



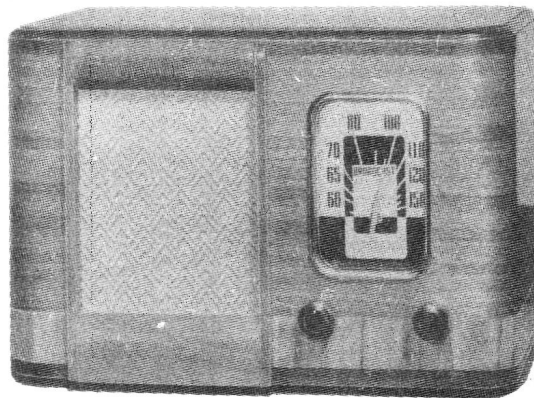
RCA Victor

ACE

Five-Tube, Single-Band, A-C, Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL



Electrical Specifications

Frequency Range 540 to 1,600 k.c.
R.F. Alignment Frequency....1,500 k.c. (osc., ant.)
Intermediate Frequency 455 k.c.

LOUDSPEAKER

Type 5 inch Electrodynamic
Voice-coil Impedance 3 ohms at 400 cycles

Tube Complement

(1) Type 6SA7 First-Det., Osc.
(2) Type 6SK7.....Intermediate Frequency AMP.
(3) Type 6SQ7.....Second-Det., A.V.C., A.F.

(4) Type 6K6-G Power Output
(5) Type 5Y4G Full Wave Rectifier

POWER SUPPLY RATING

Rating A 105-125 volts, 50-60 cycle 50 watts
Rating B 105-125 volts, 25-60 cycle 50 watts

POWER OUTPUT

Undistorted 1 watt
Maximum 2 watts

Mechanical Specifications

	Height	Width	Depth
Cabinet Dimensions	8 $\frac{1}{8}$ inches	12 $\frac{7}{8}$ inches	8 inches
Chassis Base Dimensions	1 $\frac{7}{8}$ inches	9 $\frac{3}{4}$ inches	5 $\frac{7}{8}$ inches
Overall Chassis Height			4 inches
Weight (net)			10 $\frac{1}{2}$ pounds
Weight (shipping)			12 $\frac{3}{4}$ pounds
Operating Controls	(1) Power Switch—Volume, (2) Tuning		

General Description

This receiver employs a five tube, single band chassis incorporating a Loop Antenna as the first tuned circuit. Details of the electrical design are shown in the Schematic circuit diagram. Features of design include:—New single ended, metal tubes; full A.V.C. circuit; Loop antenna for ease of installation; stabilized oscillator circuit; sensitive, five inch electrodynamic loudspeaker; and a full vision dial housed in a modern styled cabinet of walnut veneers.

Alignment Procedure

Cathode-ray Alignment is the preferable method. Connections for the oscillograph are shown in the wiring diagram.

Output meter alignment. If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

Test-oscillator. For all alignment operations, connect the low side of the test-oscillator to the receiver chassis, and keep the output as low as possible to avoid a-v-c action.

Pre-setting Dial. With gang condenser in full mesh position, move pointer to coincide with calibration mark at the low frequency end of dial.

Steps	Connect the high side of test-oscillator to—	Tune test-osc. to—	Tune radio dial to—	Adjust the following for max. peak output
No. 1	6SK7 I-F grid, in series with .01 mfd.	455 kc	Quiet point between 550-750 kc	L5 and L6 (2nd I-F Transformer) L3 and L4 (1st I-F Transformer)
No. 2	6SA7 1st-det. grid in series with .01 mfd.	455 kc		
No. 3	Antenna lead, in series with 300 ohms	1,500 kc	1,500 kc	C5 (oscillator) C2 (antenna)

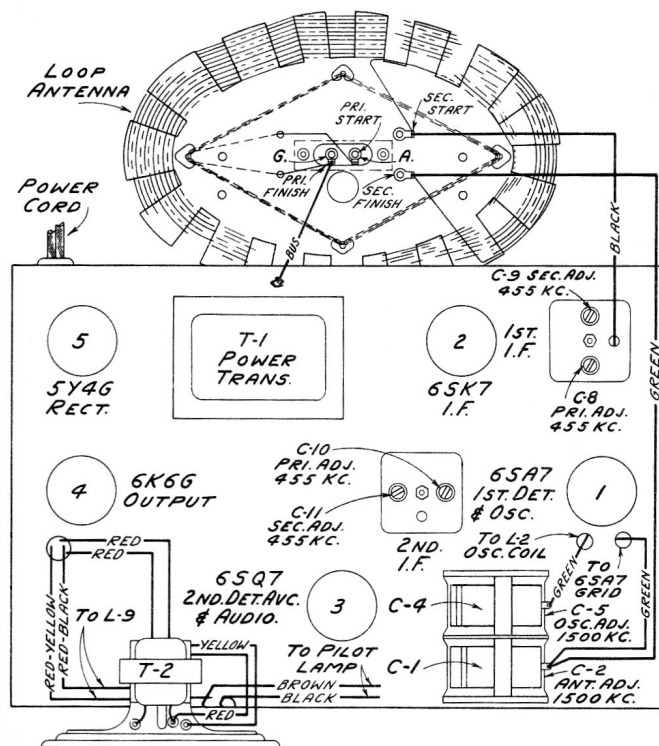


Fig. No. 1 Tube & Trimmer Locations

Radiotron Socket Voltages

Type	Plate	Screen Grid	Cathode	Filament
6SA7 det.	195 V	65 V	0 V	6.3 V. A.C.
6SA7 osc.	65 V	...	...	
6SK7	195 V	65 V	0 V	6.3 V. A.C.
6SQ7 amp.	62 V	...	0 V	6.3 V. A.C.
6K6G	185 V	195 V	12.5 V	6.3 V. A.C.
5Y4G	290/290 V	...	295 V	5 V. A.C.

The above measurements are all made to chassis. Measurements made with set tuned to quiet point, volume control set at minimum, using 1,000-ohm-per-volt meter, having ranges of 10, 50, 250, and 500 volts. (Use nearest range above the specified measured voltage.)

All the above values should hold within approximately $\pm 20\%$ for 115 volt, 25-60 cycle supply.

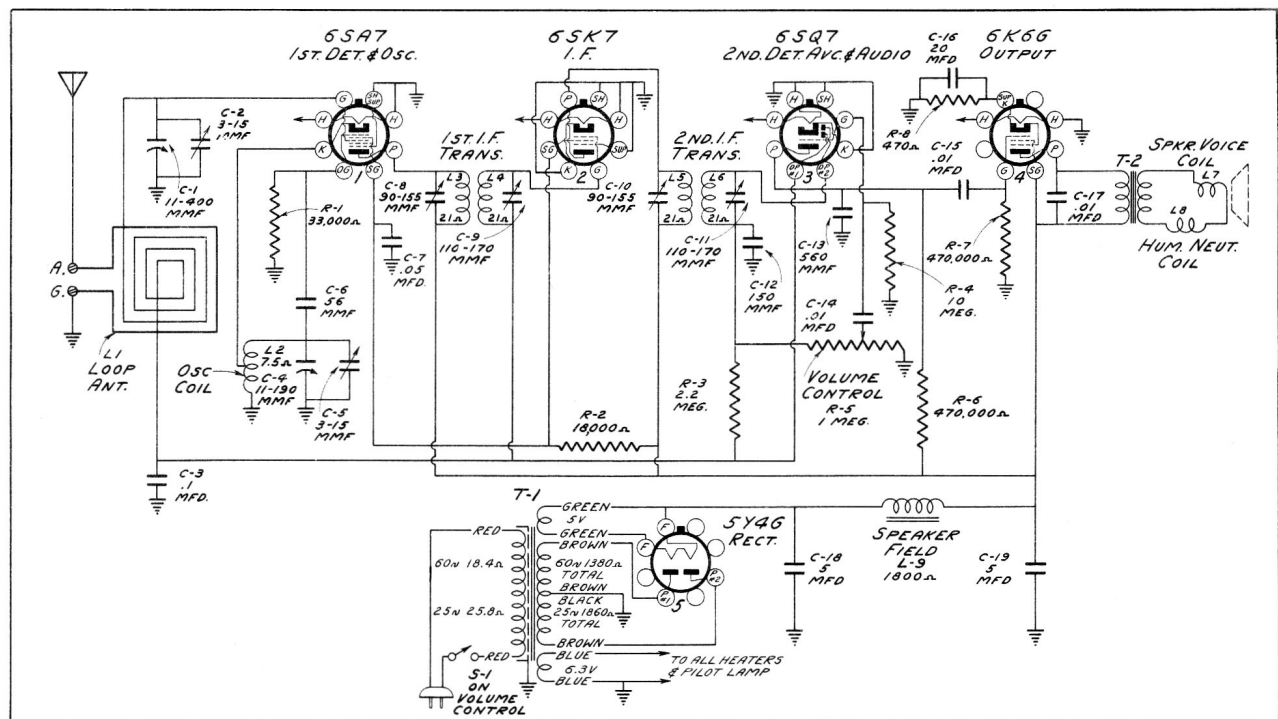


Fig. No. 2 Schematic Circuit Diagram

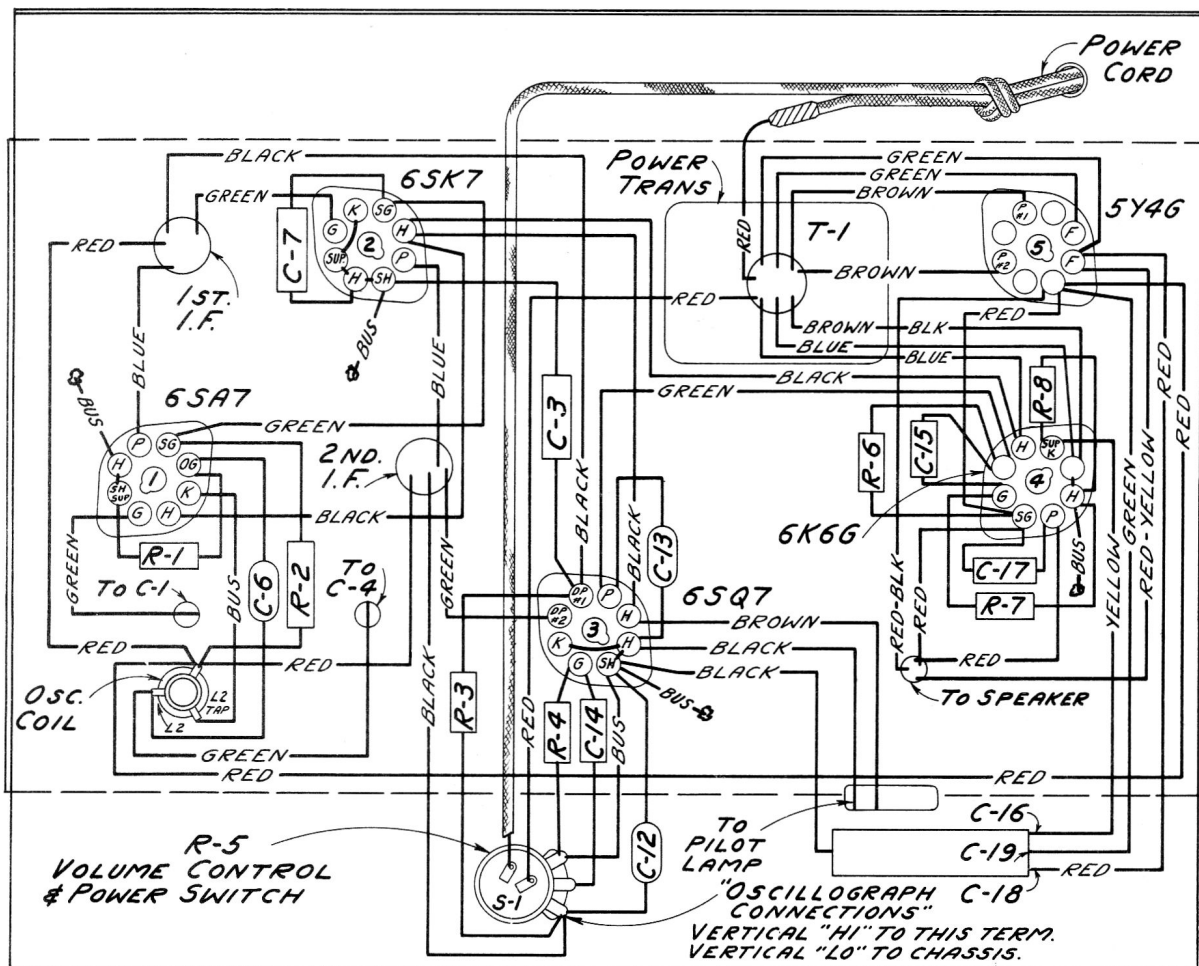


Fig. No. 3 Chassis Wiring Diagram

Precautionary Lead Dress

- (1) Keep a-c leads away from volume-control wiring.
- (2) Keep lead from high side of volume control away from plate circuit of 6SQ7 tube.
- (3) Dress speaker leads to front of chassis away from 6K6G tube.

REPLACEMENT PARTS FOR MODEL ACE

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers.

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES			
12723	Capacitor-56 mmfd. (C6).....	31418	Spring-Drive cord tension spring (Pkg.3).....
12725	Capacitor-150 mmfd.(C12).....	S-2715	Transformer-1st I.F. Transformer (L3,L4,C8,C9).....
12537	Capacitor-560 mmfd.(C13).....	S-2716	Transformer-2nd I.F. Transformer (L5,L6,C10,C11).....
4858	Capacitor-.01 mfd. (C14).....	S-2316	Transformer-Power Transformer 105-125 volt,25-60 cy.(T1).....
14393	Capacitor-.01 mfd. (C15,C17).....	S-2317	Transformer-Power transformer 105-125 volt,50-60 cy.(T1).....
30847	Capacitor-.05 mfd. (C7).....	33631	Volume Control and Power Switch(R5).
4839	Capacitor-0.1 mfd. (C3).....	REPRODUCER ASSEMBLIES (CRL-593-1)	
S-2615	Capacitor-Electrolytic capacitor consisting of two 5 mfd. sections and one 20 mfd. section(C16,C18,C19)....	S-2375	Cone-Reproducer cone, dust cap and gasket (L7).....
S-2707	Coil-Oscillator Coil (L2).....	S-2387	Coil-Field coil (L9).....
S-2708	Condenser-2 gang variable tuning capacitor (C1,C2,C4,C5).....	S-2388	Reproducer complete.....
S-2709	Cord-Variable condenser drum drive cord.....	S-2389	Transformer-Output transformer (T2).
S-2710	Dial-Station selector dial scale assembly.....	MISCELLANEOUS ASSEMBLIES	
S-2309	Drum-Variable condenser drive cord drum.....	S-2732	Cover-Receiver back cover.....
S-2712	Indicator-Station selector indicator pointer.....	S-2706	Crystal-Dial crystal.....
11765	Lamp-Dial lamp.....	S-2368	Escutcheon-Station selector dial escutcheon.....
S-2713	Loop-Antenna loop assembly (L1).....	30863	Knob-Station selector or volume control knob.....
30499	Resistor-470 ohm 1/2 watt (R8).....	30900	Spring-Knob retaining spring (Pkg.5).....
S-2060	Resistor-18,000 ohm, 1 watt (R2).....		
12454	Resistor-33,000 ohm, 1/4 watt (R1)....		
12285	Resistor-470,000 ohm, 1/4 watt(R6,R7).		
12679	Resistor-2.2 meg., 1/4 watt (R3).....		
13601	Resistor-10.0 meg., 1/4 watt (R4).....		
14887	Retainer-Drive shaft retainer(Pkg.10).		
S-1469	Screw-Drum set screw (Pkg.10).....		
S-2714	Shaft-Drive shaft.....		
31251	Socket-Radiotron socket.....		
S-2719	Socket-Pilot lamp socket and lead assembly.....		