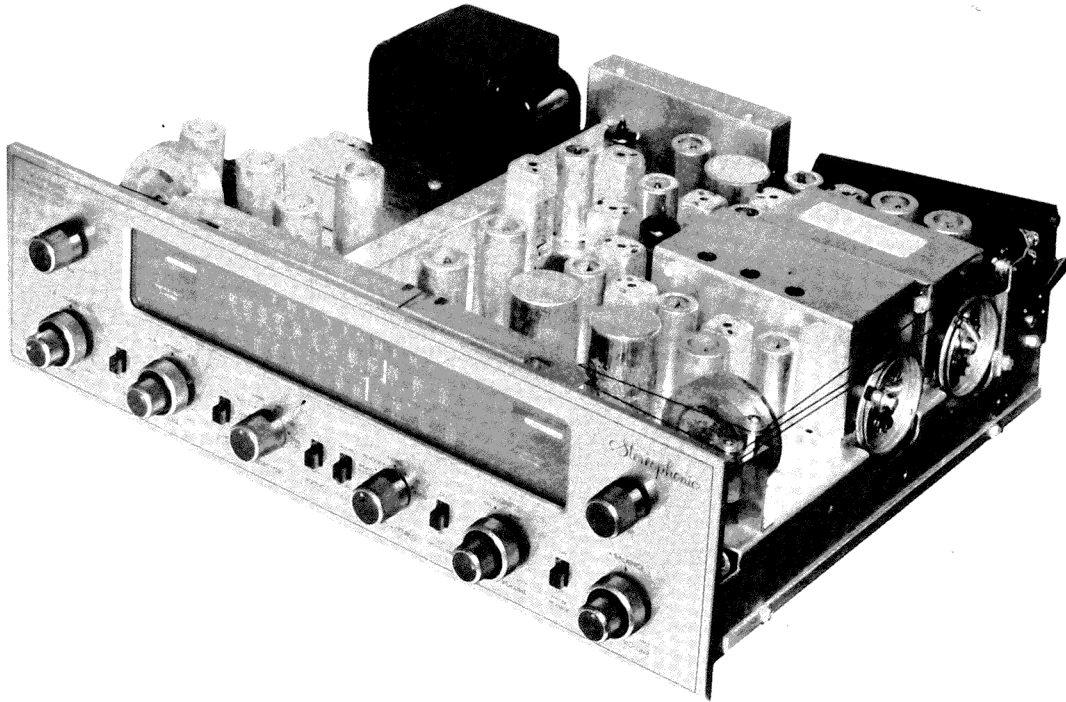


FISHER  
MODEL 202-TFISHER  
MODEL 202-T

TRADE NAME	Fisher Model 202-T (Serial #30001-39999 Inclusive)		
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.		
TYPE SET	AC Operated 21 Tube FM-AM Receiver With Stereo Amplifier		
POWER SUPPLY	105 - 120 Volts AC, 50-60 Cycles	RATING	95 Watts, .88 Amp. @117 Volts AC
TUNING RANGES - BROADCAST	540 - 1600KC	FREQ. MOD.	88 - 108MC

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

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KL141

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# ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Use only enough generator output to provide a usable indication.	
Suggested Alignment Tools: A1, A25, A26, A27 .....	GENERAL CEMENT #5003, 8271, 8275, 8276, 8609, 8721, 8722 9150, 9298, WALSCO #2516, 2518, 2519
A2 Thru A7, A9, A16 thru A21.....	GENERAL CEMENT #5097, 8727 WALSCO #2515
A8, A13, A14, A15, A22, A23, A24....	GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440 WALSCO #2526, 2543, 2544, 2545
A10, A11, A12.....	GENERAL CEMENT #5004, 5008, 5009 WALSCO #2520

## AM ALIGNMENT—SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	High side of Audio generator to pin 7 (plate) of AM detector. Low side to chassis.	10KC	(AM) Point of non-interference. (AM Bandwidth at "SHARP".)	AC probe channel "B" RCDR. output jack.	A1	Adjust for MINIMUM deflection.
2.	High side thru .01mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400% AM)	"	DC probe to point $\diamond A$ . Common to chassis.	A2, A3, A4, A5, A6, A7	Adjust for maximum deflection.
3.	"	455KC (30KC Swp.)	Point of non-interference. (AM Bandwidth at "BROAD".)	USE SCOPE Connect across Ch. "B" RCDR. Output jack.		Retouch A2 for symmetry of response.
4.	High side thru 220mmf to AM antenna terminal #3. Low side to chassis.	600KC (400% AM)	600KC	Scope as above. DC probe of VTVM to point $\diamond A$ . Common to chassis.	A8, A9	Check for sine wave. Adjust for maximum deflection on VTVM.
5.	"	1400KC	1400KC	"	A10, A11, A12	"

## FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM—SELECTOR IN FM POSITION

FM Muting Switch Off.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6.	High side thru .01mfd to pin 1 (grid) of 2nd FM IF. Low side to chassis.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point $\diamond B$ . Common to chassis.	A13, A14, A15	Adjust for maximum deflection.
7.	"	"	"	DC probe to point $\diamond C$ . Common to chassis.	A14	Readjust A14 for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
8.	High side to ungrounded tube shield floating over FM Mixer- Osc. Low side to chassis.	"	"	DC probe to point $\diamond D$ . Common to chassis.	A16, A17, A18, A19, A20, A21	Adjust for maximum deflection.

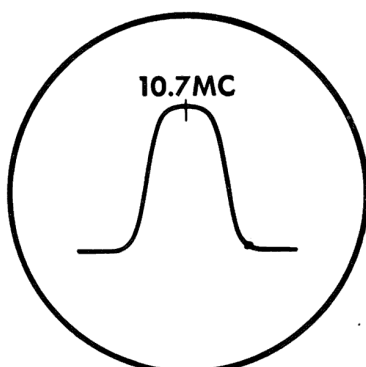


FIG. 1

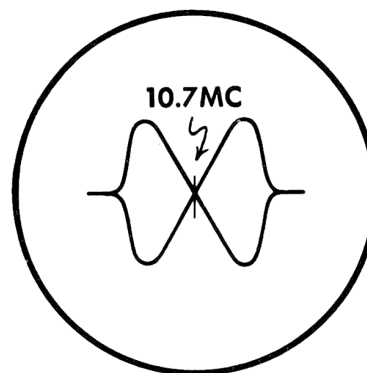


FIG. 2

# ALIGNMENT INSTRUCTIONS (cont)

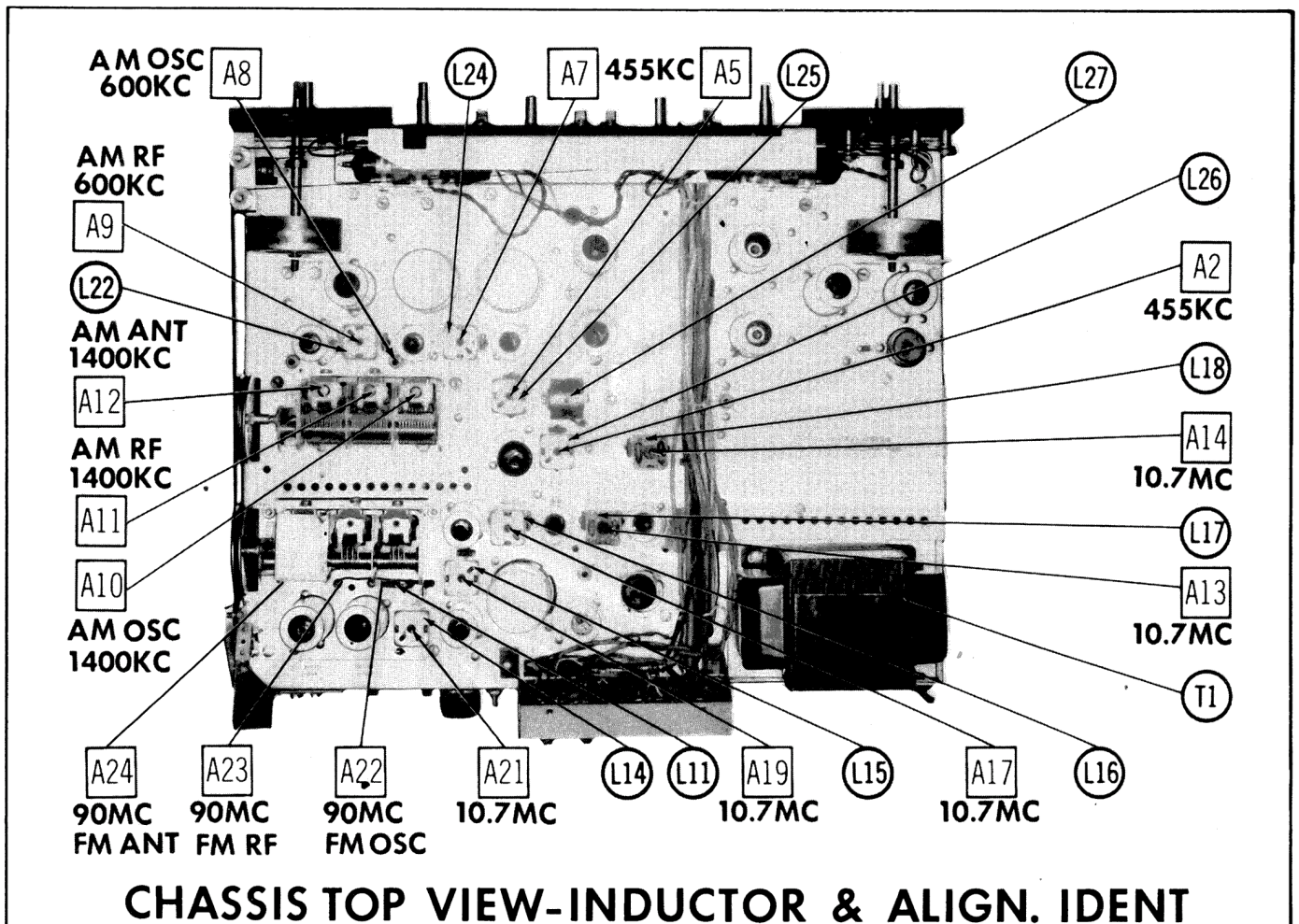
FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE—SELECTOR IN FM POSITION

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120V sawtooth voltage in scope for horizontal deflection.  
FM Muting Switch Off.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
6.	High side thru .01mfd to pin 1 (grid) of 2nd FM IF. Low side to chassis.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. Amp. to point $\text{B}$ . Low side to chassis.	A13, A14, A15	Disconnect stabilizing capacitor C6. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C6.
7.	"	"	"	Vert. Amp. to point $\text{C}$ . Low side to chassis.	A14	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A15 for maximum amplitude and straightness of crossover lines.
8.	High side to ungrounded tube shield floating over FM Mixer-Osc. Low side to chassis.	"	"	Vert. Amp. to point $\text{D}$ . Low side to chassis.	A16, A17, A18, A19, A20, A21	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
9.	Across FM antenna terminals #5 & 6 with 120 $\Omega$ in each lead.	90MC (22.5MC Swp)	(FM) 90MC	DC probe to point $\text{D}$ . Common to chassis. Scope across Ch. "A" RCDR. output jack.	A22, A23, A24	Check for sine wave. Adjust for maximum deflection on VTVM.
10.	"	106MC	106MC	"	A25, A26, A27	Check for sine wave. Adjust for maximum deflection on VTVM. Repeat Steps 9 and 10.



CHASSIS TOP VIEW-INDUCTOR & ALIGN. IDENT

FISHER  
MODEL 202-T

FOLDER 9



# PARTS LIST AND DESCRIPTIONS

## TUBES

GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE	USE	TYPE	
V1	FM RF Amplifier	ECC88 (6DJ8) *	AM Tuning Indicator	EM84 (6FG6) *	
V2	FM Mixer-FM Osc.	ECC85/6AQ8	Channel A Preamp.	ECC83/12AX7	
V3	1st FM IF Amplifier	6AU6	Channel A AF Amp. -	ECC8/12AT7	
V4	2nd FM IF Amplifier	6AU6	Channel A Cath. Follower	ECC8/12AX7	
V5	3rd FM IF Amplifier	6AU6	Channel A AF Amp. -	ECC83/12AX7	
V6	4th FM IF Amplifier	6AV6	Channel B AF Amp. -	ECC8/12AT7	
V7	FM Tuning Osc.	6AV6	Channel B Cath. Follower	ECC83/12AX7	
V8	FM Tuning Indicator	EM84 (6FG6) *	Channel B Preamp.	ECC8/12AX7	
V9	AM RF Amplifier	6BE6	Channel B AF Amp. -	ECC8/12AX7	
V10	AM Converter	6BE6	Channel B Cath. Follower	ECC83/12AX7	
V11	1st AM IF Amplifier	6BQ6	Rectifier	E281/6CA4	
V12	2nd AM IF Amp. -AM Det.	6BF89/6DC8			

\* Alternate

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
C1A	40 350	C50180-3		FP327.89	TMT-3337	TYLS-4581 *
B	40 300			TC58	TD-40-250	
C	40 300					
D	40 250					
C2A	40 250	C50180-4		FP327.88	TMD-2315	TVL-2575
B	40 250			BR4025	TD-40-250	TVA-1511
C3A	40 250	C50180-5		FP217.87	TMD-2315	TVL-2575
B	40 250					
C4A	1000 30	C50180-7				
B	1000 30					
C5	2 70	C721-142	PRSI400	NLW2-100	TT150X2	TE-1401
C6	5 50	C829-138	PRSI320	NLW8-100	TT50X10	TE-1303.3
C7	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091
C8	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091
C9	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091
C10	8 50	C546-126	PRSI320	NLW8-100	TT41	TE-1303.3
C11	1 250	C546-126	PRSI700	BR45	TD-2-450	TVA-1701
C12	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091
C13	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091
C14	25 6	C639-114	XPP-6025	NLW25-6	TT6X25	TE-1091

\* Not normally in distributor's 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	REMARKS	REPLACEMENT DATA				SPRAGUE PART No.
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENC0 PART No.	MALLORY PART No.	
C15	8 NPO ± .5mmf	#C662-123	NPO-SI 8.2	C10V8C		10TCC-V82	
C16	100 N1500	#C50070-6					
C17	100 N1500	#C50070-6					
C18	100 N1500	#C50070-6					
C19	1000		EF-001		CCF-102	CT280A	
C20	1000		EF-001		CCF-102	CT280A	
C21	1000		EF-001		CCF-102	CT280A	
C22	1000		EF-001		CCF-102	CT280A	
C23	1000		EF-001		CCF-102	CT280A	

## FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	REPLACEMENT DATA			
						ELMENC0 PART No.	MALLORY PART No.	SPRAGUE PART No.	
C24	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C25	8 NPO ± .5mmf	#C662-123	NPO-SI 8.2	C10V8C				10TCC-V82	
C26	8 N750	#C50070-19	N750-SI 68	TCN-68	C10Q68C	CCTN-680	CN7-468	10TCU-Q88	
C27	100 N1500 5%	#C50070-8	DI-1000	DD-102	5R5D1	CCD-102	GP210	10TS-D10	
C28	200 10%								
C29	24 N150 5%								
C30	47 N750 10%								
C31	100 N1500								
C32	5 N220 ± .5mmf	#C50070-6	N750-DI 47	DTN-47	C10Q47U	CCTN-470	CN7-447	10TCU-Q47	
C33	5 N150 ± .5mmf	#C662-123							
C34	100 N1500	#C20R050D5							
C35	5 N150 ± .5mmf	#C20P1050D5							
C36	100 N1500	#C50070-6							
C37	1000								
C38	5000		EF-001	TCL-100					
C39	1000		BPD-005	MFT-1000	BYA10D5	CCF-102	CT280A	5HK-D50	
C40	20000		EF-001	MFT-1000					
C41	5000		BPD-02	DD-502	BYB6S2	CCF-102	CT280A	5HK-S20	
C42	2700 10%		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C43	5000		BPD-005	DD-502	DPMS6D27	CCD-272	GEM-1623	10TS-D27	
C44	2700 10%		BPD-005	DD-502	DPMS6D27	CCD-272	GEM-1623	10TS-D27	
C45	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C46	47 N750		BPD-005	DD-502	C10Q47C	CCTN-470	CN7-447	10TCU-Q47	
C47	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C48	2700 10%		BPD-02	DD-502	DPMS6D27	CCD-272	GEM-1623	10TS-D27	
C49	20000		BPD-02	DD-502	BYB6S2	CCD-203	B-120	5HK-S20	
C50	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C51	12 NPO 10%								
C52	5000		BPD-005	DD-502	C10Q12C	CCTO-120	CNO-412	10TCC-Q12	
C53	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C54	.1 250V 10%		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10	
C55	2700 10%		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C56	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C57	2700 10%		BPD-005	DD-502	DPMS6D27	CCD-272	GEM-1623	10TS-D27	
C58	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C59	300 10%		BPD-005	DD-502	LI0733	CCD-331	GP333	10TS-T33	
C60	300 10%		BPD-005	DD-502	LI0733	CCD-331	GP333	10TS-T33	
C61	5000		BPD-005	DD-502	LI0733	CCD-331	GP333	10TS-T33	
C62	300 10%		BPD-005	DD-502	LI0733	CCD-331	GP333	10TS-T33	
C63	.0033 200V 5%		V84C4D33-10%	DD-331	LI0733	CCD-331	GP333	10TS-T33	
C64	.1 250V 5%		P488N-1	DF-104	MCJ462	8DP-1-332-J	MS-233	4TM-P10	
C65	.015 250V								
C66	5000		P488N-015	DD-153	5R5T82	CM-19B-821J	GEM-415	4TM-S15	
C67	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C68	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C69	220 10%		BPD-005	DD-502	LI0722	CCD-221	GP322	10TS-T22	
C70	5 NPO ± .5mmf		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50	
C71	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C72	20000		BPD-02	DD-502	BYB6S2	CCD-203	B-120	5HK-S20	
C73	24 N150 5%	#C50070-8	NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50	
C74	5 NPO ± .5mmf	#C50070-5							
C75	100 N1500								
C76	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20	
C77	5000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20	
C78	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20	
C79	.68		NPO-SI 68	TCZ-R68					
C80	10 NPO ± .5mmf	#C50070-5	NPO-SI 10	TCZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10	
C81	100 N1500	#C50070-5							
C82	100 N1500	#C50070-5							
C83	470 5%		NPO-SI 10	TCZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10	
C84	5000		1469-00047	DD-203	5R5T47	CCD-203	MCJ244	MS-347	
C85	20000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C86	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C87	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50	
C88	.047 250V		P488N-047	DD-503	BYA10D5	CCD-503	GEM-4147	4TM-S47	

# PARTS LIST AND DESCRIPTIONS (Continued)

## FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CENTRALAB PART No.	SHUREL CORNER PART No.	ELMENCO PART No.	MALLORY PART No.
C88	470 5%		1469-00047	5R5T47	CM-19B-471J	MCJ244	MS-347
C89	470 5%		1469-00047	5R5T47	CM-19B-471J	CMJ244	MS-347
C90	5000		BYA10D5	BYA10D5	CCD-502	B-250	5HK-D50
C91	5000		BYA10D5	BYA10D5	CCD-502	B-250	5HK-D50
C92	20000		BPD-02	BYB652	CCD-203	B-120	5HK-S20
C93	20000		BPD-02	BYB652	CCD-203	B-120	5HK-S20
C94	470 5%		1469-00047	5R5T47	CM-19B-471J	MCJ244	MS-347
C95	1 P100	#C50070-1					
C96	24 N150 5%	#C50070-8					
C97	5000		BFD-005	BYA10D5	CCD-502	B-250	5HK-D50
C98	5000		BFD-005	BYA10D5	CCD-502	B-250	5HK-D50
C99	20000		BFD-02	BYB652	CCD-203	B-120	5HK-S20
C100	5000		BFD-005	BYA10D5	CCD-502	B-250	5HK-D50
C101	220 10%		DI-220	LI0722	CCD-221	GP322	10TS-T22
C102	.047 250V		P488N-047	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C103	.047 250V		P488N-047	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C104	560 10%		DI-560	5R5T56	CCD-561	GP356	10TS-T56
C105		#C829-151-5					
C106	220 10%		DI-220	LI0722	CCD-221	GP322	10TS-T22
C107	100 N1500	#C50070-5					
C108	.01 250V		P488N-01	CUB4S1	4DP-1-103	GEM-401	4TM-S10
C109	.02 250V		P488N-022	CUB4S22	4DP-2-223	GEM-4122	4TM-S22
C110	33 N750 5%		DI-2700	DI0633U	CCD-272	GEM-1623	10TS-D27
C111	2700 10%		DI-3300	DPM58D27	CCD-272	GEM-1623	10TS-D27
C112	3300 10%		DI-3300	DPM58D33	CCD-332	GEM-1623	10TS-D33
C113	.047 250V		BFD-005	BYA10D5	CCD-502	B-250	5HK-D50
C114	5000		BFD-001	BYA10D1	CCD-102	B-210	5HK-D10
C115	1000		P484CM-68	P484P68	CCD-102	B-210	5HK-D10
C116	.68 250V		DI-330	LI0733	CCD-331	GP333	10TS-T33
C117	.027 250V		P684CM-027	DPM58S27	6DP-3-273	GEM-413	6PS-T33
C118	.027 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C119		#C50070-8					
C120	24 N150 5%		DI-330	LI0733	CCD-331	GP333	10TS-T33
C121	330 10%		DI-1000	5R5D31	CCD-102	GP210	10TS-D10
C122	1000 10%		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C123	.1 250V		BFD-02	BYB652	CCD-203	B-120	5HK-S20
C124	20000		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C125	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C126	.047 250V		P488N-047	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C127	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C128	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C129	220 10%		DI-220	LI0722	CCD-221	GP322	10TS-T22
C130	100 N1500	#C50070-5					
C131	.1 250V		P488N-01	CUB4S1	4DP-1-103	GEM-411	4TM-S10
C132	.022 250V		P488N-022	CUB4S22	4DP-2-223	GEM-4122	4TM-S22
C133	33 N750 5%		DI-2700	DI0633U	CCD-272	GEM-1623	10TS-D27
C134	2700 10%		DI-3300	DPM58D33	CCD-272	GEM-1623	10TS-D33
C135	3300 10%		P488N-047	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C136	.047 250V		BFD-005	BYA10D5	CCD-502	B-250	5HK-D50
C137	5000		BFD-001	BYA10D1	CCD-102	B-210	5HK-D10
C138	1000		P684CM-68	P484P68	CCD-102	B-210	5HK-D10
C139	.68 250V		DI-330	LI0733	CCD-331	GP333	10TS-T33
C140	330 10%		P684CM-027	DPM58S27	6DP-3-273	GEM-413	6PS-T33
C141	.027 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C142	.027 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C143	24 N150 5%	#C50070-8					
C144	330 10%		DI-330	LI0733	CCD-331	GP333	10TS-T33
C145	1000 10%		DI-1000	5R5D31	CCD-102	GP210	10TS-D10
C146	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C147	20000		BFD-02	BYB652	CCD-203	B-120	5HK-S20
C148	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C149	.1 250V		P488N-1	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C150	.01 600V		P688N-01	CUB6S1	6DP-2-103	GEM-611	6TM-S10

# Fisher Part Number.  
\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	
RIA	Switch		R50-160-29				Loudness
B	100K *	1/4					Master Volume, Channel B
C	100K *	1/4					Master Volume, Channel A
D	Switch						Power Off-On
R2A	250K	1/4	R50-160-31				Center Volume
B	300K	1/4					Balance, Channel A
C	250K Tap	1/4					Balance, Channel B
R3A	500K	1/4	R50-160-28				Treble, Channel B
B	500K Tap	1/4					Treble, Channel A
R4A	1meg	1/4	R50-160-30				Bass, Channel B
B	500K Tap	1/4					Bass, Channel A
R5	100K	1/4	R50-160-20	JP-104			MPX Stereo Control
R6	250K	1/4	R50-160-3	JL-254	MLC254L		AM Level
R7	250K	1/4	R50-160-3	JL-254	MLC254L		Phono Level, Channel A
R8	250K	1/4	R50-160-3	JL-254	MLC254L		Phono Level, Channel B
R9	250K	1/4	R50-160-3	JL-254	MLC254L		Tape Record Level, Channel A
R10	250K	1/4	R50-160-3	JL-254	MLC254L		Tape Record Level, Channel B
R11	250K	1/4	R50-160-3	JL-254	MLC254L		Muting Level

\* Taps @ 35K & 65K.

## RESISTORS (IRC or EQUIVALENT)

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

ITEM No.	RATING		REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
	RESISTANCE	WATTS							
R12	330Ω			R46	1000Ω		R80	68K	
R13	2700Ω			R47	6800Ω		R81	100K	
R14	330Ω			R48	6800Ω		R82	270Ω	
R15	100K			R49	33K		R83	270Ω	
R16	120Ω			R50	220K		R84	2.2meg	
R17	330K			R51	3.3meg		R85	820K	
R18	330K			R52	15meg		R86	1000Ω	
R19	470K			R53	1meg		R87	27K	
R20	1000Ω			R54	68K		R88	47K	
R21	2200Ω			R55	470K		R89	47K	
R22	22Ω			R56	150K		R90	3.3meg	
R23	22000Ω 1W			R57	100K		R91	470K	
R24	1.8meg			R58	470K		R92	68K	
R25	1.8meg			R59	470K		R93	180Ω	
R26	100K			R60	100K		R94	82K	
R27	47K			R61	1000Ω		R95	100K	
R28	47K			R62	220K		R96	2700Ω 1W	
R29	82K			R63	220K		R97	10K	
R30	1000Ω			R64	1000Ω		R98	100K	
R31	120Ω			R65	4.7Ω		R99	330K 1W	
R32	56K			R66	4.7meg		R100	4.7meg	
R33	470Ω			R67	1000Ω		R101	220K	
R34	120Ω			R68	47K		R102	470K	
R35	82K			R69	120Ω		R103	1meg	
R36	1000Ω			R70	3.3meg		R104	47K	
R37	15K			R71	4.7Ω		R105	470Ω	
R38	220K			R72	820K		R106	270K	
R39	1000Ω			R73	100Ω		R107	3.9meg	
R40	22K 1W			R74	22K		R108	330K	
R41	100Ω			R75	1000Ω		R109	470K	
R42	270Ω			R76	22K 1W		R110	220Ω	
R43	100K			R77	270Ω		R111	10K	
R44	330K			R78	270Ω		R112	10K	
R45	1500Ω			R79	1000Ω		R113	22K	

(470K) \*

# PARTS LIST AND DESCRIPTIONS (Continued)

## RESISTORS (IRC or EQUIVALENT) (cont)

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
RL14	10meg		RL56	1800Ω	
RL15	470K		RL57	2.2meg	
RL16	1.5meg		RL58	100K	
RL17	100K		RL59	1800Ω	
RL18	1800Ω		RL60	330K	
RL19	2.2meg		RL61	1meg	
RL20	100K		RL62	1500Ω	
RL21	1800Ω		RL63	47K	
RL22	330K		RL64	68K	
RL23	470K		RL65	10K	
RL24	1meg		RL66	10K	
RL25	47K		RL67	1000Ω	
RL26	27K		RL68	1000Ω	
RL27	27K		RL69	1200Ω IW	
RL28	470K		RL70	1200Ω IW	
RL29	470K		RL71	400Ω 5W	
RL30	470K		RL72	400Ω 5W	
RL31	68K		RL73	100Ω 5W	
RL32	82K		RL74	12Ω 5W	
RL33	100		RL75	1000Ω	
RL34	2700Ω IW		RL76	18K	

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	FISHER PART No.	REPLACEMENT DATA
K1	Phone Equalization		PC50187-3	
K2	Tone Comp.	100mmf, 4700mmf, 4700mmf, 1000Ω, 100K, 470K	PC657-140	Centralab PC-190 Sprague TC-1
K3	High Freq. Filter		PC50187-2	
K4	Phone Equalization		PC50187-3	
K5	Tone Comp.	100mmf, 4700mmf, 4700mmf, 1000Ω, 100K, 100K, 470K	PC657-140	Centralab PC-190 Sprague TC-1
K6	High Freq. Filter		PC50187-2	

\* Alternate Value.

## COILS (RF-IF)

ITEM No.	USE	FISHER PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Stancor PART No.	NOTES
L1	FM Ant. Coil	L50066-8	TV-180	4608		RTC-8518	3.3uh
L2	FM Ant. Trans.	L728-124					
L3	RF Choke	L50066-2	BC-561	4602		RTC-8515	1uh
L4	RF Choke	L50066-19		4588		RTC-8513	.56uh
L5	RF Choke	L50066-19		4588		RTC-8513	.56uh
L6	RF Choke	L629-180					
L7	FM RF Coil	L728-128					
L8	RF Choke	L50066-2	BC-561	4602		RTC-8515	1uh
L9	FM Osc. Coil	L728-125					
L10	RF Choke	L50066-2	BC-561	4602		RTC-8515	1uh
L11	RF Choke	L50066-3	BC-561	4602		RTC-8515	1.2uh
L12	Cathode Choke	L50066-19		4588		RTC-8515	.56uh
L13	F.I. Choke	L50066-3	BC-561	4602		RTC-8515	1.2uh
L14	1st FM IF Trans.	Z2682-117	FM-256	1463		RTC-8515	
L15	2nd FM IF Trans.	Z2682-142	FM-254	1463		RTC-8515	
L16	3rd FM IF Trans.	Z250210-2	FM-254	1463		RTC-8515	
L17	4th FM IF Trans.	L551-121				RTC-8515	
L18	Ratio Detector	Z2592-170				RTC-8600	
L19	FM Muting Osc. Coil	L50210-21					
L20	AM Ant. Trans.	L721-139					
L21	Loopstick	L721-136				RTC-8731	
L22	AM RF Trans.	L670-151				RTC-8732 *	
L23	AM Osc. Coil	L50210-22				RTC-8646	
L24	1st AM IF Trans.	Z250210-3					
L25	2nd AM IF Trans.	Z250210-3					
L26	3rd AM IF Trans.	Z250210-3					
L27	10KC Filter Coil	L644-120				RTC-8633	

① Wound on 100Ω Resistor.

▲ Connect M5 & M6 externally.

\* Fabricate Mounting.

## TRANSFORMER (POWER)

ITEM No.	RATING		FISHER PART No.	REPLACEMENT DATA				NOTES
	PRI.	SEC.		Merit PART No.	Ram PART No.	Stancor PART No.	Thorderson PART No.	
T1	117V @ .88A	520 VCT ③ .100A	T721-115					
	SEC. 3 6.3V @ 2.7A	SEC. 4 6.3V (Not Used)						
	SEC. 5 25V @ .7A							

## RECTIFIERS

ITEM No.	RATING	CURRENT (Measured)	REPLACEMENT DATA				NOTES
			FISHER PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SARKIS TABZIAN PART No.	
M1	.450A	SR721-143 *				604B	* Bridge Type Selenium

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				
			FISHER PART No.	HOLDER	LITTELFUSE PART No.	BUSS PART No.	
M2	3AG	3A 250V	F-3000		312003	342001	HOLDER AGC-3 HKP

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		FISHER PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M3	IN295	V-IN295	IN295	IN295	Tuning Ind. Rectifier (Clip In)
M4	IN295	V-IN295	IN295	IN295	Tuning Ind. Rectifier (Clip In)
M5	IN542	V-IN542	IN295	IN295	FM Det. (Clip In) Matched
M6	IN542	V-IN542	IN295	IN295	FM Det. (Clip In) Pair

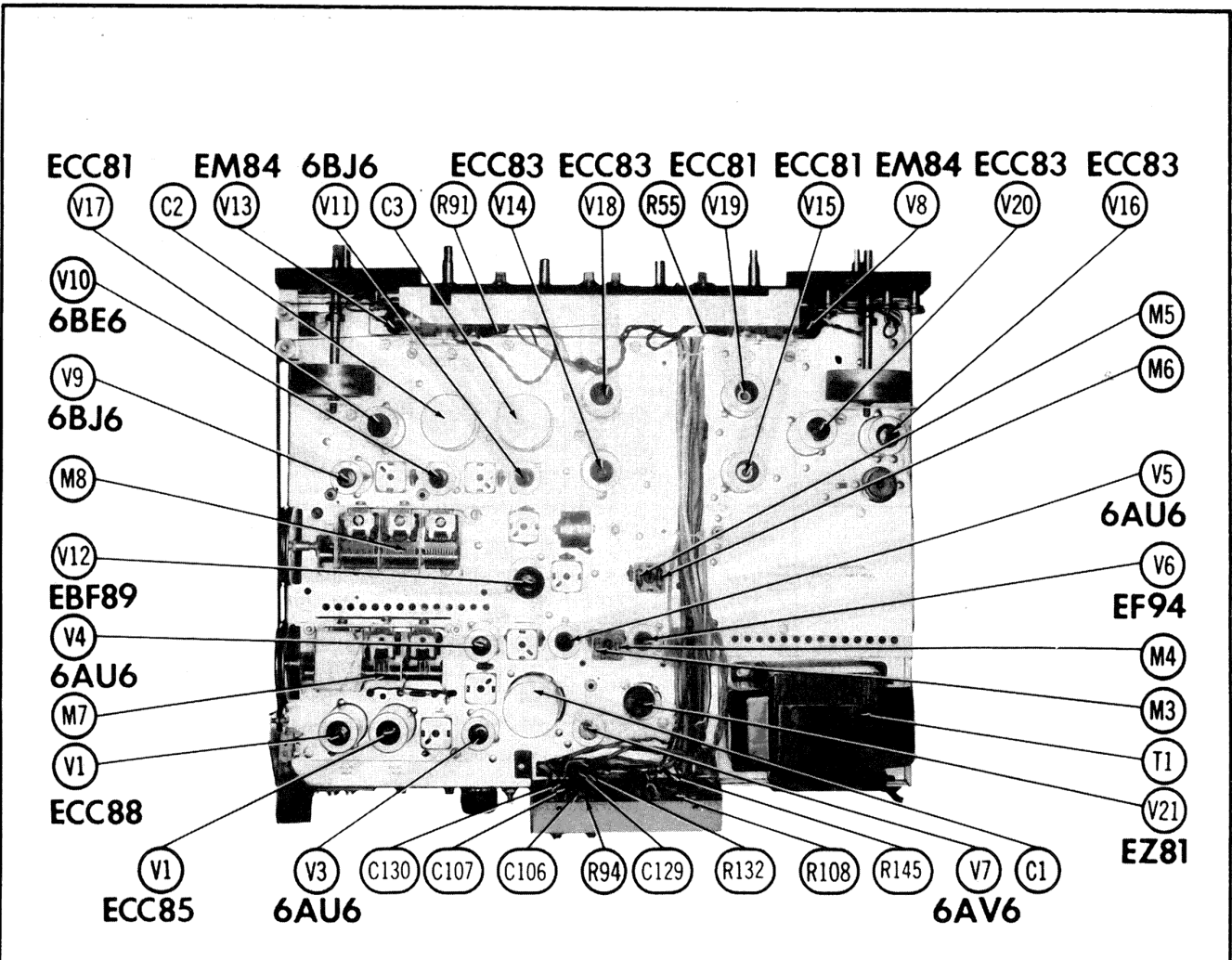
## MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M7	Tuning Cap.	C726-116	FM, 2 Gang
M8	Switch	C684-127	AM, 3 Gang
M9	Switch	S721-144	Function Selector (Rotary Wafer)
M10	Switch	S721-145	Mono-Stereo (Rotary Wafer)
M11	Switch	S50200-2 *	Local-Distance (DPDT, Slide Type)
M12	Switch	S50200-2 *	FM AUX - AUX (DPDT, Slide Type)
M13	Switch	S50200-2 *	AM Sharp-AM Broad (DPDT, Slide Type)
M14	Switch	S50200-2 *	Muting (DPDT, Slide Type)
M15	Switch	S50200-2 *	Lo Filter, Off-On (DPDT, Slide Type)
M16	Switch	S50200-2 *	Tape Off-On (DPDT, Slide Type)
M17	Switch	S50200-2 *	Hi Filter Off-On (DPDT, Slide Type)
M18	Switch	S50200-2 *	Normal-Reverse (DPDT, Slide Type)

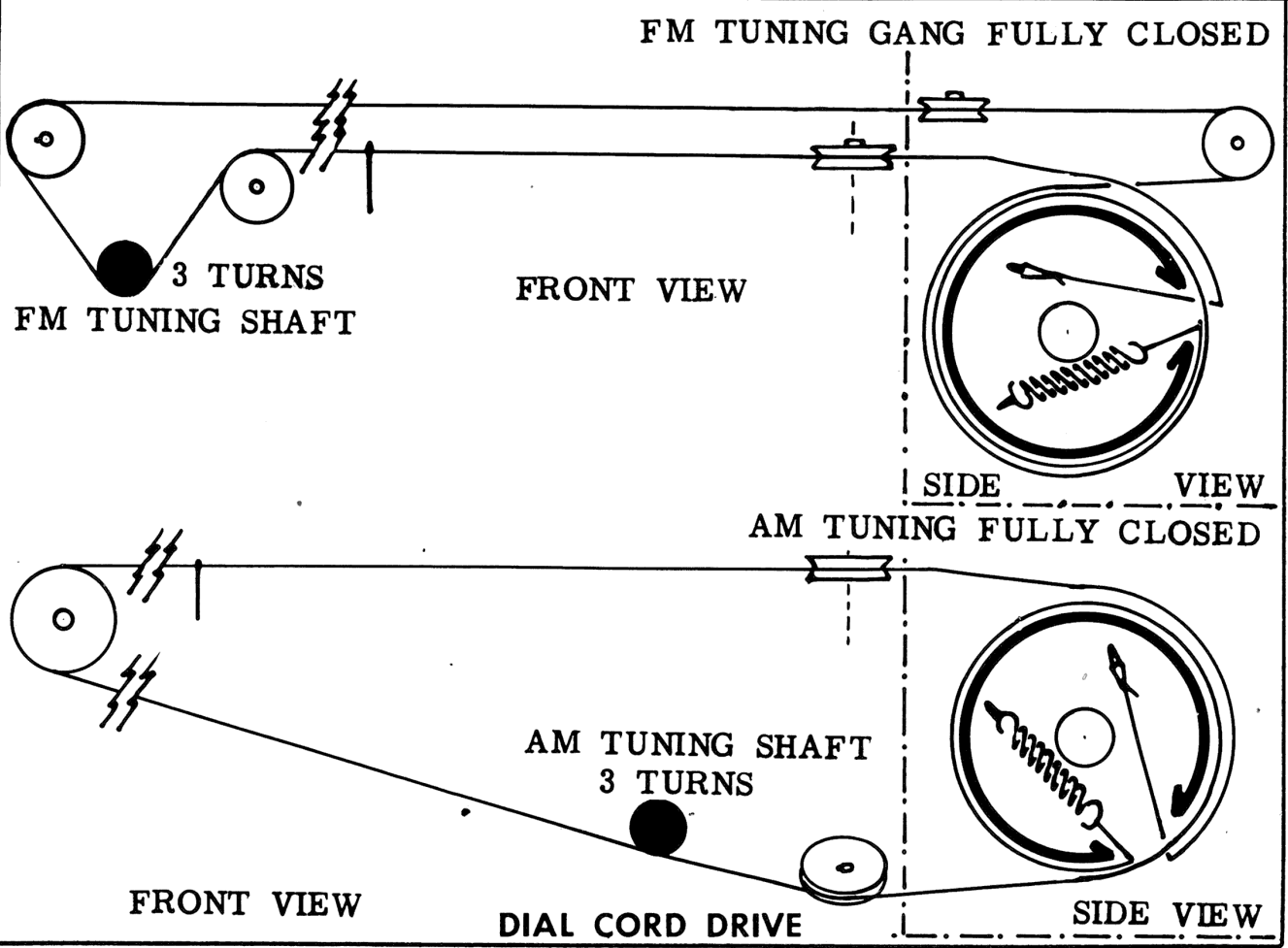
\* Alternate Part #550200-4.

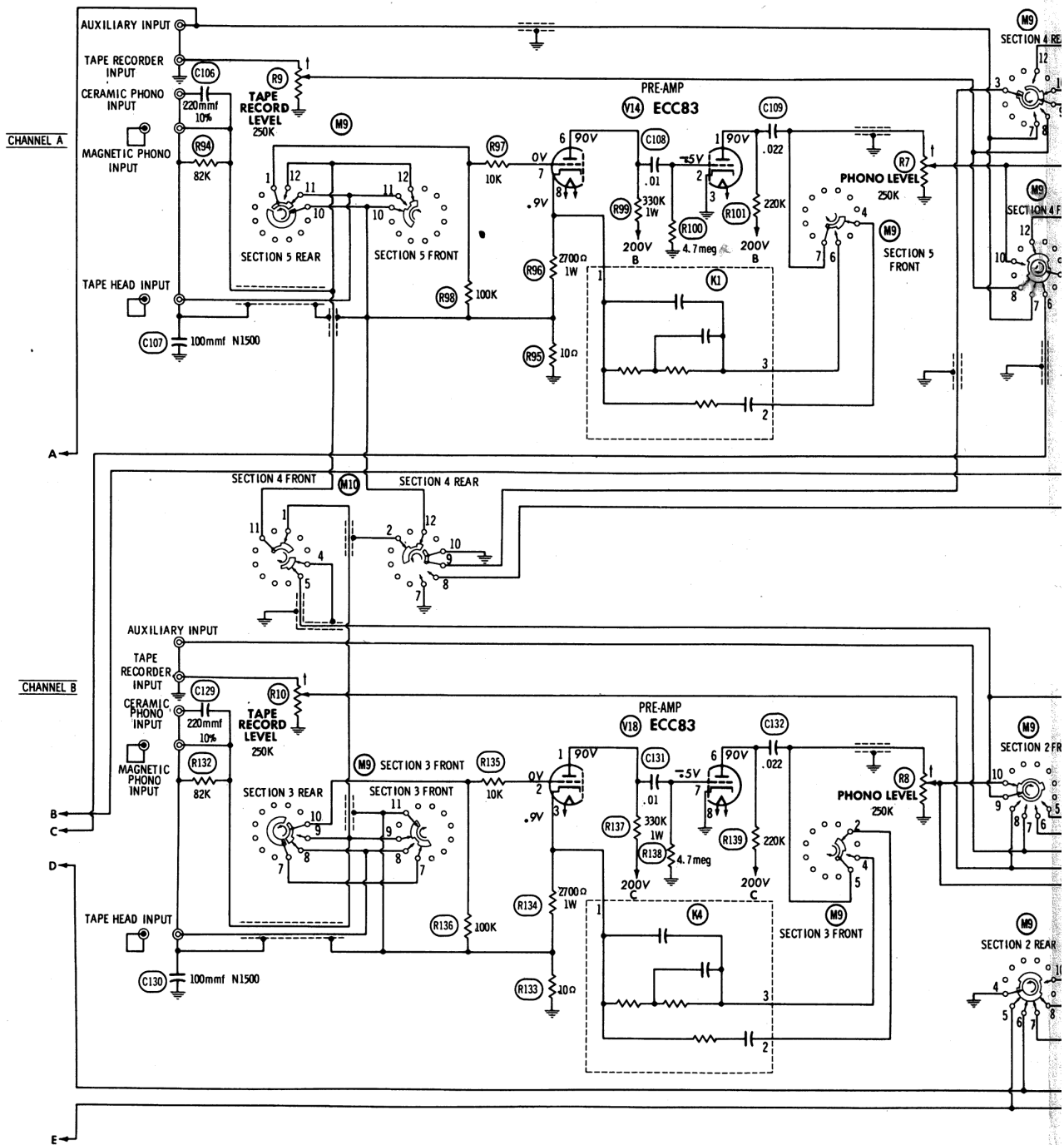
## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8550 (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)



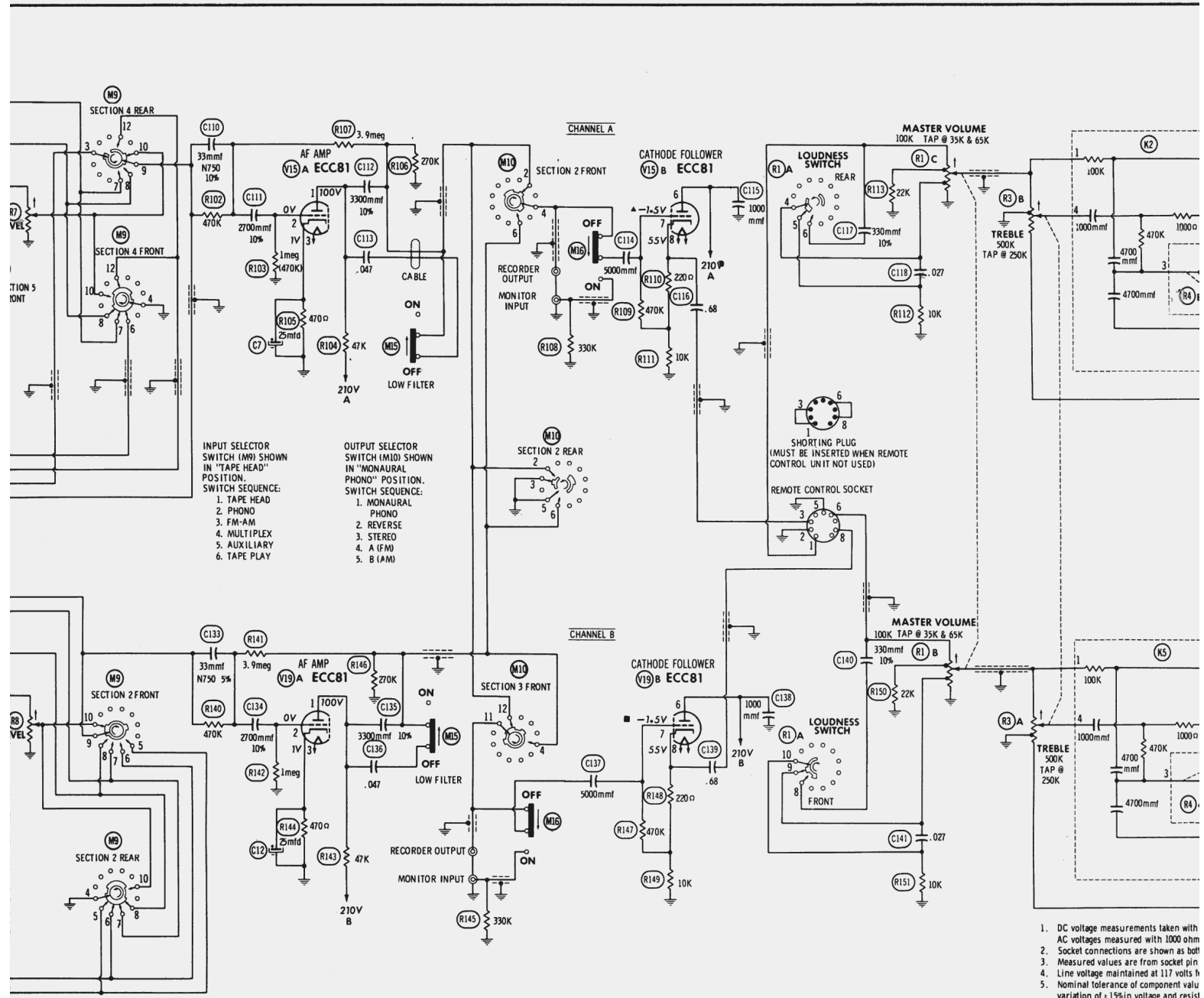
CHASSIS TOP VIEW





A PHOTOFAC STANDARD NOTATION SCHEMATIC

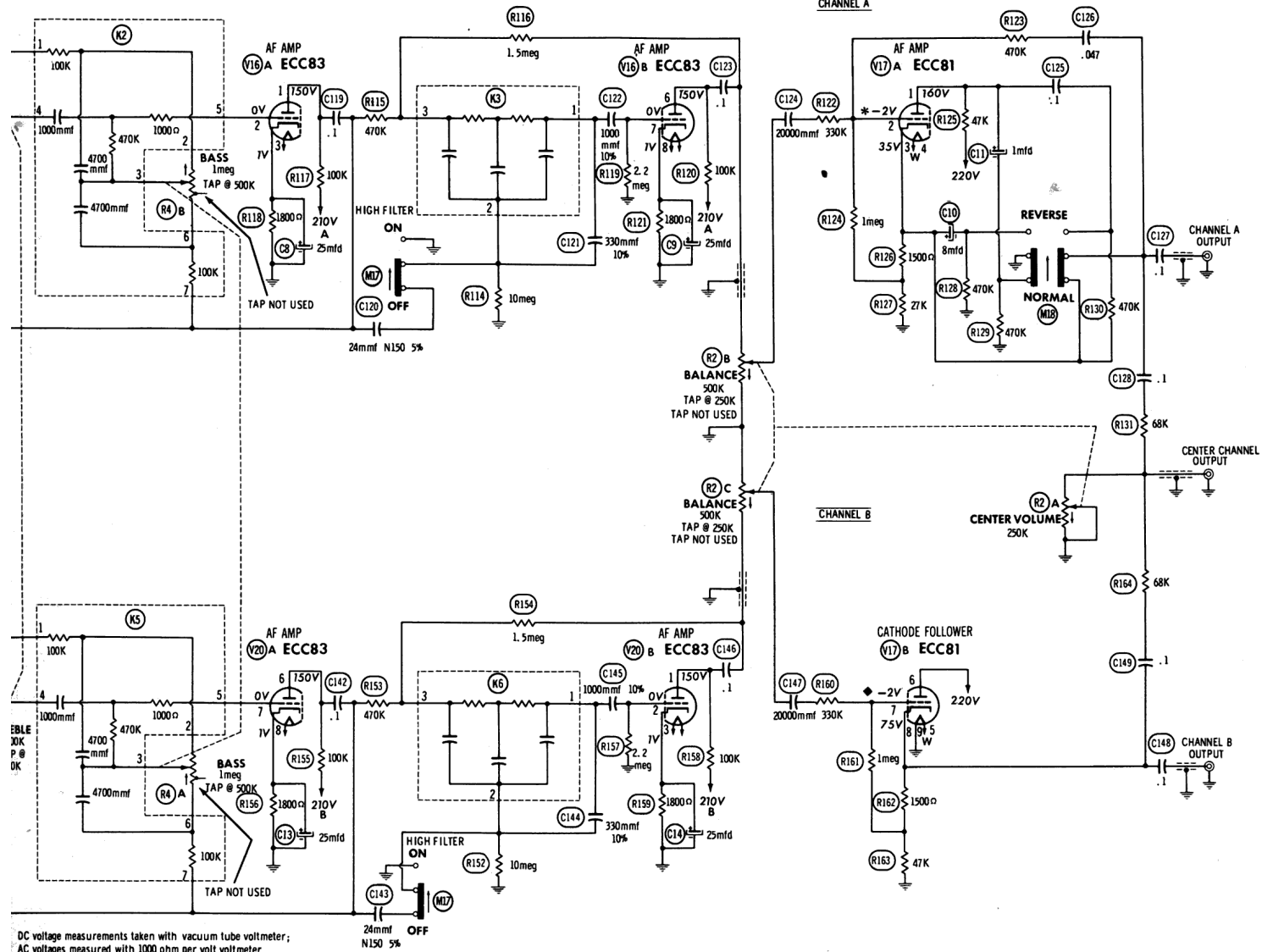




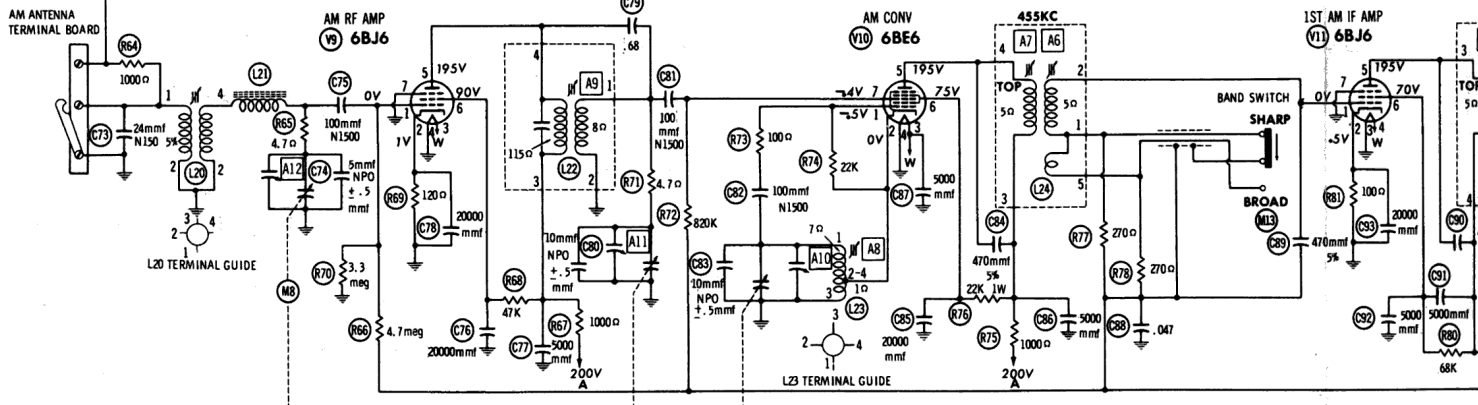
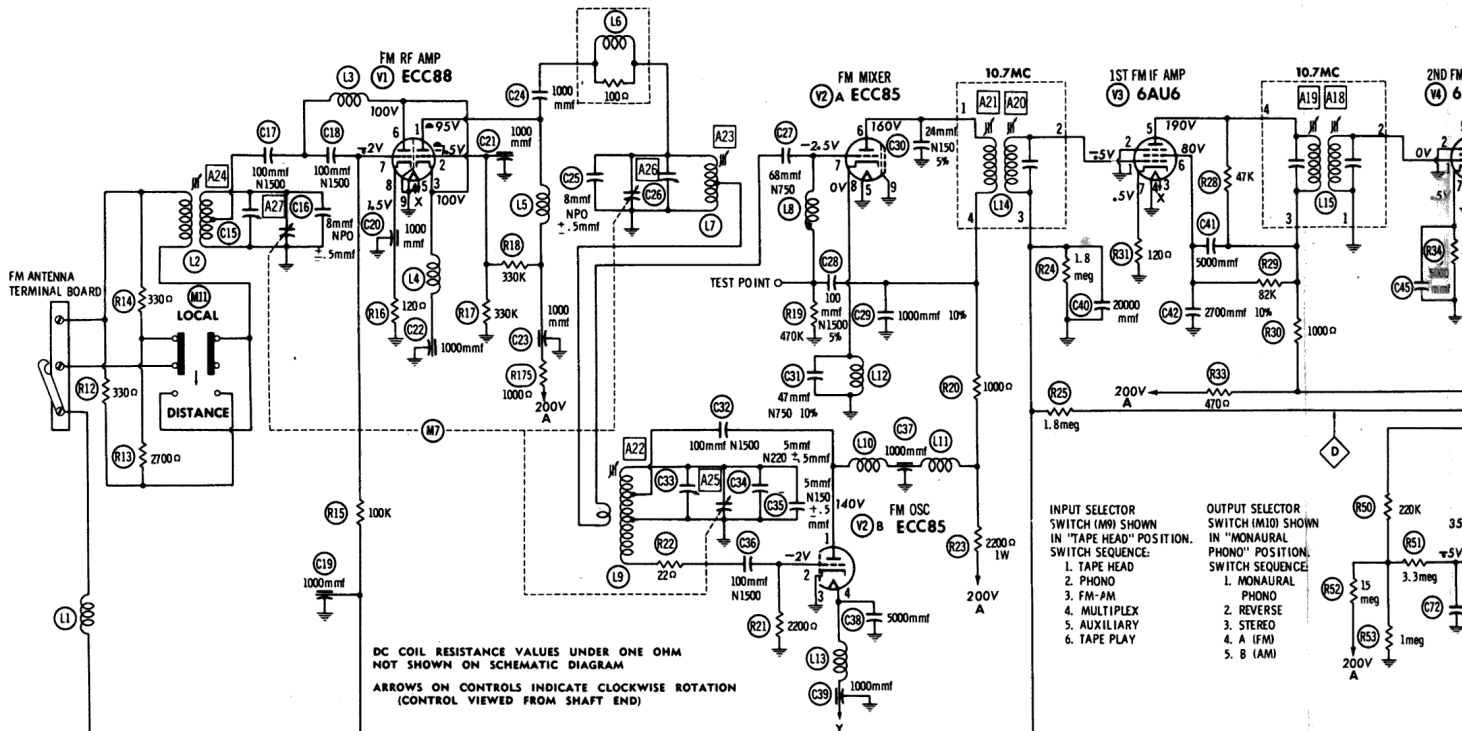
INPUT SELECTOR SWITCH (M9) SHOWN IN "TAPE HEAD" POSITION. SWITCH SEQUENCE:  
1. TAPE HEAD  
2. PHONO  
3. FM-AM  
4. MULTIPLEX  
5. AUXILIARY  
6. TAPE PLAY

OUTPUT SELECTOR SWITCH (M10) SHOWN IN "MONAURAL PHONO" POSITION. SWITCH SEQUENCE:  
1. MONAURAL PHONO  
2. REVERSE  
3. STEREO  
4. A (FM)  
5. B (AM)

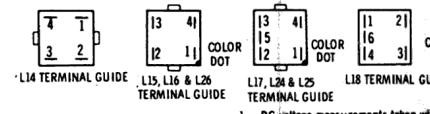
1. DC voltage measurements taken with...
2. AC voltages measured with 1000 ohm...
3. Socket connections are shown as bot...
4. Measured values are from socket pin...
5. Line voltage maintained at 117 volts h...
6. Nominal tolerance of component valu...
7. variation of  $\pm 15\%$  in voltage and resist...
8. All controls at minimum, proper out...



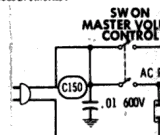
DC voltage measurements taken with vacuum tube voltmeter;  
 AC voltages measured with 1000 ohm per volt voltmeter.  
 Socket connections are shown as bottom views.  
 Measured values are from socket pin to common ground.  
 Line voltage maintained at 117 volts for voltage readings.  
 Nominal tolerance of component values makes possible a  
 variation of  $\pm 15\%$  in voltage and resistance readings.  
 All controls at minimum, proper output load connected.



ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC88	1900Ω	150K	INF	0Ω	1Ω	INF	1meg	120Ω	0Ω
V2	ECC85 6AQ8	13100Ω	2200Ω	0Ω	1Ω	0Ω	4100Ω	470K	0Ω	0Ω
V3	6AU6	1meg	0Ω	1Ω	0Ω	12400Ω	183K	120Ω		
V4	6AU6	0Ω	0Ω	1Ω	0Ω	1400Ω	157K	120Ω		
V5	6AU6	47K	0Ω	1Ω	0Ω	1900Ω	184K	0Ω		
V6	EF94 6AU6	220K 1540K	0Ω	1Ω	0Ω	1900Ω	115K	100Ω		
V7	6AV6	1250K	0Ω	1Ω	0Ω	150K	90K 100K	10Ω 220K		
V8	EM84	4meg	NC	0Ω	0Ω	1Ω	169K	1540K	NC	1540K
V9	6BJ6	2.8meg	120Ω	1Ω	0Ω	1900Ω	149K	0Ω		
V10	6BE6	22K	1Ω	0Ω	1Ω	1900Ω	124K	3.4meg		
V11	6BJ6	2.5meg	100Ω	0Ω	1Ω	1900Ω	170K	0Ω		
V12	EF89 6DC8	128K	6Ω	180Ω	1Ω	0Ω	1900Ω	95K	820K	0Ω
V13	EM84	3.4meg	NC	180Ω	0Ω	1Ω	169K	1540K	NC	1540K
V14	ECC83 12AX7	1230K	4.7meg	0Ω	10Ω	10Ω	1340K	110K 10K	2700Ω	NC
V15	ECC81 12AT7	150K	1meg	470Ω	10Ω	10Ω	13500Ω	480K	10K	NC
V16	ECC83 12AX7	1100K	400K	1800Ω	10Ω	10Ω	1100K	2.2meg	1800Ω	NC
V17	ECC81 12AT7	150K	1meg	28K	1Ω	1Ω	12500Ω	1meg	48K	0Ω
V18	ECC83 12AX7	1340K	110K 10K	2700Ω	0Ω	10Ω	1230K	4.7meg	0Ω	NC
V19	ECC81 12AT7	150K	1meg	470Ω	0Ω	10Ω	13500Ω	480K	10K	NC
V20	ECC83 12AX7	1100K	2.2meg	1800Ω	0Ω	10Ω	1100K	400K	1800Ω	NC
V21	EZ81 6CA4	65Ω	NC	1Ω	0Ω	1Ω	NC	68Ω	NC	NC

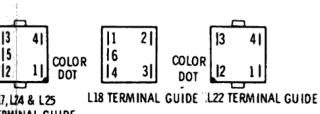
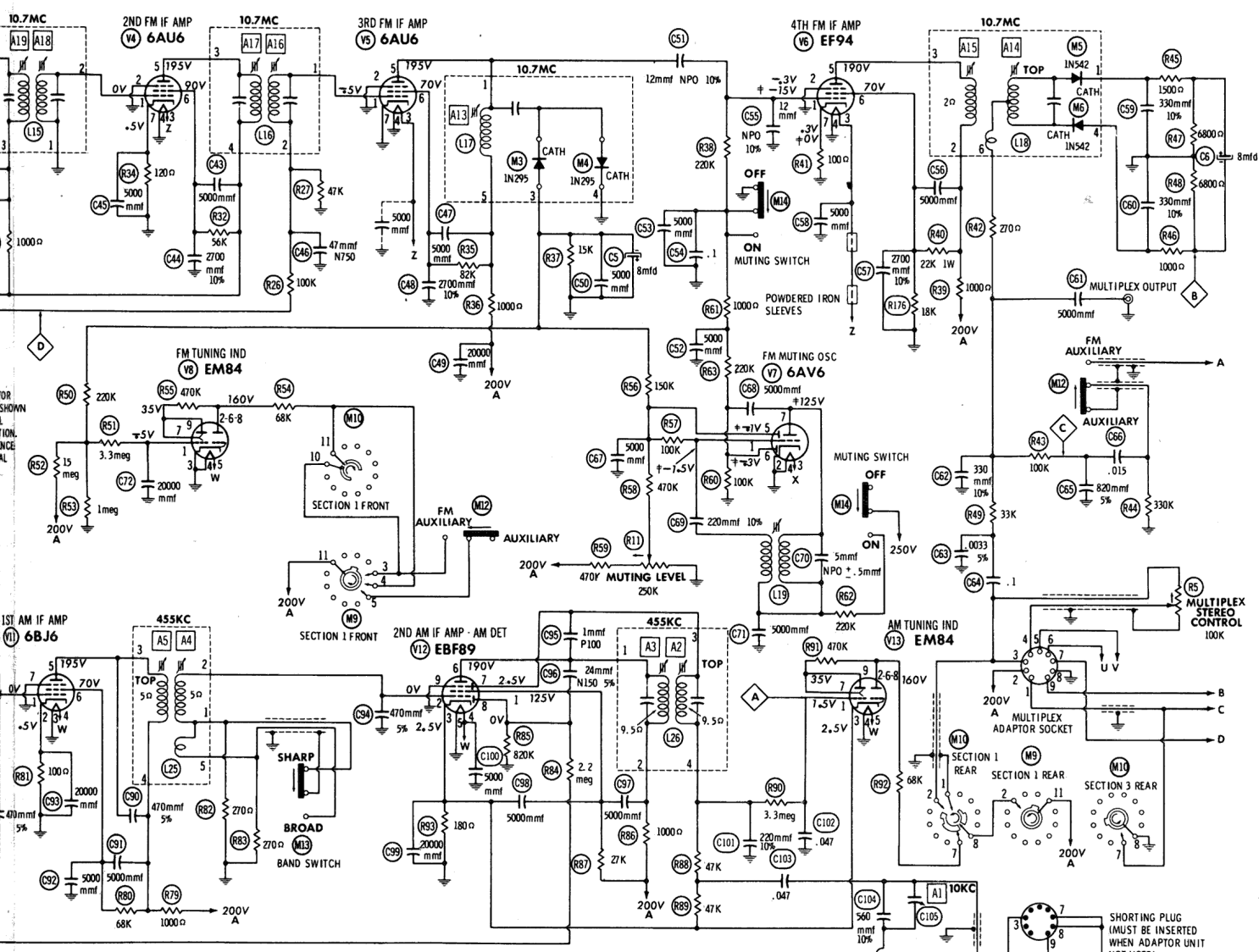


- DC voltage measurements taken with AC voltages measured with 1000 oh
- Socket connections are shown as is
- Measured values are from socket pin
- Line voltage maintained at 117 volts
- Nominal tolerance on component va variation of +15% in voltage and resl
- Volume control at maximum, no sig measurements.

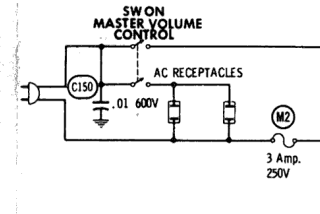


ALL MEASUREMENTS MADE IN STEREO MODE POSITION AND FM-AM INPUT POSITION.  
 † THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLY  
 † MEASURED FROM PIN 3 OF V21.  
 † MEASURED FROM PIN 8 OF V19.  
 † MEASURED FROM PIN 8 OF V17.  
 \* MEASURED FROM PIN 3 OF V17.  
 NC NO CONNECTION

A PHOTOFAC STANDARD NOTATION SCHEMATIC



DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter. Socket connections are shown as bottom views. Measured values are from socket pin to common ground. Line voltage maintained at 117 volts for voltage readings. Nominal tolerance on component values makes possible a variation of +15% in voltage and resistance readings. Volume control at maximum, no signal applied for voltage measurements.



MEASUREMENT AND FM-AM INPUT POSITION. THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.

- ▲ MEASURED FROM PIN 7 OF V15.
- † MEASURED WITH MUTING SWITCH ON.
- MEASURED FROM PIN 3 OF V1.
- ALL POSITIONS OTHER THAN FM-AM.

