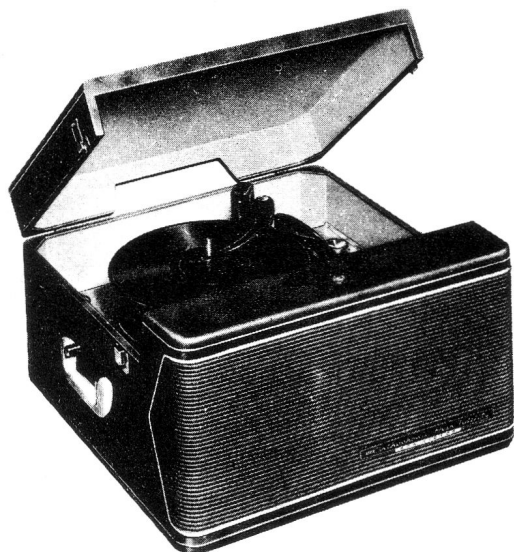




RCA VICTOR



*Model HF-381
Brown Leatherette*

High Fidelity Portable Phonograph

MODEL HF-381 SERVICE DATA

—1957 No. 15—

ISSUED BY
GENERAL SERVICE DEPARTMENT
RCA VICTOR COMPANY, LTD.
MONTREAL, CANADA

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TUBE COMPLEMENT

1. RCA 12AX7 Amplifier and Phase Invert.
 2. RCA 50C5 Output
 3. RCA 50C5 Output
- A selenium rectifier is used.

LOUDSPEAKERS

- One 6½" PM 3.2 ohm v.c.
Two 3½" PM 6.4 ohm v.c.

POWER SUPPLY RATING

115 volts, 60 cycles A.C. 50 watts

POWER OUTPUT

Undistorted 3 watts Maximum 4 watts

RECORD CHANGER (COLLARO CHALLENGER)

Turntable speed 16⅔, 33⅓, 45 or 78 r.p.m.
Record capacity Up to fourteen 7 inch RCA type,
or twelve 10 inch, or ten 12 inch,
or ten 10 in. and 12 in. intermixed
Pickup S-22186

DIMENSIONS (over-all)

Height, 10⅞" Width, 18¾" Depth, 18¾"

WEIGHT 27 lbs.

DESCRIPTION

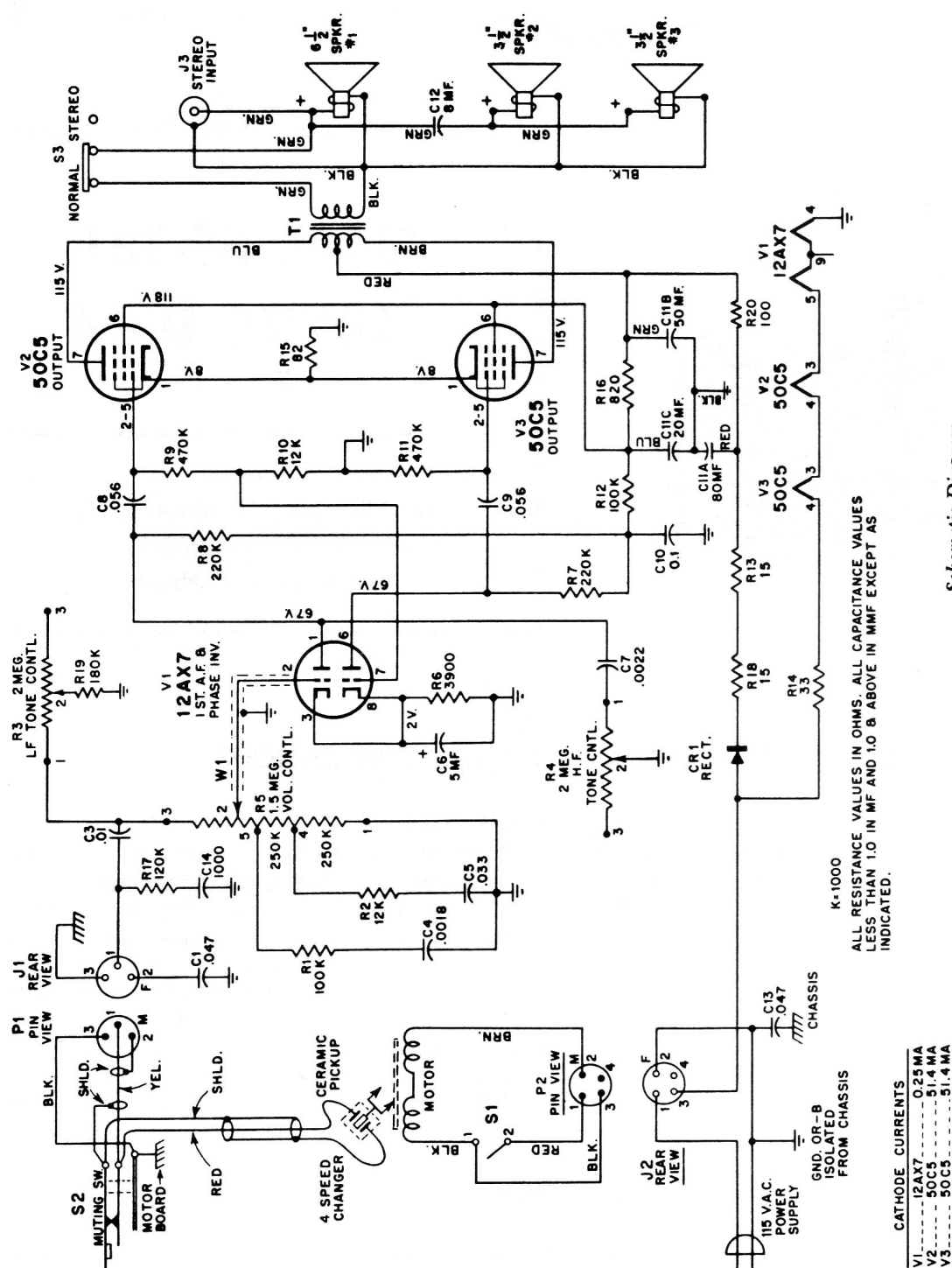
The HF-381 is a high-fidelity phonograph housed in a brown leatherette carrying case having a two-tone woven grille cloth. A four-speed automatic record changer, equipped with a dual-stylus ceramic pickup, is used.

The Panoramic Speaker System is used for wide-angle sound distribution. One 6½-inch and two 3½-inch speakers are used in the Panoramic Speaker System. The frequency response is from 70 cycles to 20,000 cycles.

The amplifier has three tubes and a selenium rectifier, it is designed for operation on a 105 v. to 125 v. 60 cycle power supply. The three controls marked "LOUDNESS," "BASS," and "TREBLE" operate in a clockwise direction for maximum response. Each control is marked with numbers from 0 to 10;

the recommended normal setting of the tone controls is "5" on each dial. At this setting and with the volume control at the top tap, the frequency response from the RCA New Orthophonic frequency record #12-5-49 is fairly flat from record to voice coil except for pickup irregularities and some bass boost. The amplifier is designed to give relatively high undistorted and maximum outputs by using a push pull amplifier, large output transformer and high B+ voltage.

FOR RECORD CHANGER
SERVICE INFORMATION—
REFER TO COLLARO CHALLENGER
SERVICE NOTE



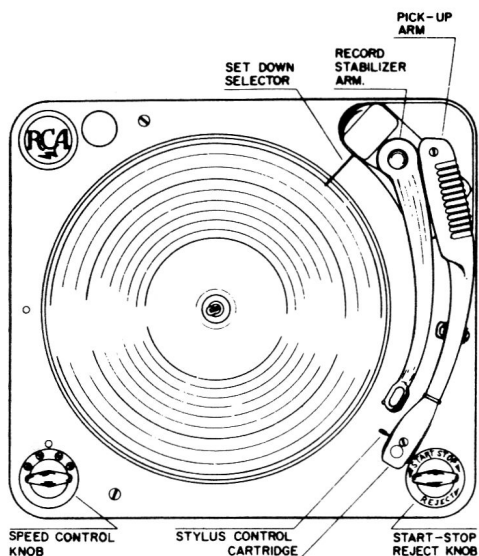
Schematic Diagram

CRITICAL LEAD DRESS

1. Dress all heater leads and power cord close to chassis and away from 12AX7 tube socket and phono input jack to maintain low hum level
2. Keep shielded lead W1, including shield connections, as short as possible.
3. Dress record changer power cable and pickup cable as far apart as possible to minimize hum pickup.

NOTE—The "ON-OFF" switch is not part of the volume control. The record changer must be "ON" for power to be applied to the amplifier.

The "NORMAL-STEREO" switch should be placed in the STEREO position when using the speakers of this instrument for stereophonic sound reproduction from another source.



Record Changer Controls

RECORD CHANGER CONTROLS

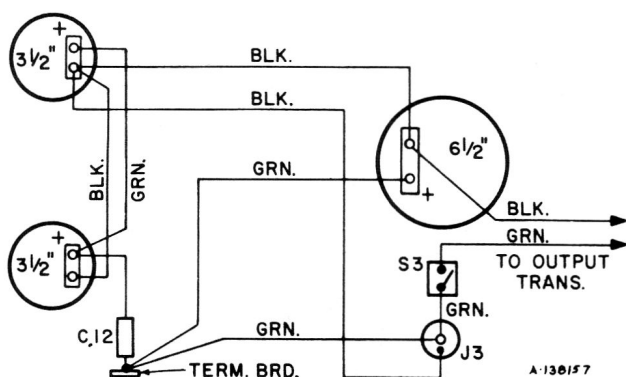
The record changer has two controls on the motorboard and a stylus selector control on the pickup arm. The lever of the right control is the OFF-ON-REJECT control. Turning this lever to the start position energizes the motor and starts the turntable, when turned to the position it starts the mechanism into complete automatic operation. The mechanism will shut off automatically after the last record has been played but can be shut off manually by turning this lever to "stop".

The left knob on the Motorboard is the speed control. It has four positions; "16-2/3," "33," "45," "78," to select the turntable speed desired.

The removable centerpost is for use with 16-2/3 or 45 r.p.m. records having the large centerhole. It must be placed over the center spindle with the word "FRONT" FACING to the FRONT. Care should be exercised in inserting and removing the centerpost so as to prevent damage to smaller spindle.

A well is provided near the record changer for storage of the centerpost when not in use.

To load or remove records, lift and turn the record stabilizer arm off to the side. After loading, the stabilizer arm should be turned to the centre so it rests on the stack of records.



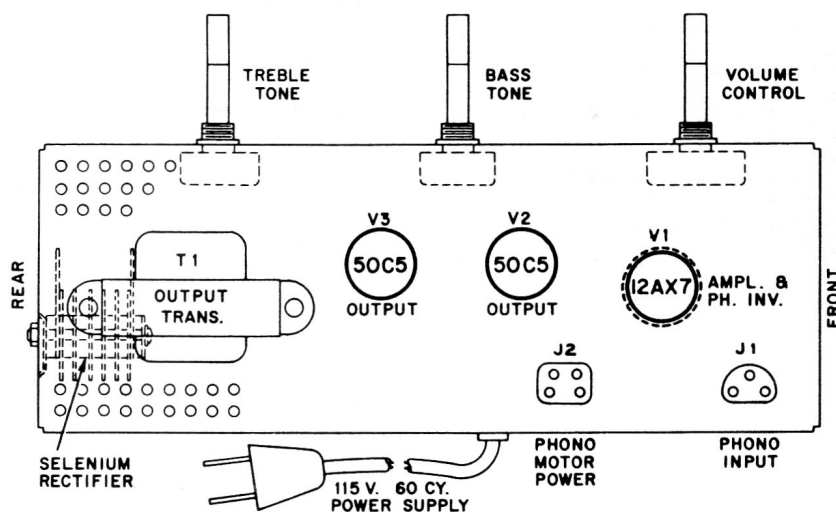
Speaker Connection Diagram

IMPORTANT

The three speakers must be connected as shown in the illustration at left. Improper connections may result in distorted or weak reproduction.

For additional information on speaker phasing, refer to the Supplementary Information at the front of this volume.

The "NORMAL-STEREO" switch should be placed in the STEREO position when using the speakers of this instrument for stereophonic sound reproduction from another source.



Top View of Amplifier

REPLACEMENT PARTS

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
AMPLIFIER ASSEMBLY					
C1	73553	Capacitor—Fixed, paper, 0.047 mf, $\pm 20\%$, 400 v.	T1	100466	Transformer—Output transformer
C3	73561	Capacitor—Fixed, paper, 0.1 mf, $\pm 10\%$, 200 v.		70392	Cord—Power line attachment cord and plug
C4		Capacitor—Fixed, paper, 0.0018 mf, $\pm 10\%$, 600 v.		76972	Shield—Tube shield for V1
C5		Capacitor—Fixed, paper, 0.033 mf, $\pm 10\%$, 200 v.		101699	Socket—Tube socket, 7 pin miniature for V2 and V3
C6		Capacitor—Electrolytic, 5 mf, 50 v.		100474	Socket—Tube socket, 9 pin miniature for V1
C7	73595	Capacitor—Fixed, paper, 0.0022 mf, $\pm 10\%$, 600 v.	RECORD CHANGER WIRING ASSEMBLY		
C8, C9	73791	Capacitor—Fixed, paper, 0.056 mf, $\pm 10\%$, 400 v.	P1	74192	Connector—3 contact male connector for phono pickup cable
C10	73551	Capacitor—Fixed, paper, 0.1 mf., $\pm 20\%$, 400 v.	P2	100510	Connector—4 contact male connector for phono power cable
C11A, C11B, C11C	S-21271	Capacitor—Electrolytic, 80/50/20 mf, 150 v.		100211	Connector—Closed end connector for motor leads
C12	100509	Part of Speaker Assembly	SPEAKER ASSEMBLY		
C13	73553	Same as C1		100465	Speaker—3½" PM speaker complete with cone,
C14		Capacitor—Fixed, mica, 1000 mmf, $\pm 10\%$, 300 v.		100464	Speaker—6½" PM speaker complete with cone,
CR1	100654	Rectifier—Selenium rectifier		100509	Capacitor—Electrolytic, 8 mf, 10 v. AC
J1	36422	Connector—3 contact female connector, phono pickup		100467	Housing—Plastic housing for 3½" speakers (2 req'd)
J2	38853	Connector—4 contact female connector, phono power	C12		
R1		Resistor—Fixed, composition, 100,000 ohm, $\pm 10\%$, ½ w.			
R2		Resistor—Fixed, composition, 12,000 ohm, $\pm 10\%$, ½ w.			
R3	S-21268	Control—Bass tone control			
R4	S-21267	Control—Treble tone control			
R5	S-21266	Control—Volume control			
R6		Resistor—Fixed, composition, 3900 ohm, $\pm 10\%$, ½ w.	J3	101734	Escutcheon—Cabinet air vent escutcheon with screen
R7, R8		Resistor—Fixed, composition, 220,000 ohm, $\pm 10\%$, ½ w.		101380	Escutcheon—Control escutcheon with mounting bracket
R9		Resistor—Fixed, composition, 470,000 ohm, $\pm 10\%$, ½ w.		101733	Foot—Cabinet side feet (3 req'd)
R10		Same as R2		101730	Handle—Plastic handle only—light tan
R11		Same as R9		101736	Hinge—Cabinet hinge (2 req'd)
R12		Same as R1		100935	Housing—"45" RPM centerpost well housing
R13		Resistor—Fixed, composition, 15 ohm, $\pm 20\%$, 1 w.		S-21317	Knob—Control knob—black—complete with spring
R14		Resistor—Fixed, composition, 33 ohm, $\pm 20\%$, 1 w.		101735	Latch—Cabinet lid latch (2 req'd)
R15		Resistor—Fixed, composition, 82 ohm, $\pm 10\%$, 1 w.		100182	Monogram—Trademark monogram
R16		Resistor—Fixed, composition, 820 ohm, $\pm 10\%$, 1 w.		S-22194	Nameplate—"New Orthophonic High Fidelity RCA Victor" nameplate
R17		Resistor—Fixed, composition, 120,000 ohm, $\pm 10\%$, ½ w.		101731	Post—Handle hinge mounting post (2 req'd)
R18		Same as R13		101729	Retainer—Wire retainer for 45 RPM centerpost
R19		Resistor—Fixed, composition, 180,000 ohm, $\pm 10\%$, ½ w.		100248	Spring—Conical spring for mounting record changer (4 req'd)
R20		Resistor—Fixed, composition, 100 ohm, $\pm 10\%$, 2 w.	S3	S-22195	Instruction manual
				S-22120	Case

Only items listed under stock numbers are available as Replacement Parts.

All parts subject to change or withdrawal without notice.