



Stereophonic

THE FISHER 500-C

SERVICE

MANUAL



MODEL 500-C

CHASSIS SERIAL NUMBERS
FROM 30001 TO 39999 INCLUSIVE

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK
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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, 8, 5%, NPO, 1000V	C50070-45
C5	Ceramic Trimmer	C662-123
C6	Ceramic, 1000, GMV, 500V	C50089-2
C8	FM Variable	C966-109-1
C9	Ceramic, 1000, GMV, 500V	C50089-2
C11	Ceramic, Feedthru, 1000, GMV	C592-187
C12	Ceramic Trimmer	C662-123
C13, 14	Ceramic, .01uf, 20%, 500V	C50089-3
C15	Ceramic, 8, 5%, NPO, 1000V	C50070-45
C16, 17	Mylar, .022uf, 250V	C50197-49
C18	Ceramic, 68, 5%, N750, 1000V	C50070-35
C19	Ceramic Trimmer	C662-123
C20	Ceramic, 24, 5%, N150, 1000V	C50070-8
C21	Ceramic, 100, 5%, N1500, 1000V	C50070-19
C22, 23	Ceramic, 100, N1500, 1000V	C50070-6
C24	Ceramic, 8, ±.5, N330, 500V	CC205J080D5
C26	Ceramic, 1000, 1000V	C50072-3
C27, 28	Ceramic, Feedthru, 1000, GMV	C592-187
C29	Ceramic, .02uf, +80 — 20%, 500V	C50089-4
C30	Ceramic, 120, N1500, 1000V	C50070-9
C31	Ceramic, 24, 5%, N150, 1000V	C50070-8
C32	Ceramic, 120, N1500, 1000V	C50070-9
C33	Ceramic, 24, 5%, N150, 1000V	C50070-8
C34	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C35, 36	Ceramic, 1000, 1000V	C50072-3
C37	Ceramic, 2700, 1000V	C50072-17
C38	Ceramic, 2200, 1000V	C50072-5
C39	Ceramic, .02uf, 20%, 500V	C50089-5
C40	Ceramic, 2200, 1000V	C50072-5
C41	Ceramic, .02uf, 20%, 500V	C50089-5
C42	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C43	Ceramic, .02uf, GMV, 1000V	C50071-6
C44, 45	Ceramic, 5000 +80 — 20%, 500V	C50089-6
C46	Ceramic, 2700, 1000V	C50072-17
C47, 48	Ceramic, 100, 5%, N1500, 1000V	C50070-19
C49	Ceramic, 24, 5%, N150, 1000V	C50070-8
C50	Ceramic, .02uf, +80 — 20%, 500V	C50089-4
C51	Electrolytic, 2uf, 70V	C721-142
C52, 53	Mylar, .047uf, 400V	C50197-30
C54, 55	Ceramic, 820, 1000V	C50072-7
C56	Ceramic, 2700, 1000V	C50072-17
C57	Electrolytic, 5uf, 350V	C50283-7
C58	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C59	Mylar, .1uf, 125V	C50435-7
C60	Ceramic, 560, 1000V	C50072-14
C61	Mylar, 1uf, 125V	C50435-7
C62	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C63	Ceramic, 68, N2200, 1000V	C50070-12
C64, 65	Ceramic, .02uf, 20%, 500V	C50089-5
C66	Ceramic, 2700, 1000V	C50072-17
C67	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C68	Polystyrene, 1800, 5%, 125V	CP50394-11
C69, 70	Electrolytic, 50uf, 10V	C50283-6
C71	Ceramic, 330, 1000V	C50072-1
C72	Mylar, .1uf, 125V	C50435-7
C75, 76	Ceramic, 330, 1000V	C50072-1
C77	Mylar, .047uf, 630V	C50197-101
C78	Mylar, .047uf, 250V	C50197-52
C79	Mylar, .047uf, 630V	C50197-101
C80	Mylar, .047uf, 250V	C50197-52
C81	Ceramic, 1000, 1000V	C50072-3
C82	Ceramic, 18, N470, 1000V	C50070-13
C83	Ceramic, 1000, 1000V	C50072-3
C84	Ceramic, 18, N470, 1000V	C50070-13
C85	Electrolytic, 8uf, 50V	C629-138
C86	Mylar, .1uf, 125V	C50435-7
C89, 90	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C91	Electrolytic, 4 Section:	C50180-49
	A — 20uf, 300V	
	B — 40uf, 400V	
	C — 40uf, 450V	
	D — 40uf, 500V	
C92	Electrolytic, 4 Section:	C50180-48
	A — 50uf, 250V	
	B — 50uf, 250V	
	C — 50uf, 250V	
	D — 200uf, 250V	
C93, 94, 95, 96	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C97	Electrolytic, 2 Section:	C50180-38
	A — 1000uf, 35V	
	B — 1000uf, 35V	
C98	Electrolytic, 200uf, 250V	C50180-20
C99, 100, 101	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C102, 103	Molded, .01uf, 20%, 600V	C2747
C104, 105	Ceramic, Feedthru, 1000, GMV	C592-187
C106	Ceramic, 68, N2200, 1000V	C50070-12
C107	Mylar, .1uf, 125V	C50435-7

RESISTORS AND POTENTIOMETERS

In ohms, 5% tolerance, 1/8 Watt unless otherwise noted. K = Kilohm, M = Megohm.

Symbol	Description	Part No.
R1	Composition, 270, 10%, 1/2 W	RC20BF271K
R2	Composition, 100K, 10%, 1/2 W	RC20BF104K
R3	Dep. Carbon, 220K	R12DC224J
R4	Dep. Carbon, 150K	R12DC154JD
R5	Dep. Carbon, 68K	R12DC683J
R6	Dep. Carbon, 150K	R12DC154J
R7	Dep. Carbon, 68K	R12DC683J
R8	Dep. Carbon, 220K	R12DC224J
R10	Dep. Carbon, 10K	R12DC103J
R11	Dep. Carbon, 100K	R12DC104J
R12	Glass, 2.7K, 1/2 W	R20G272J
R13	Dep. Carbon, 10	R12DC100J
R14	Dep. Carbon, 10K	R12DC103J
R15	Dep. Carbon, 100K	R12DC104J
R16	Glass, 2.7K, 1/2 W	R20G272J
R17	Dep. Carbon, 10	R12DC100J
R18, 19	Glass, 330K, 1W	R30G334J
R20	Dep. Carbon, 220K	R12DC224J
R21	Dep. Carbon, 4.7M, 1/3 W	R33DC475J
R22	Dep. Carbon, 220K, 1/3 W	R33DC224J
R23	Dep. Carbon, 4.7M, 1/3 W	R33DC475J
R24	Dep. Carbon, 220K, 1/3 W	R33DC224J
R25, 26	Dep. Carbon, 330K	R12DC334J
R27	Dep. Carbon, 390	R12DC391J
R28	Dep. Carbon, 220K	R12DC224J
R29, 30	Dep. Carbon, 82K	R12DC823J
R31	Dep. Carbon, 1.2K	R12DC122J
R32	Dep. Carbon, 1K	R12DC102J
R33, 34	Dep. Carbon, 330K	R12DC334J
R35	Dep. Carbon, 56K	R12DC563J
R36	Glass, 4.7K, 10%, 3W	RP3W472K
R37	Composition, 3.3K, 10%, 1W	RC30BF332
R38, 39	Dep. Carbon, 470K	R12DC474J
R40	Dep. Carbon, 2.7M, 1/3 W	R33DC275J

PARTS DESCRIPTION LIST

R41, 42 Dep. Carbon, 1.5M, 1/3 W
R43 Composition, 180, 10%, 1/2 W
R44 Dep. Carbon, 120K, 1/3 W
R45 Dep. Carbon, 1K, 1/3 W
R46 Dep. Carbon, 120K, 1/3 W
R47 Dep. Carbon, 2.7M, 1/3 W
R48 Dep. Carbon, 1K, 1/3 W
R49 Dep. Carbon, 39K
R50 Composition, 27K, 10%, 1/2 W
R51 Composition, 1K, 10%, 1/2 W
R52 Dep. Carbon, 680K
R53 Potentiometer, 500K, Dual Treble
R54 Potentiometer, 500K, Dual Bass
R55 Dep. Carbon, 680K
R58 Dep. Carbon, 1K
R59 Composition, 150, 10%, 1/2 W
R60 Composition, 10K, 10%, 1/2 W
R61 Composition, 100, 10%, 1/2 W
R62 Composition, 47K, 10%, 1/2 W
R63 Composition, 1K, 10%, 1/2 W
R64 Dep. Carbon, 680K
R66 Dep. Carbon, 120K, 1/3 W
R67 Dep. Carbon, 1K, 1/3 W
R68 Dep. Carbon, 120K, 1/3 W
R69 Dep. Carbon, 1K, 1/3 W
R70 Dep. Carbon, 2.2M, 1/3 W
R71 Dep. Carbon, 820K
R72, 73 Dep. Carbon, 220K
R74 Dep. Carbon, 68K
R75 Dep. Carbon, 270K
R76 Dep. Carbon, 56K
R77 Dep. Carbon, 150K
R78, 79 Dep. Carbon, 2.7M, 1/3 W
R80 Composition, 100, 10%, 1/2 W
R81 Dep. Carbon, 22K
R82 Composition, 82K, 10%, 1/2 W
R83 Dep. Carbon, 470K, 1/3 W
R84 Potentiometer, 300K, Dual Balance
R85 Composition, 220, 10%, 1/2 W
R86 Composition, 1K, 10%, 1/2 W
R87 Dep. Carbon, 180
R88, 89 Dep. Carbon, 820K
R90 Dep. Carbon, 47K
R91, 92 Dep. Carbon, 22K
R93, 94 Dep. Carbon, 820K
R95 Potentiometer, 500K, Dual Volume
R96 Wirewound, 25, 10%, 5W
R97 Composition, 68K, 10%, 1/2 W
R98, 99,
100 Dep. Carbon, 47K
R101 Dep. Carbon, 470K, 1/3 W
R103 Dep. Carbon, 220, 1/3 W
R104 Dep. Carbon, 470K, 1/3 W
R105 Dep. Carbon, 2.2K, 1/3 W
R106 Dep. Carbon, 220, 1/3 W
R107 Composition, 1K, 10%, 1/2 W
R108, 109 Potentiometer, 25K
R110 Composition, 270, 1/2 W
R111, 112 Dep. Carbon, 33K, 1/3 W
R113 Dep. Carbon, 180K, 1/3 W
R114 Dep. Carbon, 68K, 1/3 W
R115 Dep. Carbon, 180K, 1/3 W
R116 Dep. Carbon, 68K, 1/3 W
R117 Dep. Carbon, 2.2K, 1/3 W
R118 Composition, 1.5K, 1/2 W
R119 Composition, 1K, 1/2 W
R120 Composition, 220, 10%, 1/2 W
R121, 122,
123 Dep. Carbon, 330K
R125 Dep. Carbon, 15K
R126, 127 Dep. Carbon, 1K, 1/3 W

R33DC155J
RC20BF181K
R33DC124J
R33DC102J
R33DC124J
R33DC275J
R33DC102J
R12DC393J
RC20BF273K
RC20BF102K
R12DC684J
R50150-101-2
R50160-101-2
R12DC684J
R12DC102J
RC20BF151K
RC20BF103K
RC20BF101K
RC20BF473K
RC20BF102K
R12DC684J
R33DC124J
R33DC102J
R33DC124J
R33DC102J
R33DC225J
R12DC824J
R12DC224J
R12DC683J
R12DC274J
R12DC563J
R12DC154J
R33DC275J
RC20BF101K
R12DC223J
RC20BF823K
R12DC474J
R50160-130
RC20BF221K
RC20BF102K
R12DC181J
R12DC824J
R12DC473J
R12DC223J
R12DC824J
R50160-104
R688-117
RC20BF683K
R12DC473J
R33DC474J
R33DC221J
R33DC474J
R33DC222J
R33DC221J
RC20BF102K
R50103-2
RC20BF271J
R33DC333J
R33DC184J
R33DC683J
R33DC184J
R33DC683J
R33DC222J
RC20BF152J
RC20BF102J
RC20BF221K
R12DC334J
R12DC153J
R33DC102J

R128 Dep. Carbon, 2.2K, 1/3 W
R129, 130 Dep. Carbon, 1K, 1/3 W
R131 Dep. Carbon, 15K, 1/3 W
R132 Dep. Carbon, 5.6K, 1/3 W
R133 Composition, 82K, 10%, 1/2 W
R135 Composition, 2.7K, 10%, 1W
R136 Glass, 470, 10%, 3W
R139 Composition, 1.2K, 10%, 1W
R140 Wirewound, 25, 10%, 5W
R142 Wirewound, 15, 10%, 5W
R143 Glass, 1.2K, 10%, 7W
R144 Glass, 470, 10%, 3W
R145, 146 Composition, 330, 10%, 1W
R149 Composition, 820K, 10%, 1/2 W

R33DC222J
R33DC102J
R33DC153J
R33DC562J
RC20BF823K
RC30BF272K
RPG3W471K
RC30BF122K
R688-117
R719-106
RPG7W122K
RPG3W471K
RC30BF331K
RC20BF824K

COILS, CHOKES & TRANSFORMERS

Symbol	Description	Part No.
L1	FM Antenna Coil	L966-113
L2	FM RF Coil	L1034-113
L3	FM Mixer Coil	L966-115
L4	FM Oscillator Coil Assembly	A5966-107
L5	Choke, .68 Microhenry	L50066-1
L6, 7	Choke, 1.2 Microhenry	L50066-3
L9	Choke, 3.3 Microhenries	L50066-8
T1	Transformer Output	T991-116-1
T2	Transformer Output	T991-116-2
T3	Transformer, Power	T991-115
Z1	Transformer, FM IF	ZZ50210-42
Z2	Transformer, FM IF	ZZ50210-39
Z3	Transformer, FM IF	ZZ50210-2
Z4	FM Limiter Coil	ZZ50210-6
Z5	FM Ratio Detector	ZZ50210-9

MISCELLANEOUS

Symbol	Description	Part No.
CR1, 2, 3, 4	Diode, Silicon	V50260-10
CR5	Diode, Silicon	SR50411-1
CR6	Selenium Rectifier, Bridge	SR50253-1
CR7	Diode, Silicon	SR50411-1
F1	Fuse, 3.2 Amp, Slo-Blo	F3319
I1, 2	Lamp, #47 OF	I50009-4
I3, 4	Lamp, Dial	I50441-4
J17	Jack, Headphone	J846-120-1
M1	Meter, Tuning	M990-124
PC1, 2	Printed Circuit, Equalization	PC50187-3
PC3, 4	Printed Circuit, Tone Control	PC50187-9
PC5, 6	Printed Circuit, High Filter	PC50187-2
RL1	Relay	K50314
S1	Switch, Selector	S991-112
S2	Switch, Slide, FM Filter	S50200-5
S3	Switch, Speaker Selector	S990-130
S4	Switch, Loudness Contour	S990-129
S5, 6, 7	Switch, Slide	S50200-5
S8	Switch, Power	Part of R95
—	FM Dipole	A550227-1
—	Dress Panel	AS991-108
—	Knob, Dummy Dual	E50324
—	Knob, Dual Rear	E50321
—	Knob, Dual Front	E50321
—	Knob, Speaker Selector	E50325-1
—	Knob, Tuning	E50325-2
—	Dial Glass	N991-107
—	Fuse Holder	X563-151

ALIGNMENT INSTRUCTIONS

Read These Instructions With Extreme Care Before Attempting Alignment.

CHASSIS: Turn the station selector completely counterclockwise, without forcing. Dial pointer should be at zero index mark on logging scale. If not, reset the dial pointer. Disconnect the external antenna.

When using an oscilloscope for alignment, set the output level controls for no overload, as shown by the proper waveform shape. Connect loads to main output and turn volume control to minimum.

SIGNAL GENERATORS: The signal generator equipment must be able to supply the following: FM RF modulated 30% (± 22.5 KC deviation) at 400 cps,

INDICATOR: DC VTVM, AC VTVM, and scope for alignment.

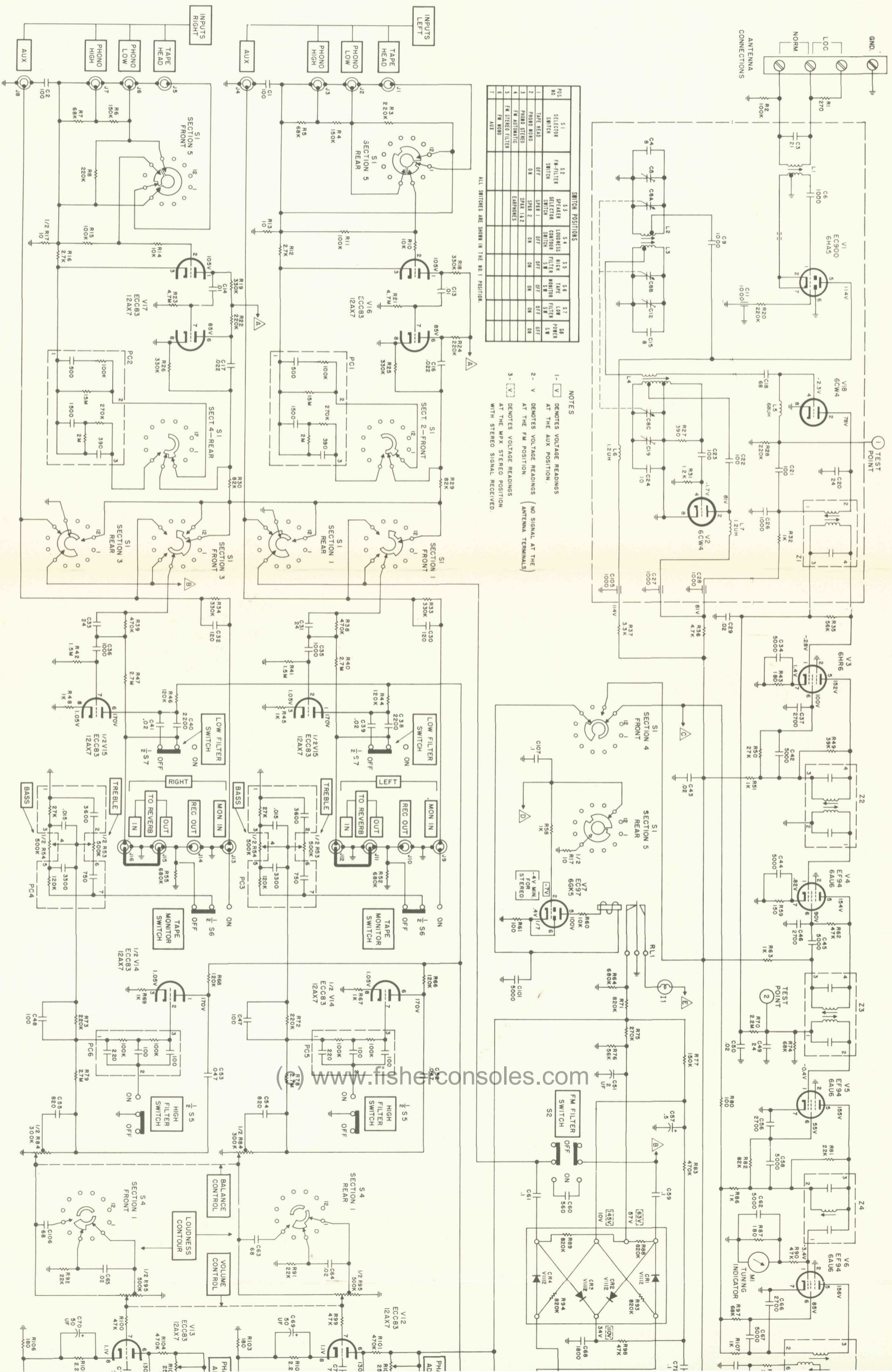
ALIGNMENT: Allow the chassis and test instruments to warm up for at least fifteen minutes. Adjust the line voltage for 117 volts AC, 50-60 cycles. Use fully insulated tools: a small screwdriver for all trimming capacitors; a K-Tran tool for Z1, Z2, and Z3; a hex tool for L1, L2, L3, L4, Z4, and Z5.

NOTE: For calibrating use as low an output voltage as possible from your signal generator.

STEPS	CHASSIS		SIGNAL GENERATOR			INDICATOR		ALIGNMENT	
	SELECTOR	STATION SELECTOR	COUPLING	FREQ.	MOD.	TYPE	CONNECTION	ADJUST	INDICATION
1	FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V ₂	10.7 MC	None	DC VTVM	to test point 3	Z1, Z2, Z3, Z4, and Z5 top and bottom	Maximum negative voltage
2	FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V ₂	10.7 MC	None	Connect hot lead of DC VTVM to MPX output, ground to junction of resistors (47K) connected in series from TSP3 to GND.		Z5, top	Zero reading on zero center scale
3	FM	90 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals Normal.	90 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to TSP3 and scope to Ch. A. Rec. output		L4, L3, L2 and L1	Check for sine waveform and adjust for maximum negative voltage
4	FM	106 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals Normal.	106 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to TSP3 and scope to Ch. A. Rec. output		C19, C12 and C5	Check for sine waveform and adjust for maximum negative voltage
5	Repeat steps 3 and 4 for proper dial calibration and maximum output.								

FM
ALIGNMENT

SCHEMATIC DIAGRAM • TUNER AND PREAMPLIFIER



ALL SWITCHES ARE SHOWN IN THE NO. 1 POSITION.

SWITCH POSITIONS									
POS.	S1	S2	S3	S4	S5	S6	S7	S8	S9
NO.	FM/AM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
1	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
2	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
3	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
4	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
5	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
6	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
7	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
8	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
9	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2
10	FM	STEREO	MONO	REAR	FRONT	SECTION 5	SECTION 4	SECTION 3	SECTION 2

NOTES

1 - [V] DEMOTES VOLTAGE READINGS AT THE AUX POSITION.

2 - [V] DEMOTES VOLTAGE READINGS AT THE FM POSITION.

3 - [V] DEMOTES VOLTAGE READINGS AT THE MPX STEREO POSITION WITH STEREO SIGNAL RECEIVED.

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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	Polystyrene, 470, 5%, 500V	C50394-1
C205	Ceramic, 82, 1000V	C50070-1
C206	Ceramic, 1000, GMV, 500V	C50089-2
C207	Ceramic, 5000, +80 — 20%, 500V	C50089-6
C208, 209	Mica, 4700, 5%, 500V	C50332-5
C210	Electrolytic, 1uf, 350V	C50283-3
C211	Ceramic, 1000, GMV, 500V	C50089-2

C212	Ceramic, .05uf, +80 — 20%, 100V	C50073-2
C214	Mylar, 4700, 400V	C50197-25
C215	Mica, 3900, 5%, 500V	C50332-6
C216, 217	Ceramic, 1000, GMV, 500V	C50089-2
C218	Ceramic, .02uf, 20%, 500V	C50089-5
C219	Ceramic, 330, 1000V	C50183-5
C220	Ceramic, .02uf, 20%, 500V	C50089-5
C221, 222	Mylar, .047uf, 250V	C50197-52
C223, 224	Ceramic, 1000, 1000V	C50072-3
C225, 226	Ceramic, 2200, 1000V	C50072-5

RESISTORS

In ohms, 5% tolerance, 1/8 W unless otherwise noted. K=Kilohms, M=Megohms.

Symbol	Description	Part No.
R200	Composition, 22M, 10%, 1/2 W	RC20BF226K

R201	Composition, 4.7K, 1/2 W	
R202	Composition, 15K, 1/2 W	
R203	Composition, 10M, 10%, 1/2 W	
R204	Dep. Carbon, 1M	
R205	Dep. Carbon, 220K, 1/2 W	
R206	Dep. Carbon, 1.8M	
R207	Dep. Carbon, 1M	
R208	Dep. Carbon, 22K	
R209, 210,		
211, 212	Dep. Carbon, 33K	
R213, 214	Dep. Carbon, 100K	
R215	Potentiometer, 50K, MPX Separation	
R216	Composition, 22M, 10%, 1/2 W	
R217, 218	Dep. Carbon, 18K, 1/2 W	
R219, 220	Dep. Carbon, 15K, 1/2 W	
R221	Composition, 22M, 10%, 1/2 W	

RC20BF472J
RC20BF153J
RC20BF106K
R12DC105J
R33DC224J
R12DC185J
R12DC105J
R12DC223J

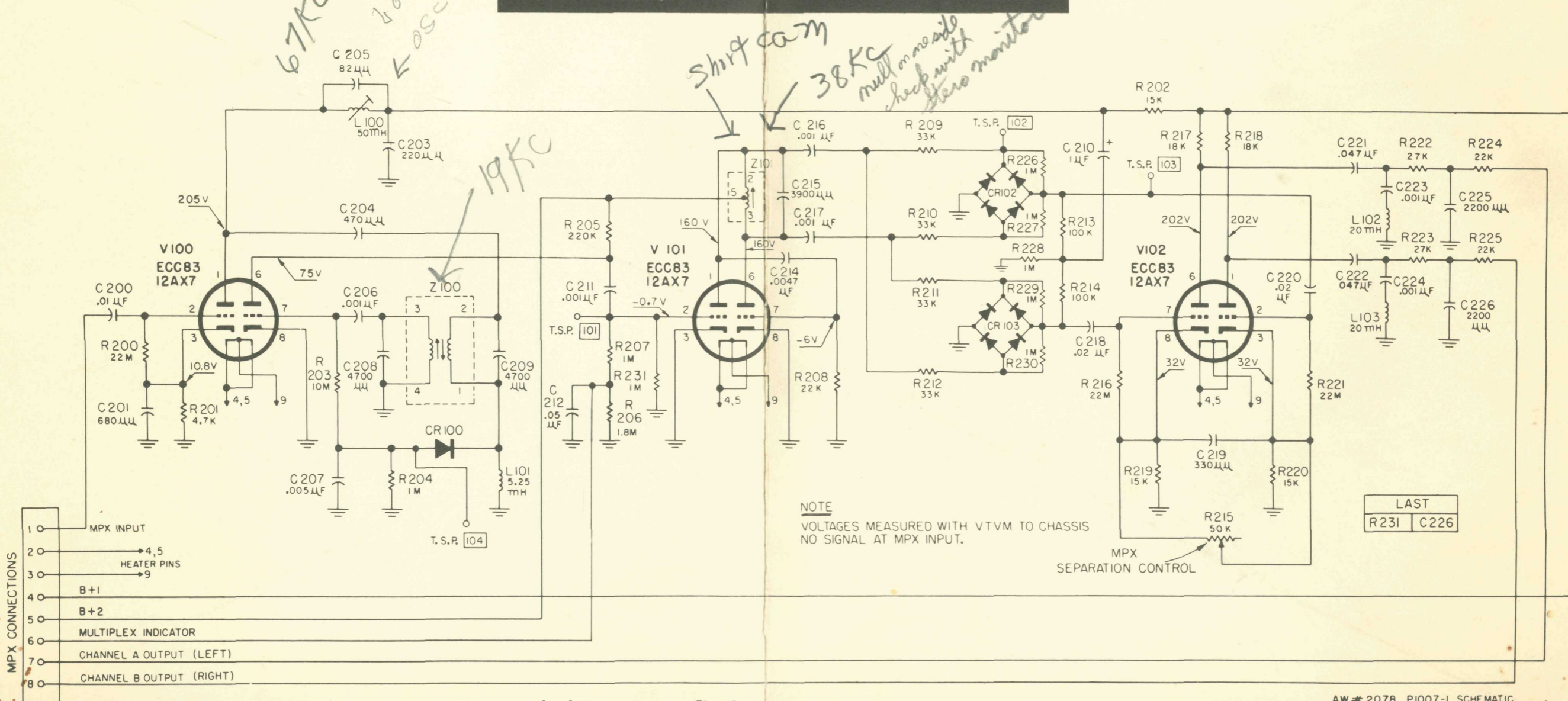
R222, 223	Dep. Carbon, 27K
R224, 225	Dep. Carbon, 22K
R226, 227,	
228, 229,	
230, 231	Dep. Carbon, 1M

R12DC273J
R12DC223J
R12DC105J

MISCELLANEOUS

Symbol	Description	Part No.
CR100, 102,		
103	Diodes, Type 1112	V-1112
L100	Coil, low pass	L50210-30
L101	Coil, 5.25MH	L50334-1
L102, 103	Coil, 20MH	L50334-2
Z100	Transformer, 19Kc	ZZ50210-34
Z101	Coil, 38Kc	ZZ50210-33

SCHEMATIC DIAGRAM • MULTIPLEX SECTION



ALIGNMENT INSTRUCTIONS • MULTIPLEX SECTION

STEPS	GENERATOR			INDICATOR	ALIGNMENT		
	CONNECTION	AUDIO FREQUENCY	RF MODULATION	TYPE & CONNECTION	ADJUST	INDICATION	NOTES
1	Audio oscillator connected to lug 1	80 KC—1 volt	None	AC VTVM to junction of C210 and R228	L100 (Use hex alignment tool)	Minimum voltage	
2	Multiplex generator audio output to lug 1 (See Note 1)	19 KC (± 5 cps) pilot tone, 100 mv	None	DC VTVM to T.S.P. 101	Z100 top and bottom (Use hex alignment tool)	Maximum voltage	1
3	Same as Step 2	19 KC pilot tone, 50 mv	None	Scope horiz. input to 19 KC output of gen.; vert. input to junction of C216 and R209. External sweep	Z101 (Use K-tran alignment tool)	Stable 2:1 Lissajous pattern. Disregard phase of pattern	1
4	Same as Step 2	19 KC	None	Same as Step 3	Vary generator 19 KC output from 50 to 200 mv	Lissajous pattern should remain stationary over the entire 150 mv range	1, 2
5	Same as Step 2	1000 cps on left (A) channel only, 1 volt rms (2.8 P-P)	None	AC VTVM and scope vert. input to channel A output lug. Internal sweep. DC VTVM to T.S.P. 101	Z100 top (Use hex tool)	Maximum indication on AC VTVM. Clean 1000 cps waveform on scope	1, 3
6	Same as Step 2	1000 cps on right (B) channel only, 1 volt rms (2.8 P-P)	None	Same as Step 5	MPX separation R215	Minimum reading on AC VTVM should be at least 33 db below reading obtained in Step 5	1
7	Same as Step 2	Same as Step 6	None	Move scope input and AC VTVM to channel B output lug	-----	Note and record voltage reading on AC VTVM	1
8	Same as Step 2	1000 cps on left (A) channel only, 1 volt rms (2.8 P-P)	None	Same as Step 7	-----	AC VTVM reading should be at least 33 db below reading observed in Step 7	1
9	Same as Step 2	8000 cps on right (B) channel only, 1 volt rms (2.8 P-P)	None	Same as Step 7	-----	AC VTVM reading should be the same as observed in Step 7	1
10	Same as Step 2	8000 cps on left (A) channel only, 1 volt rms (2.8 P-P)	None	Same as Step 7	-----	AC VTVM reading should be at least 18 db below reading observed in Step 9	1
11	Repeat Steps 9 and 10 with scope and AC VTVM connected to channel A output lug, but start with 8000 cps applied to left channel for first reading, then switch to right channel for second reading.						
12	Multiplex generator RF output to 300-ohm antenna terminals	1000 cps on left (A) channel only	100% (75 KC Dev.) No pre-emphasis	Move scope input and AC VTVM to channel A output lug	-----	Note and record voltage reading on AC VTVM	4
13	Same as Step 12	1000 cps on right (B) channel only	Same as Step 12	Same as Step 12	R215	Minimum reading on AC VTVM should be at least 33 db below reading observed in Step 12	4
14	Same as Step 12	8000 cps on left (A) channel only	Same as Step 12	Same as Step 12	-----	AC VTVM reading should be 10 db below reading observed in Step 12	4
15	Same as Step 12	8000 cps on right (B) channel only	Same as Step 12	Same as Step 12	-----	AC VTVM reading should be 28 db below reading observed in Step 12	4

NOTE: The above procedure is based on the use of the FISHER Model 300 Multiplex Generator.

1 — In steps 2 through 11, the audio output of the Multiplex Generator should be connected to lug 1 of the multiplex sub-chassis through a 12,000 ohm, ½-watt, carbon resistor, and a 180 uuf capacitor should be connected between lug 1 and ground. The wiring from the MPX TEST jack on the main chassis to lug 1 must be disconnected during Steps 2 through 11.

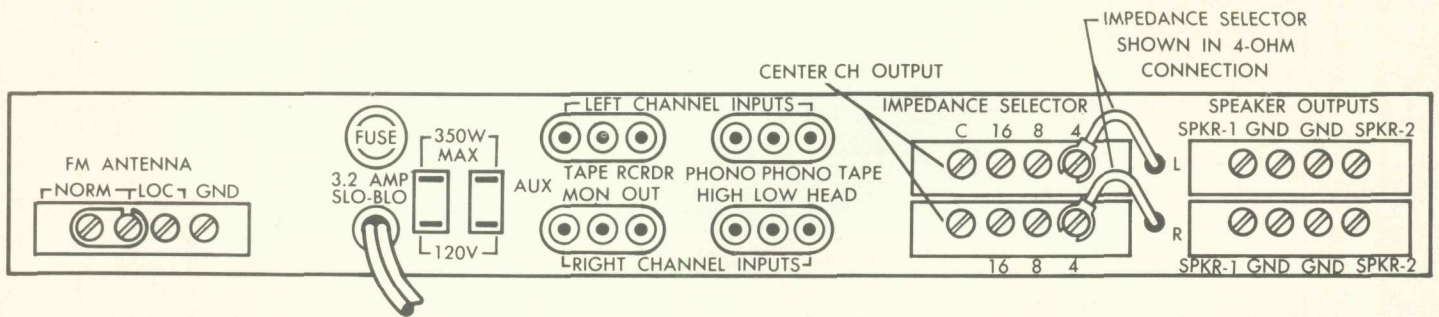
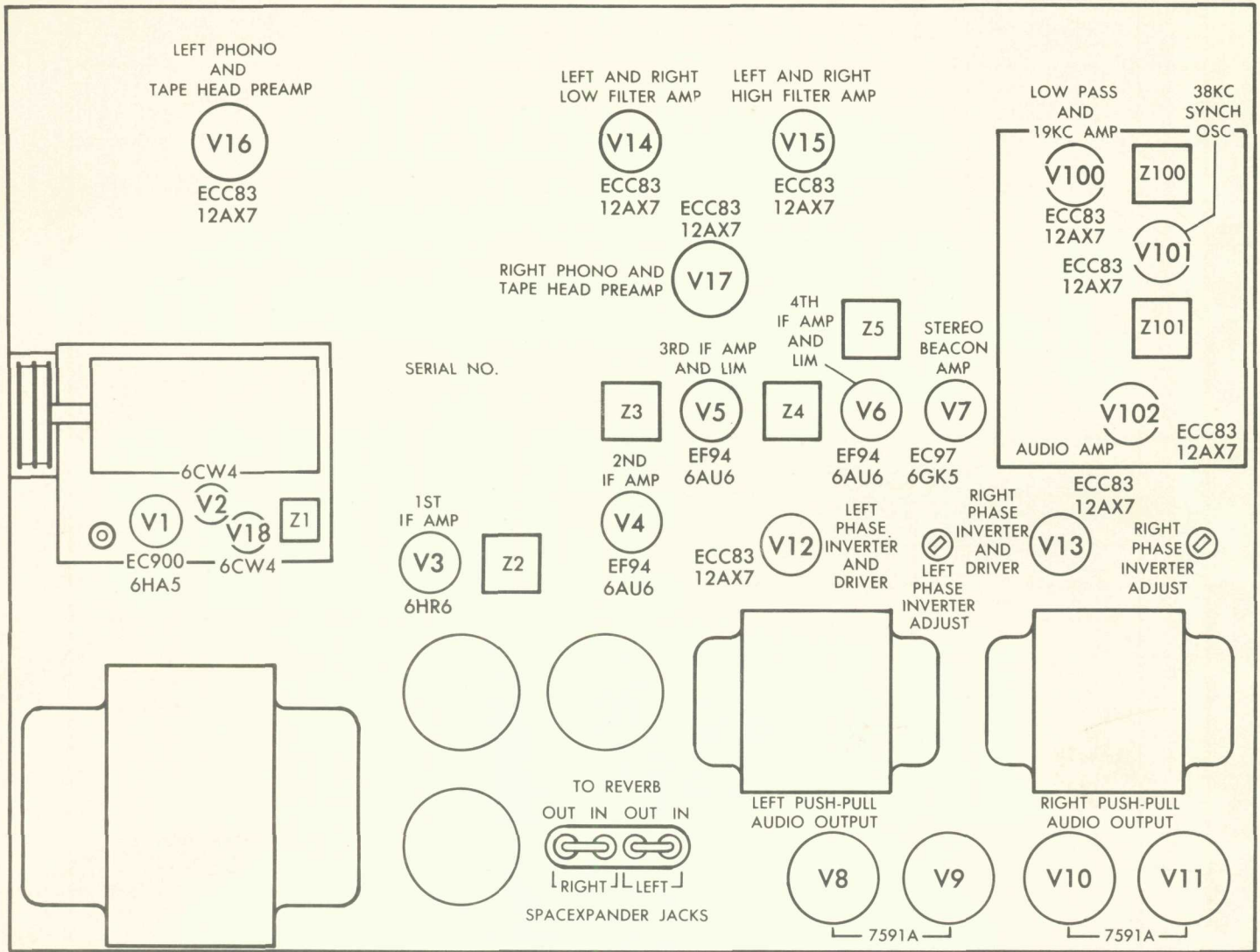
2 — The vertical amplitude of the Lissajous pattern will increase slightly

as the generator output is increased. This is a normal occurrence.

3 — If DC VTVM reading falls below -9 volts when maximum reading is obtained on the AC VTVM, readjust bottom of Z100, then repeat Step 5. Repeat this procedure until maximum AC VTVM reading is obtained with DC VTVM reading greater than -9 volts.

4 — Tune the FISHER to the RF output frequency of the Multiplex Generator.

TUBE LAYOUT



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SERVICE NOTES



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