

RECEIVER TESTING

△ = see INCREMENTS

RF GENERATOR

Press **Rx** and **RF** and **SELECT** for required RF OUT. (BNC socket has 50 W reverse power protection.)

Enter frequency and level followed by units terminator:

e.g. **FREQ** 1 2 3 4 5 **MHz** △
and **LEVEL** - 3 4 **dBm** △

Press **SET MOD** and enter modulating frequency:

e.g. **FREQ** 1 5 **kHz** △

Enter a.m. depth: e.g. **LEVEL** 6 0 **AM %** △

or f.m. deviation: e.g. **LEVEL** 5 5 **kHz** △

or ϕ .m. radians: e.g. **LEVEL** 2 **AM RAD** △

For ext. mod. connect modulating signal to **EXT MOD INPUT**

To switch off int. mod. enter **LEVEL** 0 (kHz, % or RAD).

For 2-tone int. mod. press **TONES** and follow menu.

Press **MOD** to switch int. or ext. mod. on or off.

AF VOLTMETER

Press **Rx** and **AF** for AUDIO TEST mode

— see AF GENERATOR (for settings).

Connect UUT to **AF INPUT** (and **AF GEN** for AUDIO TEST).

Select filter: **LEVEL** (0.3 to 3.4 kHz) or **LOW PASS** (0.3 or 50 kHz).

To read a.f. volts press **DC AC** to display AC.

To read d.c. + a.f. volts press **DC AC** to display DC

(50 kHz l.p.f. is automatically selected).

Press **MOD** to read dBV. Then press **dB** to read dBf.

DISTORTION METER (Rx)

Press **Rx** and **SELECT** for required RF OUT.

Set generator frequency — see RF GENERATOR.

Connect Rx input to RF OUT and output to **AF INPUT**

Press **MOD** to display **DISTN** (a.c. coupling and 0.3 to 3.4

kHz b.p.f. are automatically selected) and read % distortion.

For noise measurement press **MOD** to read **SINAD** or **S/N**.

DUPLEX TESTING

Press **ONE** and **SELECT** to display ONE or TWO PORT.

Set generator frequency, level and modulation (see RF GENERATOR) and Rx frequency.

Connect Rx input to RF OUT (N for 1-port or BNC for 2-port operation).

Select Tx channel.

Connect Tx output to RF IN (N for both 1- and 2-port operation).

Connect **AF GEN** to Tx modulating input.

Connect Rx output to **AF INPUT**

Press **MOD** or **MOD S/N** and read Rx distortion, **SINAD** or **S/N**.

TONES ENCODING/DECODING

(Tone standards: CCIR, ZVEI, DZVEI, EEA/EIA, and User Defined)

Transmitter test

Press **Tx** and **SELECT** for type N RF IN, and turn on Tx.

Press **TONES** to display TONES STANDARD MENU.

Press **MODE** key indicated by menu to select required tone standard, user defined standard or 2-tone operation.

Receiver test

Press **Rx** and **SELECT** for required RF OUT.

Press **TONES** to display TONES STANDARD MENU.

Press **MODE** key indicated by menu to select required tone standard, user defined standard or sub-audible tone.

Duplex mode

Follow instructions under DUPLEX TESTING.

Press **TONES** to display TONES STANDARD MENU.

Press **MODE** key as for 'Receiver test'.

OSCILLOSCOPE DISPLAYS

Press **SCRN** and set **INTENSITY** and **POSITION**

Press **←** or **→** to change horizontal trace expansion

and **↑** or **↓** to change vertical trace expansion.

Select **TRIP** for repeated trace on auto-trigger or **SMALL** for one sweep in storage mode.

INCREMENTS

Stepped increments or decrements can be selected for:

AF GEN function — frequency and level,
RF GEN function — frequency, level, and modulation units.

Enter step size followed by units terminator:
e.g. for frequency increments:

FREQ 5 0 0 **kHz**

or for level increments:

LEVEL 5 0 **dB**

or for modulation increments:

SET MOD 1 **AM %** OR **FM %**
LEVEL 5 0 **AM RAD** OR **FM RAD**

Then use **↑** or **↓** for single steps

or **VARIABLE** for continuous steps of smallest increment allowed.

STORE AND RECALL

To save settings press **STORE** or **RECALL** followed by identify digits 01 to 38. **RECALL** 00 restores settings after switch-off.

HELP KEY OPERATION

Press **HELP** to display HELP menu.

Press **MODE** key indicated by menu for help in TESTING, CHANGE PARAMETERS or SELF TEST.

ERROR CODES IN SELF TEST

Code	Sig. Gen. frequency	Code	Sig. Gen. power (%mW)
10	Pass	20	Pass
11,12	20 MHz high, low	21,22	300 MHz low, high
13,14	111 MHz high, low	23,24	849 MHz low, high
15,16	218 MHz high, low	25,26	20 MHz low, high
17,18	340 MHz high, low	27,28	20 MHz (% mW) low, high
19,1A	480 MHz high, low		
1B	Counter failure		
Code	Mod. freq. and level		
30	Pass		
31,33,34	400 Hz f.m.: freq. fails, level low, high		
32,35,36	1 kHz f.m.: freq. fails, level low, high		
37,38	1 kHz a.m.: level low, high		
39,3A	1 kHz ϕ .m.: level low, high		