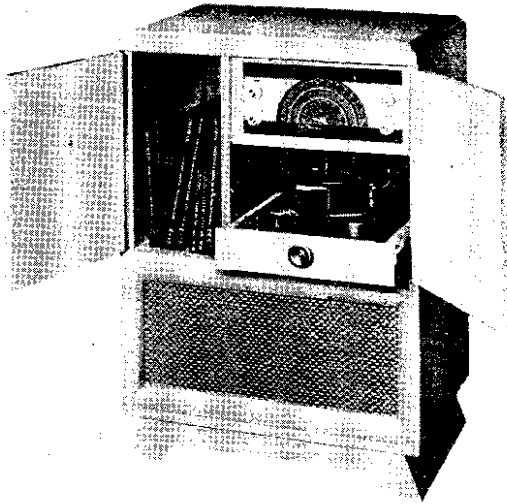
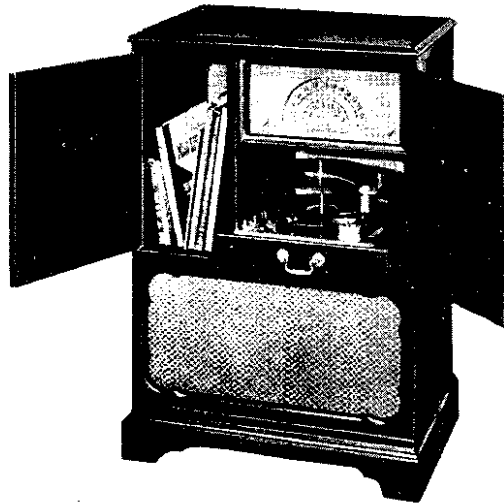


MODELS 533,
534, Ch. 167



MODEL 533
Modern Style
Oak Cabinet



MODEL 534
Traditional Style
Mahogany Cabinet

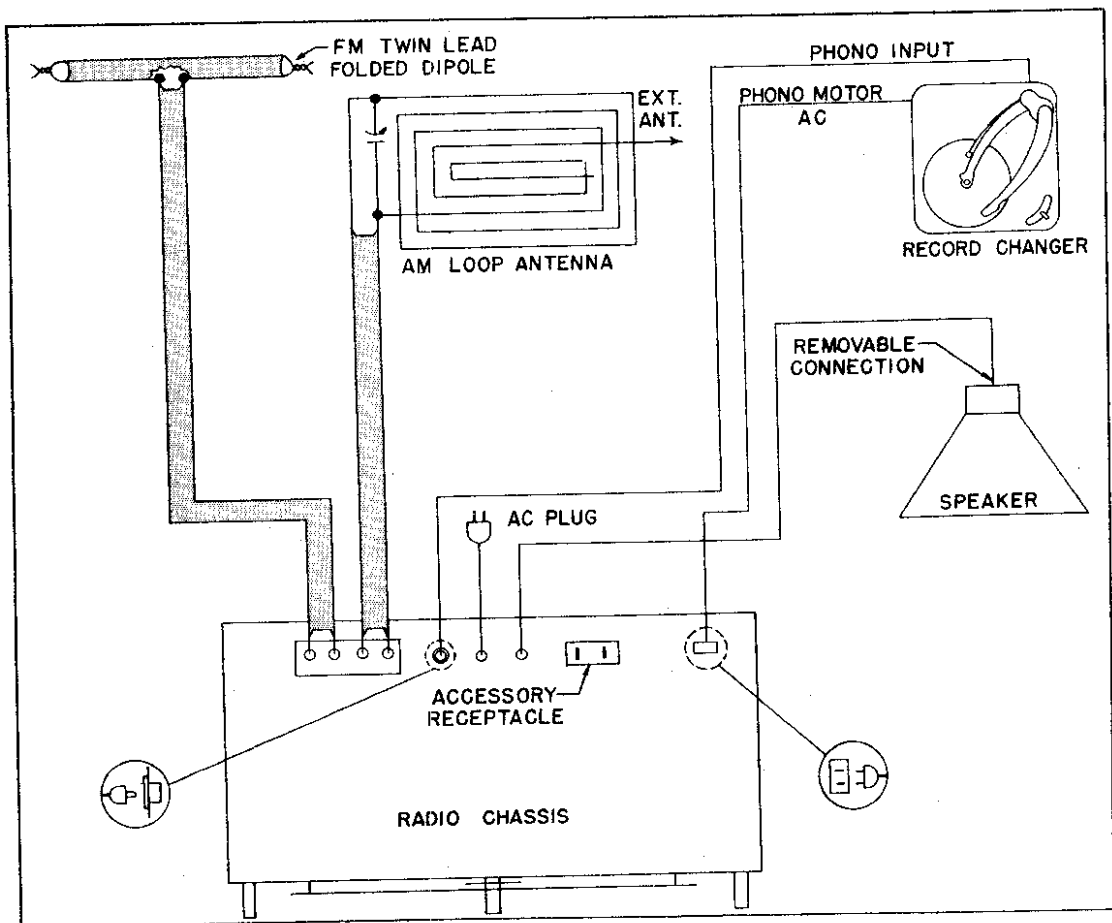
SPECIFICATIONS

Line Voltage	115V AC	60 cps	Cabinet*	
Power Consumption		95 Watts	Height	36-1/2"
Tuning Ranges			Width	26-1/4"
AM	535 KC to 1650 KC		Depth	17-1/16"
FM	88 MC to 108 MC		Record Changer	Automatically plays 1" stack of 7", 10", 12" records at 33-1/3 rpm, 45 rpm, or 78 rpm.
Number of Tubes		8		
Audio Power Output		3.5 Watts		
Speaker Type		12" PM		

* Where there are slight variations in certain of the dimensions for the two models, the largest value is listed.

MAJOR COMPONENTS

Cabinet		Dial Glass	747
Model 533	7591	Backboard	3714
Model 534	7590	Record Changer Drawer	6656
Radio Chassis	167	Knobs	
Speaker	9070	Tuning	33517A
Antenna		Off-On-Tone	33517A
AM Assembly	55214	Volume	33517A
FM Assembly	55218	Band Switch	33517C
Record Changer	9078		



BLOCK DIAGRAM

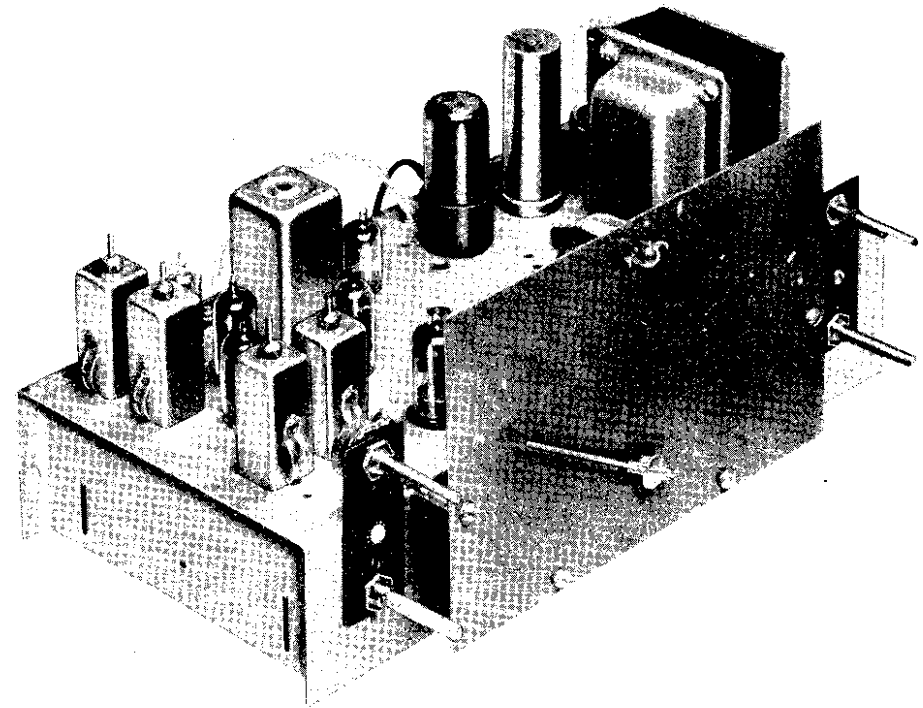


Figure 1. Chassis 167

MODELS 533,
534, Ch. 167

ELECTRICAL AND MECHANICAL DATA

Power Requirements:
Operating Voltage

115 V AC 60 cps

Watts:

95

Tuning Range:

AM 535 KC to 1650 KC
FM 88 MC to 108 MC

Audio Power Output

3.5 Watts

Output Impedance

3.2 ohms at 400 cps

Intermediate Frequencies:

AM 455 KC
FM 10.7 MC

FM Antenna Input Impedance 300 ohms, balanced

Chassis 167 is an 8 tube combination AM-FM radio receiver. It employs an indoor loop antenna for AM reception and is designed to be used with an indoor FM antenna in normal signal areas and an outside FM antenna and a 300 ohm, balanced transmission line in weak signal areas. The indoor antenna is located in the receiver cabinet, and it should be disconnected from the FM antenna terminal posts when an outside antenna is used. The chassis is mounted in place horizontally on rubber shock mounts which rest on wooden blocks that are bolted in the chassis from below. Dial stringing details are indicated in figure 2. Dial calibration appears on the dial glass mounted on the front of the cabinet.

TUBE COMPLEMENT

1	12AT7	FM Oscillator-Converter	V1
1	6BE6	AM Oscillator-Converter	V7
1	6BA6	AM-FM 1st IF Amplifier	V2
1	6BA6	FM 2nd IF Amplifier	V3
1	6AL5	FM Detector	V4
1	6AT6	AM Detector-AVC - 1st Audio (AM-FM)	V5
1	6V6GT	Power Output	V6
1	5Y3GT	Rectifier	V8

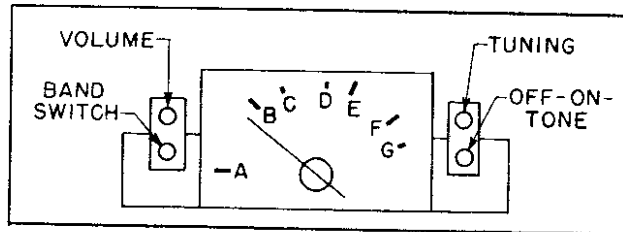


Figure 3. Location of Controls

Note: The alignment calibration marks which appear on the dial background plate are shown lettered for identification purposes. Pointer should be at "A" when condenser is in full mesh.

CONTROLS

Operation of the volume and tuning controls is straightforward. The BAND SWITCH has three positions for selecting one of the following: PHONO, AM radio, or FM radio. The PHONO position is obtained with the switch in the extreme counterclockwise position, and the other two positions are selected in the order listed by clockwise rotation of the band switch control shaft. The fourth control is the OFF-ON-TONE control. Extreme counterclockwise rotation of the control shaft turns the receiver off. Clockwise control turns the receiver on and continuously changes the tone from bass to treble.

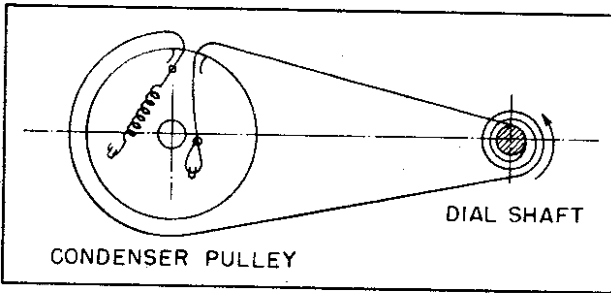


Figure 2. Dial Stringing

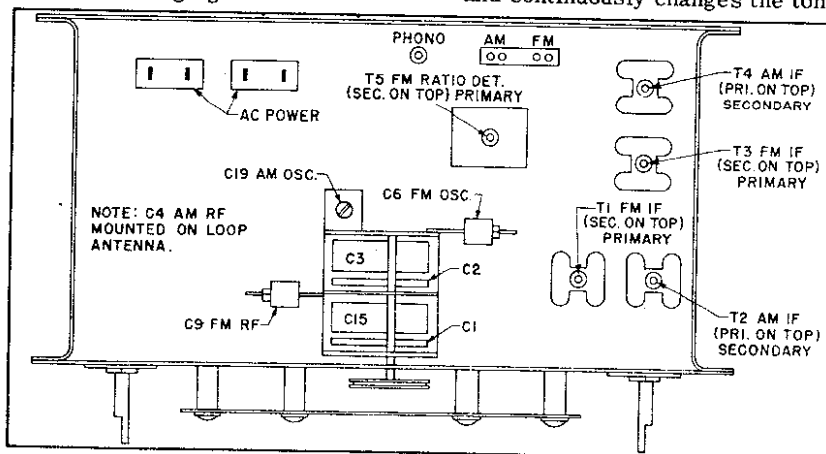


Figure 4. Trimmer Location - Bottom View

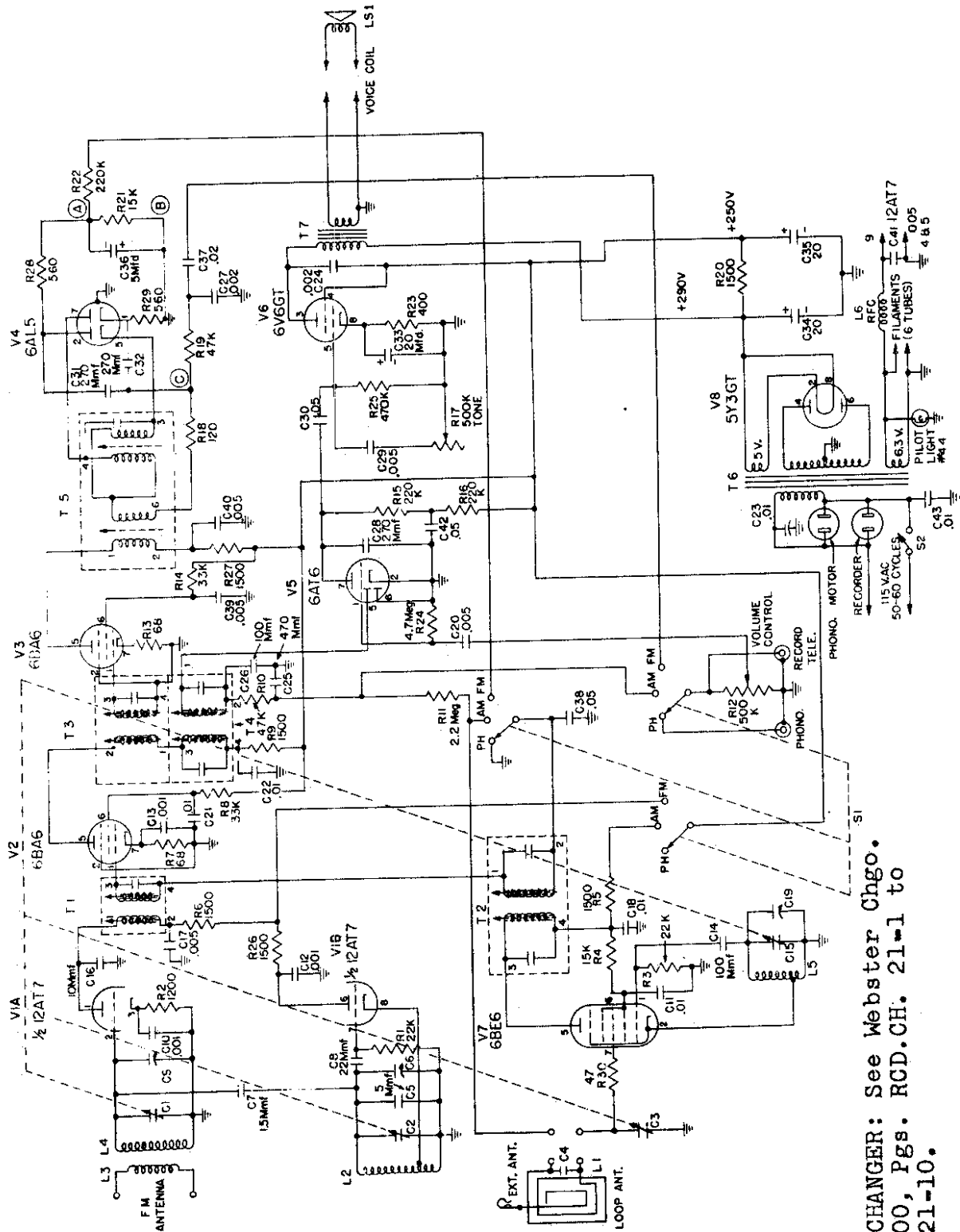
MODELS 533,
534, Ch. 167

Procedure:

The AM section should be completely aligned before beginning the FM alignment. For AM alignment the generator is coupled to the receiver by placing the "hot" lead next to the antenna loop so that lead and loop wire form a condenser. The voltmeter is connected across the voice coil and switched to a low AC scale. The coupling for FM alignment is two 150 ohm composition resistors, one in series with each generator lead. Before tuning the ratio detector transformer, solder two 100K ohm composition resistors in series from point "A", shown in figure 6, to ground. Remove them before aligning the FM RF section.

Step No.	Band Switch Position	Signal Generator Frequency	Connect Signal To	Condenser Setting (See Fig. 3)	Voltmeter	Adjust	Instructions
1	AM	455 KC Mod.	6BE6 V7 Pin 7	Full Open	Across Voice Coil	T2 Pri., Sec. T4 Pri., Sec.	Adjust for max. output. Use as low a signal input as possible.
2	"	1650 KC Mod.	Antenna Loop as described above.	"	"	C19 AM Osc. Trimmer	"
3	"	1410 KC	"	F	"	C4 AM RF Trimmer	"
4	"	600 KC	"	B	"	Plates of C3	Bend plates as required. Adjust for max. reading.
5	FM	10.7 MC CW	FM Ant. Terminals	Full Open	Between point A and ground.	T1 Pri., Sec. T3 Pri., Sec. T5 Pri. only	Adjust for max. voltmeter reading.
6	"	"	"	"	Between junction of two 100K resistors added and point C.	T5 Sec.	Adjust for zero reading, using a low signal input to avoid overloading.
7	"	107 MC CW	"	G	Point A to ground.	C6 FM Osc. Trimmer	Remove the two 100K resistors. Adjust for max. reading. Make certain receiver oscillator freq. is 10.7 MC above incoming signal freq.
8	"	"	"	"	"	C9 FM RF Trimmer	"
9	"	98 MC CW	"	D	"	Plates of C1	Bend plates as required. Adjust for max. reading.
10	"	90 MC CW	"	C	"	"	"

**SCHEMATIC DIAGRAM
CHASSIS 167**



RECORD CHANGER: See Webster Chgo.
Model 100, Pgs. RCD.CH. 21-1 to
RCD.CH. 21-10.

MODELS 533, 534,
Ch. 167

Symbol	Part No.	Value	Tol.	Watts or Volts	Type
R5	4534	1.5K	20%		
R6	4534	1.5K	20%		
R7	4524	68	20%		
R8	4556	33K	20%	1 W	
R9	4534	1.5K	20%		
R10	4504	47K	20%		
R11	4502	2.2 meg	20%		
R12	4842	.5 meg Pot.	(Volume Control)		
R13	4524	68	20%		
R14	4556	33K	20%	1 W	
R15	4500	220K	20%		
R16	4500	220K	20%		
R17	4841	.5 meg Pot. w/Switch	(Tone Control)		
R18	4546	120	10%		
R19	4504	47K	20%		
R20	4701	1.5K	5%	6-1/2 W	Wire Wound
R21	4521	15K	20%		
R22	4500	220K	20%		
R23	4587	400	10%	1 W	
R24	4544	4.7 meg	20%		
R25	4506	470K	20%		
R26	4534	1.5K	20%		
R27	4534	1.5K	20%		
R28	4507	560	10%		
R29	4507	560	10%		
R30	4508	47	20%		

Symbol	Part No.	Value	Tol.	Watts or Volts	Type
C1	4410	4 Section Variable			
C2	4313	Trimmer (AM Section)			
C3	4028	5 mmf	10%		Ceramic N750
C4	4318	1.5 mmf	10%		Mica
C5	4024	22 mmf	10%		Ceramic N150
C6	4021	1000 mmf	20%		
C7	4025	.01	20%	400 V	Ceramic HI-K
C8	4025	1000 mmf	20%		Paper
C9	4000	1000 mmf	20%		Ceramic HI-K
C10	4410	Part of 4 Section Variable			
C11	4027	10 mmf	10%		Mica
C12	4029	5000 mmf	20%		Ceramic
C13	4112	.01	20%	400 V	Ceramic HI-K
C14	4112	.01	20%	400 V	Paper
C15	4313	5000 mmf	20%	400 V	
C16	4029	5000 mmf	20%		
C17	4112	.01	20%	400 V	Ceramic HI-K
C18	4112	.01	20%	400 V	Paper
C19	4313	5000 mmf	20%	400 V	
C20	4029	5000 mmf	20%		
C21	4112	.01	20%	400 V	Ceramic HI-K
C22	4112	.01	20%	400 V	Paper
C23	4105	.01	20%	600 V	Molded Phenolic
C24	4118	.002	20%	600 V	Paper
C25	4003	470 mmf	20%		Mica
C26	4000	100 mmf	20%		Mica
C27	4118	.002	20%	600 V	Paper
C28	4001	270 mmf	20%		Mica
C29	4102	.005	20%	600 V	Paper
C30	4101	.05	20%	400 V	Paper
C31	4001	270 mmf	20%		Mica
C32	4001	270 mmf	20%		Mica
C33	4200	20	20%	25 V	Electrolytic
C34	4209	20	20%	450 V	Electrolytic
C35	4106	5	20%	450 V	Electrolytic
C36	4100	.02	20%	400 V	Paper
C37	4100	.05	20%	200 V	Paper
C38	4029	5000 mmf			Ceramic HI-K
C39	4029	5000 mmf			Ceramic HI-K
C40	4029	5000 mmf			Ceramic HI-K
C41	4029	5000 mmf			Paper
C42	4101	.05	20%	400 V	Molded Phenolic
C43	4105	.01	20%	400 V	
R1	4501	22K	20%		
R2	4553	1.2K	10%		
R3	4501	22K	20%		
R4	4539	15K	20%	1 W	

Symbol	Description	Part No.
L1	Loop Antenna (AM) Assembly with mounting bracket	55214
L2	Oscillator Coil (FM)	5247
L3	Antenna Primary (FM)	5258
L4	Antenna Secondary (FM)	5248
L5	Oscillator Coil (AM)	5282
L6	Filament Choke	5266
T1	1st FM IF Transformer	5284
T2	1st AM IF Transformer	5286
T3	2nd FM IF Transformer	5285
T4	2nd AM IF Transformer	5287
T5	Ratio Detector Transformer	5288
T6	Power Transformer	5012
T7	Output Transformer	5122
S1	Band Switch	6024
S2	Off-On Switch	(Part of R17)
Dial Glass	747	
Dial Background Plate	2217C	Socket, Miniature
Knob, Indicator	3654C	Socket, Octal
Knob, Plain	3654A	Socket, Phono
Plug, Phono	6203	Socket, Pilot Lamp
Pointer, Dial	518	Socket, AC Power
Socket, 9 pin	6134	Spring, Dial Cable
		Strip, Antenna Terminal
		424