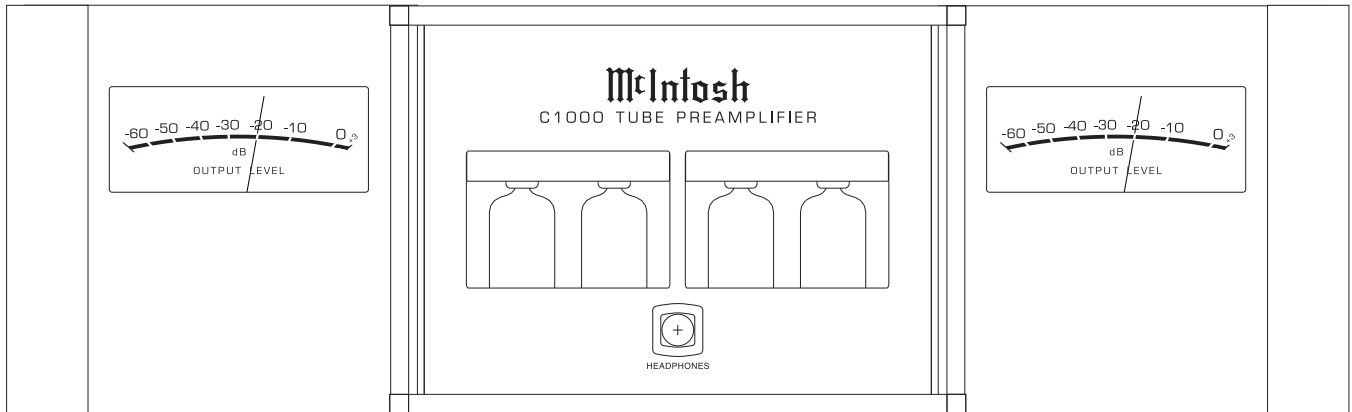




C1000

TUBE PREAMPLIFIER

SERIAL NO. WH1000 And Above



CONTENTS

Performance Specifications	2	Balanced I/O Left Schematic and PCB	33 - 34
Notes	2	Balanced I/O Right Schematic and PCB	35 - 36
Rear Panel	3	Balanced Switching Left Schematic and PCB	37 - 38
Section Location	3	Balanced Switching Right Schematic and PCB ..	39 - 40
Block Diagram	4	Meter Schematic and PCB	41 - 42
Interconnection Diagram	5 - 6	Headphone Schematic and PCB	43 - 44
Main Left Schematic and PCB	7 - 18	Parts List	47 - 56
Main Right Schematic and PCB	19 - 30	Repacking Instructions	57
Phono	31 - 32		

SERVICE MANUAL

Serial Number WH1001 And Above

PERFORMANCE SPECIFICATIONS

Power Requirements

100 Volts, 50/60Hz at 120 watts
110 Volts, 50/60Hz at 120 watts
120 Volts, 50/60Hz at 120 watts
220 Volts, 50/60Hz at 120 watts
230 Volts, 50/60Hz at 120 watts
240 Volts, 50/60Hz at 120 watts

Note: Refer to the rear panel of the C1000 Controller for the correct voltage.

General Specifications

Frequency Response

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

Total Harmonic Distortion

0.08% from 20Hz to 20,000Hz

Signal To Noise Ratio

High Level, 93dB
Phono, 80dB

Maximum Voltage Output

8V RMS Unbalanced, 16V RMS Balanced

Output Impedance

220 ohms

Sensitivity

High Level, 450mV for 2.5V rated output
Phono MM, 4.5mV for 2.5V rated output
Phono MC, 0.45mV for 2.5V rated output

Input Impedance

High Level, 22K ohms
Phono MM, 47K ohms; 50 to 750pF, in 50pF steps
Phono MC: 25, 50, 100, 200, 400 or 1,000 ohms; 100pF

Maximum Input Signal

High Level, 5V Unbalanced, 10V Balanced
Phono MM, 50mV
Phono MC, 5mV

Tube Compliment

Phono Circuitry:
4 - 12AX7A

High Level Circuitry:

4 - 12AX7A

Overall Dimensions

C1000C:

Width is 17-1/2 inches (44.45cm)
Height is 6 inches (15.24cm) including feet
Depth is 24 inches (61.0cm) including the Front Panel, Knobs and Interconnect Cables¹

C1000P:

Width is 17-1/2 inches (44.45cm)
Height is 6 inches (15.24cm) including feet
Depth is 24 inches (61.0cm) including the Front Panel and Interconnect Cables¹

C1000T:


Width is 17-1/2 inches (44.45cm)
Height is 6 inches (15.24cm) including feet
Depth is 24 inches (61.0cm) including the Front Panel and Interconnect Cables¹

Weight

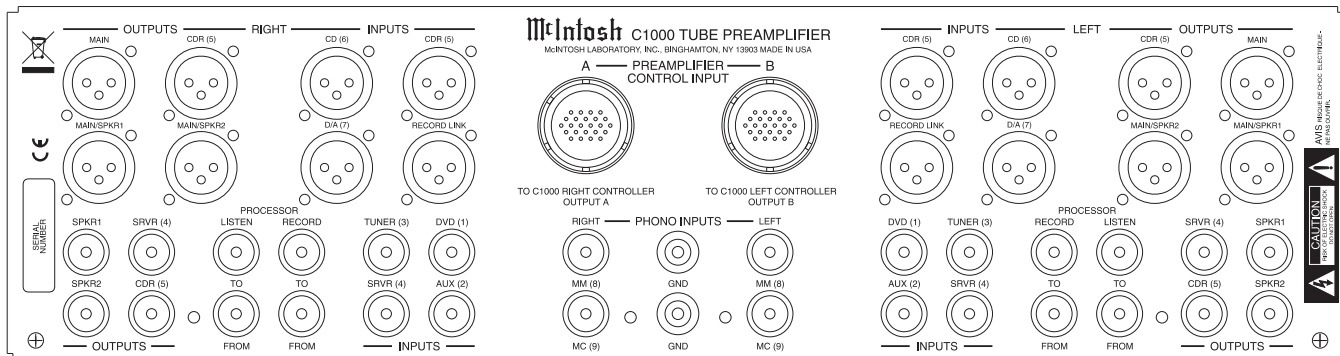
C1000C- 39.0 pounds (17.7 kg) net
61.4 pounds (27.9 kg) in shipping carton
C1000P- 33.0 pounds (15.0 kg) net
53.6 pounds (24.3 kg) in shipping carton
C1000T- 34.0 pounds (15.4 kg) net
54.6 pounds (24.8 kg) in shipping carton

¹ Interconnect Cables are supplied with the C1000 Preamplifier and C1000 Tube Preamplifier. They are used to connect Preamplifier(s) to the C1000 Controller.

NOTES

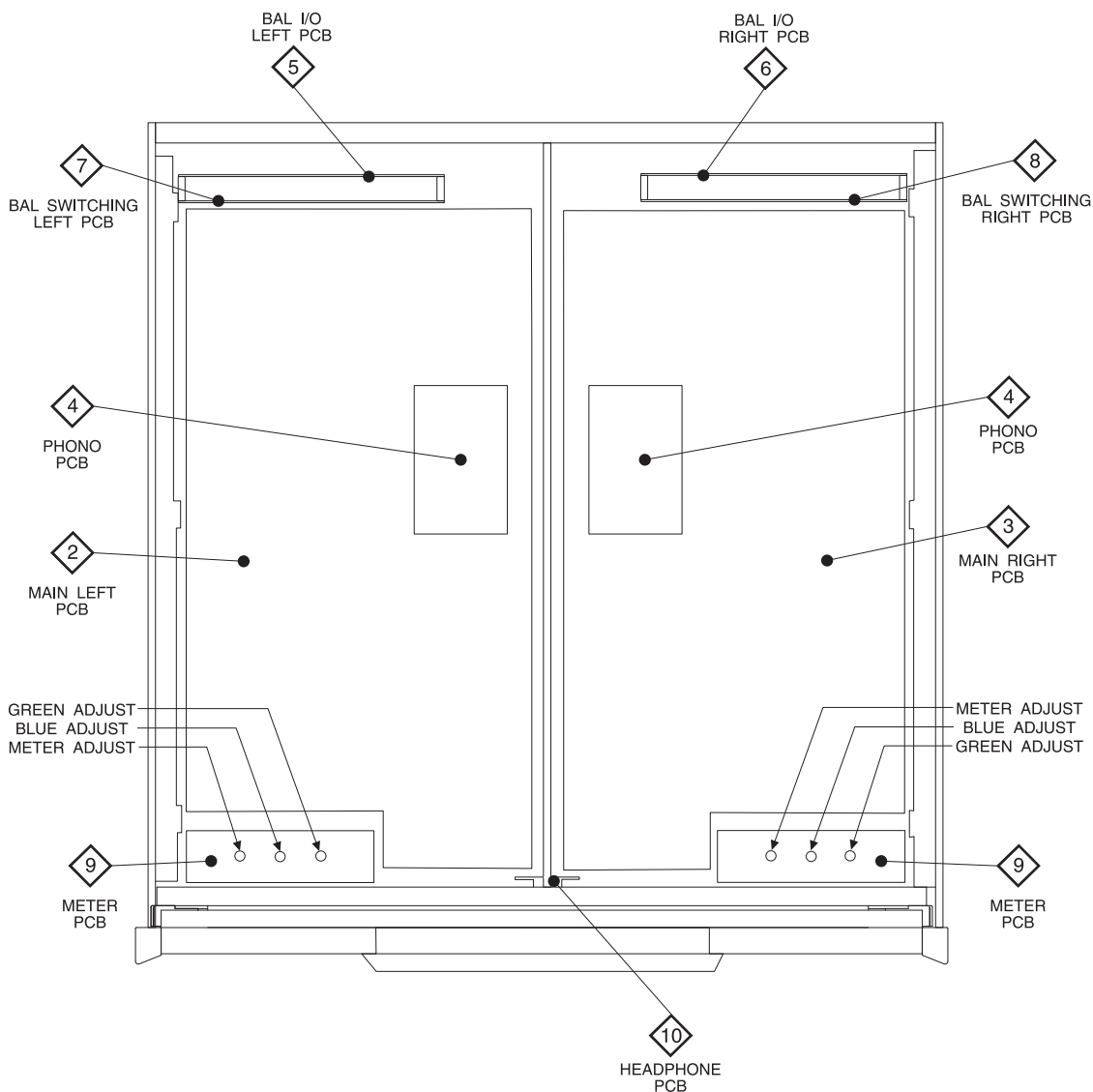
1. The heavy notes on the schematic denote the primary signal path.
2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at 120 volts, 50/60Hz.
 - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
3. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are microfarads (uF).
 - c. Inductor values are in microhenries (uH).
4. On PC board drawings, Square pad indicates:
 - a. Polarized Capacitors - Positive
 - b. Diodes - Cathode
 - c. Others - Pin 1
5. **WARNING**
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.

REAR PANEL

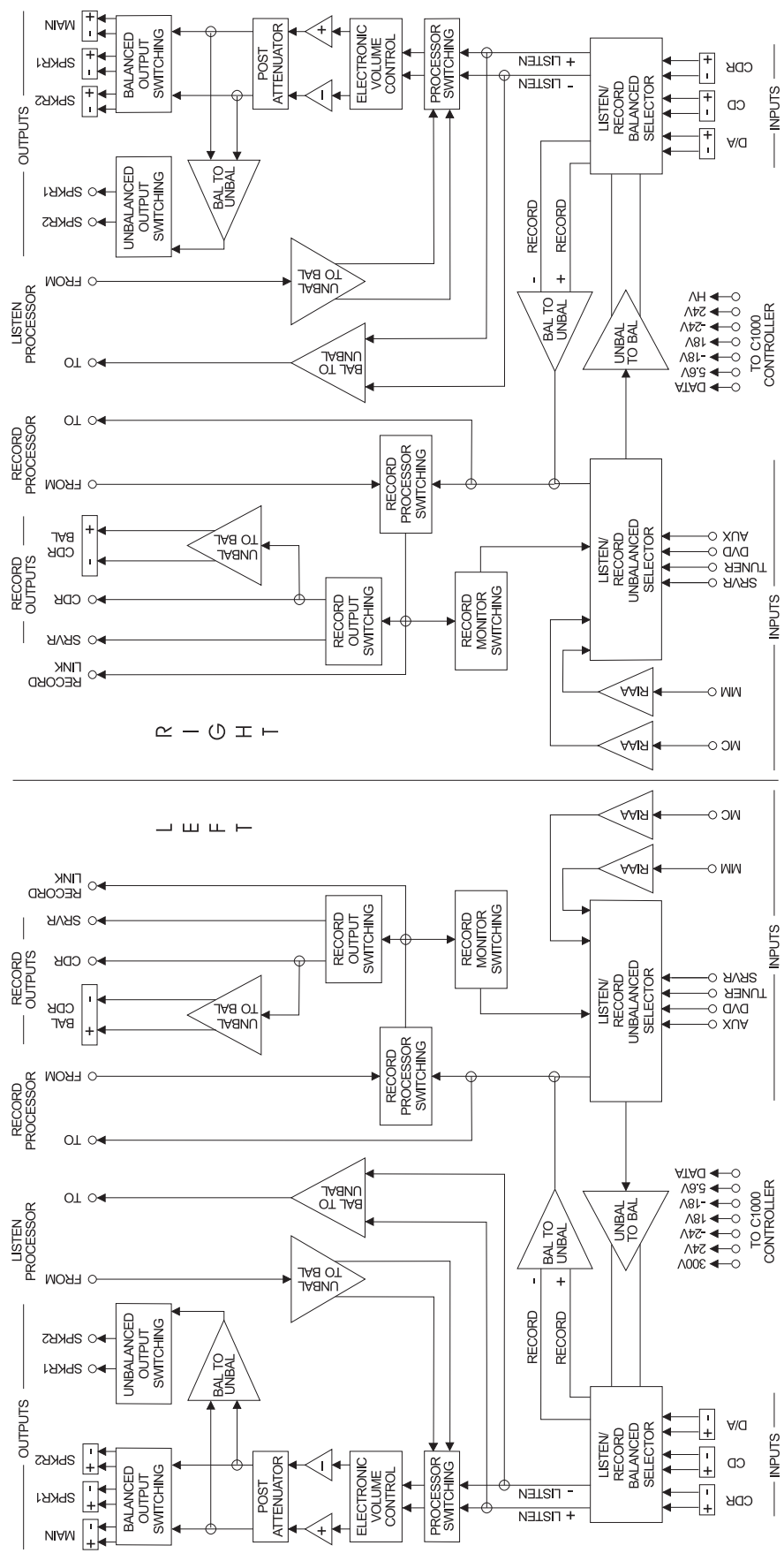


SECTION LOCATIONS

TOP VIEW WITH COVER REMOVED

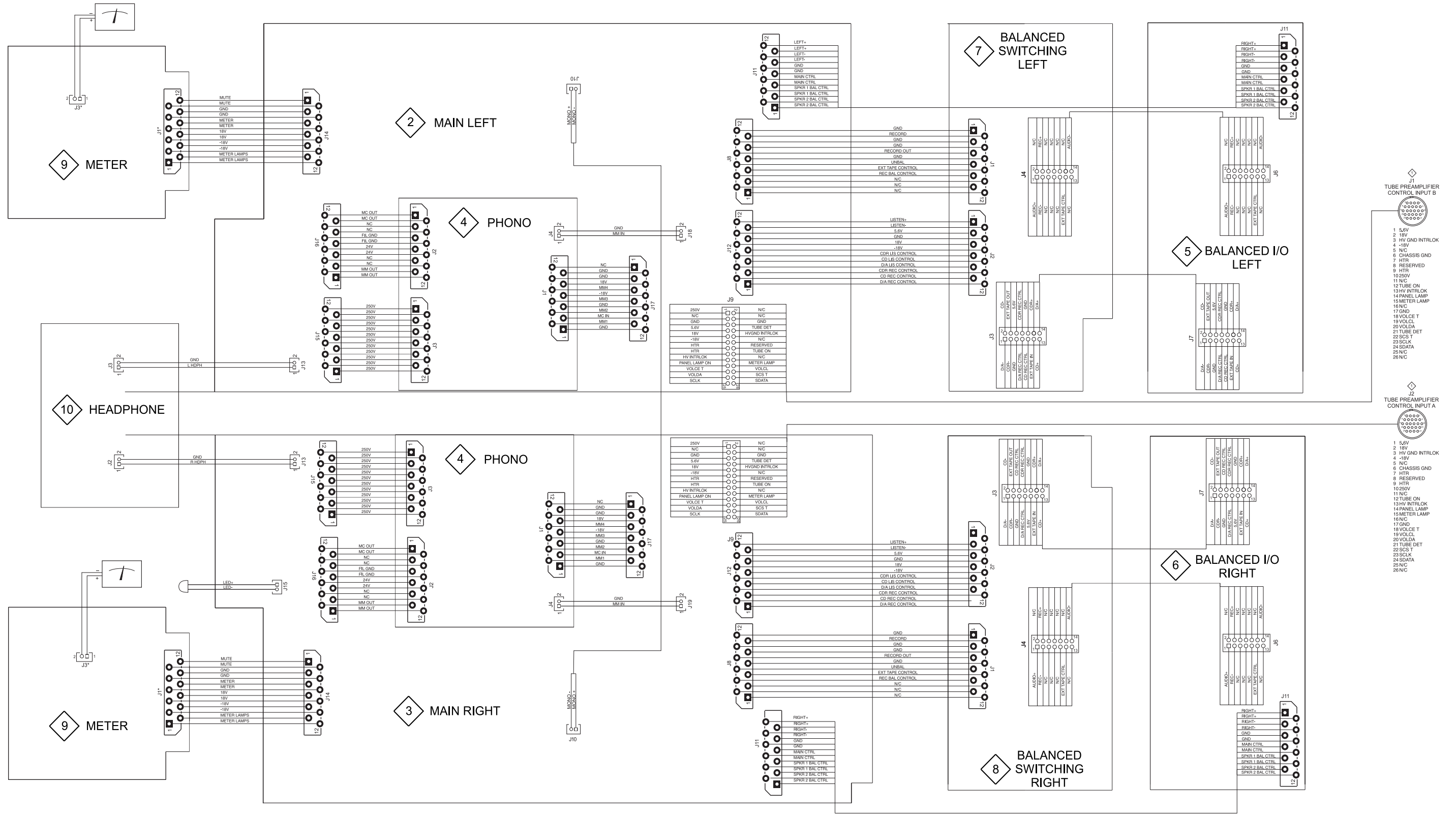


BLOCK DIAGRAM



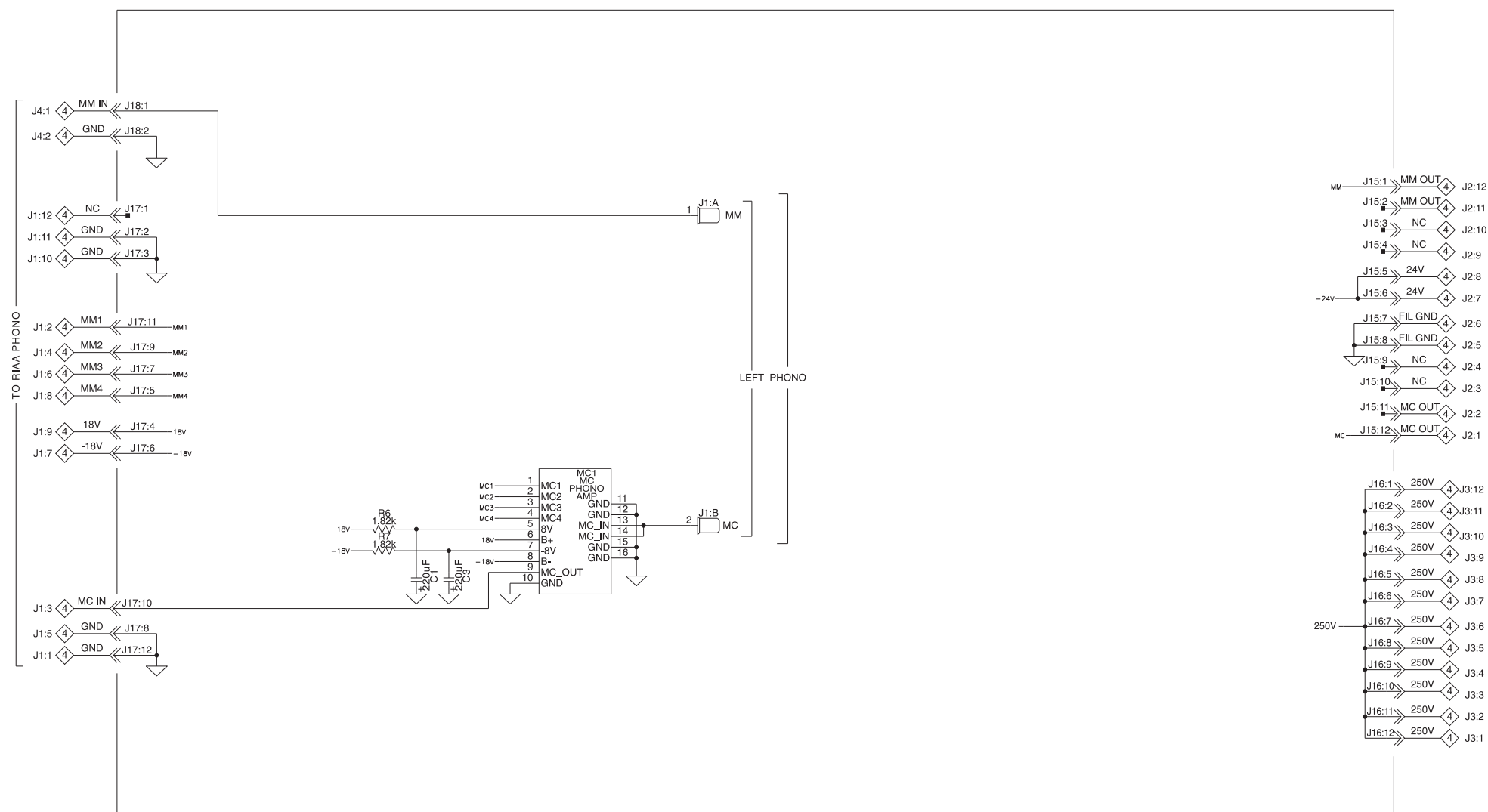
C1000
TUBE PREAMPLIFIER

INTERCONNECT



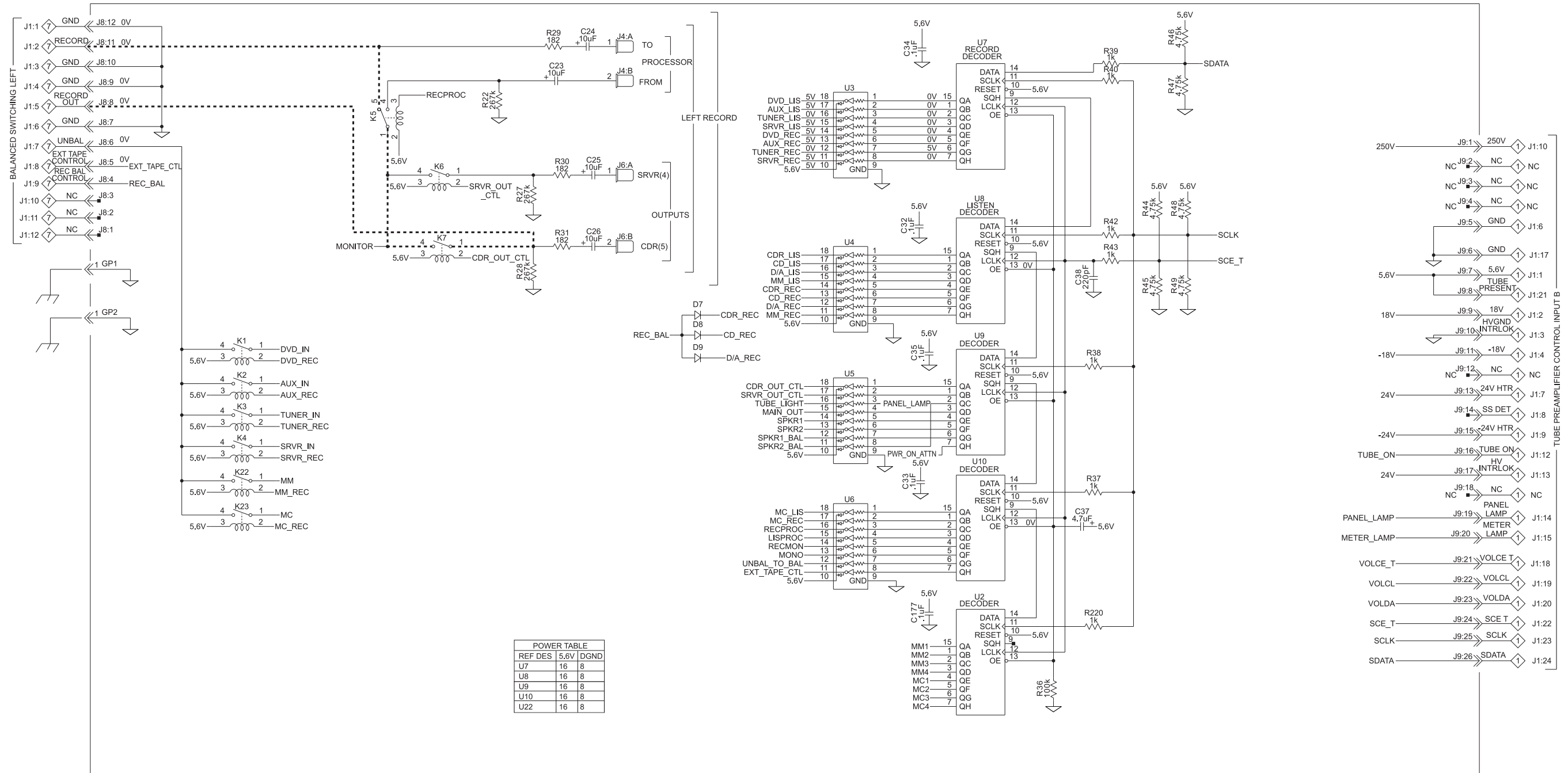
- J1 TUBE PREAMPLIFIER CONTROL INPUT B**
- 5.6V
 - 18V
 - HV GND INTRLOK
 - 18V
 - NC
 - CHASSIS GND
 - HTR
 - RESERVED
 - 10.250V
 - NC
 - TUBE ON
 - 13HV INTRLOK
 - 14PANEL LAMP
 - 15METER LAMP
 - 16NC
 - 17GND
 - 18VOLCE T
 - 19VOLCL
 - 20VOLD A
 - 21TUBE DET
 - 22SCS T
 - 23SCLK
 - 24SDATA
 - 25NC
 - 26NC
- J2 TUBE PREAMPLIFIER CONTROL INPUT A**
- 5.6V
 - 18V
 - HV GND INTRLOK
 - 18V
 - NC
 - CHASSIS GND
 - HTR
 - RESERVED
 - 10.250V
 - NC
 - TUBE ON
 - 13HV INTRLOK
 - 14PANEL LAMP
 - 15METER LAMP
 - 16NC
 - 17GND
 - 18VOLCE T
 - 19VOLCL
 - 20VOLD A
 - 21TUBE DET
 - 22SCS T
 - 23SCLK
 - 24SDATA
 - 25NC
 - 26NC

2 MAIN LEFT 050109 SCH 1 OF 5

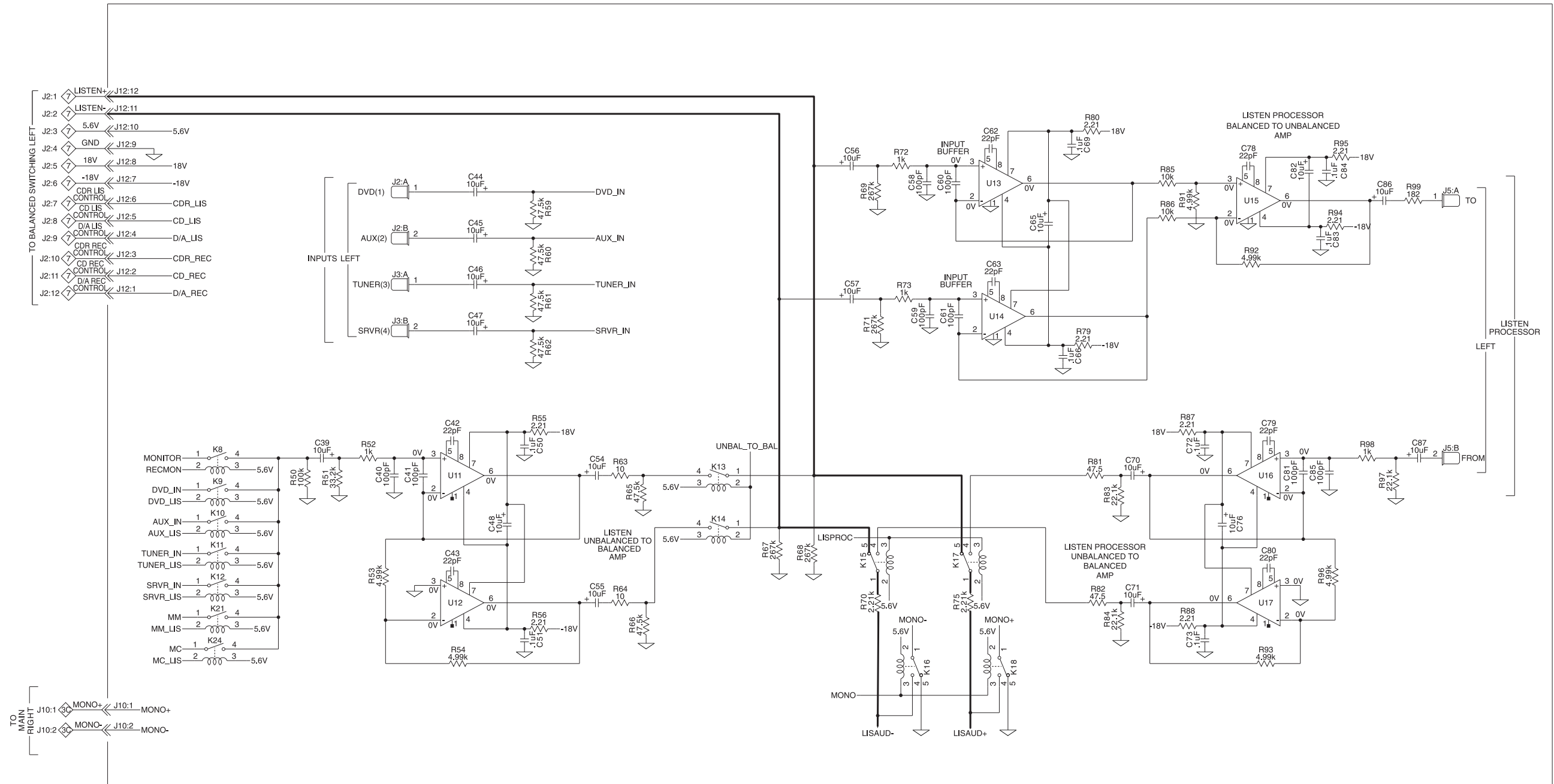


2 MAIN LEFT 050109 SCH 2 OF 5

C1000 TUBE PREAMPLIFIER

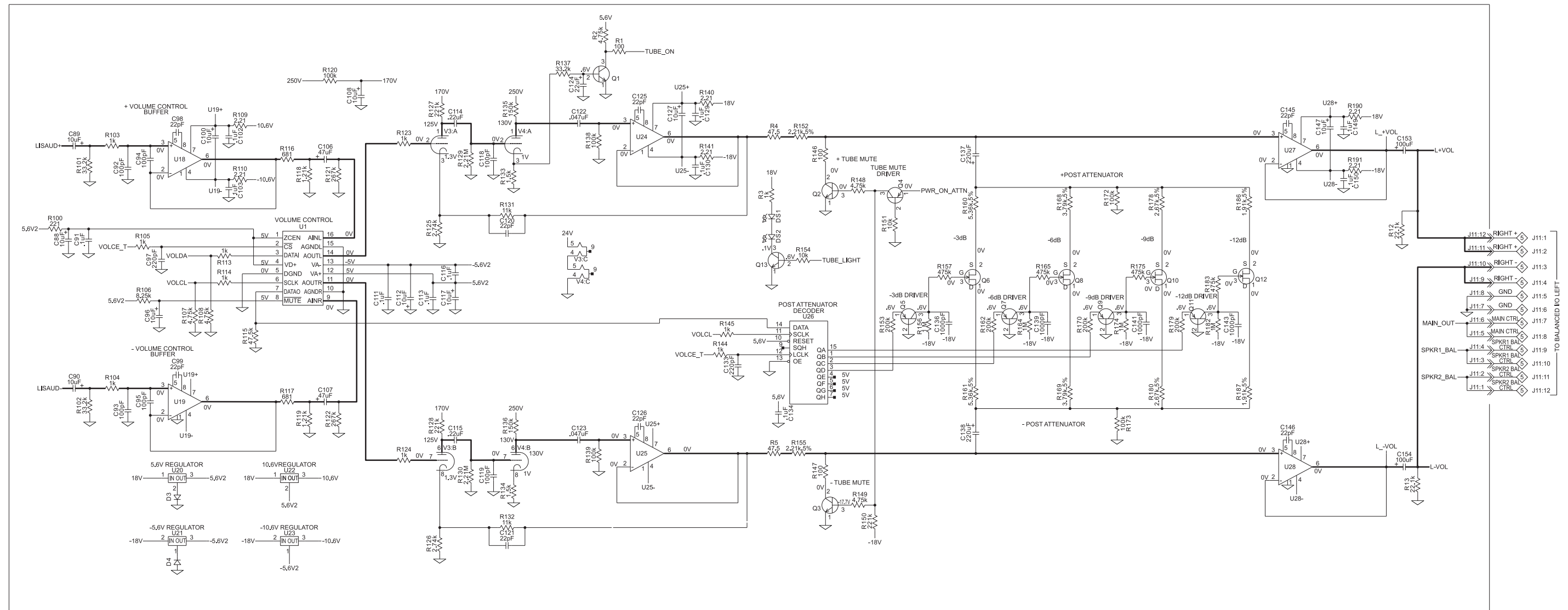


2 MAIN LEFT 050109 SCH 3 OF 5

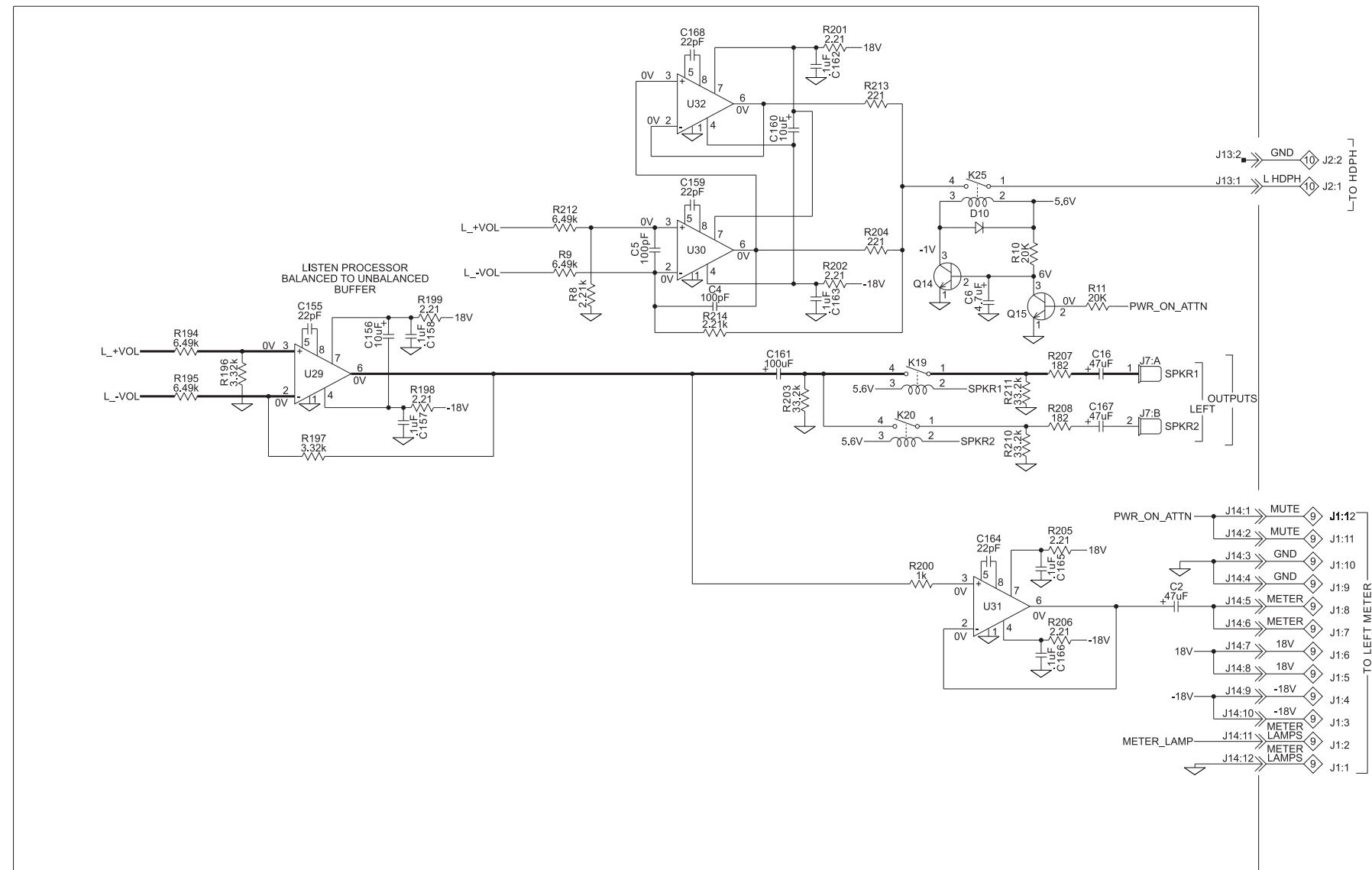


2 MAIN LEFT 050109 SCH 4 OF 5

C1000 TUBE PREAMPLIFIER

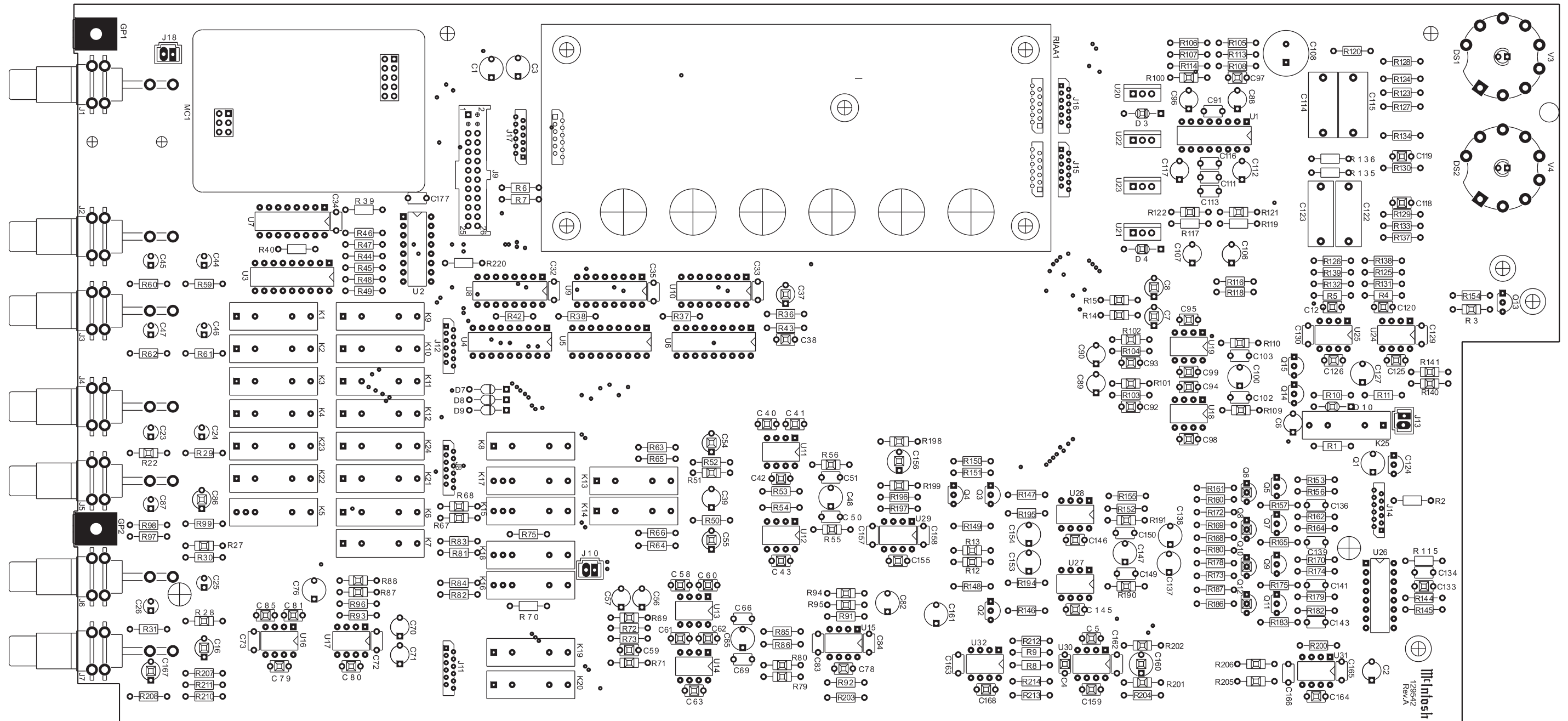


2 MAIN LEFT 050109 SCH 5 OF 5

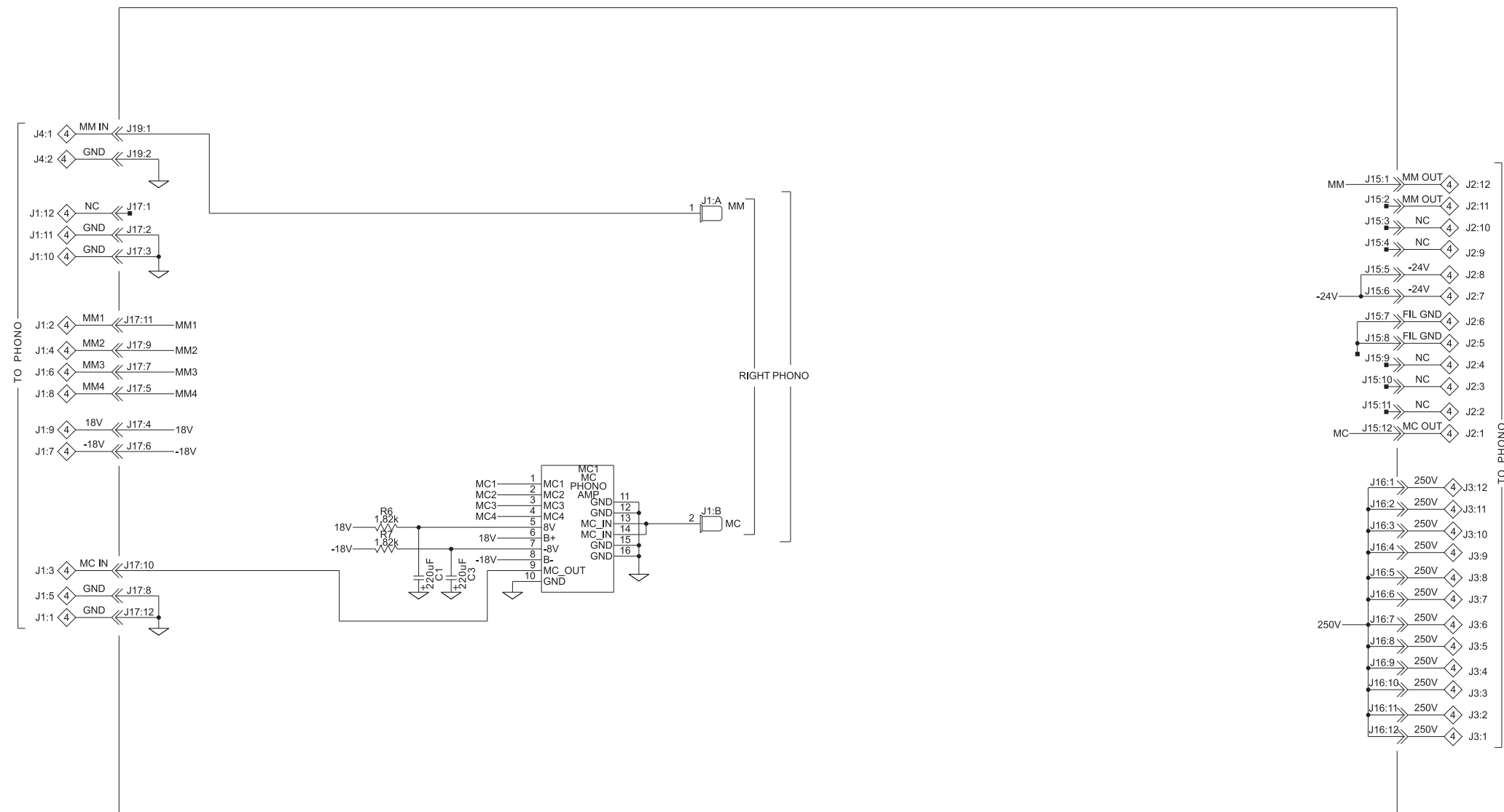


2 MAIN LEFT 050109 PCB

C1000
TUBE PREAMPLIFIER

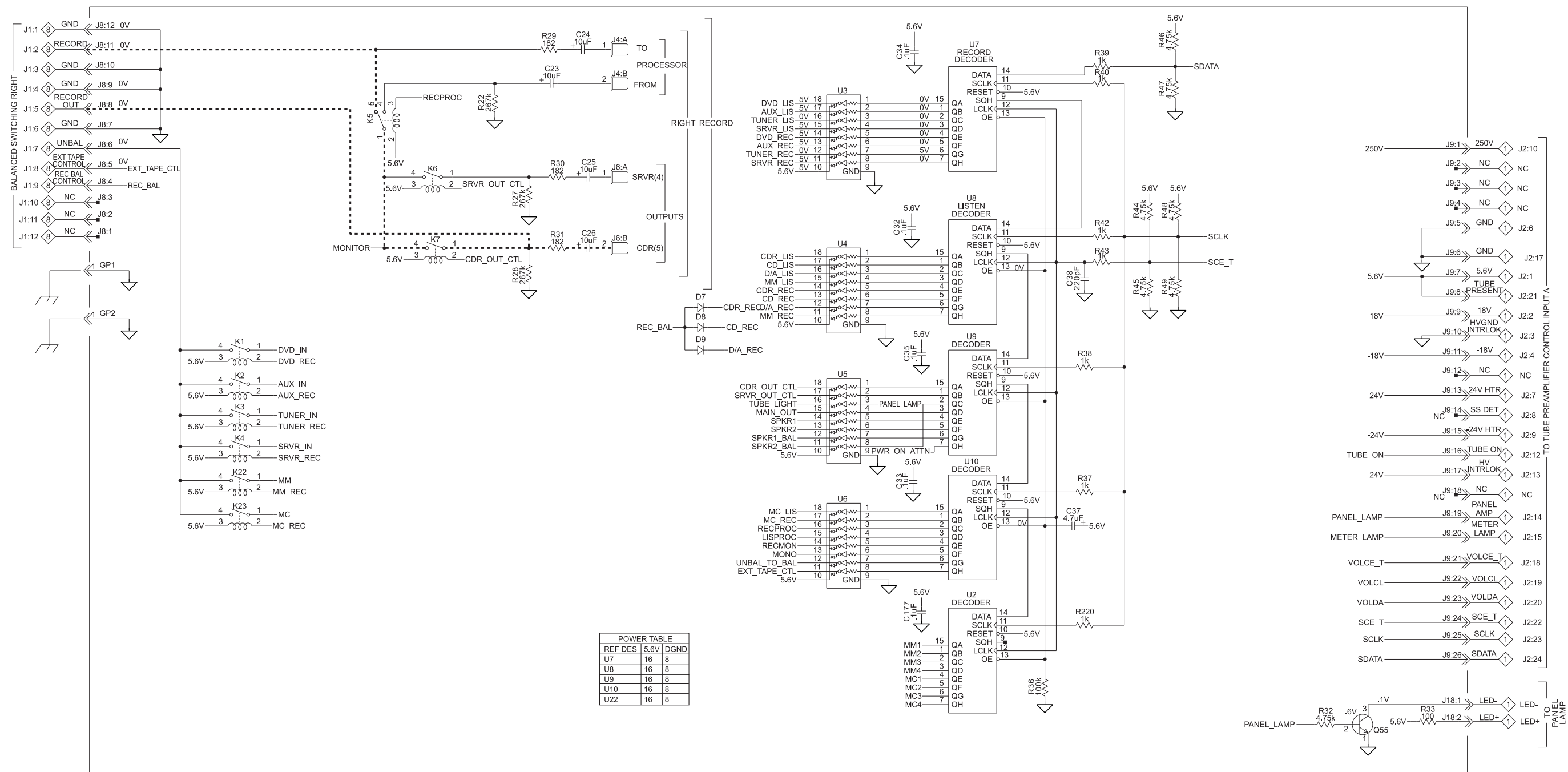


3 MAIN RIGHT 050111 SCH 1 OF 5

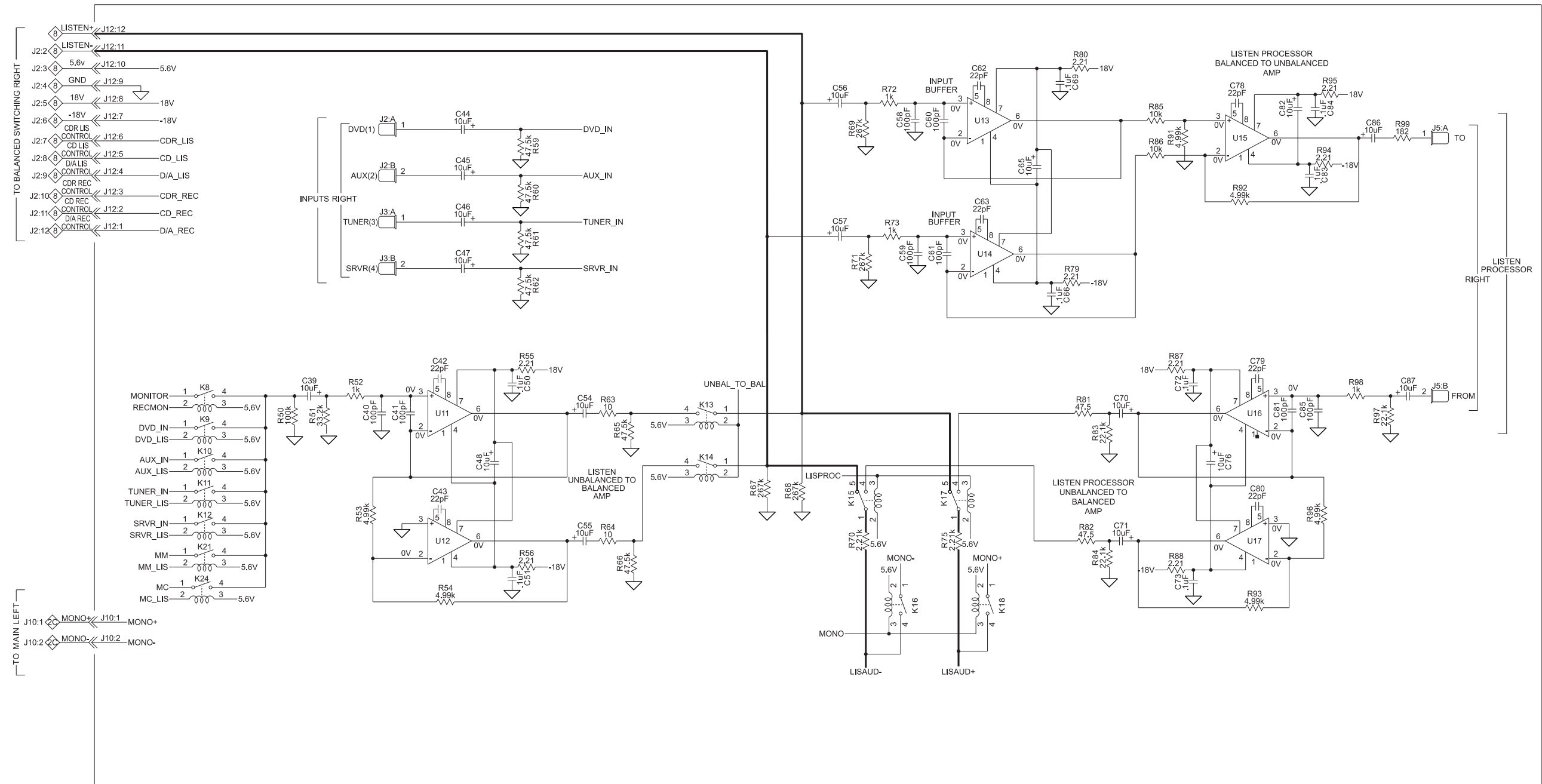


C1000
TUBE PREAMPLIFIER

3 MAIN RIGHT 050111 SCH 2 OF 5

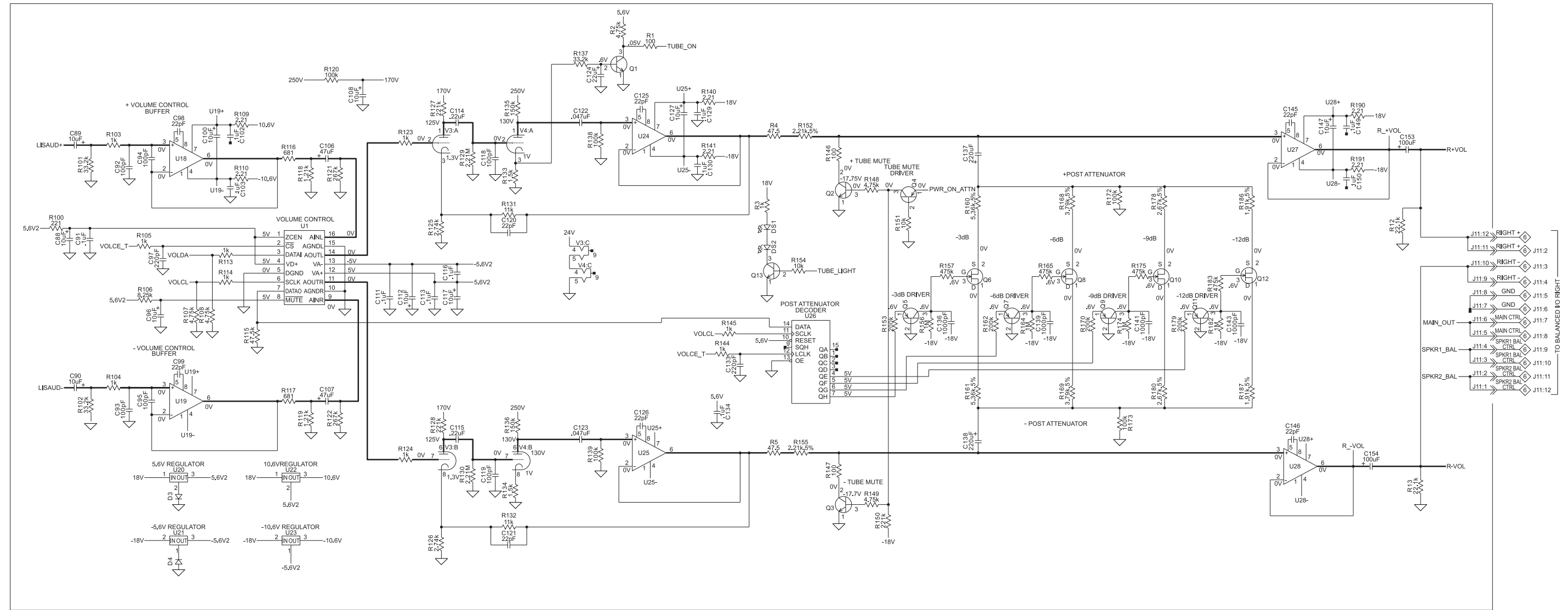


3 MAIN RIGHT 050111 SCH 3 OF 5

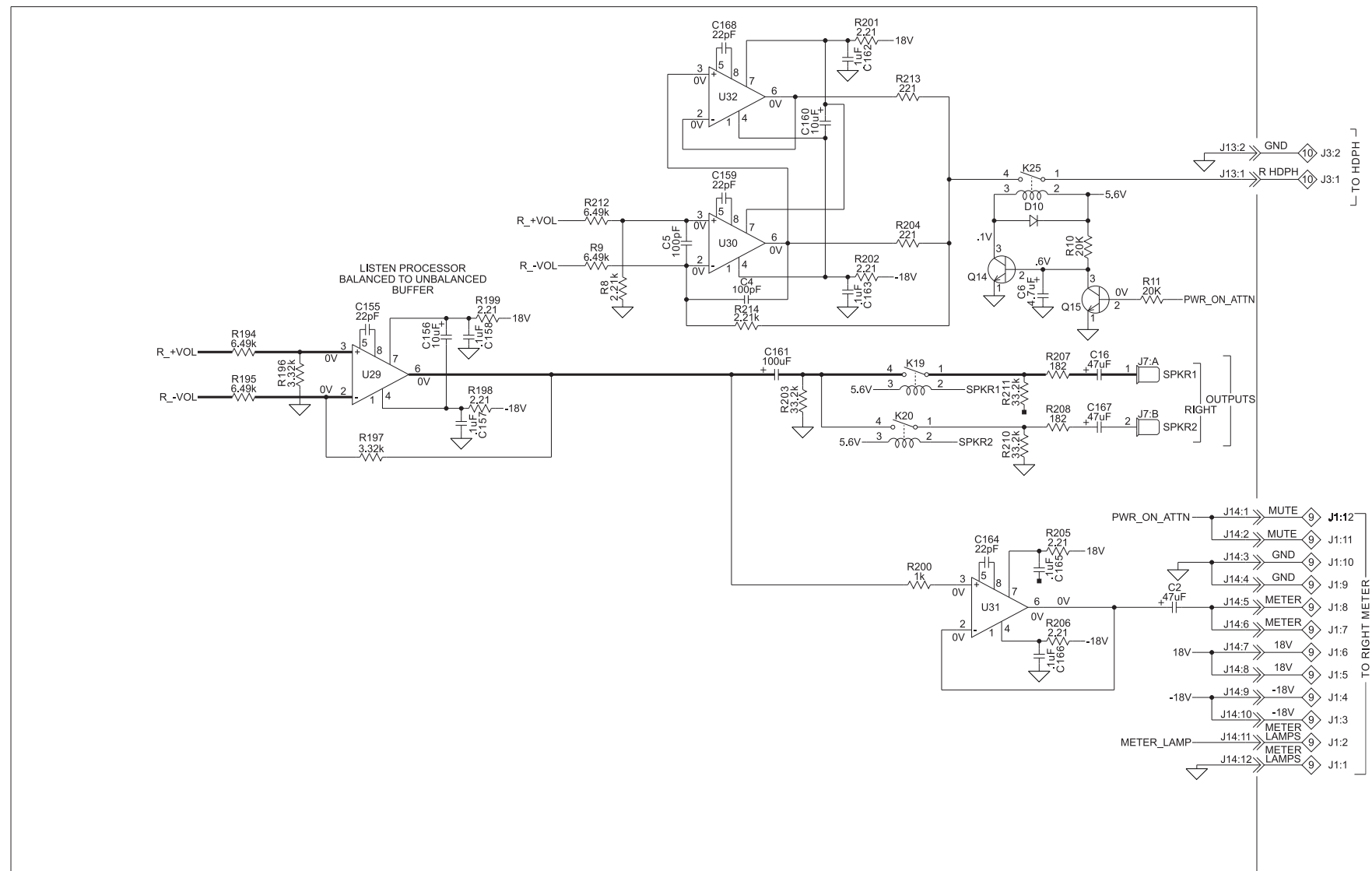


3 MAIN RIGHT 050111 SCH 4 OF 5

C1000 TUBE PREAMPLIFIER

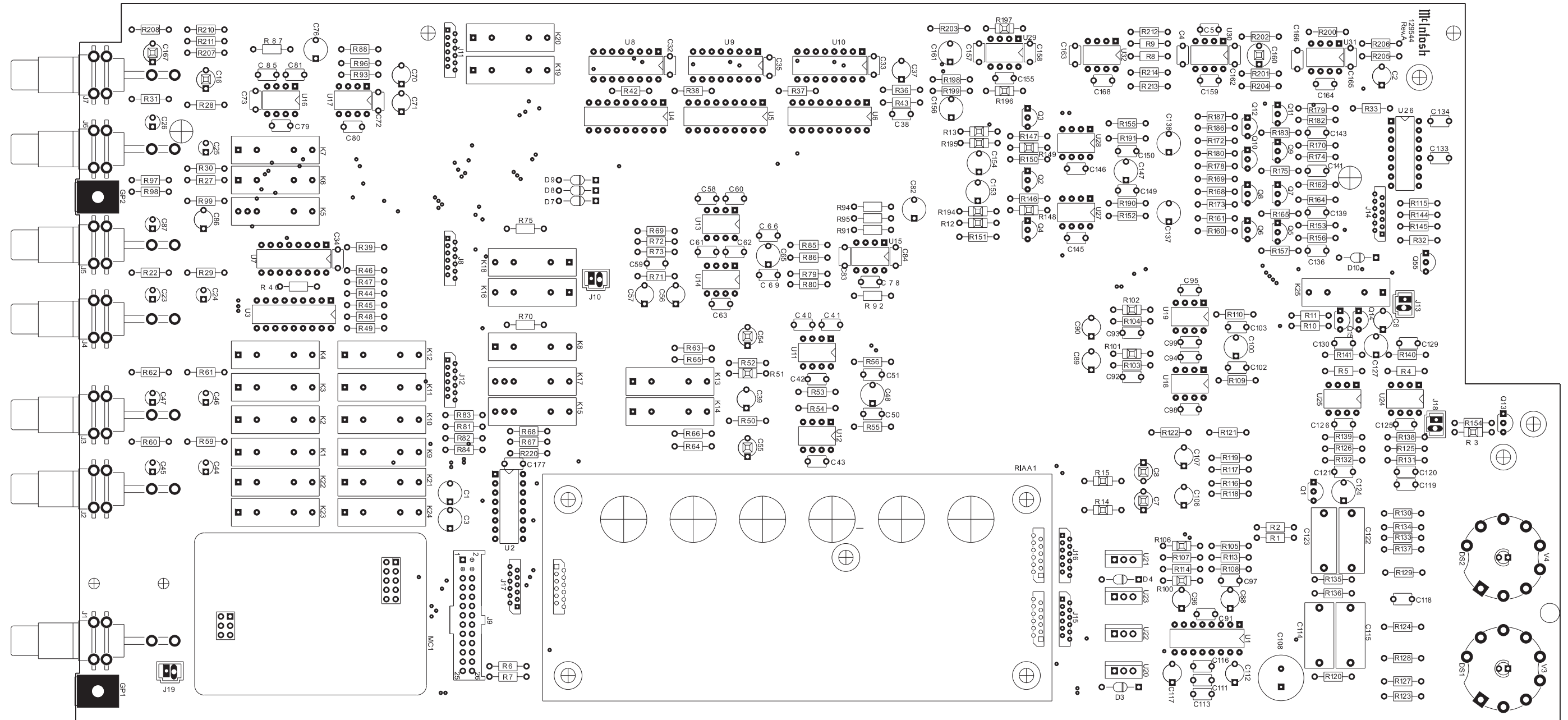


3 MAIN RIGHT 050111 SCH 5 OF 5

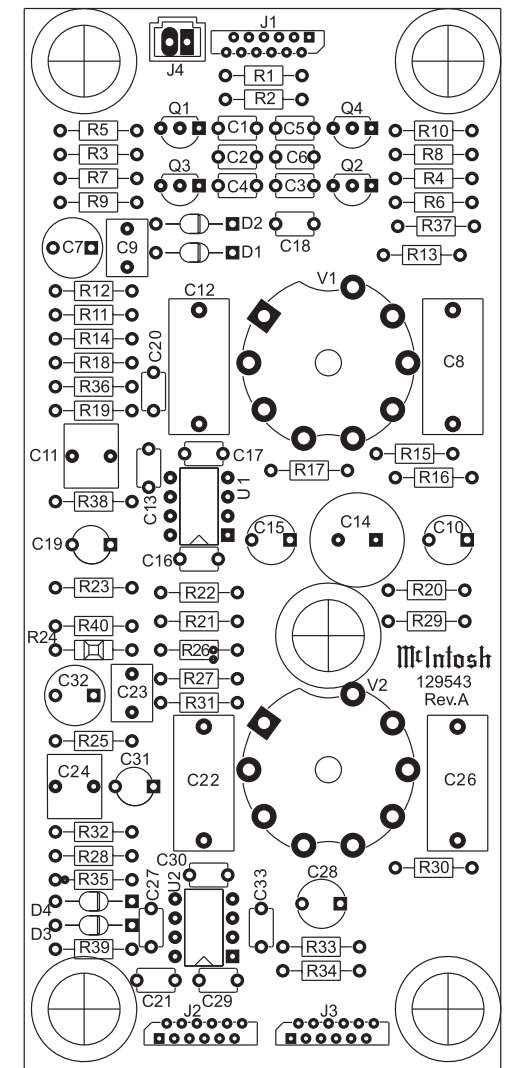
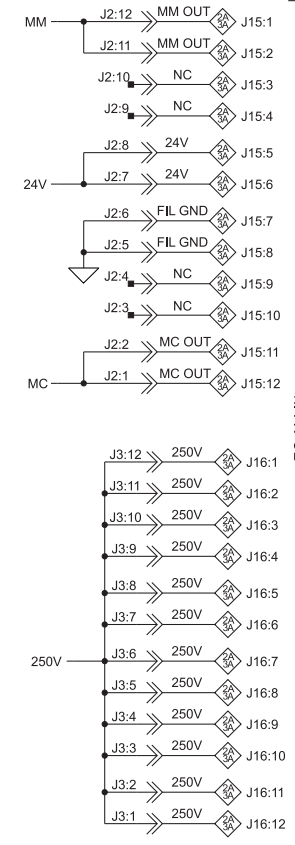
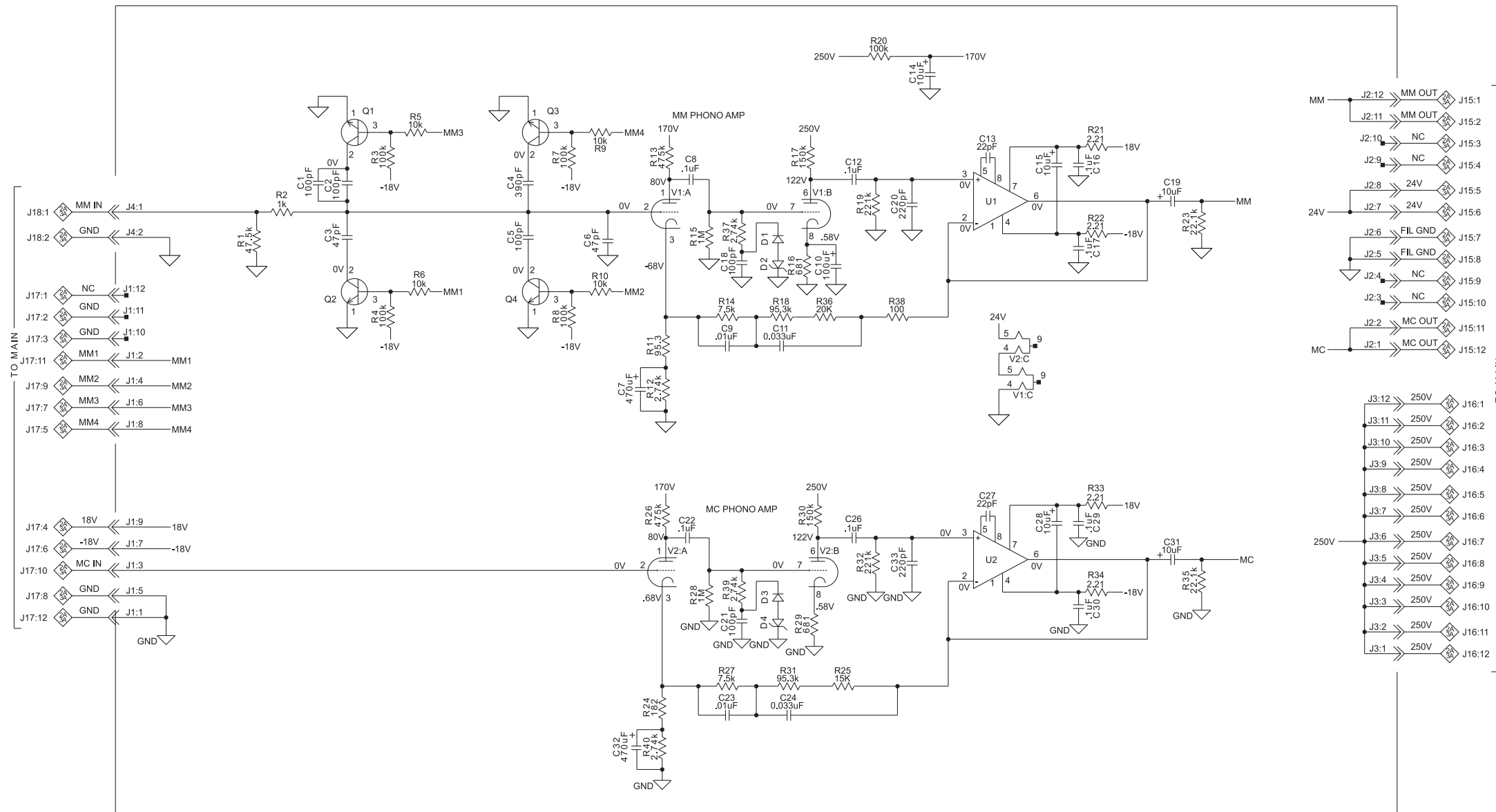


3 MAIN RIGHT 050111 PCB

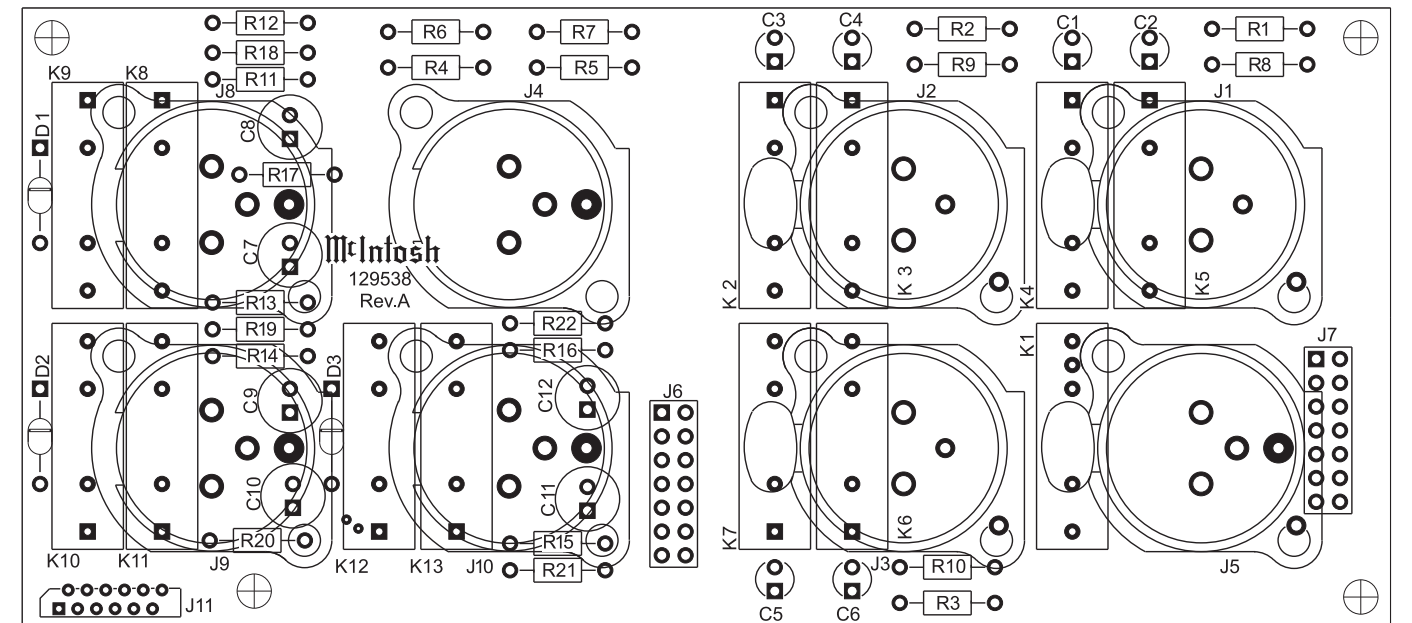
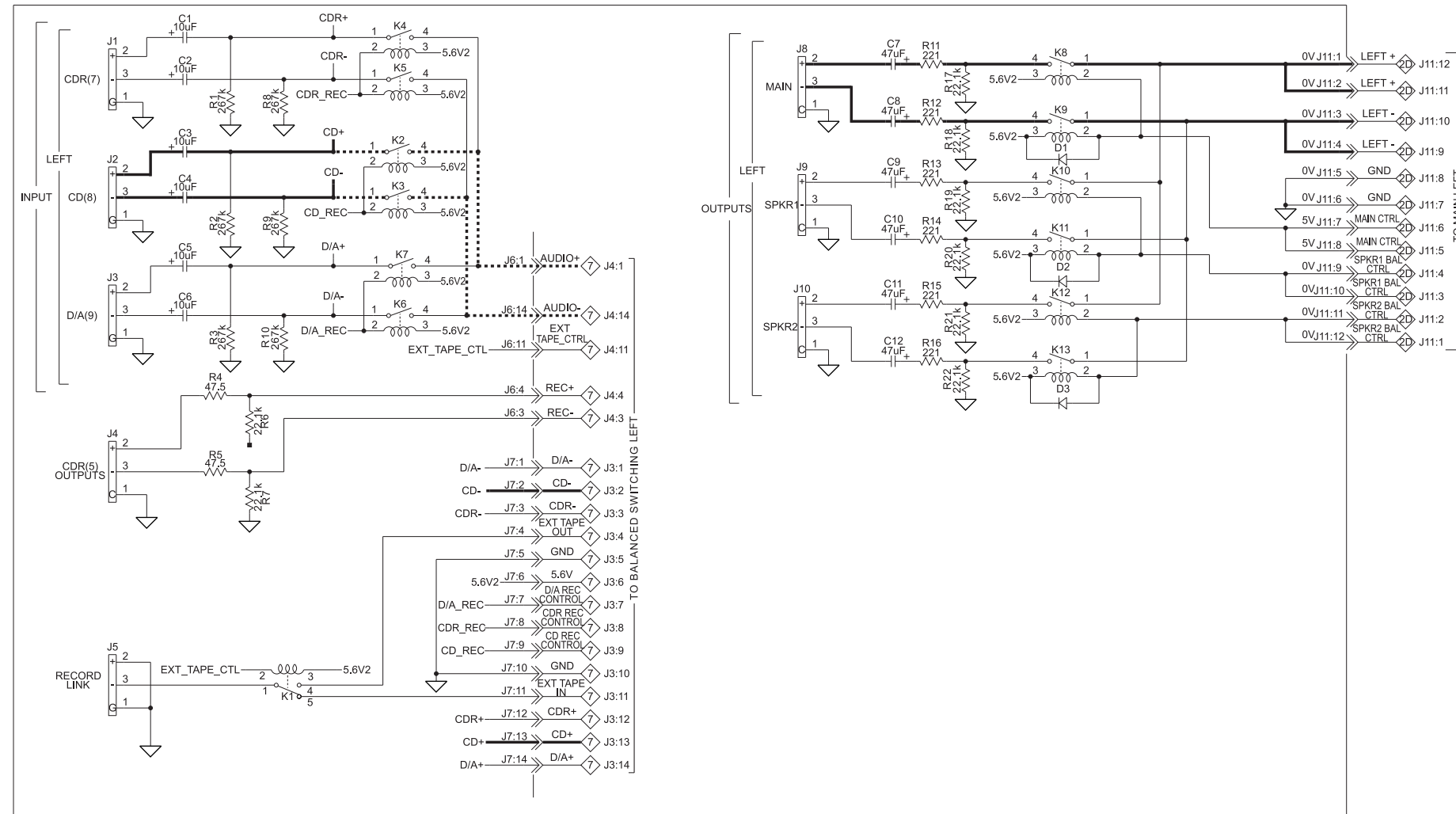
C1000 TUBE PREAMPLIFIER



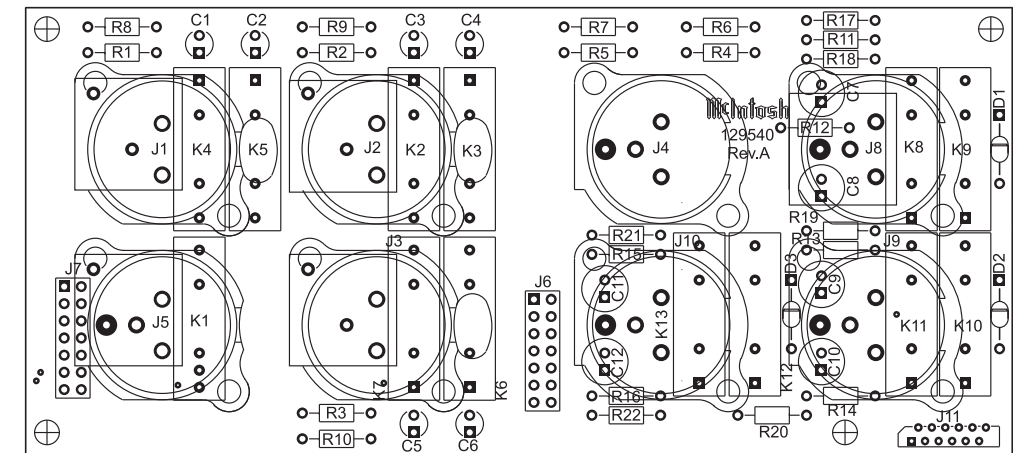
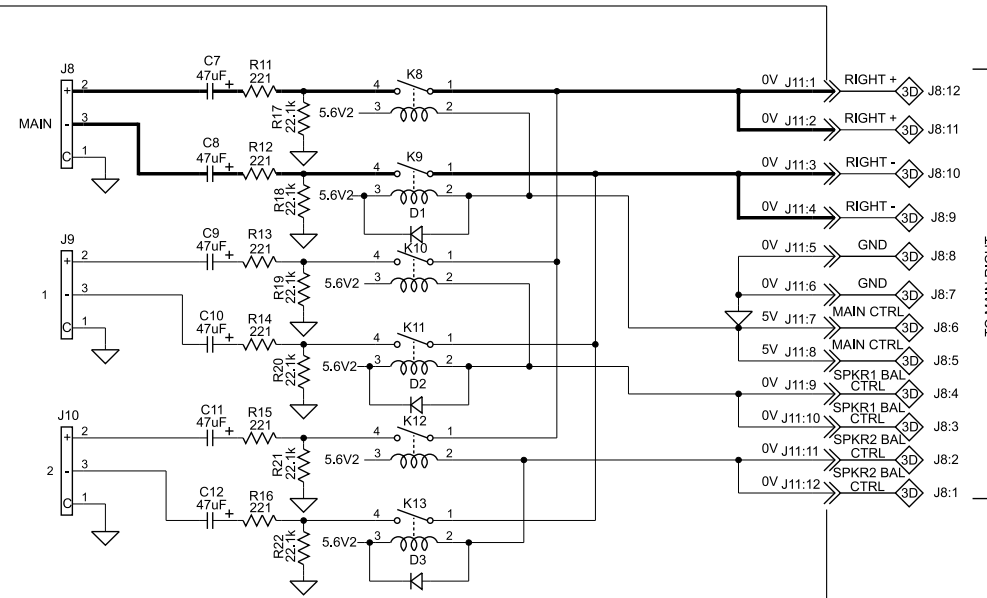
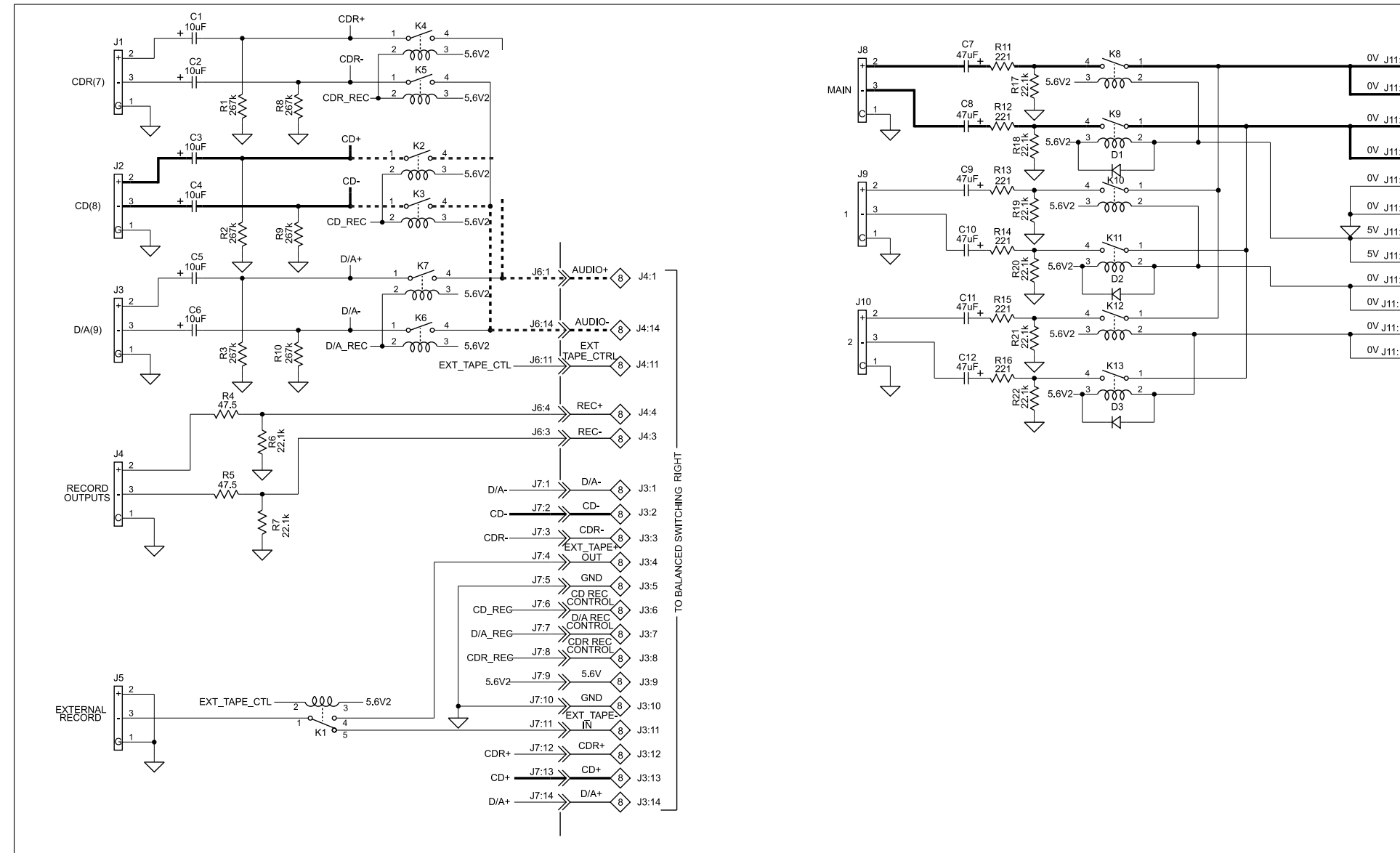
4 PHONO 050110 SCH and PCB



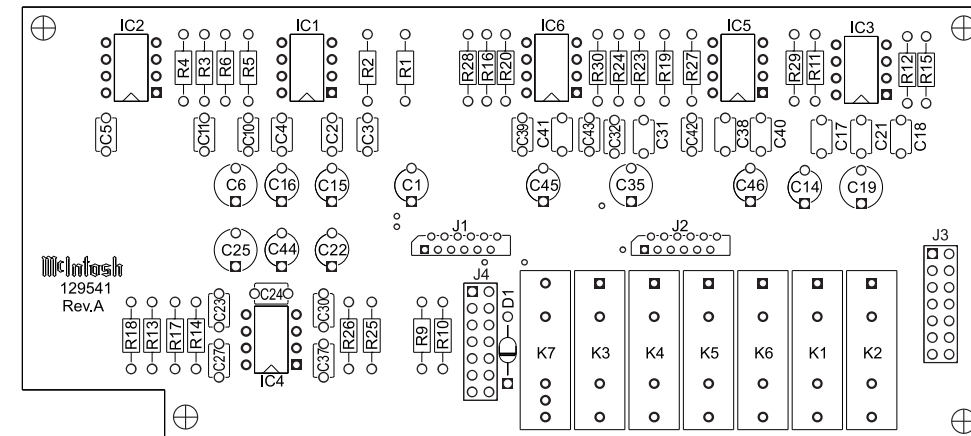
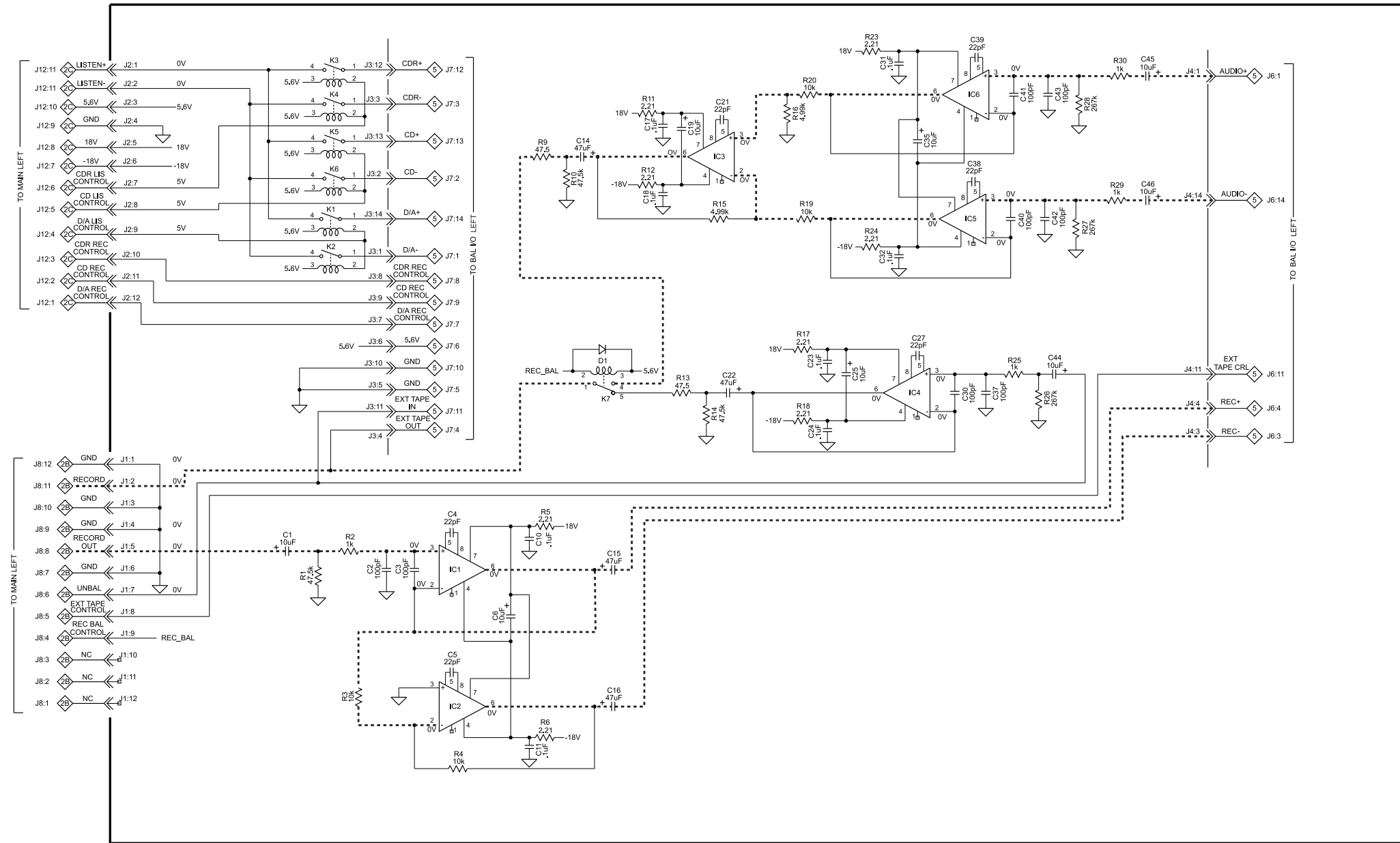
5 BALANCED I/O LEFT 050198 SCH and PCB



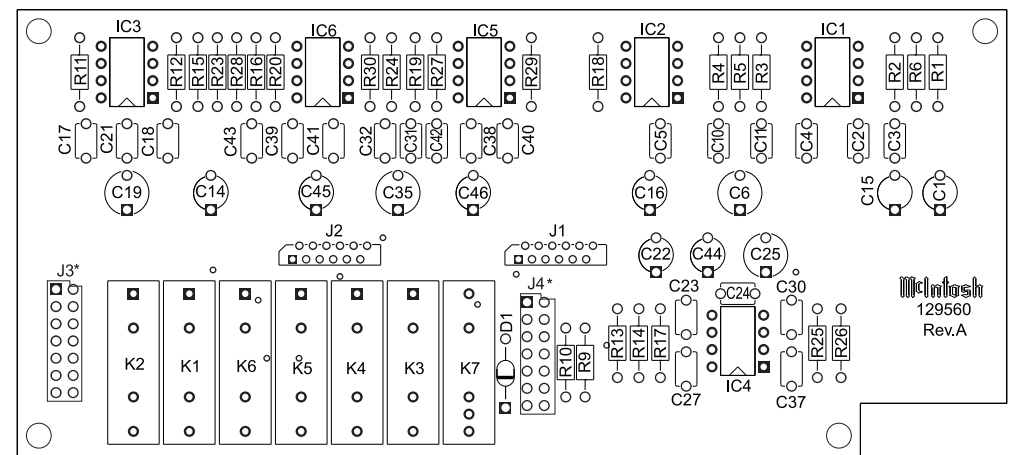
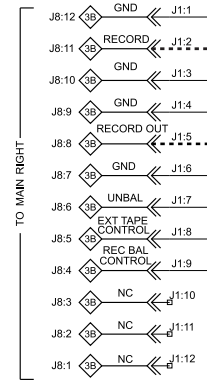
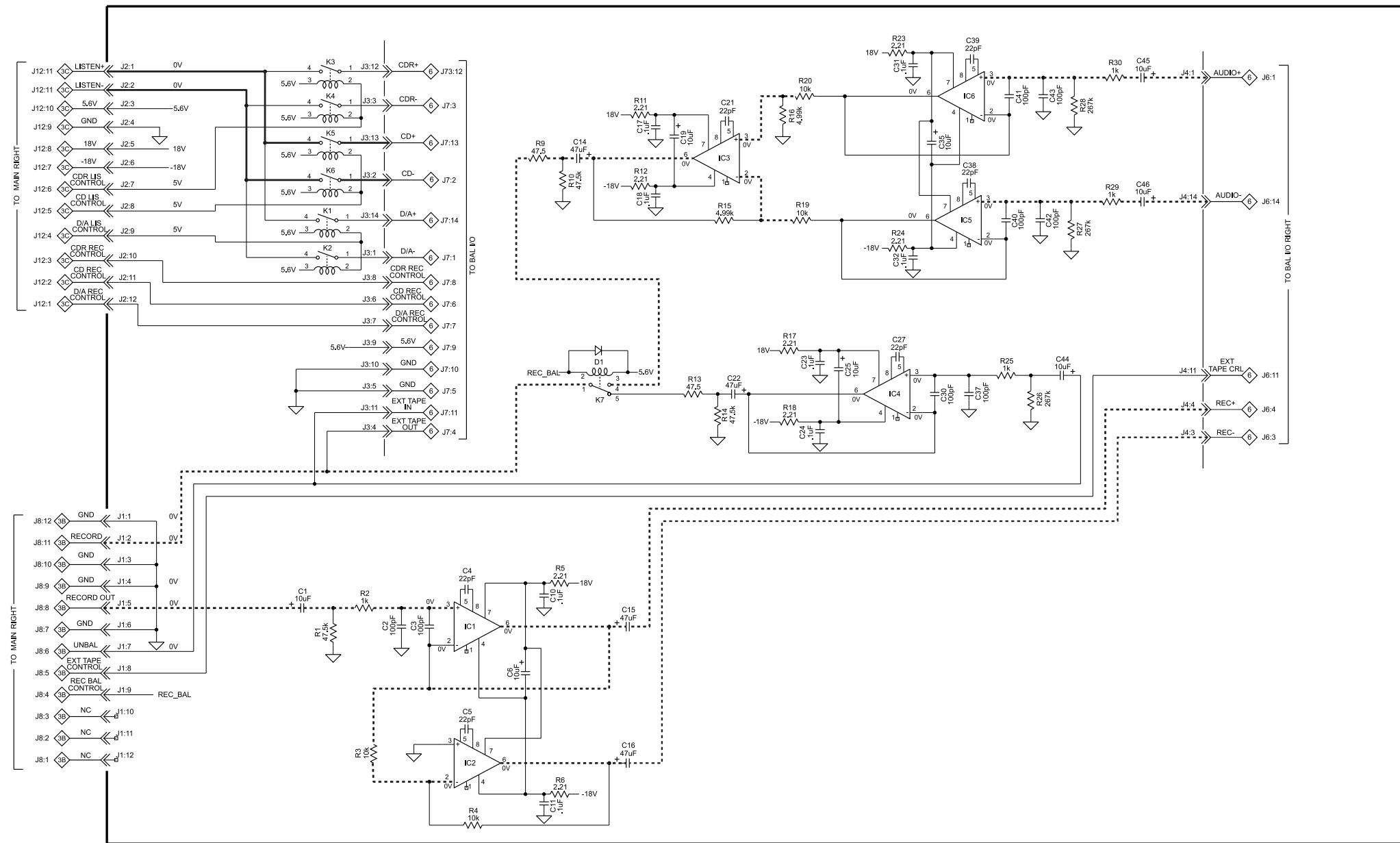
6 BALANCED I/O RIGHT 050199 SCH and PCB



7 BALANCED SWITCHING LEFT 050108 SCH and PCB



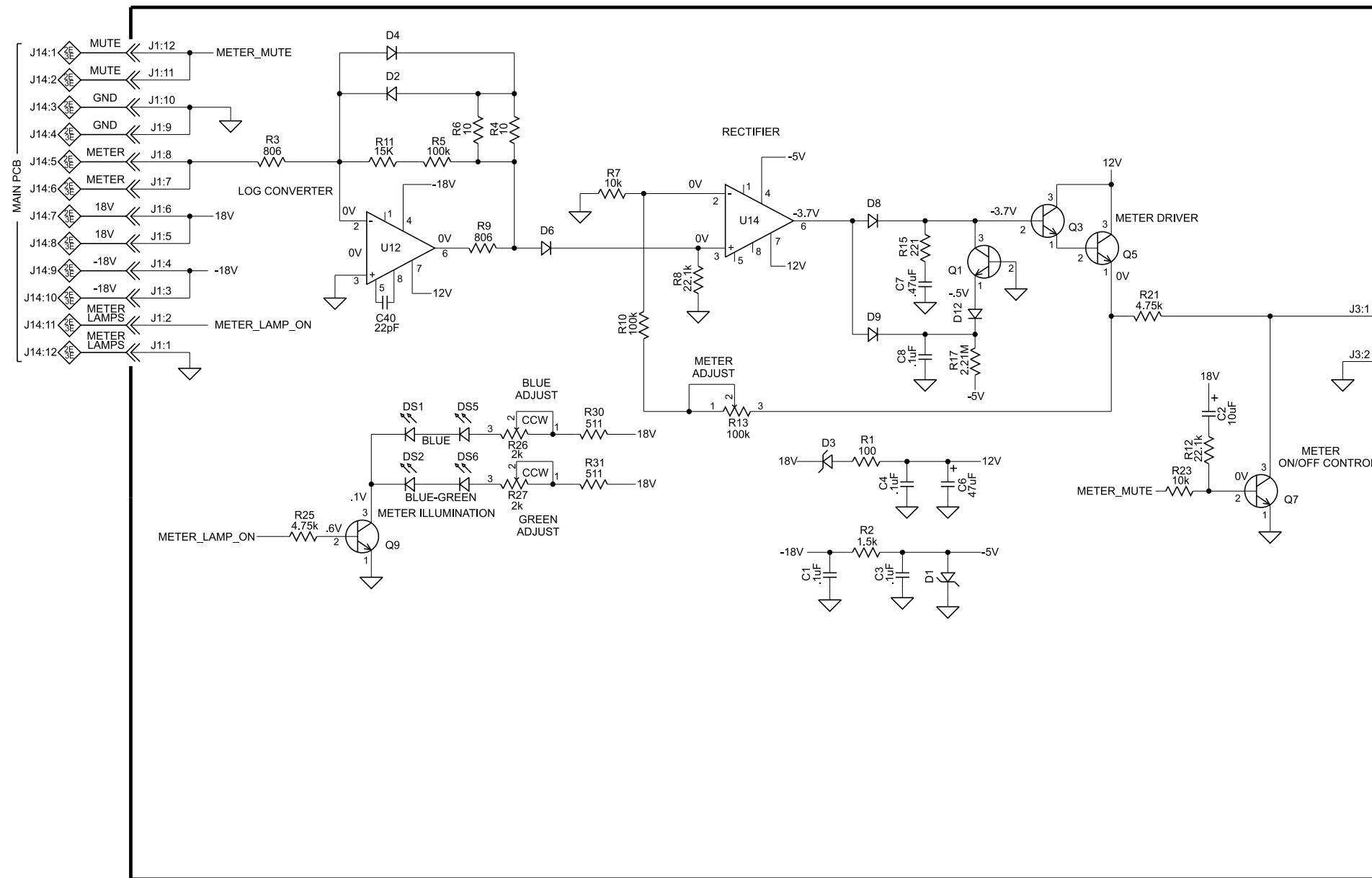
8 BALANCED SWITCHING RIGHT 050155 SCH and PCB



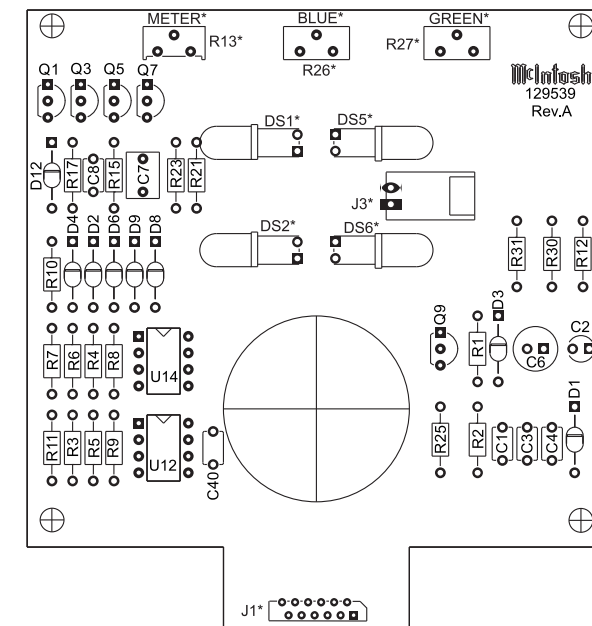
Intosh
129560
Rev.A

C1000
TUBE PREAMPLIFIER

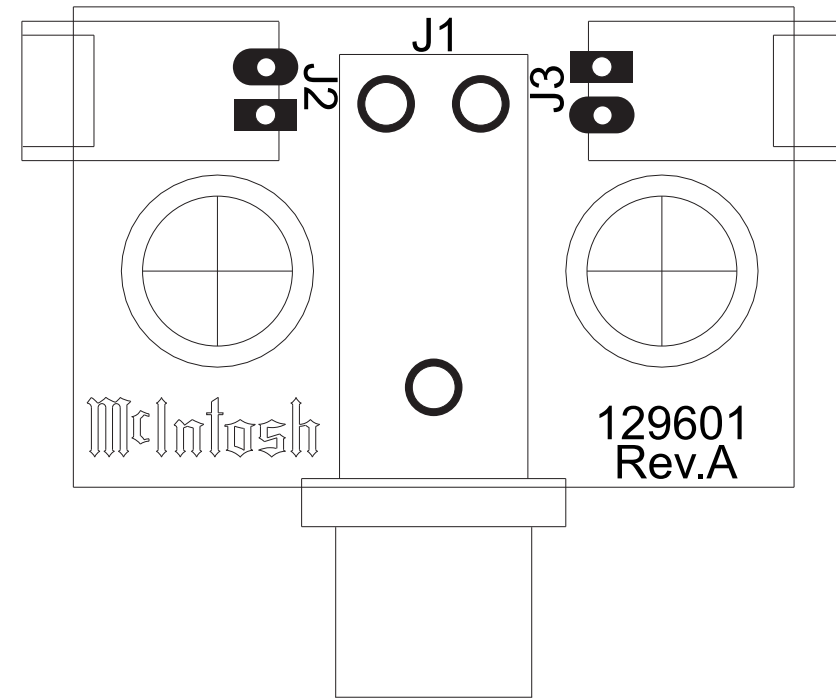
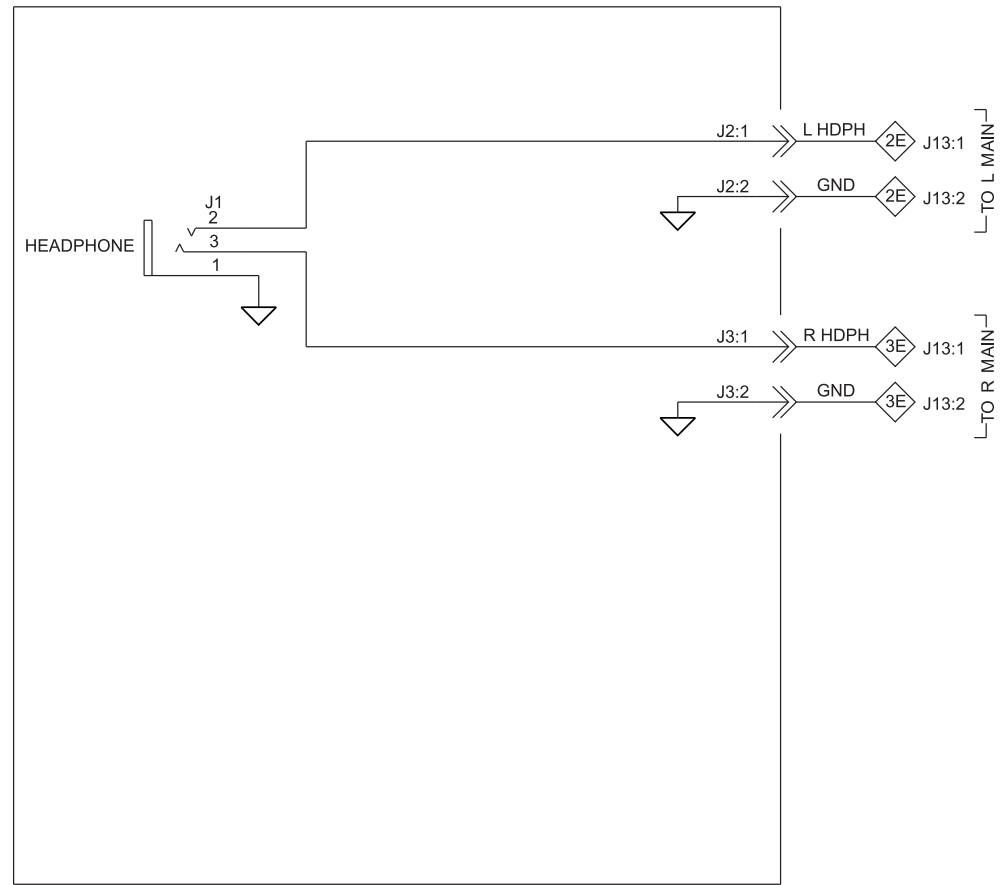
9 *METER 050106 SCH and PCB*



METER ADJUSTMENT PROCEDURE
Apply a 1kHz signal to both channels. Adjust the level for 2.5VAC at L and R SPKR1 unbalanced output. Adjust R13 for 0dB on the C1000 left and right meters



10 HEADPHONE 050262 SCH and PCB



PARTS LIST



MAIN LEFT PCB 050109

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
C1	CAP ELECT 220UF 25V	066507	C89	CAP ELECT 10UF 50V	066445
C2	CAP ELECT 47UF 35V	066446	C90	CAP ELECT 10UF 50V	066445
C3	CAP ELECT 220UF 25V	066507	C91	CAP MONO .1UF 50V 20% Z5U	061346
C4	CAP MONO 100PF 100V 10% NPO	061341	C92	CAP MONO 100PF 100V 10% NPO	061341
C5	CAP MONO 100PF 100V 10% NPO	061341	C93	CAP MONO 100PF 100V 10% NPO	061341
C6	CAP ELECT 4.7UF 50V	066512	C94	CAP MONO 100PF 100V 10% NPO	061341
C7	CAP ELECT 10UF 50V	066445	C95	CAP MONO 100PF 100V 10% NPO	061341
C8	CAP ELECT 10UF 50V	066445	C96	CAP ELECT 10UF 50V	066445
C16	CAP ELECT 47UF 35V	066446	C97	CAP MONO 220PF 200V 10% NPO	061342
C23	CAP ELECT 10UF 16V	066580	C98	CAP MONO 22PF 200V 10% NPO	061339
C24	CAP ELECT 10UF 16V	066580	C99	CAP MONO 22PF 200V 10% NPO	061339
C25	CAP ELECT 10UF 16V	066580	C100	CAP ELECT 10UF 100VDC	066462
C26	CAP ELECT 10UF 16V	066580	C102	CAP MONO .1UF 50V 20% Z5U	061346
C32	CAP MONO .1UF 50V 20% Z5U	061346	C103	CAP MONO .1UF 50V 20% Z5U	061346
C33	CAP MONO .1UF 50V 20% Z5U	061346	C106	CAP ELECT 47UF 35V	066446
C34	DIODE SIL 400PIV @ 1.5A	070031	C107	CAP ELECT 47UF 35V	066446
C35	CAP MONO .1UF 50V 20% Z5U	061346	C108	CAP ELECT 10UF 250V	066558
C37	CAP ELECT 4.7UF 50V	066512	C111	CAP MONO .1UF 50V 20% Z5U	061346
C38	CAP MONO 220PF 200V 10% NPO	061342	C112	CAP ELECT 10UF 50V	066445
C39	CAP ELECT 10UF 50V	066445	C113	CAP MONO .1UF 50V 20% Z5U	061346
C40	CAP MONO 100PF 100V 10% NPO	061341	C114	CAP POLYPROP 0.22UF 400V 20%	064438
C41	CAP MONO 100PF 100V 10% NPO	061341	C115	CAP POLYPROP 0.22UF 400V 20%	064438
C42	CAP MONO 22PF 200V 10% NPO	061339	C116	CAP MONO .1UF 50V 20% Z5U	061346
C43	CAP MONO 22PF 200V 10% NPO	061339	C117	CAP ELECT 10UF 50V	066445
C44	CAP ELECT 10UF 16V	066580	C118	CAP MONO 100PF 100V 10% NPO	061341
C45	CAP ELECT 10UF 16V	066580	C119	CAP MONO 100PF 100V 10% NPO	061341
C46	CAP ELECT 10UF 16V	066580	C120	CAP MONO 22PF 200V 10% NPO	061339
C47	CAP ELECT 10UF 16V	066580	C121	CAP MONO 22PF 200V 10% NPO	061339
C48	CAP ELECT 10UF 100VDC	066462	C122	CAP POLY .047UF 10% 1000VDC	064434
C50	CAP MONO .1UF 50V 20% Z5U	061346	C123	CAP POLY .047UF 10% 1000VDC	064434
C51	CAP MONO .1UF 50V 20% Z5U	061346	C124	CAP ELECT 22UF 100V	066574
C54	CAP ELECT 10UF 50V	066445	C125	CAP MONO 22PF 200V 10% NPO	061339
C55	CAP ELECT 10UF 50V	066445	C126	CAP MONO 22PF 200V 10% NPO	061339
C56	CAP ELECT 10UF 50V	066445	C127	CAP ELECT 10UF 100VDC	066462
C57	CAP ELECT 10UF 50V	066445	C129	CAP MONO .1UF 50V 20% Z5U	061346
C58	CAP MONO 100PF 100V 10% NPO	061341	C130	CAP MONO .1UF 50V 20% Z5U	061346
C59	CAP MONO 100PF 100V 10% NPO	061341	C133	CAP MONO 220PF 200V 10% NPO	061342
C60	CAP MONO 100PF 100V 10% NPO	061341	C134	CAP MONO .1UF 50V 20% Z5U	061346
C61	CAP MONO 100PF 100V 10% NPO	061341	C136	CAP MONO 1000PF 50V 10% NPO	061344
C62	CAP MONO 22PF 200V 10% NPO	061339	C137	CAP ELECT 220UF 25V	066507
C63	CAP MONO 22PF 200V 10% NPO	061339	C138	CAP ELECT 220UF 25V	066507
C65	CAP ELECT 10UF 100VDC	066462	C139	CAP MONO 1000PF 50V 10% NPO	061344
C66	CAP MONO .1UF 50V 20% Z5U	061346	C141	CAP MONO 1000PF 50V 10% NPO	061344
C69	CAP MONO .1UF 50V 20% Z5U	061346	C143	CAP MONO 1000PF 50V 10% NPO	061344
C70	CAP ELECT 10UF 50V	066445	C145	CAP MONO 22PF 200V 10% NPO	061339
C71	CAP ELECT 10UF 50V	066445	C146	CAP MONO 22PF 200V 10% NPO	061339
C72	CAP MONO .1UF 50V 20% Z5U	061346	C147	CAP ELECT 10UF 100VDC	066462
C73	CAP MONO .1UF 50V 20% Z5U	061346	C149	CAP MONO .1UF 50V 20% Z5U	061346
C76	CAP ELECT 10UF 100VDC	066462	C150	CAP MONO .1UF 50V 20% Z5U	061346
C78	CAP MONO 22PF 200V 10% NPO	061339	C153	CAP ELECT 220UF 25V	066507
C79	CAP MONO 22PF 200V 10% NPO	061339	C154	CAP ELECT 220UF 25V	066507
C80	CAP MONO 22PF 200V 10% NPO	061339	C155	CAP MONO 22PF 200V 10% NPO	061339
C81	CAP MONO 100PF 100V 10% NPO	061341	C156	CAP ELECT 10UF 100VDC	066462
C82	CAP ELECT 10UF 100VDC	066462	C157	CAP MONO .1UF 50V 20% Z5U	061346
C83	CAP MONO .1UF 50V 20% Z5U	061346	C158	CAP MONO .1UF 50V 20% Z5U	061346
C84	CAP MONO .1UF 50V 20% Z5U	061346	C159	CAP MONO 22PF 200V 10% NPO	061339
C85	CAP MONO 100PF 100V 10% NPO	061341	C160	CAP ELECT 10UF 100VDC	066462
C86	CAP ELECT 10UF 50V	066445	C161	CAP ELECT 100UF 25V	066573
C87	CAP ELECT 10UF 16V	066580	C162	CAP MONO .1UF 50V 20% Z5U	061346
C88	CAP ELECT 10UF 50V	066445	C163	CAP MONO .1UF 50V 20% Z5U	061346
			C164	CAP MONO 22PF 200V 10% NPO	061339
			C165	CAP MONO .1UF 50V 20% Z5U	061346
			C166	CAP MONO .1UF 50V 20% Z5U	061346

PARTS LIST *Cont'd*

MAIN LEFT PCB 050109 (Cont'd)

Ref. No.	Description	Part No.
C167	CAP ELECT 47UF 35V	066446
C168	CAP MONO 22PF 200V 10% NPO	061339
C177	CAP MONO .1UF 50V 20% Z5U	061346
D3	DIODE SILICON	070174
D4	DIODE SILICON	070174
D7	DIODE SILICON	070174
D8	DIODE SILICON	070174
D9	DIODE SILICON	070174
D10	DIODE SILICON	070174
DS1	LED GREEN 3MM HI INTENSITY	058172
(DS1)	LED SPACER .125 THK	017672
DS2	LED GREEN 3MM HI INTENSITY	058172
(DS2)	LED SPACER .125 THK	017672
GP1	BRACKET PCB CARD MOUNTING	003611
GP2	BRACKET PCB CARD MOUNTING	003611
J1	JACK PHONO GOLD	117862
J2	JACK PHONO GOLD	117862
J3	JACK PHONO GOLD	117862
J4	JACK PHONO GOLD	117862
J5	JACK PHONO GOLD	117862
J6	JACK PHONO GOLD	117862
J7	JACK PHONO GOLD	117862
J8	CONN 12 PIN FFC	117720
J9	HEADER SHROUDED 2 ROW 26 PIN V	117870
J10	HEADER 2 PIN LATCHING	117766
J11	CONN 12 PIN FFC	117720
J12	CONN 12 PIN FFC	117720
J13	HEADER 2 PIN LATCHING	117766
J14	CONN 12 PIN FFC	117720
J15	CONN 12 PIN FFC	117720
J16	CONN 12 PIN FFC	117720
J17	CONN 12 PIN FFC	117720
J18	HEADER 2 PIN LATCHING	117766
K1	RELAY REED FORM 1A 5V 500 OHMS	087050
K2	RELAY REED FORM 1A 5V 500 OHMS	087050
K3	RELAY REED FORM 1A 5V 500 OHMS	087050
K4	RELAY REED FORM 1A 5V 500 OHMS	087050
K5	RELAY REED FORM 1C 5V 125 OHMS	087056
K6	RELAY REED FORM 1A 5V 500 OHMS	087050
K7	RELAY REED FORM 1A 5V 500 OHMS	087050
K8	RELAY REED FORM 1A 5V 500 OHMS	087050
K9	RELAY REED FORM 1A 5V 500 OHMS	087050
K10	RELAY REED FORM 1A 5V 500 OHMS	087050
K11	RELAY REED FORM 1A 5V 500 OHMS	087050
K12	RELAY REED FORM 1A 5V 500 OHMS	087050
K13	RELAY REED FORM 1A 5V 500 OHMS	087050
K14	RELAY REED FORM 1A 5V 500 OHMS	087050
K15	RELAY REED FORM 1C 5V 125 OHMS	087056
K16	RELAY REED FORM 1C 5V 125 OHMS	087056
K17	RELAY REED FORM 1C 5V 125 OHMS	087056
K18	RELAY REED FORM 1C 5V 125 OHMS	087056
K19	RELAY REED FORM 1A 5V 500 OHMS	087050
K20	RELAY REED FORM 1A 5V 500 OHMS	087050
K21	RELAY REED FORM 1A 5V 500 OHMS	087050
K22	RELAY REED FORM 1A 5V 500 OHMS	087050
K23	RELAY REED FORM 1A 5V 500 OHMS	087050
K24	RELAY REED FORM 1A 5V 500 OHMS	087050
K25	RELAY REED FORM 1A 5V 500 OHMS	087050
MC1	ASSEMBLY PCB PHONO MC	050104

Ref. No.	Description	Part No.
	RIVET 1/8 X 3/16 STEEL	108011
PCB1	PC BD MAIN L	129542
Q1	TRANSISTOR NPN 2K/REEL	132317
Q2	TRANSISTOR SI NPN 25V	132257
Q3	TRANSISTOR SI NPN 25V	132257
Q4	TRANSISTOR PNP	132304
Q5	TRANSISTOR PNP	132304
Q6	TRANSISTOR N JFET	132319
Q7	TRANSISTOR PNP	132304
Q8	TRANSISTOR N JFET	132319
Q9	TRANSISTOR PNP	132304
Q10	TRANSISTOR N JFET	132319
Q11	TRANSISTOR PNP	132304
Q12	TRANSISTOR N JFET	132319
Q14	TRANSISTOR NPN 2K/REEL	132317
Q15	TRANSISTOR NPN 2K/REEL	132317
R1	RES MF 100 OHM 1% 1/4W	144568
R2	RES MF 4.75K 1% 1/4W	144520
R3	RES MF 2.21K 1% 1/4W	144584
R4	RES MF 47.5 OHM 1% 1/4W	144642
R5	RES MF 47.5 OHM 1% 1/4W	144642
R6	RES MF 1.82K 1% 1/4W	144582
R7	RES MF 1.82K 1% 1/4W	144582
R8	RES MF 2.21K 1% 1/4W	144584
R9	RES MF 6.49K .5% 1/4W	144617
R10	RES MF 20K 1% 1/4W	144524
R11	RES MF 20K 1% 1/4W	144524
R12	RES MF 22.1K 1% 1/4W	144564
R13	RES MF 22.1K 1% 1/4W	144564
R14	RES MET OX 430 OHM 5% .5W	137101
R15	RES MET OX 430 OHM 5% .5W	137101
R22	RES MF 267K 1% 1/4W	144532
R27	RES MF 267K 1% 1/4W	144532
R28	RES MF 267K 1% 1/4W	144532
R29	RES MF 182 OHM 1/4W 1%	144579
R30	RES MF 182 OHM 1/4W 1%	144579
R31	RES MF 182 OHM 1/4W 1%	144579
R36	RES MF 100K 1% 1/4W	144528
R37	RES MF 1K 1% 1/4W	144513
R38	RES MF 1K 1% 1/4W	144513
R39	RES MF 1K 1% 1/4W	144513
R40	RES MF 1K 1% 1/4W	144513
R42	RES MF 1K 1% 1/4W	144513
R43	RES MF 1K 1% 1/4W	144513
R44	RES MF 4.75K 1% 1/4W	144520
R45	RES MF 4.75K 1% 1/4W	144520
R46	RES MF 4.75K 1% 1/4W	144520
R47	RES MF 4.75K 1% 1/4W	144520
R48	RES MF 4.75K 1% 1/4W	144520
R49	RES MF 4.75K 1% 1/4W	144520
R50	RES MF 100K 1% 1/4W	144528
R51	RES MF 33.2K 1% 1/4W	144694
R52	RES MF 1K 1% 1/4W	144513
R53	RES MF 4.99K 1% 1/4W	144521
R54	RES MF 4.99K 1% 1/4W	144521
R55	RES MF 2.21 OHM 1/4W 1%	144607
R56	RES MF 2.21 OHM 1/4W 1%	144607
R59	RES MF 47.5K 1% 1/4W	144526
R60	RES MF 47.5K 1% 1/4W	144526
R61	RES MF 47.5K 1% 1/4W	144526
R62	RES MF 47.5K 1% 1/4W	144526
R63	RES MF 10 OHM 1% 1/4W	144553

PARTS LIST *Cont'd***MAIN LEFT PCB 050109 (Cont'd)**

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
R64	RES MF 10 OHM 1% 1/4W	144553	R132	RES MF 11K 1% 1/4W	144523
R65	RES MF 47.5K 1% 1/4W	144526	R133	RES MF 1.5K 1% 1/4W	144539
R66	RES MF 47.5K 1% 1/4W	144526	R134	RES MF 1.5K 1% 1/4W	144539
R67	RES MF 267K 1% 1/4W	144532	R135	RES MF 150K 1% 1/4W	144627
R68	RES MF 267K 1% 1/4W	144532	R136	RES MF 150K 1% 1/4W	144627
R69	RES MF 267K 1% 1/4W	144532	R137	RES MF 33.2K 1% 1/4W	144694
R70	RES MF 2.21K 1% 1/4W	144584	R138	RES MF 100K 1% 1/4W	144528
R71	RES MF 267K 1% 1/4W	144532	R139	RES MF 100K 1% 1/4W	144528
R72	RES MF 1K 1% 1/4W	144513	R140	RES MF 2.21 OHM 1/4W 1%	144607
R73	RES MF 1K 1% 1/4W	144513	R141	RES MF 2.21 OHM 1/4W 1%	144607
R75	RES MF 2.21K 1% 1/4W	144584	R144	RES MF 1K 1% 1/4W	144513
R79	RES MF 2.21 OHM 1/4W 1%	144607	R145	RES MF 1K 1% 1/4W	144513
R80	RES MF 2.21 OHM 1/4W 1%	144607	R146	RES MF 100 OHM 1% 1/4W	144568
R81	RES MF 47.5 OHM 1% 1/4W	144642	R147	RES MF 100 OHM 1% 1/4W	144568
R82	RES MF 47.5 OHM 1% 1/4W	144642	R148	RES MF 4.75K 1% 1/4W	144520
R83	RES MF 22.1K 1% 1/4W	144564	R149	RES MF 4.75K 1% 1/4W	144520
R84	RES MF 22.1K 1% 1/4W	144564	R150	RES MF 221K 1% 1/4W	144629
R85	RES MF 10K 1% 1/4W	144504	R151	RES MF 10K 1% 1/4W	144504
R86	RES MF 10K 1% 1/4W	144504	R152	RES MF 2.21K .5% 1/4W	144710
R87	RES MF 2.21 OHM 1/4W 1%	144607	R153	RES MF 221K 1% 1/4W	144629
R88	RES MF 2.21 OHM 1/4W 1%	144607	R154	DIODE ZENER 8.2V 1/2W	070130
R91	RES MF 4.99K 1% 1/4W	144521	R155	RES MF 2.21K .5% 1/4W	144710
R92	RES MF 4.99K 1% 1/4W	144521	R156	RES MF 1M 1% 1/4W	144577
R93	RES MF 4.99K 1% 1/4W	144521	R157	RES MF 475K 1% 1/4W	144604
R94	RES MF 2.21 OHM 1/4W 1%	144607	R160	RES MF 5.36K .5% 1/4W	144615
R95	RES MF 2.21 OHM 1/4W 1%	144607	R161	RES MF 5.36K .5% 1/4W	144615
R96	RES MF 4.99K 1% 1/4W	144521	R162	RES MF 221K 1% 1/4W	144629
R97	RES MF 22.1K 1% 1/4W	144564	R164	RES MF 1M 1% 1/4W	144577
R98	RES MF 1K 1% 1/4W	144513	R165	RES MF 475K 1% 1/4W	144604
R99	RES MF 182 OHM 1/4W 1%	144579	R168	RES MF 3.79K .5% 1/4W	144711
R100	RES MF 221 OHM 1% 1/4W	144559	R169	RES MF 3.79K .5% 1/4W	144711
R101	RES MF 33.2K 1% 1/4W	144694	R170	RES MF 221K 1% 1/4W	144629
R102	RES MF 33.2K 1% 1/4W	144694	R172	RES MF 100K 1% 1/4W	144528
R103	RES MF 1K 1% 1/4W	144513	R173	RES MF 100K 1% 1/4W	144528
R104	RES MF 1K 1% 1/4W	144513	R174	RES MF 1M 1% 1/4W	144577
R105	RES MF 1K 1% 1/4W	144513	R175	RES MF 475K 1% 1/4W	144604
R106	RES MF 8.25K 1% 1/4W	144549	R178	RES MF 2.67K .5% 1/4W	144614
R107	RES MF 4.75K 1% 1/4W	144520	R179	RES MF 221K 1% 1/4W	144629
R108	RES MF 4.75K 1% 1/4W	144520	R180	RES MF 2.67K .5% 1/4W	144614
R109	RES MF 2.21 OHM 1/4W 1%	144607	R182	RES MF 1M 1% 1/4W	144577
R110	RES MF 2.21 OHM 1/4W 1%	144607	R183	RES MF 475K 1% 1/4W	144604
R113	RES MF 1K 1% 1/4W	144513	R186	RES MF 1.91K .5% 1/4W	144613
R114	RES MF 1K 1% 1/4W	144513	R187	RES MF 1.91K .5% 1/4W	144613
R115	RES MF 47.5K 1% 1/4W	144526	R190	RES MF 2.21 OHM 1/4W 1%	144607
R116	RES MF 681 OHM 1% 1/4W	144567	R191	RES MF 2.21 OHM 1/4W 1%	144607
R117	RES MF 681 OHM 1% 1/4W	144567	R194	RES MF 6.49K .5% 1/4W	144617
R118	RES MF 1.21K 1% 1/4W	144566	R195	RES MF 6.49K .5% 1/4W	144617
R119	RES MF 1.21K 1% 1/4W	144566	R196	RES MF 3.32K 1% 1/4W	144518
R120	RES MF 100K 1% 1/4W	144528	R197	RES MF 3.32K 1% 1/4W	144518
R121	RES MF 267K 1% 1/4W	144532	R198	RES MF 2.21 OHM 1/4W 1%	144607
R122	RES MF 267K 1% 1/4W	144532	R199	RES MF 2.21 OHM 1/4W 1%	144607
R123	RES MF 1K 1% 1/4W	144513	R200	RES MF 1K 1% 1/4W	144513
R124	RES MF 1K 1% 1/4W	144513	R201	RES MF 2.21 OHM 1/4W 1%	144607
R125	RES MF 2.74K 1% 1/4W	144587	R202	RES MF 2.21 OHM 1/4W 1%	144607
R126	RES MF 2.74K 1% 1/4W	144587	R203	RES MF 33.2K 1% 1/4W	144694
R127	RES MF 221K 1% 1/4W	144629	R204	RES MF 221 OHM 1% 1/4W	144559
R128	RES MF 221K 1% 1/4W	144629	R205	RES MF 2.21 OHM 1/4W 1%	144607
R129	RES MF 2.21M 1/4W	144576	R206	RES MF 2.21 OHM 1/4W 1%	144607
R130	RES MF 2.21M 1/4W	144576	R210	RES MF 33.2K 1% 1/4W	144694
R131	RES MF 11K 1% 1/4W	144523	R211	RES MF 33.2K 1% 1/4W	144694
			R212	RES MF 6.49K .5% 1/4W	144617
			R213	RES MF 221 OHM 1% 1/4W	144559
			R220	RES MF 1K 1% 1/4W	144513

PARTS LIST Cont'd

MAIN LEFT PCB 050109 (Cont'd)

Ref. No.	Description	Part No.
R207	RES MF 182 OHM 1/4W 1%	144579
R208	RES MF 182 OHM 1/4W 1%	144579
R214	RES MF 2.21K 1% 1/4W	144584
U1	IC STEREO DGTL VOLUME CONTROL	133331
U2	IC SHFT REG SER-PAR	133186
U3	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U3)	SOCKET IC 18-PIN DIP	178184
U4	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U4)	SOCKET IC 18-PIN DIP	178184
U5	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U5)	SOCKET IC 18-PIN DIP	178184
U6	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U6)	SOCKET IC 18-PIN DIP	178184
U7	IC SHFT REG SER-PAR	133186
U8	IC SHFT REG SER-PAR	133186
U9	IC SHFT REG SER-PAR	133186
U10	IC SHFT REG SER-PAR	133186
U11	IC OPERATIONAL AMP LOW NOISE	133067
U12	IC OPERATIONAL AMP LOW NOISE	133067
U13	IC OPERATIONAL AMP LOW NOISE	133067
U14	IC OPERATIONAL AMP LOW NOISE	133067
U15	IC OPERATIONAL AMP LOW NOISE	133067
U16	IC OPERATIONAL AMP LOW NOISE	133067
U17	IC OPERATIONAL AMP LOW NOISE	133067
U18	IC OPERATIONAL AMP LOW NOISE	133067
U19	IC OPERATIONAL AMP LOW NOISE	133067
U20	IC REGULATOR 5V	133250
U21	IC -5V REGULATOR	133253
U22	IC REGULATOR 5V	133250
U23	IC -5V REGULATOR	133253
U24	IC OPERATIONAL AMP LOW NOISE	133067
U25	IC OPERATIONAL AMP LOW NOISE	133067
U26	IC SHFT REG SER-PAR	133186
U27	IC OPERATIONAL AMP LOW NOISE	133067
U28	IC OPERATIONAL AMP LOW NOISE	133067
U29	IC OPERATIONAL AMP LOW NOISE	133067
U30	IC OPERATIONAL AMP LOW NOISE	133067
U31	IC OPERATIONAL AMP LOW NOISE	133067
U32	IC OPERATIONAL AMP LOW NOISE	133067
V3	SOCKET 9 PIN TUBE CERAMIC	178170
V4	SOCKET 9 PIN TUBE CERAMIC	178170
	ASSY INSERTION PCB MAIN LEFT	701081

3 MAIN RIGHT PCB 050111

C1	CAP ELECT 220UF 25V	066507
C2	CAP ELECT 47UF 35V	066446
C3	CAP ELECT 220UF 25V	066507
C4	CAP MONO 100PF 100V 10% NPO	061341
C5	CAP MONO 100PF 100V 10% NPO	061341
C6	CAP ELECT 4.7UF 50V	066512
C7	CAP ELECT 10UF 50V	066445
C8	CAP ELECT 10UF 50V	066445
C16	CAP ELECT 47UF 35V	066446
C23	CAP ELECT 10UF 16V	066580
C24	CAP ELECT 10UF 16V	066580
C25	CAP ELECT 10UF 16V	066580
C26	CAP ELECT 10UF 16V	066580
C32	CAP MONO .1UF 50V 20% Z5U	061346

Ref. No.	Description	Part No.
C33	CAP MONO .1UF 50V 20% Z5U	061346
C34	DIODE SIL 400 PIV @ 1.5A	070031
C35	CAP MONO .1UF 50V 20% Z5U	061346
C37	CAP ELECT 4.7UF 50V	066512
C38	CAP MONO 220PF 200V 10% NPO	061342
C39	CAP ELECT 10UF 50V	066445
C40	CAP MONO 100PF 100V 10% NPO	061341
C41	CAP MONO 100PF 100V 10% NPO	061341
C42	CAP MONO 22PF 200V 10% NPO	061339
C43	CAP MONO 22PF 200V 10% NPO	061339
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 100VDC	066462
C50	CAP MONO .1UF 50V 20% Z5U	061346
C51	CAP MONO .1UF 50V 20% Z5U	061346
C54	CAP ELECT 10UF 50V	066445
C55	CAP ELECT 10UF 50V	066445
C56	CAP ELECT 10UF 50V	066445
C57	CAP ELECT 10UF 50V	066445
C58	CAP MONO 100PF 100V 10% NPO	061341
C59	CAP MONO 100PF 100V 10% NPO	061341
C60	CAP MONO 100PF 100V 10% NPO	061341
C61	CAP MONO 100PF 100V 10% NPO	061341
C62	CAP MONO 22PF 200V 10% NPO	061339
C63	CAP MONO 22PF 200V 10% NPO	061339
C65	CAP ELECT 10UF 100VDC	066462
C66	CAP MONO .1UF 50V 20% Z5U	061346
C69	CAP MONO .1UF 50V 20% Z5U	061346
C70	CAP ELECT 10UF 50V	066445
C71	CAP ELECT 10UF 50V	066445
C72	CAP MONO .1UF 50V 20% Z5U	061346
C73	CAP MONO .1UF 50V 20% Z5U	061346
C76	CAP ELECT 10UF 100VDC	066462
C78	CAP MONO 22PF 200V 10% NPO	061339
C79	CAP MONO 22PF 200V 10% NPO	061339
C80	CAP MONO 22PF 200V 10% NPO	061339
C81	CAP MONO 100PF 100V 10% NPO	061341
C82	CAP ELECT 10UF 100VDC	066462
C83	CAP MONO .1UF 50V 20% Z5U	061346
C84	CAP MONO .1UF 50V 20% Z5U	061346
C85	CAP MONO 100PF 100V 10% NPO	061341
C86	CAP ELECT 10UF 50V	066445
C87	CAP ELECT 10UF 16V	066580
C88	CAP ELECT 10UF 50V	066445
C89	CAP ELECT 10UF 50V	066445
C90	CAP ELECT 10UF 50V	066445
C91	CAP MONO .1UF 50V 20% Z5U	061346
C92	CAP MONO 100PF 100V 10% NPO	061341
C93	CAP MONO 100PF 100V 10% NPO	061341
C94	CAP MONO 100PF 100V 10% NPO	061341
C95	CAP MONO 100PF 100V 10% NPO	061341
C96	CAP ELECT 10UF 50V	066445
C97	CAP MONO 220PF 200V 10% NPO	061342
C98	CAP MONO 22PF 200V 10% NPO	061339
C99	CAP MONO 22PF 200V 10% NPO	061339
C100	CAP ELECT 10UF 100VDC	066462
C102	CAP MONO .1UF 50V 20% Z5U	061346
C103	CAP MONO .1UF 50V 20% Z5U	061346
C106	CAP ELECT 47UF 35V	066446
C107	CAP ELECT 47UF 35V	066446

PARTS LIST Cont'd**MAIN RIGHT PCB 050111 (Cont'd)**

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
C111	CAP MONO .1UF 50V 20% Z5U	061346	(DS2)	LED SPACER .125 THK	017672
C112	CAP ELECT 10UF 50V	066445	GP1	BRACKET PCB CARD MOUNTING	003611
C113	CAP MONO .1UF 50V 20% Z5U	061346	(GP1)	RIVET 1/8X3/16 STEEL	108011
C114	CAP POLYPROP 0.22UF 400V 20%	064438	GP2	BRACKET PCB CARD MOUNTING	003611
C115	CAP POLYPROP 0.22UF 400V 20%	064438	(GP2)	RIVET 1/8X3/16 STEEL	108011
C116	CAP MONO .1UF 50V 20% Z5U	061346	J1	JACK PHONO GOLD	117862
C117	CAP ELECT 10UF 50V	066445	J2	JACK PHONO GOLD	117862
C118	CAP MONO 100PF 100V 10% NPO	061341	J3	JACK PHONO GOLD	117862
C119	CAP MONO 100PF 100V 10% NPO	061341	J4	JACK PHONO GOLD	117862
C120	CAP MONO 22PF 200V 10% NPO	061339	J5	JACK PHONO GOLD	117862
C121	CAP MONO 22PF 200V 10% NPO	061339	J6	JACK PHONO GOLD	117862
C122	CAP POLY .047UF 10% 1000VDC	064434	J7	JACK PHONO GOLD	117862
C123	CAP POLY .047UF 10% 1000VDC	064434	J8	CONN 12 PIN FFC	117720
C125	CAP MONO 22PF 200V 10% NPO	061339	J9	HEADER SHROUDED 2 ROW 26 PIN V	117870
C126	CAP MONO 22PF 200V 10% NPO	061339	J10	HEADER 2 PIN LATCHING	117766
C127	CAP ELECT 10UF 100VDC	066462	J11	CONN 12 PIN FFC	117720
C129	CAP MONO .1UF 50V 20% Z5U	061346	J12	CONN 12 PIN FFC	117720
C130	CAP MONO .1UF 50V 20% Z5U	061346	J13	HEADER 2 PIN LATCHING	117766
C133	CAP MONO 220PF 200V 10% NPO	061342	J14	CONN 12 PIN FFC	117720
C134	CAP MONO .1UF 50V 20% Z5U	061346	J15	CONN 12 PIN FFC	117720
C136	CAP MONO 1000PF 50V 10% NPO	061344	J16	CONN 12 PIN FFC	117720
C137	CAP ELECT 220UF 25V	066507	J17	CONN 12 PIN FFC	117720
C138	CAP ELECT 220UF 25V	066507	J18	HEADER 2 PIN LATCHING	117766
C139	CAP MONO 1000PF 50V 10% NPO	061344	J19	HEADER 2 PIN LATCHING	117766
C141	CAP MONO 1000PF 50V 10% NPO	061344	K1	RELAY REED FORM 1A 5V 500 OHMS	087050
C143	CAP MONO 1000PF 50V 10% NPO	061344	K2	RELAY REED FORM 1A 5V 500 OHMS	087050
C145	CAP MONO 22PF 200V 10% NPO	061339	K3	RELAY REED FORM 1A 5V 500 OHMS	087050
C146	CAP MONO 22PF 200V 10% NPO	061339	K4	RELAY REED FORM 1A 5V 500 OHMS	087050
C147	CAP ELECT 10UF 100VDC	066462	K5	RELAY REED FORM 1C 5V 125 OHM	087056
C149	CAP MONO .1UF 50V 20% Z5U	061346	K6	RELAY REED FORM 1A 5V 500 OHMS	087050
C150	CAP MONO .1UF 50V 20% Z5U	061346	K7	RELAY REED FORM 1A 5V 500 OHMS	087050
C153	CAP ELECT 100UF 25V	066573	K8	RELAY REED FORM 1A 5V 500 OHMS	087050
C154	CAP ELECT 100UF 25V	066573	K9	RELAY REED FORM 1A 5V 500 OHMS	087050
C155	CAP MONO 22PF 200V 10% NPO	061339	K10	RELAY REED FORM 1A 5V 500 OHMS	087050
C156	CAP ELECT 10UF 100VDC	066462	K11	RELAY REED FORM 1A 5V 500 OHMS	087050
C157	CAP MONO .1UF 50V 20% Z5U	061346	K12	RELAY REED FORM 1A 5V 500 OHMS	087050
C158	CAP MONO .1UF 50V 20% Z5U	061346	K13	RELAY REED FORM 1A 5V 500 OHMS	087050
C159	CAP MONO 22PF 200V 10% NPO	061339	K14	RELAY REED FORM 1A 5V 500 OHMS	087050
C160	CAP ELECT 10UF 100VDC	066462	K15	RELAY REED FORM 1C 5V 125 OHM	087056
C161	CAP ELECT 100UF 25V	066573	K16	RELAY REED FORM 1A 5V 500 OHMS	087050
C162	CAP MONO .1UF 50V 20% Z5U	061346	K17	RELAY REED FORM 1C 5V 125 OHM	087056
C163	CAP MONO .1UF 50V 20% Z5U	061346	K18	RELAY REED FORM 1A 5V 500 OHMS	087050
C164	CAP MONO 22PF 200V 10% NPO	061339	K19	RELAY REED FORM 1A 5V 500 OHMS	087050
C165	CAP MONO .1UF 50V 20% Z5U	061346	K20	RELAY REED FORM 1A 5V 500 OHMS	087050
C166	CAP MONO .1UF 50V 20% Z5U	061346	K21	RELAY REED FORM 1A 5V 500 OHMS	087050
C167	CAP ELECT 47UF 35V	066446	K22	RELAY REED FORM 1A 5V 500 OHMS	087050
C168	CAP MONO 22PF 200V 10% NPO	061339	K23	RELAY REED FORM 1A 5V 500 OHMS	087050
C177	CAP MONO .1UF 50V 20% Z5U	061346	K24	RELAY REED FORM 1A 5V 500 OHMS	087050
C108	CAP ELECT 10UF 250V	066558	K25	RELAY REED FORM 1A 5V 500 OHMS	087050
C124	CAP ELECT 22UF 100V	066574	MC1	ASSEMBLY PCB PHONO MC	050104
D3	DIODE SILICON	070174	Q1	TRANSISTOR NPN SILICON	132317
D4	DIODE SILICON	070174	Q2	TRANSISTOR SI NPN 25V	132257
D7	DIODE SILICON	070174	Q3	TRANSISTOR SI NPN 25V	132257
D8	DIODE SILICON	070174	Q4	TRANSISTOR PNP	132304
D9	DIODE SILICON	070174	Q5	TRANSISTOR PNP	132304
D10	DIODE SILICON	070174	Q6	TRANSISTOR N JFET	132319
DS1	LED GREEN 3MM HI INTENSITY	058172	Q7	TRANSISTOR PNP	132304
(DS1)	LED SPACER .125 THK	017672	Q8	TRANSISTOR N JFET	132319
DS1	LED GREEN 3MM HI INTENSITY	058172	Q9	TRANSISTOR PNP	132304
			Q10	TRANSISTOR N JFET	132319
			Q11	TRANSISTOR PNP	132304
			Q12	TRANSISTOR N JFET	132319

PARTS LIST *Cont'd*

MAIN RIGHT PCB 050111 (Cont'd)

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
Q14	TRANSISTOR NPN 2K/REEL	132317	R72	RES MF 1K 1% 1/4W	144513
Q15	TRANSISTOR NPN 2K/REEL	132317	R73	RES MF 1K 1% 1/4W	144513
Q55	TRANSISTOR NPN 2K/REEL	132317	R75	RES MF 2.21K 1% 1/4W	144584
R1	RES MF 100 OHM 1% 1/4W	144568	R79	RES MF 2.21 OHM 1/4W 1%	144607
R2	RES MF 4.75K 1% 1/4W	144520	R80	RES MF 2.21 OHM 1/4W 1%	144607
R3	RES MF 2.21K 1% 1/4W	144584	R81	RES MF 47.5 OHM 1% 1/4W	144642
R4	RES MF 47.5 OHM 1% 1/4W	144642	R82	RES MF 47.5 OHM 1% 1/4W	144642
R5	RES MF 47.5 OHM 1% 1/4W	144642	R83	RES MF 22.1K 1% 1/4W	144564
R6	RES MF 1.82K 1% 1/4W	144582	R84	RES MF 22.1K 1% 1/4W	144564
R7	RES MF 1.82K 1% 1/4W	144582	R85	RES MF 10K 1% 1/4W	144504
R8	RES MF 2.21K 1% 1/4W	144584	R86	RES MF 10K 1% 1/4W	144504
R9	RES MF 6.49K .5% 1/4W	144617	R87	RES MF 2.21 OHM 1/4W 1%	144607
R10	RES MF 20K 1% 1/4W	144524	R88	RES MF 2.21 OHM 1/4W 1%	144607
R11	RES MF 20K 1% 1/4W	144524	R91	RES MF 4.99K 1% 1/4W	144521
R12	RES MF 22.1K 1% 1/4W	144564	R92	RES MF 4.99K 1% 1/4W	144521
R13	RES MF 22.1K 1% 1/4W	144564	R93	RES MF 4.99K 1% 1/4W	144521
R14	RES MET OX 430 OHM 5% .5W	137101	R94	RES MF 2.21 OHM 1/4W 1%	144607
R15	RES MET OX 430 OHM 5% .5W	137101	R95	RES MF 2.21 OHM 1/4W 1%	144607
R22	RES MF 267K 1% 1/4W	144532	R96	RES MF 4.99K 1% 1/4W	144521
R29	RES MF 182 OHM 1/4W 1%	144579	R97	RES MF 22.1K 1% 1/4W	144564
R27	RES MF 267K 1% 1/4W	144532	R98	RES MF 1K 1% 1/4W	144513
R28	RES MF 267K 1% 1/4W	144532	R99	RES MF 182 OHM 1/4W 1%	144579
R30	RES MF 182 OHM 1/4W 1%	144579	R100	RES MF 221 OHM 1% 1/4W	144559
R31	RES MF 182 OHM 1/4W 1%	144579	R101	RES MF 33.2K 1% 1/4W	144694
R32	RES MF 4.75K 1% 1/4W	144520	R102	RES MF 33.2K 1% 1/4W	144694
R33	RES MF 100 OHM 1% 1/4W	144568	R103	RES MF 1K 1% 1/4W	144513
R36	RES MF 100K 1% 1/4W	144528	R104	RES MF 1K 1% 1/4W	144513
R37	RES MF 1K 1% 1/4W	144513	R105	RES MF 1K 1% 1/4W	144513
R38	RES MF 1K 1% 1/4W	144513	R106	RES MF 8.25K 1% 1/4W	144549
R39	RES MF 1K 1% 1/4W	144513	R107	RES MF 4.75K 1% 1/4W	144520
R40	RES MF 1K 1% 1/4W	144513	R108	RES MF 4.75K 1% 1/4W	144520
R42	RES MF 1K 1% 1/4W	144513	R109	RES MF 2.21 OHM 1/4W 1%	144607
R43	RES MF 1K 1% 1/4W	144513	R110	RES MF 2.21 OHM 1/4W 1%	144607
R44	RES MF 4.75K 1% 1/4W	144520	R113	RES MF 1K 1% 1/4W	144513
R45	RES MF 4.75K 1% 1/4W	144520	R114	RES MF 1K 1% 1/4W	144513
R46	RES MF 4.75K 1% 1/4W	144520	R115	RES MF 47.5K 1% 1/4W	144526
R47	RES MF 4.75K 1% 1/4W	144520	R116	RES MF 681 OHM 1% 1/4W	144567
R48	RES MF 4.75K 1% 1/4W	144520	R117	RES MF 681 OHM 1% 1/4W	144567
R49	RES MF 4.75K 1% 1/4W	144520	R118	RES MF 1.21K 1% 1/4W	144566
R50	RES MF 100K 1% 1/4W	144528	R119	RES MF 1.21K 1% 1/4W	144566
R51	RES MF 33.2K 1% 1/4W	144694	R120	RES MF 100K 1% 1/4W	144528
R52	RES MF 1K 1% 1/4W	144513	R121	RES MF 267K 1% 1/4W	144532
R53	RES MF 4.99K 1% 1/4W	144521	R122	RES MF 267K 1% 1/4W	144532
R54	RES MF 4.99K 1% 1/4W	144521	R123	RES MF 1K 1% 1/4W	144513
R55	RES MF 2.21 OHM 1/4W 1%	144607	R124	RES MF 1K 1% 1/4W	144513
R56	RES MF 2.21 OHM 1/4W 1%	144607	R125	RES MF 2.74K 1% 1/4W	144587
R59	RES MF 47.5K 1% 1/4W	144526	R126	RES MF 2.74K 1% 1/4W	144587
R60	RES MF 47.5K 1% 1/4W	144526	R127	RES MF 221K 1% 1/4W	144629
R61	RES MF 47.5K 1% 1/4W	144526	R128	RES MF 221K 1% 1/4W	144629
R62	RES MF 47.5K 1% 1/4W	144526	R129	RES MF 2.21M 1% 1/4W	144576
R63	RES MF 10 OHM 1% 1/4W	144553	R130	RES MF 2.21M 1% 1/4W	144576
R64	RES MF 10 OHM 1% 1/4W	144553	R131	RES MF 11K 1% 1/4W	144523
R65	RES MF 47.5K 1% 1/4W	144526	R132	RES MF 11K 1% 1/4W	144523
R66	RES MF 47.5K 1% 1/4W	144526	R133	RES MF 1.5K 1% 1/4W	144539
R67	RES MF 267K 1% 1/4W	144532	R134	RES MF 1.5K 1% 1/4W	144539
R68	RES MF 267K 1% 1/4W	144532	R135	RES MF 150K 1% 1/4W	144627
R69	RES MF 267K 1% 1/4W	144532	R136	RES MF 150K 1% 1/4W	144627
R70	RES MF 2.21K 1% 1/4W	144584	R137	RES MF 33.2K 1% 1/4W	144694
R71	RES MF 267K 1% 1/4W	144532	R138	RES MF 100K 1% 1/4W	144528
			R139	RES MF 100K 1% 1/4W	144528
			R140	RES MF 2.21 OHM 1/4W 1%	144607
			R141	RES MF 2.21 OHM 1/4W 1%	144607

PARTS LIST *Cont'd*

MAIN RIGHT PCB 050111 (Cont'd)

Ref. No.	Description	Part No.
R144	RES MF 1K 1% 1/4W	144513
R145	RES MF 1K 1% 1/4W	144513
R146	RES MF 100 OHM 1% 1/4W	144568
R147	RES MF 100 OHM 1% 1/4W	144568
R148	RES MF 4.75K 1% 1/4W	144520
R149	RES MF 4.75K 1% 1/4W	144520
R150	RES MF 221K 1% 1/4W	144629
R151	RES MF 10K 1% 1/4W	144504
R152	RES MF 2.21K .5% 1/4W	144710
R153	RES MF 221K 1% 1/4W	144629
R154	DIODE ZENER 8.2V 1/2W	070130
R155	RES MF 2.21K .5% 1/4W	144710
R156	RES MF 1M 1% 1/4W	144577
R157	RES MF 475K 1% 1/4W	144604
R160	RES MF 5.36K .5% 1/4W	144615
R161	RES MF 5.36K .5% 1/4W	144615
R162	RES MF 221K 1% 1/4W	144629
R164	RES MF 1M 1% 1/4W	144577
R165	RES MF 475K 1% 1/4W	144604
R168	RES MF 3.79K .5% 1/4W	144711
R169	RES MF 3.79K .5% 1/4W	144711
R170	RES MF 221K 1% 1/4W	144629
R172	RES MF 100K 1% 1/4W	144528
R173	RES MF 100K 1% 1/4W	144528
R174	RES MF 1M 1% 1/4W	144577
R175	RES MF 475K 1% 1/4W	144604
R178	RES MF 2.67K .5% 1/4W	144614
R179	RES MF 221K 1% 1/4W	144629
R180	RES MF 2.67K .5% 1/4W	144614
R182	RES MF 1M 1% 1/4W	144577
R183	RES MF 475K 1% 1/4W	144604
R186	RES MF 1.91K .5% 1/4W	144613
R187	RES MF 1.91K .5% 1/4W	144613
R190	RES MF 2.21 OHM 1/4W 1%	144607
R191	RES MF 2.21 OHM 1/4W 1%	144607
R194	RES MF 6.49K .5% 1/4W	144617
R195	RES MF 6.49K .5% 1/4W	144617
R196	RES MF 3.32K 1% 1/4W	144518
R198	RES MF 2.21 OHM 1/4W 1%	144607
R199	RES MF 2.21 OHM 1/4W 1%	144607
R200	RES MF 1K 1% 1/4W	144513
R201	RES MF 2.21 OHM 1/4W 1%	144607
R202	RES MF 2.21 OHM 1/4W 1%	144607
R203	RES MF 33.2K 1% 1/4W	144694
R204	RES MF 221 OHM 1% 1/4W	144559
R205	RES MF 2.21 OHM 1/4W 1%	144607
R206	RES MF 2.21 OHM 1/4W 1%	144607
R207	RES MF 182 OHM 1/4W 1%	144579
R210	RES MF 33.2K 1% 1/4W	144694
R211	RES MF 33.2K 1% 1/4W	144694
R212	RES MF 6.49K .5% 1/4W	144617
R213	RES MF 221 OHM 1% 1/4W	144559
R214	RES MF 2.21K 1% 1/4W	144584
R220	RES MF 1K 1% 1/4W	144513
U1	IC STEREO DGTL VOLUME CONTROL	133331
U2	IC SHFT REG SER-PAR	133186
U3	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U3)	SOCKET IC 18-PIN DIP	178109
U4	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U4)	SOCKET IC 18-PIN DIP	178184

Ref. No.	Description	Part No.
U5	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U5)	SOCKET IC 18-PIN DIP	178184
U6	IC OCTAL DARLNGTON TRANS ARRAY	133258
(U6)	SOCKET IC 18-PIN DIP	178184
U7	IC SHFT REG SER-PAR	133186
U8	IC SHFT REG SER-PAR	133186
U9	IC SHFT REG SER-PAR	133186
U10	IC SHFT REG SER-PAR	133186
U11	IC OPERATIONAL AMP LOW NOISE	133067
U12	IC OPERATIONAL AMP LOW NOISE	133067
U13	IC OPERATIONAL AMP LOW NOISE	133067
U14	IC OPERATIONAL AMP LOW NOISE	133067
U15	IC OPERATIONAL AMP LOW NOISE	133067
U16	IC OPERATIONAL AMP LOW NOISE	133067
U17	IC OPERATIONAL AMP LOW NOISE	133067
U18	IC OPERATIONAL AMP LOW NOISE	133067
U19	IC OPERATIONAL AMP LOW NOISE	133067
U20	IC REGULATOR 5V	133250
U21	IC -5V REGULATOR	133598
U22	IC REGULATOR 5V	133250
U23	IC -5V REGULATOR	133598
U24	IC OPERATIONAL AMP LOW NOISE	133067
U25	IC OPERATIONAL AMP LOW NOISE	133067
U26	IC SHFT REG SER-PAR	133186
U27	IC OPERATIONAL AMP LOW NOISE	133067
U28	IC OPERATIONAL AMP LOW NOISE	133067
U29	IC OPERATIONAL AMP LOW NOISE	133067
U30	IC OPERATIONAL AMP LOW NOISE	133067
U31	IC OPERATIONAL AMP LOW NOISE	133067
U32	IC OPERATIONAL AMP LOW NOISE	133067
(V3)	SOCKET 9 PIN TUBE CERAMIC	178170
(V4)	SOCKET 9 PIN TUBE CERAMIC	178170
	ASSY INSERTION PCB MAIN RIGHT	701083

4 PHONO PCB 050110

C1	CAP MONO 100PF 100V 10% NPO	061341
C2	CAP MONO 100PF 100V 10% NPO	061341
C3	CAP MONO 47PF 200V 10% NPO	061340
C4	CAP MONO 390PF 5% 200V	061352
C5	CAP MONO 100PF 100V 10% NPO	061341
C6	CAP MONO 47PF 200V 10% NPO	061340
C7	CAP ELECT 470UF 16V	066508
C8	CAP MPF 0.1UF 630VDC	064431
C9	CAP POLYPROP 0.01UF 63V 1%	064444
C11	CAP POLYPROP 0.033UF 63V 2.5%	064446
C12	CAP MPF 0.1UF 630VDC	064431
C13	CAP MONO 22PF 200V 10% NPO	061339
C15	CAP ELECT 10UF 100VDC	066462
C16	CAP MONO .1UF 50V 20% Z5U	061346
C17	CAP MONO .1UF 50V 20% Z5U	061346
C18	CAP MONO 100PF 100V 10% NPO	061341
C19	CAP ELECT 10UF 50V	066445
C20	CAP MONO 220PF 200V 10% NPO	061342
C21	CAP MONO 100PF 100V 10% NPO	061341
C22	CAP MPF 0.1UF 630VDC	064431
C23	CAP POLYPROP 0.01UF 63V 1%	064444
C24	CAP POLYPROP 0.033UF 63V 1%	064446
C26	CAP MPF 0.1UF 630VDC	064431
C27	CAP MONO 22PF 200V 10% NPO	061339
C28	CAP ELECT 10UF 100VDC	066462
C29	CAP MONO .1UF 50V 20% Z5U	061346
C30	CAP MONO .1UF 50V 20% Z5U	061346

PARTS LIST *Cont'd*

PHONO PCB 050110 (Cont'd)

Ref. No.	Description	Part No.
C31	CAP ELECT 10UF 50V	066445
C32	CAP ELECT 470UF 16V	066508
C33	CAP MONO 220PF 200V 10% NPO	061342
C14	CAP ELECT 10UF 250V	066558
C10	CAP ELECT 100UF 25V	066573
D1	DIODE SILICON	070174
D2	DIODE ZENER 5.1V	070186
D3	DIODE SILICON	070174
D4	DIODE ZENER 5.1V	070186
J1	CONN 12 PIN FFC	117720
J2	CONN 12 PIN FFC	117720
J3	CONN 12 PIN FFC	117720
J4	HEADER 2 PIN LATCHING	117766
Q1	TRANSISTOR SI NPN 25V	132257
Q2	TRANSISTOR SI NPN 25V	132257
Q3	TRANSISTOR SI NPN 25V	132257
Q4	TRANSISTOR SI NPN 25V	132257
PCB1	PC BD PHONO MM	129543
R1	RES MF 47.5K 1% 1/4W	144526
R2	RES MF 1K 1% 1/4W	144513
R3	RES MF 100K 1% 1/4W	144528
R4	RES MF 100K 1% 1/4W	144528
R5	RES MF 10K 1% 1/4W	144504
R6	RES MF 10K 1% 1/4W	144504
R7	RES MF 100K 1% 1/4W	144528
R8	RES MF 100K 1% 1/4W	144528
R9	RES MF 10K 1% 1/4W	144504
R10	RES MF 10K 1% 1/4W	144504
R11	RES MF 95.3 OHM 1% 1/4W	144572
R12	RES MF 2.74K 1% 1/4W	144587
R13	RES MF 475K 1% 1/4W	144604
R14	RES MF 7.5K 1% 1/4W	144571
R15	RES MF 1M 1/4W	144577
R16	RES MF 681 OHM 1% 1/4W	144567
R17	RES MF 150K 1% 1/4W	144627
R18	RES MF 95.3K 1% 1/4W	144538
R19	RES MF 221K 1% 1/4W	144629
R20	RES MF 100K 1% 1/4W	144528
R21	RES MF 2.21 OHM 1/4W 1%	144607
R22	RES MF 2.21 OHM 1/4W 1%	144607
R23	RES MF 22.1K 1% 1/4W	144564
R24	RES MF 182 OHM 1% 1/4W	144579
R26	RES MF 475K 1% 1/4W	144604
R27	RES MF 7.5K 1% 1/4W	144571
R28	RES MF 1M 1/4W	144577
R29	RES MF 681 OHM 1% 1/4W	144567
R30	RES MF 150K 1% 1/4W	144627
R31	RES MF 95.3K 1% 1/4W	144538
R32	RES MF 221K 1% 1/4W	144629
R33	RES MF 2.21 OHM 1/4W 1%	144607
R34	RES MF 2.21 OHM 1/4W 1%	144607
R35	RES MF 22.1K 1% 1/4W	144564
R36	RES MF 20K 1% 1/4W	144524
R37	RES MF 2.74K 1% 1/4W	144587
R38	RES MF 100 OHM 1% 1/4W	144568
R39	RES MF 2.74K 1% 1/4W	144587
R40	RES MF 2.74K 1% 1/4W	144587
R25	RES MF 15K 1% 1/4W	144623
U1	IC OPERATIONAL AMP LOW NOISE	133067

Ref. No.	Description	Part No.
U2	IC OPERATIONAL AMP LOW NOISE	133067
(V1)	SOCKET 9 PIN TUBE CERAMIC	178170
(V2)	SOCKET 9 PIN TUBE CERAMIC	178170
	ASSY INSERTION PCB PHONO	701082

5 BALANCE I/O LEFT PCB 050198

C1	CAP ELECT 10UF 16V	066580
C2	CAP ELECT 10UF 16V	066580
C3	CAP ELECT 10UF 16V	066580
C4	CAP ELECT 10UF 16V	066580
C5	CAP ELECT 10UF 16V	066580
C6	CAP ELECT 10UF 16V	066580
C7	CAP ELECT 47UF 16V	066380
C8	CAP ELECT 47UF 16V	066380
C9	CAP ELECT 47UF 16V	066380
C10	CAP ELECT 47UF 16V	066380
C11	CAP ELECT 47UF 16V	066380
C12	CAP ELECT 47UF 16V	066380
D1	DIODE SILICON	070174
D2	DIODE SILICON	070174
D3	DIODE SILICON	070174
J1	CONN XLR FEM VERT PCB LATCH	117813
J2	CONN XLR FEM VERT PCB LATCH	117813
J3	CONN XLR FEM VERT PCB LATCH	117813
J4	RECEPTACLE XLR MALE	117669
J5	RECEPTACLE XLR MALE	117669
J6	TERMINAL STRIP 14 PIN .025 SQ	117647
J7	TERMINAL STRIP 14 PIN .025 SQ	117647
J8	RECEPTACLE XLR MALE	117669
J9	RECEPTACLE XLR MALE	117669
J10	RECEPTACLE XLR MALE	117669
J11	CONN 12 PIN FFC	117720
K1	RELAY REED FORM 1C 5V 125 OHM	087056
K2	RELAY REED FORM 1A 5V 500 OHMS	087050
K3	RELAY REED FORM 1A 5V 500 OHMS	087050
K4	RELAY REED FORM 1A 5V 500 OHMS	087050
K5	RELAY REED FORM 1A 5V 500 OHMS	087050
K6	RELAY REED FORM 1A 5V 500 OHMS	087050
K7	RELAY REED FORM 1A 5V 500 OHMS	087050
K8	RELAY REED FORM 1A 5V 500 OHMS	087050
K9	RELAY REED FORM 1A 5V 500 OHMS	087050
K10	RELAY REED FORM 1A 5V 500 OHMS	087050
K11	RELAY REED FORM 1A 5V 500 OHMS	087050
K12	RELAY REED FORM 1A 5V 500 OHMS	087050
K13	RELAY REED FORM 1A 5V 500 OHMS	087050
PCB1	PC BD BALANCED I/O LEFT	129538
R1	RES MF 267K 1% 1/4W	144532
R2	RES MF 267K 1% 1/4W	144532
R3	RES MF 267K 1% 1/4W	144532
R4	RES MF 47.5 OHM 1% 1/4W	144642
R5	RES MF 47.5 OHM 1% 1/4W	144642
R6	RES MF 22.1K 1% 1/4W	144564
R7	RES MF 22.1K 1% 1/4W	144564
R8	RES MF 267K 1% 1/4W	144532
R9	RES MF 267K 1% 1/4W	144532
R10	RES MF 267K 1% 1/4W	144532
R11	RES MF 221 OHM 1% 1/4W	144559
R12	RES MF 221 OHM 1% 1/4W	144559
R13	RES MF 221 OHM 1% 1/4W	144559
R14	RES MF 221 OHM 1% 1/4W	144559
R15	RES MF 221 OHM 1% 1/4W	144559
R16	RES MF 221 OHM 1% 1/4W	144559

PARTS LIST Cont'd**BALANCE I/O LEFT PCB 050198 (Cont'd)**

Ref. No.	Description	Part No.
R17	RES MF 22.1K 1% 1/4W	144564
R18	RES MF 22.1K 1% 1/4W	144564
R19	RES MF 22.1K 1% 1/4W	144564
R20	RES MF 22.1K 1% 1/4W	144564
R21	RES MF 22.1K 1% 1/4W	144564
R22	RES MF 22.1K 1% 1/4W	144564
	ASSY INSERTION PCB BAL I/O L	701079

Ref. No.	Description	Part No.
R12	RES MF 221 OHM 1% 1/4W	144559
R13	RES MF 221 OHM 1% 1/4W	144559
R14	RES MF 221 OHM 1% 1/4W	144559
R15	RES MF 221 OHM 1% 1/4W	144559
R16	RES MF 221 OHM 1% 1/4W	144559
R17	RES MF 22.1K 1% 1/4W	144564
R18	RES MF 22.1K 1% 1/4W	144564
R19	RES MF 22.1K 1% 1/4W	144564
R20	RES MF 22.1K 1% 1/4W	144564
R21	RES MF 22.1K 1% 1/4W	144564
R22	RES MF 22.1K 1% 1/4W	144564
	ASSY INSERTION PCB BAL I/O R	701095

6 BALANCE I/O RIGHT PCB 050199

C1	CAP ELECT 10UF 16V T&R	066580
C2	CAP ELECT 10UF 16V T&R	066580
C3	CAP ELECT 10UF 16V T&R	066580
C4	CAP ELECT 10UF 16V T&R	066580
C5	CAP ELECT 10UF 16V T&R	066580
C6	CAP ELECT 10UF 16V T&R	066580
C7	CAP ELECT 47UF 16V	066380
C8	CAP ELECT 47UF 16V	066380
C9	CAP ELECT 47UF 16V	066380
C10	CAP ELECT 47UF 16V	066380
C11	CAP ELECT 47UF 16V	066380
C12	CAP ELECT 47UF 16V	066380
D1	DIODE SILICON	070174
D2	DIODE SILICON	070174
D3	DIODE SILICON	070174
J1	CONN XLR FEM VERT PCB LATCH	117813
J2	CONN XLR FEM VERT PCB LATCH	117813
J3	CONN XLR FEM VERT PCB LATCH	117813
J4	RECEPTACLE XLR MALE	117669
J5	RECEPTACLE XLR MALE	117669
J6	TERMINAL STRIP 14 PIN .025 SQ	117647
J7	TERMINAL STRIP 14 PIN .025 SQ	117647
J8	RECEPTACLE XLR MALE	117669
J9	RECEPTACLE XLR MALE	117669
J10	RECEPTACLE XLR MALE	117669
J11	CONN 12 PIN FFC	117720
K1	RELAY REED FORM 1C 5V 125 OHM	087056
K2	RELAY REED FORM 1A 5V 500 OHMS	087050
K3	RELAY REED FORM 1A 5V 500 OHMS	087050
K4	RELAY REED FORM 1A 5V 500 OHMS	087050
K5	RELAY REED FORM 1A 5V 500 OHMS	087050
K6	RELAY REED FORM 1A 5V 500 OHMS	087050
K7	RELAY REED FORM 1A 5V 500 OHMS	087050
K8	RELAY REED FORM 1A 5V 500 OHMS	087050
K9	RELAY REED FORM 1A 5V 500 OHMS	087050
K10	RELAY REED FORM 1A 5V 500 OHMS	087050
K11	RELAY REED FORM 1A 5V 500 OHMS	087050
K12	RELAY REED FORM 1A 5V 500 OHMS	087050
K13	RELAY REED FORM 1A 5V 500 OHMS	087050
PCB1	PC BD BALANCE I/O RIGHT	129540
R1	RES MF 267K 1% 1/4W	144532
R2	RES MF 267K 1% 1/4W	144532
R3	RES MF 267K 1% 1/4W	144532
R4	RES MF 47.5 OHM 1% 1/4W	144642
R5	RES MF 47.5 OHM 1% 1/4W	144642
R6	RES MF 22.1K 1% 1/4W	144564
R7	RES MF 22.1K 1% 1/4W	144564
R8	RES MF 267K 1% 1/4W	144532
R9	RES MF 267K 1% 1/4W	144532
R10	RES MF 267K 1% 1/4W	144532
R11	RES MF 221 OHM 1% 1/4W	144559

7 BALANCE SWITCHING LEFT PCB 050108

C1	CAP ELECT 10UF 50V	066445
C2	CAP MONO 100PF 100V 10% NPO	061341
C3	CAP MONO 100PF 100V 10% NPO	061341
C4	CAP MONO 22PF 200V 10% NPO	061339
C5	CAP MONO 22PF 200V 10% NPO	061339
C6	CAP ELECT 10UF 100VDC	066442
C10	CAP MONO .1uF 50V 20% Z5U	061346
C11	CAP MONO .1uF 50V 20% Z5U	061346
C14	CAP ELECT 47UF 35V	066446
C15	CAP ELECT 47UF 35V	066446
C16	CAP ELECT 47UF 35V	066446
C17	CAP MONO .1uF 50V 20% Z5U	061346
C18	CAP MONO .1uF 50V 20% Z5U	061346
C19	CAP ELECT 10UF 100VDC	066442
C21	CAP MONO 22PF 200V 10% NPO	061339
C22	CAP ELECT 47UF 35V	066446
C23	CAP MONO .1uF 50V 20% Z5U	061346
C24	CAP MONO .1uF 50V 20% Z5U	061346
C25	CAP ELECT 10UF 100VDC	066442
C27	CAP MONO 22PF 200V 10% NPO	061339
C30	CAP MONO 100PF 100V 10% NPO	061341
C31	CAP MONO .1uF 50V 20% Z5U	061346
C32	CAP MONO .1uF 50V 20% Z5U	061346
C35	CAP ELECT 10UF 100VDC	066442
C37	CAP MONO 100PF 100V 10% NPO	061341
C38	CAP MONO 22PF 200V 10% NPO	061339
C39	CAP MONO 22PF 200V 10% NPO	061339
C40	CAP MONO 100PF 100V 10% NPO	061341
C41	CAP MONO 100PF 100V 10% NPO	061341
C42	CAP MONO 100PF 100V 10% NPO	061341
C43	CAP MONO 100PF 100V 10% NPO	061341
C44	CAP ELECT 10UF 50V	066445
C45	CAP ELECT 10UF 50V	066445
C46	CAP ELECT 10UF 50V	066445
D1	DIODE SILICON	070174
IC1	IC OPERATIONAL AMP LOW NOISE	133067
IC2	IC OPERATIONAL AMP LOW NOISE	133067
IC3	IC OPERATIONAL AMP LOW NOISE	133067
IC4	IC OPERATIONAL AMP LOW NOISE	133067
IC5	IC OPERATIONAL AMP LOW NOISE	133067
IC6	IC OPERATIONAL AMP LOW NOISE	133067
J1	CONN 12 PIN FFC	117720
J2	CONN 12 PIN FFC	117720
J3	SOCKET STRIP 14 PIN .025 SQ	117644
J4	SOCKET STRIP 14 PIN .025 SQ	117644
K1	RELAY REED FORM 1A 5V 500 OHMS	087050
K2	RELAY REED FORM 1A 5V 500 OHMS	087050
K3	RELAY REED FORM 1A 5V 500 OHMS	087050

PARTS LIST Cont'd

BALANCE SWITCHING LEFT PCB 050108 (Cont'd)

Ref. No.	Description	Part No.
K4	RELAY REED FORM 1A 5V 500 OHMS	087050
K5	RELAY REED FORM 1A 5V 500 OHMS	087050
K6	RELAY REED FORM 1A 5V 500 OHMS	087050
K7	RELAY REED FORM 1C 5V 125 OHM	087056
PCB1	PC BD BAL SWITCHING LEFT	129541
R1	RES MF 47.5K 1% 1/4W	144526
R2	RES MF 1K 1% 1/4W	144513
R3	RES MF 10K 1% 1/4W	144504
R4	RES MF 10K 1% 1/4W	144504
R5	RES MF 2.21 OHM 1/4W 1%	144607
R6	RES MF 2.21 OHM 1/4W 1%	144607
R9	RES MF 47.5 OHM 1% 1/4W	144642
R10	RES MF 47.5K 1% 1/4W	144526
R11	RES MF 2.21 OHM 1/4W 1%	144607
R12	RES MF 2.21 OHM 1/4W 1%	144607
R13	RES MF 47.5 OHM 1% 1/4W	144642
R14	RES MF 47.5K 1% 1/4W	144526
R15	RES MF 4.99K 1% 1/4W	144521
R16	RES MF 4.99K 1% 1/4W	144521
R17	RES MF 2.21 OHM 1/4W 1%	144607
R18	RES MF 2.21 OHM 1/4W 1%	144607
R19	RES MF 10K 1% 1/4W	144504
R20	RES MF 10K 1% 1/4W	144504
R23	RES MF 2.21 OHM 1/4W 1%	144607
R24	RES MF 2.21 OHM 1/4W 1%	144607
R25	RES MF 1K 1% 1/4W	144513
R26	RES MF 267K 1% 1/4W	144532
R27	RES MF 267K 1% 1/4W	144532
R28	RES MF 267K 1% 1/4W	144532
R29	RES MF 1K 1% 1/4W	144513
R30	RES MF 1K 1% 1/4W	144513
	ASSY INSERTION PCB BAL SW LEFT	701096

8 BALANCE SWITCHING RIGHT PCB 050155

C1	CAP ELECT 10UF 50V	066445
C2	CAP MONO 100PF 100V 10% NPO	061341
C3	CAP MONO 100PF 100V 10% NPO	061341
C4	CAP MONO 22PF 200V 10% NPO	061339
C5	CAP MONO 22PF 200V 10% NPO	061339
C6	CAP ELECT 10UF 100VDC	066462
C10	CAP MONO .1UF 50V 20% Z5U	061346
C11	CAP MONO .1UF 50V 20% Z5U	061346
C14	CAP ELECT 47UF 35V	066446
C15	CAP ELECT 47UF 35V	066446
C16	CAP ELECT 47UF 35V	066446
C17	CAP MONO .1UF 50V 20% Z5U	061346
C18	CAP MONO .1UF 50V 20% Z5U	061346
C19	CAP ELECT 10UF 100VDC	066462
C21	CAP MONO 22PF 200V 10% NPO	061339
C22	CAP ELECT 47UF 35V	066446
C23	CAP MONO .1UF 50V 20% Z5U	061346
C24	CAP MONO .1UF 50V 20% Z5U	061346
C25	CAP ELECT 10UF 100VDC	066462
C27	CAP MONO 22PF 200V 10% NPO	061339
C30	CAP MONO 100PF 100V 10% NPO	061341
C31	CAP MONO .1UF 50V 20% Z5U	061346
C32	CAP MONO .1UF 50V 20% Z5U	061346
C35	CAP ELECT 10UF 100VDC	066462
C37	CAP MONO 100PF 100V 10% NPO	061341
C38	CAP MONO 22PF 200V 10% NPO	061339

Ref. No.	Description	Part No.
C39	CAP MONO 22PF 200V 10% NPO	061339
C40	CAP MONO 100PF 100V 10% NPO	061341
C41	CAP MONO 100PF 100V 10% NPO	061341
C42	CAP MONO 100PF 100V 10% NPO	061341
C43	CAP MONO 100PF 100V 10% NPO	061341
C44	CAP ELECT 10UF 50V	066445
C45	CAP ELECT 10UF 50V	066445
C46	CAP ELECT 10UF 50V	066445
D1	DIODE SILICON	070174
IC1	IC OPERATIONAL AMP LOW NOISE	133067
IC2	IC OPERATIONAL AMP LOW NOISE	133067
IC3	IC OPERATIONAL AMP LOW NOISE	133067
IC4	IC OPERATIONAL AMP LOW NOISE	133067
IC5	IC OPERATIONAL AMP LOW NOISE	133067
IC6	IC OPERATIONAL AMP LOW NOISE	133067
J1	CONN 12 PIN FFC	117720
J2	CONN 12 PIN FFC	117720
J3	SOCKET STRIP 14 PIN .025 SQ	117644
J4	SOCKET STRIP 14 PIN .025 SQ	117644
K1	RELAY REED FORM 1A 5V 500 OHMS	087050
K2	RELAY REED FORM 1A 5V 500 OHMS	087050
K3	RELAY REED FORM 1A 5V 500 OHMS	087050
K4	RELAY REED FORM 1A 5V 500 OHMS	087050
K5	RELAY REED FORM 1A 5V 500 OHMS	087050
K6	RELAY REED FORM 1A 5V 500 OHMS	087050
K7	RELAY REED FORM 1C 5V 125 OHM	087056
PCB1	PC BD BALANCE SWITCHING RIGHT	129560
R1	RES MF 47.5K 1% 1/4W	144526
R2	RES MF 1K 1% 1/4W	144513
R3	RES MF 10K 1% 1/4W	144504
R4	RES MF 10K 1% 1/4W	144504
R5	RES MF 2.21 OHM 1/4W 1%	144607
R6	RES MF 2.21 OHM 1/4W 1%	144607
R9	RES MF 47.5 OHM 1% 1/4W	144642
R10	RES MF 47.5K 1% 1/4W	144526
R11	RES MF 2.21 OHM 1/4W 1%	144607
R12	RES MF 2.21 OHM 1/4W 1%	144607
R13	RES MF 47.5 OHM 1% 1/4W	144642
R14	RES MF 47.5K 1% 1/4W	144526
R15	RES MF 4.99K 1% 1/4W	144521
R16	RES MF 4.99K 1% 1/4W	144521
R17	RES MF 2.21 OHM 1/4W 1%	144607
R18	RES MF 2.21 OHM 1/4W 1%	144607
R19	RES MF 10K 1% 1/4W	144504
R20	RES MF 10K 1% 1/4W	144504
R23	RES MF 2.21 OHM 1/4W 1%	144607
R24	RES MF 2.21 OHM 1/4W 1%	144607
R25	RES MF 1K 1% 1/4W	144513
R26	RES MF 267K 1% 1/4W	144532
R27	RES MF 267K 1% 1/4W	144532
R28	RES MF 267K 1% 1/4W	144532
R29	RES MF 1K 1% 1/4W	144513
R30	RES MF 1K 1% 1/4W	144513
	ASSY INSERTION PCB BAL RIGHT	701097

9 METER PCB 050106

C1	CAP MONO .1UF 50V 20%	061346
C2	CAP ELECT 10UF 16V	066580
C3	CAP MONO .1UF 50V 20%	061346
C4	CAP MONO .1UF 50V 20%	061346
C6	CAP ELECT 47UF 16V 6.3X5 CASE	066380
C7	CAP MPF 0.47UF 5% 50/63VDC	064333
C8	CAP MONO .1UF 50V 20%	061346

PARTS LIST *Cont'd***METER PCB 050106 (Cont'd)**

Ref. No.	Description	Part No.
C40	CAP MONO 22PF 200V 10% NPO	061339
D1	DIODE ZENER 5.1V	070132
D2	DIODE SILICON	070174
D3	DIODE ZENER 5.1V	070132
D4	DIODE SILICON	070174
D6	DIODE SILICON	070174
D8	DIODE SILICON	070174
D9	DIODE SILICON	070174
D12	DIODE SILICON	070174
DS1	LED BLUE 5MM HI-INT	058166
(DS1)	SPACER LED	112108
DS2	LED BLUE-GREEN HI-INTENSITY	058176
(DS2)	SPACER LED	112108
DS5	LED BLUE 5MM HI-INT	058166
(DS5)	SPACER LED	112108
DS6	LED BLUE-GREEN HI-INTENSITY	058176
(DS6)	SPACER LED	112108
J1	CONN 12 PIN FFC	117720
J3	CONNECTOR HEADER 2PIN RT ANGLE	117873
PCB1	PC BD METER	129539
R1	RES MF 100 OHM 1% 1/4W	144196
R2	RES MF 1.5K 1% 1/4W	144128
R3	RES MF 806 OHM 1% 1/4W	144089
R4	RES MF 10 OHM 1% 1/4W	144553
R5	RES MF 100K 1% 1/4W	144528

Ref. No.	Description	Part No.
R6	RES MF 10 OHM 1% 1/4W	144553
R7	RES MF 10K 1% 1/4W	144504
R8	RES MF 22.1K 1% 1/4W	144564
R9	RES MF 806 OHM 1% 1/4W	144512
R10	RES MF 100K 1% 1/4W	144528
R11	RES MF 15K 1% 1/4W	144623
R12	RES MF 22.1K 1% 1/4W	144564
R13	POT TRIM 100K OHM 20%	134504
R15	RES MF 221 OHM 1% 1/4W	144559
R17	RES MF 2.21M 1/4W	144576
R21	RES MF 4.75K 1% 1/4W	144520
R23	RES MF 10K 1% 1/4W	144504
R25	RES MF 4.75K 1% 1/4W	144520
R26	POT TRIM 2K OHM 20%	134507
R27	POT TRIM 2K OHM 20%	134507
R30	RES 511 OHM 1% 1/4W	144123
R31	RES 511 OHM 1% 1/4W	144123
U12	IC OPERATIONAL AMP LOW NOISE	133067
U14	IC OPERATIONAL AMP LOW NOISE ASSY INSERTION PCB METER	133067 701080

**HEADPHONE PCB 050262**

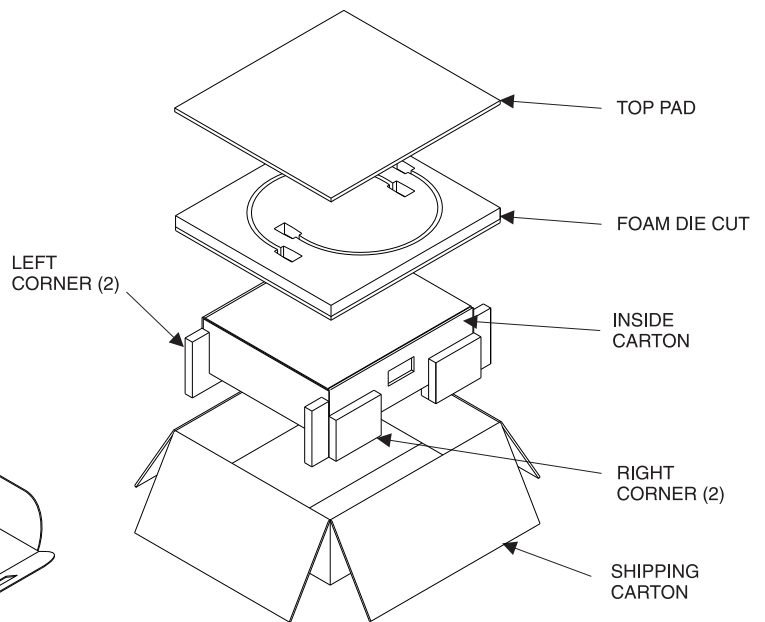
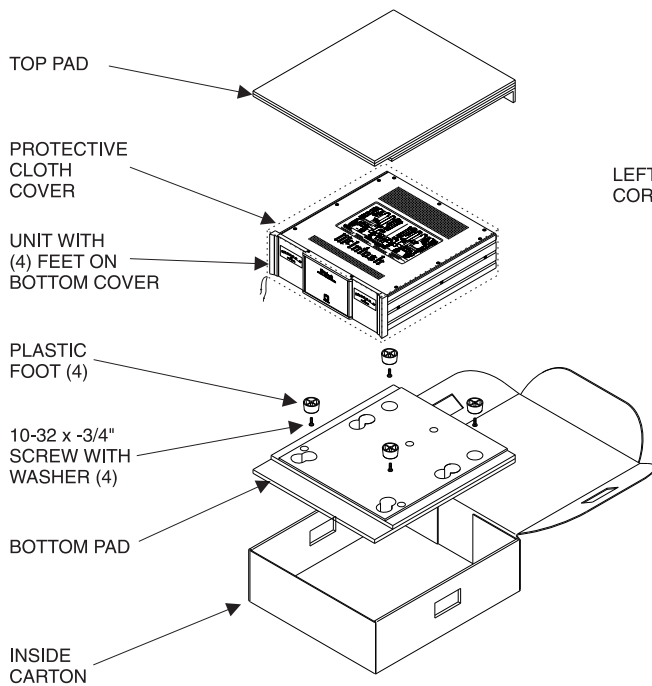
Ref. No.	Description	Part No.
J1	HEADPHONE JACK 1/4	117881
J2	CONNECTOR HEADER 2PIN RT ANGLE	117873
J3	CONNECTOR HEADER 2PIN RT ANGLE	117873
	PC BD HEADPHONE	129601

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. 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 4. Please see the Part List for the correct part numbers.

Qty.	Part No.	Description
1	033888	Shipping carton only
2	034346	Foam left corner
2	034347	Foam right corner
1	034345	Foam top pad diecut for cables
1	034351	Top pad
1	033836	Inside carton only
1	033725	Top pad
1	034301	Bottom pad
1	034355	Protective blue cloth cover
4	017937	Plastic foot
4	400159	#10-32 x 3/4" Machine screws
4	404080	Washer flat #10



C1000

TUBE PREAMPLIFIER

SERVICE MANUAL

SERIAL NO. WH1000 And Above



The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.