



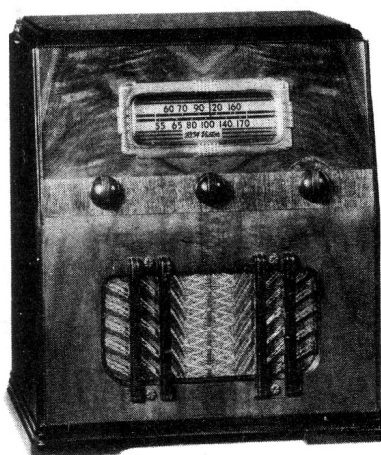
RCA Victor

MODEL B-1

Six-Tube, Single-Band, Battery Operated, Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL



Electrical Specifications

TUBE COMPLEMENT

- (1) Type 1A7-G First Detector-Oscillator
- (2) Type 1N5-G I.F. Amplifier
- (3) Type 1H5-G Second Det., A.F. Amp., & A.V.C.

- (4) Type 1G4-G Phase Inverter
- (5) Type 1C5-G Power Output
- (6) Type 1C5-G Power Output

Frequency Range 540-1,740 K.C.

POWER OUTPUT

Type Class "A-B"
 Undistorted3 watts
 Maximum4 watts

ALIGNMENT FREQUENCIES

I.F. 455 K.C.
 Ant. 1,500 K.C.
 Osc. 600 K.C., 1,500 K.C.

BATTERIES REQUIRED

"A" One 1.5 Volt Dry Plug-in (Eveready No. 740) or One 1.4 Volt Plug-in Aircell (Eveready No. A-1300)
 "B" Two 45 Volt Dry Plug-in "B" Batteries (Eveready No. 386)

CURRENT CONSUMPTION

"A" at 1.4 Volts4 Amps.
 "B" at 90 Volts 11.1 Milliamperes

LOUDSPEAKER

Type.....6 inch Permanent Magnet Dynamic
 Voice Coil Impedance.....3 ohms at 400 cycles

Mechanical Specifications

	Height	Width	Depth
Cabinet Dimensions	14 ¹ / ₈ "	12 ¹ / ₂ "	8 ³ / ₈ "
Chassis Base Dimensions	2"	9 ⁵ / ₈ "	5 ¹ / ₂ "
Overall Chassis Height			5 ³ / ₄ "
Operating Controls(1) Power Switch-Volume, (2) Tuning, (3) Tone-Phono.			

General Description

The RCA Victor Model B-1 is a six-tube, single band, battery operated receiver housed in a table type cabinet of superbly matched veneers. Features of design include:—Magnetite core I.F. and oscillator transformers, automatic volume control, low frequency oscillator tracking, resistance coupled audio,

phase inversion, class "A-B" audio output stage, radio-phono switch and tone control, phono input socket, super-sensitive, six-inch, permanent magnet, dynamic loudspeaker, low current drain and a large, easy to read dial.

Service Data

The various diagrams of this booklet contain such information as will be needed to isolate causes for defective operation if such develops. The ratings of the resistors, capacitors, coils, etc., are indicated adjacent to the symbols signifying these parts on the diagrams. Identification titles such as R1, L1, C1, etc., provide reference between the illustrations and Replacement Parts List.

Victrola Attachment. A jack located on the rear apron of the chassis is provided for connecting a Victrola Attachment into the audio-amplifying circuit. The cable running from the Victrola Attachment should be terminated in a Stock No. 31048 plug to fit the jack.

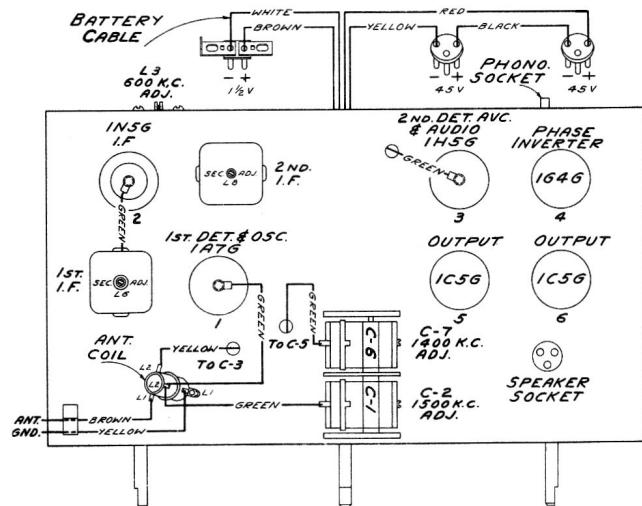


Fig. 1—Tube and Trimmer Locations

Alignment Procedure

Calibrate the tuning dial by adjusting the dial pointer to the low-frequency calibration mark on dial with the gang condenser plates in full-mesh position. This is a friction adjustment.

Perform alignment in proper order, tabulated below, starting with No. 1 and following all operations across, then No. 2, etc. Adjustment locations are shown on figures 1 and 3.

Cathode-ray alignment is highly preferable; the connections to the chassis are shown on figure 3. If an output indicator is used, connect it across the loudspeaker voice-coil and advance the receiver volume control to full-volume position.

Connect the "low" output terminal of the test oscillator to the receiver "G" (ground) terminal for all alignment operations. Regulate the output of the test oscillator so that minimum signal is applied to the receiver to obtain an observable output indication. This will avoid a-v-c action.

The term "Dummy antenna" means the device which must be connected between the "high" test-oscillator output and the point of connection to the receiver in order to obtain ideal alignment. "No signal, 550-750 kc" means that the receiver should be tuned to a point between 550 and 750 kc where no signal or interference is received from a station or local (heterodyne) oscillator.

Order of Alignment	Test Oscillator			Receiver Dial Setting	Circuit to Adjust	Adjustment Symbols	Adjust to Obtain
	Connection to Radiotron	Dummy Antenna	Frequency Setting				
1	1N5G Grid Cap	.1 Mfd.	455 k.c.	No Signal 550-750 k.c.	2nd I.F. Trans.	L7 & L8	Symmetrical Curve
2	1A7G Det. Grid Cap	.1 Mfd.	455 k.c.	No Signal 550-750 k.c.	1st I.F. Trans.	L5 & L6	Symmetrical Curve
3	Ant. Term.	200 Mmf.	600 k.c.	600 k.c.	L.F. Osc.	L3	Max. (Peak)
4	Ant. Term.	200 Mmf.	1,500 k.c.	1,500 k.c.	H.F. Osc.	C6	Max. (Peak)
5	Ant. Term.	200 Mmf.	600 k.c.	Rock Thru 600 k.c.	L.F. Osc.	L3	Max. (Peak)
6	Ant. Term.	200 Mmf.	1,500 k.c.	1,500 k.c.	Ant.	C2	Max. (Peak)

Radiotron Socket Voltages: Measured with all batteries at Normal Voltage

Radiotron	Plate	Screen Grid	Grid	Filament
1A7G Det.	80V	40		1.4V
1A7G Osc.	80V	..		1.4V
1N5G I.F.	80V	80		1.4V
1H5G Audio	58V	..		1.4V
1G4G Inverter	37V	..	—2V	1.4V
1C5G Output	78.5	80	—10V	1.4V
1C5G Output	78.5	80	—10V	1.4V

REPLACEMENT PARTS FOR MODEL B-1

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. (C4).....	14887	Retainer-Drive shaft or pulley retainer (Pkg. 20).....
12724	Capacitor-150 mmfd. (C15).....	3903	Screw-Drive cord drum set screw (Pkg. 20).....
14712	Capacitor-180 mmfd. (C13).....	S-2312	Shaft-Station selector drive shaft...
30433	Capacitor-430 mmfd. (C5).....	S-2399	Socket-3 contact speaker socket...
14498	Capacitor-750 mmfd. (C23).....	31251	Socket-Radiotron socket.....
13762	Capacitor-1500 mmfd. (C24).....	14278	Socket-Phono input socket.....
5107	Capacitor-.0025 mfd. (C16,C18).....	31418	Spring-Drive cord tension spring (Pkg. 10).....
14393	Capacitor-.01 mfd. (C14,C17,C20,C22)	S-2400	Switch-Radio-phonograph switch (S3).....
4839	Capacitor-.1 mfd. (C3,C8,C19).....	32595	Shield-Radiotron shield.....
S-2408	Capacitor-20 mfd. electrolytic capacitor (C21).....	14261	Transformer-1st I.F. transformer (L5,L6,C9,C10).....
30894	Coil-Antenna coil (L1,L2).....	14308	Transformer-2nd I.F. transformer (L7,L8,C11,C12,C13,R5).....
32148	Coil-Oscillator coil (L3,L4).....	S-2401	Volume control and "on-off" switch (R6,S1,S2).....
S-2391	Condenser-2 gang variable con- denser (C1,C2,C6,C7).....	REPRODUCER ASSEMBLIES CRL-501-1	
S-2393	Cord-Variable condenser drum drive cord.....	S-2402	Cone-Reproducer cone and voice coil (L9).....
S-2396	Dial-Station selector dial scale assembly.....	S-2403	Plug-3 contact male plug.....
S-2309	Drum-Variable condenser drive cord drum.....	S-2404	Reproducer-Reproducer complete.....
31420	Indicator-Station selector indica- tor pointer.....	S-2405	Transformer-Output transformer (T1).
S-2398	Plug-2 contact male plug for battery cable.....	MISCELLANEOUS ASSEMBLIES	
S-1628	Plug-3 contact male plug for battery cable.....	S-2406	Escutcheon-Station selector escutcheon and crystal.....
31373	Pulley-Drive cord pulley.....	14269	Knob-Tuning, volume or tone control knob.....
14076	Resistor-820 ohms, 1/4 watt (R16).	14270	Spring-Retaining spring for knob (Pkg. 10).....
14284	Resistor-22,000 ohms, 1/10 watt (R5)		
12412	Resistor-47,000 ohms, 1/4 watt (R10)		
13715	Resistor-68,000 ohms, 1/4 watt (R2).		
12264	Resistor-220,000 ohms, 1/4 watt (R1)		
11452	Resistor-470,000 ohms, 1/10 watt (R12).....		
12285	Resistor-470,000 ohms, 1/4 watt (R14)		
13730	Resistor-1 meg. 1/4 watt (R3,R9)...		
30208	Resistor-1.2 meg. 1/4 watt (R7)...		
5028	Resistor-1.8 meg. 1/4 watt (R11)...		
5131	Resistor-2.2 meg. 1/10 watt (R8, R15).....		
12679	Resistor-2.2 meg. 1/4 watt (R4)...		
30271	Resistor-4.7 meg. 1/4 watt (R13)...		