 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 |         |                                       |
| 1200110   | 0100-3728   | 9  | 1   | CAP 1000pF 100 V                          | 06121   | B37986-J1102-J034                     |

Table C-14. 8131A Option 020 Channel 2 Board Parts List

| Table C-14. 8131A Option 02 | ) Channel 2 Board | d Parts List (continued) |
|-----------------------------|-------------------|--------------------------|
|-----------------------------|-------------------|--------------------------|

| Reference          | HP Part # | CD | Qty | Description                          | Manufr | Part #                                 |
|--------------------|-----------|----|-----|--------------------------------------|--------|----------------------------------------|
| A28C117            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     |        | B37986-J1102-J034                      |
| A28C119            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V<br>CAP 1000pF 100 V |        | B37986-J1102-J034<br>B37986-J1102-J034 |
| A28C121            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V<br>CAP 1000pF 100 V |        | B37986-J1102-J034<br>B37986-J1102-J034 |
| A28C121            | 0160-6623 | 5  | 1   | CAP 0.1uF 50 V                       | 02010  | SA115C104MAAH                          |
| A28C125<br>A28C126 | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                     | 02010  | SA115C104MAAH<br>SA101C103KAAH         |
| A200120            | 0100-0300 | 1  | · 1 | CAP 0.010F 100 V                     | 02010  | SAIUICIUSKAAH                          |
| A28C127            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                     | 02010  | SA101C103KAAH                          |
| A28C129            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C130            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
| A28C131            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
| A28C132            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
|                    |           | -  | -   |                                      | 02010  |                                        |
| A28C133            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V                     | 06121  | B37987-J1103-M034                      |
| A28C134            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V                     | 06121  | B37987-J1103-M034                      |
| A28C135            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C136            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C139            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
|                    |           |    |     |                                      |        |                                        |
| A28C140            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
| A28C141            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                     | 02010  | SA101C103KAAH                          |
| A28C142            | 0160-6500 | 7  | 1   | CAP 0.01uF 100 V                     | 02010  | SA101C103KAAH                          |
| A28C143            | 0160-5332 | 1  | 1   | CAP 0.1uF 50 V                       | 02010  | MD015C104MABH                          |
| A28C401            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V                     | 06121  | B37987-J1103-M034                      |
|                    |           |    |     |                                      |        |                                        |
| A28C402            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C403            | 0160-5726 | 7  | 1   | CAP 0.01uF 100 V                     | 06121  | B37987-J1103-M034                      |
| A28C404            | 0160-5741 | 6  | 1   | CAP 47pF 100 V                       | 06121  | B37979-J1470-J034                      |
| A28C405            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C407            | 0160-5728 | 9  | 1   | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
|                    |           |    |     |                                      |        |                                        |
| A28C409            | 0160-5728 | 9  |     | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C410            | 0160-5728 | 9  |     | CAP 1000pF 100 V                     | 06121  | B37986-J1102-J034                      |
| A28C411            | 0160-5730 | 3  |     | CAP 100pF 100 V                      | 06121  | B37979-J1101-J034                      |
| A28C412            | 0160-5730 | 3  |     | CAP 100pF 100 V                      | 06121  | B37979-J1101-J034                      |
| A28C413            | 0160-5730 | 3  | 1   | CAP 100pF 100 V                      | 06121  | B37979-J1101-J034                      |

|          | Reference          | HD D                   |     |    |                  |         |                   |
|----------|--------------------|------------------------|-----|----|------------------|---------|-------------------|
|          |                    |                        | ·   | +- |                  | Manuf   | r Part #          |
|          | A28C414            | 1                      | 1 - | 1  | 1000 1000 100    |         | B37979-J1101-J034 |
|          | A28C415            |                        | 7   | 1  | 0.0141 100       |         | B37987-J1103-M034 |
|          | A28C416            |                        | 7   | 1  | 0.0141 100       |         | SA101C103KAAH     |
|          | A28C417            |                        | 7   | 1  | 0.0141 100       |         | SA101C103KAAH     |
|          | A28C418            | 0160-5726              | 7   | 1  | CAP 0.01uF 100   | V 06121 | B37987-J1103-M034 |
|          | A28C419            | 0100 0500              |     |    |                  |         |                   |
|          | A28C419            |                        | 7   | 1  | CAP 0.01uF 100   |         | SA101C103KAAH     |
|          | A28C420            |                        | 7   | 1  | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
|          | A28C421            | 0160-5741              | 6   | 1  | CAP 47pF 100 V   | 1       | B37979-J1470-J034 |
|          | A28C422<br>A28C425 | 0160-5728              | 9   | 1  | CAP 1000pF 100   |         | B37986-J1102-J034 |
|          | A280425            | 0160-5726              | 7   | 1  | CAP 0.01uF 100 V | / 06121 | B37987-J1103-M034 |
|          | A28C426            | 0160 6500              |     |    |                  |         |                   |
|          | A28C420            | 0160-6500              | 7   | 1  | CAP 0.01uF 100 V |         | SA101C103KAAH     |
| - 1      | A28C427            | 0160-5746              | 1   | 1  | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11  |
|          | A28C429            | 0160-5726              | 7   | 1  | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
|          | A28C430            | 0160-5726<br>0160-6500 | 7   | 1  | CAP 0.01uF 100 V |         | B37987-J1103-M034 |
| 1        | A200431            | 0100-0200              | 7   | 1  | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
|          | A28C432            | 0160-6500              | 7   |    |                  |         |                   |
|          | A28C432            | 0160-6500              | 7   | 1  | CAP 0.01uF 100 V |         | SA101C103KAAH     |
|          | A28C434            | 0160-6500              | 5   | 1  | CAP 0.01uF 100 V | 1 1     | SA101C103KAAH     |
| 1        | A28C435            | 0160-5740              |     | 1  | CAP 33pF 100 V   | 1 1     | B37979-J1330-J034 |
|          | A28C435            | 0160-6500              | 7   | 1  | CAP 0.01uF 100 V |         | SA101C103KAAH     |
| ſ        | 1200430            | 0100-0900              | 7   | 1  | CAP 0.01uF 100 V | 02010   | SA101C103KAAH     |
| 4        | 28C437             | 0160-6500              | -   |    |                  |         |                   |
| 1        | 28C439             | 0160-3873              | 7   | 1  | CAP 0.01uF 100 V | 1 [     | SA101C103KAAH     |
|          |                    | 0160-5747              | 1   | 1  | CAP 4.7pF 200 V  | 1 1     | FD12C0G2D4R7D     |
| 1        |                    | 0160-5747              | 2   | 1  | CAP 0.047uF 50 V |         | B37987-J5473-M034 |
|          | 1                  | 0160-3873              | 2   | 1  | CAP 0.047uF 50 V | 1 1     | 337987-J5473-M034 |
| l î      | 200400             | 0100-3813              | 1   | 1  | CAP 4.7pF 200 V  | 06352 I | D12C0G2D4R7D      |
|          | 28C451             | 0160-6500              | 7   | ,  |                  |         |                   |
| 1        |                    |                        | 7   |    | CAP 0.01uF 100 V |         | A101C103KAAH      |
| 1        | {                  | 0160-6500              |     |    | CAP 0.01uF 100 V |         | A101C103KAAH      |
|          |                    | 0160-6500              | 7   |    | CAP 0.01uF 100 V |         | A101C103KAAH      |
|          |                    | 0160-5737              | . 1 |    | CAP 68pF 100 V   | 1       | 37979-J1680-J034  |
| <u> </u> | 200401 [(          | 0160-5737              | 0   | 1  | CAP 68pF 100 V   | 06121 B | 37979-J1680-J034  |

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Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

|     | F        |           |               |      |                  |         | ( · · · · · · · · · · · · · · · · · · · |
|-----|----------|-----------|---------------|------|------------------|---------|-----------------------------------------|
|     | Referenc |           |               | Qty  |                  | Manuf   | r Part #                                |
|     | A28C470  | 1         | 7             | 1    | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                       |
|     | A28C471  | -         | 9             | 1    | CAP 1000pF 100 V | / 06121 | B37986-J1102-J034                       |
|     | A28C472  |           | 1             | 1    | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                        |
|     | A28C473  |           | 7             | 1    | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                       |
|     | A28C474  | 0160-5728 | 9             | 1    | CAP 1000pF 100 V | 06121   | B37986-J1102-J034                       |
|     |          |           |               |      |                  |         |                                         |
|     | A28C475  | 0160-6500 | 7             | 1    | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                           |
|     | A28C476  | 0160-6623 | 5             | 1    | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                           |
|     | A28C477  | 0160-5728 | 9             | 1    | CAP 1000pF 100 V | 06121   | B37986-J1102-J034                       |
|     | A28C478  | 0160-5726 | 7             | 1    | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                       |
|     | A28C479  | 0160-6623 | 5             | 1    | CAP 0.1uF 50 V   | 02010   | SA115C104MAAH                           |
|     | 1000100  |           |               |      | _                |         |                                         |
| - 1 | A28C480  | 0160-5728 | 9             | 1    | CAP 1000pF 100 V | 06121   | B37986-J1102-J034                       |
|     | A28C481  | 0160-5728 | 9             | 1    | CAP 1000pF 100 V | 06121   | B37986-J1102-J034                       |
|     | A28C482  | 0160-5728 | 9             | 1    | CAP 1000pF 100 V | 06121   | B37986-J1102-J034                       |
|     | A28C483  | 0160-6500 | 7             | 1    | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                           |
| ľ   | A28C484  | 0160-5746 | 1             | 1    | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                        |
|     | A28C485  | 0160-5746 | .             | ,    |                  |         |                                         |
|     | A28C485  | 0160-5746 | 1             | 1    | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                        |
|     | A28C601  | 0160-5746 | $\frac{1}{7}$ |      | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11                        |
| 1   | A28C604  | 0160-6500 | 7             |      | CAP 0.01uF 100 V | 02010   | SA101C103KAAH                           |
| 1   | 128C604  | 0160-5726 | 7             |      | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                       |
| ſ   | 1200000  | 0100-5726 | ·             | 1    | CAP 0.01uF 100 V | 06121   | B37987-J1103-M034                       |
|     | 28C606   | 0160-6500 | 7             | 1    |                  |         |                                         |
|     | 28C607   | 0160-5726 | 7             |      | 1                | 02010   | SA101C103KAAH                           |
| •   | 28C608   | 0160-5746 | 1             |      | 1                |         | B37987-J1103-M034                       |
|     | 28C609   | 0160-5726 | 7             |      |                  |         | B37987-T5104-M11                        |
|     |          | 0160-5746 | 1             | +    |                  |         | B37987-J1103-M034                       |
|     |          |           |               | *  ` | CAL OTHER DO A   | 06121   | B37987-T5104-M11                        |
| A   | 28C611   | 0160-5726 | 7             | 1    | CAP 0.01uF 100 V | 06121   | Difford Three brees                     |
|     | 1        | 0160-5726 |               |      |                  |         | B37987-J1103-M034                       |
|     | I        | 0160-5746 | ·             |      |                  |         | B37987-J1103-M034                       |
|     |          | 0160-6500 |               |      |                  |         | B37987-T5104-M11                        |
| A   | 1        | 0160-6500 |               |      |                  |         | SA101C103KAAH                           |
|     | <u> </u> | <u> </u>  |               |      | 0.0101 100 V (   | 2010    | SA101C103KAAH                           |

|   | Reference | e HP Part # | # CI |       |                  |         |                      |
|---|-----------|-------------|------|-------|------------------|---------|----------------------|
|   | A28C617   | 0160-6500   |      |       |                  | Manufr  |                      |
|   | A28C618   | 0160-5500   |      |       | CAP 0.01uF 100 V | 02010   | SA101C103KAAH        |
|   | A28CP110  | 1           | 1    |       | CAP 0.1uF 50 V   | 06121   | B37987-T5104-M11     |
|   | A28CP112  |             | 1    |       | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS   |
|   | A28CP114  |             | 3    | 1     | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS   |
|   | A200P114  | 0180-0374   | 3    | 1     | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS   |
|   | A28CP116  | 1           | 1    | 1     | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS   |
|   | A28CP118  |             | 1    | 1     | CAP 6.8uF 35 V   | 04200   | 150D685X9035B2-DYS   |
|   | A28CP120  |             | 3    | 1     | CAP 10uF 20 V    | 04200   | 150D106X9020B2-DYS   |
|   | A28CP122  | 1           | 3    | 1     | CAP 0.33uF 35 V  | 04200   | 150D334X9035A2-DYS   |
|   | A28CP123  | 0180-4129   | 4    | 1     | CAP luF 35 V     | 04200   | 173D105X9035V        |
|   | 100000    |             |      |       |                  |         |                      |
|   | A28CP128  | 1           | 4    | 1     | CAP luF 35 V     | 04200   | 173D105X9035V        |
|   | A28CP438  |             | 4    | 1     | CAP luF 35 V     | 04200   | 173D105X9035V        |
|   | A28CP439  | 0180-4129   | 4    | 1     | CAP luF 35 V     | 04200   | 173D105X9035V        |
|   | A28CR100  | 1901-0535   | 9    | 1     | DIO- SCHOTTKY SM | 1 1     | 50825511             |
|   | A28CR108  | 1901-0535   | 9    | 1     | DIO- SCHOTTKY SM | 02062   | 50825511             |
|   | A28CR109  | 1901-0535   | 9    | 1     | DIO- SCHOTTKY SM | 02062   | 50825511             |
|   | A28CR111  |             | 9    | 1     | DIO- SCHOTTKY SM |         | 50825511<br>50825511 |
| 1 | A28CR112  | 1901-0535   | 9    |       | DIO- SCHOTTKY SM |         | 50825511             |
| . | A28CR122  |             | 2    |       | DIO-GEN PRP      | 03406   | 0020011              |
|   | 428CR123  | 1901-0535   | 9    | 1     | DIO- SCHOTTKY SM | ! !     | 50825511             |
|   |           |             |      |       |                  |         |                      |
|   | A28CR124  |             | 9    |       | DIO- SCHOTTKY SM |         | 50825511             |
|   |           | 1901-0535   | 9    | 1     | DIO- SCHOTTKY SM | 1 1     | 50825511             |
|   |           | 1901-0535   | 9    | 1 1   | DIO- SCHOTTKY SM | 1 1     | 50825511             |
|   | 28CR414   | i .         | 2    |       | DIO-GEN PRP      | 03406   |                      |
| A | 28CR415   | 1901-0732   | 8    | 1   1 | DIO-PWR RECT     | 1       | R3010-4RL            |
| A | 28CR416   | 1901-0732   | 8    | 1 1   | DIO-PWR RECT     | 02037 S | R3010-4RL            |
| A | 28CR417   | 1901-1098   | 1    | 1     | DIO-1N4150       | 00746   | K3010-4KL            |
|   | 1         | 1901-1098   | 1    |       | DIO-1N4150       | 00746   |                      |
|   |           | 1901-1098   | 1    |       | DIO-1N4150       | 00746   |                      |
|   | J         | 901-1098    | 1    |       |                  | 00746   |                      |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference          | ce HP Part # | CD  | Qty           | Description                | Manufr | Part #                  |
|--------------------|--------------|-----|---------------|----------------------------|--------|-------------------------|
|                    | 01 1901-0535 | 9   | 1             | DIO- SCHOTTKY SM           | 02062  | 50825511                |
| A28CR6             | 02 1901-1098 | 1   | 1             | DIO-1N4150                 | 00746  |                         |
| A28J1              | 1251-8324    | 1   | 1             | CONN-POST-TP-HDR           | 04486  | G06M96P4BEBL-004-715    |
| A28J101            | 1251-1556    | 7   | 4             | CONN-SGL CONT              | 01075  | 006-4844-00-0-990       |
| A28J102            | 1251-1556    | 7   | 4             | CONN-SGL CONT              | 01075  | 006-4844-00-0-990       |
|                    |              |     | }             |                            |        | 2                       |
| A28J103            | 1251-4682    | 6   | 1             | CONN-POST-TP-HDR           | 03394  | 1102-1-103-02           |
| A28J403            | 1252-2649    | 3   | 1             | CONN ELAST 43LG            | 09922  | NE 0.2P 43.0L 3.0H 3.6W |
| A28J404            | 1252-2649    | 3   | 1             | CONN ELAST 43LG            | 09922  | NE 0.2P 43.0L 3.0H 3.6W |
| A28J405            | 1252-2650    | 6   | 1             | CONN ELAST 30LG            | 09922  | NE 0.2P 30.0L 3.0H 3.6W |
| A28J406            | 1252-2651    | 7   | 1             | CONN ELAST 5LG             | 09922  | NE 0.2P 5.0L 3.0H 3.6W  |
|                    |              |     |               |                            |        |                         |
| A28J407            | 1252-2651    | 7   | 1             | CONN ELAST 5LG             | 09922  | NE 0.2P 5.0L 3.0H 3.6W  |
| A28J408            | 1252-2651    | 7   | 1             | CONN ELAST 5LG             | 09922  | NE 0.2P 5.0L 3.0H 3.6W  |
| A28J423            | 1252-2648    | 2   | 1             | CONN ELAST 30LG            | 09922  | NE 0.4P 30.0L 3.5H 4.2W |
| A28J424            | 1252-2648    | 2   | 1             | CONN ELAST 30LG            | 09922  | NE 0.4P 30.0L 3.5H 4.2W |
| A28J425            | 1252-2647    | 1   | 1             | CONN ELAST 0.4P            | 09922  | NE 0.4P 43.0L 3.5H 4.2W |
| A28J426            | 1252-2647    |     | ,             | CONNER LODA (D             |        |                         |
| A28J420<br>A28K403 | 0955-0452    | 1   | $\frac{1}{1}$ | CONN ELAST 0.4P            | 09922  | NE 0.4P 43.0L 3.5H 4.2W |
| A28K403            | 0955-0452    |     | 1             | SW-COAX SMA<br>SW-COAX SMA | 02574  | S-4845                  |
| A28L100            | 9100-1788    | 6   |               |                            | 02574  | S-4845                  |
| A28L100            | 9100-1788    | 1 1 | 1             | CORE-FERRITE               | 1 1    | VK200 20/4B             |
| AZOLIUI            | 9100-1788    | 6   | 1             | CORE-FERRITE               | 02995  | VK200 20/4B             |
| A 997 109          | 0100 1700    |     |               |                            |        |                         |
| A28L102            | 9100-1788    | 6   |               | CORE-FERRITE               |        | VK200 20/4B             |
| A28L103            | 9100-1788    | 6   |               | CORE-FERRITE               |        | VK200 20/4B             |
| A28L104            | 9100-1788    | 6   |               | CORE-FERRITE               |        | VK200 20/4B             |
| A28L105            | 9100-1788    | 6   | . 1           | CORE-FERRITE               | 1      | VK200 20/4B             |
| A28L401            | 9100-2257    | 6   | 1             | L 820NH +-10%              | 03273  | 10M820K                 |
| A 907 400          |              | _ 1 |               |                            | ĺ      |                         |
| A28L402            | 9100-2256    | 5   |               | L 560NH +-10%              |        | 10M560K                 |
| A28L403            | 9100-2257    | 6   | - i           | L 820NH +-10%              |        | 10M820K                 |
| A28L404            | 9100-2256    | 5   |               | L 560NH +-10%              |        | 10M560K                 |
| A28MP1             | 08131-00601  | 7   |               | SHIELD                     |        | 08131-00601             |
| A28MP2             | 0403-0285    | 9   |               |                            |        | SJ-5018 GRAY            |
| A28MP16            | 3050-0152    | 3   | 3             | WSHR-SHLDR                 | 04604  | 1462                    |

|     | Reference | <b>HD D</b> // | lan | In.      | D                | 1       |                 |
|-----|-----------|----------------|-----|----------|------------------|---------|-----------------|
| ſ   |           |                |     | <u> </u> |                  | Manuf'ı | Part #          |
|     | A28MP20   |                | 8   | 4        | SCR-MACHINE      | 05610   |                 |
|     | A28MP21   | 3050-0960      | 1   | 2        | WASHER-SHLDR 3.0 | 05947   | V5359           |
|     | A28MP22   | 3050-0098      | 6   | 2        | WSHR-FL MTLC     | 04939   | AN960 C2        |
|     | A28MP142  |                | 0   | 1        | INSULATOR        | 28480   | 0340-1212       |
|     | A28MP142  | 2 08131-21101  | 6   | 1        | HEATSINK TUB     | 28480   | 08131-21101     |
|     |           |                |     |          |                  |         |                 |
| - 1 | A28MP143  |                | 1   | 1        | FRAME PLASTIC    | 28480   | 08131-40503     |
| - 1 | A28MP144  |                | _   | 1        | COVER            | 28480   | 08131-04104     |
| - 1 | A28MP145  |                |     | 1        | DUST HYBRD COVE  | 28480   | 08131-05401     |
| - 1 | A28MP403  |                | 2   | 1        | HEAT SINK        | 02608   | 6107B-14        |
|     | A28MP404  | 1205-0295      | 2   | 1        | HEAT SINK        | 02608   | 6107B-14        |
|     |           | 1              |     |          |                  |         |                 |
|     |           | 1205-0295      | 2   | 1        | HEAT SINK        | 02608   | 6107B-14        |
| 1   | A28MP413  |                | 2   | 1        | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
|     | A28MP414  |                | 2   | 1        | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| i i | A28MP415  |                | 2   | 1        | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| 1   | A28MP603  | 1205-0295      | 2   | 1        | HEAT SINK        | 02608   | 6107B-14        |
|     | 1001/D000 |                |     |          |                  |         |                 |
|     |           | 1205-0011      | 0   | 1        | HEAT SINK        | 02608   | 2226B           |
| 1   | A28MP613  |                | 2   | 1        | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
|     | A28MP618  |                | 2   | 1        | INSUL-XSTR       | 05447   | 3223-07FR-58-AC |
| •   | A28Q100   | 1854-1028      | 6   | 1        | XSTR NPN SI      | 02037   | 2N3904          |
| A   | 28Q101    | 1853-0314      | 9   | 1        | XSTR PNP 2N2905A | 02037   | 2N2905A         |
|     |           |                |     |          |                  | Ĩ       |                 |
| 1   | 28Q102    | 1854-0637      | 1   | 1        | XSTR NPN 2N2219A | 02037   | 2N2219A         |
| E . | 28Q401    | 1854-0583      | 6   | 1        | XSTR NPN SI      | 02037   | MPS-A18         |
|     | 28Q403    | 1854-0828      | 2   | 1        | XSTR NPN SI      | 00039   | NTD560          |
|     | .28Q404   | 1853-0468      | 4   | 1        | XSTR PNP SI DARL | 02037   | TIP-127         |
| A   | .28Q405   | 1855-0548      | 5   | 1        | MOSFET N-CHAN    | 02037   | BUZ71A          |
|     |           |                |     |          |                  |         |                 |
|     |           | 1855-0751      | 2   | 1        | MOSFET N-CHAN    | 02883   | VN0808M         |
|     |           | 1854-0583      | 6   | 1        | XSTR NPN SI      |         | MPS-A18         |
| A   | 28Q412    | 1855-0751      | 2   | 1        |                  |         | VN0808M         |
| A   | 28Q413    | 1855-0751      | 2   |          |                  |         | VN0808M         |
| A   | 28Q415    | 1855-0689      | 5   |          |                  | 1       | 2N5461          |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

# Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference | e HP Part # | CD | Qty | Description      | Manufr | Part #         |
|-----------|-------------|----|-----|------------------|--------|----------------|
| A28Q416   | 1853-0563   | 0  | 1   | XSTR PNP SI      | 02037  | 2N3906(SEL)    |
| A28Q430   | 1853-0563   | 0  | 1   | XSTR PNP SI      | 02037  | 2N3906(SEL)    |
| A28Q431   | 1853-0563   | 0  | 1   | XSTR PNP SI      | 02037  | 2N3906(SEL)    |
| A28Q603   | 1855-0548   | 5  | 1   | MOSFET N-CHAN    | 02037  | BUZ71A         |
| A28Q605   | 1854-1028   | 6  | 1   | XSTR NPN SI      | 02037  | 2N3904         |
| 1         |             |    |     |                  |        |                |
| A28Q606   | 1855-0751   | 2  | 1   | MOSFET N-CHAN    | 02883  | VN0808M        |
| A28Q608   | 1853-0509   | 4  | 1   | XSTR PNP         | 01698  | TIP42A         |
| A28Q609   | 1853-0314   | 9  | 1   | XSTR PNP 2N2905A | 02037  | 2N2905A        |
| A28R100   | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R101   | 0757-0465   | 6  | 1   | RES 100K 1% .125 | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        | •              |
| A28R102   | 0698-8827   | 4  | 1   | RES 1M 1% .125W  | 00746  | CRB14 OR CRB25 |
| A28R105   | 0698-3452   | 1  | 1   | RES 147K 1% .125 | 00746  | CRB14 OR CRB25 |
| A28R106   | 0698-3132   | 4  | 1   | RES 261 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R107   | 0698-3439   | 4  | 1   | RES 178 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R108   | 0698-6360   | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        |                |
| A28R109   | 0698-6360   | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A28R110   | 0698-6630   | 3  | 1   | RES 20K .1% .125 | 00746  | CRB14 OR CRB25 |
| A28R111   | 0698-6360   | 6  | 1   | RES 10K .1% .125 | 00746  | CRB14 OR CRB25 |
| A28R112   | 0757-0442   | 9  | 1   | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R113   | 0698-3279   | 0  | 1   | RES 4.99K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |             |    |     |                  |        |                |
| A28R114   | 0757-0439   | 4  |     | RES 6.81K 1% .12 | 1      | CRB14 OR CRB25 |
| A28R115   | 0757-0280   | 3  |     | RES 1K 1% .125W  |        | CRB14 OR CRB25 |
| A28R116   | 0757-0280   | 3  |     | RES 1K 1% .125W  |        | CRB14 OR CRB25 |
| A28R117   | 0757-0280   | 3  |     | RES 1K 1% .125W  |        | CRB14 OR CRB25 |
| A28R118   | 0757-0280   | 3  | 1   | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A28R119   | 0757 0449   |    | ,   |                  |        |                |
|           | 0757-0442   | 9  | 1   |                  | 1      | CRB14 OR CRB25 |
| A28R120   | 0757-0274   | 5  |     |                  |        | CRB14 OR CRB25 |
| A28R121   | 0757-0438   | 3  |     | 1                |        | CRB14 OR CRB25 |
| A28R130   | 0757-0278   | 9  | 1   |                  | 1      | CRB14 OR CRB25 |
| A28R131   | 0698-3153   | 9  | 1   | RES 3.83K 1% .12 | 00746  | CRB14 OR CRB25 |

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Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

|   | Reference HP Part # |           |   |     | • • • | <u> </u>         |       | (              |
|---|---------------------|-----------|---|-----|-------|------------------|-------|----------------|
|   |                     |           |   |     | ty    |                  | Manuf | r Part #       |
|   | A28R132             | 1         |   |     | 1     | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R135             |           | 1 |     | l     | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R136             | 1         | 1 | 1 - | - 1   | RES 3.83K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R137             | 1         | 1 |     |       | RES 1.78K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R140             | 0698-6360 | 6 | 1   |       | RES 10K .1% .125 | 00746 | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |
|   | A28R141             |           | 6 | 1   |       | RES 10K .1% .125 | 00746 | CRB14 OR CRB25 |
|   | A28R142             | _         | 0 | 1   |       | RES 4.99K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R144             |           | 9 | 1   |       | RES 38.3K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R145             | 0757-0199 | 3 | 1   |       | RES 21.5K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R146             | 0757-0416 | 7 | 1   |       | RES 511 1% .125W | 00746 | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |
| 1 | A28R147             | 0698-3136 | 8 | 1   |       | RES 17.8K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | A28R148             | 0757-0442 | 9 | 1   |       | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|   | A28R149             | 0757-0416 | 7 | 1   |       | RES 511 1% .125W | 00746 | CRB14 OR CRB25 |
|   | A28R150             | 0757-0416 | 7 | 1   |       | RES 511 1% .125W | 00746 | CRB14 OR CRB25 |
| ŀ | A28R157             | 0757-0442 | 9 | 1   | 1     | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |
|   | A28R200             | 1250-2206 | 4 | 1   | 17    | TERM 50 OHM      | 28480 | 1250-2206      |
|   | A28R300             | 1250-2206 | 4 | 1   | 17    | FERM 50 OHM      | 28480 | 1250-2206      |
| 1 | A28R400             | 8159-0005 | 0 | 1   | F     | RES-ZERO OHMS    | 01339 | L-2007-1       |
| 1 | A28R401             | 0698-3242 | 7 | 1   | F     | RES 357 1% .125W | 00746 | CRB14 OR CRB25 |
| ŀ | A28R402             | 0757-0280 | 3 | 1   | F     | RES 1K 1% .125W  | 00746 | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |
|   | A28R403             | 0698-3558 | 8 | 1   | F     | RES 4.02K 1% .12 | 00746 | CRB14 OR CRB25 |
|   | 28R404              | 8159-0005 | 0 | 1   | R     | RES-ZERO OHMS    | 01339 | L-2007-1       |
|   | 28R405              | 0757-0416 | 7 | 1   |       | LES 511 1% .125W | 00746 | CRB14 OR CRB25 |
|   | 28R406              | 0757-0442 | 9 | 1   | R     | ES 10K 1% .125W  |       | CRB14 OR CRB25 |
| A | 28R407              | 0757-0449 | 6 | 1   | L L   | ES 20K 1% .125W  | 1     | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |
|   | 1                   | 0757-0416 | 7 | 1   | R     | ES 511 1% .125W  | 00746 | CRB14 OR CRB25 |
|   |                     | 0698-0084 | 9 | 1   | R     |                  |       | CRB14 OR CRB25 |
|   |                     | 0757-0449 | 6 | 1   | R     |                  | ļ     | CRB14 OR CRB25 |
|   |                     | 0757-0442 | 9 | 1   |       |                  | 1     | CRB14 OR CRB25 |
| A | 28R413              | 0757-0442 | 9 | 1   |       |                  |       | CRB14 OR CRB25 |
|   |                     |           |   |     |       |                  |       |                |

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Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference          | HP Part # | CD | Qty | Description                           | Manufr | Bost #         |  |
|--------------------|-----------|----|-----|---------------------------------------|--------|----------------|--|
| A28R414            | 0757-0279 |    |     | · · · · · · · · · · · · · · · · · · · |        |                |  |
| A28R414<br>A28R415 |           | 0  |     | RES 3.16K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
|                    | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |  |
| A28R416            | 0757-0280 | 3  |     | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |  |
| A28R417            | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |  |
| A28R418            | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |  |
|                    |           |    |     |                                       |        |                |  |
| A28R419            | 0757-0438 | 3  | 1   | RES 5.11K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R420            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R421            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R422            | 0757-0416 | 7  | 1   | RES 511 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R423            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
|                    |           |    |     |                                       |        |                |  |
| A28R424            | 0698-4477 | 2  | 1   | RES 10.5K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R425            | 0698-4445 | 4  | 1   | RES 5.76K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R426            | 0698-3153 | 9  | 1   | RES 3.83K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R427            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R428            | 0698-3430 | 5  | 1   | RES 21.5 1% .125                      | 00746  | CRB14 OR CRB25 |  |
|                    |           |    |     |                                       |        |                |  |
| A28R429            | 0757-0284 | 7  | 1   | RES 150 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R430            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      |        | CRB14 OR CRB25 |  |
| A28R431            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R432            | 0698-3446 | 3  | 1   | RES 383 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R434            | 0757-0999 | 1  | 1   | RES 47.5 1% .5W                       | 01074  | H2             |  |
|                    |           |    |     |                                       |        |                |  |
| A28R435            | 0757-0401 | 0  | 1   |                                       | 00746  | CRB14 OR CRB25 |  |
| A28R436            | 0698-0085 | 0  | 1   | RES 2.61K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R437            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R438            | 0757-0401 | 0  | 1   | RES 100 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R439            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
|                    |           |    |     |                                       | ļ      |                |  |
| A28R440            | 0757-0444 | 1  | 1   | RES 12.1K 1% .12                      | 00746  | CRB14 OR CRB25 |  |
| A28R441            | 0757-0280 | 3  | 1   | RES 1K 1% .125W                       | 00746  | CRB14 OR CRB25 |  |
| A28R442            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R443            | 0757-0442 | 9  | 1   | RES 10K 1% .125W                      | 00746  | CRB14 OR CRB25 |  |
| A28R444            | 0757-0421 | 4  | 1   | RES 825 1% .125W                      |        | CRB14 OR CRB25 |  |

|    | Def      | TTD D     |   | Τ_ | T                |       |                |
|----|----------|-----------|---|----|------------------|-------|----------------|
|    | Referenc |           |   | Qt |                  | Manuf | r Part #       |
|    | A28R445  | 1         | - | 1  | RES 3.48K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R446  |           |   | 1  | RES 6.19K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R447  |           | 1 | 1  | RES 12.1K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R448  |           | 2 | 1  | RES 14.7K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R449  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|    | 1000     |           |   |    |                  |       |                |
|    | A28R450  |           | 7 | 1  | RES 7.5K 1% .125 | 00746 | CRB14 OR CRB25 |
|    | A28R451  | 1         | 2 | 1  | RES 1.15K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R452  | 0757-0428 | 1 | 1  | RES 1.62K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R453  | 0757-0290 | 5 | 1  | RES 6.19K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R454  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|    | 100D 1   |           |   |    |                  | 1     |                |
|    | A28R456  | 0698-3444 | 1 | 1  | RES 316 1% .125W | 00746 | CRB14 OR CRB25 |
|    | A28R457  | 0757-0442 | 9 | 1  | RES 10K 1% .125W |       | CRB14 OR CRB25 |
|    | A28R458  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|    | A28R459  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| ŀ  | A28R460  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|    |          |           |   |    |                  |       |                |
| 1  | A28R464  | 0757-0439 | 4 | 1  | RES 6.81K 1% .12 | 00746 | CRB14 OR CRB25 |
|    | A28R465  | 0698-0085 | 0 | 1  | RES 2.61K 1% .12 | 00746 | CRB14 OR CRB25 |
| í. | A28R466  | 0698-0085 | 0 | 1  | RES 2.61K 1% .12 | 00746 | CRB14 OR CRB25 |
| 1  | A28R467  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
| 1  | A28R468  | 0757-0442 | 9 | 1  | RES 10K 1% .125W | 00746 | CRB14 OR CRB25 |
|    |          |           |   |    |                  |       | 0.0220         |
|    | A28R469  | 0757-0416 | 7 | 1  | RES 511 1% .125W | 00746 | CRB14 OR CRB25 |
|    | A28R470  | 0698-4448 | 7 | 1  | RES 294 1% .125W |       | CRB14 OR CRB25 |
|    | A28R471  | 0698-3438 | 3 |    | RES 147 1% .125W |       | CRB14 OR CRB25 |
|    | 128R472  | 0698-4037 | 0 | 1  | RES 46.4 1% .125 | l l   | CRB14 OR CRB25 |
| A  | 28R473   | 0757-0442 | 9 |    |                  |       | CRB14 OR CRB25 |
|    |          |           |   |    |                  |       |                |
|    |          | 0757-0442 | 9 |    |                  | 00746 | CRB14 OR CRB25 |
|    |          | 0757-1094 | 9 |    | RES 1.47K 1% .12 |       | CRB14 OR CRB25 |
|    | 1        | 0698-3439 | 4 | 1  | RES 178 1% .125W |       | CRB14 OR CRB25 |
|    | 1        | 0698-3444 | 1 |    |                  | 1     | CRB14 OR CRB25 |
| A  | 28R478   | 0698-3444 | 1 |    |                  | 1     | CRB14 OR CRB25 |
|    |          |           |   |    |                  |       |                |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference HP Part 7 |                    |           | E CD | Qt  | Dear-i-ti        |         |                   |
|---------------------|--------------------|-----------|------|-----|------------------|---------|-------------------|
|                     | A28R479            |           | -    |     |                  | Manuf'ı | 1                 |
| ļ                   | A28R479<br>A28R480 |           | 9    |     | RES 10K 1% .125W | -       | CRB14 OR CRB25    |
|                     | A28R480            | 1         | 9    |     | RES 10K 1% .125W |         | CRB14 OR CRB25    |
|                     | A28R484<br>A28R486 |           | 4    | 1   | RES 6.81K 1% .12 | 00746   | CRB14 OR CRB25    |
|                     |                    |           | 9    | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25    |
|                     | A28R487            | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
|                     |                    |           |      |     |                  |         |                   |
|                     | A28R488            | 0757-0280 | 3    | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25    |
|                     | A28R489            | 0757-0280 | 3    | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25    |
|                     | A28R490            | 0757-0442 | 9    | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25    |
|                     | A28R491            | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
|                     | A28R492            | 0757-0466 | 7    | 1   | RES 110K 1% .125 | 00746   | CRB14 OR CRB25    |
|                     | 1000 100           |           |      |     |                  |         |                   |
|                     | A28R493            | 0698-3515 | 7    | 1   | RES 5.9K 1% .125 | 00746   | CRB14 OR CRB25    |
| E                   | A28R494            | 0757-0416 | 7    | 1   | RES 511 1% .125W | 00746   | CRB14 OR CRB25    |
|                     | A28R498            | 0757-0442 | 9    | 1   | RES 10K 1% .125W |         | CRB14 OR CRB25    |
|                     | A28R499            | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
| 1                   | A28R500            | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
|                     |                    |           |      |     |                  |         |                   |
|                     | A28R501            | 0757-0441 | 8    | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25    |
|                     | A28R504            | 8159-0005 | 0    | 1   | RES-ZERO OHMS    | 01339   | L-2007-1          |
| Ł                   | A28R508            | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
|                     | A28R509            | 0757-0441 | 8    | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25    |
| A                   | A28R510            | 0757-0438 | 3    | 1   | RES 5.11K 1% .12 | 00746   | CRB14 OR CRB25    |
|                     |                    |           |      |     |                  |         |                   |
| 1                   | 28R511             | 0683-2265 | 1    | 1   | RES 22M 5% .25W  | 01607   | CB2265            |
|                     | 28R512             | 0698-8958 | 2    | 1   | RES 511K 1% .125 |         | CRB14 OR CRB25    |
| 1                   | 28R513             | 0683-2265 | 1    | 1   | RES 22M 5% .25W  |         | CB2265            |
| A                   | 28R514             | 0698-8958 | 2    | 1   | RES 511K 1% .125 |         | CRB14 OR CRB25    |
| A                   | .28R519            | 0757-0280 | 3    | 1   | RES 1K 1% .125W  |         | CRB14 OR CRB25    |
|                     |                    |           |      |     |                  |         |                   |
|                     |                    | 0757-0442 | 9    | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25    |
|                     |                    | 8159-0005 | 0    | - 1 |                  |         | L-2007-1          |
| A                   | 28R523             | 0698-3242 | 7    |     |                  |         | CRB14 OR CRB25    |
| A                   | 28R524             | 0757-0416 | 7    |     |                  | 1       | CRB14 OR CRB25    |
| A                   | 28R525             | 0757-0283 | 6    | 1   |                  |         | CRB14 OR CRB25    |
|                     |                    |           |      | d   |                  |         | JALDIA OIL OILD2J |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference | e HP Part # | CD | Qty  | Description      | Manuf' | r Part #       |
|-----------|-------------|----|------|------------------|--------|----------------|
| A28R526   | 6 0698-3488 | 3  | 1    | RES 442 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R527   | 0698-3488   | 3  | 1    | RES 442 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R530   | 0698-3558   | 8  | 1    | RES 4.02K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R531   | 0757-0283   | 6  | 1    | RES 2K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A28R532   | 0698-0085   | 0  | 1    | RES 2.61K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |             |    |      |                  |        |                |
| A28R540   |             | 6  | 1    | RES 200 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R541   |             | 6  | 1    | RES 200 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R550   |             | 7  | 1    | RES 511 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R551   |             | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R552   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |             |    |      |                  |        |                |
| A28R553   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R554   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R560   | 0757-0439   | 4  | 1    | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R561   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R562   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
|           |             |    |      |                  |        |                |
| A28R563   | 0757-0439   | 4  | 1    | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R564   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R565   | 0757-0442   | 9  | 1    | RES 10K 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R566   | 0757-0439   | 4  | 1    | RES 6.81K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R567   | 0757-0280   | 3  | 1    | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
|           |             |    |      |                  |        |                |
| A28R568   | 0757-0280   | 3  |      | RES 1K 1% .125W  | 00746  | CRB14 OR CRB25 |
| A28R569   | 0757-0444   | 1  | 1    | RES 12.1K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R570   | 0698-4123   | 5  | 1    | RES 499 1% .125W | 00746  | CRB14 OR CRB25 |
| A28R571   | 0698-3159   | 5  | 1    | RES 26.1K 1% .12 | 00746  | CRB14 OR CRB25 |
| A28R572   | 0698-3159   | 5  | 1    | RES 26.1K 1% .12 | 00746  | CRB14 OR CRB25 |
|           |             |    |      |                  |        |                |
| A28R573   | 0698-4123   | 5  |      |                  | 00746  | CRB14 OR CRB25 |
| A28R574   | 0698-4123   | 5  |      | 1                | 00746  | CRB14 OR CRB25 |
| A28R575   | 0757-0280   | 3  |      |                  | 00746  | CRB14 OR CRB25 |
| A28R576   | 0757-0123   | 3  |      |                  | 00746  | CRB14 OR CRB25 |
| A28R577   | 0757-0123   | 3  | 1 ]] | RES 34.8K 1% .12 | 00746  | CRB14 OR CRB25 |

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Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| Reference | HP Part # | CD | Qty | Description      | Manuf'r | Part #         |
|-----------|-----------|----|-----|------------------|---------|----------------|
| A28R588   | 0757-0997 | 9  | 1   | RES 39.2 1% .5W  | 01074   | H2             |
| A28R604   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R607   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R608   | 0757-0449 | 6  | 1   | RES 20K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R609   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  | ·       |                |
| A28R610   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R612   | 0757-0199 | 3  | 1   | RES 21.5K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R613   | 0698-4425 | 0  | 1   | RES 1.54K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R614   | 0698-6630 | 3  | 1   | RES 20K .1% .125 | 00746   | CRB14 OR CRB25 |
| A28R615   | 0698-6624 | 5  | 1   | RES 2K .1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A28R617   | 0698-4437 | 4  | 1   | RES 2.94K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R618   | 0757-0200 | 7  | 1   | RES 5.62K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R621   | 0757-0444 | 1  | 1   | RES 12.1K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R622   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A28R624   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A28R625   | 0757-0280 | 3  | 1   | RES 1K 1% .125W  | 00746   | CRB14 OR CRB25 |
| A28R626   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R628   | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R629   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R630   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A28R631   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R632   | 0757-0441 | 8  | 1   | RES 8.25K 1% .12 | 00746   | CRB14 OR CRB25 |
| A28R633   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R635   | 0698-3444 | 1  |     | RES 316 1% .125W | 00746   | CRB14 OR CRB25 |
| A28R636   | 0757-0442 | 9  | 1   | RES 10K 1% .125W | 00746   | CRB14 OR CRB25 |
|           |           |    |     |                  |         |                |
| A28R639   | 0757-0441 | 8  |     | · · · · ·        | 1       | CRB14 OR CRB25 |
| A28R640   | 0757-0442 | 9  | 1   |                  | 1       | CRB14 OR CRB25 |
| A28R641   | 0698-3444 | 1  |     |                  | 00746   | CRB14 OR CRB25 |
| A28R642   | 0757-0442 | 9  |     | 1                |         | CRB14 OR CRB25 |
| A28R643   | 0757-0283 | 6  | 1   | RES 2K 1% .125W  | 00746   | CRB14 OR CRB25 |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

| A28R6440757-031771RES 1.33K 1% .1200746CRB14 OR CRB25A28R6450757-020071RES 5.62K 1% .1200746CRB14 OR CRB25A28R6460698-443181RES 2.05K 1% .1200746CRB14 OR CRB25A28R6470757-027901RES 3.16K 1% .1200746CRB14 OR CRB25A28R6480698-349631RES 3.57K 1% .1200746CRB14 OR CRB25A28R6490757-042471RES 1.1K 1% .1200746CRB14 OR CRB25A28R6500757-043831RES 5.11K 1% .1200746CRB14 OR CRB25A28R6510757-028031RES 1.4 1% .125W00746CRB14 OR CRB25A28R6520757-028031RES 1.4 1% .125W00746CRB14 OR CRB25A28R6530757-028031RES 1.4 1% .125W00746CRB14 OR CRB25A28R5101810-031611NETWORK-RES DIP02483761-3-R10KA28RV1032100-335271RES-TRMR 1K 10%037443386X-Y46-102A28RV1042100-320711RES-TRMR 5K 10%037443386X-Y46-502A28RV4552100-056701RES-TRMR 5K 10%037443386X-Y46-502A28RV4552100-05671RES-TRMR 10K 10%037443386X-Y46-103A28RV5012100-338341RES-TRMR 50 10%037443386X-Y46-500A28RV5022100-327311 <th></th> <th>Referenc</th> <th>e HP Part 7</th> <th># CI</th> <th>Qt</th> <th>y Description</th> <th>Manuf</th> <th>r Part #</th>                                                                                                                                                                                                                                                                                         |    | Referenc | e HP Part 7 | # CI | Qt  | y Description    | Manuf   | r Part #         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|-------------|------|-----|------------------|---------|------------------|
| A28R645       0757-0200       7       1       RES 5.62K 1% .12       00746       CRB14 OR CRB25         A28R646       0698-3496       3       1       RES 2.05K 1% .12       00746       CRB14 OR CRB25         A28R648       0698-3496       3       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A28R649       0757-0279       0       1       RES 3.57K 1% .12       00746       CRB14 OR CRB25         A28R649       0757-0242       7       1       RES 1.1K 1% .12       00746       CRB14 OR CRB25         A28R650       0757-0438       3       1       RES 1.1K 1% .12       00746       CRB14 OR CRB25         A28R651       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R540       1810-0316       1       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R5410       1810-0316       1       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25 <t< td=""><td></td><td></td><td>0757-0317</td><td>7</td><td>1</td><td></td><td></td><td></td></t<>                              |    |          | 0757-0317   | 7    | 1   |                  |         |                  |
| A28R646       0698-4431       8       1       RES 2.05K 1% .12       00746       CRB14 OR CRB25         A28R647       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A28R648       0698-3496       3       1       RES 3.57K 1% .12       00746       CRB14 OR CRB25         A28R649       0757-0424       7       1       RES 1.1K 1% .12       00746       CRB14 OR CRB25         A28R650       0757-0438       3       1       RES 1.1K 1% .12       00746       CRB14 OR CRB25         A28R652       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R53       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R53       0757-0280       3       1       RES 1.1K 1% .125W       00746       CRB14 OR CRB25         A28R540       1810-0316       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28R5404       2100-3207       1       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         <                                                                                                                                 |    | A28R645  | 0757-0200   | 7    | 1   |                  |         |                  |
| A28R647       0757-0279       0       1       RES 3.16K 1% .12       00746       CRB14 OR CRB25         A28R648       0698-3496       3       1       RES 3.57K 1% .12       00746       CRB14 OR CRB25         A28R649       0757-0424       7       1       RES 1.1K 1% .12       00746       CRB14 OR CRB25         A28R650       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRB25         A28R651       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRB25         A28R652       0757-0280       3       1       RES 1.K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1.K 1% .125W       00746       CRB14 OR CRB25         A28R599       0699-1503       1       1       RES 1.K 1% .125W       00746       CRB14 OR CRB25         A28R100       1810-0316       1       1       RES TRMR 1K 10%       03744       3386X-Y46-102         A28RV103       2100-3352       7       1       RES-TRMR 5K 10%       03744       3386X-Y46-102         A28RV104       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502                                                                                                                                          |    | A28R646  | 0698-4431   | 8    | 1   |                  |         |                  |
| A28R648       0698-3496       3       1       RES 3.57K 1% .12       00746       CRB14 OR CRB25         A28R649       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRB25         A28R650       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRB25         A28R651       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       RES .05 100% TKF       00746       CRB14 OR CRB25         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502 <t< td=""><td></td><td>A28R647</td><td>0757-0279</td><td>0</td><td>1</td><td></td><td>1</td><td></td></t<>                                 |    | A28R647  | 0757-0279   | 0    | 1   |                  | 1       |                  |
| A28R649       0757-0424       7       1       RES 1.1K 1% .125       00746       CRB14 OR CRE25         A28R650       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRE25         A28R651       0757-0280       3       1       RES 47.5 1% .5W       01074       H2         A28R652       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRE25         A28R53       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRE25         A28R53       0757-0280       3       1       RES 05 100% TKF       00746       CRB14 OR CRE25         A28R4100       1810-0316       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3349       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0567       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV455       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV450                                                                                                                                             |    | A28R648  | 0698-3496   | 3    | 1   |                  |         | 1                |
| A28R650       0757-0438       3       1       RES 5.11K 1% 1.2       00746       CRB14 OR CRB25         A28R651       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRB25         A28R652       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3352       7       1       RES-TRMR 100 10%       03744       3386X-Y46-102         A28RV102       2100-3369       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-102         A28RV404       2100-0574       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 5K 10%       03744       3386X-Y46-502 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>00140</td><td>CRB14 OR CRB25</td></td<>                                |    |          |             |      |     |                  | 00140   | CRB14 OR CRB25   |
| A28R650       0757-0438       3       1       RES 5.11K 1% .12       00746       CRB14 OR CRB25         A28R651       0757-0280       3       1       RES 47.5 1% .5W       01074       H2         A28R653       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R630       0757-0280       3       1       RES 1K 1% .125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV122       2100-3349       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV450       2100-3383       4       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV501                                                                                                                                              |    | A28R649  | 0757-0424   | 7    | 1   | RES 1.1K 1% .125 | 00746   | CRB14 OP CRDS    |
| A28R651       0757-0999       1       1       RES 47.5 1%. 5W       01074       H2         A28R652       0757-0280       3       1       RES 1K 1%. 125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1%. 125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       RES .55 100% TKF       00746       CRB14 OR CRB25         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3327       1       RES-TRMR 100 10%       03744       3386X-Y46-102         A28RV404       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV455       2100-3274       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV500       2100-3383       4       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV501       2100-3274       2       1       RES-TRMR 50 10%       03744       3386Y-Y46-502         A28RV502       2100-3383       4                                                                                                                                        | .  | A28R650  | 0757-0438   | 3    | 1   |                  |         |                  |
| A28R652       0757-0280       3       1       RES 1K 1%.125W       00746       CRB14 OR CRB25         A28R653       0757-0280       3       1       RES 1K 1%.125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       RES .05 100% TKF       00746       CRB14 OR CRB25         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3349       2       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV450       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386F-Y46-500         A                                                                                                                                     |    |          | 0757-0999   | 1    | 1   |                  | -       |                  |
| A28R653       0757-0280       3       1       RES 1K 1%.125W       00746       CRB14 OR CRB25         A28R999       0699-1503       1       1       RES.05 100% TKF       00746       CRB14 OR CRB25         A28R4100       1810-0316       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3249       2       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-3274       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV450       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-202         A28RV501       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A28R                                                                                                                                     |    |          | 0757-0280   | 3    | 1   |                  | 1       |                  |
| A28R999       0699-1503       1       1       RES       .05       100% TKF       00746       MCR18EZHJW00E0         A28RA100       1810-0316       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3349       2       1       RES-TRMR 100 10%       03744       3386X-Y46-101         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV438       2100-3274       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV402       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-202         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-202                                                                                                                                   |    |          | 0757-0280   | 3    | 1   |                  | 1       |                  |
| A28RA100       1810-0316       1       1       NETWORK-RES DIP       02483       761-3-R10K         A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3349       2       1       RES-TRMR 100 10%       03744       3386X-Y46-102         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A                                                                                                                                     | 1  | A28R999  | 0699-1503   | 1    | 1   |                  |         | •                |
| A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3207       1       1       RES-TRMR 100 10%       03744       3386X-Y46-101         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3283       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV501       2100-3283       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>00110</td><td>MORISEZEJ WOULU</td></td<>                               |    |          |             |      |     |                  | 00110   | MORISEZEJ WOULU  |
| A28RV103       2100-3352       7       1       RES-TRMR 1K 10%       03744       3386X-Y46-102         A28RV104       2100-3349       2       1       RES-TRMR 100 10%       03744       3386X-Y46-101         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-102         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV438       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV461       2100-3274       2       1       RES-TRMR 2K 10%       03744       3386X-Y46-502         A28RV500       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV503       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500 <td< td=""><td>A</td><td>A28RA100</td><td>1810-0316</td><td>1</td><td>1</td><td>NETWORK-RES DIP</td><td>02483</td><td>761 3 P10V</td></td<> | A  | A28RA100 | 1810-0316   | 1    | 1   | NETWORK-RES DIP  | 02483   | 761 3 P10V       |
| A28RV104       2100-3349       2       1       RES-TRMR 100 10%       03744       3386X-Y46-101         A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386Y-Y46-202         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386Y-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386Y-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         <                                                                                                                                 | A  | A28RV103 | 2100-3352   | 7    | 1   |                  |         |                  |
| A28RV123       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV404       2100-0554       5       1       RES-TRMR 500 10%       03744       3386X-Y46-502         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV435       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV401       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202                                                                                                                                         | A  | A28RV104 | 2100-3349   | 2    | 1   |                  | 1 1     |                  |
| A28RV404       2100-0554       5       1       RES-TRMR 500 10%       03744       3386P-Y46-501         A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV438       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3274       2       1       RES-TRMR 50 10%       03744       3386P-Y46-202         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV501       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP                                                                                                                                       | A  | 28RV123  | 2100-3207   | 1    | 1   |                  | 1 1     |                  |
| A28RV435       2100-3207       1       1       RES-TRMR 5K 10%       03744       3386X-Y46-502         A28RV438       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 2K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386X-Y46-500         A28RV501       2100-3273       1       1       RES-TRMR 50 10%       03744       3386X-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386X-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP                                                                                                                                       | A  | 28RV404  | 2100-0554   | 5    | 1   |                  | 1       | 1                |
| A28RV438       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-502         A28RV455       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386X-Y46-103         A28RV451       2100-3274       2       1       RES-TRMR 2K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV500       2100-3273       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-                                                                                                                                         |    |          |             |      |     |                  | 00111   | 55601-140-501    |
| A28RV438       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV455       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386X-Y46-103         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-202         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-202         A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386X-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104                                                                                                                                              |    |          | 2100-3207   | 1    | 1   | RES-TRMR 5K 10%  | 03744   | 3386X V46 509    |
| A28RV455       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105                                                                                                                                                       | 1  |          | 2100-3274   | 2    | 1   |                  |         |                  |
| A28RV461       2100-3274       2       1       RES-TRMR 10K 10%       03744       3386X-Y46-103         A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105                                                                                                                                                      | A  | 28RV455  | 2100-0567   | 0    | 1   |                  |         |                  |
| A28RV500       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264 </td <td></td> <td></td> <td>2100-3274</td> <td>2</td> <td>1</td> <td></td> <td></td> <td></td>                                                          |    |          | 2100-3274   | 2    | 1   |                  |         |                  |
| A28RV501       2100-3383       4       1       RES-TRMR 50 10%       03744       3386P-Y46-500         A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386X-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264                                                                                                                                                                   | A  | 28RV500  | 2100-3383   | 4    |     |                  |         | 1                |
| A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386P-Y46-500         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                             |    |          | 1           |      |     |                  |         | JJOOF - I 40-JUU |
| A28RV502       2100-3273       1       1       RES-TRMR 2K 10%       03744       3386X-Y46-202         A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386X-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                             |    |          | 2100-3383   | 4    | 1   | RES-TRMR 50 10%  | 03744   | 386P VA6 500     |
| A28RV503       2100-0567       0       1       RES-TRMR 2K 10%       03744       3386P-Y46-202         A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-202         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                            | A  | 28RV502  | 2100-3273   | 1    |     |                  | 1       |                  |
| A28RV504       2100-3210       6       1       RES-TRMR 10K 10%       03744       3386P-Y46-103         A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | 1        | 2100-0567   | 0    |     |                  |         |                  |
| A28TP101       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |          | 2100-3210   | 6    |     |                  | 1       |                  |
| A28TP102       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A2 | 28TP101  | 0360-2264   | 6    |     |                  |         |                  |
| A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |          |             |      |     |                  |         |                  |
| A28TP103       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP104       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D         A28TP105       0360-2264       6       1       TERMTEST POINT       10358       1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1  | 1        | 0360-2264   | 6    | 1 7 | FERMTEST POINT   | 10358 1 | 0950             |
| A28TP104         0360-2264         6         1         TERMTEST POINT         10358         1095D           A28TP105         0360-2264         6         1         TERMTEST POINT         10358         1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1  |          | 0360-2264   | 6    |     |                  | . 1     |                  |
| A28TP105 0360-2264 6 1 TERMTEST POINT 10358 1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | 1        | 0360-2264   | 6    |     |                  |         |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |          | 0360-2264   | 6    |     |                  |         |                  |
| A28TP106 0360-2264 6 1 TERMTEST POINT 10358 1095D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A2 | 8TP106 0 | 360-2264    | 6    |     |                  |         | 1                |

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|     |           |           | 1 |     |                  | ····   | · · · · · · · · · · · · · · · · · · · |
|-----|-----------|-----------|---|-----|------------------|--------|---------------------------------------|
|     | leference |           | + | Qty |                  | Manufr | Part #                                |
| 1   | 28TP107   |           | 6 | 1   | TERMTEST POINT   | 10358  | 1095D                                 |
|     | 28TP403   |           | 6 | 1   | TERMTEST POINT   | 10358  | 1095D                                 |
|     | 28TP404   | 1         | 6 | 1   | TERMTEST POINT   | 10358  | 1095D                                 |
|     | 28U100    | 1820-3665 | 0 | 1   | IC-MM74HCT245N   | 01698  | SN74HCT245N                           |
| A   | 28U101    | 1820-3847 | 0 | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N                           |
|     |           |           |   |     |                  |        |                                       |
|     | 28U102    | 1820-3081 | 4 | 1   | IC-MC74HC74N     | 01698  | SN74HC74N                             |
|     | 28U103    | 1820-3298 | 5 | 1   | IC-MM74HC32N     | 02037  | MC74HC32N                             |
| A2  | 28U104    | 1826-0861 | 4 | 1   | D/A 10-BIT       | 03285  | AD7533LN                              |
| A2  | 28U105    | 1826-0861 | 4 | 1   | D/A 10-BIT       | 03285  | AD7533LN                              |
| A2  | 28U106    | 1820-3399 | 7 | 1   | IC-MC74HC273N    | 01698  | SN74HC273N                            |
|     |           |           |   |     |                  |        |                                       |
| A2  | 8U107     | 1826-0877 | 2 | 1   | A/D 8-BIT        | 03285  | AD7574KN                              |
| A2  | 8U108     | 1820-1315 | 3 | 1   | ANLG MUXR MC1405 | 02037  | MC14051BCP                            |
| A2  | 8U109     | 1820-0493 | 6 | 1   | IC 307           | 03406  | LM307N                                |
| A2  | 8U110     | 1820-3847 | 0 | 1   | IC-MM74HCT138N   | 01698  | SN74HCT138N                           |
| A2  | 8U111     | 1820-3082 | 5 | 1   | IC-MC74HC374N    | 01698  | SN74HC374N                            |
|     |           |           |   |     |                  |        |                                       |
| A2  | 8U112     | 1826-0285 | 6 | 1   | IC MC79L05ACP    | 02037  | MC79L05ACP                            |
| A2  | 8U113     | 1826-0315 | 3 | 1   | IC 348           | 03406  | LM348N                                |
| A2  | 8U114     | 1826-0161 | 7 | 1   | IC 324           | 02037  | LM324N                                |
| A28 | 8U115     | 1820-3097 | 2 | 1   | IC-MM74HC08N     | 02037  | MC74HC08N                             |
| A28 | 8U117     | 1820-3373 | 7 | 1   | IC-MM74HC221AN   | 03406  | MM74HC221AN                           |
|     |           | 1         |   |     |                  |        |                                       |
| A28 | 8U118     | 1820-0493 | 6 | 1   | IC 307           | 03406  | LM307N                                |
| A28 | SU120     | 1820-2924 | 2 | 1   | IC-MC74HC02N     |        | SN74HC02N                             |
| A28 | 3U121     | 1820-3081 | 4 | 1   | IC-MC74HC74N     | •      | SN74HC74N                             |
| A28 | 3U122     | 1820-3082 | 5 |     | IC-MC74HC374N    | 1      | SN74HC374N                            |
| A28 | 3U123     | 1820-3081 | 4 |     |                  | -      | SN74HC74N                             |
|     |           |           |   |     |                  | 01000  |                                       |
| A28 | 3U124     | 1820-3081 | 4 | 1   | IC-MC74HC74N     | 01698  | SN74HC74N                             |
| A28 | 1         | 1820-3081 | 4 |     |                  |        | SN74HC74N                             |
| A28 | U401      | 1NB7-8179 | 7 |     |                  | 1      | 1NB7-8179                             |
| A28 | U402      | 1826-0524 | 6 | 1   | 1                |        | LM324AN                               |
| A28 | U403      | 1826-0207 | 2 |     |                  |        | LM318P                                |

Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

|     | Reference |                                   | #   | CD | Qty   | Description      | Manuf   | r Part #     |
|-----|-----------|-----------------------------------|-----|----|-------|------------------|---------|--------------|
|     | A28U404   | • • • • • • • • • • • • • • • • • |     | 8  | 1     | IC 339           | 01698   | LM339N       |
|     | A28U405   |                                   | - 1 | 1  | 1     | IC 201           | 03406   | LM201AN      |
|     | A28U406   |                                   |     | 6  | 1     | IC 307           | 03406   | LM307N       |
|     | A28U407   |                                   |     | 7  | 1     | IC 324           | 02037   | LM324N       |
|     | A28U408   | 1826-0207                         |     | 2  | 1     | IC 318           | 01698   | LM318P       |
|     |           |                                   |     |    |       |                  |         |              |
|     | A28U409   | 1826-0161                         |     | 7  | 1     | IC 324           | 02037   | LM324N       |
|     | A28U410   | 1858-0058                         |     | 8  | 1     | XSTR ARY 14P-DIF | 02037   | MPQ3906      |
|     | A28U411   | 1858-0087                         |     | 3  | 1     | XSTR ARY 14P-DIF | 02037   | MPQ3904      |
|     | A28U412   | 1858-0087                         |     | 3  | 1     | XSTR ARY 14P-DIF | 02037   | MPQ3904      |
|     | A28U413   | 1858-0087                         |     | 3  | 1     | XSTR ARY 14P-DIF | 02037   | MPQ3904      |
|     |           |                                   |     |    |       |                  |         |              |
|     | A28U415   | 1826-0600                         |     | 9  | 1     | IC 074A          | 01698   | TL074ACN     |
|     | A28U416   | 1858-0087                         |     | 3  | 1     | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
|     | A28U417   | 1826-0161                         |     | 7  | 1     | IC 324           | 02037   | LM324N       |
|     | A28U418   | 1858-0087                         |     | 3  | 1     | XSTR ARY 14P-DIP | 02037   | MPQ3904      |
|     | A28U601   | 1826-0315                         |     | 3  | 1     | IC 348           | 03406   | LM348N       |
|     |           |                                   |     |    |       |                  |         |              |
| - 1 | A28U602   | 1826-0315                         |     | 3  | 1     | IC 348           | 03406   | LM348N       |
|     | A28U603   | 1826-0161                         | 17  | 7  | 1     | IC 324           | 02037   | LM324N       |
| 1   | A28VR101  |                                   | 0   |    | 1     | DIO-ZNR 8.2V 5%  | 02037   |              |
|     | A28VR403  | 1902-0963                         | 9   |    | 1     | DIO-ZNR 16V 5%   |         | SZ30035-21RL |
| -   | A28VR404  | 1902-0956                         | 0   |    | 1     | DIO-ZNR 8.2V 5%  | 02037   |              |
|     |           |                                   |     |    |       |                  |         |              |
| 1   | A28VR405  | 1902-0956                         | 0   |    | 1  1  | DIO-ZNR 8.2V 5%  | 02037   |              |
|     | A28VR406  | 1902-0949                         | 1   |    | 1   1 | DIO-ZNR 4.3V 5%  | 02037   |              |
| 1   | A28VR407  | 1902-0945                         | 7   |    | 1   I | DIO-ZNR 3V 5%    |         | SZ0035-3RL   |
| 1   | 28VR409   | 1902-0951                         | 5   |    | 1   1 | DIO-ZNR 5.1V 5%  | 1       | 5Z30035-9RL  |
| A   | 28VR412   | 1902-0950                         | 4   |    | 1   [ | DIO-ZNR 4.7V 5%  | 02037   |              |
|     |           |                                   |     |    |       |                  |         |              |
|     | 28VR415   | 1902-0950                         | 4   | 1  | l   I | DIO-ZNR 4.7V 5%  | 02037   |              |
| - 1 | 28VR417   | 1902-0963                         | 9   | 1  |       |                  | 02037 S | Z30035-21RL  |
| 1   | 28VR419   | 1902-0953                         | 7   | 1  |       |                  |         | Z30035-11RL  |
| 1   | 28VR495   | 1902-0951                         | 5   | 1  |       |                  |         | Z30035-9RL   |
| A   | 28VR602   | 1902-0953                         | 7   | 1  | D     | OIO-ZNR 6.2V 5%  |         | Z30035-11RL  |

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| Reference | HP Part #   | CD | Qty | Description    | Manufr | Part #      |
|-----------|-------------|----|-----|----------------|--------|-------------|
| A28VR603  | 1902-0958   | 2  | 1   | DIO-ZNR 10V 5% | 02037  |             |
| A28VR604  | 1902-0945   | 7  | 1   | DIO-ZNR 3V 5%  | 02037  | SZ0035-3RL  |
| A28W103   | 1258-0141   | 8  | 1   | JUMPER-REM     | 01380  | 530153-2    |
| A28W403   | 08131-61607 | 1  | 1   | CBL SEMI RIGID | 28480  | 08131-61607 |
| A28W404   | 08131-61607 | 1  | 1   | CBL SEMI RIGID |        | 08131-61607 |

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Table C-14. 8131A Option 020 Channel 2 Board Parts List (continued)

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## Backdating

## Introduction

This appendix contains backdating information, which adapts this manual to instruments with serial numbers as shown below.

Changes are listed in the serial number order that they occured in the manufacture of the instrument.

#### HP 8130A

Instruments with serial numbers lower than 2905G00321 may show the following differences:

|              | ·····                                                   |           | 08130-66505 (Std) | 08130-66525 | (Opt. 020) |
|--------------|---------------------------------------------------------|-----------|-------------------|-------------|------------|
| L-Fix        | $50 \mu H$                                              | 9100-2891 | L400              | L400        | L600       |
| R-Fix        | $100 \mathrm{k}\Omega$                                  | 0757-0465 | R438              | R438        | R638       |
| R-Fix        | $750 \mathrm{k}\Omega$                                  | 0698-8960 | R452              | R452        | R652       |
| R-Fix        | $75k\Omega$                                             | 0757-0462 | R453              | R453        | R653       |
| R-Fix*       | $1.47 \mathrm{k}\Omega$                                 | 0757-1094 | R101              | R101        |            |
| LED Lamp*    |                                                         | 1990-1278 | DS100             | DS100       |            |
| Switch DIP*  |                                                         | 3101-0408 | S100              | S100        |            |
| *Connected b | *Connected between U104/12 and U112/21 on line LWRTEEPR |           |                   |             |            |

#### Table D-1. Timing Board

|                                                         |                         |           | 08130-66506 |  |
|---------------------------------------------------------|-------------------------|-----------|-------------|--|
| R-Fix*                                                  | $1.47 \mathrm{k}\Omega$ | 0757-1094 | R127        |  |
| LED Lamp*                                               |                         | 1990-1278 | DS100       |  |
| Switch DIP*                                             |                         | 3101-0408 | S101        |  |
| R-Fix                                                   | 301                     | 0757-0410 | R30         |  |
| C-Fix                                                   | 10pF                    | 0160-5735 | C19         |  |
| *Connected between U102/12 and U104/21 on line LWRTEEPR |                         |           |             |  |

Table D-2. Output Board

### HP 8131A

Instruments with serial numbers lower than 2839G00781 may show the following differences:

|                                                         |                         |           | 08131-66505 (Std) | 08131-6652   | 5 (Opt. 020) |
|---------------------------------------------------------|-------------------------|-----------|-------------------|--------------|--------------|
| L-Fix                                                   | $50 \mu H$              | 9100-2891 | L400              | L400         | L600         |
| R-Fix                                                   | $100 k\Omega$           | 0757-0465 | R438              | R438         | R638         |
| R-Fix                                                   | $750 \mathrm{k}\Omega$  | 0698-8960 | R452              | R452         | R652         |
| R-Fix                                                   | $75 \mathrm{k}\Omega$   | 0757-0462 | R453              | R453         | R653         |
| R-Fix                                                   | $464k\Omega$            | 0698-3260 | R539              | R539         | R739         |
| R-Fix                                                   | $909 \mathrm{k}\Omega$  | 0698-8961 | R551              | R551         | R751         |
| R-Fix*                                                  | $1.47 \mathrm{k}\Omega$ | 0757-1094 | R101              | R101         |              |
| Conn.Post*                                              |                         | 1251-5380 | <b>J</b> 400      | J400         | J600         |
| LED Lamp*                                               |                         | 1990-1278 | DS100             | DS100        |              |
| Switch DIP*                                             |                         | 3101-0408 | S100              | S100         |              |
| R-Fix*                                                  | $1.47 \mathrm{k}\Omega$ | 0757-1094 | R322              | R322         |              |
| R-Fix                                                   | $4.02 \mathrm{k}\Omega$ | 0698-3558 | R323              | R739         |              |
| Coil-MLD                                                | 50nH                    | 9100-7891 | L300              | <b>L30</b> 0 |              |
| R-Fix                                                   | $1k\Omega$              | 0757-0280 | R303              | R739         |              |
| *Connected between U104/12 and U112/21 on line LWRTEEPR |                         |           |                   |              |              |

Table D-3. Timing Board

| Table | D-4. | Output  | Board            |
|-------|------|---------|------------------|
| 10010 |      | o a par | <b>D Q Q A A</b> |

|       |                         |           | 08130-66506            |
|-------|-------------------------|-----------|------------------------|
| R-Fix | 15.4k $\Omega$          | 0698-3540 | R424                   |
| R-Fix | $8.25 \mathrm{k}\Omega$ | 0757-0441 | R425                   |
| R-Fix | $100 k\Omega$           | 0757-0465 | R508, R520             |
| R-Fix | $18.2\Omega$            | 0698-7833 | R504, R506, R521, R522 |

Table D-5. CPU Board

|        |             | 08130-66503 |
|--------|-------------|-------------|
| EPROM1 | 08131-13701 |             |
|        | 08131-13703 | U204        |
| EPROM2 | 08131-13702 |             |
|        | 08131-13704 | U205        |