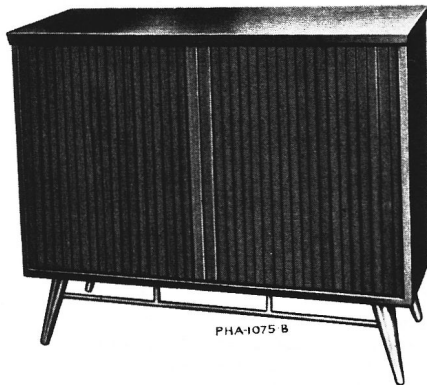




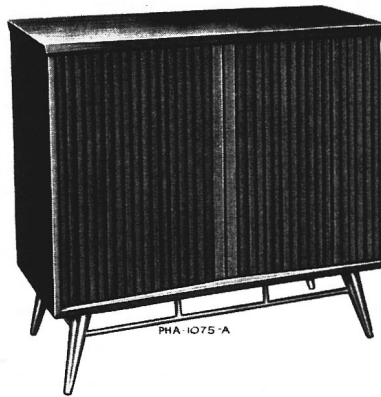
**MODEL 6-HF-1**  
*Contemporary Mahogany*



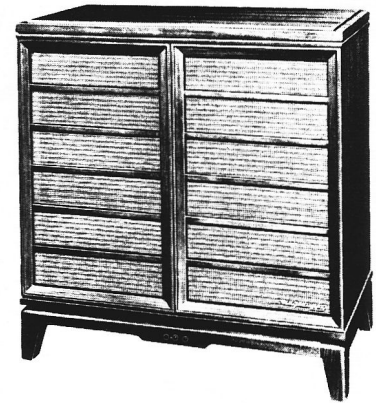
**RK-196 Speaker Unit**  
*Contemporary Mahogany*



**MODEL 6-HF-1**  
*Modern Walnut*



**RK-196 Speaker Unit**  
*Modern Walnut*



**MODEL 6-HF-2**  
*Mahogany or Blond Oak*



# RCA VICTOR



High-Fidelity Combination

## MODELS 6-HF-1, 6-HF-2

RC-1154, RC-1154A Tuner/Amplifier  
RS-147 Pwr. Amp. RP-197C-5 Rec. Ch.  
RK-196 Speaker Unit, TR-1 Tape Rec.

## SERVICE DATA

— 1955 No. 20 —

ISSUED BY

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

### DESCRIPTION

Model 6-HF-1 is a high-fidelity combination instrument consisting of AM-FM tuner, power amplifier, record changer and tape recorder. The four speakers are housed in a separate cabinet.

Model 6-HF-2 is a high-fidelity combination instrument consisting of AM-FM tuner, power amplifier, record changer and three speakers all in one cabinet.

The AM-FM tuner incorporates a tuned r.f. stage, one stage of A-M i.f. amplification and three stages of F-M i.f. amplification. A transistor is used as phono preamplifier. Two stages of a.f. amplification are provided for AM radio reproduction or recording or for FM recording. One stage of a.f. amplification is provided for FM reproduction and for "tape" playback. The A-M i.f. amplifier also incorporates a 10 kc. filter to suppress adjacent channel interference. A type 6AL7-GT tuning eye is used for accurate tuning on both AM and FM.

A four-position record equalization switch is used to compensate for differing recording characteristics used on

records. This is in addition to the customary bass and treble tone controls.

The function switch has four positions: "Phono," "AM," "FM" and "Tape" for the several functions. Tape recordings can be made from either A-M or F-M radio programs while monitoring such programs on the speakers.

The record changer is of the three-speed type and uses plug-in pickup heads of the wide-range moving-coil type. The record changer comes equipped with a pickup head for playing 33 1/3 r.p.m. or 45 r.p.m. records, this head has a .001 inch diamond stylus. The head to be used for playing 78 r.p.m. records has a .003 inch sapphire stylus and is available as an accessory.

The high-fidelity tape recorder is housed in a separate pull-out drawer and comes equipped with a 7 inch reel (1200 ft.) of tape. Either of two speeds (3.75" or 7.5" per second) may be selected by interchanging capstans and rollers without use of tools. Further description may be found in Service Data for Model TR-1.

**SPECIFICATIONS**

CHASSIS DESIGNATIONS	Model 6-HF-1	Model 6-HF-2
Tuner/Amplifier	RC-1154	RC-1154A
Power Amplifier	RS-147	RS-147
Record Changer	RP-197C-5	RP-197C-5
Speaker Unit	RK-196	Self-contained
Tape Recorder	TR-1	Not included

**TUBE COMPLEMENT**

**Radio Chassis RC-1154, RC-1154A**

- (1) RCA 6CB6 ..... R.F. Amplifier
- (2) RCA 6J6 ..... Mixer & Oscillator
- (3) RCA 6BA6 ..... I.F. Amplifier
- (4) RCA 6AU6 ..... 2nd F.M. I.F. Ampl.
- (5) RCA 6AU6 ..... 3rd F.M. I.F. Ampl.
- (6) RCA 6AL5 ..... Ratio Detector
- (7) RCA 6AV6 ..... A.M. Det.—AVC—A.F. Ampl.
- (8) RCA 6C4 ..... A.F. Amplifier
- (9) RCA 6AL7-GT ..... Tuning Eye

An RCA type 2N104 transistor is used as a phono pre-amplifier. Three #44 lamps are used for function indication. Two #44 lamps are used for dial lighting.

**Audio Amp. & Power Supply Chassis RS-147**

- (1) RCA 12AU7 ..... A.F. Amp. & Phase Inverter
- (2) RCA 6AU6 (2) ..... Drivers
- (3) RCA 6V6-GT (4) ..... Output
- (4) RCA 5U4G ..... Rectifier

**Tape Recorder TR-1**

- (1) RCA 12AX7 ..... A.F. Amplifier
- (2) RCA 12AU7 ..... A.F. Amplifier
- (3) RCA 6E5 ..... Recording Level Indicator
- (4) RCA 6X4 ..... Rectifier
- (5) RCA 12AU7 ..... Oscillator

Two type 1U1 crystal diodes are used for signal rectification preceding the Recording Level Indicator. A full wave selenium rectifier is used to supply d.c. voltage to the heaters of the two A.F. Amplifiers. A type #44 pilot lamp and a neon bias indicator lamp are used.

**POWER SUPPLY RATING**

- MODEL 6-HF-1 ..... 115 volts, 60 cycles, 270 watts (includes record changer and tape recorder)
- MODEL 6HF-2 ..... 115 volts, 60 cycles, 180 watts (includes record changer)

**TUNING DRIVE RATIO** ..... 21½:1 (10¾ turns of knob)

**TUNING RANGE**

- Standard Broadcast (AM) ..... 540-1,600 kc.
- Frequency Modulation (FM) ..... 88-108 mc.

**RECORD CHANGER (RP-197C-5)**

- Turntable speed ..... 33 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 inch and 12 inch intermixed
- Pickup ..... Plug-in head, moving coil type
- Head Stock No. 100806 with .001" diamond stylus.
- A plug-in head with .003" sapphire stylus is available as an accessory.

**TAPE RECORDER (TR-1)**

- Tape Speed ..... 3¾" or 7½" per second (interchangeable with no tools required)
- Rewind Speed ..... 1200 ft. of tape (full 7-inch reel) rewound in 40 seconds
- Playing Time ..... Up to two hours (two sides of 7 inch reel of tape at 3¾" per second)
- Inputs (2) ..... High impedance for microphone and high impedance from radio tuner unit.
- Output ..... Medium (10,000 ohms) impedance to radio tuner volume control circuit.

**AUDIO POWER OUTPUT**

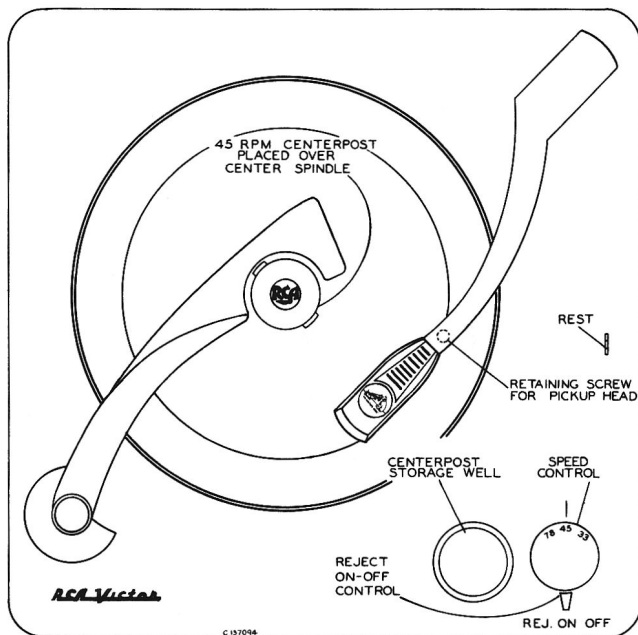
From 30 cycles to 15,000 cycles, 20 watts with less than 1% distortion.

**LOUDSPEAKERS**

- | 6-HF-1 Size and type      | V.C. impedance       |
|---------------------------|----------------------|
| One 15 inch PM "woofer"   | 16 ohms @ 400 cycles |
| One 5 inch PM "mid-range" | 8-10 ohms @ 2000 cy. |
| Two 3½ inch PM "tweeters" | 6-8 ohms @ 3000 cy.  |
- 
- | 6-HF-2                    | V.C. impedance        |
|---------------------------|-----------------------|
| One 12 inch PM "woofer"   | 6-8 ohms @ 400 cycles |
| Two 3½ inch PM "tweeters" | 6-8 ohms @ 3000 cy.   |

**CABINET DIMENSIONS**

	Height	Width	Depth
6-HF-1 Contemporary Tuner/Amp. Unit	35"	46"	21½"
6-HF-1 Contemporary Speaker Unit (RK-196 mahogany)	35"	37"	20½"
6-HF-1 Modern Tuner/Amp. Unit ..	36½"	43"	23"
6-HF-1 Modern Speaker Unit..... (RK-196 walnut)	36½"	38"	23"
6-HF-2 (Single Unit).....	36"	34¾"	18¾"



*Record Changer Controls*

**RECORD CHANGER CONTROLS**

The record changer has a dual control on the motor-board. The double-ended lever of the dual control is the OFF-ON-REJECT control. Turning this lever to the center position energizes the motor and starts the turntable, when turned to the clockwise 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 the left (counter-clockwise).

The circular knob of the dual control is the speed control. It has three positions; "33", "45", "78", to select the turntable speed desired.

The high-fidelity pickup "head" contains a diamond stylus for playing 45 rpm and 33-1/3 rpm records. This head is interchangeable with an accessory pickup "head" for playing 78 rpm records.

To change pickup "heads", loosen the thumbscrew on the underside of the pickup arm and replace with the desired head. Tighten the thumbscrew. Store the other "head" in the round rubber holder at back of phonograph drawer.

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

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 center so it rests on the stack of records.

## TAPE RECORDER OPERATION

### Speed Selection

The tape speed to be used for "play-back" must match that at which the tape was recorded. The 7.5 in./sec. speed is used for highest quality recordings and the 3.75 in./sec. speed is used primarily for speech and maximum playing time.

To change, unscrew the knurled thumb screws and remove the capstan and pressure roller. Replace with the other pair of capstans and rollers. These are designated as follows:

3.75" per second—the smallest metal capstan and the largest rubber pressure roller.

7.5" per second—the largest metal capstan and the smallest rubber pressure roller.

### Tape Threading

The tape to be played or recorded is placed on the left-hand spindle and secured with the reel retainer. Pull off about 2 ft. of tape and thread over the guide rollers, heads, capstan and onto the takeup reel in the direction indicated on the front panel.

### Starting Recorder

After selecting desired speed and threading the recorder, turn on the amplifier switch (second knob from left). Place the record-playback switch in "record" or "playback" as required and allow to warm up for about 10 to 20 seconds. Start the recorder by placing the rewind-stop-forward switch in "forward" position.

NOTES:—The power switch on the tuner unit must be "on" for power to be available to the tape recorder.

When the record-playback switch is turned to "record" the previous recording on the tape will be automatically erased as it passes over the erase head.

### Connecting Microphone

Any high impedance microphone of good quality can be used although a controlled reluctance type is supplied with Model 6-HF-1. Insert microphone connector into "Mic" input jack on the left side of panel.

### Recording

Recordings can be made from radio programs, microphone or both. When recording from radio program only, the microphone should be disconnected; when recording from the microphone the tuner function switch should be turned to "phono". This is to prevent undesired sounds from being recorded. The recorder volume control should be advanced until the "Magic Eye" just closes on volume peaks.

This will record only one half of the tape. To use the second half of the tape, remove the full reel of tape that is now on the right hand reel, turn around and place it on the left hand side. Place the empty reel on the right side and proceed as before.

NOTE:—The tuner volume control has no effect on recording level.

### Playback

1. Set the record-playback switch to "playback".
2. Set the tape in motion on the recorder mechanism by turning the rewind-stop-forward switch to the "forward" position.
3. Adjust the volume and tone controls on the tuner unit for desired tone and volume.

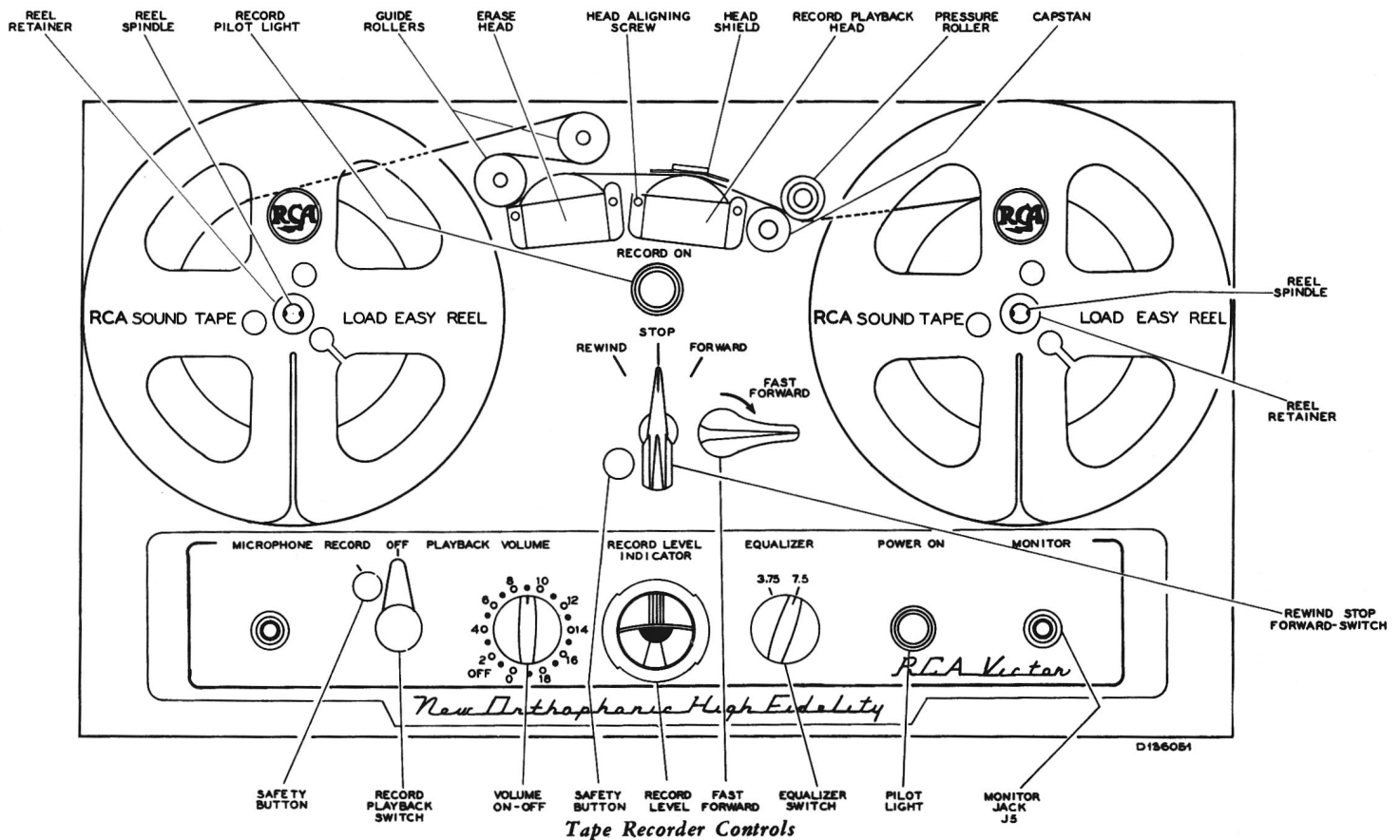
### To Rewind

When rewinding, never allow the tape to run back over the record head. Instead, before placing the rewind-stop-forward switch in "rewind" position, place the tape over the head shield.

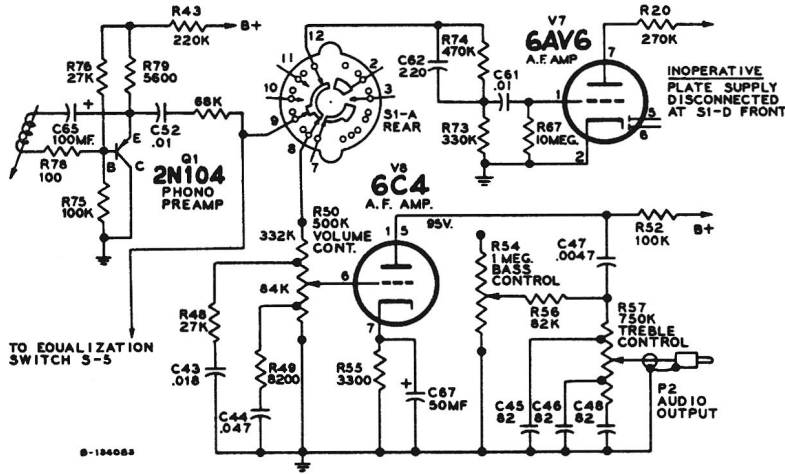
### To Erase A Recording

When a new recording is made over a previously recorded tape, the old recording is automatically erased from the track that is being recorded as the tape passes over the erase head. The recording on the other side of the tape is not affected.

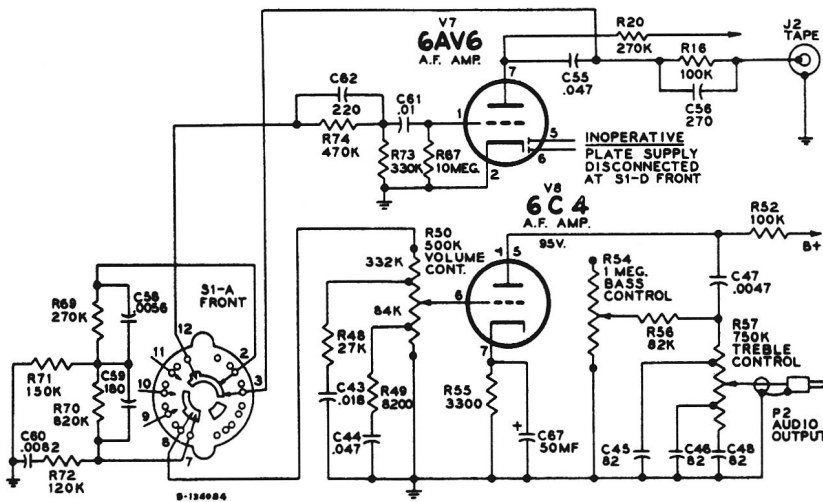
To erase a recording without recording anything new on the tape, proceed to record in the normal manner except turn the volume control down.



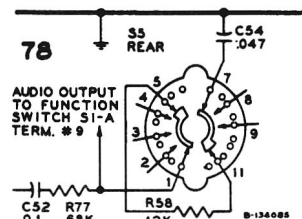
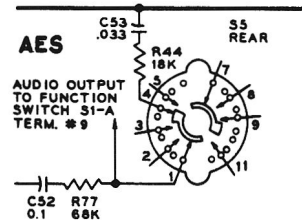
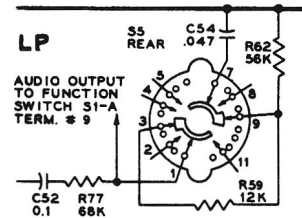
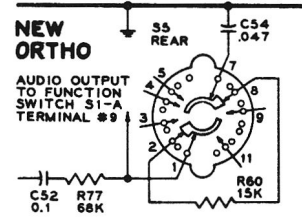
# 6-HF-1, 6-HF-2



Simplified Diagram of Tuner Unit—"Phono" Position



Simplified Diagram of Tuner Unit—"Tape" Position



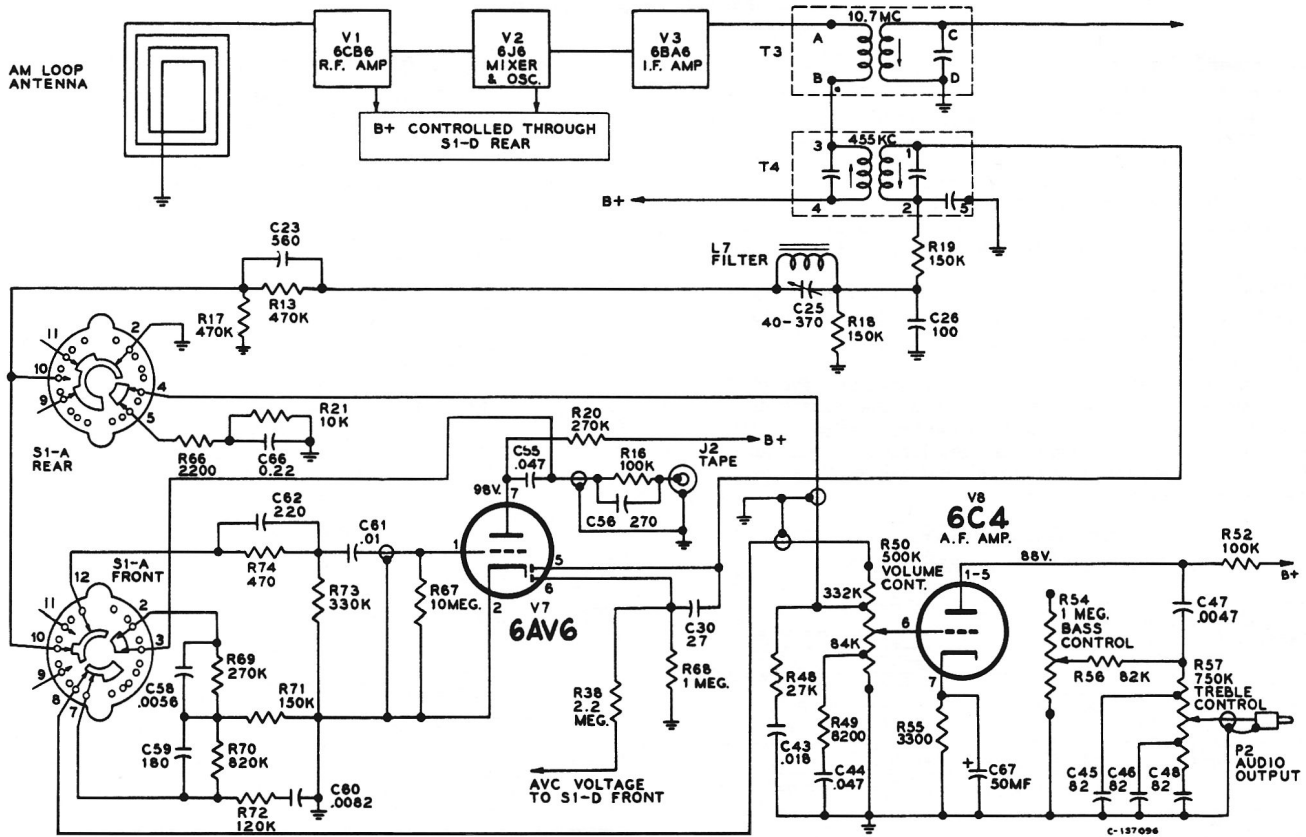
Simplified Diagrams of Record Equalization Switch

## SOCKET VOLTAGES

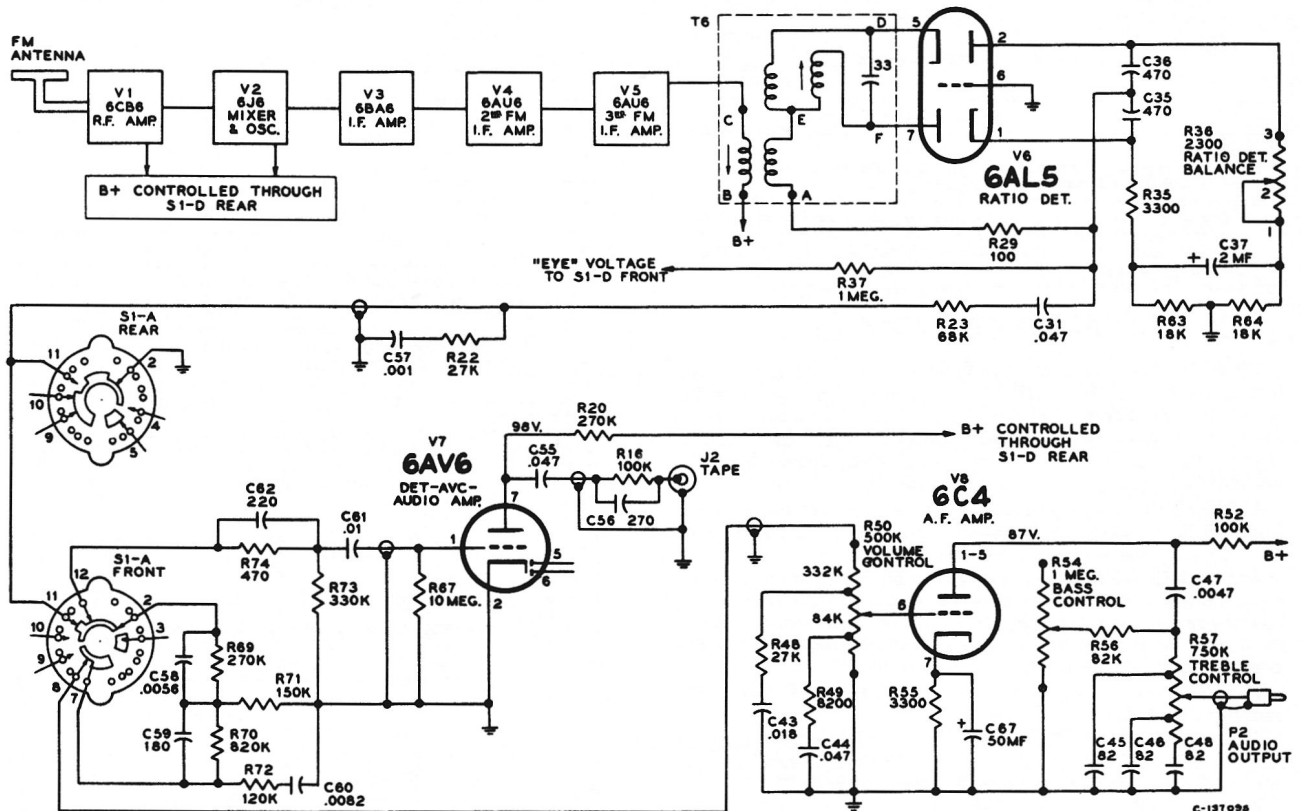
Tube	Terminal	Voltage		
		Phono Tape	A.M.	F.M.
V1 6CB6 RF Amp	Plate 5	—	240	202
	Screen 6	—	70	60
	Cathode 2	—	0.2	0.2
	Grid 1	—	-0.75	-0.5
V2 6J6 Mixer & Osc	Plate 2	—	44	45
	Grid 5	—	-1.3	-1.3
V3 6BA6 IF Amp	Plate 5	203	189	181
	Screen 6	128	113	100
	Cathode 7	0.8	0.75	0.8
	Grid 1	-1.2	-0.8	0
V4 6AU6 2nd FM. I.F.	Plate 5	218	201	200
	Screen 6	77	71	71
	Cathode 7	0.6	0.6	0.6
V5 6AU6 3rd FM. I.F.	Plate 5	4.0	4.0	4.0
	Screen 6	51	48	48
	Cathode 7	0.3	0.3	0.3
	Grid 1	-0.1	-0.1	-0.1
V6 6AL5 Ratio Detector	Cathode 1	+1.6	+1.6	+1.6
	Plate 2	-1.3	-1.3	-1.3
V7 6AV6 Det.-AVC.-AF	Plate 7	—	98	98
	Grid 1	—	-0.7	-0.7

Voltages measured with VoltOhmyst and should hold within  $\pm 20\%$  with rated line voltage. Tuning condenser closed—no signal input.

Tube	Terminal	Voltage		
		Phono Tape	A.M.	F.M.
V8 6C4 A.F. Amp.	Plate 1-5	95	88	87
	Cathode 7	4.7	4.4	4.3
V9 6AL7-GT Tuning Eye	Target 3	—	244	242
	Cathode 8	—	0.7	0.7
	Grid 1	—	0.7	0.7
Q1 Transistor 2N104 Preamp.	Base B	18.8	18.8	18.8
	Emitter E	19.0	19.0	19.0
	Collector C	0	0	0
V101 12AU7 Ampl. & Ph. Inverter	Plate 6	105	105	105
	Cathode 8	5.8	5.8	5.8
	Grid 7	0	0	0
	Plate 1	180	180	180
V102 6AU6 Driver	Cathode 3	109	109	109
	Grid 2	105	105	105
	Plate 5	200	197	197
V103 6AU6 (2)	Screen 6	61	61	61
	Cathode 7	6.4	6.4	6.4
	Grid 1	4.8	4.8	4.8
	Plate 3	317	314	314
V104 6V6-GT Output	Screen 4	328	321	321
	Cathode 8	19	19	19
V105 V106 (4) V107	Plate 3	317	314	314
	Screen 4	328	321	321
	Cathode 8	19	19	19
V109 5U4G	Filament 2-8	344	340	340



Simplified Circuit Diagram—Tuner Unit—AM Position



Simplified Circuit Diagram—Tuner Unit—FM Position

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 minimum audio output during FM Ratio Detector 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 a-v-c voltage.

When audio output is being measured the volume control should be turned to maximum. Adjust tone controls for maximum highs and lows during alignment.

Signal Generator:

For all alignment operations connect the low side of the signal generator to the receiver chassis. The output should be adjusted to provide accurate resonance indication at all times. If output measurement is used for AM alignment the output of the signal generator should be kept as low as possible to avoid a-v-c 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 max. output
1	Pin #1 of V3 in series with .01 mfd.	455 KC (400 cycle mod.)	Quiet point at high freq. end of band (gang open)	T-4 top & bottom cores
2		†455 KC (10 KC mod.)		C25 Minimum Output
3	Terminal #4 of T-7 (A.M. R.F. coil) in series with .01 mfd.	455 KC (400 cycle mod.)		†T-2 top & bottom cores with alternate loading
4	Short wire placed near loop for radiated signal	1620 KC	Gang fully open	C1-BT osc.
5		1400 KC	1400 KC signal	C1-ET ant. C1-DT R.F.
6		600 KC	600 KC signal	††T-8 osc. while rocking gang
7				T-7 R.F.
8		Repeat Steps 4, 5, 6 and 7		

NOTES

- † If preferred, a 10 kc audio signal may be supplied to term #2 of T-4 during adjustment of C25.
- ‡ Alternate loading: Connect a 1000 ohm resistor across primary of T-2 (term #4 & #6) while adjusting secondary (top core). Remove the resistor from term #4 & #6 and connect across secondary of T-2 (term #1 & #2) while adjusting primary (bottom core).
- †† Shunt C1-D with 10,000 ohm resistor while adjusting T-8.

RADIO CONTROLS

**FUNCTION**—This control is used to select the type of entertainment desired. "AM" for Standard Broadcast radio, "FM" for Frequency Modulation radio, "PHONO" when playing records or recording from microphone, "TAPE" when listening to tape recordings or when sound from the loudspeaker is desired while using the microphone.

**LOUDNESS**—This control is the master power switch combined with a control of loudness from the speakers. It does not control recording level of tape recorder.

**BASS AND TREBLE**—These controls, when turned clockwise, increase bass and treble emphasis of sound from the loudspeakers. They have no effect on the tone of radio programs being recorded. The "normal" setting of these controls is at "5" for each control.

**TUNING**—This control is used for tuning in AM and FM radio programs.

**COMPENSATION**—This control is used when playing records. Set according to the record manufacturers' specifications for the particular records being played.

**TUNING EYE**—On AM reception, the tuning control should be adjusted for narrowest bright bands in the tuning eye. On FM reception, the tuning control should be adjusted for equal width of the bright bands in the tuning eye.

FM RATIO DETECTOR ALIGNMENT

FUNCTION SWITCH IN "FM" POSITION. VOLUME CONTROL AT CONVENIENT LEVEL.

Set balance control to approximate mid-position. Set signal generator to 10.7 mc, approx. 0.7 volt, AM modulated; connect high side to pin #1 of V5 (6AU6 3rd F.M. I.F.).

STEP 1	Connect the d.c. probe of a VoltOhmyst to the junction of R64 (18K) and R36 (balance control)
STEP 2	Adjust top core of T-6 for maximum d.c. voltage (approx. —5 volts)
STEP 3	Connect the d.c. probe of a VoltOhmyst to junction of R37 (1 meg) and C38 (.01 mf)
STEP 4	Adjust the bottom core of T-6 for d.c. crossover (zero volts d.c., can go + or — from crossover)
STEP 5	Adjust R-36 (balance control) for minimum audio output
STEP 6	Repeat Steps 4 and 5

FM I.F./R.F. ALIGNMENT

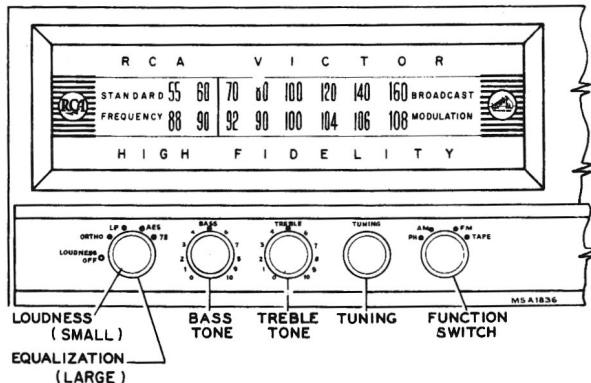
FUNCTION SWITCH IN "FM" POSITION

Steps	Connect high side of sig. gen. to—	Sig. gen. output	Turn radio dial to—	Adjust for max. output	
1	Pin #1 of V3 (I.F. Amplifier) in series with .01 mf ceramic disc (use short leads)	10.7 mc Unmodulated	—	Connect d.c. probe of VoltOhmyst to junction of R-30 (220K) and C-32 (.01 mf)	
2				T-5 top core	
3				T-3 top and bottom cores with alternate loading†	
4				T-1 top and bottom cores	
5	Stator of C1-C (F.M. R.F.) in series with .01 mf (use short leads)	90 mc	90 mc	L-3 osc.‡	
6		To FM antenna terminals thru 120 ohms in each side of line	106 mc	106 mc	C1-FT ant. C1-CT r.f.
7		90 mc	90 mc	L-1 ant.‡ L-2 r.f.‡	
8	Repeat Steps 6 and 7				

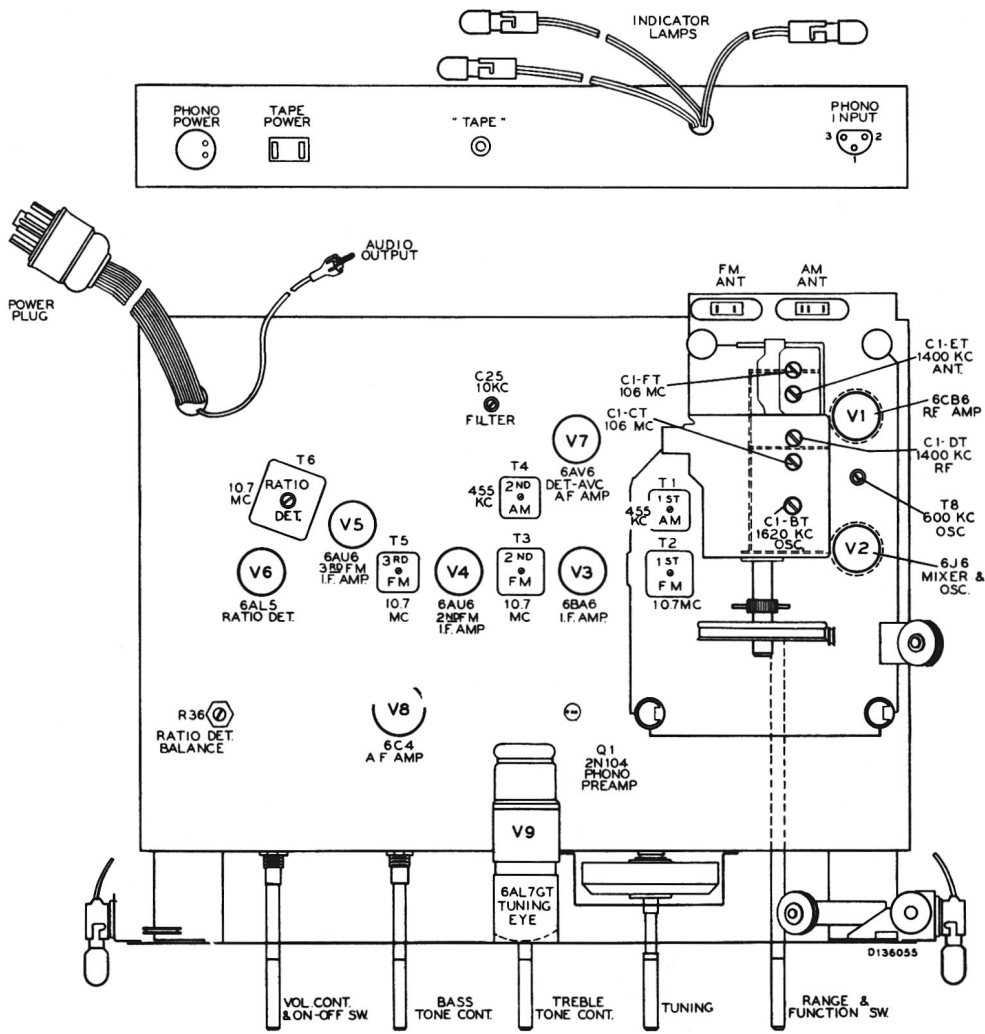
† Alternate loading—load the plate winding (term #A and #B) with a 270 ohm resistor while the grid winding (top core) is being adjusted and then load the grid winding (term #C and #D) while the plate winding (bottom core) is being adjusted. Adjust signal generator output to maintain approximately 1.0 volt d.c. indication.

‡ L-3, L-1 and L-2 are adjustable by increasing or decreasing spacing between turns. Oscillator signal tracks above signal frequency.

The preferred method of F.M. I.F. alignment is by use of a sweep signal input and an oscilloscope. If this method is used, connect the oscilloscope to the junction of R-30 (220K) and terminal #9 of S1-D front. Disconnect C32 (.01 mf) to prevent distortion of the pattern.



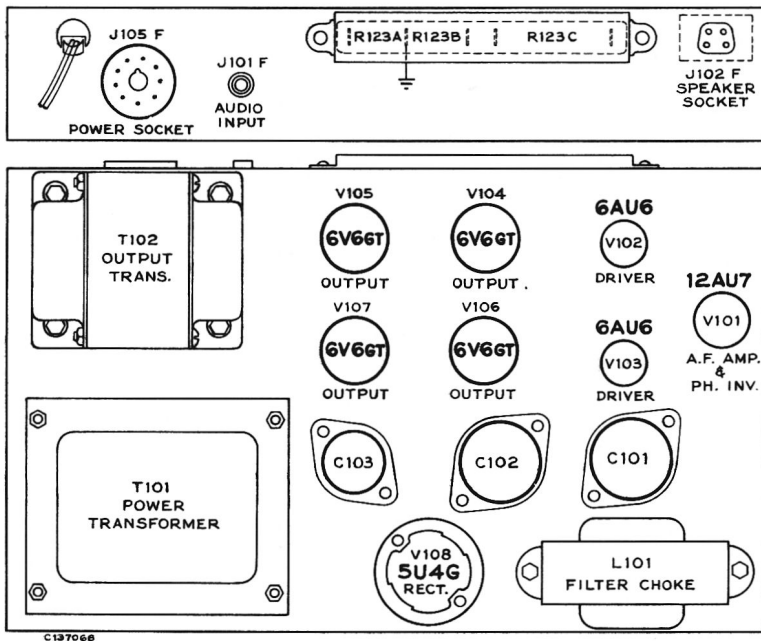
Radio Tuner Controls



Top View of Tuner Chassis RC-1154 or RC-1154A

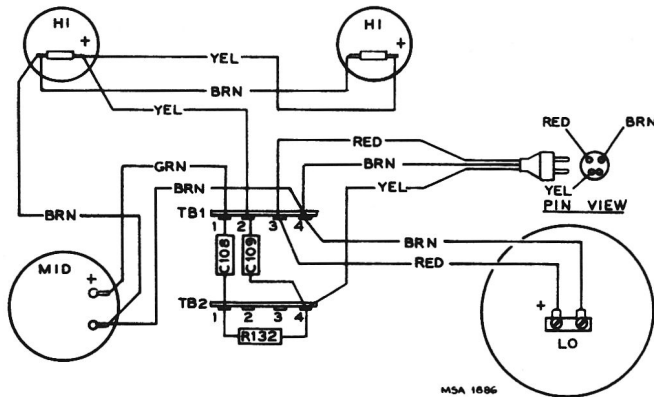
**CRITICAL LEAD DRESS**

1. Dress lead from loudness control arm to V8 grid away from filament and dial lamp leads.
2. Dress A.C. power leads away from C57 and loudness control tap.
3. Dress filament leads to V8 away from R22.
4. Dress filament lead to V6 and B+ lead to audio circuits down against chassis and away from V5 plate. Keep V5 plate lead short.
5. Dress filament leads away from L7 (10 KC filter).
6. Dress R67 down against chassis.
7. Dress filament lead to tuning eye away from C55 and the "Tape" input/output circuit.
8. Dress lead from switch to mixer plate (pin #2 of V2) away from oscillator plate (pin #1 of V2).
9. Keep the lead short at the grid end of R30.
10. The ground straps between the R.F. shelf and the main chassis should be well soldered and kept as short as practicable while allowing flexibility for the R.F. shelf.
11. C18 should ground as close to the R.F. shelf ground strap as possible.
12. All leads from the R.F. shelf which leave through the shields must be kept as short as possible to minimize oscillator radiation.
13. All leads in the F.M. circuits should be kept short, particularly on the R.F. shelf.
14. Dress audio circuit capacitors against chassis where possible.
15. In RS 147 power amplifier, keep audio lead from input jack down against chassis base.

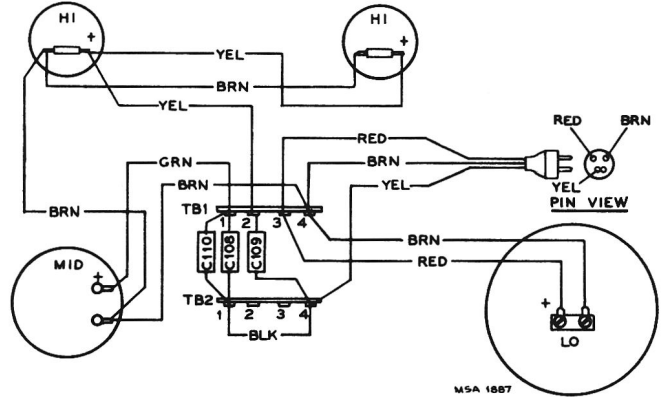


Top View of Power Amplifier RS-147

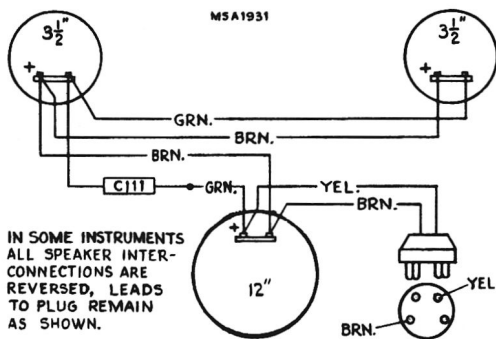
6-HF-1, 6-HF-2



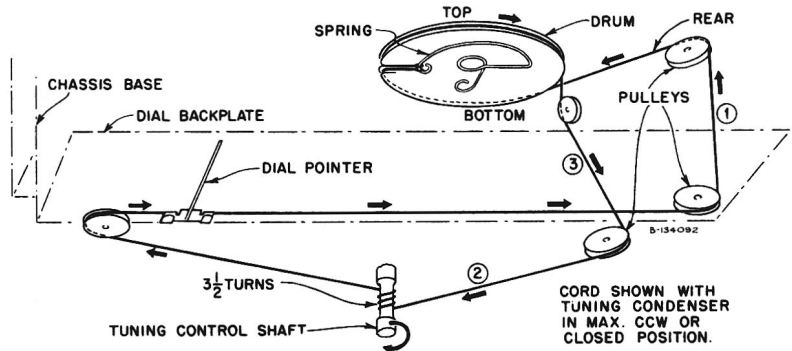
RK-196 Speaker Unit Connections  
6-HF-1 Contemporary Mahogany



RK-196 Speaker Unit Connections  
6-HF-1 Modern Walnut



Speaker Connections  
Model 6-HF-2

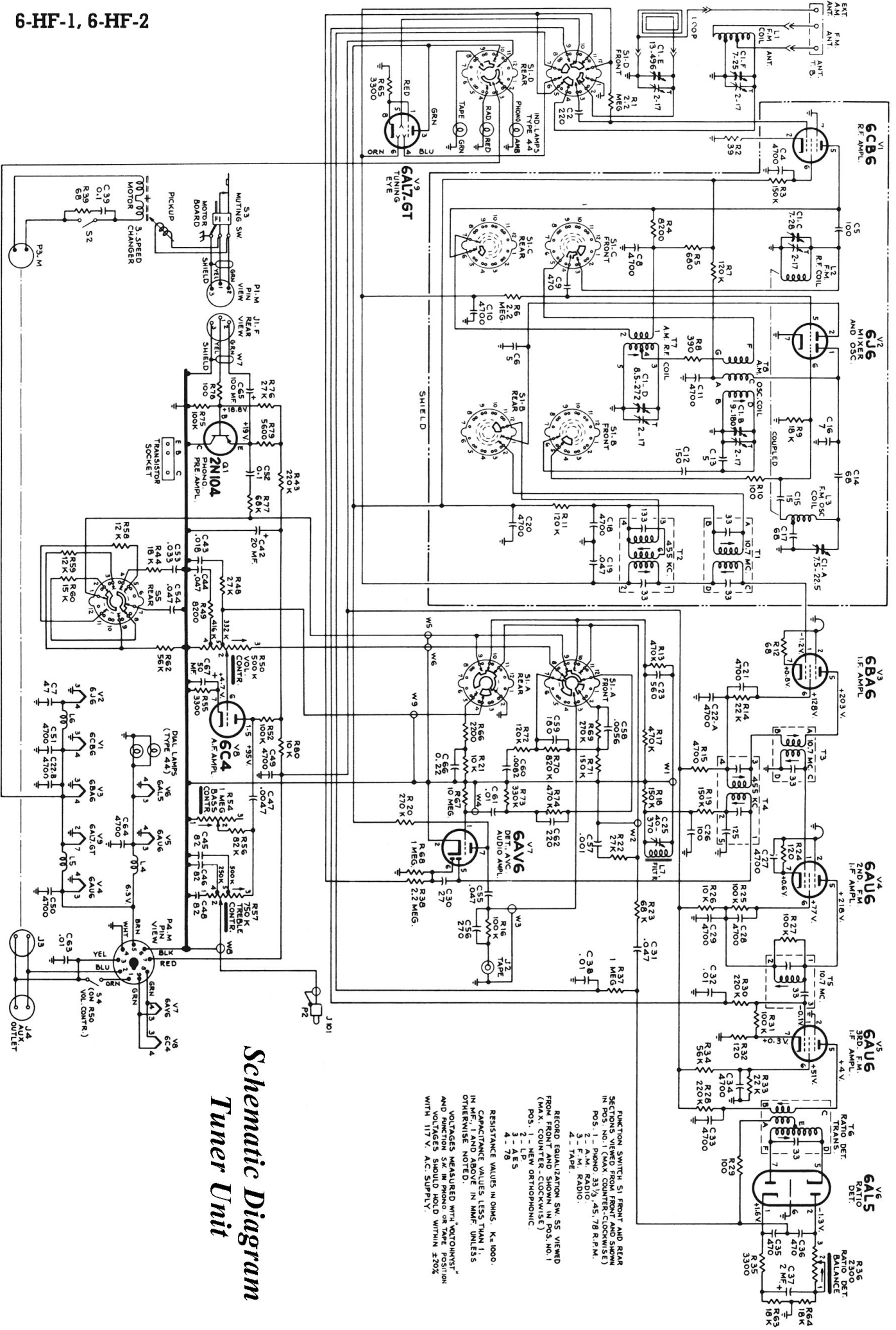


Tuning Drive Cord Assembly

REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
<b>TUNER CHASSIS ASSEMBLIES RC-1154, RC-1154A</b>					
C1A to C1F Incl.	77308	Capacitor—Variable tuning capacitor	C27 to C29 Incl.	73473	Same as C4
C2.	75611	Capacitor—Fixed, ceramic, 220 mmf., ±20%, 500 v.	C30	100514	Capacitor—Fixed, ceramic, 27 mmf., ±20%, 500 v.
C4	73473	Capacitor—Fixed, ceramic, 4700 mmf., +100%, -0%, 500 v.	C31	73558	Same as C19
C5	39396	Capacitor—Fixed, ceramic, 100 mmf., ±10%, 500 v.	C32	73960	Capacitor—Fixed, ceramic, .01 mfd., +100%, -0%, 500 v.
C6	75613	Capacitor—Fixed, ceramic, 5 mmf., ±10%, 500 v.	C33, C34	73473	Same as C4
C7	75609	Capacitor—Fixed, ceramic, 47 mmf., ±20%, 500 v.	C35, C36	77941	Capacitor—Fixed, mica, 470 mmf., ±10%, 300 v.
C8	73473	Same as C4	C37	79181	Capacitor—Fixed, electrolytic, 2 mf., +100%, -10%, 50 v.
C9	76992	Capacitor—Fixed, ceramic, 470 mmf., ±20%, 300 v.	C38	73960	Same as C32
C10, C11	73473	Same as C4	C39	78882	Part of Record Changer
C12	75614	Capacitor—Fixed, ceramic, 150 mmf., ±10%, 500 v.	C42	56243	Capacitor—Fixed, electrolytic, 20 mf., -10%, +50%, 450 v.
C13	75613	Same as C6	C43	77469	Capacitor—Fixed, paper, .018 mfd., ±10%, 200 v.
C14	75612	Capacitor—Fixed, ceramic, 68 mmf., ±10%, 500 v.	C44	73558	Capacitor—Fixed, paper, .047 mfd., ±10%, 200 v.
C15	39044	Capacitor—Fixed, ceramic, 15 mmf., ±10%, 500 v.	C45, C46	39626	Capacitor—Fixed, mica, 82 mmf., ±10%, 500 v.
C16	78262	Capacitor—Fixed, ceramic, 7.0 mmf., ±5%, 500 v.	C47	73920	Capacitor—Fixed, paper, .0047 mfd., ±10%, 400 v.
C17	93229	Capacitor—Fixed, ceramic, 68 mmf., ±5%, 500v.	C48	39626	Same as C45
C18	73473	Same as C4	C49 to C51 Incl.	73473	Same as C4
C19	73558	Capacitor—Fixed, paper, .047 mfd., ±20%, 200 v.	C52	73784	Capacitor—Fixed, paper, 0.1 mfd., ±20%, 200 v.
C20, C21	73473	Same as C4	C53	79015	Capacitor—Fixed, paper, .033 mfd., ±10%, 400 v.
C22A, C22B	76470	Capacitor—Fixed, ceramic, 4700 mmf., +100%, -0%, 500 v.	C54	73558	Same as C44
C23	76685	Capacitor—Fixed, paper, 560 mmf., ±10%, 500 v.	C55	73553	Capacitor—Fixed, paper, .047 mfd., ±20%, 400 v.
C25	100813	Capacitor—Adjustable, 40/370 mmf., 10 KC audio filter	C56	39638	Capacitor—Fixed, mica, 270 mmf., ±10%, 500 v.
C26	75437	Capacitor—Fixed, ceramic, 100 mmf., ±10%, 500 v.	C57	75643	Capacitor—Fixed, paper, .001 mfd., ±10%, 600 v.
			C58	73788	Capacitor—Fixed, paper, .0056 mfd., ±10%, 400 v.
			C59	79344	Capacitor—Fixed, mica, 180 mmf., ±10%, 500 v.
			C60	79019	Capacitor—Fixed, paper, .0082 mfd., ±10%, 400 v.
			C61	73561	Capacitor—Fixed, paper, .01 mfd., ±10%, 200 v.
			C62	39636	Capacitor—Fixed, mica, 220 mmf., ±10%, 500 v.
			C63	73565	Capacitor—Fixed, paper, .01 mfd., ±20%, 600 v.
			C64	73473	Same as C4





Schematic Diagram  
Tuner Unit

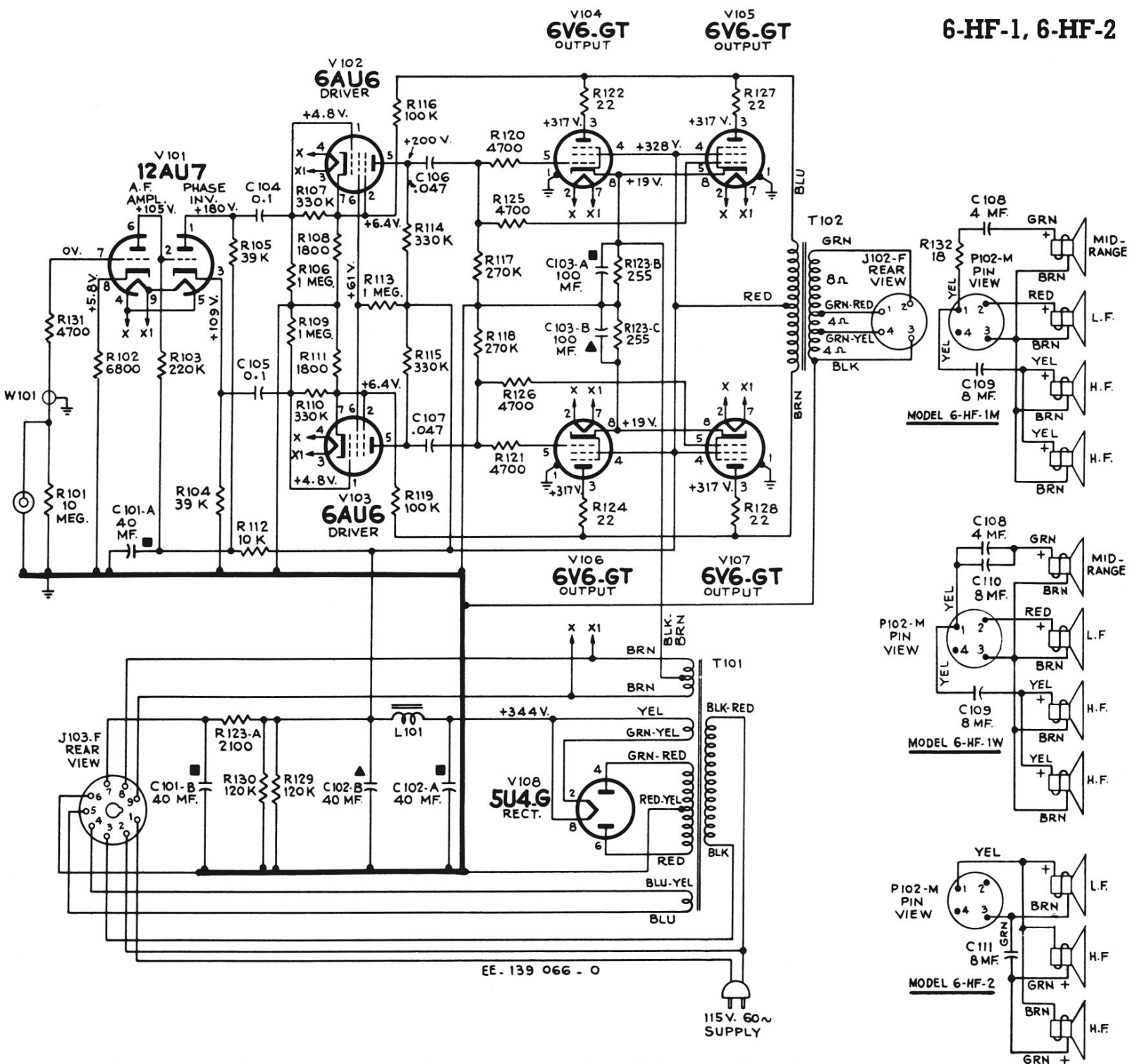
FUNCTION SWITCH S1 FRONT AND REAR SECTIONS VIEWED FROM FRONT AND SHOWN IN FIG. 1 AND ABOVE IN POS. NO. 1 (MAX. COUNTER CLOCKWISE). POS. 2 - A.M. RADIO. POS. 3 - F.M. RADIO. POS. 4 - T.A.P.E.

RECORD EQUALIZATION SW. S5 VIEWED FROM FRONT AND SHOWN IN FIG. 1 (MAX. COUNTER CLOCKWISE). POS. 1 - NEW ORTHOPHONIC. POS. 2 - A.E.S. POS. 3 - A.E.S. POS. 4 - 78

RESISTANCE VALUES IN OHMS, K-1000, CAPACITANCE VALUES LESS THAN 1 IN MF., AND ABOVE IN MMF. UNLESS OTHERWISE NOTED.

VOLTAGES MEASURED WITH "VORTONYS"™ AND FUNCTION SW. IN PHONO OR TAPE POSITION AND VOLTAGES SHOULD HOLD WITHIN ±20% WITH 117 V. A.C. SUPPLY.

# 6-HF-1, 6-HF-2



Schematic Diagram - Power Supply, Power Amplifier and Speakers

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
C65	100552	Capacitor—Fixed, electrolytic, 100 mfd., +100%, -10%, 25 v.	R57	100524	Control—Treble tone control
C66	100650	Capacitor—Fixed, paper, 0.22 mf., ±10%, 200 v.	R58, R59	502312	Resistor—Fixed, composition, 12,000 ohm, ±5%, ½ w.
C67	78573	Capacitor—Electrolytic, 50 mfd., +150%, -10%, 6 v.	R60	502315	Resistor—Fixed, composition, 15,000 ohm, ±5%, ½ w.
J1	36422	Plug—3 contact phono input plug (female)	R62	502356	Resistor—Fixed, composition, 56,000 ohm, ±5%, ½ w.
J2	35787	Connector—"Tape" Audio input/output connector (female)	R63, R64	502318	Same as R9
J3	75543	Socket—Phono power socket (female)	R65	502233	Resistor—Fixed, composition, 3300 ohm, ±10%, ½ w. (Part of eye cable)
J4	52131	Connector—Auxiliary AC power outlet	R66	502222	Resistor—Fixed, composition, 2200 ohm, ±10%, ½ w.
L1	77313	Coil—F.M. antenna coil	R67	502610	Resistor—Fixed, composition, 10 megohm, ±20%, ½ w.
L2	77314	Coil—F.M. R.F. coil	R68	502510	Same as R37
L3	77315	Coil—F.M. oscillator coil	R69	502427	Same as R20
L4 to L6 Incl.	71942	Reactor—Filament choke coil	R70	502482	Resistor—Fixed, composition, 820,000 ohm, ±10%, ½ w.
L7	100528	Reactor—Audio filter (10 KC)	R71	502415	Same as R3
P1	74192	Part of Record Changer	R72	502412	Same as R7
P2	31048	Plug—Audio output pin plug	R73	502433	Resistor—Fixed, composition, 330,000 ohm, ±10%, ½ w.
P3	30870	Part of Record Changer	R74	502447	Same as R13
P4	75063	Connector—9 contact male connector complete with shell	R75	502410	Same as R16
Q1	100741	Transistor—Type 2N104	R76	502327	Resistor—Fixed, composition, 27,000 ohm, ±5%, ½ w.
R1	502522	Resistor—Fixed, composition, 2.2 megohm, ±20%, ½ w.	R77	502368	Same as R23
R2	502039	Resistor—Fixed, composition, 39 ohm, ±10%, ½ w.	R78	502110	Same as R10
R3	502415	Resistor—Fixed, composition, 150,000 ohm, ±10%, ½ w.	R79	502256	Resistor—Fixed, composition, 5600 ohm, ±5%, ½ w.
R4	502282	Resistor—Fixed, composition, 8200 ohm, ±10%, ½ w.	R80	502310	Same as R21
R5	502168	Resistor—Fixed, composition, 680 ohm, ±10%, ½ w.	S1A to S1D Incl.	100537	Switch—Range & function switch
R6	502522	Same as R1	S2, S3		Part of Record Changer
R7	502412	Resistor—Fixed, composition, 120,000 ohm, ±10%, ½ w.	S4	100548	Control—"On-Off" power switch (includes R50 and S5)
R8	30498	Resistor—Fixed, composition, 390 ohm, ±10%, ½ w.	S5	100548	Switch—Record equalizer switch (Includes R50 and S4)
R9	502318	Resistor—Fixed, composition, 18,000 ohm, ±10%, ½ w.	T1	77514	Transformer—First F.M. I.F. transformer
R10	502110	Resistor—Fixed, composition, 100 ohm, ±10%, ½ w.	T2	100532	Transformer—First A.M. I.F. transformer
R11	502412	Same as R7	T3	75560	Transformer—2nd F.M. I.F. transformer
R12	502068	Resistor—Fixed, composition, 68 ohm, ±10%, ½ w.	T4	73037	Transformer—2nd A.M. I.F. transformer
R13	502447	Resistor—Fixed, composition, 470,000 ohm, ±10%, ½ w.	T5	77939	Transformer—3rd F.M. I.F. transformer
R14	502322	Resistor—Fixed, composition, 22,000 ohm, ±10%, ½ w.	T6	73743	Transformer—Ratio detector transformer
R15	512247	Resistor—Fixed, composition, 4700 ohm, ±20%, 1 w.	T7	77305	Coil—A.M. R.F. coil complete with adjustable core
R16	502410	Resistor—Fixed, composition, 100,000 ohm, ±10%, ½ w.	T8	75569	Coil—A.M. oscillator coil with adjustable core
R17	502447	Same as R13		72953	Cord—Tuning drive cord (250 ft. spool)—approximately 60 inches required
R18, R19	502415	Same as R3		100519	Bracket—Tuning eye mounting bracket
R20	502427	Resistor—Fixed, composition, 270,000 ohm, ±10%, ½ w.		100512	Bushing—Base bushing for tuning control
R21	502310	Resistor—Fixed, composition, 10,000 ohm, ±10%, ½ w.		73935	Clip—I.F. transformer mounting clip
R22	502327	Resistor—Fixed, composition, 27,000 ohm, ±10%, ½ w.		74879	Connector—2 contact polarized female connector for A.M. & F.M. antenna input
R23	502368	Resistor—Fixed, composition, 68,000 ohm, ±10%, ½ w.		100538	Cover—Bottom cover assembly for RC-1154 (Model 6-HF-1)
R24	502112	Resistor—Fixed, composition, 120 ohm, ±10%, ½ w.		100900	Cover—Bottom cover assembly for RC-1154A (Model 6-HF-2)
R25	502410	Same as R16		100526	Cover—Cover shield for RF shelf assembly
R26	502310	Resistor—Fixed, composition, 10,000 ohm, ±20%, ½ w.		74839	Fastener—Push fastener to hold RF shelf assembly (4 req'd)
R27	502410	Same as R16		16058	Grommet—Rubber grommet for mounting RF shelf to base
R28	502422	Resistor—Fixed, composition, 220,000 ohm, ±20%, ½ w.		75548	Grommet—Rubber mounting grommet for bottom cover #100900
R29	502110	Same as R10		11891	Lamp—Dial lamp or indicator lamp (Type #44)
R30	502422	Same as R28		100546	Plate—Dial backplate assembly complete with brackets and pulleys
R31	502410	Same as R16		100529	Pointer—Dial pointer
R32	502112	Same as R24		100518	Pulley—Dial cord pulley bracket assembly complete with one ¼" pulley
R33	502322	Resistor—Fixed, composition, 22,000 ohm, ±20%, ½ w.		100557	Shaft—Extension shaft for function switch
R34	512356	Resistor—Fixed, composition, 56,000 ohm, ±10%, 1 w.		75708	Shell—Socket shell only for tuning eye tube (V9)
R35	502233	Resistor—Fixed, composition, 3300 ohm, ±10%, ½ w.		100558	Shield—Tube shield for V2
R36	77199	Control—Ratio detector balance control		75192	Shield—Tube shield for V1
R37	502510	Resistor—Fixed, composition, 1 megohm, ±20%, ½ w.		100559	Shield—Tube shield for V8
R38	502522	Same as R1		100642	Socket—Dial lamp socket
R39	78882	Part of Record Changer		100643	Socket—Indicator pilot lamp socket
R40, R41, R42	Not Used			68592	Socket—Socket for tuning eye tube—less shell
R43	502422	Resistor—Fixed, composition, 220,000 ohm, ±10%, ½ w.		100521	Socket—Transistor socket (Q1) with mounting retainer
R44	502318	Resistor—Fixed, composition, 18,000 ohm, ±5%, ½ w.		74179	Socket—Tube socket, 7 pin miniature for V1
R48	502337	Same as R22		77306	Socket—Tube socket, 7 pin miniature for V2
R49	502282	Same as R4		77937	Socket—Tube socket, 7 pin miniature for V3, V4, V5 and V6
R50	100548	Control—Volume control (Includes S4 and S5)		73117	Socket—Tube socket, 7 pin miniature for V7
R52	502410	Same as R16		77087	Socket—Tube socket, 7 pin miniature for V8
R54	100525	Control—Bass tone control		76332	Spring—Tuning capacitor drive cord tension spring
R55	502233	Same as R35		75563	Spring—Friction spring (flat) for extension shaft mounting
R56	502382	Resistor—Fixed, composition, 82,000 ohm, ±10%, ½ w.		75564	Spring—Locking spring for extension shaft
				77304	Support—Polystyrene support for oscillator coil complete with mtg. bracket
				35969	Washer—"C" type retaining washer on flywheel assembly
				73540	Washer—Spring washer for flywheel assembly
				100516	Wheel—Tuning control flywheel complete with shaft

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER &amp; POWER UNIT ASSEMBLY RS-147</b>			<b>SPEAKER ASSEMBLIES (CONT'D.)</b>
C101A, B C102A, B C103A, B	58567	Capacitor—Fixed, electrolytic, 40-40 mfd., 450 v.		100909	Cone—Speaker cone and voice coil for 12" speaker stamped 961628-1
	98645	Capacitor—Fixed, electrolytic, dual 100 mfd., 50 v.		100467	Housing—Plastic housing for mounting of 3½" speakers
C104, C105	73551	Capacitor—Fixed, paper, 0.1 mfd., ±10%, 400 v.		100897	Speaker—12" PM, complete with cone and voice coil (6 to 8 ohm) (Speaker stamped 961628-1)
C106, C107	73553	Capacitor—Fixed, paper, .047 mfd., ±10%, 400 v.		100465	Speaker—3½" PM, complete with cone and voice coil (6 to 8 ohm) (Speaker stamped 961616-1)
C108	100565	Part of Speaker Assembly			<b>MISCELLANEOUS</b>
C109, C110, C111	100509	Part of Speaker Assembly		100534	Antenna—A.M. loop antenna
J101	35787	Connector—Audio input connector		100531	Back—Cabinet back cover for 6HF1 Mahog.
J102	38853	Socket—4 contact female socket—audio output		100995	Back—Cabinet back cover for 6HF1 Walnut
J103	100515	Connector—9 contact—female—power connector		100904	Back—Cabinet back cover for 6HF2
L101	100527	Reactor—Filter reactor (choke)		100523	Board—Terminal board for antenna cable
R101	502610	Resistor—Fixed, composition, 10 megohm, ±10%, ½ w.		100896	Bracket—Bracket with stud for escutcheon mtg.
R102	502268	Resistor—Fixed, composition, 6800 ohm, ±5%, ½ w.		71599	Bracket—Jewel lamp bracket—6HF2 only
R103	502422	Resistor—Fixed, composition, 220,000 ohm, ±5%, ½ w.		100604	Bushing—Pickup head retainer bushing
R104, R105	502339	Resistor—Fixed, composition, 39,000 ohm, ±5%, ½ w.		207952	Cable—Shielded audio cable—6 ft. length with connectors—tape recorder to tuner
R106	502510	Resistor—Fixed, composition, 1 megohm, ±5%, ½ w.		71892	Catch—Door catch complete with strike & nail Model 6HF2
R107	502433	Resistor—Fixed, composition, 330,000 ohm, ±5%, ½ w.		X2782	Cloth—Grille cloth for mahogany cabinet Model 6HF2
R108	502218	Resistor—Fixed, composition, 1800 ohm, ±5%, ½ w.		X2783	Cloth—Grille cloth for oak cabinet Model 6HF2
R109	502510	Same as R106		74752	Connector—2 contact male connector for antenna cable
R110	502433	Same as R107		77461	Cord—Power cord & plug—tape recorder drawer to chassis
R111	502218	Same as R108		100647	Cover—Cover for microphone storage
R112	502310	Resistor—Fixed, composition, 10,000 ohm, ±10%, ½ w.		100545	Dial—Plastic dial scale with calibration markings
R113	502510	Same as R106		101049	Escutcheon—Tape recorder drawer escutcheon for 6HF1
R114, R115	502433	Resistor—Fixed, composition, 330,000 ohm, ±10%, ½ w.		100539	Escutcheon—Tuning dial escutcheon for 6HF1 and 6HF2
R116	522410	Resistor—Fixed, composition, 100,000 ohm, ±5%, 2 w.		100547	Escutcheon—Radio control panel escutcheon for 6HF1 MAHOGANY.
R117, R118	502427	Resistor—Fixed, composition, 270,000 ohm, ±10%, ½ w.		101190	Escutcheon—Radio control panel escutcheon for 6HF1 WALNUT.
R119	522410	Same as R116		100898	Escutcheon—Radio control panel escutcheon for 6HF2
R120, R121	502247	Resistor—Fixed, composition, 4700 ohm, ±10%, ½ w.		101048	Escutcheon—Record changer drawer escutcheon for 6HF1
R122	502022	Resistor—Fixed, composition, 22 ohm, ±10%, ½ w.		100899	Escutcheon—Record changer drawer escutcheon for 6HF2
R123A, B, C	100533	Resistor—Fixed, wire wound, voltage divider: comprising of 1 section 2100 ohm, ±10%, 3 w. 1 section 255 ohm, ±5%, 1½ w., and 1 section 255 ohm, ±5%, 1½ w.		74308	Hinge—Door hinge (1 set) (2 req'd) for 6HF2
R124	502022	Same as R122		79957	Insulator—Rubber insulator for record changer mtg.
R125, R126	502247	Same as R120		100556	Jewel—Indicator lamp jewel—red—phono
R127, R128	502022	Same as R122		100555	Jewel—Indicator lamp jewel—green—tape
R129, R130	522412	Resistor—Fixed, composition, 120,000 ohm, ±10%, 2 w.		13103	Jewel—Indicator lamp jewel—amber—radio
R131	502247	Same as R120		100544	Knob—Volume control knob (small) with spring
R132	522018	Part of Speaker Assembly		100541	Knob—Record equalization control knob (large) with spring
T101	100535	Transformer—Power transformer		100542	Knob—Tone controls, tuning & function switch control knob (small) with spring (4 req'd)
T102	100536	Transformer—Output transformer		100572	Knob—Tone controls & function switch knob (large) with spring (3 req'd)
	70392	Cord—Power cord & plug		100543	Knob—Tuning control knob (large) with spring
	79295	Grommet—Rubber grommet strain relief for power cord (1 set)		100641	Nameplate—"Orthophonic High Fidelity RCA Victor" nameplate—Model 6HF2
	70391	Plate—Insulating plate for audio input socket		76894	Nut—#10-32 springnut for record changer mtg. stud
	18469	Plate—Mounting plate for electrolytic capacitor (C101A, B, C102A, B)		100646	Roller—Roller for L.H. & R.H. slide mechanism (2 req'd) each slide—Model 6HF1
	28452	Plate—Mounting plate for electrolytic capacitor (C103A, B)		100810	Screw—#6-32 knurled thumb screw for storage of tape recorder capstan and roller
	76534	Shield—Tube shield		96824	Screw—#10-32 x 1¼" oval head for mounting tape recorder to drawer
	73117	Socket—Tube socket, miniature, 7 pin for V102, V103		100644	Slide—L.H. slide mechanism for drawer—Model 6HF1
	31251	Socket—Tube socket, octal for V104 to V108 Incl.		100645	Slide—R.H. slide mechanism for drawer—Model 6HF1
	78564	Socket—Tube socket, miniature, 9 pin for V101A, B		100908	Slide—Slide mechanism for drawer—Model 6HF2
		<b>SPEAKER CABINET ASSEMBLIES RK-196 (Model 6-HF-1 only)</b>		100530	Spacer—Wood spacer with tee nuts for mounting "Victrola" escutcheon—Model 6HF1 Mahog.
C108	100565	Capacitor—Electrolytic, 4 mf., 10 v. a.c. type		100932	Spacer—Wood spacer with tee nuts for mounting "Victrola" escutcheon — Model 6HF1 WALNUT.
C109, C110	100509	Capacitor—Electrolytic, 8 mf., 10 v. a.c. type		100933	Spacer—Wood spacer with tee nuts for mounting tape recorder drawer escutcheon —Model 6HF1 MAHOGANY.
P102	100510	Connector—4 pin male connector		100934	Spacer—Wood spacer with tee nuts for mounting tape recorder drawer escutcheon —Model 6HF1 WALNUT.
R132	522018	Resistor—Fixed, composition, 18 ohm, ±10%, 2 w.		100248	Spring—Conical spring for record changer mtg.
	100651	Cone—Speaker cone & voice coil kit for 15" speaker (100602)		79339	Stud—Record changer mounting stud
	100467	Housing—Plastic housing for mounting H.F. speakers		39437	Washer—Felt washer for tape recorder drawer
	100602	Speaker—15" P.M. complete with cone & voice coil (16 ohms)		79340	Washer—Paper insulating washer for record changer mtg.
	100603	Speaker—5" P.M. complete with cone & voice coil (8 to 10 ohms)		78753	Washer—Rubber insulating washer for mtg. record changer
	100465	Speaker—3½" P.M. complete with cone & voice coil (6 to 8 ohms)		61455	Washer—Vallutex washer for dial
		<b>SPEAKER ASSEMBLIES (Model 6-HF-2 only)</b>			
C111	100509	Capacitor—Electrolytic, 8 mf. ±25%, 10 v. a.c. type			
P102	100510	Connector—4 pin, male connector			

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