

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, 01uF, 20%, 500V	C50089-3
C3, 4, 5, 6	Mylar, .022uF, 400V	C50574-8
C7, 8	Ceramic, 560, 1000V	C50072-14
C9, 10	Ceramic, 56, N1500, 1000V	C50070-22
C11, 12	Ceramic, 2200, 1000V	C50072-5
C13, 14	Ceramic, 33, N750, 1000V	C50070-15
C15, 16	Ceramic, .02uF, +80 -20%, 100V	C50095-1
C17, 18, 23, 24	Mylar, .047uF, 400V	C50197-30
C25, 26	Ceramic, 15, N75, 1000V	C50070-18
C27, 28	Ceramic, 1000, 1000V	C50072-3
C29	Molded, .01uF, 20%, 600V	C2747
C30	Electrolytic, 200uF, 250V	C50180-20
C31	Electrolytic, 2-section: A—200uF, 250V B—40uF, 500V	C50180-19
C32	Electrolytic, 3-section: A—40uF, 475V B—40uF, 475V C—20uF, 300V	C50180-75A
C33	Electrolytic, 100uF, 70V	C50483-19
C34, 35	Ceramic, 100, N1500, 1000V	C50070-6

RESISTORS

Deposited Carbon, in ohms, 5% tolerance, 1/2-watt, unless otherwise noted. K=Kilohms, M=Megohms.

Symbol	Description	Part No.
R1, 2	68K, 5%, 1/8W	R12DC683J
R3, 4, 7, 8	100K, 5%, 1/8W	R12DC104J
R5, 6	180K, 5%, 1/8W	R12DC184J
R9, 10	10K	R33DC103J
R11, 12	Glass, 330K, 5%, 1W	R30G334J
R13, 14	Glass, 2.2K, 5%, 1W	R30G222J
R15, 16	2.2M	R33DC225J
R17, 18	220K	R33DC224J
R19, 20	47K, 5%, 1/8W	R12DC473J
R21, 22	Composition, 10M, 10%, 1/2W	RC20BF106K
R23, 24	2.7M	R33DC275J
R25, 26	1.5K	R33DC152J
R27, 28	150K	R33DC154J
R29, 30	1M	R33DC105J
R31, 32	560K	R33DC564J
R33, 34	2.2K	R33DC222J
R35, 36	22K	R33DC223J
R37, 38	82K	R33DC823J
R39, 40	470K	R33DC474J
R41, 42	1.2K	R33DC122J

R43, 44	220	R33DC221J
R45, 46	39K	R33DC393J
R47, 48	68K	R33DC683J
R49, 50	330K	R33DC334J
R51, 52	10K	R33DC103J
R53, 54, 59, 60, 61, 62	1K	R33DC102J
R55, 56, 57, 58		330K, 5%, 1/8W
R63, 64	Glass, 25, 10%, 5W	RPG5W250K
R65, 66	Composition, 330, 10%, 1W	RC30BF331K
R71	Composition, 3.3K, 10%, 1/2W	RC20BF332K
R73	Composition, 820, 10%, 1/2W	RC20BF821K
R74	450, 10%, 7W	RPG7W451K
R77	W.W., 2.2K, 10%, 10W	R1113-119
R78	Composition, 2.2K, 10%, 1W	RC30BF222K
R79	Composition, 2.2K, 10%, 1/2W	RC20BF222K
R80	Composition, 47K, 10%, 1W	RC30BF473K
R81	Composition, 100K, 10%, 1W	RC30BF104K

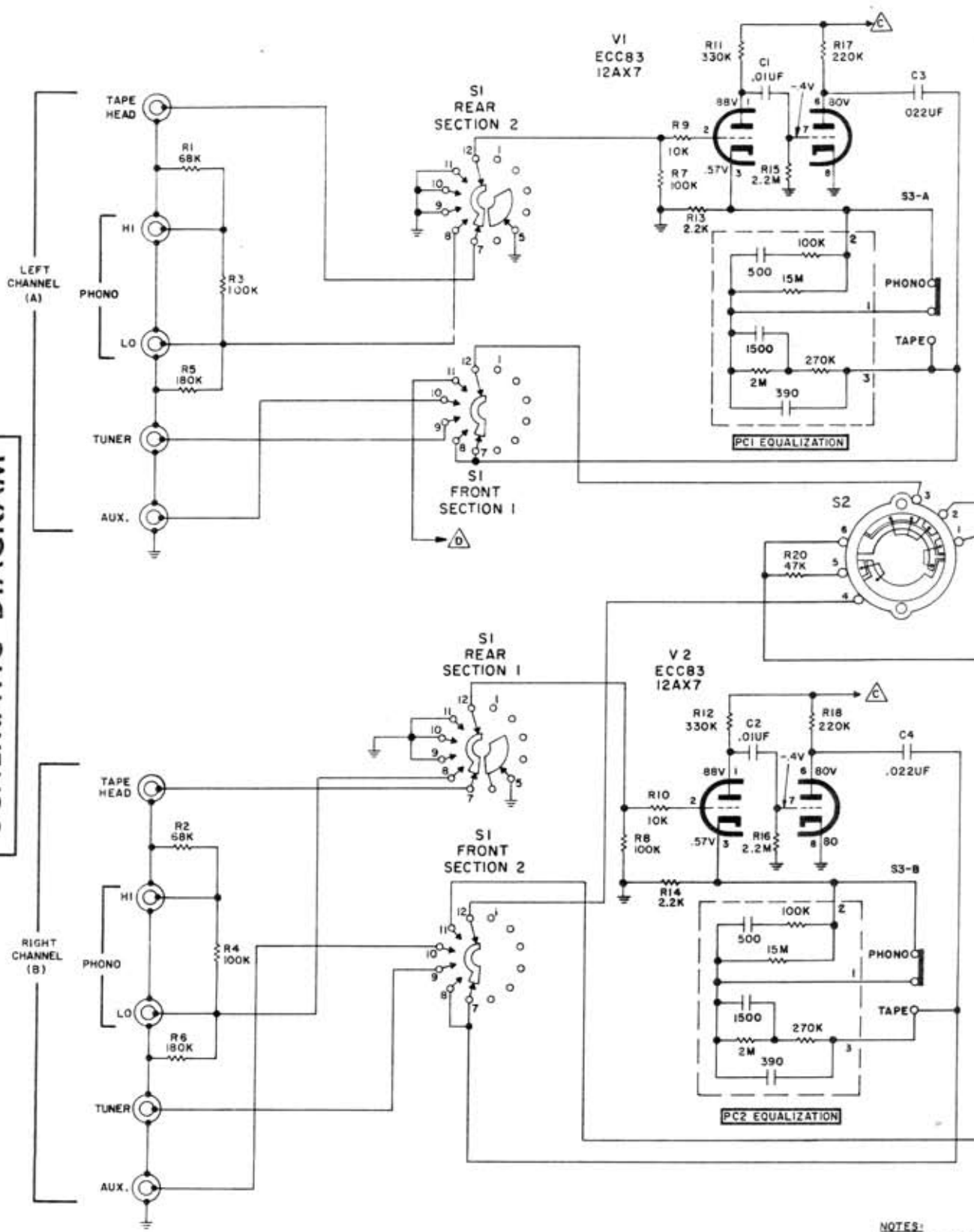
POTENTIOMETERS AND SWITCHES

Symbol	Description	Part No.
R67	Potentiometer, 500K, Dual, Bass	R50160-153
R68	Potentiometer, 500K, Dual, Treble	R50160-153
R69	Potentiometer, 500K, Dual, Volume	R50160-143
R70	Potentiometer, 500K, Dual, Balance	R50160-152
R72	Potentiometer, 5K, Bias	R50103-4
R75, 76	Potentiometer, 25K, Phase Inverter	R50103-2
S1	Switch, Selector	S1113-118
S2	Switch, Mode	S1113-117
S3, 4, 5, 6, 7	Switch, Rocker	S50200-15-1
S-8	Switch Power	Part of R69

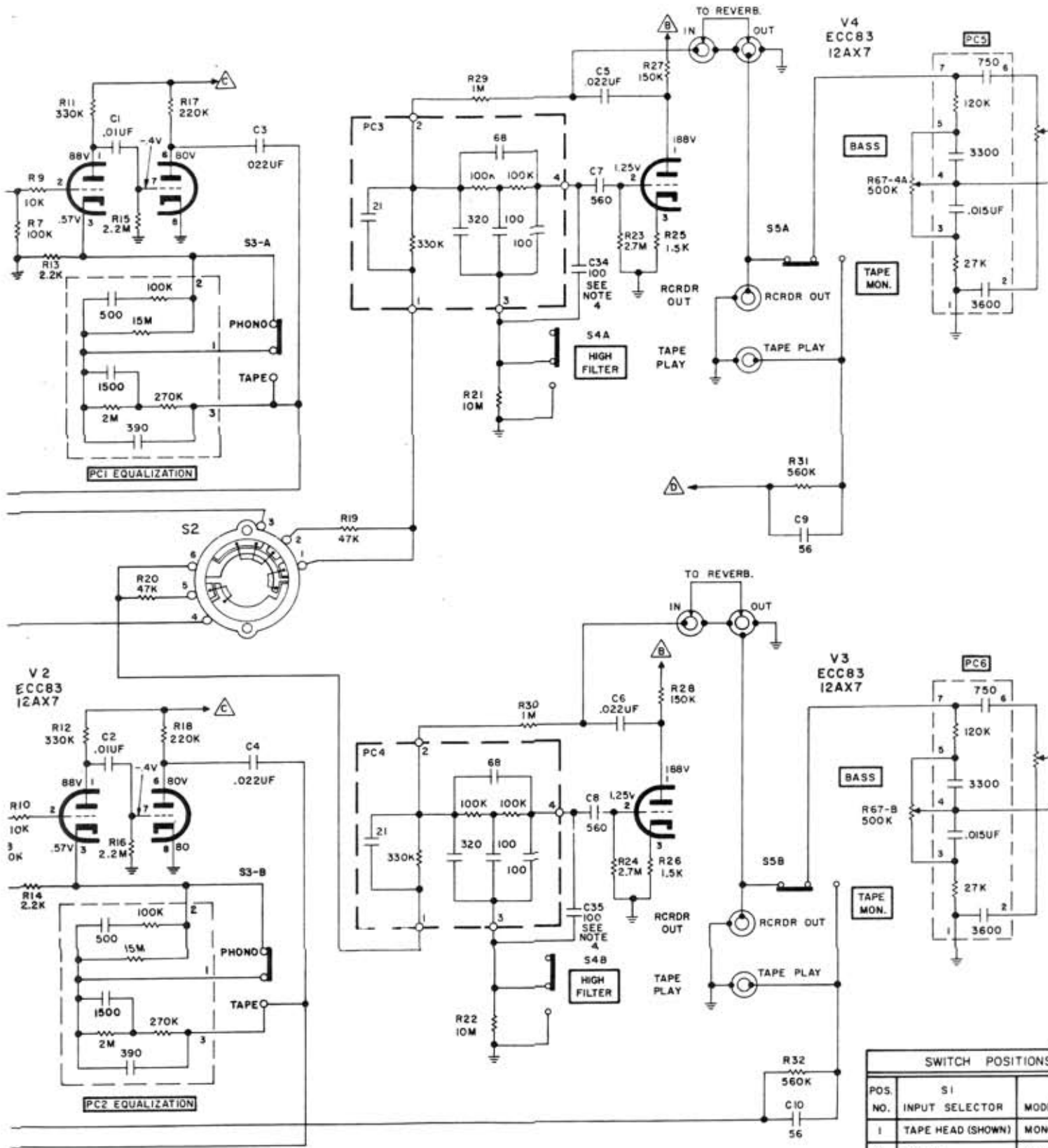
MISCELLANEOUS

Symbol	Description	Part No.
CR1, 2	Silicon Diode	SR50411-1
F1	Fuse, 3.2A, Slo-Blo	F3319
PC1, 2	Printed Circuit, Equalization	PC50187-18
PC3, 4	Printed Circuit, High Filter	PC50187-19
PC5, 6	Printed Circuit, Tone Control	PC50187-9
T1	Transformer, Output, Channel A	T991-116-3
T2	Transformer, Output, Channel B	T991-116-4
T3	Transformer, Power	T1113-115
—	Insert, Dress Panel Screened (Upper)	AS1113-122
—	Insert, Dress Panel Screened (Lower)	AS1113-123
—	Knob, Selector, Mode, Balance	E50562-1
—	Knob, Dual Top, Tone Control	E50563
—	Knob, Dual Bottom, Tone Control	E50564
—	Knob, Volume	E50566-1
—	Pilot Lamp No. 1847 OF	I50009-8

SCHEMATIC DIAGRAM



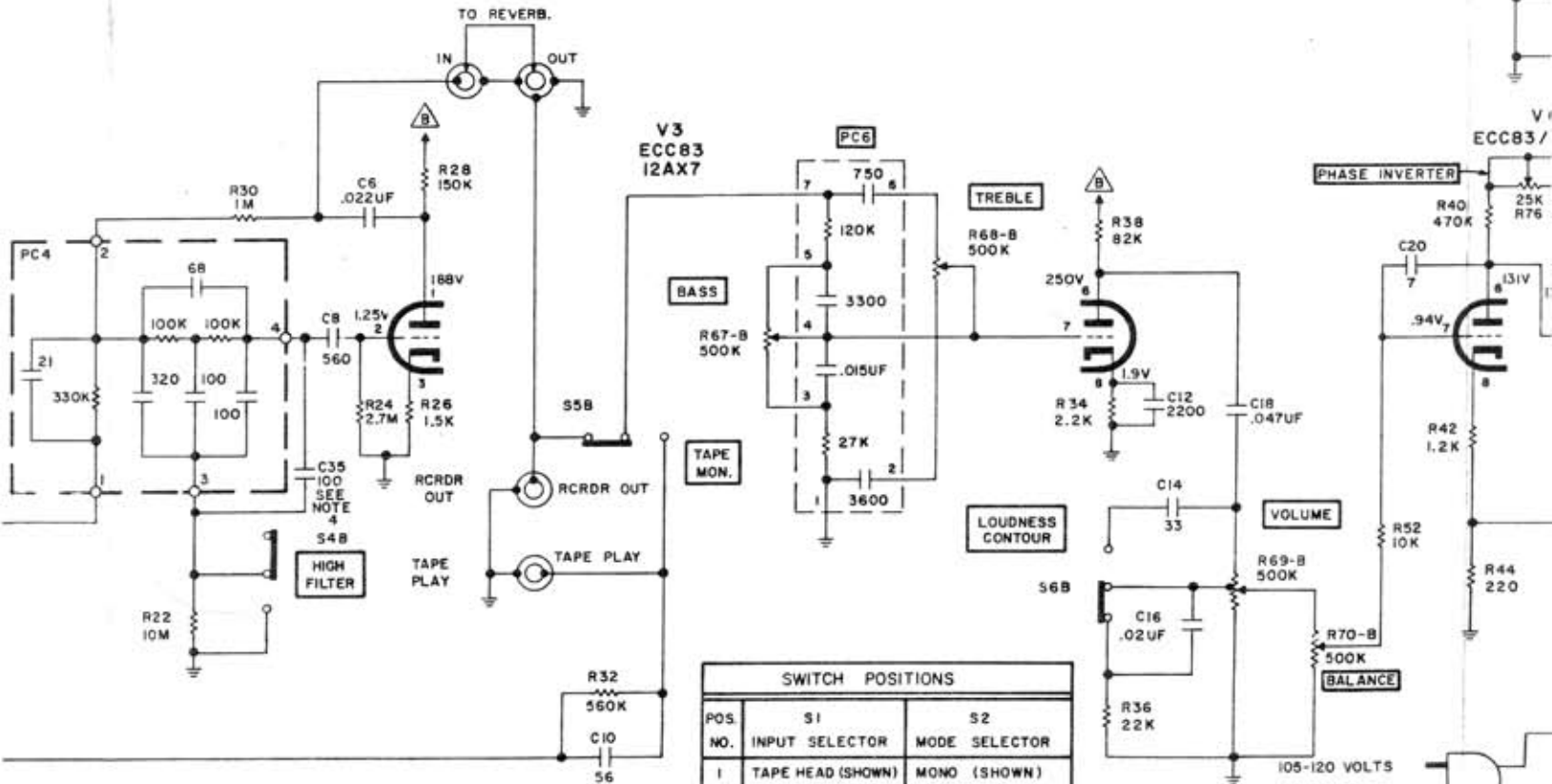
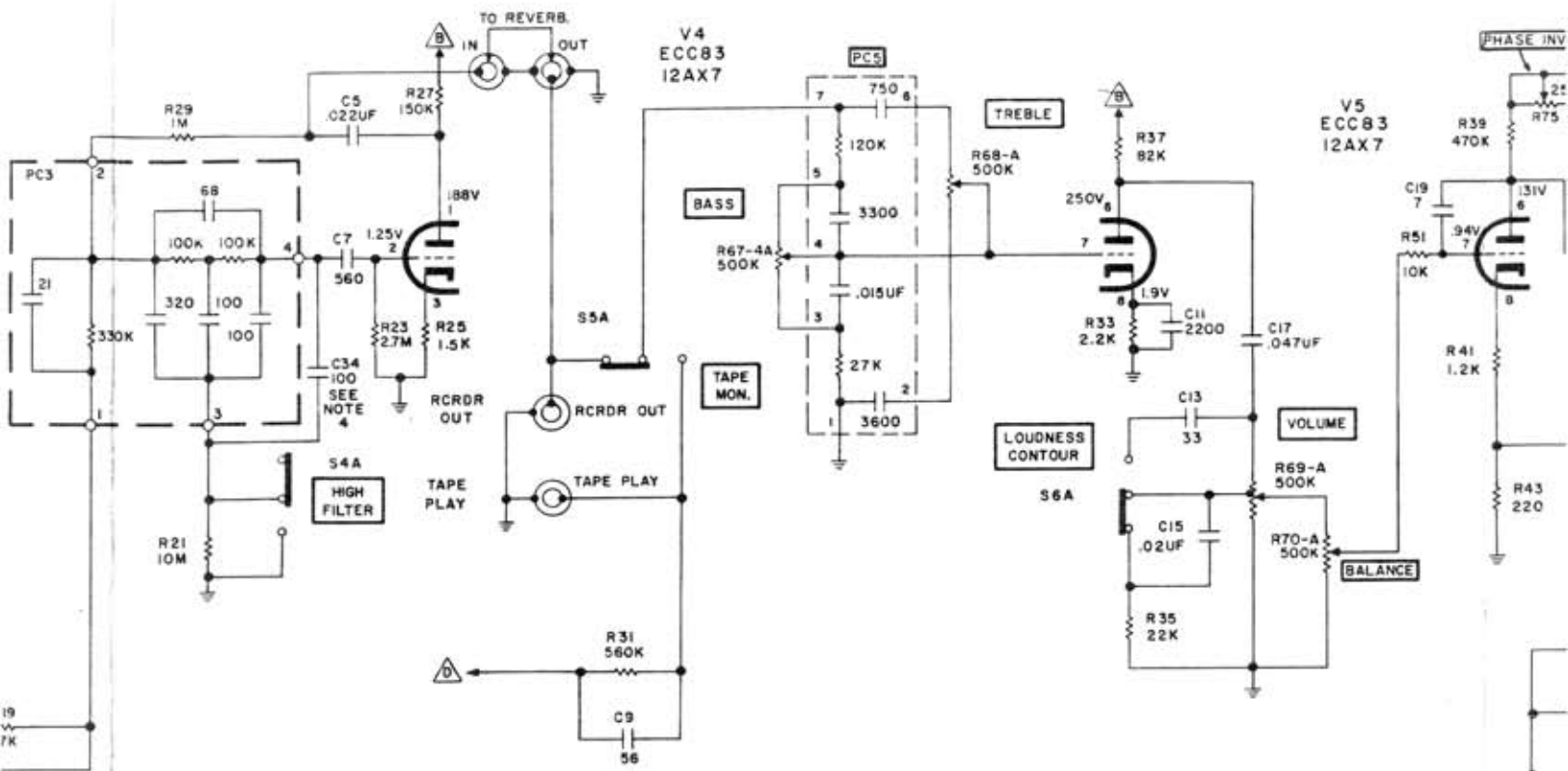
- NOTES:**
1. FOR ALL
 2. DC VOLTA
 3. REAR SEC
 4. CAPACITOR



NOTES:

1. FOR ALL VOLTAGE AND CURRENT MEASUREMENTS, LINE = 117 V.A.C.
2. DC VOLTAGE MEASURED WITH VTVM TO CHASSIS WITH NO SIGNAL INPUT.
3. REAR SECTION OF DUAL CONTROLS USED IN LEFT CHANNEL; FRONT SECTION IN RIGHT.
4. CAPACITORS C34 AND C35 OMITTED IN SETS SERIALIZED 10001A TO 11000A.

SWITCH POSITIONS		
POS. NO.	S1 INPUT SELECTOR	MODE
1	TAPE HEAD (SHOWN)	MONO
2	PHONO	STEREO
3	TUNER	REVERSE
4	AUXILIARY	
5	TAPE PLAY	



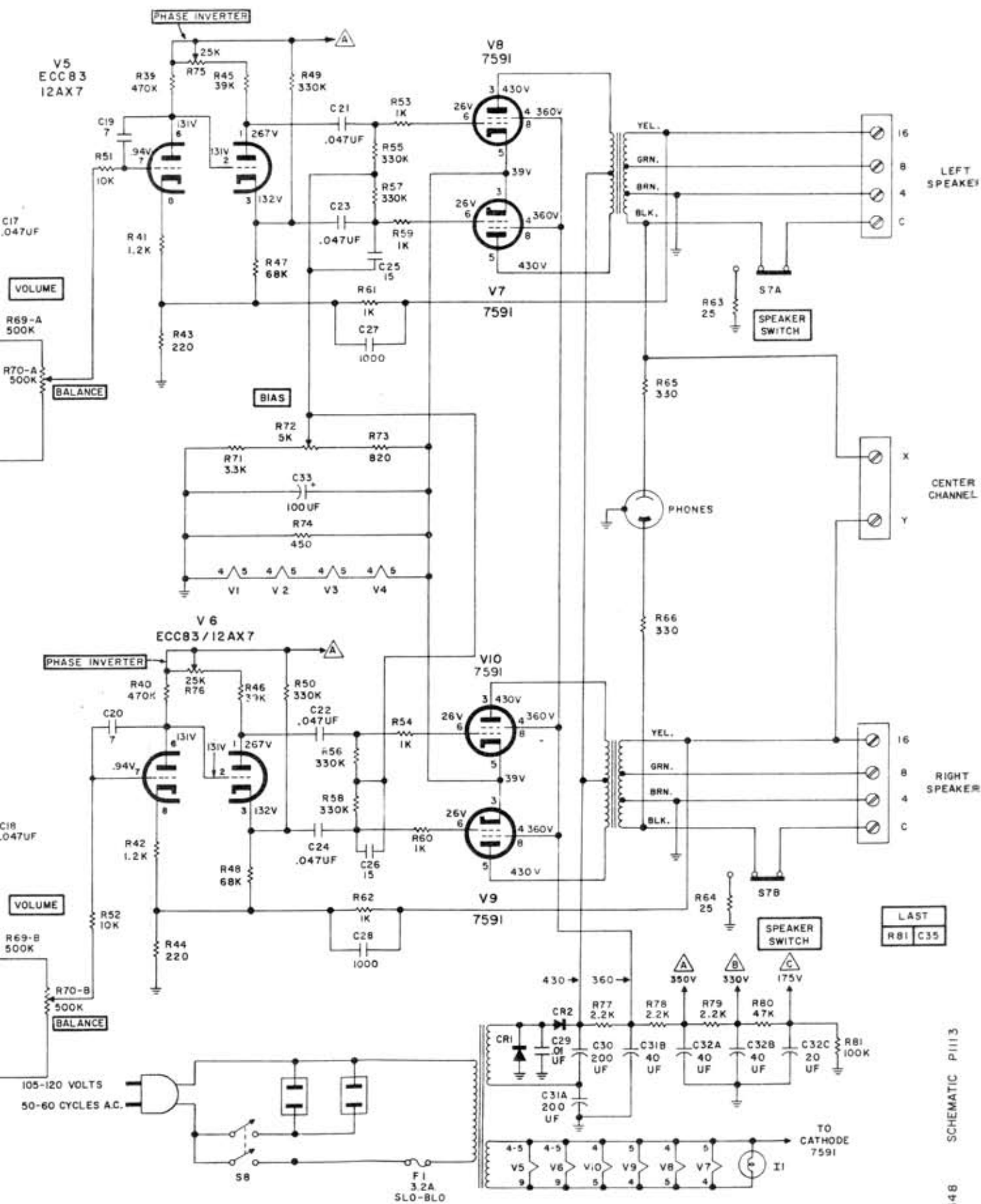
SWITCH POSITIONS		
POS. NO.	S1 INPUT SELECTOR	S2 MODE SELECTOR
1	TAPE HEAD (SHOWN)	MONO (SHOWN)
2	PHONO	STEREO
3	TUNER	REVERSE
4	AUXILIARY	
5	TAPE PLAY	

VOLTAGE AND CURRENT MEASUREMENTS, LINE = 117 V.A.C.
MEASURED WITH VTVM
WITH NO SIGNAL INPUT.

1/4 OF DUAL CONTROLS USED IN LEFT CHANNEL;
1/2 MON IN RIGHT.

R34 AND C35 OMITTED IN SETS SERIALIZED 10001A TO 11000A.

105-120 VOLTS
50-60 CYCLES A.C.



ADJUSTMENTS

Equipment Required: DC VTVM, Audio (AC) VTVM
IM Analyzer,
4-ohm, non-inductive load resistor
(minimum 25-watt rating)

1 — Bias Adjustment

- a. Set Volume control to minimum.
- b. Connect DC VTVM to Pin 5 of any output tube (V7, V8, V9 or V10).
- c. Adjust "Bias" control for 39.0 volts.

2 — Phase Inverter Adjustment

IMPORTANT: Note in the schematic that the C (common) speaker terminals are not grounded — the 4-ohm terminals are grounded. Never ground the C terminals either directly or accidentally through test equipment common ground leads.

Channel A

- a. Connect a 4-ohm load between C and 4 left speaker terminals.
- b. Connect IM Distortion Analyzer output to channel A AUX input.
- c. Connect the Analyzer input ground lead to the left speaker 4-ohm terminal.
- d. Connect the Analyzer input hot lead to the left speaker C terminal
- e. Set the Selector switch to AUX, the Mode switch to STEREO, and adjust the Analyzer for 8.0 volts across the 4-ohm load.
- f. Adjust the CH A Phase Inverter control for minimum IM distortion.

Channel B

- a. Connect a 4-ohm load between C and 4 right speaker terminals.
- b. Connect IM Distortion Analyzer output to channel B AUX input.
- c. Connect the Analyzer input ground lead to the right speaker 4-ohm terminal.
- d. Connect the Analyzer input hot lead to the right speaker C terminal.
- e. Set the Selector switch to AUX, the Mode switch to STERO, and adjust the Analyzer for 8.0 volts across the 4-ohm load.
- f. Adjust the CH B Phase Inverter control for minimum IM distortion.