

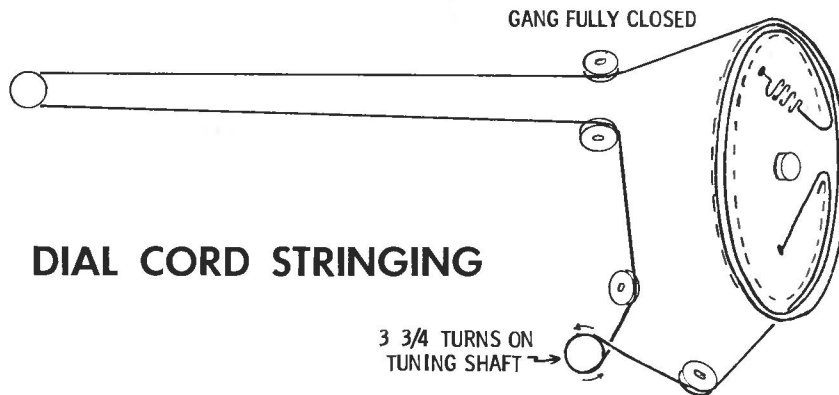


FISHER
MODEL 90-T



FISHER
MODEL 90-T

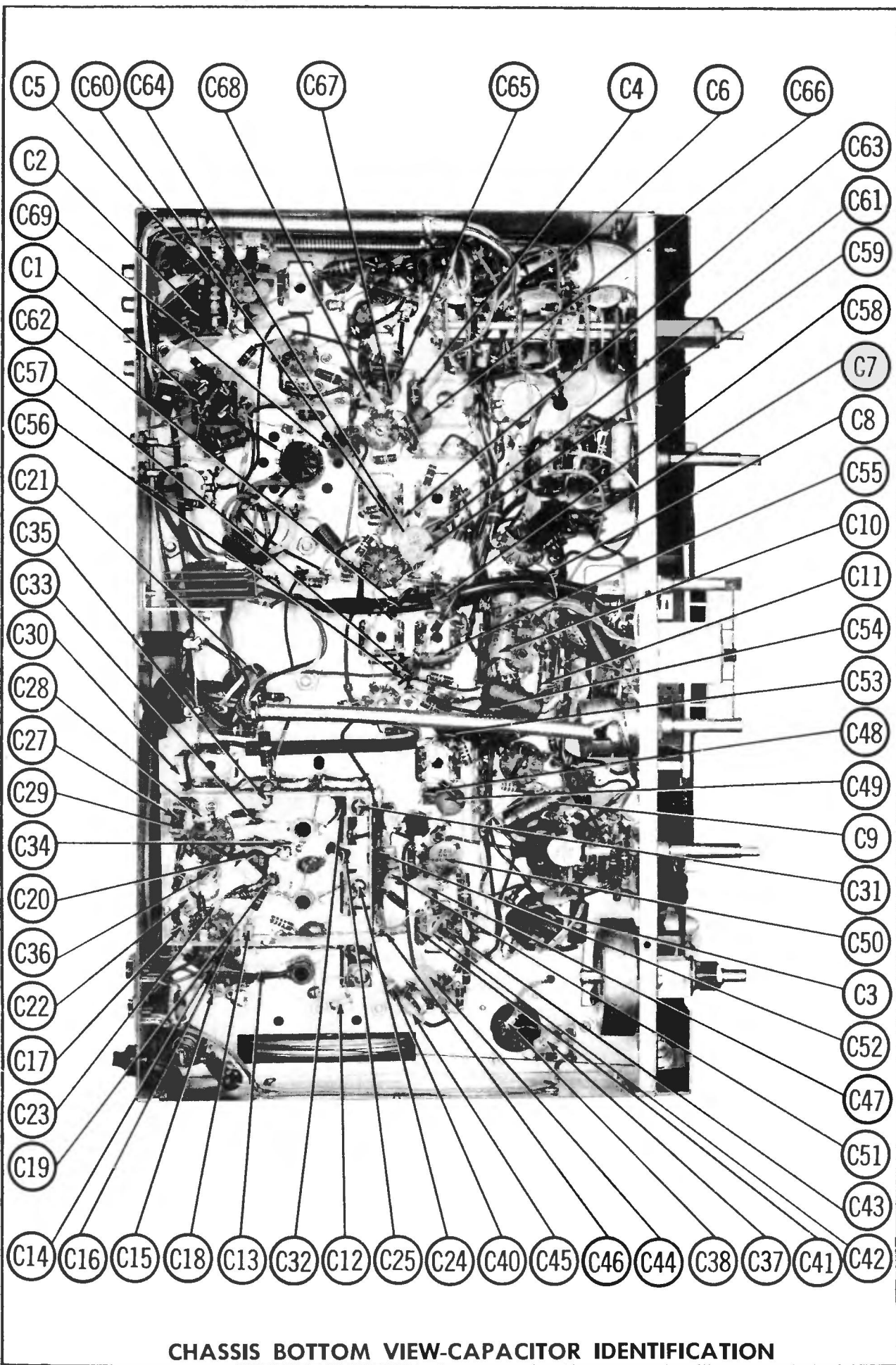
TRADE NAME	Fisher Model 90-T (Serial #19999 and Lower)	
MANUFACTURER	Fisher Radio Corp., 21-21 44th. Drive, Long Island City 1, N. Y.	
TYPE SET	AC Operated FM-AM Tuner	
TUBES	Fifteen	
POWER SUPPLY	105-125 Volts AC-60 Cycles	RATING .53 Amp. @ 117 Volts AC (54 Watts)
TUNING RANGE-BROADCAST	535-1650KC	FREQ. MOD. 88-108MC



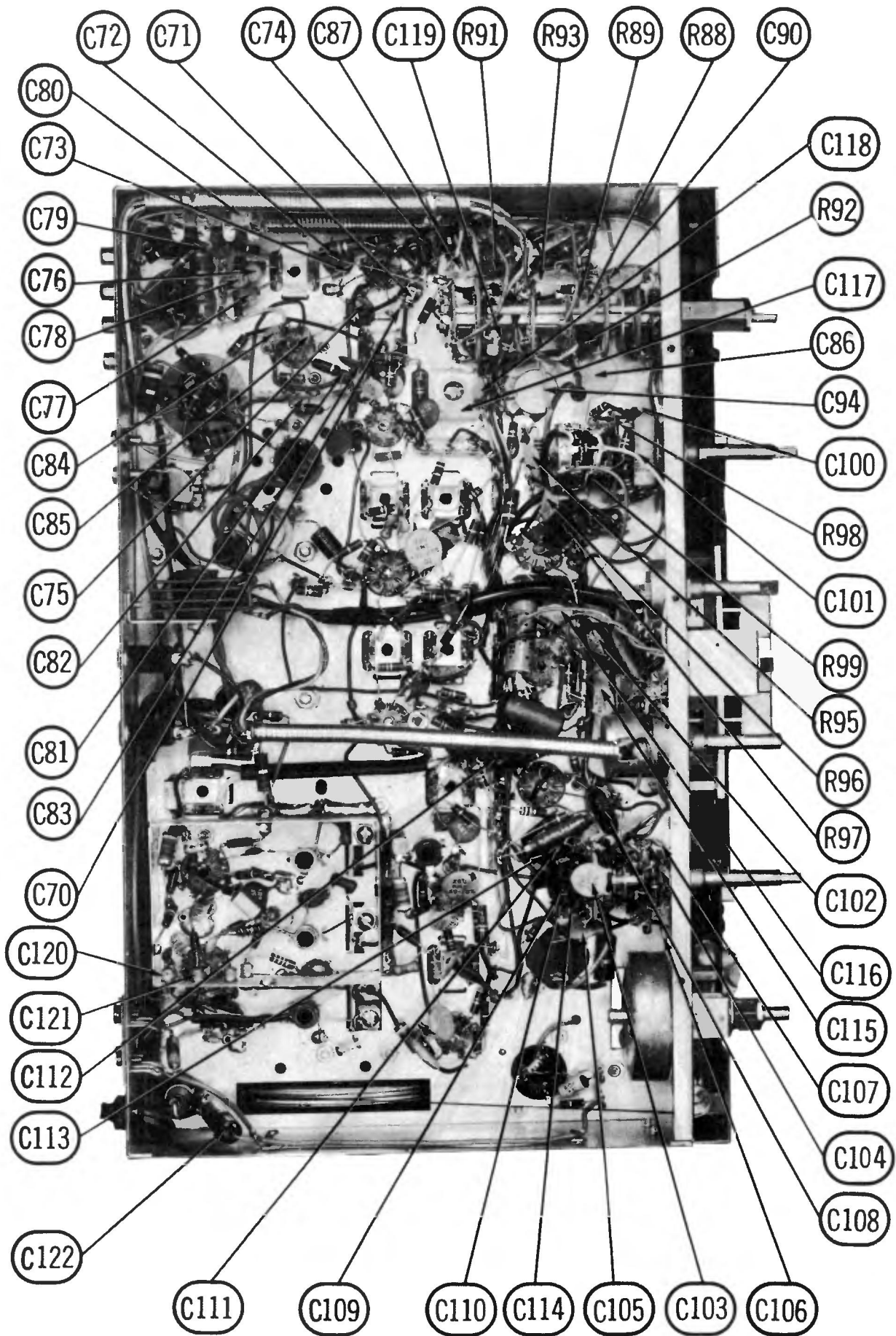
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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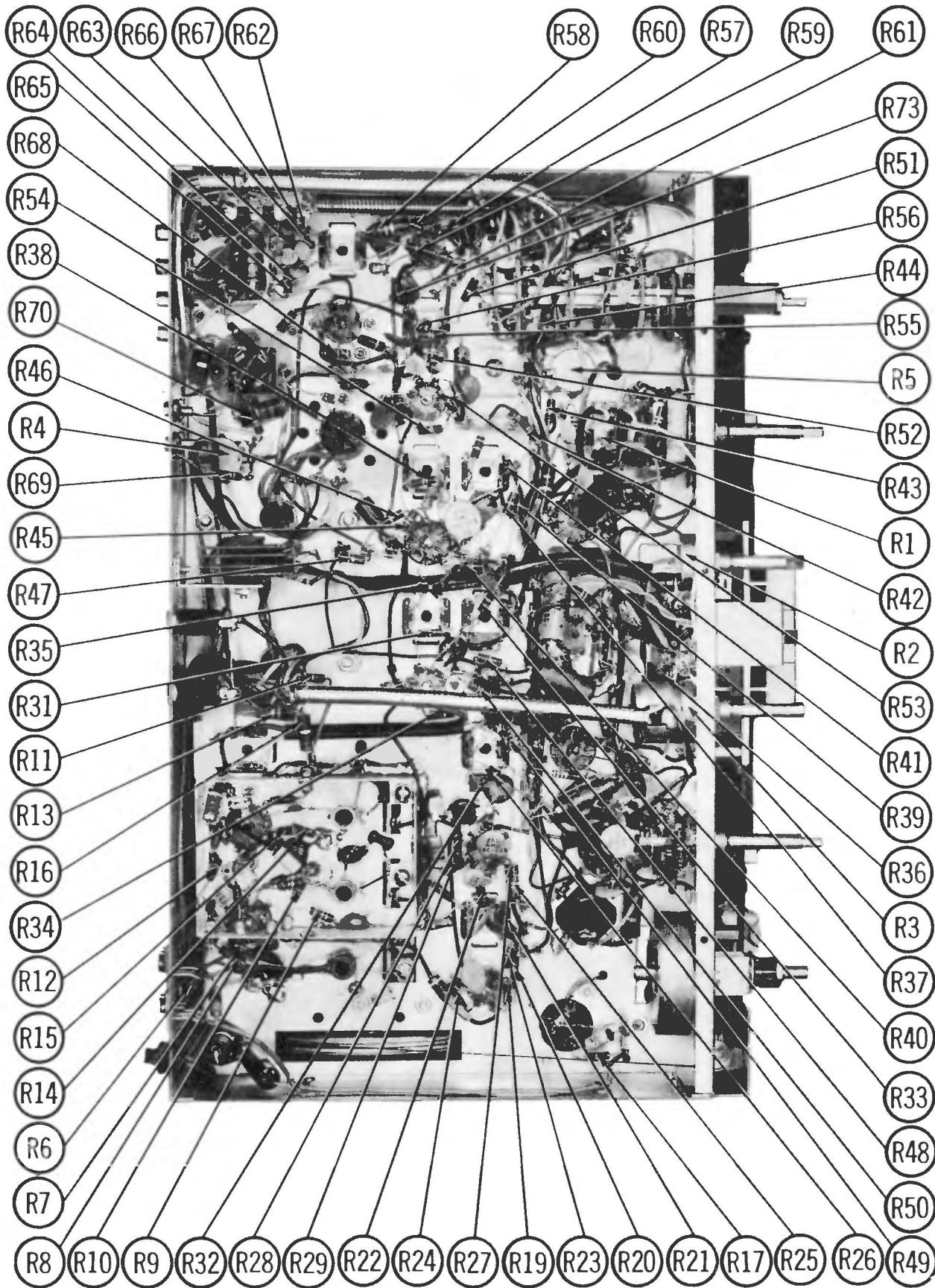
CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



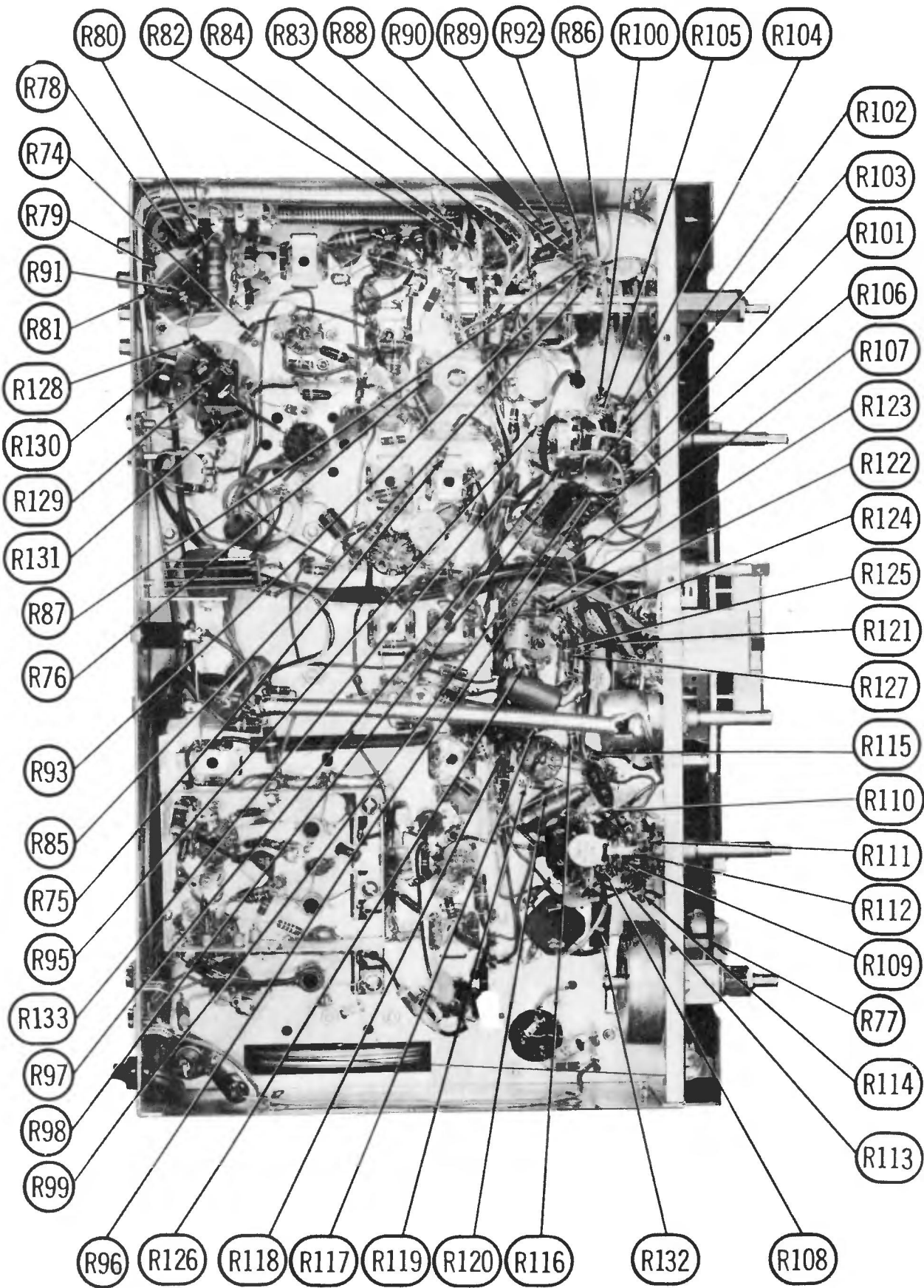
CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

FISHER
MODEL 90-T

FOLDER 7



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



FISHER
MODEL 90-T

FOLDER 7

CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	FM RF Amplifier	6CC8/V50087 ①	V8	4th FM IF Amplifier	6BH6
V2	FM Mixer-FM Osc.	6AQ8/ECC85 ①	V9	Squelch-AVC Clamper	6AV6
V3	AM RF Amplifier	6BJ6	V10	Tuning Indicator	12AX7/ECC83 ①
V4	AM Converter	6BE6	V11	Pre-amplifier	12AX7/ECC83 ①
V5	1st FM-AM IF Amplifier	6BJ6	V12	1st AF Amplifier	82B7/EF88 ①
V6	2nd FM-AM IF Amplifier	6BE6	V13	2nd AF Amplifier	8C4
V7	AM Det.-AM AVC	6BE6	V14	3rd AF Amplifier	6Y4/EZ80 ①
	3rd FM IF Amplifier	6BE6	V15	Rectifier	6Y4/EZ80 ①

① Domestic type listed may not be directly interchangeable in some instances.

ELECTROLYTIC CAPACITORS

RATING		REPLACEMENT DATA			
ITEM No.	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.
C1A	.40	300	C-829-126	D0084	
C1B	#40	300			
C1C	4.0	250			
C1D	40	250			
C2A	640	250	C-829-143	B0280	
C3A	41000	25	C-829-144	A0130	
C4	4	50	C-829-175	PR850V4	
C5	8	50	C-829-138	BRH4-50	
C6	25	6	C-839-114	SR850V8	
C7	25	6	C-839-114	SR850V8	
C8	25	6	C-839-114	SR850V8	
C9	25	6	C-839-114	SR850V8	
C10	1.0	250	C-546-126	PR8450V1	
C11	25	6	C-839-114	SR850V8	

* Not normally in distributor's stock. Available through 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.

RATING		REPLACEMENT DATA				NOTES
ITEM No.	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C12	5	1000	CC20CH050P5	NPO-SI 5	TCZ-4R7	
C13	100	1000	C-50070-5	BPD-001	DD-102	
C14	100	1000	C-50070-5	EF-001	MFT-1000	
C15	1000	1000	C-50071-2	EF-001	MFT-1000	
C16	1000	1000	C-829-172	EF-001	MFT-1000	
C17	1000	1000	C-829-172	EF-001	MFT-1000	
C18	1000	1000	C-829-172	EF-001	MFT-1000	
C19	1000	1000	C-829-172	EF-001	MFT-1000	
C20	5000	5000	C-829-170	BPD-005	DD-502	
C21	5000	1000	C-829-170	BPD-005	DD-502	
C22	1000	1000	HVD-15-1000	HVD-15-1000	DD-102	
C23	1000	1000	C-50071-2	C-50071-2	DD-102	
C24	3	250	C-643-153	CC20CH030D5	C-643-153	
C25	66	66	CC20GP680K5	NPO-SI 68	D6-680	
C26	120	120	CC20GP121K5	NPO-SI 120	D6-121	
C27	5	5	CC20CH050F5	NPO-SI 5	TCZ-4R7	
C28	24	24	CC20GP240K5	NPO-SI 24	TCZ-4R7	
C29	1000	1000	C-643-153	CC20GP102K5	C-643-153	
C30	15	15	CC20T1150J5	BPD-0001	DD-101	
C31	100	100	C-577-121	BPD-0001	DD-101	
C32	1000	1000	C-829-172	EF-001	MFT-1000	
C33	1000	1000	C-50071-2	BPD-001	DD-102	
C36	1000	1000	C-50071-2	BPD-001	DD-102	

CAPACITORS (cont)

RATING		REPLACEMENT DATA				NOTES
ITEM No.	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
C37	24	24	CC20GP240K5	NPO-SI 24	TCZ-4R7	
C38	5	5	CC20CH050P5	NPO-SI 5	CTA8Q24C	
C39	4-40	1000	C-629-18-2	NPO-SI 120	CTA8Q12C	
C40	120	120	CC20GP121K5	NPO-SI 120	CTA8Q12C	
C41	.66	1000	C-50077-8N	NPO-SI 66	CTA8Q12C	
C42	47	1000	C-50077-8	NPO-SI 47	CTA8Q12C	
C43	5000	5000	C-50071-3	BPD-02	DD-203	
C44	20000	20000	CC20CH100G5	BPD-02	DD-203	
C45	20000	20000	CC20CH100G5	BPD-02	DD-203	
C46	100	1000	C-50070-2	NPO-SI 10	CTA8Q1C	
C47	100	1000	C-3334	1469-00047	5R8T47	
C48	470	5000	C-629-170	BPD-005	BYA10D5	
C49	5000	5000	C-50071-3	BPD-02	DD-203	
C50	20000	20000	CC20GP121K5	NPO-SI 120	CTA8T12C	
C51	120	120	CC20V1K100G5	NPO-SI 120	D6-121	
C52	470	250	C-50074-27	1469-00047	5R8T47	
C53	470	250	C-3334	1469-00047	5R8T47	
C54	470	250	C-829-170	BPD-005	BYA10D5	
C55	5000	5000	C-829-170	BPD-005	BYA10D5	
C56	5000	5000	C-829-170	BPD-005	BYA10D5	
C57	5000	5000	C-829-170	BPD-005	BYA10D5	
C58	470	5000	C-3334	1469-00047	5R8T47	
C59	20000	20000	C-50071-3	BPD-02	DD-203	
C60	9000	9000	CC20CH100G5	NPO-SI 10	CTA8Q1C	
C61	9000	9000	C-629-170	BPD-005	BYA10D5	
C62	1.0	1000	C-50070-1	NPO-SI 220	D6-221	
C63	1.0	1000	CC20GP241K5	BPD-005	BYA10D5	
C64	220	5000	C-829-170	BPD-005	BYA10D5	
C65	5000	5000	C-829-170	BPD-005	BYA10D5	
C66	5000	5000	C-829-170	BPD-005	BYA10D5	
C67	100	1000	C-50070-5	BPD-005	BYA10D5	
C68	100	1000	C-50070-5	BPD-005	BYA10D5	
C69	5000	5000	C-50071-2	BPD-005	BYA10D5	
C70	5	5	CC20CH050F5	NPO-SI 5	TCZ-4R7	
C71	5	5	CC20CH050F5	NPO-SI 5	TCZ-4R7	
C72	5000	5000	C-629-170	BPD-005	BYA10D5	
C73	5000	5000	C-629-170	BPD-005	BYA10D5	
C74	5000	5000	C-629-170	BPD-005	BYA10D5	
C75	5000	5000	C-629-170	BPD-005	BYA10D5	
C76	330	1000	C-50072-1	BPD-005	BYA10D5	
C77	330	1000	C-50072-1	BPD-005	BYA10D5	
C78	330	1000	C-50072-1	BPD-005	BYA10D5	
C79	1000	1000	C-50072-2	BPD-005	BYA10D5	
C80	1000	1000	C-50072-2	BPD-005	BYA10D5	
C81	1000	1000	C-50072-2	BPD-005	BYA10D5	
C82	1000	1000	C-50072-2	BPD-005	BYA10D5	
C83	5000	5000	C-629-170	BPD-005	BYA10D5	
C84	1000	1000	C-50071-2	BPD-005	BYA10D5	
C85	1000	1000	C-50071-2	BPD-005	BYA10D5	
C86	20000	20000	C-50072-2	BPD-005	BYA10D5	
C87	30000	30000	C-50072-2	BPD-005	BYA10D5	
C88	390	1000	C-50072-6	BPD-005	BYA10D5	
C89	820	1000	C-50072-8	BPD-005	BYA10D5	
C90	1800	1000	C-50072-8	BPD-005	BYA10D5	
C91	5000	5000	C-629-170	BPD-005	BYA10D5	
C92	.022	250	C-50074-28	BPD-005	BYA10D5	
C93	50000	50000	C-50073-2	BPD-005	BYA10D5	
C94	50000	50000	C-50073-2	BPD-005	BYA10D5	
C95	30	1000	C-50070-3	BPD-005	BYA10D5	
C96	20000	20000	C-50073-1	BPD-005	BYA10D5	
C97	1	250	C-50074-28	BPD-005	BYA10D5	
C98	220	220	CC20GP221K5	NPO-SI 220	D6-221	
C99	120	120	CC20GP121K5	NPO-SI 120	D6-121	
C100	.0047	200	C-50074-24	BPD-005	BYA10D5	
C101	.0047	200	C-50074-24	BPD-005	BYA10D5	
C102	1	250	C-50074-26	BPD-005	BYA10D5	
C103	1200	1000	C-50072-4	BPD-005	BYA10D5	
C104	680	1000	C-50072-4	BPD-005	BYA10D5	
C105	1200	1000	C-50072-4	BPD-005	BYA10D5	
C106	680	1000	C-50072-4	BPD-005	BYA10D5	
C107	1200	1000	C-50072-4	BPD-005	BYA10D5	
C108	.027	125	C-50074-16	BPD-005	BYA10D5	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA				NOTES	
	CAP.	VOLT	FISHER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.		MALLORY PART No.
C109	.1	250	C-80074-28					
C110	.01	250	C-80074-25				GEM-16L1	5%
C111	.0047	200	C-80074-24				GEM-16247	10%
C112	.047	260	C-80047-27				GEM-401	10%
C113	.1	250	C-80074-26	P488N-1	DF-104	CUB4PI		4TM-FI
C114	12	1000	C-80072-5					NPO 10%
C115	220000	1000	C-80073-1					10%
C116	12-100	1000	C-80073-2					
C117	30	1000	C-80073-3					
C118	47	1000	C-80073-4					
C119	1000	1000	C-80073-5					
C120	1000	1000	C-80073-6					
C121	1000	1000	C-80073-7					
C122	.01	600	C-3747					

① Some versions may use Part #C-520-159 in this application.

② Some versions may use 16mmf in this application (Part #CC20CH000F5).

③ Some versions may use 16mmf N30 5% in this application (Part #CC20S1800F5).

④ Not used in some versions.

⑤ Some versions may use two units in parallel. Other versions use .0047mf (Part #C-60074-24), or .022mf (Part #C-50074-26).

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		RESIST. ANISE	WATTS	CENTRALAB PART No.	FISHER PART No.	
R1A	Switch					
R1B	500K					
R2A	1meg					
R3A	500K					
R4A	50K					
R5A	200K					

* Use KR with CR1 "red label" control; KR with "blue label" controls and KR-5 switch cover.

†† Enlarge mounting hole to 3/8" diameter.

RESISTORS (cont)

ITEM No.	RATING		FISHER PART No.	NOTES
	OHMS	WATT		
R52	68K		RC20BF683K	Note 3
R53	22meg		RC20BF226K	
R54	100K		RC20BF101K	
R55	22K		RC20BF223K	
R56	470K		RC20BF474K	
R57	470K		RC20BF474K	
R58	16K		RC30BF163K	
R59	1500K		RC20BF150K	
R60	16K		RC20BF163K	
R61	2700K		RC20BF272K	
R62	1500K		RC20BF150K	
R63	6800K		RC20BF683K	
R64	1000K		RC20BF102K	Note 4
R65	6800K		RC20BF683K	Note 4
R66	270K		RC20BF271K	
R67	68K		RC20BF683K	
R68	470K		RC20BF474K	
R69	10K		RC20BF103K	
R70	220K		RC20BF223K	
R71	12K		RC20BF123K	
R72	16K		RC20BF163K	
R73	100K		RC20BF104K	
R74	10meg		RC20BF106K	Note 5
R75	3.3meg		RC20BF335K	
R76	220K		RC20BF224K	
R77	470K		RC20BF474K	
R78	1000K		RC20BF102K	
R79	47K		RC20BF473K	
R80	1000K		RC20BF102K	
R81	100K		RC20BF104K	
R82	330K		RC20BF334K	
R83	220K		RC20BF224K	
R84	2700K		RC30BF272K	
R85	1meg		RC20BF106K	
R86	1.2meg		RC20BF123K	
R87	39K		RC20BF393K	
R88	270K		RC20BF272K	
R89	2.2meg		RC20BF226K	
R90	220K		RC20BF224K	
R91	270K		RC20BF271K	
R92	2700K		RC20BF272K	

Note 1. Not used in some versions.

Note 2. Some versions may use 100K in this application (Part #RC20BF101K).

Note 3. Some versions may use 56K in this application (Part #RC20BF563K).

Note 4. Some versions may use 68K in this application (Part #RC20BF683K).

Note 5. Some versions may use 10meg in this application (Part #RC20BF106K).

Note 6. Some versions may use 100K in this application (Part #RC20BF104K).

COILS (RF-IF)

ITEM No.	USE	FISHER PART No.	REPLACEMENT DATA			NOTES
			Meissner PART No.	Miller PART No.	Rom PART No.	
L1	FM Ant. Coil	L-50068-8				
L2	FM Ant. Trans.	L-629-177				
L3	RF Choke	L-60068-3				
L4	RF Choke	L-50068-19				
L5	RF Choke	L-50068-19				
L6	RF Choke	L-50068-19				
L7	RF Choke	L-50068-19				
L8	FM RF Coil	L-629-180				
L9	RF Choke	L-629-178				
L10	FM Osc. Coil	L-50068-3				
L11	FM Osc. Coil	L-50068-19				
L12	RF Choke	L-629-179				
L13	AM Ant. Trans.	L-50068-3				
L14	Loop Shckt	L-629-176				
L15	RF Choke	L-50068-3				

RESISTORS

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

ITEM No.	RATING		FISHER PART No.	NOTES
	OHMS	WATT		
R6	220K		RC20BF221K	
R7	470K		RC20BF474K	
R8	100K		RC20BF101K	Note 1
R9	330K		RC20BF334K	
R10	1000K		RC20BF102K	
R11	820K		RC20BF824K	
R12	10K		RC20BF103K	
R13	1500K		RC20BF150K	
R14	4.7K		RC20BF471K	
R15	6800K		RC20BF682K	
R16	1000K		RC20BF102K	
R17	1000K		RC20BF102K	
R18	4.7K		RC20BF471K	
R19	1meg		RC20BF106K	
R20	2.2meg		RC20BF225K	
R21	2200K		RC20BF222K	
R22	4.7K		RC20BF471K	
R23	47K		RC20BF473K	
R24	820K		RC20BF824K	
R25	1000K		RC20BF104K	
R26	820K		RC20BF824K	
R27	22K		RC20BF223K	
R28	22K		RC20BF223K	

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (cont)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		FISHER PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L16	RF Choke	L-50068-3	19-1000	BC-561	4602		1. 2 Microhenries
L17	AM RF Trans.	L-556-125					
L18	RF Choke	L-50068-3	19-1000	BC-561	4602		1. 2 Microhenries
L19	AM Osc. Coil	C-550-122					
L20	RF Choke	L-50068-3	19-1000	BC-561	4602		1. 2 Microhenries
L21	1st FM IF	ZZ-530-114					
L22	1st AM IF	ZZ-529-135					
L23	2nd FM IF	ZZ-529-142	16-3487	FM-254	1463		
L24	2nd AM IF	ZZ-529-135					
L25	FIL Choke	L-520-196	19-1000	BC-561	4602		1. 2 Microhenries
L26	3rd FM IF	ZZ-529-142	16-3487	FM-254	1463		
L27	3rd AM IF	ZZ-2994	16-5758	BC-353	12-C2		
L28	FM Limiter	L-551-121					
L29	Ratio Det.	ZZ-592-170					
L30	Tone Choke	L-829-183					

IOKC CHOKE

ITEM No.	CURRENT (Measured)	RATINGS	REPLACEMENT DATA					Tried PART No.
			FISHER PART No.	Halderson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	
L31	360Ω	2.3 Hz.	L-829-152					

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA					Tried PART No.
		FISHER PART No.	Halderson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	
T1	117V 420VCT ③ .53A ④ .040A Tap ⑤ 6.3V ③ 3.5A ④ .4A	T-629-118					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	FISHER PART No.	REPLACEMENT DATA
K1	Tone Compensation		P-C-552-105	

SELENIUM RECTIFIER

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA			NOTES
		FISHER PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	
M1	355A	SR-629-157	1017	C1B	604B

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				
			FISHER PART No.	LITTELFUSE PART No.	BUSS PART No.	FUSE HOLDER	FUSE HOLDER
M2	3AG	1A 250V	F-3329	31200L (1A 250V)	342001	AGC1	HKP

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		FISHER PART No.	CBS PART No.	SYLVANIA PART No.	
M3	1N295	V-1N295	1N638	1N295	FM Limiter (Pigtail)
M4	1N295	V-1N295	1N638	1N295	FM Limiter (Pigtail)
M5	1N541 *	V-1N541	1N638	1N295	FM Muting (Pigtail)
M6	1N541 *	V-1N541	1N638	1N295	FM Muting (Pigtail)
M7	1N542	V-1N542	1N638	1N295	FM Detector (Pigtail)
M8	1N542	V-1N542	1N638	1N295	FM Detector (Pigtail)

* Some versions may use 1N66 in this application.

MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M9	Lamp	1-565-145	
M10	Lamp	1-565-145	6V 2W
M11	Lamp	1-565-120	6.3 Volts .15A Special
M12	Lamp	1-565-120	6.3 Volts .15A Special
M13	Lamp	1-565-120	6.3 Volts .15A Special
M14	Lamp	1-565-120	6.3 Volts .15A Special
M15	Lamp	1-565-120	6.3 Volts .15A Special
M16	Lamp	1-565-120	6.3 Volts .15A Special
M17	Tuning Cap.	C-628-118	6 Gang, (AM Section): Ant. 19-495mmf, RF 20-499mmf, Osc. 18-165mmf
M18	Switch	S-629-134	Channel Selector, Rotary, Water Type
M19	Switch	S-629-140	Noise, Rumble Filter, Rotary Water Type
M20	Switch	S-629-117	Muting, Bandwidth, Pushbutton, Slide Type (Early units)
M21	Switch	S-629-155	Muting, Bandwidth, Pushbutton, Slide Type (Early units)
M22	Switch	S-629-156	Interchangeable with Switch #S-629-129

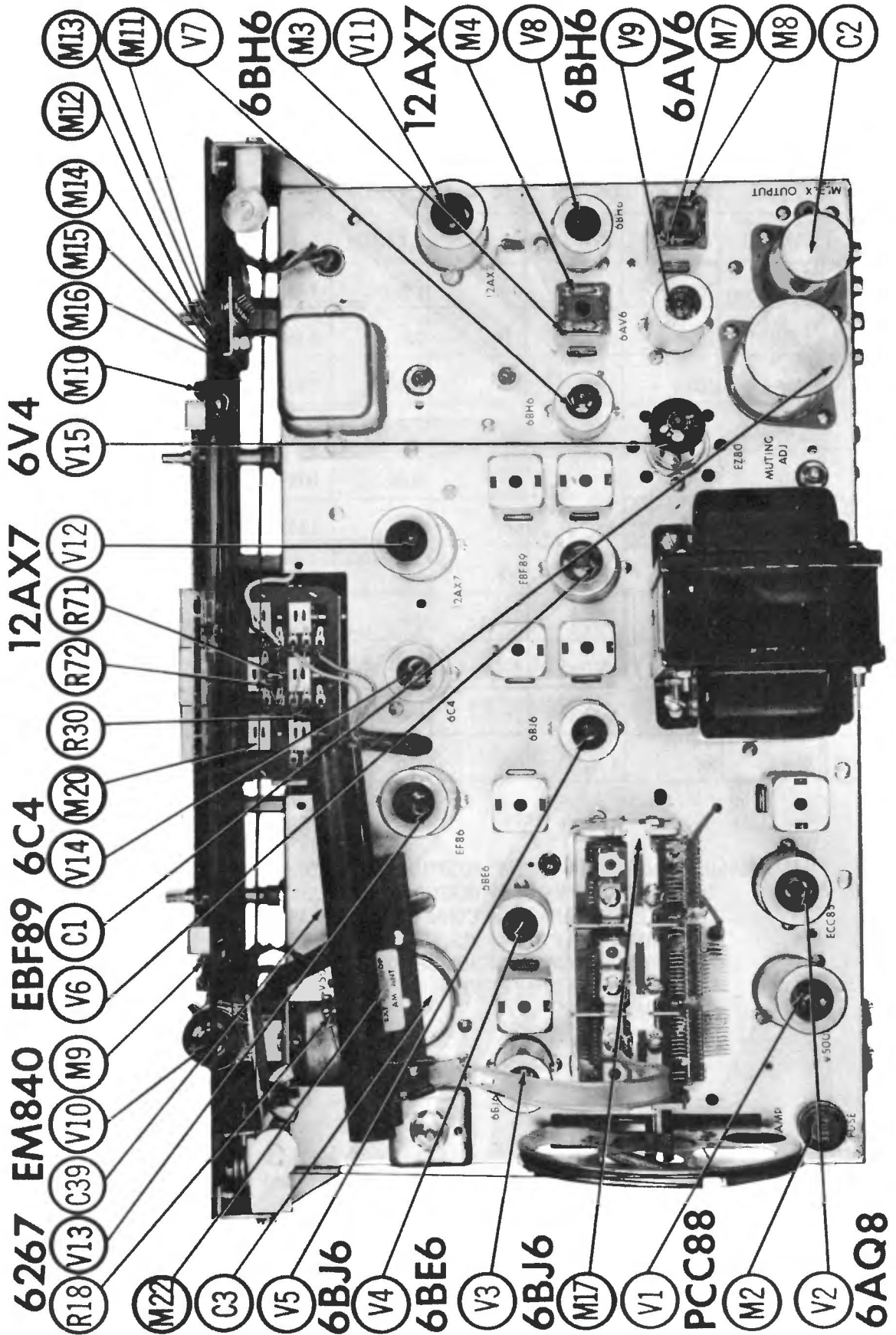
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	E-50049-1	Tuning
Knob	E-50048-2	Volume
Knob	E-50049-12	Channel Selector, Bass, Treble
Knob	E-50049-4	Loudness, Noise Filter
Knob	E-50049-13	Rumble Filter
Panel	AS-629-162	Assembled, Includes Escutcheon
Panel	AS-629-115	Without Escutcheon
Plunger	A-629-154	
Dial Glass	A-629-133	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 6550 (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)



FISHER
 MODEL 90-JT
 CHASSIS TOP VIEW

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	PCC88 V50067	INF	950K	100 Ω	.3 Ω	0 Ω	† 1600 Ω	† 160K	INF	0 Ω
V2	6AQ8 ECC85	† 7400 Ω	1500 Ω	0 Ω	0 Ω	.2 Ω	† 10K	820K	0 Ω	0 Ω
V3	6BJ6	• 800K	100 Ω	0 Ω	.1 Ω	• † 2800 Ω	• † 50K	0 Ω		
V4	6BE6	22K	.5 Ω	.1 Ω	0 Ω	• † 1600 Ω	• † 23K	• 2.3meg		
V5	6BJ6	6.8 Ω • 1.4meg	100 Ω	.1 Ω	0 Ω	† 1600 Ω	† 83K	0 Ω		
V6	EBF89	† 83K	2.2meg	0 Ω	.1 Ω	0 Ω	† 1600 Ω	630K	75K	0 Ω
V7	6BH6	.6 Ω	100 Ω	.1 Ω	0 Ω	† 1600 Ω	† 69K	0 Ω		
V8	6BH6	• 470K	2700 Ω	.1 Ω	0 Ω	† 2100 Ω	† 16K	2700 Ω		
V9	6AV6	500K	0 Ω	.1 Ω	0 Ω	480K	80K	570K		
V10	EM840 V50078	220K	TP	0 Ω	0 Ω	.1 Ω	† 3400 Ω	† 470K	TP	† 470K
V11	12AX7 ECC83	† 490K	330K	2700 Ω	0 Ω	7 Ω	† 490K	2.2meg	2700 Ω	3.5 Ω
V12	12AX7 ECC83	† 100K	320K	1500 Ω	7 Ω	0 Ω	† 100K	1meg	1000 Ω	4 Ω
V13	6267 EF86	† 390K	0 Ω	1000 Ω	8.5 Ω	7 Ω	† 100K	0 Ω	1000 Ω	820K
V14	6C4	† 50K	NC	8.5 Ω	7 Ω	† 50K	1meg	1200 Ω		
V15	6V4 EZ80	90 Ω	NC	¶	0 Ω	.1 Ω	NC	85 Ω	NC	NC

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

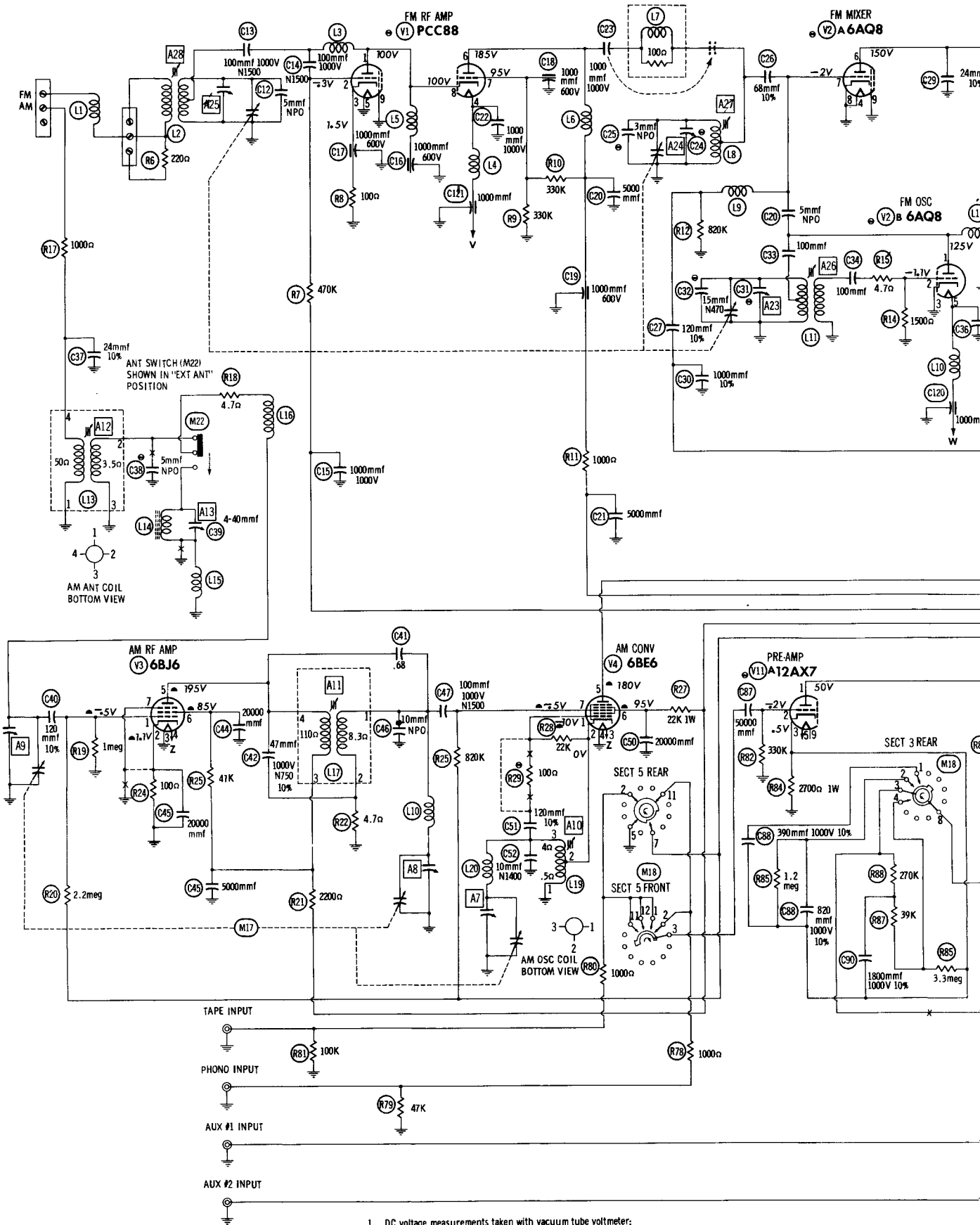
¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC CAPACITOR CONNECTED IN THE ASSOCIATED CIRCUIT.

† MEASURED FROM PIN 3 OF V15.

• MEASURED IN "AM" POSITION.

▪ MEASURED FROM PIN 2 OF V8.

NC NO CONNECTION.

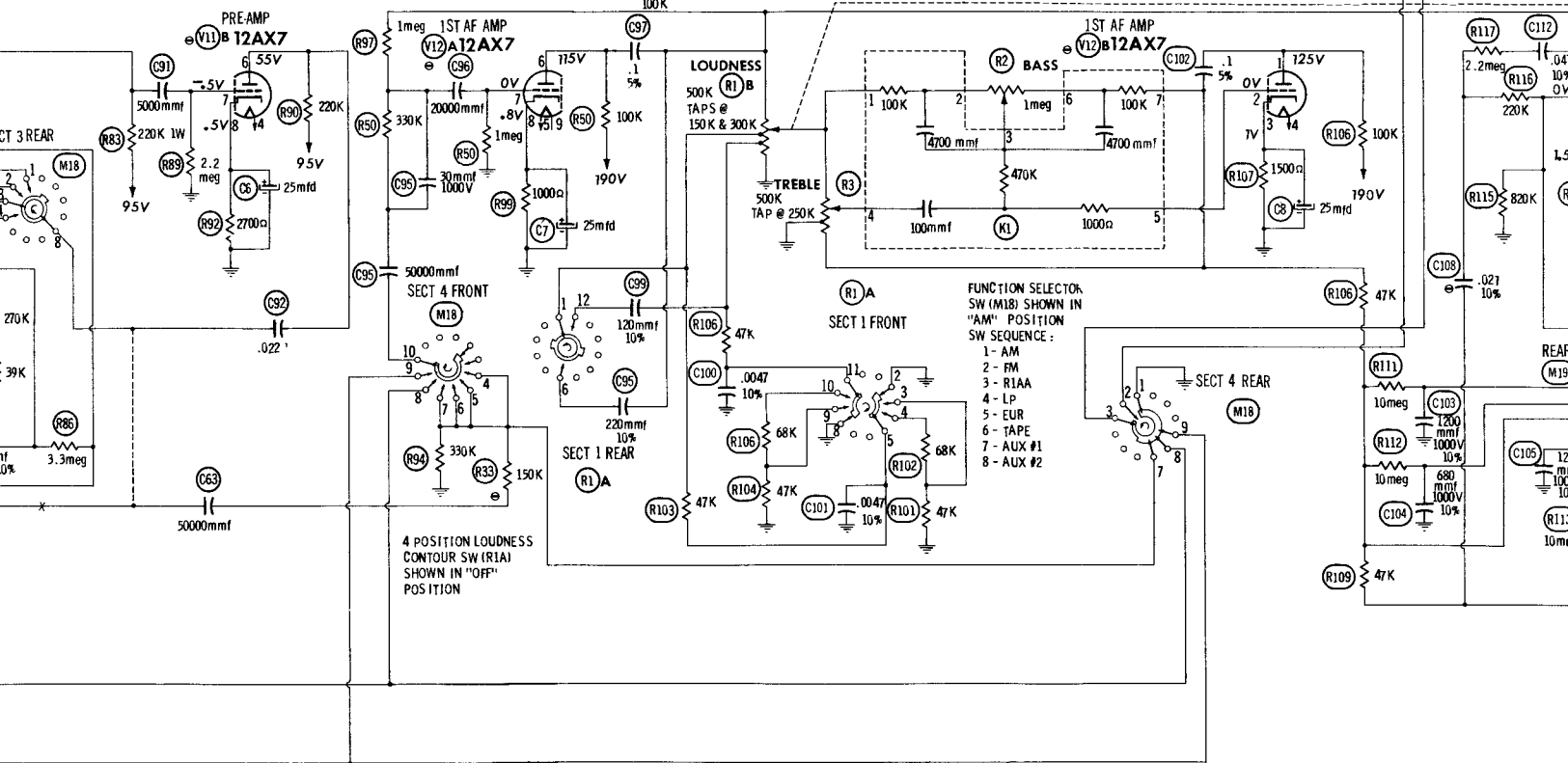
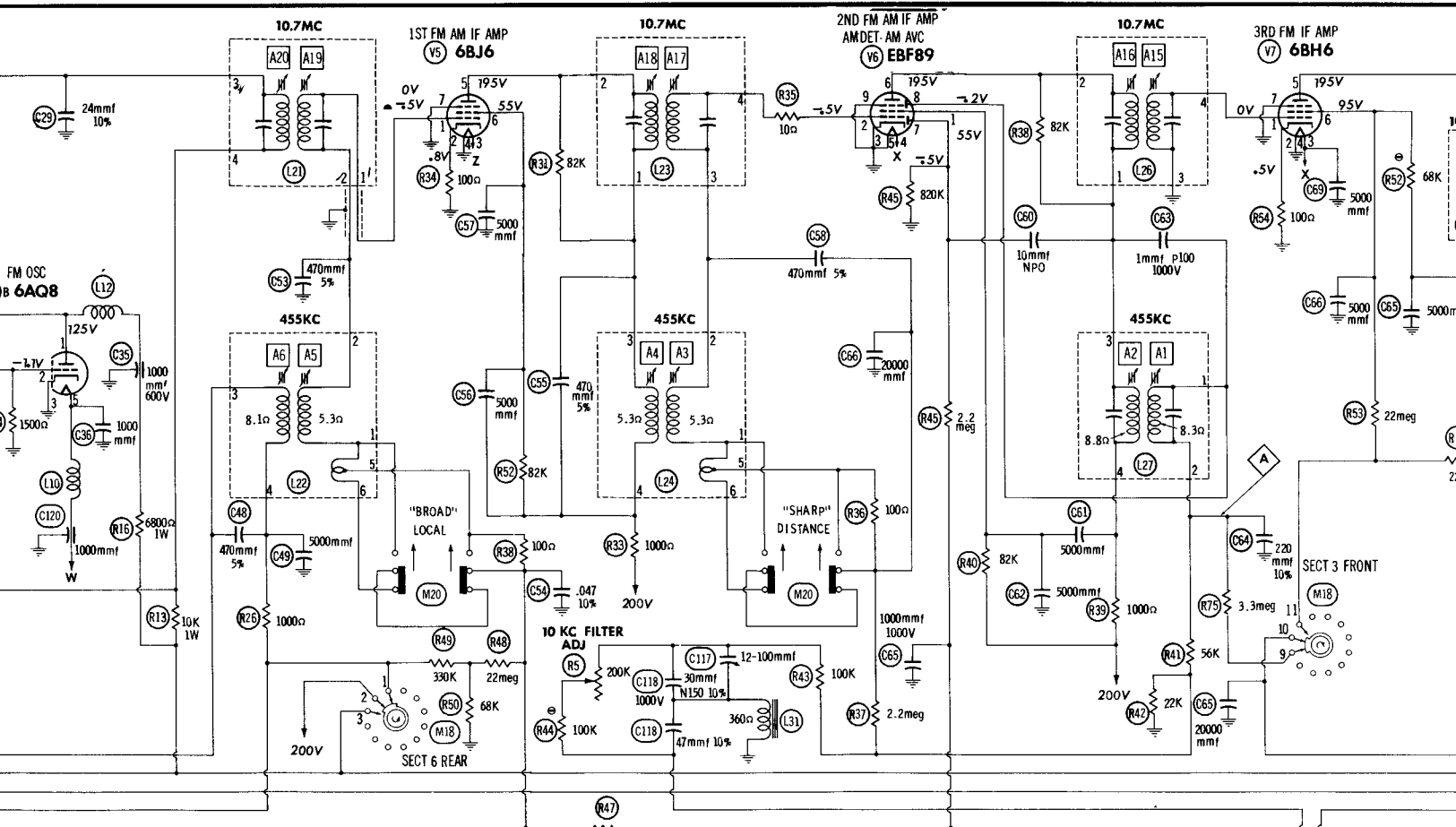


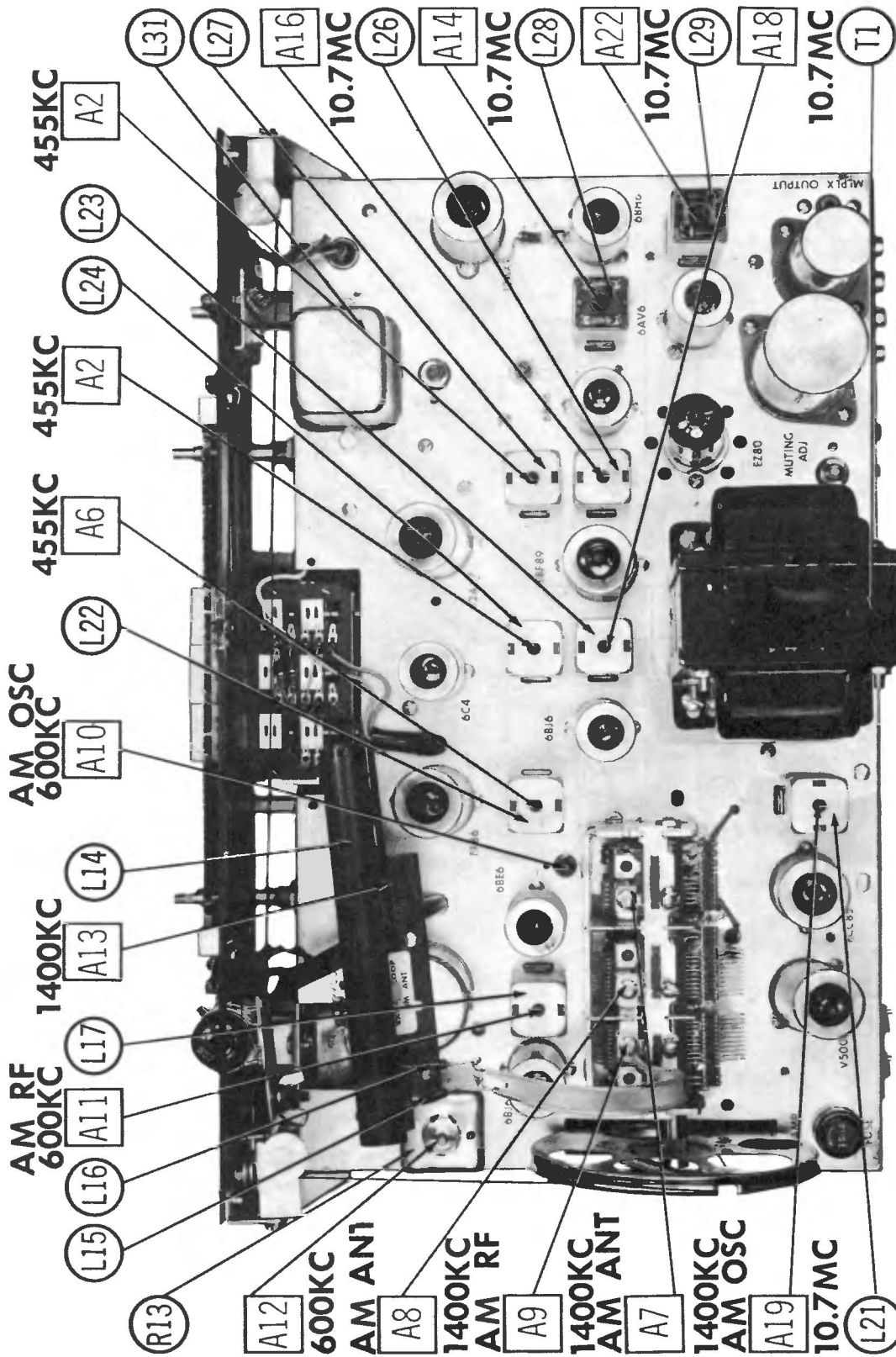
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFAC STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1958

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 +15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.





CHASSIS-TOP VIEW - INDUCTOR AND ALIGNMENT IDENTIFICATION
 FISHER
 MODEL 90-1T

FOLDER 7

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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, adjust dial pointer to coincide with zero mark on logging scale.

AM ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1. .01mfd	High side to pin 7 (grid) of 6BE6 (V4). Low side to chassis.	455KC (400v Mod)	AM (Distant)	Tuning gang fully open	DC probe to point ⊕ . Common to chassis.	A1, A2, A3, A4, A5, A6	Ant. switch in "Ext". Adjust for maximum output.
2. 220mfd	High side to AM antenna terminal. Low side to chassis.	1400KC	"	1400KC	"	A7, A6, A9	"
3. "	"	600KC	"	600KC	"	A10, A11, A12	Ant. switch in "Ext.". Adjust for maximum output. Repeat steps 2 and 3.
4.	Loop	1400KC	AM (Sharp)	1400KC	"	A13	Ant. switch in "Loop". Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
5. .01mfd	High side to pin 7 (grid) of 6BE6 (V4). Low side to chassis.	455KC (30KC Swp)	AM (Local) Loop Sw on ext.	Tuning gang fully open	(USE SCOPE) Vert. Amp. to main output jack. Low side to chassis.	A2	Adjust SLIGHTLY for symmetrical curve.
6. .1mfd	High side to pin 6 of V6. Low side to chassis.	10KC	AM		(USE VTVM) AC probe to main output jack. Common to chassis.	R5, C17	"Rock in" for MINIMUM deflection.

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
7.	High side to ungrounded tube shield of ECC65 (V2). Low side to chassis.	10.7MC (Unmod)	FM (Distant)	Point of non-interference	DC probe to point ⊕ . Common to chassis.	A14, A15, A16, A17, A18, A19, A20	Adjust for maximum deflection.
8.	"	"	"	"	DC probe to point ⊕ . Common to chassis.	A21	"
9.	"	"	"	"	DC probe to point ⊕ . Common to chassis.	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 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
7.	High side to ungrounded tube shield of ECC65 (V2). Low side to chassis.	10.7MC (450KC Swp)	FM (Distant)	Point of non-interference	Vert. Amp. to point ⊕ . Low side to chassis.	A14, A15, A16, A17, A18, A19, A20	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
8.	"	"	"	"	Vert. Amp. to point ⊕ . Low side to chassis.	A21	Disconnect stabilizing capacitor (C5). Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
9.	"	"	"	"	Vert. Amp. to point ⊕ . Low side to chassis.	A22	Reconnect stabilizing capacitor (C5). Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A21 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
10. Two 120Ω Carbon Resistors	Across FM antenna terminals with 120Ω in each lead.	106MC (Unmod)	FM (Distant)	106MC	DC probe to point ⊕ . Common to chassis.	A23, A24, A25	Adjust for maximum deflection.
11. "	"	90MC	"	90MC	"	A26, A27, A28	Adjust for maximum deflection. Repeat steps 10 and 11.
12. "	"	96MC (45KC Swp)	"	96MC	(USE SCOPE) Vert. Amp. to main output jack. Low side to chassis.		Adjust generator output for no overload and no clipping.
13. "	"	"	"	"	(USE VTVM) AC probe to main output jack. Common to chassis.	R4	Observe meter reading with "Distant" pushbutton depressed. Depress "Local" pushbutton and adjust R4 for a reading of 2 decibels below first meter reading.

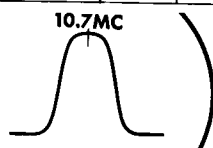


FIG. 1

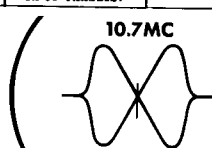


FIG. 2

