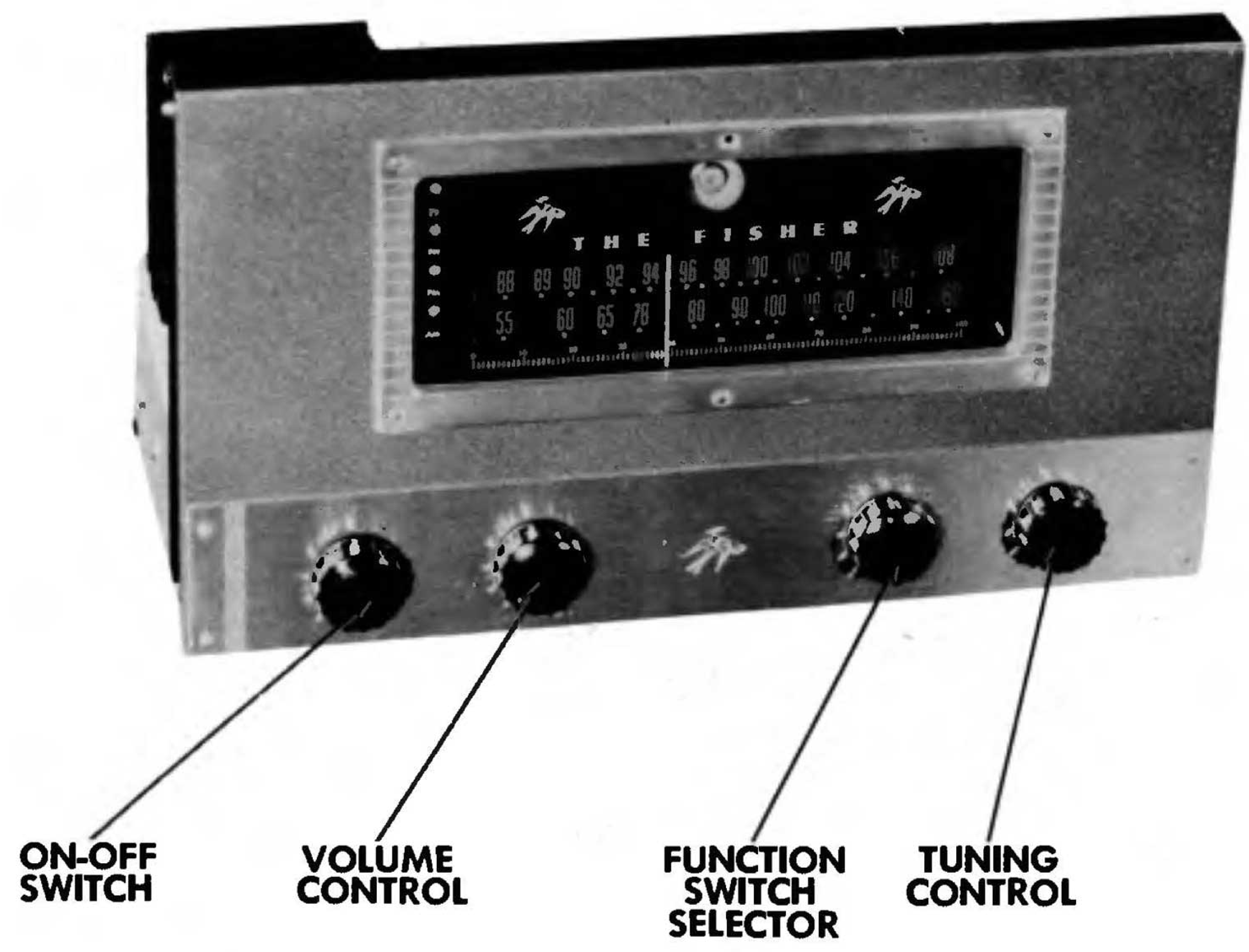
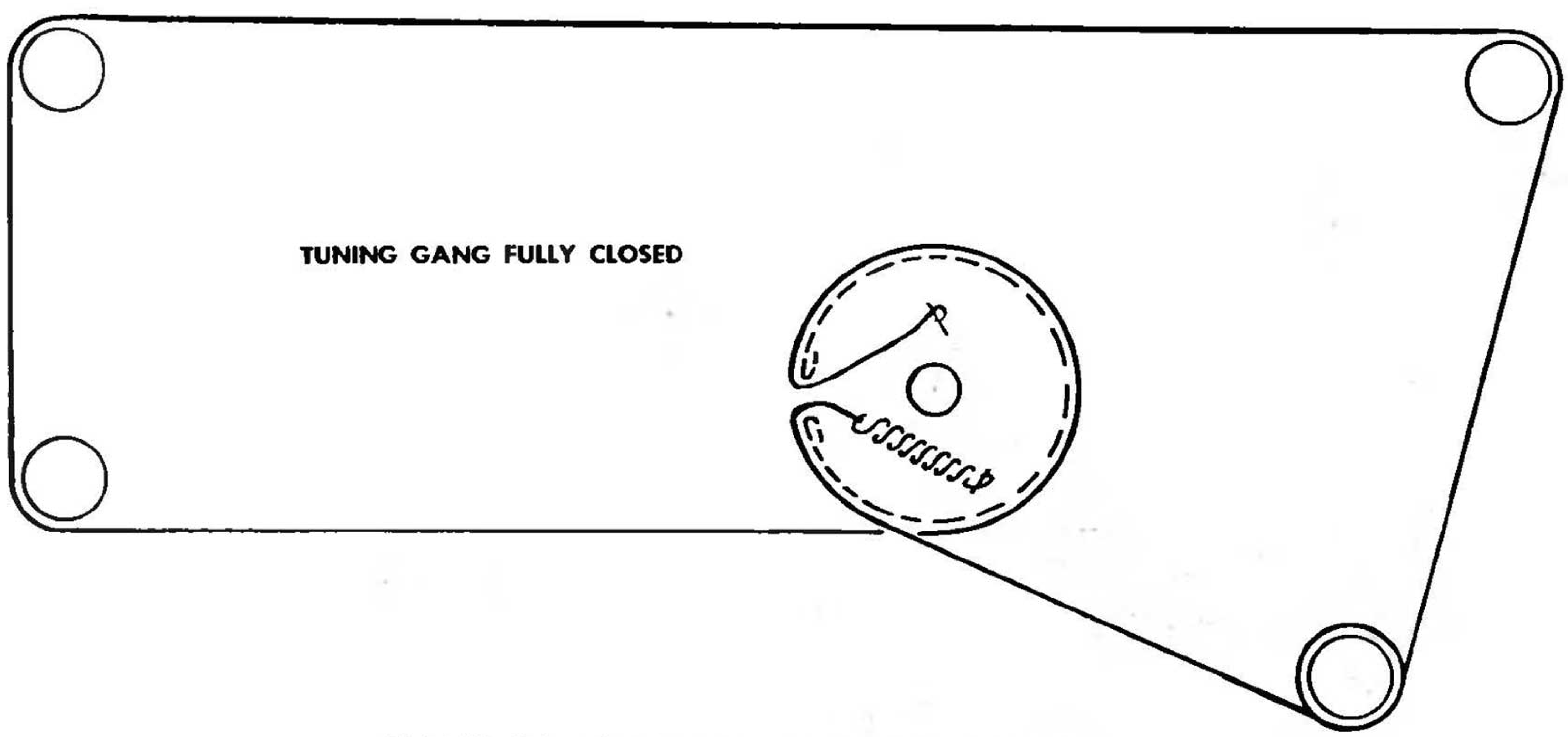
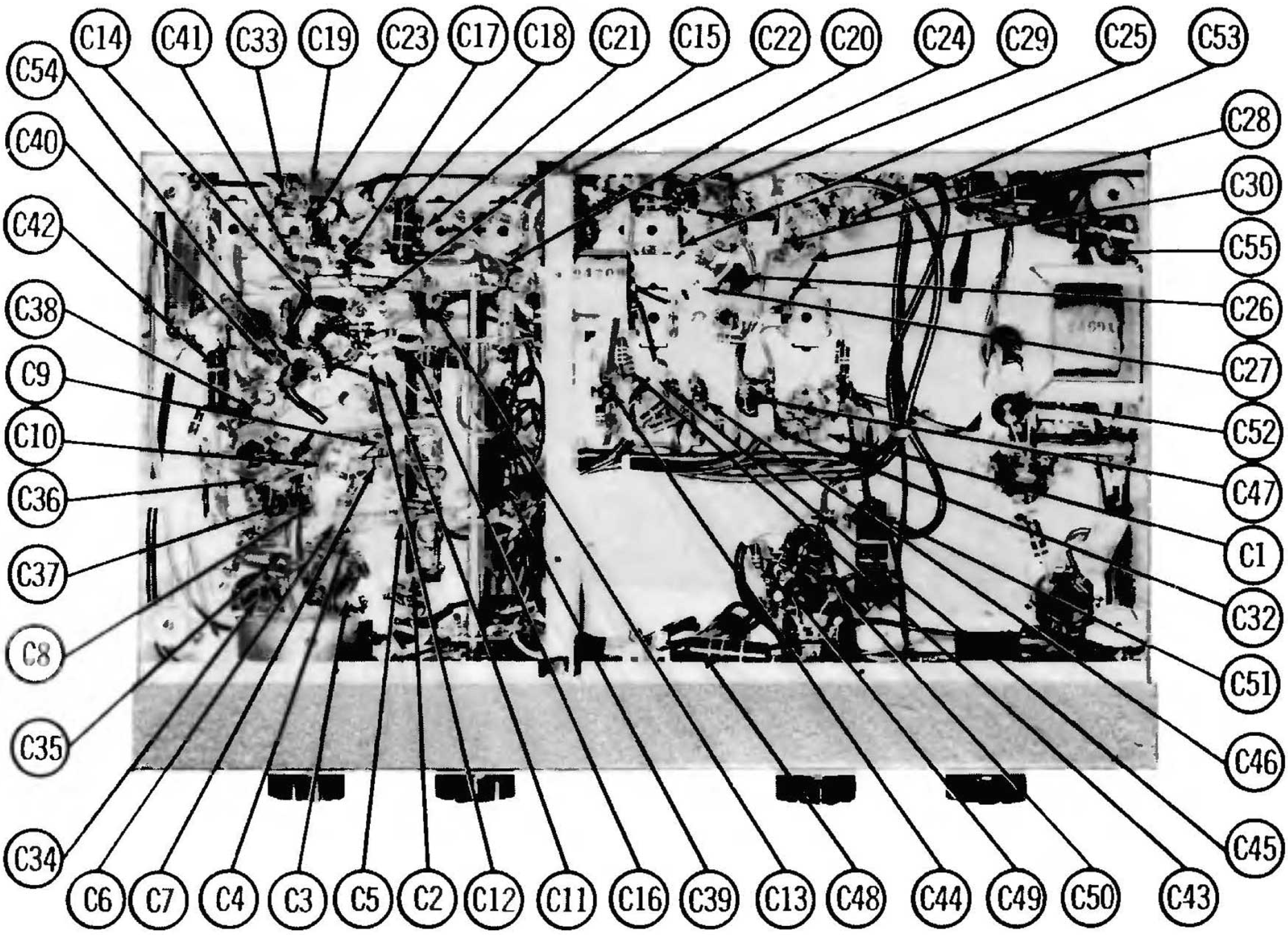
FISHER
MODELS 50R



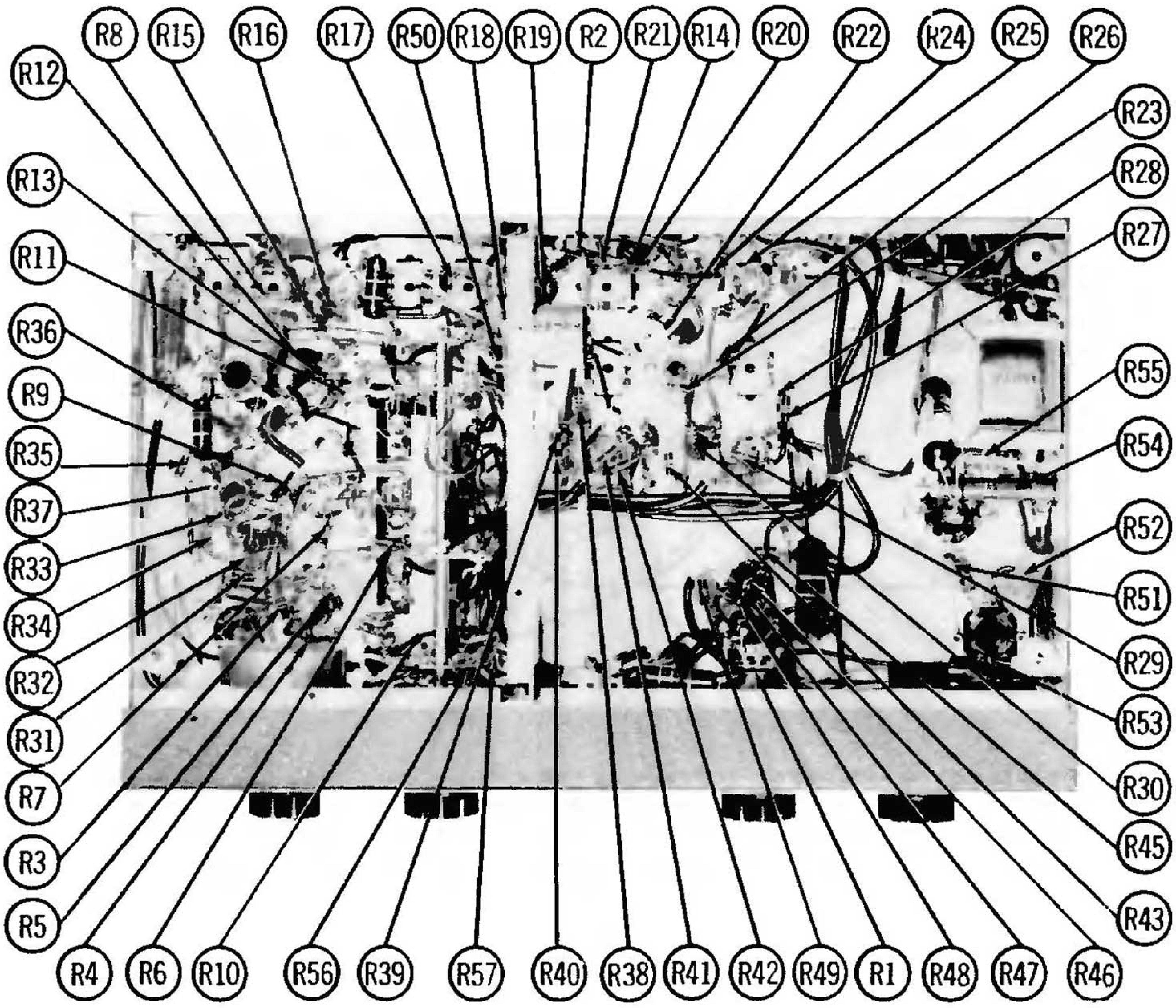
TRADE NAME	Fisher Models 50R		
MANUFACTURER	Fisher Radio Corp., 45-41 Vam Dam St., Long Island City, N.Y.		
TYPE SET	AC Operated AM-FM Superheterodyne Tuner for Custom Installation		
TUBES	Fourteen		
POWER SUPPLY	105-125 Volts AC-50/60 Cycles	RATING	.64 Amp. @ 117 Volts AC
TUNING RANGE - BROADCAST	535-1620KC	FREQ.MOD.	88-108MC



DRIVE CORD STRINGING



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

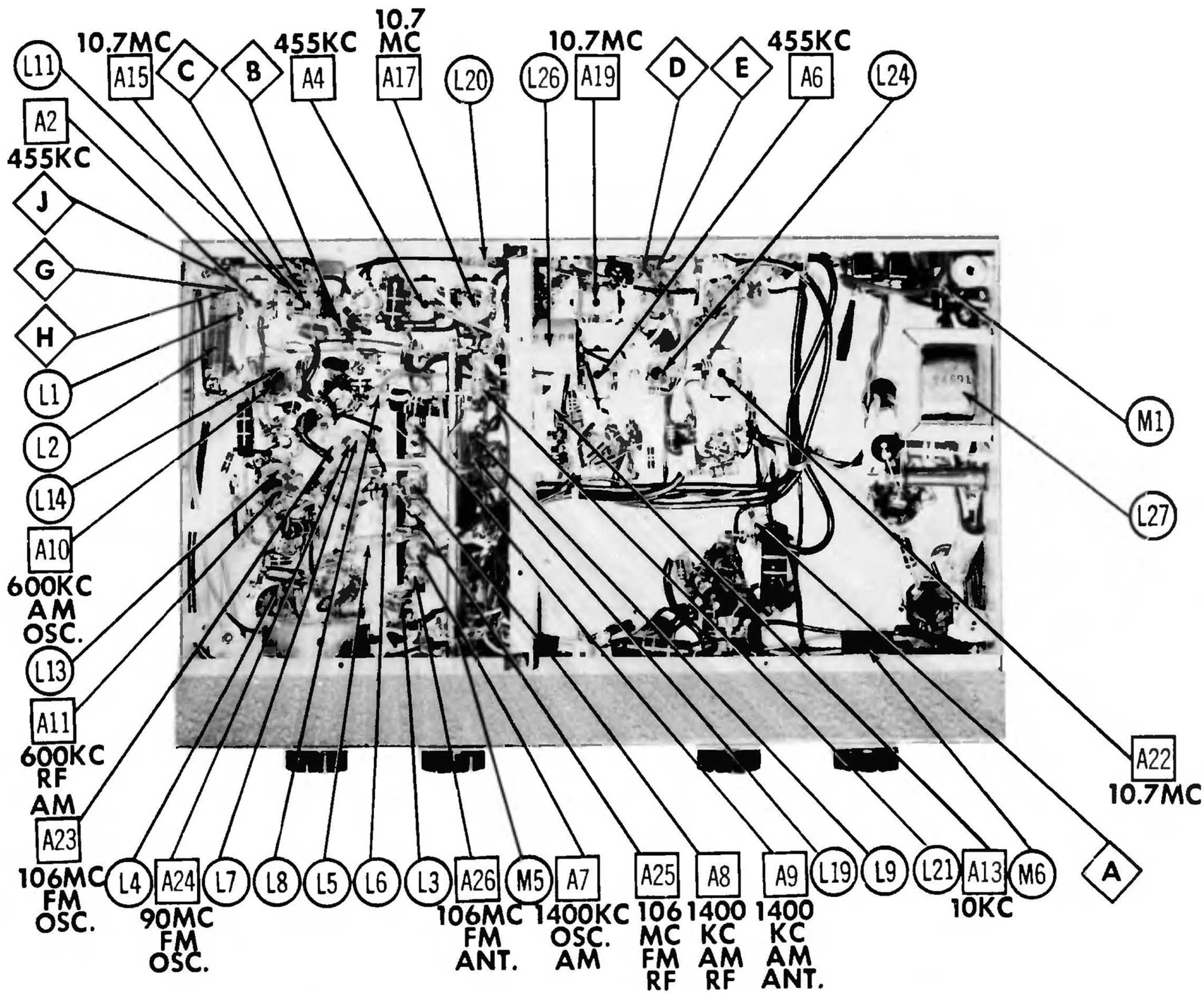
AM IF=455KC
FM IF=10.7MC

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6BQ7A	INF	370KΩ	0Ω	.2Ω	.3Ω	† 1.3KΩ	INF	INF	0Ω
V 2	6CB6	1.5Meg	0Ω	0Ω	.1Ω	† 3.3KΩ	† 3.3KΩ	0Ω		
V 3	6BQ7A	† 2.3KΩ	4.7KΩ	0Ω	0Ω	.1Ω	† 3.3KΩ	1.5Meg	1KΩ	0Ω
V 4	6BA6	3.1Meg ■ 2.7Meg	0Ω	.4Ω	0Ω	† 3.3KΩ	† 3.3KΩ	68Ω		
V 5	6BA6	6.2Ω	0Ω	.1Ω	0Ω	† 3.3KΩ	† 3.3KΩ	68Ω		
V 6	6AU6	100KΩ	0Ω	.1Ω	0Ω	† 3.3KΩ	† 3.3KΩ	0Ω		
V 7	6AU6	10KΩ	0Ω	0Ω	.1Ω	† 50KΩ	† 50KΩ	0Ω		
V 8	6AL5	0Ω	100KΩ	0Ω	.1Ω	180KΩ	0Ω	100KΩ		
V 9	6BA6	■ 100KΩ	0Ω	0Ω	.1Ω	† 3.3KΩ	† 3.3KΩ	68Ω		
V 10	6BE6	22KΩ	.7Ω	.1Ω	0Ω	† ■ 3.3KΩ	† ■ 3.3KΩ	■ 100KΩ		
V 11	6AL5	0Ω	130KΩ	1Ω	0Ω	0Ω	0Ω	■ 1.8Meg		
V 12	6U5	0Ω	† 220KΩ	430KΩ ■ 2.6Meg	† 220KΩ	0Ω	.1Ω			
V 13	12AU7	† 105KΩ	15KΩ	3.3KΩ	0Ω	0Ω	† 5KΩ	1Meg	50KΩ	.1Ω
V 14	5Y3GT	INF	8KΩ ■ 13KΩ	INF	144Ω	INF	153Ω	INF	8KΩ ■ 13KΩ	

ALL MEASUREMENTS TAKEN IN "FM -AFC" POSITION UNLESS OTHERWISE SPECIFIED
■ MEASURED IN "AM BROAD" POSITION.
† MEASURED FROM PIN #8 OF V14.

1- DC voltage measurements are at 20,000 ohms per volt, 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 ± 15% in voltage and resistance readings.
6- Volume control at maximum, no signal applied for voltage measurements.



CHASSIS BOTTOM VIEW - ALIGNMENT AND INDUCTOR IDENTIFICATION

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. Use an insulated alignment screwdriver for adjusting.
With tuning gang fully closed set pointer to last reference mark at low frequency end of dial.
Set AFC control to maximum clockwise position.

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	1000KC (Approx)	From point A to chassis	A1, A2, A2, A4, A5, A6	Adjust for maximum deflection.
2.	200MMF	High side to point B. Low side to chassis.	1400KC	"	1400KC	"	A7, A8, A9	Disconnect loop antenna. Connect point C to chassis. Adjust A7, A8 and A9 for maximum deflection.
3.	"	"	600KC	"	600KC	"	A10, A11, A12	Adjust for maximum deflection. Repeat Steps 2 and 3.
4.	.01MFD	Use audio signal generator High side to pin 2 (diode plate) of 6AL5 (V11). Low side to chassis.	10KC	"	Quiet point on dial	"	A12	Adjust for MINIMUM deflection. Remove jumper from point C to chassis.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5.	Direct	High side to ungrounded tube shield over 6CB6 (V2) Low side to chassis.	10.7MC (Unmod.)	FM-AFC	Non-interfering point on dial	DC probe to point D. Common to chassis.	A14, A15 A16, A17 A18, A19	Adjust for maximum deflection.
6.	"	"	"	"	"	DC probe to point E. Common to chassis.	A20	"
7.	"	"	"	"	"	DC probe to point F. Common to chassis.	A21	Detune A22 SLIGHTLY and adjust A21 for maximum deflection.
8.	"	"	"	"	"	"	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 AND 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.	Direct	High side to ungrounded tube shield floating over 6CB6 (V2). Low side to chassis.	10.7MC	FM-AFC	Non-interfering potot on dial	Vert. Amp. thru 10KΩ to point D. Low side to chassis.	A14, A15 A16, A17 A12, A19	Adjust for response curve of maximum amplitude and symmetry as in Fig. 1.
6.	"	"	"	"	"	Vert. Amp. thru 10KΩ to point E. Low side to chassis.	A20	"
7.	"	"	"	"	"	Vert. Amp. thru 10KΩ to potot F. Low side to chassis.	A21	Detune A22 and adjust A21 for curve of maximum amplitude and symmetry as in Fig. 1.
8.	"	"	"	"	"	"	A22	Adjust A22 so that 10.7MC occurs at center of crossover linee as in Fig. 2. SLIGHTLY retouch A21 for maximum amplitude and straightness of crossover lines.

FM RF AND MIXER ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
9.	Two 120Ω Carbon Resistors	High side to point H Low side to potot G	106MC	FM	106MC	DC probe to point D. Common to chassis.	A23	Connect point J to chassis. Adjust A22 for maximum deflection.
10.	"	"	90MC	"	90MC	"	A24	Adjust for maximum deflection. Repeat stepe 9 and 10.
11.	"	"	106MC	"	106MC	"	A25, A26	Adjust for maximum deflection.
12.	"	"	90MC	"	90MC	"		Compress or expand coil forms of L3 and L5 for maximum deflection on VTVM. Repeat steps 11 and 12.

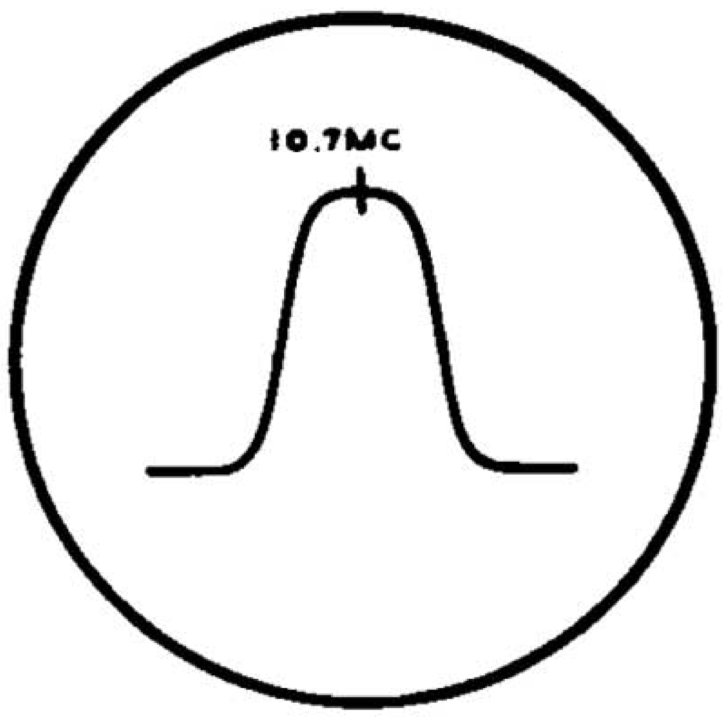


FIG. 1

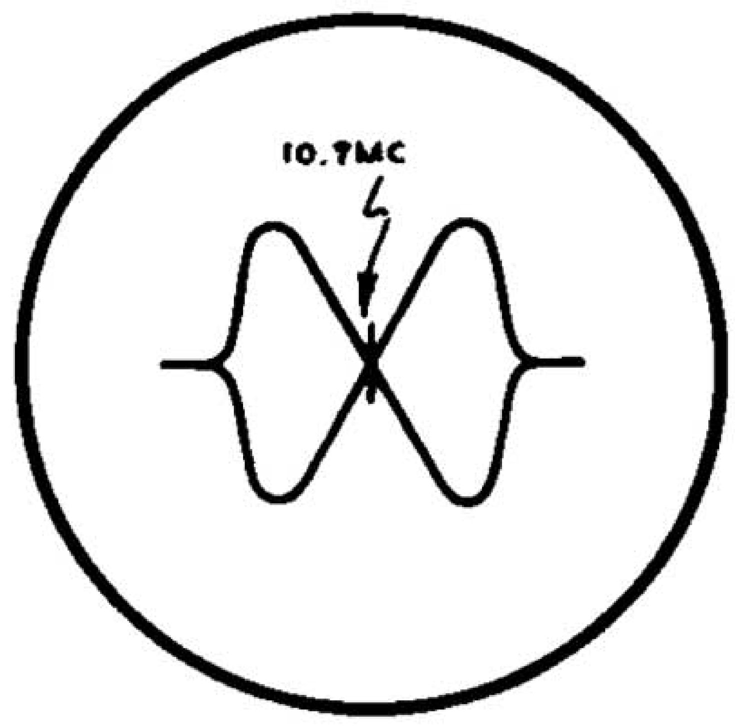


FIG. 2

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA		RETMA BASE TYPE	NOTES
		FISHER PART No.	STANDARD REPLACEMENT		
V1	FM RF Amplifier	6BQ7A	6BQ7A	9AJ	
V2	FM Mixer	6CB6	6CB6	7CM	
V3	FM Osc.-AFC	6BQ7A	6BQ7A	9AJ	
V4	FM-AM IF Amp.	6BA6	6BA6	7BK	
V5	2nd. FM AM IF Amp.	6BA6	6BA6	7BK	
V6	Limiter	6AU6	6AU6	7BK	
V7	Limiter	6AU6	6AU6	7BK	
V8	Discriminator	6AL5	6AL5	6BT	
V9	AM RF Amplifier	6BA6	6BA6	7BK	
V10	AM Converter	6BE6	6BE6	7CH	
V11	AM Detector-AVC	6AL5	6AL5	6BT	
V12	Tuning Indicator	6U5	6U5	6R	
V13	AF Amplifier	12AU7	12AU7	9A	
V14	Rectifier	5Y3GT	5Y3GT	5T	

CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	FISHER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C1A	●40	300		AFH3-44		DO46		FP377	R1327	
B	■40	300		PRS450/40		BR4035		TC78		
C	▲40	300								
D	40	300								
C2	10			SI10NP0	TCZ-10		NP0K-100	ZT-541	5TCC-Q1	
C3	33			SI33	D6-330		GP1K-330	UC-5433	5GA-Q33	
C4	500			SI500	D6-501	TM5T5	GP2K-501	UC-535	5GA-T5	
C5	5000			SI5000	D6-502	TM5D5	GP2-333-502	UC-525	5GA-D5	
C6	33			SI33	D6-330		GP1K-330	UC-5433	5GA-Q33	
C7	5000			SI5000	D6-502	TM5D5	GP2-333-502	UC-525	5GA-D5	
C8	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C9	2.2									
C10	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C11	220			SI220	D6-221		GP2K-221	UC-5322	5GA-T22	
C12	47				TCZ-47		NP0K-470	ZT-5447	5TCC-Q47	
C13	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C14	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C15	500			SI500	D6-501	TM5T5	GP2K-501	UC-535	5GA-T5	
C16	.047	400		P468-047	DF-503	PTE4S47		PT4147	4TM-S47	
C17	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C18	.01	400		P488-01	D6-103	PTE4S1	GP2-333-103	PT411	4TM-S1	
C19	470	500		1468-0005	D6-501	5W5T5	GP2K-471	MC-245	1FM-35	
C20	470	500		1468-0005	D6-501	5W5T5	GP2K-471	MC-245	1FM-35	
C21	470	500		1468-0005	D6-501	5W5T5	GP2K-471	MC-245	1FM-35	
C22	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C23	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C24	.022	400		P488-022	DD-203	PTE4S22		PT4122	4TM-S22	
C25	47				TCZ-47		NP0K-470	ZT-5447	5TCC-Q47	
C26	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C27	47						NP0K-47			
C28	220			SI220	D6-221		GP2K-221	UC-5322	5GA-T22	
C29	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C30	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C31	100			SI100	D6-101	TM5T1	GP1K-101	UC-531	5GA-T1	
C32	560			SI560	D6-561		GP2K-561	UC-5356	5GA-T56	
C33	15				TCZ-15				5TCC-Q15	
C34	2.2									
C35	220			SI220	D6-221		GP2K-221	UC-5322	5GA-T22	
C36	5			SI5	D8-050		GP1K-050		5GA-V5	
C37	.01	400		P488-01	D6-103	PTE4S1	GP2-333-103	PT411	4TM-S1	
C38	220			SI220	D6-221		GP2K-221	UC-5322	5GA-T22	
C39	.047	400		P468-047	DF-503	PTE4S47		PT4147	4TM-S47	
C40	220			SI220	D6-221		GP2K-221	UC-5322	5GA-T22	
C41	470			1468-005	D6-471	5W5T5	811-005	MC-245	1FM-35	
C42	.01	400		P488-01	D6-103	PTE4S1	GP2-333-103	PT411	4TM-S1	
C43	100			SI100	D6-101	TM5T1	GP1K-101	UC-531	5GA-T1	
C44	100			SI100	D6-101	TM5T1	GP1K-101	UC-531	5GA-T1	
C45	47				TCZ-47		NP0K-470	ZT-5447	5TCC-Q47	
C46	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C47	5000			BPD-005	MD-502	TM5D5	811-005	DC-525	5HK-D5	
C48	.047	400		P488-047	DF-503	PTE4S47		PT4147	4TM-S47	

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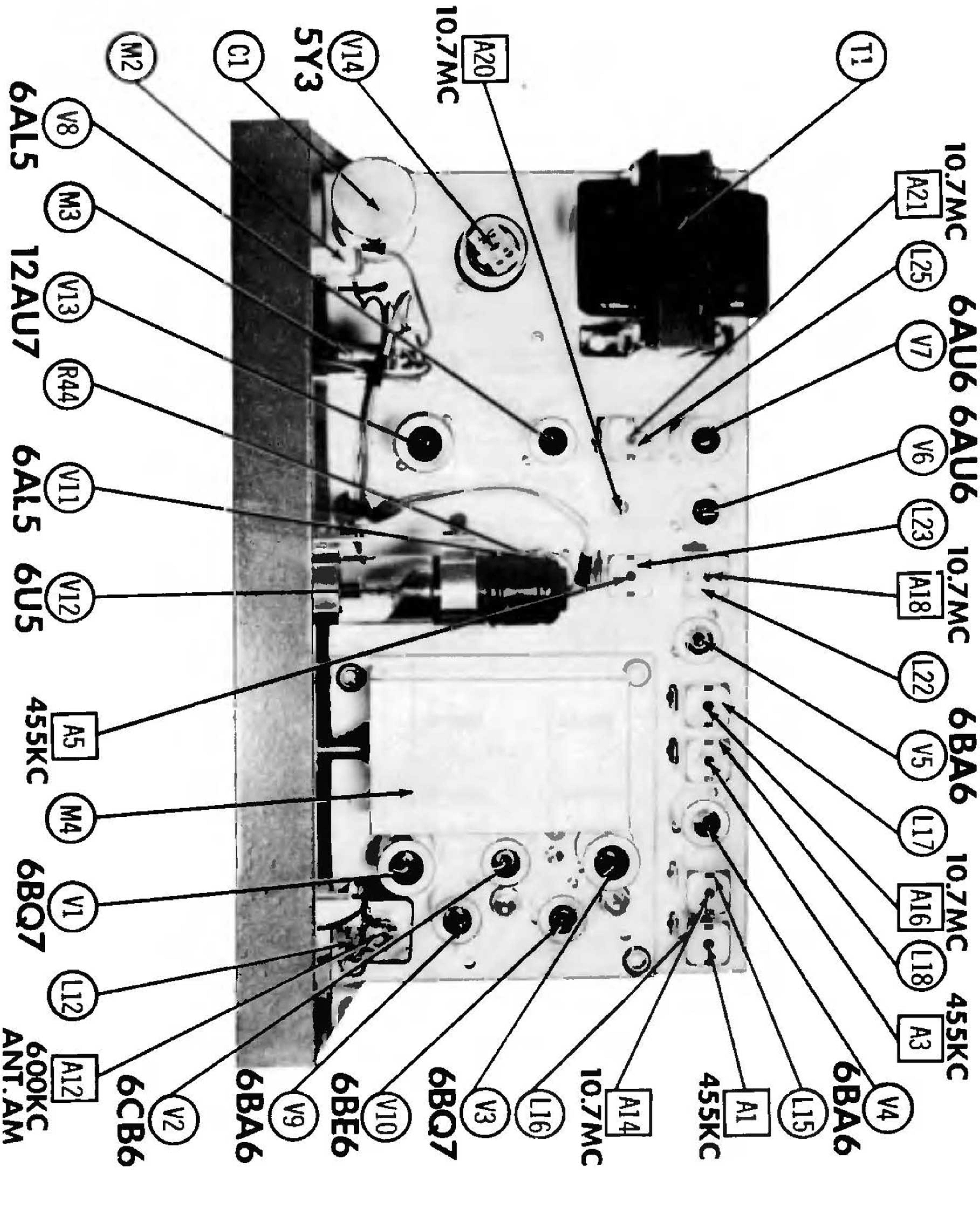
CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA: FISHER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C49	.047	400		P488-047	DF-503	PTE4S47		PT4147	4TM-S47	
C50	.047	400		P488-047	DF-503	PTE4S47		PT4147	4TM-S47	
C51	.1	400		P486-1	DF-104	PTE4P1		PT401	4TM-P1	
C52	.1	400		P486-1	DF-104	PTE4P1		PT401	4TM-P1	
C68	5000			BPD-005	MD-503	TM5D5	811-005	DC-525	5HK-D5	
C54	5000			BPD-005	MD-502	TM5D5	611-005	DC-525	5HK-D5	
C55	.01	600		P688-01		PTE6S1		PT611	6TM-S1	
C56	10			SI10	D6-100		GP1K-101	UC-531	5GA-T1	

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA: FISHER PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	500KΩ	½	R50000-1	Q13-123	DC-10-Z	BB-104	UF55A	Volume
B	500KΩ	½	Not Req.	M13-132	Not Req.	Not Req.	UR55A	
C	Shaft		Not Req.	Not Req.	Not Req.	Not Req.	DS-36	Attach to R1A
R2A	2Meg	½	R-2615-12	Q11-139	AΩ-83-S	AB-75	SU-56	AFC
B	Shaft		Not Req.	Not Req.	FKS-1/4	AK-1	Not Req.	Attach to R2A

RESISTORS

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA: FISHER PART No.	IRC PART No.	NOTES
R3	470KΩ	½		BTS-470K	
R4	470KΩ	½		BTS-470K	
R5	470KΩ	½		BTS-470K	
R6	1000Ω	½		BTS-1000	
R7	1Meg	½		BTS-1Meg	
R8	68KΩ	½		BTS-68K	
R9	1000Ω	½		BTS-1000	
R10	1Meg	½		BTS-1Meg	
R11	4700Ω	½		BTS-4700	
R12	1000Ω	½		BTS-1000	
R13	100Ω	½			
R14	1Meg	½		BTS-1Meg	
R15	68Ω	½		BTS-68	
R16	1000Ω	½		BTS-1000	
R17	65KΩ	½		BTS-65K	
R18	68Ω	½		BTS-68	
R19	1000Ω	½		BTS-1000	
R20	470KΩ	½		BTS-470K	
R31	100KΩ	½		BTS-100K	
R32	15KΩ	½		BTS-15K	
R33	33KΩ	½		BTS-33K	
R34	1Meg	½		BTS-1Meg	
R39	10KΩ	½		BTS-10K	
R39	47KΩ	½		BTS-47K	
R37	100KΩ	½		BTS-100K	
R36	100KΩ	½		BTS-100K	
R39	150KΩ	½		BTS-150K	
R30	470KΩ	½		BTS-470K	

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA: FISHER PART No.	IRC PART No.	NOTES
R31	1Meg	½		BTS-1Meg	
R32	68Ω	½		BTS-68	
R33	1000Ω	½		BTS-1000	
R34	22Meg	½		BTS-22Meg	
R35	1Meg	½		BTS-1Meg	
R36	23KΩ	½		BTS-22K	
R37	1000Ω	½		BTS-1000	
R38	33KΩ	½		BTS-33K	
R39	47KΩ	½		BTS-47K	
R40	47KΩ	½		BTS-47K	
R41	2.2Meg	½		BTS-2.2Meg	
R42	1Meg	½		BTS-1Meg	
R43	220KΩ	½		BTS-220K	
R44	220KΩ	½		BTS-220K	
R45	3300Ω	½		BTS-3300	
R46	100KΩ	½		BTS-100K	
R47	1Meg	½		BTS-1Meg	
R48	2300Ω	½		BTS-2300	
R49	47KΩ	½		BTS-47K	
R50	10KΩ	2		BTB-10K	
R51	47Ω	1			
R52	300Ω	5		1 3/4A-300	
R53	4700Ω	½		BTS-4700	
R54	2000Ω	10		1 3/4A-2000	
R55	15KΩ	2		BTB-15K	
R56	23Ω	½		BTS-23	
R57	22Ω	½		BTS-22	

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3 / SEC. 4	REPLACEMENT DATA: FISHER PART No.	STANCOR PART No.	MERIT PART No.	Halldorson PART No.	TRIAD PART No.
T1	117VAC @.64A	540VCT .083A	5VAC @3A	SEC. 3: 6.3VAC @.91A; SEC. 4: 6.3VAC @3.54A					

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA FISHER PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	FM Ant. Trans	.8Ω	.8Ω					
L2	FM Ant. Trans	.8Ω	.8Ω					
L3	FM Ant. Coil	0Ω						Tapped
L4A	Fil. Choke	.2Ω					4604	1.4Microhenries
B	Fil. Choke	.2Ω					4604	1.4Microhenries
L5	FM RF Choke	1.8Ω					4606	2.2Microhenries; IRC Part #CLA
L6	FM RF Coil	0Ω						Tapped
L7	FM Osc. Coil	0Ω	0Ω					
L8	FM RF Choke	.8Ω					4606	2.5 Microhenries
L9	Fil. Choke	.14Ω			19-2001	TV-189	6175	.47 Microhenries; IRC Part # CL-1
L10	AM Loop Ant.	.8Ω						
L11	AM Ant. Loading Coil	2.1Ω			19-3036	TV-160	4602	51 Microhenries
L12	AM Ant. Coil	60Ω	3.8Ω					
L13	AM RF Coil	140Ω	8Ω				A5495-RF	
L14	AM Osc. Coil	4.4Ω					71-Osc	Tapped @ .7Ω
L15	1st FM IF	.7Ω	.7Ω	ZZ2987	16-3487	FM-254	1463	
L16	1st AM IF	5.8Ω	5.8Ω	ZZ509-133A				Tertiary winding=.5Ω
L17	2nd FM IF	.7Ω	.7Ω	ZZ2987	16-3487	FM-254	1463	
L18	2nd AM IF	5.8Ω	5.8Ω	ZZ509-133A				Tertiary winding=.5Ω
L19	RF Choke	1.8Ω					4606	2.2Microhenries; IRC Part # CLA
L20	Fil. Choke	.44Ω			19-2001	TV-189	6175	.68 Microhenries; IRC Part # CLA
L21	RF Choke	1.8Ω					4606	2.2Microhenries; IRC Part # CLA
L22	3rd FM IF	1.8Ω	.5Ω	ZZ509-130	16-3487	FM-254	1463	
L23	3rd AM IF	9.5Ω	9.5Ω	ZZ2954	16-6756	BC-353	12-C2	
L24	4th FM IF	.3Ω						
L25	FM Discriminator	.7Ω	.9ΩCT	ZZ509-131		FM-253	1464	
L26	10KC Filter Choke	500Ω						1 Hy.

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA FISHER PART No.	STANCOR PART No.	MERIT PART No.	Halldorson PART No.	TRIAD PART No.
L27	.079A	200Ω	3.4 Hy.		C-2325 ①			

① Drill one new mounting hole.

FUSES

ITEM No.	TYPE	RATING	FISHER PART No. FUSE	FISHER PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	3AG (Slo-Blo)	1Amp. 125V			313001. (3AG-1A Slo/Blo)	342001	MDL1	HKP

MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M2	Dial light		Type # 47 (2 used)
M2	Pilot light		Function indicator, type # 47 (4 used)
M4	Tuning capacitor		15-360MMF, 15-360 MMF, 29-170 MMF (includes FM tuning capacitor)
M5	Switch		Function selector
M6	Switch		Off-on
A13	Trimmer capacitor	C-2347	10KC filter, 68-315 MMF