



Stereophonic

THE FISHER 800

SERVICE

MANUAL



MODEL 800

CHASSIS SERIAL NUMBERS
FROM 10001 TO 19999 INCLUSIVE

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK

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THE FISHER 800



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, 100uuf, N1500, 1000V	C50070-6
C3	Ceramic, 8uuf, $\pm 5uuf$, NPO, 1000V	CC20CJ080D5
C4	Ceramic, 5uuf, $\pm 5uuf$, NPO, 1000V	CC20CJ050D5
C5	Ceramic, Trimmer	C662-123
C6	AM Trimmer	Part of C9
C7	Ceramic, 100uuf, N1500, 1000V	C50070-6
C8	FM Variable	C726-116
C9	AM Variable	C684-127
C10	Ceramic, Feedthru, .001uf, GMV	C592-187
C11	Ceramic, 100uuf, N1500, 1000V	C50070-6
C12	Mylar, .047uf, 250V	C50197-52
C13	Ceramic, .001uf, 1000V	C50072-3
C14	Ceramic, Feedthru, .001uf, GMV	C592-187
C15	Ceramic, 8uuf, $\pm 5uuf$, NPO, 500V	CC20CJ080D5
C16	Ceramic, Trimmer	C662-123
C17	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C18	Molded, .01uf, 20%, 600V	C2747
C19	Ceramic, 100uuf, N1500, 1000V	C50070-6
C20	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C21	Ceramic, 68uuf, N750, 500V	CC20UJ680K5
C22	Ceramic, 100uuf, N1500, 1000V	C50070-6
C23	Electrolytic, two sections: A: 1000uf, 30V B: 1000uf, 30V	C50180-7
C24	Ceramic, .005uf, 20%, 500V	C50089-1
C25	Ceramic, 5uuf, $\pm 5uuf$, N220, 500V	CC20RH050D5
C26	Ceramic, Trimmer	C662-123
C27	Ceramic, .68uuf, 20%, 500V	C50077-6N
C28	Ceramic, Feedthru, .001uf, GMV	C592-187
C29	Ceramic, 24uuf, 5%, N150, 1000V	C50070-8
C30	Ceramic, 100uuf, N1500, 1000V	C50070-19
C31	Ceramic, 10uuf, $\pm 5uuf$, NPO, 500V	CC20CH100D5
C32	Ceramic, .001uf, 1000V	C50072-3
C33	AM Trimmer	part of C9
C34	Ceramic, 100uuf, N1500	C50070-6
C35	Ceramic, .005uf, 20%, 500V	C50089-1
C36	Ceramic, 2.2uuf, 500V	C3039
C37	Electrolytic, 100uf, 25V	C643-145
C38	Ceramic, Feedthru, .001uf, GMV	C592-187
C39	Electrolytic, four section: A — 500uf, 250V C — 50uf, 250V B — 50uf, 250V D — 50uf, 250V	C50180-21
C40	Ceramic, Feedthru, .001uf, GMV	C592-187
C41	Ceramic, .02uf +80 - 20%, 500V	C50089-4
C42	Ceramic, 100uf, N1500, 1000V	C50070-6
C43	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C44	Ceramic, .001uf, 1000V	C50072-3
C45	Ceramic, .005uf, 20%, 500V	C50089-1
C46	Ceramic, .0027uf, 1000V	C50072-17
C47	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C48	Ceramic, Feedthru, .001uf, GMV	C592-187
C49	Ceramic, .005uf, 20%, 500V	C50089-1
C50	Ceramic, 10uuf, NPO, 1000V	C50070-11
C51	AM Trimmer	Part of C9
C52	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C53	Ceramic, Feedthru, .001uf, GMV	C592-187
C54	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C55, 56	Ceramic, .005uf, 20%, 500V	C50089-1
C57	Ceramic, .0027uf, 1000V	C50072-17
C58	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C59	Ceramic, 10uuf, NPO, 1000V	C50070-11
C60	Ceramic, .005uf, 20%, 500V	C50089-1
C61	Ceramic, .0027uf, 1000V	C50072-17
C62, 63	Ceramic, .005uf, 20%, 500V	C50089-1
C64, 65	Ceramic, 330uuf, 1000V	C50072-1
C66	Electrolytic, 8uf, 50V	C629-138
C67	Ceramic, .005uf, 20%, 500V	C50089-1
C68	Ceramic, 330uuf, 1000V	C50072-1
C69	Molded, .0033uf, 5%, 200V	C68P332J2
C70	Ceramic, .01uf, 20%, 500V	C50089-3
C71	Mylar, .022uf, 250V	C50197-49
C72	Ceramic, 220uuf, 1000V	C50072-20
C73	Ceramic, 900uuf, 5%, 500V	CC21GP901J5
C74	Mylar, .047uf, 250V	C50197-52
C75	Ceramic, .01uf, 20%, 500V	C50089-3
C76, 77	Ceramic, .02uf, +80 - 20%, 500V	C50089-4
C78	Ceramic, .01uf, 20%, 500V	C50089-3
C79	Ceramic, 12uuf, NPO, 1000V	C50070-2
C80	Electrolytic, 200uf, 250V	C50180-20
C81, 82	Ceramic, .01uf, 20%, 500V	C50089-3
C83	Ceramic, 12uuf, NPO, 1000V	C50070-2
C84, 85	Ceramic, .01uf, 20%, 500V	C50089-3
C86, 87	Electrolytic, 25uf, 6V	C639-114
C88	Electrolytic, three section: A — 20uf, 300V B — 40uf, 400V C — 40uf, 450V	C50180-18
C89	Electrolytic, two section: A — 200uf, 250V B — 40uf, 500V	C50180-19
C102, 103	Mylar, .022uf, 250V	C50197-49
C104, 105	Ceramic, 47uuf, N750, 1000V	C50070-4
C108, 110	Mylar, .01uf, 250V	C50197-48
C114	Molder, .002uf, 200V	C68P202K2
C115	Ceramic, .001uf, 1000V	C50072-3
C116	Molder, .002uf, 200V	C68P202K2
C117	Ceramic, .001uf, 1000V	C50072-3
C118, 119	Electrolytic, 25uf, 6V	C639-114
C120, 121	Ceramic, 100uuf, N1500, 1000V	C50070-6
C122	Mylar, .1uf, 400V	C50197-32
C123, 124	Ceramic, 68uuf, N2200, 1000V	C50070-12
C125	Mylar, .1uf, 400V	C50197-32
C126, 127	Ceramic, 24uuf, 5%, 1000V	C50070-8
C128	Electrolytic, 25uf, 6V	C639-114
C129	Ceramic, 220uuf, 1000V	C50072-20
C130, 131	Mylar, .022uf, 250V	C50197-49
C132	Ceramic, 220uuf, 1000V	C50072-20
C133	Ceramic, .05uf, +80 - 20%, 100V	C50073-2
C134	Electrolytic, 25uf, 6V	C639-114
C135	Ceramic, 330uuf, 1000V	C50072-1
C136, 137, 138, 139	Mylar, .1uf, 400V	C50197-32
C141, 142	Ceramic, .005uf, 20%, 500V	C50089-1
C143	Ceramic, Feedthru, .001uf, GMV	C592-187
C145	Ceramic, 5uuf, $\pm 5uuf$, N150, 500V	CC20PJ050D5
C146	Ceramic, 47uuf, N750, 1000V	C50070-6
C147, 148	Ceramic, 33uuf, N750, 1000V	C50070-15
C149, 150	Ceramic, .005uf, 20%, 500V	C50089-1

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, 5	Composition, 330K	RC20BF334K
R6	Composition, 100K	RC20BF104K
R7, 8	Composition, 2.2M	RC20BF225K
R9	Composition, 100	RC20BF101K
R10	Composition, 22	RC20BF220K
R11	Composition, 2.2K	RC20BF222K
R12	Composition, 47K	RC20BF473K
R13	Composition, 1K	RC20BF102K
R14	Composition, 220	RC20BF221K
R15	Composition, 470K	RC20BF474K
R16	Composition, 1K	RC20BF102K
R17	Composition, 4.7	RC20BF4R7K
R18	Composition, 820K	RC20BF824K
R19	Wirewound, 75, 5W	R684-140
R20	Composition, 3.3K	RC20BF332K
R21	Wirewound, 75, 5W	R684-140
R22	Composition, 4.7K	RC20BF472K
R23, 24	Composition, 150	RC20BF151K
R25	Wirewound, 75, 5W	R684-140
R26	Wirewound, 2200, 7W	R563-148
R27	Composition, 47K	RC20BF473K
R28	Wirewound, 100, 5W	R592-185
R29	Composition, 68K	RC20BF683K
R30	Composition, 680K	RC20BF684K
R31	Composition, 33K, 1W	RC30BF333K
R32	Composition, 1K	RC20BF102K
R33	Composition, 470, 1W	RC30BF471K
R34	Composition, 2.2M	RC20BF225K
R35	Composition, 22K, 1W	RC30BF223K

R36 Composition, 150
R37 Composition, 1K
R38 Composition, 120
R39 Composition, 47K
R40 Composition, 220
R41 Composition, 1K
R42 Composition, 47K
R43 Composition, 180
R44, 45 Composition, 2.2M
R46 Composition, 82K
R47 Composition, 470K
R48 Composition, 1K
R49 Composition, 47K, 1W
R50 Composition, 47K
R51 Composition, 1K
R52 Composition, 270
R53 Composition, 2.2M
R54 Composition, 330K
R55 Composition, 6.8K
R56 Composition, 470K
R57 Composition, 1K
R58 Dep. carbon, 22K, 5%, 1/3W
R59 Composition, 100K
R60 Composition, 3.3M
R61 Potentiometer, 250K, AM level set
R62 Composition, 6.8K
R63 Composition, 1.5K
R64, 65, 66, 67 Potentiometer, 250K
R68, 69 Dep. carbon, 220K, 5%, 1/3W
R70, 71 Composition, 4.7M
R72 Dep. carbon, 22K, 5%, 1/3W
R73 Composition, 8.2M
R74 Composition, 2.2M
R75 Composition, 3.3M
R76 Dep. carbon, 330K, 5%, 1/3W
R77 Dep. carbon, 2.7K, 5%, 1/3W
R78 Composition, 10
R79 Dep. carbon, 330K, 5%, 1/3W
R80 Dep. carbon, 2.7K, 5%, 1/3W
R81 Composition, 10
R82 Composition, 10K
R83 Composition, 8.2M
R84 Composition, 2.2M
R85 Composition, 3.3M
R86 Composition, 100K
R87 Composition, 1.2K
R88 Dep. carbon, 10K, 5%, 1/3W
R89 Dep. carbon, 100K, 5%, 1/3W
R90 Dep. carbon, 10K, 5%, 1/3W
R91 Dep. carbon, 100K, 5%, 1/3W
R92 Composition, 100K
R93 Composition, 1.2K
R94 Potentiometer, dual bass, 1M
R95 Composition, 470K
R96 Composition, 39K
R97 Composition, 3.3M
R102 Composition, 10M
R103 Composition, 39K
R105 Potentiometer, dual treble, 1M
R108, 109 Dep. carbon, 470K, 5%, 1/3W
R110 Composition, 10M
R111 Composition, 4.7M
R113 Composition, 10M
R114 Composition, 4.7M
R117, 119 Composition, 10M
R120, 121 Composition, 2.2M
R122, 123 Composition, 220K
R124 Composition, 2.2K
R125, 126 Dep. carbon, 100K, 5%, 1/3W
R127 Composition, 2.2K
R128 Potentiometer, triple bal. Center ch. vol.
R129, 130 Composition, 120K
R131 Composition, 22K
F132 Potentiometer, dual vol., 500K
R133 Composition, 4.7K
R134, 135 Composition, 820K
R136 Composition, 220K
R137 Composition, 1.5K

RC20BF151K
RC20BF102K
RC20BF121K
RC20BF473K
RC20BF221K
RC20BF102K
RC20BF473K
RC20BF181K
RC20BF225K
RC20BF823K
RC20BF474K
RC20BF102K
RC30BF473K
RC20BF473K
RC20BF102K
RC20BF271K
RC20BF225K
RC20BF334K
RC20BF682K
RC20BF474K
RC20BF102K
R33DC223J
RC20BF104K
RC20BF335K
R50, 160-3
RC20BF682K
RC20BF152K
R50, 160-3
R33DC224J
RC20BF475K
R33DC223J
RC20BF285K
RC20BF225K
RC20BF335K
R33DC334J
R33DC272J
RC20BF100K
R33DC334J
R33DC272J
RC20BF100K
RC20BF103K
RC20BF825K
RC20BF225K
RC20BF335K
RC20BF104K
RC20BF122K
R33DC103J
R33DC104J
R33DC103J
R33DC104J
RC20BF104K
RC20BF122K
R50160-19
RC20BF474K
RC20BF393K
RC20BF335K
RC20BF106K
RC20BF393K
R50160-19
R33DC474J
RC20BF106K
RC20BF475K
RC20BF106K
RC20BF475K
RC20BF106K
RC20BF225K
RC20BF224K
RC20BF222K
R33DC104J
RC20BF222K
R50160-47
RC20BF124K
RC20BF222K
R50160-50
RC20BF472K
RC20BF824K
RC20BF224K
RC20BF152K

R138 Composition, 100
R139 Composition, 6.8K
R140 Composition, 220K
R141 Composition, 1.5K
R142 Composition, 100
R143 Composition, 6.8K
R144 Composition, 33K, 1W
R146, 147 Dep. carbon, 22K, 5%, 1/3W
R148 Composition, 33K, 1W
R150, 151 Composition, 300K, 5%
R152 Composition, 22K
R153, 154 Composition, 300K, 5%
R155, 156 Potentiometer, 25K
R157 Composition, 1K
R158 Composition, 100K
R160, 163 Composition, 10K
R161 Composition, 2.7K, 1W
R162 Composition, 1K
R164, 165 Composition, 8.2K

RC20BF101K
RC20BF682K
RC20BF224K
RC20BF152K
RC20BF101K
RC20BF682K
RC30BF333K
R33DC223J
RC30BF333K
RC20BF304J
RC20BF223K
RC20BF304J
R806-125
RC20BF102K
RC20BF104K
RC20BF103K
RC20BF272K
RC20BF102K
RC20BF822K

COILS, CHOKES AND TRANSFORMERS

Symbol	Description	Part No.
L1	Choke, 3.3 Micro Henries	L50066-8
L2	Coil, FM Antenna	L726-124
L3	Coil, AM Antenna	L721-139
L4	AM Ferrite Loop	L50210-24
L5	Choke, 1 Micro Henry	L50066-2
L6, 7	Choke, .68 Micro Henries	L50066-19
L8	Choke, RF	L629-180
L9	Coil, FM RF	L726-126
L10	Coil, FM Osc.	L726-125
L11, 13	Choke, 1 Micro Henry	L50066-2
L12	Choke, .56 Micro Henries	L50066-19
L14	Choke, 1.2 Micro Henries	L50066-3
L15, 16, 17, 18	Choke, Filament Ferrite Bead	L592-189
L19	Coil, AM Osc.	L50210-21
L20	Choke, 1.2 Micro Henries	L50066-3
L21	Coil, 10KC Filter	L644-120
T1	Transformer, Power	T806-115
T2, 3	Transformer, Output	T806-127
Z1	Transformer, FM IF	ZZ662-117
Z2	Transformer, FM IF	ZZ2987
Z3	Limited Coil Assembly	L670-145
Z4	Transformer, FM Detector	ZZ592-170
Z5	Transformer, AM RF	L50210-23
Z6	Transformer, AM IF	ZZ50210-1
Z7	Transformer, AM IF	ZZ2984

MISCELLANEOUS

Symbol	Description	Part No.
CR1, 2	Diode, matched pair	V-1N542
F1	Fuse, 3.2 Ampere Slo-Blo	F3319
PC1, 2	Printed Circuit Phono Equalization C90, 91 390uuf, 10% C95, 96 560uuf, 10% C99, 100 1500uuf, 10% R98, 100 270K, 10% R99, 101 2M, 20% R106, 107 120K, 10%	PC50187-3
PC3, 4	Printed Circuit High Freq. Filter C106, 107 220uuf, 20% C109, 111, 112, 113 100uuf, 20% R112, 115, 116, 118 100K, 20%	PC50187-2
PC5, 6	Printed Circuit tone control	PC50187-4
I1, 2	Lamp dial	I50082-3
S1	Switch-selector	S720-154
S2	Switch, Mono-Stereo	S270-151
S3	Switch, Slide	S50200-2
S4	Switch, Power	Part of R132
S5, 6, 7, 8, 9	Switch slide	S50200-2
S10	Switch, AM IF Bandwidth	Part of R132
—	Dress panel, screened	AS806-108-1
—	Dial pointers	A720-212
—	Speaker terminal strip	E50170-10
—	Dial glass	N720-207
—	Fuse holder	X1036

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. Set Volume Control to minimum (CCW.)

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% (± 22.5 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.

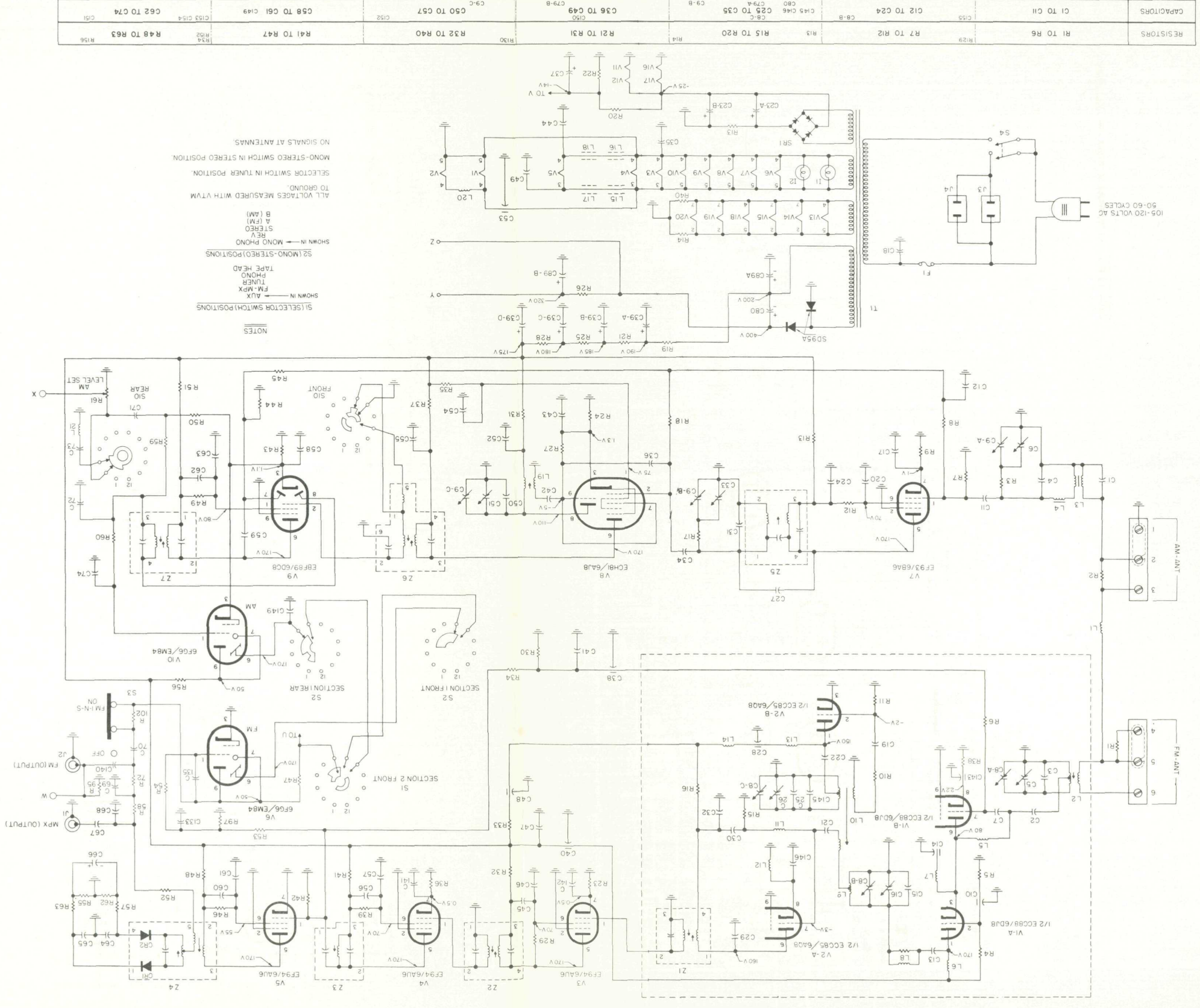
INDICATOR: DC VTVM, AC VTVM, and scope for alignment. AC VTVM for 10 KC AM whistle filter adjustment.

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 screwdriver for all trimming capacitors; a K-Tran tool for Z1, Z2, Z3, Z5, Z6 and Z7; a hex tool for Z4, L2, L9, L10 and L19. For AM alignment, short junction of C12 and R8 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 3 of Z7	1 KC	None	AC VTVM to Ch. B RCRDR Output			0 db at 1 KC
					10 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. B RCRDR Output	Z6, Z7, top and bottom	Maximum voltage	
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. B RCRDR Output	Z6 bottom	Adjust slightly for symmetrical curve	
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. B RCRDR Output	L19, Z5	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. B RCRDR Output	C51, C6 C33	Maximum voltage	
6	Repeat steps 4 and 5 for proper dial calibration and maximum output.									
7		FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V2	10.7 MC	None	DC VTVM to junction of R57 and C66	Z1, Z2, Z3 and Z4, top & bottom	Maximum negative voltage	
8		FM	Point of no signal and no interference	FM Gen. connected to ungrounded tube shield of V2	10.7 MC	None	Connect two 47K ohm resistors in series across C66. Connect a VTVM between the junction of the two 47K ohm resistors and the junction of R58, C70.	Z4 top	Zero reading on zero center scale	
9		FM	90 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals 2 and 3	90 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to the junction of R34 and R30 and scope to Ch. A. RCRDR Output	L2, L9, L10	Check for sine waveform and adjust for maximum negative voltage	
10		FM	106 MC	FM Gen. connected thru two 120-ohm carbon resistors in series with lead to antenna terminals 2 and 3	106 MC	30% FM (22.5 KC Dev.) at 400 cps	DC VTVM to the junction of R34 and R30 and scope to Ch. A. RCRDR Output	C5, C16 and C26	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



RESISTORS	CAPACITORS
R1 TO R6	C1 TO C11
R7 TO R12	C12 TO C24
R13	C25 TO C35
R14	C36 TO C49
R15 TO R20	C50 TO C57
R21 TO R31	C58 TO C61
R32 TO R40	C62 TO C74
R41 TO R47	
R48 TO R53	
R54	
R55	
R56	

NOTES

1. SELECTOR SWITCH POSITIONS

2. SHOWN IN — FM-MPX TUNER PHONO TAPE HEAD

3. S2 (MONO-STEREO) POSITIONS

4. SHOWN IN — MONO PHONO STEREO REV

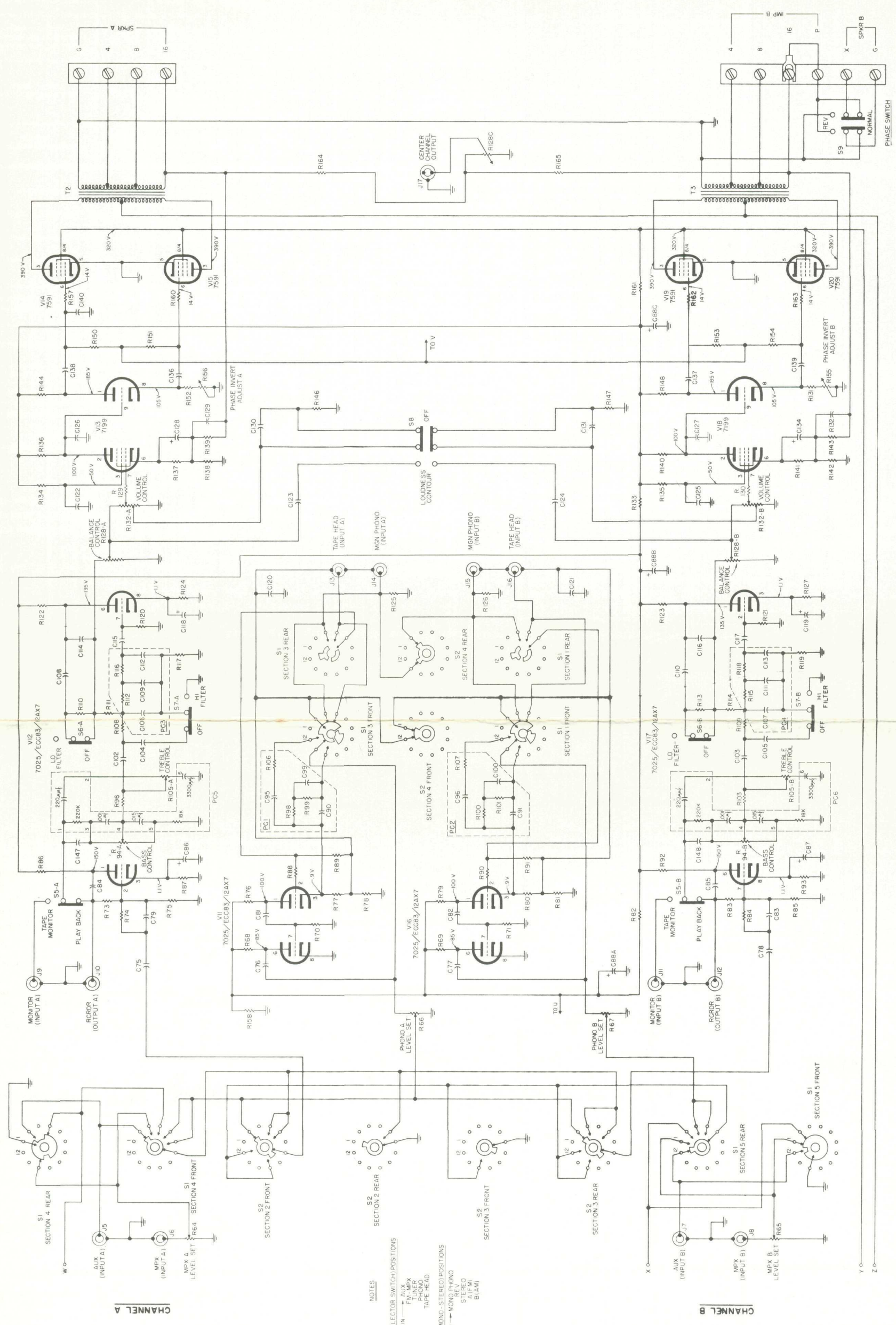
5. ALL VOLTAGES MEASURED WITH VTVM TO GROUND.

6. SELECTOR SWITCH IN TUNER POSITION.

7. MONO-STEREO SWITCH IN STEREO POSITION.

8. NO SIGNALS AT ANTENNAS.

SCHEMATIC DIAGRAM • AMPLIFIER SECTION



CHANNEL A

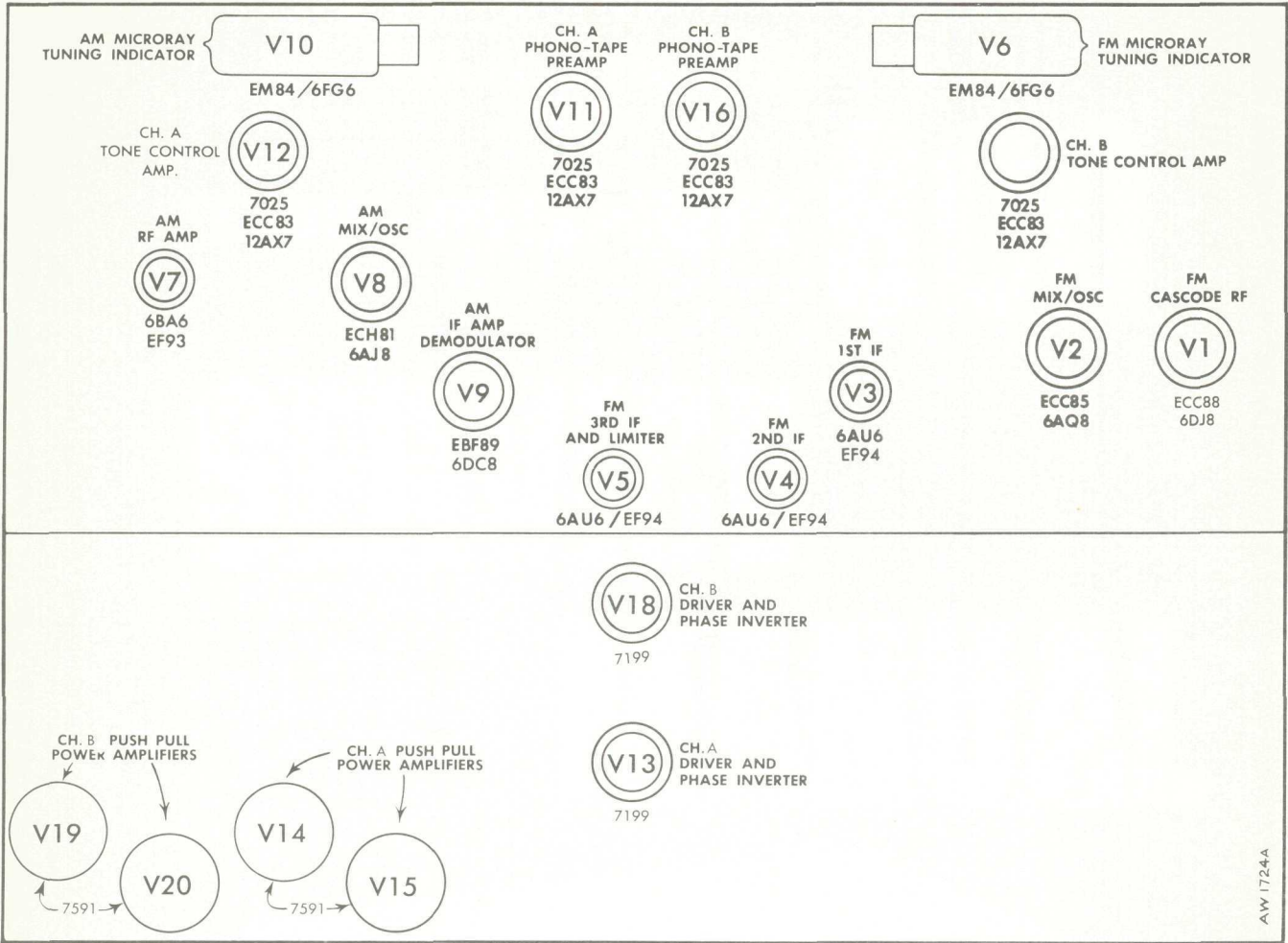
CHANNEL B

NOTES
S1 SELECTOR SWITCH POSITIONS
SHOWN IN → AUX
FM MPX
TUNER
TAPE HEAD

S2 MONO-STEREO POSITIONS
SHOWN IN → MONO PHONO
REV
STEREO
FM (M)
B (AM)

R54 R65	R94-A R94-B	R105-A R105-B	R120 TO R131	R132-A R132-B	R150 TO R165
C75 TO C78	R66 TO R104 C79 TO C93	C94 TO C110	R106 TO R119 C94 TO C110	R128-A R128-B	R133 TO R149 C122 TO C137
					C138 TO C144

TUBE LAYOUT





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