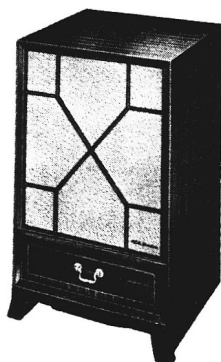




Model 3-HS-6



Speaker SPK-1



RCA VICTOR



HIGH FIDELITY RECORD PLAYER

Model 3-HS-6

SERVICE DATA

— 1953 No. 23 —

HOME INSTRUMENT SERVICE DIVISION
RCA VICTOR COMPANY, LTD
MONTREAL, CANADAFOR RECORD CHANGER SERVICE INFORMATION
—REFER TO 124196 SERIES SERVICE DATA.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TUBE COMPLEMENT

- | | |
|---------------|---------------------|
| (1) RCA 12AX7 | 1st & 2nd Amplifier |
| (2) RCA 12AU7 | 3rd & 4th Amplifier |
| (3) RCA 6C4 | Phase Inverter |
| (4) RCA 6AQ5 | Output |
| (5) RCA 6AQ5 | Output |
| (6) RCA 5Y3GT | Rectifier |

POWER SUPPLY RATING

115 volts, 60 cycles..... 90 watts

POWER OUTPUT

- At 70 cycles and 10,000 cycles
5 watts with less than 2% distortion
- At 1000 cycles
5 watts with less than 1% distortion

LOUDSPEAKER

- Size & type..... 12 inch wide range
Voice coil impedance..... 8 ohms @ 400 cycles

RECORD CHANGER (124196)

- Turntable speed..... 33 $\frac{1}{3}$, 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 (Stock No. 78634)..... Variable reluctance

CABINET DIMENSIONS

- Height 32 $\frac{3}{4}$ " Width 32 $\frac{3}{4}$ " Depth 16 $\frac{1}{2}$ "

GENERAL DESCRIPTION

Model 3-HS-6 is a high fidelity console record player using a three-speed record changer, a six-tube amplifier and a twelve-inch wide range speaker.

The three-speed (33 $\frac{1}{3}$, 45 and 78 r.p.m.) record changer is mounted on a roll-out drawer. It is equipped with a variable reluctance pickup having two replaceable styli. A four-pole four-coil motor and a laminated turntable are used to minimize hum pickup.

The amplifier uses six tubes (including rectifier) and is mounted at the bottom left rear of the cabinet with cables running to a control panel on the front of the roll-out drawer. The controls are marked "LOUDNESS," "BASS" and "TREBLE" and operate in a clockwise direction for maximum response. Each control is marked with numbers from 0 to 10. The amplifier is designed to give five watts output with less than one per cent distortion at 1000 cycles and less than two per cent distortion at 70 and 10,000 cycles. This is accomplished by using a well-designed output transformer and 15 db. of negative feedback applied from the transformer secondary to the amplifier stage ahead of the phase inverter. A hum

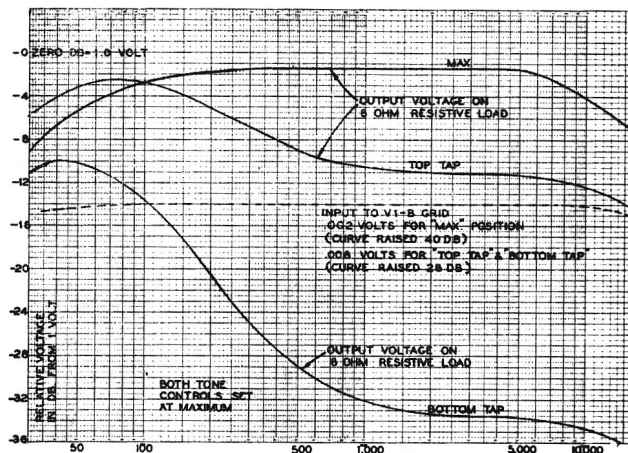
bucking potentiometer is located on the back apron of the chassis.

Model 3-HS-6 is provided with a means of using an external loudspeaker. A three-position switch located in the upper left rear corner of the cabinet selects use of (1) the internal loudspeaker, (2) the external loudspeaker or (3) both speakers. The load impedance is properly matched at all switch positions by selecting the proper taps on the output transformer. The loudspeaker cables are polarized to maintain proper phasing of the loudspeakers.

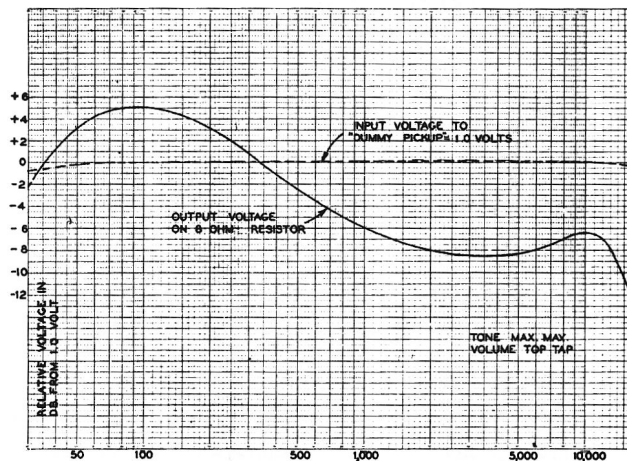
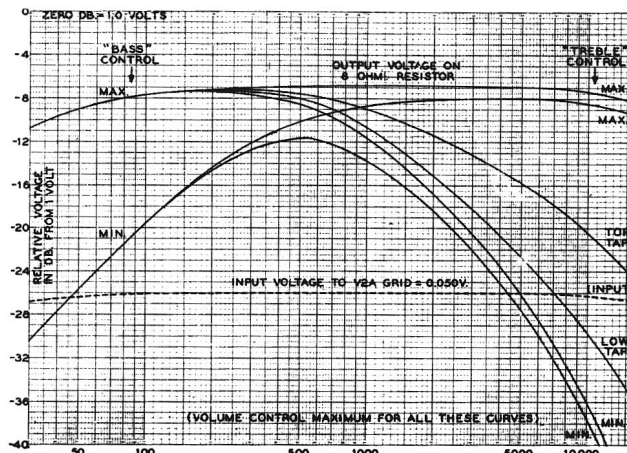
The 12 inch wide range loudspeaker is mounted on the right side of the cabinet in its own compartment. Extra heavy sides and internal bracing are used to achieve high quality acoustic performance.

SPK-1

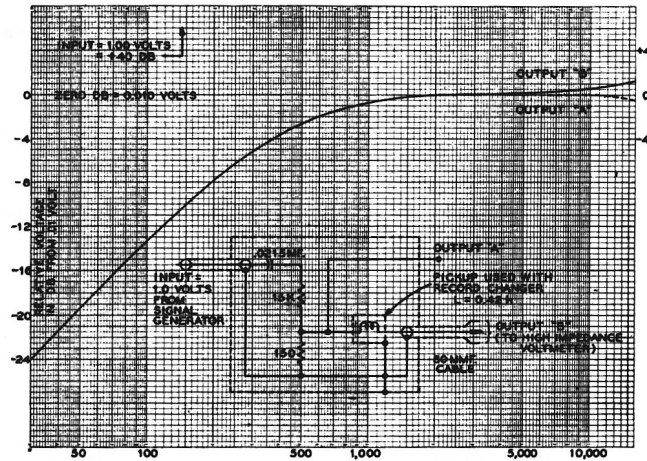
The SPK-1 is a companion loudspeaker for Model 3-HS-6 and is housed in a cabinet having similar acoustic properties. The speaker mechanism is identical to that used in Model 3-HS-6. A 50 foot attachment cable with polarized plug is used to connect SPK-1 to Model 3-HS-6.



Loudness Control Position vs. Frequency Response

Overall Frequency Response
Using "Dummy Pickup"

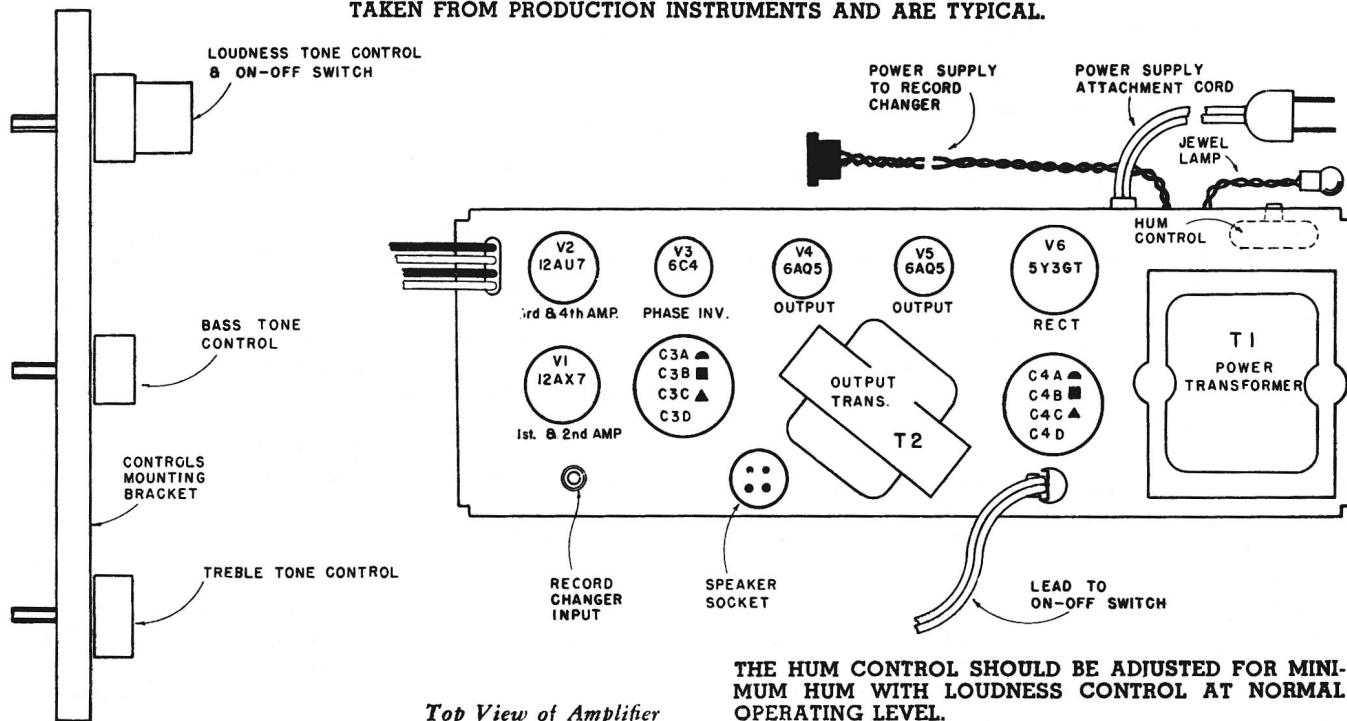
Tone Control Position vs. Frequency Response



"Dummy Pickup" Construction and Response

The "dummy pickup" is used to connect a signal generator to the amplifier input without materially changing the response characteristics.

THE PERFORMANCE CURVES SHOWN ABOVE AND ON THE FOLLOWING PAGE WERE TAKEN FROM PRODUCTION INSTRUMENTS AND ARE TYPICAL.



Top View of Amplifier

THE HUM CONTROL SHOULD BE ADJUSTED FOR MINIMUM HUM WITH LOUDNESS CONTROL AT NORMAL OPERATING LEVEL.

Insist on Genuine Factory Tested Parts, which are readily identified and may be purchased from Authorized Dealers.

STOCK No.	PART DESCRIPTION	STOCK No.	PART DESCRIPTION
AMPLIFIER ASSEMBLIES		SPEAKER ASSEMBLIES	
39626	Capacitor—Fixed, mica:	78575	Speaker—12" PM speaker complete with cone and voice coil
39636	82 mmf., 500 volts (C10, C11, C13)		
39640	220 mmf., 500 volts (C17)		
	330 mmf., 500 volts (C18)	MISCELLANEOUS	
	Capacitors—Fixed, paper:	71599	Bracket—Pilot lamp bracket
	.0047 mfd., 600 volts (C12)	74296	Cable—Shielded pickup cable complete with pin plug
	.01 mfd., 400 volts (C5)	13103	Cap—Pilot lamp cap
	.015 mfd., 600 volts (C7)	71892	Catch—Bullet catch and strike for doors
	.018 mfd., 400 volts (C6)	X3349	Cloth—Grille cloth for mahogany or walnut instruments
	.033 mfd., 400 volts (C2)	X3371	Cloth—Grille cloth for oak instruments
	.047 mfd., 200 volts (C8)	75474	Connector—Single contact male connector for speaker cable
	0.27 mfd., 400 volts (C14, C15, C16)	74882	Connector—2 contact (polarized) male connector for speaker cable (P3, P4)
78562	Capacitors—Electrolytic:	74879	Connector—2 contact (polarized) female connector for speaker leads (J3, J4)
	comprising: 2 sections of 20 mfd., 350 volts	39153	Connector—4 contact male connector less shell for speaker cable (P2)
	1 section of 10 mfd., 350 volts	78592	Decal—Control function decal for mahogany or walnut instruments
	1 section of 40 mfd., 25 volts	78593	Decal—Control function decal for oak instruments
	(C3A, C3B, C3C, C3D)	74273	Decal—"Victrola" decal
78563	comprising: 2 sections of 35 mfd., 350 volts	74308	Hinge—Cabinet door hinge (1 set)
	1 section of 10 mfd., 300 volts	77735	Knob—Speaker switch knob—brown—for mahogany or walnut instruments
	1 section of 20 mfd., 25 volts	77736	Knob—Speaker switch knob—medium beige—for oak instruments
	(C4A, C4B, C4C, C4D)	78576	Knob—Volume or tone control knob—maroon—for mahogany or walnut instruments
78573	50 mfd., 6 volts (C1)	78577	Knob—Volume or tone control knob—medium beige—for oak instruments
35787	Connector—Phono input connector (J1)	11765	Lamp—Pilot lamp—Mazda 51
30868	Connector—2 contact female connector for motor cable (P1A)	78594	Nameplate—"RCA Victor" nameplate
38853	Connector—4 contact female connector for external speaker cable (J2)	73634	Nut—Speednut for speaker mounting screw
78567	Control—Hum bucking control (R17)	77013	Nut—Speednut for "RCA Victor" nameplate
78566	Control—H.F. tone control (R22)	76421	Pin—Slide mechanism stop pin
78580	Control—L.F. tone control (R19)	78590	Pull—Door pull (top) for mahogany or walnut instruments
78565	Control—Volume control and power switch (R10, S1)	78591	Pull—Door pull (center) for mahogany or walnut instruments
S-4367	Cord—Power cord and plug	78500	Pull—Door pull for oak instruments
74838	Grommet—Power cord strain relief	74279	Screw—#8-32 x 7/8" trinit head screw for pull 78590
18469	Plate—Bakelite mounting plate for electrolytic	74113	Screw—#8-32 x 1" trinit head screw for pulls 78500 and 78591
	Resistors—Wire wound:	78589	Slide—Slide mechanism for rollout
78570	2.0 ohms, 1/2 watt (R15, R16)	76837	Spring—Retaining spring for knob
73637	2200 ohms, 5 watts (R6)	76422	Spring—Retaining spring for slide mechanism stop pin
	Resistors—Fixed, composition:	72936	Stop—Door stop
523133	330 ohms, $\pm 10\%$, 2 watts (R34)	78618	Switch—Speaker switch (S3)
	2700 ohms, $\pm 10\%$, 1/2 watt (R27)	EXTERNAL SPEAKER ASSEMBLIES	
	3300 ohms, $\pm 10\%$, 1/2 watt (R2, R8, R13, R30)	SPK-1	
	4700 ohms, $\pm 10\%$, 1/2 watt (R5, R24)	X3349	Cloth—Grille cloth for mahogany or walnut instruments
	8200 ohms, $\pm 10\%$, 1/2 watt (R12)	X3371	Cloth—Grille cloth for oak instruments
	10,000 ohms, $\pm 10\%$, 1/2 watt (R23)	75474	Connector—Single contact male connector for external speaker cable
	15,000 ohms, $\pm 10\%$, 1/2 watt (R14)	74882	Connector—2 contact (polarized) male connector for external speaker cable
	22,000 ohms, $\pm 10\%$, 1/2 watt (R11, R28, R29)	78594	Nameplate—"RCA Victor" nameplate
	27,000 ohms, $\pm 10\%$, 1/2 watt (R31)	73634	Nut—Speednut for speaker mounting screws
	56,000 ohms, $\pm 10\%$, 1/2 watt (R26)	77013	Nut—Speednut for "RCA Victor" nameplate
	82,000 ohms, $\pm 10\%$, 1/2 watt (R21, R25)	78606	Pull—Door pull for mahogany or walnut instruments
	120,000 ohms, $\pm 10\%$, 1/2 watt (R1, R18)	78607	Pull—Door pull for oak instruments
	150,000 ohms, $\pm 10\%$, 1/2 watt (R9)		
	220,000 ohms, $\pm 10\%$, 1/2 watt (R3, R4)		
	470,000 ohms, $\pm 10\%$, 1/2 watt (R7, R32, R33)		
	680,000 ohms, $\pm 10\%$, 1/2 watt (R20)		
76533	Shield—Tube shield for 12AX7		
78574	Socket—Pilot lamp socket and lead		
73117	Socket—Tube socket, miniature, 7 pin, wafer, for V3, V4, V5		
31251	Socket—Tube socket, octal, wafer for 5Y3GT		
78564	Socket—Tube socket, miniature, 9 pin, moulded, for 12AX7		
76971	Socket—Tube socket, miniature, 9 pin, wafer, for 12AU7		
78568	Transformer—Output transformer (T2)		
78569	Transformer—Power transformer, 117 volt 60 cycle (T1)		

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS