



RCA VICTOR



HIGH FIDELITY RADIO-PHONOGRAPH COMBINATION

MODEL HFC-391 (The Debonaire III)

SERVICE DATA

GENERAL DESCRIPTION

The model HFC-391 "Hi-Fi" Combination incorporates a eight tube Superheterodyne Radio (Standard Broadcast Band) with a new 12 inch speakers and two 3½ inch P.M. Speakers. The record changer is the 4-speed automatic COLLARO CHALLENGER.



MODEL HFC-391

Electrical and Mechanical Specifications

Standard Broadcast 540 - 1600 Kc
Intermediate Frequency 455 KCS.

Tube Complement

Symbol	Tube No.	Function	
V-1	RCA 6BE6	Converter	Tuning Drive Ratio (17.1) or 8½ turns of Knob
V-2	RCA 6BA6	I.F. Amplifier	POWER OUTPUT
V-3	RCA 6AV6	2nd Det. & AVC	Undistorted 8 watts
V-4A	RCA ½ 12AU7	1st Audio Amplifier	Maximum 10 watts
V-4B	RCA ½ 12AU7	2nd Audio Amplifier	LOUDSPEAKER
V-5A	RCA ½ 12AU7	3rd Audio Amplifier	Type (1) 12" PM — (2) 3½" PM.
V-5B	RCA ½ 12AU7	Phase Inverter	PHONOGRAPH COLLARO CHALLENGER
V-6	RCA 6V6GT	Power Output	Turntable 16⅔, 33⅓, 45 & 78 RPM
V-7	RCA 6V6GT	Power Output	CABINET DIMENSIONS
V-8	RCA 5Y3GT	Rectifier	Height 38¾"
			Width 30"
			Depth 20⅝"

For Record Changer mechanism, please refer to the Collaro Challenger Record Changer Service Note.

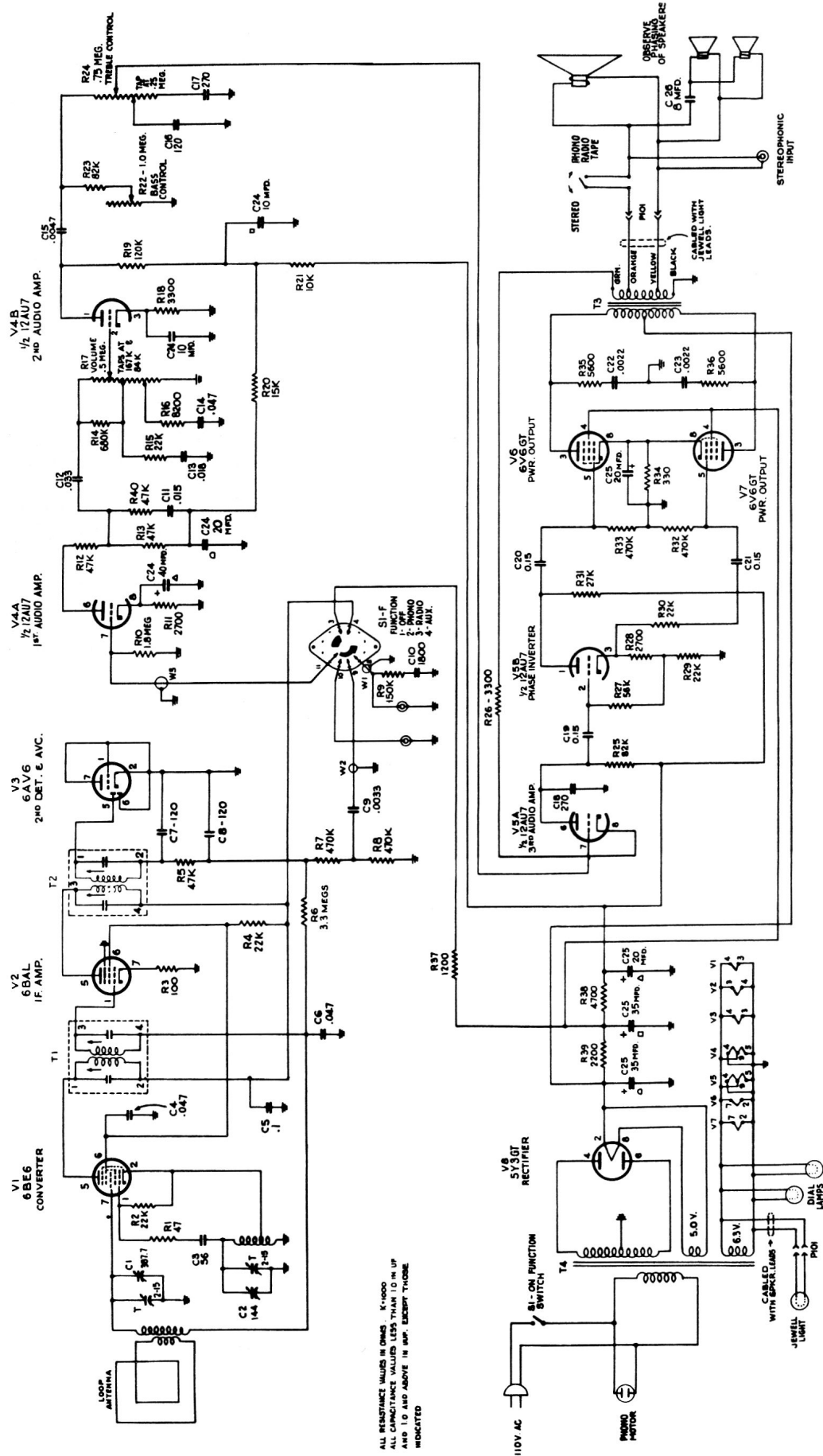


DIAL SCALE HFC-391

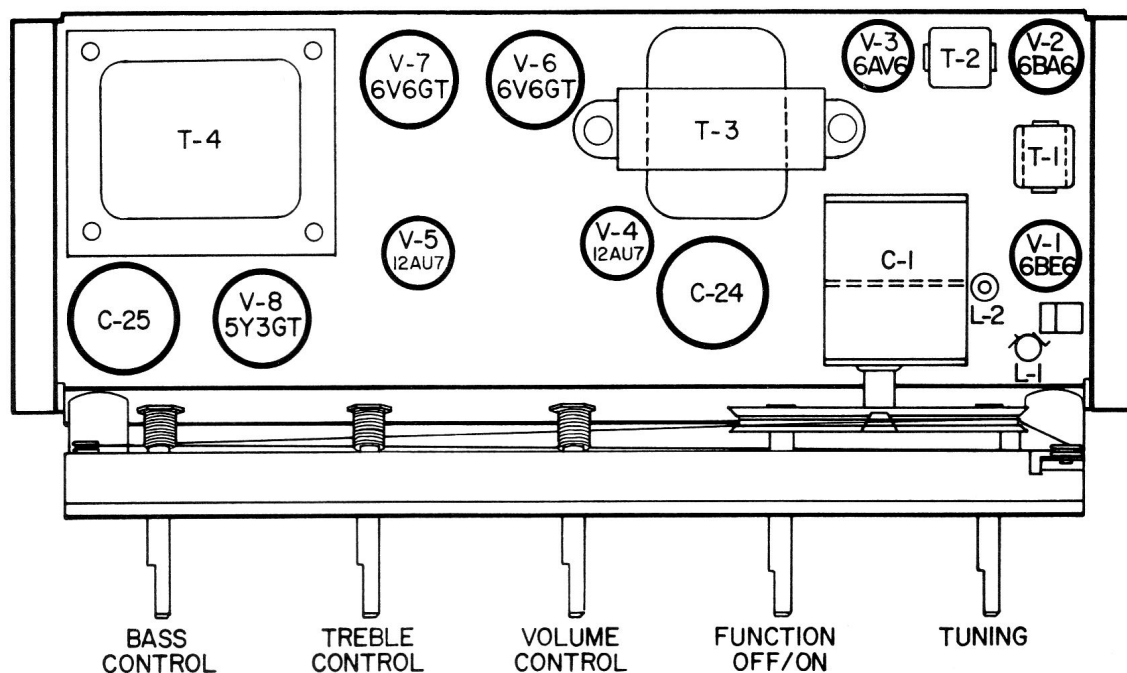
The Dial Scale Drawing shown is a full size reproduction. It can be used as a reference in alignment procedure.

ISSUED BY

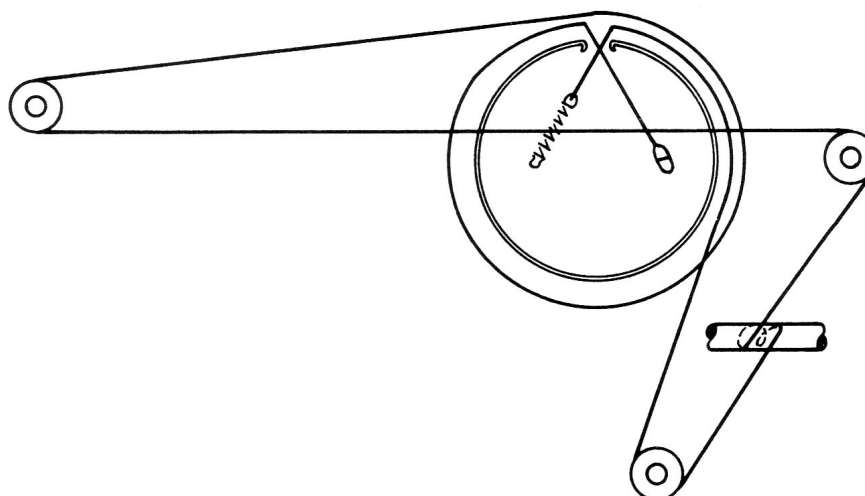
GENERAL SERVICE DEPARTMENT
RCA VICTOR COMPANY, LTD.
MONTREAL, CANADA



Schematic Diagram for Hi-Fi Combination Model HFC-391



Chassis Layout HFC-391



Dial Cord Stringing HFC-391

Alignment Procedure

Line Voltage 117 volts
 Standard Output 1.4 volts across 4.0 ohm voice coil
 Dummy antenna..... 10 mmf and dummy loop.

1. With range switch in radio position, gang wide open, and oscilloscope connected at junction of R-6 and R-7, apply 455 kc sweep signal to 6BA6 I.F. Grid (Pin #1) through 0.1 mfd. capacitor. Adjust second I.F. transformer for symmetrical curve.
2. Apply 455 kc sweep signal to 6BE6 grid (pin #7), through 0.1 mfd capacitor, and adjust first I.F. transformer for symmetrical curve.
3. Disconnect scope and sweep generator.
4. Connect AC output meter across voice coil, turn tone and volume controls to maximum clockwise, connect dummy loop to the black and green antenna leads, and apply R.F. signals to the green lead (through a 10 mmf capacitor). Connect low side of signal to chassis.
5. With dummy dial scale in place and gang fully closed, adjust pointer to start point.
6. Turn gang until pointer is over the 600 kc point. Feed in 600 kc signal and adjust oscillator, R.F., and antenna cores for maximum output.
7. Turn gang until pointer is over the 1500 kc point and adjust oscillator, R.F., and antenna trimmers for maximum output.
8. Repeat steps 6 and 7 until no further improvement in sensitivity can be made.

REPLACEMENT PARTS

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

SYMBOL	STOCK NO.	DESCRIPTION	SYMBOL	STOCK NO.	DESCRIPTION
C1, C2	*S-22101	Capacitor, Variable Capacitor	R30		Resistor 10% 22K ohms ½W
C3		Capacitor, C, 56 mmf 500V	R31		Resistor 10% 27K ohms ½W
C4		Capacitor, P, .047 mfd 400V	R32		Resistor 10% 470K ohms ½W
C5		Capacitor, P, 0.1 mfd 400V	R33		Resistor 10% 470K ohms ½W
C6		Capacitor, P, .047 mfd 200V	R34		Resistor 10% 330 ohms 2W
C7		Capacitor, C, 120 mmf 500V	R35		Resistor 10% 5600 ohms 1W
C8		Capacitor, C, 120 mmf 500V	R36		Resistor 10% 5600 ohms 1W
C9		Capacitor, P, .0033 mfd 400V	R37		Resistor 10% 1200 ohms 1W
C10		Capacitor, C, 1800 mmfd 500V	R38		Resistor 10% 4700 ohms ½W
C11		Capacitor, P, .015 mfd 400V	R39		Resistor 10% 2200 ohms 5W
C12		Capacitor, P, .033 mfd 400V	R40		Resistor 10% 47K ohms ½W
C13		Capacitor, P, .018 mfd 200V			
C14		Capacitor, P, .047 mfd 200V			
C15		Capacitor, P, .0047 mfd 400V	S1	*S-22099	Switch — Function Switch
C16		Capacitor, M, 120 mmf 500V			
C17		Capacitor, M, 270 mmf 500V			
C18		Capacitor, M, 270 mmf 500V	T1	S-20404	Transformer — 1st I.F. Transformer
C19		Capacitor, P, .15 mfd 400V	T2	S-20405	Transformer — 2nd I.F. Transformer
C20		Capacitor, P, .15 mfd 400V	T3	*S-22111	Transformer — Audio Output Transformer
C21		Capacitor, P, .15 mfd 400V	T4	*S-22103	Transformer — Power Transformer — 60 cycle
C22		Capacitor, P, .0022 mfd 1000V			
C23		Capacitor, P, .0022 mfd 1000V			
C24ABCD	*S-22102	Electrolytic — 20, 10, 40, 10 mfd			
C25ABCD	*S-20521	Electrolytic — 35 mfd, 35 mfd, 20 mf, 20 mf			
C26	S-21641	Electrolytic — 8 mfd	*	100465	SPEAKER ASSEMBLY Speaker — 3½" PM Speaker (2 req'd)
L1	*S-22100	Coil — Antenna Coil		S-22183	Speaker — 12" PM Speaker (4 ohm)
L2	S-20609	Coil — Oscillator Coil			MISCELLANEOUS ASSY.
R1		Resistor 10% 47 ohms ½W		*S-22104	Ass'y — Back Cover Ass'y
R2		Resistor 20% 22K ohms ½W		S-22212	Ass'y — Stereo Switch and Socket Bracket Ass'y
R3		Resistor 10% 100 ohms ½W			
R4		Resistor 10% 22K ohms 2W		*S-22034	Cap — Jewel Lamp Cap
R5		Resistor 20% 47K ohms ½W		S-4313	Cord — Dial Drive Cord
R6		Resistor 20% 3.3 Megohms ½W			
R7		Resistor 10% 470K ohms ½W		S-21696	Emblem — RCA Emblem
R8		Resistor 10% 470K ohms ½W			
R9		Resistor 10% 150K ohms ½W		S-21262	Knob Ass'y — Control Knobs (4 req'd)
R10		Resistor 10% 1.8 Megohms ½W			
R11		Resistor 10% 2700 ohms ½W		S-21307	Knob Ass'y — Tuning Knob
R12		Resistor 10% 47K ohms ½W			
R13		Resistor 10% 47K ohms ½W			
R14		Resistor 10% 680K ohms ½W		S-6983	Lamp — Dial Lamp
R15		Resistor 10% 22K ohms ½W			
R16		Resistor 10% 8.2K ohms ½W		*S-22045	Pointer — Tuning Indicator
R17	S-22044	Resistor Volume Control			
R18		Resistor 10% 3300 ohms ½W		*S-22040	Shaft — Drive Shaft
R19		Resistor 10% 120K ohms ½W		*S-22105	Scale — Dial Scale
R20		Resistor 10% 15K ohms ½W		33545	Shield — Pilot Lamp Shield
R21		Resistor 10% 10K ohms ½W		*S-22106	Trim — Dial Scale Trim — Top
R22	*S-22108	Resistor Bass Control		*S-22107	Trim — Dial Scale Trim — Bottom
R23		Resistor 10% 82K ohms ½W			
R24	*S-22109	Resistor Treble Control		S-10694	Socket — Tube Socket for 6V6GT, 5Y3GT
R25		Resistor 10% 82K ohms ½W		S-20727	Socket — Tube Socket for 12AU7
R26		Resistor 10% 3300 ohms ½W		S-9513	Socket — Tube Socket for 6AV6, 6BA6, 6BE6
R27		Resistor 10% 56K ohms ½W			
R28		Resistor 10% 2700 ohms ½W		*S-22110	Instruction Booklet
R29		Resistor 10% 22K ohms ½W		S-22275	Handle — Door
				S-22302	Lid Lift — Yellow brass
				S-22227	Lid Lift — Antique Brass

*Indicates New Stock Items.

Only items listed under stock numbers are available as Replacement Parts

All parts subject to change or withdrawal without notice.