RCA Victor

MODEL VR-3

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

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL

Electrical Specifications

Frequency Range ..... 540 to 1,750 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 6A8 ..... First-Det., Osc.
(2) Type 6K7.....Intermediate Frequency AMP.
(3) Type 6Q7G.....Second-Det., A.V.C., A.F.
(4) Type 6F6-G ..... Power Output
(5) Type 5Y4G ..... Full Wave Rectifier

POWER SUPPLY RATING
Rating A ..... 105-125 volts, 50-60 cycle watts
Rating B ..... 105-125 volts, 25-60 cycle watts

POWER OUTPUT
Undistorted ..... 1 watt
Maximum ..... 2 watts

General Description

Model VR-3 RCA Victrola is a combination radio receiver and phonograph mechanism mounted in a modern styled table type cabinet. Features of design include:—Magnetite core I. F. transformers, stabilized oscillator circuit, electro-dynamic loudspeaker, Phono-Radio-Tone Switch, self-starting constant speed phonograph motor, motor toggle switch and a free-floating, light weight, crystal pickup of new design.

Mechanical Specifications

	Height	Width	Depth
Cabinet Dimensions	11¾ inches	15¼ inches	13 inches
Chassis Base Dimensions	1⅞ inches	9¾ inches	5⅞ inches
Overall Chassis Height			4 inches
Weight (net)			27 pounds
Weight (shipping)			34 pounds
Operating Controls	(1) Power Switch—Volume, (2) Tuning (3) Radio-Phono Switch		

Alignment Procedure

Cathode-ray Alignment is the preferable method. Connections for the oscillograph are shown in the chassis drawing.

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.

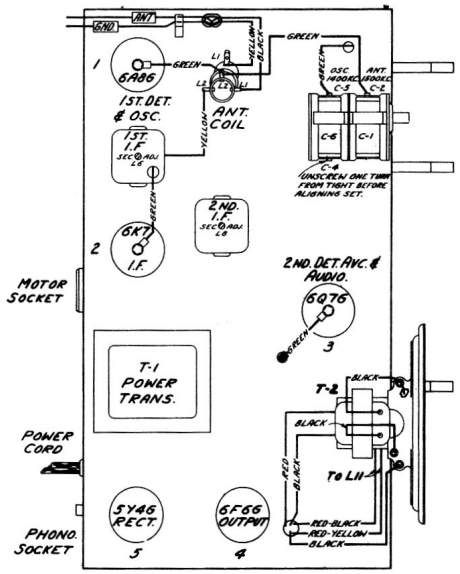


Fig. 1 Tube & Trimmer Locations.

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	6K7 I-F grid cap, in series with .01 mfd.	455 kc	Quiet point between 550-750 kc	L7 and L8 (2nd I-F Transformer)
No. 2	6A8 1st-det. grid cap, in series with .01 mfd.	455 kc		L5 and L6 (1st I-F Transformer)
No. 3	Antenna lead, in series with 200 mmfd.	1,500 kc	1,500 kc	C6* (oscillator) C3 (antenna)

Radiotron Socket Voltages

Type	Plate	Screen Grid	Control Grid	Filament
6A8 det.	210 V	135 V	O V	6.3 V. A.C.
6A8 osc.	210 V	. . .	. . .	. . . . .
6K7	210 V	135 V	O V	6.3 V. A.C.
6Q7G amp.	100 V	. . .	O V	6.3 V. A.C.
6F6G	190 V	210 V	O V	6.3 V. A.C.
5Y4G	Plate 1 or 2 to Chassis 282 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 ± 20% for 115 volt, 25-60 cycle supply.

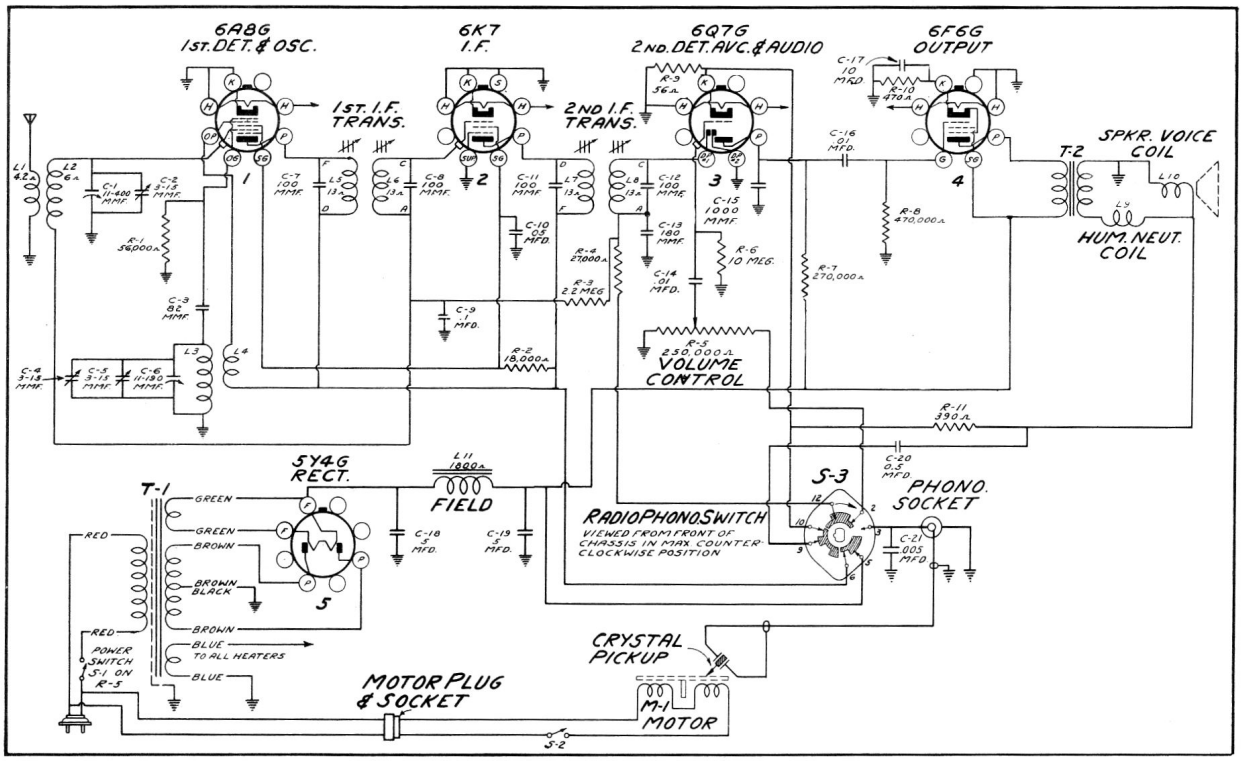


Figure 2. Schematic Circuit Diagram.

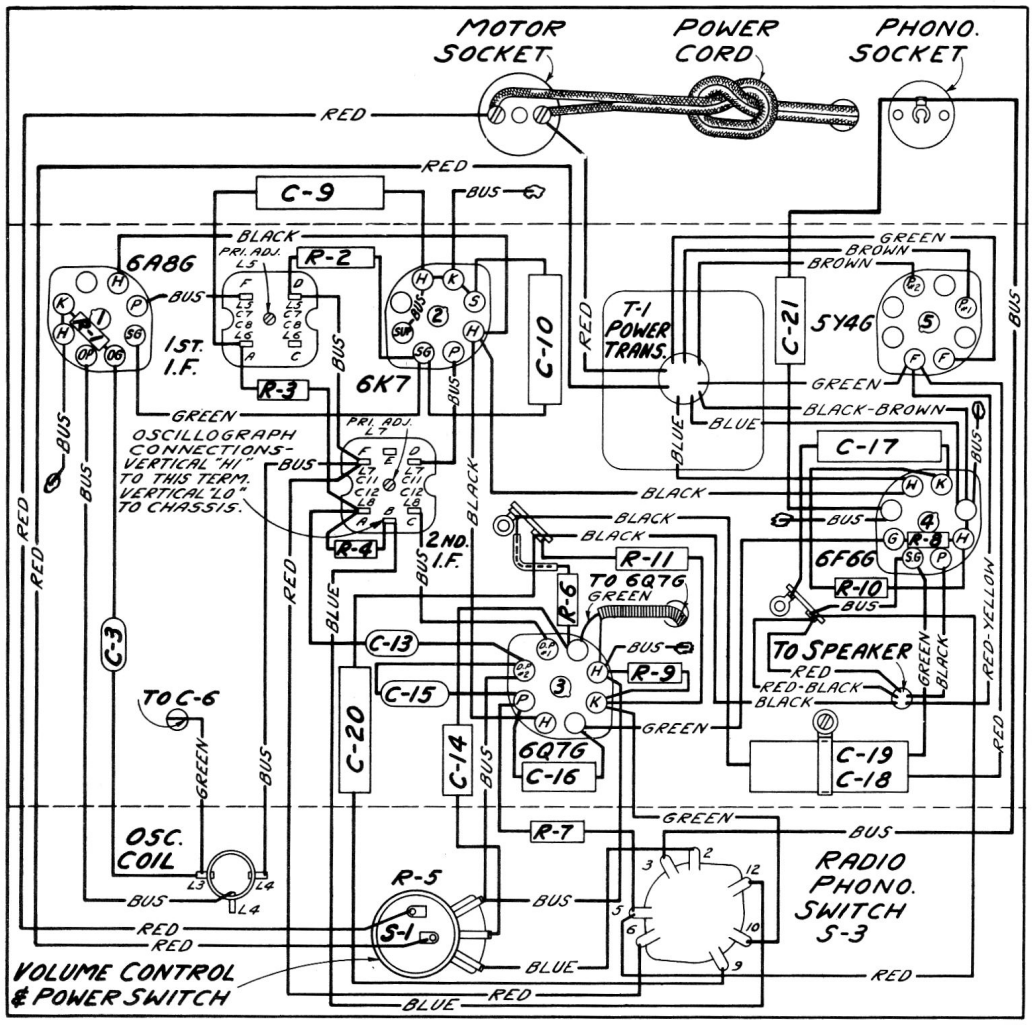
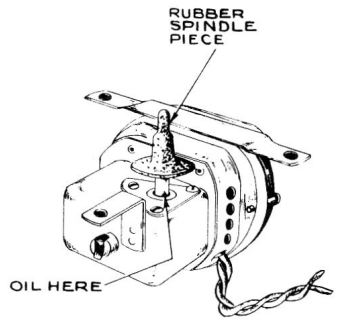


Fig. 3. Chassis Wiring Diagram.



Victrola Mechanism

The crystal pickup is sealed in a metal case as protection against extreme changes of climate. If failure occurs, do not attempt to repair the unit, but install a new crystal unit.

Motor Lubrication.—Apply a few drops of light machine oil to the spindle bearing and oil hole every six months.

The motor spindle is tapered, and a conical rubber piece fits snugly on the spindle. The hole in the turntable bushing is tapered to fit the rubber. This provides an excellent self-centering floating mounting.

A metal washer is placed on the spindle under the rubber piece. The washer has ears on the under side which fit over a pin that projects through the spindle.

REPLACEMENT PARTS FOR MODEL VR-3
FIVE TUBE "A" BAND COMBINATION

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

STOCK NO.	DESCRIPTION	LIST PRICE
	RECEIVER ASSEMBLIES	
S-2301	Cap-Grid contact cap (Pkg.of 5).....	$ .35
12813	Capacitor-82 mmfd. (C3).....	.49
12720	Capacitor-100 mmfd.(C5,C6,C11,C12)....	.49
13003	Capacitor-180 mmfd.(C13).....	.49
12725	Capacitor-1000 mmfd.(C15).....	.49
4838	Capacitor-.005 mfd. (C21).....	.35
14393	Capacitor-.01 mfd. (C14,C16).....	.42
30847	Capacitor-.05 mfd. (C10).....	.28
4839	Capacitor-0.1 mfd. (C9).....	.42
12741	Capacitor-0.5 mfd. (C20).....	.42
S-2443	Capacitor-10 mfd. electrolytic (C17)..	.80
S-2320	Capacitor-Electrolytic capacitor consisting of two 5 mfd. sections (C18, C19).....	2.15
32338	Coil-Antenna coil (L1,L2).....	1.19
30895	Coil-Oscillator coil (L3,L4).....	1.47
S-2444	Condenser-2 gang variable tuning condenser (C1,C2,C4,C5,C6).....	3.75
S-2306	Cord-Variable condenser drum drive cord.....	.28
S-2445	Dial-Station selector dial scale.....	.70
S-2309	Drum-Variable condenser drive drum assembly.....	.60
32605	Indicator-Station selector indicator pointer.....	.42
11765	Lamp-Pilot lamp.....	.21
S-2216	Resistor-56 ohms, 1/4 watt (R9).....	.20
12261	Resistor-390 ohms,1/4 watt (R11).....	.20
30499	Resistor-470 ohms,1/2 watt (R10).....	.20
S-2060	Resistor-18,000 ohms,1 watt (R2).....	.22
14390	Resistor-27,000 ohms,1/10 watt (R4)...	.15
12286	Resistor-56,000 ohms,1/4 watt (R1)....	.20
11323	Resistor-270,000 ohms,1/4 watt (R7)...	.20
S-1690	Resistor-470,000 ohms,1/4 watt (R8)...	.20
12679	Resistor-2.2 meg.,1/4 watt (R3).....	.20
13601	Resistor-10 meg., 1/4 watt (R6).....	.20
S-2446	Retainer-Female A.C. socket retainer (Pkg.of 3).....	.21
S-1469	Screw-Variable capacitor drum set screw (Pkg.of 10).....	.42
S-2312	Shaft-Variable capacitor drum drive shaft.....	.45
S-2447	Socket-Female A.C. socket.....	.42
31251	Socket-Radiotron socket.....	.35
S-2448	Socket-Pilot lamp socket.....	.28
31418	Spring-Drive cord tension spring (Pkg.of 3).....	.21
S-2449	Switch-Tone-Phono switch (S3).....	1.68
S-2314	Transformer-First I.F. Transformer (L5,L6,C7,C8).....	$2.68
S-2315	Transformer-2nd I.F. Transformer (L7,L8,C11,C12).....	2.68
S-2317	Transformer-Power Transformer 105-125 volts 50/60 cycle (T1)..	6.00
S-2316	Transformer-Power Transformer 105-125 volt 25/60 cycle (T1)...	9.00
S-2318	Volume control and power switch (R5,S1).....	2.10
14278	Socket-Phono input socket.....	.35
	MOTOR BOARD ASSEMBLIES	
S-2285	Damper-Turntable damper plate and sleeve.....	.40
S-2450	Escutcheon-Toggle switch "On-Off" escutcheon (Pkg.of 2).....	.28
32558	Motor-110 volt,60 cycle motor complete (M1).....	14.70
32638	Motor-110 volt,25 cycle motor complete (M1).....	17.92
4671	Switch-Motor toggle switch.....	1.54
31463	Turntable-Motor turntable.....	2.10
	PICKUP & ARM ASSEMBLIES	
S-2451	Base-Pickup arm pivot shaft and base assembly.....	.91
33122	Crystal-Pickup crystal cartridge & needle screw.....	5.25
31048	Plug-Pickup cable plug.....	.21
33529	Screw-Pickup needle screw.....	.22
33591	Shell-Pickup arm shell,less base assembly and crystal unit.....	.90
	MISCELLANEOUS ASSEMBLIES	
32602	Escutcheon-Station selector dial escutcheon & crystal.....	1.68
14269	Knob-Station selector,volume or tone control knob.....	.28
14270	Spring-Retaining spring for knob (Pkg.of 10).....	.70
	REPRODUCER ASSEMBLIES CRL-503-1	
S-2387	Coil-Field coil (L11).....	1.75
S-2375	Cone-Reproducer cone & voice coil (L1).....	1.68
S-2388	Reproducer complete.....	6.32
S-2389	Transformer - Output transformer.....	1.32

Prices quoted above are subject to change or withdrawal without notice.