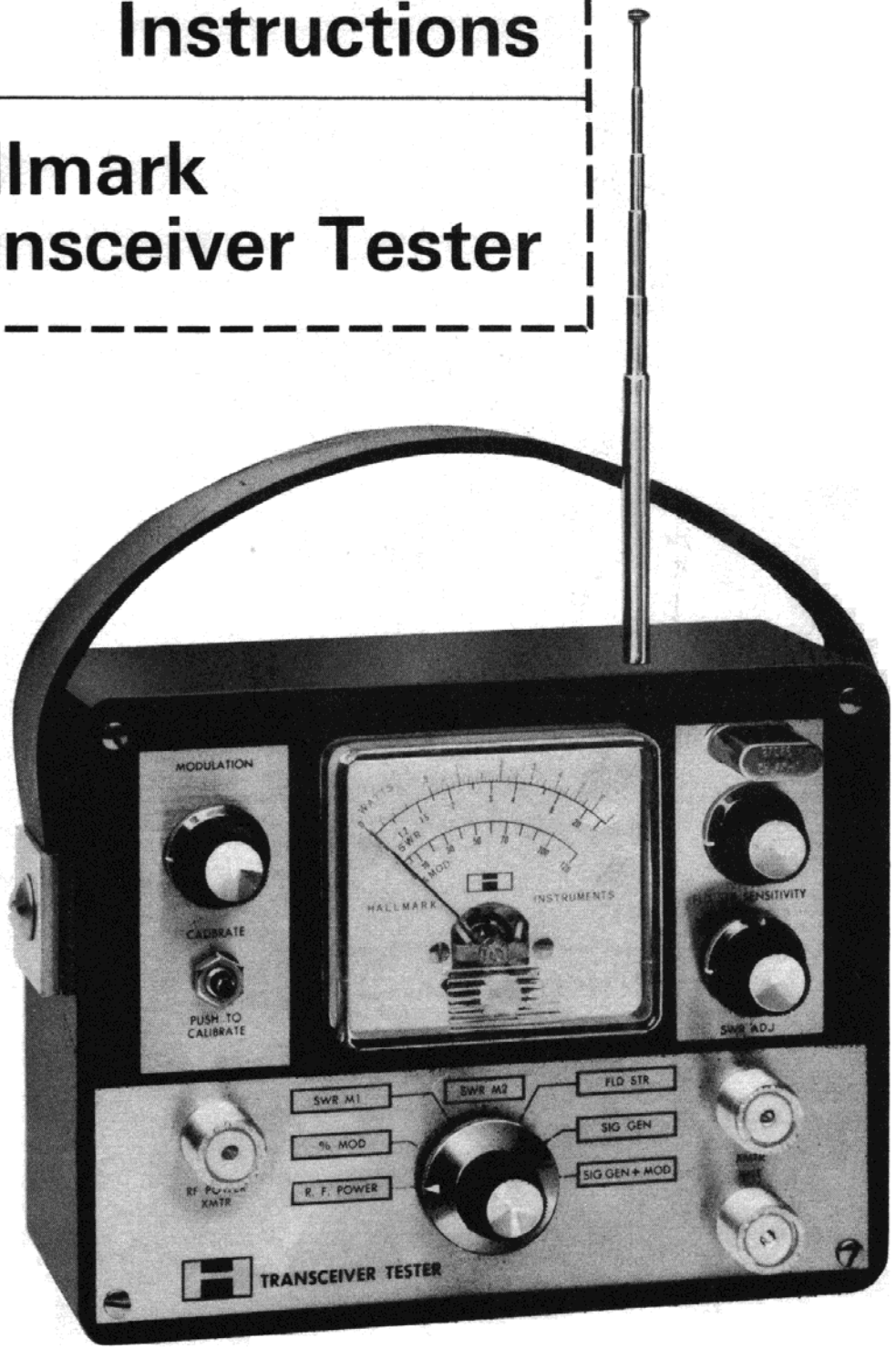
Hallmark Transceiver Tester Owners Manual

Operating Instructions

Hallmark Transceiver Tester



Introduction:

The Hallmark Transceiver Tester is designed primarily for testing low-power equipment such as 5-watt Citizens Band Transceivers. The Hallmark Tester features rugged construction for use in the field as well as on the test bench. The electronic circuit and front panel are engineered for reliability and ease of operation. Given reasonable care, and used as directed, the Hallmark Transceiver Tester will give years of reliable operation and dependable performance.

Transceiver Tester Functions:

The Hallmark Transceiver Tester has 6 basic functions:

1. Measure RF power (absolute) 0-5 watts
2. Measure percent amplitude modulation 0-120%
3. Measure standing wave ratio
4. Provide relative field strength indication
5. Generate a crystal controlled signal from 26.965 mc to 27.255 mc
6. Generate a crystal controlled signal from 26.965 mc to 27.255 mc with modulation

Operating Instructions:

Measuring Absolute RF Power:

1. Connect transmitter RF power output to the RF POWER TRANSMITTER connector.
2. Place selector switch in the RF power position.
3. Key transmitter and read absolute power level in watts on red scale of meter.

Measuring Percent Modulation:

1. Connect the transmitter RF power output to the RF POWER TRANSMITTER connector.
2. Place selector switch in the % MOD position.
3. Key the transmitter, and with no modulation calibrate the modulation meter by depressing the PUSH TO CALIBRATE switch and adjusting the MODULATION control to the red line located on the 100% modulation point on the meter.
4. Release the PUSH TO CALIBRATE switch, modulate the transmitter by voice or external signal generator, and read the percent modulation on the bottom scale of the meter.

Measuring Standing Wave Ratio:

1. Connect the transmitter RF power output to the transmitter connector located on the right side of the Tester.
2. Place selector switch to the SWR M2 position.
3. Key the transmitter and adjust the SWR ADJ control to a full scale meter reading.
4. Place the selector switch to the SWR M1 position and note the SWR reading.
5. Connect the antenna or load to the ANT connector, and with the selector switch in the SWR M1 position, adjust the SWR ADJ control to a meter reading obtained in Step 4.
6. Place the selector switch to the SWR M2 position and read the Standing Wave Ratio on middle scale of meter.

Note: The SWR M1 position on the Tester and the SWR ADJ control are used in order to eliminate the loading effect that the antenna or load will have on most transmitters.

If it is desired to use the meter for antenna adjustments rather than for accurate SWR readings, the SWR M1 position need not be used. It is only necessary to adjust the transmitter matching network for the best meter "null."

Field Strength Indication:

1. Place the selector switch in the FLD STR position.
2. Extend the antenna to its maximum height and place the Tester in close proximity to the transmitting antenna.
3. With the FLD STR SENSITIVITY control in the maximum counter-clockwise position and the transmitter keyed, turn FLD STR SENSITIVITY control in the clockwise direction until there is sufficient meter deflection for a relative indication of field strength.

Note: There is no field strength scale provided on the meter. The main purpose of obtaining a field strength indication is to allow the transmitter or antenna system to be peaked for maximum output without connecting a meter directly into the circuit.

Signal Generator Without Modulation:

The signal generator is to be used for checking Citizens Band Receivers. Crystals for all Citizens Band frequencies may be obtained from HALL-MARK INSTRUMENTS, INC.

1. Insert crystal into XTAL socket located on front panel of Tester.
2. Extend the antenna to its maximum height.
3. Place selector switch in the SIG GEN position.
4. Place Tester in close proximity to the receiver RF input connector. The low level signal should now indicate the relative operating condition of the RF section of the receiver.

Signal Generator With Modulation:

1. Insert the crystal into XTAL socket located on front panel of Tester.
2. Extend the antenna to its maximum height.
3. Place the selector switch in the SIG GEN + MOD position.
4. Place Tester in close proximity to the receiver RF input connector. The low level signal with modulation should now indicate the relative operating condition of the RF and Audio sections of the receiver.

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