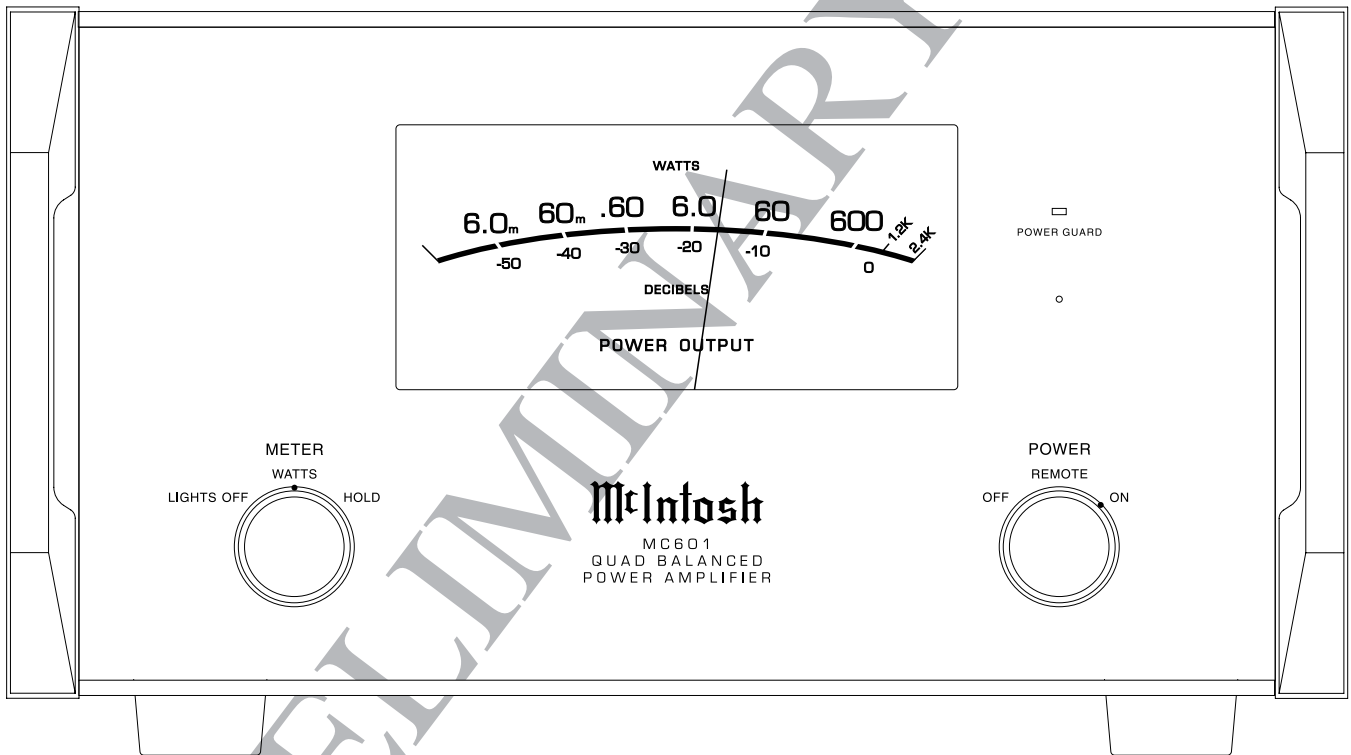




MC601

QUAD BALANCED POWER AMPLIFIER

SERIAL NO. AAY1001 And Above



CONTENTS

| | | | |
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SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

Specifications:

Power Output

Minimum sine wave continuous average power output is:
600 watts into 2 ohm load
600 watts into 4 ohm load
600 watts into 8 ohm load

Output Load Impedance

2, 4 or 8 ohms

Rated Power Band

20Hz to 20,000Hz

Total Harmonic Distortion

0.005% maximum harmonic distortion at any power level from 250 milliwatts to rated power, 20Hz to 20,000Hz

Dynamic Headroom

1.8dB

Frequency Response

+0, -0.25dB from 20Hz to 20,000Hz
+0, -3.0dB from 10Hz to 100,000Hz

Input Sensitivity (for rated output)

4.8 Volts Balanced
2.4 Volts Unbalanced

Signal To Noise Ratio (A-Weighted)

96dB Balanced (124dB below rated output)
94dB Unbalanced (122dB below rated output)

Intermodulation Distortion

0.005% maximum, if the instantaneous peak power output does not exceed twice the rated power output for any combination of frequencies from 20Hz to 20,000Hz.

Wide Band Damping Factor

Greater than 40

Input Impedance

22,000 ohms Balanced
22,000 ohms Unbalanced

Voltage Gain

29dB, 8 Ohms
26dB, 4 Ohms
23dB, 2 Ohms

Power Guard

Less than 2% Total Harmonic Distortion with up to a 14dB overdrive signal

Power Control Input

5-15VDC, less than 1mA

Power Control Output 1 and 2

12VDC, 50mA maximum total
Output is delayed 0.2 seconds from turn On

Power Requirements

Field AC Voltage conversion of the MC601 is not possible. The MC601 is factory configured for one of the following AC Voltages:

100V ~ 50/60Hz at 8 Amps
110V ~ 50/60Hz at 6.6 Amps
120V ~ 50/60Hz at 6.6 Amps
220V ~ 50/60Hz at 3.6 Amps
230V ~ 50/60Hz at 3.3 Amps
240V ~ 50/60Hz at 3.3 Amps
Standby: less than 0.5 watt

Note: Refer to the rear panel of the MC601 for the correct voltage.

Overall Dimensions

Width is 17-1/2 inches (44.45cm)
Height is 9-7/16 inches (23.97cm) including feet
Depth is 22 inches (55.88cm) including the Front Panel, Handles and Cables


Weight

93 pounds (42.18 kg) net, 126 pounds (57.15 kg) in shipping carton

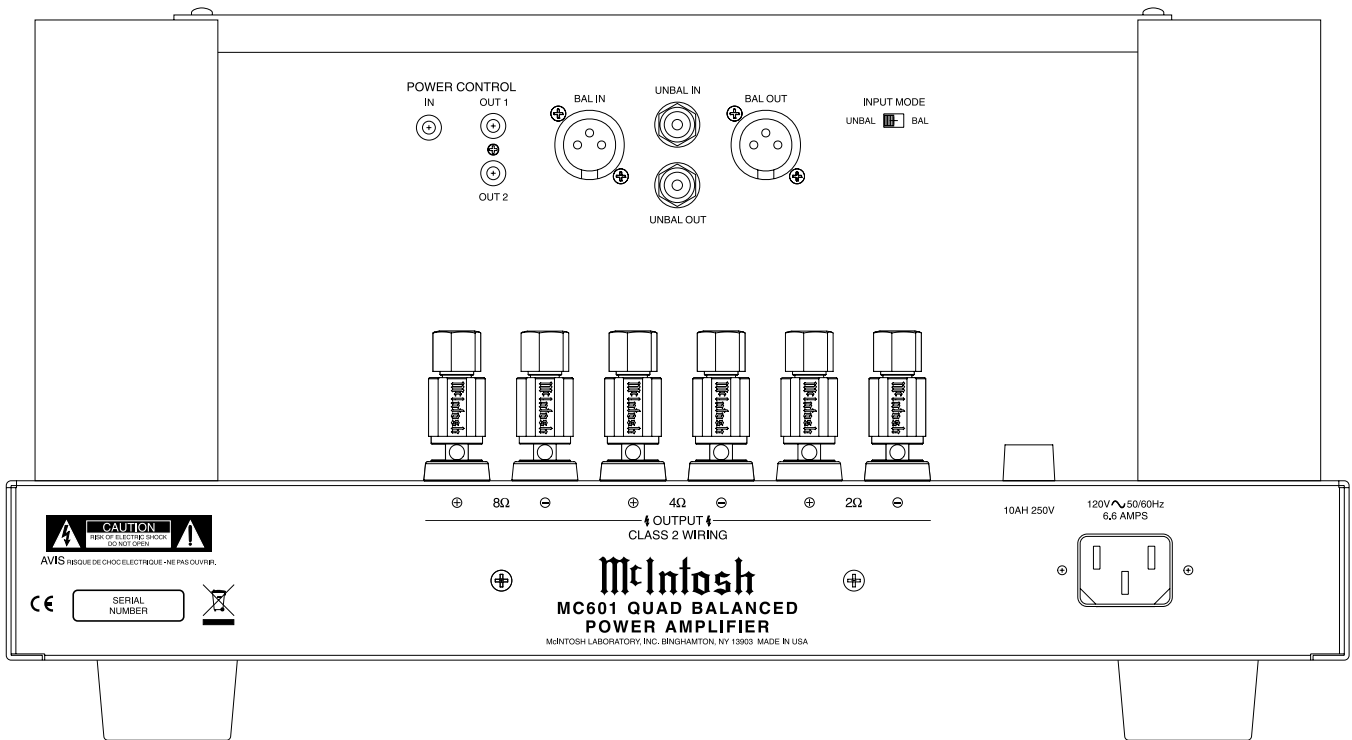
Shipping Carton Dimensions

Width is 29-1/2 inches (74.93cm)
Height is 17 inches (43.18cm)
Depth is 29 inches (73.66cm)

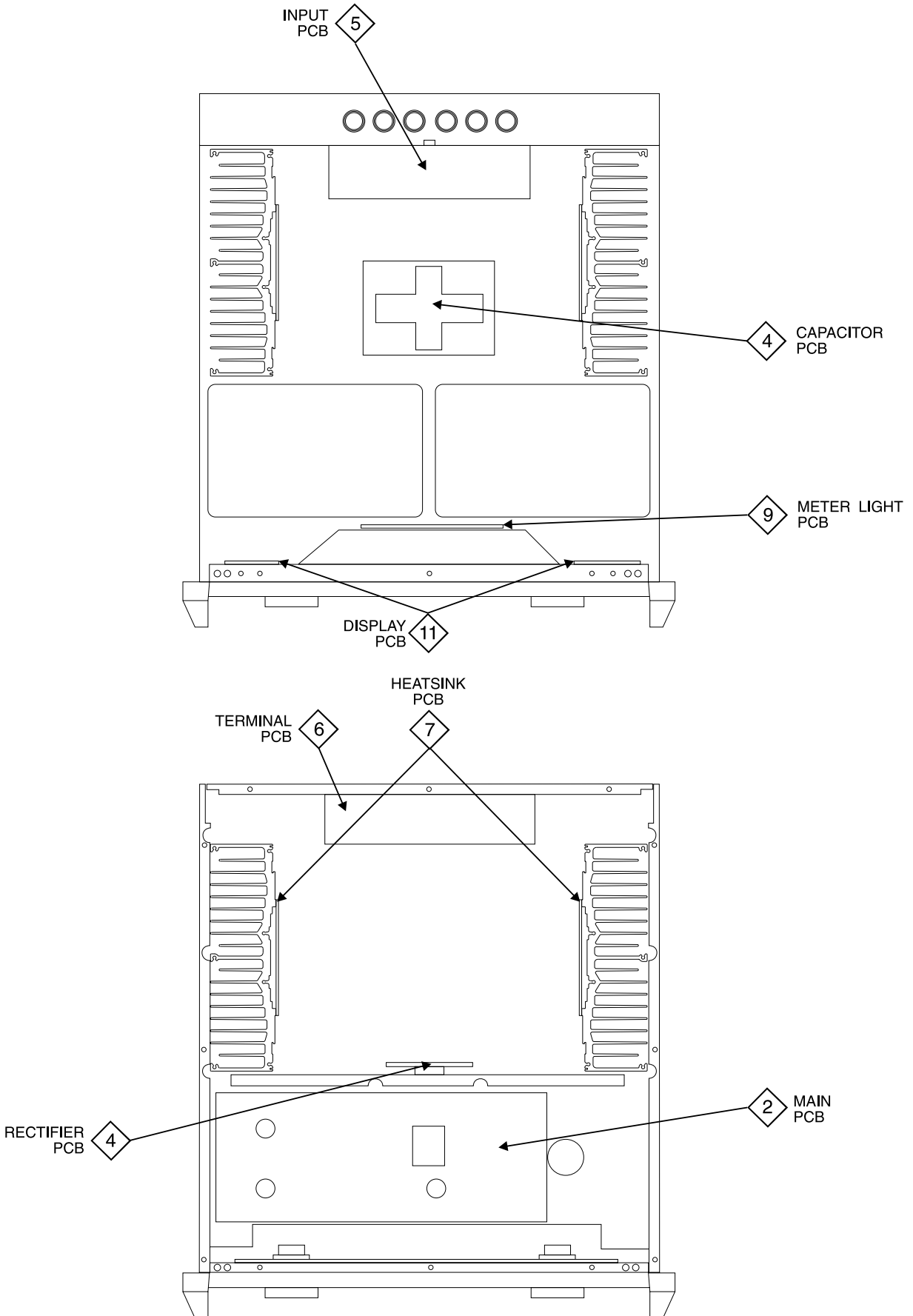
NOTES

1. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at rated voltage marked on rear panel.
 - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
2. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are microfarads (uF).
 - c. Inductor values are in microhenries (uH)
3. On PC board drawings, Square pad indicates:
 - a. Polarized Capacitors - Positive
 - b. Diodes - Cathode
 - c. Others - Pin 1
4. **WARNING**
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.
5. Use McIntosh Remote Control Model HR063.

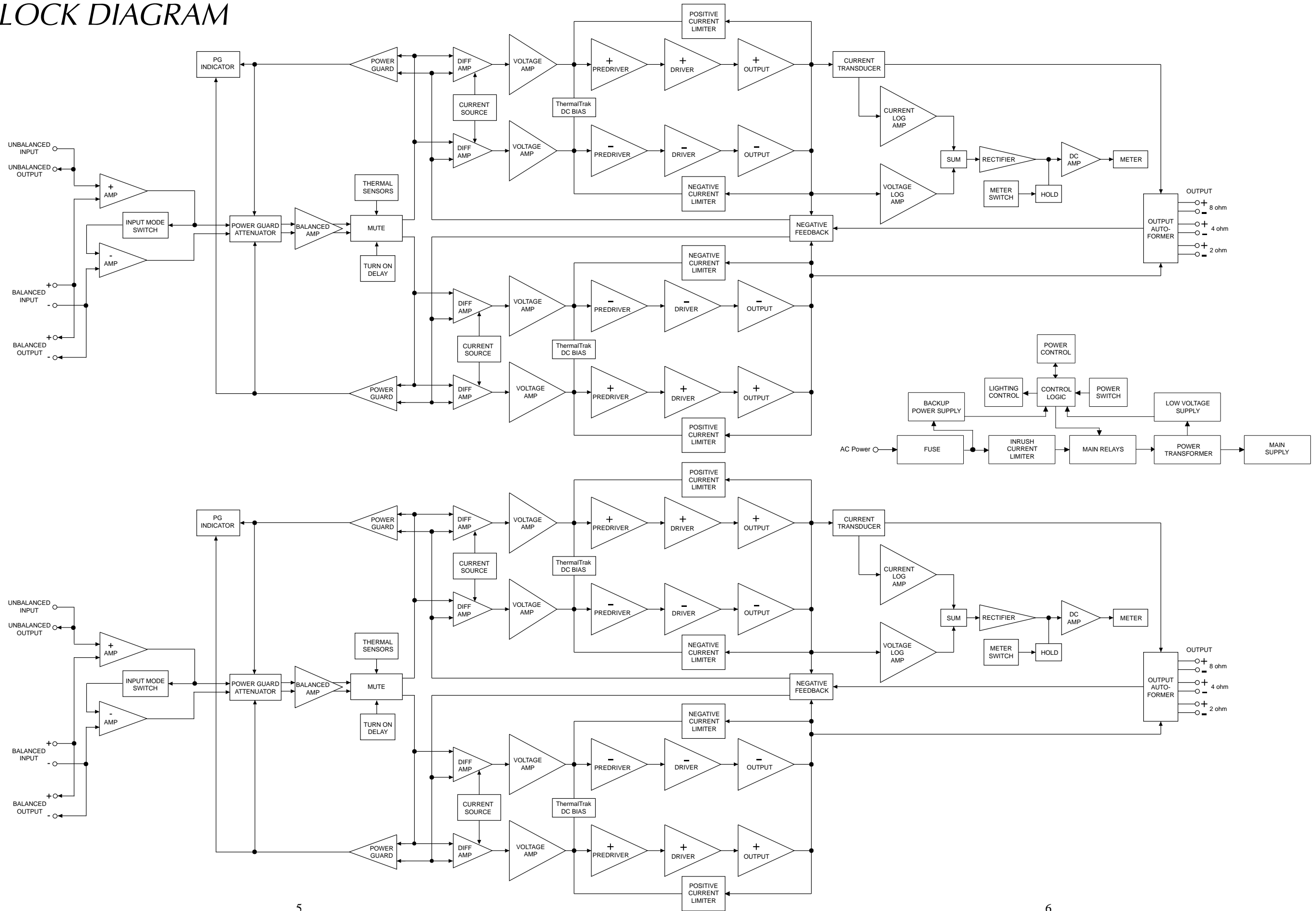
REAR PANEL




SECTION LOCATION



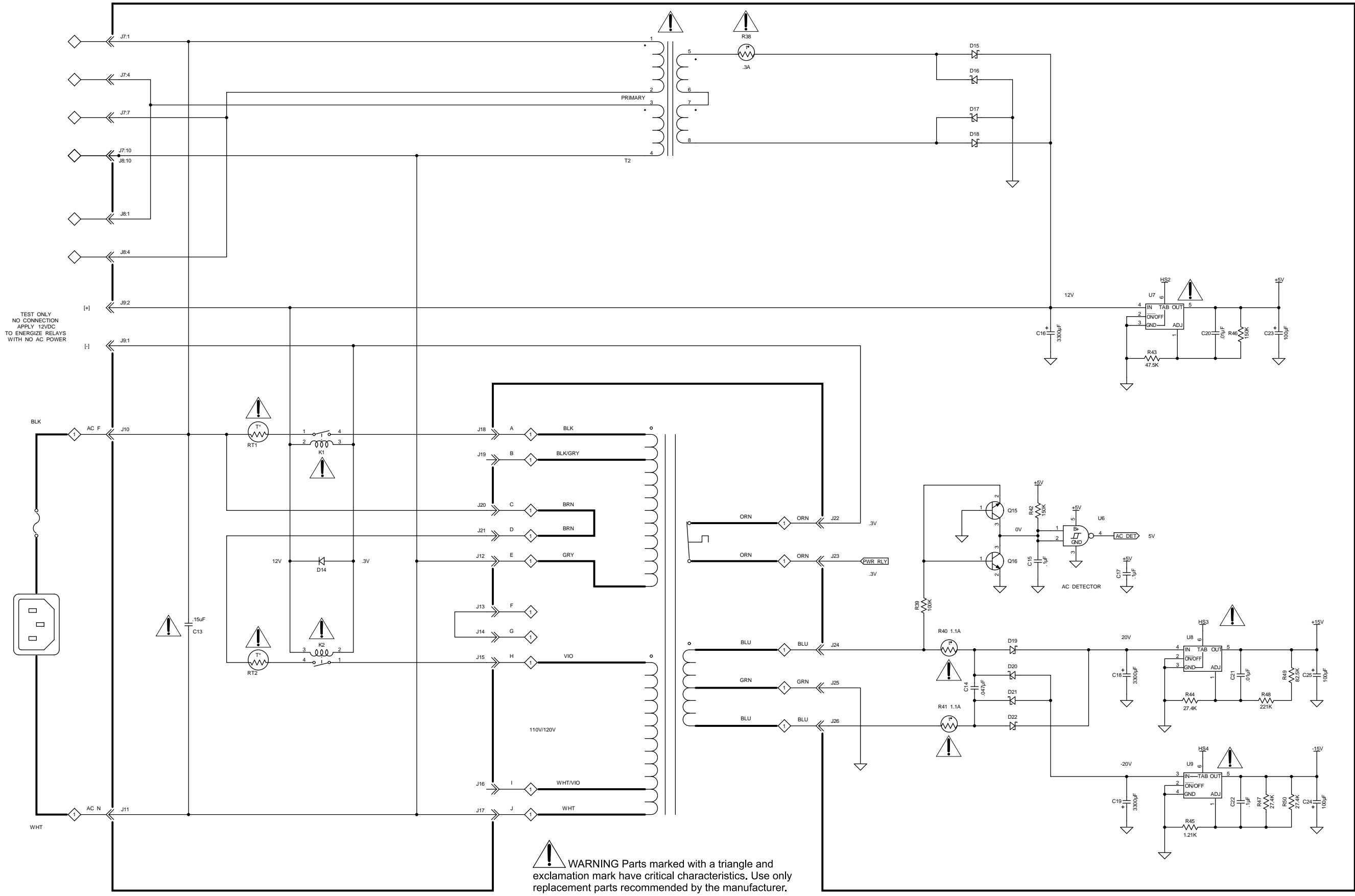
BLOCK DIAGRAM



1 *INTERCONNECT*

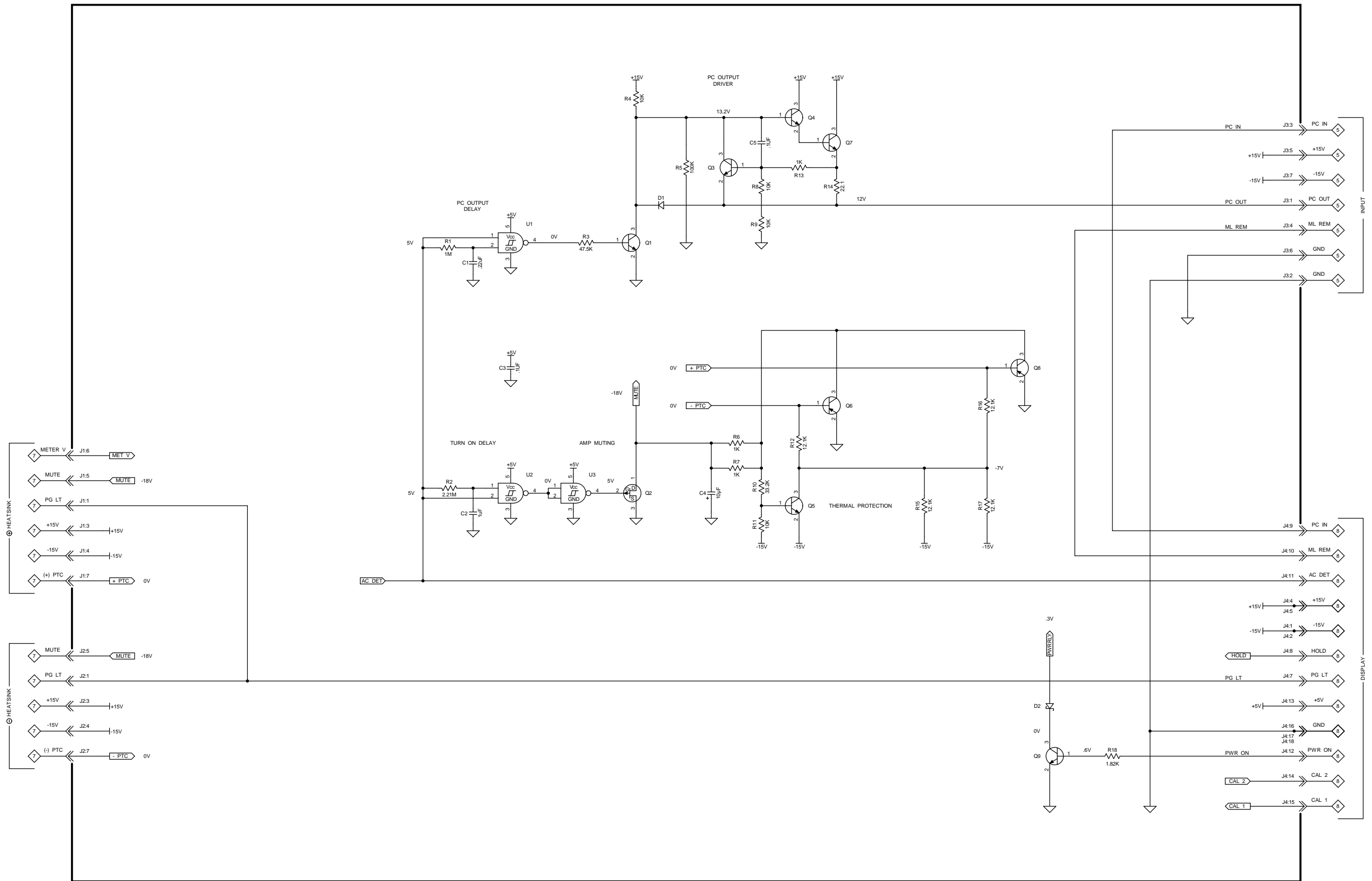
 **WARNING** Parts marked with a triangle and exclamation mark have critical characteristics. Use only replacement parts recommended by the manufacturer.

2 MAIN 751232 SCH 1 OF 3

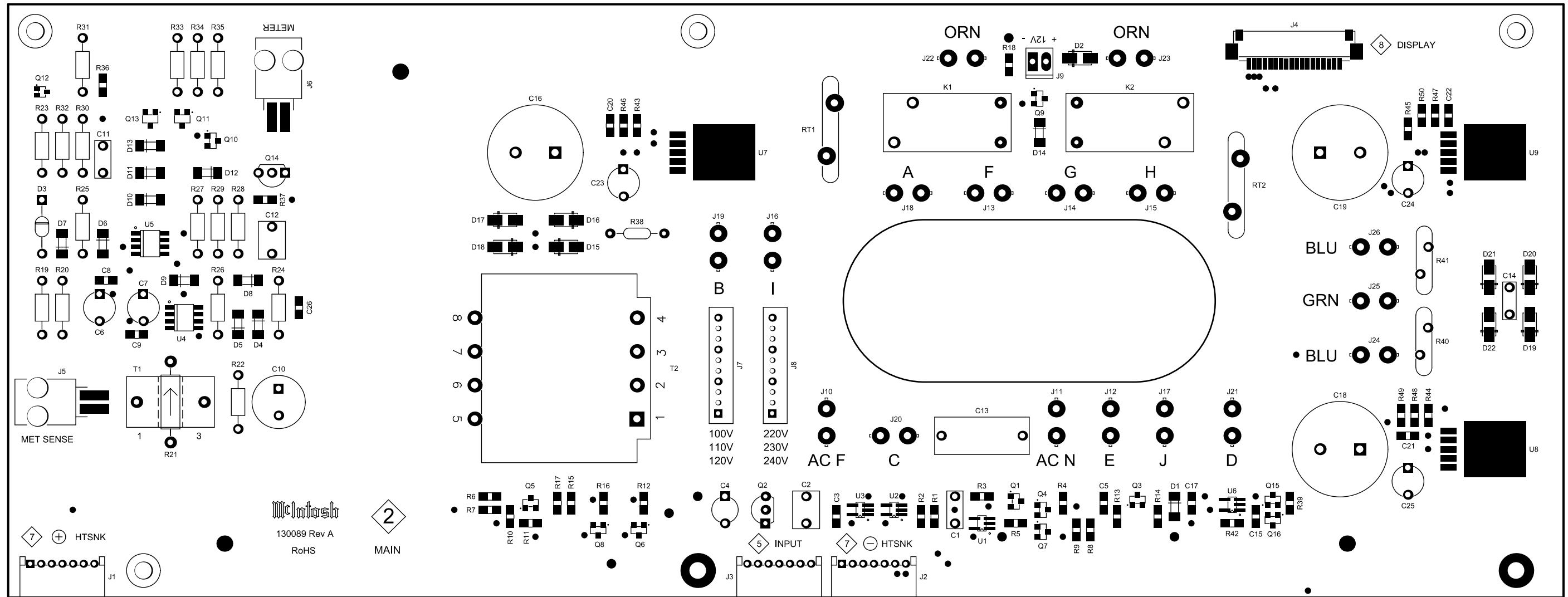


TEST ONLY
NO CONNECTION
APPLY 12VDC
TO ENERGIZE RELAYS
WITH NO AC POWER

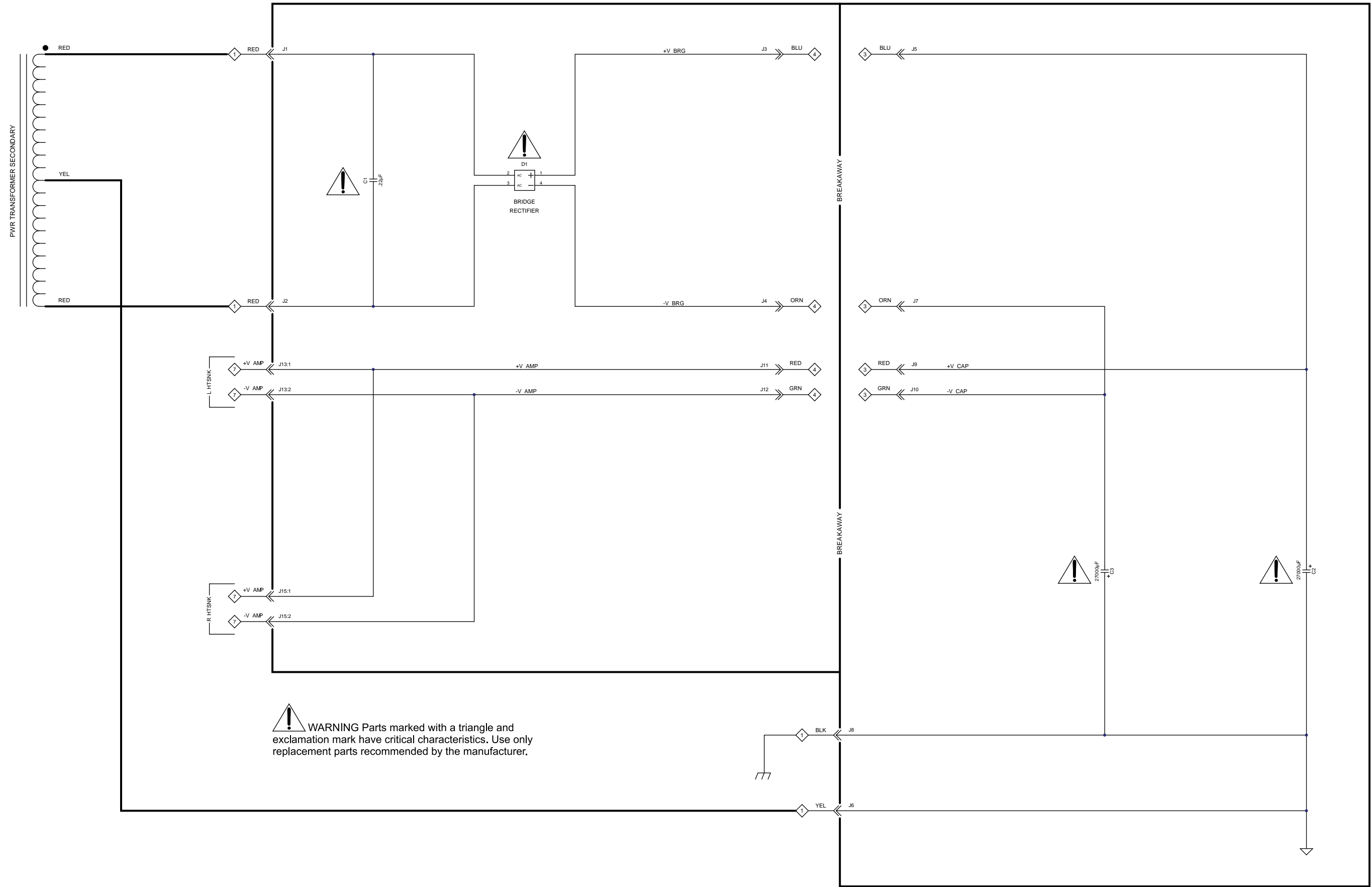
2 MAIN 751232 SCH 3 OF 3



2 MAIN 751232 PCB



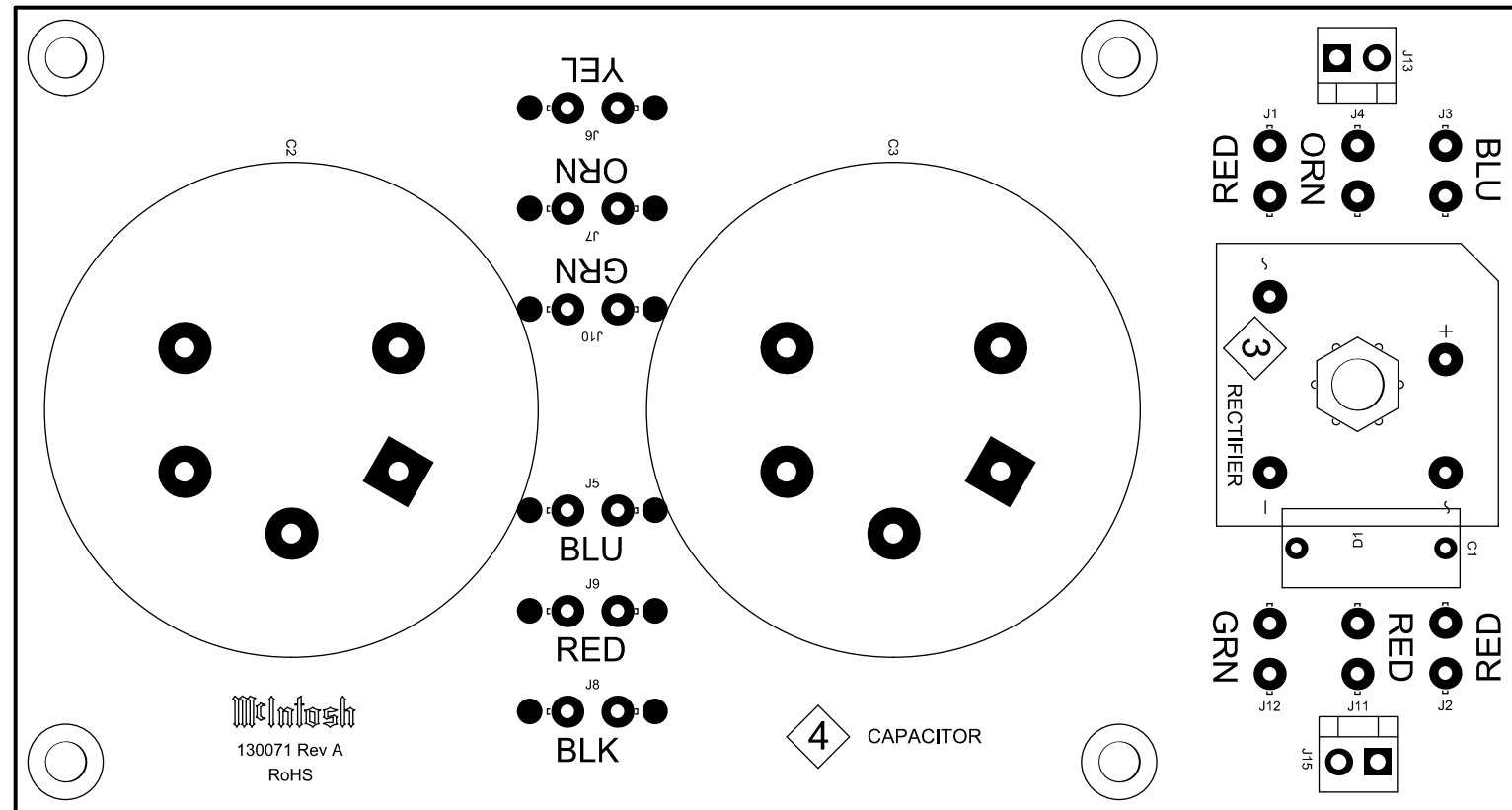
3 **4** CAPACITOR 751207 SCH



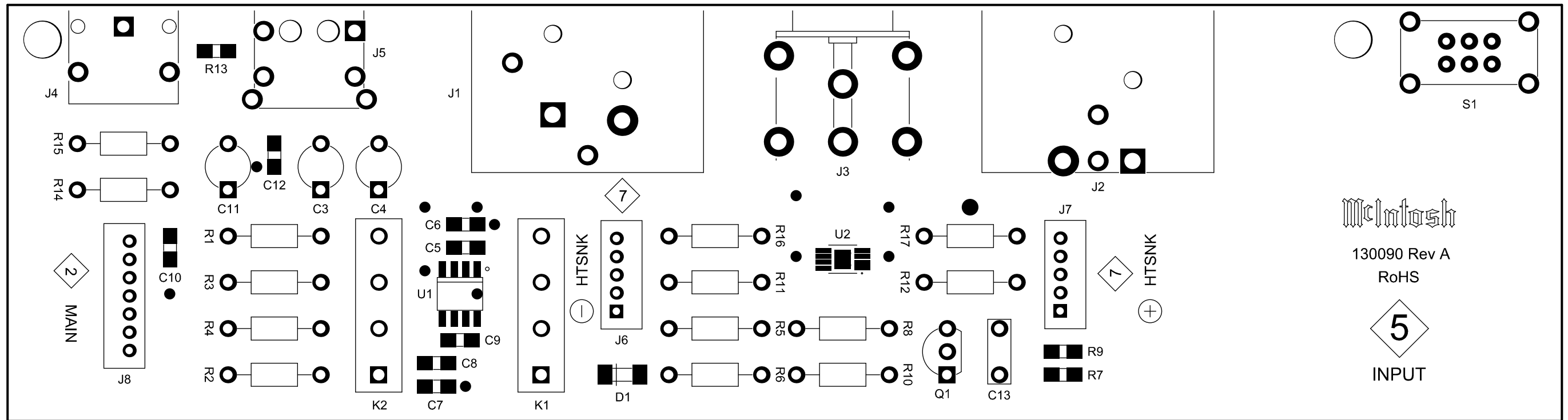
! WARNING Parts marked with a triangle and exclamation mark have critical characteristics. Use only replacement parts recommended by the manufacturer.

3 4

CAPACITOR 751207 PCB

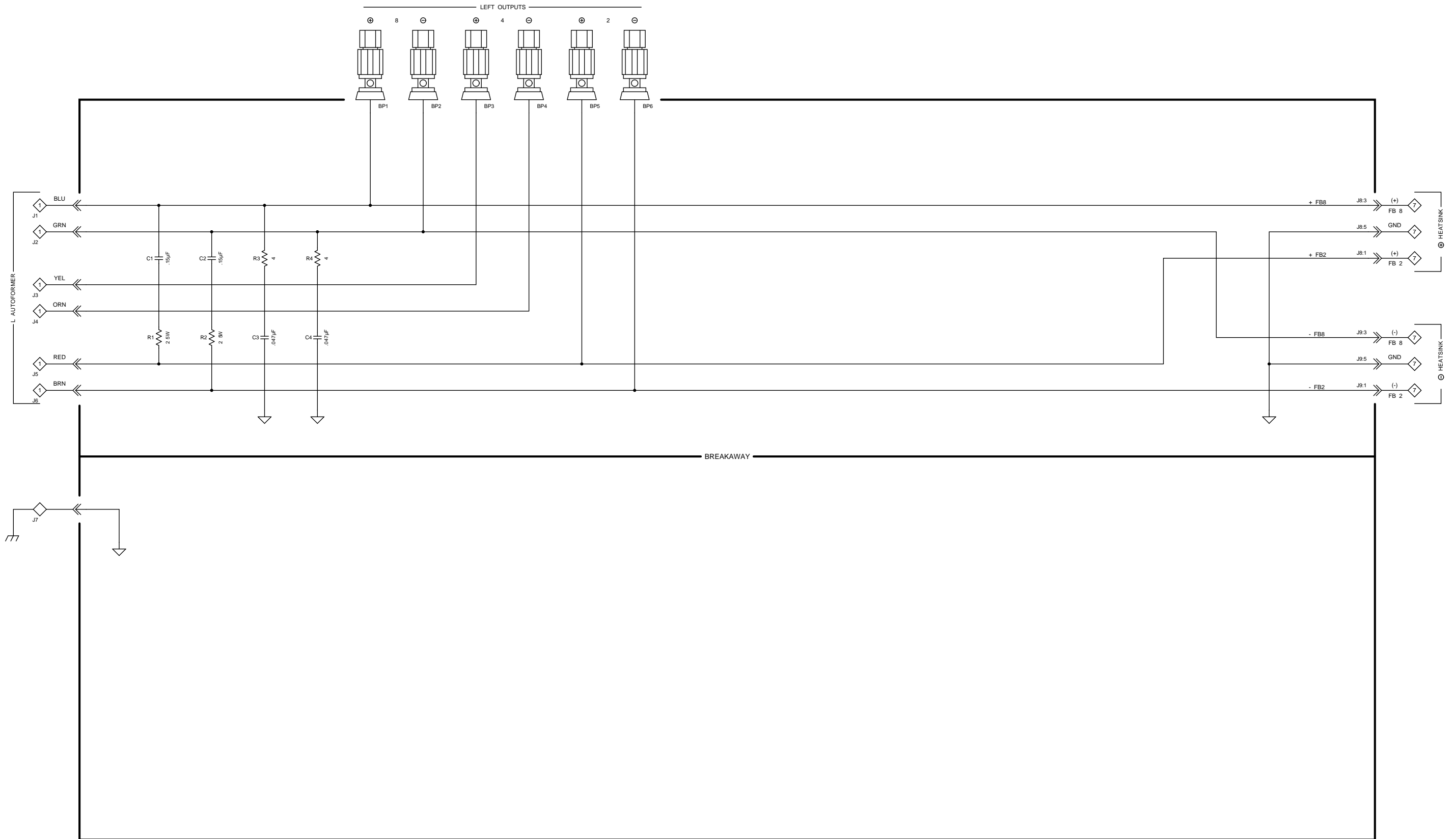


5 INPUT 751233 PCB

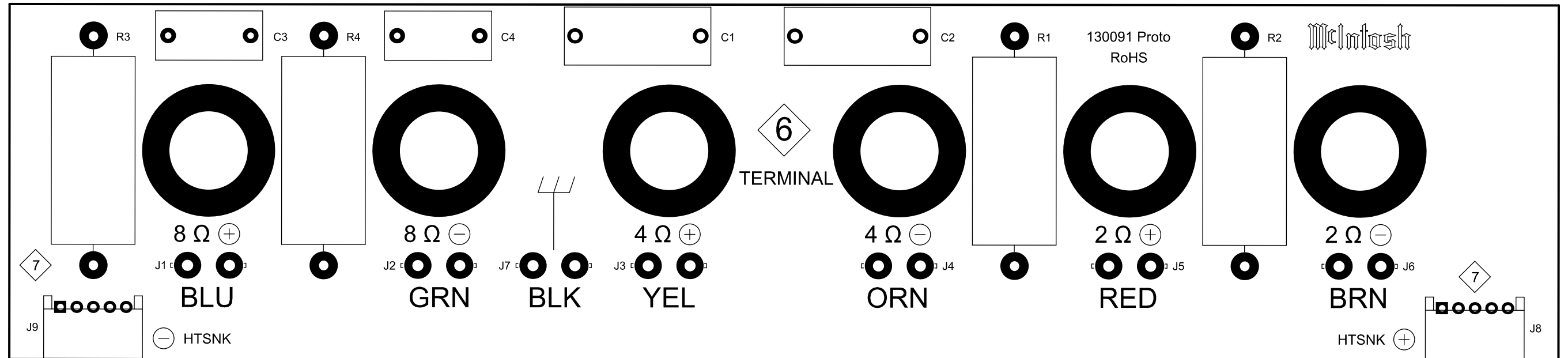


McIntosh
 130090 Rev A
 RoHS
5
 INPUT

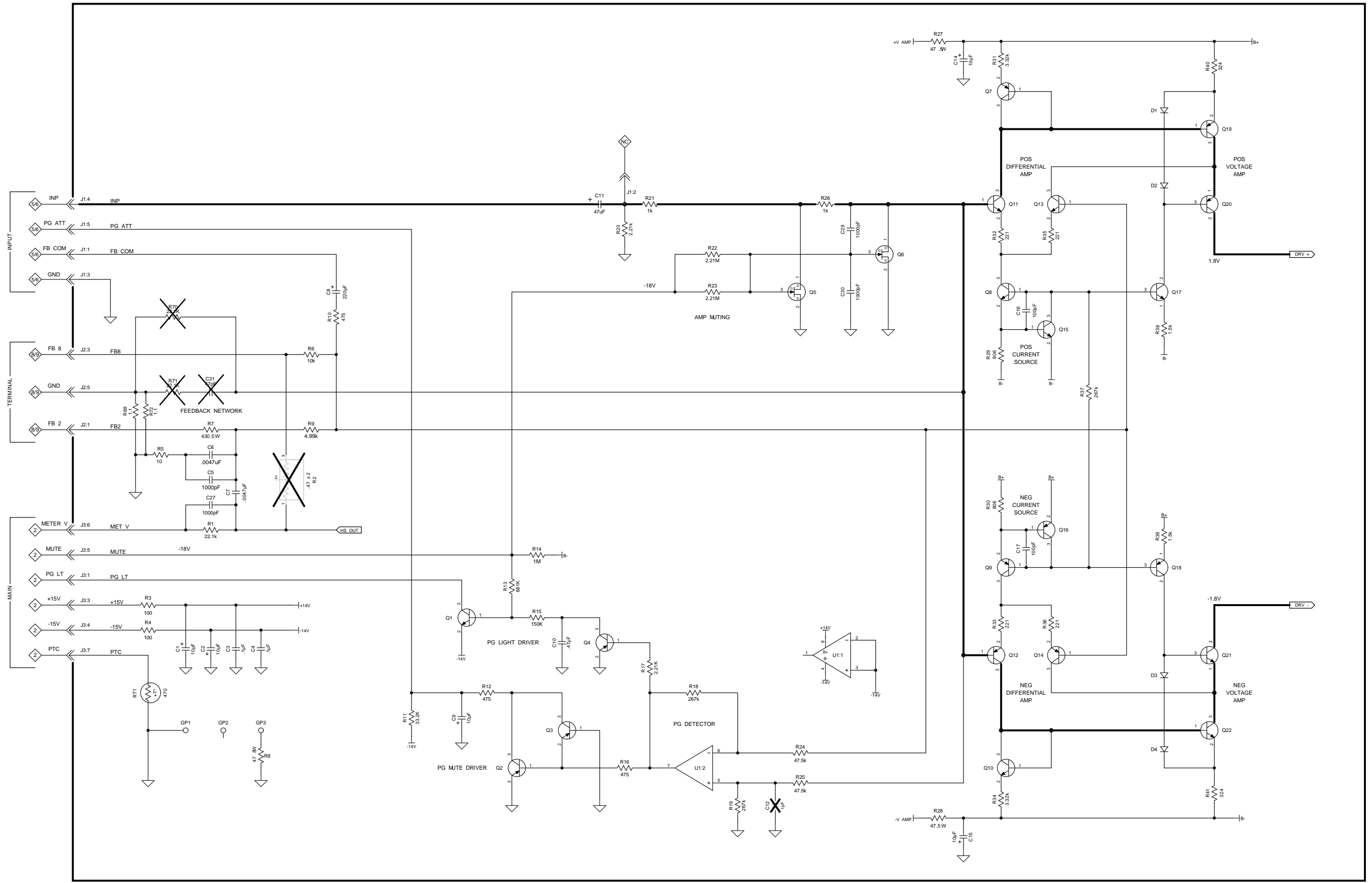
6 **TERMINAL** 751234 SCH



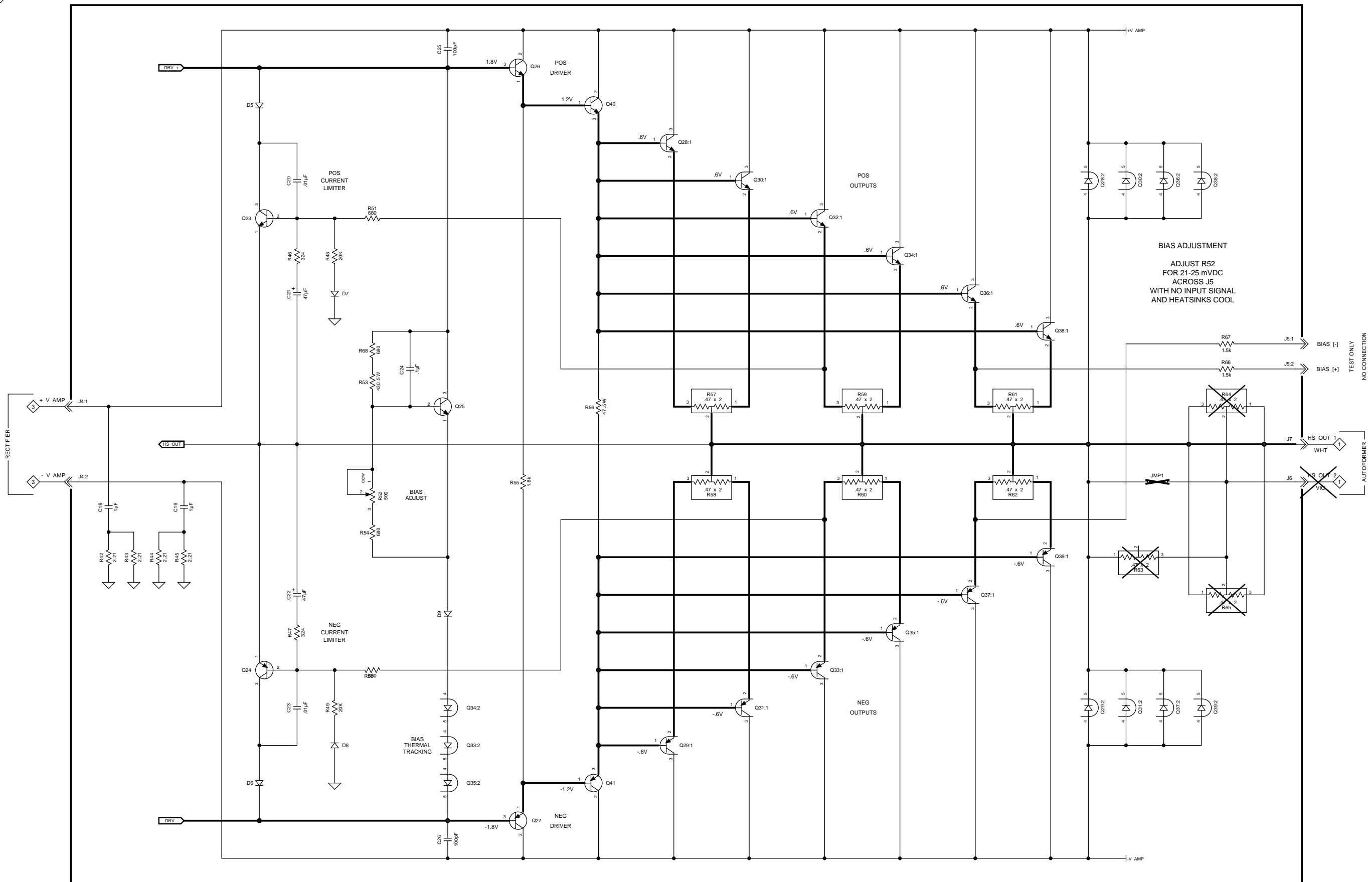
6 *TERMINAL* 751234 PCB



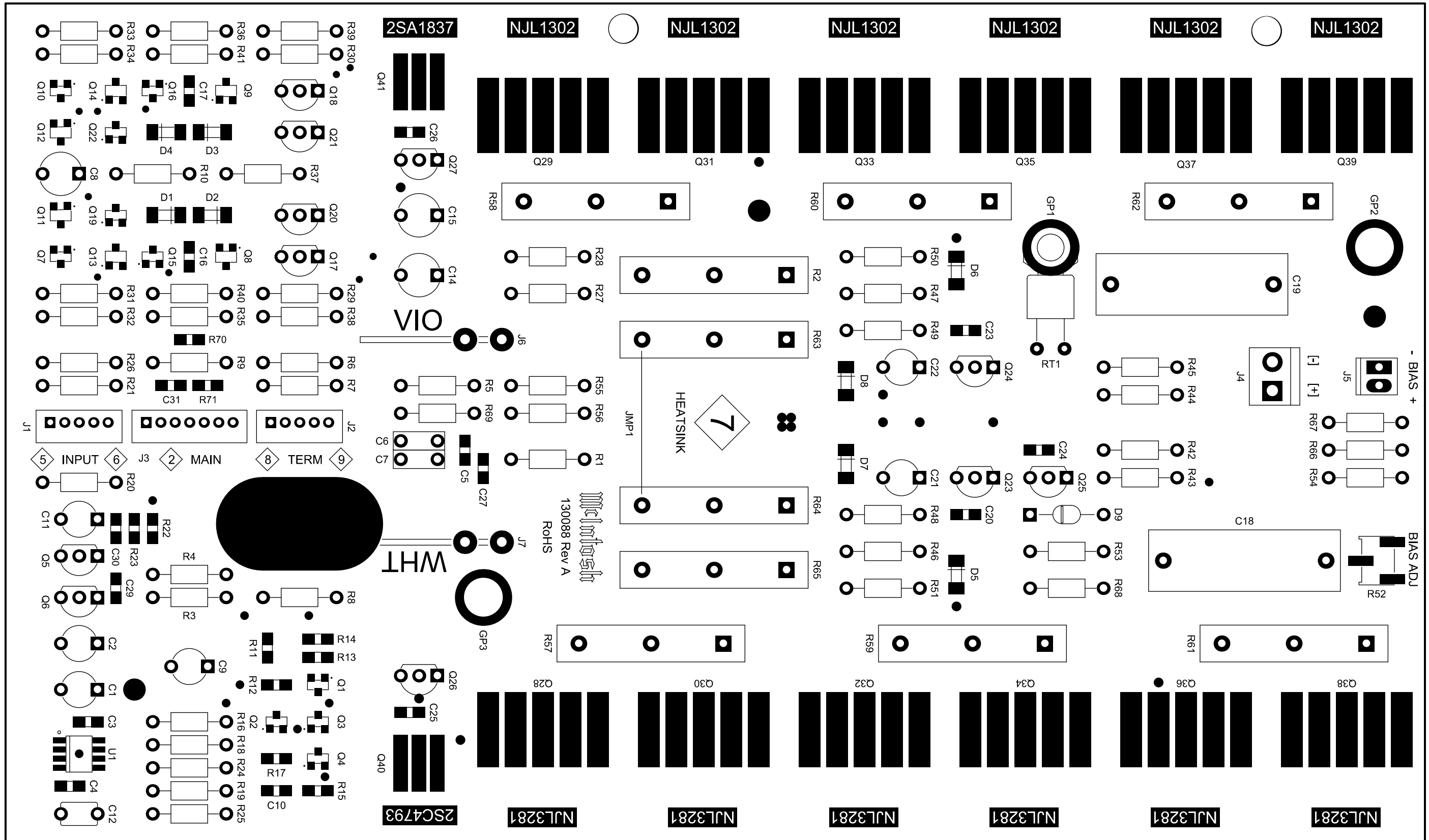
7 HEATSINK 751235 SCH 1 OF 2



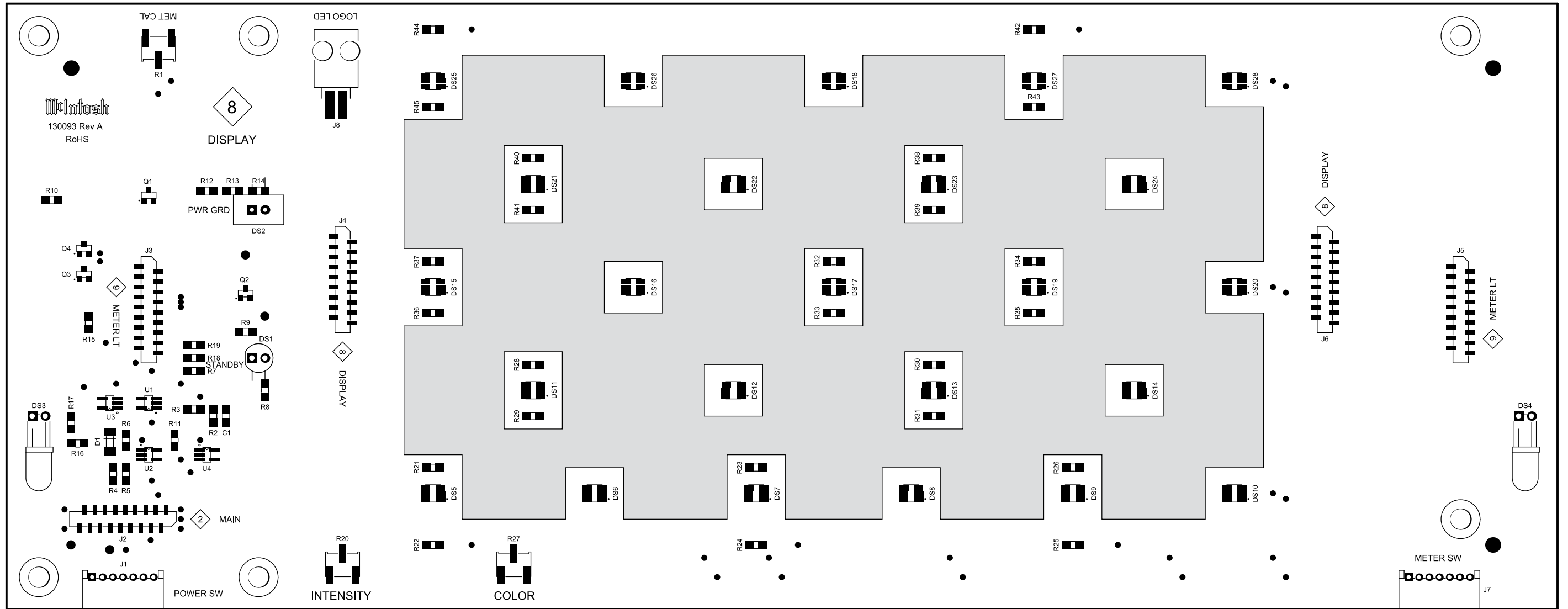
7 HEATSINK 751209 SCH 2 OF 2



7 HEATSINK 751209 PCB



8 9 DISPLAY 751237 PCB



NOTES

PARTS LIST

① INTERCONNECT

Ref. No. Description

CA1
CA2
CA3
CA4
CA5
CA6
CA7
CA8
CA9
CA10
CA11
CA13
CA15
CA16
CA17
CA18
CA19
CA20
CA21
CA22
CA23
CA24
CA25
CA26

Part No.

Ref. No. Description

Part No.

D2 DIODE SCHOTTKY 40V 2A SMD 070210
D3 DIODE ZENER 5.1V 070186
D4 DIODE SMALL SIGNAL 4148 SMD 070199
D5 DIODE SMALL SIGNAL 4148 SMD 070199
D6 DIODE SMALL SIGNAL 4148 SMD 070199
D7 DIODE SMALL SIGNAL 4148 SMD 070199
D8 DIODE SMALL SIGNAL 4148 SMD 070199
D9 DIODE SMALL SIGNAL 4148 SMD 070199
D10 DIODE SMALL SIGNAL 4148 SMD 070199
D11 DIODE SMALL SIGNAL 4148 SMD 070199
D12 DIODE SMALL SIGNAL 4148 SMD 070199
D13 DIODE SMALL SIGNAL 4148 SMD 070199
D14 DIODE SMALL SIGNAL 4148 SMD 070199
D15 DIODE SCHOTTKY 40V 2A SMD 070210
D16 DIODE SCHOTTKY 40V 2A SMD 070210
D17 DIODE SCHOTTKY 40V 2A SMD 070210
D18 DIODE SCHOTTKY 40V 2A SMD 070210
D19 DIODE SCHOTTKY 40V 2A SMD 070210
D20 DIODE SCHOTTKY 40V 2A SMD 070210
D21 DIODE SCHOTTKY 40V 2A SMD 070210
D22 DIODE SCHOTTKY 40V 2A SMD 070210
J1 HEADER 2MM 7PIN R-ANGLE 117941
J2 HEADER 2MM 7PIN R-ANGLE 117941
J3 HEADER 2MM 7PIN R-ANGLE 117941
J4 CONN 18 PIN FFC RA SMD 117997
J5 CONNECTOR LATCHING 2PIN RA SMD 118027
J6 CONNECTOR LATCHING 2PIN RA SMD 118027
J7 HEADER SHROUDED 10 PIN 2MM 117973
J8 HEADER SHROUDED 10 PIN 2MM 117973
J9 CONN 2 PIN MALE 117213
J10 BLADE FASTON W/FEET 117708
J11 BLADE FASTON W/FEET 117708
J12 BLADE FASTON W/FEET 117708
J13 BLADE FASTON W/FEET 117708
J14 BLADE FASTON W/FEET 117708
J15 BLADE FASTON W/FEET 117708
J16 BLADE FASTON W/FEET 117708
J17 BLADE FASTON W/FEET 117708
J18 BLADE FASTON W/FEET 117708
J19 BLADE FASTON W/FEET 117708
J20 BLADE FASTON W/FEET 117708
J21 BLADE FASTON W/FEET 117708
J22 BLADE FASTON W/FEET 117708
J23 BLADE FASTON W/FEET 117708
J24 BLADE FASTON W/FEET 117708
J25 BLADE FASTON W/FEET 117708
J26 BLADE FASTON W/FEET 117708
K1 RELAY POWER TV8 12V 087083
K2 RELAY POWER TV8 12V 087083
PCB1 PC BD MAIN 130089
Q1 TRANSISTOR NPN A05 SMD 132333
Q2 TRANSISTOR P FET 1-4PO 250 OHM 132220
Q3 TRANSISTOR NPN A05 SMD 132333
Q4 TRANSISTOR NPN A05 SMD 132333
Q5 TRANSISTOR NPN A05 SMD 132333
Q6 TRANSISTOR PNP A55 SMD 132334
Q7 TRANSISTOR NPN A05 SMD 132333
Q8 TRANSISTOR PNP A55 SMD 132334

② MAIN PCB 751232

C1 CAP MPF 0.22UF 5% 63VDC 064329
C2 CAP MPF 1UF 5% 63VDC 064337
C3 CAP MONO .1UF 50V ±20% X7R SMD 061365
C4 CAP ELECT 10UF 50V 066445
C5 CAP MONO .1UF 50V ±20% X7R SMD 061365
C6 CAPELECT 220UF 25V 066507
C7 CAPELECT 220UF 25V 066507
C8 CAP MONO .1UF 50V ±20% X7R SMD 061365
C9 CAP MONO .1UF 50V ±20% X7R SMD 061365
C10 CAPELECT 1000UF 25V 066513
C11 CAP MPF 0.22UF 5% 63VDC 064329
C12 CAP MPF 1UF 5% 63VDC 064337
C13 CAP POLYPROP 0.15UF 10% 275V 064464
C14 CAP MPF 0.047UF 5% 63VDC 064320
C15 CAP MONO .1UF 50V ±20% X7R SMD 061365
C16 CAP ELECT 3300UF 35V 066509
C17 CAP MONO .1UF 50V ±20% X7R SMD 061365
C18 CAPELECT 3300UF 35V 066509
C19 CAPELECT 3300UF 35V 066509
C20 CAP .01UF 50V 20% NPO SMD0805 061372
C21 CAP .01UF 50V 20% NPO SMD0805 061372
C22 CAP MONO .1UF 50V ±20% X7R SMD 061365
C23 CAP ELECT 100UF 25V 066573
C24 CAPELECT 100UF 25V 066573
C25 CAPELECT 100UF 25V 066573
C26 CAP 1000PF 50V NPO SMD0805 061317
D1 DIODE SMALL SIGNAL 4148 SMD 070199

PARTS LIST (Cont'd.)

② MAIN PCB 751232 (Cont'd.)

| Ref. No. | Description | Part No. |
|----------|----------------------------|----------|
| Q9 | TRANSISTOR NPN A05 SMD | 132333 |
| Q10 | TRANSISTOR NPN A05 SMD | 132333 |
| Q11 | TRANSISTOR NPN 2SC3324 SMD | 132345 |
| Q12 | TRANSISTOR NPN 2SC4694 SMD | 132336 |
| Q13 | TRANSISTOR NPN 2SC3324 SMD | 132345 |
| Q14 | TRANSISTOR N JFET | 132319 |
| Q15 | TRANSISTOR NPN A05 SMD | 132333 |
| Q16 | TRANSISTOR NPN A05 SMD | 132333 |
| R1 | RES SMD0805 1M 1/8W 1% | 145042 |
| R2 | RES SMD0805 2.21M 1/8W 1% | 145043 |
| R3 | RES SMD0805 47.5K 1/8W 1% | 145013 |
| R4 | RES SMD0805 10K 1/8W 1% | 145010 |
| R5 | RES SMD0805 100K 1/8W 1% | 145014 |
| R6 | RES SMD0805 1K 1/8W 1% | 145007 |
| R7 | RES SMD0805 1K 1/8W 1% | 145007 |
| R8 | RES SMD0805 10K 1/8W 1% | 145010 |
| R9 | RES SMD0805 10K 1/8W 1% | 145010 |
| R10 | RES SMD0805 33.2K 1/8W 1% | 145033 |
| R11 | RES SMD0805 10K 1/8W 1% | 145010 |
| R12 | RES SMD0805 12.1K 1/8W 1% | 145030 |
| R13 | RES SMD0805 1K 1/8W 1% | 145007 |
| R14 | RES SMD0805 22.1 1/8W 1% | 145003 |
| R15 | RES SMD0805 12.1K 1/8W 1% | 145030 |
| R16 | RES SMD0805 12.1K 1/8W 1% | 145030 |
| R17 | RES SMD0805 12.1K 1/8W 1% | 145030 |
| R18 | RES SMD0805 1.82K 1/8W 1% | 145023 |
| R19 | RES MET OX 47 OHM 5% 1/2W | 137102 |
| R20 | RES MF 1K 1% 1/4W | 144513 |
| R21 | RES WW 0.1 OHM 5% 1W | 144697 |
| R22 | RES MF 10 OHM 1% 1/4W | 144553 |
| R23 | RES MF 10K 1% 1/4W | 144504 |
| R24 | RES MF 33.2K 1% 1/4W | 144694 |
| R25 | RES MF 200K 1% 1/4W | 144531 |
| R26 | RES MF 18.2K 1% 1/4W | 144563 |
| R27 | RES MF 22.1K 1% 1/4W | 144564 |
| R28 | RES MF 150K 1% 1/4W | 144627 |
| R29 | RES MF 100 OHM 1% 1/4W | 144568 |
| R30 | RES MF 475K 1% 1/4W | 144604 |
| R31 | RES MF 475K 1% 1/4W | 144604 |
| R32 | RES MF 12.1K 1% 1/4W | 144550 |
| R33 | RES MF 200K 1% 1/4W | 144531 |
| R34 | RES MF 3.32K 1% 1/4W | 144520 |
| R35 | RES MF 1K 1% 1/4W | 144513 |
| R36 | RES SMD0805 475K 1/8W 1% | 145040 |
| R37 | RES SMD0805 1M 1/8W 1% | 145042 |
| R38 | RES POLYSWITCH RXE030 | 144670 |
| R39 | RES SMD0805 100K 1/8W 1% | 145014 |
| R40 | RES POLYSWITCH RXE110 | 144671 |
| R41 | RES POLYSWITCH RXE110 | 144671 |
| R42 | RES SMD0805 150K 1/8W 1% | 145037 |
| R43 | RES SMD0805 47.5K 1/8W 1% | 145013 |
| R44 | RES SMD0805 27.4K 1/8W 1% | 145032 |
| R45 | RES SMD0805 1.21K 1/8W 1% | 145021 |
| R46 | RES SMD0805 150K 1/8W 1% | 145037 |
| R47 | RES SMD0805 27.4K 1/8W 1% | 145032 |
| R48 | RES SMD0805 221K 1/8W 1% | 145038 |
| R49 | RES SMD0805 82.5K 1/8W 1% | 145036 |
| R50 | RES SMD0805 27.4K 1/8W 1% | 145032 |
| RT1 | THERMISTOR 5 OHM | 144151 |

| Ref. No. | Description | Part No. |
|----------|--------------------------------|----------|
| RT2 | THERMISTOR 5 OHM | 144151 |
| T1 | TRANSFORMER CURRENT | 159353 |
| T2 | TRANSFORMER BACKUP | 159376 |
| U1 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U2 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U3 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U4 | IC OP AMP 33178 SMD | 133720 |
| U5 | IC OP AMP 33178 SMD | 133720 |
| U6 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U7 | IC REG 1.2A LO-DROP ENABLE SMD | 133717 |
| U8 | IC REG 1.2A LO-DROP ENABLE SMD | 133717 |
| U9 | REG NEG ADJ 1A WITH ENA SMD | 133731 |
| | JUMPER BACK-UP | 173085 |
| | ASSY INSERTION PCB MAIN | 702588 |
| | ASSY PCB MAIN SMD | 710102 |

③ CAPACITOR PCB 751207

| Ref. No. | Description | Part No. |
|----------|-------------------------------|----------|
| ④ C1 | CAP POLYPROP 0.22UF 400V 20% | 064438 |
| C2 | CAP ELECT 27000UF 100V | 066596 |
| C3 | CAP ELECT 27000UF 100V | 066596 |
| D1 | RECTIFIER BRIDGE PCB 35A 600V | 070187 |
| J1 | BLADE FASTON W/FEET | 117708 |
| J2 | BLADE FASTON W/FEET | 117708 |
| J3 | BLADE FASTON W/FEET | 117708 |
| J4 | BLADE FASTON W/FEET | 117708 |
| J5 | BLADE FASTON W/FEET | 117708 |
| J6 | BLADE FASTON W/FEET | 117708 |
| J7 | BLADE FASTON W/FEET | 117708 |
| J8 | BLADE FASTON W/FEET | 117708 |
| J9 | BLADE FASTON W/FEET | 117708 |
| J10 | BLADE FASTON W/FEET | 117708 |
| J11 | BLADE FASTON W/FEET | 117708 |
| J12 | BLADE FASTON W/FEET | 117708 |
| J13 | CONN HEADER 2 PIN 0.156 | 117404 |
| J15 | CONN HEADER 2 PIN 0.156 | 117404 |
| | PC BD CAP/RECTIFIER | 130071 |

⑤ LEFT INPUT PCB 751233

| Ref. No. | Description | Part No. |
|----------|--------------------------------|----------|
| C3 | CAP ELECT 10UF 50V | 066445 |
| C4 | CAP ELECT 10UF 50V | 066445 |
| C5 | CAP 100PF 50V NPO SMD0805 | 061316 |
| C6 | CAP 100PF 50V NPO SMD0805 | 061316 |
| C7 | CAP 100PF 50V NPO SMD0805 | 061316 |
| C8 | CAP 100PF 50V NPO SMD0805 | 061316 |
| C9 | CAP 47PF 200V 10% NPO SMD0805 | 061368 |
| C10 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 |
| C11 | CAP ELECT 10UF 50V | 066445 |
| C12 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 |
| C13 | CAP MPF 0.022UF 5% 63VDC | 064316 |
| D1 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| J1 | RECEPTACLE XLR FEMALE | 117685 |
| J2 | RECEPTACLE XLR MALE | 117686 |
| J3 | JACK DUAL RCA | 118020 |
| J4 | JACK HEADPHONE STEREO 1/8IN | 117945 |
| J5 | JACK HEADPHONE DUAL BLACK 1/8" | 117825 |
| J6 | HEADER 5 PIN SHROUDED | 117916 |
| J7 | HEADER 5 PIN SHROUDED | 117916 |
| J8 | HEADER 7 PIN SHROUDED | 117910 |
| K1 | RELAY REED SPST-NO 5V 1.2A | 087078 |

PARTS LIST (Cont'd.)

5 LEFT INPUT PCB 751233 (Cont'd.)

| Ref. No. | Description | Part No. | Ref. No. | Description | Part No. |
|----------|----------------------------|----------|----------|--------------------------------|----------|
| K2 | RELAY REED SPST-NO 5V 1.2A | 087078 | C14 | CAP ELECT 10UF 100VDC | 066462 |
| PCB1 | PC BD INPUT | 130090 | C15 | CAP ELECT 10UF 100VDC | 066462 |
| Q1 | TRANSISTOR N JFET | 132319 | C16 | CAP 100PF 50V NPO SMD0805 | 061316 |
| R1 | RES MF 22.1K 1% 1/4W | 144564 | C17 | CAP 100PF 50V NPO SMD0805 | 061316 |
| R2 | RES MF 22.1K 1% 1/4W | 144564 | C18 | CAP POLYPROP 1UF 160V 5% | 064451 |
| R3 | RES MF 1K 1% 1/4W | 144513 | C19 | CAP POLYPROP 1UF 160V 5% | 064451 |
| R4 | RES MF 1K 1% 1/4W | 144513 | C20 | CAP .01UF 50V 20% NPO SMD0805 | 061372 |
| R5 | RES MF 1K 1% 1/4W | 144513 | C21 | CAP ELECT 47UF 35V | 066446 |
| R6 | RES MF 1K 1% 1/4W | 144513 | C22 | CAP ELECT 47UF 35V | 066446 |
| R7 | RES SMD0805 475 1/8W 1% | 145020 | C23 | CAP .01UF 50V 20% NPO SMD0805 | 061372 |
| R8 | RES MF 1.82K 1% 1/4W | 144582 | C24 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 |
| R9 | RES SMD0805 2.21M 1/8W 1% | 145043 | C25 | CAP 100PF 50V NPO SMD0805 | 061316 |
| R10 | RES MF 1.82K 1% 1/4W | 144582 | C26 | CAP 100PF 50V NPO SMD0805 | 061316 |
| R11 | RES MF 22.1 OHM 1% 1/4W | 144554 | C27 | CAP 1000PF 50V NPO SMD0805 | 061317 |
| R12 | RES MF 22.1 OHM 1% 1/4W | 144554 | C29 | CAP 1000PF 50V NPO SMD0805 | 061317 |
| R13 | RES SMD0805 100 1/8W 1% | 145005 | C30 | CAP 1000PF 50V NPO SMD0805 | 061317 |
| R14 | RES FP 10 OHM 5% 1/4W | 137105 | D1 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| R15 | RES FP 10 OHM 5% 1/4W | 137105 | D2 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| R16 | RES MF 2.21K 1% 1/4W | 144584 | D3 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| R17 | RES MF 2.21K 1% 1/4W | 144584 | D4 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| S1 | SWITCH SLIDE DPDT | 148076 | D5 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| U1 | IC DUAL OP AMP 5532 SMD | 133718 | D6 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| U2 | IC OP AMP DIFFERENTIAL SMD | 133772 | D7 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| | ASSY INSERTION PCB INPUT | 702589 | D8 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| | ASSY PCB INPUT SMD | 710103 | D9 | DIODE SILICON | 070174 |

6 TERMINAL PCB 751234

| | | | | | |
|----|-------------------------------|--------|-------|-------------------------|--------|
| C1 | CAP POLYPROP 0.15UF 10% 275V | 064464 | (GP1) | SCR SM6-18X5/8 PH PAN | 401059 |
| C2 | CAP POLYPROP 0.15UF 10% 275V | 064464 | (GP2) | SCR SM6-18X5/8 PH PAN | 401059 |
| C3 | CAP POLYPROP 0.047UF 10% 275V | 064466 | (GP2) | WASHER #4 FLT | 404001 |
| C4 | CAP POLYPROP 0.047UF 10% 275V | 064466 | (GP3) | SCR SM6-18X5/8 PH PAN | 401059 |
| J1 | BLADE FASTON W/FEET | 117708 | (GP3) | WASHER #4 FLT | 404001 |
| J2 | BLADE FASTON W/FEET | 117708 | J1 | HEADER 5 PIN SHROUDED | 117916 |
| J3 | BLADE FASTON W/FEET | 117708 | J2 | HEADER 5 PIN SHROUDED | 117916 |
| J4 | BLADE FASTON W/FEET | 117708 | J3 | HEADER 7 PIN SHROUDED | 117910 |
| J5 | BLADE FASTON W/FEET | 117708 | J4 | CONN HEADER 2 PIN 0.156 | 117404 |
| J6 | BLADE FASTON W/FEET | 117708 | J5 | CONN 2 PIN MALE | 117213 |
| J7 | BLADE FASTON W/FEET | 117708 | J7 | CONNECTOR TAB .250 RA | 118028 |
| J8 | CONNECTOR 2MM 5 PIN RA | 118032 | PCB1 | PC BD HEATSINK | 130088 |
| J9 | CONNECTOR 2MM 5 PIN RA | 118032 | Q1 | TRANSISTOR NPN A05 SMD | 132333 |
| | PC BD TERMINAL | 130091 | Q2 | TRANSISTOR PNP A55 SMD | 132334 |
| R1 | RES WW 2 OHM 10% 5W W/FEET | 139253 | Q3 | TRANSISTOR PNP A55 SMD | 132334 |
| R2 | RES WW 2 OHM 10% 5W W/FEET | 139253 | Q4 | TRANSISTOR PNP A55 SMD | 132334 |
| R3 | RES WW 4 OHM 5% 5W | 139248 | Q5 | TRANSISTOR N JFET | 132319 |
| R4 | RES WW 4 OHM 5% 5W | 139248 | Q6 | TRANSISTOR N JFET | 132319 |

7 HEATSINK PCB 751235

| | | | | | |
|-----|--------------------------------|--------|-----|-----------------------------|--------|
| C1 | CAP ELECT 10UF 50V | 066445 | Q7 | TRANSISTOR PNP A55 SMD | 132334 |
| C2 | CAP ELECT 10UF 50V | 066445 | Q8 | TRANSISTOR NPN 2SC3324 SMD | 132345 |
| C3 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 | Q9 | TRANSISTOR PNP 2SA1312 SMD | 132344 |
| C4 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 | Q10 | TRANSISTOR NPN A05 SMD | 132333 |
| C5 | CAP 470PF 100V 10% NPO SMD0805 | 061370 | Q11 | TRANSISTOR NPN 2SC3324 SMD | 132345 |
| C6 | CAP PF 0.001UF 5% 63VDC | 064453 | Q12 | TRANSISTOR PNP 2SA1312 SMD | 132344 |
| C7 | CAP MPF 0.0047UF 5% 63VDC | 064308 | Q13 | TRANSISTOR NPN 2SC3324 SMD | 132345 |
| C8 | CAP ELECT 220UF 25V | 066507 | Q14 | TRANSISTOR PNP 2SA1312 SMD | 132344 |
| C9 | CAP ELECT 10UF 50V | 066445 | Q15 | TRANSISTOR NPN A05 SMD | 132333 |
| C10 | CAP .47UF 50V 20% NPO SMD0805 | 061373 | Q16 | TRANSISTOR PNP A55 SMD | 132334 |
| C11 | CAP ELECT 47UF 35V | 066446 | Q17 | TRANSISTOR NPN 300V 2SC4449 | 132342 |
| C12 | CAP MONO 1PF 50V NPO | 061362 | Q18 | TRANSISTOR PNP 300V 2SA1689 | 132343 |
| | | | Q19 | TRANSISTOR PNP A55 SMD | 132334 |
| | | | Q20 | TRANSISTOR PNP 300V 2SA1689 | 132343 |
| | | | Q21 | TRANSISTOR NPN 300V 2SC4449 | 132342 |
| | | | Q22 | TRANSISTOR NPN A05 SMD | 132333 |

PARTS LIST (Cont'd.)

⑦ HEATSINK PCB 751235 (Cont'd.)

| Ref. No. | Description | Part No. | Ref. No. | Description | Part No. |
|----------|--------------------------------|----------|----------|----------------------------------|----------|
| Q23 | TRANSISTOR NPN SILICON | 132317 | (Q41) | ISOSTRATE | 084225 |
| Q24 | TRANSISTOR PNP SILICON | 132304 | (Q41) | HEATSINK | 018614 |
| Q25 | TRANSISTOR NPN SILICON | 132317 | R1 | RES MF 22.1K 1% 1/4W | 144564 |
| Q26 | TRANSISTOR NPN 300V 2SC4449 | 132342 | R2 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| Q27 | TRANSISTOR PNP 300V 2SA1689 | 132343 | R3 | RES MF 100 OHM 1% 1/4W | 144568 |
| Q28 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R4 | RES MF 100 OHM 1% 1/4W | 144568 |
| (Q28) | CLIP TRANSISTOR 214 | 414119 | R5 | RES MF 100 OHM 1% 1/4W | 144568 |
| (Q28) | ISOSTRATE | 084225 | R6 | RES MF 10K 1% 1/4W | 144504 |
| (Q28) | HEATSINK | 018614 | R7 | RES MET OX 430 OHM 5% 1/2W | 137101 |
| Q29 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R8 | RES MET OX 47 OHM 5% 1/2W | 137102 |
| (Q29) | CLIP TRANSISTOR 214 | 414119 | R9 | RES MF 4.99K 1% 1/4W | 144521 |
| (Q29) | ISOSTRATE | 084225 | R10 | RES MF 475 OHM 1% 1/4W | 144509 |
| (Q29) | HEATSINK | 018614 | R11 | RES SMD0805 33.2K 1/8W 1% | 145033 |
| Q30 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R12 | RES SMD0805 475 1/8W 1% | 145020 |
| (Q30) | CLIP TRANSISTOR 214 | 414119 | R13 | RES SMD0805 681K 1/8W 1% | 145041 |
| (Q30) | ISOSTRATE | 084225 | R14 | RES SMD0805 1M 1/8W 1% | 145042 |
| (Q30) | HEATSINK | 018614 | R15 | RES SMD0805 150K 1/8W 1% | 145037 |
| Q31 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R16 | RES MF 475 OHM 1% 1/4W | 144509 |
| (Q31) | CLIP TRANSISTOR 214 | 414119 | R17 | RES SMD0805 2.21K 1/8W 1% | 145024 |
| (Q31) | ISOSTRATE | 084225 | R18 | RES MF 267K 1% 1/4W | 144532 |
| (Q31) | HEATSINK | 018614 | R19 | RES MF 267K 1% 1/4W | 144532 |
| Q32 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R20 | RES MF 2.21K 1% 1/4W | 144584 |
| (Q32) | CLIP TRANSISTOR 214 | 414119 | R21 | RES MF 1K 1% 1/4W | 144513 |
| (Q32) | ISOSTRATE | 084225 | R22 | RES SMD0805 2.21M 1/8W 1% | 145043 |
| (Q32) | HEATSINK | 018614 | R23 | RES SMD0805 2.21M 1/8W 1% | 145043 |
| Q33 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R24 | RES MF 47.5K 1% 1/4W | 144526 |
| (Q33) | CLIP TRANSISTOR 214 | 414119 | R25 | RES MF 47.5K 1% 1/4W | 144526 |
| (Q33) | ISOSTRATE | 084225 | R26 | RES MF 1K 1% 1/4W | 144513 |
| (Q33) | HEATSINK | 018614 | R27 | RES MET OX 47 OHM 5% 1/2W | 137102 |
| Q34 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R28 | RES MET OX 47 OHM 5% 1/2W | 137102 |
| (Q34) | CLIP TRANSISTOR 214 | 414119 | R29 | RES MF 806 OHM 1% 1/4W | 144512 |
| (Q34) | ISOSTRATE | 084225 | R30 | RES MF 806 OHM 1% 1/4W | 144512 |
| (Q34) | HEATSINK | 018614 | R31 | RES MF 3.32K 1% 1/4W | 144518 |
| Q35 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R32 | RES MF 221 OHM 1% 1/4W | 144559 |
| (Q35) | CLIP TRANSISTOR 214 | 414119 | R33 | RES MF 221 OHM 1% 1/4W | 144559 |
| (Q35) | ISOSTRATE | 084225 | R34 | RES MF 3.32K 1% 1/4W | 144518 |
| (Q35) | HEATSINK | 018614 | R35 | RES MF 221 OHM 1% 1/4W | 144559 |
| Q36 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R36 | RES MF 221 OHM 1% 1/4W | 144559 |
| (Q36) | CLIP TRANSISTOR 214 | 414119 | R37 | RES MF 267K 1% 1/4W | 144532 |
| (Q36) | ISOSTRATE | 084225 | R38 | RES MF 1.5K 1% 1/4W | 144539 |
| (Q36) | HEATSINK | 018614 | R39 | RES MF 1.5K 1% 1/4W | 144539 |
| Q37 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R40 | RES MF 324 OHM 1% 1/4W | 144597 |
| (Q37) | CLIP TRANSISTOR 214 | 414119 | R41 | RES MF 324 OHM 1% 1/4W | 144597 |
| (Q37) | ISOSTRATE | 084225 | R42 | RES MF 2.21 OHM 1% 1/4W | 144607 |
| (Q37) | HEATSINK | 018614 | R43 | RES MF 2.21 OHM 1% 1/4W | 144607 |
| Q38 | TRANSISTOR NPN 260V THERM TRAK | 132330 | R44 | RES MF 2.21 OHM 1% 1/4W | 144607 |
| (Q38) | CLIP TRANSISTOR 214 | 414119 | R45 | RES MF 2.21 OHM 1% 1/4W | 144607 |
| (Q38) | ISOSTRATE | 084225 | R46 | RES MF 324 OHM 1% 1/4W | 144597 |
| (Q38) | HEATSINK | 018614 | R47 | RES MF 324 OHM 1% 1/4W | 144597 |
| Q39 | TRANSISTOR PNP 260V THERM TRAK | 132331 | R48 | RES MF 20K 1% 1/4W | 144524 |
| (Q39) | CLIP TRANSISTOR 214 | 414119 | R49 | RES MF 20K 1% 1/4W | 144524 |
| (Q39) | ISOSTRATE | 084225 | R50 | RES MET OX 680 OHM 5% 1/2W | 137099 |
| (Q39) | HEATSINK | 018614 | R51 | RES MET OX 680 OHM 5% 1/2W | 137099 |
| Q40 | TRANSISTOR NPN 230V 2SC4793 | 132324 | R52 | "POT 1/4" HORIZ 500 OHM .5W SMD" | 134517 |
| (Q40) | CLIP TRANSISTOR 218 | 414118 | R53 | RES MET OX 430 OHM 5% 1/2W | 137101 |
| (Q40) | ISOSTRATE | 084225 | R54 | RES MET OX 680 OHM 5% 1/2W | 137099 |
| (Q40) | HEATSINK | 018614 | R55 | RES MET OX 1.8K 5% 1/2W | 137100 |
| Q41 | TRANSISTOR PNP 230V 2SA1837 | 132323 | R56 | RES MET OX 47 OHM 5% 1/2W | 137102 |
| (Q41) | CLIP TRANSISTOR 218 | 414118 | R57 | RES WW DUAL .47 OHM 5% 5W | 139252 |

PARTS LIST (Cont'd.)

7 HEATSINK PCB 751235 (Cont'd.)

| Ref. No. | Description | Part No. |
|----------|----------------------------|----------|
| R58 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| R59 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| R60 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| R61 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| R62 | RES WW DUAL .47 OHM 5% 5W | 139252 |
| R66 | RES MF 1.5K 1% 1/4W | 144539 |
| R67 | RES MF 1.5K 1% 1/4W | 144539 |
| R68 | RES MET OX 680 OHM 5% 1/2W | 137099 |
| R69 | RES FP 1.1 OHM 5% 1/4W | 137002 |
| R72 | RES FP 1.1 OHM 5% 1/4W | 137002 |
| RT1 | THERMISTOR 100 | 144279 |
| U1 | IC DUAL OP AMP 5532 SMD | 133718 |

8 DISPLAY PCB 7512370

| Ref. No. | Description | Part No. |
|----------|--------------------------------|----------|
| C1 | CAP MONO .1UF 50V ±20% X7R SMD | 061365 |
| D1 | DIODE SMALL SIGNAL 4148 SMD | 070199 |
| DS1 | LED RED 5MM ROUND | 058187 |
| (DS1) | LED SPACER .220 LENGTH | 163001 |
| DS2 | LED AMBER | 058133 |
| (DS2) | LED SPACER .220 LENGTH | 163001 |
| DS3 | LED GREEN 5MM 30 DEG | 058190 |
| (DS3) | SPACER LED | 112108 |
| DS4 | LED GREEN 5MM 30 DEG | 058190 |
| (DS4) | SPACER LED | 112108 |
| DS5 | LED RGB SMD | 058199 |
| DS6 | LED RGB SMD | 058199 |
| DS7 | LED RGB SMD | 058199 |
| DS8 | LED RGB SMD | 058199 |
| DS9 | LED RGB SMD | 058199 |
| DS10 | LED RGB SMD | 058199 |
| DS11 | LED RGB SMD | 058199 |
| DS12 | LED RGB SMD | 058199 |
| DS13 | LED RGB SMD | 058199 |
| DS14 | LED RGB SMD | 058199 |
| DS15 | LED RGB SMD | 058199 |
| DS16 | LED RGB SMD | 058199 |
| DS17 | LED RGB SMD | 058199 |
| DS18 | LED RGB SMD | 058199 |
| DS19 | LED RGB SMD | 058199 |
| DS20 | LED RGB SMD | 058199 |
| DS21 | LED RGB SMD | 058199 |
| DS22 | LED RGB SMD | 058199 |
| DS23 | LED RGB SMD | 058199 |
| DS24 | LED RGB SMD | 058199 |
| DS25 | LED RGB SMD | 058199 |
| DS26 | LED RGB SMD | 058199 |
| DS27 | LED RGB SMD | 058199 |
| DS28 | LED RGB SMD | 058199 |
| J1 | HEADER 2MM 7PIN R-ANGLE | 117941 |
| J2 | CONN 18 PIN FFC SMD | 118003 |
| J3 | CONN 18 PIN FFC SMD | 118003 |
| J4 | CONN 18 PIN FFC SMD | 118003 |
| J5 | CONN 18 PIN FFC SMD | 118003 |
| J6 | CONN 18 PIN FFC SMD | 118003 |
| J7 | HEADER 2MM 7PIN R-ANGLE | 117941 |
| J8 | CONNECTOR LATCHING 2PIN RA SMD | 118027 |

| Ref. No. | Description | Part No. |
|----------|---|------------------|
| PCB1 | PC BD DISPLAY | 130093 |
| Q1 | TRANSISTOR PNP A55 SMD | 132334 |
| Q2 | TRANSISTOR NPN A05 SMD | 132333 |
| Q3 | TRANSISTOR PNP A55 SMD | 132334 |
| Q4 | TRANSISTOR NPN A05 SMD | 132333 |
| R1 | "POT 1/4" HORIZ 100K .5W SMD " | 134515 |
| R2 | RES SMD0805 22.1K 1/8W 1% | 145012 |
| R3 | RES SMD0805 47.5K 1/8W 1% | 145013 |
| R4 | RES SMD0805 47.5K 1/8W 1% | 145013 |
| R5 | RES SMD0805 22.1K 1/8W 1% | 145012 |
| R6 | RES SMD0805 4.75K 1/8W 1% | 145008 |
| R7 | RES SMD0805 1K 1/8W 1% | 145007 |
| R8 | RES SMD0805 4.75K 1/8W 1% | 145008 |
| R9 | RES SMD0805 1K 1/8W 1% | 145007 |
| R10 | RES SMD0805 33.2K 1/8W 1% | 145033 |
| R11 | RES SMD0805 4.75K 1/8W 1% | 145008 |
| R12 | RES SMD0805 221 1/8W 1% | 145001 |
| R13 | RES SMD0805 221 1/8W 1% | 145001 |
| R14 | RES SMD0805 221 1/8W 1% | 145001 |
| R15 | RES SMD0805 4.75K 1/8W 1% | 145008 |
| R16 | RES SMD0805 221 1/8W 1% | 145001 |
| R17 | RES SMD0805 475 1/8W 1% | 145020 |
| R18 | RES SMD0805 475 1/8W 1% | 145020 |
| R19 | RES SMD0805 475 1/8W 1% | 145020 |
| R20 | POT 1/4" HORIZ 1K OHM 1/2W SMD | 134518 |
| R21 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R22 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R23 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R24 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R25 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R26 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R27 | POT 1/4" HORIZ 500 OHM .5W SMD | 134517 |
| R28 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R29 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R30 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R31 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R32 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R33 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R34 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R35 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R36 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R37 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R38 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R39 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R40 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R41 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R42 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R43 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| R44 | RES SMD0805 8.25K 1/8W 1% | 145009 |
| R45 | RES SMD0805 1.5K 1/8W 1% | 145022 |
| U1 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U2 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U3 | IC SINGLE NAND SCHMITT SMD | 133724 |
| U4 | IC SINGLE NAND SCHMITT SMD ASSY PCB DISPLAY SMD | 133724 710105 |

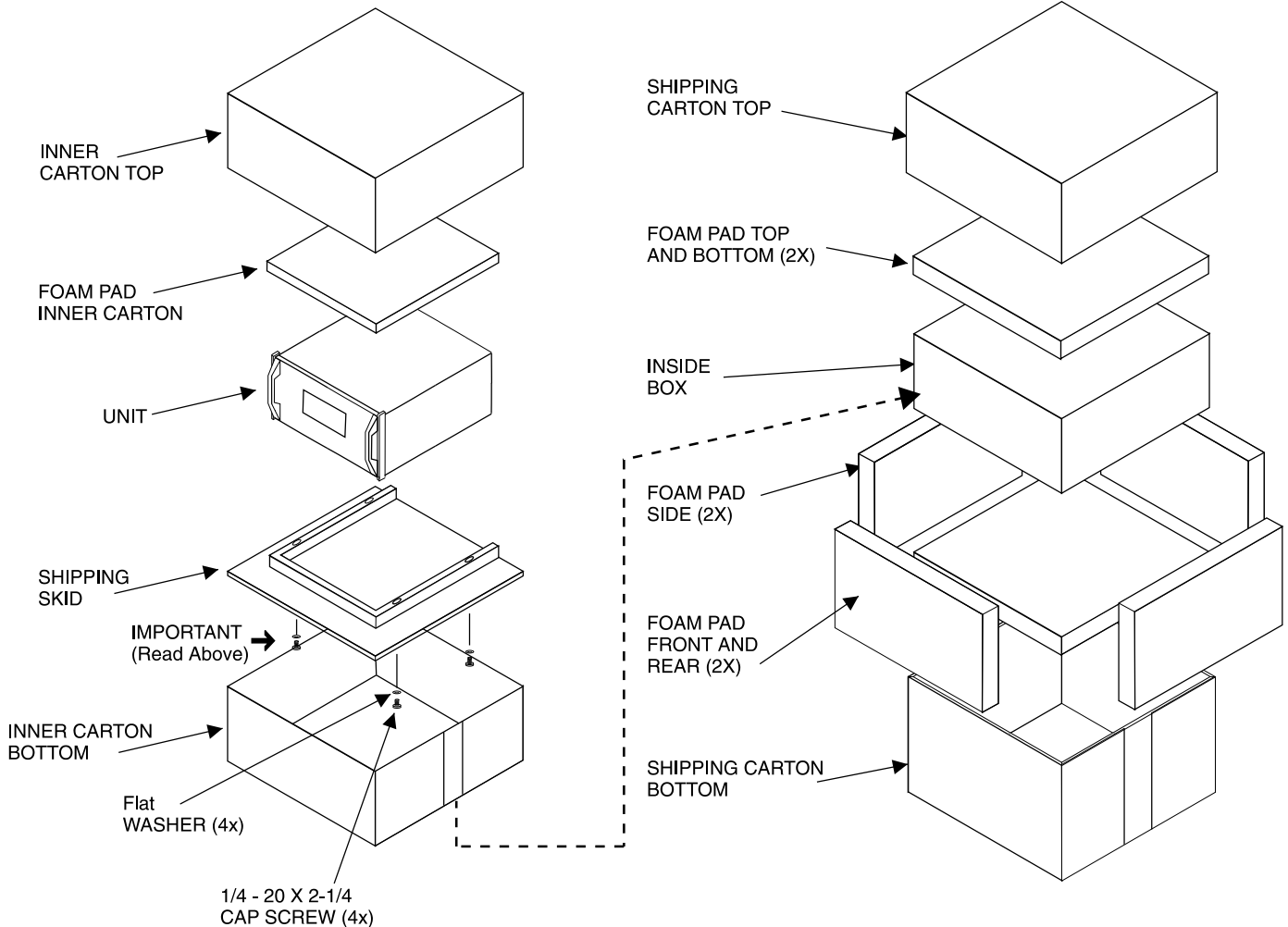
NOTES

REPACKING INSTRUCTIONS

In the event it is necessary to repack the equipment for shipment, the equipment must be packed exactly as shown below. It is very important that the four plastic feet are attached to the bottom of the equipment. Four 1/4 - 20x2-1/4 inch screws and washers must be used to fasten the unit securely to the bottom pad and wood skid. This will ensure the proper equipment location on the bottom pad. Failure to do this will result in shipping damage.

Use the original shipping carton and interior parts only if they are all in good serviceable condition. If a shipping carton or any of the interior part(s) are needed, please call or write Customer Service Department of McIntosh Laboratory. Refer to page 3. Please see the Part List for the correct part numbers.

| Quantity | Part Number | Description |
|----------|-------------|---------------------------|
| 1 | 034052 | Shipping carton top |
| 1 | 034051 | Shipping carton bottom |
| 2 | 034054 | Foam Pad (top and bottom) |
| 2 | 034186 | Foam Pad (front and rear) |
| 2 | 034187 | Foam Pad (sides) |
| 1 | 034136 | Inner carton top |
| 1 | 034137 | Inner carton bottom |
| 1 | 034188 | Foam Pad (inner carton) |
| 1 | 034479 | Shipping skid |
| 4 | 401212 | 1/4 - 20x2-1/4 cap screw |
| 4 | 104058 | Flat washer |



MC302

QUAD BALANCED POWER AMPLIFIER

SERIAL NO. AAY1001 And Above



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