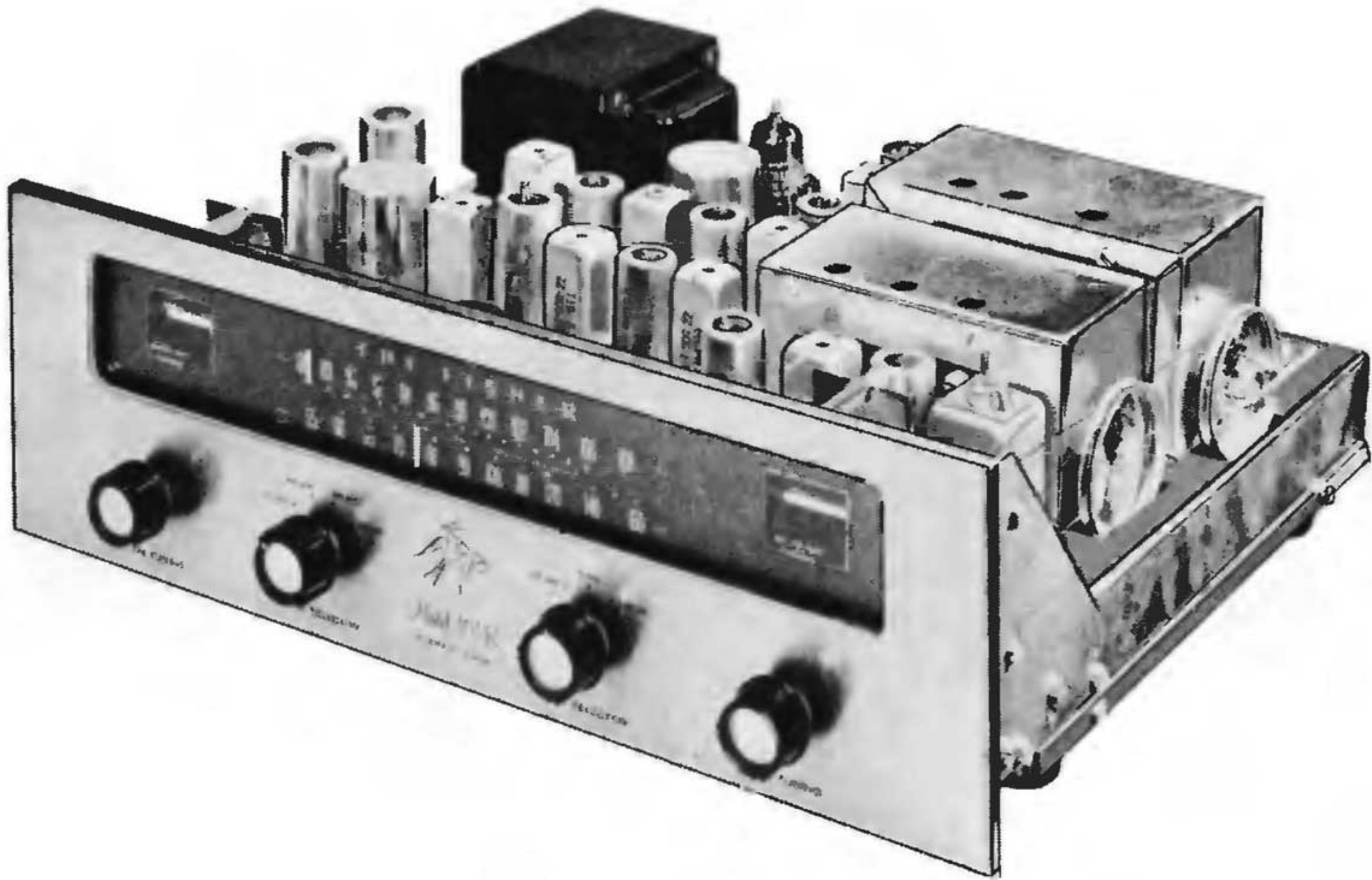
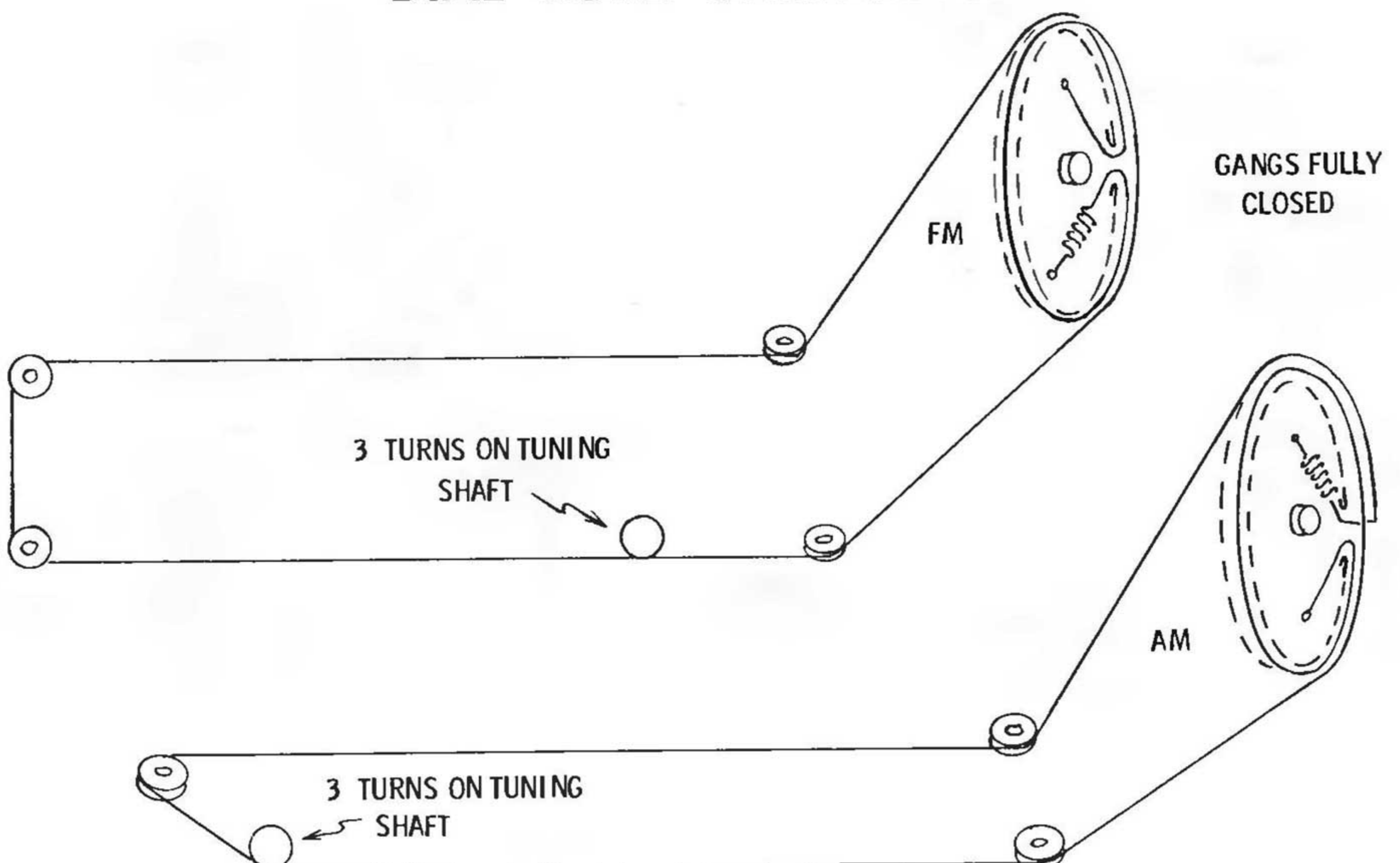


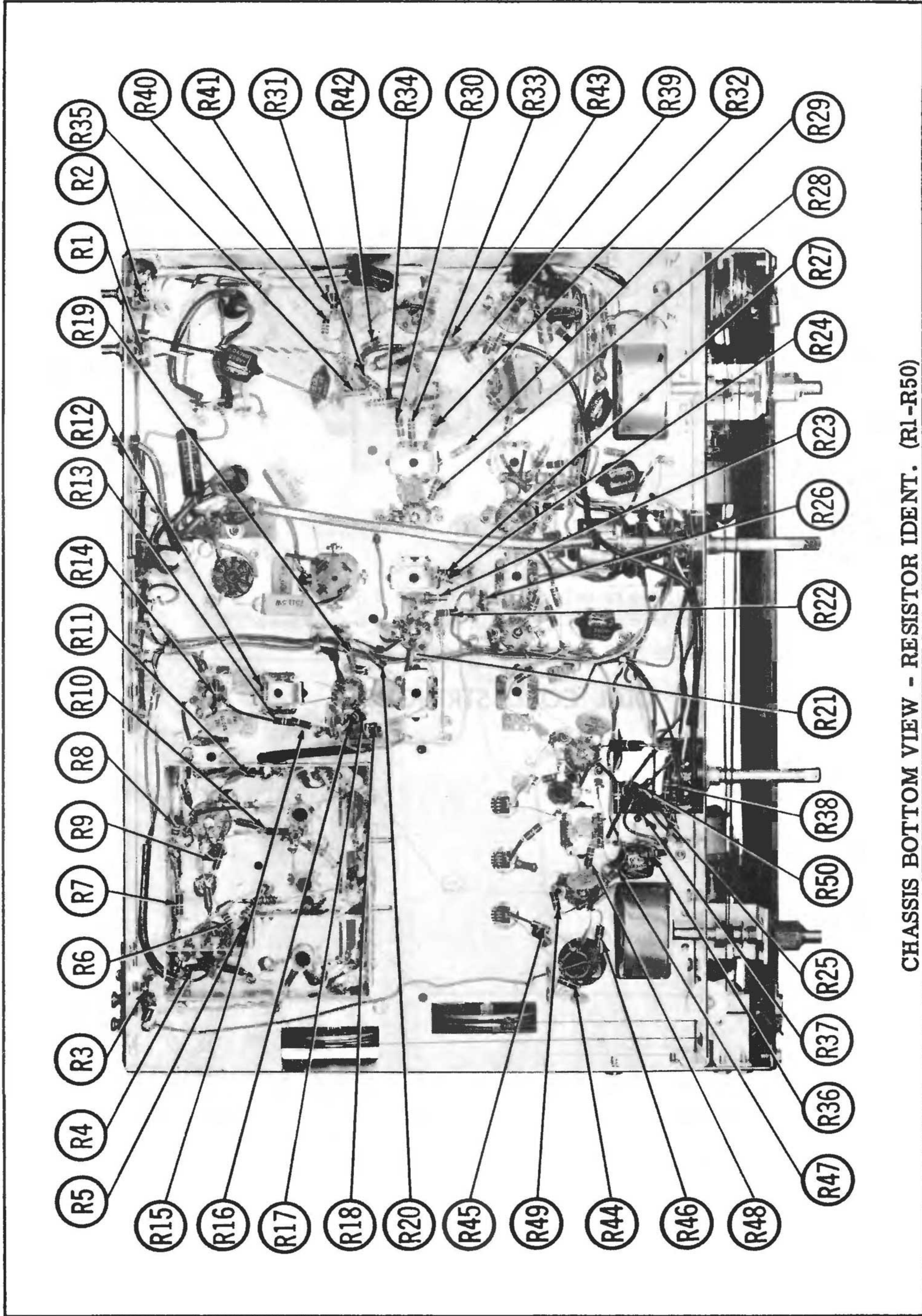
# FISHER MODEL 101-R



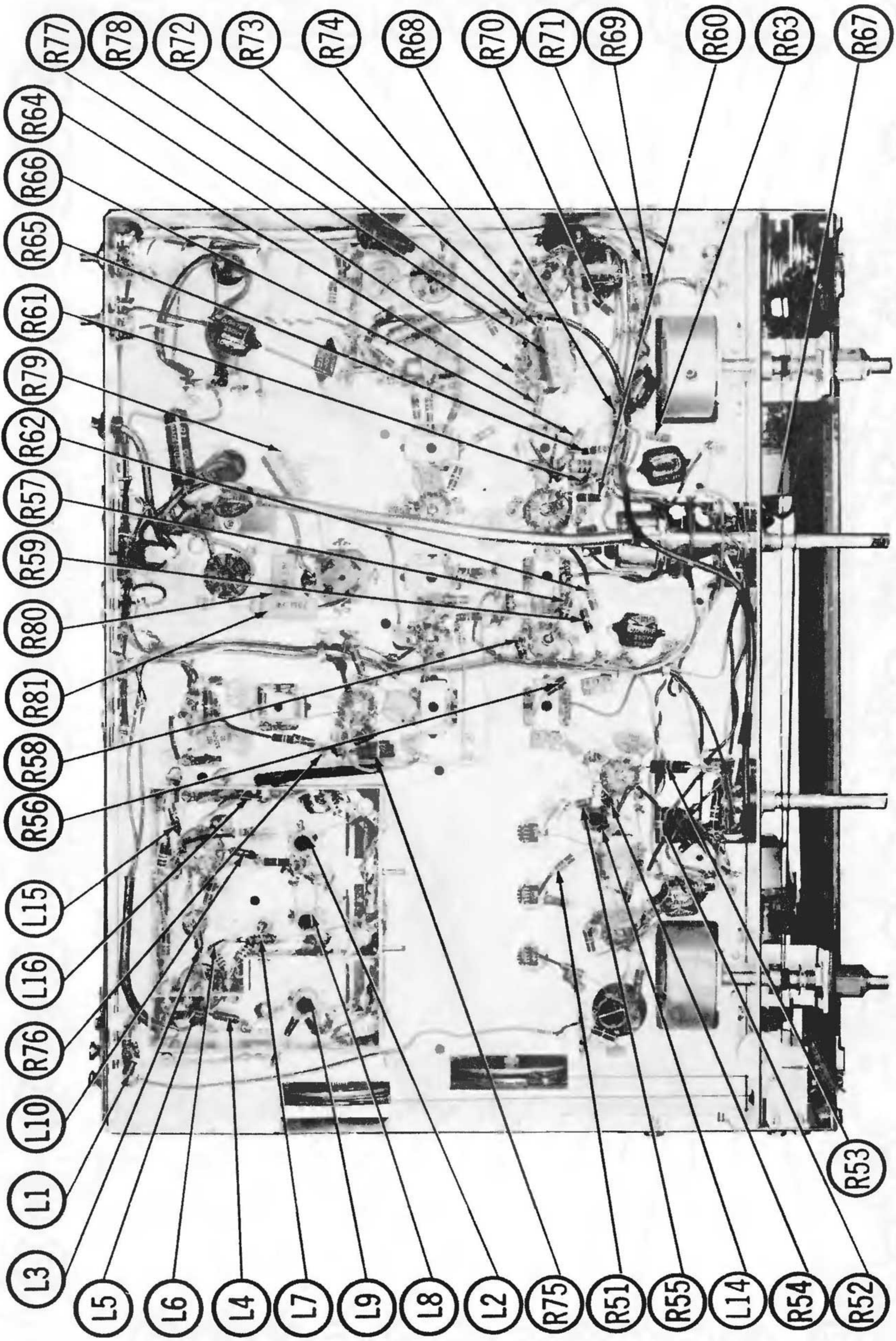
TRADE NAME	Fisher Model 101-R		
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.		
TYPE SET	AC Operated 15 Tube FM-AM Tuner		
POWER SUPPLY	105-125 Volts AC, 50-60 Cycles	RATING	80 Watts, .74 Amp. @117 Volts AC
TUNING RANGE—BROADCAST	515-1680KC	FREQ. MOD.	88-108MC

## DIAL CORD STRINGING

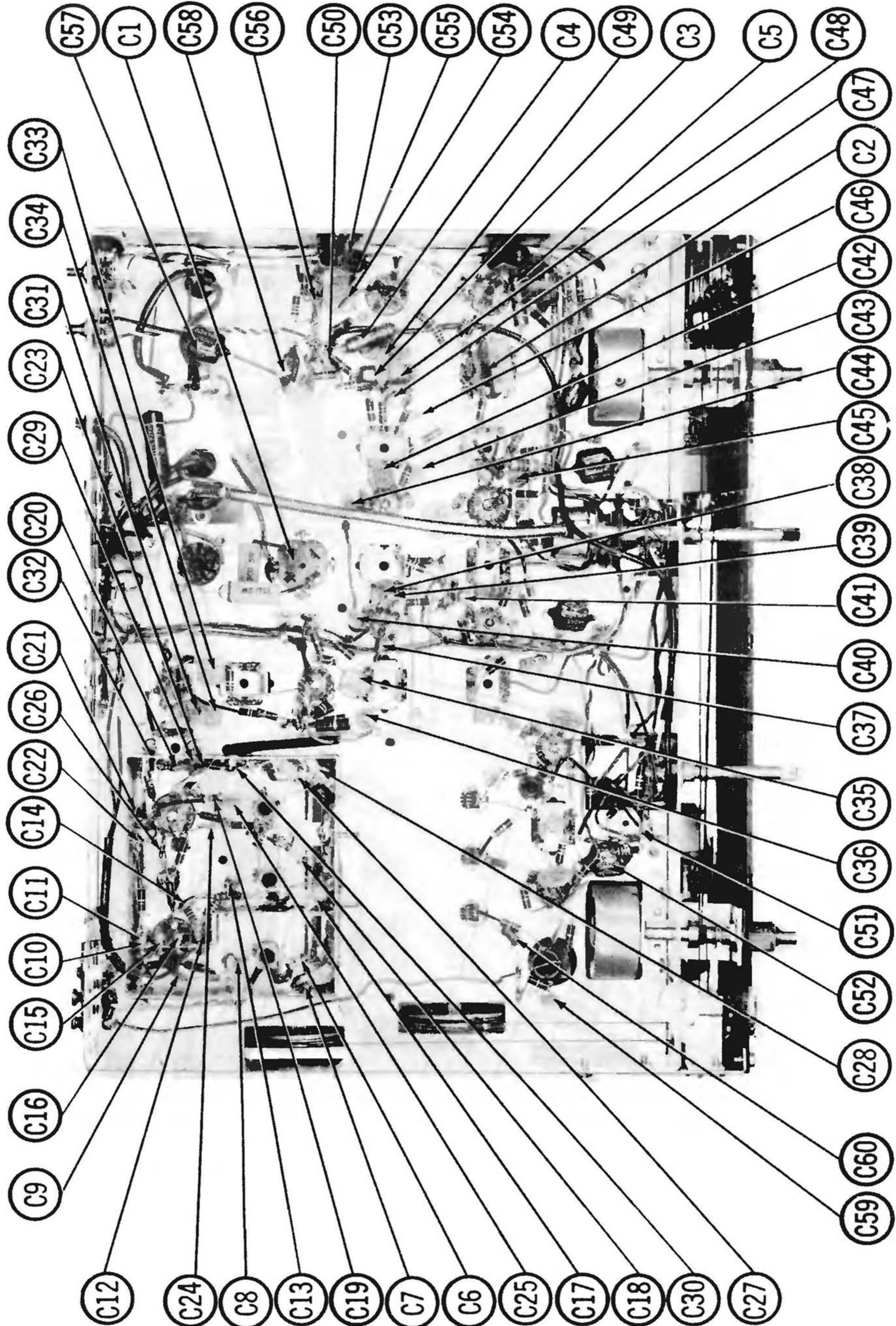




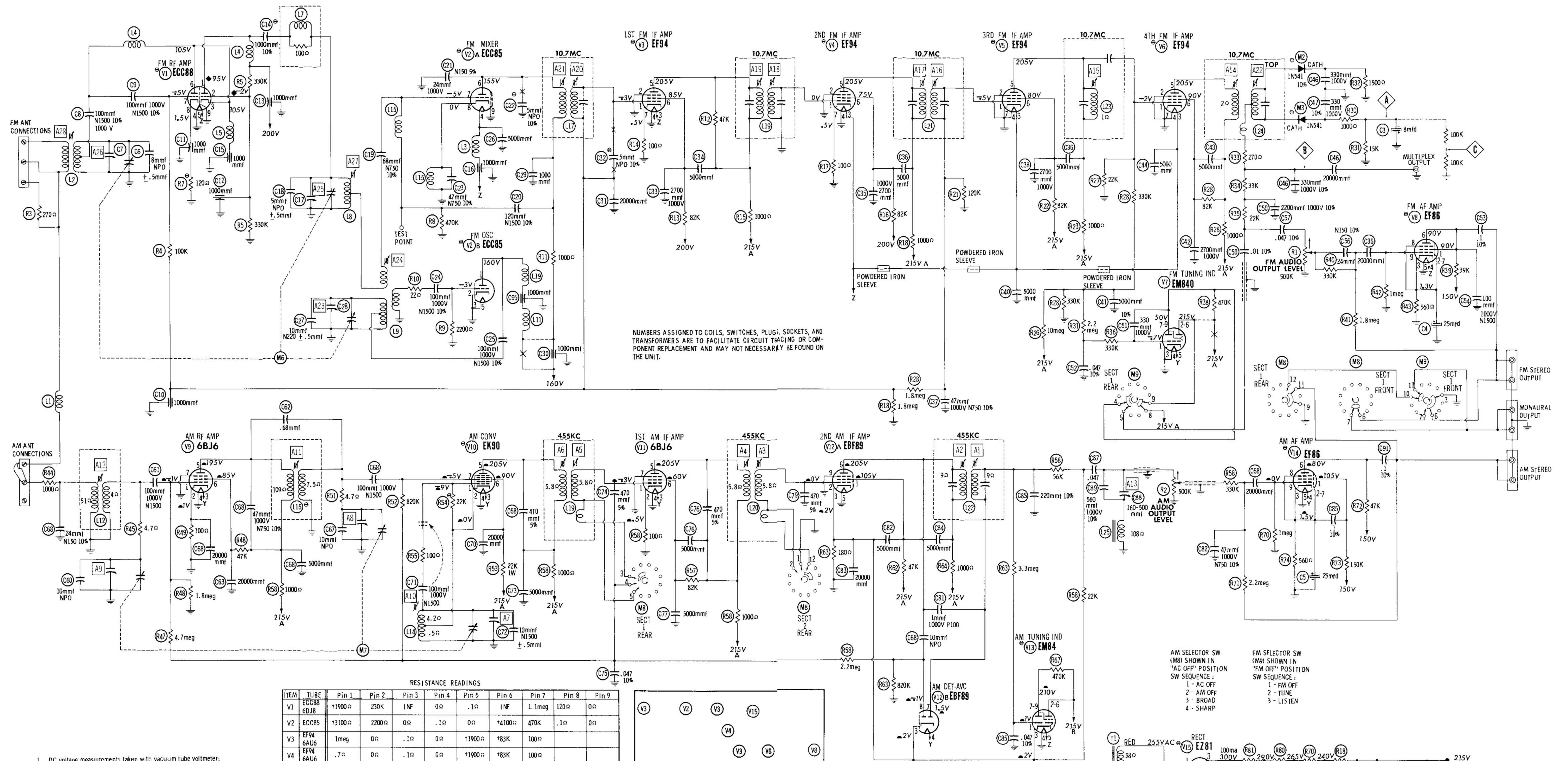
CHASSIS BOTTOM VIEW - RESISTOR IDENT. (R1-R50)



CHASSIS BOTTOM VIEW - INDUCTOR & RESISTOR IDENT. (R51-R81)



CHASSIS BOTTOM VIEW - CAPACITOR IDENT. (C1-C60)



NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

**RESISTANCE READINGS**

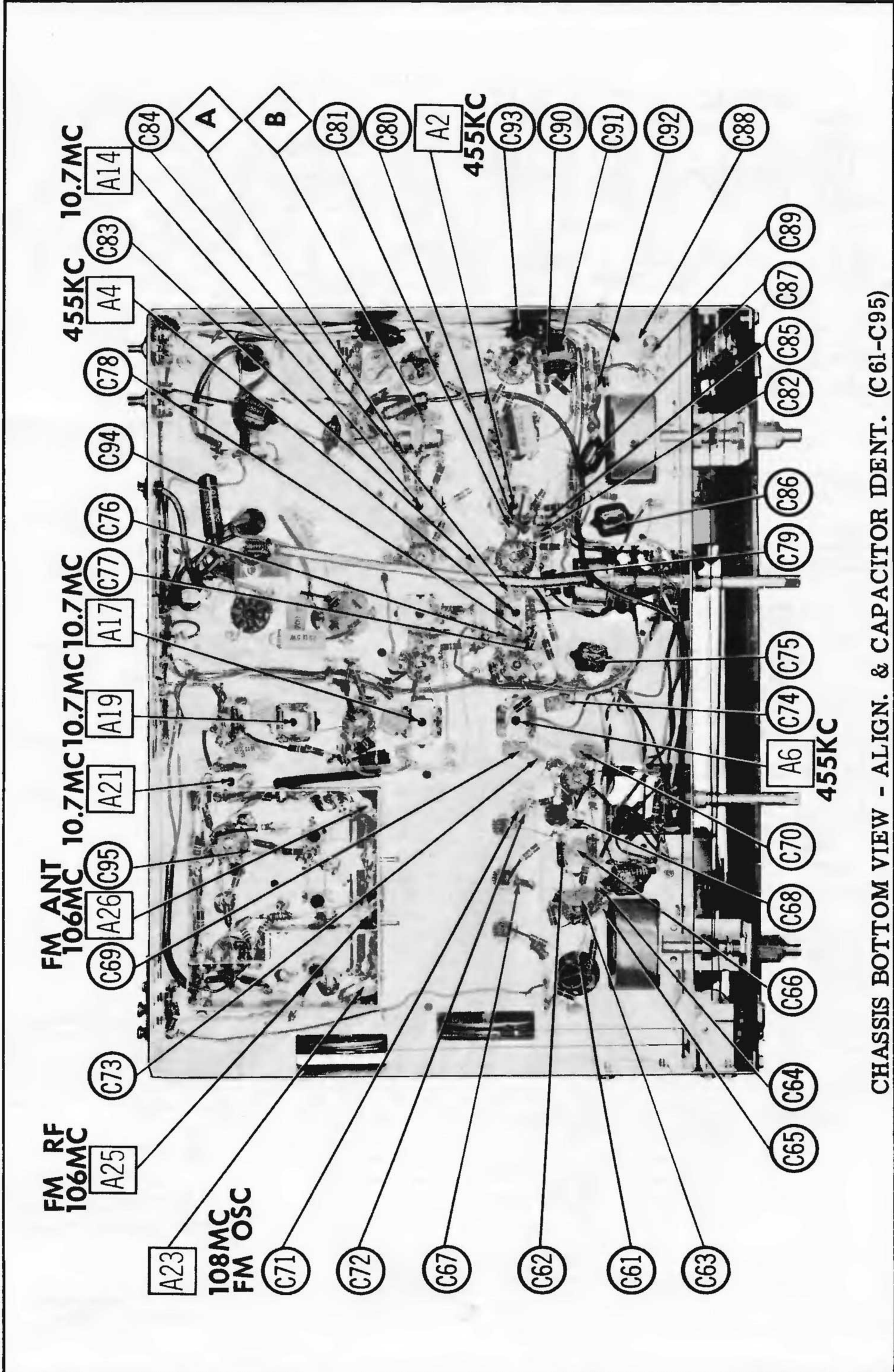
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC88 6DJ8	+1900Ω	230K	1N	0Ω	1N	1.1meg	120Ω	0Ω	
V2	ECC85	+1310Ω	2200Ω	0Ω	.1Ω	0Ω	+4100Ω	470K	.1Ω	0Ω
V3	EF94 6AU6	1meg	0Ω	.1Ω	0Ω	+1900Ω	+83K	100Ω		
V4	EF94 6AU6	.7Ω	0Ω	.1Ω	0Ω	+1900Ω	+83K	100Ω		
V5	EF94 6AU6	120K	0Ω	.1Ω	0Ω	+1900Ω	+83K	0Ω		
V6	EF94 6AU6	22K	0Ω	.1Ω	0Ω	+1900Ω	+83K	0Ω		
V7	EM84	2.7meg	900Ω	0Ω	0Ω	.1Ω	1900Ω	+470K	+900Ω	+470K
V8	EF86 6267	145K	560Ω	560Ω	.1Ω	0Ω	145K	560Ω	560Ω	1meg
V9	6BJ6	1.4meg	100Ω	.1Ω	0Ω	+1900Ω	+148K	0Ω		
V10	EK90 6BE6	22K	.5Ω	.1Ω	0Ω	+1900Ω	+123K	+3meg		
V11	6BJ6	2meg	100Ω	.1Ω	0Ω	+1900Ω	+184K	0Ω		
V12	EF89	+148K	.58Ω	180Ω	.1Ω	0Ω	+1900Ω	.78K	750K	0Ω
V13	EM84	3.2meg	+900Ω	180Ω	0Ω	.1Ω	+1900Ω	+470K	NC	+1470K
V14	EF86 6267	+155K	560Ω	560Ω	.1Ω	0Ω	+53K	560Ω	560Ω	1meg
V15	EZ81 6CA4	58Ω	NC	1Ω	0Ω	.1Ω	NC	61Ω	NC	NC

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.  
 - MEASURED IN "AM" POSITION.  
 † THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.  
 ‡ MEASURED FROM PIN 3 OF V15.  
 § MEASURED FROM PIN 3 OF V1.  
 NC NO CONNECTION

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
  - Socket connections are shown as bottom views.
  - Measured values are from socket pin to common negative.
  - Line voltage maintained at 117 volts for voltage readings.
  - Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
  - Volume control at maximum, no signal applied for voltage measurements.
- SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
- DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
- ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

AM SELECTOR SW (M8) SHOWN IN "AC OFF" POSITION  
 SW SEQUENCE:  
 1 - AC OFF  
 2 - AM OFF  
 3 - BROAD  
 4 - SHARP

FM SELECTOR SW (M9) SHOWN IN "FM OFF" POSITION  
 SW SEQUENCE:  
 1 - FM OFF  
 2 - TUNE  
 3 - LISTEN



FM RF  
106MC

FM ANT  
106MC

10.7MC 10.7MC 10.7MC

455KC 10.7MC

108MC  
FM OSC

455KC

455KC

CHASSIS BOTTOM VIEW - ALIGN. & CAPACITOR IDENT. (C61-C95)

# ALIGNMENT INSTRUCTIONS

## ALIGNMENT INSTRUCTIONS--READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Suggested alignment tools:

A1 thru A6, A15 thru A21.....	GENERAL CEMENT #5097, 8727 WALSCO #2515
A7, A8, A9.....	GENERAL CEMENT #5004, 5008, 5009 WALSCO #2520
A10 thru A13.....	GENERAL CEMENT #8271, 8273, 8275, 8276, 8721, 8722, 9150, 9298, 5003 WALSCO #2516, 2519
A14, A22, A24, A28.....	GENERAL CEMENT #8606, 8606L, 8282, 9295 WALSCO #2526, 2543, 2544, 2545
A23, A25, A26, A27.....	GENERAL CEMENT #5000, 5003, 8276, 8290 WALSCO #2512, 2525

### AM ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .01mfd.	High side to pin 7 (grid) of 6BE6 (V10). Low side to chassis.	455KC (400% Mod.)	AM (Sharp)	Point of non-interference	Across AM output jack	A1, A2, A3, A4, A5, A6	Adjust for maximum output.
2. 200mmf.	High side to AM antenna terminal. Low side to chassis.	1600KC	"	1600KC	"	A7, A8, A9	"
3. "	"	600KC	"	600KC	"	A10, A11, A12	"
4. "	High side to pin 2 (grid) of EBF89 (V12). Low side to chassis.	10KC	"	"	"	A13	Adjust for <u>MINIMUM</u> output.

### FM IF ALIGNMENT USING AM SIGNAL GENERATOR & VTVM

Connect two matched 100K (+1%) resistors in series from point **A** to chassis. The junction of these two resistors is alignment point **C** as shown on the schematic.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5. .01mfd.	High side to pin 7 (grid) of 6AQ8 (V2). Low side to chassis.	10.7MC (Unmod.)	FM	Point of non-interference	DC probe to point <b>A</b> . Common to chassis.	A14, A15, A16, A17, A18, A19, A20, A21	Adjust for maximum deflection.
6. "	"	"	"	"	DC probe to point <b>B</b> . Common to point <b>C</b> .	A22	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

### FM IF ALIGNMENT USING FM SIGNAL GENERATOR & OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
5. .01mfd.	High side to pin 7 (grid) of 6AQ8 (V2). Low side to chassis.	10.7MC (Unmod.)	FM	Point of non-interference	Vert. amp to point <b>A</b> . Low side to chassis.	A14, A15, A16, A17, A18, A19, A20, A21	Disconnect stabilizing capacitor C3. Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
6. "	"	"	"	"	Vert. amp. to point <b>B</b> . Low side to chassis.	A22	Reconnect stabilizing capacitor C3. Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. <b>SLIGHTLY</b> retouch A14 for maximum amplitude and straightness of crossover lines.

### FM RF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
7. Two 120Ω Carbon Resistors	Across FM antenna terminals with 120Ω in each lead.	108MC (45KC Swp.)	FM	108MC	DC probe to point <b>A</b> . Common to chassis.	A23	Adjust for maximum deflection.
8. "	"	88MC	"	88MC	"	A24	"
9. "	"	106MC	"	106MC	"	A25, A26	"
10. "	"	90MC	"	90MC	"	A27, A28	"

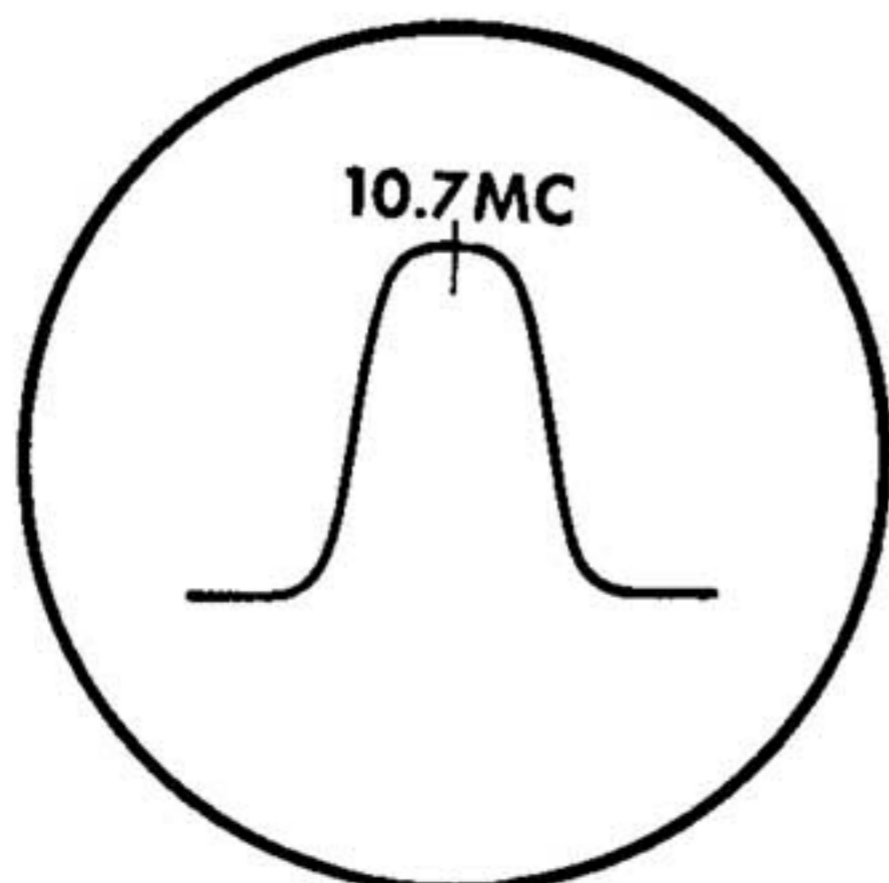


FIG. 1

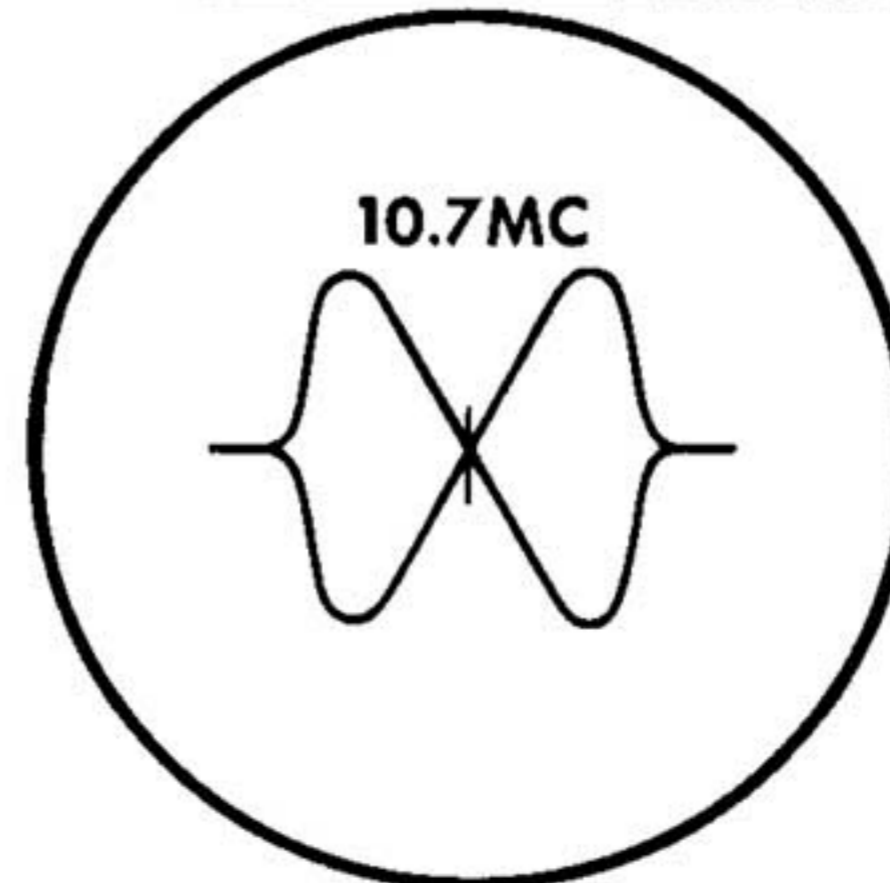
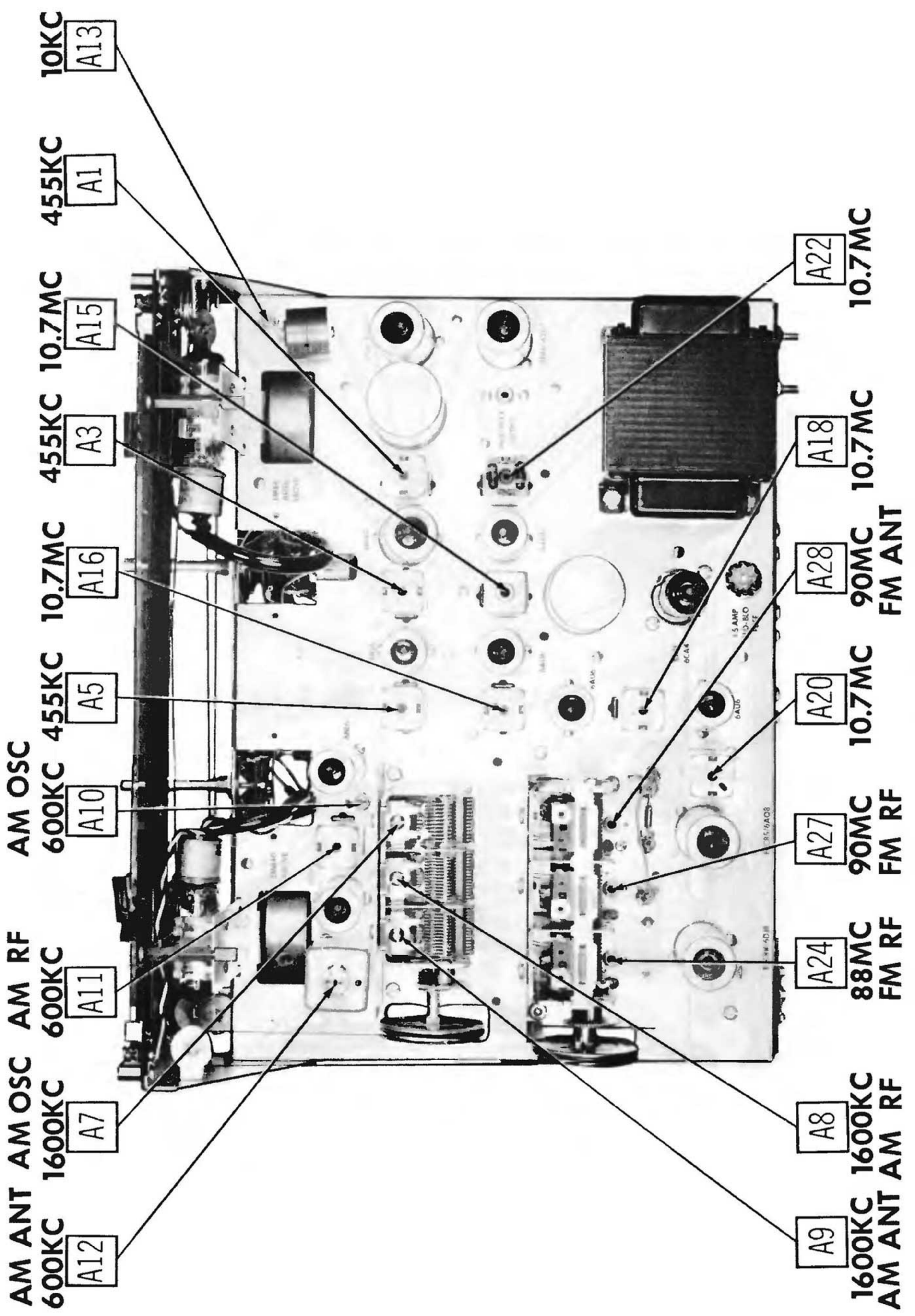
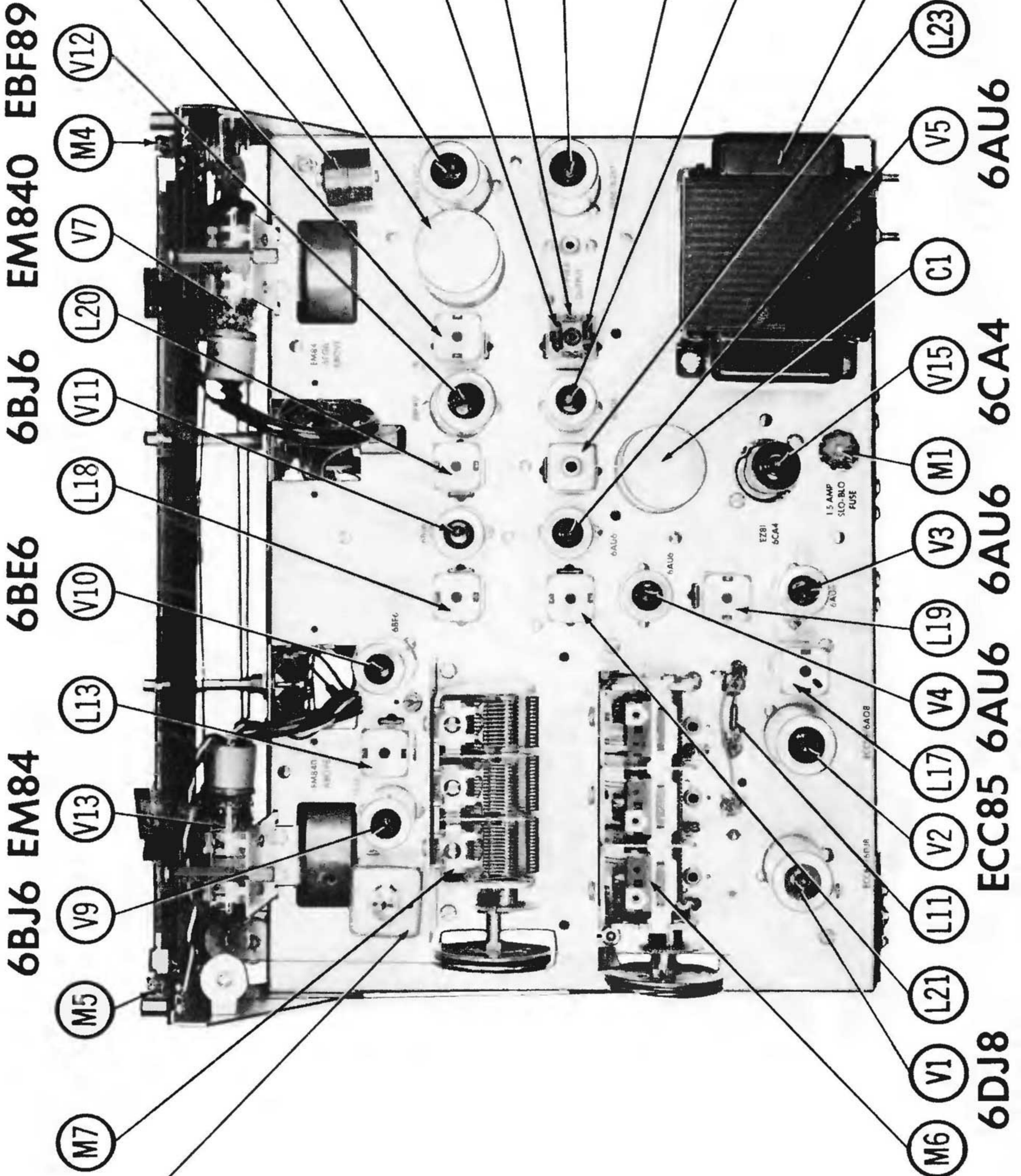


FIG. 2



CHASSIS TOP VIEW - ALIGNMENT IDENT.





CHASSIS TOP VIEW - TUBE, INDUCTOR, MISC. & CAPACITOR IDENT.



# PARTS LIST & DESCRIPTION (continued)

## RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		FISHER PART No.	NOTES	ITEM No.	RATING		FISHER PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R3	270Ω		RC20BF271K		R43	560Ω		RC20BF561K	
R4	100K		RC20BF104K		R44	1000Ω		RC20BF102K	
R5	330K		RC20BF334K		R45	4.7Ω		RC20BF4R7K	
R6	330K		RC20BF334K		R46	1.8meg		RC20BF185K	
R7	120Ω		RC20BF121K	①	R47	4.7meg		RC20BF475K	
R8	470K		RC20BF474K		R48	47K		RC20BF473K	
R9	2200Ω		RC20BF222K		R49	100Ω		RC20BF101K	
R10	22Ω		RC20BF220K		R50	1000Ω		RC20BF102K	
R11	1000Ω		RC20BF102K		R51	4.7Ω		RC20BF4R7K	
R12	47K		RC20BF473K		R52	620K		RC20BF824K	
R13	62K		RC20BF823K		R53	22K	1	RC30BF223K	②
R14	100Ω		RC20BF101K		R54	22K		RC20BF223K	
R15	1000Ω		RC20BF102K		R55	100Ω		RC20BF101K	
R16	82K		RC20BF823K		R56	1000Ω		RC20BF102K	
R17	100Ω		RC20BF101K		R57	62K		RC20BF823K	
R18	1000Ω		RC20BF102K		R58	100Ω		RC20BF101K	
R19	1.8meg		RC20BF185K		R59	1000Ω		RC20BF102K	
R20	1.8meg		RC20BF185K		R60	2.2meg		RC20BF225K	
R21	120K		RC20BF124K		R61	820K		RC20BF624K	
R22	82K		RC20BF823K		R62	47K		RC20BF473K	
R23	1000Ω		RC20BF102K		R63	180Ω		RC20BF181K	
R24	330K		RC20BF334K		R64	1000Ω		RC20BF102K	
R25	330K		RC20BF334K		R65	3.3meg		RC20BF335K	
R26	10meg		RC20BF106K		R66	56K		RC20BF563K	
R27	22K		RC20BF223K		R67	470K		RC20BF474K	
R28	82K		RC20BF823K		R68	22K		RC20BF223K	
R29	1000Ω		RC20BF102K		R69	330K		RC20BF334K	
R30	1000Ω		RC20BF102K		R70	1meg		RC20BF105K	
R31	15K		RC20BF153K		R71	2.2meg		RC20BF225K	
R32	1500Ω		RC20BF152K		R72	47K		RC20BF473K	
R33	270Ω		RC20BF271K		R73	150K		RC20BF154K	
R34	33K		RC20BF333K		R74	560Ω		RC20BF561K	
R35	22K		RC20BF223K		R75	2200Ω	1	RC30BF222K	
R36	330K		RC20BF334K		R76	1000Ω		RC20BF102K	
R37	2.2meg		RC20BF225K		R77	5600Ω		RC20BF562K	
R38	470K		RC20BF474K		R78	270Ω	5	R684-141	
R39	39K		RC20BF393K		R79	270Ω	5	R684-141	
R40	330K		RC20BF334K		R80	270Ω	5	R684-141	
R41	1.8meg		RC20BF185K		R81	75Ω	5	R684-140	
R42	1meg		RC20BF105K						

① Some versions may use 1200Ω in this application (Part #RC20BF122K).  
 ② Some versions may use 33K in this application (Part #RC20BF333K).

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		FISHER PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	FM Ant. Coil	L50066-8						3.3uh
L2	FM Ant. Trans.	L682-124						
L3	Fl. Choke	L50066-3	19-1000	19-1000	BC-561	4602		1.2uh
L4	RF Choke	L50066-3	19-1000	19-1000	BC-561	4602		1.2uh
L5	Cathode Choke	L50066-19						.56uh
L6	RF Choke	L50066-19						.56uh
L7	RF Choke	L629-180						3 turns on 100Ω
L8	FM RF Coil	L682-125						
L9	FM Osc. Coil	L682-126						
L10	RF Choke	L50066-3	19-1000	19-1000	BC-561	4602		1.2uh
L11	RF Choke	L50066-3	19-1000	19-1000	BC-561	4602		1.2uh
L12	AM Ant. Trans.	L629-171						
L13	AM RF Coil	L556-125 ①						
L14	AM Osc. Coil	L550-122	14-1055	14-1055		70-OSC*		*Disregard tap
L15	RF Choke	L50066-3	19-1000	19-1000	BC-561	4602		1.2uh
L16	Cathode Choke	L50066-18						.56uh
L17	1st FM IF Trans.	ZZ682-117	16-3490▲	16-3490▲		1463-PC▲		▲Remove C32
L18	1st AM IF Trans.	ZZ509-132						
L19	2nd FM IF Trans.	ZZ629-142	16-3487	16-3487	FM-254	1463		
L20	2nd AM IF Trans.	ZZ509-132						

## COILS (cont)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		FISHER PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L21	3rd FM IF Trans.	ZZ629-142	16-3487	16-3487	FM-254	1463		
L22	3rd AM IF Trans.	ZZ2984	16-6756	16-6758	BC-353	12-C2	RF-2	
L23	FM Limiter	L670-145						
L24	Ratio Detector	ZZ592-170						
L25	10KC Filter	L644-120						295MH

① Alternate Part #L670-151

## TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	FISHER PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117V @ .74A	510 VCT @ .100A	6.3V @ 2.5A	T664-124						
	SEC. 3	SEC. 4	SEC. 5							
	6.3V @ 2.6A									

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			FISHER PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG	1½A 125V S/B	F684-143		31301.5 (1½A 125V S/B)	342012	MDL 1½	HKP-CC

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		FISHER PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N541*		1N636	1N295	FM Detector (Pigtail)
M3	1N541*		1N636	1N295	FM Detector (Pigtail) Matched

\* Some versions may use 1N542 in this application (Part #V-1N542).

## MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M4	Lamp	I50082	7V, 2W
M5	Lamp	I50082	7V, 2W
M6	Tuning Cap.	C662-113	FM, 3 Gang
M7	Tuning Cap.	C684-127	AM, 3 Gang (Ant. 10-505mmf, RF. 10-503mmf, Osc. 7-138mmf)
M8	Switch	S684-123	AM Selector (4 Position, Rotary Wafer Type)
M9	Switch	S684-120	Includes Power On-Off (SPST, Snap Type) FM Selector (3 Position, Rotary Wafer Type)

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors  
 8524 (Stranded) Available in Ten Colors  
 Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)  
 1725-K (7½ Ft. Length)