

SERVICE DATA

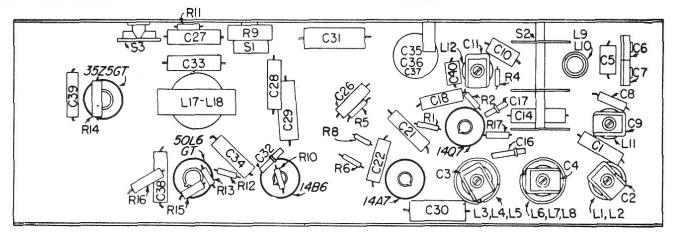
WAVE RANGE SWITCH

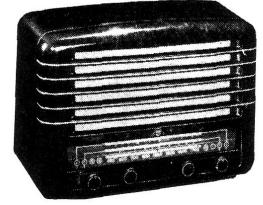
The schematic diagram shows each section of this switch in a straight line form. The short stator contacts are represented as solid squares; the long contacts as solid rectangles; and the rotor contacts as bars. All sections are shown in the extreme counter-clockwise (phonograph) position of the switch. As the switch rotates clockwise, the rotor contacts move upwards through the second, third and fourth wave range switch positions as indicated above. The exact location of each stator is shown on a front view drawing of a switch wafer on the schematic diagram.

TO REMOVE CHASSIS

- 1. Disconnect plug from line socket.
- 2. Remove antenna and ground connections from chassis.
- Remove control knobs.
- 4. Remove back cover.

- Unsolder speaker leads if it is necessary to completely remove the chassis.
- Remove the four chassis mounting screws in bottom of cabinet.





INTERMEDIATE FREQUENCY: 455 kc.

AUDIO POWER OUTPUT:

0.9 watt undistorted, 1.9 watts maximum.

CONTROLS: Left to right (looking at front)

- 1. Tone Switch
- 2. On-Off Switch and Volume Control
- 3. Tuning Control
- 4. Wave Range and Phonograph Switch

RANGE SWITCH POSITIONS AND TUNING RANGES:

1st-Phonograph Position.

2nd-560 to 170 m.-535 to 1760 Kc. (Standard Broadcast).

3rd-155 to 49 m.-1.95 to 6.1 Mc. (Short Wave).

4th-53 to 16.5 m.-5.6 to 18.15 Mc. (Short Wave).

PHILIPS 921

ALIGNMENT OF RECEIVER

With the variable capacitor fully closed, adjust the centre of the dial pointer to the edge of the dial opening (clear area) to the left of the 550 kc. calibration mark. Set the tone switch to position No. 2, and the volume to the full clockwise (maximum) position.

EQUIPMENT REQUIRED

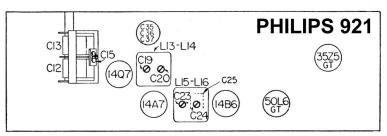
OUTPUT INDICATOR: A high resistance A.C. voltmeter and an output transformer. SIGNAL GENERATOR: A generator capable of supplying modulated signals between 500 kc. and 20 Mc. ISOLATING TRANSFORMER: A one to one ratio line isolating transformer, if aligned on A.C. power.

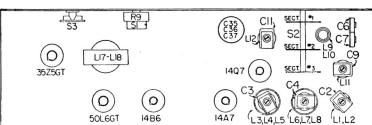
EQUIPMENT CONNECTIONS AND ALIGNMENT PROCEDURE

OUTPUT INDICATOR: Connect the A.C. voltmeter across the voice coil of the speaker. During alignment, keep the output below 1½ A.C. volts across the voice coil. If the meter is not sensitive enough to indicate 1 volt, connect the secondary of an output transformer across the speaker voice coil and connect the A.C. voltmeter across the primary. When using the latter method, the maximum output reading should be kept below 25 A.C. volts. When the output indication increases, regulate the signal generator attenuator to restore the original indication.

SIGNAL GENERATOR: Connect the output lead of the signal generator to the points indicated in the chart below, in series with the specified resistor or capacitor. Connect the return lead of the signal generator to the B— lead of the receiver through a .05 mfd. condenser. The B— connection to the receiver is to be made to terminal No. 5 of the 14Q7 tube socket. Do not connect

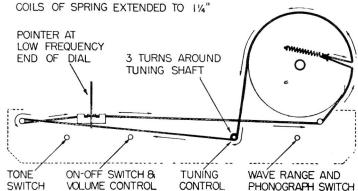
a grounded lead to B- unless a line isolating transformer is used.





GANG CONDENSER AT MAXIMUM CAPACITY (CLOSED)

DIAL DRUM IN POSITION SHOWN.



Operation Steps	SIGNAL GENERATOR		RECEIVER			
	Output Connections to Receiver	Frequency	Range Switch	Tuning Capacitor	See Notes	Adjust in Stated Order for Maximum Output
1	To 14A7 control grid (6) through .05 mfd. capacitor	455 kc.	Pos. 2	Min.		2nd I.F. Trimmers C24, C23
2	To stator of C12 through .05 mfd. capacitor	455 kc.	Pos. 2	Min.	A	1st I.F. Trimmers C20, C19
3	To antenna contact through 100 mmf. capacitor*	1600 kc.	Pos. 2	1600 kc.		B.C. Osc. Trimmer C7 B.C. Ant. Trimmer C2
4	To antenna contact through 100 mmf. capacitor*	600 kc.	Pos. 2	600 kc.	В	B.C. Osc. Padder C6
5	To antenna contact through 400 ohms resistor*	5 Mc.	Pos. 2	5 Mc.	С	S.W. Osc. Trimmer C9 S.W. Ant. Trimmer C3
6	To antenna contact through 400 ohms resistor*	2.4 Mc.	Pos. 3	2.4 Mc. approx.	D	Loop L5 on S.W. Ant. Coil (adjust loop position)
7	To antenna contact through 400 ohms resistor*	17 Mc.	Pos. 3	17 Mc.	С	S.W. Osc. Trimmer C11 S.W. Ant. Trimmer C4
8	To antenna contact through 400 ohms resistor*	6 Mc.	Pos. 4	6 Mc. approx.	D	Loop L8 on S.W. Ant. Coil (adjust loop position)

* or a standard dummy antenna with a 200 mmf. condenser in series.

NOTE A — After operation 2, leave signal generator on C12 and carefully readjust C24 and C23.

NOTE B — After completing operation, return to 1600 kc. and repeat operation 3, then repeat operation 4.

NOTE C — Unscrew oscillator trimmer approximately 3 turns from tight. Then turn adjustment clockwise until first output peak is obtained. Make adjustments using this peak. Rock the tuning capacitor slowly back and forth while adjusting antenna trimmer.

NOTE D - Adjust position of loop with non-metallic rod. Return to previous operation and carefully adjust antenna trimmer.