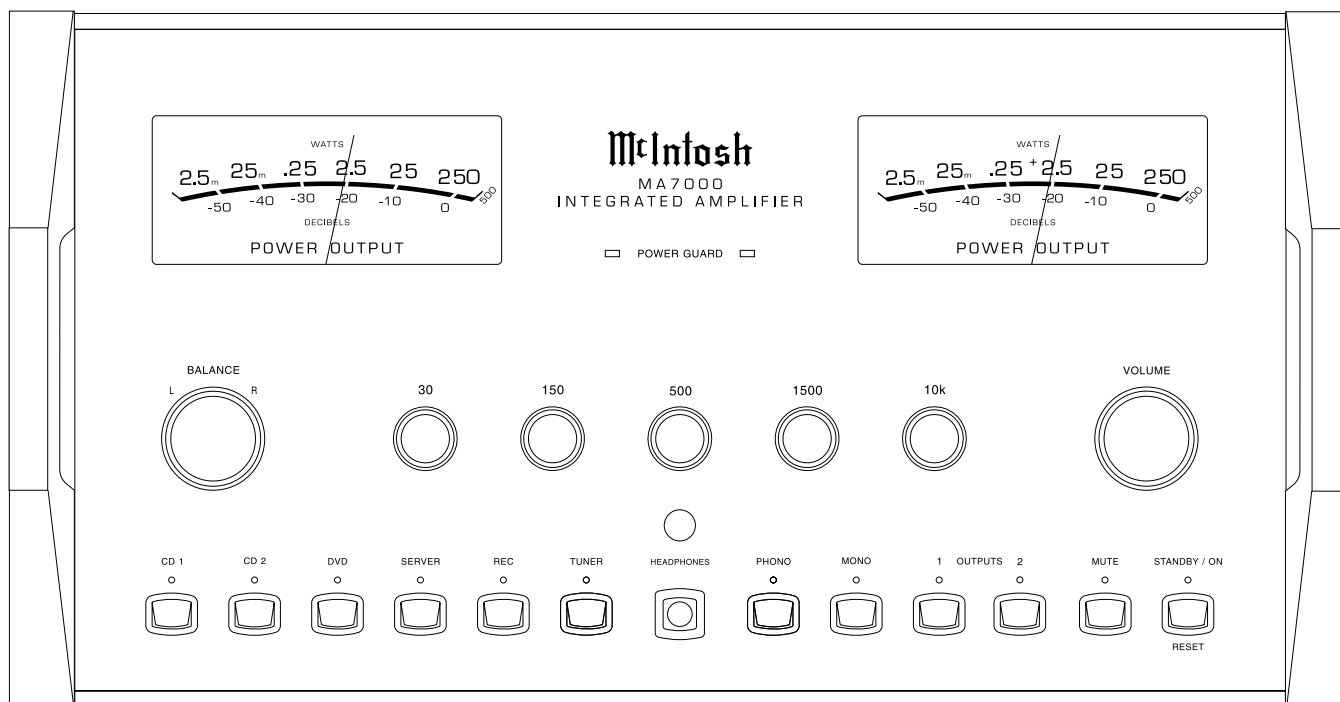




MA7000

INTEGRATED AMPLIFIER

SERIAL NO. YK1001 And Above



A058616 MA7000 P1324 DISPLAY 7/19/07

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SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

Specifications

Power Output

250 watts is the minimum sine wave continuous average power output per channel, both channels operating

Output Load Impedance

2, 4 or 8 ohms

Rated Power Band

20Hz to 20,000Hz

Total Harmonic Distortion

0.005% maximum with both channels operating from 250 milliwatts to rated power, 20Hz to 20,000Hz

Dynamic Headroom

2.0dB

Frequency Response

+0, -0.5dB from 20Hz to 20,000Hz
+0, -3dB from 10Hz to 100,000Hz

Preamplifier Main Output (for rated input)

2.5V unbalanced (8V Maximum)
5.0V balanced (16V Maximum)

Sensitivity (for rated output)

High Level, 250mV unbalanced, 500mV balanced
Phono, 1.2 mV
Power Amp In, 2.5V

Signal To Noise Ratio (A-Weighted)

High Level, 100dB below rated output
Phono, 84dB below 5mV input
Power Amplifier, 115 below rated output

Intermodulation Distortion

0.005% maximum, if the instantaneous peak power is 500 watts or less per channel with both channels operating for any combination of frequencies from 20Hz to 20,000Hz

Wide Band Damping Factor

Greater than 40

Input Impedance

High Level, 20K ohms
Phono, 47K ohms; 65pF
Power Amp In, 10K ohms

Maximum Input Signal

High Level, 8V unbalanced, 16V balanced
Phono, 45mV
Power Amplifier In, 16V

Main Output Impedance

50 ohms

Power Guard

Less than 2% THD with up to 16dB overdrive at 1,000Hz

Voltage Gain

High Level to Rec Output: 0dB
High Level to Main Output: 20dB
Phono to Rec Output: 46dB
Phono to Main Output: 66dB
Power Amplifier: 25dB

Equalizer Controls

Variable 12dB boost to 12dB cut at 30Hz, 150Hz, 500Hz, 1500Hz and 10,000Hz

Power Requirements

100 Volts, 50/60Hz at 8.0 amps
110 Volts, 50/60Hz at 7.2 amps
120 Volts, 50/60Hz at 6.6 amps
220 Volts, 50/60Hz at 3.3 amps
230 Volts, 50/60Hz at 3.3 amps
240 Volts, 50/60Hz at 3.3 amps
Standby: Less than 1 watt

Note: Refer to the rear panel of the MA7000 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, Knobs and Cables


Weight

97.5 pounds (44.3 kg) net, 130.5 pounds (59.2 kg) in shipping carton

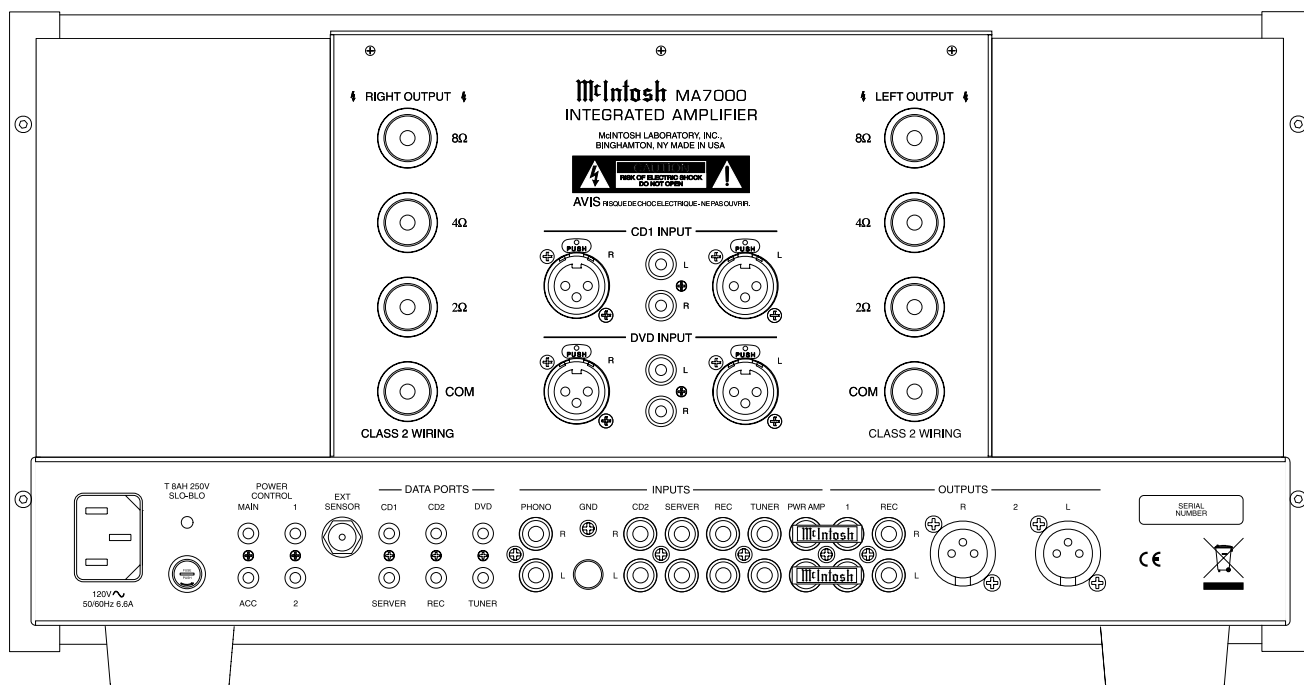
Shipping Carton Dimensions

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

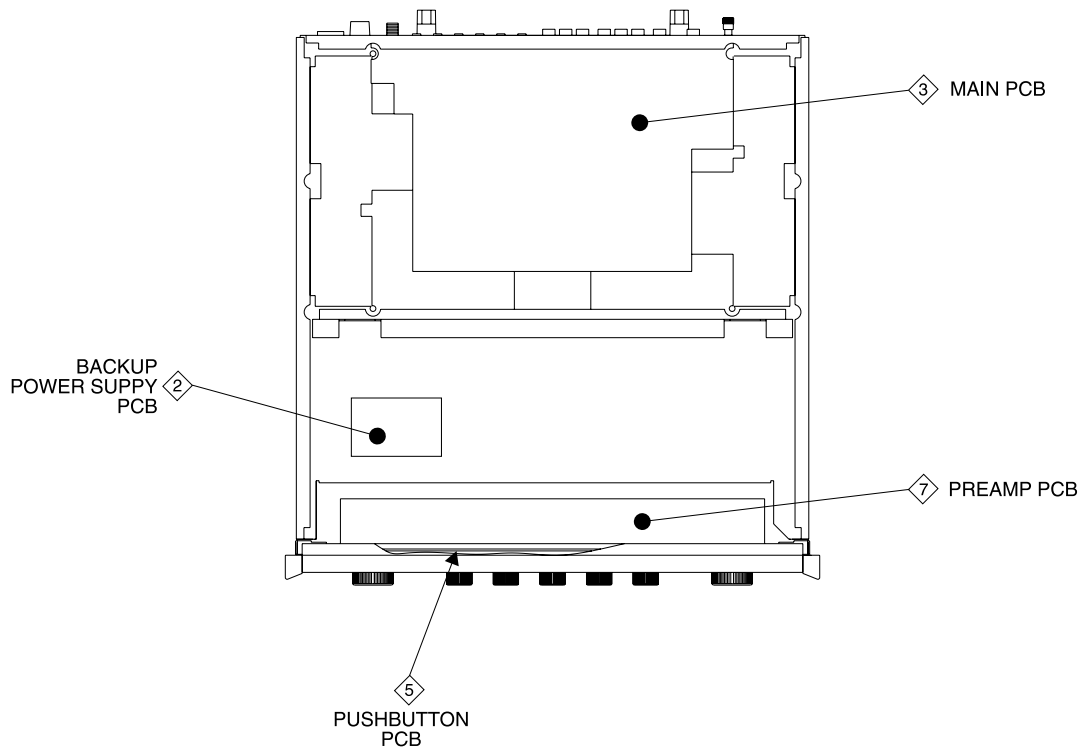
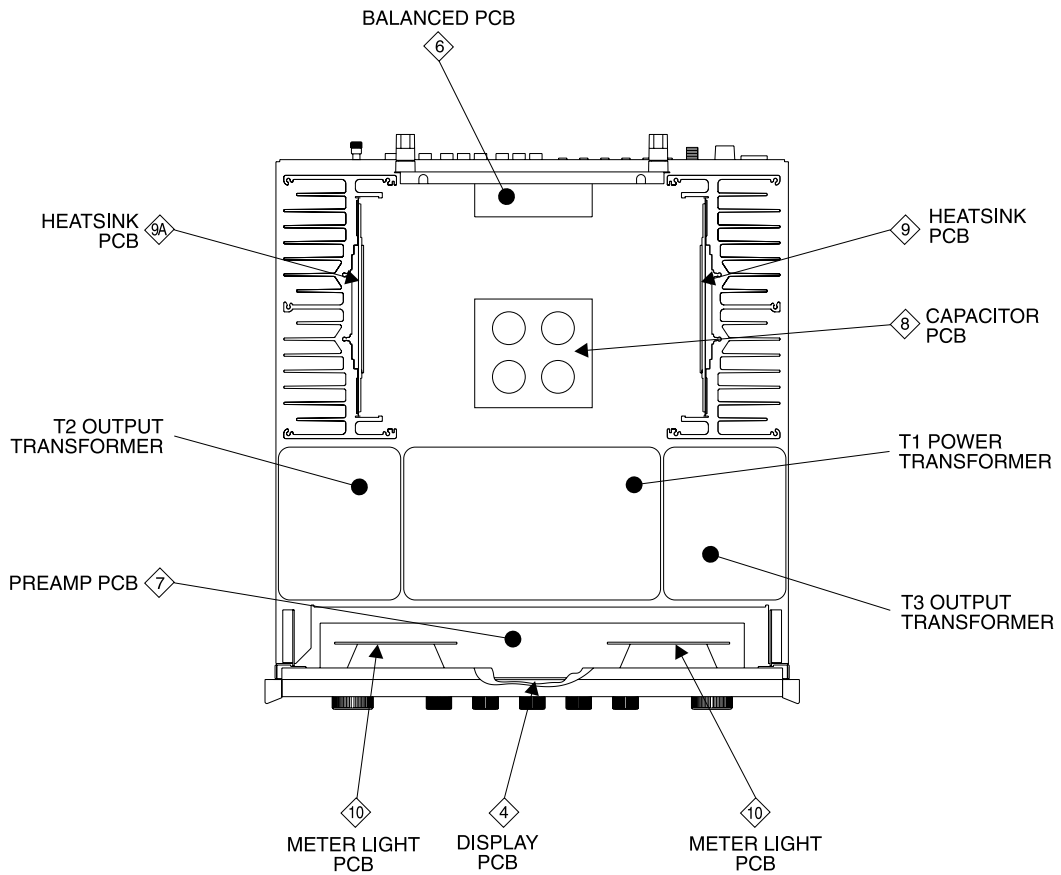
NOTES

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.

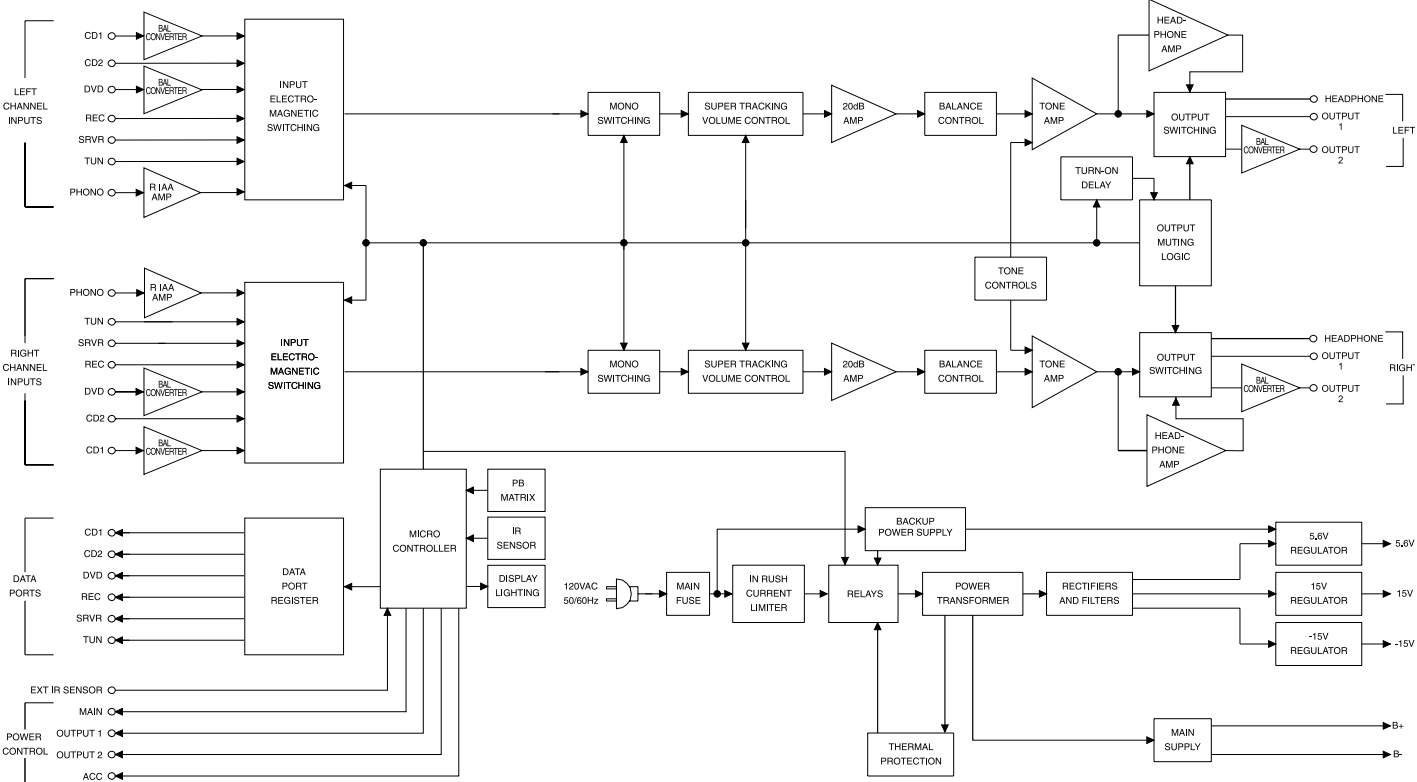
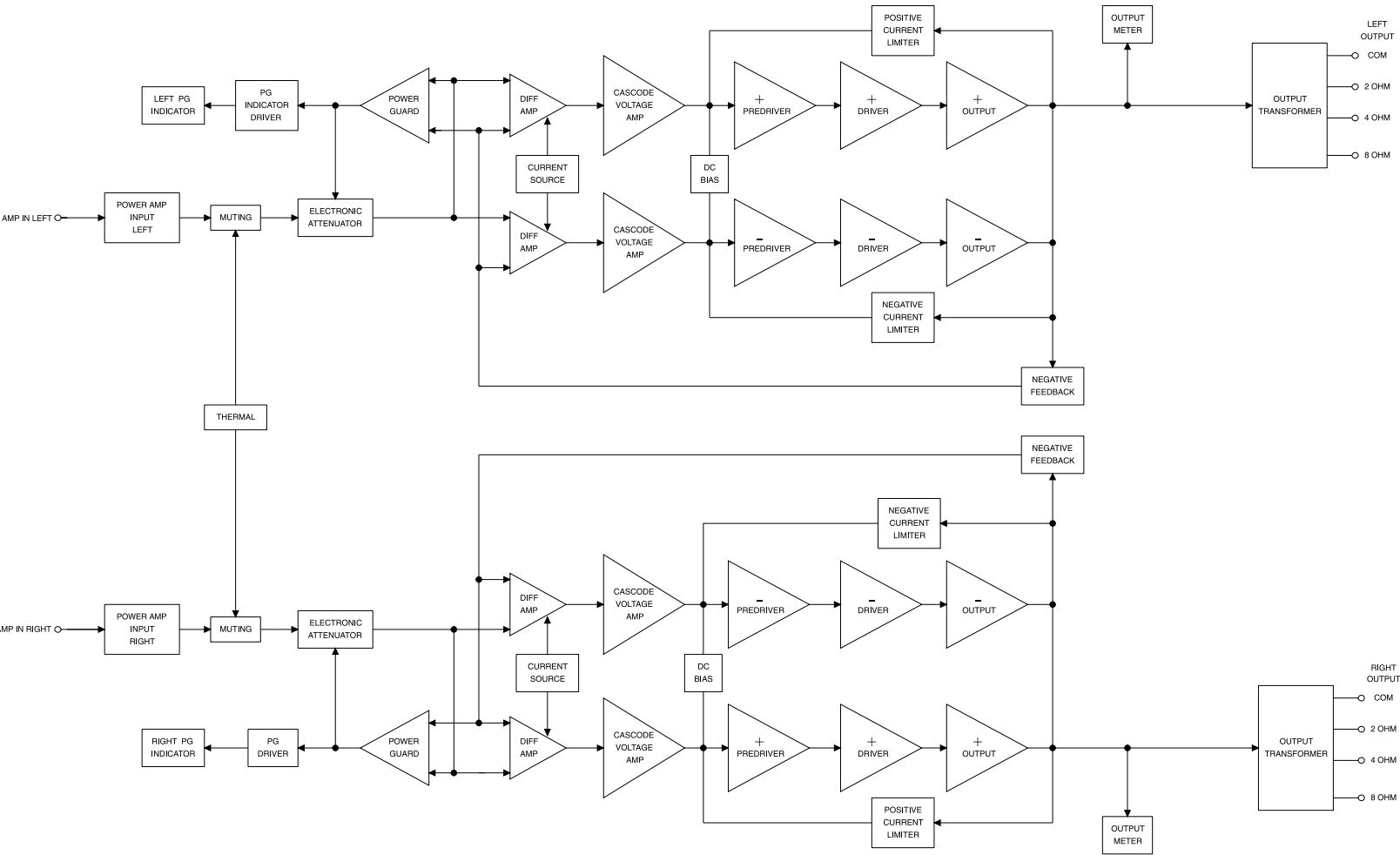
REAR PANEL



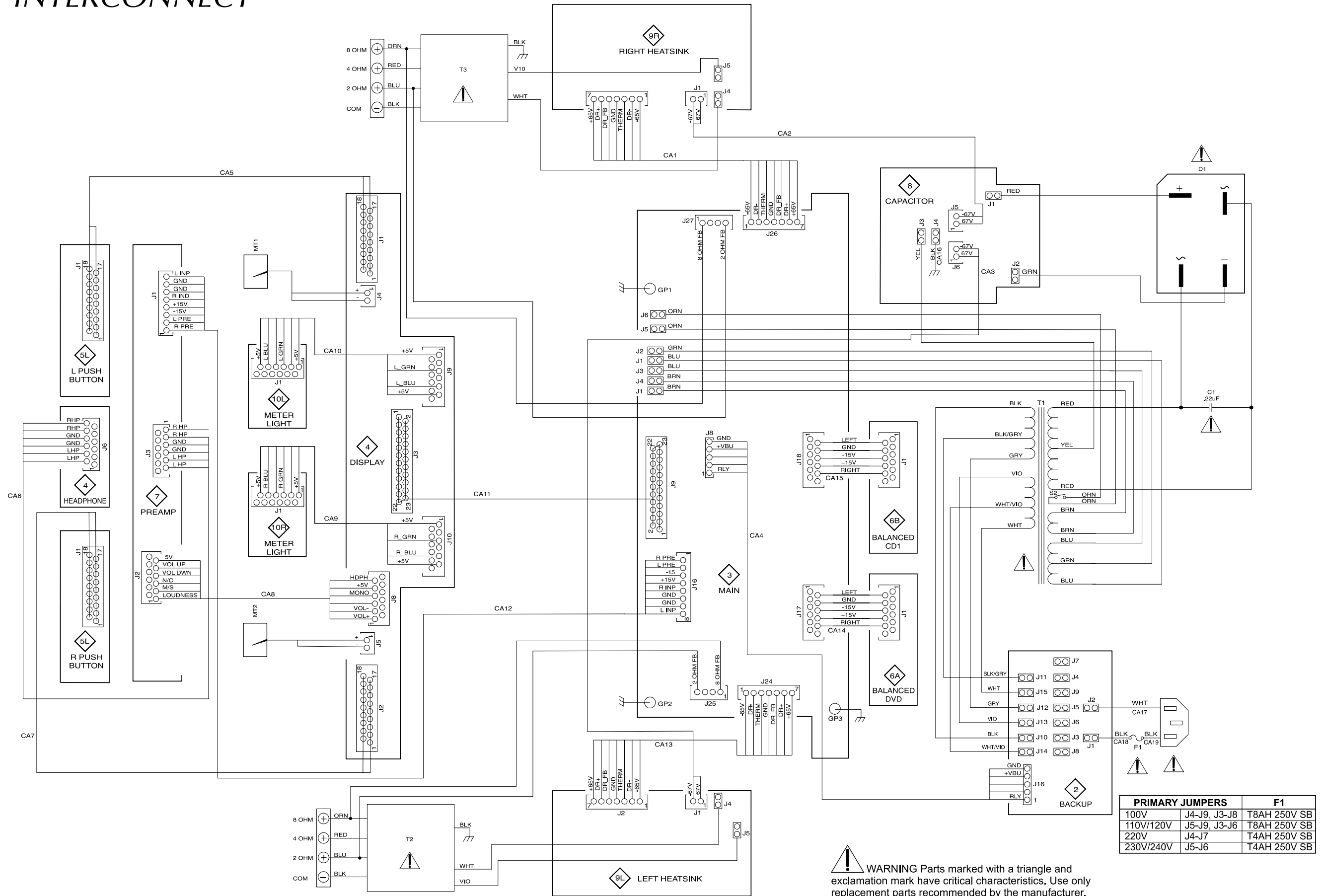
SECTION LOCATIONS

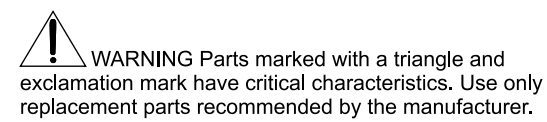


BLOCK DIAGRAM

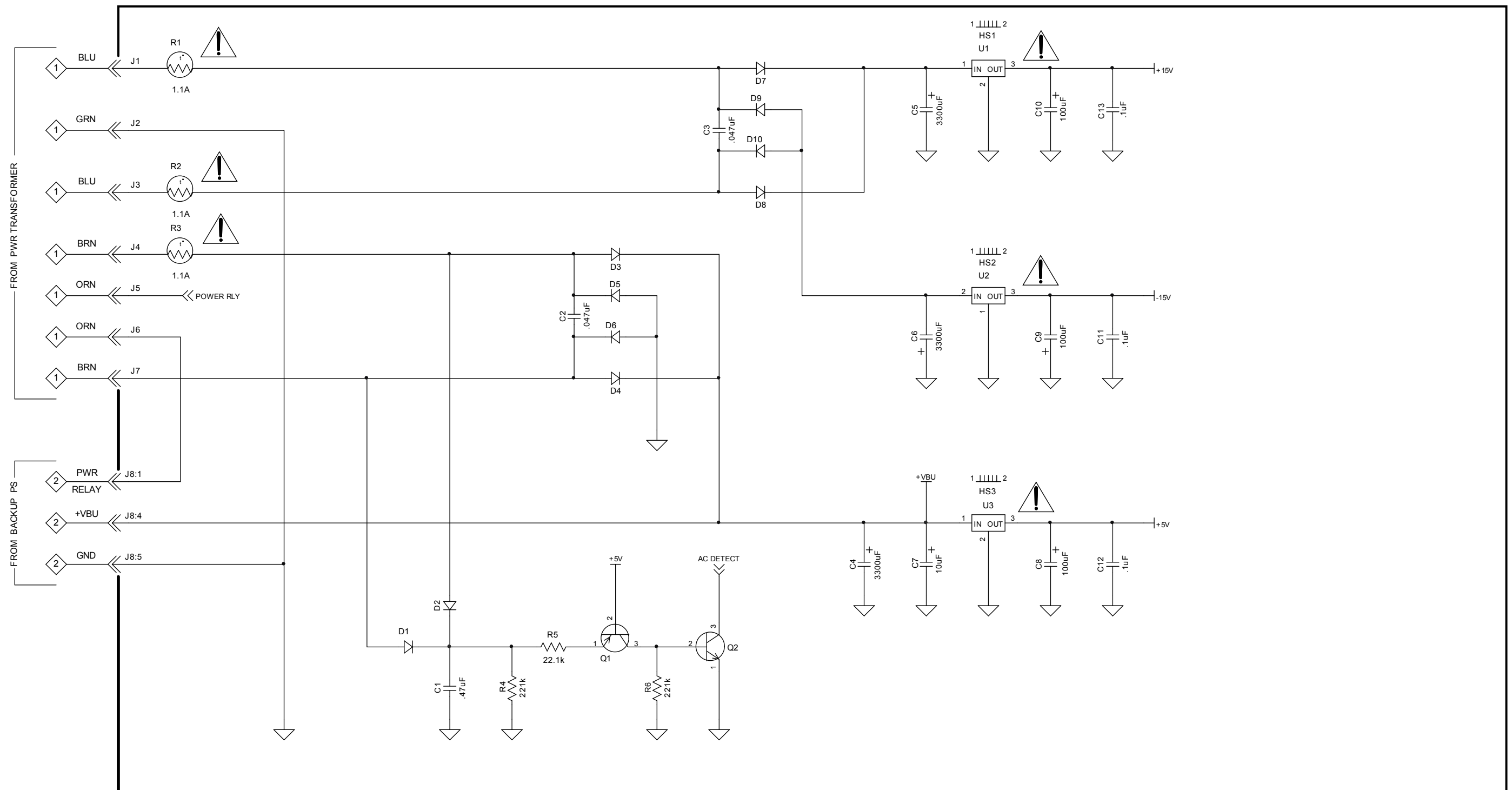


1 INTERCONNECT

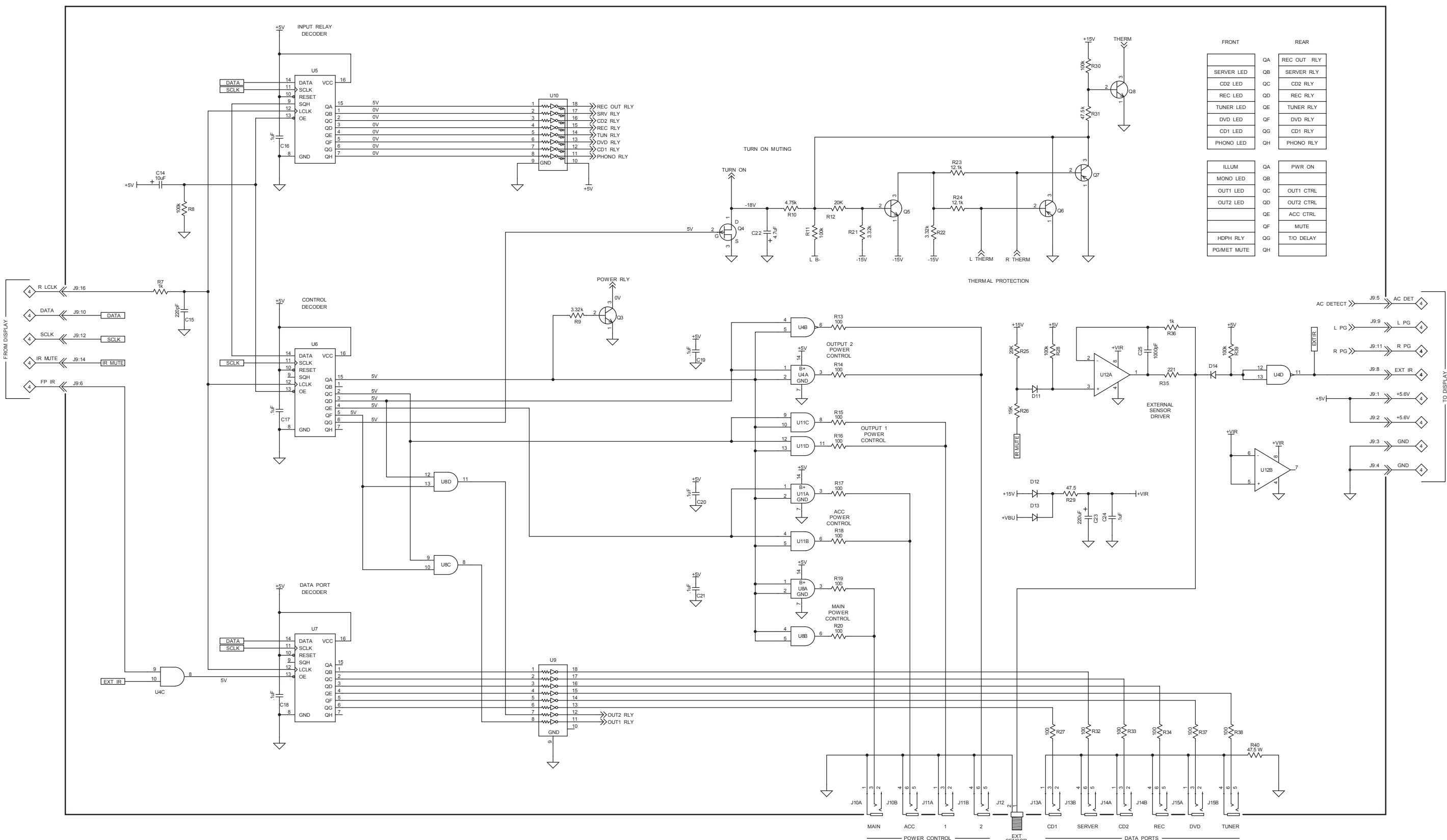


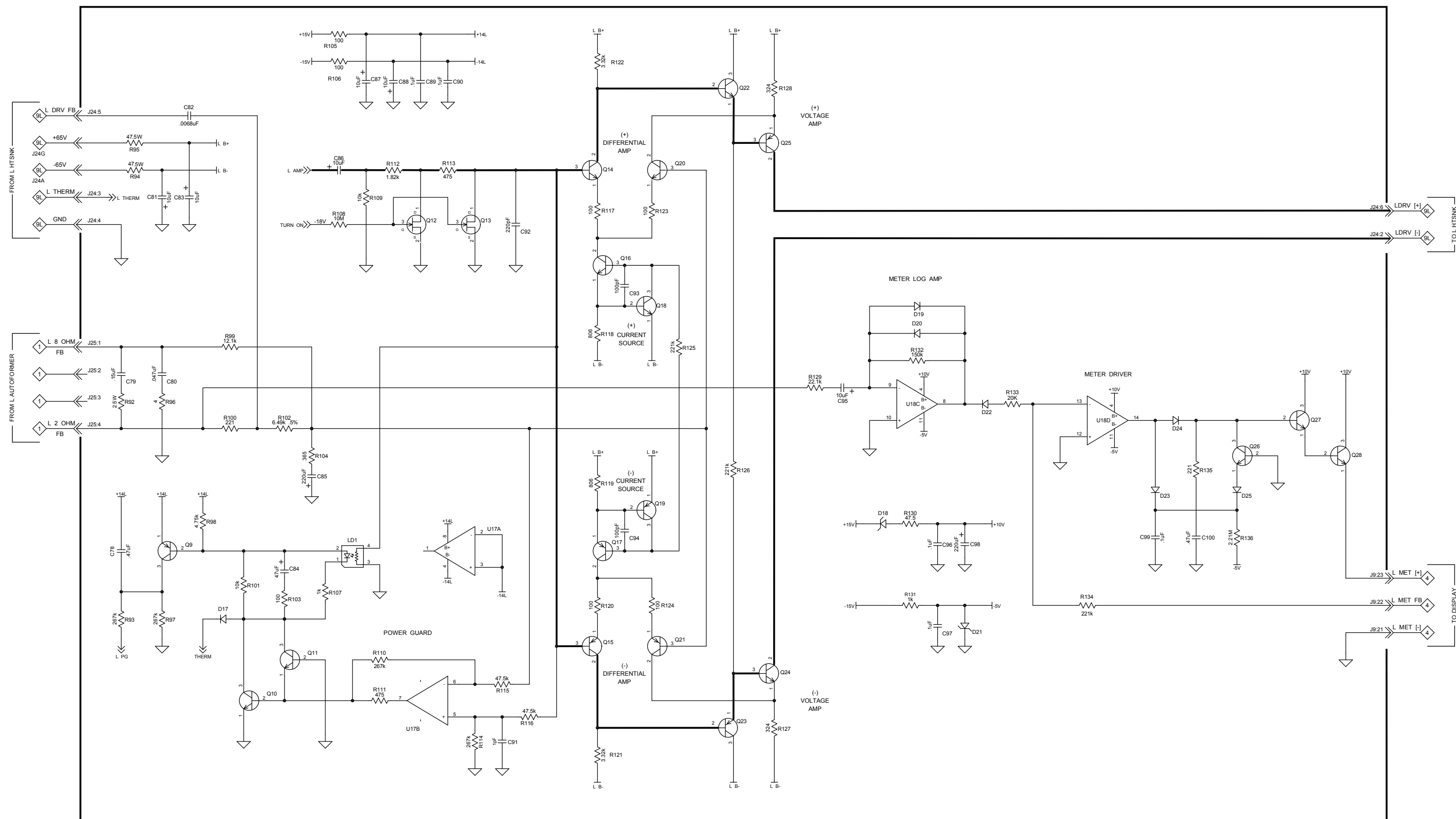


3 **MAIN** 750856 SCH 1 of 5

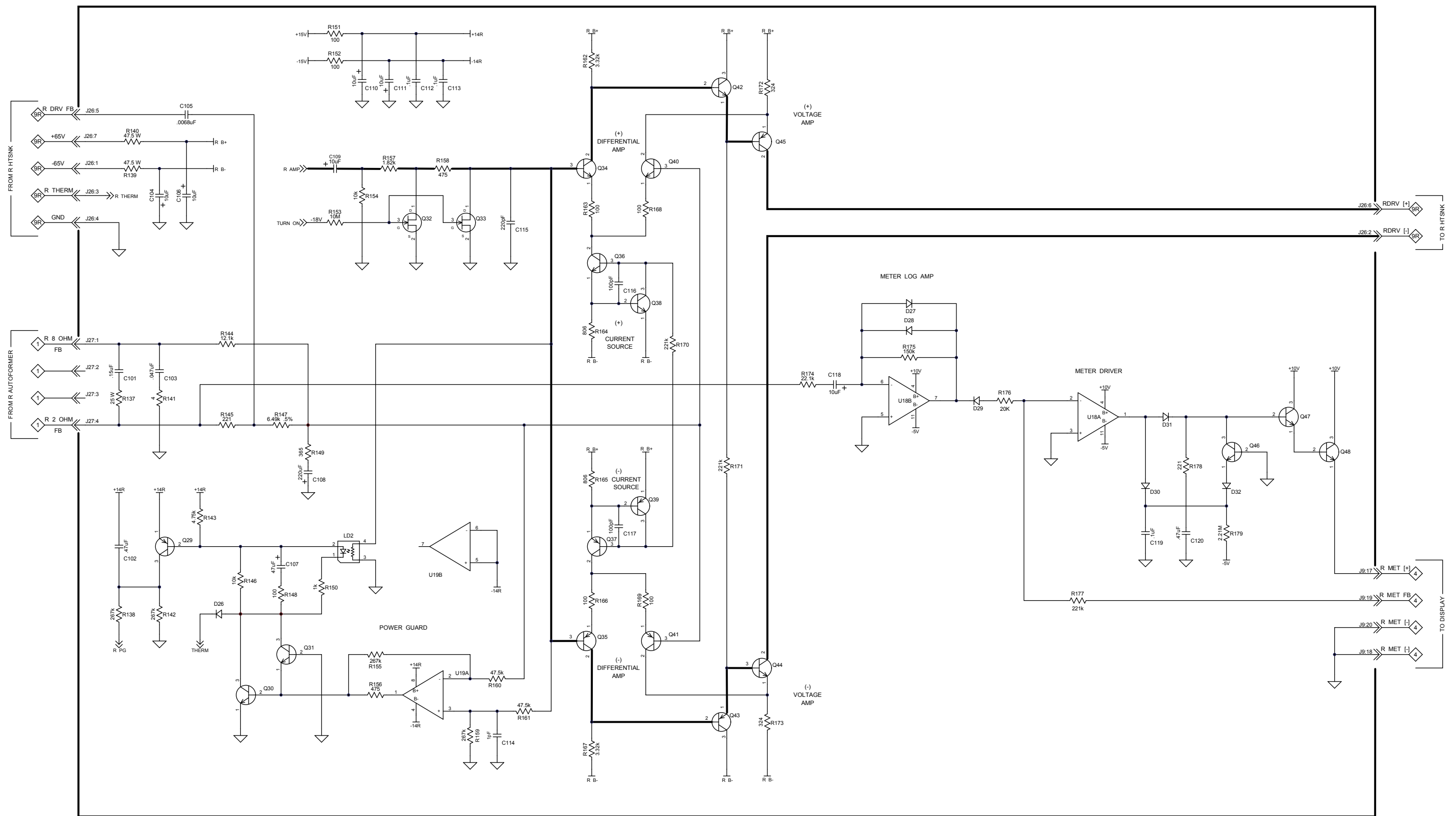


WARNING Parts marked with a triangle and exclamation mark have critical characteristics. Use only replacement parts recommended by the manufacturer.

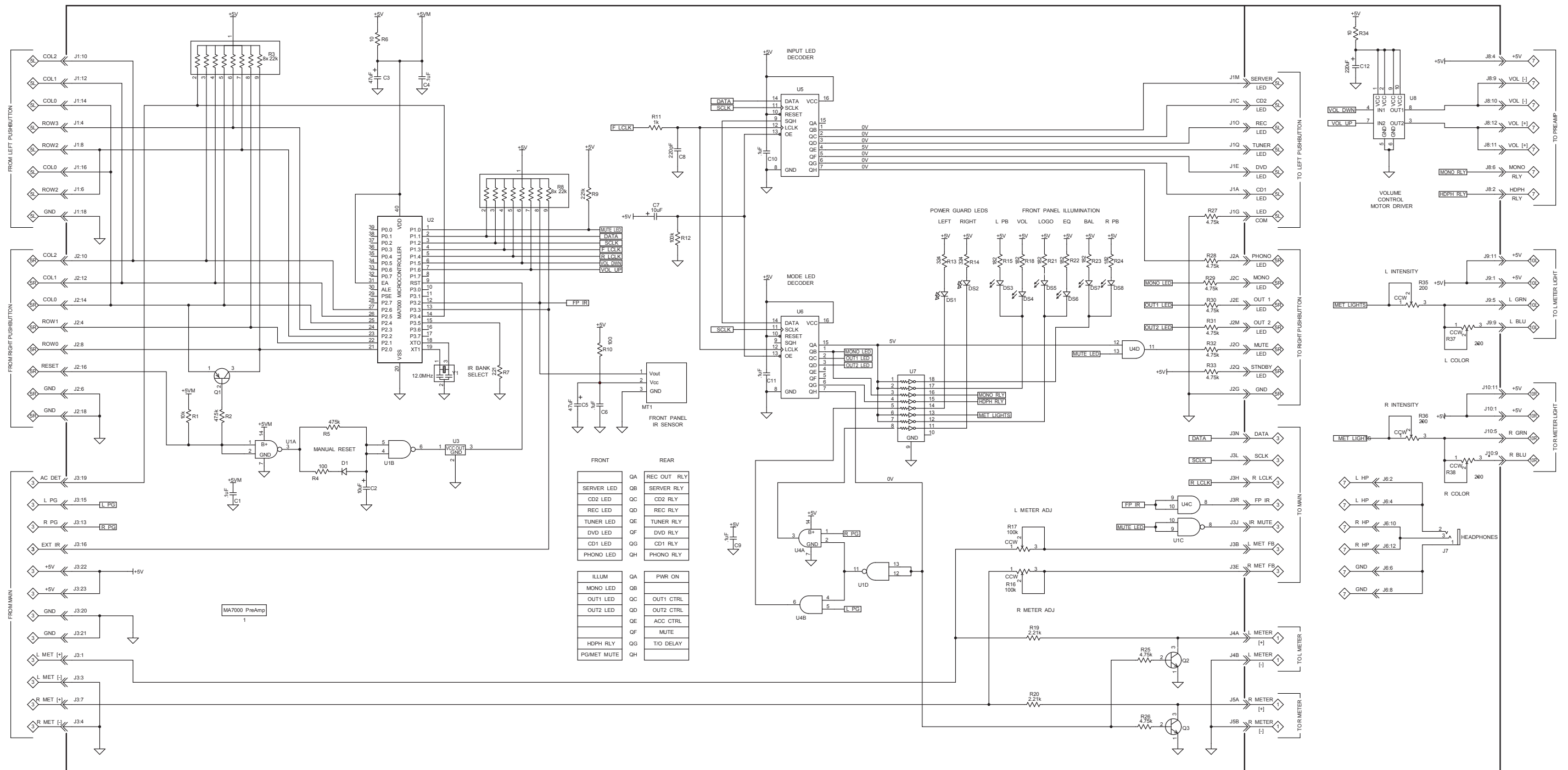




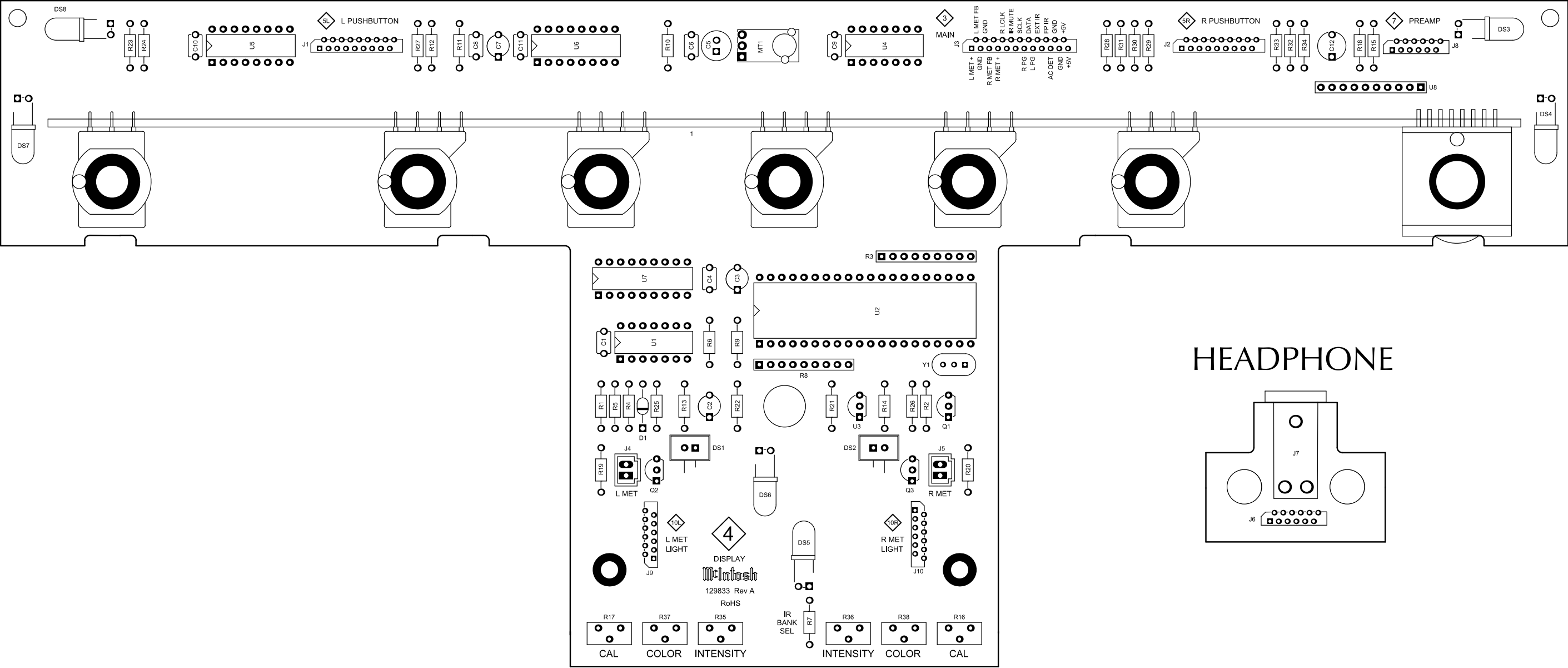
3 MAIN 750856 SCH 5 of 5



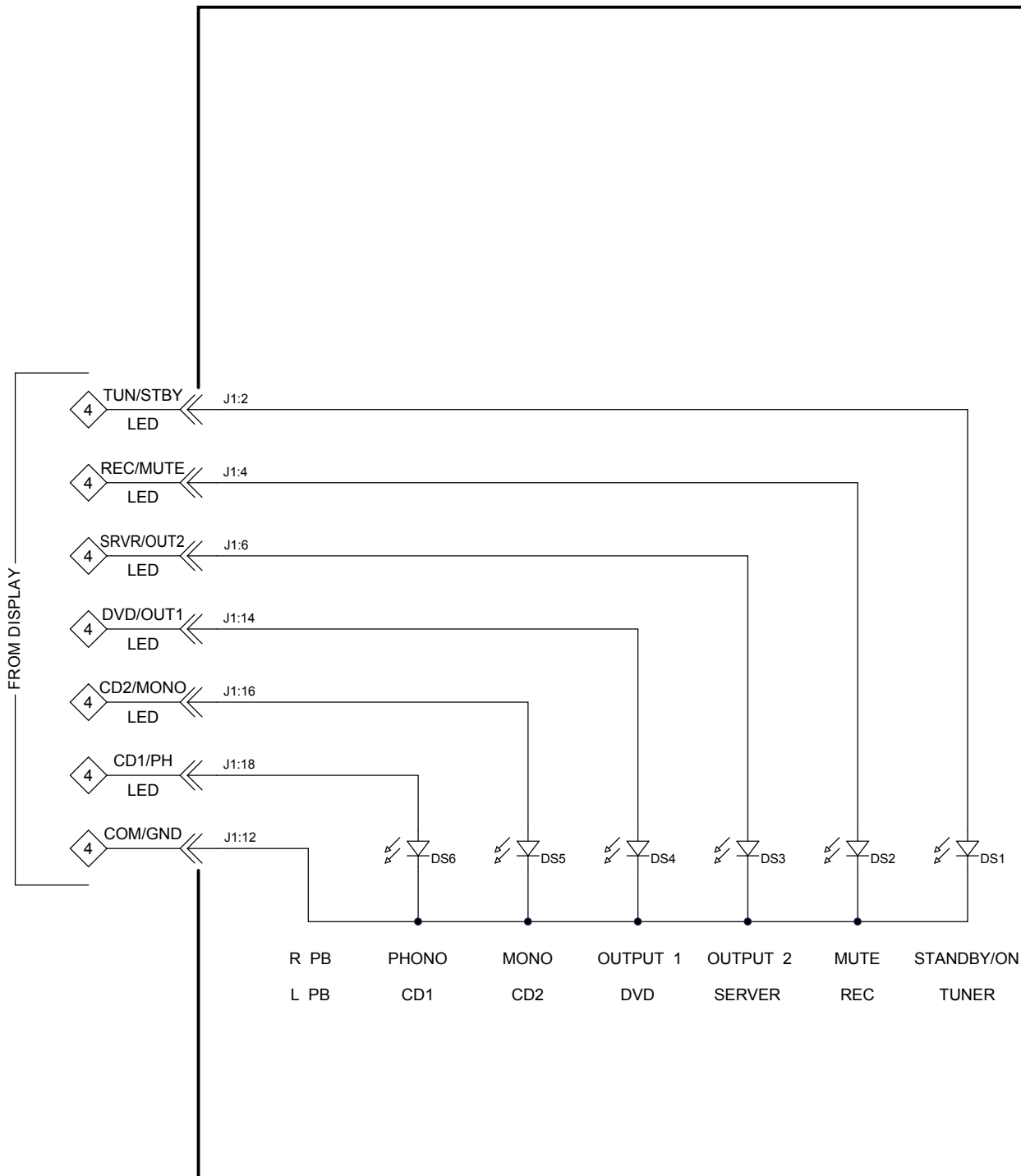




4 *DISPLAY/HEADPHONE 750680 PCB*

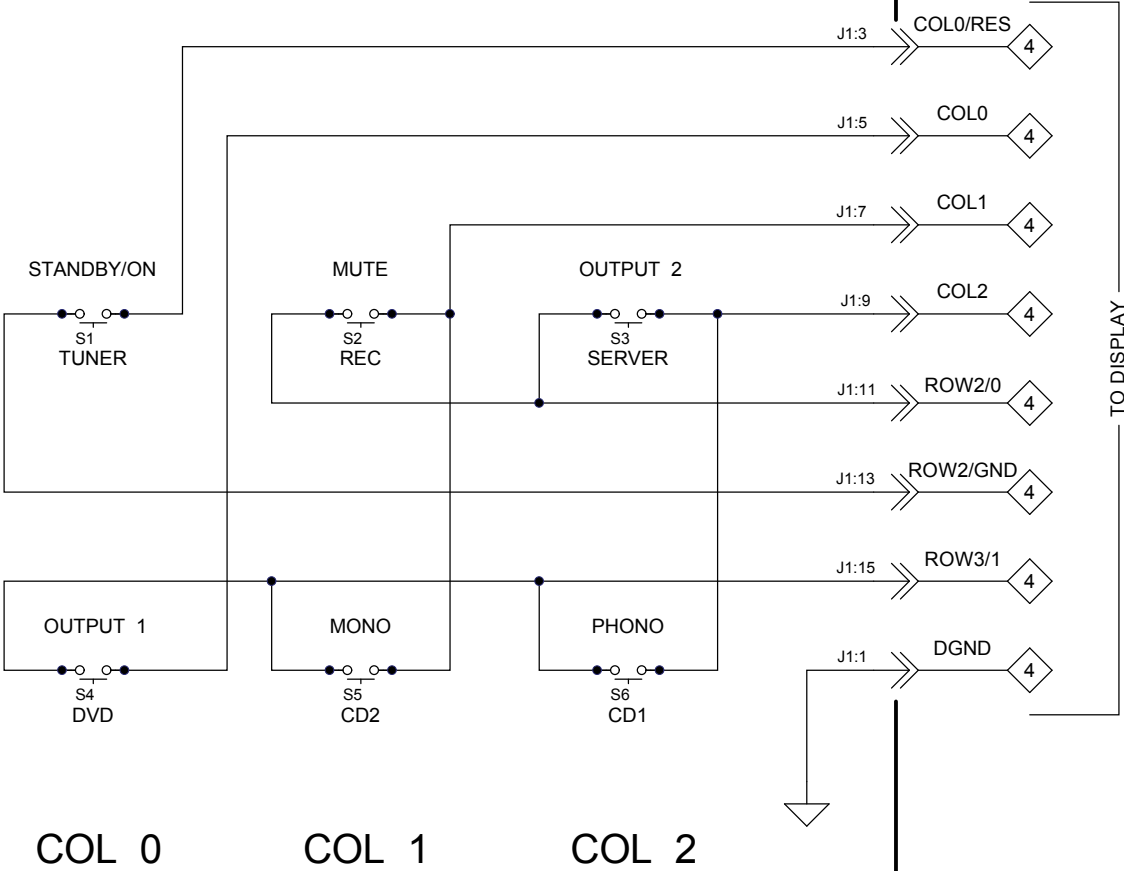


5 *PUSHBUTTON* 750681 SCH

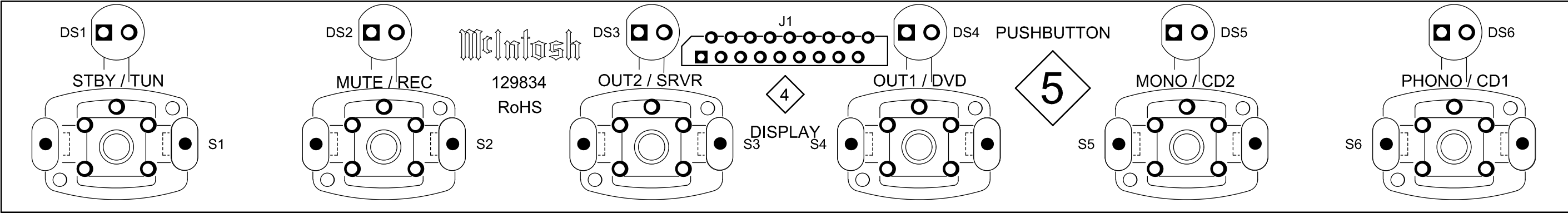


ROW 0
ROW 2

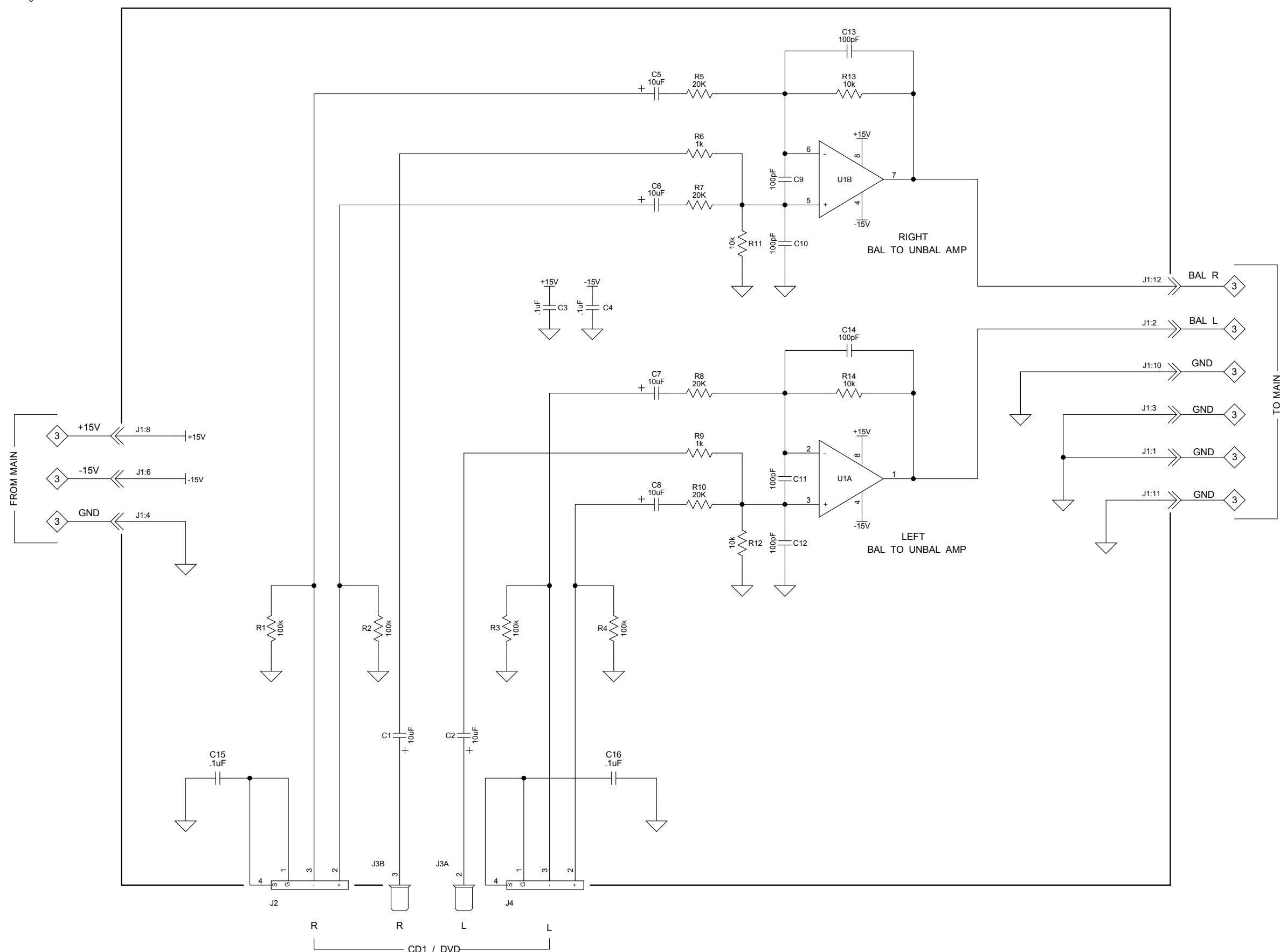
ROW 1
ROW 3



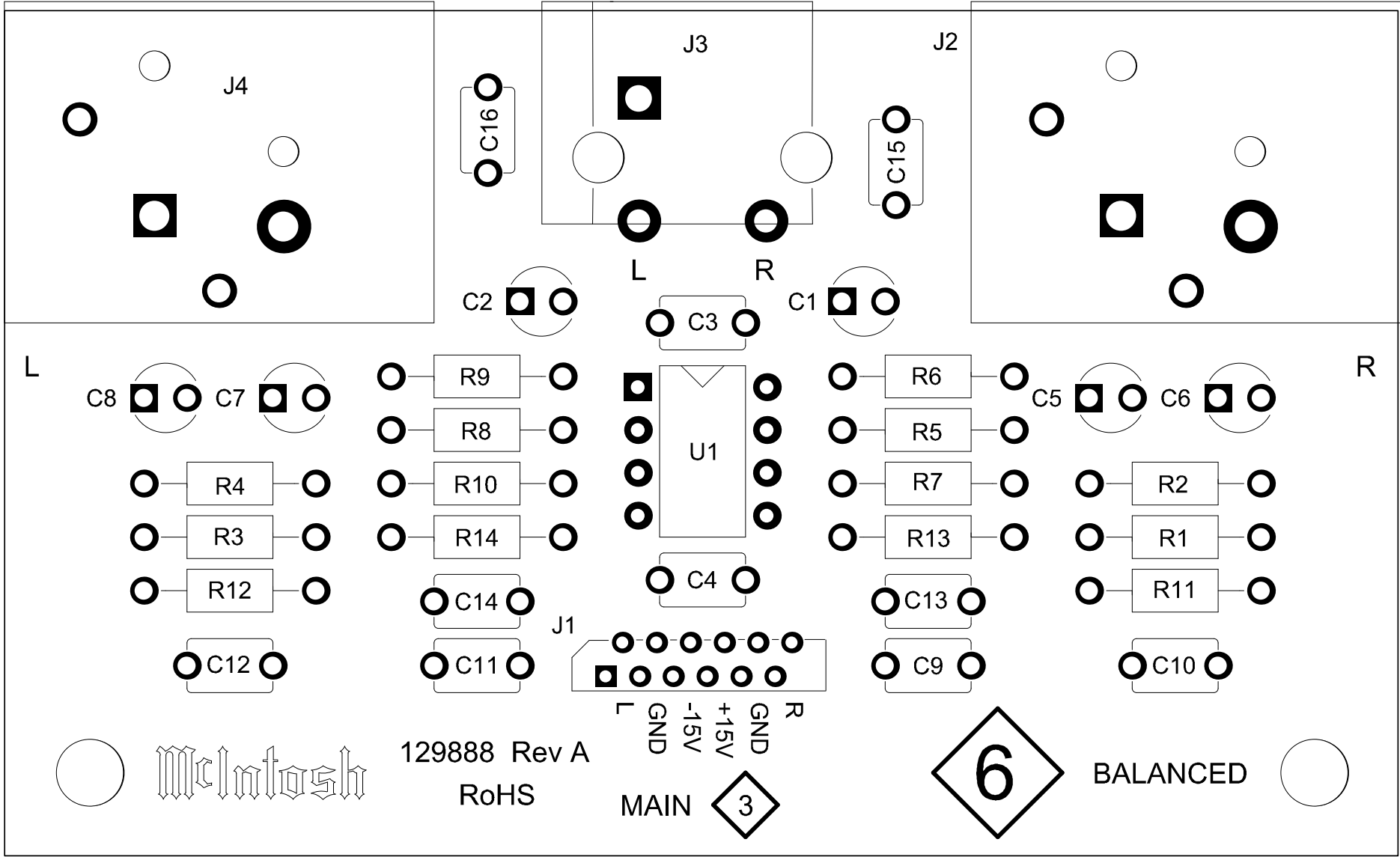
5 *PUSHBUTTON* 750681 PCB



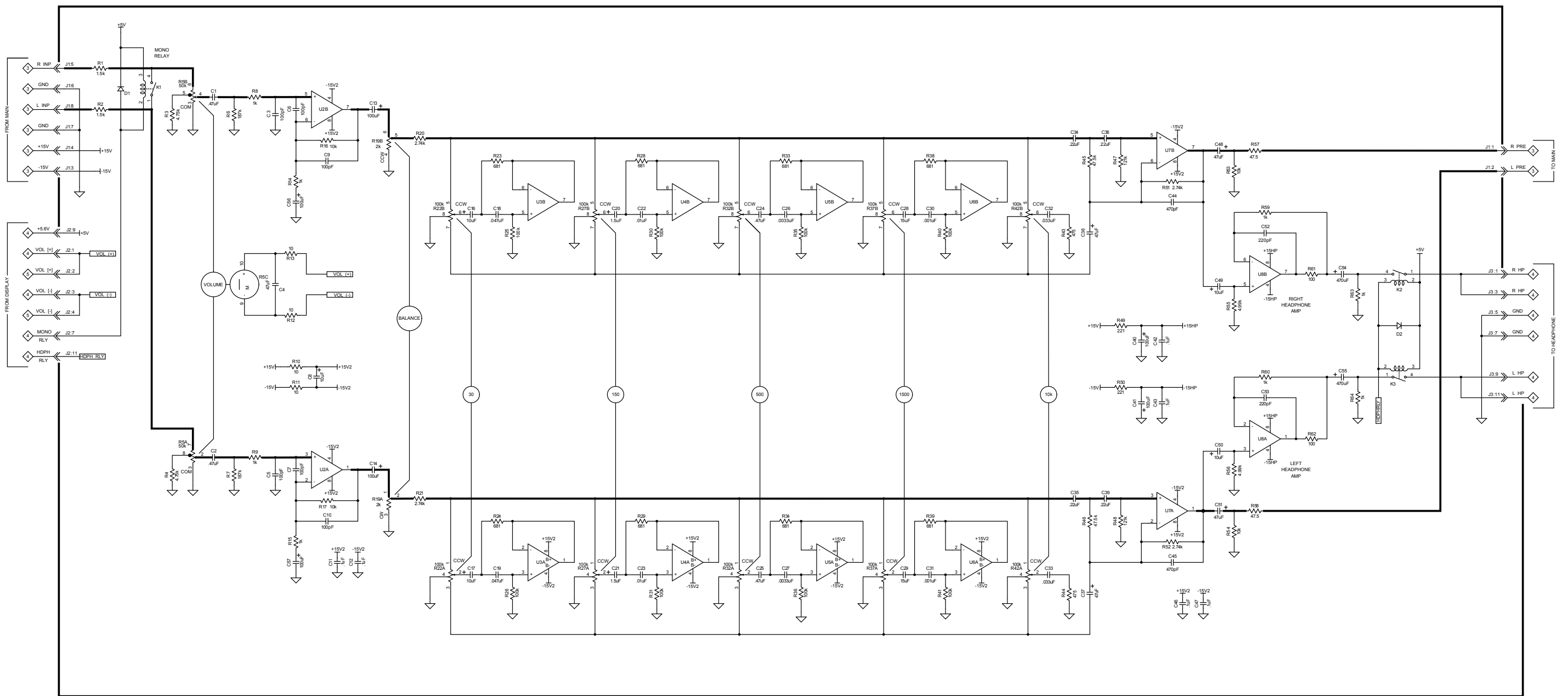
6 **BALANCED** 750682 SCH

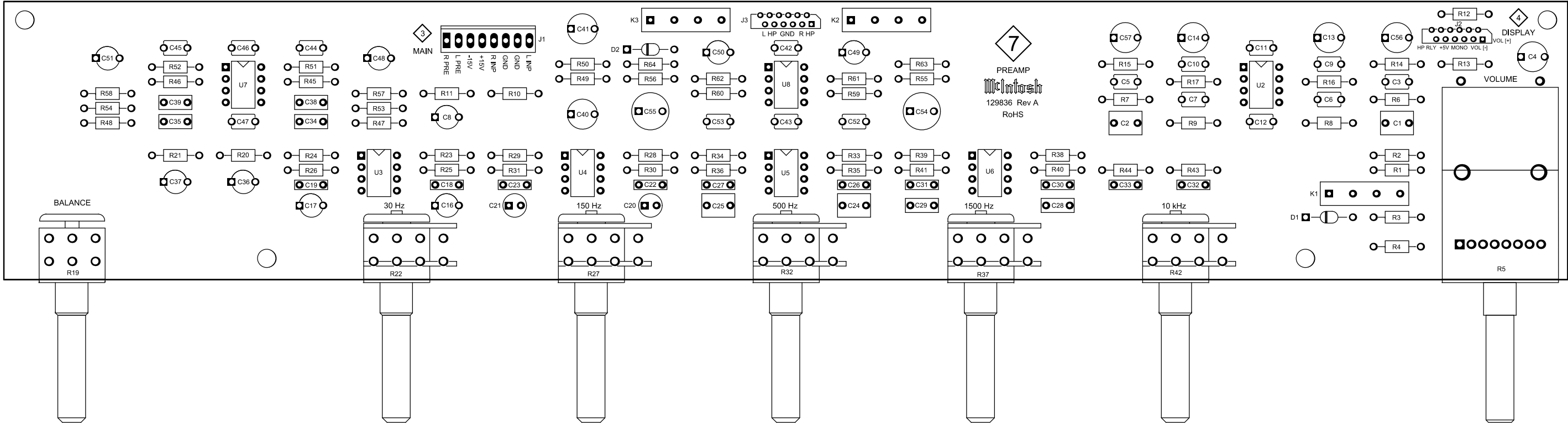


6 *BALANCED* 750682 PCB

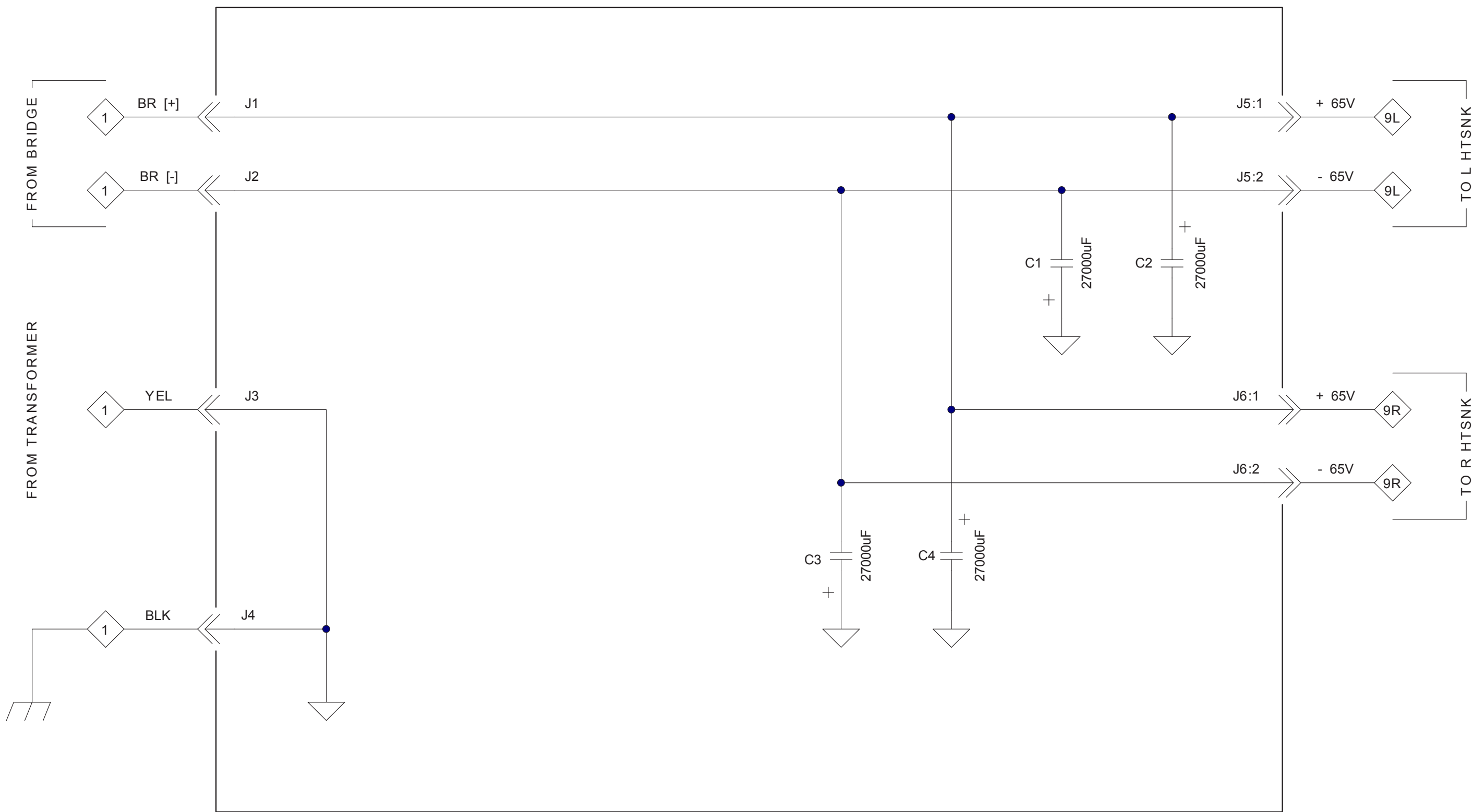


7 PREAMP 750683 SCH





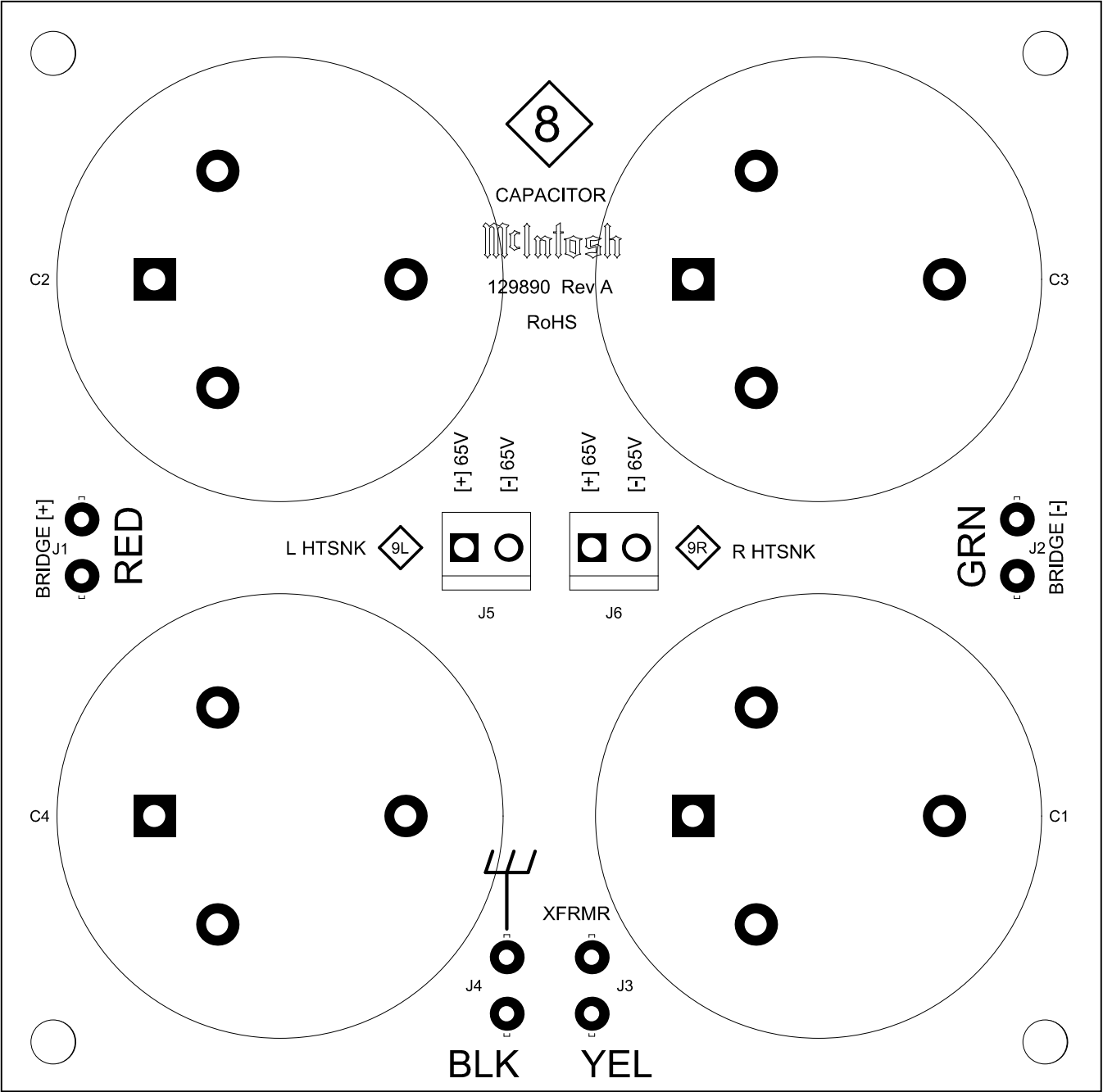
8 *CAPACITOR* 750685 SCH



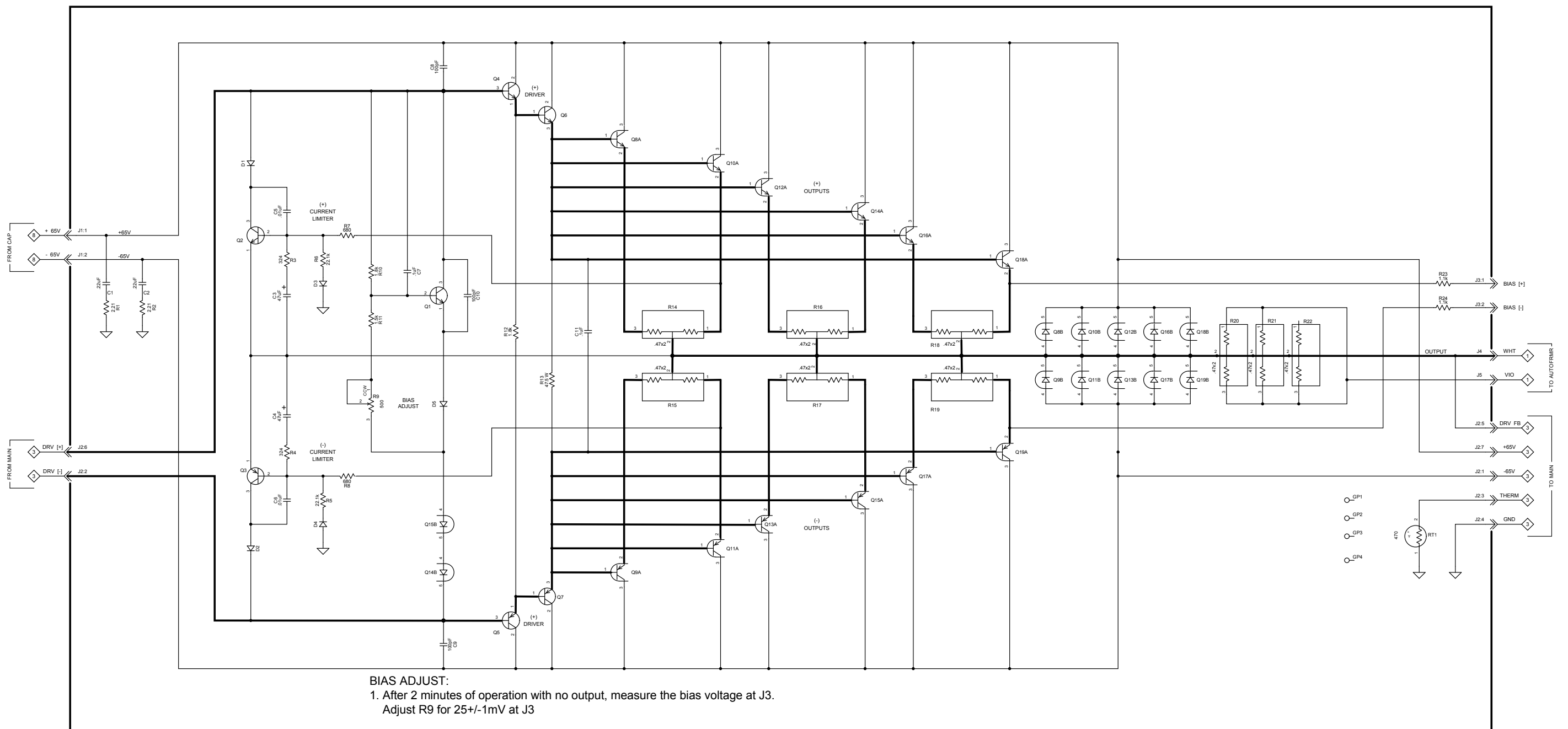
8

CAPACITOR 750685 PCB

MA7000

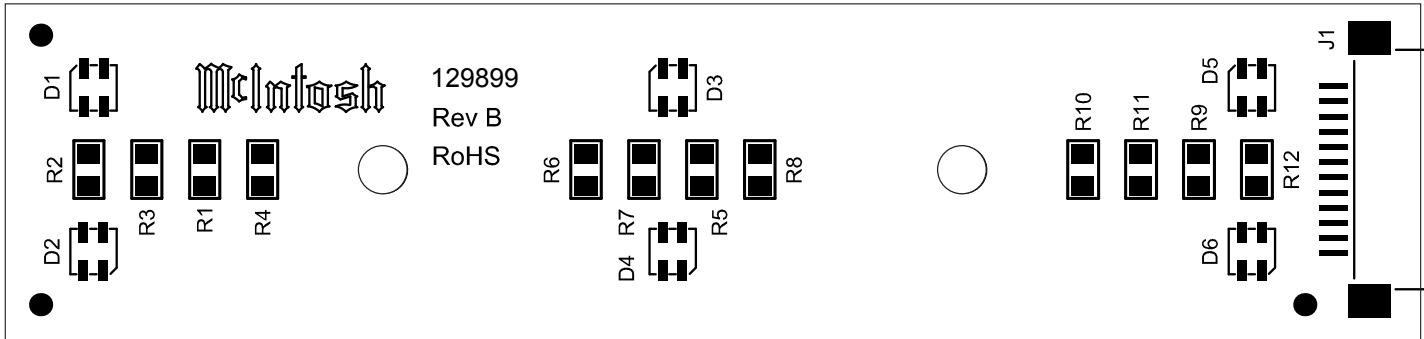


9 HEATSINK 750684 SCH





10



PARTS LIST

① INTERCONNECT

Ref. No.	Description	Part No.
C1	ASSEMBLY CAPACITOR	052005
CA1	CABLE ASSY MAIN/HEATSINK	171896
CA2	CABLE ASSY CAP/HEATSINK	171897
CA3	CABLE ASSY CAP/HEATSINK	171897
CA4	CABLE ASSY BACKUP/MAIN	171943
CA5	CABLE 18 COND FLAT FLEXIBLE	171317
CA6	CABLE 12 COND FLAT FLEXIBLE	171318
CA7	CABLE 18 COND FLAT FLEXIBLE	171317
CA8	CABLE 12 COND FLAT FLEXIBLE	171318
CA9	CABLE 12 COND FLAT FLEXIBLE	171318
CA10	CABLE 12 COND FLAT FLEXIBLE	171318
CA11	CABLE FLAT FLEXIBLE 23 COND	171400
CA12	CABLE ASSY MAIN PREAMP	171877
CA13	CABLE ASSY MAIN/HEATSINK	171896
CA14	CABLE FLAT FLEXIBLE 12 COND	171545
CA15	CABLE FLAT FLEXIBLE 12 COND	171545
CA16	CABLE ASSY CAP/CHASSIS GND	171565
CA17	CABLE ASSY AC/BACKUP WHT	171890
CA18	CABLE ASSY FUSE/BACKUP BLK	171889
CA19	CABLE ASSY A/C FUSE HOLDER BLK	171929
D1	DIODE BRIDGE RECT	070181
J1	CONN AC LINE INPUT IEC FASTON	117886
MT1	METER MC252	124138
MT2	METER MC252	124138
T1	POTTED TRANSFORMER POWER	750694
T2	POTTED TRANSFORMER OUTPUT	750693
T3	POTTED TRANSFORMER OUTPUT	750693

② BACKUP PCB 751060

C1	CAP 3300PF 250V UL/CSA	061312
C2	CAP ELECT 1000UF 50V 20%	066590
D1	DIODE SILICON	070174
D2	DIODE RECTIFIER	070175
D3	DIODE RECTIFIER	070175
D4	DIODE RECTIFIER	070175
D5	DIODE RECTIFIER	070175
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	BLADE FASTON W/FEET	117708
J14	BLADE FASTON W/FEET	117708
J15	BLADE FASTON W/FEET	117708
J16	CONN MALE 5 PIN 0.1 POST ASSY	117216
J17	CONN 2 PIN MALE	117213
K1	RELAY POWER TV5 12V	087070
K2	RELAY POWER TV5 12V	087070
PCB1	PC BD BACKUP POWER SUPPLY	129900
R1	RES POLY SWITCH RXE030	144670
R2	RES POLY SWITCH RXE030	144670

Ref. No.	Description	Part No.
RT1	THERMISTOR 5 OHM	144151
RT2	THERMISTOR 5 OHM	144151
T1	TRANSFORMER 8V/16V 2.5VA	159366

③ MAIN PCB 750856

C1	CAP DISC MONO .47UF 50V	061320
C2	CAP MPF 0.047UF 5% 63VDC	064320
C3	CAP MPF 0.047UF 5% 63VDC	064320
C4	CAP ELECT 3300UF 35V	066509
C5	CAP ELECT 3300UF 35V	066509
C6	CAP ELECT 3300UF 35V	066509
C7	CAP ELECT 10UF 50V	066445
C8	CAP ELECT 100UF 25V	066573
C9	CAP ELECT 100UF 25V	066573
C10	CAP ELECT 100UF 25V	066573
C11	CAP MONO .1UF 50V 20%	061346
C12	CAP MONO .1UF 50V 20%	061346
C13	CAP MONO .1UF 50V 20%	061346
C14	CAP ELECT 10UF 50V	066445
C15	CAP MONO 220PF 200V 10% NPO	061342
C16	CAP MONO .1UF 50V 20%	061346
C17	CAP MONO .1UF 50V 20%	061346
C18	CAP MONO .1UF 50V 20%	061346
C19	CAP MONO .1UF 50V 20%	061346
C20	CAP MONO .1UF 50V 20%	061346
C21	CAP MONO .1UF 50V 20%	061346
C22	CAP ELECT 4.7UF 50V	066512
C23	CAP ELECT 220UF 25V	066507
C24	CAP MONO .1UF 50V 20%	061346
C25	CAP MONO 0.001UF 50V NPO	061344
C26	CAP ELECT 22UF 100V	066574
C27	CAP ELECT 22UF 100V	066574
C28	CAP MONO .1UF 50V 20%	061346
C29	CAP ELECT 100UF 25V	066573
C30	CAP MONO .1UF 50V 20%	061346
C31	CAP ELECT 100UF 25V	066573
C32	CAP ELECT 10UF 16V	066580
C33	CAP ELECT 10UF 16V	066580
C34	CAP ELECT 10UF 16V	066580
C35	CAP ELECT 10UF 16V	066580
C36	CAP ELECT 10UF 16V	066580
C37	CAP ELECT 10UF 16V	066580
C38	CAP ELECT 10UF 16V	066580
C39	CAP ELECT 10UF 16V	066580
C40	CAP ELECT 10UF 16V	066580
C41	CAP ELECT 10UF 16V	066580
C42	CAP ELECT 10UF 16V	066580
C43	CAP ELECT 10UF 16V	066580
C44	CAP ELECT 10UF 16V	066580
C45	CAP ELECT 10UF 16V	066580
C46	CAP ELECT 10UF 16V	066580
C47	CAP ELECT 10UF 16V	066580
C48	CAP ELECT 10UF 16V	066580
C49	CAP ELECT 10UF 16V	066580
C50	CAP ELECT 10UF 16V	066580
C51	CAP ELECT 10UF 16V	066580
C52	CAP ELECT 10UF 16V	066580
C53	CAP ELECT 10UF 16V	066580
C54	CAP ELECT 10UF 16V	066580

PARTS LIST (Cont'd.)

③ MAIN PCB 750856 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
C55	CAP ELECT 10UF 16V	066580	C115	CAP MONO 220PF 200V 10% NPO	061342
C56	CAP ELECT 10UF 50V	066445	C116	CAP MONO 100PF 100V 10% NPO	061341
C57	CAP ELECT 10UF 50V	066445	C117	CAP MONO 100PF 100V 10% NPO	061341
C58	CAP ELECT 470UF 16V	066508	C118	CAP ELECT 10UF 50V	066445
C59	CAP ELECT 470UF 16V	066508	C119	CAP MPF 0.1UF 5% 63VDC	064325
C60	CAP MONO 100PF 100V 10% NPO	061341	C120	CAP MPF 0.47UF 5% 100VDC	064442
C61	CAP MONO 47PF 200V 10% NPO	061340	D1	DIODE SILICON	070174
C62	CAP MONO 100PF 100V 10% NPO	061341	D2	DIODE SILICON	070174
C63	CAP MONO 47PF 200V 10% NPO	061340	D3	DIODE RECTIFIER	070175
C64	CAP MONO 100PF 100V 10% NPO	061341	D4	DIODE RECTIFIER	070175
C65	CAP MONO 47PF 200V 10% NPO	061340	D5	DIODE RECTIFIER	070175
C66	CAP MONO 100PF 100V 10% NPO	061341	D6	DIODE RECTIFIER	070175
C67	CAP MONO 47PF 200V 10% NPO	061340	D7	DIODE RECTIFIER	070175
C68	CAP MPF 0.01UF 5% 63VDC	064312	D8	DIODE RECTIFIER	070175
C69	CAP MPF 0.01UF 5% 63VDC	064312	D9	DIODE RECTIFIER	070175
C70	CAP MONO .1UF 50V 20%	061346	D10	DIODE RECTIFIER	070175
C71	CAP MPF 0.033UF 5% 63VDC	064318	D11	DIODE SILICON	070174
C72	CAP MPF 0.033UF 5% 63VDC	064318	D12	DIODE SILICON	070174
C73	CAP MONO .1UF 50V 20%	061346	D13	DIODE SILICON	070174
C74	CAP ELECT 47UF 35V	066446	D14	DIODE SILICON	070174
C75	CAP ELECT 47UF 35V	066446	D15	DIODE SILICON	070174
C76	CAP MONO .1UF 50V 20%	061346	D16	DIODE SILICON	070174
C77	CAP MONO .1UF 50V 20%	061346	D17	DIODE SILICON	070174
C78	CAP DISC MONO .47UF 50V	061320	D18	DIODE ZENER 5.1V	070186
C79	CAP POLYPROP 0.15UF 10% 275VDC	064464	D19	DIODE SILICON	070174
C80	CAP POLYPROP 0.047UF 10% 275VDC	064466	D20	DIODE SILICON	070174
C81	CAP ELECT 10UF 100VDC	066462	D21	DIODE ZENER 5.1V	070186
C82	CAP MPF 0.0068UF 5% 63VDC	064310	D22	DIODE SILICON	070174
C83	CAP ELECT 10UF 100VDC	066462	D23	DIODE SILICON	070174
C84	CAP ELECT 47UF 35V	066446	D24	DIODE SILICON	070174
C85	CAP ELECT 220UF 25V	066507	D25	DIODE SILICON	070174
C86	CAP ELECT 10UF 50V	066445	D26	DIODE SILICON	070174
C87	CAP ELECT 10UF 100VDC	066462	D27	DIODE SILICON	070174
C88	CAP ELECT 10UF 100VDC	066462	D28	DIODE SILICON	070174
C89	CAP MONO .1UF 50V 20%	061346	D29	DIODE SILICON	070174
C90	CAP MONO .1UF 50V 20%	061346	D30	DIODE SILICON	070174
C93	CAP MONO 100PF 100V 10% NPO	061341	D31	DIODE SILICON	070174
C91	CAP MONO 1PF 50V NPO	061362	D32	DIODE SILICON	070174
C92	CAP MONO 220PF 200V 10% NPO	061342	GP1	TERMINAL PC SCREW	117975
C94	CAP MONO 100PF 100V 10% NPO	061341	HS1	Heatsink TO220	080021
C95	CAP ELECT 10UF 50V	066445	HS2	Heatsink TO220	080021
C96	CAP MONO .1UF 50V 20%	061346	HS3	Heatsink TO220	080021
C97	CAP MONO .1UF 50V 20%	061346	J1	BLADE FASTON W/FEET	117708
C98	CAP ELECT 220UF 25V	066507	J2	BLADE FASTON W/FEET	117708
C99	CAP MPF 0.1UF 5% 63VDC	064325	J3	BLADE FASTON W/FEET	117708
C100	CAP MPF 0.47UF 5% 100VDC	064442	J4	BLADE FASTON W/FEET	117708
C101	CAP POLYPROP 0.15UF 10% 275VDC	064464	J5	BLADE FASTON W/FEET	117708
C102	CAP DISC MONO .47UF 50V	061320	J6	BLADE FASTON W/FEET	117708
C103	CAP POLYPROP 0.047UF 10% 275VDC	064466	J7	BLADE FASTON W/FEET	117708
C104	CAP ELECT 10UF 100VDC	066462	J8	CONN MALE 5 PIN 0.1 POST ASSY	117216
C105	CAP MPF 0.0068UF 5% 63VDC	064310	J9	CONN 23 PIN FFC	117906
C106	CAP ELECT 10UF 100VDC	066462	J10	JACK HEADPHONE DUAL BLACK 1/8	117825
C107	CAP ELECT 47UF 35V	066446	J11	JACK HEADPHONE DUAL BLACK 1/8	117825
C108	CAP ELECT 220UF 25V	066507	J12	CONN GOLD F RIGHT ANGLE	117661
C109	CAP ELECT 10UF 50V	066445	J13	JACK HEADPHONE DUAL BLACK 1/8	117825
C110	CAP ELECT 10UF 100VDC	066462	J14	JACK HEADPHONE DUAL BLACK 1/8	117825
C111	CAP ELECT 10UF 100VDC	066462	J15	JACK HEADPHONE DUAL BLACK 1/8	117825
C112	CAP MONO .1UF 50V 20%	061346	J16	CONN 8 POS MALE FRICTION LOCK	117275
C113	CAP MONO .1UF 50V 20%	061346	J17	CONN 12 PIN FFC	117907
C114	CAP MONO 1PF 50V NPO	061362	J18	CONN 12 PIN FFC	117907

PARTS LIST (Cont'd.)

③ MAIN PCB 750856 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
J19	RECEPTACLE XLR MALE	117686	Q27	TRANSISTOR NPN SILICON	132317
J20	RECEPTACLE XLR MALE	117686	Q28	TRANSISTOR NPN SILICON	132317
J21	JACK RCA 3X2 WHT/RED 14MM	117790	Q29	TRANSISTOR PNP SILICON	132304
J22	JACK RCA 4X2 WHT/RED 14MM	117791	Q30	TRANSISTOR NPN SILICON	132317
J23	JACK RCA 1X2 WHT/RED 14MM	117788	Q31	TRANSISTOR NPN SILICON	132317
J24	CONN MALE 7 PIN	117217	Q32	TRANSISTOR N JFET	132319
J25	CONN 4 PIN	117215	Q33	TRANSISTOR N JFET	132319
J26	CONN MALE 7 PIN	117217	Q34	TRANSISTOR SI NPN 25V	132254
J27	CONN 4 PIN	117215	Q35	TRANSISTOR PNP POWER	132255
K1	RELAY REED SPST-NO 5V 1.2A	087078	Q36	TRANSISTOR SI NPN 25V	132254
K2	RELAY REED SPST-NO 5V 1.2A	087078	Q37	TRANSISTOR PNP POWER	132255
K3	RELAY REED SPST-NO 5V 1.2A	087078	Q38	TRANSISTOR NPN SILICON	132317
K4	RELAY REED SPST-NO 5V 1.2A	087078	Q39	TRANSISTOR PNP SILICON	132304
K5	RELAY REED SPST-NO 5V 1.2A	087078	Q40	TRANSISTOR NPN	132254
K6	RELAY REED SPST-NO 5V 1.2A	087078	Q41	TRANSISTOR PNP 120V	132255
K7	RELAY REED SPST-NO 5V 1.2A	087078	Q42	TRANSISTOR NPN SILICON	132317
K8	RELAY REED SPST-NO 5V 1.2A	087078	Q43	TRANSISTOR PNP SILICON	132304
K9	RELAY REED SPST-NO 5V 1.2A	087078	Q44	TRANSISTOR NPN 2SC3334C	132342
K10	RELAY REED SPST-NO 5V 1.2A	087078	Q45	TRANSISTOR PNP 2SA1321C	132343
K11	RELAY REED SPST-NO 5V 1.2A	087078	Q46	TRANSISTOR NPN SILICON	132317
K12	RELAY REED SPST-NO 5V 1.2A	087078	Q47	TRANSISTOR NPN SILICON	132317
K13	RELAY REED SPST-NO 5V 1.2A	087078	Q48	TRANSISTOR NPN SILICON	132317
K14	RELAY REED SPST-NO 5V 1.2A	087078	R1	RES POLYSWITCH RXE110	144671
K15	RELAY REED SPST-NO 5V 1.2A	087078	R2	RES POLYSWITCH RXE110	144671
K16	RELAY REED SPST-NO 5V 1.2A	087078	R3	RES POLYSWITCH RXE110	144671
K17	RELAY REED SPST-NO 5V 1.2A	087078	R4	RES MF 221K 1% 1/4W	144629
K18	RELAY REED SPST-NO 5V 1.2A	087078	R6	RES MF 221K 1% 1/4W	144629
K19	RELAY REED SPST-NO 5V 1.2A	087078	R5	RES MF 22.1K 1% 1/4W	144564
K20	RELAY REED SPST-NO 5V 1.2A	087078	R7	RES MF 1K 1% 1/4W	144513
K21	RELAY REED SPST-NO 5V 1.2A	087078	R8	RES MF 100K 1% 1/4W	144528
K22	RELAY REED SPST-NO 5V 1.2A	087078	R9	RES MF 3.32K 1% 1/4W	144518
LD1	LDR NETWORK	144179	R10	RES MF 4.75K 1% 1/4W	144520
LD2	LDR NETWORK	144179	R11	RES MF 100K 1% 1/4W	144528
PCB1	PC BD MAIN	129903	R12	RES MF 20K 1% 1/4W	144524
Q1	TRANSISTOR PNP SILICON	132304	R13	RES MF 100 OHM 1% 1/4W	144568
Q2	TRANSISTOR NPN SILICON	132317	R14	RES MF 100 OHM 1% 1/4W	144568
Q3	TRANSISTOR NPN SILICON	132317	R15	RES MF 100 OHM 1% 1/4W	144568
Q4	TRANSISTOR P FET 1-4PO 250 OHM	132220	R16	RES MF 100 OHM 1% 1/4W	144568
Q5	TRANSISTOR NPN SILICON	132317	R17	RES MF 100 OHM 1% 1/4W	144568
Q6	TRANSISTOR PNP SILICON	132304	R18	RES MF 100 OHM 1% 1/4W	144568
Q7	TRANSISTOR PNP SILICON	132304	R19	RES MF 100 OHM 1% 1/4W	144568
Q8	TRANSISTOR NPN SILICON	132317	R20	RES MF 100 OHM 1% 1/4W	144568
Q9	TRANSISTOR PNP SILICON	132304	R21	RES MF 3.32K 1% 1/4W	144518
Q10	TRANSISTOR NPN SILICON	132317	R22	RES MF 3.32K 1% 1/4W	144518
Q11	TRANSISTOR NPN SILICON	132317	R23	RES MF 12.1K 1% 1/4W	144550
Q12	TRANSISTOR N JFET	132319	R24	RES MF 12.1K 1% 1/4W	144550
Q13	TRANSISTOR N JFET	132319	R25	RES MF 20K 1% 1/4W	144524
Q14	TRANSISTOR NPN	132254	R26	RES MF 15K 1% 1/4W	144623
Q15	TRANSISTOR PNP POWER	132255	R27	RES MF 100 OHM 1% 1/4W	144568
Q16	TRANSISTOR NPN	132254	R28	RES MF 100K 1% 1/4W	144528
Q17	TRANSISTOR PNP 120V	132255	R29	RES MF 47.5 OHM 1% 1/4W	144642
Q18	TRANSISTOR NPN SILICON	132317	R30	RES MF 100K 1% 1/4W	144528
Q19	TRANSISTOR PNP SILICON	132304	R31	RES MF 47.5K 1% 1/4W	144526
Q20	TRANSISTOR NPN	132254	R32	RES MF 100 OHM 1% 1/4W	144568
Q21	TRANSISTOR PNP 120V	132255	R33	RES MF 100 OHM 1% 1/4W	144568
Q22	TRANSISTOR NPN SILICON	132317	R34	RES MF 100 OHM 1% 1/4W	144568
Q23	TRANSISTOR PNP SILICON	132304	R35	RES MF 221 OHM 1% 1/4W	144559
Q24	TRANSISTOR NPN 2SC3334C	132342	R36	RES MF 1K 1% 1/4W	144513
Q25	TRANSISTOR PNP 2SA1321C	132343	R37	RES MF 100 OHM 1% 1/4W	144568
Q26	TRANSISTOR NPN SILICON	132317	R38	RES MF 100 OHM 1% 1/4W	144568

PARTS LIST (Cont'd.)

③ MAIN PCB 750856 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
R39	RES MF 100K 1% 1/4W	144528	R99	RES MF 12.1K 1% 1/4W	144550
R40	RES MET OX 47 OHM .5W 5%	137102	R100	RES MF 221 OHM 1% 1/4W	144559
R41	RES MF 10K 1% 1/4W	144504	R101	RES MF 10K 1% 1/4W	144504
R42	RES MF 10K 1% 1/4W	144504	R102	RES MF 6.49K .5% 1/4W	144617
R43	RES MF 10K 1% 1/4W	144504	R103	RES MF 100 OHM 1% 1/4W	144568
R44	RES MF 10K 1% 1/4W	144504	R104	RES MF 365 OHM 1% 1/4W	144505
R45	RES MF 10K 1% 1/4W	144504	R105	RES MF 100 OHM 1% 1/4W	144568
R46	RES MF 10K 1% 1/4W	144504	R106	RES MF 100 OHM 1% 1/4W	144568
R47	RES MF 221 OHM 1% 1/4W	144559	R107	RES MF 1K 1% 1/4W	144513
R48	RES MF 22.1K 1% 1/4W	144564	R108	RES MF 10M 1% 1/4W	144575
R49	RES MF 221 OHM 1% 1/4W	144559	R109	RES MF 10K 1% 1/4W	144504
R50	RES MF 22.1K 1% 1/4W	144564	R110	RES MF 267K 1% 1/4W	144532
R51	RES MF 221 OHM 1% 1/4W	144559	R111	RES MF 475 OHM 1% 1/4W	144509
R52	RES MF 22.1K 1% 1/4W	144564	R112	RES MF 1.82K 1% 1/4W	144582
R53	RES MF 221 OHM 1% 1/4W	144559	R113	RES MF 475 OHM 1% 1/4W	144509
R54	RES MF 22.1K 1% 1/4W	144564	R114	RES MF 267K 1% 1/4W	144532
R55	RES MF 221 OHM 1% 1/4W	144559	R115	RES MF 47.5K 1% 1/4W	144526
R56	RES NET 2 X 22K ISOLATED	144689	R116	RES MF 47.5K 1% 1/4W	144526
R57	RES MF 221 OHM 1% 1/4W	144559	R117	RES MF 100 OHM 1% 1/4W	144568
R58	RES MF 221 OHM 1% 1/4W	144559	R118	RES MF 806 OHM 1% 1/4W	144512
R59	RES NET 2 X 22K ISOLATED	144689	R119	RES MF 806 OHM 1% 1/4W	144512
R60	RES MF 221 OHM 1% 1/4W	144559	R120	RES MF 100 OHM 1% 1/4W	144568
R61	RES NETWORK 2X220K ISO	144678	R121	RES MF 3.32K 1% 1/4W	144518
R62	RES NETWORK 2X220K ISO	144678	R122	RES MF 3.32K 1% 1/4W	144518
R63	RES NETWORK 2X220K ISO	144678	R123	RES MF 100 OHM 1% 1/4W	144568
R64	RES NETWORK 2X220K ISO	144678	R124	RES MF 100 OHM 1% 1/4W	144568
R65	RES NETWORK 2X220K ISO	144678	R125	RES MF 221K 1% 1/4W	144629
R66	RES NET 2 X 22K ISOLATED	144689	R126	RES MF 221K 1% 1/4W	144629
R67	RES NETWORK 2X220K ISO	144678	R127	RES MF 324 OHM 1% 1/4W	144597
R68	RES MF 221 OHM 1% 1/4W	144559	R128	RES MF 324 OHM 1% 1/4W	144597
R69	RES MF 22.1K 1% 1/4W	144564	R129	RES MF 22.1K 1% 1/4W	144564
R70	RES MF 22.1K 1% 1/4W	144564	R130	RES MF 47.5 OHM 1% 1/4W	144642
R71	RES MF 221 OHM 1% 1/4W	144559	R131	RES MF 1K 1% 1/4W	144513
R72	RES MF 221K 1% 1/4W	144629	R132	RES MF 150K 1% 1/4W	144627
R73	RES MF 221K 1% 1/4W	144629	R133	RES MF 20K 1% 1/4W	144524
R74	RES MF 47.5 OHM 1% 1/4W	144642	R134	RES MF 221K 1% 1/4W	144629
R75	RES MF 47.5K 1% 1/4W	144626	R135	RES MF 221 OHM 1% 1/4W	144559
R76	RES MF 47.5 OHM 1% 1/4W	144642	R136	RES MF 2.21M 1% 1/4W	144576
R77	RES MF 47.5K 1% 1/4W	144526	R137	RES WW 2 OHM 10% 5W	139253
R78	RES MF 1K 1% 1/4W	144513	R138	RES MF 267K 1% 1/4W	144532
R79	RES MF 1K 1% 1/4W	144513	R139	RES MET OX 47 OHM .5W 5%	137102
R80	RES MF 7.5k .5% 1/4W	144605	R140	RES MET OX 47 OHM .5W 5%	137102
R81	RES MF 7.5k .5% 1/4W	144605	R141	RES WW 4 OHM 5W 5%	139248
R82	RES MF 89.8k .5% 1/4W	144606	R142	RES MF 267K 1% 1/4W	144532
R83	RES MF 89.8k .5% 1/4W	144606	R143	RES MF 4.75K 1% 1/4W	144520
R84	RES MF 47.5 OHM 1% 1/4W	144642	R144	RES MF 12.1K 1% 1/4W	144550
R85	RES MF 47.5 OHM 1% 1/4W	144642	R145	RES MF 221 OHM 1% 1/4W	144559
R86	RES MF 221K 1% 1/4W	144629	R146	RES MF 10K 1% 1/4W	144504
R87	RES MF 221K 1% 1/4W	144629	R147	RES MF 6.49K .5% 1/4W	144617
R88	RES MF 22.1 OHM 1% 1/4W	144554	R148	RES MF 100 OHM 1% 1/4W	144568
R89	RES MF 22.1 OHM 1% 1/4W	144554	R149	RES MF 365 OHM 1% 1/4W	144505
R90	RES MF 2.21 OHM 1% 1/4W	144607	R150	RES MF 1K 1% 1/4W	144513
R91	RES MF 2.21 OHM 1% 1/4W	144607	R151	RES MF 100 OHM 1% 1/4W	144568
R92	RES WW 2 OHM 10% 5W	139253	R152	RES MF 100 OHM 1% 1/4W	144568
R93	RES MF 267K 1% 1/4W	144532	R153	RES MF 10M 1% 1/4W	144575
R94	RES MET OX 47 OHM .5W 5%	137102	R154	RES MF 10K 1% 1/4W	144504
R95	RES MET OX 47 OHM .5W 5%	137102	R155	RES MF 267K 1% 1/4W	144532
R96	RES WW 4 OHM 5W 5%	139248	R156	RES MF 475 OHM 1% 1/4W	144509
R97	RES MF 267K 1% 1/4W	144532	R157	RES MF 1.82K 1% 1/4W	144582
R98	RES MF 4.75K 1% 1/4W	144520	R158	RES MF 475 OHM 1% 1/4W	144509

PARTS LIST (Cont'd.)

③ MAIN PCB 750856 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
R159	RES MF 267K 1% 1/4W	144532	DS3	LED GREEN 5MM 30 DEG	058190
R160	RES MF 47.5K 1% 1/4W	144526	(DS3)	SPACER LED	112108
R161	RES MF 47.5K 1% 1/4W	144526	DS4	LED GREEN 5MM 30 DEG	058190
R162	RES MF 3.32K 1% 1/4W	144518	(DS4)	SPACER LED	112108
R163	RES MF 100 OHM 1% 1/4W	144568	DS5	LED GREEN 5MM 30 DEG	058190
R164	RES MF 806 OHM 1% 1/4W	144512	(DS5)	SPACER LED	112108
R165	RES MF 806 OHM 1% 1/4W	144512	DS6	LED GREEN 5MM 30 DEG	058190
R166	RES MF 100 OHM 1% 1/4W	144568	(DS6)	SPACER LED	112108
R167	RES MF 3.32K 1% 1/4W	144518	DS7	LED GREEN 5MM 30 DEG	058190
R168	RES MF 100 OHM 1% 1/4W	144568	(DS7)	SPACER LED	112108
R169	RES MF 100 OHM 1% 1/4W	144568	DS8	LED GREEN 5MM 30 DEG	058190
R170	RES MF 221K 1% 1/4W	144629	(DS8)	SPACER LED	112108
R171	RES MF 221K 1% 1/4W	144629	J1	CONN 18 PIN FFC	117908
R172	RES MF 324 OHM 1% 1/4W	144597	J2	CONN 18 PIN FFC	117908
R173	RES MF 324 OHM 1% 1/4W	144597	J3	CONN 23 PIN FFC	117906
R174	RES MF 22.1K 1% 1/4W	144564	J4	HEADER 2 PIN LATCHING	117766
R175	RES MF 150K 1% 1/4W	144627	J5	HEADER 2 PIN LATCHING	117766
R176	RES MF 20K 1% 1/4W	144524	J6	CONN 12 PIN FFC	117907
R177	RES MF 221K 1% 1/4W	144629	J7	HEADPHONE JACK 1/4"	117881
R178	RES MF 221 OHM 1% 1/4W	144559	J8	CONN 12 PIN FFC	117907
R179	RES MF 2.21M 1% 1/4W	144576	J9	CONN 12 PIN FFC	117907
U1	IC REGULATOR +15 VOLT	133587	J10	CONN 12 PIN FFC	117907
U2	IC VOLTAGE REGULATOR -15V	133566	MT1	SENSOR IR 38KHZ	121046
U3	IC REGULATOR 5V 1.5A LOW DROP	133610	PCB1	PC BD DISPLAY	129833
U4	IC AND 2 INPUT X 4	133577	Q1	TRANSISTOR PNP SILICON	132304
U5	IC SHFT REG SER-PAR	133594	Q2	TRANSISTOR NPN SILICON	132317
U6	IC SHFT REG SER-PAR	133594	Q3	TRANSISTOR NPN SILICON	132317
U7	IC SHFT REG SER-PAR	133594	R1	RES MF 10K 1% 1/4W	144504
U8	IC AND 2 INPUT X 4	133577	R2	RES MF 47.5K 1% 1/4W	144526
U9	IC 8 LN DRIVER ARRAY	133180	R3	RES NETWORK 9X-1-223	144498
U10	IC OCTAL DAR TRNS ARRY W/DIODE	133624	R4	RES MF 100 OHM 1% 1/4W	144568
U11	IC AND 2 INPUT X 4	133577	R5	RES MF 475K 1% 1/4W	144604
U12	IC OPERATIONAL AMPLIFIER	133626	R6	RES MF 10 OHM 1% 1/4W	144553
U13	IC DUAL OPERATIONAL AMPLIFIER	133578	R7	RES MF 2.21 OHM 1% 1/4W	144607
U14	IC OPERATIONAL AMP LOW NOISE	133565	R8	RES NETWORK 9X-1-223	144498
U15	IC OPERATIONAL AMP LOW NOISE	133565	R9	RES MF 22.1K 1% 1/4W	144564
U16	IC DUAL OPERATIONAL AMPLIFIER	133578	R10	RES MF 100 OHM 1% 1/4W	144568
U17	IC DUAL OPERATIONAL AMPLIFIER	133578	R11	RES MF 1K 1% 1/4W	144513
U18	IC QUAD OP AMP TLC074CN	133419	R12	RES MF 100K 1% 1/4W	144528
U19	IC DUAL OPERATIONAL AMPLIFIER	133578	R13	RES MF 324 OHM 1% 1/4W	144597

④ DISPLAY/HEADPHONE PCB 750680

C1	CAP MONO .1UF 50V 20% Z5U	061346	R15	RES MF 182 OHM 1% 1/4W	144579
C2	CAP ELECT 10UF 50V	066445	R16	POT TRIM 100K OHM 20%	134504
C3	CAP ELECT 47UF 35V	066446	R17	POT TRIM 100K OHM 20%	134504
C4	CAP MONO .1UF 50V 20% Z5U	061346	R18	RES MF 182 OHM 1% 1/4W	144579
C5	CAP ELECT 47UF 16V	066380	R19	RES MF 2.21K 1% 1/4W	144584
C6	CAP MONO .1UF 50V 20% Z5U	061346	R20	RES MF 2.21K 1% 1/4W	144584
C7	CAP ELECT 10UF 50V	664450	R21	RES MF 182 OHM 1% 1/4W	144579
C8	CAP MONO 220PF 200V 10% NPO	061342	R22	RES MF 182 OHM 1% 1/4W	144579
C9	CAP MONO .1UF 50V 20% Z5U	061346	R23	RES MF 182 OHM 1% 1/4W	144579
C10	CAP MONO .1UF 50V 20% Z5U	061346	R24	RES MF 182 OHM 1% 1/4W	144579
C11	CAP MONO .1UF 50V 20% Z5U	061346	R25	RES MF 4.75K 1% 1/4W	144520
C12	CAP ELECT 220UF 25V	066507	R26	RES MF 4.75K 1% 1/4W	144520
D1	DIODE SILICON	070174	R27	RES MF 4.75K 1% 1/4W	144520
	GROMMET	078031	R28	RES MF 4.75K 1% 1/4W	144520
DS1	LED AMBER	058133	R29	RES MF 4.75K 1% 1/4W	144520
(DS1)	LED SPACER .220 LENGTH	163001	R30	RES MF 4.75K 1% 1/4W	144520
DS2	LED AMBER	058133	R31	RES MF 4.75K 1% 1/4W	144520
(DS2)	LED SPACER .220 LENGTH	163001	R32	RES MF 4.75K 1% 1/4W	144520
			R33	RES MF 4.75K 1% 1/4W	144520

PARTS LIST (Cont'd.)

4 DISPLAY/HEADPHONE PCB 750680 (Cont'd.)

Ref. No.	Description	Part No.
R34	RES MF 10 OHM 1% 1/4W	144553
R35	POT TRIM 200 OHM 20% HORIZ AD	134506
R36	POT TRIM 200 OHM 20% HORIZ AD	134506
R37	POT TRIM 200 OHM 20% HORIZ AD	134506
R38	POT TRIM 200 OHM 20% HORIZ AD	134506
U1	IC NAND 2 INPUT X 4	133575
U2	IC PROGRAMMED V1.00 MA7000	133671
(U2)	SOCKET IC 40-PIN	178133
U3	IC MICRO RESET POS	133241
U4	IC AND 2 INPUT X 4	133577
U5	IC SHFT REG SER-PAR	133594
U6	IC SHFT REG SER-PAR	133594
U7	IC 8 LN DRIVER ARRAY	133180
U8	IC DRIVER MOTOR DC	133618
Y1	CERAMIC RESONATOR 12MHZ	180059

5 PUSHBUTTON PCB 750681

DS1	LED RED 5MM ROUND	058187
(DS1)	LED SPACER .220 LENGTH	163001
DS2	LED RED 5MM ROUND	058187
(DS2)	LED SPACER .220 LENGTH	163001
DS3	LED RED 5MM ROUND	058187
(DS3)	LED SPACER .220 LENGTH	163001
DS4	LED RED 5MM ROUND	058187
(DS4)	LED SPACER .220 LENGTH	163001
DS5	LED RED 5MM ROUND	058187
(DS5)	LED SPACER .220 LENGTH	163001
DS6	LED RED 5MM ROUND	058187
(DS6)	LED SPACER .220 LENGTH	163001
J1	CONN 18 PIN FFC	117908
	PC BD PUSHBUTTON	129834
S1	SWITCH TACT	150058
S2	SWITCH TACT	150058
S3	SWITCH TACT	150058
S4	SWITCH TACT	150058
S5	SWITCH TACT	150058
S6	SWITCH TACT	150058

6 BALANCED PCB 750682

C1	CAP ELECT 10UF 16V	066580
C2	CAP ELECT 10UF 16V	066580
C3	CAP MONO .1UF 50V 20% Z5U	061346
C4	CAP MONO .1UF 50V 20% Z5U	061346
C5	CAP ELECT 10UF 16V	066580
C6	CAP ELECT 10UF 16V	066580
C7	CAP ELECT 10UF 16V	066580
C8	CAP ELECT 10UF 16V	066580
C9	CAP MONO 100PF 100V 10% NPO	061341
C10	CAP MONO 100PF 100V 10% NPO	061341
C11	CAP MONO 100PF 100V 10% NPO	061341
C12	CAP MONO 100PF 100V 10% NPO	061341
C13	CAP MONO 100PF 100V 10% NPO	061341
C14	CAP MONO 100PF 100V 10% NPO	061341
C15	CAP MONO .1UF 50V 20% Z5U	061346
C16	CAP MONO .1UF 50V 20% Z5U	061346
J1	CONN 12 PIN FFC	117907
J2	CONN XLR FEM HORIZ PCB LATCH	117814
J3	JACK RCA 1X2 WHT/RED 14MM	117788
J4	CONN XLR FEM HORIZ PCB LATCH	117814
PCB1	PC BD BALANCED	129888

Ref. No.	Description	Part No.
R1	RES MF 100K 1% 1/4W	144528
R2	RES MF 100K 1% 1/4W	144528
R3	RES MF 100K 1% 1/4W	144528
R4	RES MF 100K 1% 1/4W	144528
R5	RES MF 20K 1% 1/4W	144524
R6	RES MF 1K 1% 1/4W	144513
R7	RES MF 20K 1% 1/4W	144524
R8	RES MF 20K 1% 1/4W	144524
R9	RES MF 1K 1% 1/4W	144513
R10	RES MF 20K 1% 1/4W	144524
R11	RES MF 10K 1% 1/4W	144504
R12	RES MF 10K 1% 1/4W	144504
R13	RES MF 10K 1% 1/4W	144504
R14	RES MF 10K 1% 1/4W	144504
U1	IC DUAL OPERATIONAL AMPLIFIER	133578

7 PREAMP PCB 750683

C1	CAP MPF 0.47UF 5% 50/63VDC	064442
C2	CAP MPF 0.47UF 5% 50/63VDC	064442
C3	CAP MONO 100PF 100V 10% NPO	061341
C4	CAP ELECT 47UF 25V 20% BP	066556
C5	CAP MONO 100PF 100V 10% NPO	061341
C6	CAP MONO 100PF 100V 10% NPO	061341
C7	CAP MONO 100PF 100V 10% NPO	061341
C8	CAP ELECT 10UF 50V	066445
C9	CAP MONO 100PF 100V 10% NPO	061341
C10	CAP MONO 100PF 100V 10% NPO	061341
C11	CAP MONO .1UF 50V 20% Z5U	061346
C12	CAP MONO .1UF 50V 20% Z5U	061346
C13	CAP ELECT 100UF 25V	066573
C14	CAP ELECT 100UF 25V	066573
C16	CAP ELECT 10UF 50V	066445
C17	CAP ELECT 10UF 50V	066445
C18	CAP MPF 0.047UF 5% 63VDC	064320
C19	CAP MPF 0.047UF 5% 63VDC	064320
C20	CAP ELECT 1.5UF 50V	066563
C21	CAP ELECT 1.5UF 50V	066563
C22	CAP MPF 0.01UF 5% 63VDC	064312
C23	CAP MPF 0.01UF 5% 63VDC	064312
C24	CAP MPF 0.47UF 5% 100VDC	064442
C25	CAP MPF 0.47UF 5% 100VDC	064442
C26	CAP MPF 0.0033UF 5% 63VDC	064455
C27	CAP MPF 0.0033UF 5% 63VDC	064455
C28	CAP MPF 0.15UF 5% 63VDC	064327
C29	CAP MPF 0.15UF 5% 63VDC	064327
C30	CAP PF 0.001UF 5% 63VDC	064453
C31	CAP PF 0.001UF 5% 63VDC	064453
C32	CAP MPF 0.033UF 5% 63VDC	064318
C33	CAP MPF 0.033UF 5% 63VDC	064318
C34	CAP MPF 0.22UF 5% 63VDC	064329
C35	CAP MPF 0.22UF 5% 63VDC	064329
C36	CAP ELECT 47UF 35V	066446
C37	CAP ELECT 47UF 35V	066446
C38	CAP MPF 0.22UF 5% 63VDC	064329
C39	CAP MPF 0.22UF 5% 63VDC	064329
C40	CAP ELECT 100UF 25V	066573
C41	CAP ELECT 100UF 25V	066573
C42	CAP MONO .1UF 50V 20% Z5U	061346
C43	CAP MONO .1UF 50V 20% Z5U	061346
C44	CAP MONO 470PF 100V 10% NPO	061343

PARTS LIST (Cont'd.)

PREAMP PCB 750683 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
C45	CAP MONO 470PF 100V 10% NPO	061343	R40	RES MF 100K 1% 1/4W	144528
C46	CAP MONO .1UF 50V 20% Z5U	061346	R41	RES MF 100K 1% 1/4W	144528
C47	CAP MONO .1UF 50V 20% Z5U	061346	R42	POT EQUAL	134509
C48	CAP ELECT 47UF 35V	066446	R43	RES MF 475 OHM 1% 1/4W	144509
C49	CAP ELECT 10UF 50V	066445	R44	RES MF 475 OHM 1% 1/4W	144509
C50	CAP ELECT 10UF 50V	066445	R45	RES MF 47.5K 1% 1/4W	144526
C51	CAP ELECT 47UF 35V	066446	R46	RES MF 47.5K 1% 1/4W	144526
C52	CAP MONO 220PF 200V 10% NPO	061342	R47	RES MF 121K 1% 1/4W	144626
C53	CAP MONO 220PF 200V 10% NPO	061342	R48	RES MF 121K 1% 1/4W	144626
C54	CAP ELECT 470UF 16V	066508	R49	RES MF 221 OHM 1% 1/4W	144559
C55	CAP ELECT 470UF 16V	066508	R50	RES MF 221 OHM 1% 1/4W	144559
C56	CAP ELECT 100UF 25V	066573	R51	RES MF 2.74K 1% 1/4W	144587
C57	CAP ELECT 100UF 25V	066573	R52	RES MF 2.74K 1% 1/4W	144587
D1	DIODE SILICON	070174	R53	RES MF 10K 1% 1/4W	144504
D2	DIODE SILICON	070174	R54	RES MF 10K 1% 1/4W	144504
J1	CONN 8 POS MALE FRICTION LOCK	117275	R55	RES MF 4.99K 1% 1/4W	144521
J2	CONN 12 PIN FFC	117907	R56	RES MF 4.99K 1% 1/4W	144521
J3	CONN 12 PIN FFC	117907	R57	RES MF 47.5 OHM 1% 1/4W	144642
K1	RELAY REED SPST-NO 5V 1.2A	087078	R58	RES MF 47.5 OHM 1% 1/4W	144642
K2	RELAY REED SPST-NO 5V 1.2A	087078	R59	RES MF 1K 1% 1/4W	144513
K3	RELAY REED SPST-NO 5V 1.2A	087078	R60	RES MF 1K 1% 1/4W	144513
PCB1	PC BD PREAMP	129836	R61	RES MF 100 OHM 1% 1/4W	144568
R1	RES MF 1.5K 1% 1/4W	144539	R62	RES MF 100 OHM 1% 1/4W	144568
R2	RES MF 1.5K 1% 1/4W	144539	R63	RES MF 1K 1% 1/4W	144513
R3	RES MF 4.75K 1% 1/4W	144520	R64	RES MF 1K 1% 1/4W	144513
R4	RES MF 4.75K 1% 1/4W	144520	U2	IC DUAL OPERATIONAL AMPLIFIER	133578
R5	POT 50KAX2	134490	U3	IC DUAL OPERATIONAL AMPLIFIER	133578
R6	RES MF 187K 1% 1/4W	144621	U4	IC DUAL OPERATIONAL AMPLIFIER	133578
R7	RES MF 187K 1% 1/4W	144621	U5	IC DUAL OPERATIONAL AMPLIFIER	133578
R8	RES MF 1K 1% 1/4W	144513	U6	IC DUAL OPERATIONAL AMPLIFIER	133578
R9	RES MF 1K 1% 1/4W	144513	U7	IC DUAL OPERATIONAL AMPLIFIER	133578
R10	RES MF 10 OHM 1% 1/4W	144553	U8	IC DUAL OPERATIONAL AMPLIFIER	133578
R11	RES MF 10 OHM 1% 1/4W	144553			
R12	RES MF 10 OHM 1% 1/4W	144553			
R13	RES MF 10 OHM 1% 1/4W	144553			
R14	RES MF 1K 1% 1/4W	144513			
R15	RES MF 1K 1% 1/4W	144513			
R16	RES MF 10K 1% 1/4W	144504			
R17	RES MF 10K 1% 1/4W	144504			
R19	POT BALANCE 2K OHM	134510			
R20	RES MF 2.74K 1% 1/4W	144587			
R21	RES MF 2.74K 1% 1/4W	144587			
R22	POT EQUAL	134509			
R23	RES MF 681 OHM 1% 1/4W	144567			
R24	RES MF 681 OHM 1% 1/4W	144567			
R25	RES MF 100K 1% 1/4W	144528			
R26	RES MF 100K 1% 1/4W	144528			
R27	POT EQUAL	134509			
R28	RES MF 681 OHM 1% 1/4W	144567			
R29	RES MF 681 OHM 1% 1/4W	144567			
R30	RES MF 100K 1% 1/4W	144528			
R31	RES MF 100K 1% 1/4W	144528			
R32	POT EQUAL	134509			
R33	RES MF 681 OHM 1% 1/4W	144567			
R34	RES MF 681 OHM 1% 1/4W	144567			
R35	RES MF 100K 1% 1/4W	144528			
R36	RES MF 100K 1% 1/4W	144528			
R37	POT EQUAL	134509			
R38	RES MF 681 OHM 1% 1/4W	144567			
R39	RES MF 681 OHM 1% 1/4W	144567			

CAPACITOR PCB 750685

C1	CAP ELECT 27000UF 80V	066594
C2	CAP ELECT 27000UF 80V	066594
C3	CAP ELECT 27000UF 80V	066594
C4	CAP ELECT 27000UF 80V	066594
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	CONN HEADER 2 PIN 0.156	117404
J6	CONN HEADER 2 PIN 0.156	117404
	PC BD CAPACITOR	129890

HEATSINK PCB 750684

C1	CAP POLYPROP 0.22UF 400V 20%	064438
C2	CAP POLYPROP 0.22UF 400V 20%	064438
C3	CAP ELECT 47UF 35V	066446
C4	CAP ELECT 47UF 35V	066446
C5	CAP MONO .01UF 50V 20% X7R	061345
C6	CAP MONO .01UF 50V 20% X7R	061345
C7	CAP MONO .1UF 50V 20% Z5U	061346
C8	CAP MONO 100PF 100V 10% NPO	061341
C9	CAP MONO 100PF 100V 10% NPO	061341
C10	CAP MONO 100PF 100V 10% NPO	061341
C11	CAP MONO .1UF 50V 20% Z5U	061346
D1	DIODE SILICON	070174
D2	DIODE SILICON	070174

PARTS LIST (Cont'd.)

9 HEATSINK PCB 750688 (Cont'd.)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
D3	DIODE SILICON	070174	R1	RES MF 2.21 OHM 1% 1/4W	144607
D4	DIODE SILICON	070174	R2	RES MF 2.21 OHM 1% 1/4W	144607
D5	DIODE SILICON	070174	R3	RES MF 324 OHM 1% 1/4W	144597
GP1	STANDOFF 6-32 X 1/4 MOUNT PCB	112130	R4	RES MF 324 OHM 1% 1/4W	144597
GP2	STANDOFF 6-32 X 1/4 MOUNT PCB	112130	R5	RES MF 22.1K 1% 1/4W	144564
GP3	STANDOFF 6-32 X 1/4 MOUNT PCB	112130	R6	RES MF 22.1K 1% 1/4W	144564
GP4	STANDOFF 6-32 X 1/4 MOUNT PCB	112130	R7	RES MET OX 680 OHM 5% 1/2W	137099
HS1	HEATSINK	018690	R8	RES MET OX 680 OHM 5% 1/2W	137099
J1	CONN HEADER 2 PIN 0.156	117404	R9	POT TRIM 500 OHM 10% HORIZ ADJ	134508
J2	CONN MALE 7 PIN	117217	R10	RES MET OX 1.8K 5% 1/2W	137100
J3	CONN 2 PIN MALE	117213	R11	RES MF 1.5K 1% 1/4W	144539
J4	BLADE FASTON W/FEET	117708	R12	RES MET OX 1.8K 5% 1/2W	137100
J5	BLADE FASTON W/FEET	117708	R13	RES MET OX 47 OHM 5% 1/2W	137102
PCB1	PC BD HEATSINK	129886	R14	RES WW DUAL .47 OHM 5% 5W	139252
Q1	TRANSISTOR NPN SILICON	132317	R15	RES WW DUAL .47 OHM 5% 5W	139252
Q2	TRANSISTOR NPN SILICON	132317	R16	RES WW DUAL .47 OHM 5% 5W	139252
Q3	TRANSISTOR PNP SILICON	132304	R17	RES WW DUAL .47 OHM 5% 5W	139252
Q4	TRANSISTOR NPN	132342	R18	RES WW DUAL .47 OHM 5% 5W	139252
Q5	TRANSISTOR PNP	132343	R19	RES WW DUAL .47 OHM 5% 5W	139252
Q6	TRANSISTOR NPN	132324	R20	RES WW DUAL .47 OHM 5% 5W	139252
(Q6)	CLIP ANGLE RT	414141	R21	RES WW DUAL .47 OHM 5% 5W	139252
Q7	TRANSISTOR PNP	132323	R22	RES WW DUAL .47 OHM 5% 5W	139252
(Q7)	CLIP ANGLE RT	414141	R23	RES MF 1.1K 1% 1/4W	144514
Q8	TRANSISTOR NPN THERM. TRAK	132330	R24	RES MF 1.1K 1% 1/4W	144514
(Q8)	CLIP ANGLE RT	414141	RT1	THERMISTOR 100	144279
Q9	TRANSISTOR PNP THERM. TRAK	132331			
(Q9)	CLIP ANGLE RT	414141			
Q10	TRANSISTOR NPN THERM. TRAK	132330			
(Q10)	CLIP ANGLE RT	414141			
Q11	TRANSISTOR PNP THERM. TRAK	132331			
(Q11)	CLIP ANGLE RT	414141			
Q12	TRANSISTOR NPN THERM. TRAK	132330			
(Q12)	CLIP ANGLE RT	414141			
Q13	TRANSISTOR PNP THERM. TRAK	132331			
(Q13)	CLIP ANGLE RT	414141			
Q14	TRANSISTOR NPN THERM. TRAK	132330			
(Q14)	CLIP ANGLE RT	414141			
Q15	TRANSISTOR PNP THERM. TRAK	132331			
(Q15)	CLIP ANGLE RT	414141			
Q16	TRANSISTOR NPN THERM. TRAK	132330			
(Q16)	CLIP ANGLE RT	414141			
Q17	TRANSISTOR PNP THERM. TRAK	132331			
(Q17)	CLIP ANGLE RT	414141			
Q18	TRANSISTOR NPN THERM. TRAK	132330			
(Q18)	CLIP ANGLE RT	414141			
Q19	TRANSISTOR PNP THERM. TRAK	132331			
(Q19)	CLIP ANGLE RT	414141			

10 METER LIGHT PCB 750845

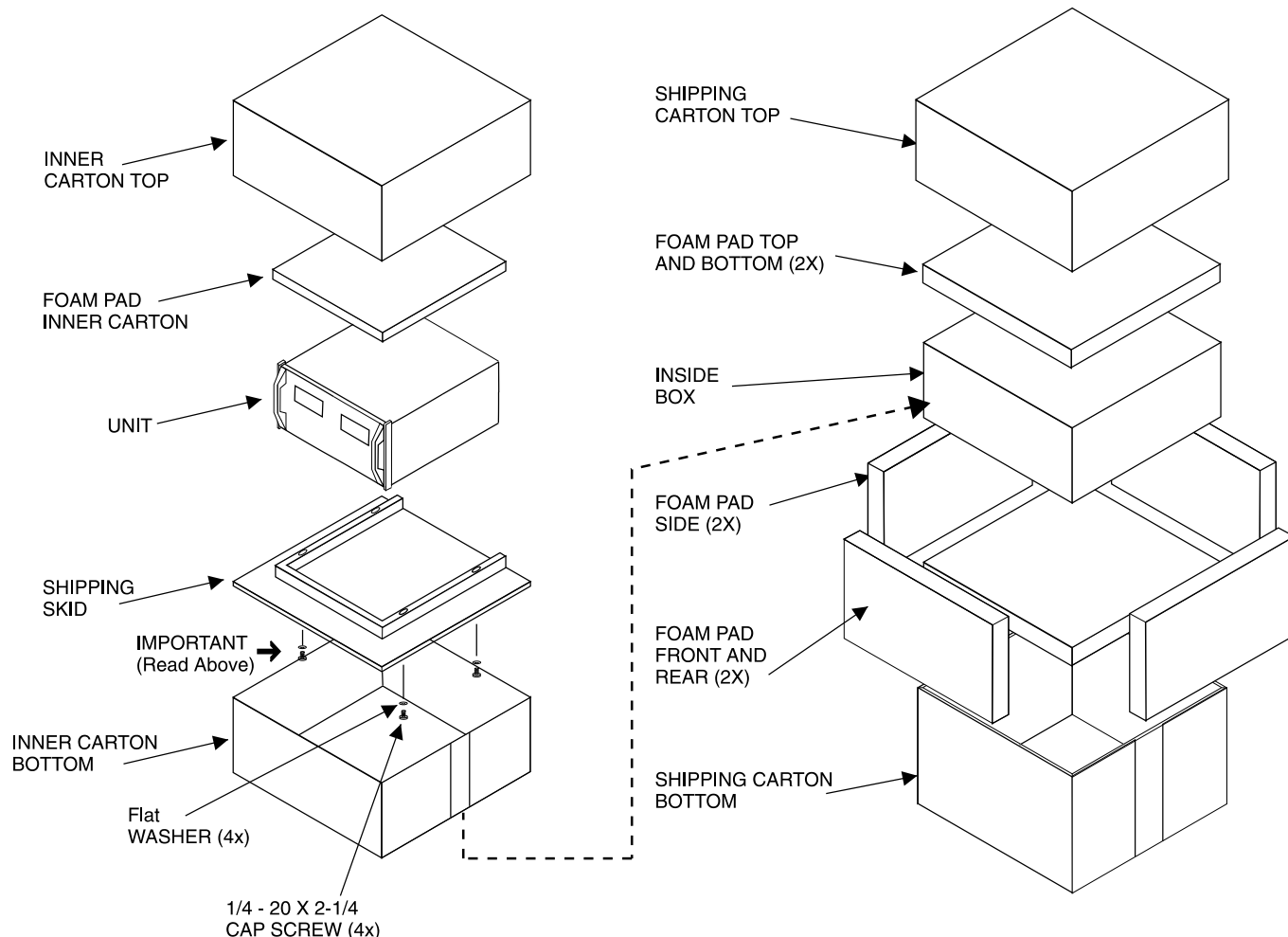
D1	LED RGB SURFACE MOUNT	058178
D2	LED RGB SURFACE MOUNT	058178
D3	LED RGB SURFACE MOUNT	058178
D4	LED RGB SURFACE MOUNT	058178
D5	LED RGB SURFACE MOUNT	058178
D6	LED RGB SURFACE MOUNT	058178
J1	CONN 12 PIN FFC SMT RA	117990
	PC BD METER LIGHT	129899
R1	RES SMD0805 681 1/8W 1%	145002
R2	RES SMD0805 221 1/8W 1%	145001
R3	RES SMD0805 681 1/8W 1%	145002
R4	RES SMD0805 221 1/8W 1%	145001
R5	RES SMD0805 681 1/8W 1%	145002
R6	RES SMD0805 221 1/8W 1%	145001
R7	RES SMD0805 681 1/8W 1%	145002
R8	RES SMD0805 221 1/8W 1%	145001
R9	RES SMD0805 681 1/8W 1%	145002
R10	RES SMD0805 221 1/8W 1%	145001
R11	RES SMD0805 681 1/8W 1%	145002
R12	RES SMD0805 221 1/8W 1%	145001

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	400411	1/4 - 20x2-1/4 cap screw
4	104058	Flat washer



MA7000

INTEGRATED AMPLIFIER

SERIAL NO. YK1001 And Above



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