



RCA Victor

VICTROLA MODEL VR-42

Five-Tube, Two-Band, A-C, Superheterodyne Radio-Phonograph Combination

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL



Model VR-42

Electrical Specifications

FREQUENCY RANGES

Standard Broadcast	540-1550 kc
Short Wave	5.6-21 mc
Intermediate Frequency	455 kc

TUBE COMPLEMENT

- (1) Type-6SA7 1st Detector—Oscillator
- (2) Type-6SK7 I-F Amplifier
- (3) Type-6SQ7 2nd Detector, A.V.C.,
and A-F Amplifier
- (4) Type-6F6-G Power Output
- (5) Type-5Y4-G Rectifier
- Pilot Lamps (2) .. Mazda No. 51, 7.5 volts, 0.2 amp.

POWER OUTPUT RATING

Undistorted	2.5 watts
Maximum	4.0 watts

LOUDSPEAKER (CRL517-1)

Type	6-inch Electrodynamic
V.C. Impedance	3.4 ohms at 400 cycles

POWER SUPPLY RATINGS

Rating A.....	105-125 volts, 50-60 cycles, 90 watts
Rating B.....	105-125 volts, 25-60 cycles, 90 watts

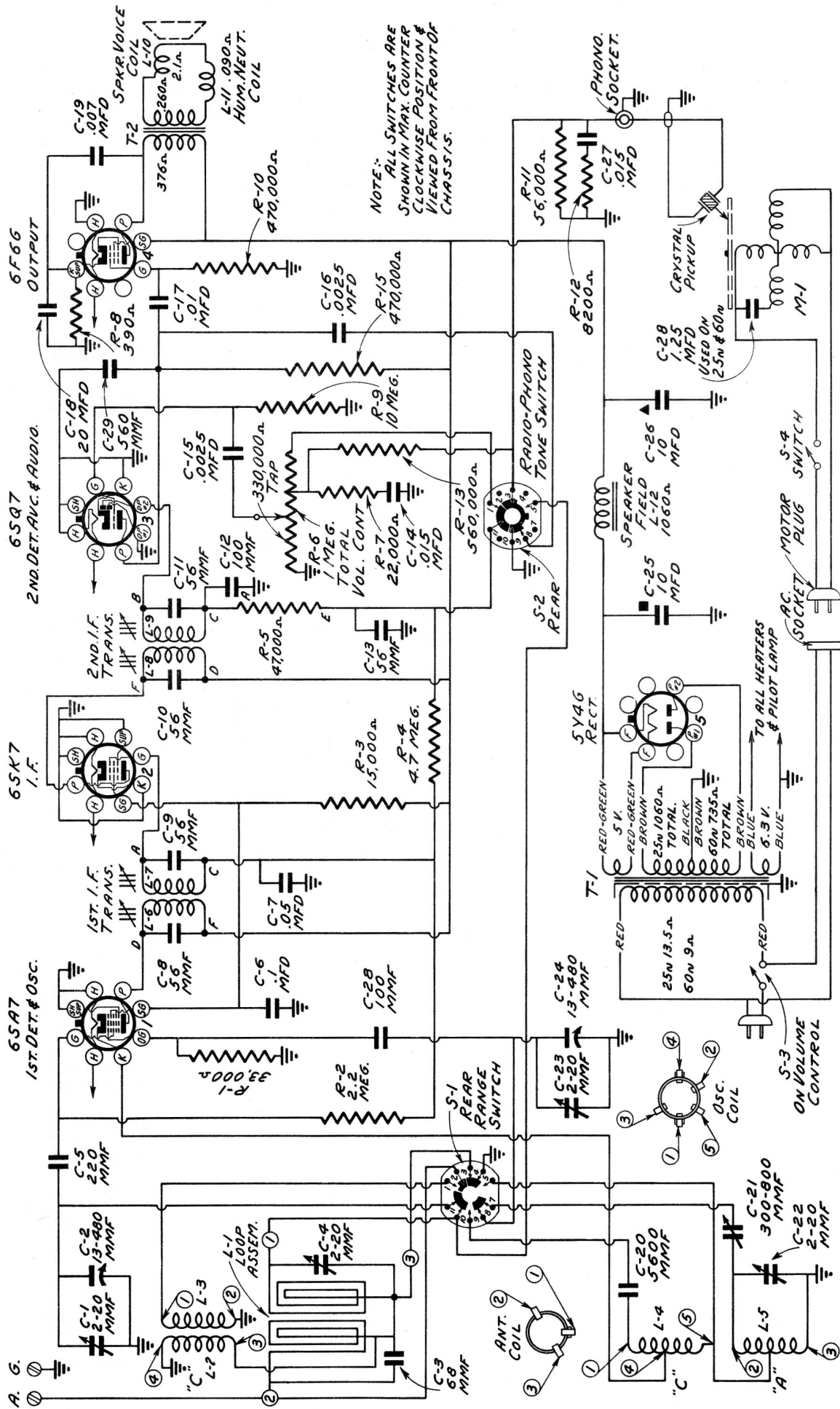
PHONOGRAPH MOTOR—Self-starting, constant speed, induction type Crystal Pickup.

Impedance	100,000 ohms at 1000 C.P.S.
Average Output	1.5 volts at 1000 C.P.S. across 500,000 ohm load

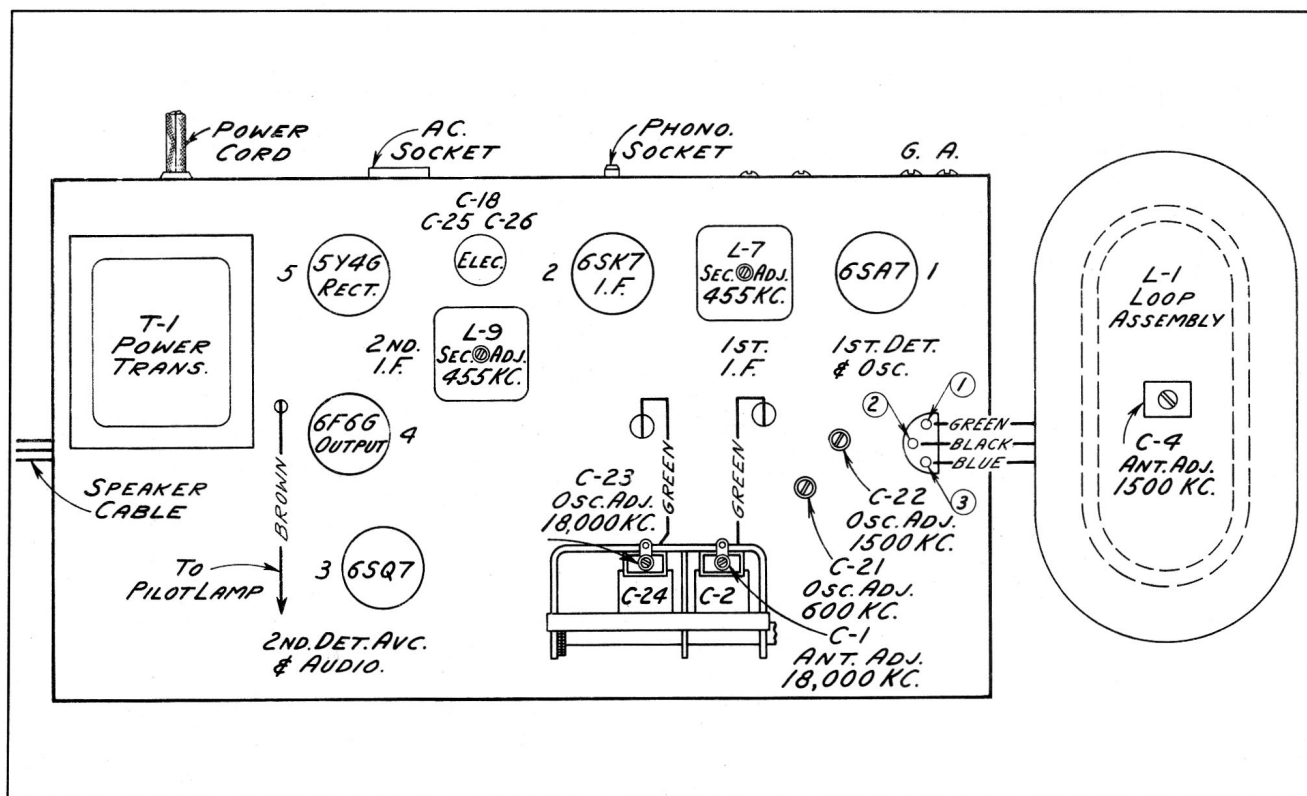
General Description

The Model VR-42 is a five tube, two band Victrola combining the latest developments in both radio and phonograph circuits. The mechanism is housed in a table type cabinet of modern design. Features of this model include: Crystal pickup, and a rim drive, con-

stant speed synchronous motor in the phonograph; five push buttons, loop antenna on the "A" band, Radio-Phono tone switch, aurally compensated volume control, large glass dial and a six inch high efficiency speaker in the radio.



Schematic Diagram



Alignment Procedure

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

Test Oscillator.—For all alignment operations, keep the oscillator output as low as possible to avoid a-v-c action.

Dial Indicator Adjustment.—With the gang condenser in full mesh, the indicator should point to the extreme left (low frequency) mark on the dial scale.

Steps	Connect test-osc. output to—	Tune test-osc. to—	Turn radio dial to	Adjust the following for maximum peak output
1	6SK7 I-F grid through 0.1 mfd capacitor and ground	455 kc	Quiet point between 600-800 kc	L9 & L10 (2nd I-F trans.)
2	6SA7 1st det. grid through 0.1 mfd capacitor and ground			L7 & L8 (1st I-F trans.)
3	Ant. & Grd. Terminal Board	18 mc	Rock at 18 mc	C-1 antenna† C-23 oscillator
4	Radiation Loop consisting of two turns of wire located 4 to 6 feet from receiver	600 kc	Rock at 600 kc	C-21 oscillator
5		1,500 kc	1,500 kc	C-4 antenna C-22 oscillator

When making adjustments 4 and 5 the chassis must be in the cabinet, the loop connected, and all leads in their normal positions. When mounting chassis in cabinet if calibration does not line up with dial scale mounted on cabinet move pointer to agree with dial scale on cabinet.

†If two peaks can be obtained use low frequency (maximum capacity) peak.

RADIOTRON SOCKET VOLTAGES

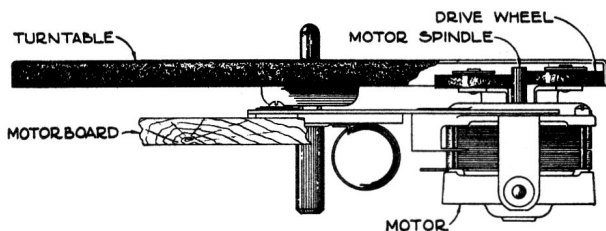
Type	Function	Plate	Screen Grid	Cathode	Heater
6SA7	Det.	260V	80V		6.6V
	Osc.			2.3V	
6SK7	I.F.	260V	80V		6.6V
6SQ7	Audio	80*V			6.6V
6F6-G	Output	245V	260V	16V	6.6V
5Y4-G	Rectifier			350V	5.0V

*Cannot be measured with an ordinary voltmeter.

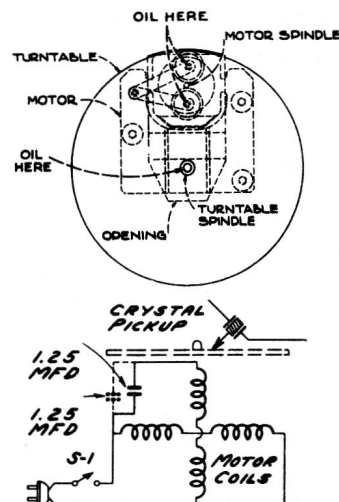
The above voltages are measured with a 1000 ohm-per-volt meter. All values should hold within plus or minus 20 percent.

The phonograph motor has its bearing filled with oil and sealed at the factory and hence should not require lubrication in the field. However the two rubber tired idler pulleys should have their bearings lubricated occasionally with S.A.E. 10 oil. Care should be taken not to get any oil, grease, or other foreign matter on the rubber tires. These tires and the motor spindle should be cleaned occasionally with quick drying naphtha.

The turntable spindle bearing should also be lubricated occasionally with S.A.E. 10 oil.



Motor Detail



Motor and Pickup Circuit

Push Button Adjustments

The push buttons should be adjusted for five favorite stations after the receiver has had a brief warm-up period.

Any standard broadcast stations may be chosen. The preferable arrangement is to adjust for stations in the order of frequency, from low to high.

Proceed as follows:—

1. Set the Radio-Phono knob to "Radio" and turn the range selector to "A" band position.

2. Loosen the five push buttons by turning in a counter clockwise direction one turn.

3. Accurately tune in the first station by means of the tuning knob.

4. With station accurately tuned in, press in the first push button and tighten.

5. Proceed in a similar manner to adjust the remainder of the push buttons.

6. Place call letter tabs in openings provided.

REPLACEMENT PARTS FOR MODEL VR-42

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			
S-2482	Board-Ant.Gnd. Terminal board.....	12285	Resistor-470,000 ohm, $\frac{1}{4}$ watt (R10,R15)
S-2466	Capacitor-Adjustable capacitor one 2-20 mmfd; one 300-800 mmfd; sections (C21,C22).....	12486	Resistor-560,000 ohm, $\frac{1}{4}$ watt (R13)...
12723	Capacitor-56 mmfd. (C13).....	12679	Resistor-2.2 meg., $\frac{1}{4}$ watt (R2).....
13057	Capacitor-68 mmfd. (C3).....	S-2038	Resistor-4.7 meg., $\frac{1}{4}$ watt (R4).....
12720	Capacitor-100 mmfd. (C28).....	13601	Resistor-10 meg., $\frac{1}{4}$ watt (R9).....
12694	Capacitor-220 mmfd. (C5).....	S-2867	Shaft-Station selector drive shaft...
12537	Capacitor-560 mmfd. (C29).....	31319	Socket-Tube socket.....
13895	Capacitor-5600 mmfd. (C20).....	31364	Socket-Dial lamp socket.....
5107	Capacitor-.0025 mfd. (C15,C16).....	14278	Socket-Phone input socket.....
5148	Capacitor-.007 mfd. (C19).....	30585	Spring-Drive cord tension spring Pkg.3
11315	Capacitor-.015 mfd. (C14,C27).....	S-2824	Socket-A.C. Input socket.....
32787	Capacitor-.05 mfd. (C7).....	S-2868	Switch-Range switch (S1).....
4839	Capacitor-0.1 mfd. (C6).....	S-2869	Switch-Phono Tone Switch (S2).....
4858	Capacitor-.01 mfd. (C17).....	S-2861	Transformer-1st I.F. Transformer (L6,L7,C8,C9).....
32240	Capacitor-Electrolytic comprising two 10 mfd., one 20 mfd., sections (C18,C25,C26).....	32825	Transformer-2nd I.F. Transformer (L8,L9,C10,C11,R5).....
S-2856	Coil-"C" band antenna coil (L2,L3)....	S-2457	Transformer-Power transformer 110 volt, 50/60 cycle.....
S-2857	Coil-Oscillator coil (L4,L5).....	33619	Transformer-Power transformer 110 volt, 25 cycle.....
S-2823	Condenser-2 gang variable tuning condenser complete with push button mechanism (C1,C2,C23,C24).....	S-2870	Volume control and power switch (R6,S3).....
S-2837	Cord-Variable condenser drum drive cord.....	REPRODUCER ASSEMBLIES (CRL 517-1) (6*)	
33633	Indicator-Station selector indicator pointer.....	32907	Cap-Dust cap for cone center (Pkg.5).....
11765	Lamp-Dial lamp Mazda #51.....	33077	Coil-Field coil (L12).....
5119	Plug-3 contact female speaker plug...	32934	Cone-Reproducer cone and voice coil (L10).....
31388	Resistor-390 ohm, 1 watt (R8).....	5118	Plug-3 contact male plug.....
S-2858	Resistor-8,200 ohm, $\frac{1}{4}$ watt (R12).....	S-2875	Reproducer complete.....
33489	Resistor-15,000 ohm, $\frac{1}{4}$ watt (R3).....	32905	Transformer-Output transformer (T2)...
13998	Resistor-22,000 ohm, $\frac{1}{4}$ watt (R7).....		
12454	Resistor-33,000 ohm, $\frac{1}{4}$ watt (R1).....		
12286	Resistor-56,000 ohm, $\frac{1}{4}$ watt (R11)....		

REPLACEMENT PARTS FOR MODEL VR-42 (Cont'd.)

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
MOTOR ASSEMBLIES		PICKUP AND ARM ASSEMBLIES	
36986	Arm-Drive wheel or idler arm for 60 cycle.....	S-2451	Base-Pickup arm pivot shaft and base assembly.....
S-3261	Arm-Drive wheel or idler arm for 25 cycle.....	33122	Crystal-Pickup crystal and needle screw complete.....
36989	Bushing-Motor mounting rubber bushing.....	33123	Damper-Viscoloid complete for pickup armature.....
36990	Capacitor-1.25 mfd. motor capaci- tor (2 used on 25 cycle).....	S-2853	Pickup arm and crystal assembly complete.....
36984	Motor-110 volt 60 cycle (motor only).....	33529	Screw-Needle screw.....
S-2872	Motor-110 volt 25 cycle (motor only).....	33591	Shell-Pickup shell less crystal unit and base.....
36995	Plate-Motor support plate 60 cyc..	MISCELLANEOUS ASSEMBLIES	
S-3262	Plate-Motor support plate 25 cyc..	S-2641	Button-Station selector push button.....
36996	Spindle-Turntable spindle.....	S-2862	Dial-Station selector dial scale..
36997	Spring-Idler tension spring (60 cycle) (Pkg.2).....	32994	Escutcheon-Push button escutcheon..
S-3263	Spring-Idler tension spring (25 cycle) (Pkg.2).....	S-2863	Escutcheon-Dial scale escutcheon..
34422	Turntable (9 in. diameter).....	S-2873	Knob-Tuning, range, tone or volume Control knob.....
36994	Wheel-Rubber tired idler or drive wheel.....	S-2871	Loop-Antenna loop assembly (L1,C3,C4).....
AUTOMATIC SWITCH ASSEMBLIES		31589	Marker-Station call letter markers (1 set).....
36772	Cam-Cam assembly comprising main and auxiliary cam, hub and set screw.....	S-2874	Mounting-Motor switch mounting hardware.....
32869	Screw-Set screw for cam hub(Pkg.10)	14270	Spring-Knob retaining spring (Pkg.5).....
36521	Spring-Actuating lever tension spring (Pkg.2).....	34422	Turntable-Phonograph turntable less spindle.....
36529	Switch-Contact and plunger (S1)		