

Receiver testing

Press for RF IN/OUT socket.

Press to display TONES menu.

Select from , , and .

On **SEQUENTIAL TONES MENU**, select required standard or .

On **RX SEQUENTIAL TONES** menu, use and number keys to enter up to 11 tones on each of 3 pages. Use , or to generate the sequence.

On **DTMF GENERATOR AND DECODER** display, set MOD LEVEL and, under SEND DATA, use , , number keys and for sequence of digits. Under RECEIVE DATA, decoded digits are shown.

On **DCS GENERATOR** display, set MOD FREQ, sub-audible deviation LEVEL and POLARITY and use , , number keys and for address code (3 octal digits) until is used.

On **POCSAG RADIO PAGER TEST** display, set pager's RF FREQ, RF LEVEL, MOD FREQ and MOD LEVEL and use , and number keys for RIC number. Set and use and to insert errors and use to transmit signal.

Duplex testing

Press and for ONE PORT or TWO PORT.

Press to display TONES menu.

Select from , , and .

For generating, proceed as for 'Receiver testing'. For receiving, use TRANSMITTER TEST mode.

Audio testing

Press and for AUDIO TEST mode.

For generating, connect audio unit to AF GEN OUTPUT.

Press and then as under 'Receiver testing'.

For receiving, connect audio unit to AF INPUT.

Press and then as under 'Transmitter testing'.

AUDIO AND MODULATION SETUP

On a TONES menu, press , or .

Select generator as under 'AF generators' or as for modulation setting under 'RF generator'.

Press to select enabled or OFF.

Press to lock level of GEN 2 to that of GEN 1. Press to select SINE, SQUARE, TRIANGLE or SAWTOOTH.

Press to show EXT MOD INPUT FREQ and LEVEL where applicable.

OSCILLOSCOPE DISPLAYS

Press and set INTENSITY and POSITION controls.

Press or to adjust HORIZ scale.

Press or to adjust VERT scale.

Press or for single SWEEP storage or repetitive on auto trigger.

STORE AND RECALL

Press and number keys (01 to 26) for storage.

Press and same number keys to recall or 00 to recall settings at last switch-off or power failure.

HELP KEY OPERATION

Press to display HELP menu.

Press a MODE key for an operating summary.

Press to display the parameters menu.

Select any of the parameters and reset as required.

MARCONI INSTRUMENTS LIMITED
Longacres, St Albans, Herts, AL4 0JN, England
Telephone: (0702) 59292 Telefax: 23350
Fax: (0727) 57481

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Printed in the UK
Issue 1

Jan. 93

Part No. 46882-116A

RADIO COMMUNICATIONS TEST SET 2955B 0.4 to 1000 MHz

TRANSMITTER TESTING

RF power meter and frequency meter

Press and for RF IN/OUT socket. Sustained overload makes display flash and sounds alarm. Read power and frequency on TRANSMITTER TEST display.

For frequency OFFSET on display, enter datum frequency:

e.g.

AF generators

Connect Tx modulating input to AF GEN OUTPUT.

Press and for first AF generator.

Enter frequency of first AF generator:

e.g.

Enter level of first AF generator:

e.g.

Press and for second AF generator.

Enter frequency and level in same way.

Press and to return to first AF generator.

Press to enable or disable selected AF generator.

For increments of frequency and level, use to set, then Δ INCREMENT keys for increase or decrease.

Modulation meter

Press and for RF IN/OUT socket.

Select modulation from or or

Press once or twice for 0.3 to 3.4 kHz or EXTERNAL.

Press once or twice for 0.3 or 15 kHz.

Use AF GEN OUTPUT to modulate Tx if required.
Read modulation level on display.
Demodulated signal can be heard on internal speaker or on earphones connected to ACCESSORY socket.
Signal also available at DE-MOD OUT socket.

Audio distortion and noise meter

Connect Tx modulating input to AF GEN OUTPUT.

Press **TX TEST** and **SELECT** for RF IN/OUT socket.

Select modulation from **FM**, **AM %** or **ΦM RAD**.

Press **ON/OFF** for distortion reading on display.

Modulation frequency of 1 kHz and 0.3 to 3.4 kHz filter are automatically selected.

Press **LOW PASS** once or twice for up to 0.3 or 15 kHz.

Press **SINAD S/N** for SINAD reading on display.

0.3 to 3.4 kHz filter is automatically selected.

Press **LOW PASS** once or twice for up to 0.3 or 15 kHz.

Press **BAND PASS** once or twice to return to 0.3 to 3.4 kHz or for an EXTERNAL filter (between DE-MOD OUT socket and AF INPUT socket).

Press **SINAD S/N** again for S/N reading on display.

Select filter as for SINAD.

RECEIVER TESTING

RF generator

Press **TX TEST**, **RF GEN** and **SELECT** for RF IN/OUT socket.
Reverse overload makes display flash and sounds alarm.
Enter frequency and level of RF generator:

e.g. **FREQ** **1** **2** **3** **.** **5** **KHZ**

and **LEVEL** **-** **3** **4** **dBm**

For increments of frequency and level, use **SET MOD** for first modulation generator.

Press **SET MOD** for first modulation generator.

Press **SET MOD** and **2** for second generator.

Press **ON/OFF** to enable or disable selected generator.

When both are enabled, press **MEM** and **1** for first modulation generator.

For one or both generators, enter modulation frequency:

e.g. **FREQ** **1** **.** **5** **MHZ**

For one or both generators, enter modulation level and type of modulation:

e.g. **LEVEL** **5** **KHZ** **MV** for FM deviation

and **LEVEL** **6** **0** **AM %** for AM depth

and **LEVEL** **2** **ΦM** **RAD** for ΦM deviation radians.

For increments of frequency and level, use **Δ INCR** to set, then **Δ INCREMENT** keys for increase or decrease.
Connect external modulation to EXT MOD INPUT.
External modulation is added to internal modulation.

For external only, enter **LEVEL** **0** and any unit.

Audio distortion and noise meter

Connect Rx audio output to AF INPUT.

Press **TX TEST** and **SELECT** for RF IN/OUT socket.

Set RF frequency and level as above.

Set modulation level and type as above.

Press **DISTN** for distortion reading on display.

Modulation frequency of 1 kHz, AC coupling and 0.3 to 3.4 kHz filter are automatically selected.

Press **LOW PASS** once or twice for up to 0.3 or 50 kHz.

Press **SINAD S/N** for SINAD reading on display.

Modulation frequency of 1 kHz and 0.3 to 3.4 kHz filter are automatically selected.

Press **LOW PASS** once or twice for up to 0.3 or 50 kHz.

Press **SINAD S/N** again for S/N reading on display.

Select filter as for SINAD.

DUPLEX TESTING

Press **DUPLEX TEST** and **SELECT** for ONE PORT or TWO PORT as shown on the DUPLEX display.

Connect Tx modulating input to AF GEN OUTPUT.

Set AF generator as for 'Transmitter testing'.

Connect Tx output to RF IN/OUT N socket.

Connect Rx input to RF IN/OUT N (1-port) or BNC (2-port) socket.

Connect Rx audio output to AF INPUT.

Set RF generator frequency, level and modulation as for 'Receiver testing'.

Then proceed as for 'Transmitter testing' and 'Receiver testing'.

AUDIO TESTING

AF voltmeter

Connect audio unit to AF GEN OUTPUT and AF INPUT.

Press **TX TEST** and **AF GEN** for AUDIO TEST mode.

Set AF generators as for 'Transmitter testing'.

Read input voltage on display.

Press **dB** once or twice to add dBV or dBm reading.

Press **AC DC** for AC or DC + AC.

Press **BAND PASS** for 0.3 to 3.4 kHz.

Press **LOW PASS** once or twice for 0.3 or 50 kHz.

Distortion and noise meter

Proceed as for 'Transmitter testing' except that LOW PASS filter is 0.3 or 50 kHz.

SIGNALLING CODES

Transmitter testing

Press **TX TEST** and **SELECT** for RF IN/OUT socket.

Press **TONES** to display TONES menu.

Select from **SEQUENTIAL**, **DTMF** and **DCS**

On **SEQUENTIAL TONES MENU**, select required standard. Trigger Tx to show TONE number, FREQ and % ERROR on **TX SEQUENTIAL TONES** menu.

On **DTMF GENERATOR AND DECODER** display, set AF generator LEVEL and, under SEND DATA, use **CLEAR**, **LOAD**, number keys and **SEND** for sequence of digits. Under RECEIVE DATA, decoded digits are shown.

On **DCS DECODER** display, set MOD FREQ and POLARITY to show decoded signal and each address CODE.