

ARROWS → ON BAND SWITCH AND VOLUME CONTROL INDICATES COUNTER-CLOCKWISE ROTATION OF SHAFT.

BANDSWITCH SECTION SHOWN IN COUNTER-CLOCKWISE (SHORTWAVE) POSITION.

VOLTAGES MEASURED TO CHASSIS WITH A 20,000 Ω PER VOLT METER, NO SIGNAL APPLIED TO RECEIVER.

**735, 735-11**

**POWER SOURCE:**

A 1½ volt "A" battery and a 90 volt "B" battery or their equivalent.

**BATTERY DRAIN:**

The "A" battery drain is 0.25 amperes and the "B" battery drain is 11 milliamperes.

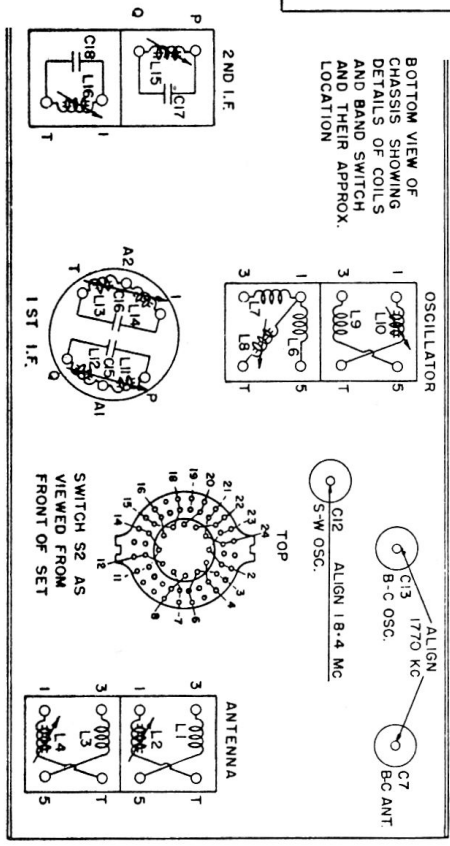
**BAND SWITCH POSITIONS:**

Left Position—Standard broadcast band—540 to 1760 kc.  
 Right Position—Model 735—Short wave band—6.1 to 18.3 Mc.  
 —Model 735-11—Short wave band—1.77 to 5.7 Mc.

**INTERMEDIATE FREQUENCY:** 455 kc.

**AUDIO OUTPUT:** 100 Milliwatts undistorted.

**LOUDSPEAKER IMPEDANCE:** 4 ohms at 400 c—approximately.



**BATTERIES:**

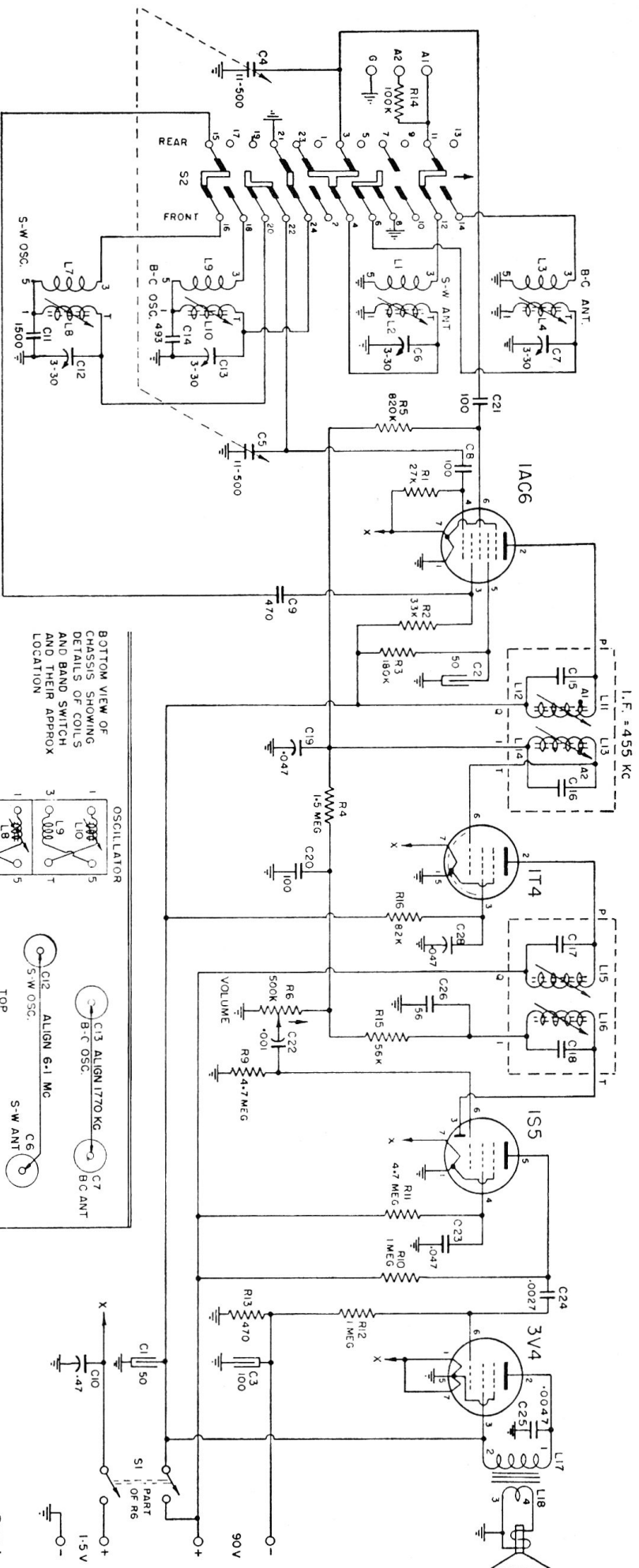
The receiver battery cable is supplied with standard battery plugs for use with the plug-in type batteries. The following table shows the various combinations of batteries that may be used with this receiver:

	Eveready	Burgess	General
A-B Pack .....	748	1860	1
A Standard .....	741	8FP1	1
B Standard ....	842 or 762	5308	2

It is recommended that the "A" battery be replaced when the operating voltage drops below 0.9 volts. The "B" battery should be replaced when the 90 volt supply drops below 54 volts.

**CABINET DIMENSIONS:**

Width—11 inches.  
 Height—7 inches.  
 Depth—6 inches.

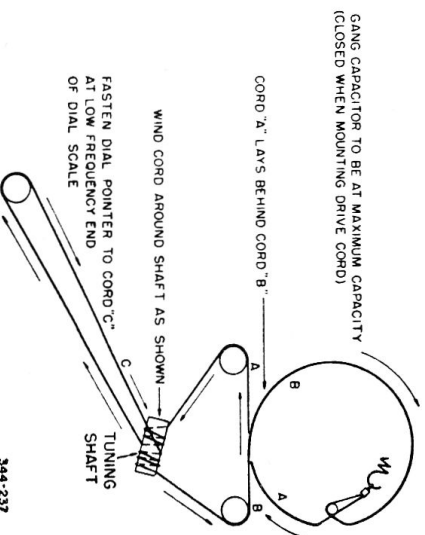
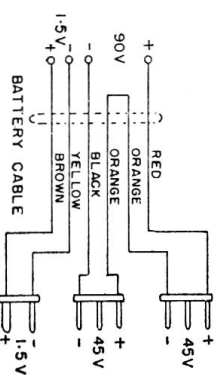
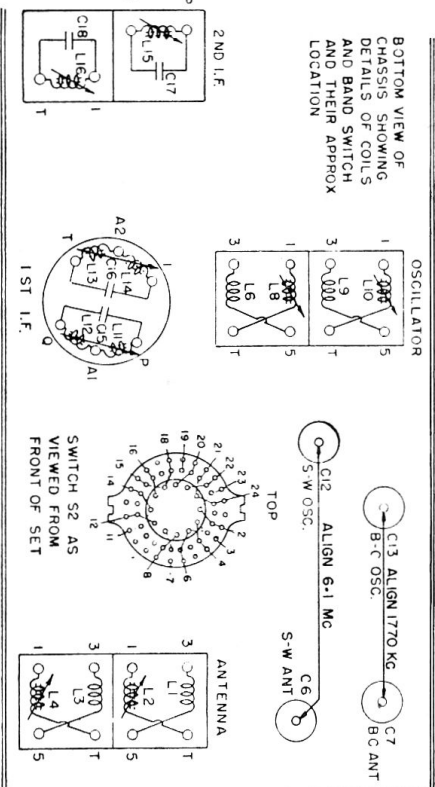
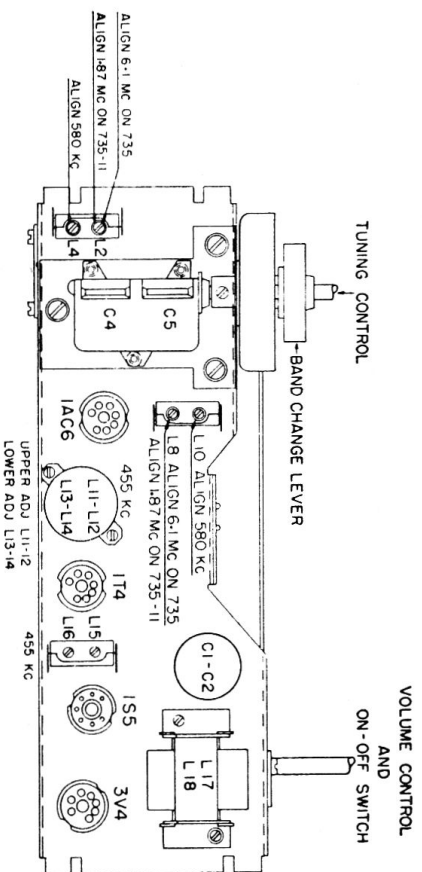
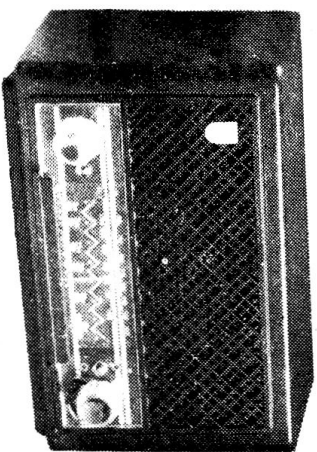


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Philips 735-11

REFER TO SCHEMATIC DIAGRAM FOR LOCATION OF TRIMMER CONDENSERS

FRONT VIEW OF DIAL CORD LAYOUT

## WAVE RANGE SWITCH:

The schematic diagram shows each section of this switch in a straight line form. The stator contacts are represented as solid parallelograms and the rotor contacts as open figures.

The switch is shown in the extreme counterclockwise (short wave) position of the switch. As the switch rotates clockwise, the rotor contacts move upwards to the standard broadcast position. The exact location of the stator is shown as a front view diagram of the switch on the schematic diagram.

735, 735-11

## TO REMOVE CHASSIS

1. Disconnect plugs from batteries.
2. Remove antenna and ground connections from chassis.
3. Remove set screws in knobs and pull off knobs.
4. Remove the back and bottom cover assembly.
5. Unscrew the dial pointer from the dial cord.
6. Remove the two screws and fixing brackets securing the rear of the chassis to the sides of the cabinet and slide the chassis out of the cabinet.
7. Unsolder the speaker leads if chassis is to be completely detached from cabinet.

# ALIGNMENT OF RECEIVER

## EQUIPMENT REQUIRED

**SIGNAL GENERATOR:** Capable of supplying modulated frequencies from 540 kc. to 18.5 Mc.

**OUTPUT INDICATOR:** A power output meter or a high resistance A.C. Voltmeter.

## ALIGNMENT PROCEDURE AND EQUIPMENT CONNECTIONS

**SIGNAL GENERATOR:** Allow a sufficient length of time after the generator has been turned on for it to become thermally stable before making any tests. Always be sure to use the specified capacitor or resistor in series with the signal generator output lead connections, as listed on the alignment procedure chart. Connect the return lead of the signal generator to the ground terminal of the receiver.

**OUTPUT INDICATOR:** If a power output meter is used adjust it for 4 ohms impedance and connect it across the secondary of the output transformer in place of the speaker voice coil. Do not exceed 50 milliwatts output during alignment. If an A.C. voltmeter is used connect it across the voice coil with the speaker connected and do not exceed .44 volts during alignment. As the reading of the test meter increases with alignment regulate the signal generator attenuator to keep the output below the above limits.

**RECEIVER:** Turn the volume control to the full or (clockwise) position. With the gang tuning condenser fully open adjust the dial pointer to the alignment mark on high frequency end of the alignment scale on the dial background.

# ALIGNMENT PROCEDURE CHART

OPER- TION STEPS	S I G N A L   G E N E R A T O R		R E C E I V E R			
	Output Connections to Receiver	Frequency	Band Switch	Tuning Capacitor	See Notes	Adjust in Stated Order for Maximum Output
1	To 1T4 Control Grid (Pin 6) through .05 mf capacitor	455 kc.	Left Position	Min.		2nd I-F Transformer L16, L15
2	To Stator of C1 through .05 mf capacitor	455 kc.	Left Position	Min.	A	1st I-F Transformer L11, L12 and L13, L14
3	To Antenna Contact through 100 mmf capacitor*	1770 kc.	Left Position	Min.		B-C Osc. Trimmer C13 B-C Ant. Trimmer C7
4	To Antenna Contact through 100 mmf capacitor*	580 kc.	Left Position	580 kc.	B	B-C Osc. Coil L10 B-C Ant. Coil L4
5 735	To Antenna Contact through a 400 ohm resistor*	18.4 Mc.	Right Position	Min.	C	S-W Osc. Trimmer C12
6 735	To Antenna Contact through a 400 ohm resistor*	6.1 Mc.	Right Position	6.1 Mc.		S-W Osc. Coil L8 S-W Ant. Coil L2
5 735-11	To Antenna Contact through a 400 ohm resistor*	6.1 Mc.	Right Position	Min.	C	S-W Osc. Trimmer C12 S-W Ant. Trimmer C6
6 735-11	To Antenna Contact through a 400 ohm resistor*	1.87 Mc.	Right Position	1.87 Mc.	D	S-W Osc. Coil L8 S-W Ant. Coil L2

\* Or a Standard Dummy Antenna with an additional 200 mmf condenser in series.

## ALIGNMENT NOTES

NOTE A: After operation 2 has been completed, do not make any further adjustments to L16 and L15.

NOTE B: After completing operation 4 return to 1770 kc. and repeat operation 3; then repeat operation 4.

NOTE C: Unscrew S-W Oscillator Trimmer C12 approximately 2 turns from tight. Then turn adjustment

clockwise until first output peak is obtained. Make adjustments using this peak.

NOTE D: Return to 6.1 Mc. and rock the gang tuning capacitor slowly back and forth while adjusting the S-W Antenna Trimmer, C6, for maximum output.