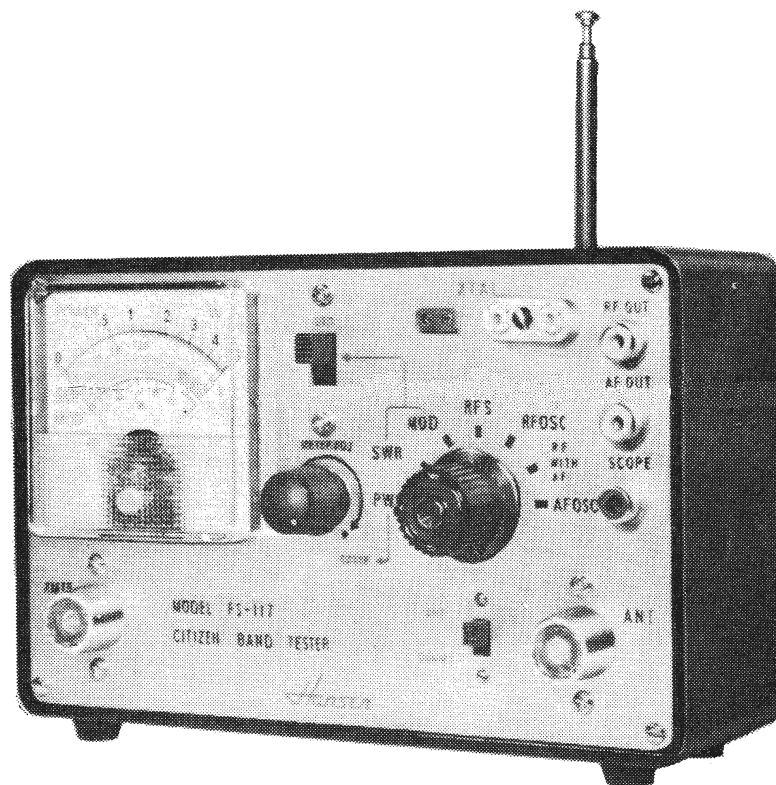


Hansen

MODEL FS-117



CITIZENS' BAND TESTER

HANSEN ELECTRONICS CORPORATION

FS-117 CITIZENS' BAND TESTER

Model FS-117 citizens' band tester has been made to allow easy checking of transceivers operating in the 27 Mc citizens' band. The compact design of this tester makes it ideal for use by mobile stations.

Specifications

- | | |
|-------------------|---|
| 1. Frequency | 27 Mc citizens' band |
| 2. Impedance | 50—52 ohms |
| 3. Connector | SO-239 (UHF type) |
| 4. Meter | 100 μ A moving coil (pivot) Type 52 (25A) |
| 5. Battery | 006P (9V) 1 ea. |
| 6. Size (Overall) | 81×117×179 mm, 780 grams |

Measurement Range

1. Wattmeter (PWR) 0—5 watts (average power) $\pm 10\%$
2. Standing wave ratio (VSWR) 1:1—1:3 (Measurable power 1 watt min.)
3. Modulation degree meter 0—100% (average modulation degree) $\pm 10\%$ (Measurable power 1 watt min.)
4. Relative field strength meter (RFS)
5. 27 Mc band radio frequency oscillator Output 300 mV min. (At no load)
6. Crystal activity test (Good or Bad method)
7. 27 Mc band oscillator with audio frequency modulation (RF with AF oscillation about 1000 c/s)
8. Low frequency oscillator Freq. about 1000 c/s Output 1 V min. (at No-load)
9. 5 watt dummy load built in.

How to Use CB Tester

1. Connect XMTR terminal to transmitter and ANT terminal to antenna cable.
2. Setting the slide switch located at left side of antenna connector to DUMMY will allow the power from the transmitter to flow into the dummy load built in the tester. Setting this slide switch to ANT will connect the power from transmitter to the antenna circuit.
3. Wattmeter—Switch on the transmitter. Set the tester FUNCTION switch to PWR. Next, turn the METER ADJ knob fully clockwise until it is at the CALIB mark. The meter indications will be changed to allow reading the wattmeter scale directly.

4. SWR meter—Shift the slide switch located above METER ADJ to SET position. Set the FUNCTION switch to SWR position. Turn the METER ADJ knob and set the meter to full scale. Next, shift the above slide switch to CHECK position. The meter indications will be changed to allow reading the SWR scale directly.
5. Modulation degree meter (MOD)—Set the FUNCTION switch to MOD position. Shift the slide switch located above the METER ADJ knob to SET position. Turn the METER ADJ knob and set the meter to full scale. Next, shift the above slide switch to CHECK position. The meter indications will now be changed to allow reading the MOD% scale directly.
6. RFS (Relative Field Strength meter)—Insert the telescopic antenna, supplied as accessory, into the hole in top of cabinet. Set the FUNCTION switch to RFS position. Turn the METER ADJ knob and adjust the meter pointer to deflect suitably. It will now be possible to draw out detected wave from the SCOPE terminal.
7. 27 Mc oscillator (RF OSC)—Set the FUNCTION switch to XTAL/RF OSC. Insert the desired channel crystal oscillator element into XTAL socket. It will now be possible to draw out radio frequency output from RF OUT terminal. The lead to be connected to the RF OUT terminal should be as short as possible.
8. Crystal activity test—Set the FUNCTION switch to XTAL/RC OSC position. Insert the crystal element into XTAL socket. Next, set the meter pointer to full scale by turning the METER ADJ knob. Removing the crystal element from the XTAL socket will cause the meter pointer to deflect. If the pointer stops within the GOOD zone of the XTAL scale, the crystal element is in satisfactory state.
9. Oscillator for RF containing AF—Set the FUNCTION switch to RF WITH AF position. Insert the desired channel crystal element into XTAL socket. This will allow drawing out modulated radio frequency from the RF OUT terminal, and also modulated wave from AF OUT terminal. The lead to be connected to RF OUT terminal should be as short as possible.
10. AF oscillator (AF OSC)—Set the function switch to AF OSC. This will allow drawing out audio frequency of about 1000 c/s from the AF OUT terminal.

Caution Setting the slide switch, located at left side of ANT terminal, to DUMMY position will cause the power from the transmitter to be sent into the dummy load built in the tester. Setting this slide switch to ANT position will cause the power from transmitter to be sent into the antenna cable through the ANT terminal.

SCHEMATIC MODEL FS-117

