



FISHER
MODEL 90-C



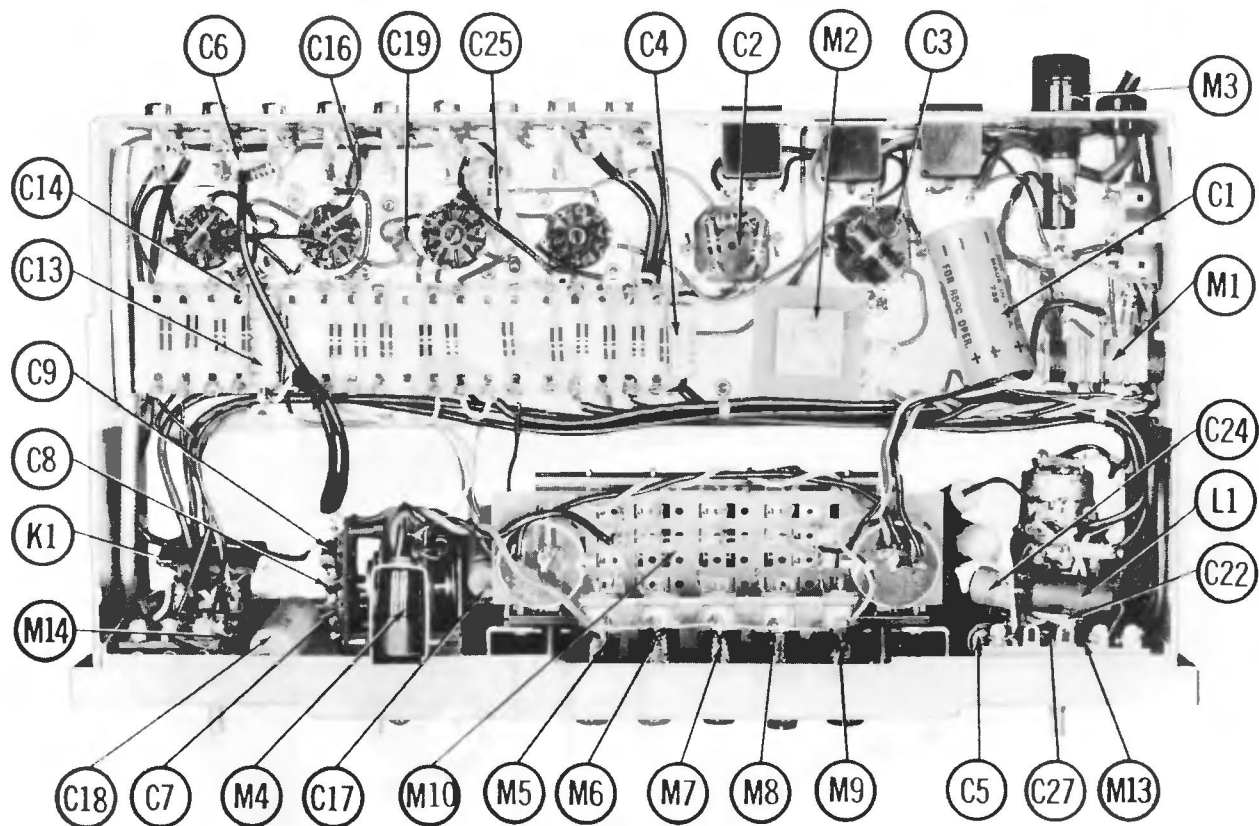
FISHER
MODEL 90-C

TRADE NAME	Fisher Model 90-C (Serial #10001-19999 Inclusive)		
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.		
TYPE SET	AC Operated 7 Channel Audio Preamplifier		
TUBES (Four)	Types 12AX7 Phono Preamplifier, 12AX7 Mic Preamp. -AF Amp., 12AX7 AF Amplifier, 12AU7 Cathode Follower		
POWER SUPPLY	105-125 Volts AC-50/60 Cycles	RATING	.23 Amp. @ 117 Volts AC (24 Watts)

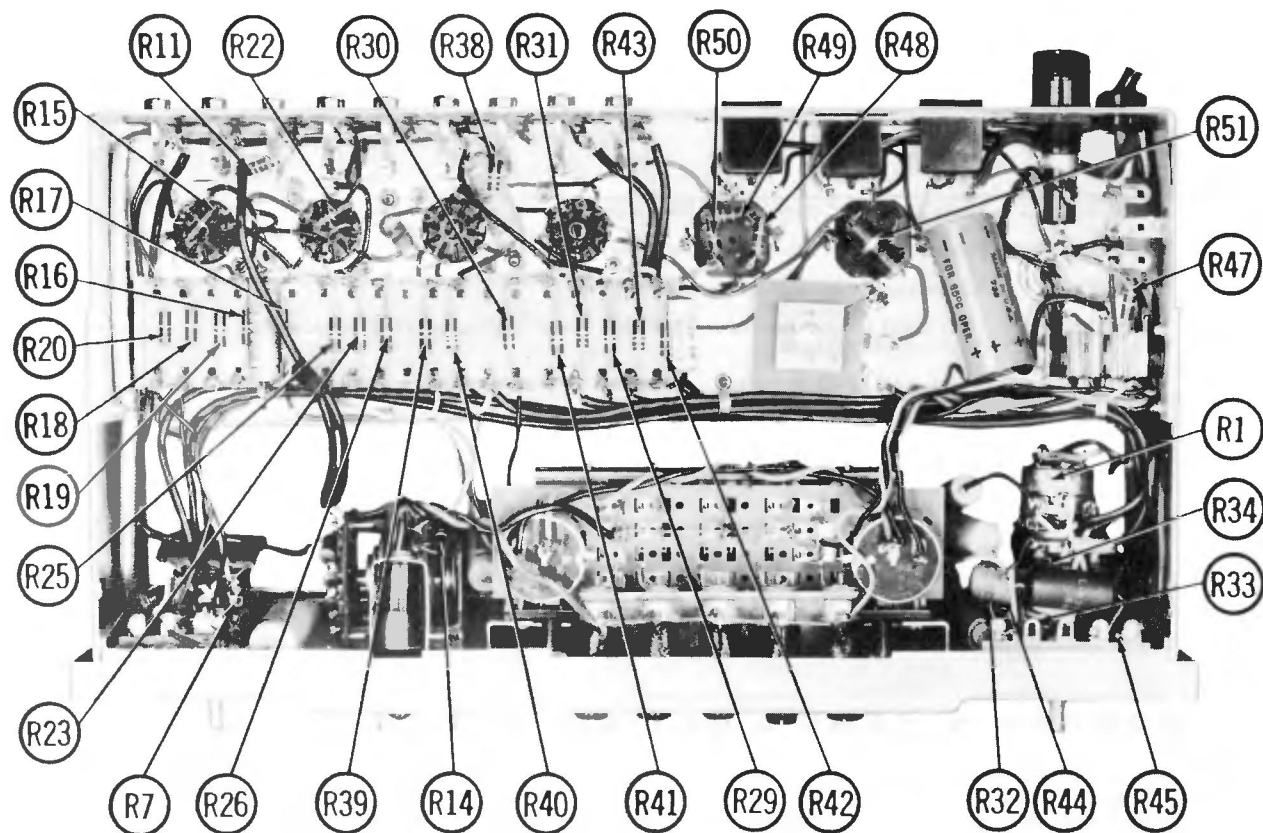
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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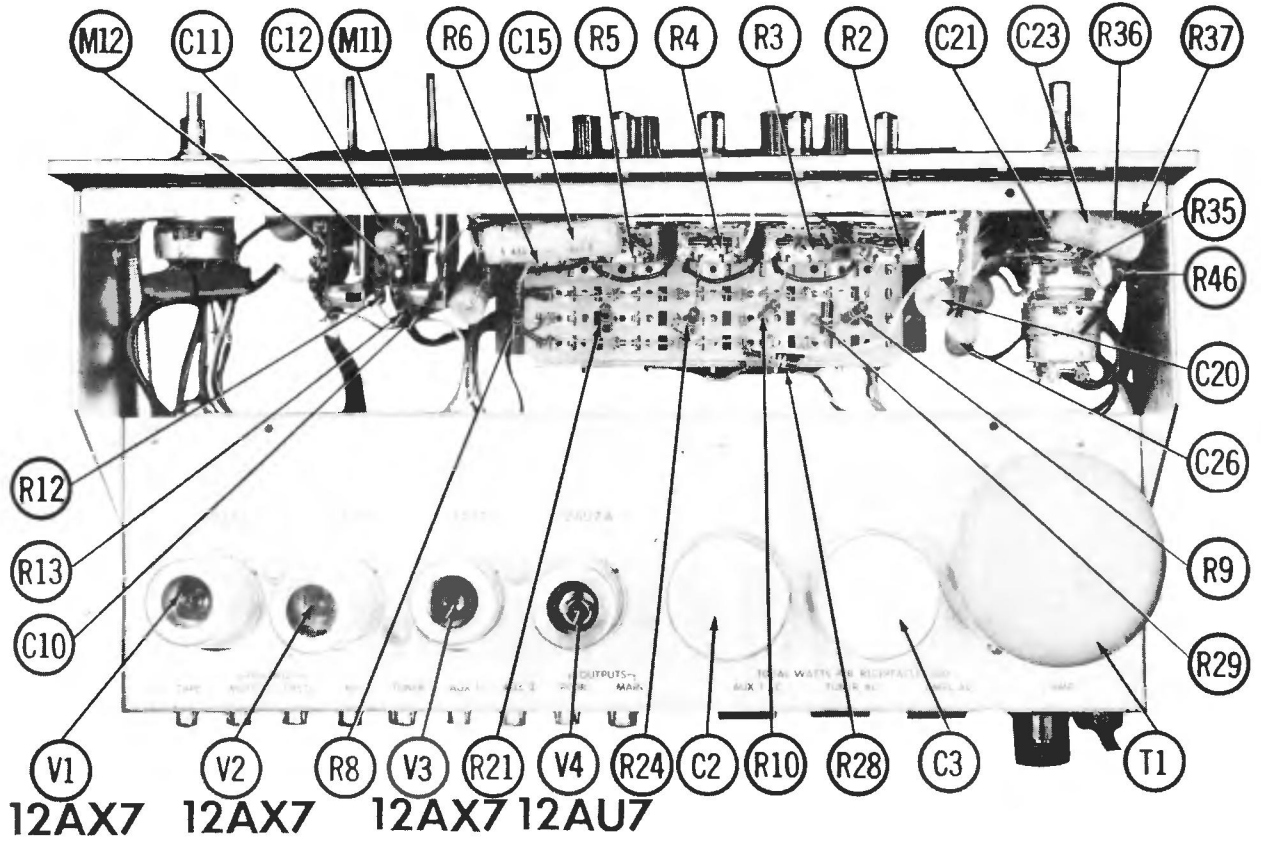


CHASSIS BOTTOM VIEW - CAPACITOR & MISC IDENT.



CHASSIS BOTTOM VIEW - RESISTOR IDENT

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS TUBES (GENERAL ELECTRIC, PENNSYLVANIA)

ITEM No.	USE	TYPE	NOTES	ITEM No.	USE	TYPE	NOTES
V1	Phono Pre-amplifier	12AX7		V3	AF Amplifier	12AX7	
V2	Mic Pre-Amp. -AF Amp.	12AX7		V4	Cath. Follower	12AU7	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA					SPRAGUE PART No.	
			FISHER PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.		SANGAMO PART No.
C1	10	350	C-546-133	PRS350V10	BR1045	TC62	TD-10-450	MT-4510	TVA-1604
C2A	40	250	C-546-115		D0020				R2946
C2B	40	250			BR4025				
C2C	40	250							
C2D	40	250							
C3A	1000	30	C-546-116						
C3B	1000	30							
C3C	25	250	C-556-137	PWE6025	NL25-6	TT6X25	ML30-6	MQ-0225	R2619
C3D	25	250	C-546-126	PRS450V1	BR145	TT250X1		MMT-4501	TE-1091
C3E	1	250							R2702

* Not normally in distributors' 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 CAP.	VOLT.	REPLACEMENT DATA					NOTES	
			FISHER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.		SPRAGUE PART No.
C6	100	50	CC21GP101M5	S1100	D6-101	L76T1	UC-531	5GA-T1	10%
C7	440	50	CC21GP441K5	NPO-S1120	D6-121	L10T2		MS-312	10%
C8	120	50	CC21GP121K5	NPO-S1220	D6-221	L10T22		MS-322	10%
C9	220	50	CC21GP221K5						10%
C10	720	50	CC21GP721K5						10%
C11	.0033	200	C68P203K2	P288N-02	DD-203	CUP252	GEM-16233	4TM-S2	10%
C12	.0022	200	C68P203K2	BFD-01	DD-103	BYA51	GEM-16222	5HK-S1	10%
C13	.02	200	C68P203K2	C68P473M4	DF-503	CUP4647	GEM-412	4TM-S47	10%
C14	10000	400	C68P473M4	BFD-01	DF-103	BYA51	GEM-417	5HK-S1	10%
C15	.047	400	C68P473M4	P488N-047	DF-103	CUB4847	GEM-417	4TM-S47	10%
C16	10000	400	C68P473M4	BFD-01	DF-103	CUB4847	GEM-401	4TM-S47	10%
C17	.047	400	C68P473M4	P488N-047	DF-104	CUB4847	GEM-201	MS-33	10%
C18	.1	400	C68P473M4	P488N-1	DF-301	L10T3	GEM-347	MS-347	10%
C19	300	200	CC21GP301K5	P288N-1	DF-104	CUB2P1	MCB255	MS-21	10%
C20	.1	200	CC21GP301K5		D6-471	L10T47	GEM-1612		10%
C21	470	200	CC21GP471K5			IR5D1	GEM-1612		10%
C22	1000	200	C26GP102K5				GEM-16268		10%
C23	.02	200	C68P203K2				GEM-16222		10%
C24	.02	200	C68P203K2						10%
C25	.0068	200	C68P62K2						10%
C26	.047	200	C68P473K2						10%
C27	.0022	200	C68P222K2						10%

CONTROLS

ITEM No.	RESISTANCE	WATTS	REPLACEMENT DATA				INSTALLATION NOTES
			FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	
R1A	Switch	100K	RS-546-152CX				Loudness Contour
C	25K	Switch					Master Volume, Tap @ .37, .5K & 62.5K
R2A	500K	500K	R-50000-13	B-59	A47-500K-S	Q11-133	Power On-Off
B	500K	500K	Not Req.	Not Req.	Not Req.	Not Req.	Aux-1
R3A	500K	500K	R-50000-13	B-59	A47-500K-S	Q11-133	Aux-2
B	500K	500K	Not Req.	Not Req.	Not Req.	Not Req.	Mic
R4A	500K	500K	R-50000-13	B-59	A47-500K-S	Q11-133	Phono
B	500K	500K	Not Req.	Not Req.	Not Req.	Not Req.	Tuner
R5A	500K	500K	R-50000-13	B-59	A47-500K-S	Q11-133	Not Req.
B	500K	500K	Not Req.	Not Req.	Not Req.	Not Req.	Not Req.
R6A	500K	500K	R-50000-13	B-59	A47-500K-S	Q11-133	Not Req.
B	500K	500K	Not Req.	Not Req.	Not Req.	Not Req.	Not Req.
R7A	500K	500K	R-647-111	F1-51	R4-42	UE3950	Not Req.
B	500K	500K					Treble, Tap @ .250K

* "STA-LOC" Equivalent: FA16L, 06587, RU55T254, IS1062.

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

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

ITEM No.	RATING		FISHER PART No.	NOTES	FISHER PART No.	NOTES
	OHMS	WATT				
R8	220K		RC20BF224K		RC20BF272K	
R9	220K		RC20BF224K		RC20BF473K	
R10	220K		RC20BF224K		RC20BF103K	
R11	47K		RC20BF473K	Note 1	RC20BF103K	
R12	3.3meg		RC20BF335K		RC20BF103K	
R13	2.2meg		RC20BF225K		RC20BF103K	
R14	150K		RC20BF154K		RC20BF103K	
R15	2.2meg		RC20BF225K		RC20BF474K	
R16	220K		RC20BF224K		RC20BF104K	
R17	2700Q		RC20BF272K		RC20BF394K	
R18	220K		RC20BF224K		RC20BF224K	
R19	220K		RC20BF224K		RC20BF272K	
R20	2200Q		RC20BF224K		RC20BF272K	
R21	220K		RC20BF224K		RC20BF473K	
R22	15meg		RC20BF159K		RC20BF225K	
R23	220K		RC20BF224K		RC20BF103K	
R24	220K		RC20BF224K		RC20BF473K	
R25	100K		RC20BF104K		RC20BF332K	
R26	2700Q		RC20BF272K		RC20BF332K	
R27	1meg		RC20BF105K		RC20BF103K	
R28	390K		RC20BF394K		RC20BF103K	
R29	220K		RC20BF224K		RC40BF105K	

Note 1. Some versions may use 100K in this application (Part #RC20BF104K).

COILS

ITEM No.	USE	REPLACEMENT DATA				NOTES
		FISHER PART No.	Meissner PART No.	Miller PART No.	Rom PART No.	
L1	Tone Choke	L-629-153				1 Henry

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			
		FISHER PART No.	Halderson PART No.	Merit PART No.	Rom PART No.
T1	390VCT 24V @ .22A @ .007A SEC. 3 6.3V @ .33A	T-546-114			

COMPONENT COMBINATIONS

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

SELENIUM RECTIFIER

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA		NOTES
		FISHER PART No.	FEDERAL INTERNATIONAL PART No.	
M1	.007A	SR-3283	SARKES TARZIAN PART No.	
M2	.265A	SR-3078	1016	026-18Q1-Q 304B

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			FISHER PART No.	LITTELFUSE PART No.	HOLDER	BUSS PART No.
M3	3AG	1A 250V	F-3297	X-1036	312, 500 (1/2A, 250V)	342001 AGC 1/2 HKP

MISCELLANEOUS

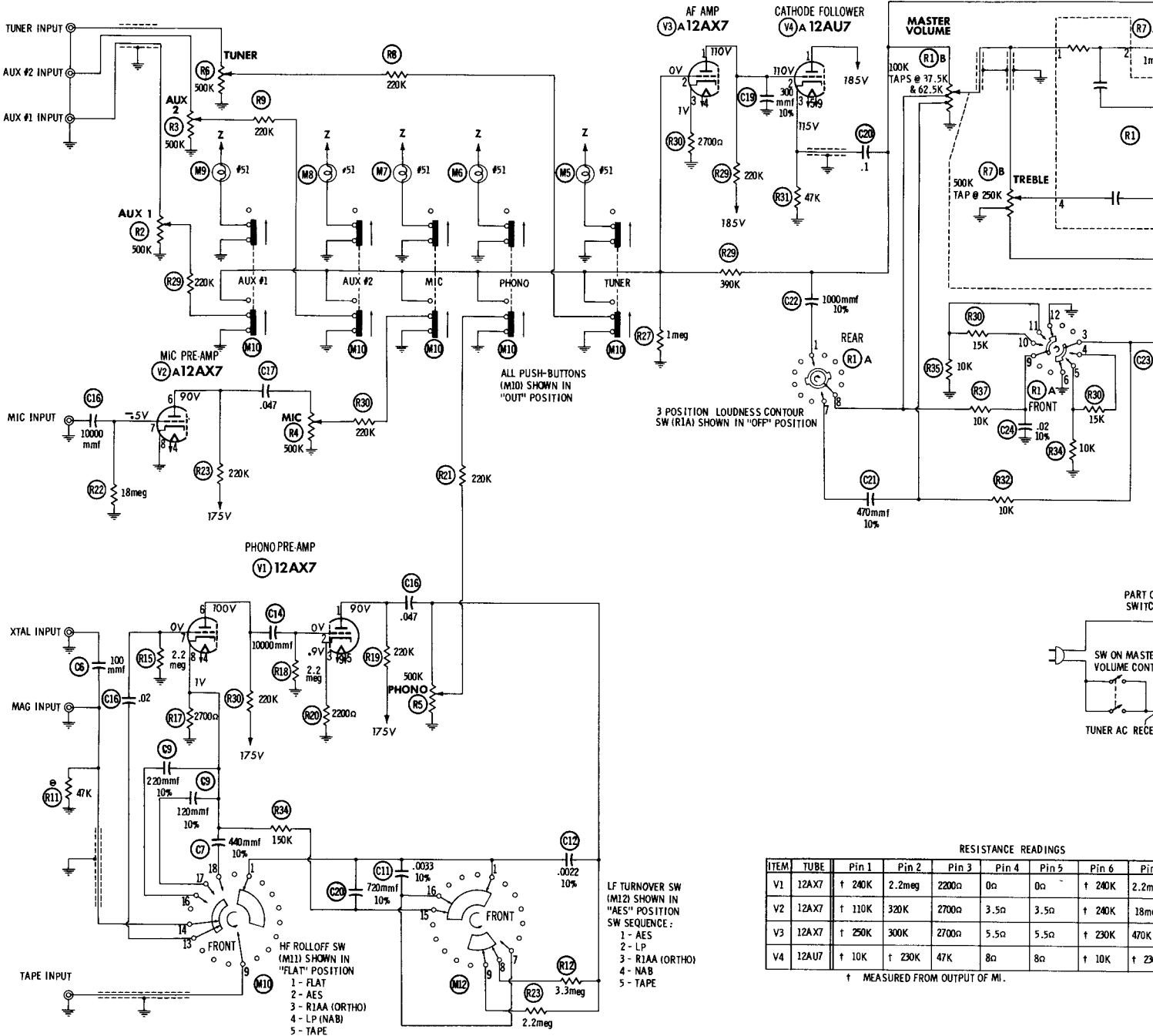
ITEM No.	PART NAME	FISHER PART No.	NOTES
M4	Lamp	1-50009-2	#51
M5	Lamp	1-50009-2	#51
M6	Lamp	1-50009-2	#51
M7	Lamp	1-50009-2	#51
M8	Lamp	1-50009-2	#51
M9	Lamp	1-50009-2	#51
M10	Switch Ass'y.	S-546-133	Five Channel Selector, Slide Type
M11	Switch	S-50022-4	High Frequency Roll-off Equalization, Rotary, Wafer Type
M12	Switch	S-50022-5	Low Frequency Turnover Equalization, Rotary, Wafer Type
M13	Switch	S-628-155	Presence, SPST, Slide Type
M14	Switch	S-628-155	Rumble Filter, SPST, Slide Type

CABINETS & CABINET PARTS

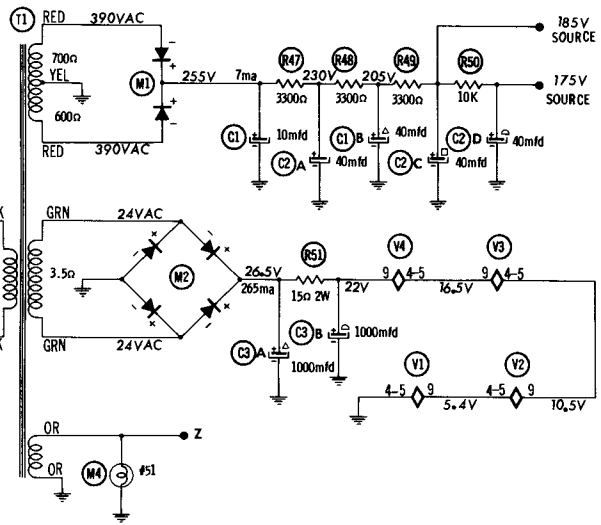
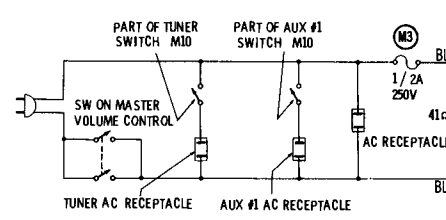
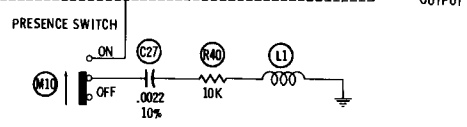
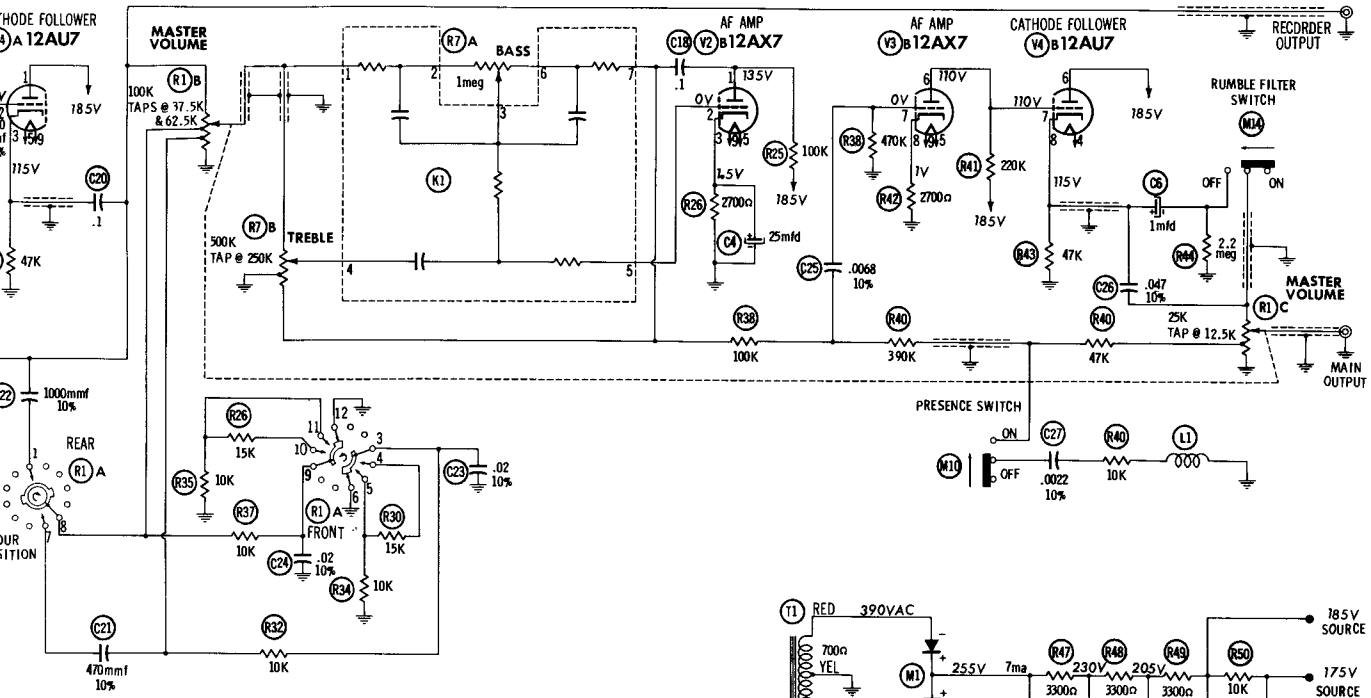
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Card	Use BELDEN No. 1785-B (6 Ft. Length) 1725-K (7 1/2 Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 6401
Phono Pick-up Arm Cable	Use BELDEN No. 6430 (Two Conductor - Twisted)



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 of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.



RESISTANCE READINGS

TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
12AX7	† 240K	2.2meg	2200Ω	0Ω	0Ω	† 240K	2.2meg	2700Ω	3.5Ω
12AX7	† 110K	320K	2700Ω	3.5Ω	3.5Ω	† 240K	18meg	0Ω	5.5Ω
12AX7	† 230K	300K	2700Ω	5.5Ω	5.5Ω	† 230K	470K	2700Ω	8Ω
12AU7	† 10K	† 230K	47K	8Ω	8Ω	† 10K	† 230K	47K	10Ω

† MEASURED FROM OUTPUT OF M1.

DC voltage measurements taken with vacuum tube voltmeter;
 AC voltages measured at 1000 ohms per volt.
 Socket connections are shown as bottom views.
 Measured values are from socket pin to common negative.
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 Nominal tolerance of component values makes possible a
 variation of ±15% in voltage and resistance readings.
 All controls at minimum, proper output load connected.