

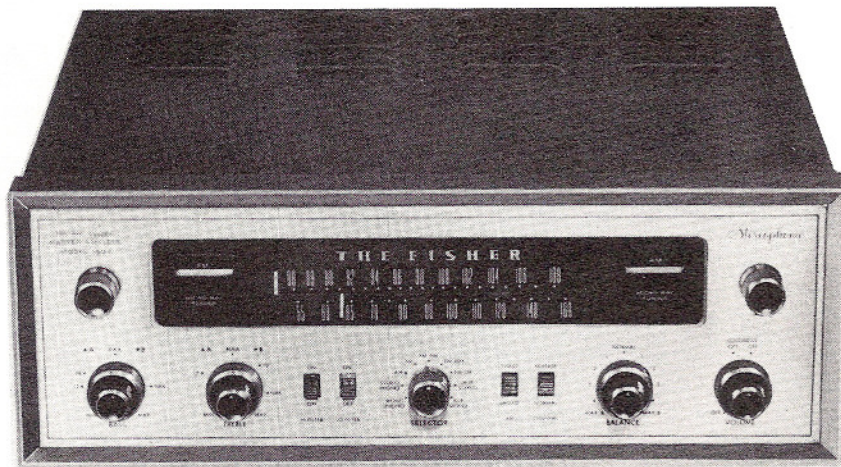


*Stereophonic*

**THE FISHER 100-T**

**SERVICE**

**MANUAL**



MODEL 100-T

**CHASSIS SERIAL NUMBERS  
30001 - 39999 INCLUSIVE**

PRICE: \$1.00

**FISHER RADIO CORPORATION • NEW YORK**

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**CHASSIS SERIAL NUMBERS  
30001 - 39999 INCLUSIVE**

**THE FISHER 100-T**





# PARTS DESCRIPTION LIST

## CAPACITORS

10% tolerance for all fixed capacitors, unless otherwise noted or marked. GMV (guaranteed minimum value.)

Symbol	Description	Part No.
C1	Ceramic, 24uuf 5% N150, 1000V	C50070-8
C2	Ceramic, 8uuf ± .5uuf NPO, 500V	CC20CJ080D5
C3	not used	
C4	Ceramic, 100uuf N1500, 1000V	C50070-6
C5	Ceramic, Trimmer	C662-123
C6	FM Variable	C726-116
C7	AM Variable	C684-127
C8, 9	Ceramic, 100uuf, N1500, 1000V	C50070-6
C10	Ceramic, Feedthru, .001uf GMV	C592-187
C11	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C12	Ceramic, Feedthru, .001uf GMV	C592-187
C13	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C14	Ceramic, 18uuf, N470, 1000V	C50070-13
C15	Ceramic, Feedthru, .001uf GMV	C592-187
C16	Ceramic, .001uf, 1000V	C50072-3
C17	Ceramic, .68uuf, 500V	C50077-6N
C18	Ceramic, Feedthru, .001uf GMV	C592-187
C19	Ceramic, 5uuf ± .5uuf NPO, 1000V	CC20CJ050D5
C20	not used	
C21	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C22	Ceramic, Trimmer	C662-123
C23	Ceramic, 10uuf ± .5uuf NPO, 500V	CC20CJ100D5
C24	Ceramic, 100uuf N1500, 1000V	C50070-6
C25	Ceramic, 2.2uuf, 500V	C3039
C26	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C27	Ceramic, 68uuf N750, 500V	CC20UJ680K5
C28	Ceramic, 100uuf N1500, 1000V	C50070-6
C29	Ceramic, 5uuf ± .5uuf N150, 500V	CC20PJ050D5
C30	Ceramic, 47uuf N750, 1000V	C50070-6
C31	Ceramic, 5uuf ± .5uuf N220, 500V	CC20RH050D5
C32	Ceramic, Trimmer	C662-123
C33	Ceramic, 100uuf GMV, 1000V	C50070-5
C34	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C35	Ceramic, 24uuf 5% N150, 1000V	C50070-8
C36	Ceramic, Feedthru .001uf GMV	C592-187
C37	Ceramic, 100uuf 5%, N1500, 1000V	C50070-19
C38	Ceramic, 10uuf ± .5uuf NPO, 500V	CC20CJ100D5
C39	Ceramic, .001uf, 1000V	C50072-3
C40	Ceramic, .68uuf, 500V	C50077-6N
C41	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C42	Ceramic, Feedthru .001uf GMV	C592-187
C43	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C44	Ceramic, .005uf, 20%, 500V	C50089-1
C45	Ceramic, .0027uf, 20%, 1000V	C50071-5
C46	Ceramic, .005uf, 20%, 500V	C50089-1
C47	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C48	Ceramic, .005uf, 20%, 500V	C50089-1
C49	Ceramic, 900uuf, 5%, 500V	CC21GP901J5
C50	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C51	Ceramic, .005uf, 20, 500V	C50089-1
C52	Ceramic, .05uf + 80 — 20%, 100V	C50073-2
C53, 54	Ceramic, .005uf, 20%, 500V	C50089-1
C55	Ceramic, .0027uf, 20%, 1000V	C50071-5
C56	Ceramic, 220uuf, 1000V	C50072-20
C57	Ceramic, .02uf + 80 — 20%, 500V	C50089-4
C58	Ceramic, .0027uf, 20%, 1000V	C50071-5
C59	Ceramic, .005uf, 20%, 500V	C50089-1
C60	Mylar, .1uf, 400V	C50197-32
C61	Ceramic, 330uuf, 1000V	C50072-1
C62	Molded, .0033uf, 5%, 200V	C68P332J2
C63	Ceramic, .005uf, 20%, 500V	C50089-1
C64, 65	Ceramic, 330uuf, 1000V	C50072-1

C66	Electrolytic, 8uf, 50V	C629-138
C67, 68	Ceramic, 220uuf, 1000V	C50072-20
C69, 70	Ceramic, 100uuf, GMV N1500, 1000V	C50070-5
C71, 72	Ceramic, .01uf, 20%, 500V	C50089-3
C73, 74	Ceramic, .02uf, 20%, 500V	C50089-5
C75, 76	Ceramic, .05uf + 80 — 20%, 100V	C50073-2
C77, 78	Ceramic, 39uuf, N1500, 1000V	C50070-17
C79, 80	Ceramic, .02uf, 20%, 500V	C50089-5
C81	Ceramic, 220uuf, 1000V	C50072-20
C82	Ceramic, .0033uf, 1000V	C50072-11
C83	Ceramic, 220uuf, 1000V	C50072-20
C84	Ceramic, .0033uf, 1000V	C50072-11
C85	Ceramic, .001uf, 1000V	C50072-3
C86	Ceramic, .01uf 20%, 500V	C50089-3
C87	Ceramic, .001uf, 1000V	C50072-3
C88	Ceramic, .01uf, 20%, 500V	C50089-3
C89, 90	Ceramic, .05uf, + 80% — 20% 100V	C50073-2
C91	Ceramic, 39uuf, N1500, 1000V	C50070-17
C92	Ceramic, 68uuf, N750, 1000V	C50070-16
C93	Ceramic, .0015uf, 1000V	C50072-10
C94	Ceramic, .0027uf, 1000V	C50072-17
C95	Ceramic, .0015uf, 1000V	C50072-10
C96	Ceramic, .0027uf, 1000V	C50072-17
C97, 98	Ceramic, .02uf, 20%, 500V	C50089-5
C99, 100	Ceramic, 18uuf, N470, 1000V	C50070-13
C101, 102	Ceramic, .02uf, 20%, 500V	C50089-5
C103	Mylar, .1uf, 400V	C50197-32
C104	Ceramic, .02uf, 20%, 500V	C50089-5
C105	Ceramic, 82uuf, N1500, 1000V	C50070-7
C106	Mylar, .1uf, 400V	C50197-32
C107	Ceramic, .02uf, 20%, 500V	C50089-5
C108	Ceramic, 82uuf, N1500, 1000V	C50070-7
C109	Ceramic, .005uf, 20%, 500V	C50089-1
C110	Electrolytic, two section: A: 40uf, 250V B: 40uf, 250V	C50180-5
C111	Ceramic, .005uf, 20%, 500V	C50089-1
C112	Electrolytic, three section: A: 40uf, 300V B: 40uf, 250V C: 40uf, 250V	C670-125
C113	Electrolytic, two section: A: 500uf, 30V B: 500uf, 30V	C50180-6
C114	Ceramic, Feedthru, .001uf, GMV	C592-187
C115, 116, 117	Ceramic, .005uf, 20%, 500V	C50089-1
C118, 119	Molded, .01uf, 20%, 600V	C2747

## RESISTORS AND POTENTIOMETERS

In ohms, 10% tolerance, 1/2 Watt, unless otherwise noted. K = Kilohm, M = Megohm.

Symbol	Description	Part No.
R1	Composition, 270	RC20BF271K
R2	Composition, 1K	RC20BF102K
R3	Composition, 4.7	RC20BF4R7K
R4	Composition, 820K	RC20BF824K
R5	Composition, 100K	RC20BF104K
R6	Composition, 100	RC20BF101K
R7	Composition, 47K	RC20BF473K
R8, 9	Composition, 330K	RC20BF334K
R10	Composition, 4.7	RC20BF4R7K
R11	Composition, 22	RC20BF220K
R12	Composition, 2.2K	RC20BF222K
R13	Composition, 33K 1W	RC30BF333K
R14	Composition, 220	RC20BF221K
R15	Composition, 47K	RC20BF473K



R16 Composition, 470K  
R17 Composition, 1K  
R18 Composition, 270  
R19 Composition, 150  
R20 Composition, 33K 1W  
R21 Composition, 270  
R22 Composition, 68K  
R23 Composition, 2.2K 1W  
R24 Potentiometer, 250 K AM Level set  
R25, 26 Composition, 1K  
R27 Composition, 180  
R28 Composition, 27K  
R29 Composition, 150  
R30 Composition, 1K  
R31 Composition, 47K  
R32 Composition, 1M  
R33 Composition, 39K  
R34 Composition, 82K  
R35 Composition, 1K  
R36 Composition, 3.3M  
R37 Composition, 2.2M  
R38 Composition, 47K  
R39 Composition, 470K  
R40 Composition, 68K  
R41 Composition, 82K  
R42 Composition, 1K  
R43 Composition, 270  
R44 Composition, 56K  
R45 Composition, 68K  
R46 Potentiometer, 100 K MPX Balance  
R47 Composition, 10M  
R48 Composition, 68K  
R49 Composition, 1.5K  
R50 Composition, 1K  
R51 Composition, 470K  
R52, 53 Composition, 6.8K  
R54 Composition, 180K  
R55 Composition, 1.2M  
R56, 57 Composition, 47K  
R58 Composition, 10K  
R59 Composition, 10  
R60 Composition, 10K  
R61 Composition, 10  
R62, 63 Dep. Carbon, 2.7K, 5 %  
R64, 65 Dep. Carbon, 330K, 5 %  
R66, 67 Dep. Carbon, 4.7M, 5 %  
R68, 69 Dep. Carbon, 220K, 5 %  
R70 Potentiometer, 250K, Phono A level set  
R71, 72 Composition, 470K  
R73 Composition, 5.6M, 5 %  
R74 Dep. Carbon, 2.2M, 5 %  
R75 Composition, 5.6M, 5 %  
R76 Dep. Carbon, 2.2M, 5 %  
R77 Composition, 100K  
R78 Composition, 560  
R79 Composition, 100K  
R80 Composition, 560  
R81, 82 Composition, 220K  
R83 Potentiometer, dual 1 M treble  
R84 Composition, 220K  
R85 Potentiometer, dual 1M bass  
R86 Composition, 15K  
R87 Composition, 220K  
R88 Composition, 15K  
R89, 90 Composition, 39K  
R91 Composition, 10M  
R92 Dep. Carbon, 220K, 5 %

RC20BF474K  
RC20BF102K  
RC20BF271K  
RC20BF151K  
RC30BF333K  
RC20BF271K  
RC20BF683K  
RC30BF222K  
R50160-3  
RC20BF102K  
RC20BF181K  
RC20BF273K  
RC20BF151K  
RC20BF102K  
RC20BF473K  
RC20BF105K  
RC20BF393K  
RC20BF823K  
RC20BF102K  
RC20BF335K  
RC20BF225K  
RC20BF473K  
RC20BF474K  
RC20BF683K  
RC20BF823K  
RC20BF102K  
RC20BF271K  
RC20BF563K  
RC20BF683K  
R50160-20  
RC20BF106K  
RC20BF683K  
RC20BF152K  
RC20BF102K  
RC20BF474K  
RC20BF682K  
RC20BF184K  
RC20BF125K  
RC20BF473K  
RC20BF103K  
RC20BF100K  
RC20BF103K  
RC20BF100K  
R33DC272J  
R33DC334J  
R33DC475J  
R33DC224J  
R50160-3  
RC20BF474K  
RC20BF565J  
R33DC225J  
RC20BF565J  
R33DC225J  
RC20BF104K  
RC20BF561K  
RC20BF104K  
RC20BF561K  
RC20BF224K  
R50160-34  
RC20BF224K  
R50160-35  
RC20BF153K  
RC20BF224K  
RC20BF153K  
RC20BF393K  
RC20BF106K  
R33DC224J

R93 Composition, 10M  
R94 Dep. Carbon, 220K, 5 %  
R95, 96  
97, 98 Dep. Carbon, 2.2M, 5 %  
R99, 100 Composition, 220K  
R101 Composition, 100K  
R102 Composition, 560  
R103 Composition, 100K  
R104 Composition, 560  
R105 Potentiometer, dual 250 K balance  
R106, 107 Dep. Carbon, 1.5M, 5 %  
R108 Composition, 22M  
R109 Dep. Carbon, 330K, 5 %  
R110 Potentiometer, dual 500 K volume  
R111 Composition, 22M  
R112 Dep. Carbon, 330K, 5 %  
R113, 114 Composition, 100K  
R115, 116 Composition, 22K  
R117 Dep. Carbon, 220K, 5 %  
R118 Dep. Carbon, 470K, 5 %  
R119 Composition, 10K  
R120 Composition, 1K  
R121 Wirewound, 270, 5W  
R122 Wirewound, 330, 5W  
R123 Wirewound, 30, 5W  
R124, 125 Composition, 220  
R126 Dep. Carbon, 220K, 5 %  
R127 Potentiometer, 250 K Phono B level set  
R128 Dep. Carbon, 470K, 5 %

RC20BF106K  
R33DC224J  
R33DC225J  
RC20BF224K  
RC20BF104K  
RC20BF561K  
RC20BF104K  
RC20BF561K  
R50160-33  
R33DC155J  
RC20BF226K  
R33DC334J  
R50160-32  
RC20BF226K  
R33DC334J  
RC20BF104K  
RC20BF223K  
R33DC224J  
R33DC474J  
RC20BF103K  
RC20BF102K  
R684-141  
R746-146  
R689-103  
RC20BF221K  
R33DC224J  
R50160-3  
R33DC474J

**COILS, CHOKES, AND TRANSFORMERS**

Symbol	Description	Part No.
L1	Coil, FM Antenna	L726-124
L2	Coil, AM Antenna	L721-139
L3	AM Ferrite loop	L721-136
L4	Choke, 1 Micro Henry	L50066-2
L5, 6	Choke, 56 Micro Henries	L50066-19
L7	Choke, RF	L629-180
L8	Coil, FM RF.	L726-126
L9	Coil, FM Osc.	L726-125
L10	Choke, 1 Micro Henry	L50066-2
L11	Choke, .56 Micro Henries	L50066-19
L12	Choke, 1 Micro Henry	L50066-2
L13	Coil, AM Osc.	L50210-21
L14	Choke, 1.2 Micro Henries	L50066-3
L15	Coil, 10KC Filter	L644-120
L16	Choke, 3.3 Micro Henries	L50066-8
L17, 18	Choke Filament Ferrite Bead	L592-189
L19	Choke, 1.2 Micro Henries	L50066-3
T1	Transformer, Power	T755-115
Z1	Transformer, FM IF	ZZ662-117
Z2	Transformer, FM IF	ZZ2987
Z3	Coil, FM Limiter	L670-145
Z4	Transformer, FM Radio Detector	ZZ592-170
Z5	Transformer, AM RF	L556-125
Z6	Transformer, AM IF	ZZ50210-1
Z7	Transformer, AM IF	ZZ2984

**MISCELLANEOUS**

Symbol	Description	Part No.
F1	Fuse, 2 Amp.	F755-145
11, 12	Lamp, Dial Panel	L50082-3
S1	Switch, Selector	S755-116
S2, 3, 4, 5, 6	Switch, Slide	S50200-2
S7	Switch, Loudness	Part of R110
S8	Switch, Power	Part of R110
SR1	Selenium Rectifier	SR755-140



# ALIGNMENT INSTRUCTIONS

## Read These Instructions With Extreme Care Before Attempting Alignment.

**CHASSIS:** Turn the station selectors completely counterclockwise, without forcing. Dial pointers should be at zero index mark on logging scale. If not, reset the dial pointers. Disconnect the external antennas and the antenna link. Set Ferrite Loop to normal position, parallel to rear panel. When using an oscilloscope for alignment, set the output level controls for no overload, as shown by the proper waveform shape.

**SIGNAL GENERATORS:** The signal generator equipment must be able to supply the following:  
 FM RF modulated 30% ( $\pm 2.5$  KC deviation) at 400 cps; AM RF modulated 30% at 400 cps;

AM IF with 30KC sweep for AM bandwidth adjustment; audio oscillator accurately calibrated for 1 and 10KC audio output for testing the 10KC AM whistle filter.

**INDICATOR:** DC VTVM, AC VTVM, and scope for alignment. AC VTVM for 10 KC AM whistle filter adjustment.

**ALIGNMENT:** Allow the chassis and test instruments to warm up for at least fifteen minutes. Adjust the line voltage for 117 volts AC, 50-60 cycles. Use fully insulated tools: a small screw-driver for all trimming capacitors; a K-Tren tool for Z1, Z2, Z3, Z5, Z6 and Z7; a hex tool for Z4, L1, L8 and L9. For AM alignment, short test point 4 to ground.

## AM ALIGNMENT

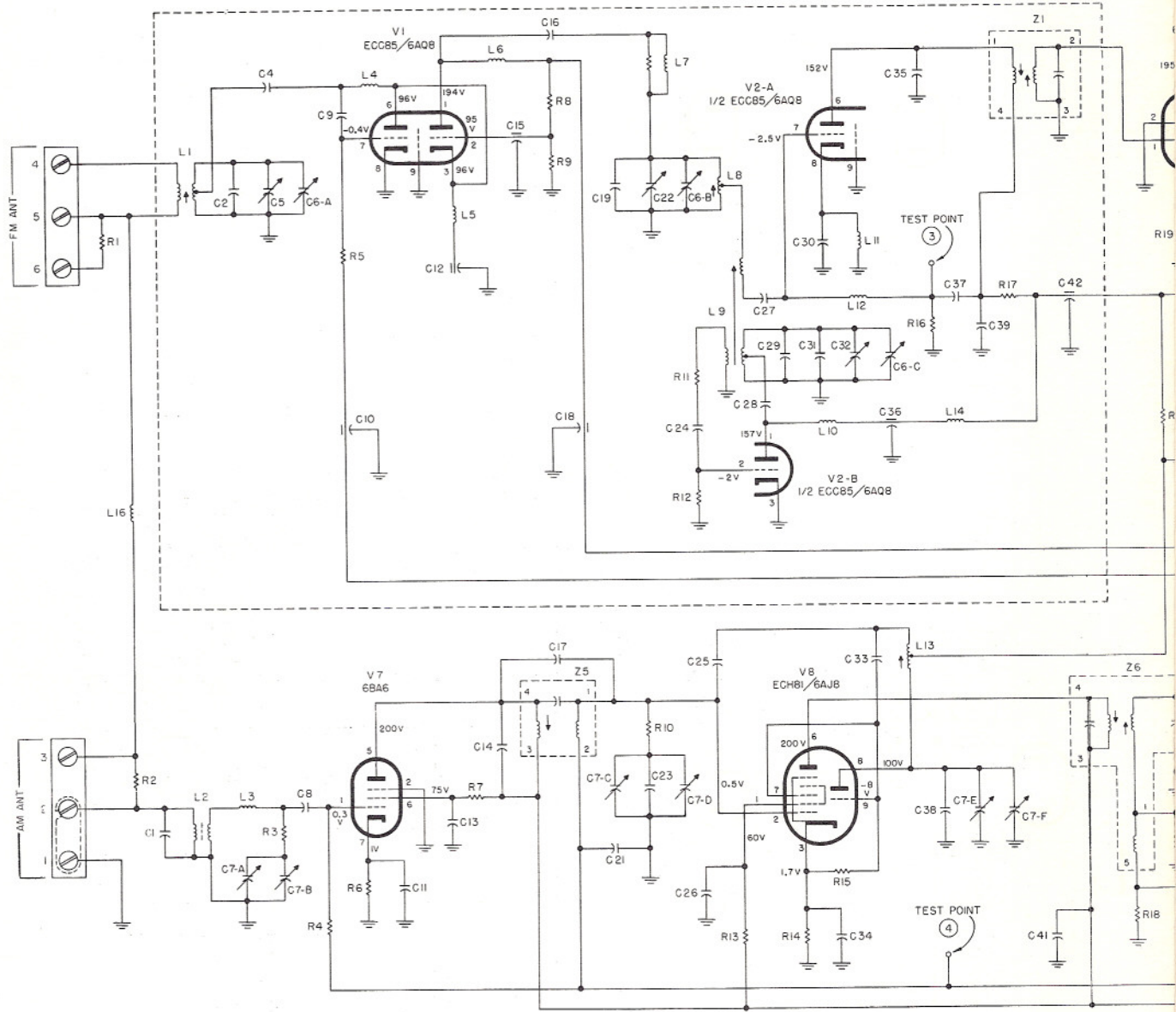
STEPS	CHASSIS			SIGNAL GENERATOR				INDICATOR		ALIGNMENT	
	AM BANDWIDTH	SELECTOR	STATION SELECTOR	COUPLING	FREQ.	MOD.	TYPE	CONNECTION	ADJUST	INDICATION	
1	SHARP	AM	Point of no signal and no interference	Audio Gen. connected to Pin 7 of V9	1 KC 10 KC	None	AC VTVM to Ch. A RCRDR Output		Z6, Z7 top and bottom	0 db at 1 KC — 25 db at 10 KC	
2	SHARP	AM	Point of no signal and no interference	AM Gen. connected thru .01-uf cap. in series with hot lead to V8, Pin 2	455 KC	30% AM at 400 cps	AC VTVM to Ch. A RCRDR Output		Z6 Bottom	Maximum voltage Adjust slightly for symmetrical curve	
3	BROAD	AM	Point of no signal and no interference	AM Gen. connected thru .01-uf cap. in series with hot lead to V8, Pin 2	455 KC	30 KC sweep	Scope to Ch. A RCRDR Output		L13, Z5	Maximum voltage	
4	SHARP	AM	600 KC	AM Gen. connected thru 220-uf cap. in series with hot lead to antenna terminal 3 Disconnect link between 1 & 2	600 KC	30% AM at 400 cps	AC VTVM to Ch. A RCRDR Output			Maximum voltage	
5	SHARP	AM	1400 KC	AM Gen. connected thru 220-uf cap. in series with hot lead to antenna terminal 3 Disconnect link between 1 & 2	1400 KC	30% AM at 400 cps	AC VTVM to Ch. A RCRDR Output		C7E, C7C, C7A	Maximum voltage	
6	Repeat steps 4 and 5 for proper dial calibration and maximum output.										
7	FM	FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V2	10.7 MC	None	DC VTVM to test point 1		Z1, Z2, Z3 and Z4, top & bottom	Maximum negative voltage	
8	FM	FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V2	10.7 MC	None	Connect VT VM to test point 2		Z4 top	Zero reading on zero center scale	
9	FM	FM	90 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals 4 and 5	90 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to the junction of R32 and R36 and scope to Ch. A. RCRDR Output		L1, L8 and L9	Check for sine waveform and adjust for maximum negative voltage	
10	FM	FM	106 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals 4 and 5	106 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to the junction of R32 and R36 and scope to Ch. A. RCRDR Output		C5, C22 and C32	Check for sine waveform and adjust for maximum negative voltage	
11	Repeat steps 9 and 10 at least once for proper dial calibration and maximum output.										

**NOTE:** For calibrating both the AM and FM, use as low an output voltage as possible from your signal generator.

## FM ALIGNMENT



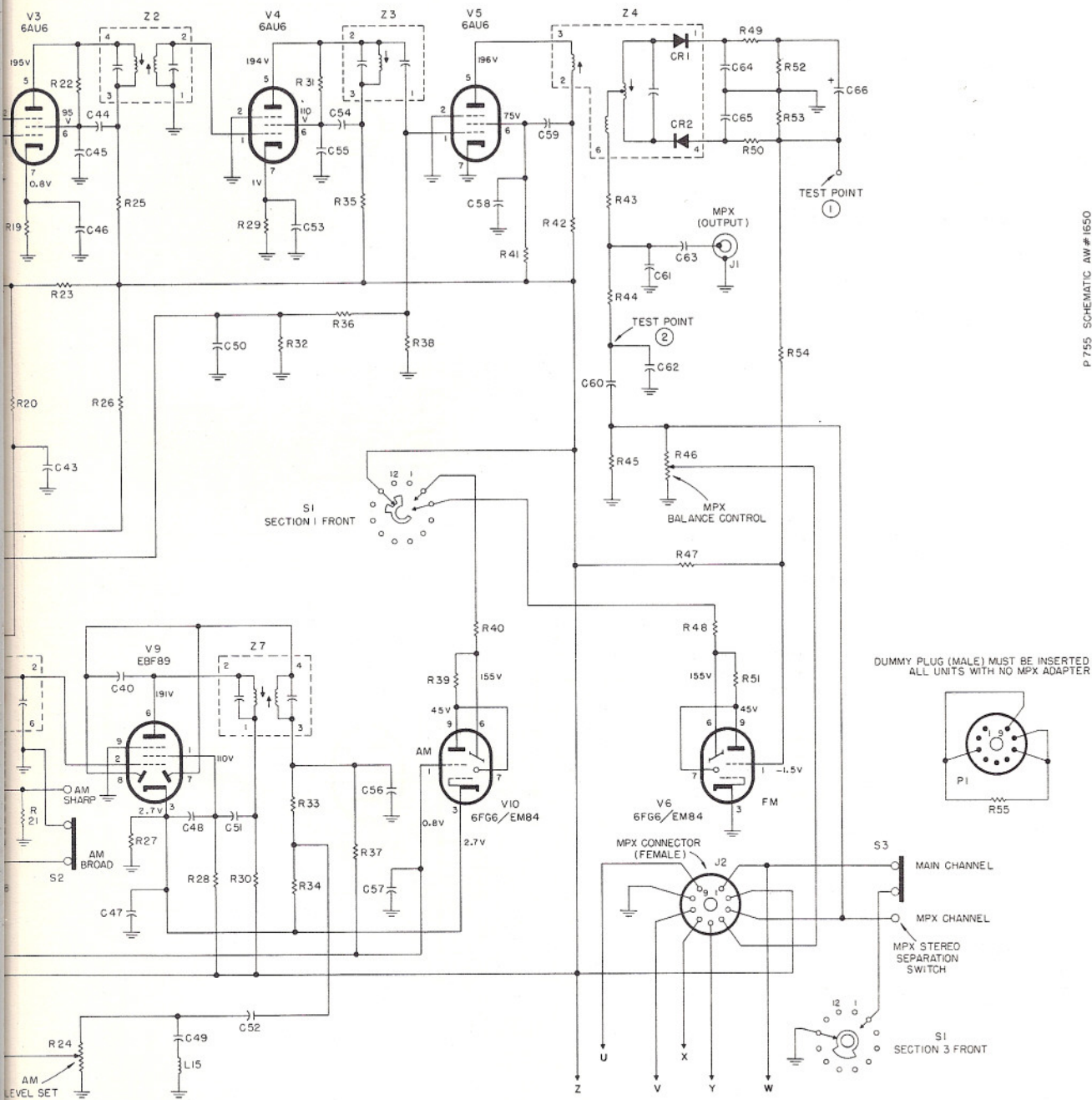
# SCHEMATIC DIAGRAM • FM-AM TUNING SECTIONS



S1  
SELECTOR SWITCH  
POSITIONS

SHOWN IN → MONO PHONO  
PHONO STEREO  
AM  
FM  
FM-AM  
FM-MPX  
FM-FM  
AUX STEREO  
AUX MONO

RESISTORS	R1	R2	R3	R4	R5 R6	R7	R8 R9	R10	R11 R12	R13	R14	R15	R16	R17	R18	R19				
CAPACITORS	C1	C2 C7-A	C4 C5	C6-A C7-B C8	C9 C10	C11	C12 C13	C14	C15 C16 C17 C18	C19	C22 C7-C C23	C24 C6-B C26 C7-D	C25	C27 C28 C29	C30 C31	C32 C33 C34	C35 C36 C6-C	C37 C38 C7-E	C39 C7-F	C41 C42



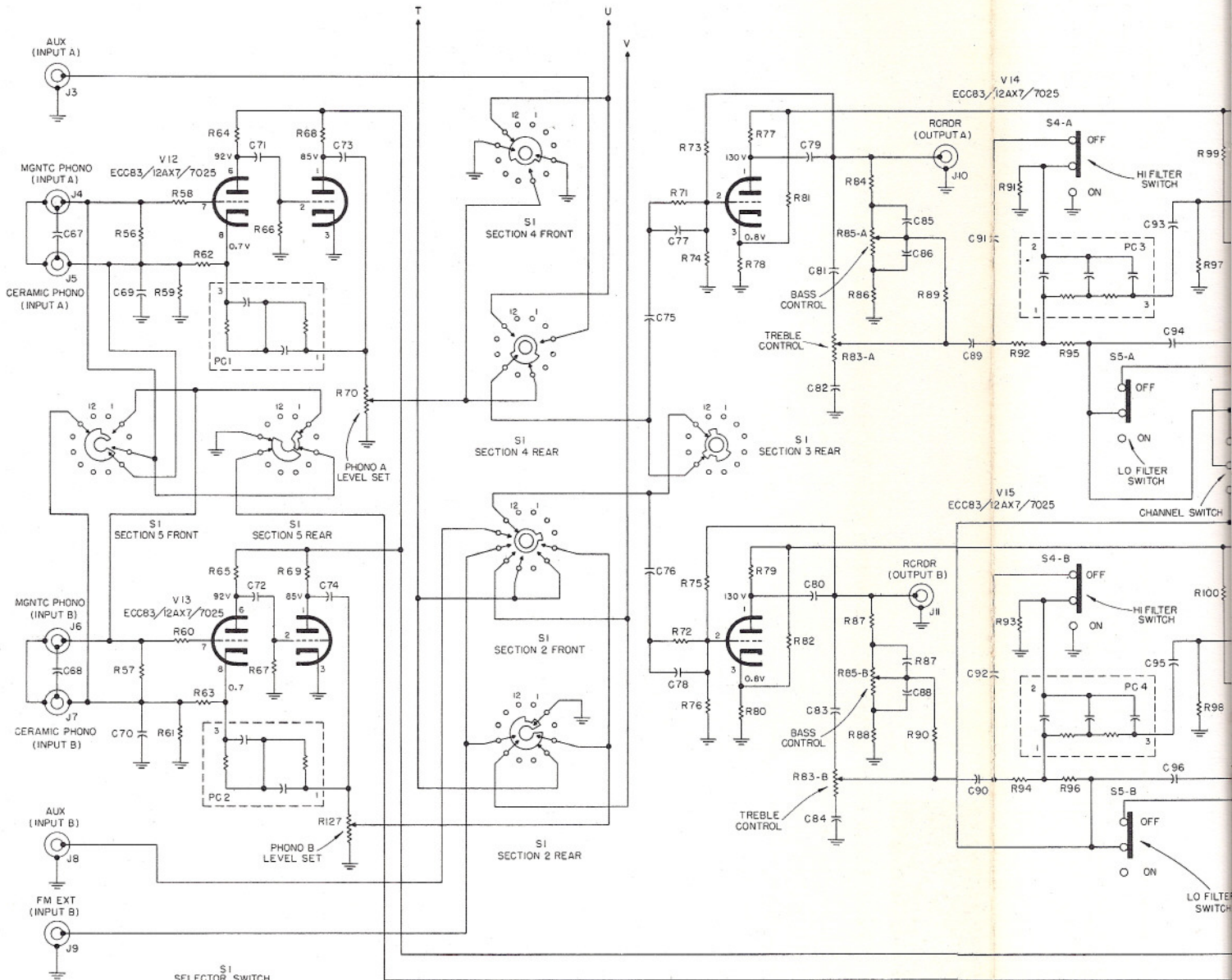
R19	R22	R25	R28	R29	R31	R35	R38	R39	R40	R41	R42	R43	R46	R49	R52	R55
R20	R23	R26	R30	R33	TO	R36						R44	R47	R50	R53	
R21	R24	R27	R34	R37	R37	R37						R45	R48	R51	R54	
C43	C44	C47	C48	C50	C53	C54	C56	C58	C59	C60	C61	C63	C64	C65	C66	
	C45	C40	C49	C51	C52	C55	C57					C62	C66			
	C46															



# SCHEMATIC DIAGRAM • PREAMPLIFIER

CHANNEL A

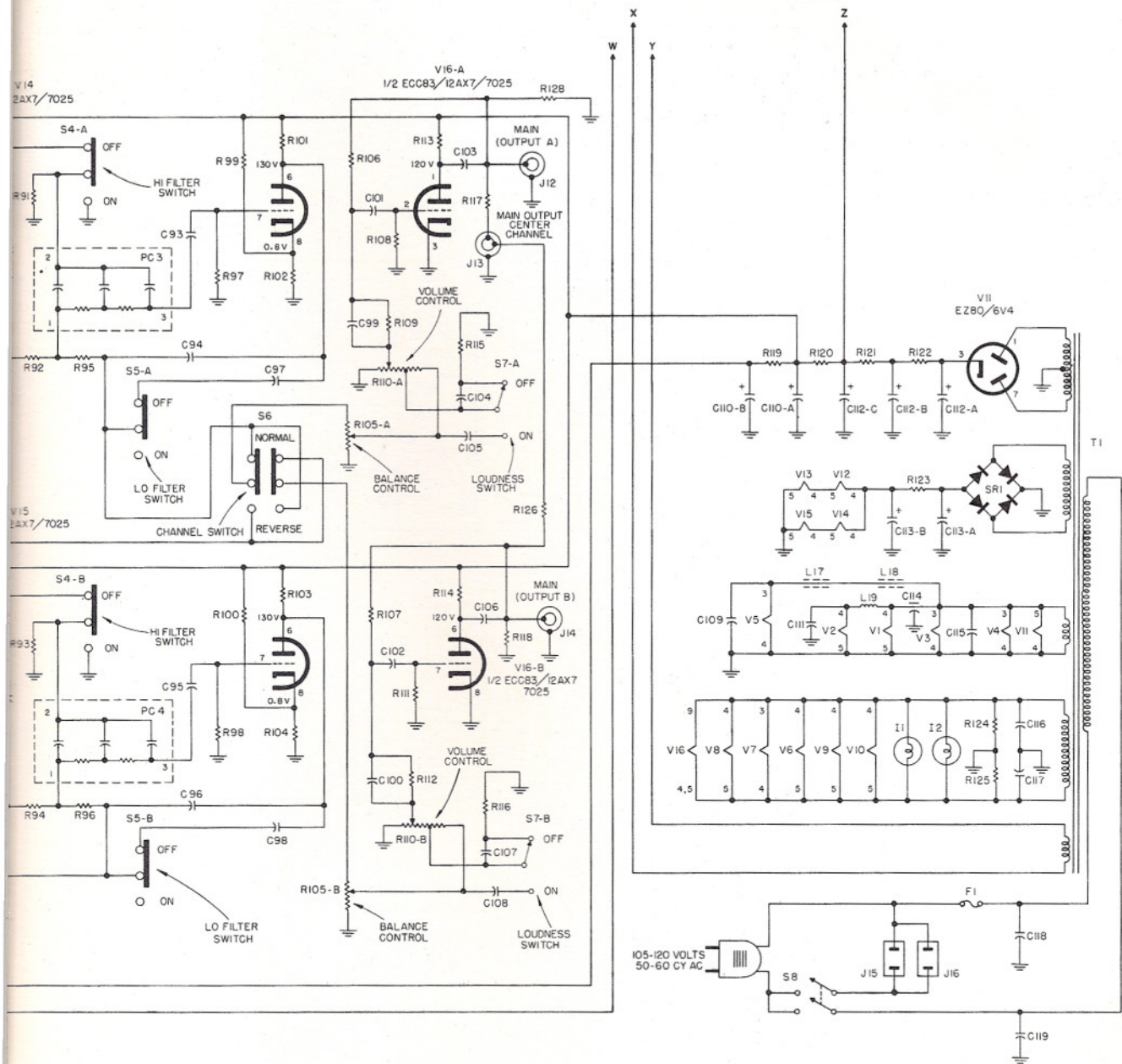
CHANNEL B



S1  
SELECTOR SWITCH  
POSITIONS

SHOWN IN → MONO PHONO  
PHONO STEREO  
AM  
FM  
FM-AM  
FM-MPX  
FM-FM  
AUX STEREO  
AUX MONO

RESISTORS	R56 R57	R58 TO R61	R62 R63	R64 R65	R66 R67	R68 R69	R70 R127	R71 R72	R73 TO R76	R77 TO R80	R81 R82	R83-A TO R88	R84 TO R88	R89 R90	R91 TO R94	R95 R96	R97 R98 R99	
CAPACITORS	C67 C68	C69 C70		C71 C72	C73 C74			C75 C76	C77 C78		C79 C80	C81 TO C84		C85 TO C88	C89 C90	C91 C92		C93 TO C96

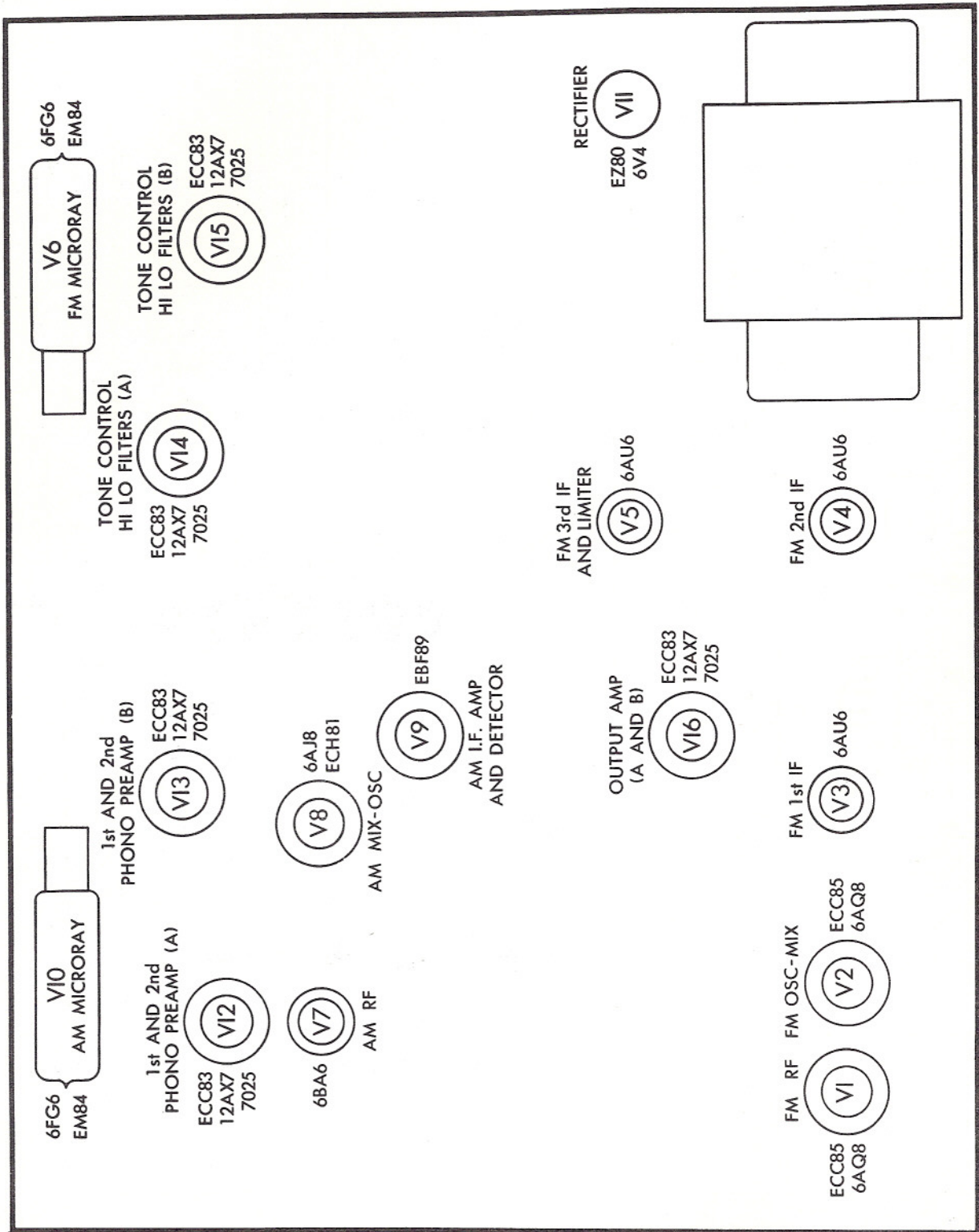


P 7455 SCHEMATIC AW # 1650  
SHEET 2 OF 2

R91 R94	R95 R96	R97 R98	R99 R100	R101 TO R104	R105-A R105-B	R106 TO R112	R113 R114 R115	R116 R117 R118	R126 R128	R119	R120	R121	R122 R123	R124 R125
C91 C92	C93 TO C96	C97 C98	C99 C100	C101 C102	C103 TO C108	C109	C110-B C111	C112-C C113-B	C112-A C113-A C114	C115	C116 C117	C118	C119	



# TUBE SOCKET LAYOUT



AW 1655





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