

SERVICE HINTS

The proper operating voltages are found on the circuit diagram, Figure 29. The proper resistances are found in the resistance chart on page 38. Never measure resistances with the receiver turned on.

| TROUBLE | POSSIBLE CAUSE | SERVICE PROCEDURE |
|---|---|--|
| Receiver dead | Defective tube(s) Tubes in wrong sockets or not seated Line cord not in AC outlet Fuse open Phone jack miswired No B+ voltage OFF-STBY-RCV-CAL switch open or miswired R-1 open R-2 open or miswired Speaker (or headphones) defective S-4 miswired Oscillator not working | Replace defective tubes. Visual inspection. Check fuse. Look for power supply shorts. Check voltages and resistances. Check wiring for wrong connections. Check wafer A-B on BAND switch, and associated coils. Test 6BH8. |
| Poor sensitivity on one band only | Terminals of Bandswitch or coils poorly soldered | See page 14. Resolder terminals. |
| Poor sensitivity on all bands | RF GAIN control turned too low Low B+ voltages Defective tubes IF stages misaligned RF and mixer stages misaligned Improper setting of Q-Multiplier controls | Check control setting. Check C-54. Check tubes, especially 6BH8, 6BH8, 6AZ6, 6X4. Realign. See page 27. Realign. See page 29. See page 29. |
| Output distorts on strong AM signals when receiver is in AVC position | AVC line is grounded Distortion on strong local stations | Check S-3 wiring, C-46, C-59 and C-60. Test 6BCT. Turn down RF GAIN. |

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| Receiver oscillates ("motorboats") | Tube shields not seated against ground clips Bad ground on shielding of the lead from pin 9 of 6BH8 IF circuits regenerative RF and mixer circuits regenerative RF shield plate not properly soldered to C-1 QX SELECTIVITY control set too high | Reseat all shields. Check solder connections. Check C-30 and C-35. Not loose on spade lug in hole K of RF printed circuit board. See Figure 23. Check solder joint. Readjust QX SELECTIVITY. |
| Hum | C-49 positioned wrong Open filter capacitor Shorted tube Short circuit which draws excessive current Bad ground to the printed circuit boards | Position correctly. C-54 defective. Test tubes. Look for wrong connections and uninsulated wires shorting. Check solder connections of yellow wire from hole 33 on IF board to ground. |
| Beat frequency oscillator does not function | Bad 6AW8A S-3, L-15, C-38, or C-39 open, shorted, or miswired L-15 not properly adjusted | Replace tube. Check voltages, resistance, and wiring. Readjust L-15. |
| Receiver High-Frequency oscillator unstable | Low B+ (OB2 not "firing") Defective 6BH8 | OB2 should glow blue. Measure the voltages. Replace 6BH8 tube. |
| Adjustment of C-12 or C-16 doesn't affect alignment | Trimmers miswired Terminals shorted or not soldered on wafers A, B, C or D of switch S-1. | Recheck C-12 or C-16 wiring. Check soldering of S-1 terminals. Check for shorts on foil side of S-1. |
| Q-Multiplier not operating | Defective 12AX7 | Replace 12AX7 tube. |
| Does not peak | L-14 improperly adjusted | Readjust L-14. |
| Does not null | R-25 improperly adjusted | Readjust R-25. |