

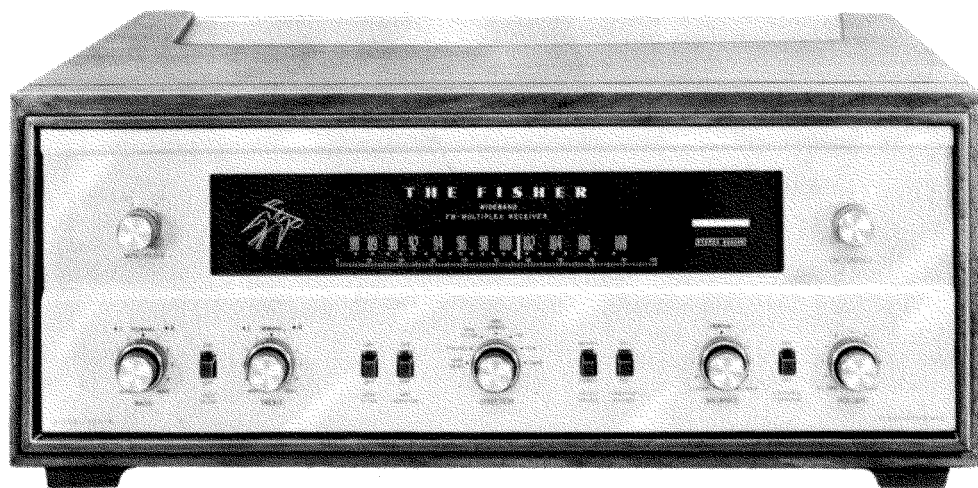


*Stereophonic*

# THE FISHER 500-B

# SERVICE

# MANUAL



MODEL 500-B

CHASSIS SERIAL NUMBERS  
FROM 20001 TO 29999 INCLUSIVE

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK



CHASSIS SERIAL NUMBERS  
FROM 20001 TO 29999 INCLUSIVE

THE FISHER 500-B



# PARTS DESCRIPTION LIST

## CAPACITORS

10 % tolerance for all fixed capacitors, unless otherwise noted or marked GMV (guaranteed minimum value). All capacitors not marked uf are pF (uuf).

Symbol	Description	Part No.
C1, 2	Ceramic, 100 GMV, N1500, 1000V	C50070-5
C3	Ceramic, 21, 5 %, N750, 1000V	C50070-32
C4	Ceramic, 1000 GMV, 1000V	C50071-2
C5	Ceramic, Feedthru, 1000 GMV	C592-187
C6	Ceramic, .02uf, +80 — 20 %, 500V	C50089-4
C7	Ceramic, Feedthru, 1000 GMV	C592-187
C8, 9	Ceramic, .01uf, 20 %, 500V	C50089-3
C10	Ceramic, Trimmer	C662-123
C11	FM, Variable	C818-116
C12	Ceramic, 1000 GMV, 1000V	C50071-2
C13	Ceramic, 8, ±.5, NPO, 500V	CC20CJ080D5
C14, 15	Mylar, .022uf, 250V	C50197-25
C16	Ceramic, 33, 5 %, N750, 1000V	C50070-25
C17	Ceramic, 21, 5 %, N750, 1000V	C50070-32
C18	Ceramic, 10, NPO, 1000V	C50070-11
C19	Ceramic, 24, 5 %, N150, 1000V	C50070-8
C20	Ceramic, Trimmer	C662-123
C21	Ceramic, 47, 5 %, N750, 1000V	C50070-29
C22	Ceramic, 100, 5 %, N1500, 1000V	C50070-19
C23	Ceramic, 8, ±.5, NPO, 500V	CC20CJ080D5
C24	Ceramic, 1000, 1000V	C50072-3
C25	Ceramic, 27, 5 %, N150, 1000V	C50070-37
C26	Ceramic, 21, 5 %, N750, 1000V	C50070-32
C27	Ceramic, 1000, 1000V	C50072-3
C28	Ceramic, 10, ±.5, N150, 500V	CC20PJ100D5
C29	Ceramic, Feedthru, 1000, GMV	C592-187
C30	Ceramic, 1000, 1000V	C50072-3
C31, 32	Ceramic, .02uf, 20 %, 500V	C50089-5
C33, 34	Ceramic, 2200, 1000V	C50072-5
C35	Ceramic, 2700, 1000V	C50072-17
C36	Ceramic, 5000, +80 — 20 %, 500V	C50089-6
C37	Ceramic, .02uf, +80 — 20 %, 500V	C50089-4
C38, 39	Ceramic, 82, N1500, 1000V	C50070-7
C40	Ceramic, 5000, +80 — 20 %, 500V	C50089-6
C41	Ceramic, 2700, 1000V	C50072-17
C42	Ceramic, 5000, +80 — 20 %, 500V	C50089-6
C43, 44	Mylar, .047uf, 400V	C50197-30
C45	Ceramic, 470, 1000V	C50072-13
C46	Ceramic, 24, 5 %, 1000V	C50070-8
C47	Ceramic, 470, 1000V	C50072-13
C48, 49	Ceramic, 68, N2200, 1000V	C50070-12
C50, 51	Ceramic, .02uf, 20 %, 500V	C50089-5
C52	Ceramic, 2700, 1000V	C50072-17
C53, 54	Ceramic, 7, NPO, 1000V	C50070-20
C55	Ceramic, 5000, +80 — 20 %, 500V	C50089-6
C56	Ceramic, .01uf, 20 %, 500V	C50089-3
C57	Mylar, .047uf, 400V	C50197-30
C58	Mylar, .047, 10 %, 250V	C50197-52
C59	Ceramic, 330, 1000V	C50072-1
C60	Mylar, .047uf, 400V	C50197-30
C61	Mylar, .047, 10 %, 250V	C50197-52
C62	Ceramic, 330, 1000V	C50072-1
C63, 64	Ceramic, 18, N470, 1000V	C50070-13
C65	Ceramic, 2700, 1000V	C50072-17
C66	Ceramic, 1800, 1000V	C50072-8
C67	Ceramic, 5000, +80 — 20 %, 500V	C50089-6
C68, 69	Ceramic, 330, 1000V	C50072-1
C70	Ceramic, .05uf, +80 — 20 %, 100V	C50073-2
C71, 72, 73	Ceramic, 330, 1000V	C50072-1
C74	Electrolytic, 8uf, 50V	C629-138
C75	Ceramic, Feedthru, 1000, GMV	C592-187
C76	Ceramic, 560, 1000V	C50072-14
C77	Electrolytic, 4 section: A — 50uf, 250V B — 50uf, 250V C — 50uf, 250V D — 50uf, 250V	C50180-21
C78	Electrolytic, 3 section: A — 20uf, 300V B — 40uf, 400V C — 40uf, 450V	C50180-18
C79	Electrolytic, 2 section: A — 1000uf, 35V B — 1000uf, 35V	C50180-29
C80, 81, 82, 83	Ceramic, .005uf, +80 — 20 %, 500V	C50089-6
C84	Electrolytic, 2 section: A — 40uf, 500V B — 200uf, 250V	C50180-19
C85	Electrolytic, 100uf, 25V	C643-145
C86, 87	Ceramic, .005uf, +80 — 20 %, 500V	C50089-6
C88	Electrolytic, 200uf, 250V	C50180-26
C89, 90	Ceramic, .005uf, +80 — 20 %, 500V	C50089-6
C91, 92	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, 3	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R4	Composition, 100K	RC20BF104K
R5	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R6	Composition, 10	RC20BF100K
R7	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R8	Composition, 10	RC20BF100K
R9	Composition, 100K	RC20BF104K
R10	Dep. Carbon, 10K, 5 %, 1/3 W	R33DC103J
R11	Glass, 2.7K, 5 %, 1W	R30G272J
R12	Dep. Carbon, 10K, 5 %, 1/3 W	R33DC103J
R13	Glass, 2.7K, 5 %, 1W	R30G272J
R14	Glass, 330K, 5 %, 1W	R30G334J
R15	Dep. Carbon, 4.7M, 5 %, 1/3 W	R33DC475J
R16	Glass, 330K, 5 %, 1W	R30G334J
R17	Dep. Carbon, 4.7M, 5 %, 1/3 W	R33DC475J
R18, 19	Dep. Carbon, 220K, 5 %, 1/3 W	R33DC224J
R20, 21	Potentiometer, 250K, Phono Level	R50103-1
R22	Composition, 470	RC20BF471K
R23	Composition, 820	RC20BF821K
R24, 25	Dep. Carbon, 330K, 5 %, 1/3 W	R33DC334J
R26	Composition, 560K, 5 %	RC20BF564J
R27	Composition, 82K, 5 %	RC20BF823J
R28	Composition, 560K, 5 %	RC20BF564J
R29	Composition, 150K	RC20BF154K
R30	Composition, 82K, 5 %	RC20BF823J
R31, 32	Dep. Carbon, 470K, 5 %, 1/3 W	R33DC474J
R33, 34	Dep. Carbon, 120K, 5 %, 1/3 W	R33DC124J

# PARTS DESCRIPTION LIST

**R35, 36** Composition, 1K  
**R37, 38** Composition, 2.7M, 5 %  
**R39, 40** Composition, 1.2M, 5 %  
**R41, 42** Composition, 1K  
**R43** Composition, 56K  
**R44** Composition, 150  
**R45** Potentiometer, 500K, Bass Control  
**R46, 47** Composition, 680K  
**R48** Composition, 47K  
**R49** Composition, 1K  
**R50** Potentiometer, 500K, Treble Control  
**R51, 52** Dep. Carbon, 220K, 5 % , 1/3 W  
**R53** Composition, 150  
**R54** Composition, 47K  
**R55** Composition, 27K  
**R56, 57** Composition, 3.3M, 5 %  
**R58, 59** Composition, 10M  
**R60** Composition, 1K  
**R61** Dep. Carbon, 2.2M, 5 % , 1/3 W  
**R62, 63,**  
**64** Dep. Carbon, 220K, 5 % , 1/3 W  
**R65** Composition, 560  
**R66** Dep. Carbon, 220K, 5 % , 1/3 W  
**R67** Composition, 560  
**R68** Composition, 68K  
**R69** Dep. Carbon, 1.8M, 5 % , 1/3 W  
**R70, 71** Dep. Carbon, 47K, 5 % , 1/3 W  
**R72** Potentiometer, 500K, Balance Control  
**R73, 74** Dep. Carbon, 22K, 5 % , 1/3 W  
**R75** Potentiometer, 500K, Volume  
**R77, 78** Dep. Carbon, 47K, 5 % , 1/3 W  
**R79** Composition, 27K  
**R80** Composition, 82K  
**R81** Composition, 1.2K, 5 %  
**R82** Dep. Carbon, 220, 5 % , 1/3 W  
**R83** Composition, 1.2K, 5 %  
**R84** Dep. Carbon, 220, 5 % , 1/3 W  
**R85** Composition, 1K  
**R86, 87** Composition, 390K, 5 %  
**R88** Potentiometer, 25K Phase Inv. Adj.  
**R89** Composition, 33K  
**R90** Composition, 68K, 5 %  
**R91** Potentiometer, 25K Phase Inv. Adj.  
**R92** Composition, 33K  
**R93** Composition, 68K, 5 %  
**R94** Composition, 10M  
**R95, 96** Dep. Carbon, 3.9K, 5 % , 1/3 W  
**R97** Composition, 33K  
**R98** Composition, 12K  
**R99, 100** Dep. Carbon, 150K, 5 % , 1/3 W  
**R101, 102,**  
**103, 104,**  
**105** Dep. Carbon, 330K, 5 % , 1/3 W  
**R106, 107,**  
**108, 109** Composition, 1K  
**R110** Composition, 56K  
**R111** Composition, 1K  
**R112** Dep. Carbon, 47K, 5 % , 1/3 W  
**R113** Composition, 270  
**R114, 115,**  
**116** Composition, 1K  
**R117** Composition, 1.5K  
**R118** Composition, 1K

**RC20BF102K**  
**RC20BF275J**  
**RC20BF125J**  
**RC20BF102K**  
**RC20BF563K**  
**RC20BF151K**  
**R50160-101-1**  
**RC20BF684K**  
**RC20BF473K**  
**RC20BF102K**  
**R50160-101-2**  
**R33DC224J**  
**RC20BF151K**  
**RC20BF473K**  
**RC20BF372K**  
**RC20BF335J**  
**RC20BF106K**  
**RC20BF102K**  
**R33DC225J**  
  
**R33DC224J**  
**RC20BF561K**  
**R33DC224J**  
**RC20BF561K**  
**RC20BF683K**  
**R33DC185J**  
**R33DC473J**  
**R50160-103**  
**R33DC223J**  
**R50160-104**  
**R33DC473J**  
**RC20BF273K**  
**RC20BF823K**  
**RC20BF122J**  
**R33DC221J**  
**RC20BF122J**  
**R33DC221J**  
**RC20BF102K**  
**RC20BF394J**  
**R50103-2**  
**RC20BF333K**  
**RC20BF683J**  
**R50103-2**  
**RC20BF333K**  
**RC20BF683J**  
**RC20BF106K**  
**R33DC392J**  
**RC20BF333K**  
**RC20BF123K**  
**R33DC154J**  
  
**R33DC334J**  
  
**RC20BF102K**  
**RC20BF563K**  
**RC20BF102K**  
**R33DC473J**  
**RC20BF271K**  
  
**RC20BF102K**  
**RC20BF152K**  
**RC20BF102K**

**R119** Composition, 15K  
**R120** Composition, 470K  
**R121, 122** Composition, 220  
**R123** Composition, 100K  
**R124** Composition, 5.6K, 5 %  
**R125** Dep. Carbon, 22K, 5 % , 1/3 W  
**R126** Composition, 2.7K  
**R127** Glass, 180, 3W  
**R128** Wirewound, 15, 5W  
**R129** Composition, 5.6K, 5 %  
**R130** Composition, 3.3M, 5 %  
**R131** Composition, 1.2K, 1W  
**R132** Glass, 180, 3W  
**R133** Glass, 1.2K, 7W  
**R134** Glass, 180, 3W  
**R135** Dep. Carbon, 10K, 5 % , 1/3 W  
**R136** Composition, 820K

**RC20BF153K**  
**RC20BF474K**  
**RC20BF221K**  
**RC20BF104K**  
**RC20BF564J**  
**R33DC223J**  
**RC20BF272K**  
**RPG3W181K**  
**R719-106**  
**RC20BF562J**  
**RC20BF335J**  
**RC30BF122K**  
**RPG3W181K**  
**RPG7W122K**  
**RPG3W181K**  
**R33DC103J**  
**RC20BF824K**

## COILS, CHOKES & TRANSFORMERS

Symbol	Description	Part No.
L1	FM Antenna Coil	L818-113
L2	Choke, 1.5 Micro Henries	L50066-4
L3	Choke, RF	L629-180
L4	FM RF Coil	L818-114
L5	FM Oscillator Coil	AS818-118
L6	Choke, .68 Micro Henry	L50066-1
L7	Choke, .2 Micro Henry	L50026-21
L8	Choke, 3.3 Micro Henries	L50066-8
T1	Transformer, Output	T860-116-3
T2	Transformer, Output	T860-116-4
T3	Transformer, Power	T860-142
Z1	Transformer, FM, IF	ZZ662-117
Z2	Transformer, FM, IF	ZZ2987
Z3	Transformer, FM, IF	ZZ50210-2
Z4	FM Limiter Coil	L670-145
Z5	FM Ratio Detector	ZZ50210-9

## MISCELLANEOUS

Symbol	Description	Part No.
CR3, 4	Silicon Diode	SR806-126
F1	Fuse, 3,2A, Slo-Blo	S3319
I1, 2	Dial Lamp	I50082-8
PC1, 2	Printed Cir., Phono, Tape Equalization	PC50187-3
PC3, 4	Printed Circuit, Tone Control	PC50187-9
PC5, 6	Printed Circuit, High Filter	PC50187-2
S1	Switch, Selector	S859-118
S2, 3, 4,	Switch, Slide	S50200-5
5, 6, 7		S50200-2
S8	Switch, Slide, Phase Reverse	S859-120
S9	Switch, MPX-Filter	Part of R75
S10	Switch, Power	SR755-140
SR1	Selenium Rectifier, Bridge	AS50227-1
—	Dipole Assembly	AS859-112
—	Dress Panel	E50221
—	Knob, Dual, Rear	E50323
—	Knob, Dual, Front	E50324
—	Knob, Dummy, Dual	E50325-2
—	Knob, Tuning	E5325-1
—	Knob, MPX-Filter	N857-109
—	Dial, Glass	X563-151
—	Fuse Holder	

# ALIGNMENT INSTRUCTIONS

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

**CHASSIS: 1** — For the entire alignment procedure, set the Selector Switch to the FM position and the volume control to minimum.

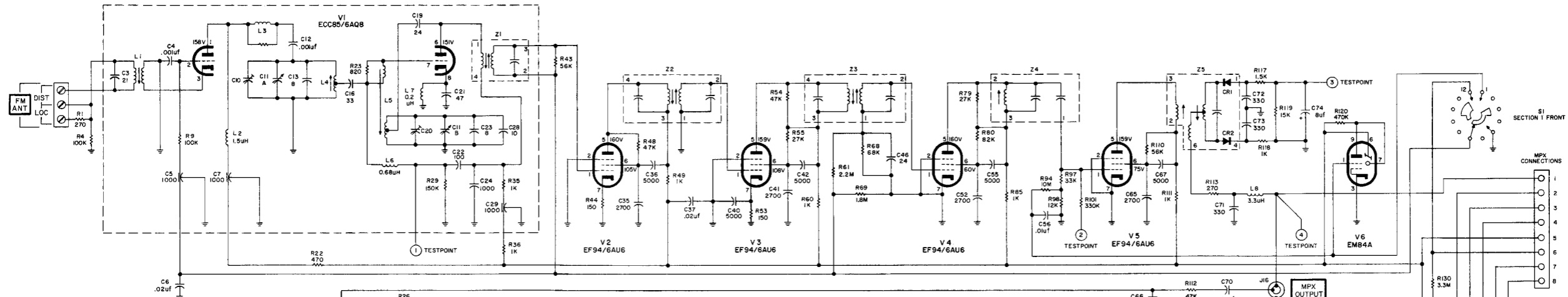
**2** — Turn the Tuning knob maximum counterclockwise. (Dial pointer should line up with calibration mark at the beginning of the dial. Reset the dial pointer if necessary.)

**3** — Allow the Receiver and test equipment at least 15 minutes warm-up time. Adjust the line voltage for 117 volts AC 50-60 cps. Use fully insulated tools: a small screw-driver for trimmer capacitors C10 and C20, a K-Tran tool for Z1, Z2 and Z3; a hex tool for all Z4, Z5, L1, L4 and L5.

STEP	DIAL	SIGNAL GENERATOR			DC VTVM	ADJUST	INDICATION
		GENERATOR COUPLING	FREQ.	MOD.			
1	Set dial pointer for extreme C.C.W. position.	Ungrounded tube shield of V1	10.7 MC	None	Test Point 2	Z1, Z2, Z3 top and bottom and bottom Z4	Maximum negative voltage (below 5 volts)
2		Ungrounded tube shield of V1	10.7 MC	None	Test Point 3	Z5 top and bottom	Maximum negative voltage (below 20 volts)
3		Ungrounded tube shield of V1	10.7 MC	None	Hot lead of DC VTVM to Test point 4. Ground lead of DC VTVM to junction of two series connected resistors (47K), wired between Test point 3 and ground.	Z5 top	Zero indication on zero center dial.
4	90 MC	Two 120 ohm carbon resistors in series with generator leads to the Distance antenna terminals.	90 MC	± 22.5 KC deviation at 400 cps.	Test Point 2	L5, L4 and L1	Adjust for maximum negative voltages and check for sine wave-form, with scope at A or B RCDR output.
5	106 MC		106 MC	± 22.5 KC deviation at 400 cps.	Test Point 2	C20 and C10	

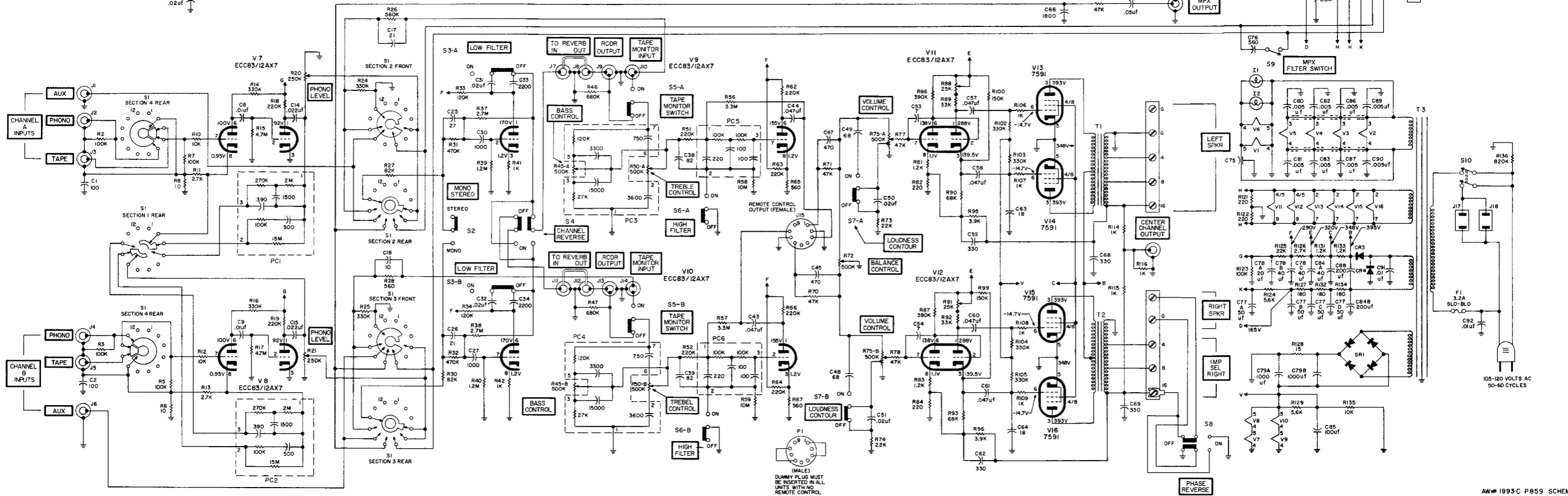
**NOTE:** (Steps 1 and 2): Decrease signal generator output while aligning IF transformers so that the VTVM indicates not more than specified voltages. Repeat steps 4 and 5 to obtain proper dial calibration and maximum sensitivity.

# SCHEMATIC DIAGRAM



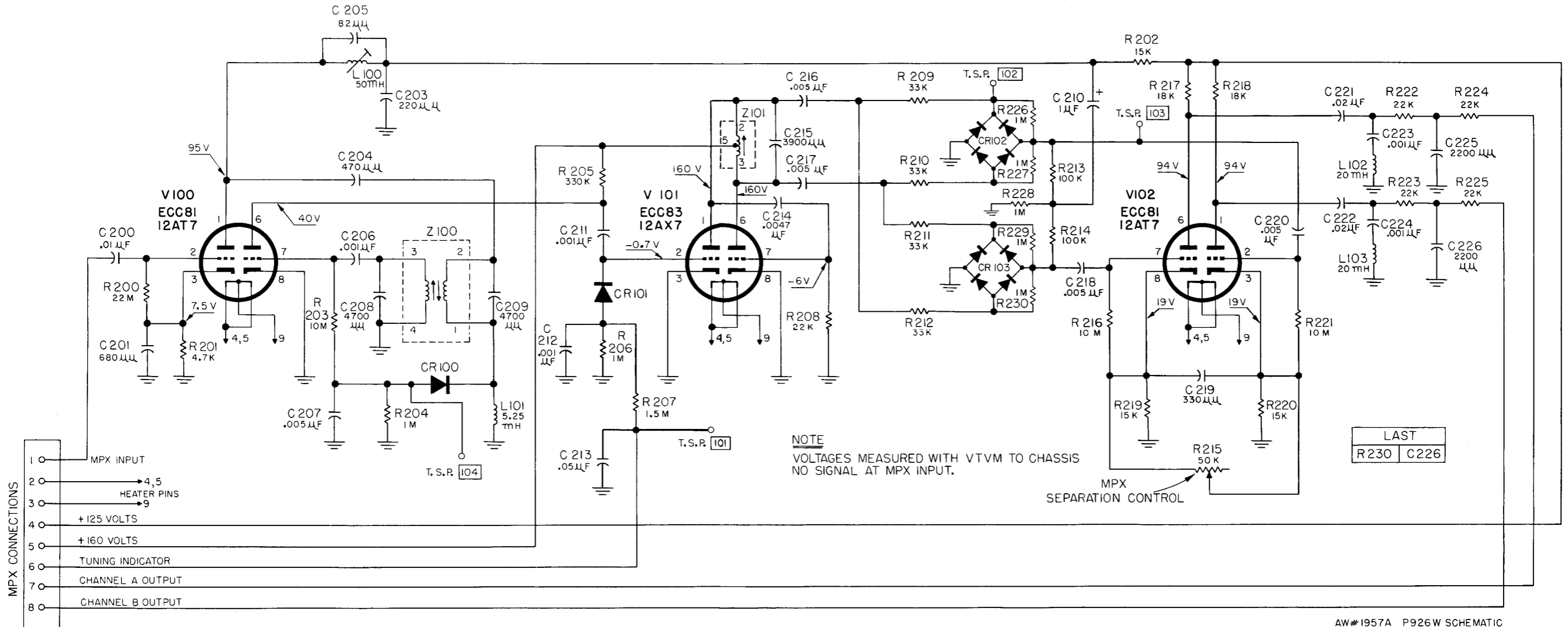
SWITCH POSITIONS	
POS NO.	S1 SELECTOR SWITCH
1	TAPE HEAD (SHOWN)
2	PHONO
3	MPX STEREO
4	FM
5	AUX
6	TAPE

LAST  
R136 C92



105-120 VOLTS AC  
50-60 CYCLES

# SCHEMATIC DIAGRAM • MULTIPLEX SECTION



# PARTS DESCRIPTION LIST • MULTIPLEX SECTION

## CAPACITORS

10 % tolerance for all fixed capacitors, unless otherwise noted or marked GMV (guaranteed minimum value). All capacitors not marked uf are pF (uuf).

Symbol	Description	Part No.
C200	Ceramic, .01uf, +80 — 20 %, 500V	C50089-7
C201	Ceramic, 680, 1000V	C50072-2
C203	Ceramic, 220, 1000V	C50183-3
C204	Mica, 470, 5 %, 300V	C50332-4
C205	Ceramic, 82, N1500, 1000V	C50070-7
C206	Ceramic, .001uf, GMV, 500V	C50089-2
C207	Ceramic, .005uf, +80 — 20 %, 500V	C50089-6
C208, 209	Mica, 4700, 5 %, 500V	C50332-5
C210	Electrolytic, .1uf, 350V	C50283-3
C211, 212	Ceramic, .001uf, GMV, 500V	C50089-2
C213	Ceramic, .05uf, +80 — 20 %, 100V	C50073-2
C214	Mylar, .0047uf, 400V	C50197-25
C215	Mica, 3900, 5 %, 500V	C50332-6
C216, 217, 218	Ceramic, .005uf, 20 %, 500V	C50089-1
C219	Ceramic, 330, 1000V	C50072-1
C220	Ceramic, .005uf, 20 %, 500V	C50089-1
C221, 222	Ceramic, .02uf, +80 — 20 %, 500V	C50089-4
C223, 224	Ceramic, .001uf, 1000V	C50072-3
C225, 226	Ceramic, 2200, 1000V	C50072-5

## RESISTORS AND POTENTIOMETERS

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

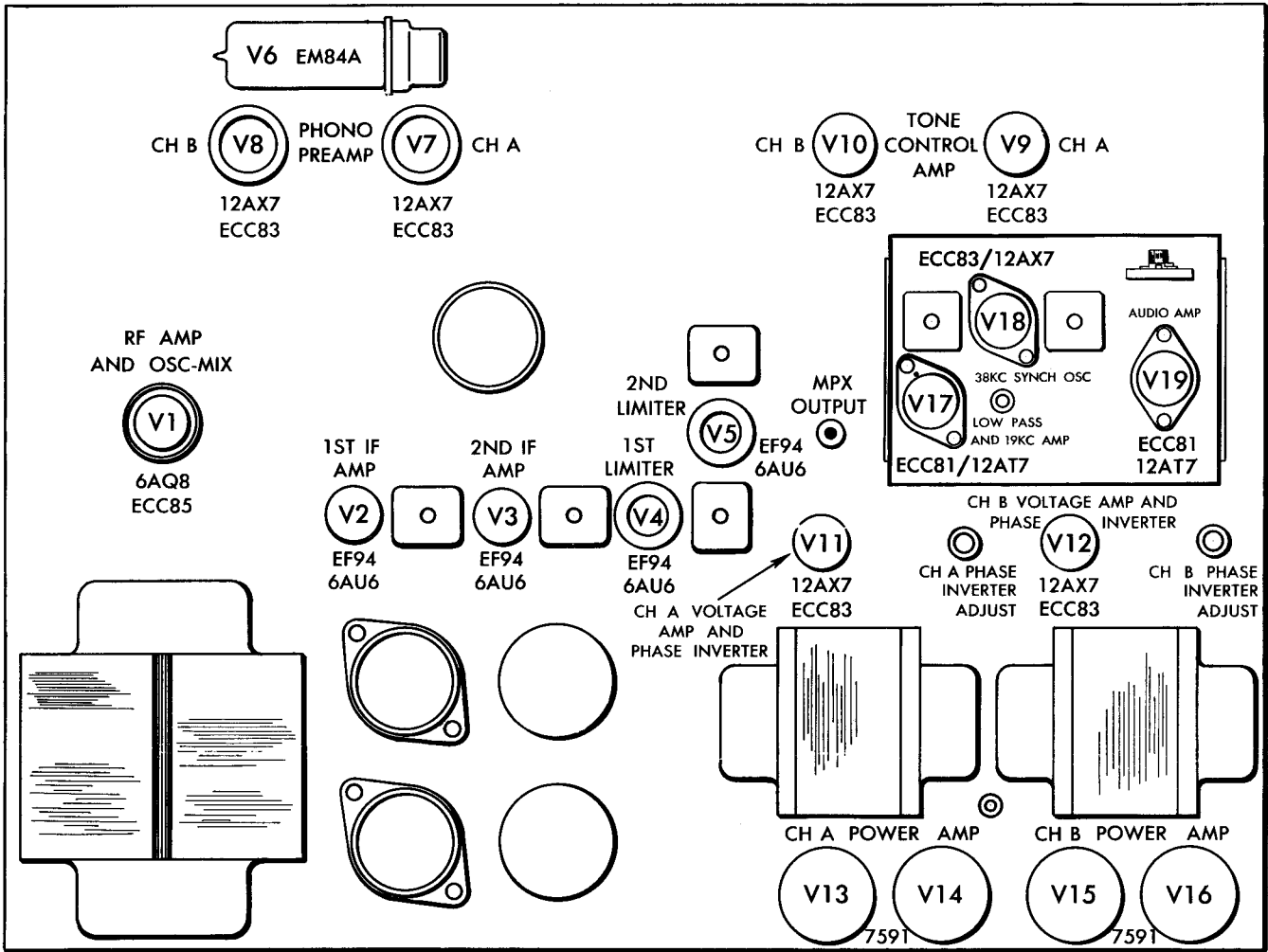
Symbol	Description	Part No.
R200	Composition, 22M	RC20BF226K

R201	Composition, 4.7K, 5 %	RC20BF742J
R202	Composition, 15K, 5 %	RC20BF135J
R203	Composition, 10M	RC20BF106K
R204	Dep. Carbon, 1M, 5 %, 1/3 W	R33DC105J
R205	Dep. Carbon, 330K, 5 %, 1/3 W	R33DC334J
R206	Dep. Carbon, 1M, 5 %, 1/3 W	R33DC105J
R207	Dep. Carbon, 1.5M, 5 %, 1/3 W	R33DC155J
R208	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R209, 210, 211, 212	Composition, 33K, 5 %	RC20BF333J
R213, 214	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R215	Potentiometer, 50K, MPX-separation	R50150-4
R216	Composition, 10M	RC20BF106K
R217, 218	Dep. Carbon, 18K, 5 %, 1/3 W	R33DC183J
R219, 220	Dep. Carbon, 15K, 5 %, 1/3 W	R33DC153J
R221	Composition, 10M	RC20BF106K
R222, 223, 224, 225	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R226, 227, 228, 229, 230	Dep. Carbon, 1M, 5 %, 1/8 W	R12DC105J

## MISCELLANEOUS

Symbol	Description	Part No.
CR100, 101, 102, 103	Diode, Type 1112	V-1112
L100	Coil, Low Pass	L50210-30
L101	Coil, 5.25, M.H., 5 %	L50334-1
L102, 103	Coil, 20, M.H., 5 %	L50334-2
Z100	Transformer, 19Kc	ZZ50210-34
Z101	Coil, 38Kc	ZZ50210-33

# TUBE LAYOUT



AW 1945 A



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