



Model HF-192
The "Mark III"
Mahogany or Blond Oak

# High-Fidelity Radio-Phonograph

# Model HF-192

Chassis Nos. RC-1155 and RS-151A

# SERVICE DATA

— 1956 No. 19 —

ISSUED BY

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

### ELECTRICAL & MECHANICAL SPECIFICATIONS

TUNING RANGE	LOUDSPEAKERS
Standard Broadcast (AM)	One 12" PM "woofer"
AM455 kc	RECORD CHANGER (RC 456)
FM	Turntable speed16%, 331%, 45 or 78 r.p.m.
TUBE COMPLEMENT	Record capacity
TUNER CHASSIS RC-1155	or ten 12 inch.
(1) RCA 6BJ6	or ten 10 in. and 12 in. intermixed.
(2) RCA 19X8Mixer-Oscillator	Pickup (Stock No. 100653)Ceramic
(3) RCA 12BA6	POWER SUPPLY RATING
(5) RCA 12AU6FM I.F. Amplifier	115 volts, 60 cycles120 watts
(6) RCA 12AL5	AUDIO POWER OUTPUT
(8) RCA 35W4Rectifier	10 wattsWith less than 1½% distortion 15 wattsMaximum
AMPLIFIER CHASSIS RS-151A	
(1) RCA 6CG71st and 2nd A.F. Amplifier	TUNING DRIVE RATIO7½:1 (3¾ turns of knob)
(2) RCA 6CG73rd A.F. Ampl, and Ph. Inverter	NET WEIGHTapprox. 93 lbs.
(3) RCA 6V6GTOutput	DIMENSIONS (OIII)
(4) RCA 6V6GTOutput	DIMENSIONS (Overall)
(5) RCA 5Y3GTRectifier	Height34½" Width35" Depth16½"

### GENERAL DESCRIPTION

The "MARK III" is a high-fidelity radio-phonograph combination consisting of an AM-FM tuner chassis, an audio amplifier chassis, a four-speed record changer, one 12-inch wide-range speaker and two  $3\frac{1}{2}$ -inch speakers housed in a traditional cabinet in mahogany, maple or blond oak finish. The two  $3\frac{1}{2}$ -inch speakers are mounted at an angle to provide panoramic sound distribution. Provision is made for the use of a tape recorder attachment.

The tuner chassis provides R-F amplification on both AM and FM operation. The FM antenna input is broad-banded and resonates to the approximate center of the FM band. The mixer is pentode connected for AM operation and triode connected for FM operation. AM I-F circuits use a conventional I-F amplifier and a diode detector which provides AVC voltage. FM I-F circuits include three I-F amplifiers without AVC and a discriminator detector. AC supply voltage

for the 35W4 rectifier tube and the series connected tube heaters is obtained from an isolation transformer.

A four-position audio function switch is contained in the audio amplifier chassis and permits use of a tape recorder in conjunction with any other audio function. Two 6CG7 tubes provide three stages of A-F amplification and phase inversion; two 6V6-GT tubes are used for push-pull output. Negative feed-back, applied to the third A-F amplifier, is derived from a tapped resistive output load.

One 12-inch wide-range speaker and two  $3\frac{1}{2}$ -inch speakers are used for wide acoustic range and panoramic sound distribution.

A four-speed record changer is used. It utilizes a ceramic dual-stylus pickup.

# ALIGNMENT PROCEDURE

#### **ALIGNMENT INDICATORS:**

An RCA VoltOhmyst® or equivalent meter is necessary for measuring developed d-c voltage during FM alignment. Connections are specified in the alignment tabulation. An output meter is also necessary to indicate maximum audio output during AM alignment. Connect the output meter across the speaker voice coil. The RCA VoltOhmyst can also be used as an AM alignment indicator, either to measure audio output or to measure AVC voltage. When audio output is being measured, the volume control should be turned to maximum. Adjust tone controls to mid-position.

#### SIGNAL GENERATOR:

For all alignment operations, connect the low side of the signal generator to the receiver chassis. If output measurement is used for AM alignment, the output of the signal generator should be kept as low as possible to avoid AVC action.

AM Alignment
FUNCTION SWITCH IN AM POSITION

Steps	Connect high side of sig. gen. to—	Sig. gen. output	Turn radio dial to—	Adjust for peak output	
1	Pin No. 1 of V3 in series with .01 mfd	455 kc.	Quiet point	T4 bottom core (sec.) T4 top core (pri.)	
2	Tap lug (No. 4) on AM RF coil	(mod.)	at high freq. end	T2 bottom core (sec.) T2 top core (pri.)	
3		1620 kc. (mod.)	1620 kc. (gang open)	ClE-T (osc.)	
4	Short wife placed near loop for	1400 kc. (mod.)	1400 kc. signal	ClA-T (ant.) ClC-T (rf.)	
5	radiated signal	radiated signal 600 kc.		L6 (osc.) (rock gang)	
6	(mod.)		signal	L4 (RF)	
7	Repeat steps 4, 5 and 6 until maximum gain is obtained				

Oscillator frequency is above signal frequency on both AM and FM

#### FM SWEEP ALIGNMENT:

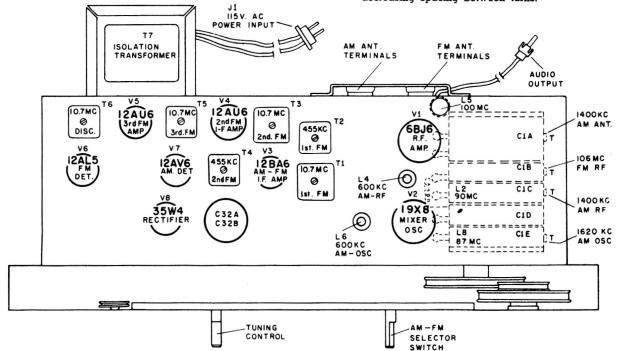
If an FM sweep generator is used for FM alignment, adjust for 10.7 mc, 0.4 mc sweep. Connect oscilloscope across C23, adjusting discriminator T6 top core for 10.7 mc crossover, and T6 bottom core for balanced peaks. Peak separation should be approximately 330 kc. When aligning the other FM tuned circuits, connect oscilloscope lead through a 220K resistor to pin 1 of V5. Follow alignment table sequence, adjusting for maximum gain and symmetrical curves.

FM Alignment FUNCTION SWITCH IN FM POSITION

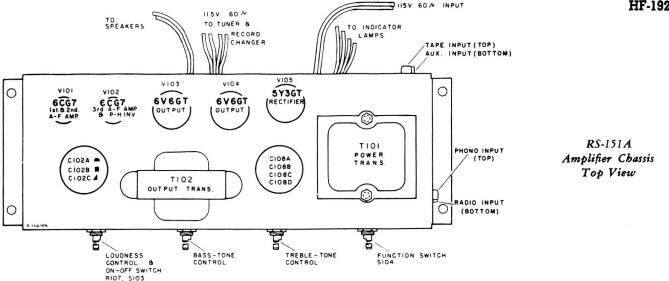
Steps	Connect high side of sig. gen. to—	Sig. gen. output	Turn radio dial to—	Adjust for max. output			
1	Pin No. 1 of V5-12AU6		Quiet	T6 top core for zero d.c. across C23 T6 bottom core for maximum d.c at junction of R18 and R19			
2	Pin No. 1 of V4-12AU6	point at 10.7 mc low †T5 top	point at	†T5 top core			
3	Pin No. 1 of V3-12BA6						
4	C1-B Stator			T1 top core †*T1 bottom core			
5		87 mc	87 mc (gang closed)	†FM osc. L8			
6	FM Ant	106 mc 106 mc. signal		†FM R.F. C1B-T			
7	terminals thru 270 ohm resistor	terminals thru 270 90 mc. 90 mc. signal		†FM R.F. L2			
8	omm resistor	Repeat st	Repeat steps 6 and 7 until maximum gain is obtained				
9	100 mc 100 mc signal			†FM ant. coil L5			

\*If necessary for accurate peaking, the winding in the same transformer not being peaked should be loaded with a 680 ohm resistor. +Connect VoltOhmyst to pin 1 of V5 through a 220K isolating resistor with  $\frac{1}{4}$  inch maximum exposed lead at grid terminal end. Output adjusted for 1 volt d.c. Dress VoltOhmyst load away from input circuits.

NOTE—FM coils L8, L2 and L5 are adjusted by increasing or decreasing spacing between turns.



RC-1155 Tuner Chassis Top View



# CRITICAL LEAD DRESS

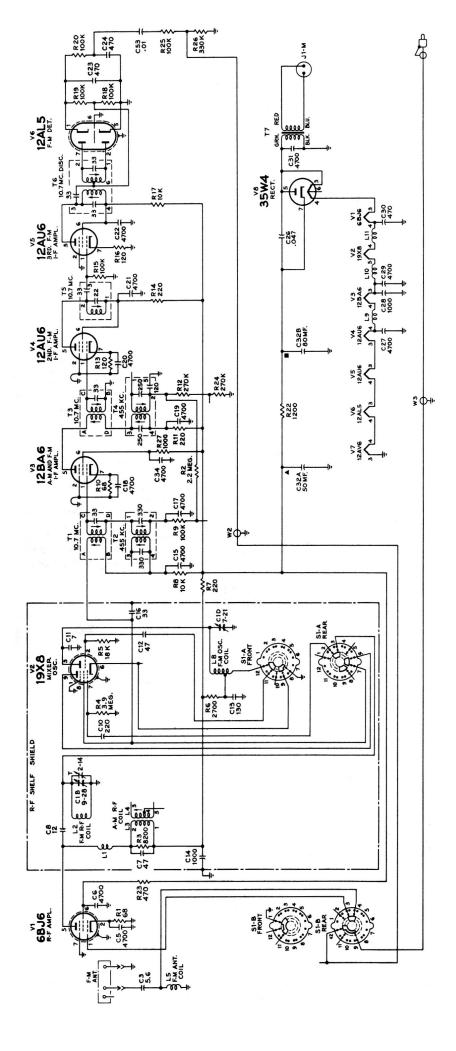
- 1. All FM IF transformer grid and plate leads should be short and direct as possible and kept low, near chassis.
- C23 leads should be kept as short as possible.
- C26 leads should be kept as short as possible.
- 4. R18 and R19 leads should be kept as short as possible on T6 terminal 6 side.
- 5. AM oscillator coil should not be tilted over toward function switch when wrapping short bus leads to switch.
- 6. Keep leads V5 pin 5, to T6 term 1, as short as possible and low near chassis.
- 7. Dress C23 down on chassis and against terminal board. Run filament lead between V5 and V6 on side of V6 socket opposite C33.
- 8. All ceramic button 4700 uuf condensers should have leads as short as possible.

- 9. Green lead from AM oscillator stator gang terminal to AM oscillator coil should be dressed against front of shield box and up above filament choke.
- 10. RF plate choke L1, should be dressed at least 1/8" away from AM R.F. coil L4 and at least  $\frac{1}{6}$ " from shield.
- 11. Mixer grid condenser C10 should be dressed away from FM oscillator gang stator terminal and away from leads connecting to terminals 8 and 9 of V2 socket.
- 12. Filament chokes L10 and L11 should be raised a minimum of 1/16" above chassis.
- Use varnished tubing only on choke and coupling cond. leads coming through shield partition slot.
- 14. Oscillator grid condenser C12 should have short leads and be dressed away from filament choke L10.
- 15. Keep leads of R101, R102, R103 and C101 short, and dress these components close to chassis.
- 16. Dress R117 away from all other components.

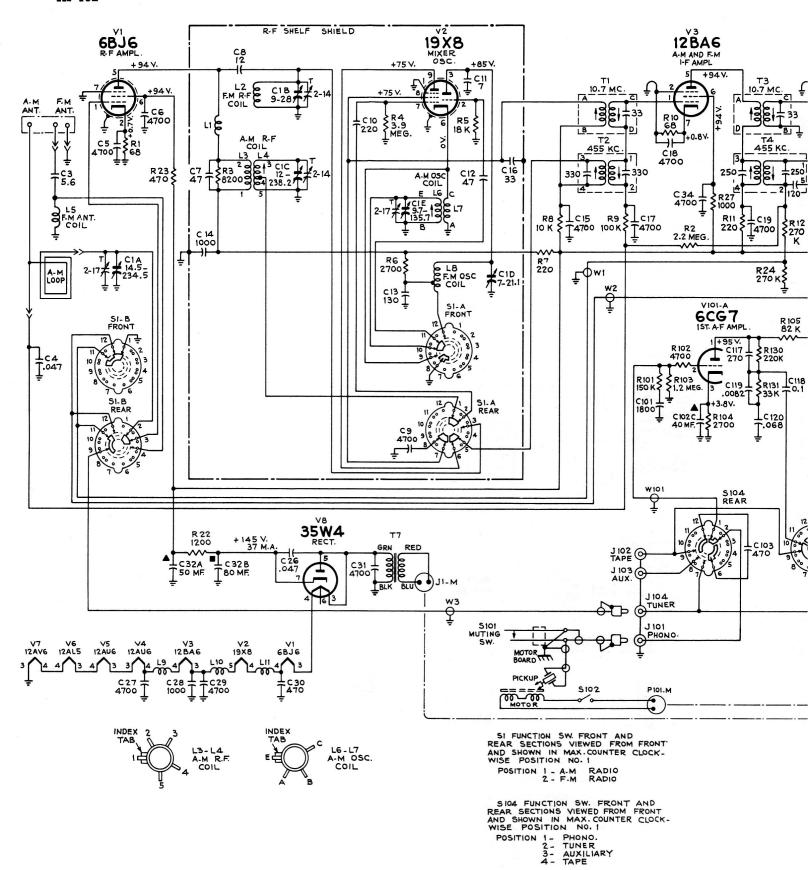
# MAIN CONTROL PANEL

	TUNING	AM FM	LOUDNESS		RADIO AUX DNO TAPE
TO PLAY RECORDS		AM or FM	Turn "on," set at desired level	set as desired	PHONO
TO RECORD FROM PHONOGRAPH†					,,
TO RECEIVE AM PROGRAMS	Tune to desired station	АМ	" "	set as desired	RADIO
TO RECORD AM PROGRAMS†	" "	"	" "		"
TO RECEIVE FM PROGRAMS	" "	FM	" "	set as desired	"
TO RECORD FM PROGRAMS†	" "	"	" "		"
AS A PUBLIC ADDRESS SYSTEM‡		AM or FM	" "	set as desired	AUX
TO RECORD FROM AUXILIARY SOURCE+‡		" "	" "		"
TO PLAY BACK RECORDED TAPE†			" "	set as desired	TAPE

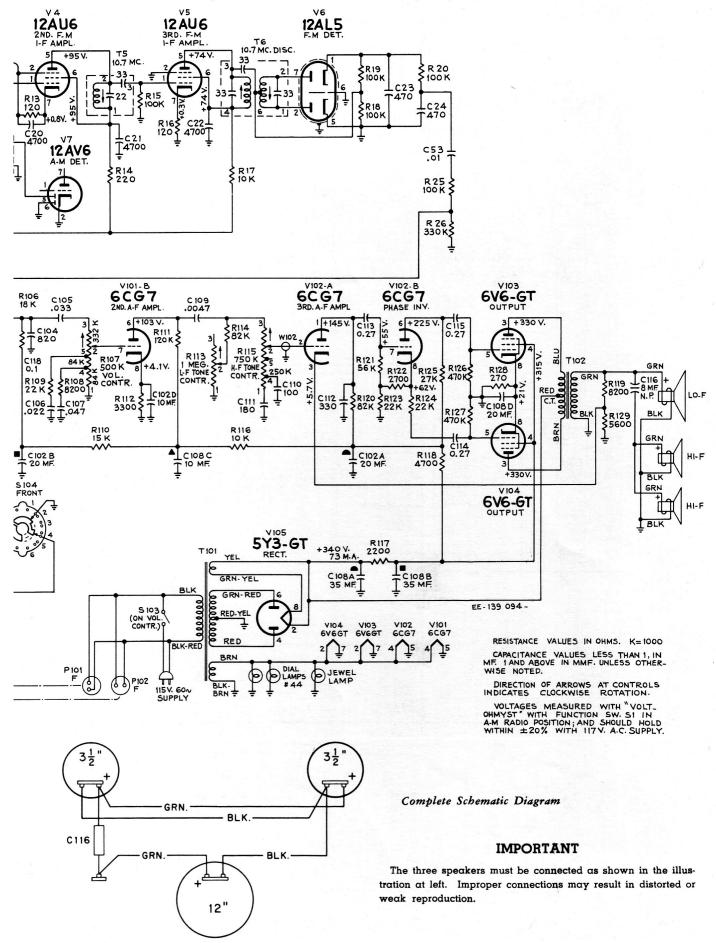
- † Tape recorder connected to "TAPE" jack at back of chassis.
- # Microphone or other sound input connected to "AUX" jack at back of chassis.



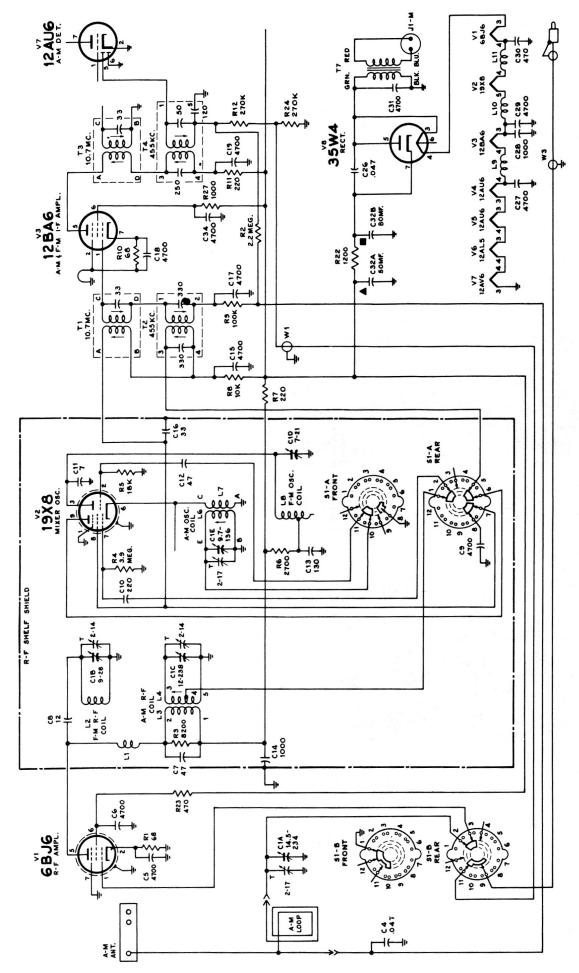
FM Simplified Circuit Diagram of Tuner Chassis RC-1155



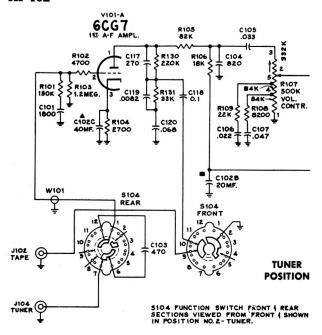
1st Half RCA Victor HF-192 Tuner / Amplifier

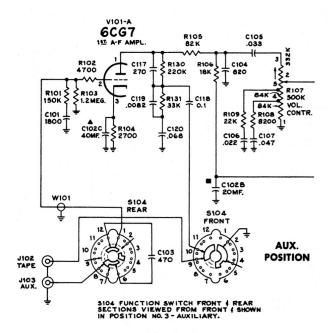


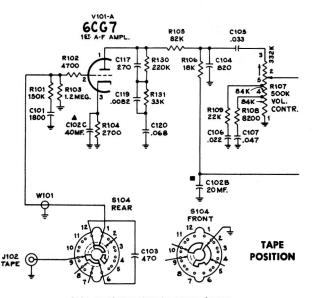
2nd Half RCA Victor HF-192 Tuner / Amplifier



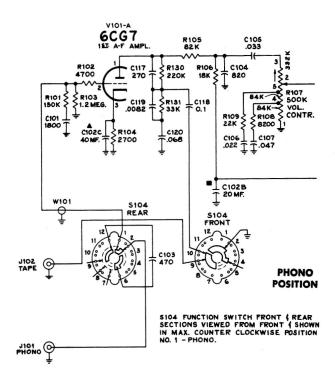
AM Simplified Circuit Diagram of Tuner Chassis RC-1155



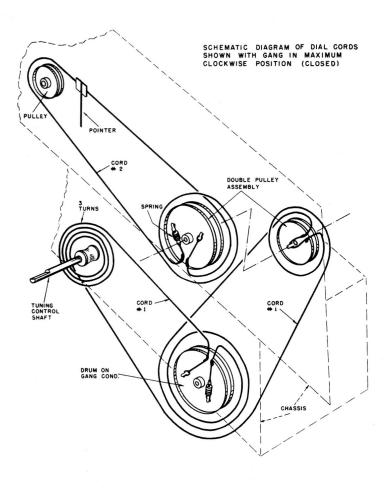




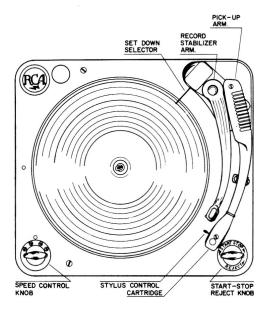
\$104 FUNCTION SWITCH FRONT ( REAR SECTIONS VIEWED FROM FRONT ( SHOWN IN MAX. CLOCKWISE POSITION NO.4-TAPE.



Simplified Schematic Diagrams of Function Switch in Amplifier Chassis RS-151A



Tuning Drive Cord Assembly



Record Changer Controls

#### STYLUS REPLACEMENT

The dual stylus is held in position by a spring clamp. To remove stylus, simply hold pickup sideways and pull spring clamp away from stylus and allow it to drop out. When inserting stylus, be certain that the small diameter rod holding the styli rests in the notch of the drive arm connecting to the cartridge element.

## 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 stylus control has two positions; to change position, push the end of the control lever down and under. The right hand position ("78" showing) is for 78 r.p.m. records and the left hand position ("MG" showing) is for 16-2/3, 33-1/3 or 45 r.p.m. records.

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, life and turn the record stabilizer arm off to the side. After loading, the stabilizer arm should be turned to the center so it rests on the stack of records.

# FOR RECORD CHANGER SERVICE INFORMATION— REFER TO COLLARO 456 SERVICE DATA

# REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		AM/FM TUNER CHASSIS RC-1155	L9 to L11 Incl.	77535	Coil—Filament RF choke coil
ClA to }	101355	Capacitor—Variable tuning capacitor	R1		Resistor—Fixed, composition, 68 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C3	74182	Capacitor—Fixed, ceramic, 5.6 mmf., ±10%, 500 v.	R2		Resistor—Fixed, composition, 2.2 megohms, $\pm 20\%$ , $\frac{1}{2}$ w.
C4 C5, C6	73473	Capacitor—Fixed, paper, .047 mf., ±20%, 200 v. Capacitor—Fixed, ceramic, 4700 mmf., +100	R3		Resistor—Fixed, composition, 8200 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C7		-0%, 500 v. Capacitor—Fixed, ceramic, 47 mmf., ±10%,	R4		Resistor—Fixed, composition, 3.9 megohms, ±10%, ½ w.
C8	70595	500 v.  Capacitor—Fixed, ceramic, 12 mmf., ±5%, 500 v.	R5		Resistor—Fixed, composition, 18,000 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C9 C10	73473	Same as C5 Capacitor—Fixed, mica, 220 mmf., ±20%, 500 v.	R6		Resistor—Fixed, composition, 2700 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C11	77531	Capacitor—Fixed, ceramic, 7 mmf., ±5%, 500 v. Capacitor—Fixed, ceramic, 47 mmf., ±10%,	R7		Resistor—Fixed, composition, 220 ohms, $\pm 20\%$ , $\frac{1}{2}$ w.
C13	//001	500 v.  Capacitor—Fixed, ceramic, 130 mmf., ±2½%,	R8		Resistor—Fixed, composition, 10,000 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C14	77084	500 v.    Capacitor—Feed thru, 1000 mmf., +100 -0%,	R9		Resistor—Fixed, composition, 100,000 ohms, ±5%, ½ w.
		500 v. DC	R10		Same as R1
C15	73473		R11		Same as R7
C16 C17 to }	73473	Capacitor—Feed-thru, 33 mmf., ±5%, 500 v. DC Same as C5	R12		Resistor—Fixed, composition, 270,000 ohms, ±10%, ½ w.
C22 Incl. ( C23, C24	76992	Capacitor—Fixed, mica, 470 mmf., ±10%, 300 v.	R13		Resistor—Fixed, composition, 120 ohms, $\pm 10\%$ , $\frac{1}{2}$ w.
C26	73592	Capacitor—Fixed, paper, .047 mf., ±20%, 600 v.	R14		Same as R7
C27	73473	Same as C5	R15		Same as R9
C28	77084	Same as C14	R16		Same as R13
C29	73473	Same as C5	R17		Resistor—Fixed, composition, 10,000 ohms,
C30	76992	Same as C23	1117		$\pm 10\%$ , $\frac{1}{2}$ w.
C31	73473	Same as C5	R18, R19,		Resistor-Fixed, composition, 100,000 ohms,
C32A, B	73520	Capacitor—Electrolytic, 50/80 mf., +100 -10%, 150 v.	R20 R22	76346	$\pm 5\%$ , $\frac{1}{2}$ w. Resistor—Fixed, wire wound, 1200 ohms,
C33	79316	Capacitor—Fixed, paper, .01 mf., ±10%, 200 v.			±10%, 4 w.
C34	73473	Same as C5	R23		Resistor—Fixed, composition, 470 ohms, ±20%,
J1	30870	Connector—2 contact male connector—power in- put to tuner chassis	R24		1/2 w. Same as R12
L1	77534	-	R25		Same as R9
L2	77536	Coil—FM—RF coil	R26		Resistor—Fixed, composition, 330,000 ohms,
L3, L4	77525	Coil—AM—RF coil	H20		$\pm 10\%$ , $\frac{1}{2}$ w.
L5	77538	Coil—FM antenna coil	R27		Resistor—Fixed, composition, 1000 ohms, ±10%,
L6, L7	77526	Coil—AM oscillator coil			⅓ w.
L8	77537	Coil—FM oscillator coil	S1A, S1B	101356	Switch—AM/FM rotary selector switch

SYMBOL NO.	STOCK NO.	DESCRIPTION		SYMBOL NO.	STOCK NO.	DESCRIPTION
T1	100112 76335	Transformer—lst FM—IF transformer		R115 R116	101348	Control—High frequency tone control Resistor—Fixed, composition, 10,000 ohms,
T1 T2 T3 T4 T5 T6	77513	Transformer—1st AM—IF transformer Transformer—2nd FM—IF transformer Transformer—2nd AM—IF transformer		R117	73637	±10%, ½ w. Resistor—Fixed, wire wound, 2200 ohms, ±10%,
T5	76328 77512	Transformer—3rd FM—IF transformer			/303/	5 watts
T6 T7	77511 101359	Transformer—Discriminator transformer Transformer—Isolation transformer		R118 R119		Same as R102 Same as R108
	101344 73935	Bushing—Tuning shaft chassis bushing Clip—IF transformer mounting spring clip		R120 R121		Same as R105 Resistor—Fixed, composition, 56,000 ohms,
	31048 74879	Connector—Pin plug for audio cable Connector—3 contact female connector for an-		R122		±10%, ½ w. Same as R104
	S-4313	tenna leads Cord—Dial cord		R123, R124 R125		Same as R109 Resistor—Fixed, composition, 27,000 ohms,
	16058	Grommet—Rubber grommet for mounting RF shelf assembly (4 reg'd)		R126, R127		$\pm 10\%$ , ½ w. Resistor—Fixed, composition, 470,000 ohms,
	101349	Pointer—Dial indicator pointer		R128		$\pm 10\%$ , $\frac{1}{2}$ w. Resistor—Fixed, composition, 270 ohms, $\pm 10\%$ ,
	101352	Pulley—Drive cord pulley assy, for dial back- plate assy. Pulley—Drive cord pulley assembly for RF shelf		R129		2 w. Resistor—Fixed, composition, 5600 ohms, ±10%,
	101351 34300	Screw—#6-32 x 1/4" cup point set screw for		R130		$\frac{1}{2}$ w. Resistor—Fixed, composition, 220,000 ohms,
, r	101346	Shaft—Tuning shaft assy, with bobbin—steel		R131		±10%, ½ w. Resistor—Fixed, composition, 33,000 ohms,
	75192 79721	Shield—Tube shield for V1 Shield—Tube shield for V2		S103		±10%, ½ w. Part of R107
	79263 77087	Shield—Tube shield for V6 Socket—Tube socket, 7 pin miniature for V1		S104	S-21313	Switch—Radio/phono/aux/tape rotary function
	73117	Socket—Tube socket, 7 pin miniature for V3 to V7 incl.		<b>T</b> 101	S-21308	
	101375 100111	Socket—Tube socket, 7 pin miniature for V8 Socket—Tube socket, 9 pin miniature for V2		T102	S-21309 70392	Transformer—AF output transformer Cord—AC power cord and plug
	100109	Spring—Dial cord tension spring Washer—"C" type retaining washer for tun-			11891	
		ing shaft bushing			76972 101371	(3 req'd) Shield—Tube shield for VIA, VIB
	77586	Washer—"C" type retaining washer for pulley assy. (RCA 101352)			100643	Socket—Dual dial lamp socket assy. Socket—Insulated pilot indicator socket
		AMPLIFIER ASSEMBLY			68590 31251	Socket—Tube socket, octal for V3 & V4 Socket—Tube socket, octal for V5
<b>~</b> 101		RS-151A			76971	Socket—Tube socket, 9 pin miniature for VIA, VIB
C101	74850	Capacitor—Fixed, ceramic, 1800 mmf., ±10%, 500 v.	П		100474	Socket—Tube socket, 9 pin miniature for V2A, V2B
C102A to } C102D Incl. }	101357	Capacitor—Electrolytic, 4 section: 20/20/40/10 mf., 400/400/25/25 volts DC				
C103 C104	39644 78143	Capacitor—Fixed, mica, 470 mmf., $\pm 10\%$ , 500 v. Capacitor—Fixed, mica, 820 mmf., $\pm 10\%$ , 300 v.	Ш			SPEAKER ASSEMBLIES
C105 C106	73552 79925	Capacitor—Fixed, paper, .033 mf., $\pm 10\%$ , 400 v. Capacitor—Fixed, paper, .022 mf., $\pm 10\%$ , 200 v.	Ш	C116	100509	Capacitor—Electrolytic, 8 mf., ±25%, 10 v. AC Cone—Speaker cone and voice coil for 12"
C107 C108	73558 101414	Capacitor—Fixed, paper, .047 mf., ±10%, 200 v. Capacitor—Electrolytic, 4 section: 35/35/10/20			100467	speaker stamped 961628-1 Housing—Plastic housing for mounting of 3½"
C109	73920	mf., 400/400/350/25 volts DC Capacitor—Fixed, paper, .0047 mf., ±10%,	П		100897	speaker (2 reg'd) Speaker—12" P.M. speaker complete with cone
C110	39628	400 v.			100897	and voice coil (6.8 ohms)—speaker stamped
C111	79344	Capacitor—Fixed, mica, 100 mmf., $\pm 10\%$ , 500 v. Capacitor—Fixed, mica, 180 mmf., $\pm 10\%$ , 500 v.			100465	961628-1   Speaker—3½" P.M. speaker complete with cone
C112 C113 to	79191	Capacitor—Fixed, mica, 330 mmf., ±10%, 500 v.   Capacitor—Fixed, paper, 0.27 mf., ±10%, 400 v.				and voice coil (6.8 ohms) (2 req'd)—speaker stamped 961616-1
C115 Incl. C116	100509	Part of Speaker Assembly				
C117	101373	Capacitor—Fixed, ceramic, 270 mmf., ±10%, 500 v.			C 0100E	MISCELLANEOUS
C118 C119	73551	Capacitor—Fixed, paper, 0.1 mf., $\pm 20\%$ , 400 v. Capacitor—Fixed, paper, .0082 mf., $\pm 10\%$ , 400 v.			1	Antenna—AM antenna loop with terminals— less cable and connector
C120	73792	Capacitor—Fixed, ceramic, .068 mf., $\pm 10\%$ , 400 v.			5-21359	Back—Back cover for cabinet.  Back—Record changer back cover—mahogany
J101, J102, J103, J104	33514	Connector—2 contact female connector—"phono," "tape," "aux.," or "radio"		-	S-21360 100523	Back—Record changer back cover—oak Board—Terminal board for antenna cabl
P101A	30868	Connector—2 contact female connector for phono motor power			101739	Bracket—Escutcheon mounting bracket and stud (between tone controls)
P102	30868	Connector—2 contact female connector for radio			100896	Bracket—Escutcheon mounting bracket and stud (center and ends)
R101		Resistor—Fixed, composition, 150,000 ohms,		*	71892 X3582	Catch—Door catch Cloth—Grille cloth for mahogany cabinet
R102		$\pm 10\%$ , ½ w. Resistor—Fixed, composition, 4700 ohms, $\pm 10\%$ ,			X3574 X3583	Cloth—Grille cloth for maple cabinet Cloth—Grille cloth for oak cabinet
R103		1/2 w. Resistor—Fixed, composition, 1.2 megohms,			74752	Connector—2 contact male connector for AM/
R104		$\pm 10\%$ , ½ w. Resistor—Fixed, composition, 2700 ohms, $\pm 10\%$ ,			74882	FM antenna terminal board cable Connector—3 contact male polarized connector
R105		$\frac{1}{2}$ w. Resistor—Fixed, composition, 82,000 ohms,			101365	for AM antenna cable Dial—Tuning dial, AM and FM bands
R106		±10%, ½ w. Resistor—Fixed, composition, 18,000 ohms,			101367 100539	Escutcheon—Control panel escutcheon Escutcheon—Tuning dial escutcheon
R107	101347	±10%, ½ w. Control—Volume control and "on-off" switch			16058 74308	Grommet—Rubber grommet for mounting tuner Hinge—Cabinet door hinge (1 set)
R108		S103 Resistor—Fixed composition, 8200 ohms, $\pm 10\%$ ,			13103 102347	Jewel—Pilot 1amp jewel amber Knob—Control knob with spring (has indicator
R109		1/2 w.   Resistor—Fixed, composition, 22,000 ohms,			102453	dot) (5 required)
R110		$\pm 10\%$ , $\frac{1}{2}$ w.			100641	Knob—Tuning control knob with spring Nameplate—"New Orthophonic High Fidelity
		$\pm 10\%$ , $\frac{1}{2}$ w.			102454	
R111		Resistor—Fixed, composition, 120,000 ohms, ±10%, ½ w.			30900	changer tray Spring—Control knob retaining spring
R112		Resistor—Fixed, composition, 3300 ohms, ±10%, ½ w.			72936	Stop-Metal door stop
R113 R114	78580	Control—Low frequency tone control Same as R105			61455	Washer—Vellutex washer for escutcheon and dial
	ı		1	i .	1	1