

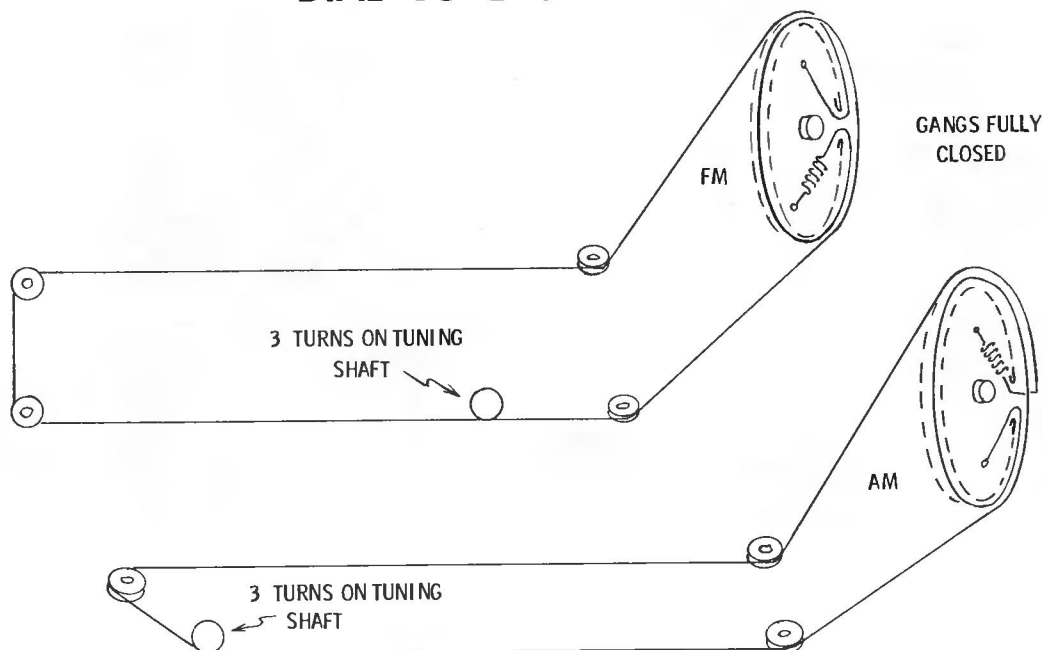


FISHER MODEL
101-R



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



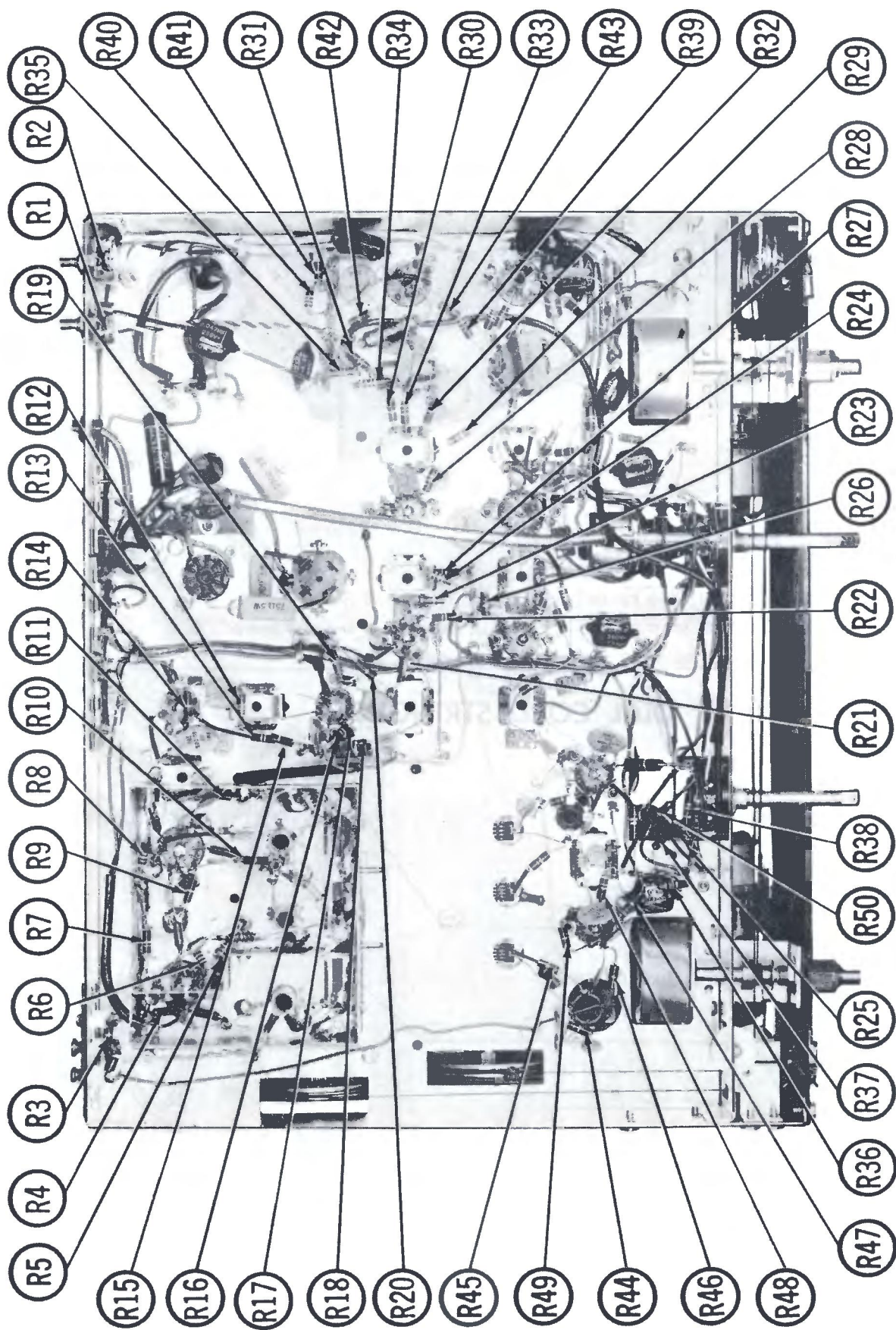
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of J10

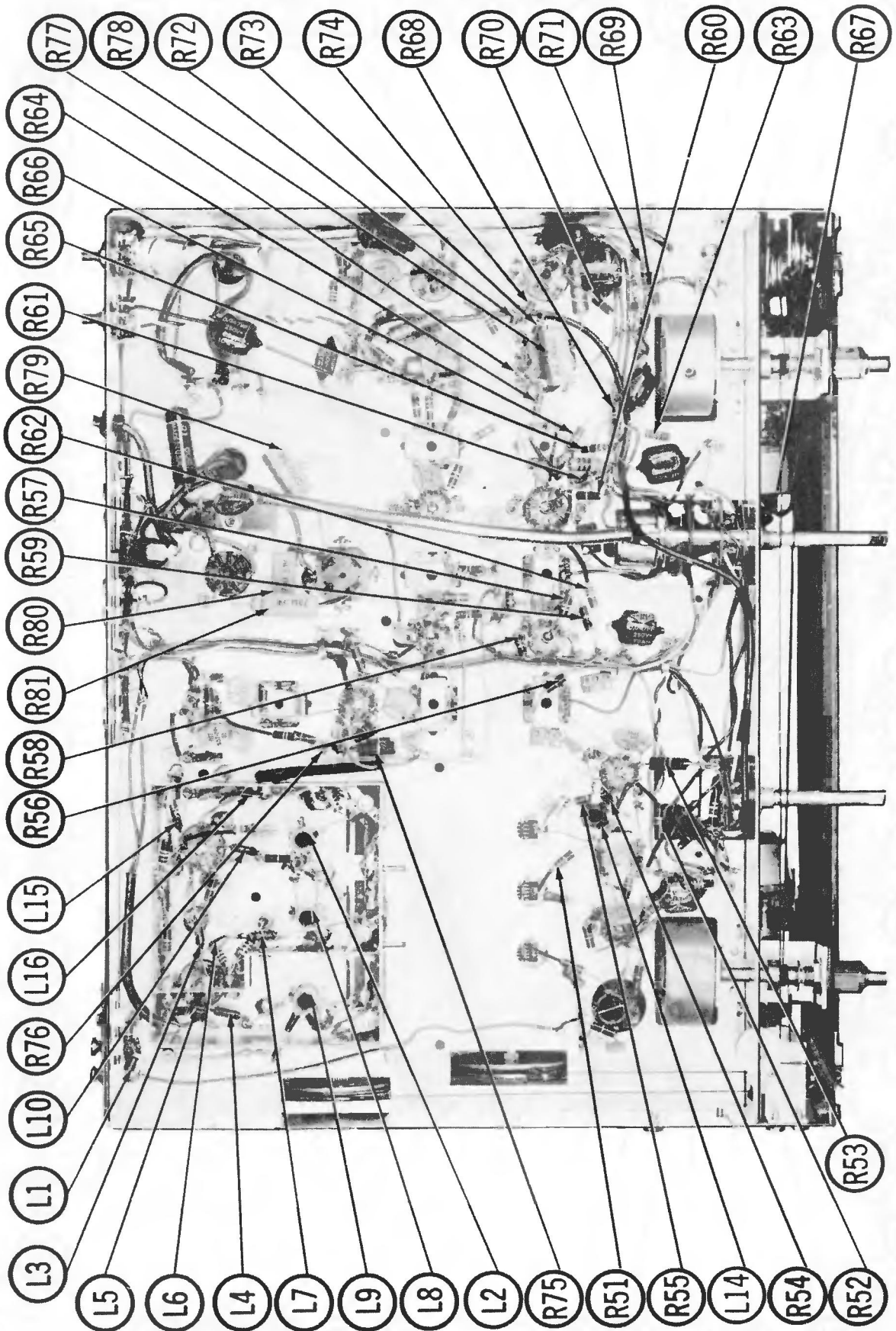
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1959 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

FISHER MODEL
101-R

SET 448
FOLDER 8

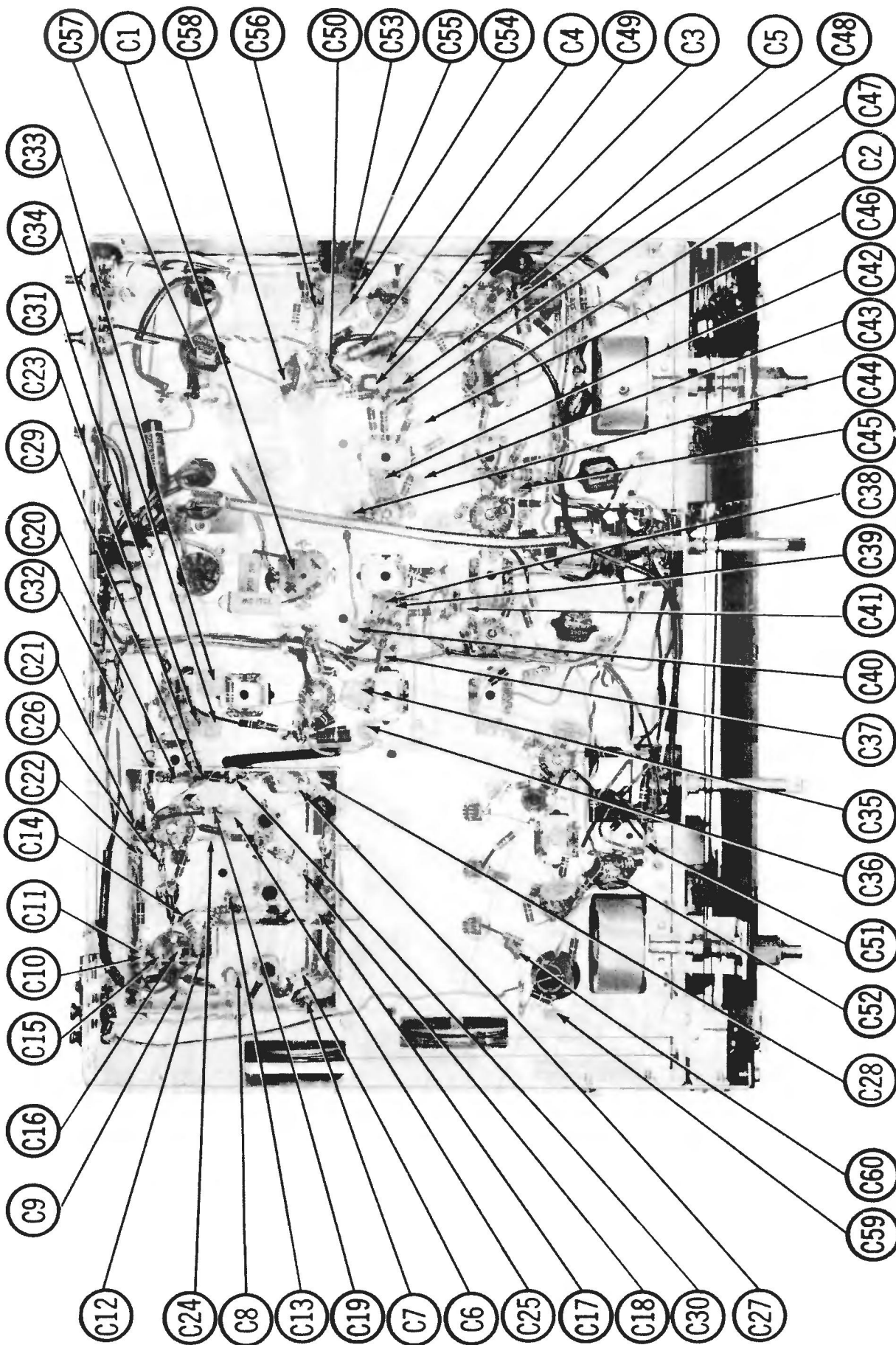


CHASSIS BOTTOM VIEW - RESISTOR IDENT. (R1-R50)

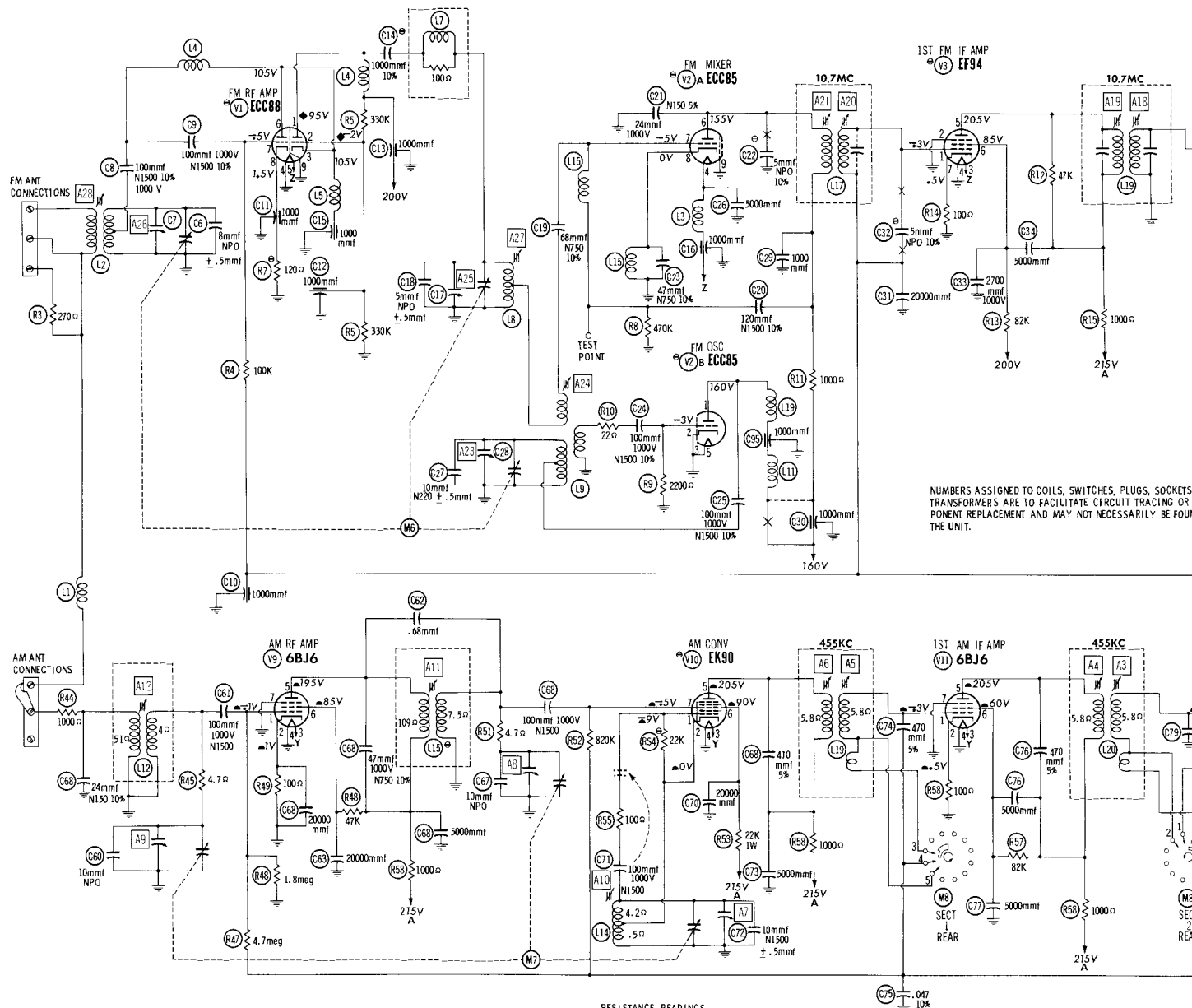


CHASSIS BOTTOM VIEW - INDUCTOR & RESISTOR IDENT. (R51-R81)

FISHER
MODEL 101-R



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



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

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. 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)

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	11900 Ω	230K	1N Ω	0 Ω	.1 Ω	1N Ω	1.1meg	120 Ω	0 Ω
V2	ECC85	13100 Ω	2200 Ω	0 Ω	.1 Ω	0 Ω	*4100 Ω	470K	.1 Ω	0 Ω
V3	EF94 6AU6	1meg	0 Ω	.1 Ω	0 Ω	11900 Ω	*83K	100 Ω		
V4	EF94 6AU6	.7 Ω	0 Ω	.1 Ω	0 Ω	*1900 Ω	*83K	100 Ω		
V5	EF94 6AU6	120K	0 Ω	.1 Ω	0 Ω	*1900 Ω	*83K	0 Ω		
V6	EF94 6AU6	22K	0 Ω	.1 Ω	0 Ω	*1900 Ω	*83K	0 Ω		
V7	EM840	2.7meg	900 Ω	0 Ω	0 Ω	.1 Ω	1900 Ω	*470K	*900 Ω	*470K
V8	EF86 6267	145K	560 Ω	560 Ω	.1 Ω	0 Ω	145K	560 Ω	560 Ω	1meg
V9	68J6	*1.4meg	100 Ω	.1 Ω	0 Ω	*11900 Ω	*148K	0 Ω		
V10	EK90 6BE6	22K	.5 Ω	.1 Ω	0 Ω	*1900 Ω	*123K	*3meg		
V11	68J6	*2meg	100 Ω	.1 Ω	0 Ω	*1900 Ω	*184K	0 Ω		
V12	EBF89	*148K	*58 Ω	180 Ω	.1 Ω	0 Ω	*1900 Ω	*78K	*50K	0 Ω
V13	EM84	*3.2meg	*900 Ω	180 Ω	0 Ω	.1 Ω	*1900 Ω	*470K	NC	*1470K
V14	EF86 6267	*155K	560 Ω	560 Ω	.1 Ω	0 Ω	*153K	560 Ω	560 Ω	1meg
V15	EZ81 6CA4	58 Ω	NC	1 Ω	0 Ω	.1 Ω	NC	61 Ω	NC	NC

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.

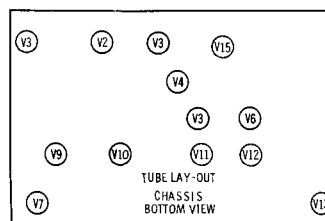
* MEASURED IN "AM" POSITION.

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.

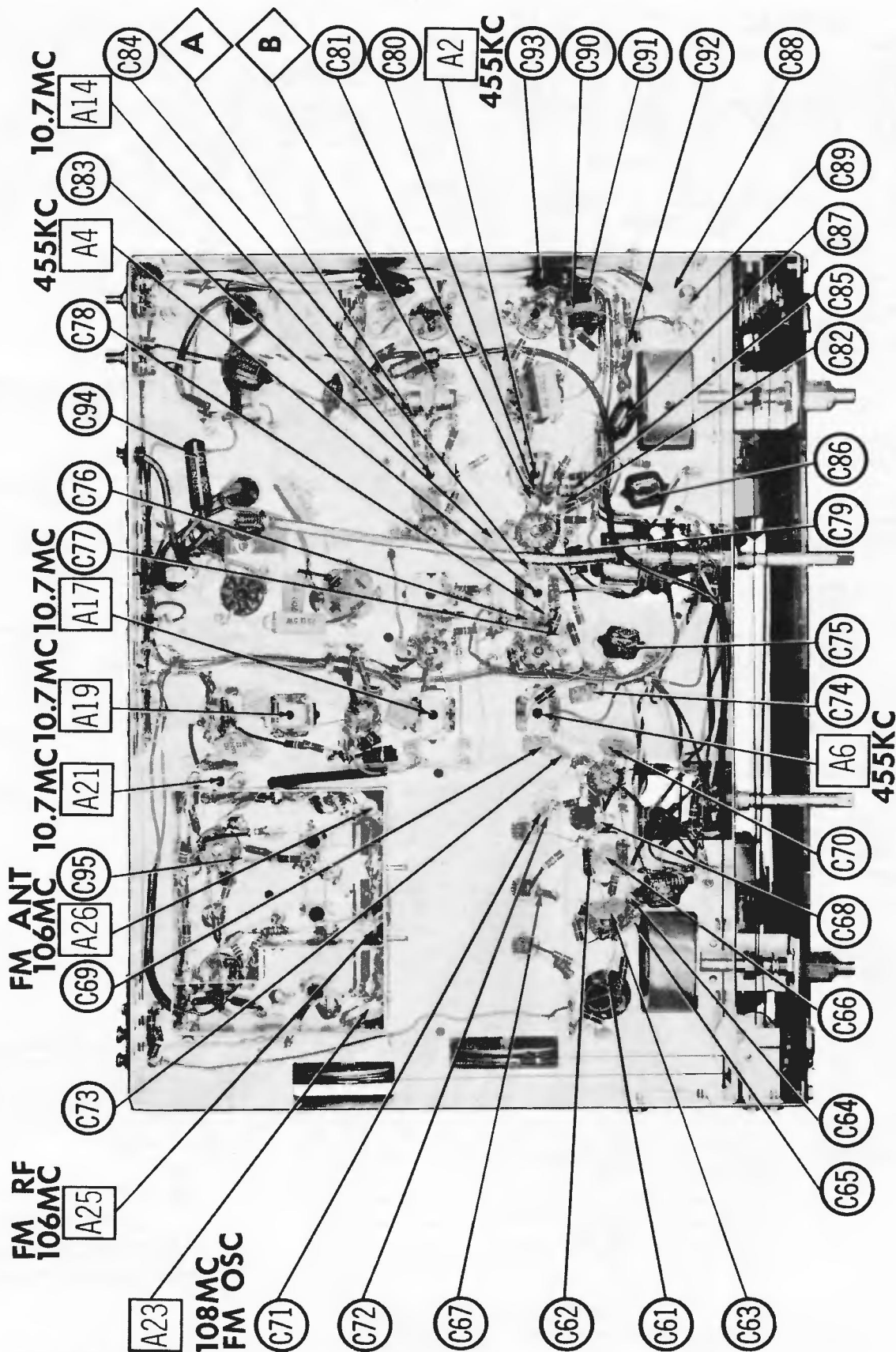
‡ MEASURED FROM PIN 3 OF V15

§ MEASURED FROM PIN 3 OF V1

NC NO CONNECTION



[illegible]



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

FISHER
MODEL 101-R

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 ν 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 6BF89 (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 ($\pm 1\%$) resistors in series from point $\diamond$ to chassis. The junction of these two resistors is alignment point $\diamond$ 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 $\diamond$. Common to chassis.	A14, A15, A16, A17, A18, A19, A20, A21	Adjust for maximum deflection.
6. "	"	"	"	"	DC probe to point $\oplus$. Common to point $\diamond$.	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 ν 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 $\diamond$. 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 $\oplus$. Low side to chassis.	A22	Reconnect stabilizing capacitor C3. Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY 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 120 Ω Carbon Resistors	Across FM antenna terminals with 120 Ω in each lead.	108MC (45KC Swp.)	FM	108MC	DC probe to point $\diamond$. Common to chassis.	A23	Adjust for maximum deflection.
8. "	"	88MC	"	88MC	"	A24	"
9. "	"	106MC	"	106MC	"	A25, A26	"
10. "	"	90MC	"	90MC	"	A27, A28	"

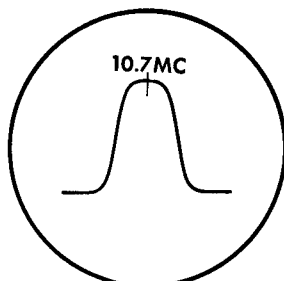


FIG. 1

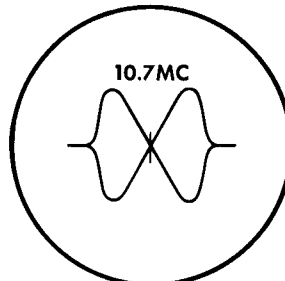
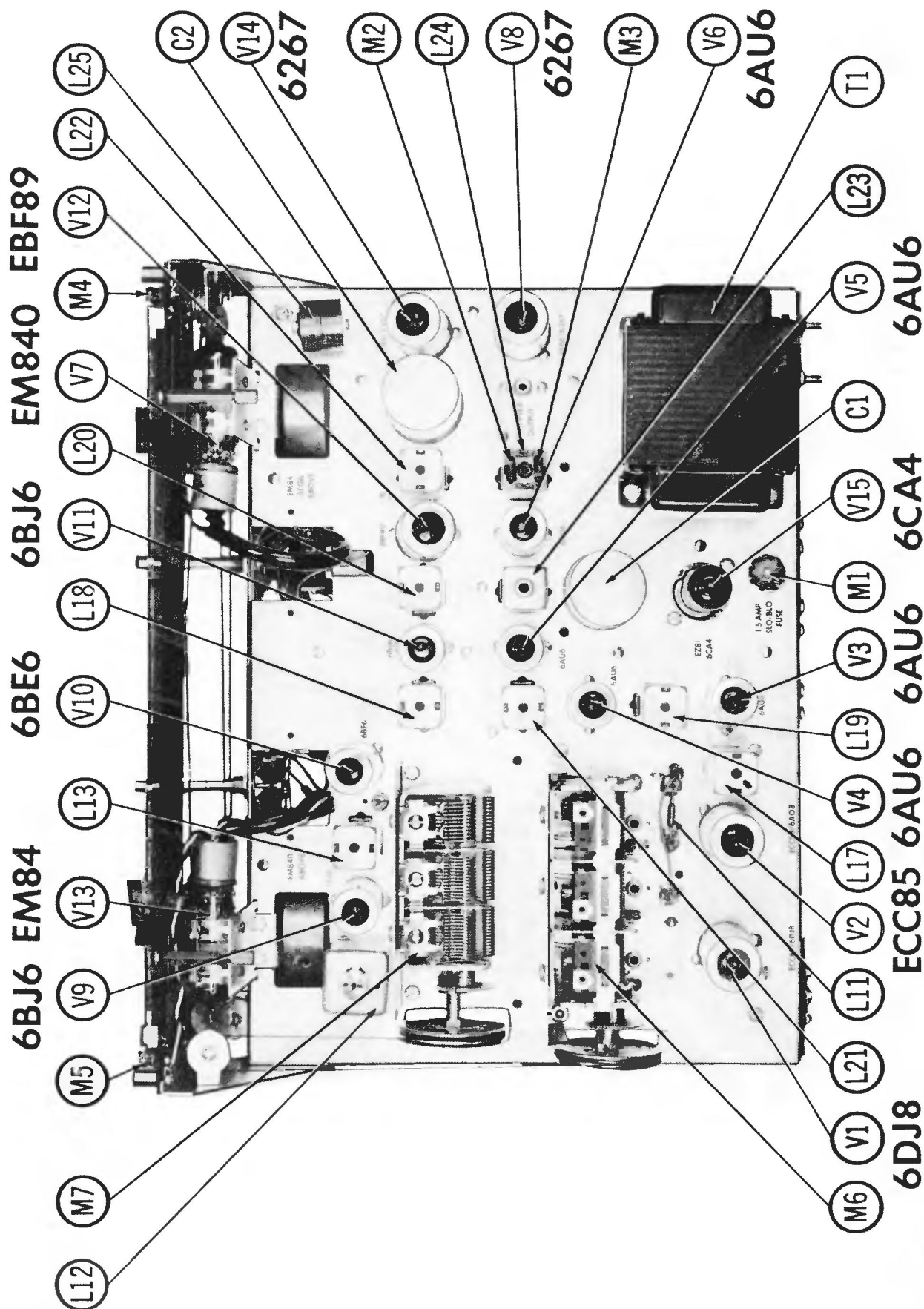


FIG. 2



PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE
V1	FM RF Amplifier	ECC88/6D38
V2	FM Mixer-FM Osc.	ECC85/6A08
V3	1st FM IF Amplifier	EF94/6AU6
V4	2nd FM IF Amplifier	EF94/6AU6
V5	3rd FM IF Amplifier	EF94/6AU6
V6	4th FM IF Amplifier	EF94/6AU6
V7	FM Tuning Indicator	EM84/6287
V8	FM AF Amplifier	EF66/6287

ITEM No.	USE	TYPE
V9	AM RF Amplifier	6B56
V10	AM Converter	EK90/6BE6
V11	1st AM IF Amplifier	6B56
V12	2nd AM IF Amp. -AM	
V13	Det. -AVC	EF98
V14	AM Tuning Indicator	EM84/6FC6
V15	AM AF Amplifier	EF98/6287
V16	Rectifier	EZ81/6CA4

ELECTROLYTIC CAPACITORS

ITEM No.	RATING			REPLACEMENT DATA			NOTES
	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBIER PART No.	MALLORY PART No.	
C1A	40	350	C884-122	AFH3-11	D0032	FP176	
C2A	40	300	C884-119	AFH4-02	D0020	FP217, 26	
C3	20	250	C829-138	PRSI50V8	BBR8-150	TC41	
C4	25	6	C839-114	SRE8V25	BBR25-6	TT6X25	
C5	25	6	C839-114	SRE8V25	BBR25-6	TT6X25	

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING			REPLACEMENT DATA			NOTES
	CAP.	VOLT.	TOL	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBIER PART No.	
C6	8		NPO ±.5mmf	CC20CJ080D5			
C7	100	1000	10%	C682-123			
C8	100	1000	10%	C50070-4			
C9	100	1000	10%	C50070-4			
C10	1000			C592-187			
C11	1000			C592-187			
C12	1000			C592-187			
C13	1000			C592-187			
C14	1000		10%	C50072-3			
C15	1000			C592-187			
C16	1000			C592-187			
C17	5		NPO ±.5mmf	C682-123			
C18	5		N750 10%	CC20CJ050D5			
C19	68		N1500 10%	CC20UJ680K5			
C20	120		N150 5%	C50070-9			
C21	24	1000		C50070-6			
C22	5		NPO 10%	C50070-4			
C23	47	1000	10%	C50070-4			
C24	100	1000	10%	C50070-6			
C25	100	1000	10%	C50070-6			
C26	5000			C50089-1			
C27	10		N220 ±.5mmf	CC20RH100D5			
C28	1000			C682-123			
C29	1000			C50072-3			
C30	1000			C592-187			
C31	20000			C50089-4			
C32	5	1000		NPO 10%			
C33	2700			C50071-5			
C34	3000			C50089-1			
C35	2700			C50071-5			
C36	5000			C50089-1			
C37	47	1000	10%	C50071-5			
C38	2700			C50071-5			
C39	5000			C50089-1			

CAPACITORS (cont)

ITEM No.	RATING			REPLACEMENT DATA			NOTES
	CAP.	VOLT.	TOL	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBIER PART No.	
C40	5000			C50089-1	BPD-005	DD-502	
C41	5000			C50089-1	BPD-005	DD-502	
C42	2700	1000		C50071-5	BPD-005	DD-272	
C43	5000			C50089-1	BPD-005	DD-502	
C44	5000			C50089-1	BPD-005	DD-502	
C45	5000			C50089-1	BPD-005	DD-502	
C46	330	1000	10%	C50072-1	BPD-005	MD-331	
C47	330	1000	10%	C50072-1	BPD-005	MD-331	
C48	330	1000	10%	C50072-1	BPD-005	MD-331	
C49	20000			C50089-4	BPD-02	DD-203	
C50	2200	1000	10%	C50072-5	BPD-02	DD-203	
C51	330	1000	10%	C50072-1	BPD-02	DD-203	
C52	330	1000	10%	C50072-1	BPD-02	DD-203	
C53	330	1000	10%	C50072-1	BPD-02	DD-203	
C54	330	1000	10%	C50072-1	BPD-02	DD-203	
C55	330	1000	10%	C50072-1	BPD-02	DD-203	
C56	330	1000	10%	C50072-1	BPD-02	DD-203	
C57	330	1000	10%	C50072-1	BPD-02	DD-203	
C58	330	1000	10%	C50072-1	BPD-02	DD-203	
C59	330	1000	10%	C50072-1	BPD-02	DD-203	
C60	330	1000	10%	C50072-1	BPD-02	DD-203	
C61	330	1000	10%	C50072-1	BPD-02	DD-203	
C62	330	1000	10%	C50072-1	BPD-02	DD-203	
C63	330	1000	10%	C50072-1	BPD-02	DD-203	
C64	330	1000	10%	C50072-1	BPD-02	DD-203	
C65	330	1000	10%	C50072-1	BPD-02	DD-203	
C66	330	1000	10%	C50072-1	BPD-02	DD-203	
C67	330	1000	10%	C50072-1	BPD-02	DD-203	
C68	330	1000	10%	C50072-1	BPD-02	DD-203	
C69	330	1000	10%	C50072-1	BPD-02	DD-203	
C70	330	1000	10%	C50072-1	BPD-02	DD-203	
C71	330	1000	10%	C50072-1	BPD-02	DD-203	
C72	330	1000	10%	C50072-1	BPD-02	DD-203	
C73	330	1000	10%	C50072-1	BPD-02	DD-203	
C74	330	1000	10%	C50072-1	BPD-02	DD-203	
C75	330	1000	10%	C50072-1	BPD-02	DD-203	
C76	330	1000	10%	C50072-1	BPD-02	DD-203	
C77	330	1000	10%	C50072-1	BPD-02	DD-203	
C78	330	1000	10%	C50072-1	BPD-02	DD-203	
C79	330	1000	10%	C50072-1	BPD-02	DD-203	
C80	330	1000	10%	C50072-1	BPD-02	DD-203	
C81	330	1000	10%	C50072-1	BPD-02	DD-203	
C82	330	1000	10%	C50072-1	BPD-02	DD-203	
C83	330	1000	10%	C50072-1	BPD-02	DD-203	
C84	330	1000	10%	C50072-1	BPD-02	DD-203	
C85	330	1000	10%	C50072-1	BPD-02	DD-203	
C86	330	1000	10%	C50072-1	BPD-02	DD-203	
C87	330	1000	10%	C50072-1	BPD-02	DD-203	
C88	330	1000	10%	C50072-1	BPD-02	DD-203	
C89	330	1000	10%	C50072-1	BPD-02	DD-203	
C90	330	1000	10%	C50072-1	BPD-02	DD-203	
C91	330	1000	10%	C50072-1	BPD-02	DD-203	
C92	330	1000	10%	C50072-1	BPD-02	DD-203	
C93	330	1000	10%	C50072-1	BPD-02	DD-203	
C94	330	1000	10%	C50072-1	BPD-02	DD-203	
C95	330	1000	10%	C50072-1	BPD-02	DD-203	

① Some versions may use 5000mmf in this application (Part #C50089-1).

② Not used in some versions.

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

ITEM No.	RATING			REPLACEMENT DATA			INSTALLATION NOTES
	RESIST. ANCE	WATTS	FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	
R1	500K			JP-504			FM Audio Output Level
R2	500K			JP-504			AM Audio Output Level

PARTS LIST & DESCRIPTION (continued)

RESISTORS

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

ITEM No.	RATING		FISHER PART No.	NOTES
	OHMS	WATT		
R1	270Ω		RC20BF271K	
R2	100K		RC20BF104K	
R3	330K		RC20BF334K	
R4	330K		RC20BF334K	
R5	1.8meg		RC20BF181K	
R6	330K		RC20BF334K	
R7	120Ω		RC20BF121K	
R8	470K		RC20BF474K	
R9	220Ω		RC20BF221K	
R10	22Ω		RC20BF220K	
R11	100Ω		RC20BF102K	
R12	47K		RC20BF473K	
R13	62K		RC20BF623K	
R14	100Ω		RC20BF101K	
R15	100Ω		RC20BF102K	
R16	82K		RC20BF823K	
R17	100Ω		RC20BF101K	
R18	100Ω		RC20BF102K	
R19	1.8meg		RC20BF181K	
R20	1.8meg		RC20BF181K	
R21	120K		RC20BF124K	
R22	82K		RC20BF823K	
R23	100Ω		RC20BF102K	
R24	330K		RC20BF334K	
R25	330K		RC20BF334K	
R26	10meg		RC20BF104K	
R27	22K		RC20BF223K	
R28	62K		RC20BF623K	
R29	100Ω		RC20BF102K	
R30	100Ω		RC20BF102K	
R31	15K		RC20BF153K	
R32	150Ω		RC20BF151K	
R33	270Ω		RC20BF271K	
R34	33K		RC20BF333K	
R35	22K		RC20BF223K	
R36	330K		RC20BF334K	
R37	2.2meg		RC20BF225K	
R38	470K		RC20BF474K	
R39	39K		RC20BF393K	
R40	330K		RC20BF334K	
R41	1.8meg		RC20BF181K	
R42	1meg		RC20BF105K	

① Some versions may use 120Ω 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.	Miller PART No.	
L1	FM Ant. Coil	L5006-8				
L2	FM Ant. Trans.	L682-124				
L3	FL Choke	L5006-3	19-1000	BC-561	4602	3.3uh
L4	RF Choke	L5006-3	19-1000	BC-561	4602	1.2uh
L5	Cathode Choke	L5006-19				1.2uh
L6	RF Choke	L5006-19				.56uh
L7	RF Choke	L629-180				.56uh
L8	FM RF Coil	L682-125				3 turns on 100G
L9	FM Osc. Coil	L682-126				
L10	RF Choke	L5006-3	19-1000	BC-561	4602	1.2uh
L11	RF Choke	L5006-3	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		70-OSC*	*Disregard tap
L15	RF Choke	L5006-3	19-1000	BC-561	4602	1.2uh
L16	Cathode Choke	L5006-18				.56uh
L17	1st FM IF Trans.	Z2563-117	16-3490A		1463-PCA	4Remove C32
L18	2nd FM IF Trans.	Z2563-132				
L19	2nd FM IF Trans.	Z2563-142	16-3487			
L20	2nd AM IF Trans.	Z2509-132				

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.	Z2620-142	16-3487	16-3487	FM-254	1463		
L22	3rd AM IF Trans.	Z22964	16-6756	16-6756	BC-353	12-C2		
L23	FM Limiter	L670-145					RF-2	
L24	Ratio Detector	Z2592-170						
L25	10KC Filter	L644-120					295MH	

① Alternate Part #L670-151

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA					
		FISHER PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.
T1	117V @ 510 VCT .74A SEC. 1 SEC. 2 6.3V @ 2.5A	T684-124					
	SEC. 3 6.3V @ 2.6A						

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			FISHER PART No.	Holder	BUSS PART No.	
M1	3AG	1 1/2A 125V S/B	F684-143	31301.5 (1 1/2A 125V S/B)	342012	MDL 1 1/2 HKP-CC

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		FISHER PART No.	CBS PART No.	SYLVANIA PART No.		
M2	IN541*	IN636	IN636	IN295	FM Detector (Pigtail)	
M3	IN541*	IN636	IN636	IN295	FM Detector (Pigtail)	Matched

* Some versions may use IN542 in this application (Part #V-IN542).

MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M4	Lamp	15082	7V, 2W
M5	Lamp	15082	7V, 2W
M6	Tuning Cap.	C662-113	FM, 3 Gang
M7	Tuning Cap.	C662-127	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)

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 (7 1/2 Ft. Length)