

marantz®

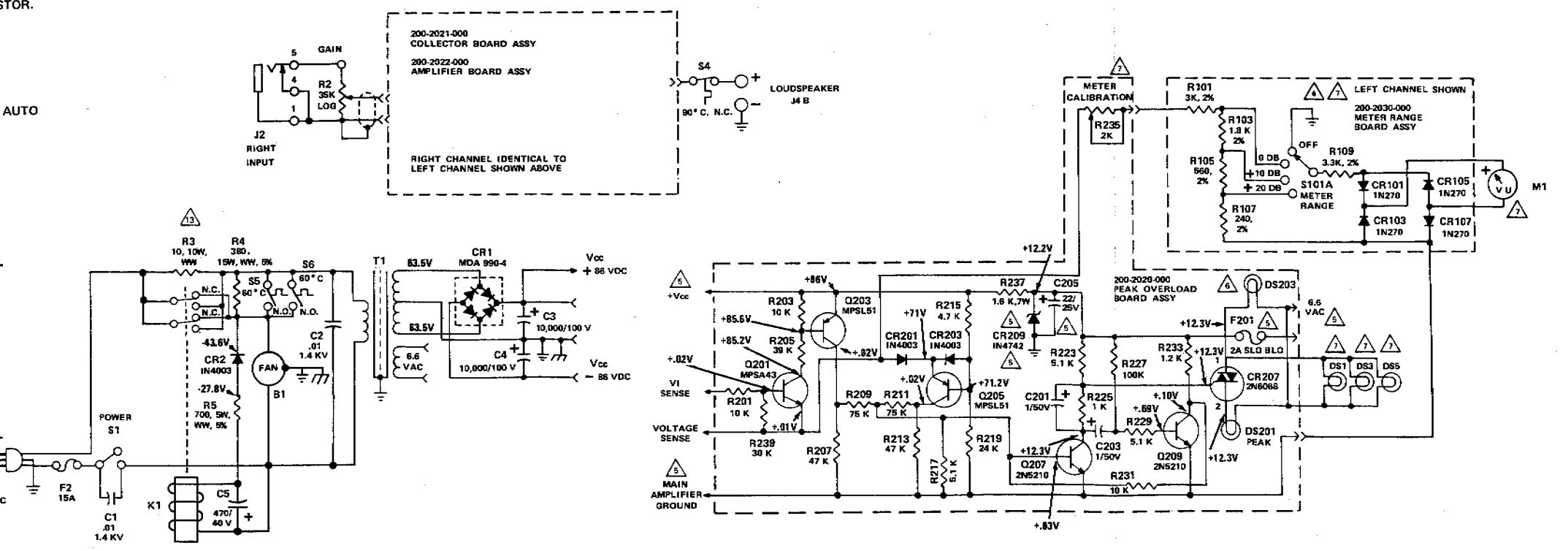
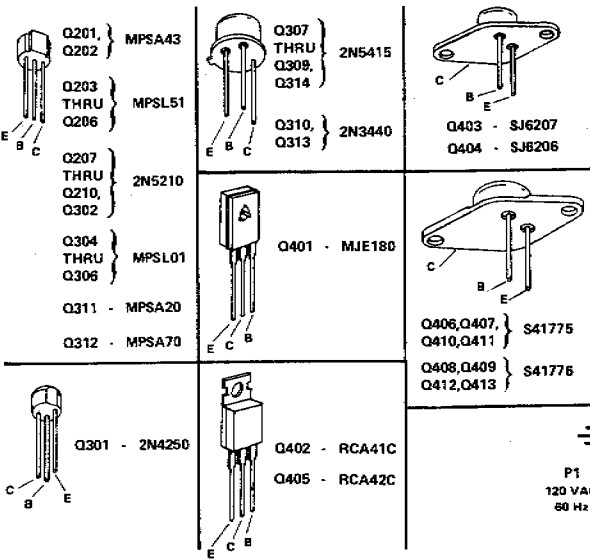
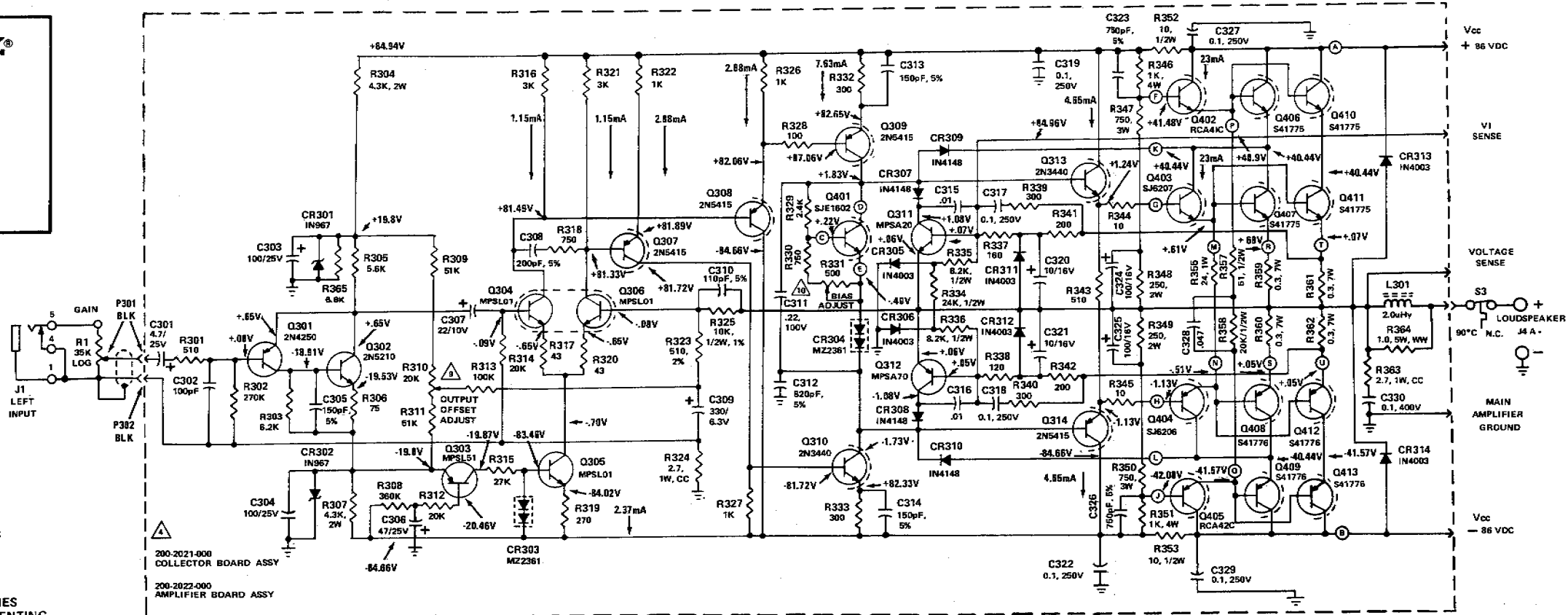
Model 510/M

POWER AMPLIFIER

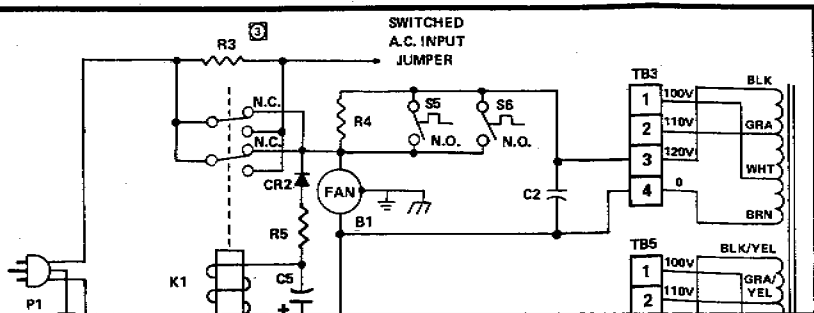
SCHEMATIC DIAGRAM

NOTES, UNLESS SPECIFIED:

- THIS SCHEMATIC SHOWS LEFT CHANNEL ONLY.
- CAPACITORS IN MFD, 10%. POLARIZED CAPACITORS ARE ELECTROLYTICS.
- RESISTORS IN OHMS, 1/4 WATT, 5%.
- LEFT CHANNEL REFERENCE DESIGNATIONS WHERE APPLICABLE ARE ODD NUMBERS, NEXT HIGHER EVEN NUMBERS ARE RIGHT CHANNEL.
- CIRCUIT OR COMPONENT COMMON TO BOTH CHANNELS.
- USED ON MODEL 510 ONLY.
- USED ON MODEL 510 M ONLY.
- POWER SUPPLY VOLTAGES @ 120 VAC LINE: IDLING (NO SIGNAL APPLIED) $\pm V_{cc}$ IS 86VDC +5% -0%; FULL POWER (8 OHM LOAD) $\pm V_{cc}$ IS 77VDC +5% -0%.
- ADJUST R310 FOR 0VDC ± 25 mV OUTPUT OFFSET.
- ADJUST R331 FOR A 26mV ± 8 mV DROP ACROSS THE SERIES RESISTANCE (R369 AND R360 OR R361 AND R362) REPRESENTING 30mA TO 57mA QUIESCENT CURRENT PER OUTPUT TRANSISTOR.
- ALL DC VOLTAGES MEASURED AT 120V WITH NO SIGNAL APPLIED AND INPUT JACKS SHORTED
- ALL VOLTAGES MEASURED WITH METER RANGE SWITCH SET AT 0 dB, GAIN CONTROLS SET AT 0 dB ON THE METER.
- RESISTOR R3 MUST BE SHORTED WITH A JUMPER BEFORE AUTO TRANSFORMER IS USED.



VOLTAGE	JUMPER NO. 1	JUMPER NO. 2	CONNECT SWITCHED A.C. INPUT JUMPER TO	R3 RESISTOR
240V	TB3-4 TO TB5-3	NONE	TB3-3	20 ohm, 20W
220V	TB3-4 TO TB5-2	NONE	TB3-2	20 ohm, 20W
200V	TB3-4 TO TB5-1	NONE	TB3-1	20 ohm, 20W
(CANADA)	NONE	NONE	TB3-3	10 ohm, 10W
110V	TB3-4 TO TB5-4	TB3-2 TO TB5-2	TB5-2	10 ohm, 10W
100V	TB3-4 TO TB5-4	TB3-1 TO TB5-1	TB5-1	10 ohm, 10W

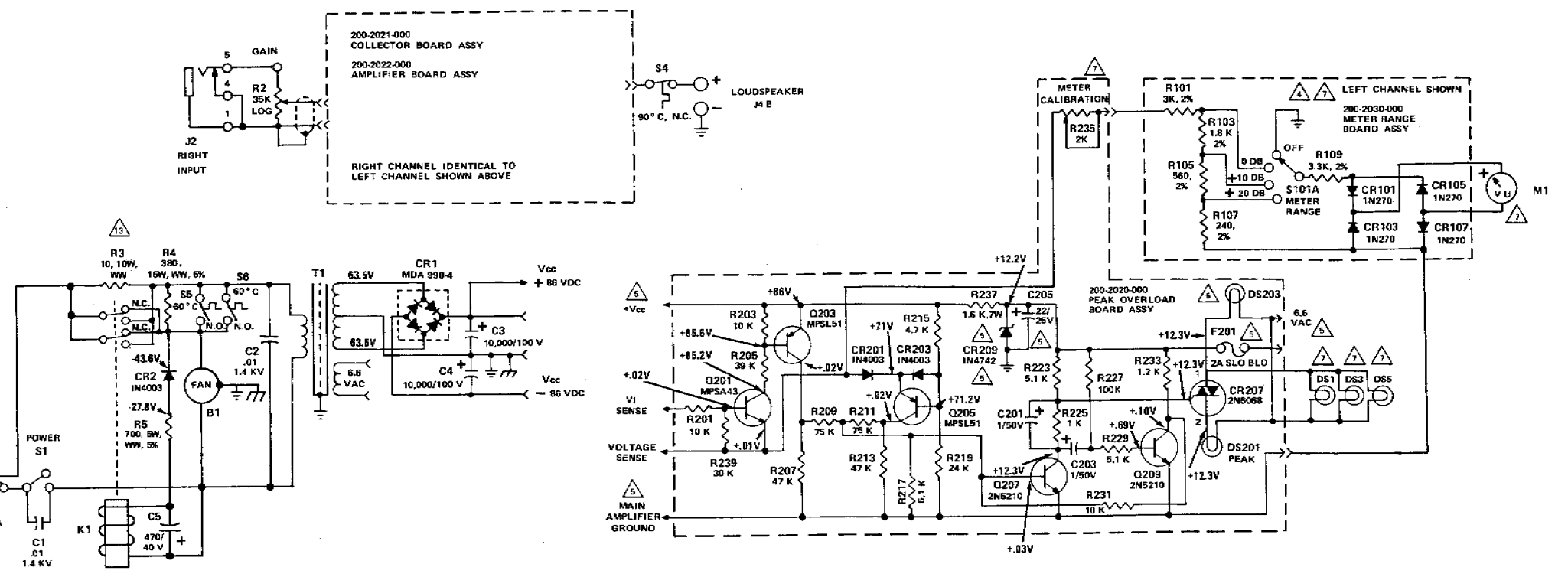
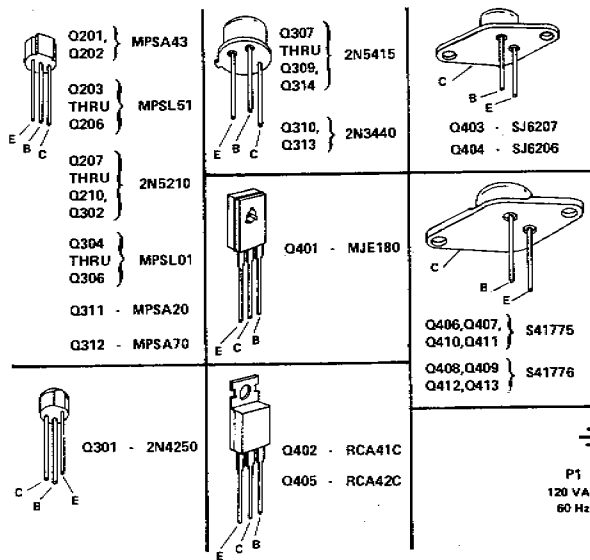
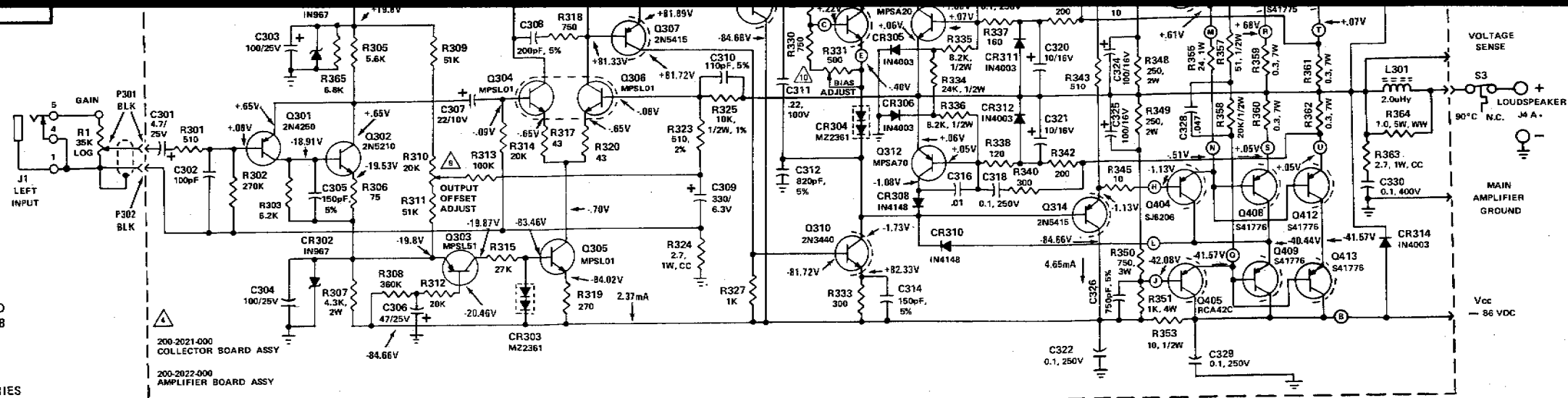


LAST REFERENCE DESIGNATION CHART				
CHASSIS	METER RANGE BOARD	PEAK OVERLOAD BD	AMPLIFIER BOARD	COLLECTOR BOARD
1-99 SERIES	100 SERIES	200 SERIES	300 SERIES	400 SERIES
C5	F2	CR108	C205	C330
CR2	S6	R110	CR209	CR314
B1	DS6	S101B	F201	Q314

OUT OF SEQUENCE CHART				
CHASSIS	METER RANGE BOARD	PEAK OVERLOAD BD	AMPLIFIER BOARD	COLLECTOR BOARD
S1		R235		
		R239		
		R237		
		CR209		
		R217		

NOTES, UNLESS SPECIFIED:

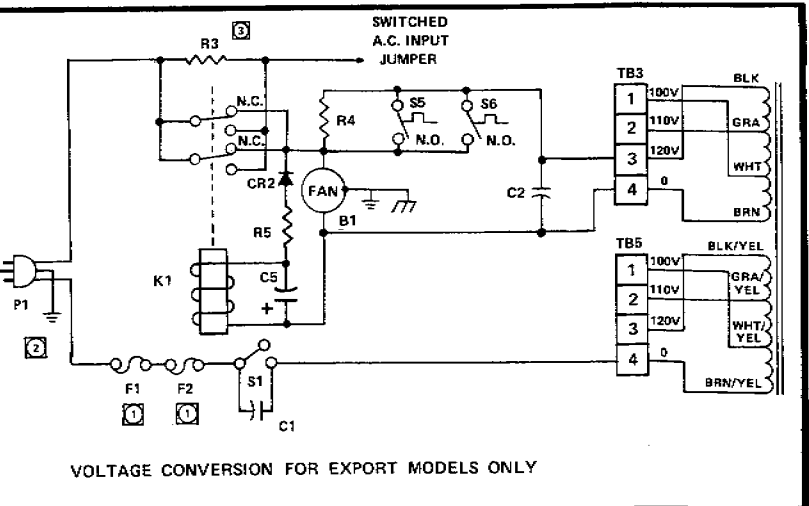
1. THIS SCHEMATIC SHOWS LEFT CHANNEL ONLY.
2. CAPACITORS IN MFD, 10%. POLARIZED CAPACITORS ARE ELECTROLYTICS.
3. RESISTORS IN OHMS, 1/4 WATT, 5%.
4. LEFT CHANNEL REFERENCE DESIGNATIONS WHERE APPLICABLE ARE ODD NUMBERS, NEXT HIGHER EVEN NUMBERS ARE RIGHT CHANNEL.
5. CIRCUIT OR COMPONENT COMMON TO BOTH CHANNELS.
6. USED ON MODEL 510 ONLY.
7. USED ON MODEL 510 M ONLY.
8. POWER SUPPLY VOLTAGES @ 120 VAC LINE: IDLING (NO SIGNAL APPLIED) $\pm V_{cc}$ IS 86VDC +5% -0%; FULL POWER (8 OHM LOAD) $\pm V_{cc}$ IS 77VDC +5% -0%.
9. ADJUST R310 FOR 0VDC ± 25 mV OUTPUT OFFSET.
10. ADJUST R331 FOR A 26mV ± 8 mV DROP ACROSS THE SERIES RESISTANCE (R359 AND R360 OR R361 AND R362) REPRESENTING 30mA TO 57mA QUIESCENT CURRENT PER OUTPUT TRANSISTOR.
11. ALL DC VOLTAGES MEASURED AT 120V WITH NO SIGNAL APPLIED AND INPUT JACKS SHORTED
12. ALL VOLTAGES MEASURED WITH METER RANGE SWITCH SET AT 0 dB, GAIN CONTROLS SET AT 0 dB ON THE METER.
13. RESISTOR R3 MUST BE SHORTED WITH A JUMPER BEFORE AUTO TRANSFORMER IS USED.



VOLTAGE	JUMPER NO. 1	JUMPER NO. 2	CONNECT SWITCHED A.C. INPUT JUMPER TO	R3 RESISTOR
240V	TB3-4 TO TB5-3	NONE	TB3-3	20 ohm, 20W
220V	TB3-4 TO TB5-2	NONE	TB3-2	20 ohm, 20W
200V	TB3-4 TO TB5-1	NONE	TB3-1	20 ohm, 20W
(CANADA)	NONE	NONE	TB3-3	10 ohm, 10W
110V	TB3-4 TO TB5-4	TB3-2 TO TB5-2	TB5-2	10 ohm, 10W
100V	TB3-4 TO TB5-4	TB3-1 TO TB5-1	TB5-1	10 ohm, 10W

100V: F1=15A SLO-BLO, F2=15A NORMAL BLO.
 120V (DOMESTIC): F1 = NOT USED, F2 = 15A.
 120V (CANADA): *F1 - 15A, F2 = 12A.
 220/240V: F1 = NOT USED, F2 = 8A.
 *USE F2 FUSE FOR F1 IN CANADIAN CONVERSION.

2 AC LINE CORD FOR 100V UNITS WITHOUT GROUND CONNECTOR.



CHASSIS	METER RANGE BOARD	PEAK OVERLOAD BD	AMPLIFIER BOARD	COLLECTOR BOARD
1-99 SERIES	100 SERIES	200 SERIES	300 SERIES	400 SERIES
C5	F2	CR108	C205	C330
CR2	S6	R110	CR209	CR314
B1	DS6	S101B	F201	Q314
J4B	M2	DS203	R365	
P1			Q210	L301
K1			R240	
T1				

CHASSIS	METER RANGE BOARD	PEAK OVERLOAD BD	AMPLIFIER BOARD	COLLECTOR BOARD
S1		R235		
		R239		
		R237		
		CR209		
		R217		

CHASSIS	METER RANGE BOARD	PEAK OVERLOAD BD	AMPLIFIER BOARD	COLLECTOR BOARD
S2		R238	R221	R354
S3		CR205	R222	R356
		CR206		

Figure 15. Schematic Diagram