



Symbol designations used in the schematics and parts list are as follows:

Technical drawing of a mechanical assembly. The drawing shows a perspective view of a rectangular frame with rounded corners. A circular component, labeled "DRIVE PULLEY", is mounted on the left side. A spring, labeled "SPRING 28-9000", is attached to the bottom of the frame. The drawing is oriented vertically on the page.



Figure 13. Drive cord installation details.

**FURTHER DATA
ON DATA SHEETS
146 • 147 • 148 •**

CONNECTING ALIGNING EQUIPMENT

NOTE: Make up a six to eight turn, 6 inch diameter loop using insulated wire; connect to signal generator leads and place near radio loop.



* For 117-volt a-c input. When operating on d-c line and no voltage can be measured, reverse power plug

CONNECTING ALIGNING EQUIPMENT

Signal Generator Connect output lead through a .05 mfd. condenser to indicated test point and ground lead to: B- Adjust generator output to give a readable deflection on the output meter; using meter range that best indicates small changes in output. Reduce generator output as alignment progresses to prevent meter needle from going off scale.

NOTE: Make alignment with loop connected to radio.

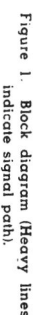


Figure 1. Block diagram (Heavy lines indicate signal path).

In this manual, the receiver circuit is divided into four sections, as shown in figure 1. One test point is designated for each section, as shown in figure 2. Abnormal indications, secured when checking at these test points, localizing trouble to the section under test. After localization, isolation of the faulty part is accomplished by testing in the order shown in the sectional test charts. A high-quality signal generator and a volt-ohmmeter are required. Voltage



CIRCUIT ON DATA SHEET 145
FURTHER DATA ON SHEETS 147-148

AC-DC

MOD 69

TROUBLE SHOOTING PROCEDURE

TESTS TO ISOLATE TROUBLE WITHIN SECTION 3

For all tests in this section, set signal generator at 460 kc., modulation ON. Connect output through a condenser (.01 to .25 mfd.) to point indicated, and ground lead to point B-. Adjust signal generator output for clear, audible signal.

TEST POINTS	NORMAL INDICATOR	POSSIBLE CAUSE OF ABNORMAL INDICATION
H to B-	Audible signal from speaker.	No signal indicates defective 7B7, i-f transformer Z302, shorted condenser C-306, open resistor R301, or defective diode section of TC6 (Section 2).
J- to B-	Audible signal from speaker, louder than preceding test.	No signal indicates defective 7B7, or i-f transformer Z301.
K to B-	Audible signal from speaker, same as preceding test.	No signal indicates defective i-f transformer Z300, or open resistor R-300.

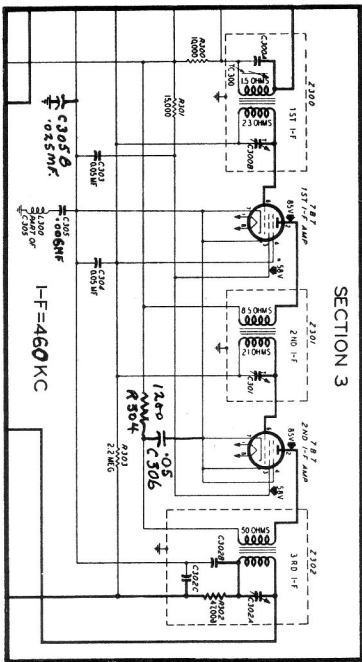


Figure 7. Section 3 schematic.

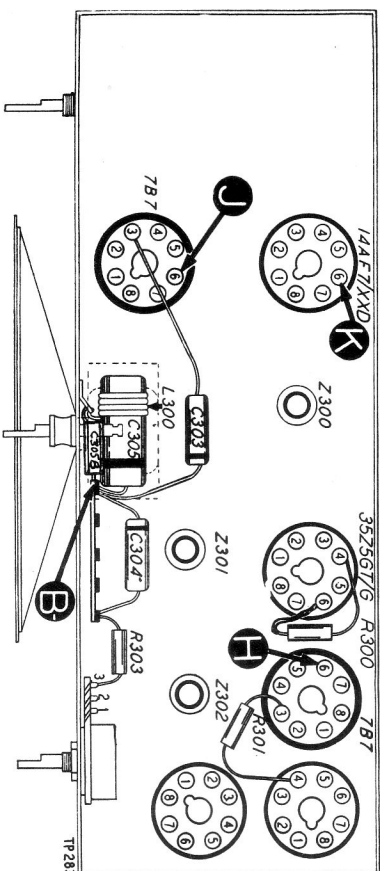


Figure 8. Bottom view, showing section 3 test points.

CIRCUIT ON
DATA SHEET 145

FURTHER DATA ON
SHEETS 146-147

TESTS TO ISOLATE TROUBLE WITHIN SECTION 4

NOTE: As a preliminary test, the tuning control should be rotated throughout its range. Any scraping noise heard in the speaker indicates bent plates, dirty wheel contacts, or faulty check this section all tests should first be made with the receiver and signal generator set at 540 kc. and then repeated at 1700 kc.

TEST POINTS	NORMAL INDICATION	POSSIBLE CAUSE OF ABNORMAL INDICATION
L to B-	Clear, audible signal from speaker.	No signal indicates defective 14A7 or transformer T-401, open resistor R-402, or shorted condenser C-408. (For supplementary oscillator test see footnote below.)
M to B-	Clear, audible signal from speaker.	No signal indicates defective coil L-400 (Broadcast) or T-400 (Short-wave).

OSCILLATOR GRID BIAS VOLTAGE— Attach the positive lead of a 20,000-ohms-per-volt meter to point P, and the prod end of the negative lead, through a 50,000-ohm resistor to point N. Set the meter on 10-volt or similar range and rotate the tuning condenser through its entire range on each position of the band switch. Absence of voltage at any point indicates that the oscillator is not functioning. If so, check the components listed in the first test in the chart above.

