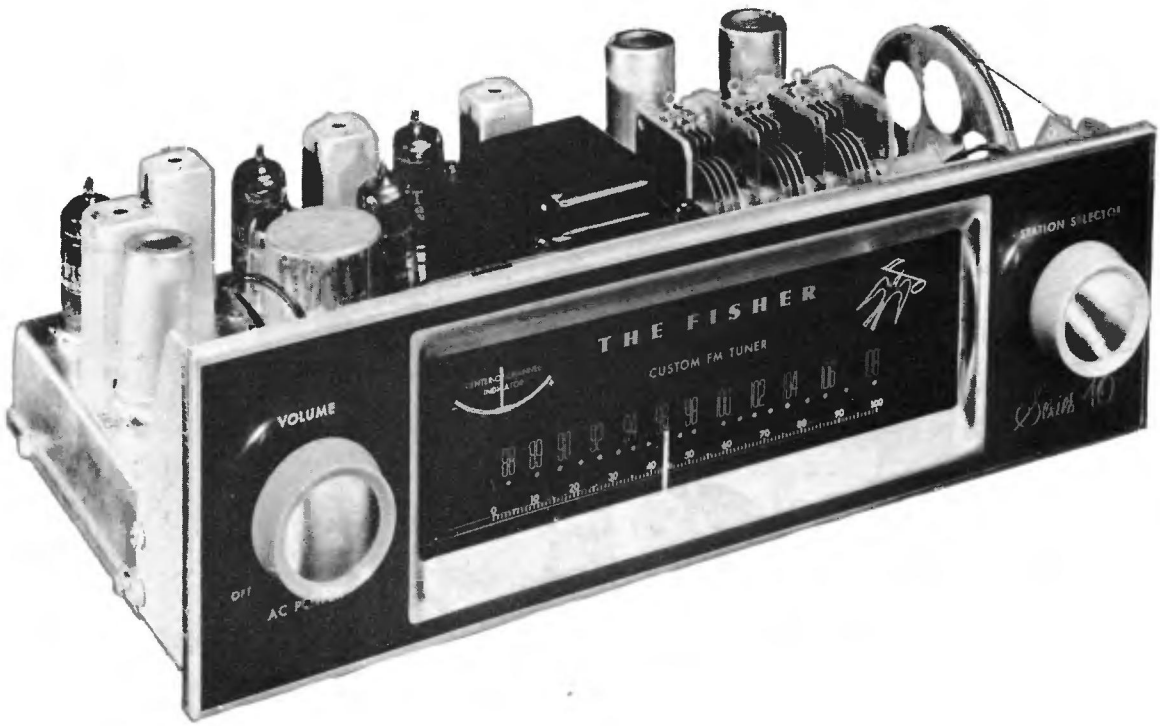
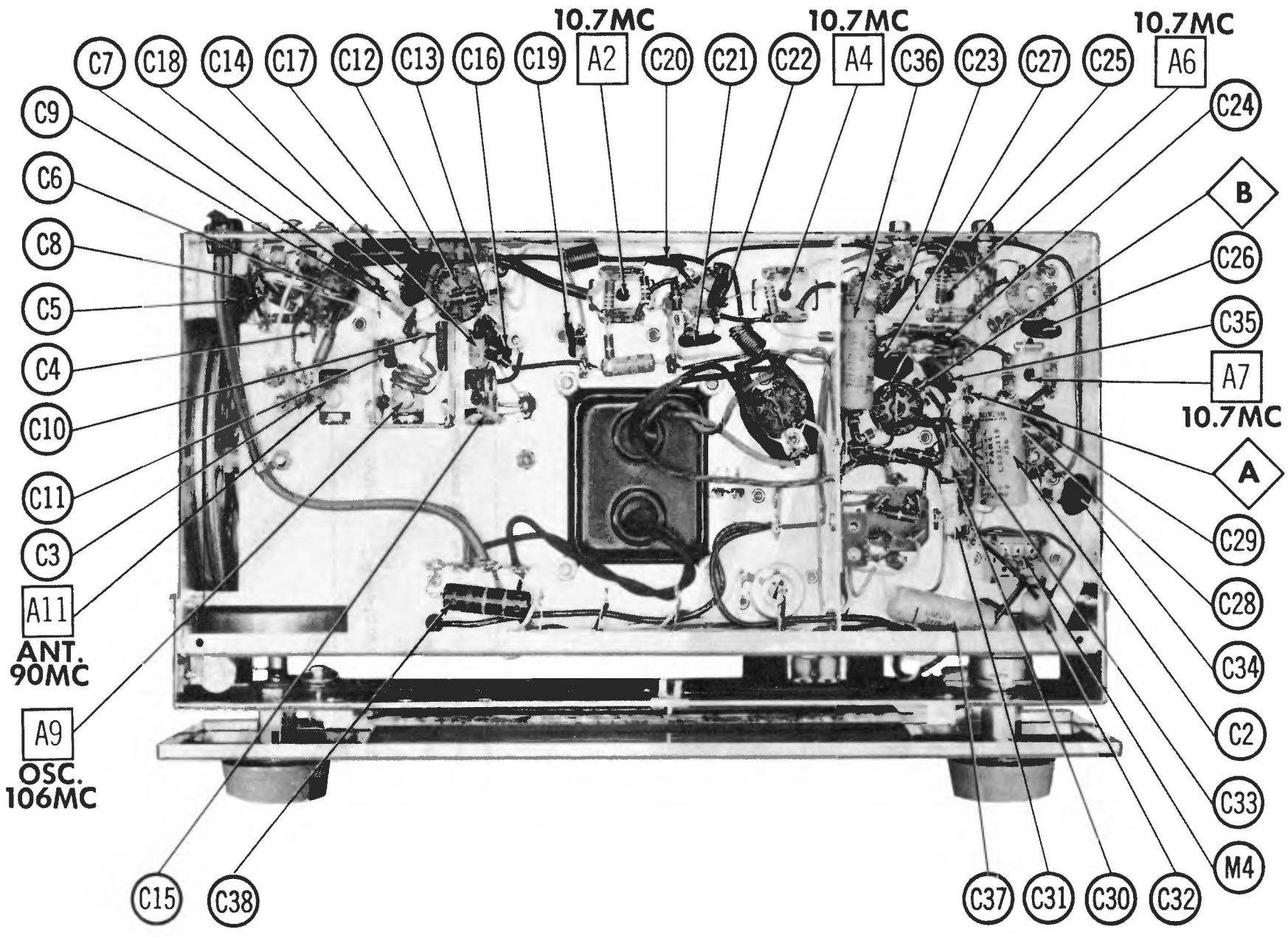
FISHER
MODEL FM-40



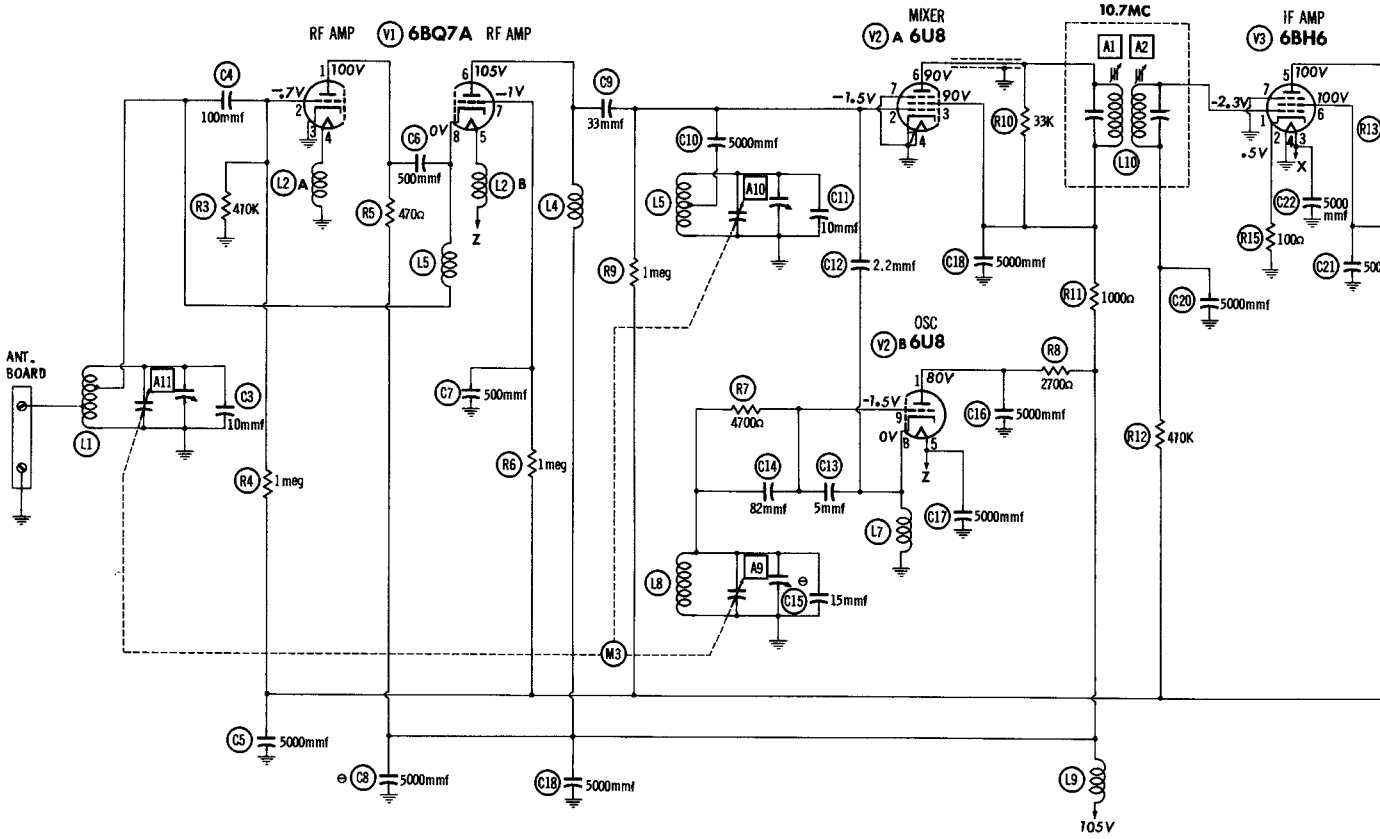
FISHER
MODEL FM-40

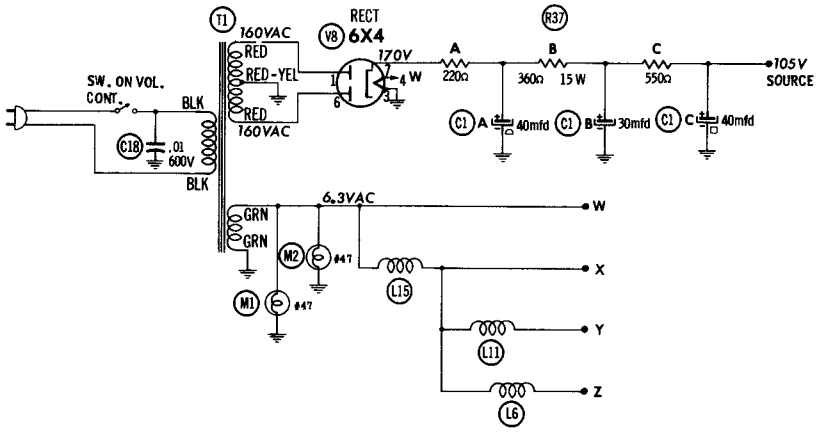
TRADE NAME	Fisher Model FM-40	
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.	
TYPE SET	AC Operated FM Tuner	
TUBES	Eight	
POWER SUPPLY	105-125 Volts AC - 50/60 Cycles	RATING .37 Amp. @ 117 Volts AC
TUNING RANGE - FM	88MC - 108MC	

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION





RESISTANCE READ

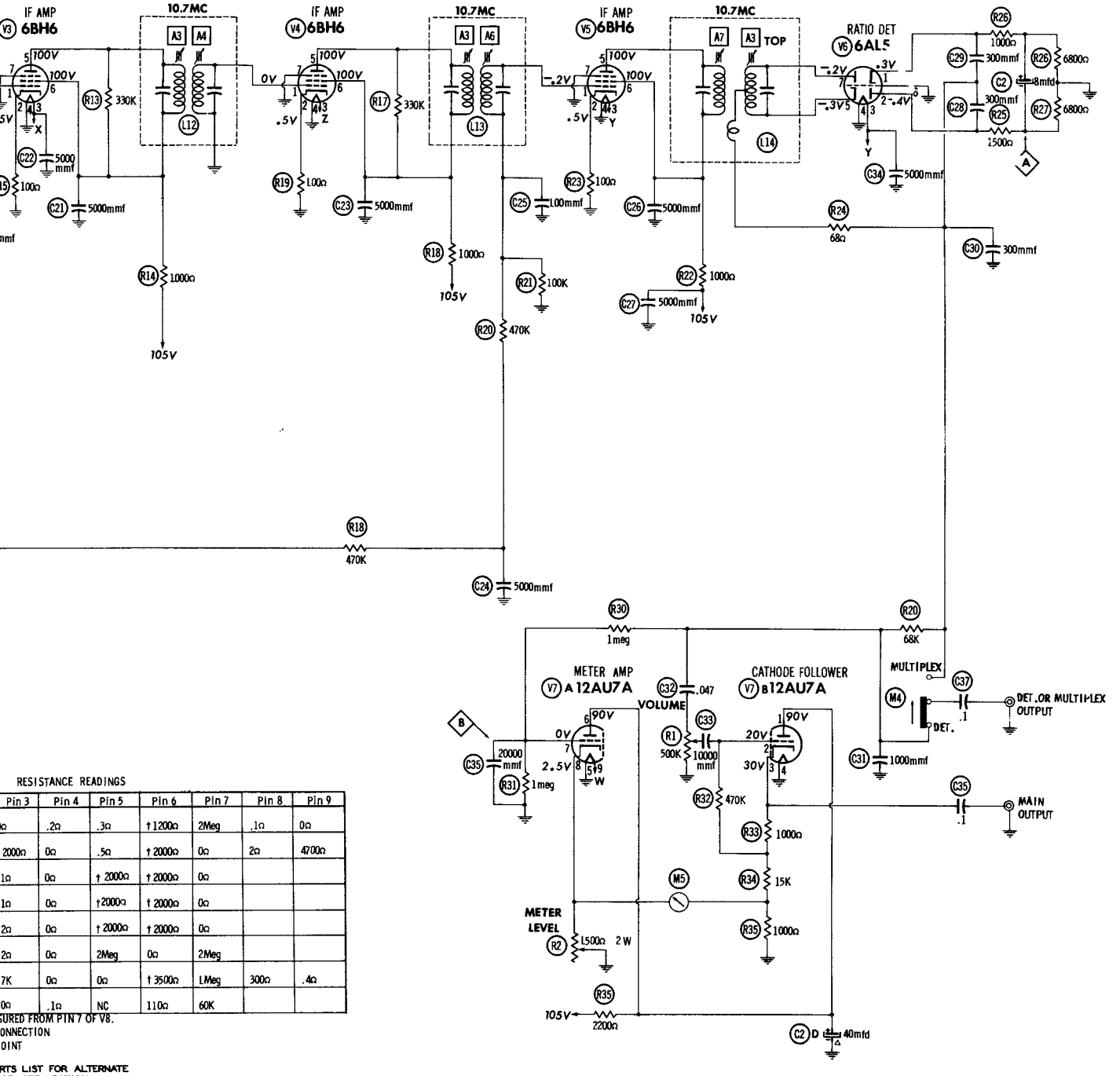
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	
V1	6BQ7A	†1500Ω	400K	0Ω	.2Ω	
V2	6U8	†4000Ω	2Meg	†2000Ω	0Ω	
V3	6BH6	1Meg	100Ω	.1Ω	0Ω	†
V4	6BH6	.3Ω	100Ω	.1Ω	0Ω	†
V5	6BH6	100K	100Ω	.2Ω	0Ω	†
V6	6AL5	8000Ω	8000Ω	.2Ω	0Ω	2
V7	12AU7A	†3500Ω	500K	17K	0Ω	0
V8	6X4	110Ω	NC	0Ω	.1Ω	N

† MEASURED FROM PIN 7 OF
NC NO CONNECTION
TP TIE POINT

⊖ SEE PARTS LIST FOR ALTE
VALUE OR APPLICATION

1. DC voltage measurements taken wit
AC voltages measured at 1000 ohms
2. Socket connections are shown as bot
3. Measured values are from socket
4. Line voltage maintained at 117 vo
5. Nominal tolerance on component va
variation of ± 15% in voltage and res
6. Volume control at maximum, no sig
measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



RESISTANCE READINGS

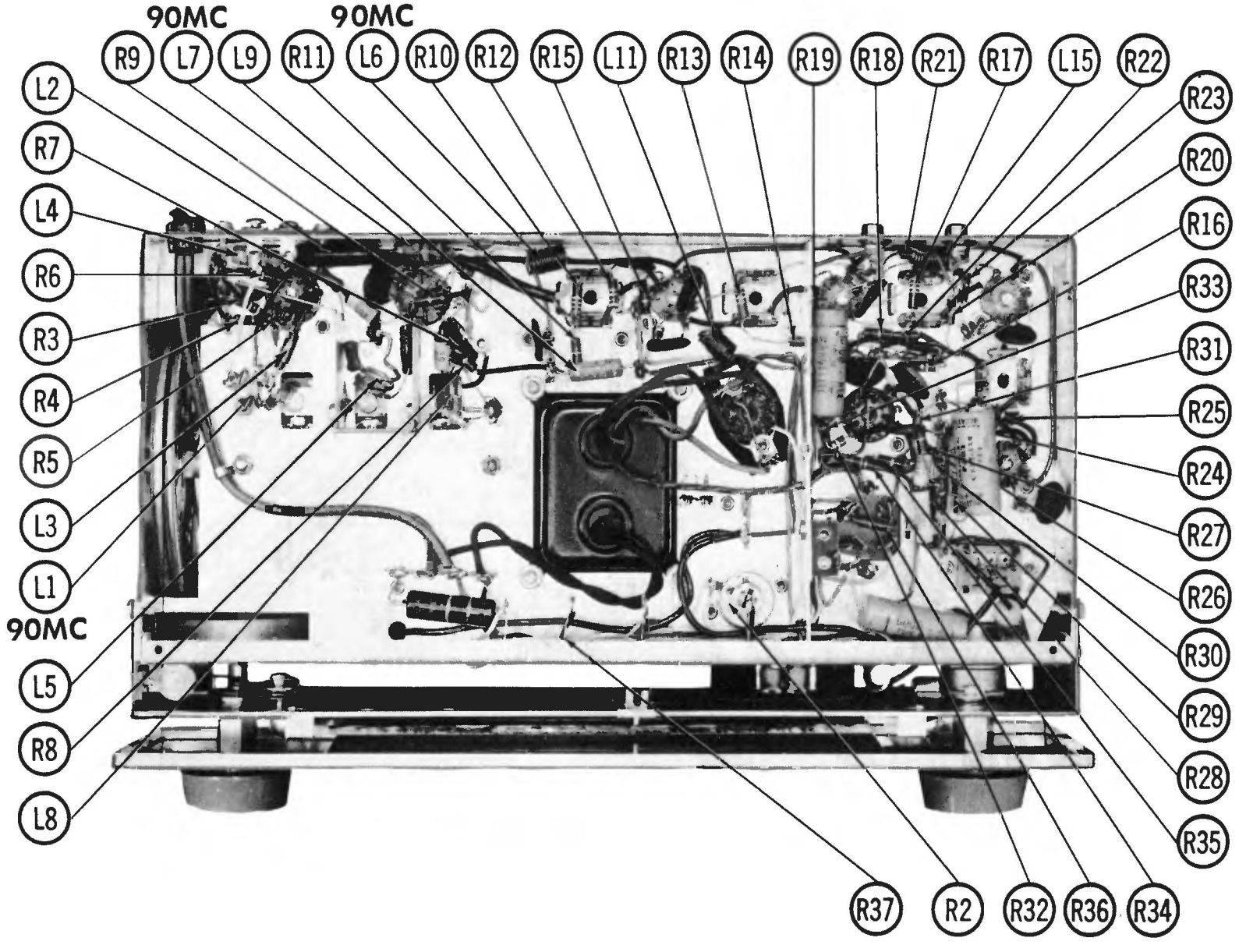
Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
Ω	.2Ω	.3Ω	†1200Ω	2Meg	.1Ω	0Ω
2000Ω	0Ω	.5Ω	†2000Ω	0Ω	2Ω	4700Ω
1Ω	0Ω	†2000Ω	†2000Ω	0Ω		
1Ω	0Ω	†2000Ω	†2000Ω	0Ω		
2Ω	0Ω	†2000Ω	†2000Ω	0Ω		
2Ω	0Ω	2Meg	0Ω	2Meg		
7K	0Ω	0Ω	†3500Ω	LMeg	300Ω	.4Ω
0Ω	.1Ω	NC	110Ω	60K		

SURED FROM PIN 7 OF V8.
ONNECTION
OINT

RTS LIST FOR ALTERNATE
OR APPLICATION

measurements taken with vacuum tube voltmeter;
measured at 1000 ohms per volt.
ections are shown as bottom views.
alues are from socket pin to common negative,
ge maintained at 117 volts for voltage readings.
erance on component values makes possible a
± 15% in voltage and resistance readings.
Fol at maximum, no signal applied for voltage
nts.

343-5



CHASSIS BOTTOM VIEW-RESISTOR 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.
To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.

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
1.		High side to ungrounded tube shield on 6U8 (V2). Low side to chassis.	10.7MC (unmod)	FM	Point of non-interference.	DC probe to point Ⓐ. Common to chassis.	A1, A2, A3, A4, A5, A6, A7	Adjust for maximum deflection.
2.		"	"	"	"	DC probe to point Ⓑ. Common to chassis.	A6	Adjust for zero reading. A positive and negative readieg 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∿ modalation and 450KC sweep. Use 120Ω 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
1.		High side to ungrounded tube shield on 6U8 (V2). Low side to chassis.	10.7MC (450KC Swp)	FM	Point of non-interference.	Vert. amp. to point Ⓐ. Low side to chassis.	A1, A2, A3, A4, A5, A6, A7	Disconnect stabilizing capacitor C2. Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
2.		"	"	"	"	Vert. amp. to point Ⓑ. Low side to chassis.	A8	Reconnect stubilizing capacitor C2. Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A7 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
3.	270Ω carbon resistor	High side thru dummy to antenna terminal. Low side to chassis.	106MC	FM	106MC	DC probe to point Ⓐ. Common to chassis.	A9	Adjust for maximum deflection.
4.	"	"	90MC	"	90MC	"	L7	Adjust for maximum deflectton by expanding or compressisg coil turns.
5.	"	"	"	"	"	"	A10, A11	Adjust for maximum deflectton.
6.	"	"	"	"	"	"	L6, L1	Adjust for maximum deflection by expanding or compressing coil turns.

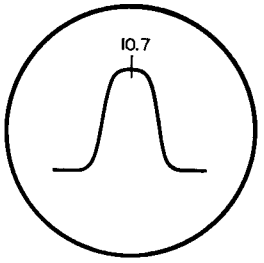


FIG. 1

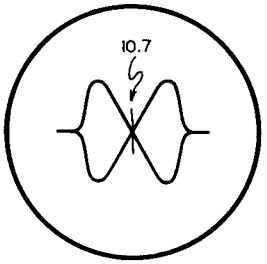
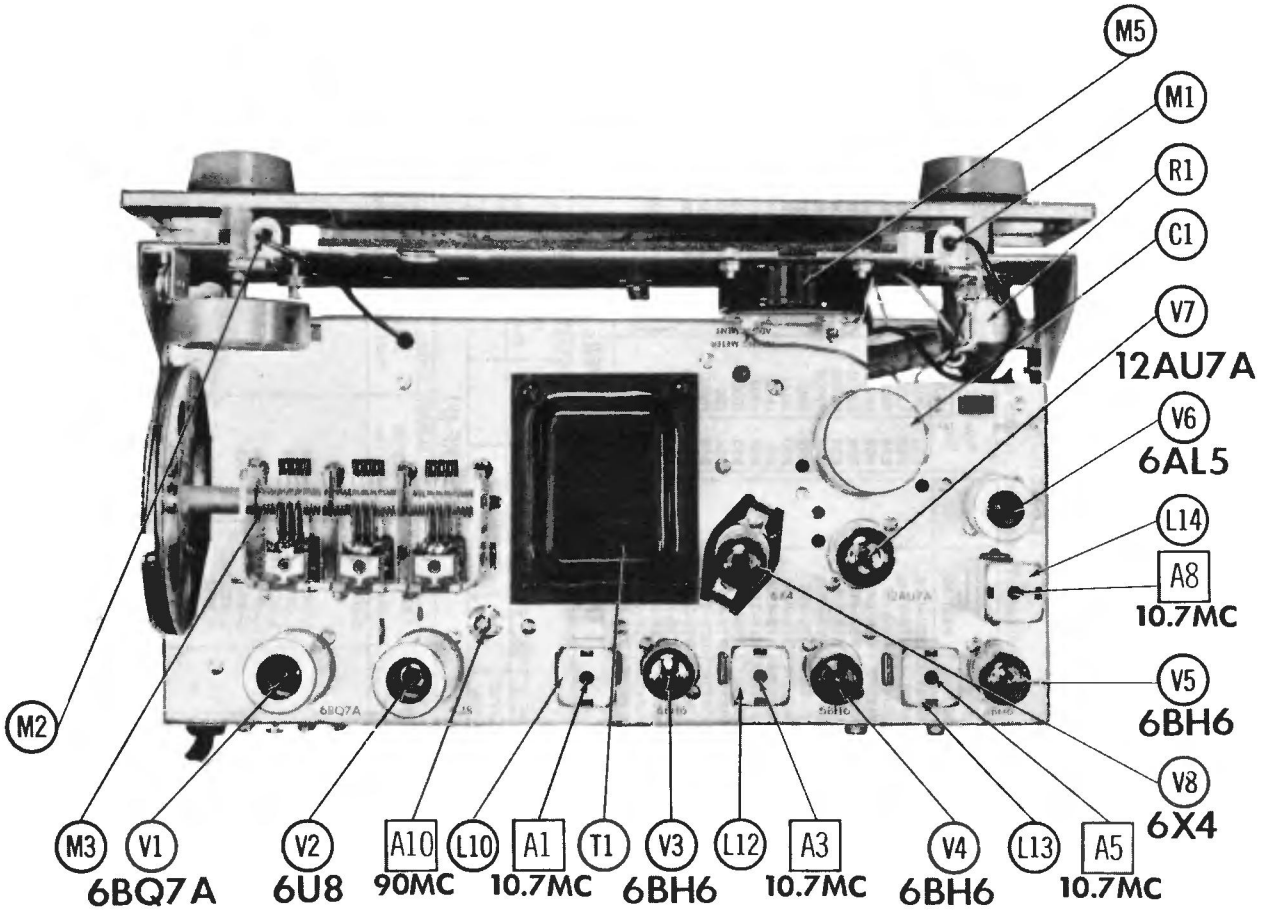
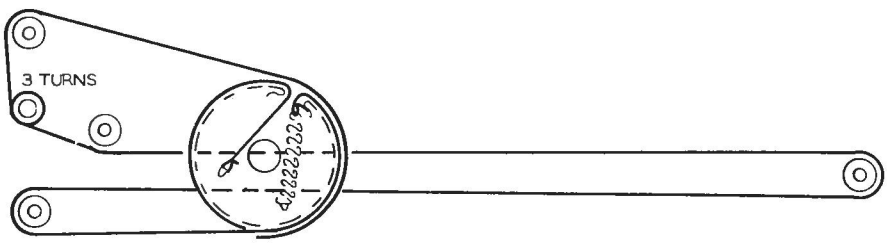


FIG. 2

CHASSIS—TOP VIEW





TUNING GANG FULLY CLOSED

DIAL CORD STRINGING

PARTS LIST AND DESCRIPTIONS
TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BQ7A	
V2	Mixer-Oscillator	6U8	
V3	1st IF Amplifier	6BH6	
V4	2nd IF Amplifier	6BH6	
V5	3rd IF Amplifier	8BH6	
V6	Ratio Detector	6AL5	
V7	Meter Amplifier-Cathode Follower	12AU7A	
V8	Rectifier	6X4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲40	250						T-085	R2319*
B	30	200						MTD-4540	
C	■40	200							
D	▲40	200							
C2	8	50		PR850V10	BR105	TC32	TD-10-50	FM-0510	TVA-1304

* Non catalog item.

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 CAP.	RATING VOLT	FISHER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C3	10		CC20CH100G5	NP0-SI10	TCZ-10	TZ09	NP0A-100	ZT-541	5TCC-Q1	
C4	100		C-577-121	DI-0001	DD-101	G042	801-101	UC-531	5GA-T1	
C5	5000		CK62GP502V8	BPD-005	DD-502	K080	811-005	DC511	5HK-D5	
C6	500		C-1315	SI500	D6-501	TP47	GP2K-501	UC-535	5GA-T5	
C7	500		C-1315	SI500	D6-501	TP47	GP2K-501	UC-535	5GA-T5	
C8	5000		C-3338	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	Note 1
C9	33		CC21GP330M5	SI33	D6-330	TP27	GP1K-330	UC-5433	5GA-Q33	
C10	5000		C-3338	BPD-005	DD-502	K060	811-005	DC525	5HK-D5	
C11	10		CC20CH100G5	NP0-SI10	TCZ-10	TZ09	NP0A-100	ZT-541	5TCC-Q1	
C12	2.2		C-3039	NP0-SI2.2	TCZ-2R2	TZ05	NP0A-2R2		5TCCB-V22	
C13	5		CC20TJO50F5							
C14	82		CC21GP820K5	1469-000082	TCZ-82	TZ28	NP0-337-820			
C15	15									Note 2
C16	5000		C-3338							
C17	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C18	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C19	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C20	5000		CK62GP502V8	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C21	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C22	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C23	5000		CK62GP502V6	BPD-005	DD-502	K060	811-005	DC525	5HK-D5	
C24	5000		CK62GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C25	100		C-577-121	SI100	D6-101	TP34	GP1K-101	UC-531	5GA-T1	
C26	5000		CK62GP502V8	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C27	5000		CK62GP502V8	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C28	300		CC21GP301K5	1469-0003	D6-331	5R5T3	811-301	MCB241	MS-33	
C29	300		CC21GP301K5	1469-0003	D6-331	5R5T3	811-301	MCB241	MS-33	
C30	300		CC21GP301K5	1469-0003	D6-331	5R5T3	811-301	MCB241	MS-33	
C31	1000			1464-001		1R5D1	811-102	MCB255	MS-21	Note 3
C32	.047	200	C68P473M2	BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C33	10000		CK62GP103V8	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C34	5000		CK82GP502V6	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C35	20000		C-556-122	BPD-02	DD-203	K085	817-02		5HK-S2	
C36	.1	200	C68P104M2	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C37	.1	200	C68P104M2	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C38	.01	600	C-2747	BPD-01	D6-103	CUB6S1	GP3-333-103	PT611	6TM-S1	

Note 1: Not used in some versions.
Note 2: Some versions may use 11MMF in this application. (Part #CC20LK110K5).
Note 3: Some versions may use 1300MMF in this application. (Part #CC26GP132K5).

PARTS LIST AND DESCRIPTIONS (Continued)
CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	500K	½	R-50000-17				U48	Volume
B	Switch		Not Req.				US-28	Attach to R1A
R2	1500Ω	2	R-520-149		39-1500		FL-1.5K	Tuning Meter Level (Wire wound)

RESISTORS

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

ITEM No.	RATING OHMS	RATING WATT	FISHER PART No.	IRC PART No.	NOTES
R3	470K		RC20BF474K	BTS-470K	
R4	1Meg		RC20BF105K	BTS-1Meg	
R5	470Ω		RC20BF471K	BTS-470	
R6	1Meg		RC20BF105K	BTS-1Meg	
R7	4700Ω		RC20BF472K	BTS-4700	
R8	2700Ω		RC20BF272K	BTS-2700	
R9	1Meg		RC20BF105K	BTS-1Meg	
R10	33K		RC20BF333K	BTS-33K	
R11	1000Ω		RC20BF103K	BTS-1000	
R12	470K		RC20BF474K	BTS-470K	
R13	330K		RC20BF334K	BTS-330K	
R14	1000Ω		RC20BF102K	BTS-1000	
R15	100Ω		RC20BF101K	BTS-100	
R16	470K		RC20BF474K	BTS-470K	
R17	330K		RC20BF334K	BTS-330K	
R18	1000Ω		RC20BF102K	BTS-1000	
R19	100Ω		RC20BF101K	BTS-100	
R20	470K		RC20BF474K	BTS-470K	
R21	100K		RC20BF104K	BTS-100K	

ITEM No.	RATING OHMS	RATING WATT	FISHER PART No.	IRC PART No.	NOTES
R22	1000Ω		RC20BF102K	BTS-1000	
R23	100Ω		RC20BF101K	BTS-100	
R24	68Ω		RC20BF680K	BTS-68	
R25	1500Ω		RC20BF152K	BTS-1500	
R26	1000Ω		RC20BF102K	BTS-1000	
R27	6800Ω		RC20BF682K	BTS-6800	
R28	6800Ω		RC20BF682K	BTS-6800	
R29	68K		RC20BF683K	BTS-68K	
R30	1Meg		RC20BF105K	BTS-1Meg	
R31	1Meg		RC20BF105K	BTS-1Meg	
R32	470K		RC20BF474K	BTS-470K	
R33	1000Ω		RC20BF102K	BTS-1000	
R34	15K		RC20BF153K	BTS-15K	
R35	1000Ω		RC20BF102K	BTS-1000	
R36	2200Ω		RC20BF222K	BTS-2200	
R37A	220Ω				
B	380Ω	15	R-550-134		
C	550Ω				

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	FISHER PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC @.37A	380VCT @.062ADC	6.3VAC @2.85A		T-557-111					

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	FISHER PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	FM Ant. Coil	0Ω		L-577-136				Tapped
L2A	Fil. Choke	0Ω						
B	Fil. Choke	0Ω						
L3	RF Choke	.1Ω		L-520-178	19-1002		4806	2 Microhenries
L4	RF Choke	1.8Ω		L-3352	19-1002		4806	2.2 Microhenries
L5	FM RF Coil	0Ω		L-577-127				Tapped
L6	Fil. Choke	0Ω		L-520-156	19-1000		4802	1.2 Microhenries
L7	Cathode Choke	1.8Ω		L-3352	19-1002		4806	2.2 Microhenries
L8	Osc. Coil	0Ω		L-577-138				
L9	RF Choke	1.8Ω		L-3352	19-1002		4806	2.2 Microhenries
L10	1st FM IF	.7Ω	.7Ω	ZZ-2987	16-3487	FM-254	1463	
L11	Fil. Choke	0Ω		L-520-156	19-1000		4802	1.2 Microhenries
L12	2nd FM IF	1.6Ω	.5Ω	ZZ-509-130				
L13	3rd FM IF	1.6Ω	.5Ω	ZZ-509-130				
L14	Ratio Det.	1.5Ω	.8ΩCT	ZZ-2986	17-3498	FM-255	1465	Tertiary winding = .4Ω
L15	Fil. Choke	0Ω		L-520-156	19-1000		4602	1.2 Microhenries

MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M1	Pilot Light	I-50009-1	#47
M2	Pilot Light	I-50009-1	#47
M3	Tuning Cap.	C577-112	3 Gang
M4	Switch	S-577-114	Detector - Multiplex (SPDT-Slide Type)
M5	Meter	M-550-132-2	Tuning Indicator