RCA Victor

MODEL V-1
RECORD PLAYER

TECHNICAL INFORMATION AND SERVICE DATA

SERVICE DIVISION • RCA VICTOR COMPANY LIMITED • MONTREAL

Electrical and Mechanical Specifications

MOTOR

Type ..... (Manual-starting) Synchronous
Turntable Speed ..... 78 r.p.m.
Turntable Diameter ..... 7 inches

POWER SUPPLY RATING

Rating A ..... 105-125 volts, 60 cycles, 10 watts
Rating B ..... 105-125 volts, 25 cycles, 10 watts

PICKUP

Type ..... Crystal
Impedance ..... 80,000 ohms at 1,000 cycles
Volume Control Resistance ..... 250,000 ohms
Average Output Voltage ..... 1½ volts at 1,000 cycles across 250,000 ohm load

CABINET DIMENSIONS

Height ..... 4⅞ inches
Depth ..... 9⅞ inches
Width ..... 11⅜ inches
Net Weight ..... 6¼ pounds
Shipping Weight ..... 8¼ pounds

General Description

The RCA Victor Record Player Model V-1 consists of a manually-operated motor turntable mechanism and a new type, light weight, crystal pickup housed in a compact, modern styled, cabinet of walnut veneer. This record player is designed to play records through the audio amplifier-loudspeaker system of practically every type of radio receiver.

Service Data

The crystal pickup unit is thoroughly sealed in a metal casing, against extreme changes of climate. The offset mounting of the crystal unit in the pickup arm insures ideal tracking between the needle and record grooves. If failure occurs due to a defective crystal unit, no attempt should be made to repair the unit, but a new replacement crystal unit should be installed.

The motor speed should be 78 r.p.m., and may be checked by placing a piece of paper between a record and the turntable, with the paper protruding beyond the edge of the record, and then counting the number of revolutions of the turntable per minute. The motor is designed to be simple and foolproof in operation. Occasionally, however, lubrication and certain adjustments may be required. The turntable is started by rotating the turntable in a clockwise direction.

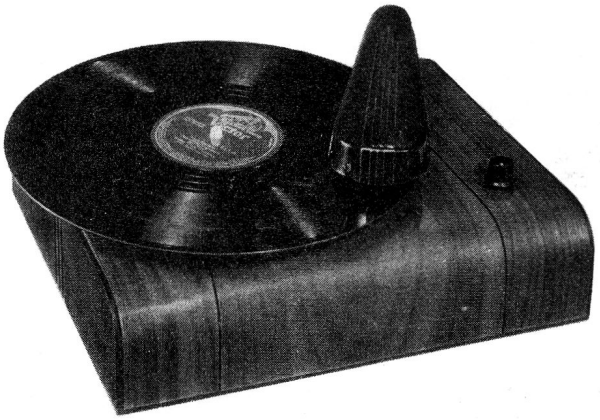
Connecting Record Player to Radio Receivers

In general, the Record Player must be used with radio receivers having at least two stages of high-gain audio amplification. The Record Player output should be connected to the grid of the first audio tube, and at the same time the output of the radio receiver portion of the chassis should be shorted or opened, to prevent radio signals being heard while the Record Player is in operation.

RECORD PLAYER REPLACEMENT PARTS FOR MODEL V-1

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

STOCK No.	DESCRIPTION		STOCK No.	DESCRIPTION	
	MOTOR ASSEMBLIES			**PICKUP AND ARM ASSEMBLIES**	
S-2277	Base-Motor support, damper and bearing cup assembly.....		33124	Base-Pickup arm pivot shaft and base assembly.....	
31046	Bearing-Motor bearing assembly.....		33122	Crystal-Pickup crystal cartridge and needle screw.....	
31041	Cap-Rubber spindle cap (Pkg.2).....		33529	Screw-Pickup needle screw.....	
31047	Cushion-Rubber cushion for bearing.		33591	Shell-Pickup arm shell less base assembly.....	
S-2264	Motor-Phonograph motor complete with turntable - 60 cy.....				
S-2265	Motor-Phonograph motor complete with turntable - 25 cy.....			**MISCELLANEOUS ASSEMBLIES**	
31040	Mounting-Turntable top - rubber mountings - 60 cycle.....		3961	Knob-Volume control knob.....	
S-2271	Retainer-Turntable retainer, washer and bearing assembly.....		S-2289	Mounting-Motor mounting screw assembly - 60 cycle.....	
32076	Turntable-Finished turntable top plate only - 25 cycle.....		S-2290	Mounting-Motor mounting screw assembly - 25 cycle.....	
31039	Turntable-Finished turntable top plate only - 60 cycle.....		31048	Plug-Pickup cable plug.....	
4083	Washer-Leather spacing washer (Pkg. 10).....		9824	Switch-Radio-Record switch and cable assembly.....	
14231	Washer-Metal spacing washer (Pkg. 10).....		31052	Volume control and on-off switch (R1,S1).....	



Model V-1

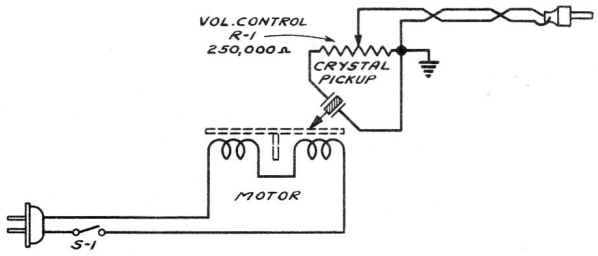


Fig. 1.

HUM AND VIBRATION

A small amount of hum when starting, decreasing to a negligible amount while running, is normal. If excessive vibration occurs either at starting or running, it may be due to one of the following:

(1) Insufficient lubrication in outer bearing or any other failure that will cause the stator to bind.

(2) Metal washer above the leather washer at the bottom of the main bearing. It must be below.

(3) Leather washer not oiled. When replacing the leather washer, make sure that it is thoroughly soaked in oil.

(4) Motor not properly supported from motor board. Unless the motor is properly supported from the motor board, vibration will be excessive.

(5) Burrs on salient poles of rotor or stator. They should be removed with fine emery cloth.

(6) Avoid placing the record player on top of the radio cabinet since acoustic feedback may tend to accentuate mechanical hum.

REMOVING THE ROTOR FROM THE STATOR

The rotor and turntable assembly simply rests on the ball bearing at the bottom of the vertical bearing, and may be removed by lifting out. Don't turn player upside down without holding turntable.

LUBRICATION

Both the rotor and stator have bearing surfaces about the center vertical axis. These bearings and the ball bearing at the bottom of the turntable's shaft should be oiled whenever player is serviced. The leather washer beneath the stator is to be pliable and soaked in light oil.

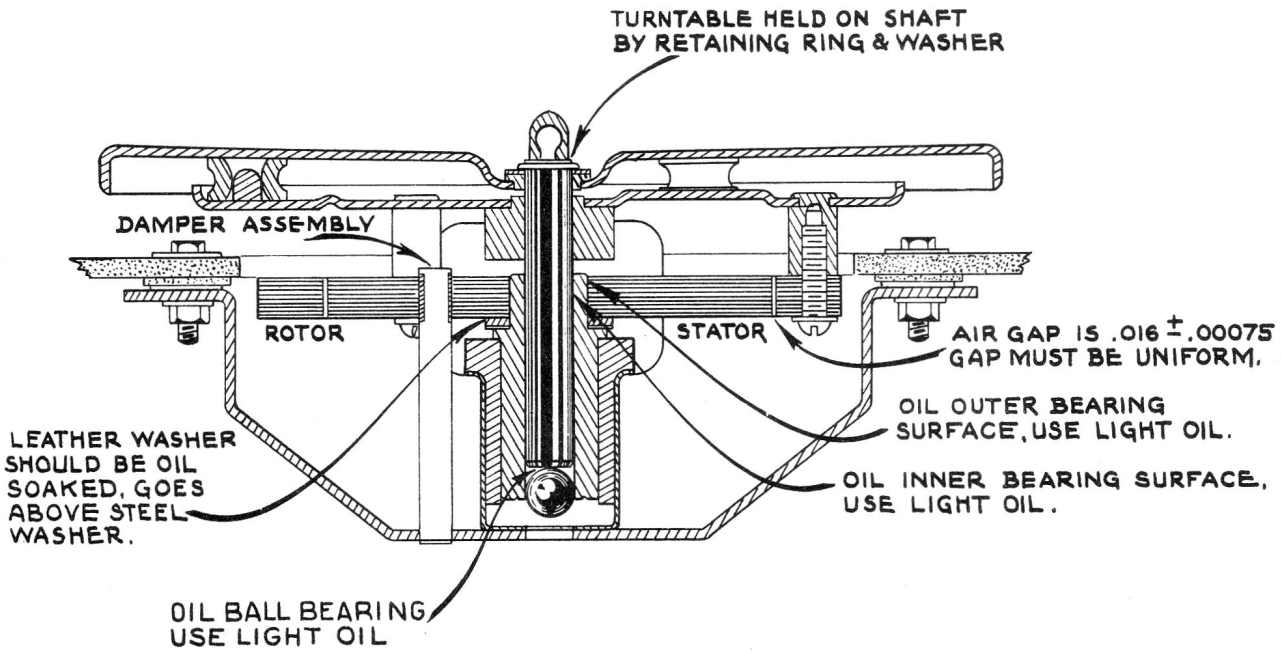


Figure 2—Motor Assembly

PHONOGRAPH MOTOR SERVICE DATA

The synchronous motor used in this instrument is designed to be simple and foolproof. Among its many features are constancy of speed, low power consumption, single moving part, ease of starting, rubber damper, ease of repair, and long life. The parts that may require attention are plainly shown by Figure 2. The motor is started by turning "on" the power switch and giving the turntable a clockwise spin with the hand. Smooth starting and running will be insured by keeping the bearings well cleaned and oiled.

ROTOR ADJUSTMENT

Use three 16-mil shims, spaced equally around the gap between rotor and stator. When rotor is suitably adjusted, securely tighten the three screws which hold the rotor to the turntable. The centering operation is very similar to that done with a dynamic speaker.

If top of rotor lamination assembly is not flush with top of stator laminations, additional steel washers should be inserted beneath the stator until it is raised to the desired level.