

INSTRUCTION FOR OPERATION

Note: Throughout these instructions the TEST UNIT 1-2,3-5 will be referred to as the TEST UNIT.

1. Turn MASTER SWITCH of the TEST UNIT to OFF.
2. Remove batteries and radio 6C-011 crystal from their case, remove the transmitter crystal from the chassis unless one of the same frequency is available for test purposes. Insert chassis into TEST CASE 6C-01-8 and attach terminal board of the harness on the TEST UNIT to the terminal board of the chassis so that the pins fit into the respective chassis terminal board contacts. Lock the two terminal boards together by a sideward movement of the levers attached to the locking pins. Mount TEST CASE 6C-01-8 in TEST STAND PT-252-0. Place PHONES-TO-TALK switch in receive position.

3. Slide CRISTAL COMPARTMENT COVER on TEST UNIT to left and insert crystal into lower socket holes. Unlatch battery compartment door on right side of TEST UNIT and insert batteries with POSITIVE ends toward door. Close and latch door.

4. Turn on the radio set by extending the antenna rod to its full length.
5. To check A battery voltage, turn the MASTER SWITCH to 24-30, 0-150 V. D.C. The nominal reading of a fresh battery should agree with the value printed on the battery.

6. To check the radio set A battery current draw, turn the MASTER SWITCH to 24-30, 0-600 MA D.C. Check this current draw for both the receive and transmit position of the PHONES-TO-TALK switch. (Multiply readings on the 0-60 scale by 10 for this test. See instructions with radio for nominal readings.)

7. To check B battery voltage, turn the MASTER SWITCH to 24-30, 0-150 V. D.C. The nominal reading of a fresh battery should agree with the value printed on the battery. (Multiply readings on the 0-15 scale by 10 for this test.)

8. To check the B current drain of the radio receiver, turn the MASTER SWITCH to

within the limits of adjustment. If not, the wrong "Tank Coil" may be in the set. Care must be taken to avoid detuning through hand-capacity near the radio.
15. Return the MASTER SWITCH to OFF.

16. To tune the transmitting section of the radio, replace the transmitter crystal. Set the MASTER SWITCH of TEST UNIT to the 24-30, 0-150 V. D.C. position. With the antenna fully extended and the PHONES-TO-TALK switch in the transmit position, adjust the "Tank Capacitor adjustment" for a maximum current reading on the meter in the TEST UNIT. Note the current drain as indicative of the action of the r-f amp. tube.
17. With MASTER SWITCH in 24-30, 0-60 MA, D.C. position, note the total plate current. For further adjustments of the transmitter section refer to the instruction book accompanying the radio.

DESCRIPTION OF TEST UNIT

1. This TEST UNIT consists of a Pierce oscillator designed to employ a crystal from the radio transmitter under test, an audio oscillator tuned to 1000 cps., with suitable switches by which the oscillator or the transmitter may be modulated by 1000 cps., a microphone and a receiver phone, a basic d'Arsonval microammeter in conjunction with a selector switch by which various meter ranges may be selected and simultaneously connected to the output of the radio under test. Components are provided for batteries 24-30 and 24-30 within the TEST UNIT. Terminals are also provided on the test panel for use with external heavy duty batteries. Also heavy duty batteries are used, the batteries from the radio must not be used simultaneously. It is best to remove them from the TEST UNIT compartment after the initial voltage and current measurements have been made. The entire TEST UNIT is housed in a metal case which provides ample shielding to prevent excessive stray radiation. TEST UNIT is designed for use in horizontal position.

OPERATION OF TEST UNIT

(A.) Set switch to OFF, before changing battery.

series of burners connections and when TEST UNIT is not in use.
(E.) PHONES-TO-TALK switch must be set for all transmitter tests and is for all transmitter tests.

(C.) MODULATING SWITCH must be set to permit operation of the RADIO section to MODULATE TRANSMITTER.

(D.) Always use CRISTAL COMPARTMENT COVER unless instructed otherwise during certain steps in the procedure.

(E.) When TEST UNIT is to be placed in storage for long periods of time, the batteries should be removed from their case in the TEST UNIT.

(F.) External magnetic shield on back of meter in TEST UNIT must not be touched. The leads necessary of the meter is fixed by this about adjustment at factory.
(G.) Pot terminal board lead to cover before attaching cover to TEST UNIT.

1. Failure to obtain signals from the TEST UNIT—Check the 24-30 and the 24-30 tubes. Check internal battery connections for corrosion and try alternate batteries.

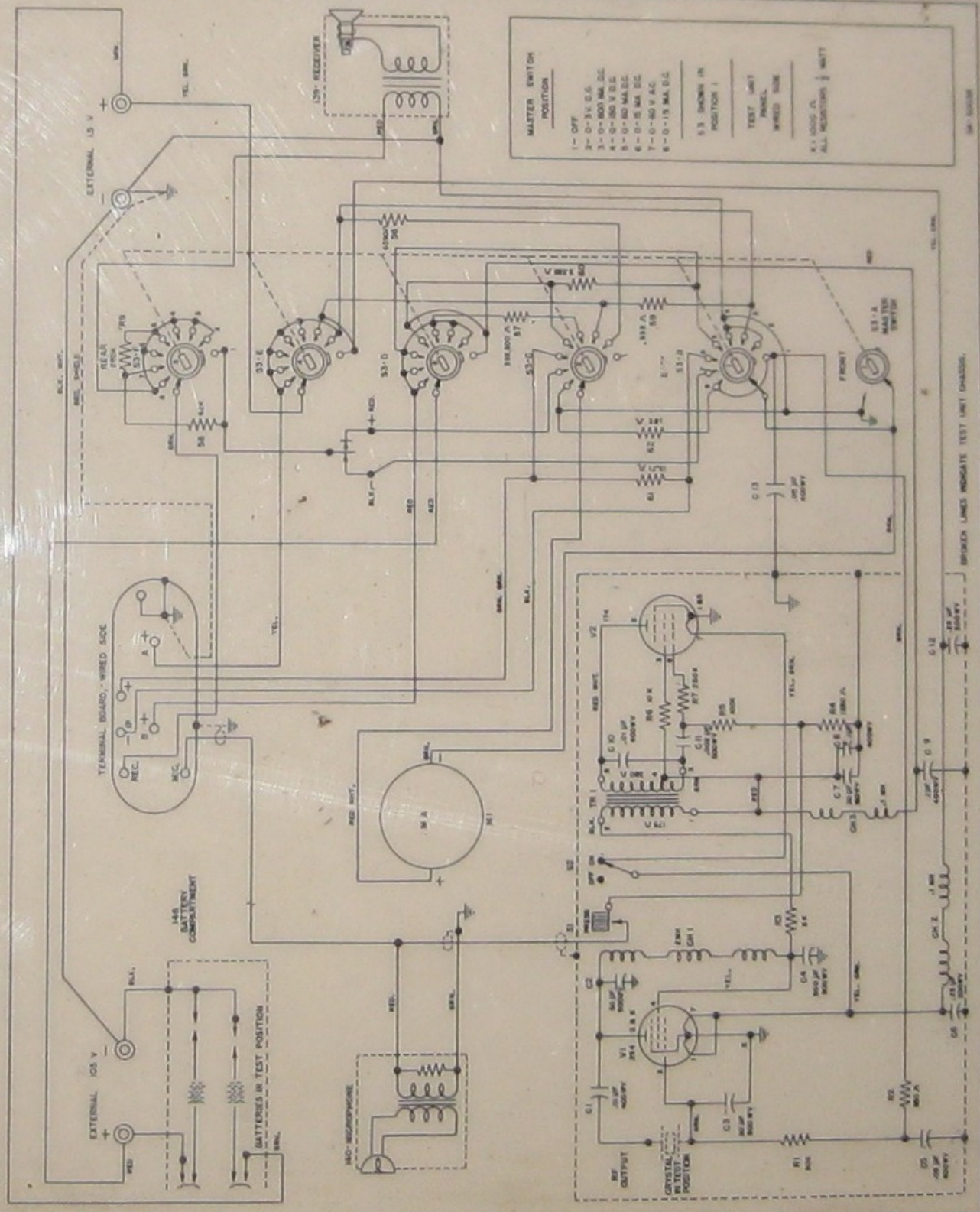
2. Disconnect one terminal of the meter and with a continuity meter trace the circuit as given in the circuit diagram. It is necessary to disconnect the microammeter because all standard components pass more current than may be safely passed through the microammeter.

3. To replace microphone or speaker, remove the wire leads and turn remaining clips on the side of their frame. They will not attach without bending the clips.

4. The radio oscillator may be checked for operation by connection of headphones from the terminal board point indicated as R.C. to the grounded terminal of antenna.

5. Failure to operate following steps or faulty meter conditions may necessitate careful checking of antenna structure or dust on alcohol or carbon microphone (Pyrex Flow Rectifier Tube). The setting of the TEST UNIT should be checked several hours after allowing the antenna structure of the antenna shield. The contacts of the antenna shield may be lubricated with plate vasoline or clean kerosene oil.

TEST UNIT I-135-F SCHEMATIC DIAGRAM



- MASTER SWITCH POSITION
- 1- OFF
 - 2- 0-30 D.C.
 - 3- 0-60 D.C.
 - 4- 0-90 D.C.
 - 5- 0-15 MA D.C.
 - 6- 0-60 V A.C.
 - 7- 0-15 MA D.C.
 - 8- 0-15 MA D.C.
- 3.3 SHOWN IN POSITION 1
- TEST UNIT PANEL WIRING SIDE
- 4.1 1000 Ω ALL RESISTORS 1/4 WATT

SPKED LINES INDICATE TEST UNIT CHASSIS.