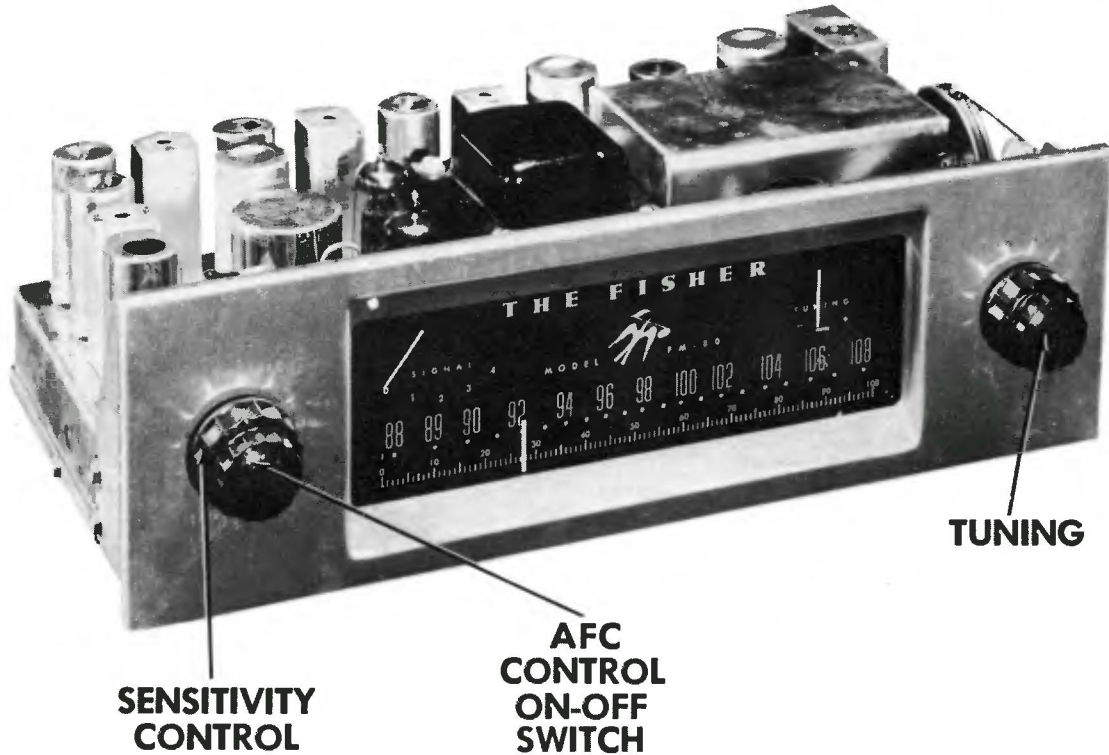




FISHER  
MODEL FM-80



SENSITIVITY  
CONTROL

AFC  
CONTROL  
ON-OFF  
SWITCH

TUNING

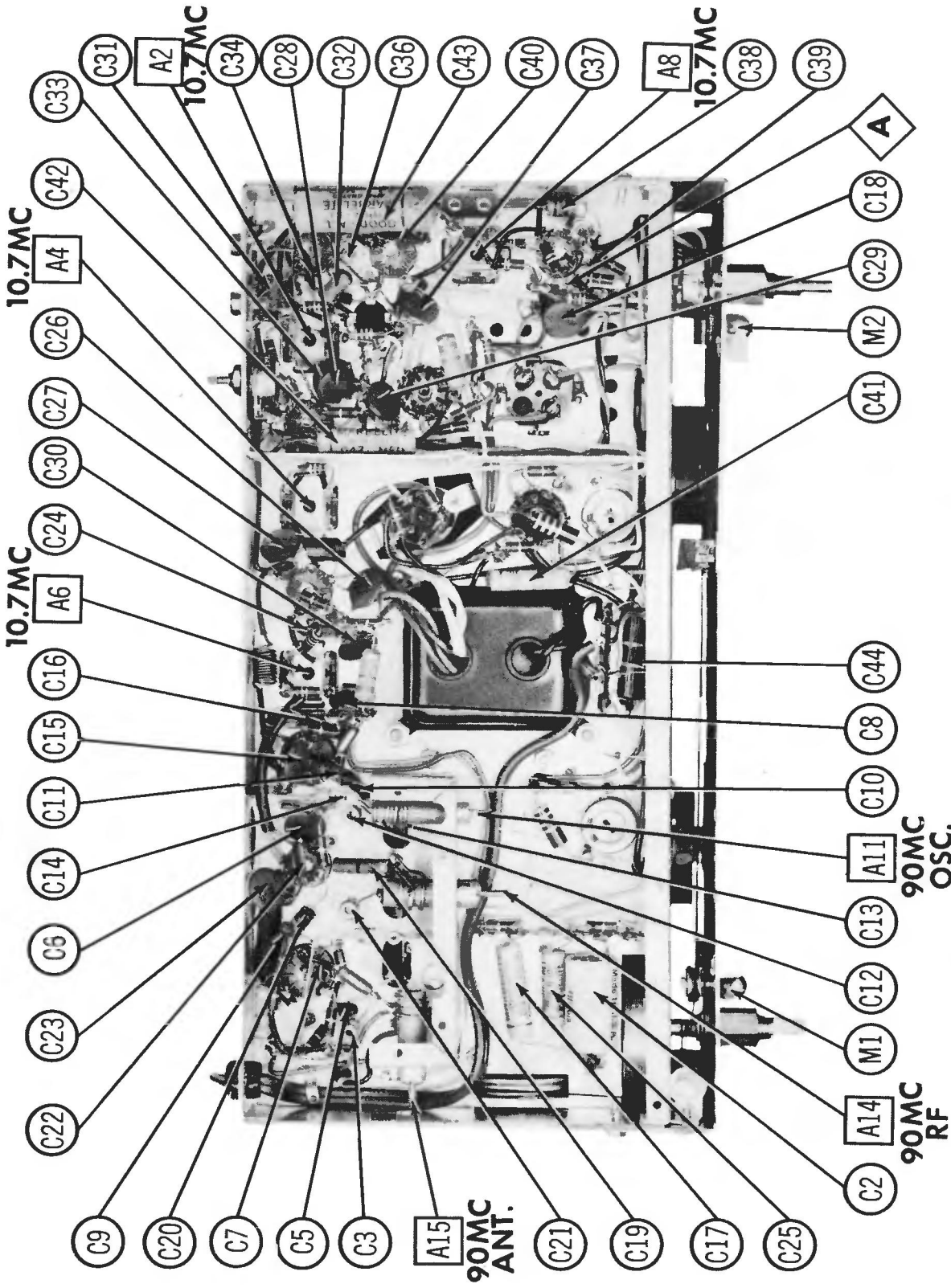
FISHER  
MODEL FM-80

TRADE NAME	Fisher Model FM-80	
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.	
TYPE SET	AC Operated FM Superheterodyne Tuner For Custom Installation	
TUBES	Eleven	
POWER SUPPLY	105-125 Volts AC - 50/60 Cycles	RATING .43 Amp. @ 117 Volts AC
TUNING RANGE - FM	88MC - 108MC	

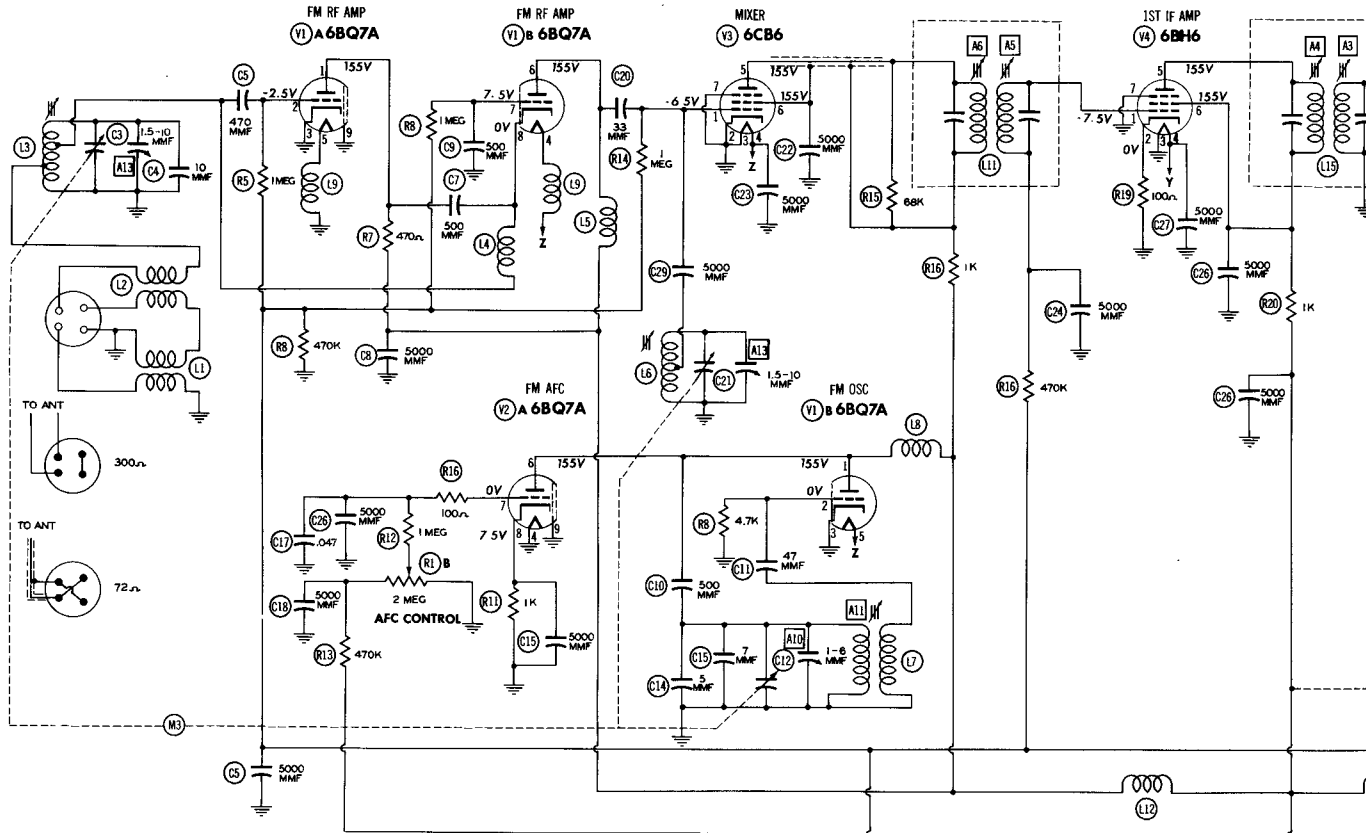
**HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana**

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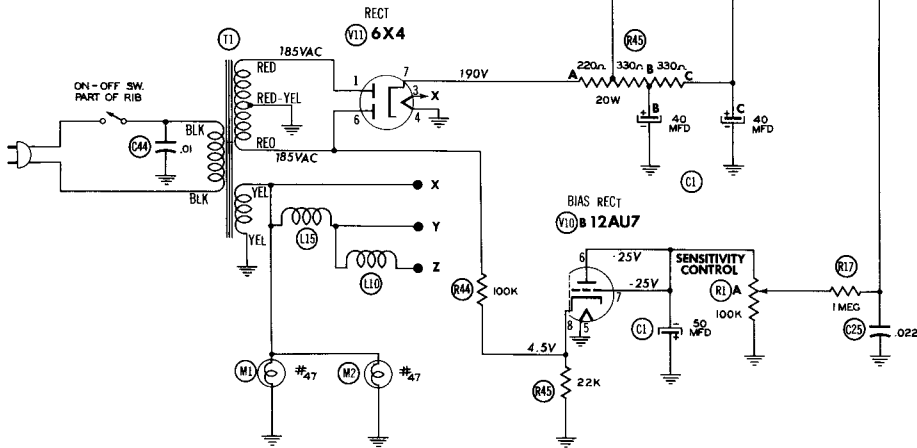


CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



FMIF=10.7MC

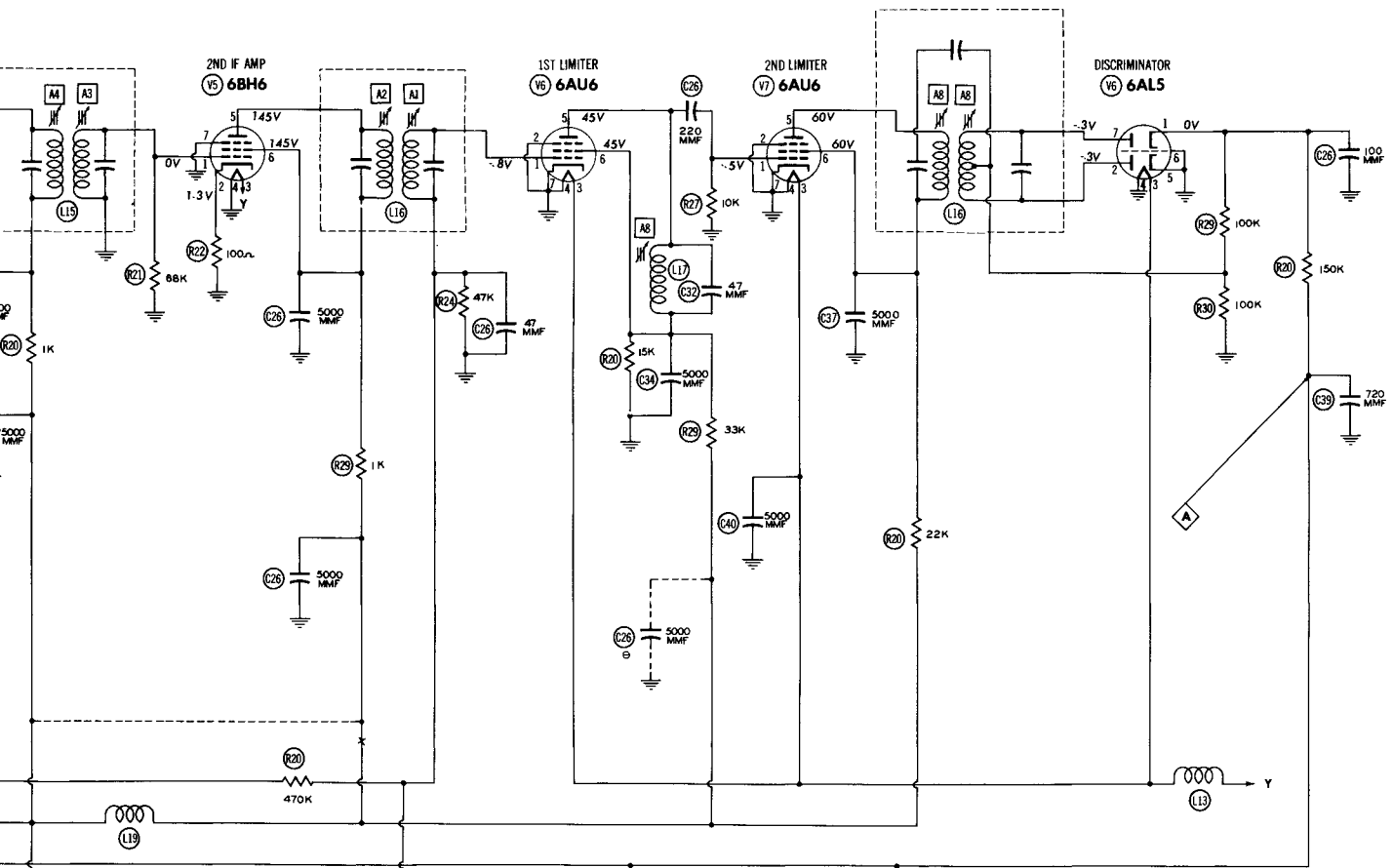
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION



RESISTANCE READINGS						
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
V 1	6BQ7A	11.3KΩ	370KΩ	0Ω	.1Ω	1800Ω
V 2	6BQ7A	1890Ω	4.7KΩ	0Ω	.1Ω	1800Ω
V 3	6CB6	1.4MΩ	100Ω	0Ω	.1Ω	1.8KΩ
V 4	6BH6	800KΩ	100Ω	0Ω	.1Ω	1.8KΩ
V 5	6BH6	.1Ω	100Ω	0Ω	.1Ω	1.8KΩ
V 6	6AU6	47KΩ	0Ω	.1Ω	0Ω	116KΩ
V 7	6AU6	10KΩ	0Ω	.1Ω	0Ω	125KΩ
V 8	6AL5	150KΩ	100KΩ	.1Ω	0Ω	0Ω
V 9	12AU7	1200Ω	800KΩ	550Ω	.1Ω	1220Ω
V 10	12AU7	1800Ω	1MΩ	49KΩ	0Ω	100KΩ
V 11	6X4	80Ω	NC	0Ω	.1Ω	80Ω

↑ MEASURED FROM PIN 7 OF V11  
NC - NO CONNECTION  
TP - TIE POINT

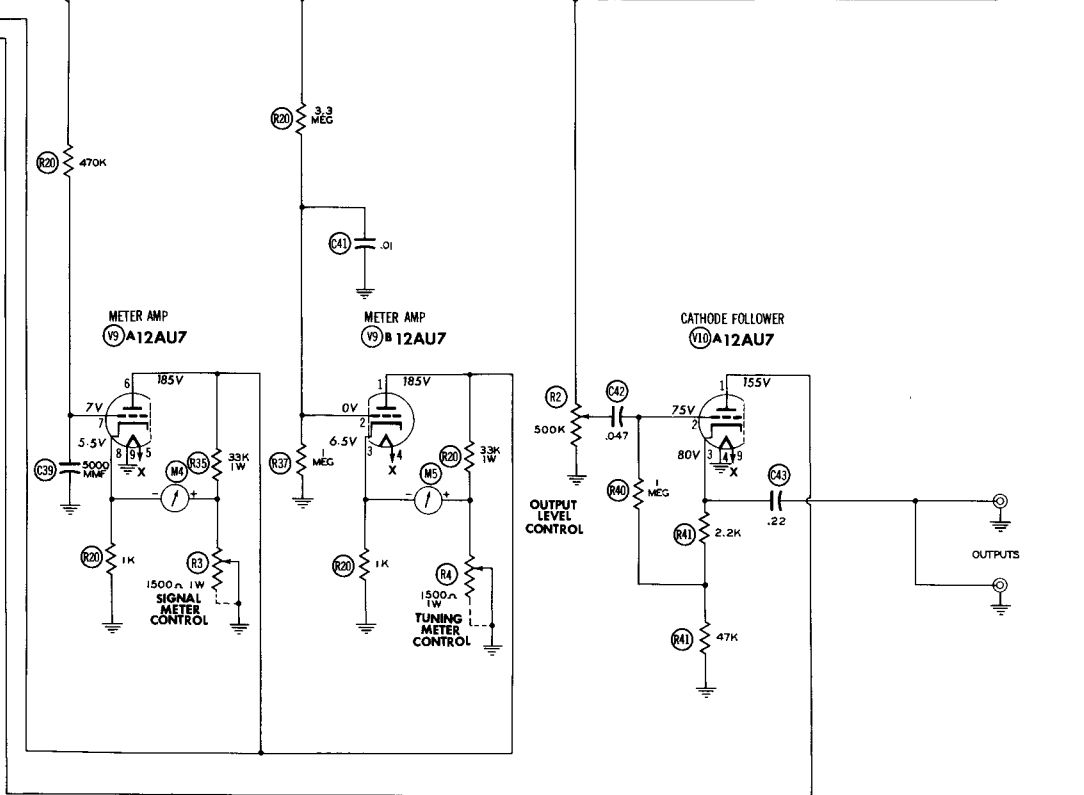
- DC voltage measurements taken with vacuum tube volt.
- AC voltages measured at 1000 ohms per volt.
- Measured values are from socket pin to common reference.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible variation of ± 1% in voltage and resistance readings.
- All controls at minimum, proper output load connected.

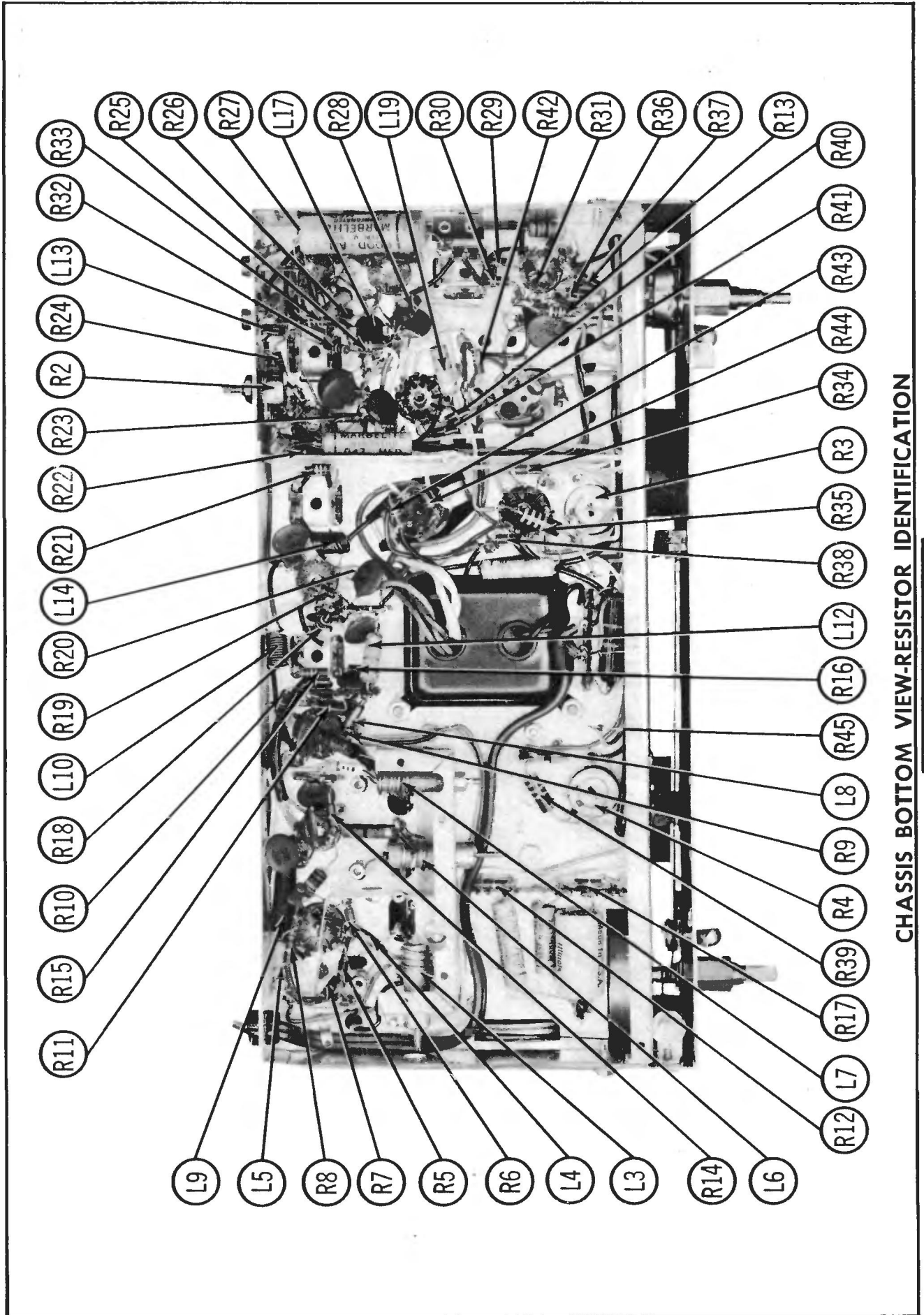


Pin 5 Pin 6 Pin 7 Pin 8 Pin 9

0Ω	1.990Ω	1.5 Meg	.1Ω	0Ω
.1Ω	1.990Ω	1.5 Meg	1KΩ	0Ω
1.8KΩ	1.8KΩ	0Ω	0Ω	0Ω
1.8KΩ	1.8KΩ	0Ω	0Ω	0Ω
1.8KΩ	1.8KΩ	0Ω	0Ω	0Ω
1.8KΩ	1.8KΩ	0Ω	0Ω	0Ω
2.2KΩ	2.2KΩ	0Ω	0Ω	0Ω
0Ω	0Ω	100KΩ	0Ω	0Ω
.1Ω	1.22KΩ	500KΩ	5.50Ω	0Ω
0Ω	100KΩ	100KΩ	20KΩ	.1Ω
0Ω	80Ω	18KΩ	0Ω	0Ω

with vacuum tube voltmeter;  
ohms per volt.  
bottom views.  
set pin to common negative.  
7 volts for voltage readings.  
nt value makes possible a  
if resistance readings.  
proper output load connected.





CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

FISHER  
MODEL FM-80

# ALIGNMENT INSTRUCTIONS

## ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.  
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.  
Sensitivity control to maximum. (Clockwise).  
AFC control to minimum. (Counter clockwise).

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. Direct	High side to ungrounded tube shield on 6CB6 (V2). Low side to chassis.	10.7MC (Unmod)	FM	Point of non-interference.	DC probe to pin 7 (grid) of 12AU7 (V9). Common to chassis.	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2. "	"	"	"	"	DC probe thru 1Meg to pin 1 (grid) of 6AU6 (V7). Common to chassis.	A7	"
3. "	"	"	"	"	DC probe to point A. Common to chassis.	A8, A9	Slightly detune A9. Adjust A8 for maximum deflection.
4. "	"	"	"	"	"	A9	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 120v 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. Direct	High side to ungrounded tube shield of 6CB6 (V2). Low side to chassis.	10.7MC (450KC Swp)	FM	Point of non-interference.	Vert. amp. to pin 7 (grid) of 12AU7 (V9). Low side to chassis.	A1, A2, A3, A4, A5, A6	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
2. "	"	"	"	"	Vert. amp. thru 1Meg to pin 1 (grid) of 6AU6 (V7). Low side to chassis.	A7	"
3. "	"	"	"	"	Vert. amp. to point A. Low side to chassis.	A8, A9	Adjust A9 so that 10.7MC occurs at center of crossover lines similar to Fig. 2. Adjust A8 for maximum amplitude and straightness of crossover lines. Continue with step 5.

## FM RF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5. Two 120Ω carbon resistors	High side to antenna (300Ω connection). Low side to chassis.	106MC	FM	106MC	DC probe to pin 7 (grid) of 12AU7 (V9). Common to chassis.	A10	Adjust for maximum deflection.
6. "	"	90MC	"	90MC	"	A11	Adjust for maximum deflection. Repeat steps 5 & 6.
7. "	"	106MC	"	106MC	"	A12, A13	Adjust for maximum deflection.
8. "	"	90MC	"	90MC	"	A14, A15	"

## METER ADJUSTMENTS

Allow a 15 minute warm-up period.  
Signal meter pointer should be at zero with sensitivity control near minimum. (Not absolute minimum).  
Tuning meter pointer should be at center of horizontal bar. If adjustment is necessary, both meters have labeled adjustments near rear of meter.

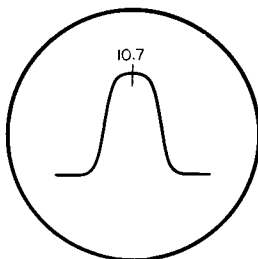


FIG. 1

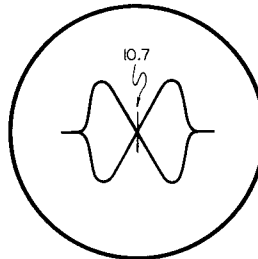
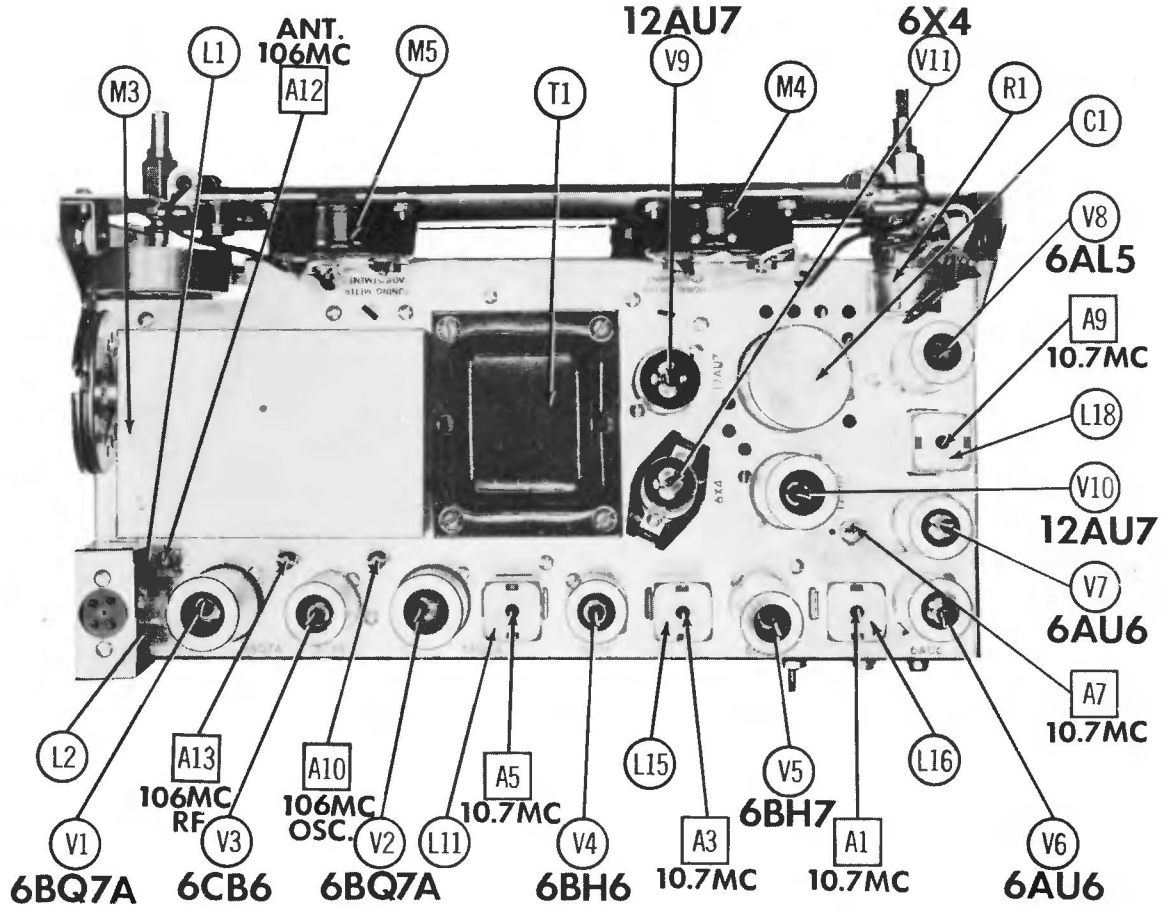


FIG. 2

# CHASSIS—TOP VIEW



# PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA			RETM A BASE TYPE	NOTES
		FISHER PART No.	STANDARD REPLACEMENT			
V1	RF Amp.	6EQ7A	6EQ7A	9AJ		
V2	Osc.-AFC	6EQ7A	6EQ7A	9AJ		
V3	Mixer	6CB6	6CB6	7CM		
V4	1st IF Amp.	6BH6	6BH6	7CM		
V5	2nd IF Amp.	6BH6	6BH6	7BK		
V6	1st Limiter	6AU6	6AU6	7BJ		
V7	2nd Limiter	6AU6	6AU6	6BT		
V8	Discriminator	6AL5	6AL5	9A		
V9	Meter Amp.	12AU7	12AU7	9A		
V10	Bias Rectifier - Cathode Follower	12AU7	12AU7	9A		
V11	Rectifier	6X4	6X4	5BS		

## CAPACITORS

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

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA							SANGAMO PART No.	
		CENTRALAB PART No.	ERIE PART No.	MAILORY PART No.	PYRAMID PART No.					
C1A	.40	C-520-117								
C1B	.40									
C2	.50	C-508-115								
C3	1.5-10	C-520-158								
C4	10	C-1317								
C5	470	C-520-143								
C6	5000	C-2148								
C7	5000	C-1315								
C8	5000	C-2146								
C9	5000	C-1315								
C10	5000	D6-501								
C11	47	C-3350								
C12	1-6	C-520-159								
C13	7									
C14	5	C-520-181								
C15	5000	C-2146								
C16	5000	C-2146								
C17	.047	C-687473M2								
C18	5000	C-1246								
C19	5000	C-9338								
C20	33	C-3337								
C21	1.5-10	C-520-158								
C22	5000	C-2146								
C23	5000	C-2146								
C24	5000	C-1748								
C25	.022	C-68P23M2								
C26	5000	C-2146								
C27	5000	C-2146								
C28	5000	C-2146								
C29	5000	C-2146								
C30	5000	C-1246								
C31	47	C-3350								
C32	47	C-3350								
C33	5000	C-2146								
C34	5000	C-2146								
C35	5000	C-2146								
C36	220	C-3306								
C37	5000	C-2146								
C38	100	C-3339								
C39	720	C-3422								
C40	5000	C-68P103M2								
C41	.01	C-68P473M2								
C42	.047	C-68P473M2								
C43	.22	C-68P244V2								
C44	.01	C-2747								

Note 1

Note 1. Not used in some versions.

# PARTS LIST AND DESCRIPTIONS (Continued)

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	RESIST. ANCE	WATTS	FISHER PART No.	CLAROSTAT PART No.	MALLOY PART No.	
R1A	100KΩ	1	R50000-7			Sensitivity AFC & Switch Output Level Attach to R2A Signal Meter Adjustment (Wire wound) Tuning Meter Adjustment (Wire wound)
R2A	2Meg		R520-139	AB-59	U-50	
R3	500KΩ Shaft	1	Not Req. R520-149	AK-1	Not Req.	
R4	1500Ω	1	R520-149			

## RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		NOTES
		FISHER PART No.	IRC PART No.	
R5	1Meg	RC20B F105K	BTS-1Meg	
R6	470KΩ	RC20B F474K	BTS-470K	
R7	470Ω	RC20B F474K	BTS-470	
R8	1Meg	RC20B F105K	BTS-1Meg	
R9	100Ω	RC20B F101K	BTS-100	
R10	1000Ω	RC20B F102K	BTS-1000	
R11	1Meg	RC20B F105K	BTS-1Meg	
R12	470KΩ	RC20B F474K	BTS-470K	
R13	1Meg	RC20B F105K	BTS-1Meg	
R14	68KΩ	RC20B F683K	BTS-68K	
R15	1000Ω	RC20B F102K	BTS-1000	
R16	470KΩ	RC20B F474K	BTS-470K	
R17	100Ω	RC20B F101K	BTS-100	
R18	1000Ω	RC20B F102K	BTS-1000	
R19	100Ω	RC20B F101K	BTS-100	
R20	68KΩ	RC20B F683K	BTS-68K	
R21	100Ω	RC20B F101K	BTS-100	
R22	1000Ω	RC20B F102K	BTS-1000	
R23	47KΩ	RC20B F473K	BTS-47K	
R24	33KΩ	RC20B F333K	BTS-33K	
R25	15KΩ	RC20B F153K	BTS-15K	

## TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA		
	PRI.	SEC. 1	SEC. 2	FISHER PART No.	Stancor PART No.	Merit PART No.
T1	117VAC @ .45A	382VCT @ 3.9A	520-112	520-112	Thorderson	Thorderson

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	FISHER PART No.	MEISSNER PART No.	MILLER PART No.	
L1	Ant. Matching	.6Ω	.6Ω	L-508-139			
L2	Ant. Matching	.6Ω	.6Ω	L-509-139			
L3	Trans.	.0Ω	.0Ω	AS-520-177			
L4	RF Choke	1.0Ω	1.8Ω	L-520-176			
L5	RF Choke	1.8Ω	1.8Ω	L-3352	19-1002	4806	Tapped 2 Microhenries; IRC part no. CLA
L6	RF Coll.	.0Ω	.0Ω	AS-520-176			
L7	Disc. Coll.	.0Ω	.0Ω	AS-520-174			
L8	RF Choke	.4Ω	.2Ω	L-508-147			
L9	RF Choke	.2Ω	.2Ω	L-508-140			
L10	RF Choke	.0Ω	.0Ω	L-520-156	19-1000	4802	1.2 Microhenries; IRC part no. CLA
L11	1st FM IF	.6Ω	.6Ω	ZZ-2887	16-3487	4606	1.2 Microhenries; IRC part no. CLA
L12	RF Choke	1.8Ω	1.8Ω	L-3352	19-1002	4602	1.2 Microhenries; IRC part no. CLA
L13	RF Choke	.0Ω	.0Ω	L-520-156	19-1000	4602	1.2 Microhenries; IRC part no. CLA
L14	RF Choke	.0Ω	.0Ω	L-520-156	19-1000	4602	1.2 Microhenries; IRC part no. CLA
L15	2nd FM IF	.6Ω	.6Ω	ZZ-2887	16-3487	4606	1.2 Microhenries; IRC part no. CLA

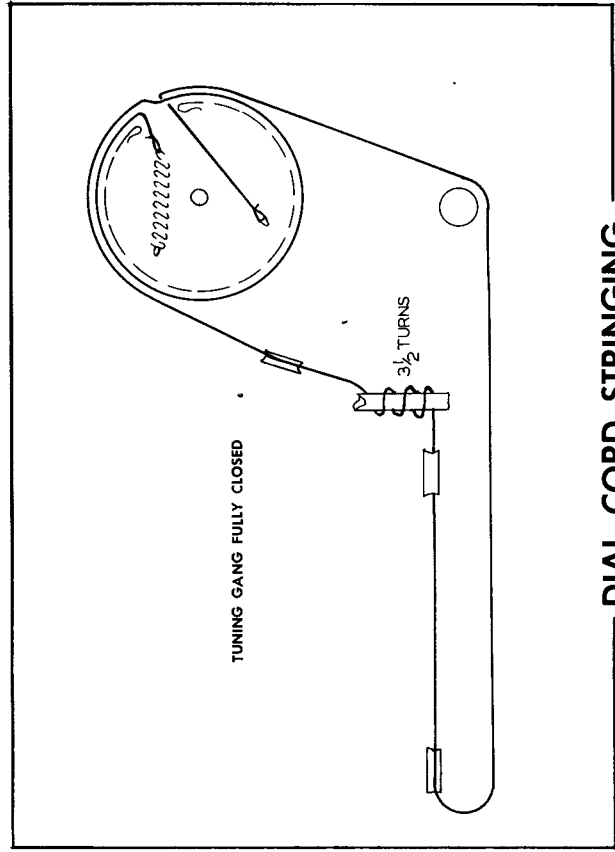
# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (cont)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	FISHER PART No.	MEISSNER PART No.	MILLER PART No.	
L16	3rd FM IF	1.7Ω	.5Ω	ZZ-509-130			
L17	FM Limiter	.2Ω	.2Ω	L-520-145			
L18	Discriminator	1.7Ω	10CT	ZZ-509-131	17-3497	FM-253	2.2 Microhenries; IRC part no. CLA
L19	RF Choke	1.8Ω	1.8Ω	L-3352	19-1002		

## MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES	
			FISHER PART No.	NOTES
M1	Dial Light	I-2148	I-2148	#47; Bayonet
M2	Dial Light	I-2148	I-2148	#47; Bayonet
M3	Tuning Cap. Meter	C-520-118	M-520-130-1	3 Gang (Capacity values unobtainable)
M4	Tuning Meter	M-520-130-2		Tuning



## DIAL CORD STRINGING