Electrical Specifications

Type of Circuit: Superhetodyne, with magnetic tuning control on the broadcast range, and a push-pull pentode audio output circuit.

Dial Mechanism: Philco Automatic Dial Tuning System.

Power Supply: Voltage Frequency Cycles Consumption
115 50 to 60 110 watts
115 25 to 40 110 watts

Intermediate Frequency: 470 K. C.

Undistorted Output: 3 watts.

Philco Tubes Used: Nine. Two 6K7G; one 6AQ7; one 6H6G; one 6G7Q; two 6F6G, and one 6V4G.

Tuning Ranges: Three. Range 1—530 to 1720 K. C.; Range 2—2.3 to 7.4 M. C.; Range 3—7.35 to 22 M. C.

Tone Control: 3 positions.

Speaker: H-35.

Alignment of Compensators

Equipment Required: (1) Signal Generator; Philco Model 088 (fundamental frequency 110 to 20,000 K. C.) is the correct instrument for this purpose; (2) Output meter; Philco Model 025 Circuit Tester incorporates a sensitive output meter and is recommended; (3) Fiber handle screw-driver (Philco Part No. 27-7069); (4) Special variable condenser (Philco Part No. 45-2335).

Output Meter: The 025 Output Meter is connected to the plate and cathode terminals of one of the (6F6G) tubes. Adjust the meter to use the (0-30) volt scale.

Intermediate Frequency Circuit
1. Set controls as follows:
   a. Magnetic Tuning "off" (19)
   b. Bass compensation minimum
   c. Volume control maximum (67)
   d. Receiver Dial 580 K. C.
   e. Signal Generator 470 K. C.
   f. Range switch position 1.

2. Adjust the I. F. compensators for maximum with signal generator output lead connected through a .1 mfd. condenser to the grid of the tubes as follows:
   Input Point Compensators in Order
   6AB6—1st Det. (54) (53P) (45S)

Radio Frequency Circuit

Tuning Range 530 to 1720 K. C.
1. Connect the signal generator output lead through a .1 mfd. condenser to terminal 1 and the generator ground to terminal 3 on aerial input panel. Terminals 2 and 3 must be connected with the shorting link provided on the aerial panel.

2. Other controls set as given under intermediate frequency circuit, with the exception of those as follows:
   Adjust compensators for maximum output as follows:
   
<table>
<thead>
<tr>
<th>Range Switch</th>
<th>Signal Generator</th>
<th>Receiver Dial</th>
<th>Compensators in Order</th>
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<tbody>
<tr>
<td>1</td>
<td>1600 K. C.</td>
<td>1500 K. C.</td>
<td>(22) (26B) (26A)</td>
</tr>
<tr>
<td>1</td>
<td>580 K. C.</td>
<td>580 K. C.</td>
<td>(22) Roll gang through signal when padding this compensator</td>
</tr>
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<td>1600 K. C.</td>
<td>1600 K. C.</td>
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</tr>
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Magnetic Tuning Adjustment—Set the range switch in position one (530 to 1720 K. C.) and the magnetic tuning switch in the "off" position. Now turn the signal generator and receiver dial to any frequency in the Broadcast Band. The receiver dial must be adjusted very accurately for maximum output.

Set the magnetic tuning control in the "on" position (clockwise). Compensator (538) of the magnetic tuning transformer is now adjusted for maximum output.

The above adjustment is now checked for accuracy, by turning the magnetic tuning control "off" and "on." When this is done, there should be no change in the tone of the received signal. If a change of tone or hiss develops, it indicates a shift in frequency and the adjustment must be made again.

Alignment of Compensators

Equipment Required: (1) Signal Generator; Philco Model 088 (fundamental frequency 110 to 20,000 K. C.) is the correct instrument for this purpose; (2) Output meter; Philco Model 025 Circuit Tester incorporates a sensitive output meter and is recommended; (3) Fiber handle screw-driver (Philco Part No. 27-7069); (4) Special variable condenser (Philco Part No. 45-2335).

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Intermediate Frequency Circuit
1. Set controls as follows:
   a. Magnetic Tuning "off" (19)
   b. Bass compensation minimum
   c. Volume control maximum (67)
   d. Receiver Dial 580 K. C.
   e. Signal Generator 470 K. C.
   f. Range switch position 1.

2. Adjust the I. F. compensators for maximum with signal generator output lead connected through a .1 mfd. condenser to the grid of the tubes as follows:
   Input Point Compensators in Order
   6AB6—1st Det. (54) (53P) (45S)

Radio Frequency Circuit

Tuning Range 530 to 1720 K. C.
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Replacement Parts—Model 37-9

**Philco Radio and Television Corporation**

Parts and Service Division—Philadelphia, Pa.

**Figure 5—Schematic Diagram**