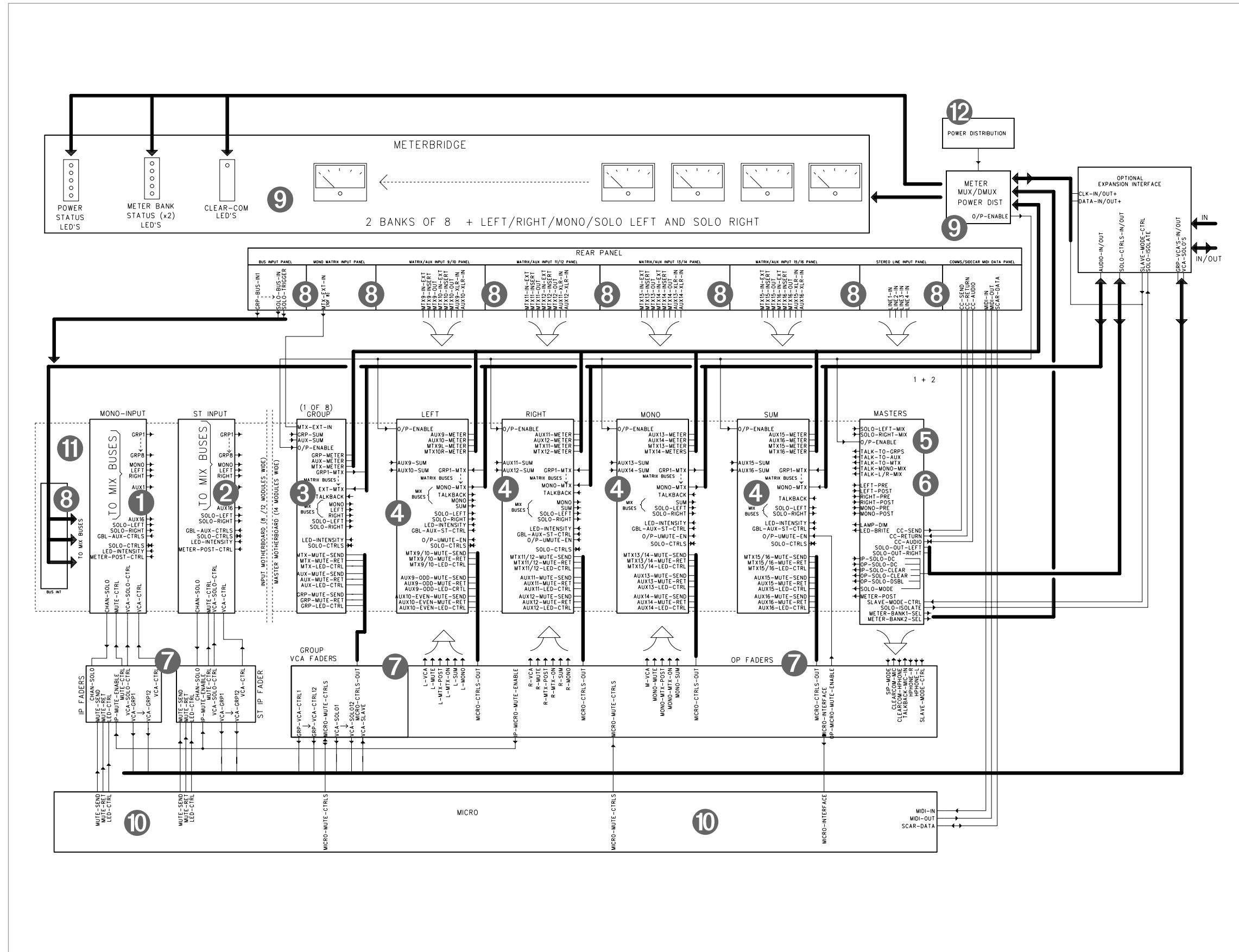


schematics
block diagrams
rear views
dimensions and weights

V12 mixing console





mono inputs p. 3

1

stereo inputs p. 13

2

groups p. 26

3

outputs p. 33

4

master 1 p. 42

5

master 2 p. 48

6

faders p. 54

7

connectors p. 63

8

meters p. 73

9

micro muting system p. 77

10

motherboards p. 83

11

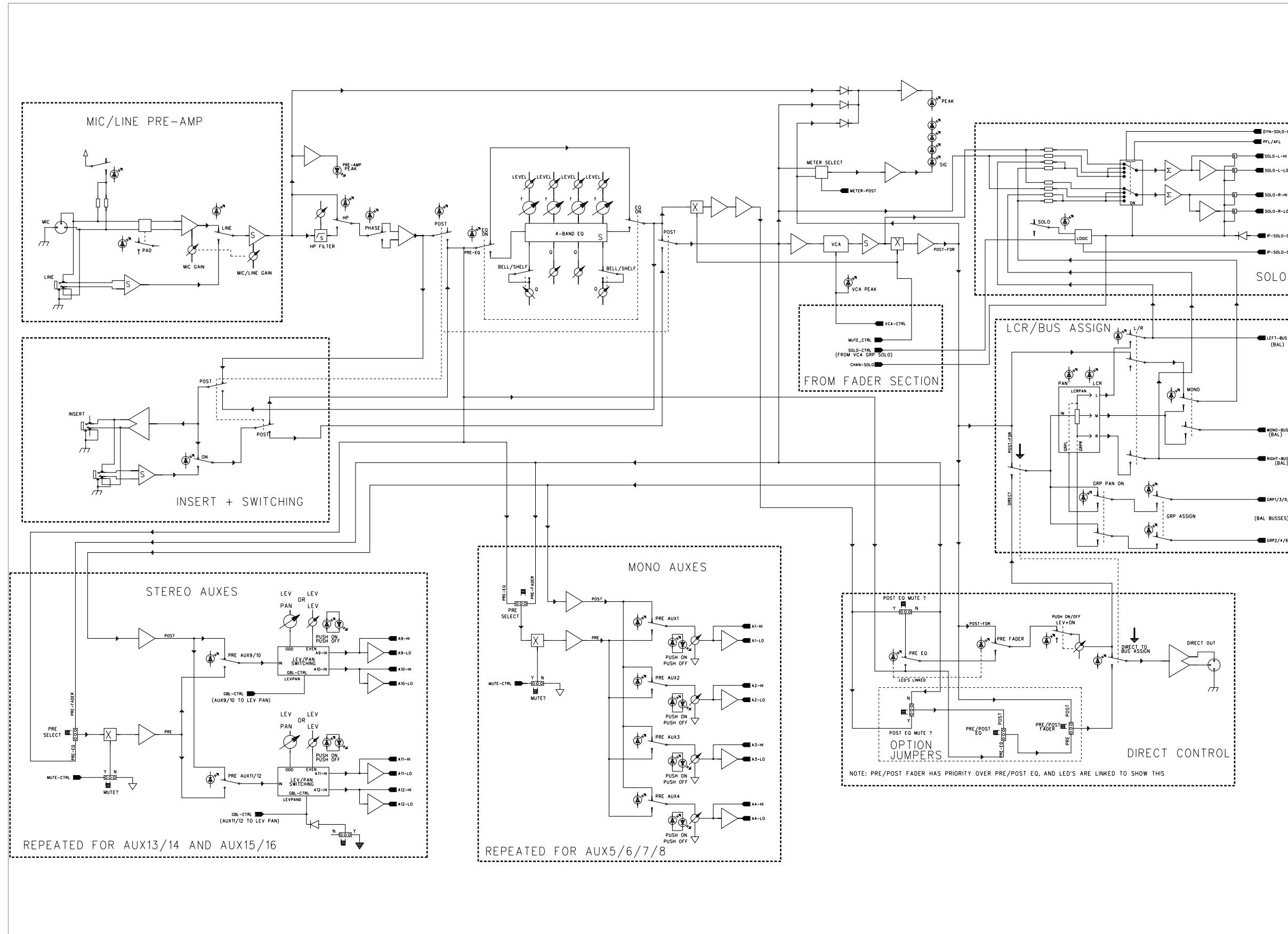
power supply p. 86

12

mono input—block diagram

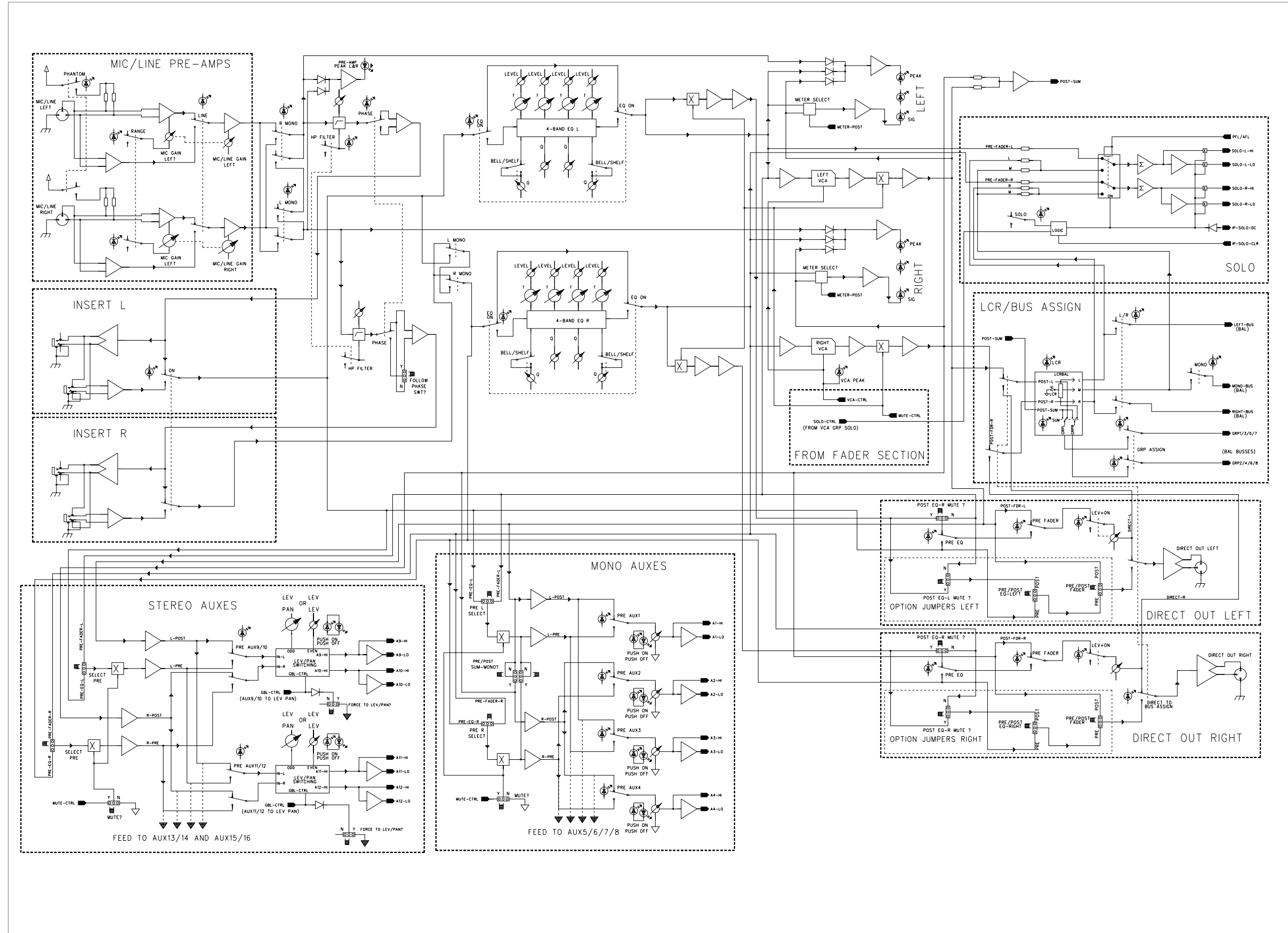
mono inputs
connector PCB
main PCB
main sub PCB

see p. 3



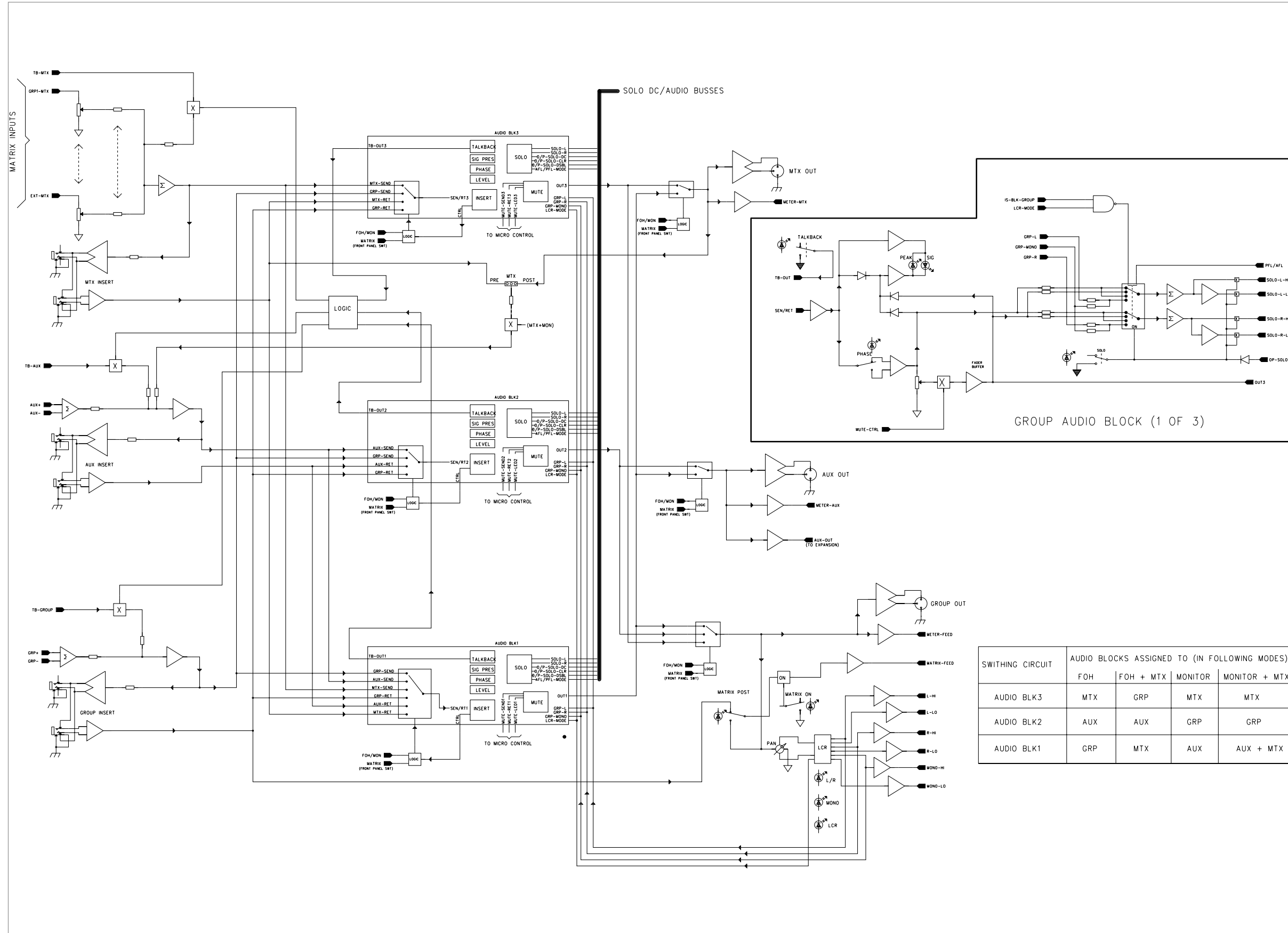
stereo input—block diagram

stereo inputs see p. 13
 connector PCB
 connector sub PCB
 main PCB
 main sub PCB



groups
audio sub PCB
connector PCB
main PCB
main sub PCB

see p. 26

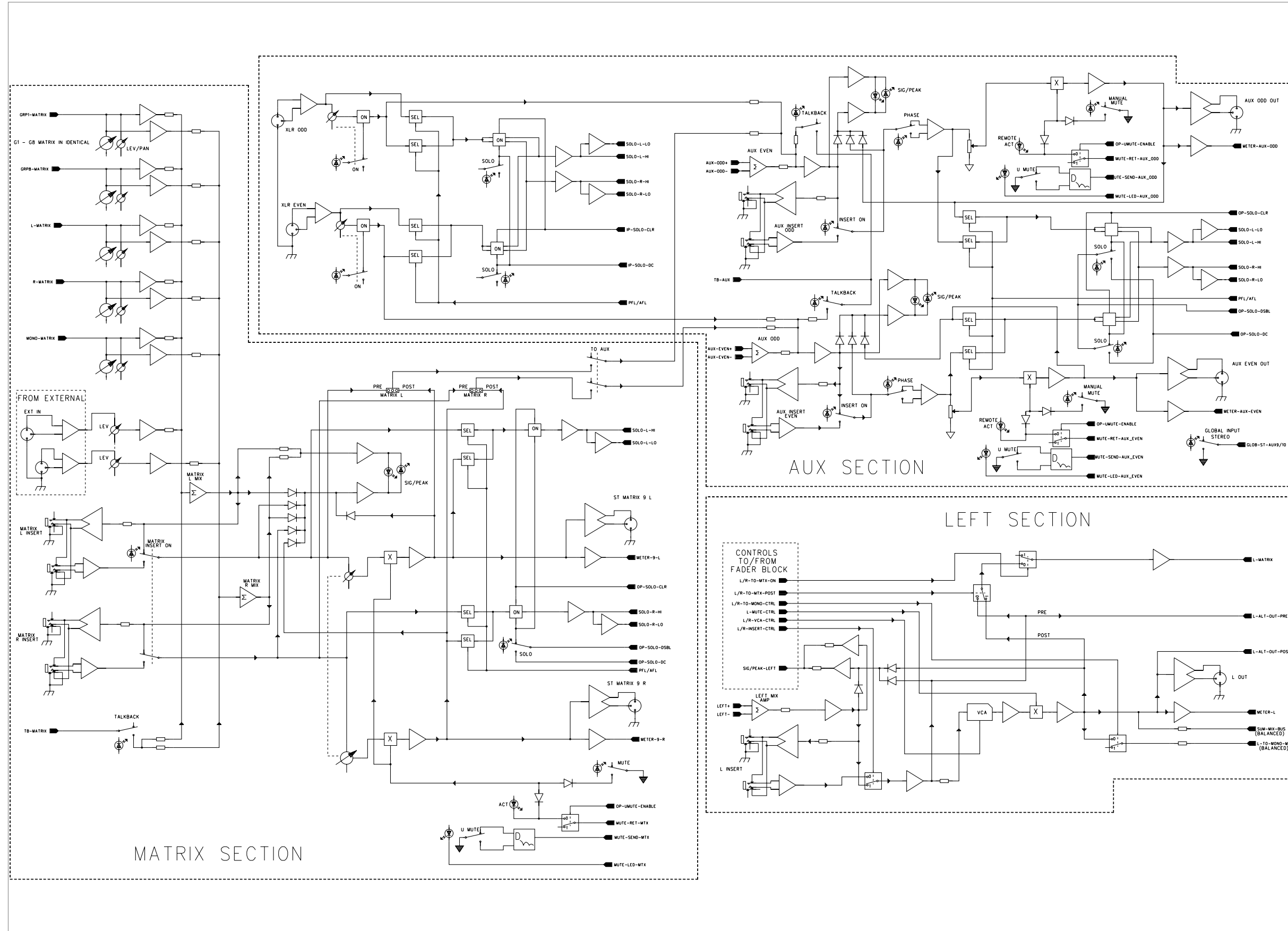


SWITCHING CIRCUIT	AUDIO BLOCKS ASSIGNED TO (IN FOLLOWING MODES)			
	FOH	FOH + MTX	MONITOR	MONITOR + MTX
AUDIO BLK3	MTX	GRP	MTX	MTX
AUDIO BLK2	AUX	AUX	GRP	GRP
AUDIO BLK1	GRP	MTX	AUX	AUX + MTX

output module—block diagram

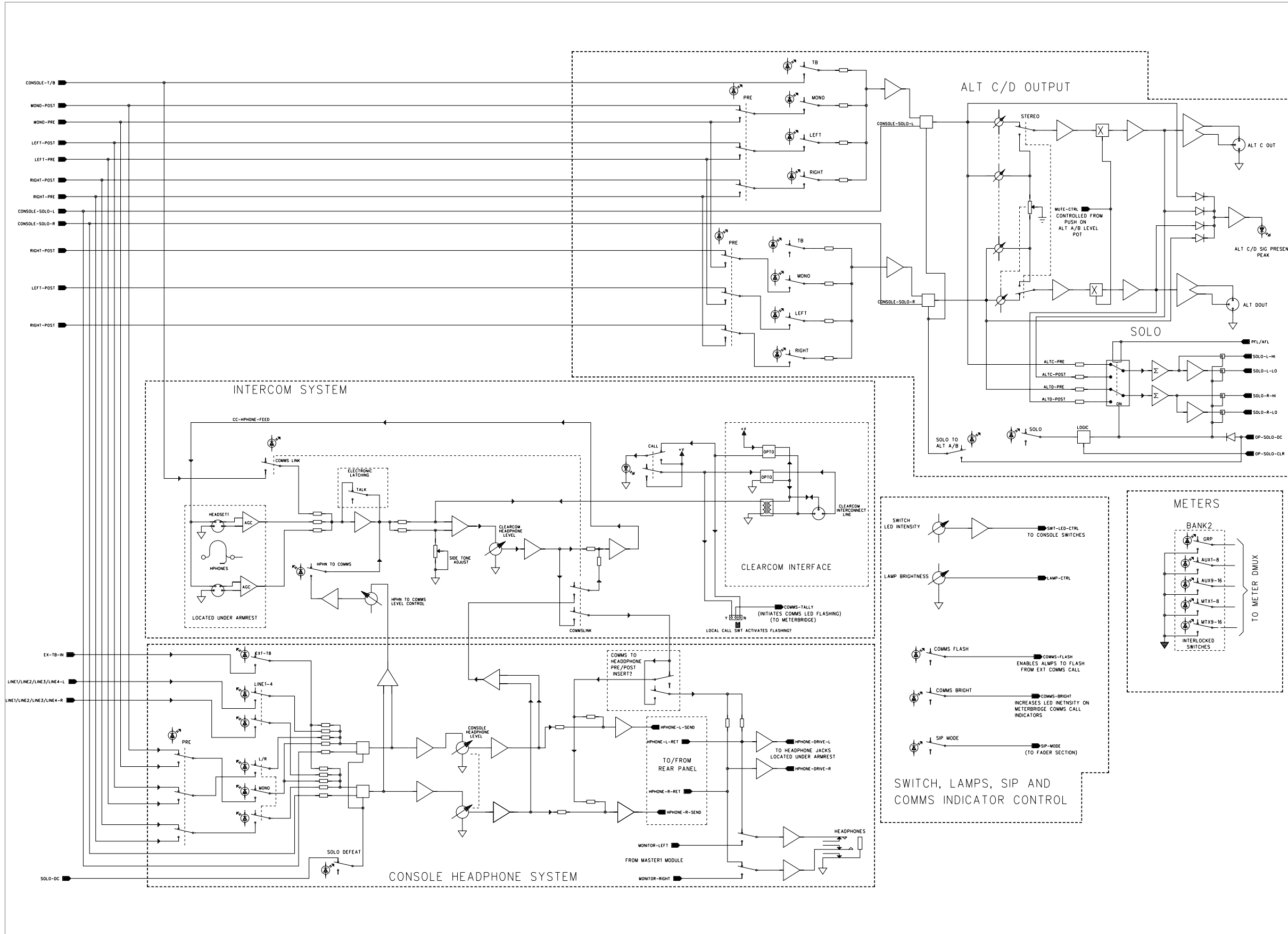
outputs
connector PCB
main PCB
main sub PCB

see p. 33



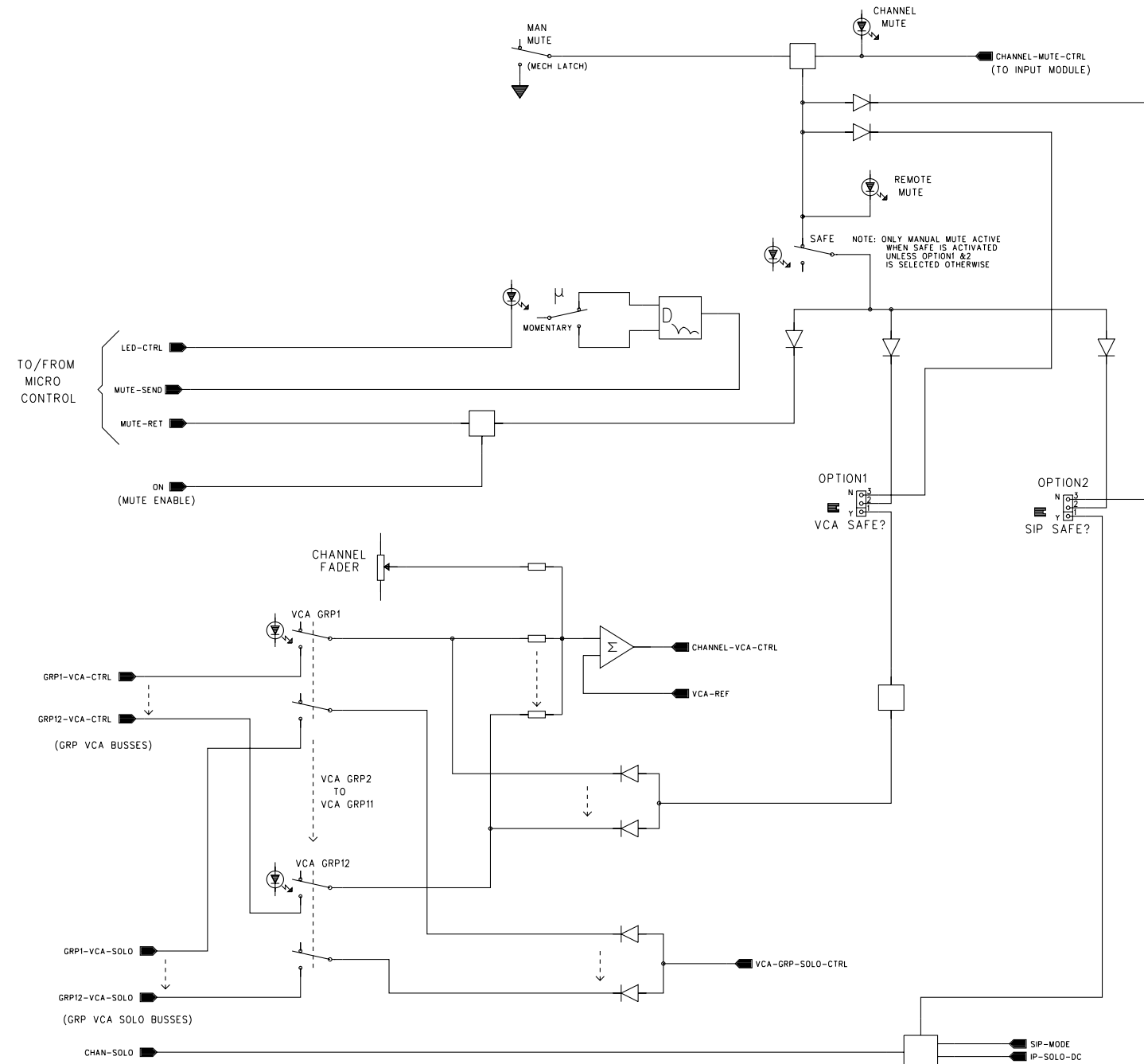
master 2
connector PCB
main PCB
main sub PCB

see p. 47

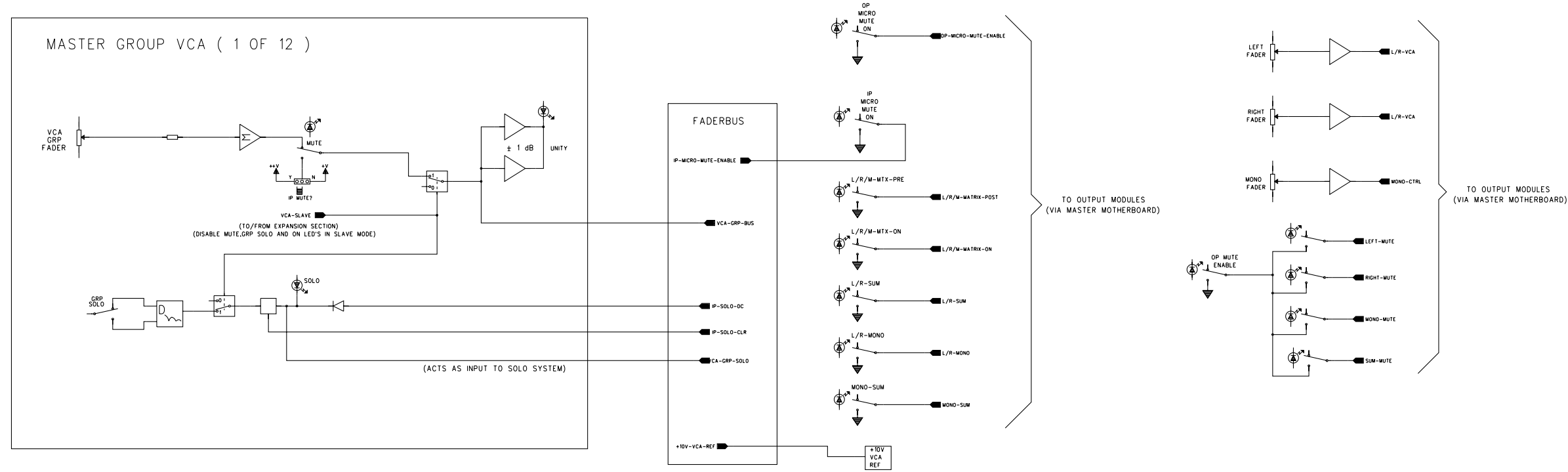


faders
fader PCB
fader mute PCB

see p.53



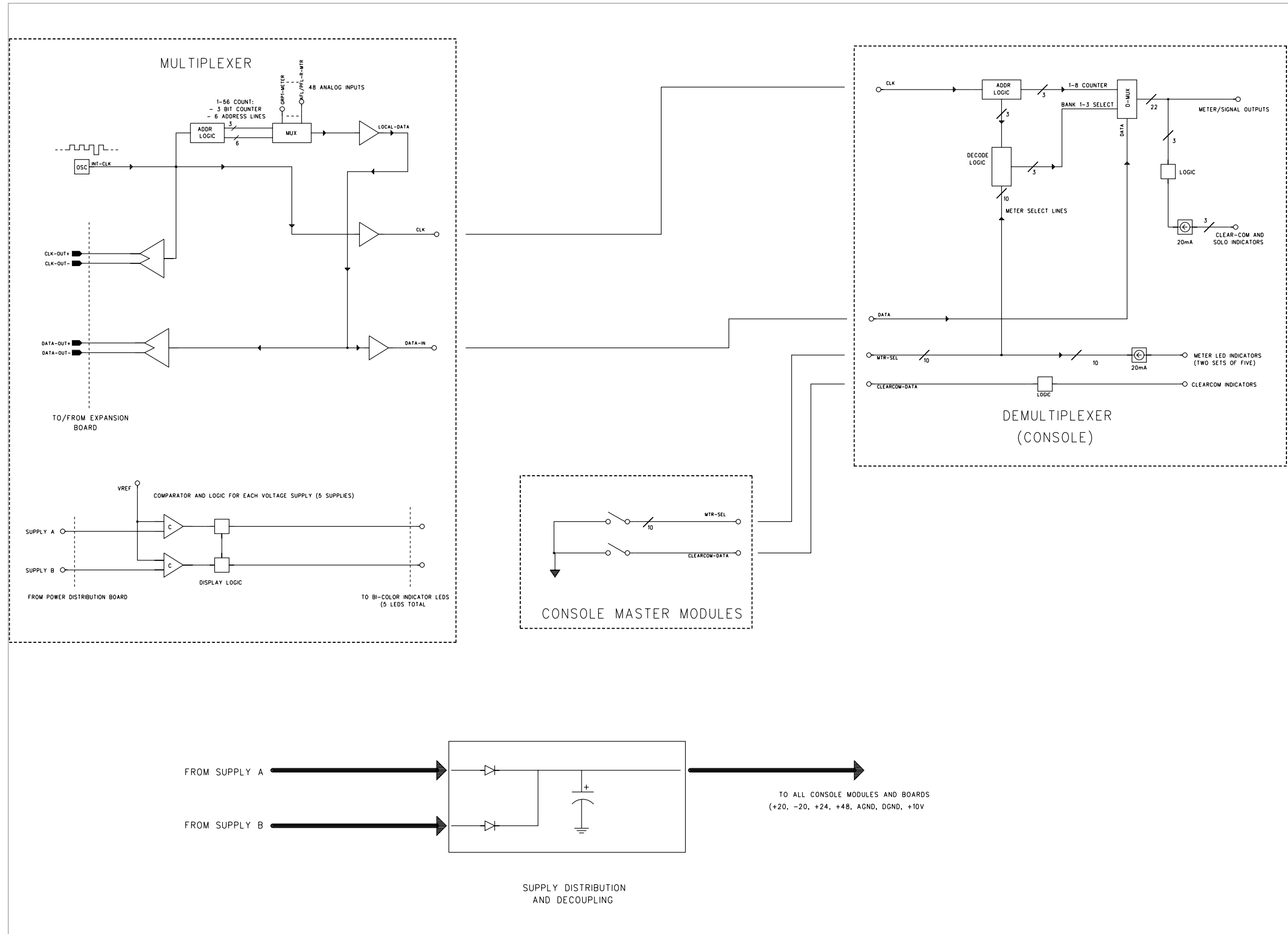
faders see p. 62
 master VCA mute PCB
 master VCA solo PCB
 output control PCB



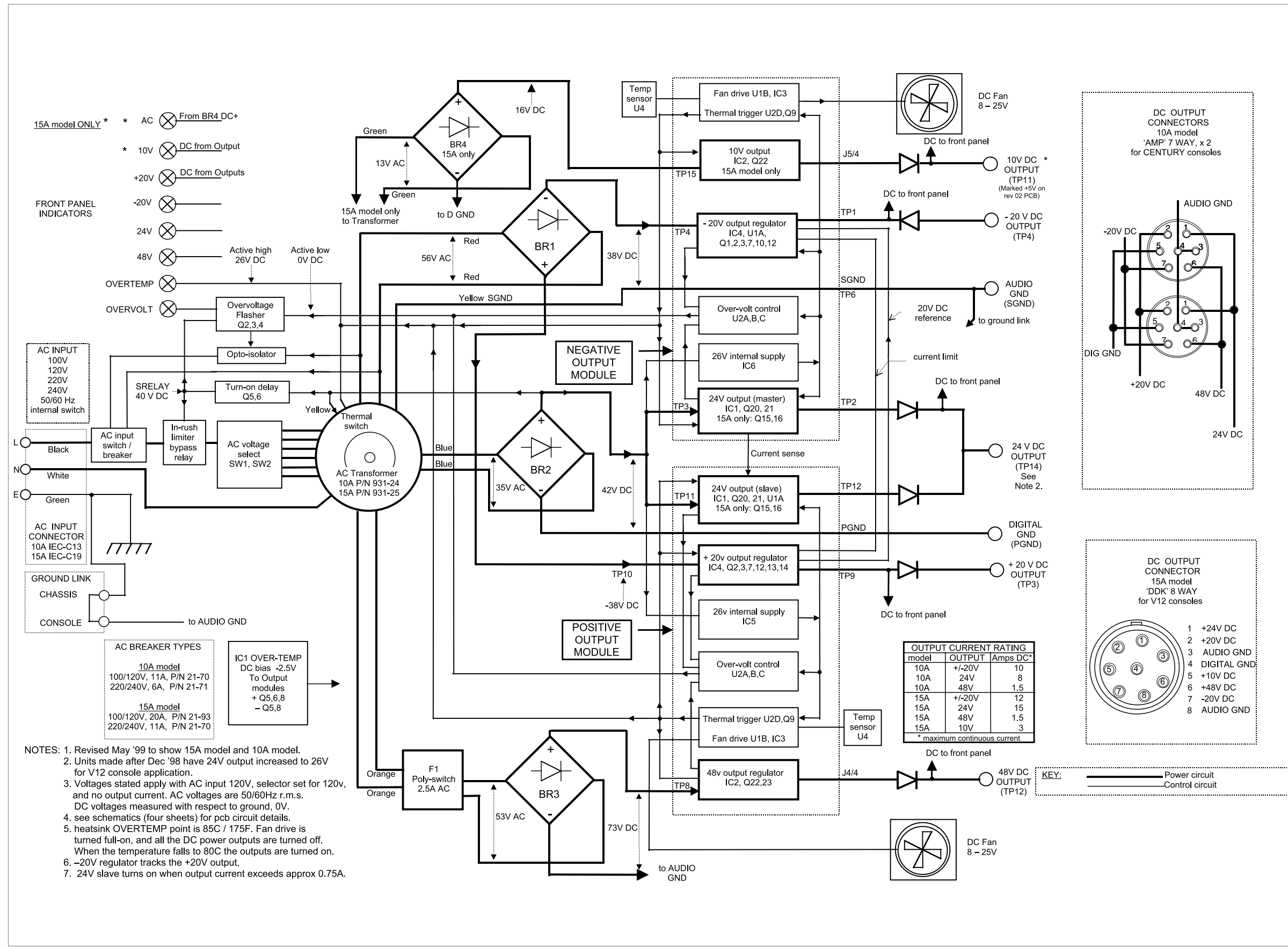
NOTE: THE MASTER MICRO INTERFACE PCB (LOCATED BELOW THIS SECTION ON THE FADER TRAY) DIRECTS MUTE SIGNALS FROM/TO THE MICRO SECTION AND THE MASTER MODULES.

meter system—block diagram

meters see p. 71
 multiplexer/dimmer/fan control PCB
 de-multiplexer PCB
 indicator PCB



power supply see p. 1
 power distribution PCB
 display PCB
 negative HS PCB
 positive HS PCB



- 15A model ONLY *
- * AC From BR4 DC+
 - * 10V DC from Output
 - +20V DC from Outputs

- FRONT PANEL INDICATORS
- 20V
 - 24V
 - 48V
 - Active high 26V DC
 - Active low 0V DC
 - OVERTEMP
 - OVERVOLT

AC INPUT
 100V
 120V
 220V
 240V
 50/60 Hz
 internal switch

AC INPUT CONNECTOR
 10A IEC-C13
 15A IEC-C19

GROUND LINK
 CHASSIS
 CONSOLE to AUDIO GND

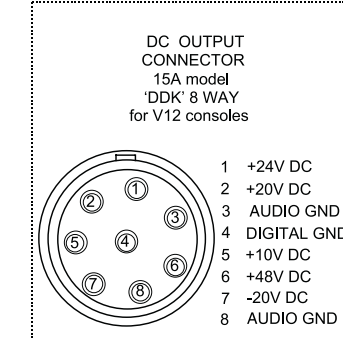
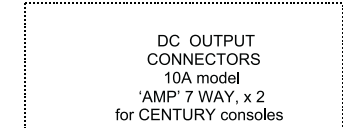
AC BREAKER TYPES

10A model
 100/120V, 11A, P/N 21-70
 220/240V, 6A, P/N 21-71

15A model
 100/120V, 20A, P/N 21-93
 220/240V, 11A, P/N 21-70

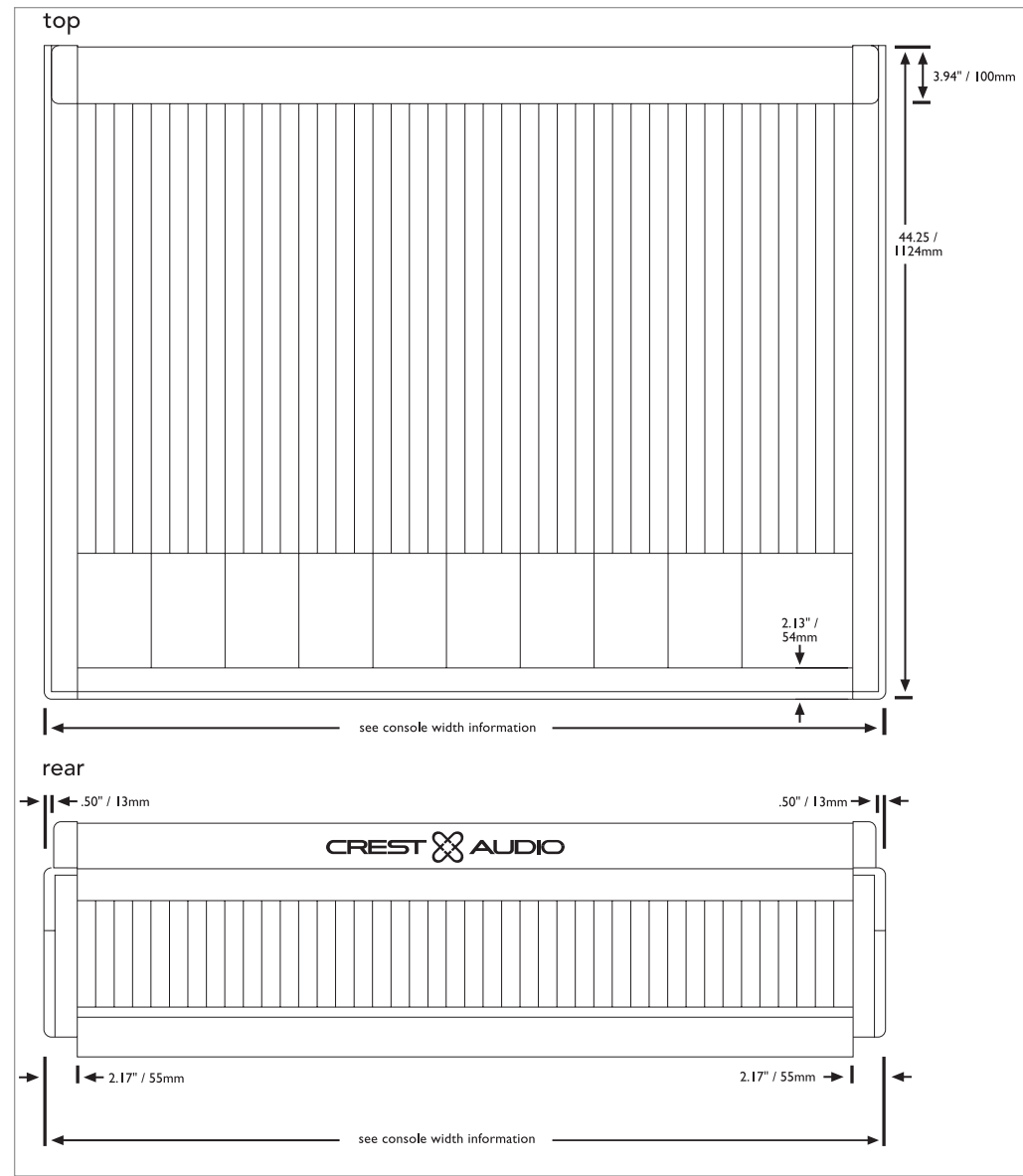
IC1 OVER-TEMP
 DC bias -2.5V
 To Output modules
 + Q5,6,8
 - Q5,8

- NOTES:
- Revised May '99 to show 15A model and 10A model.
 - Units made after Dec '98 have 24V output increased to 26V for V12 console application.
 - Voltages stated apply with AC input 120V, selector set for 120V, and no output current. AC voltages are 50/60Hz r.m.s. DC voltages measured with respect to ground, 0V.
 - see schematics (four sheets) for pcb circuit details.
 - heatsink OVERTEMP point is 85C / 175F. Fan drive is turned full-on, and all the DC power outputs are turned off. When the temperature falls to 80C the outputs are turned on.
 - 20V regulator tracks the +20V output.
 - 24V slave turns on when output current exceeds approx 0.75A.



KEY: — Power circuit
 - - - Control circuit

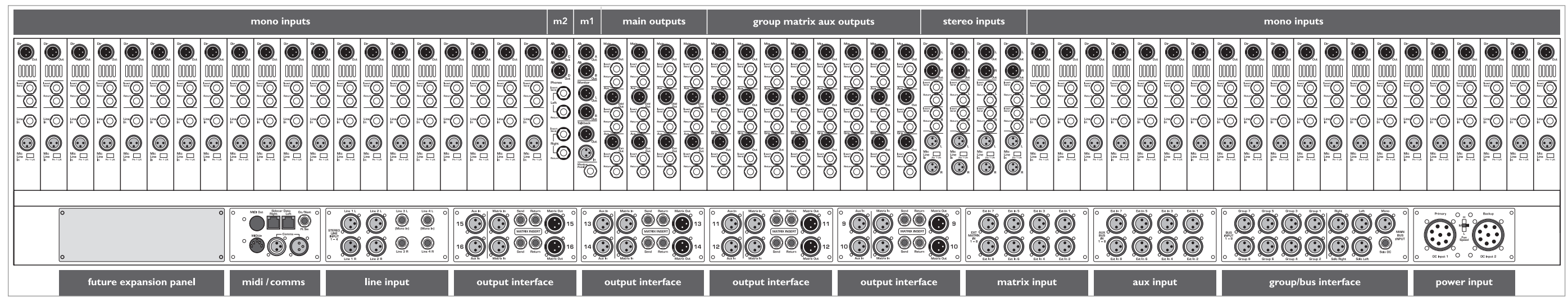
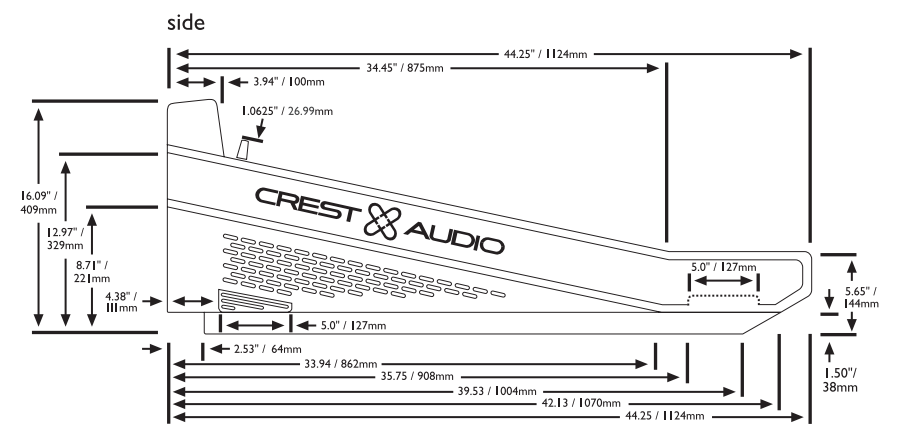
console dimensions and rear-view



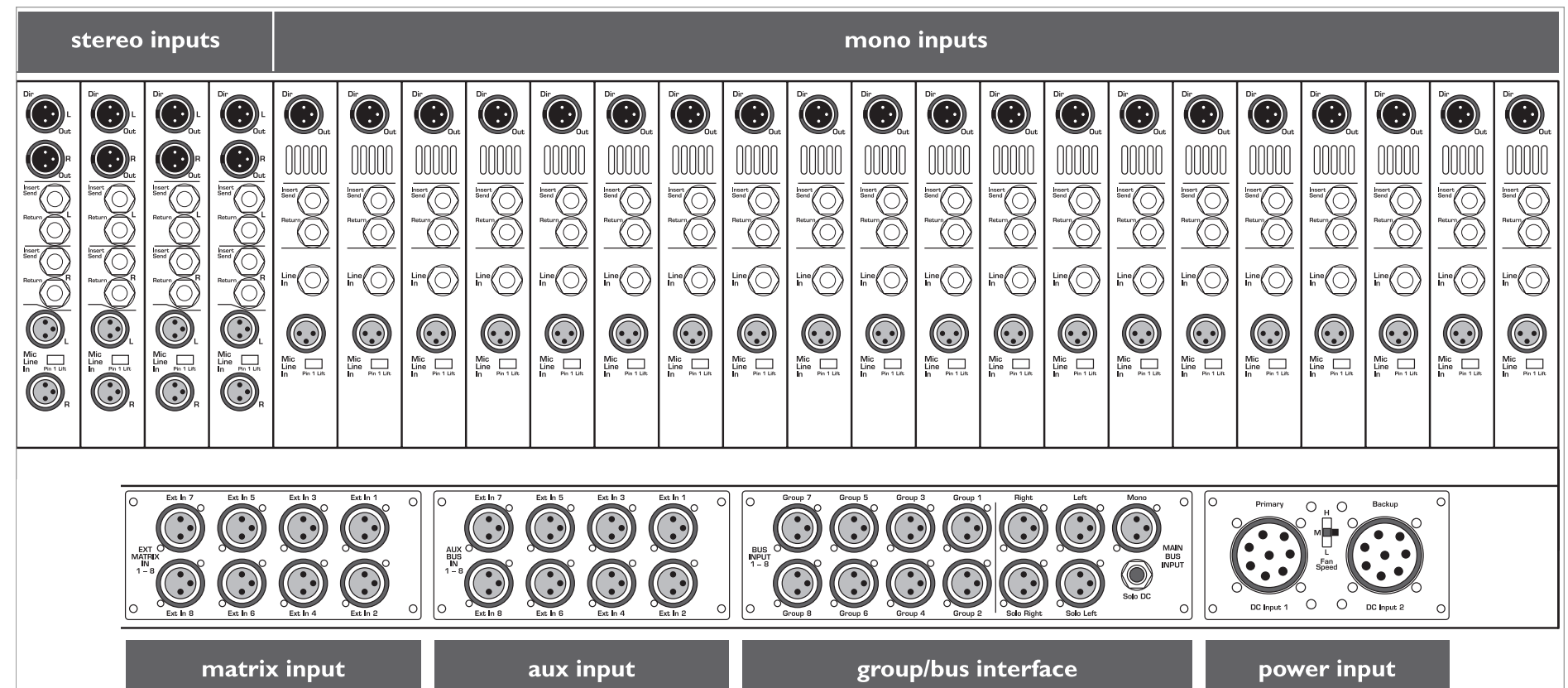
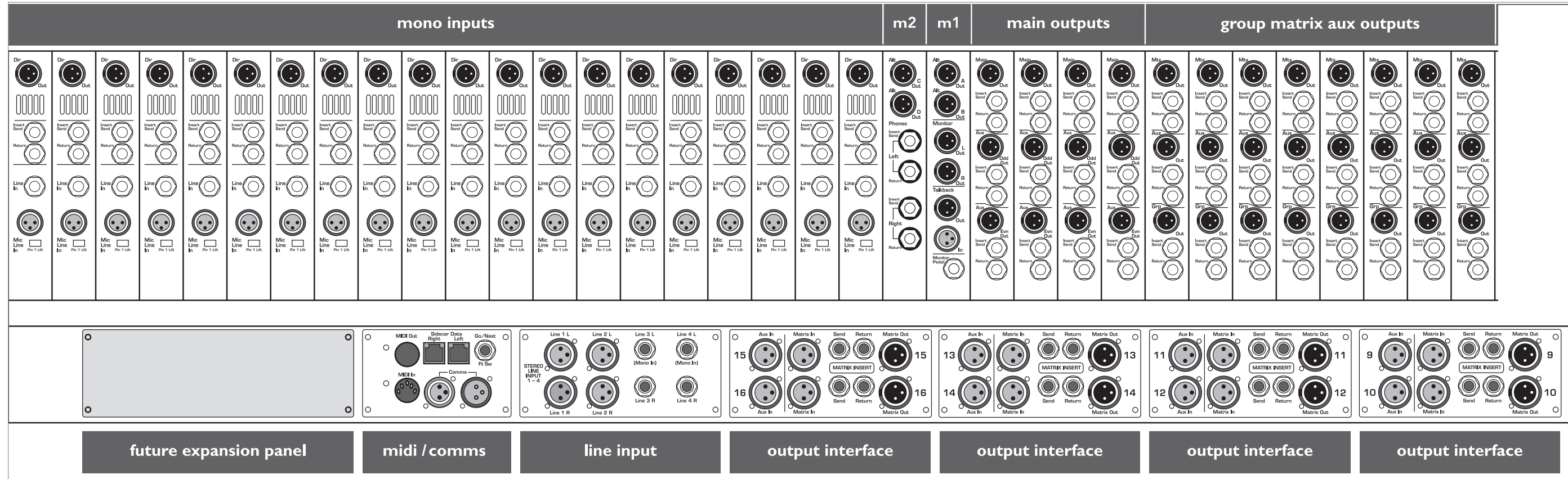
V 12 console width information

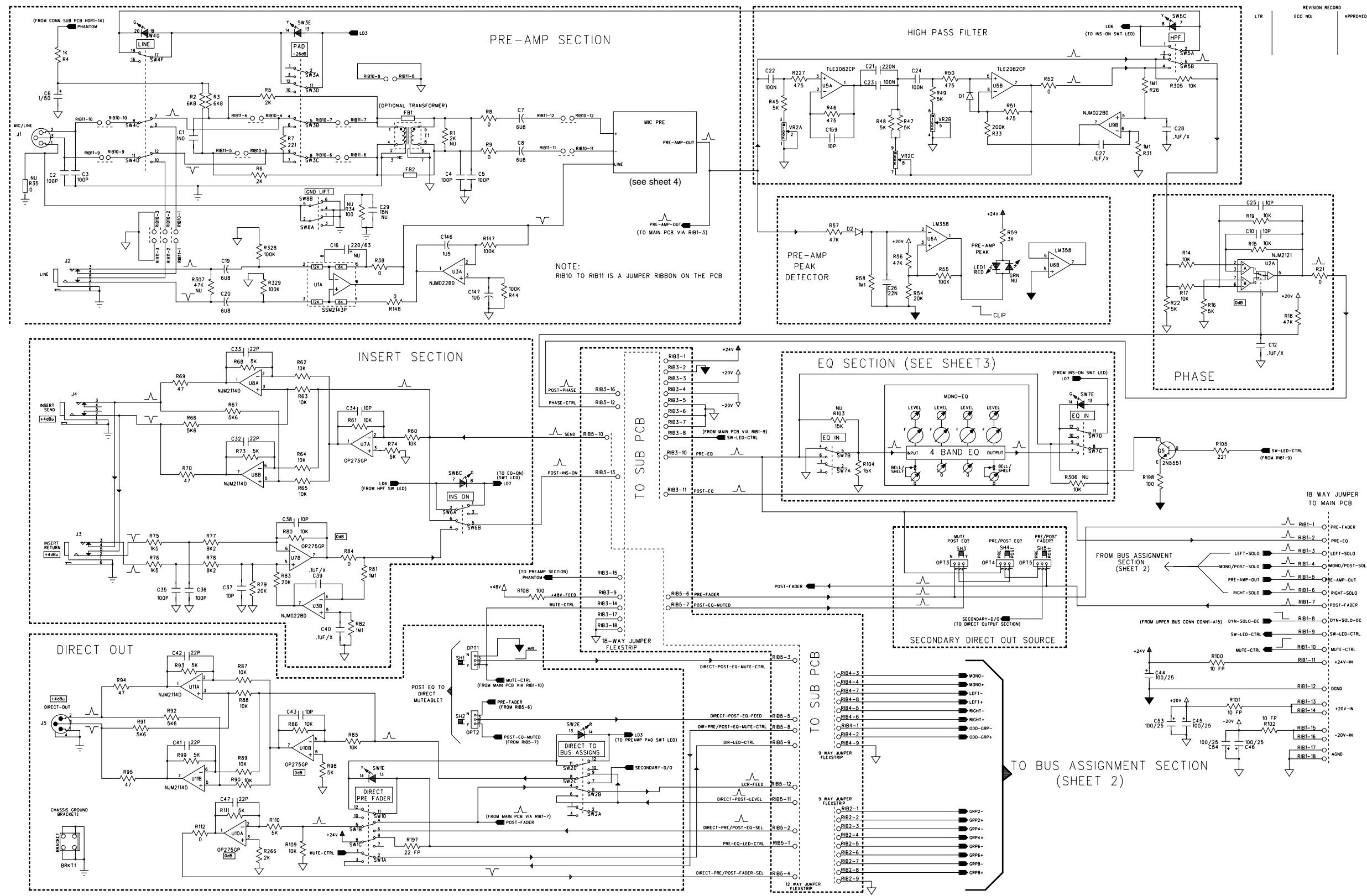
frame	dimensions	weight
42	57 × 44.25 × 16 in 145 × 112 × 40.6 cm	300 lbs 136 kg
50	67 × 44.25 × 16 in 170 × 112 × 40.6 cm	350 lbs 159 kg
58	77 × 44.25 × 16 in 196 × 112 × 40.6 cm	400 lbs 182 kg
66	87 × 44.25 × 16 in 221 × 112 × 40.6 cm	450 lbs 204 kg

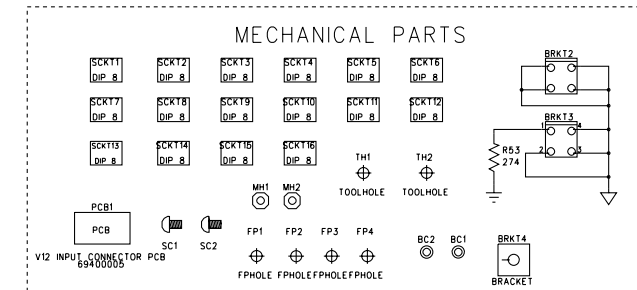
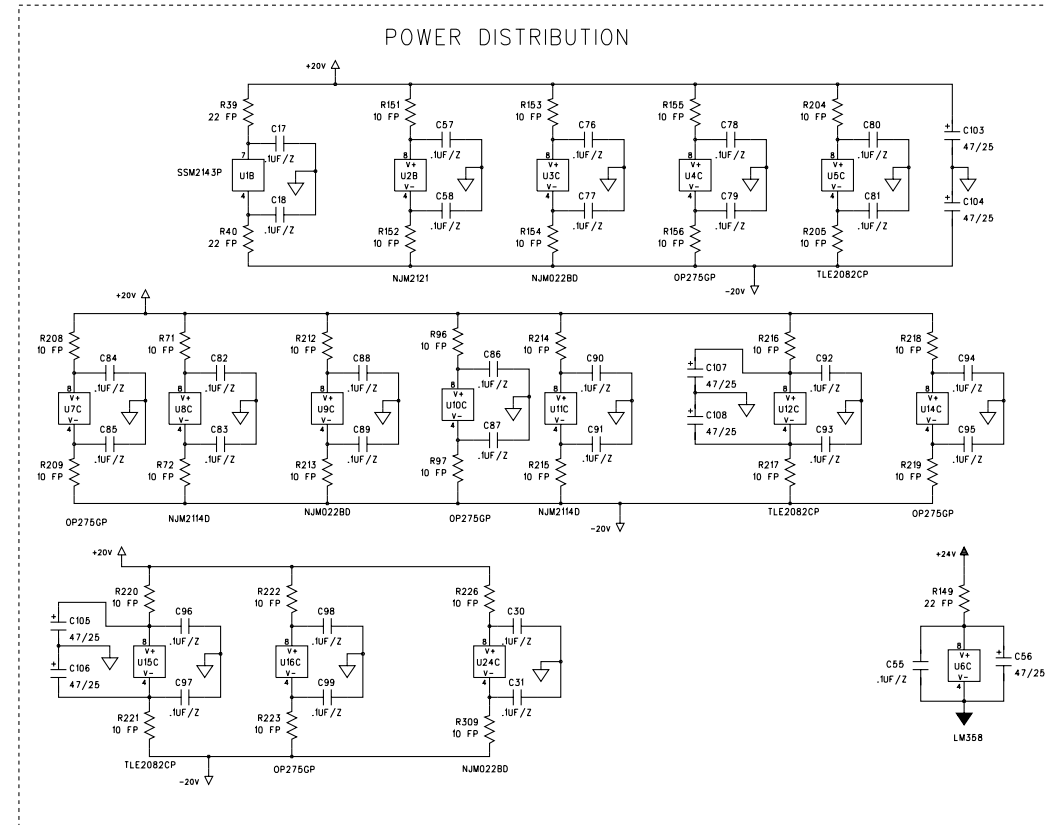
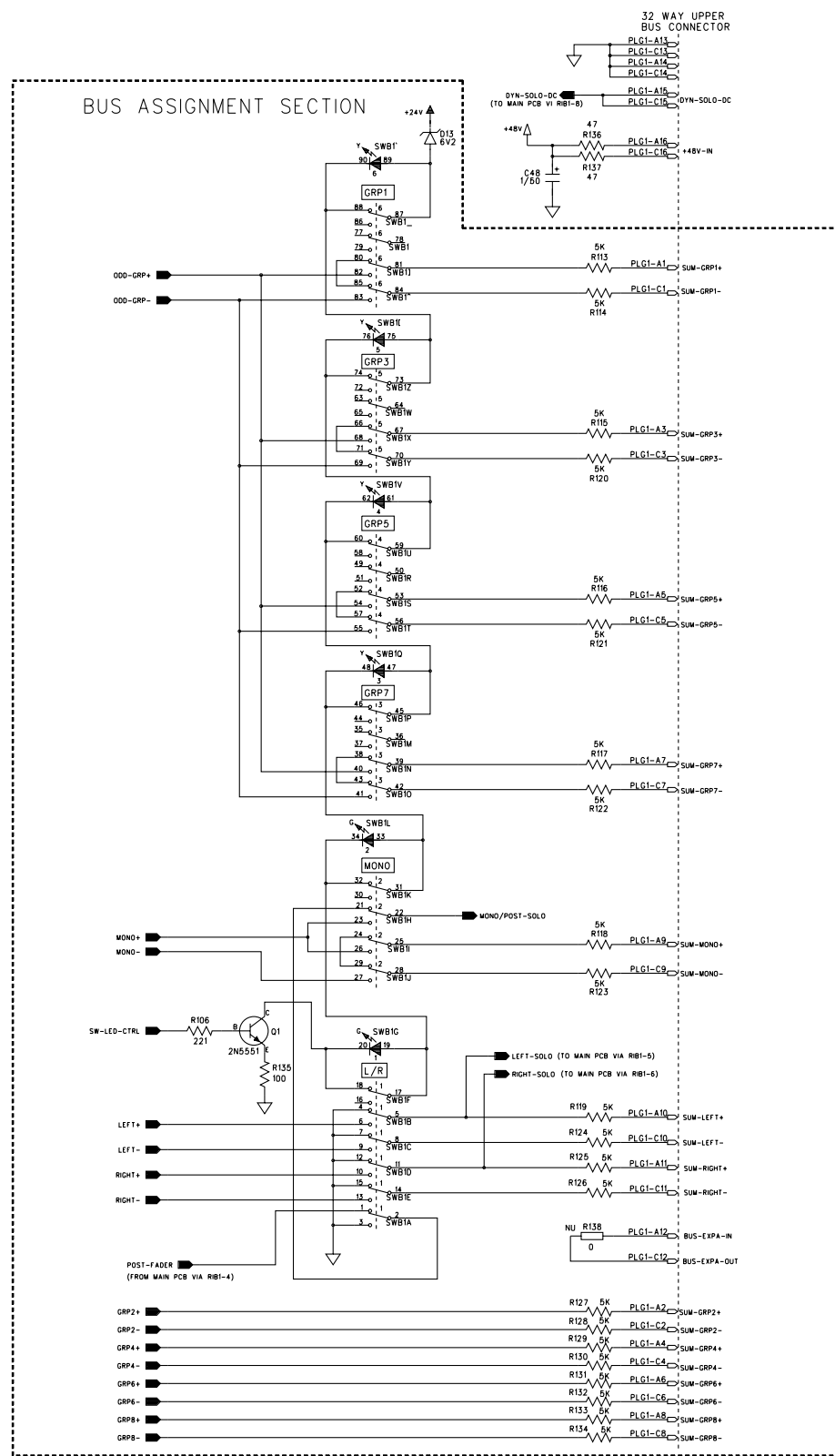
frame size = total number of modules in a console (inputs + groups + master + etc)

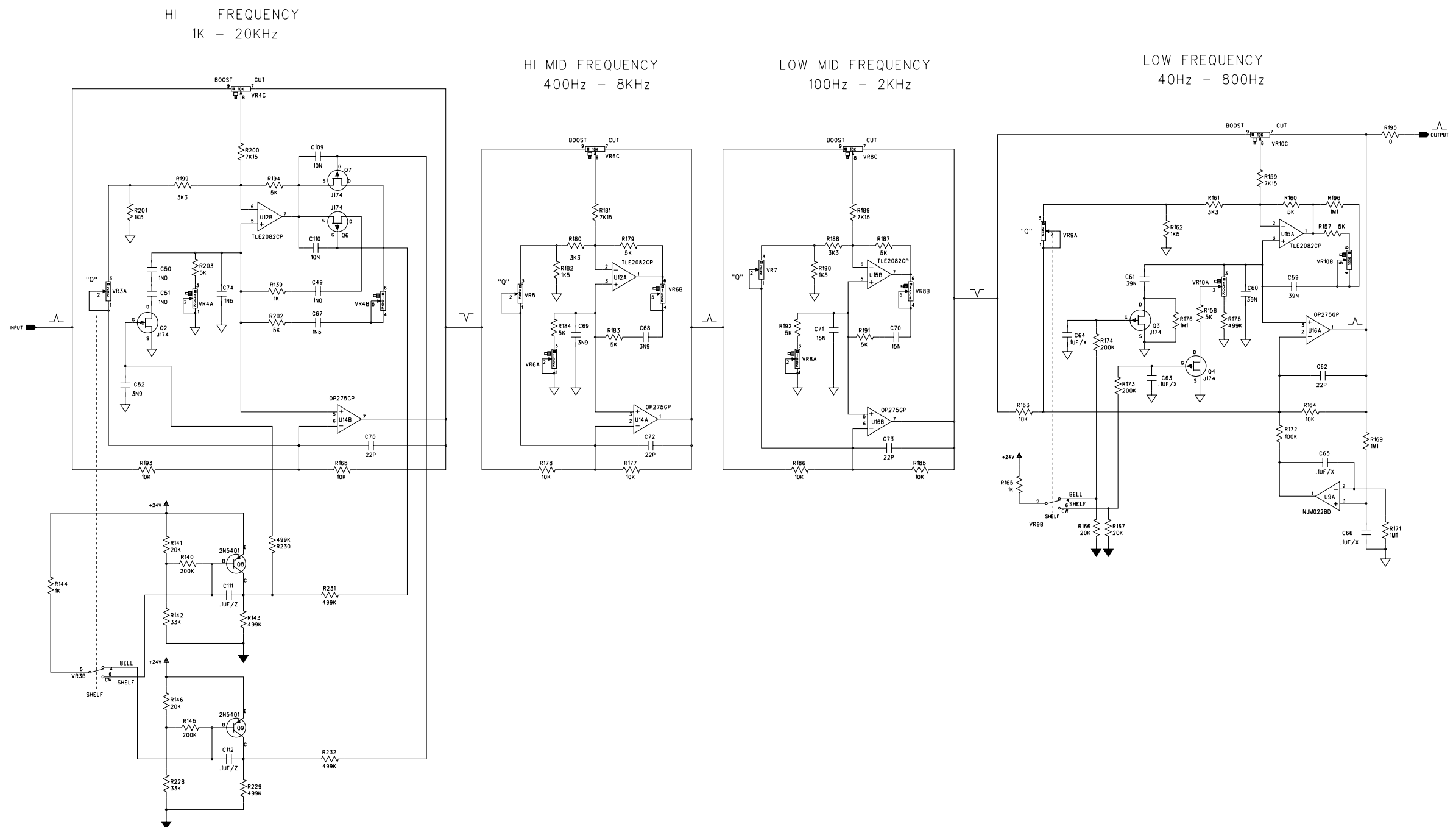


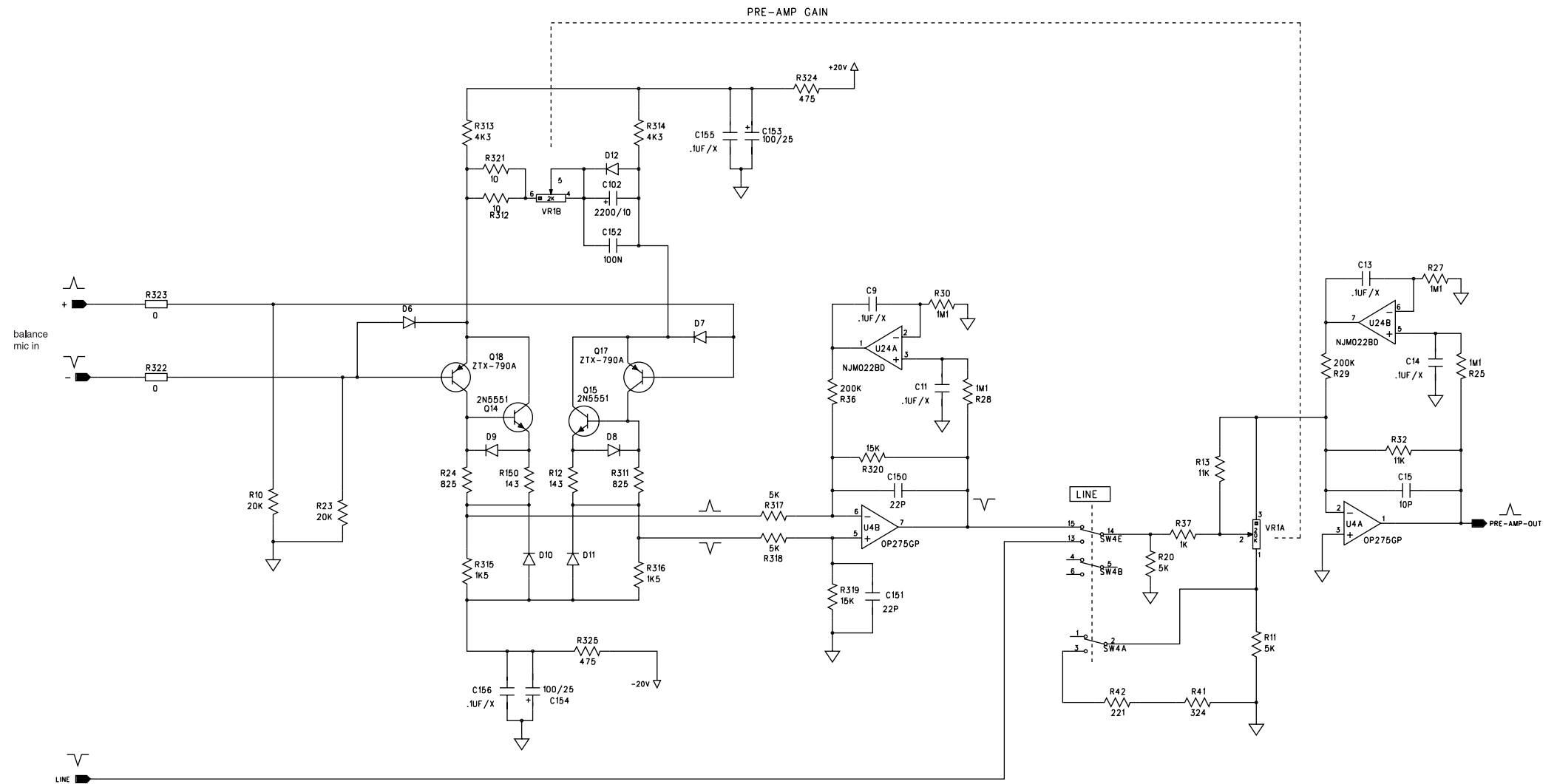
console rear-view (enlarged)

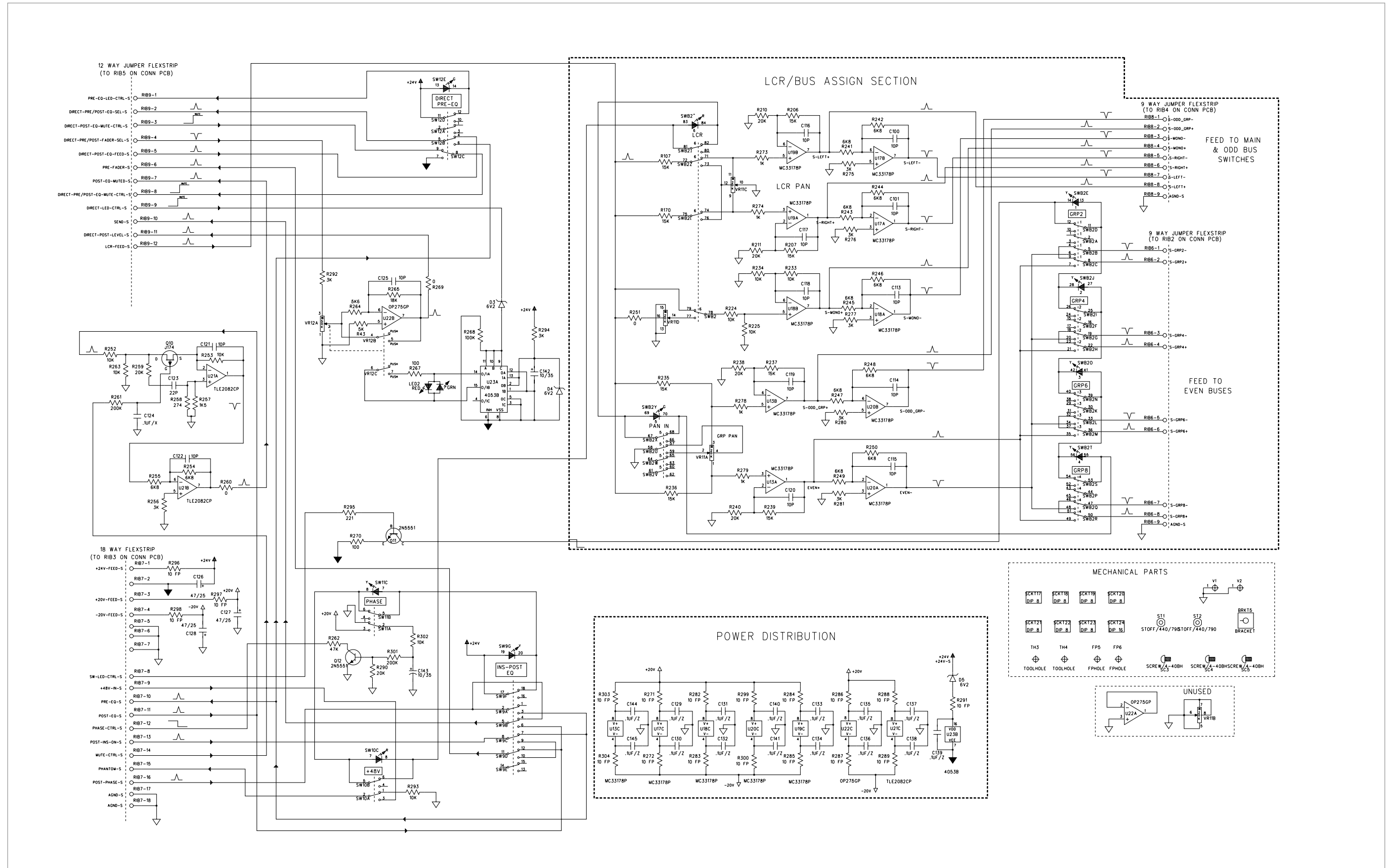


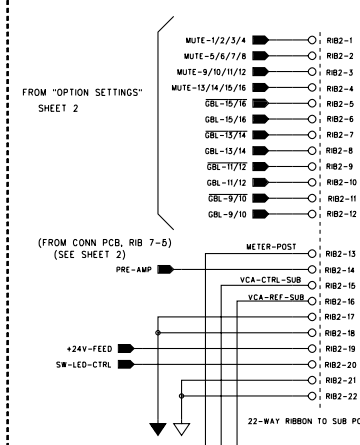
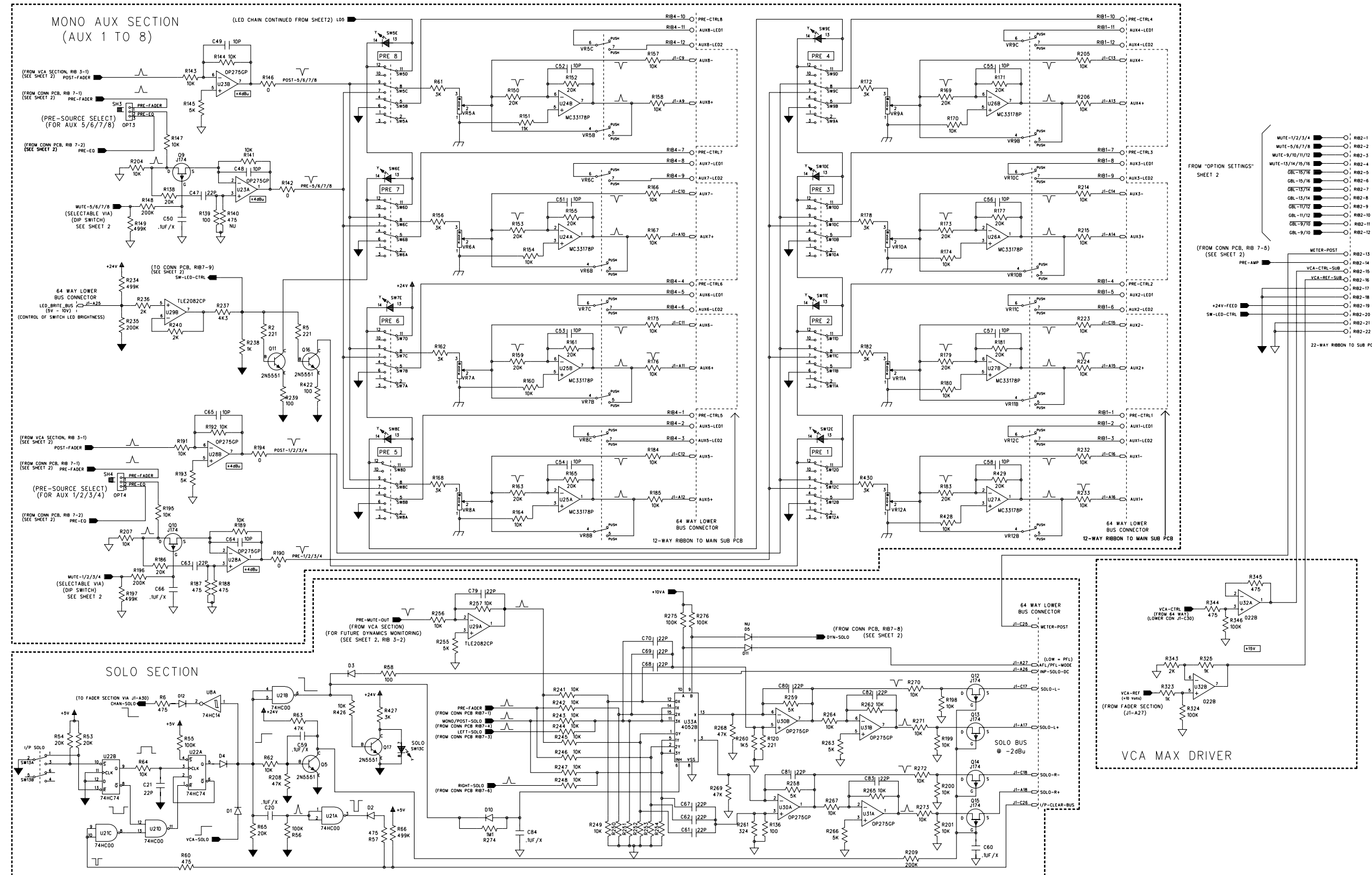


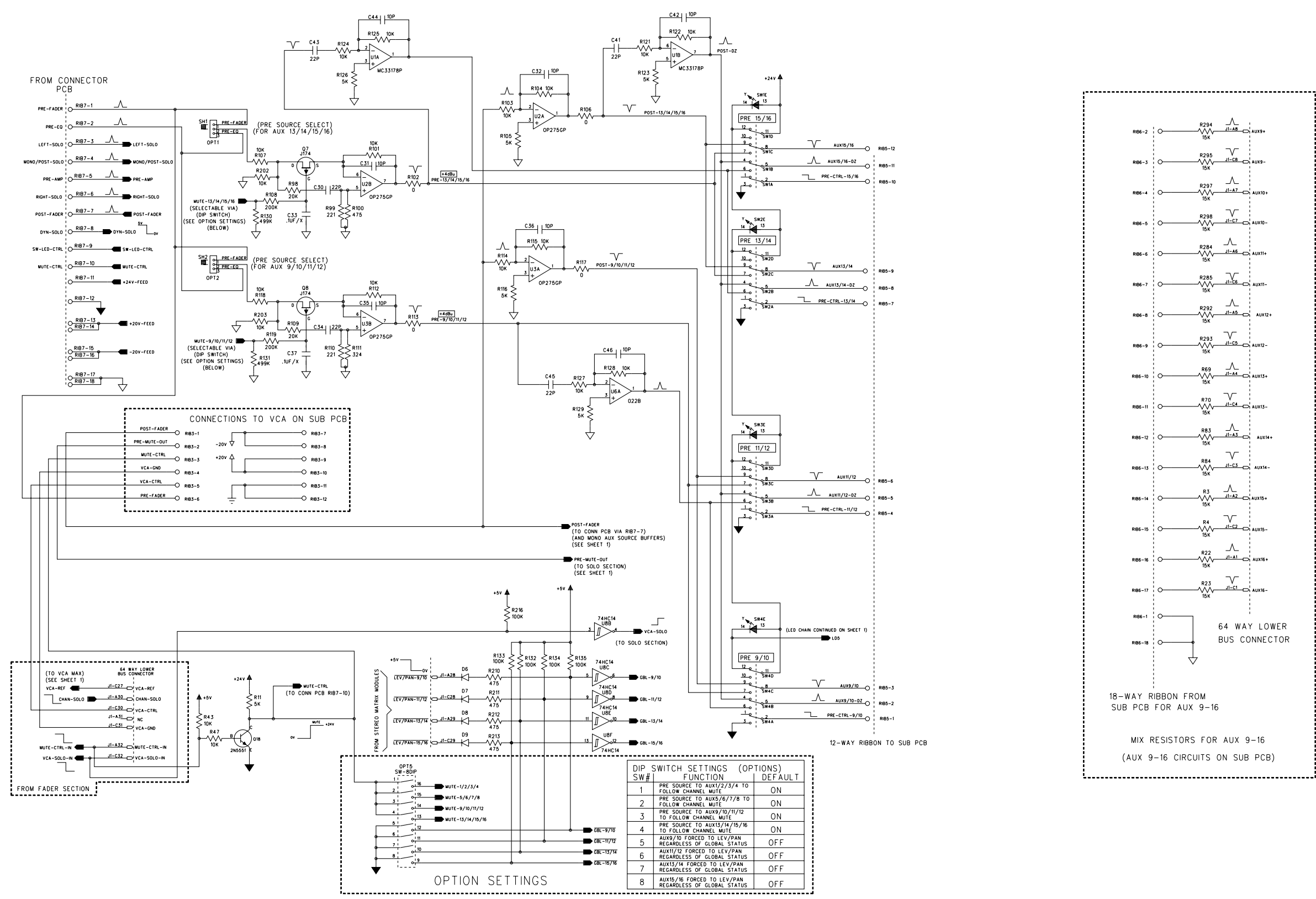


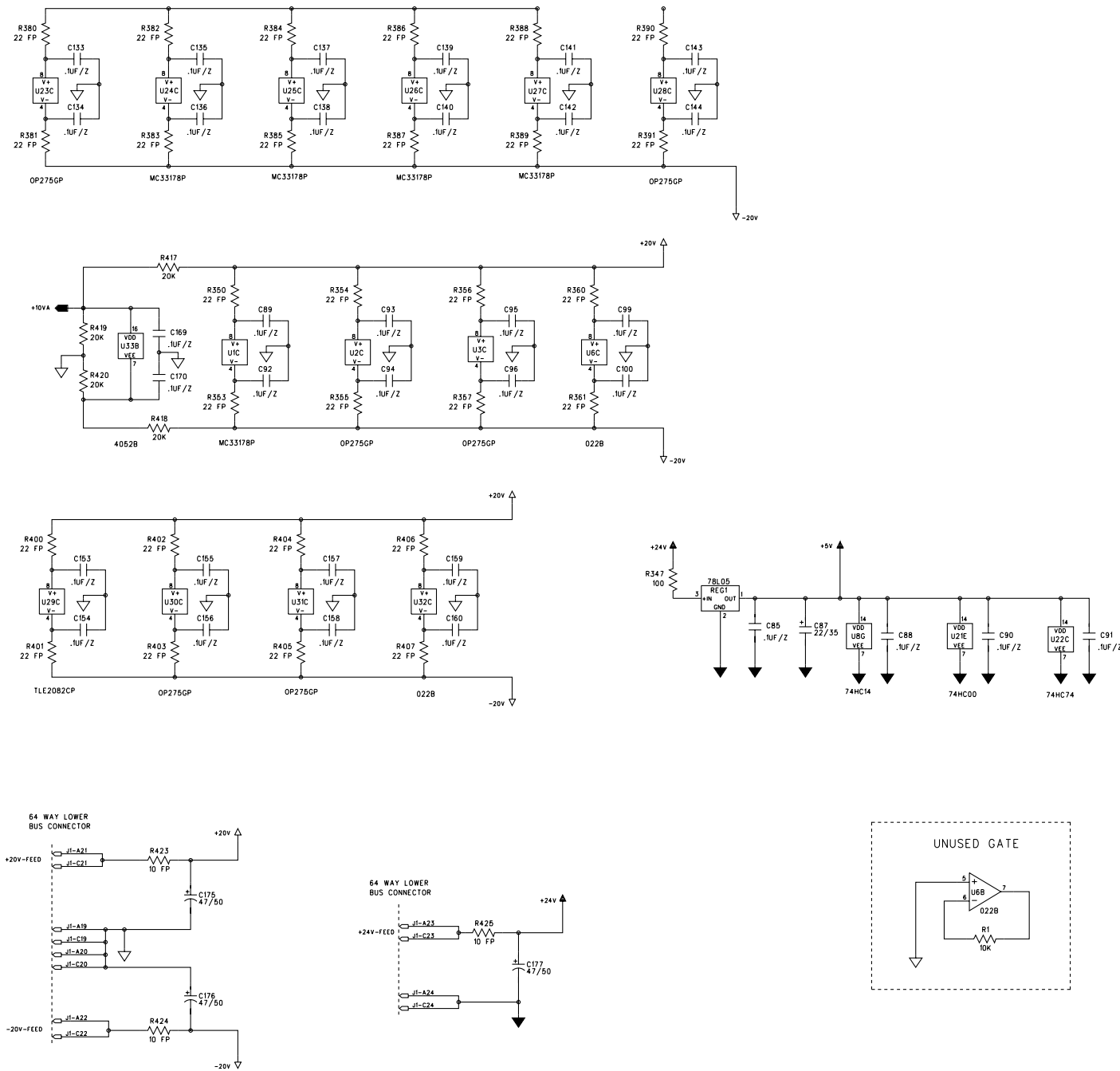




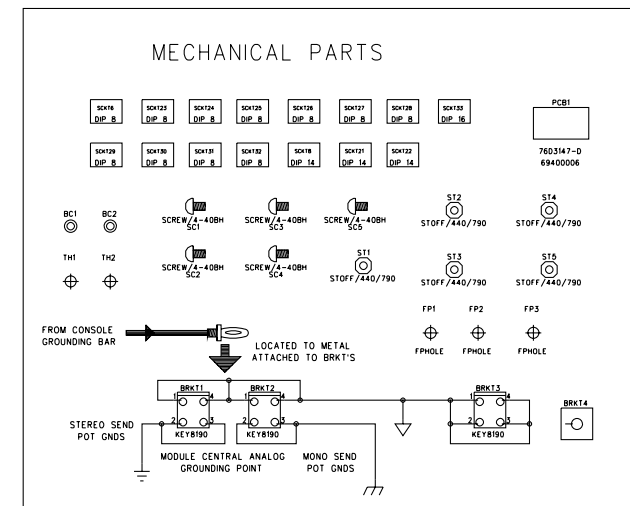


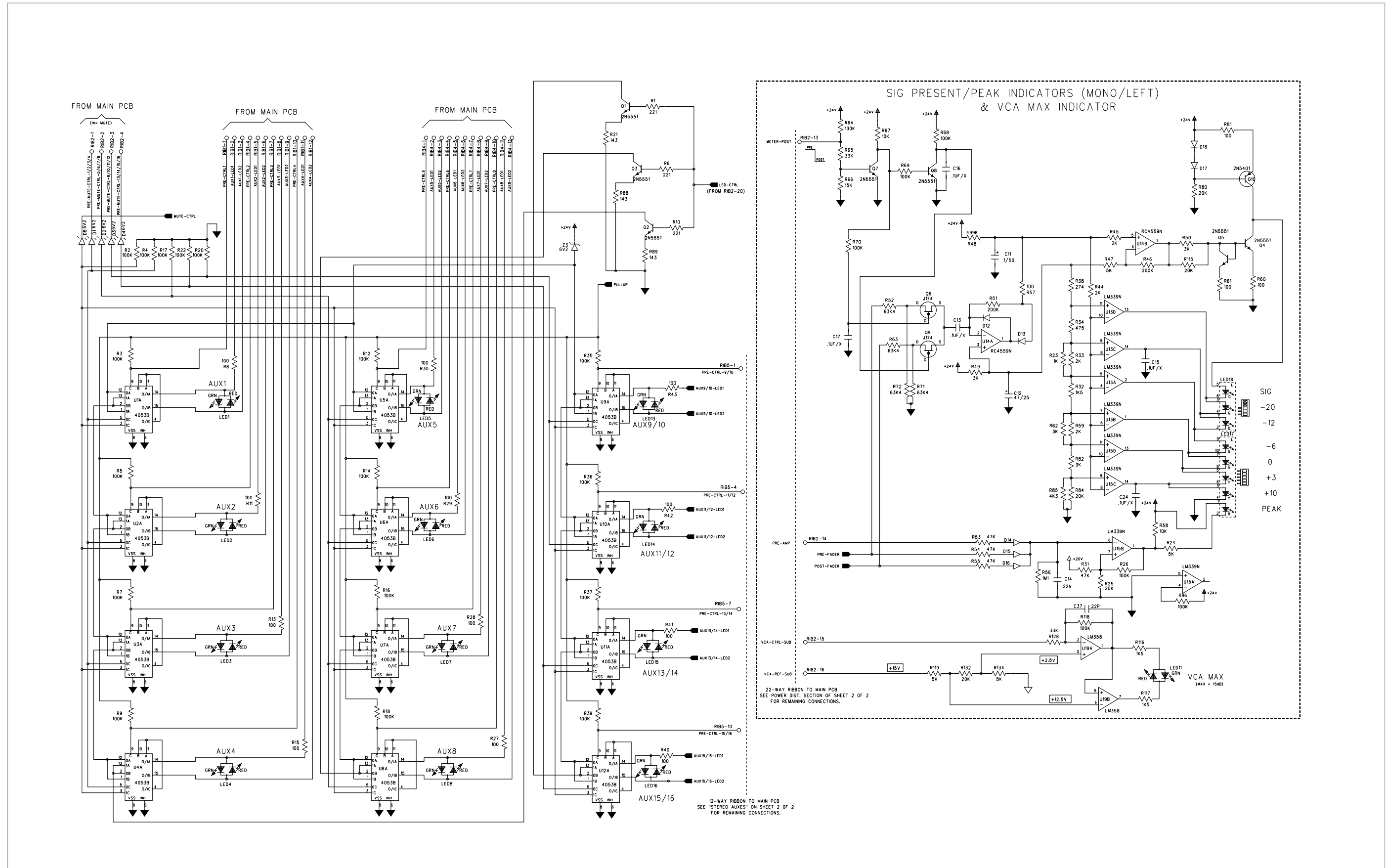


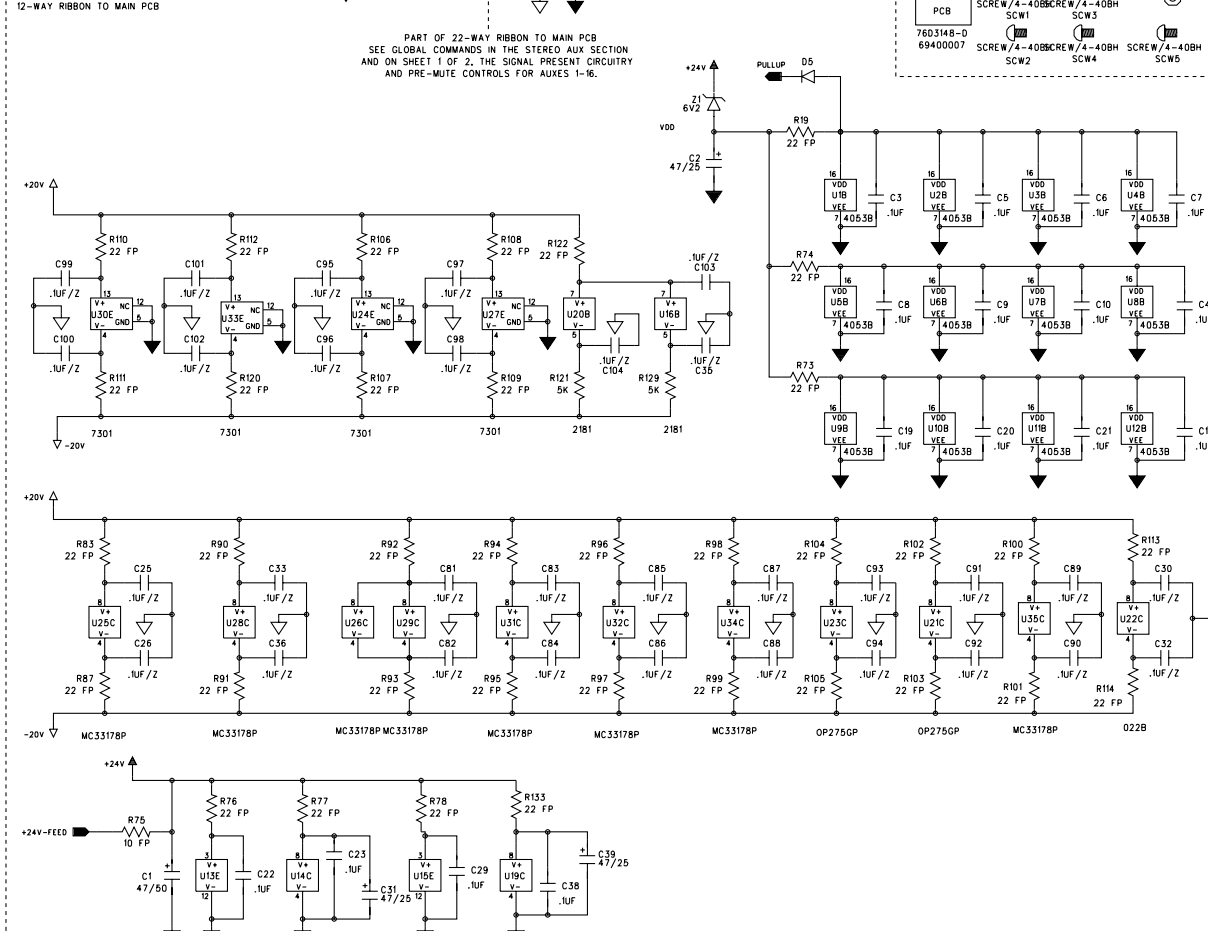
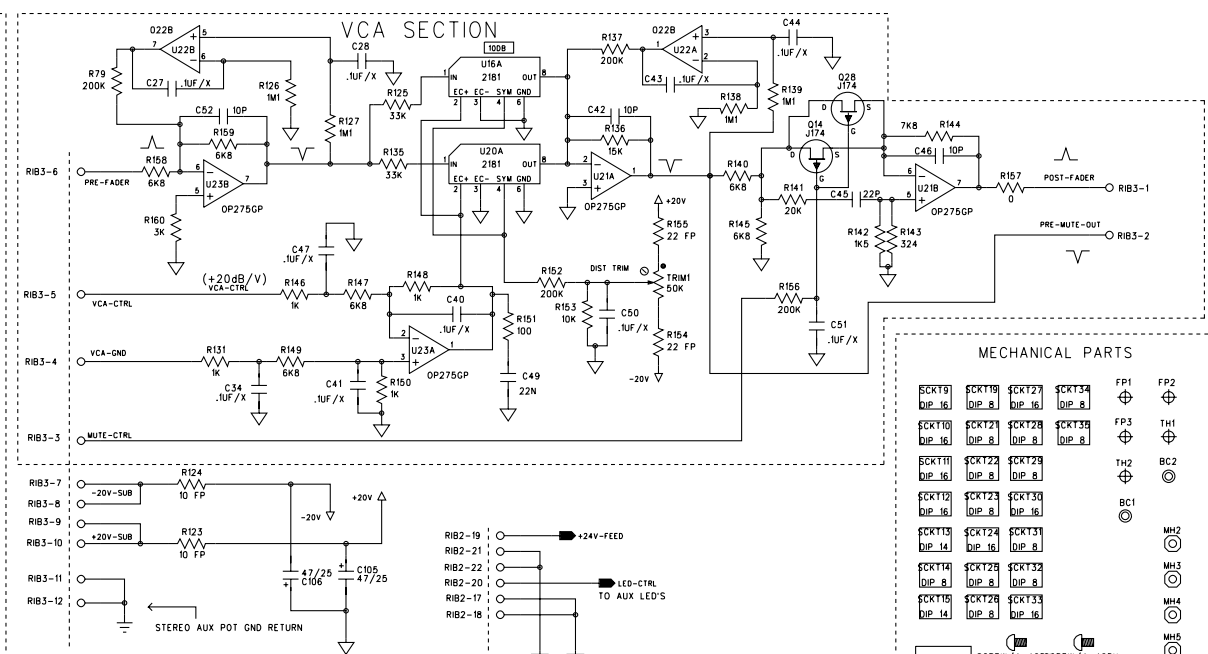
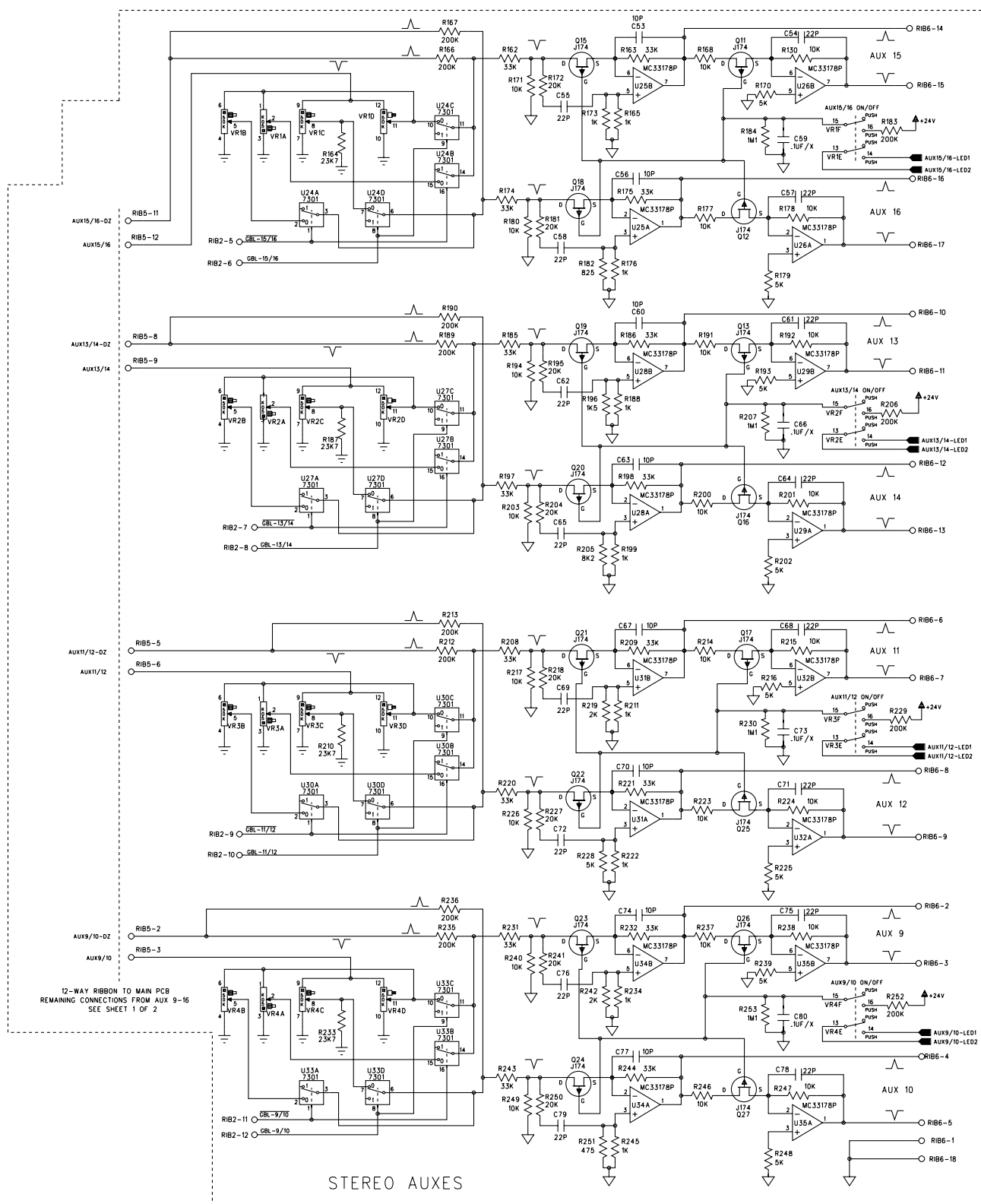


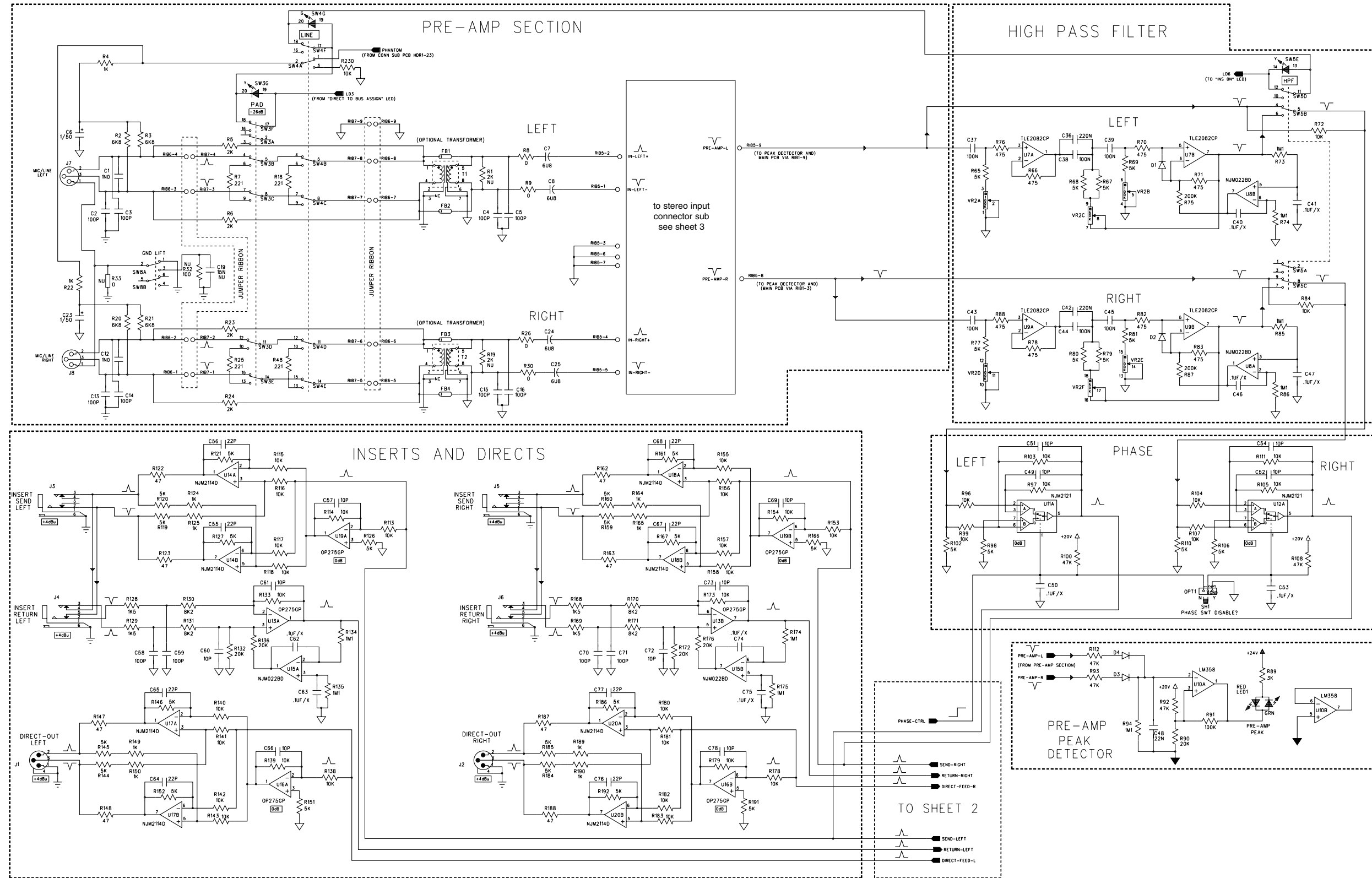


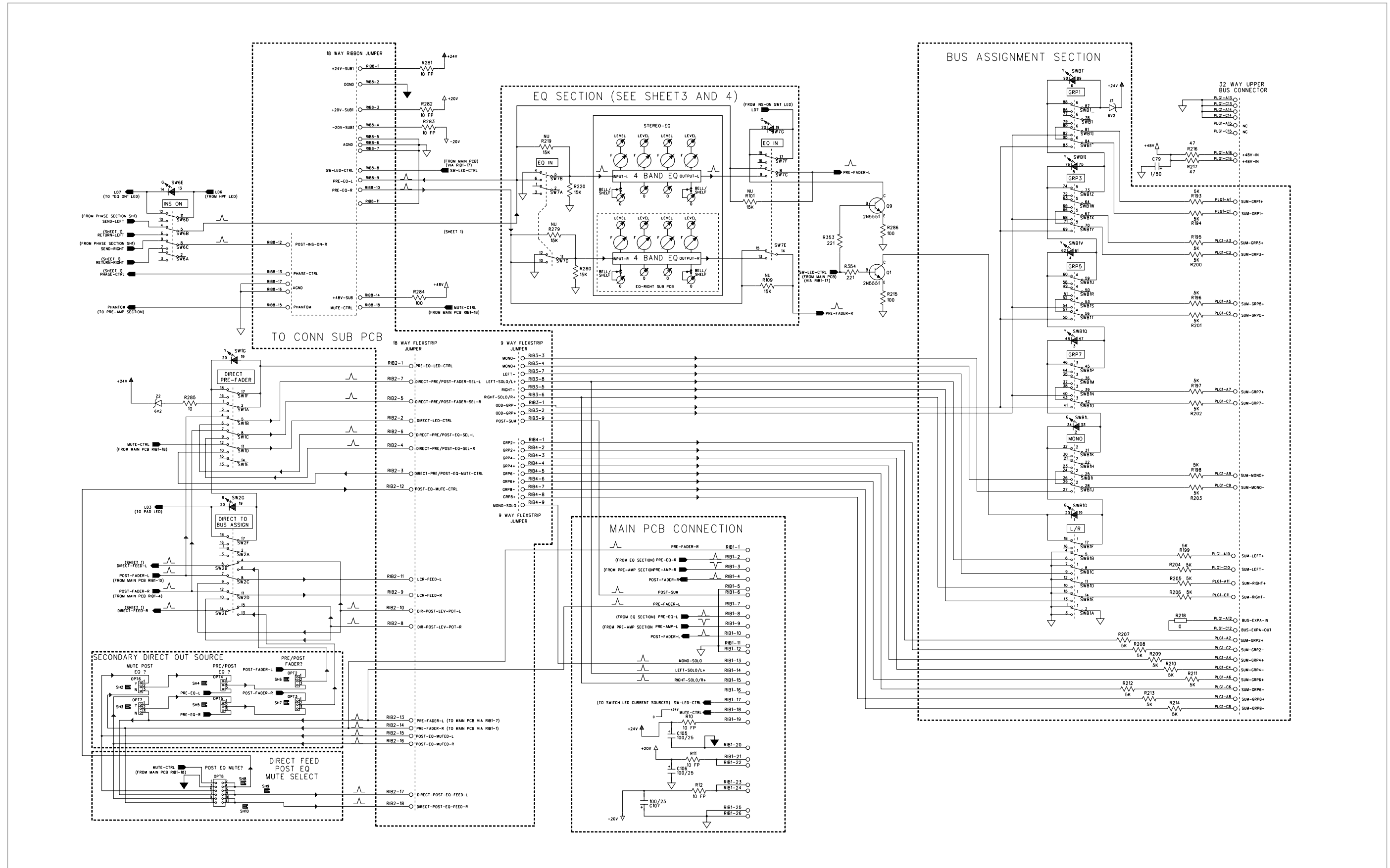
DCO/ECO #	CHANGE DESCRIPTION	PARTS CHANGED	ENGINEER
dc0775	AUX 5/6/7/8 PRE AUX MUTE TRIM SOLO CROSSTALK TRIM	R140 FROM 475R TO NU R139 FROM 221R TO 100R0 R260 FROM 4K99 TO 1K50 R120 FROM 1K0 TO 221R R261 FROM 4K99 TO 324R R136 FROM 1K0 TO 100R0	TAZ

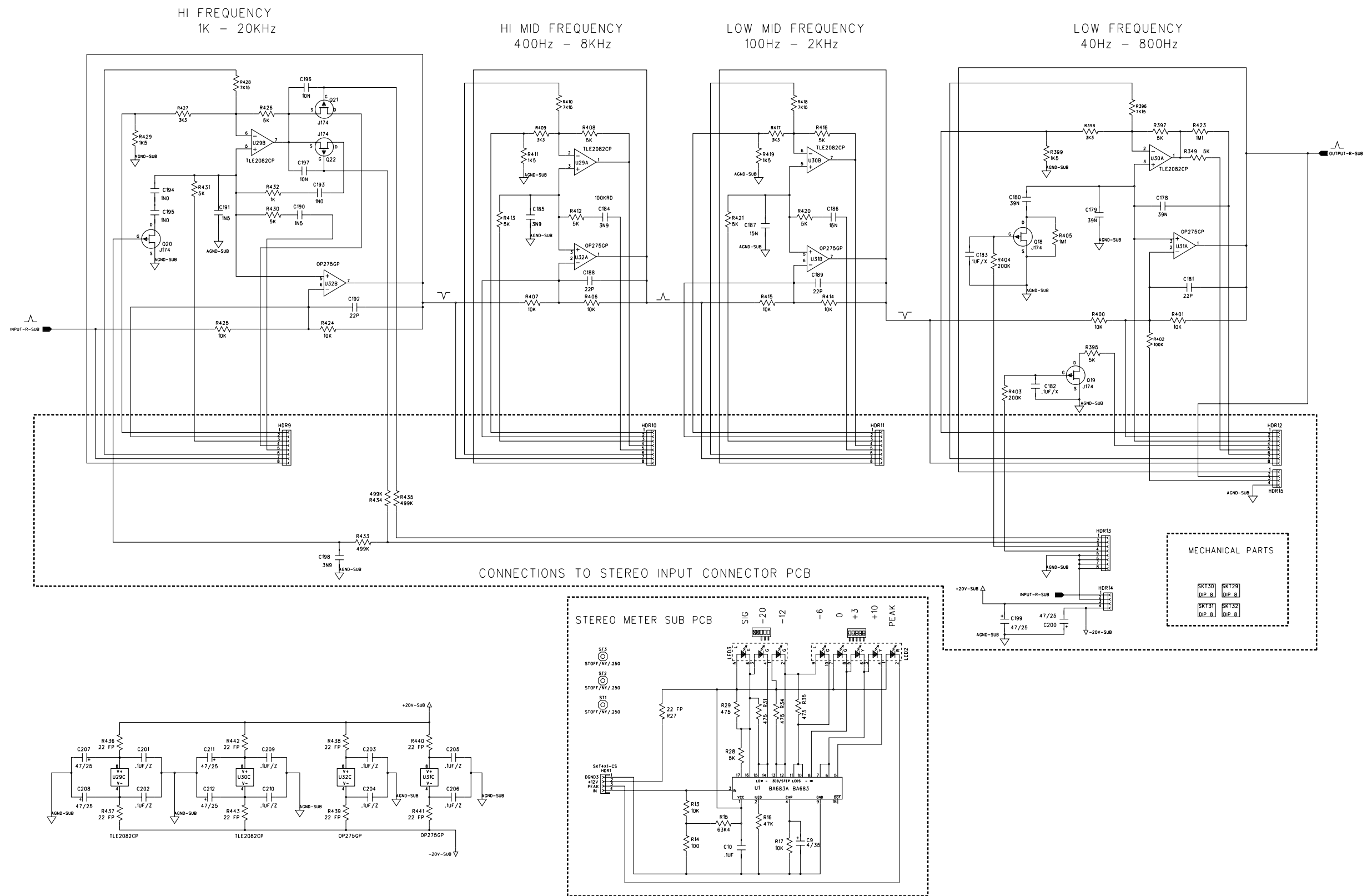


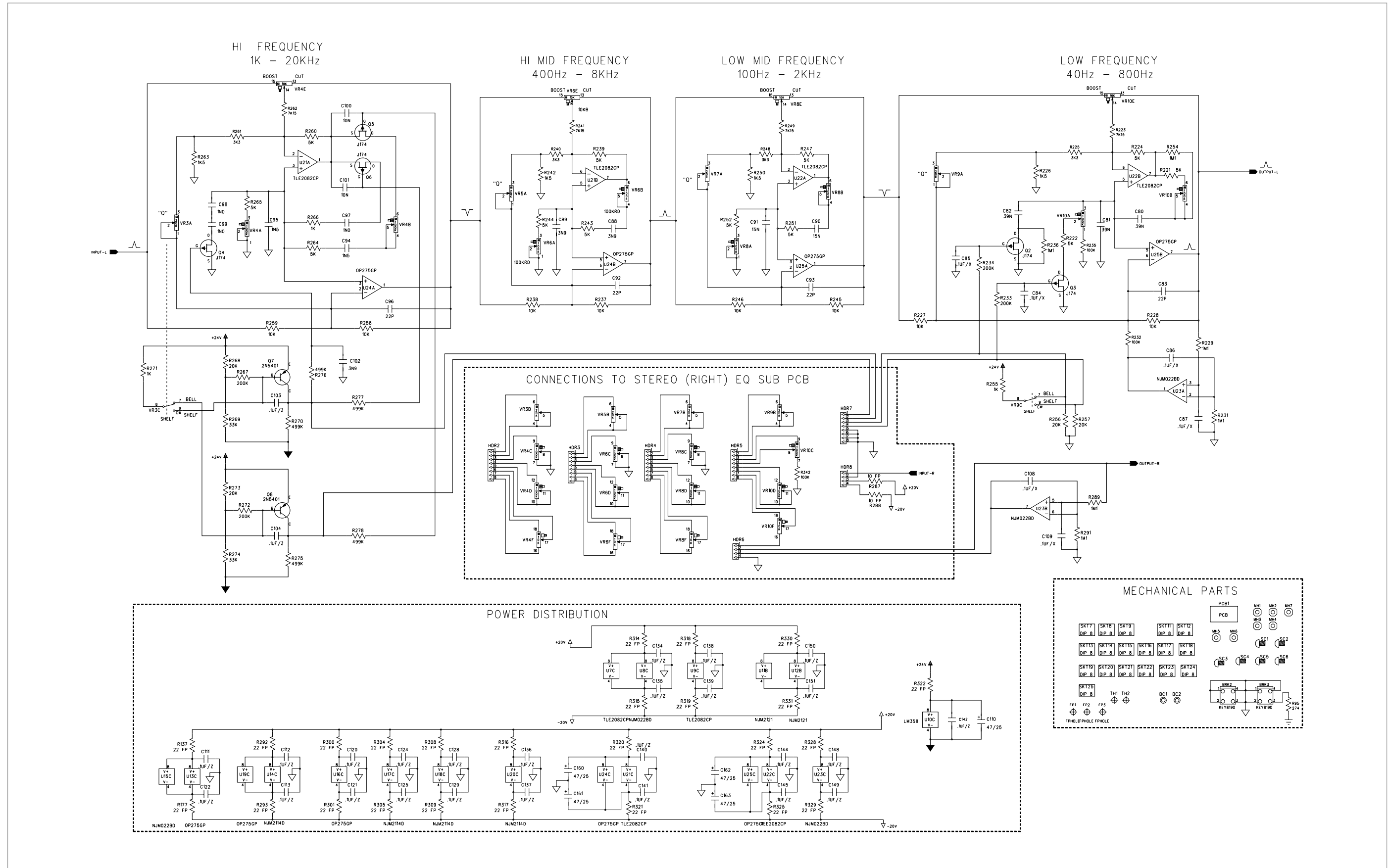


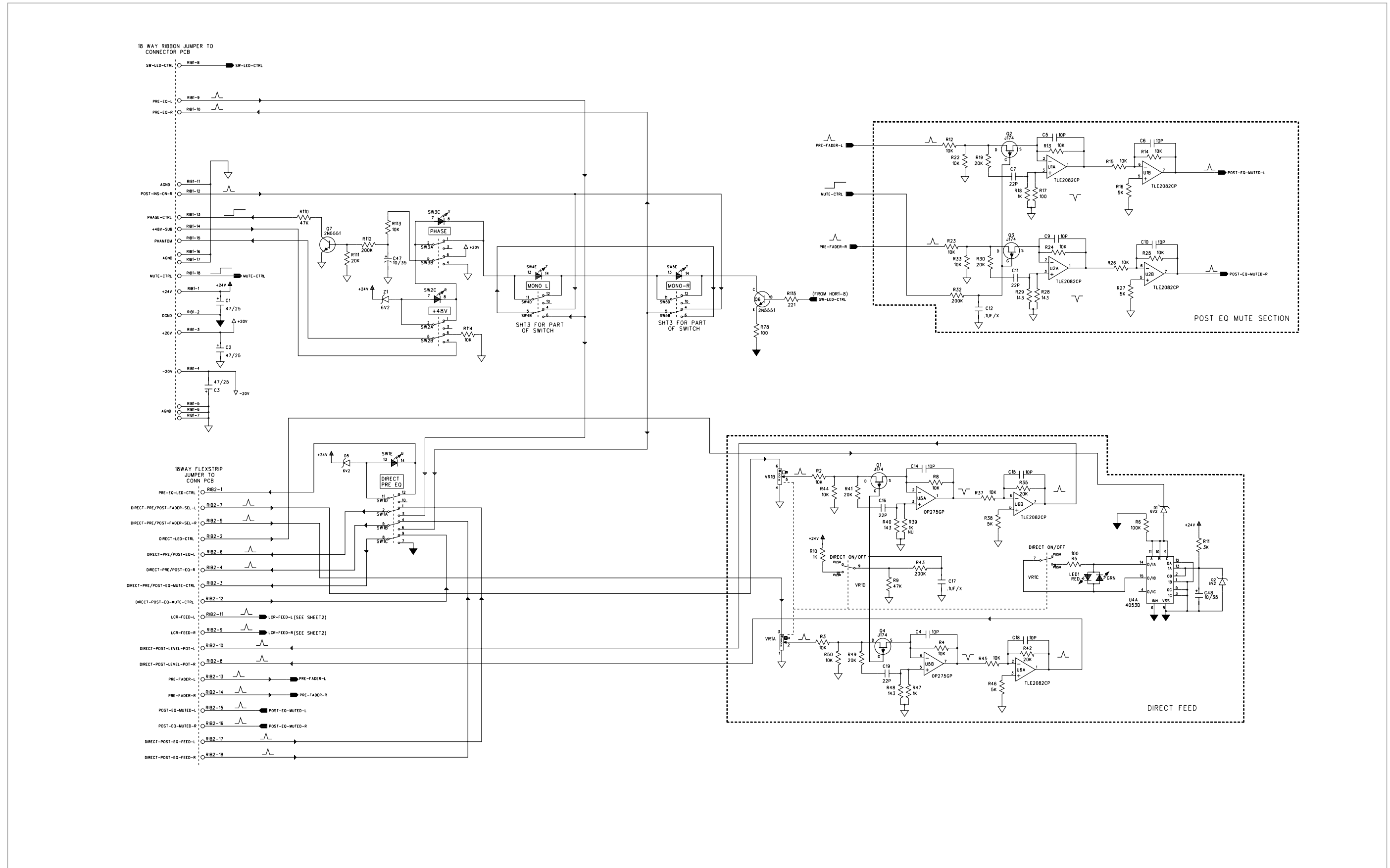


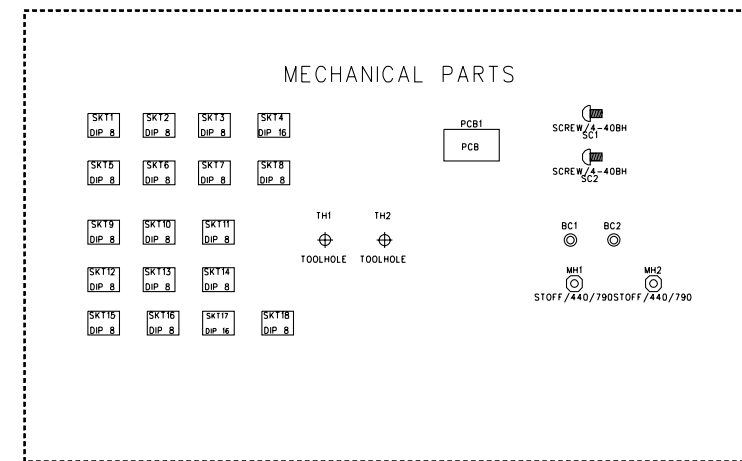
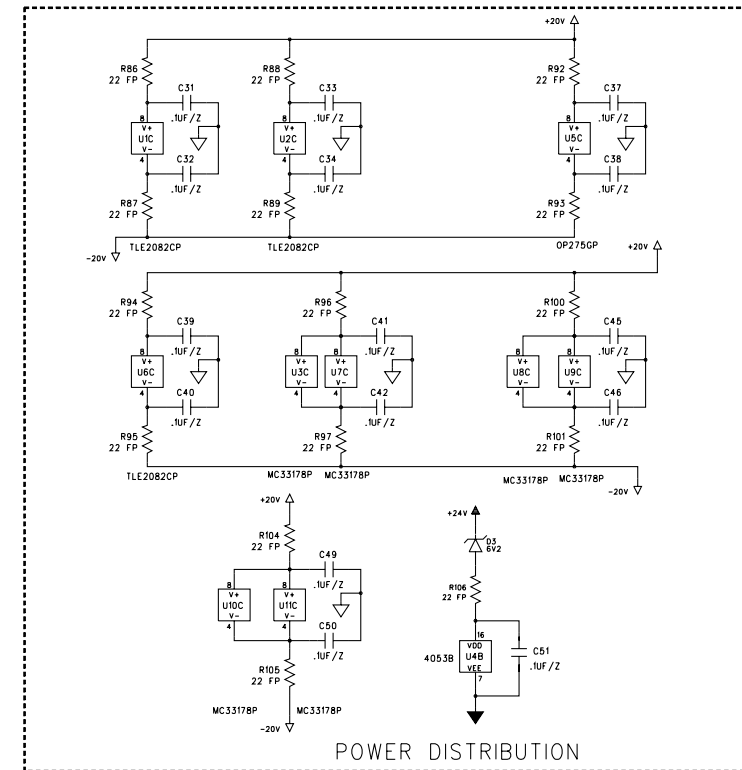
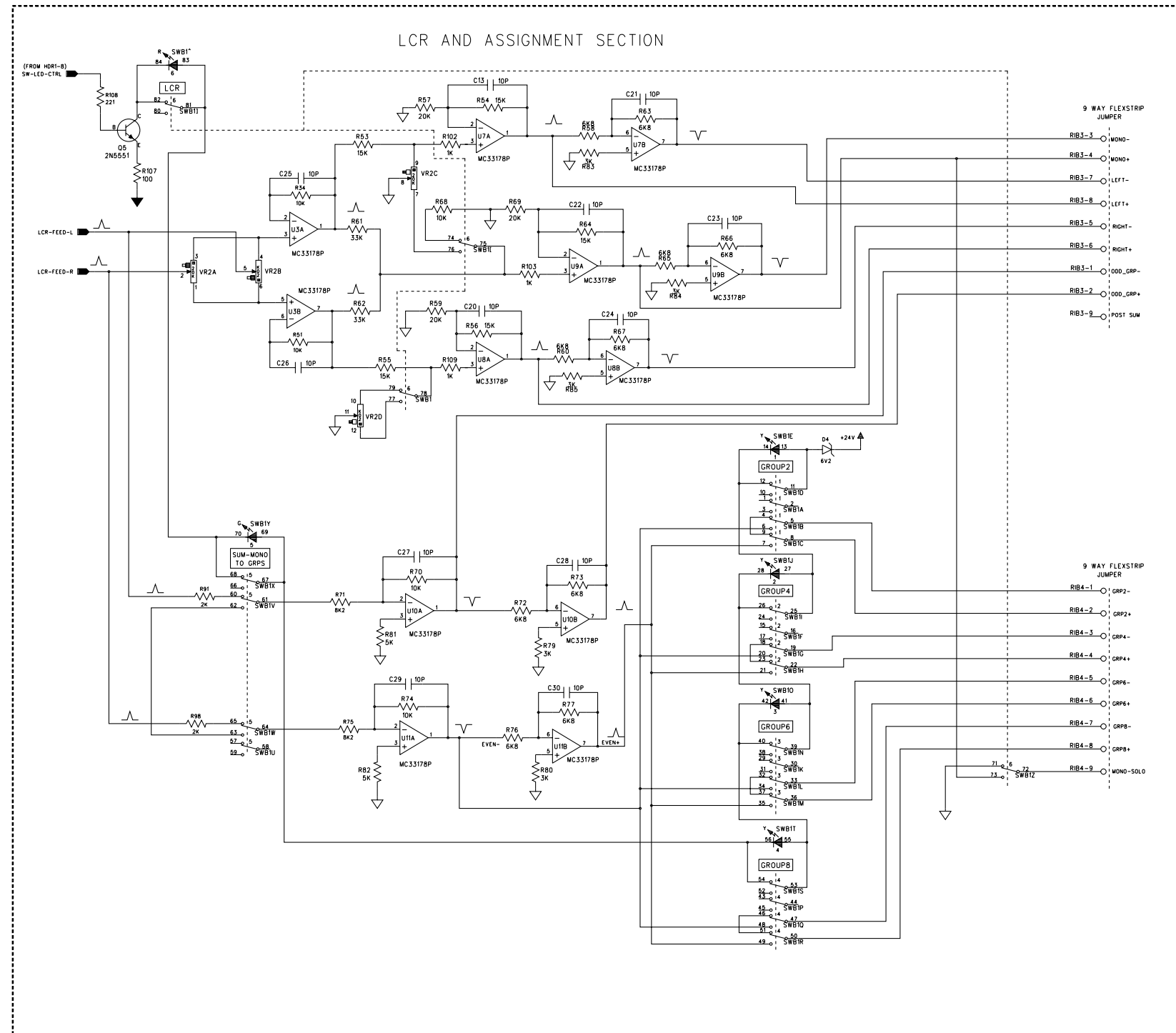


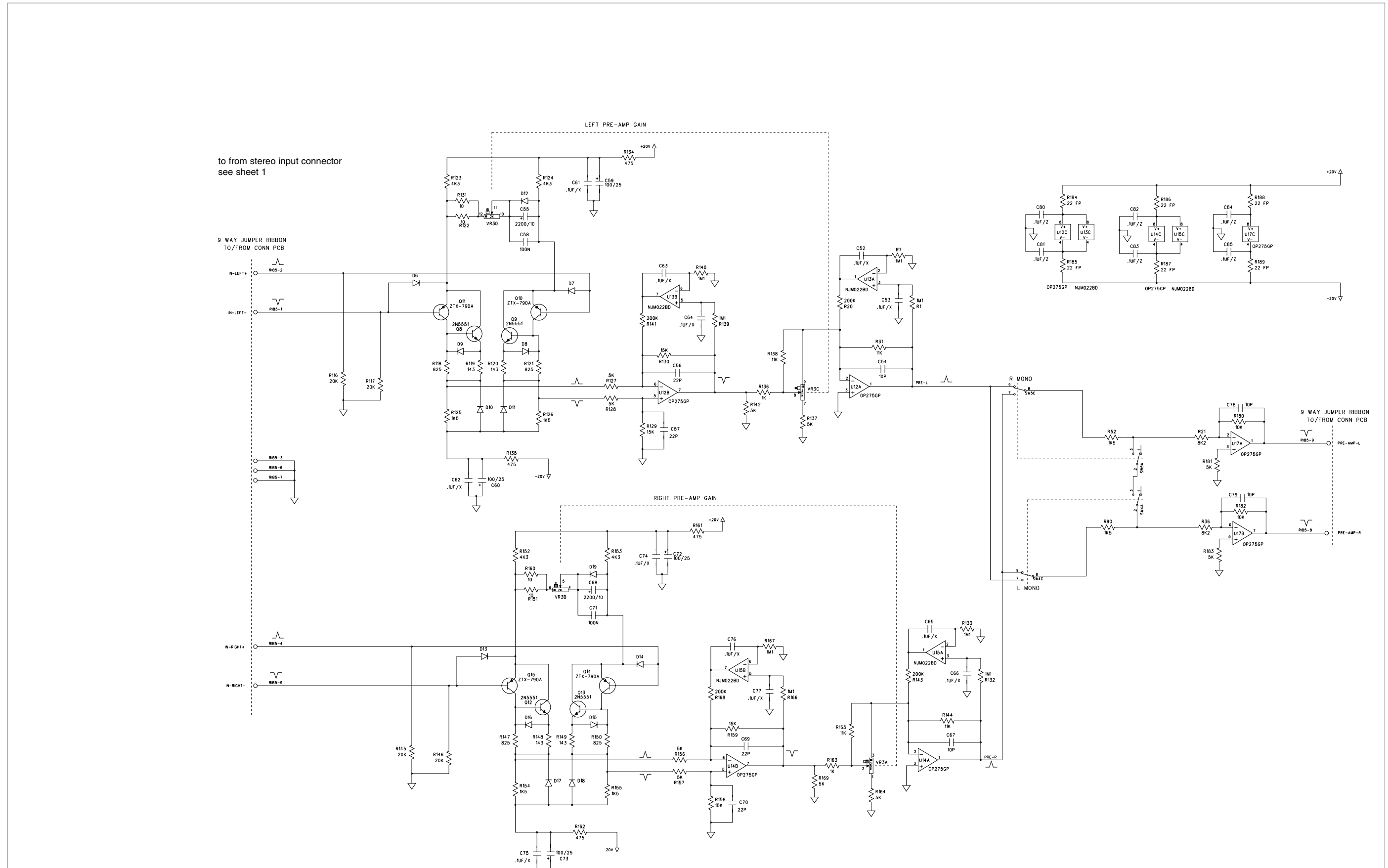


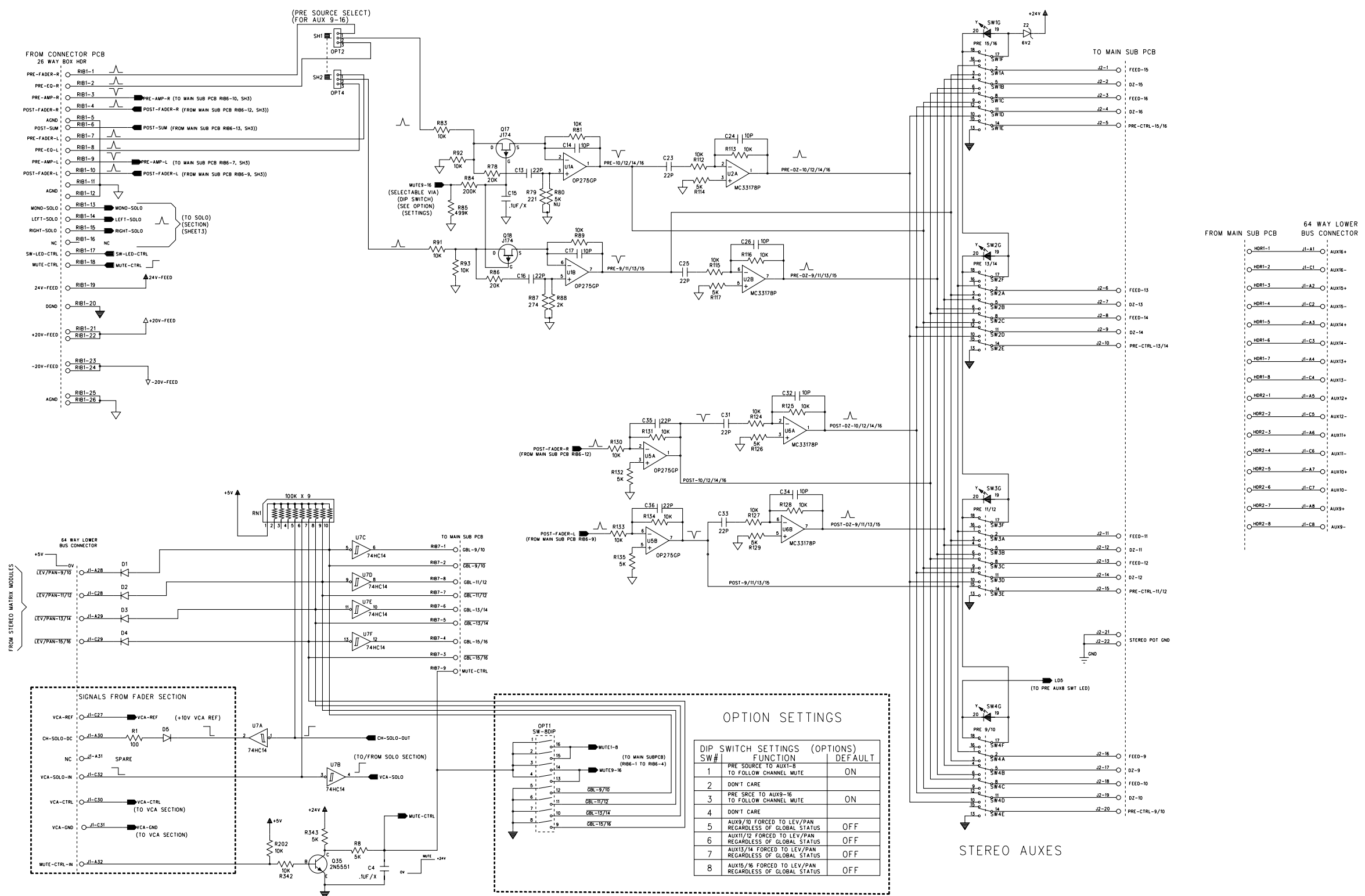


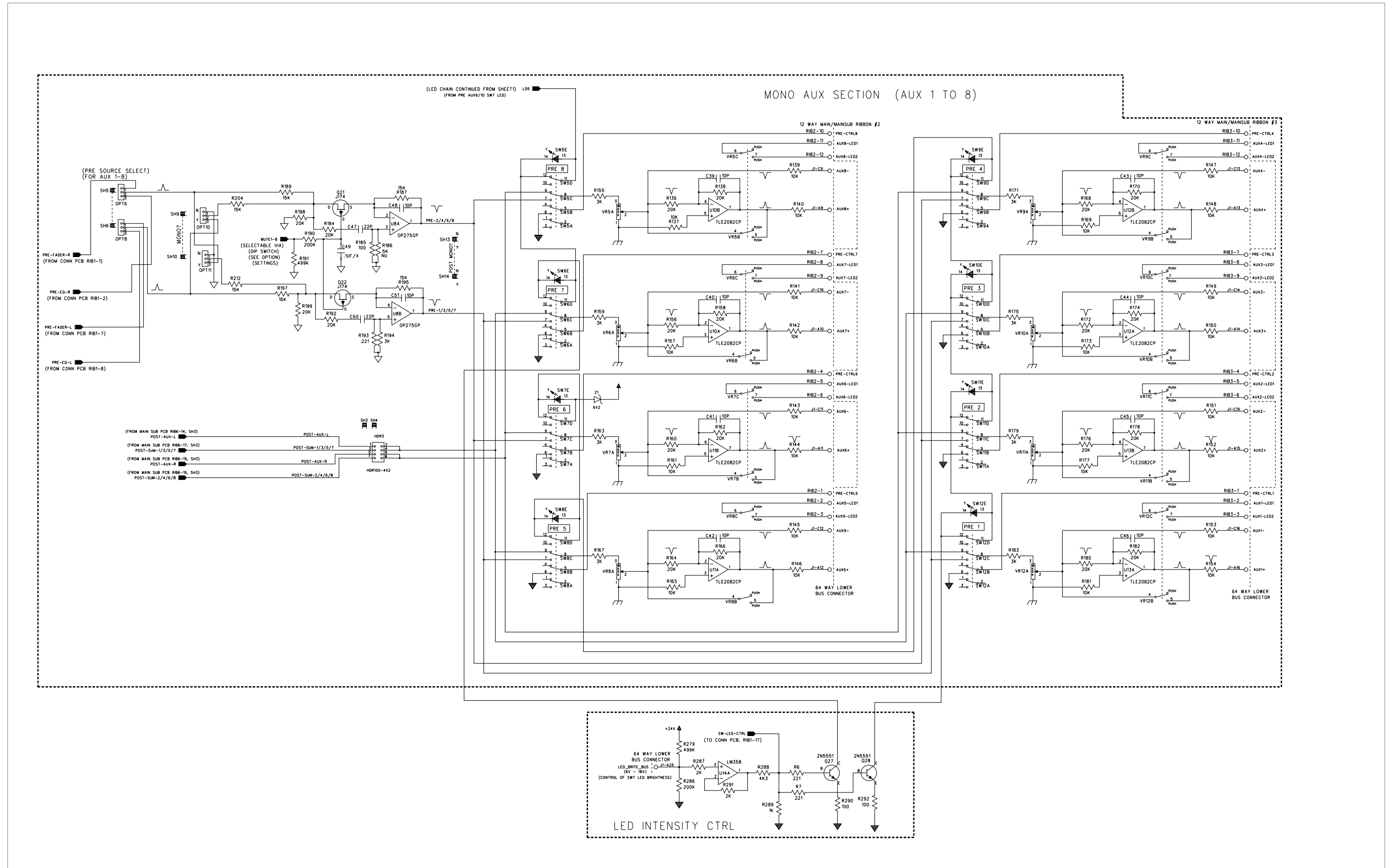


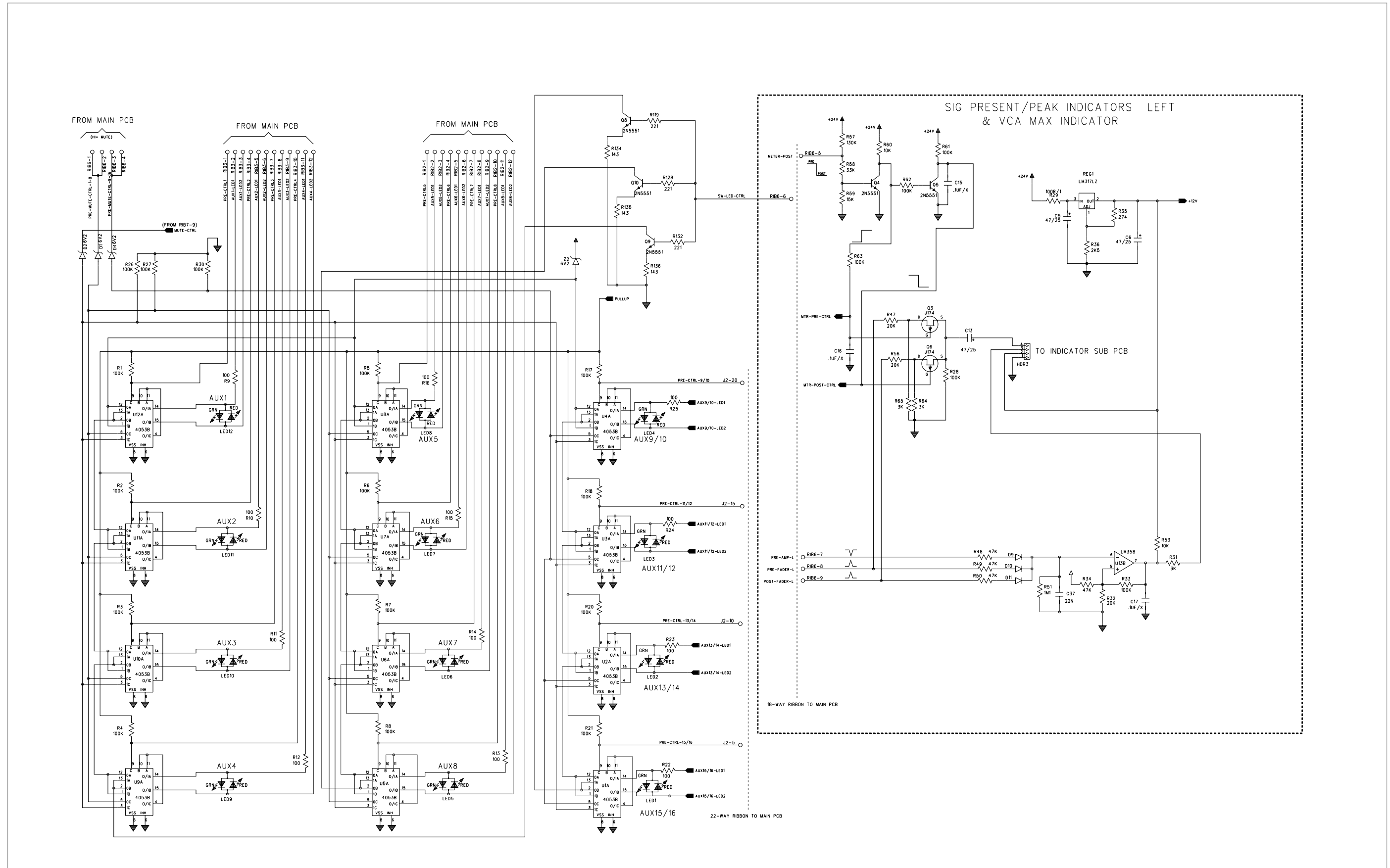


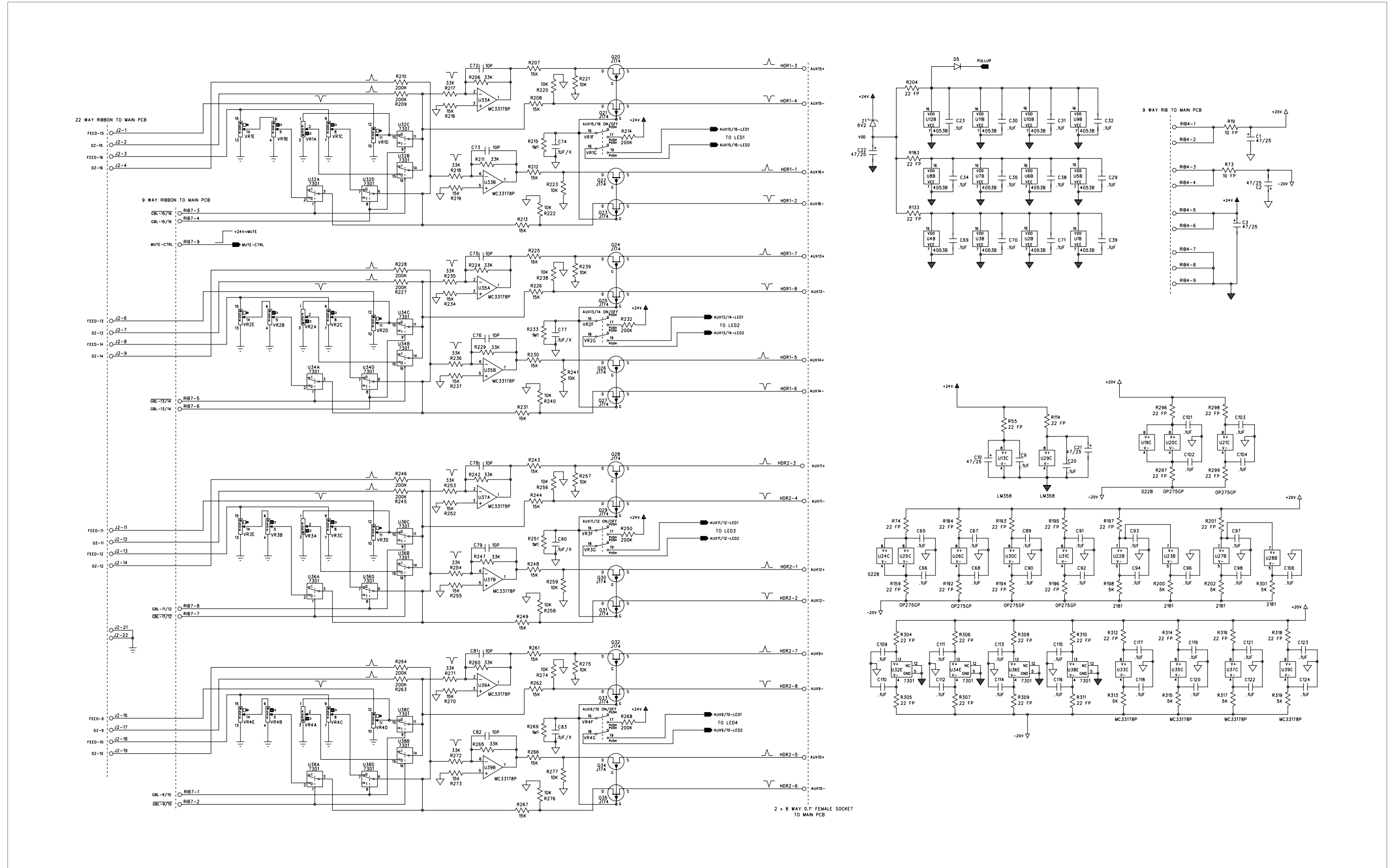


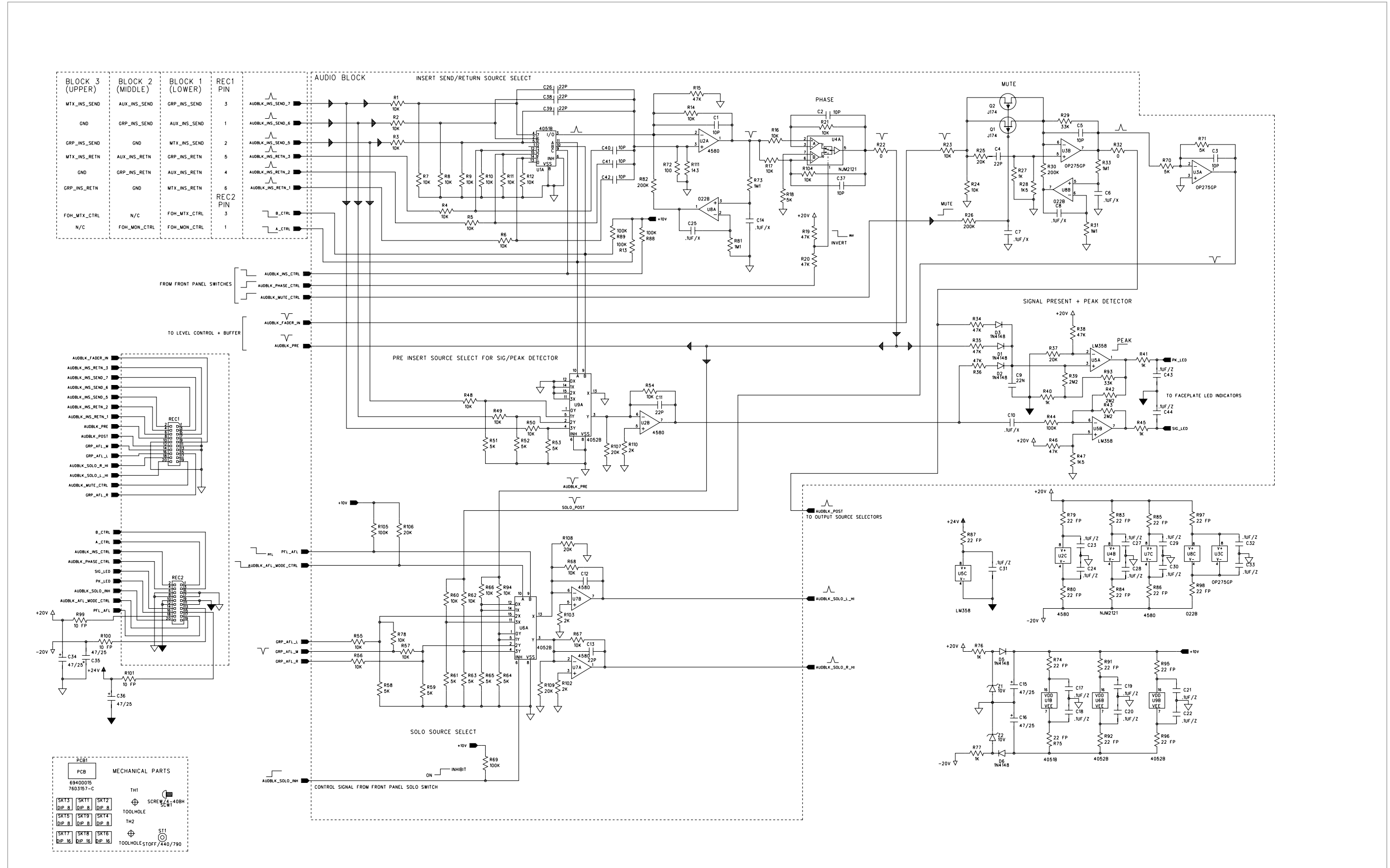


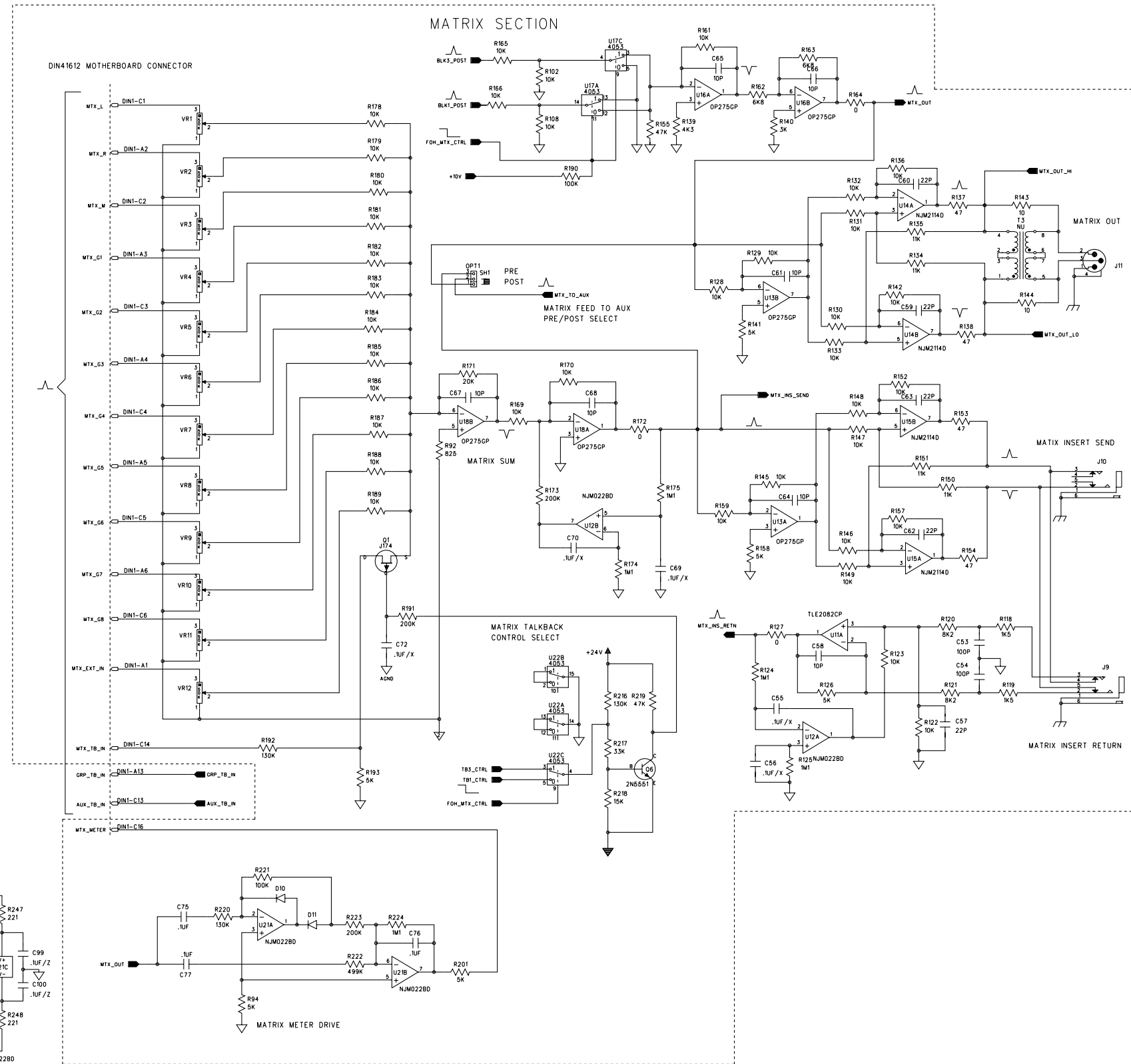
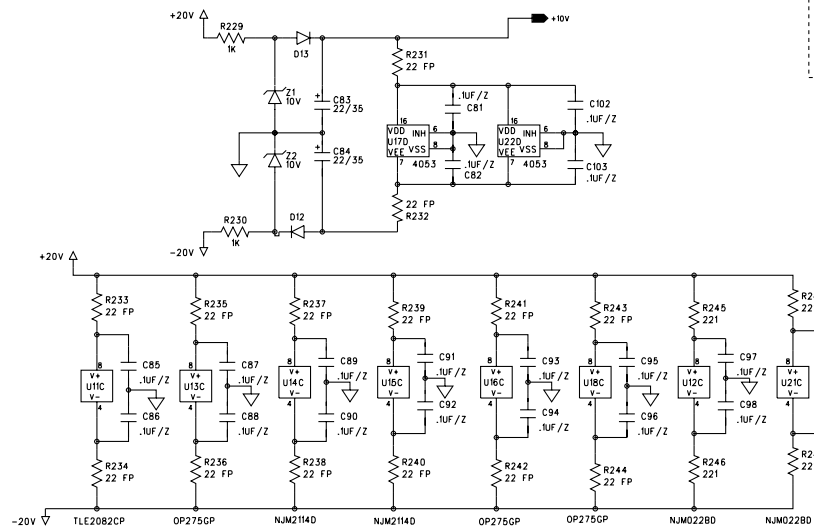
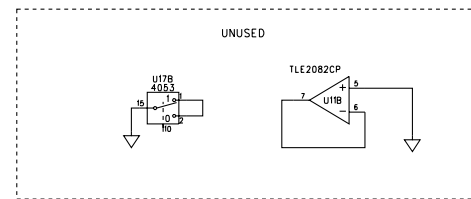
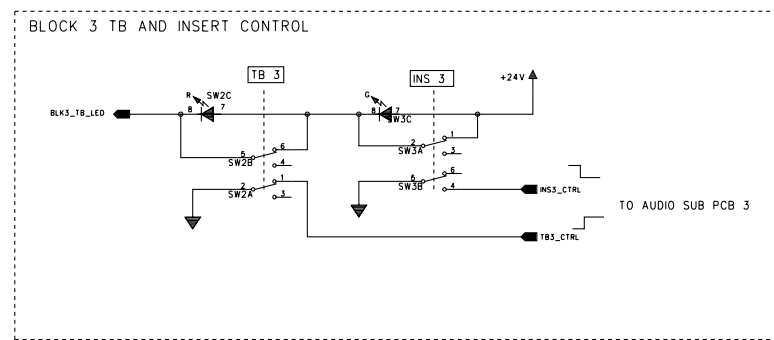
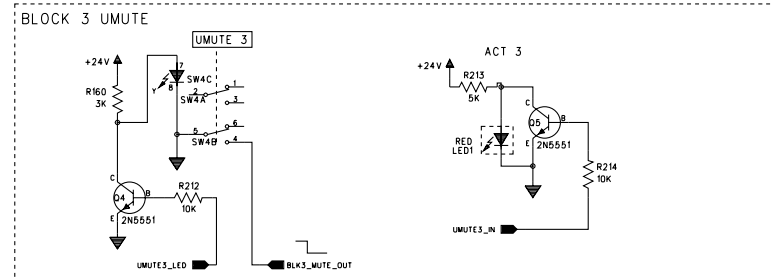


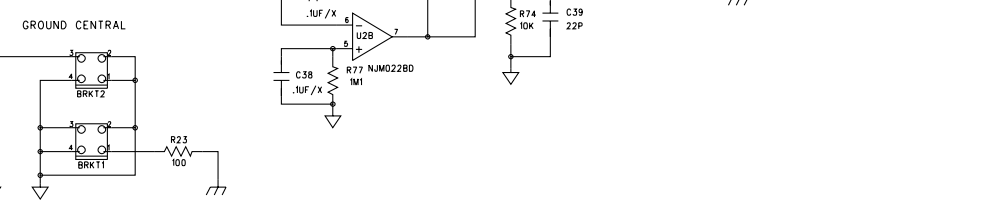
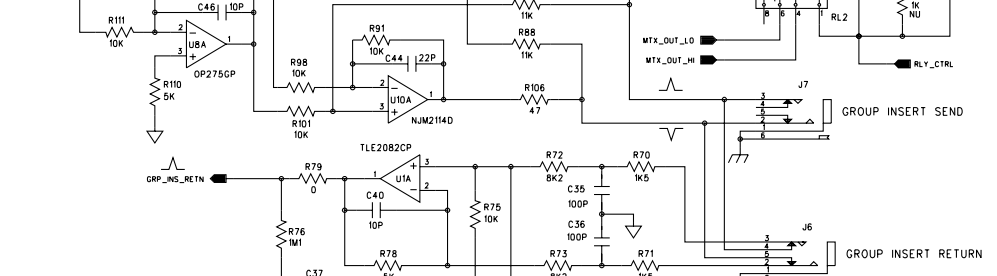
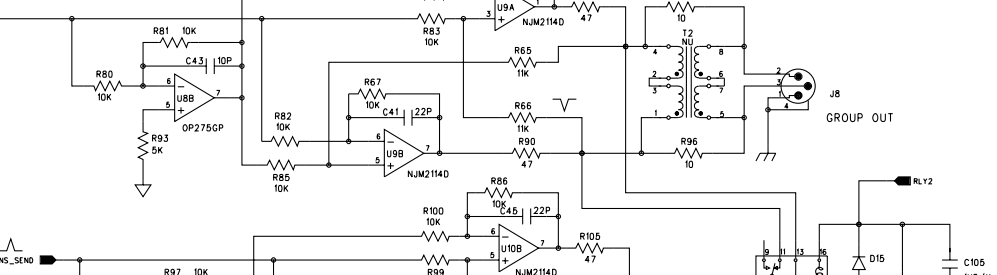
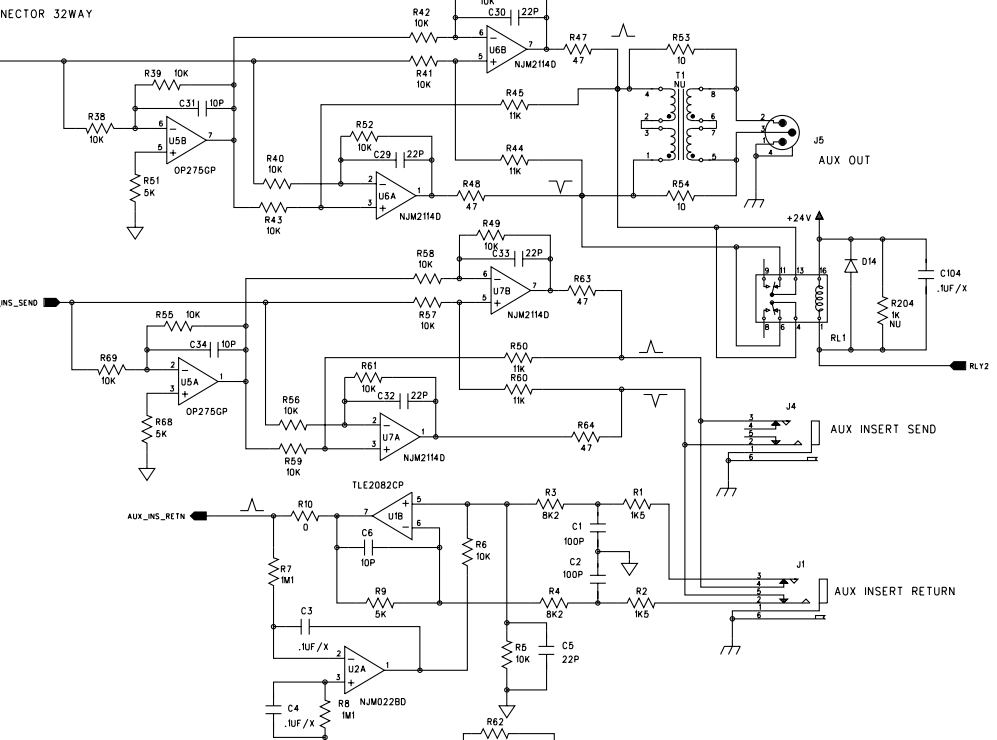
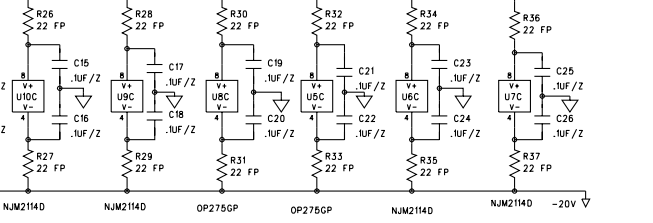
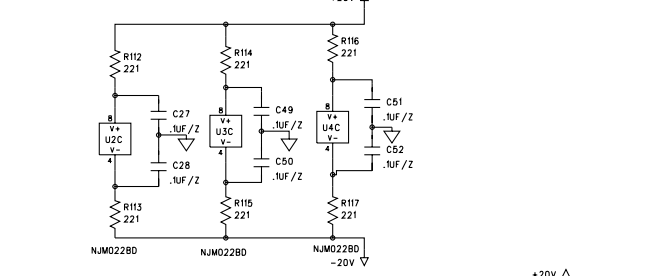
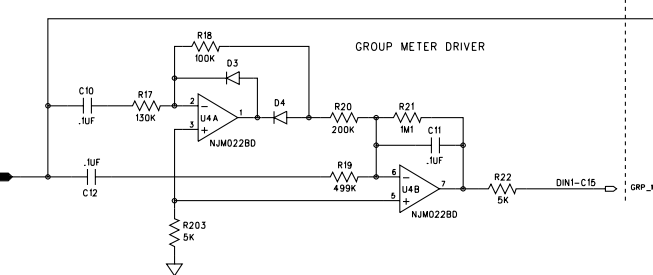
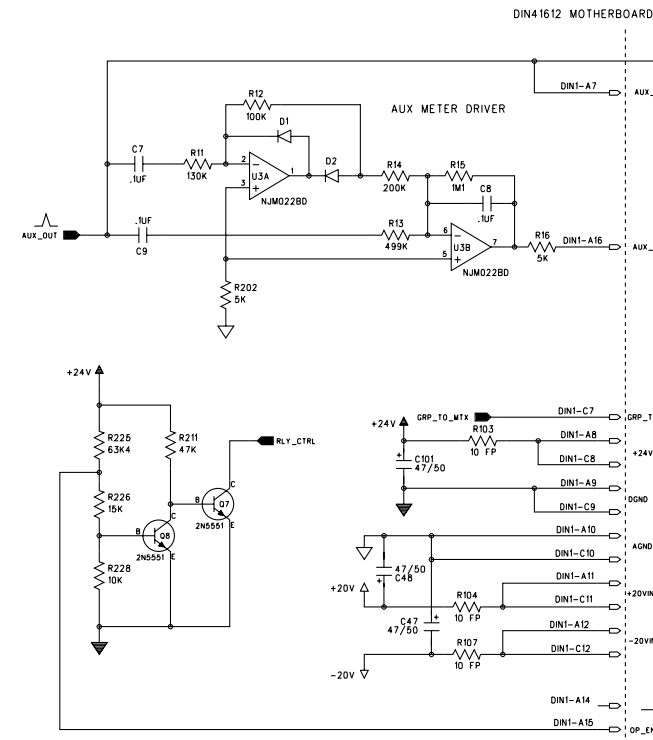
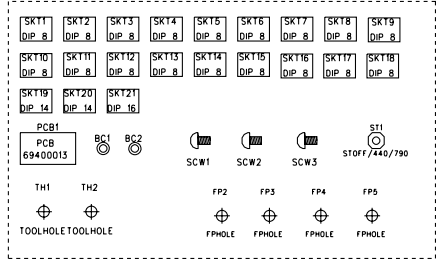
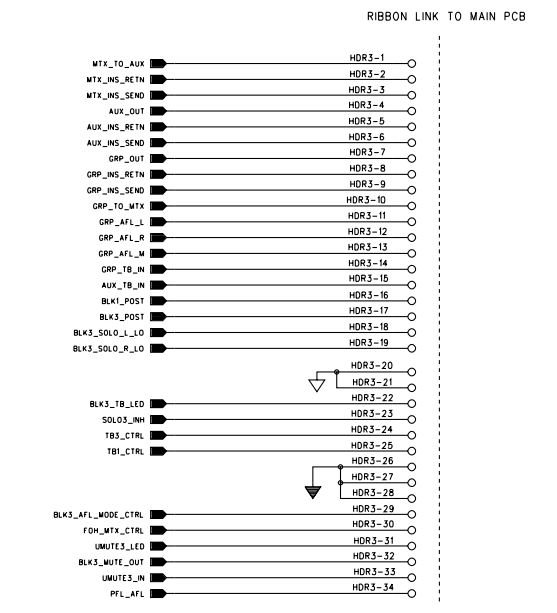
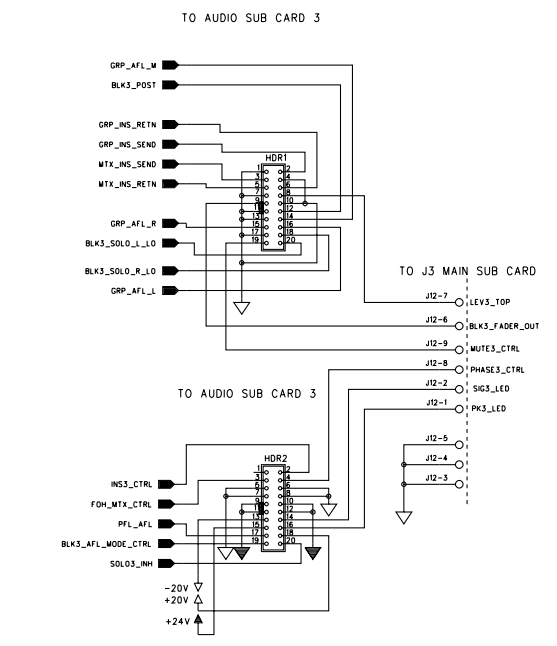


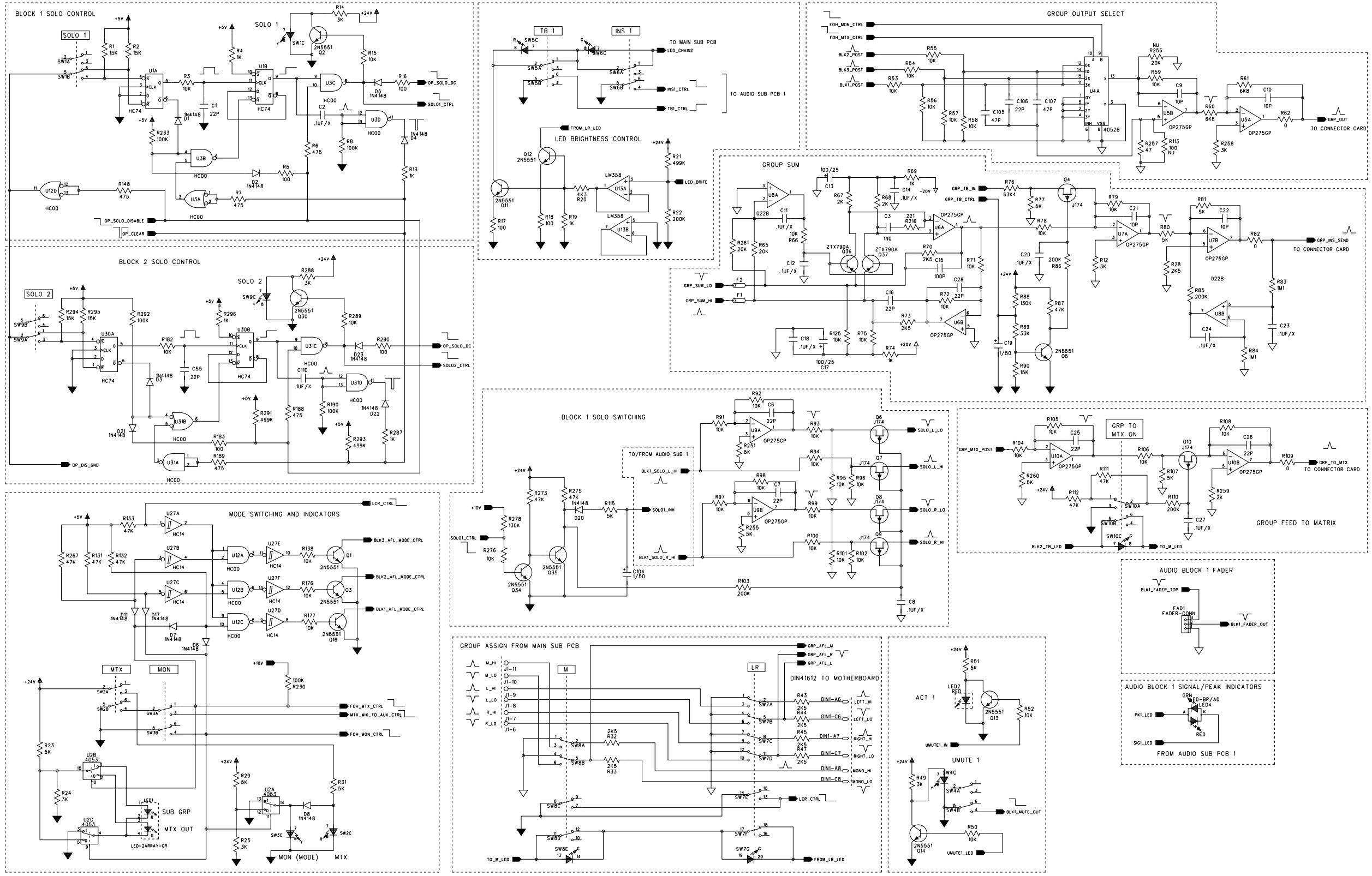


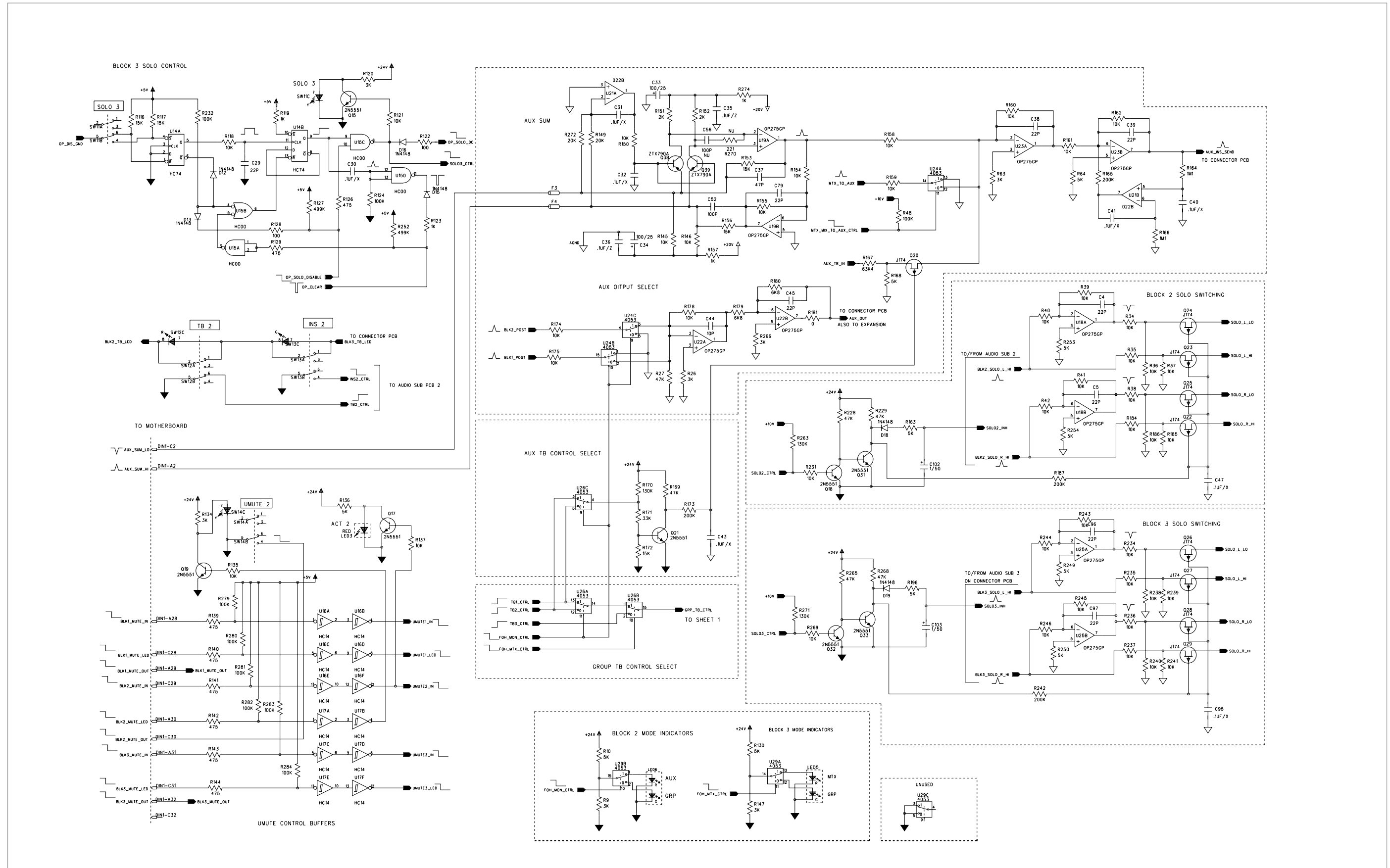


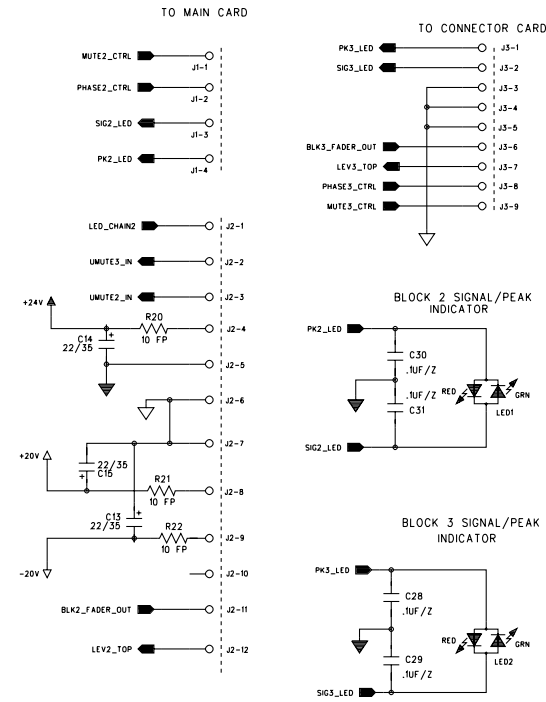
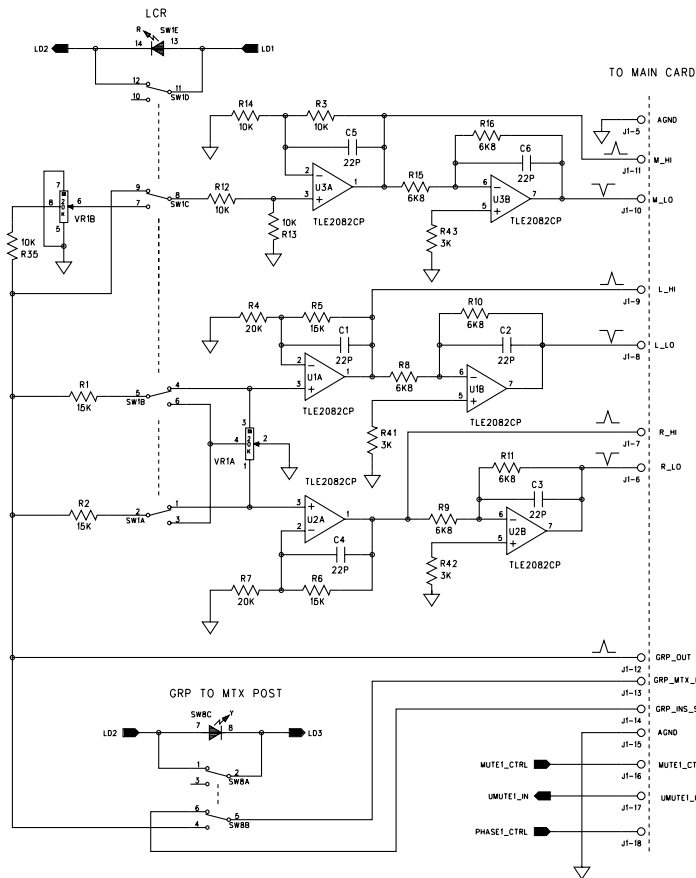




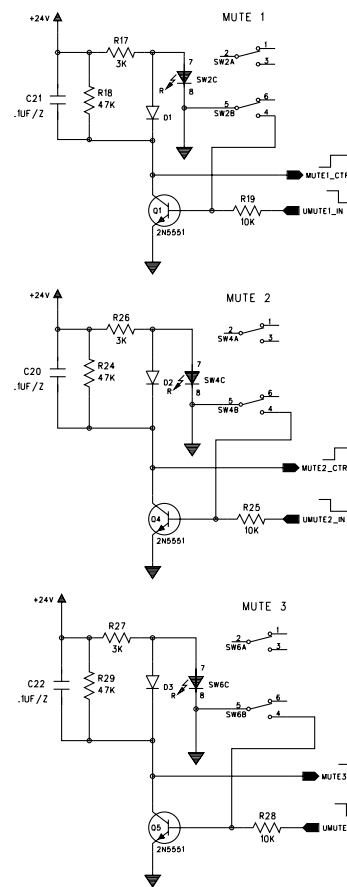




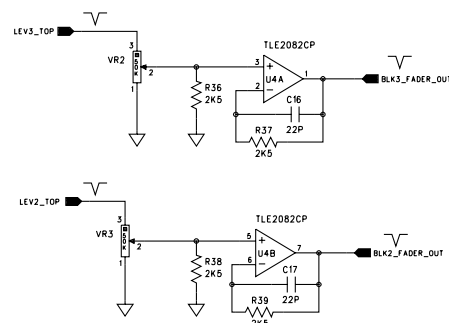
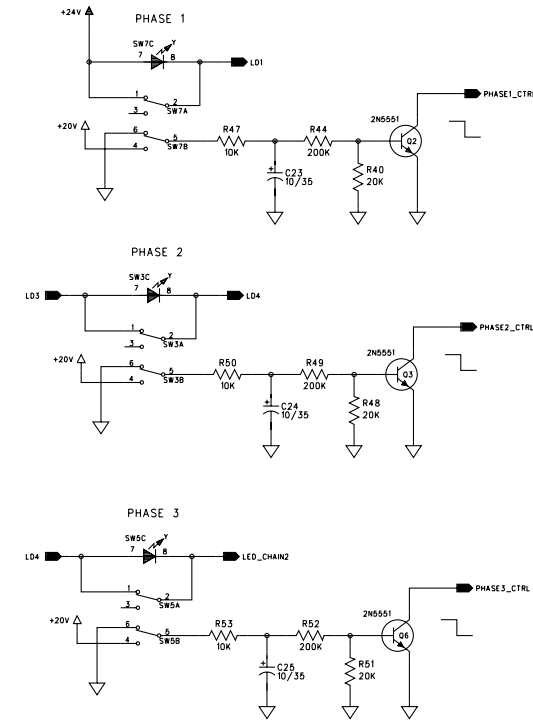




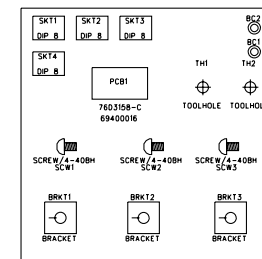
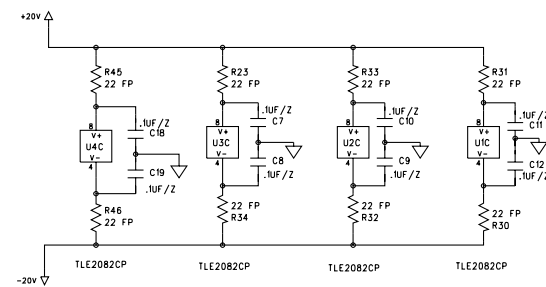
MUTE CONTROLS

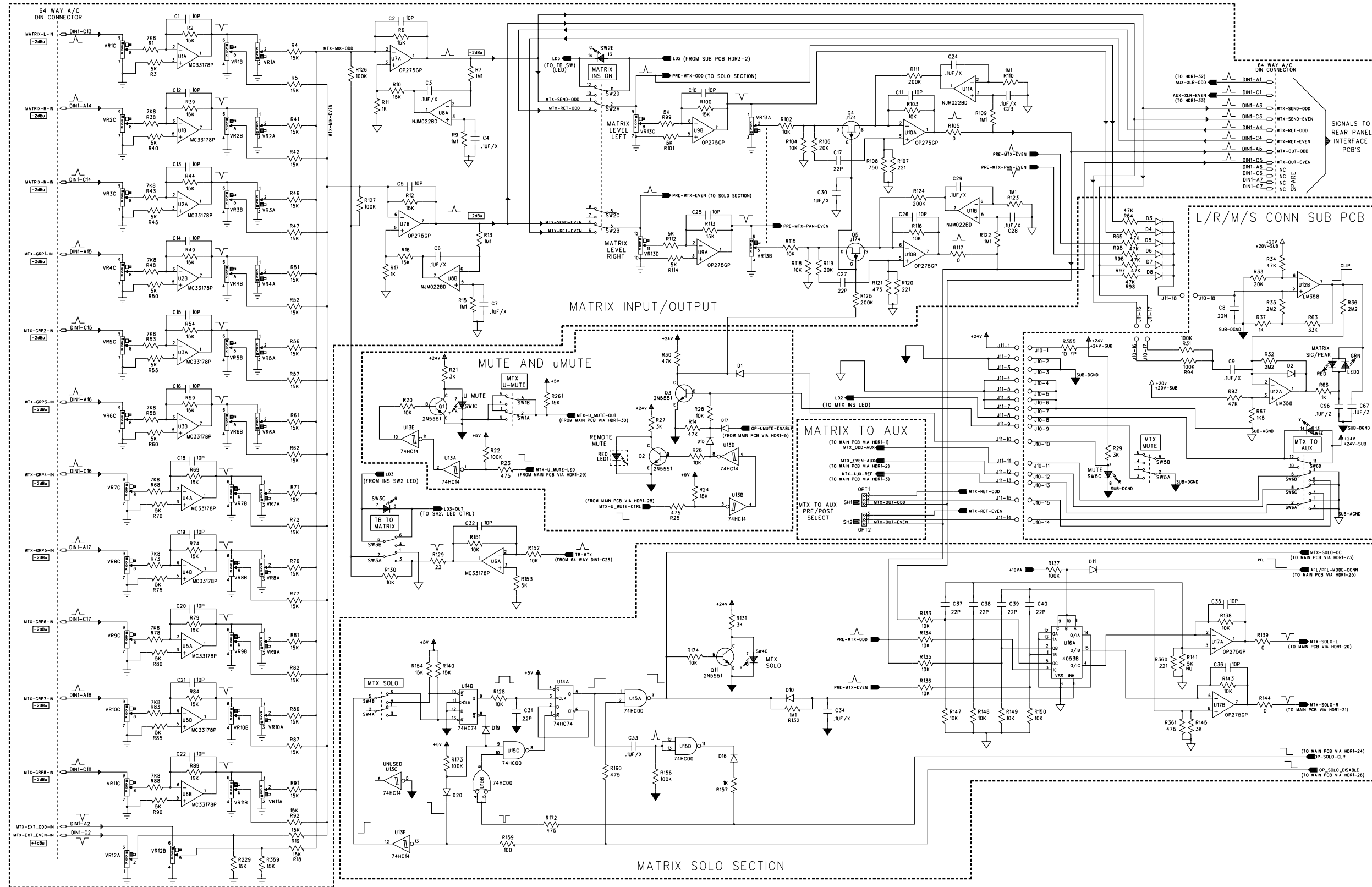


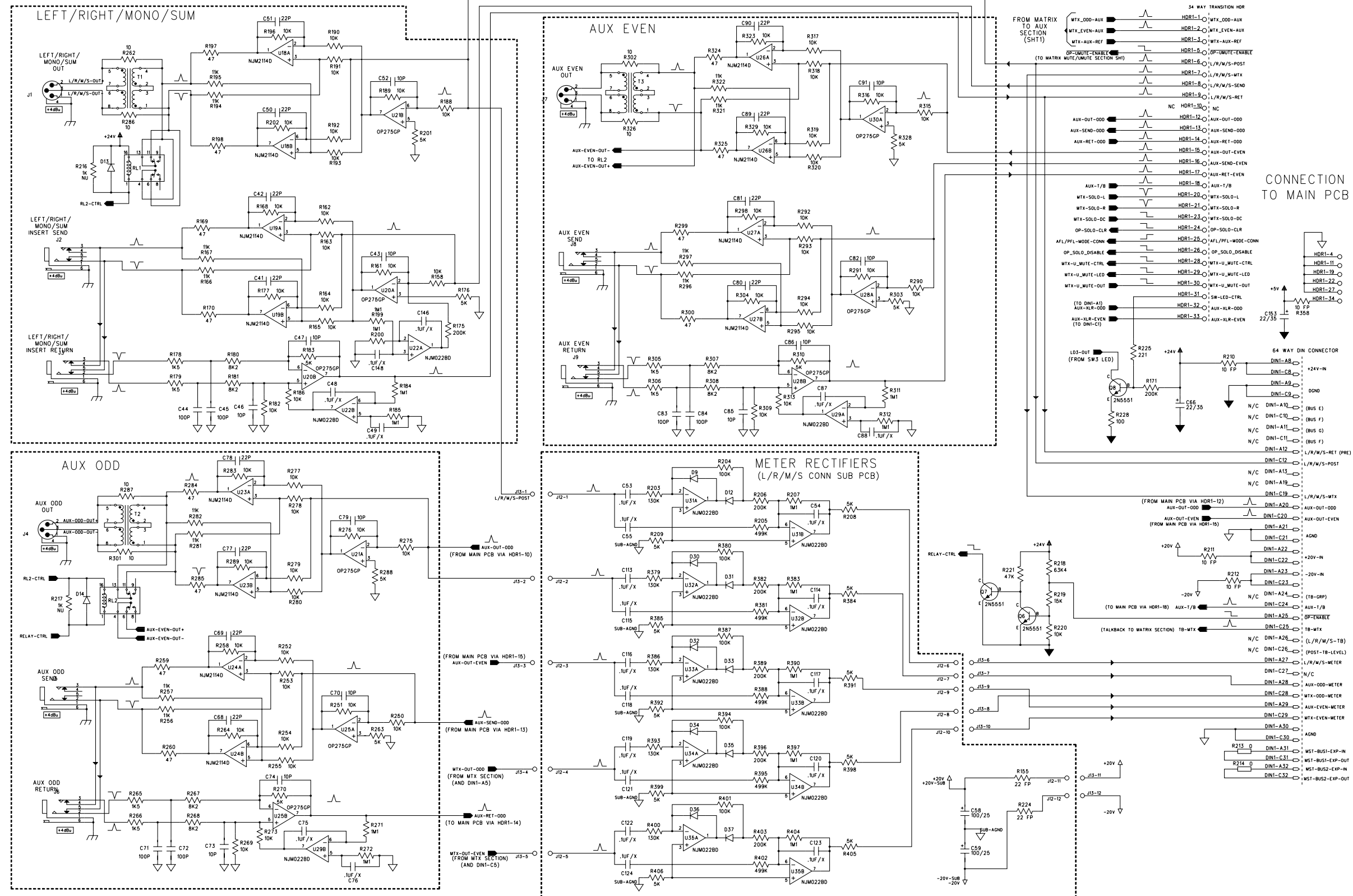
PHASE CONTROLS

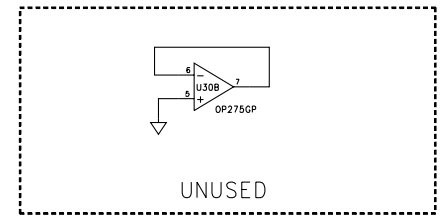
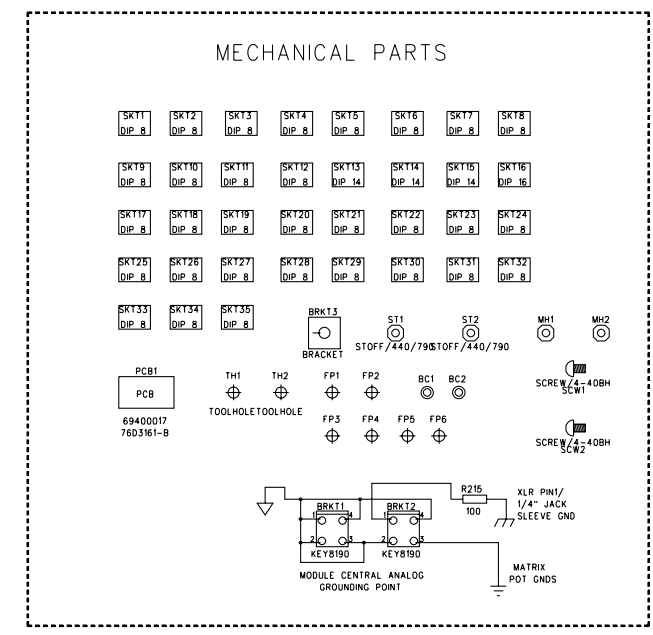
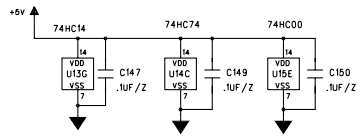
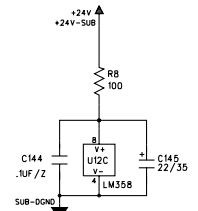
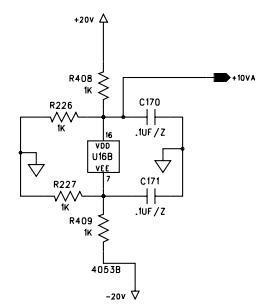
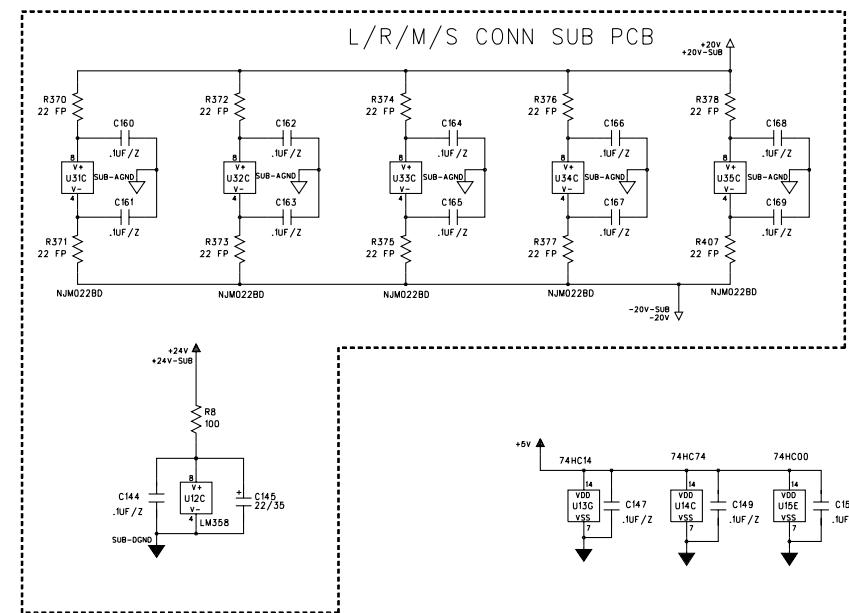
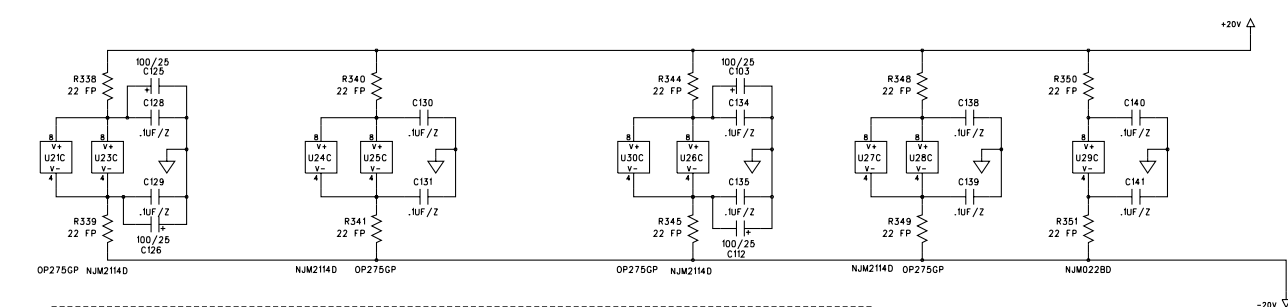
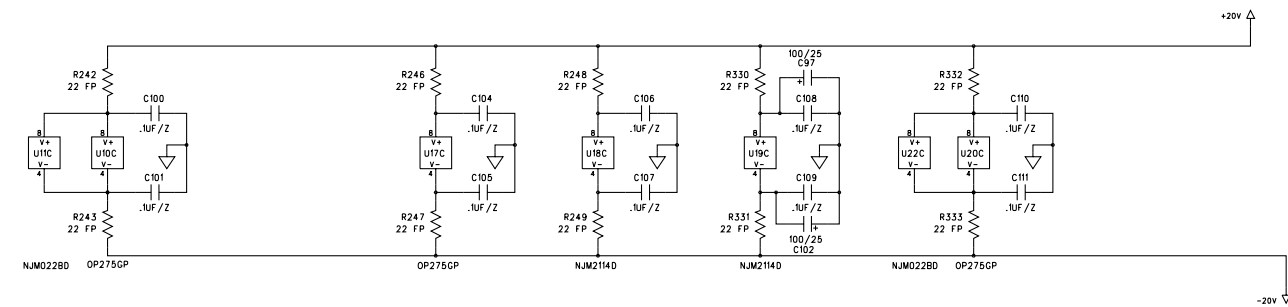
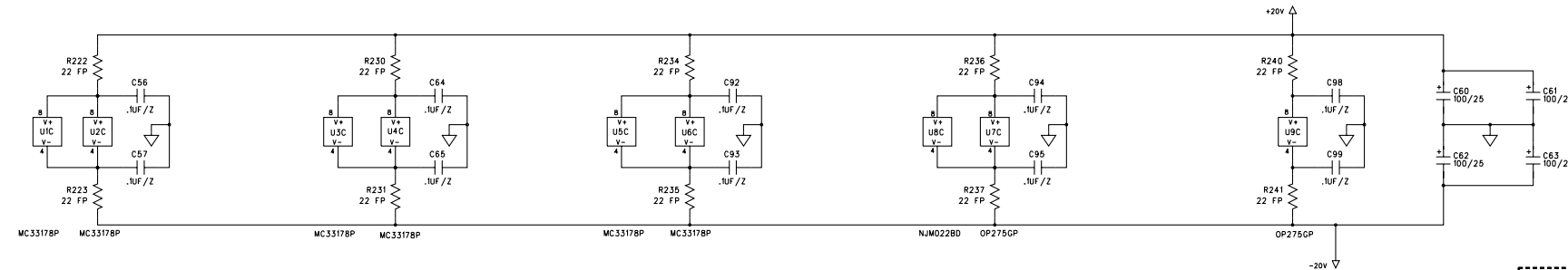


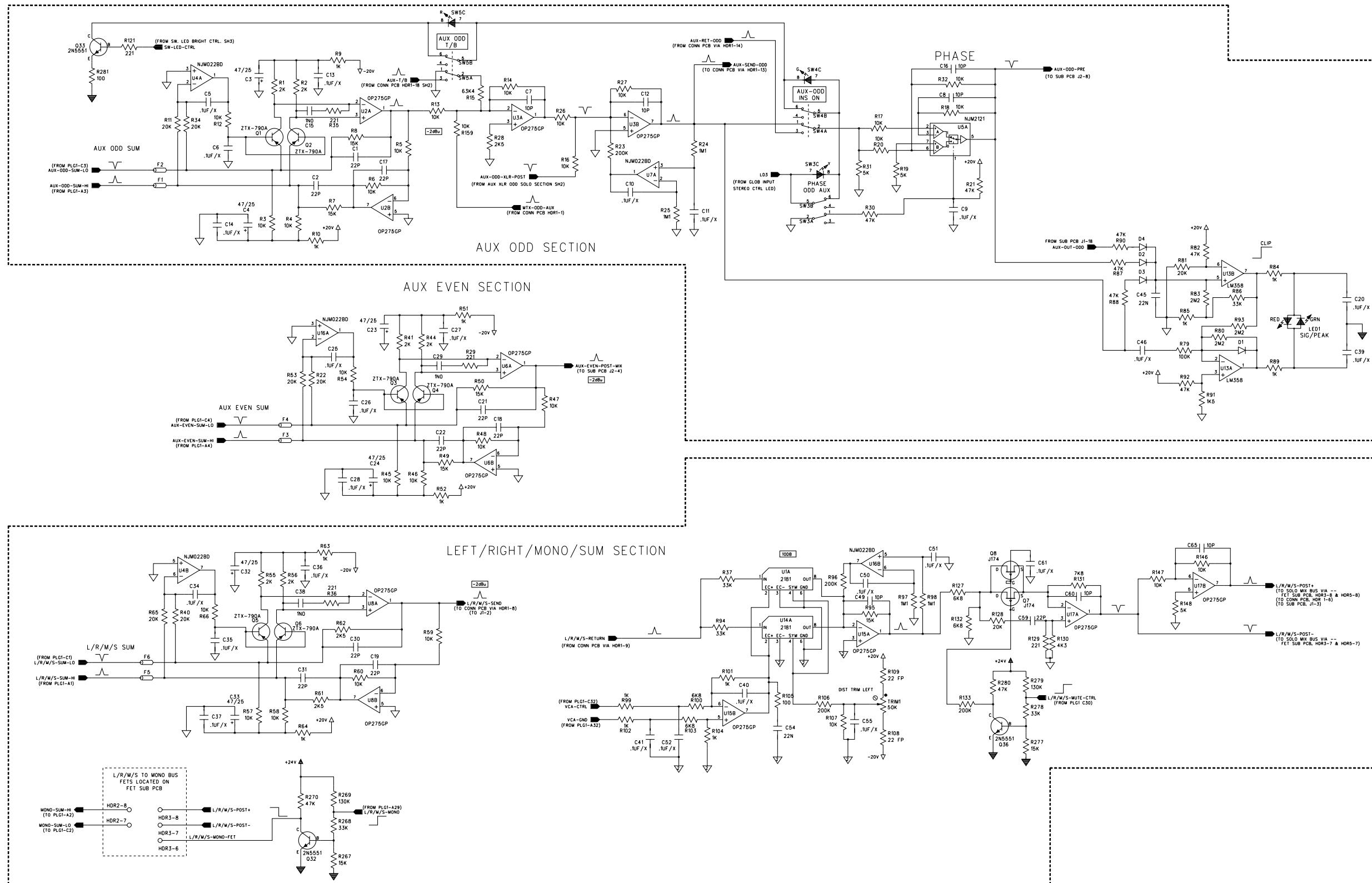
FADER BUFFERS

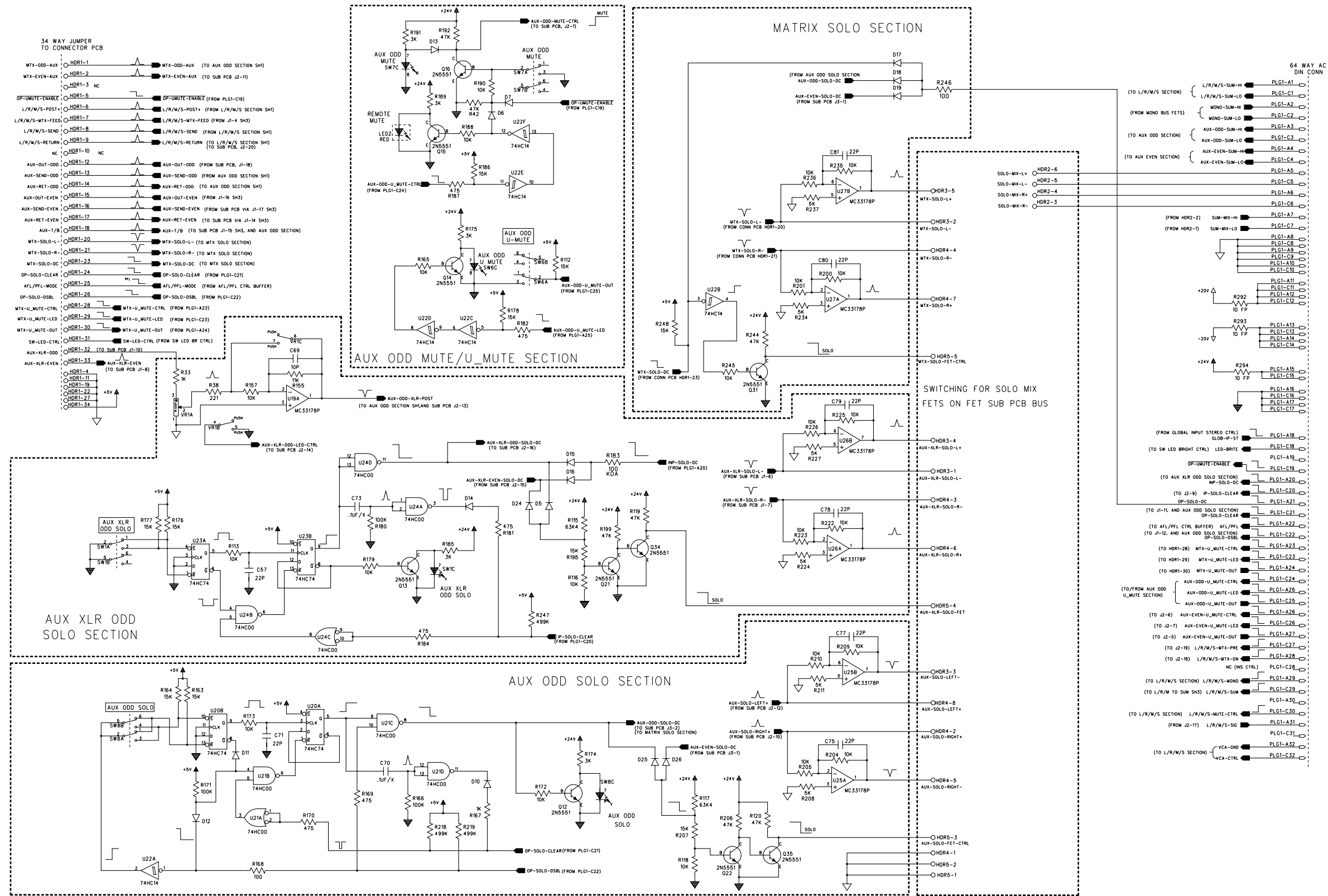


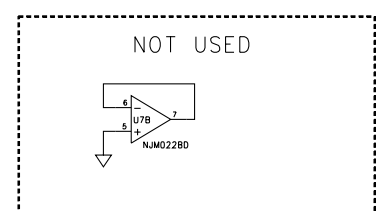
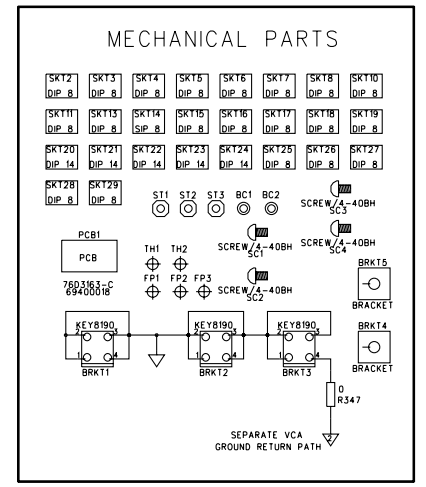
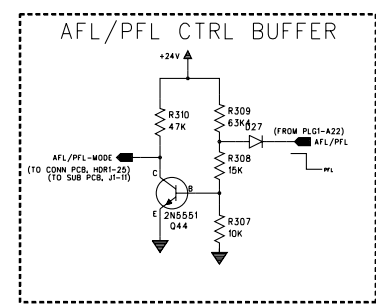
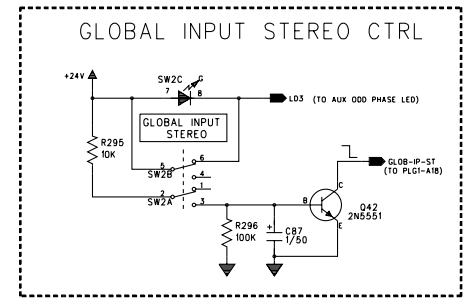
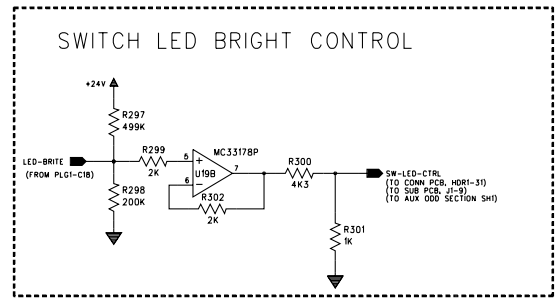
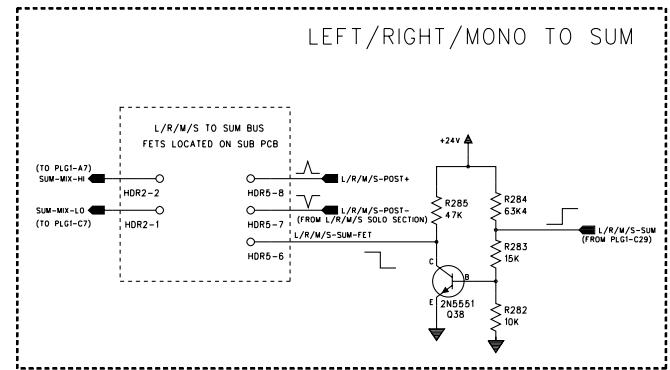
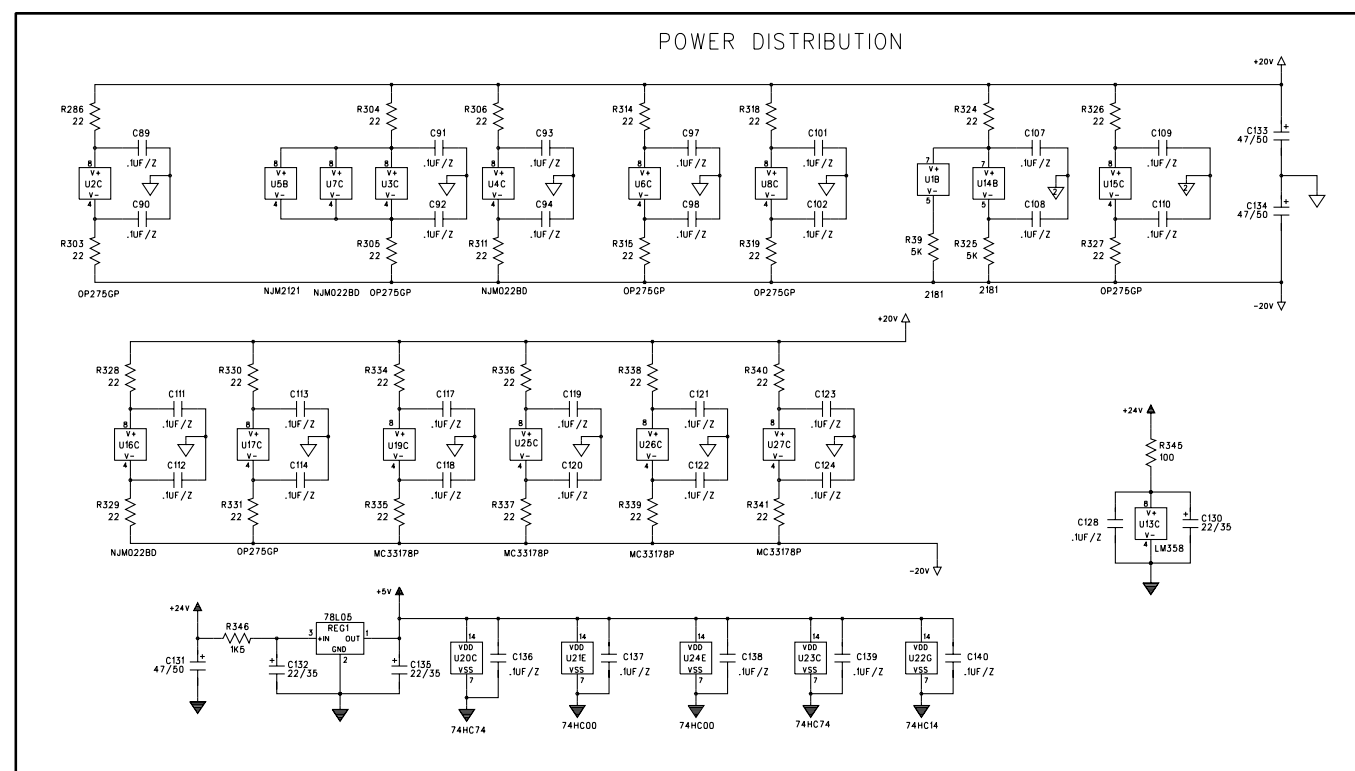
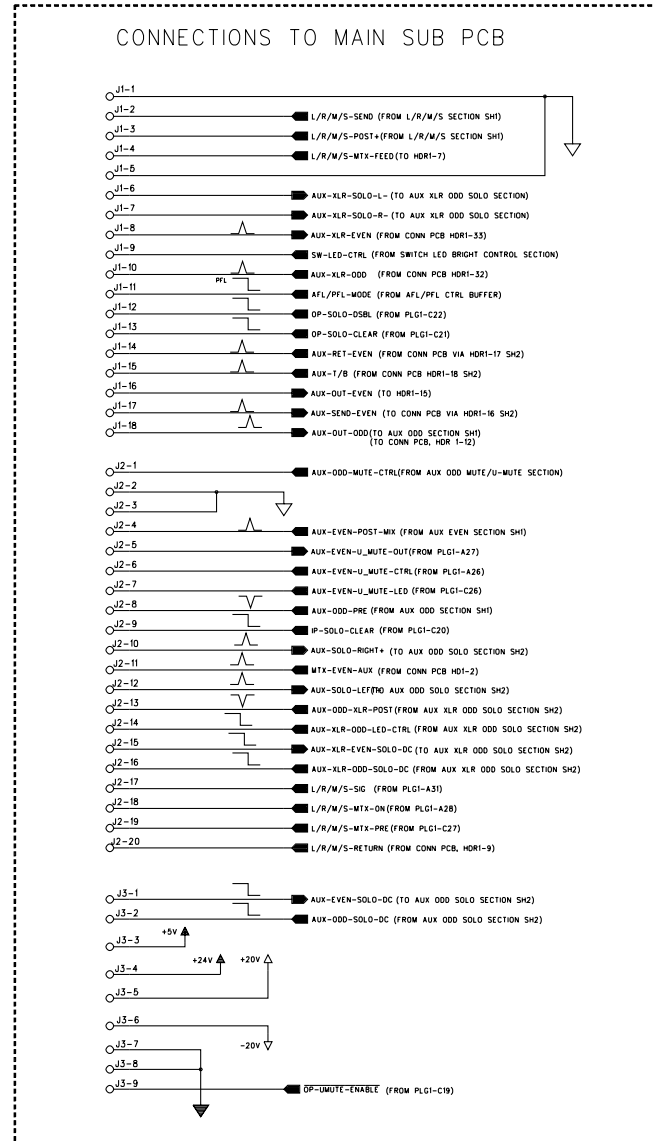




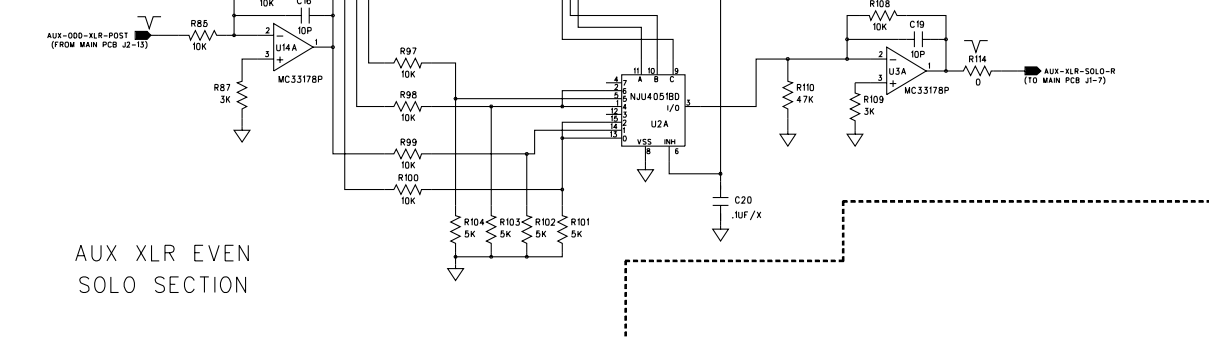
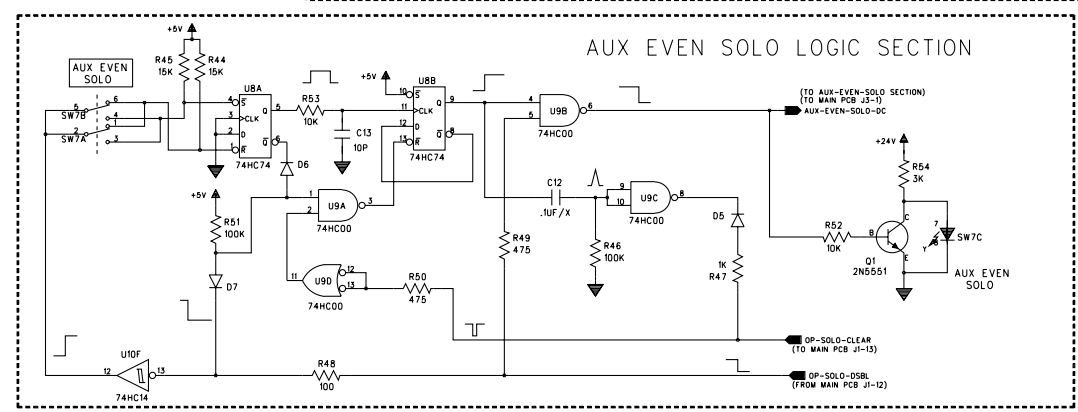
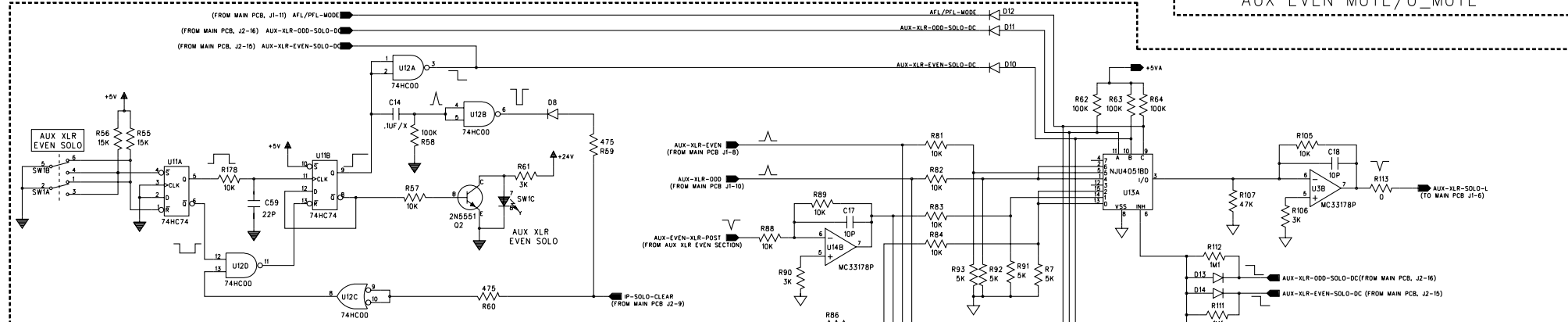
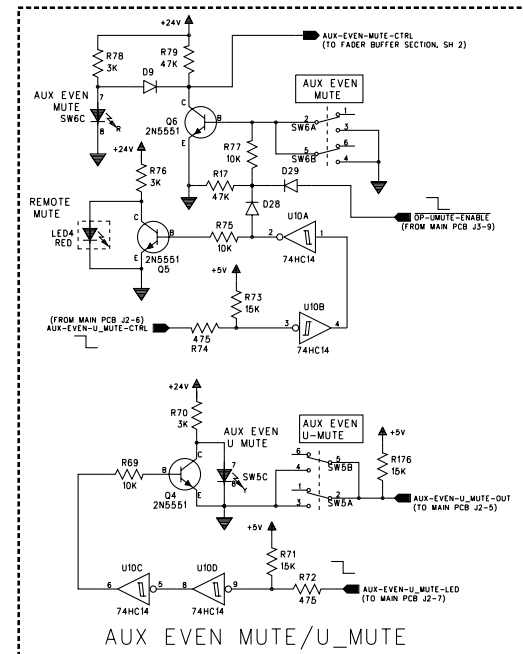
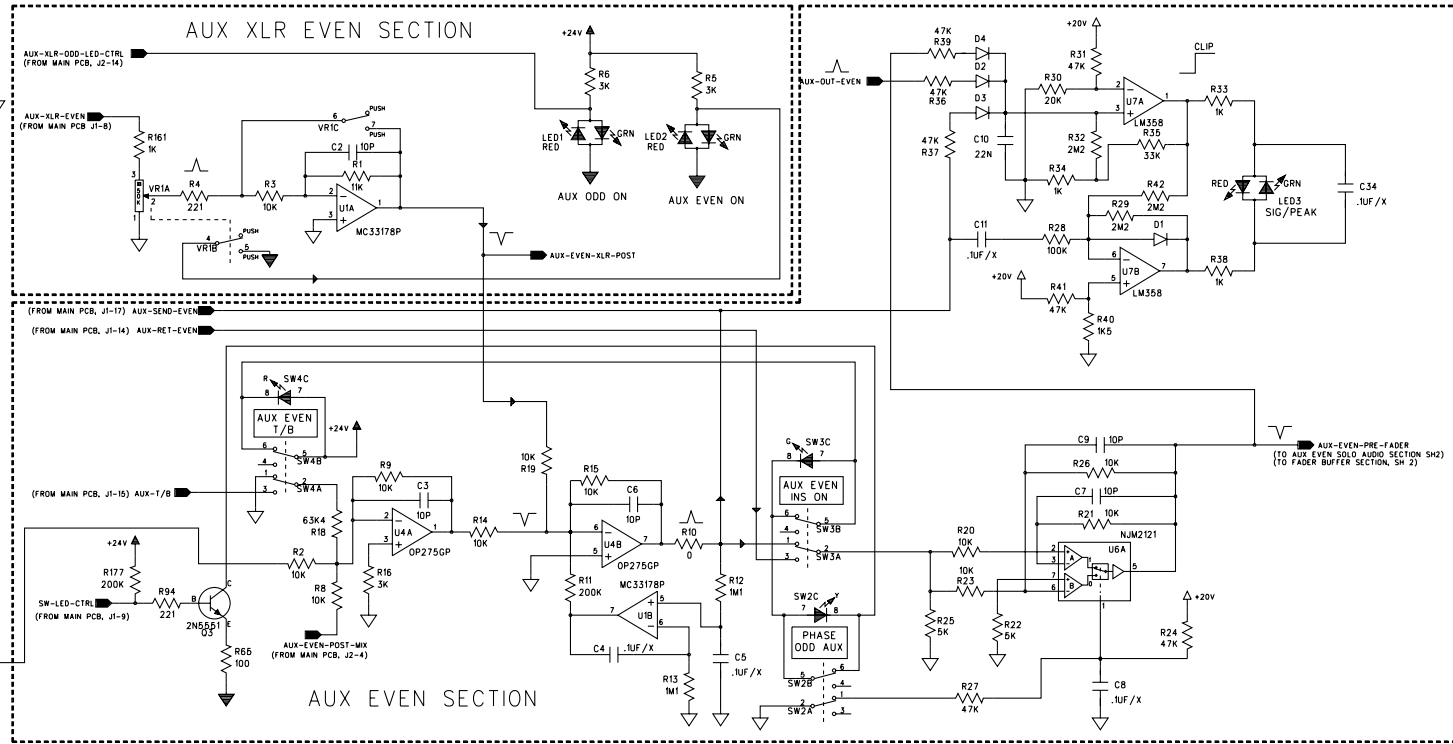
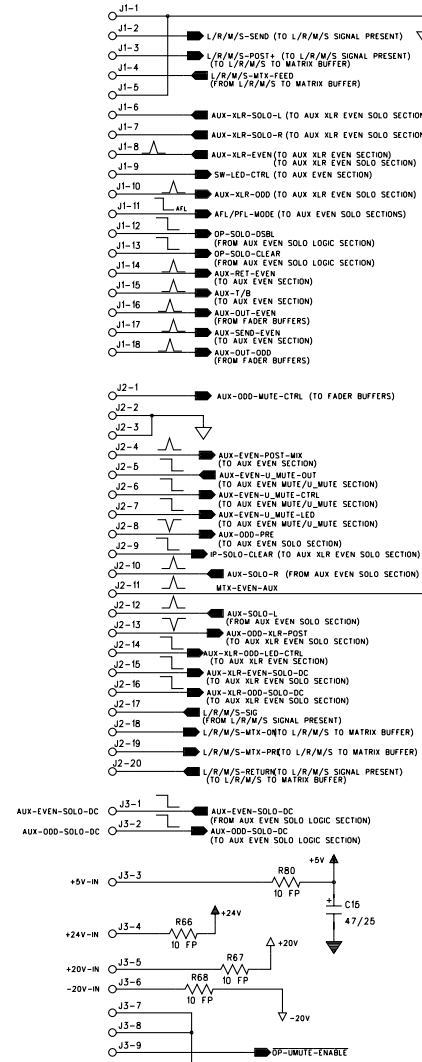


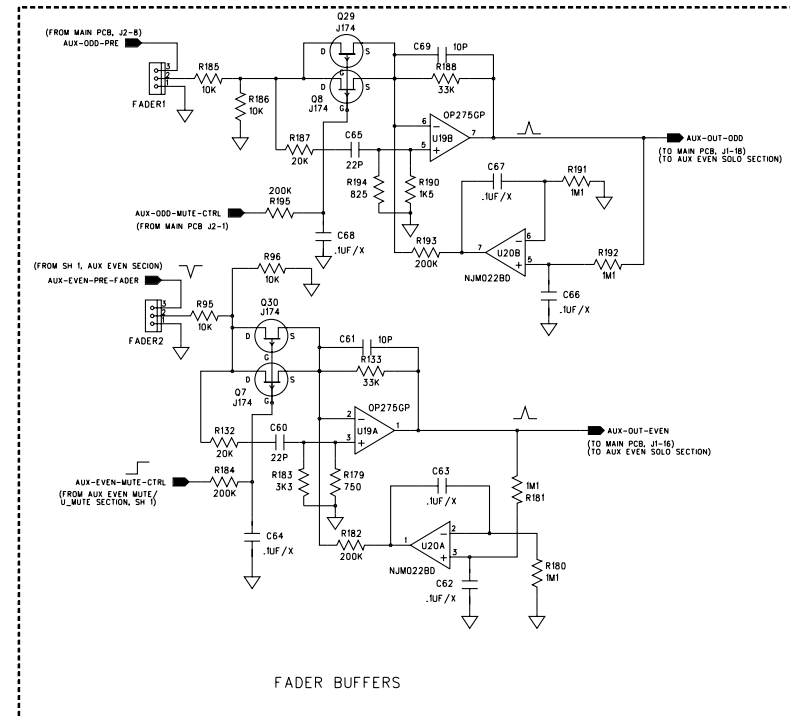
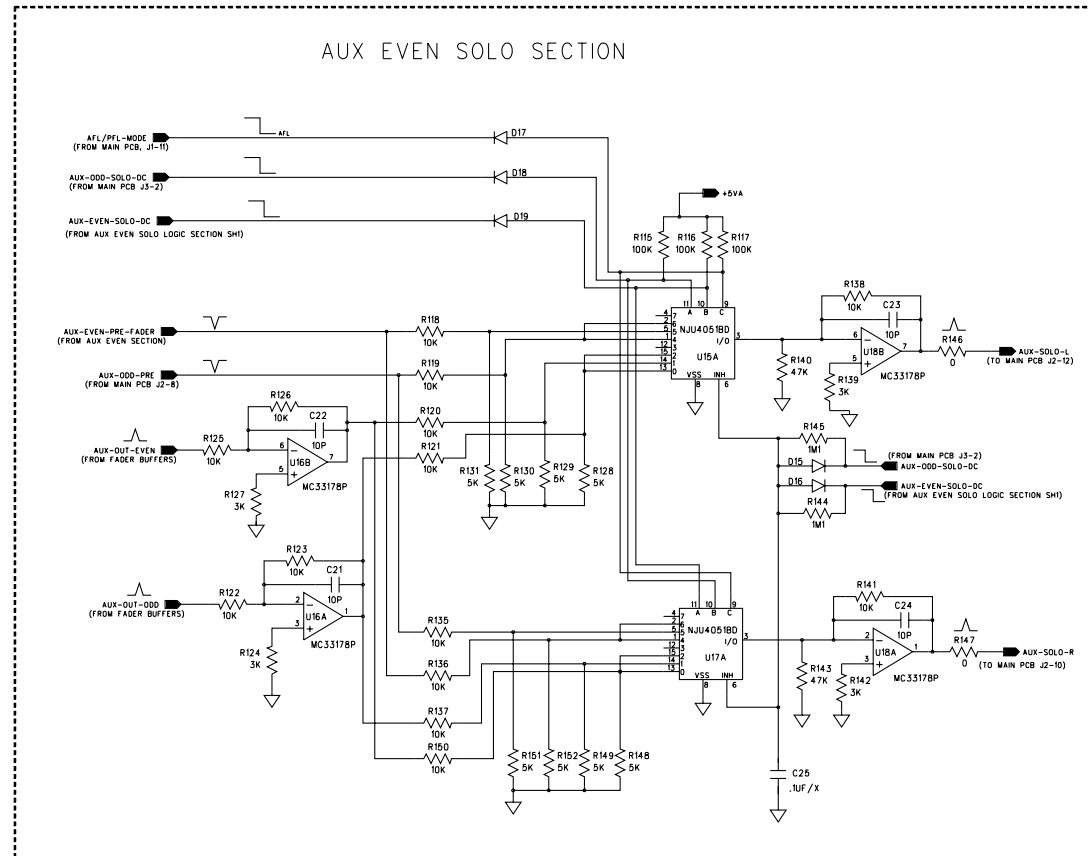






MAIN PCB CONNECTIONS



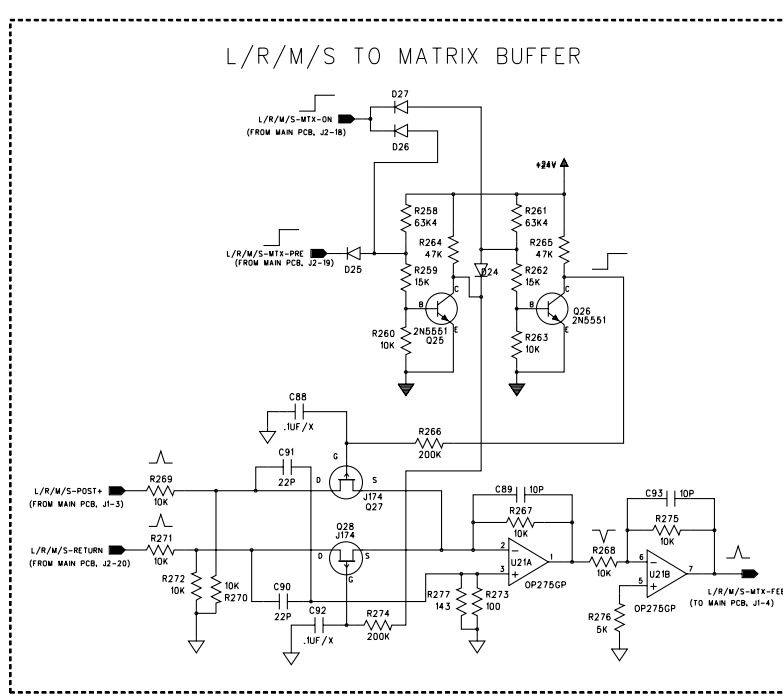
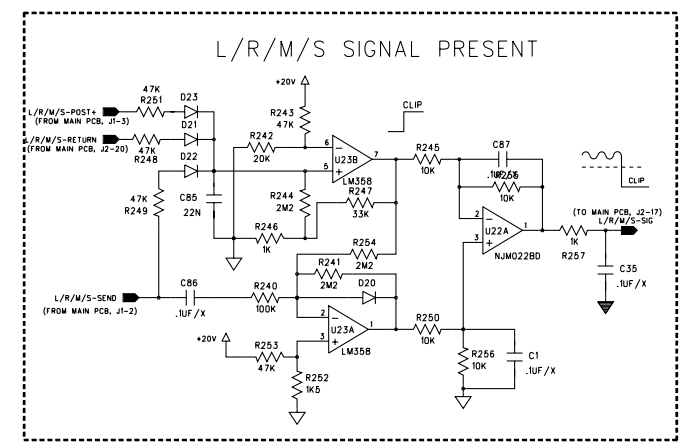
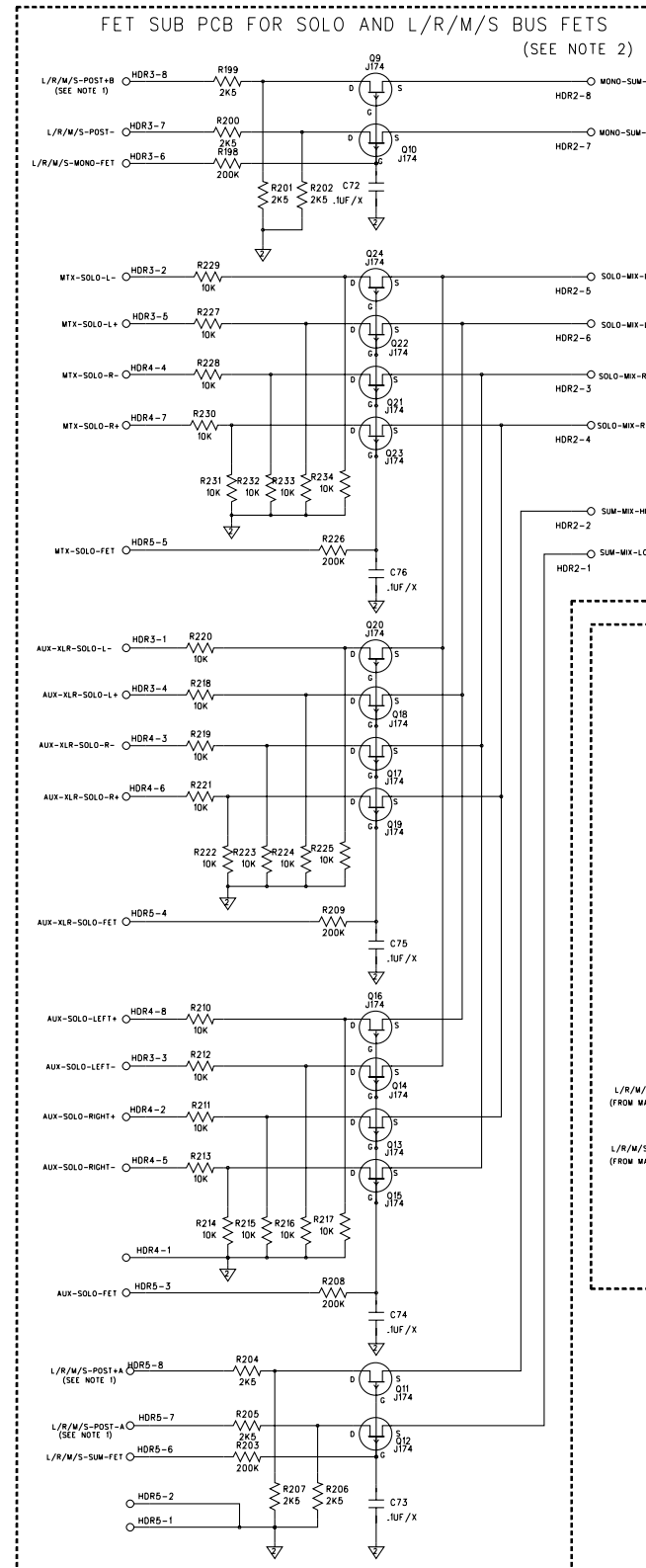


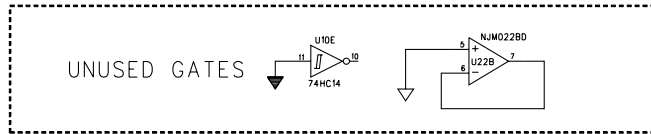
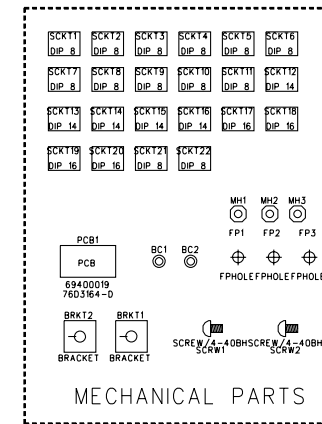
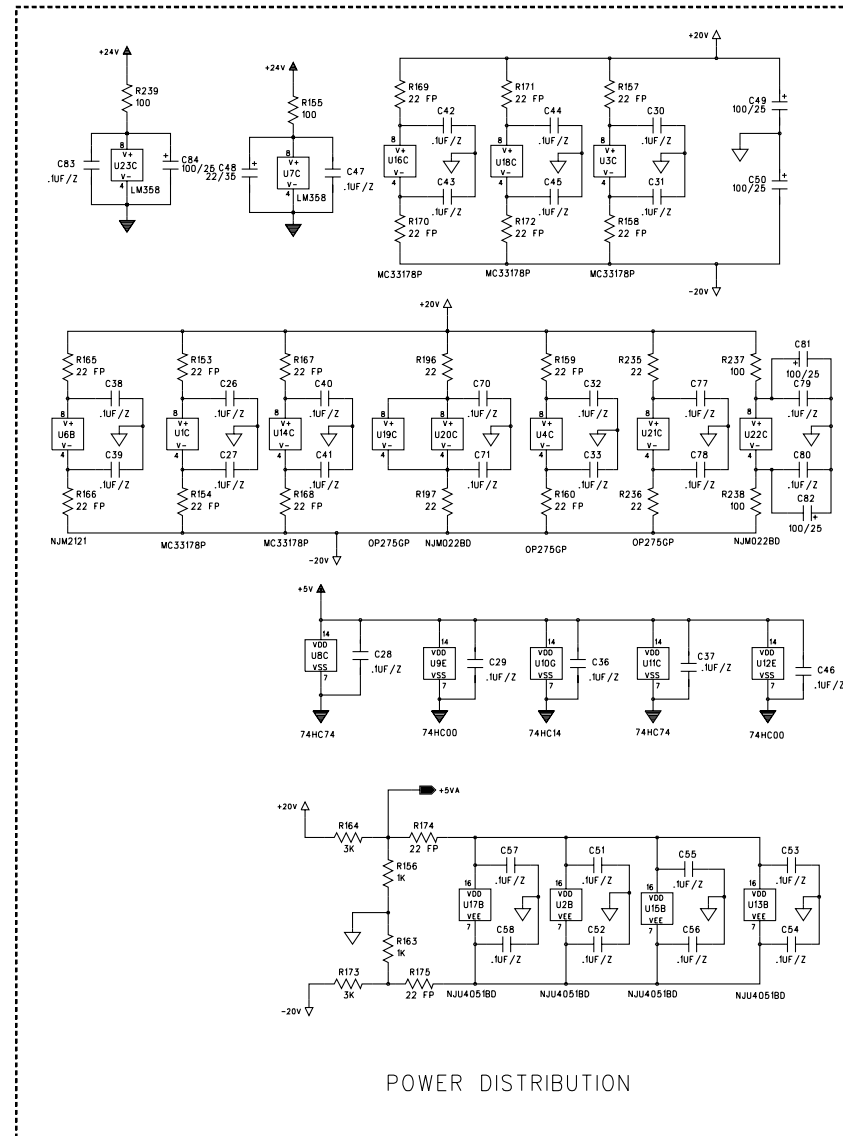
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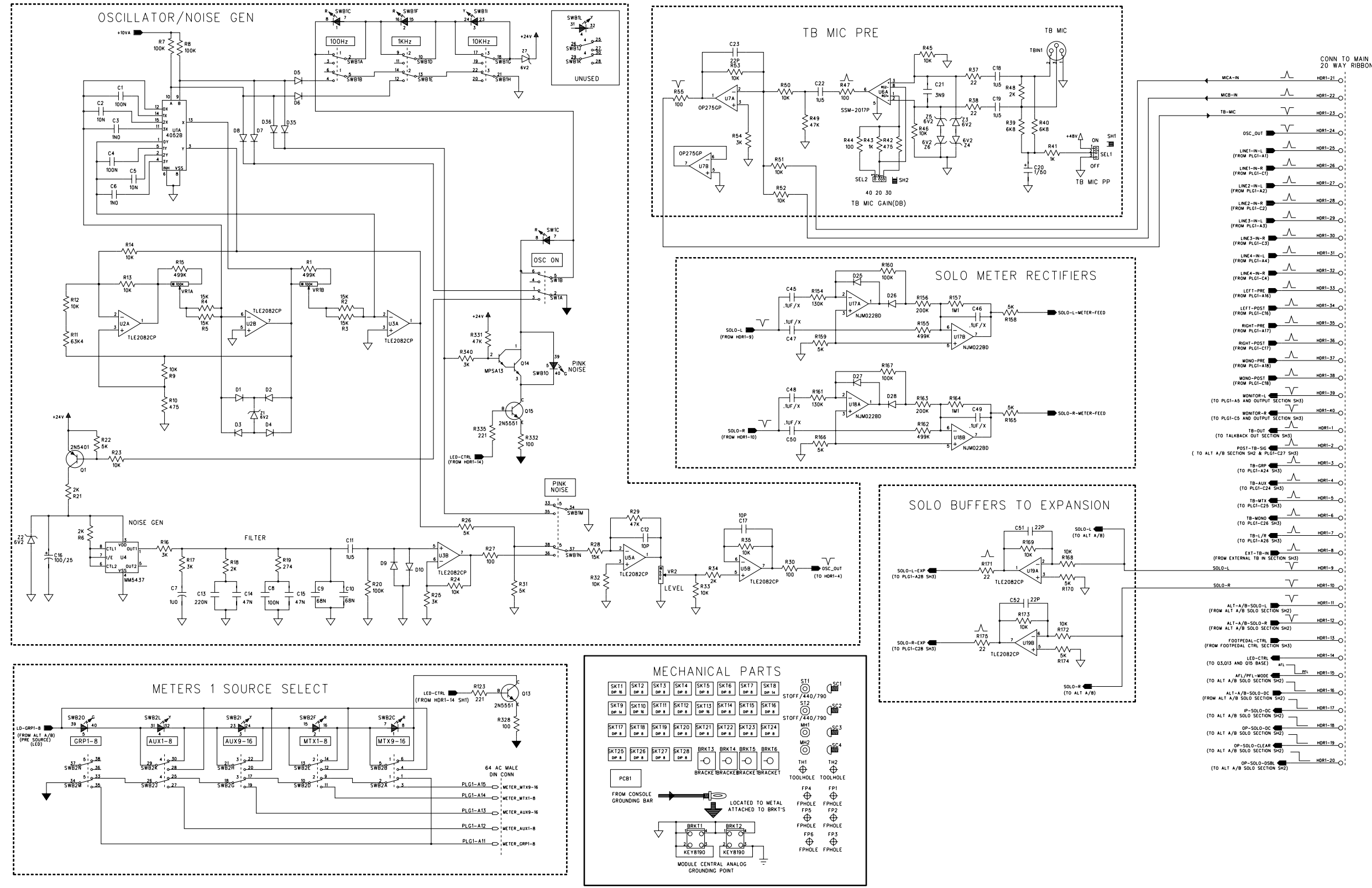
NOTE 1:
NETS L/R/M/S-POST+A AND L/R/M/S-POST+B
L/R/M/S-POST-A ARE THE SAME AS
L/R/M/S-POST+ AND L/R/M/S-POST-
RESPECTIVELY.

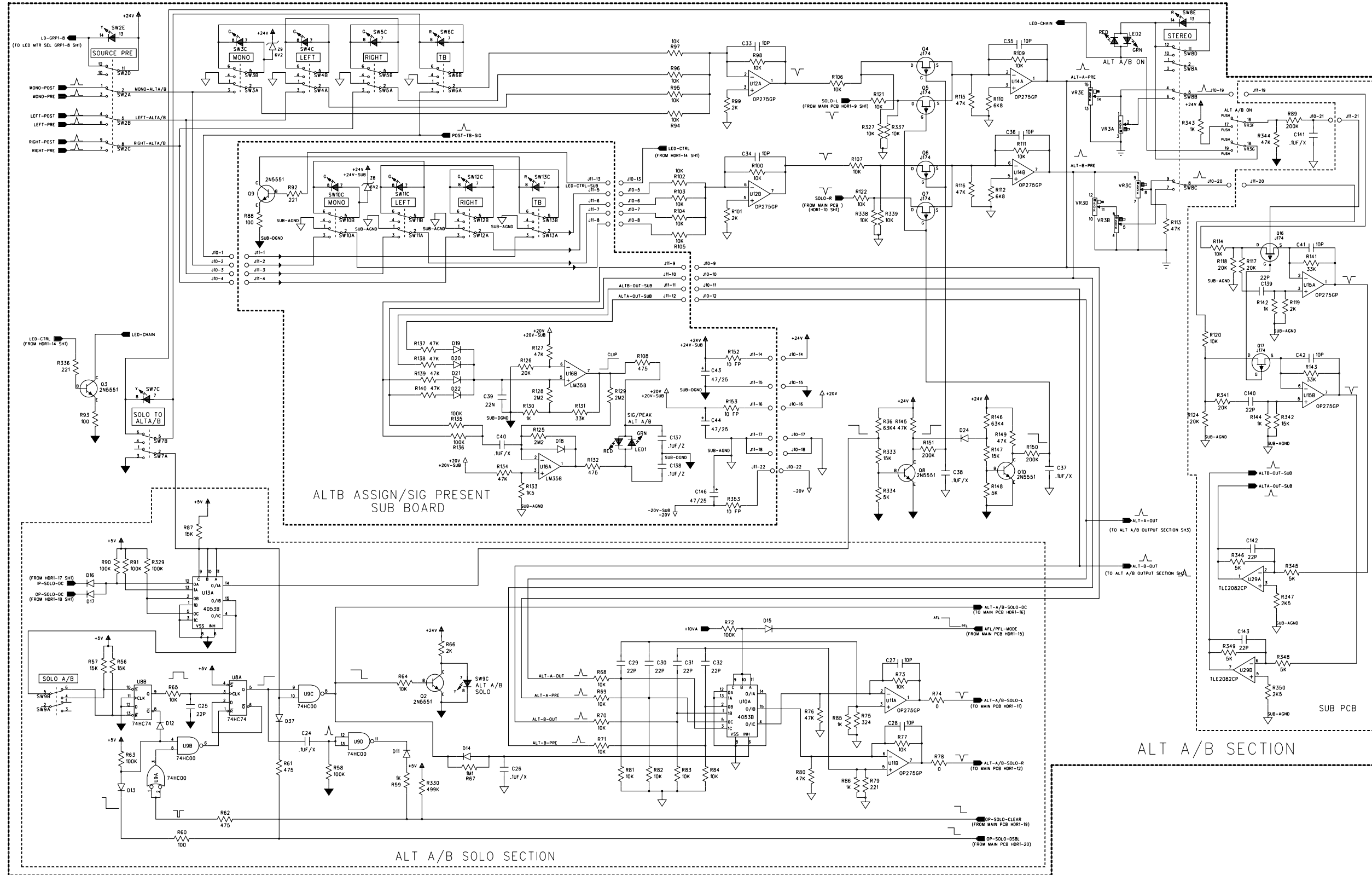
THE CHANGE IS FOR LAYOUT
PURPOSES ONLY.

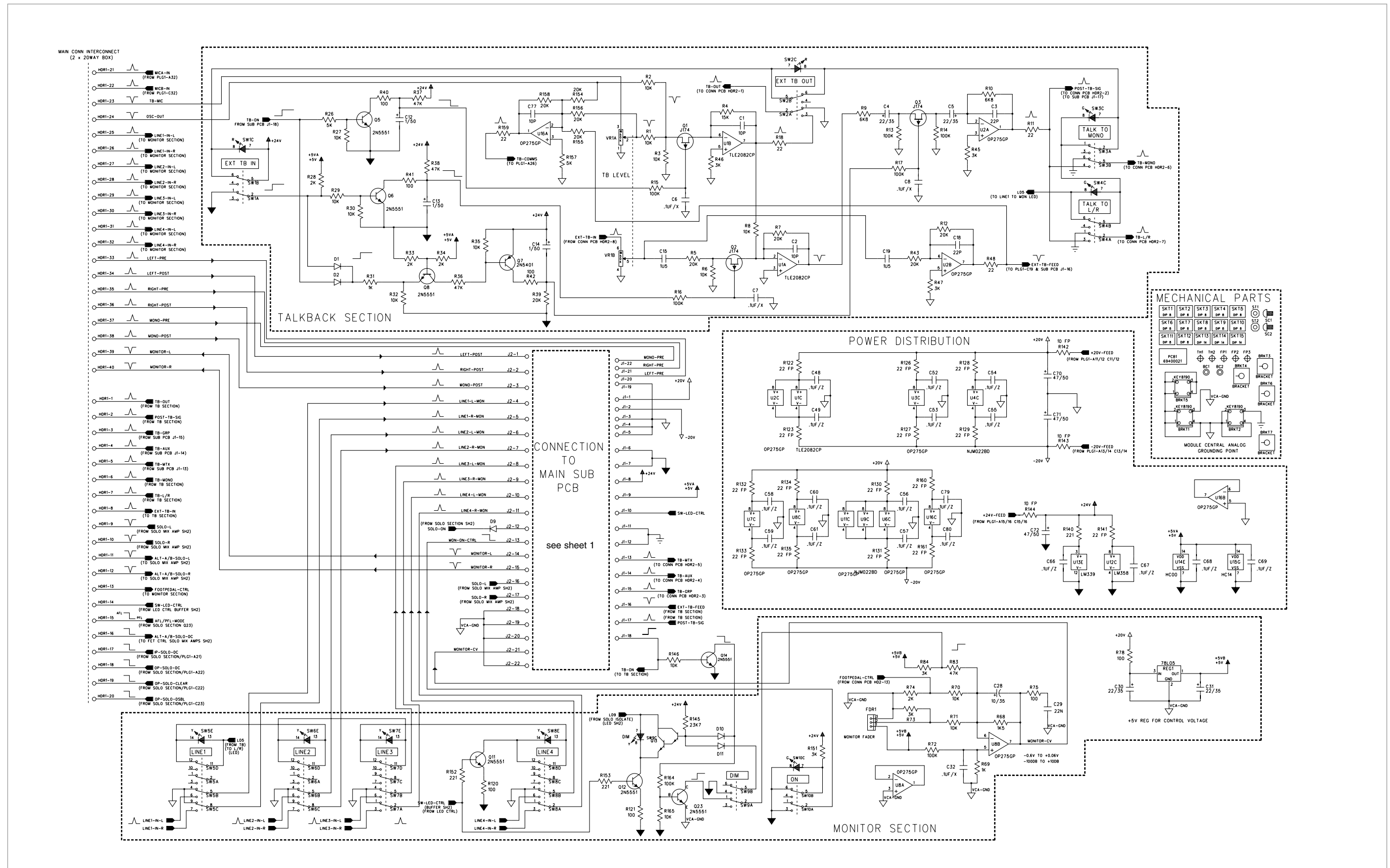
NOTE 2:
ALL HEADERS (HDR 2-5) OF THE
FET SUB PCB ARE CONNECTED
ON THE MAIN PCB. THIS SUB BOARD
IS PHYSICALLY SEPARATED FROM THE
"MAIN" SUB PCB.

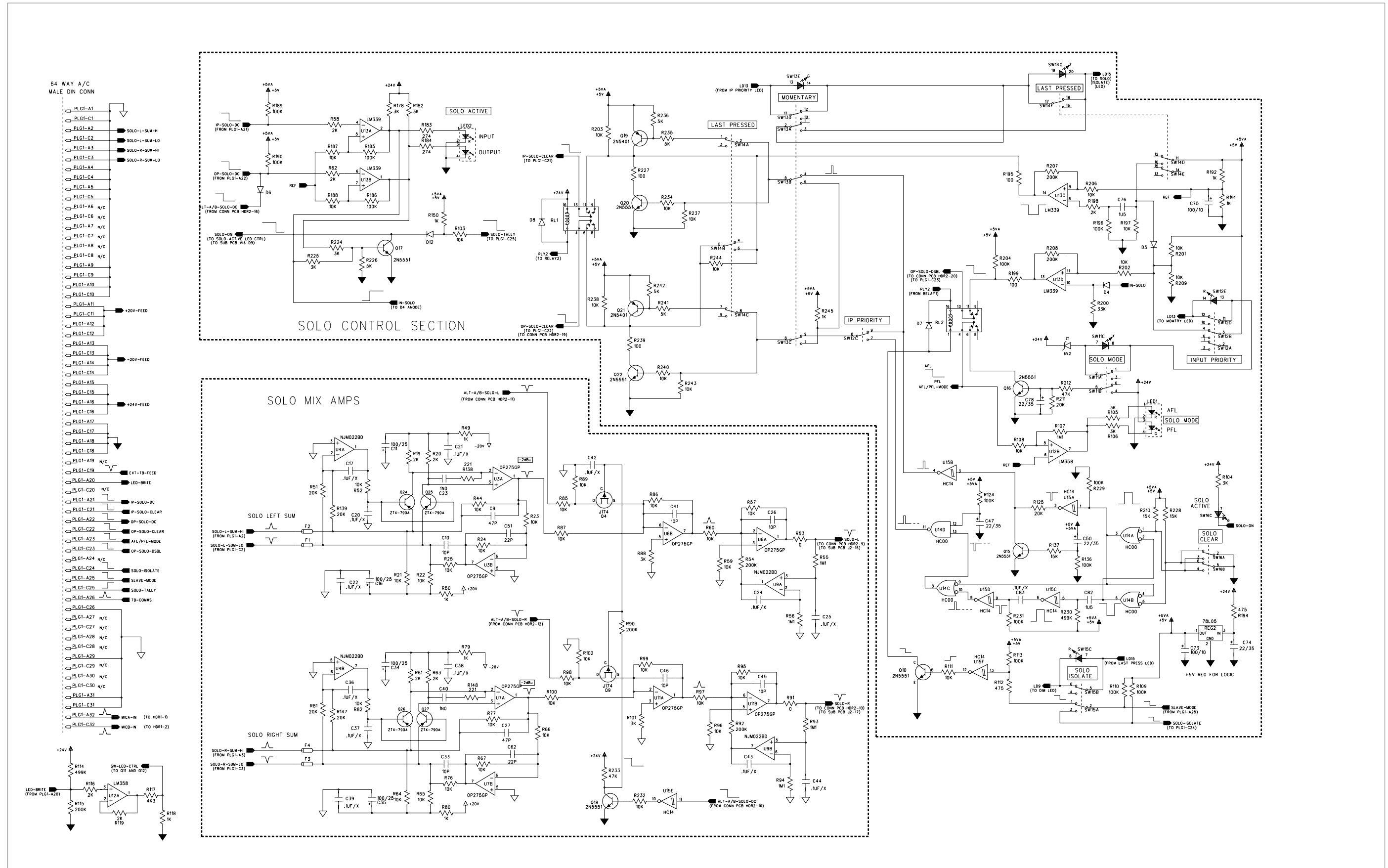


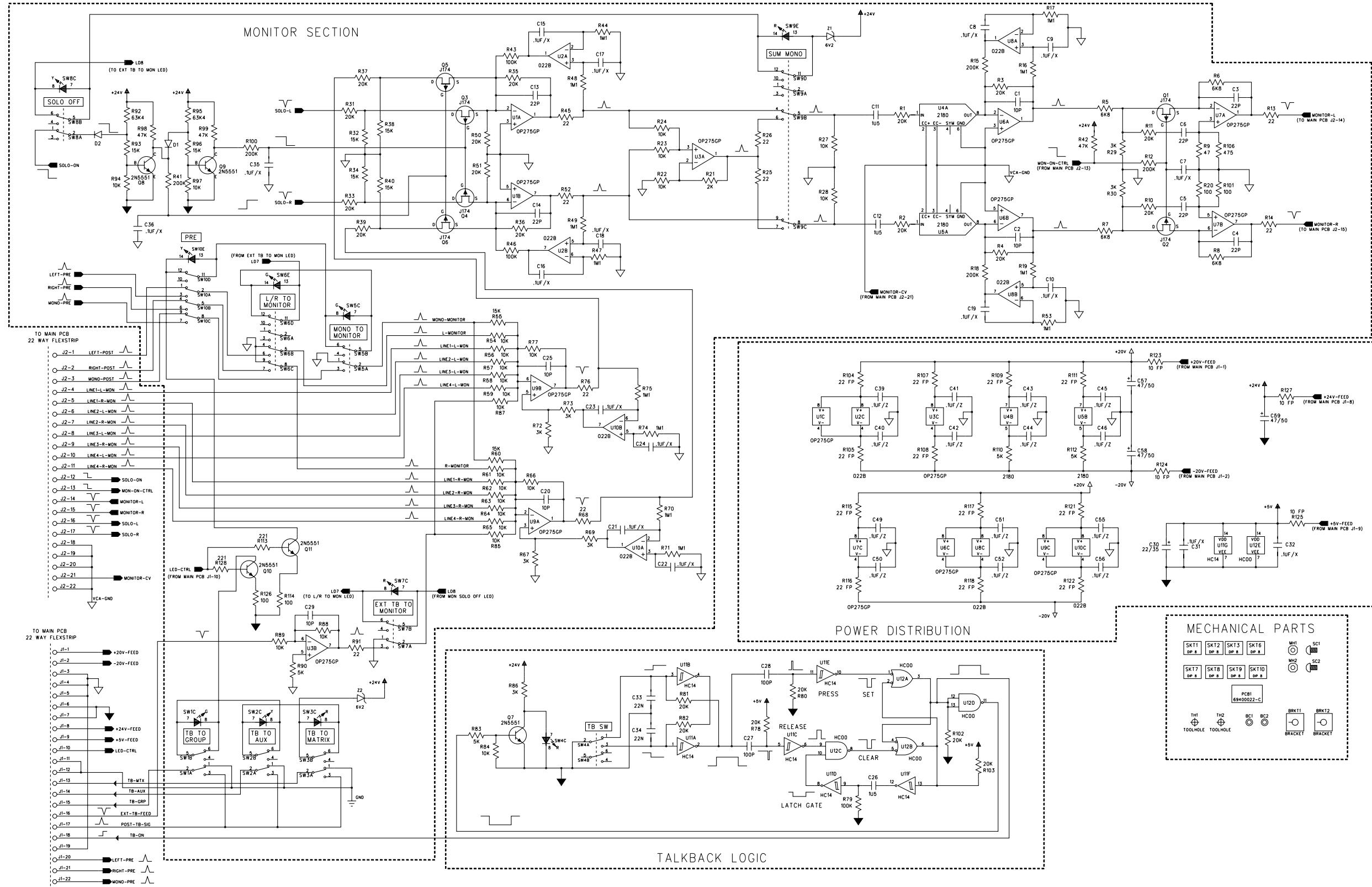


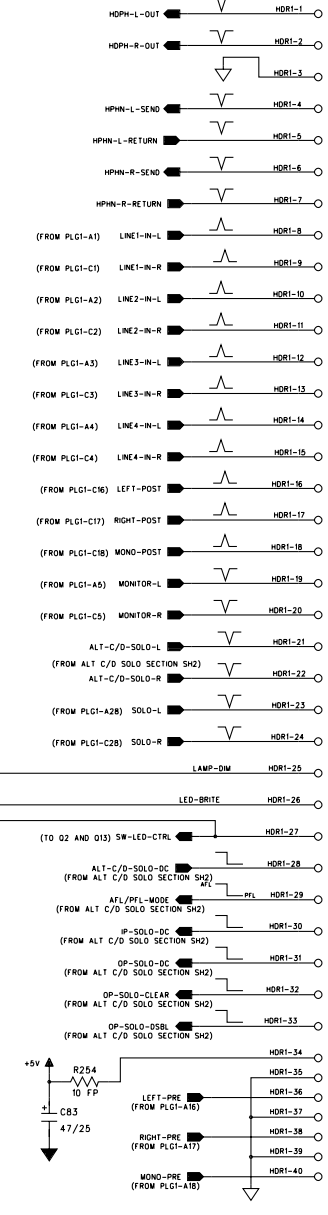
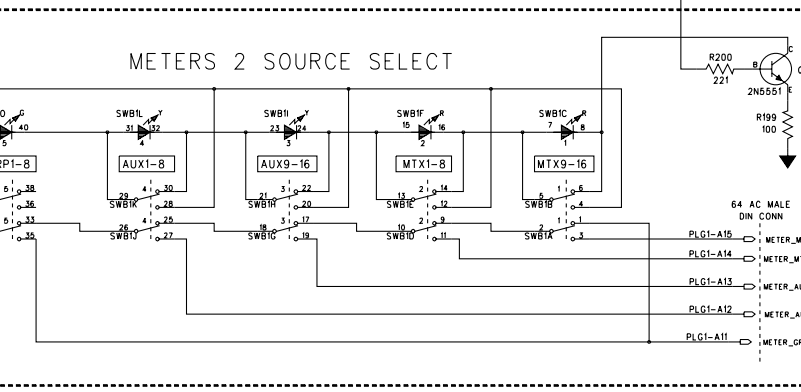
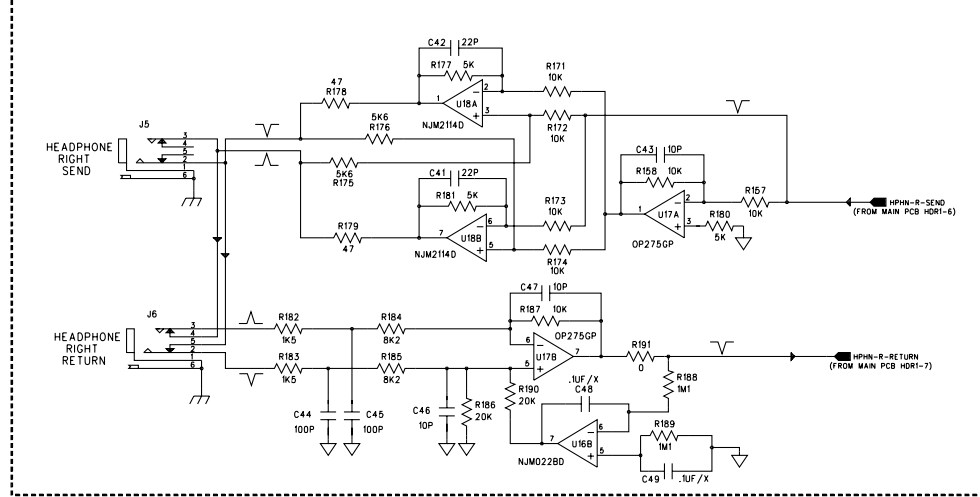
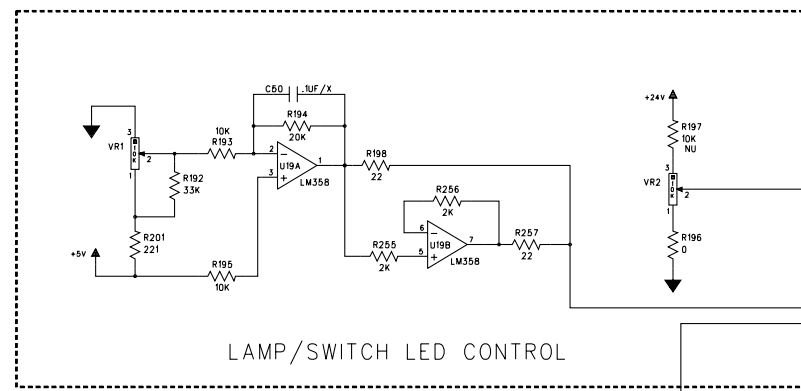
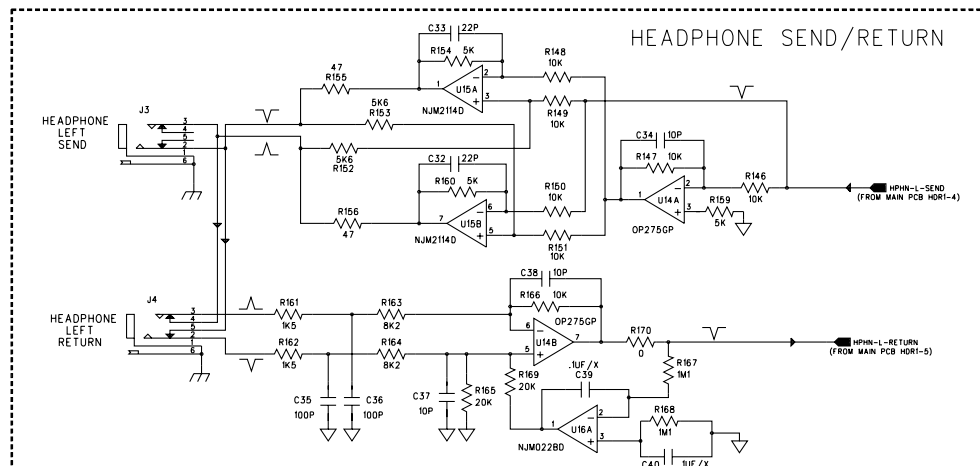
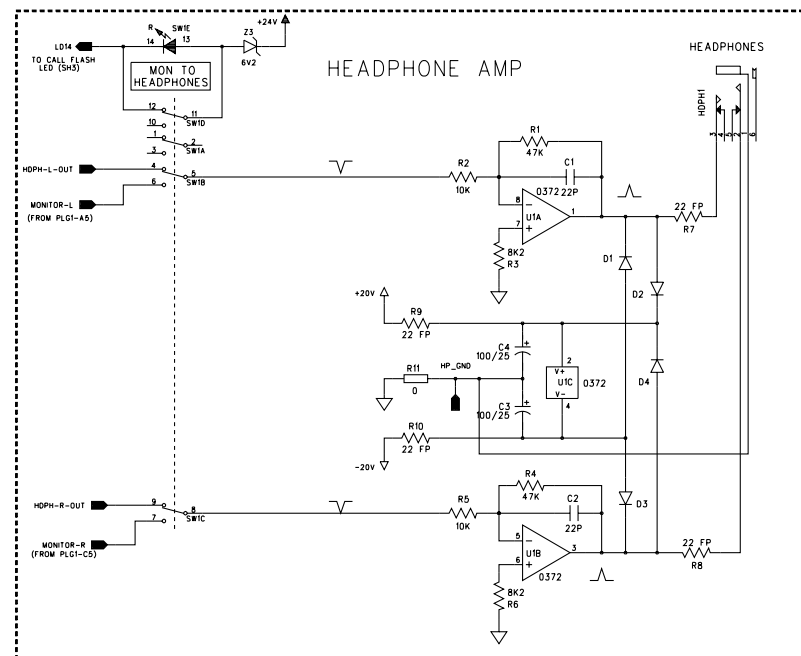
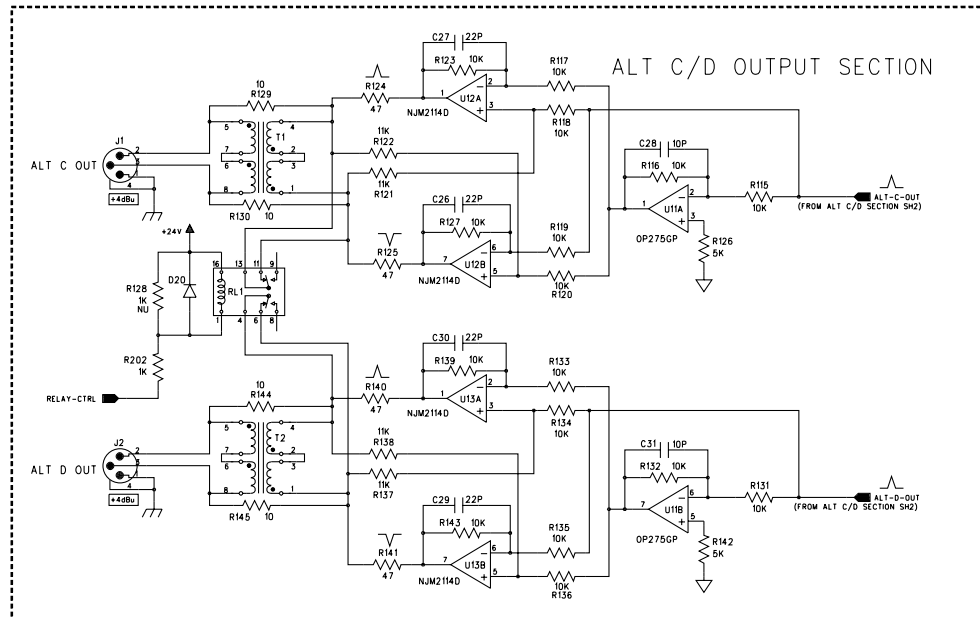


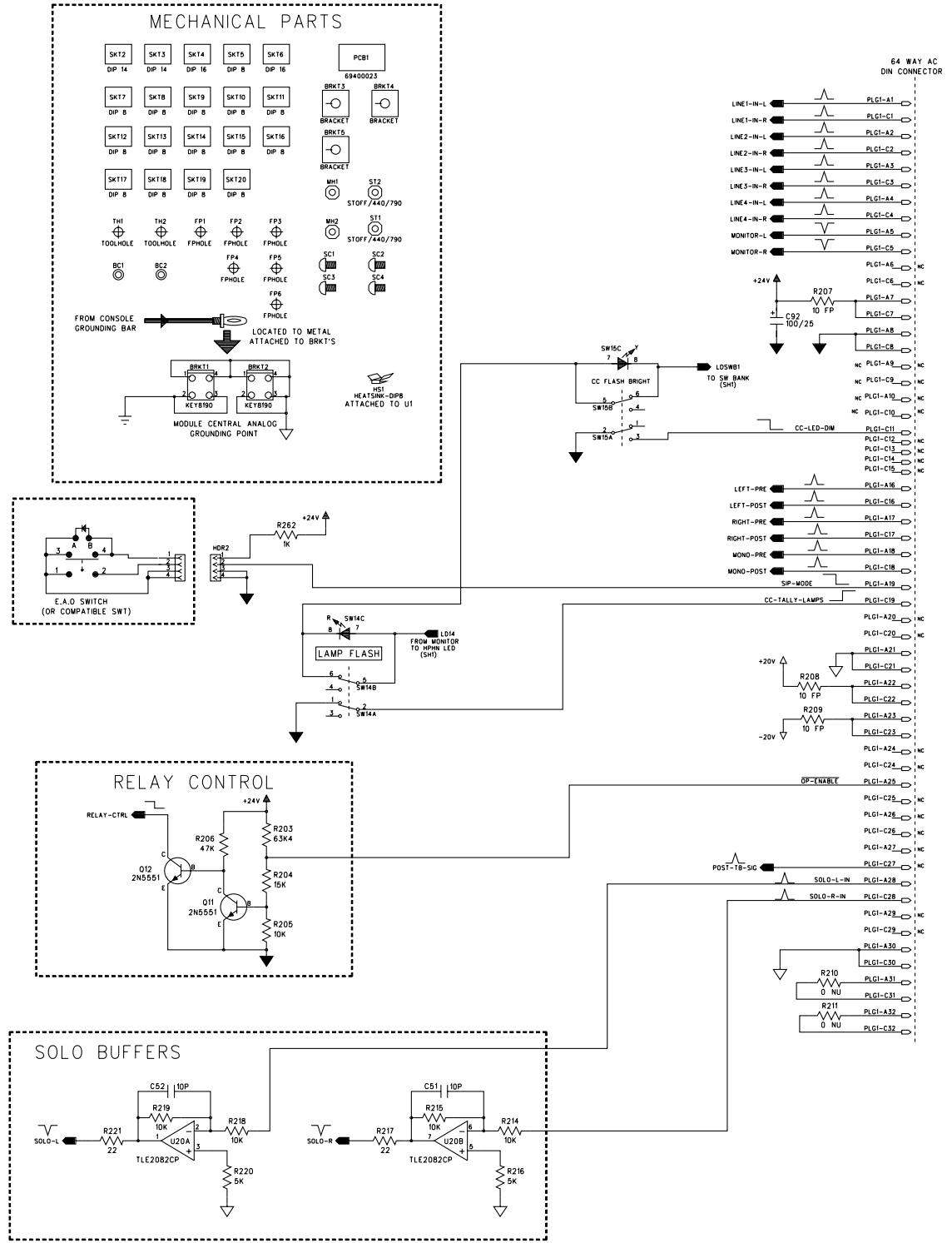
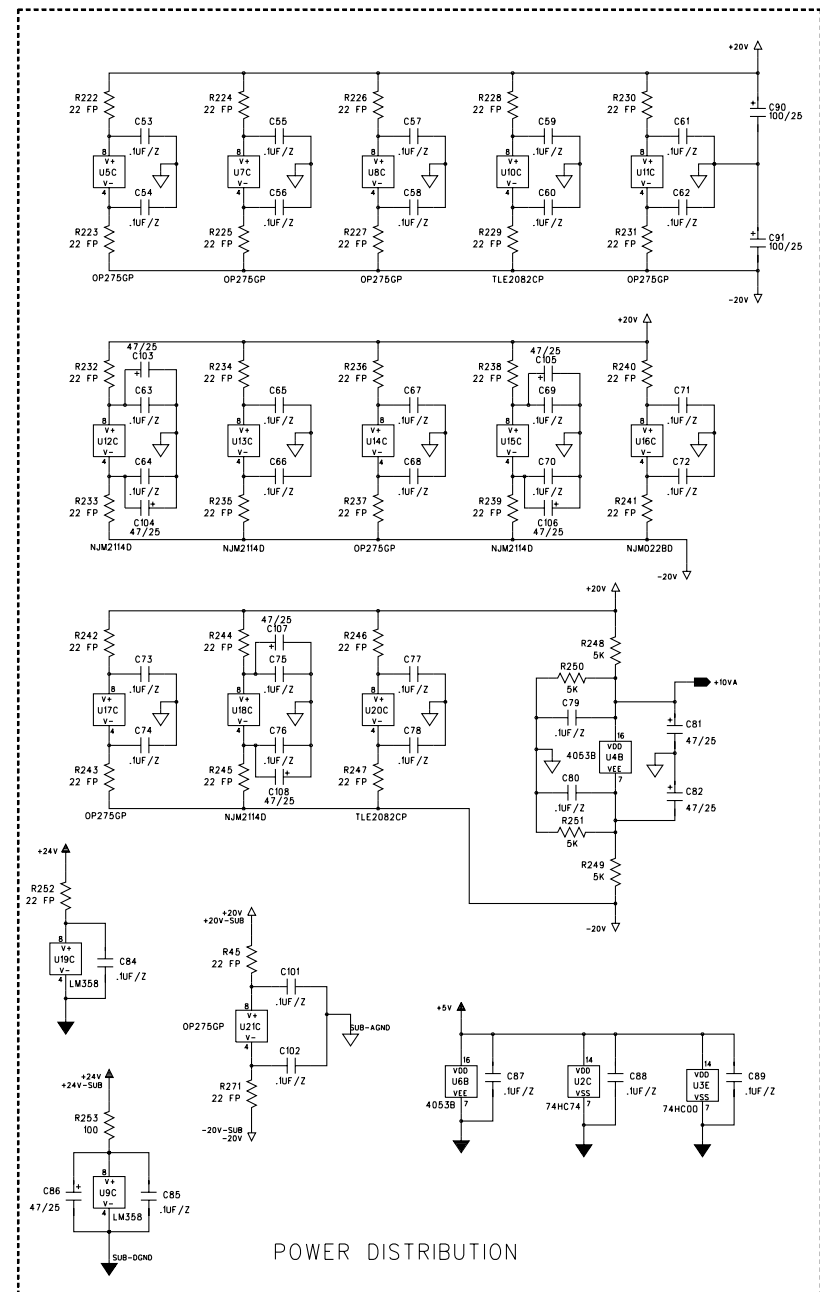


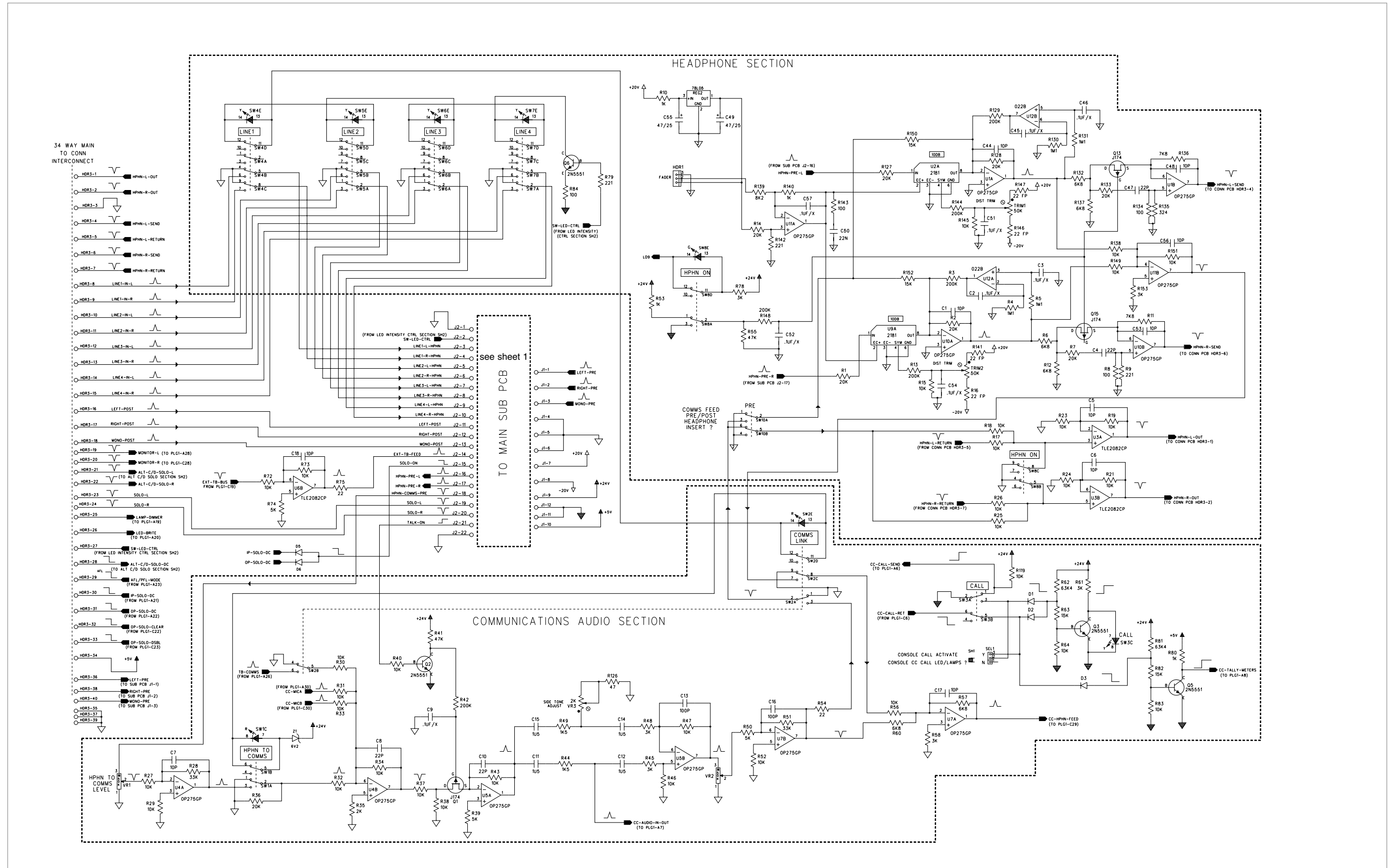


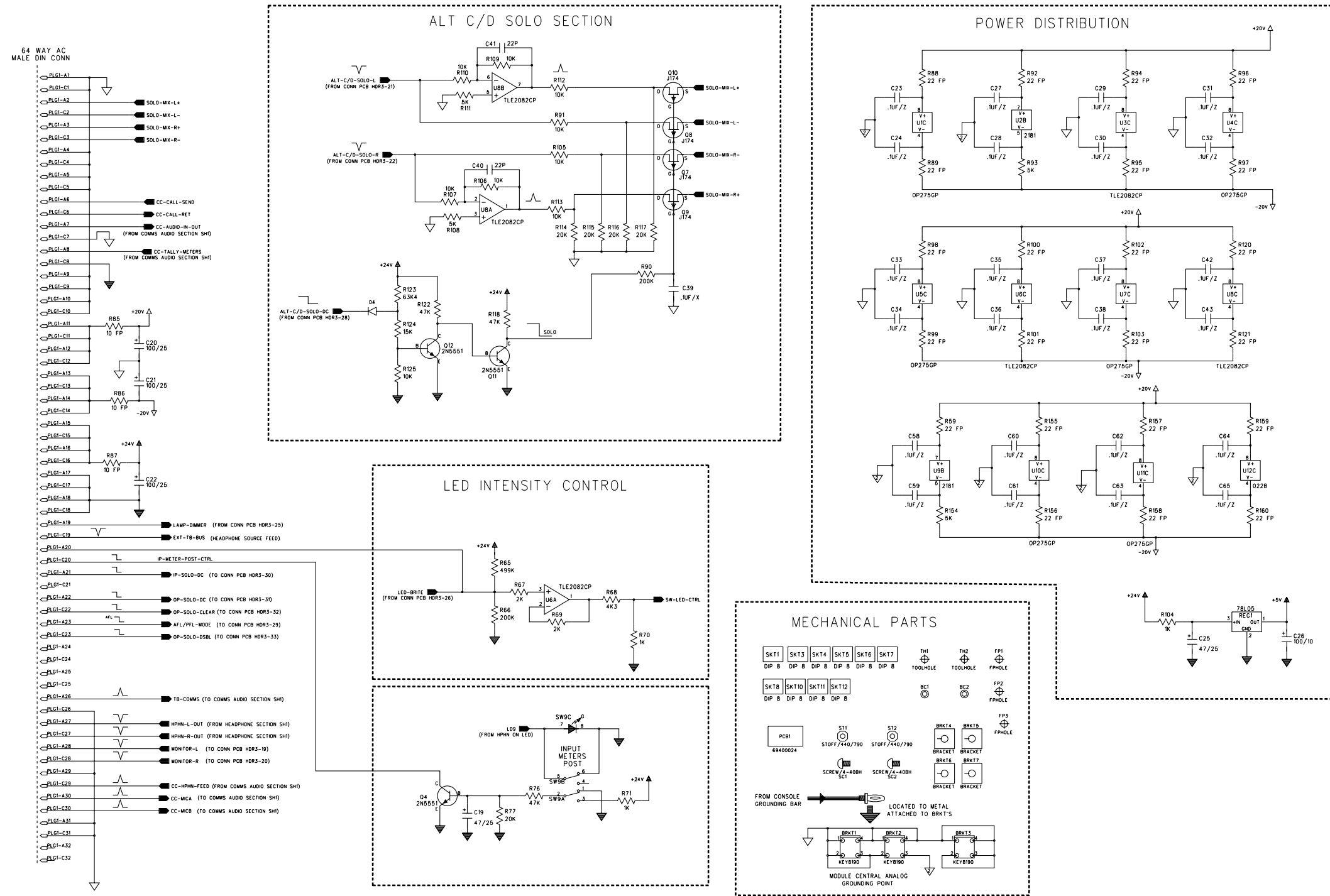


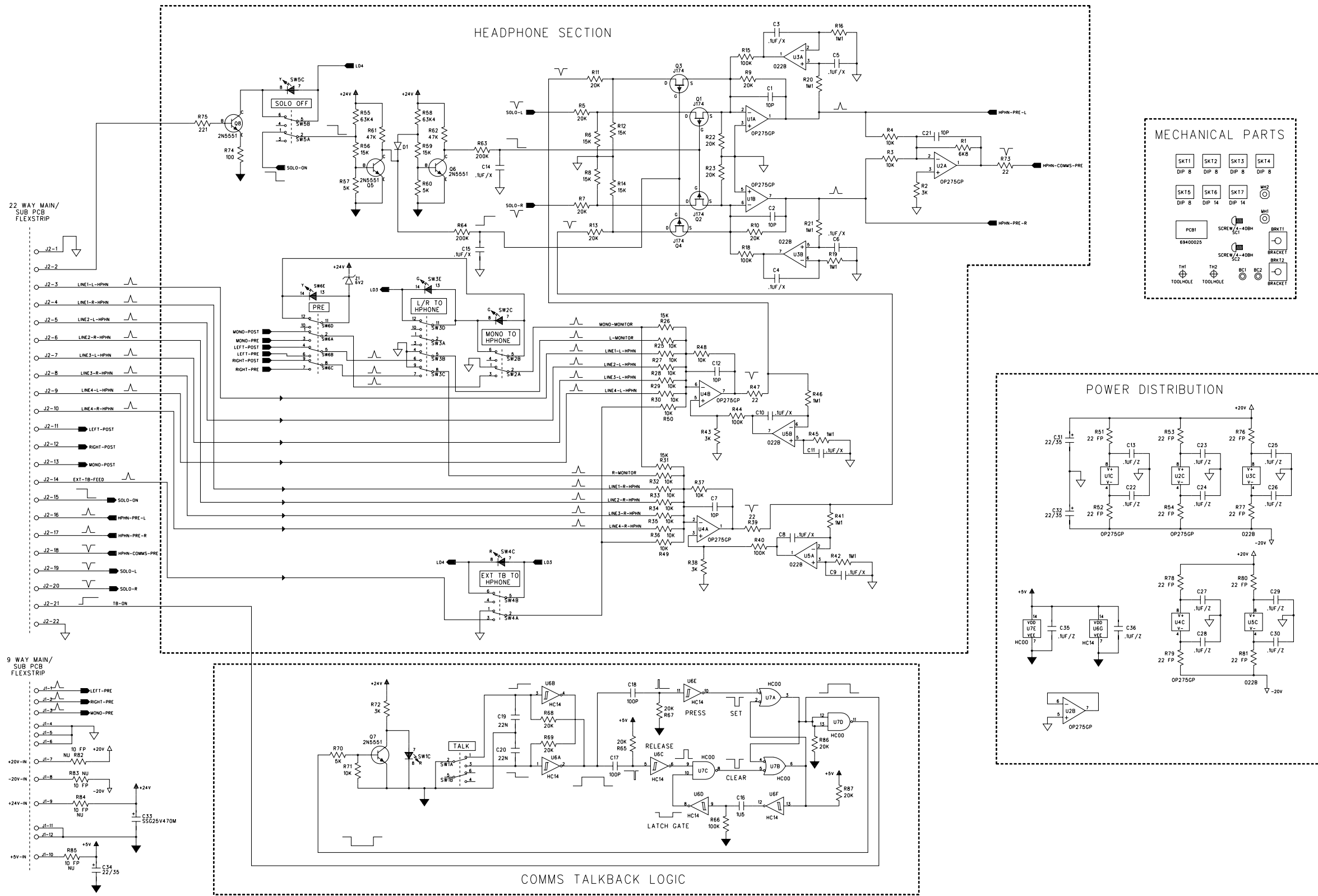


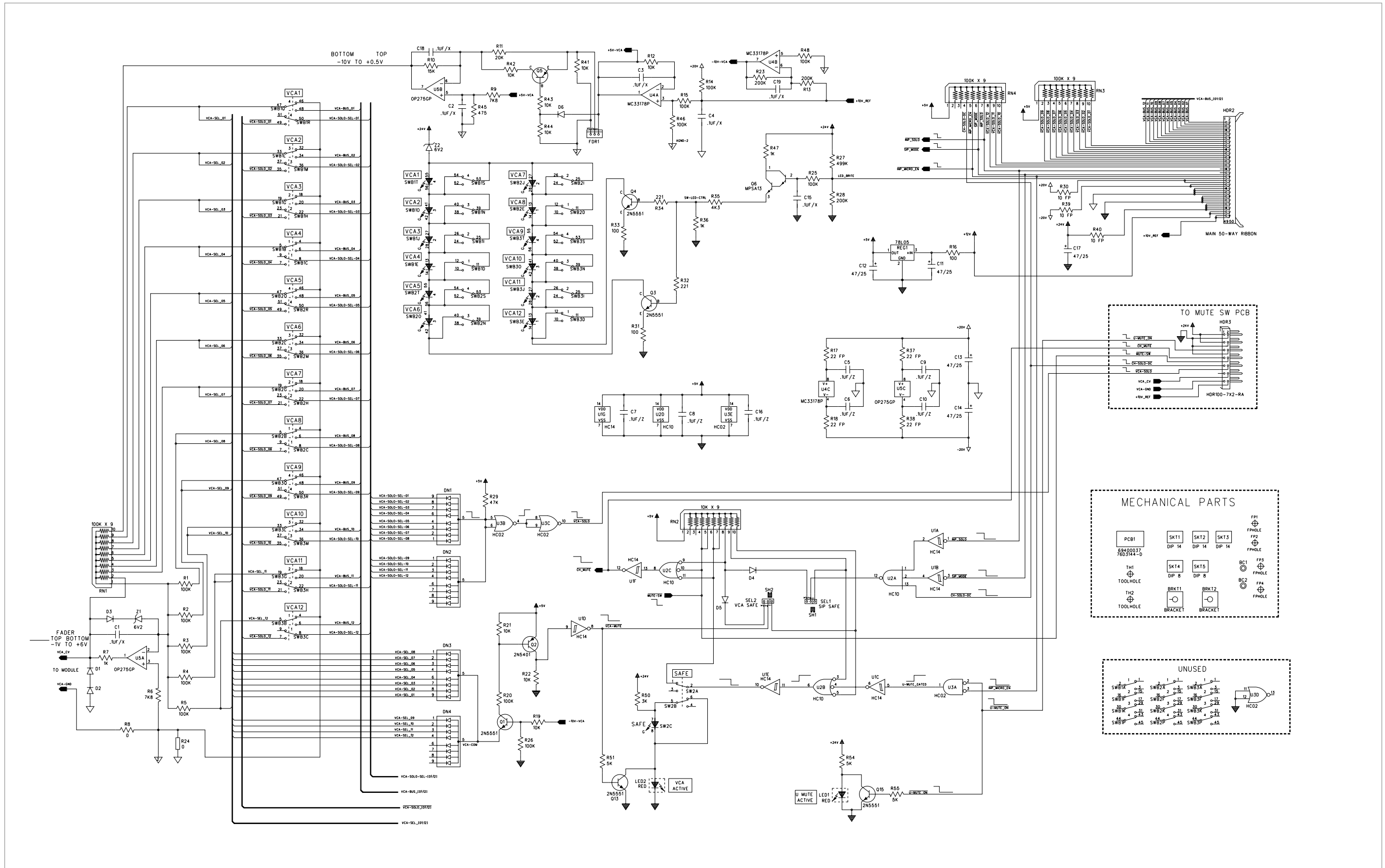


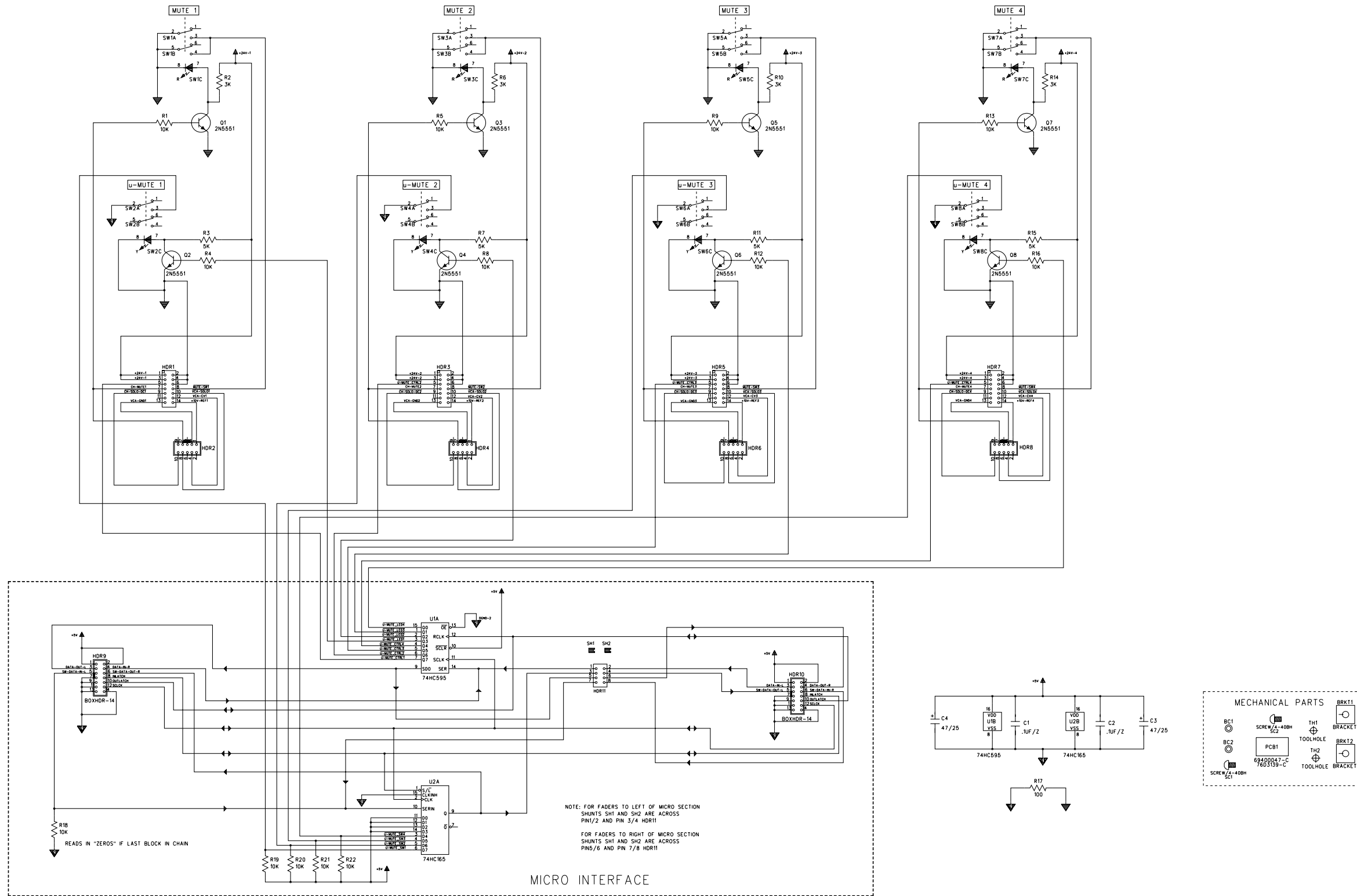


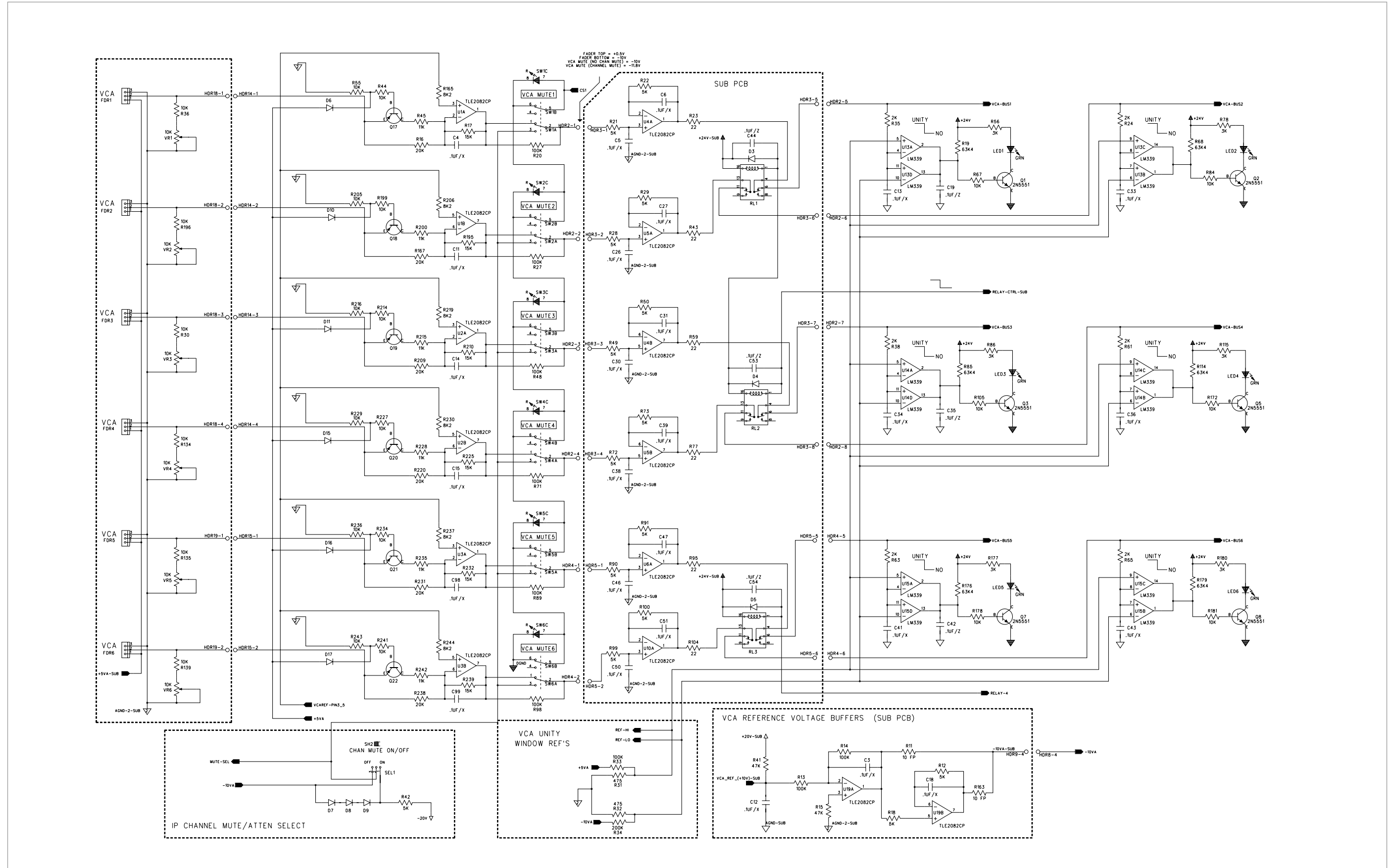


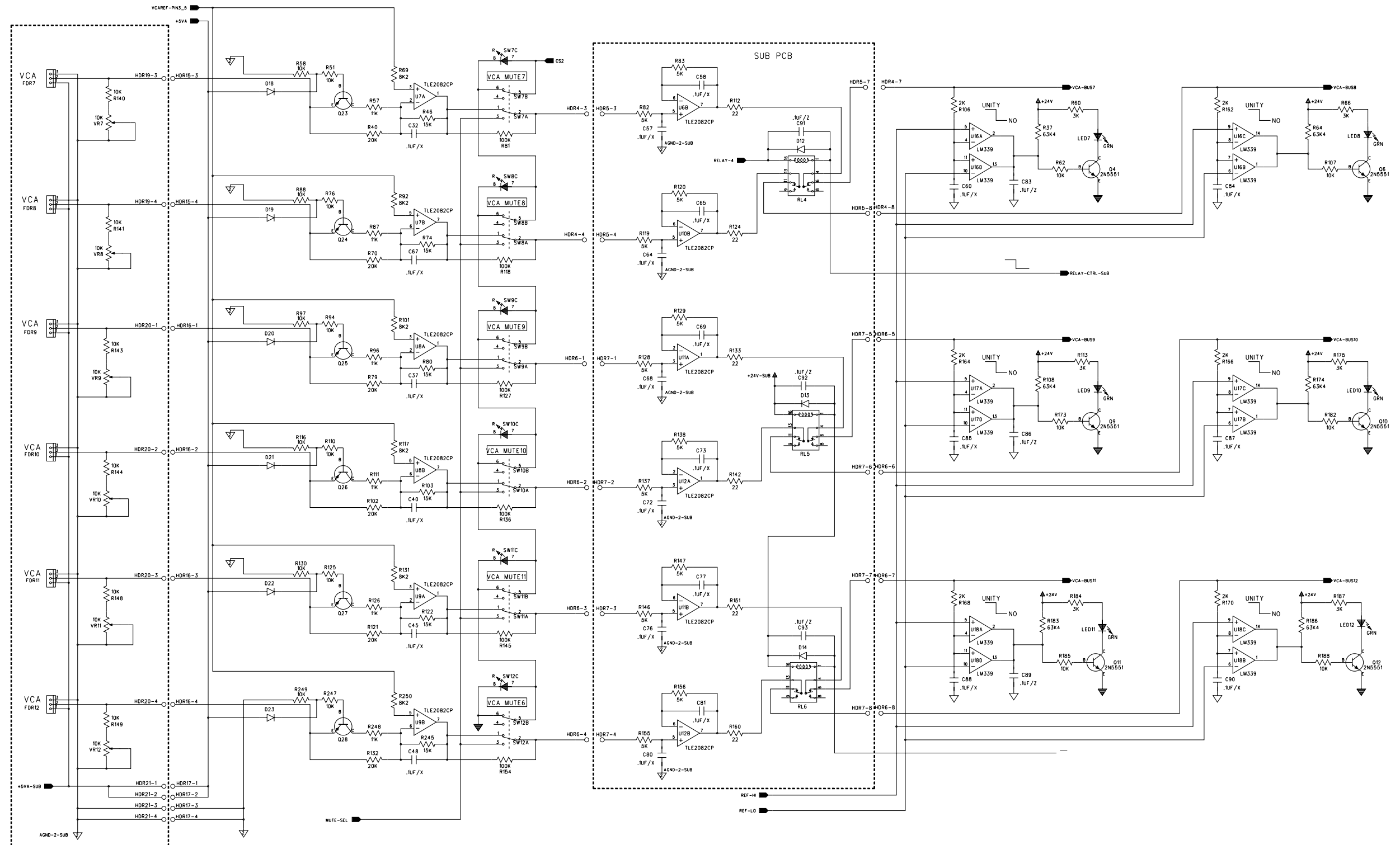


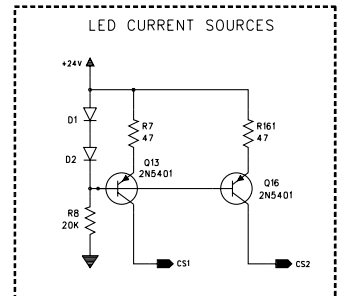
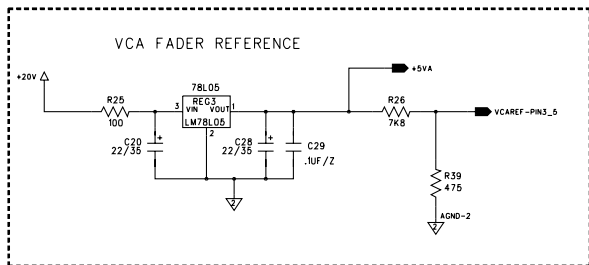
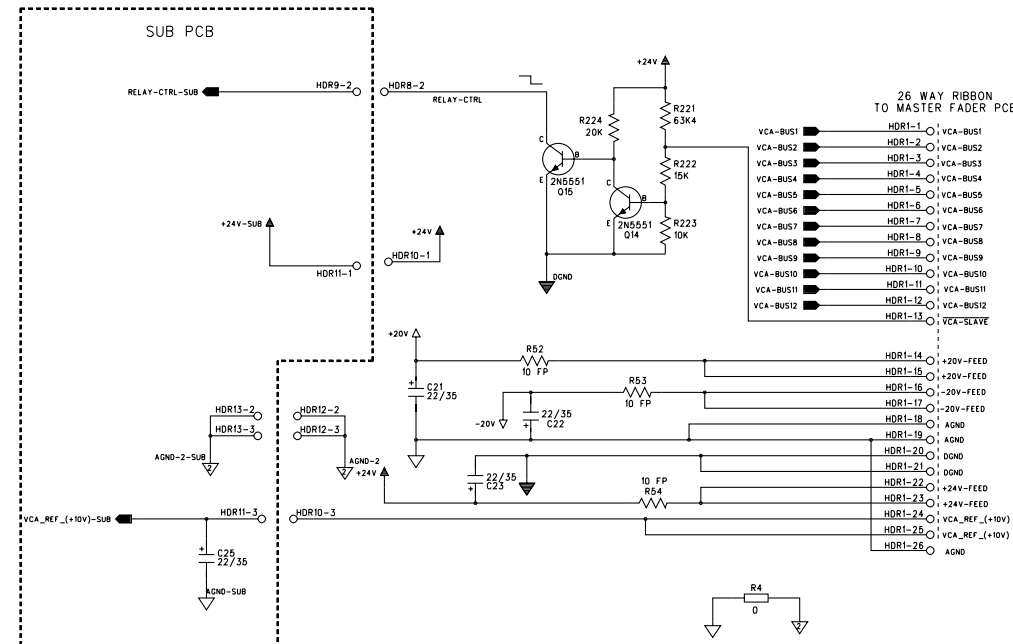
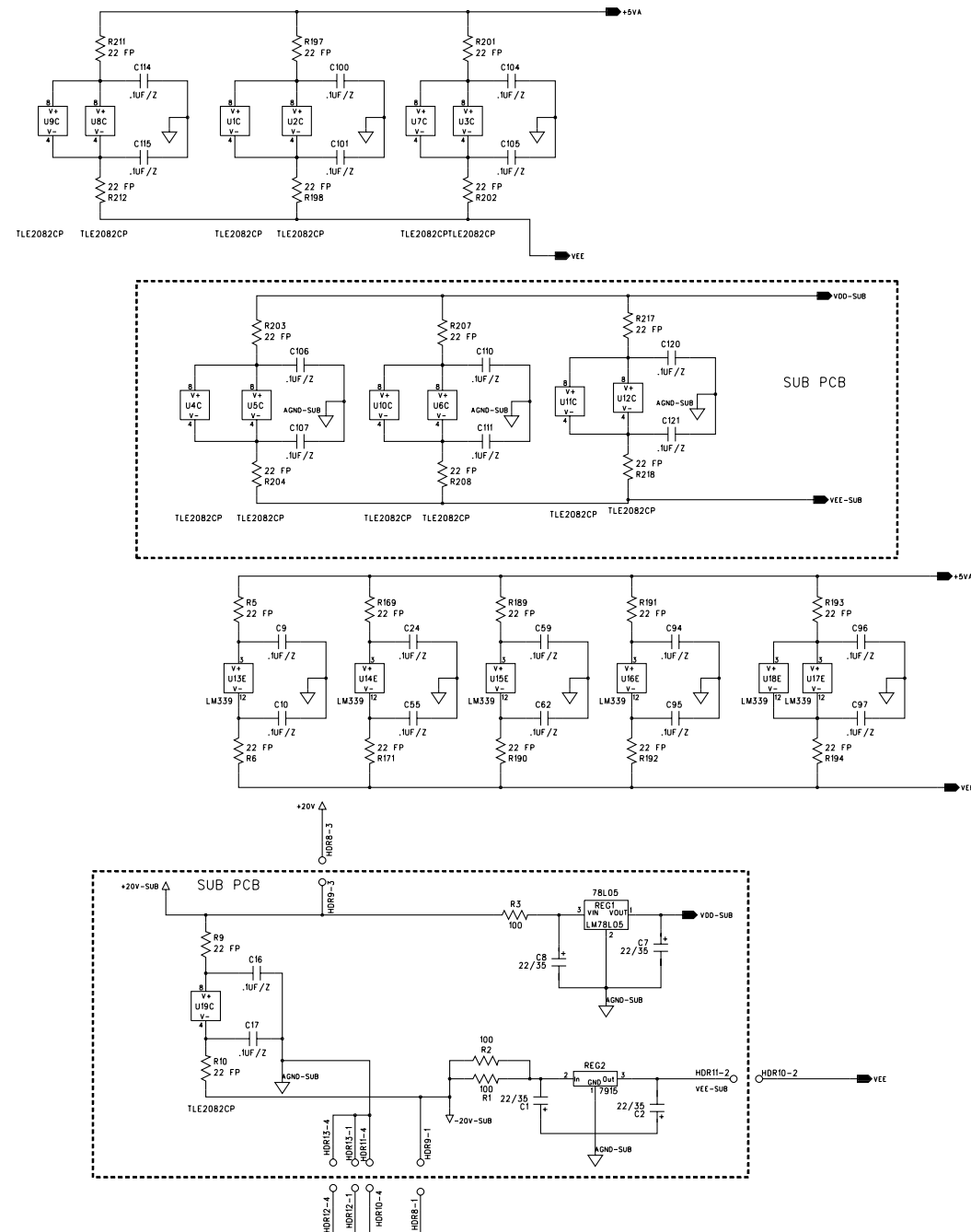


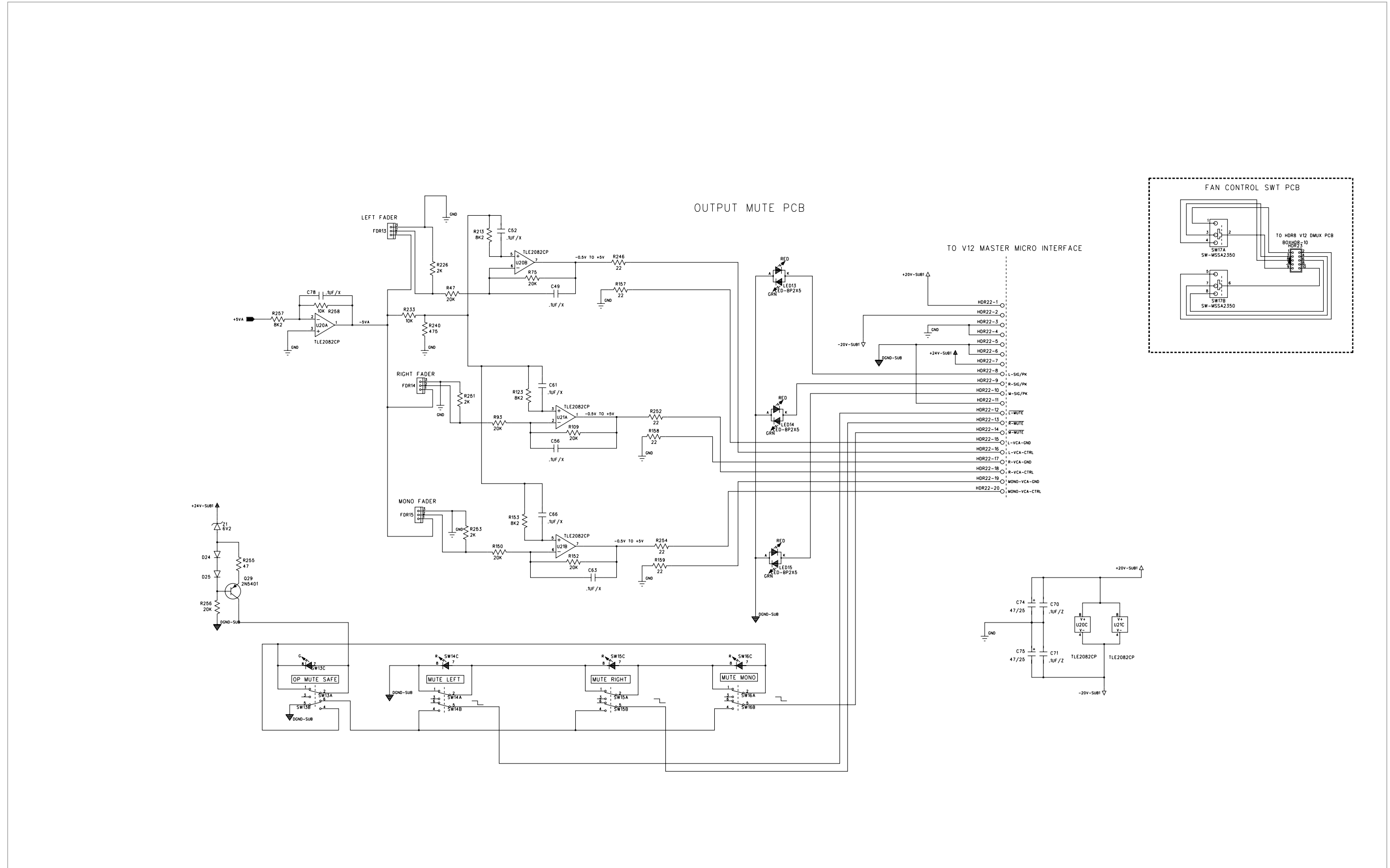


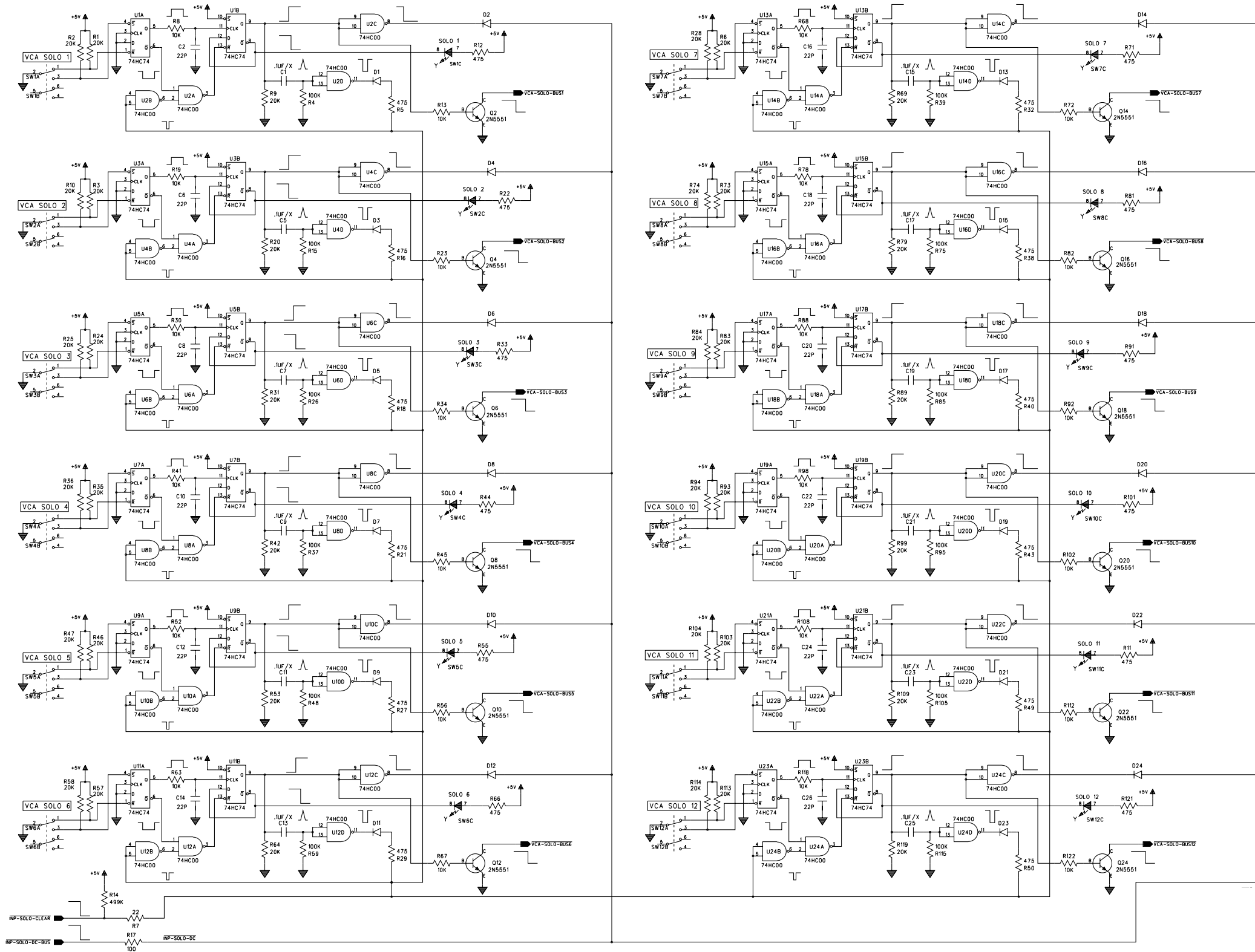


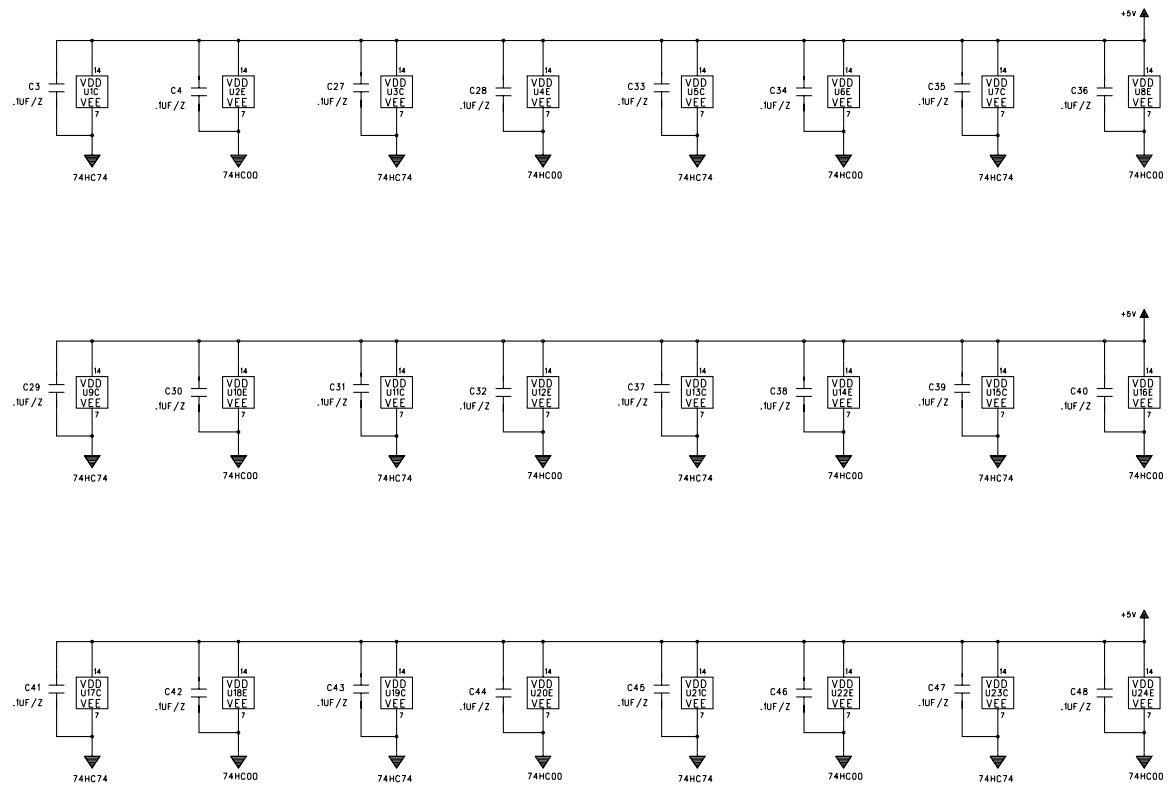




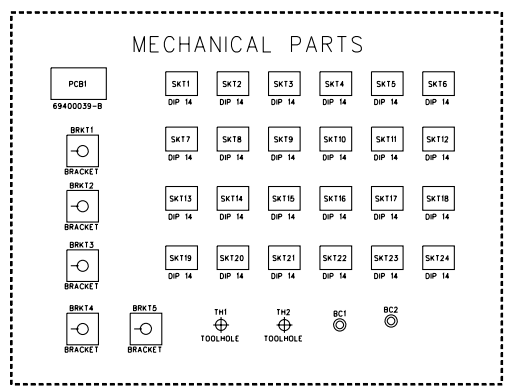
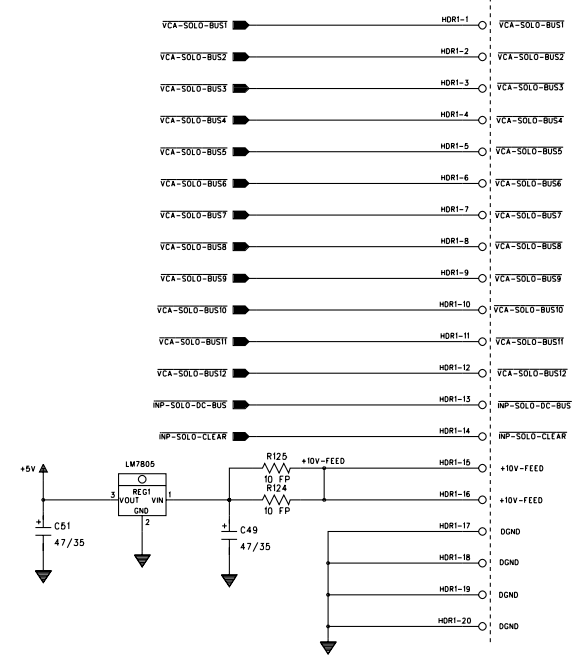


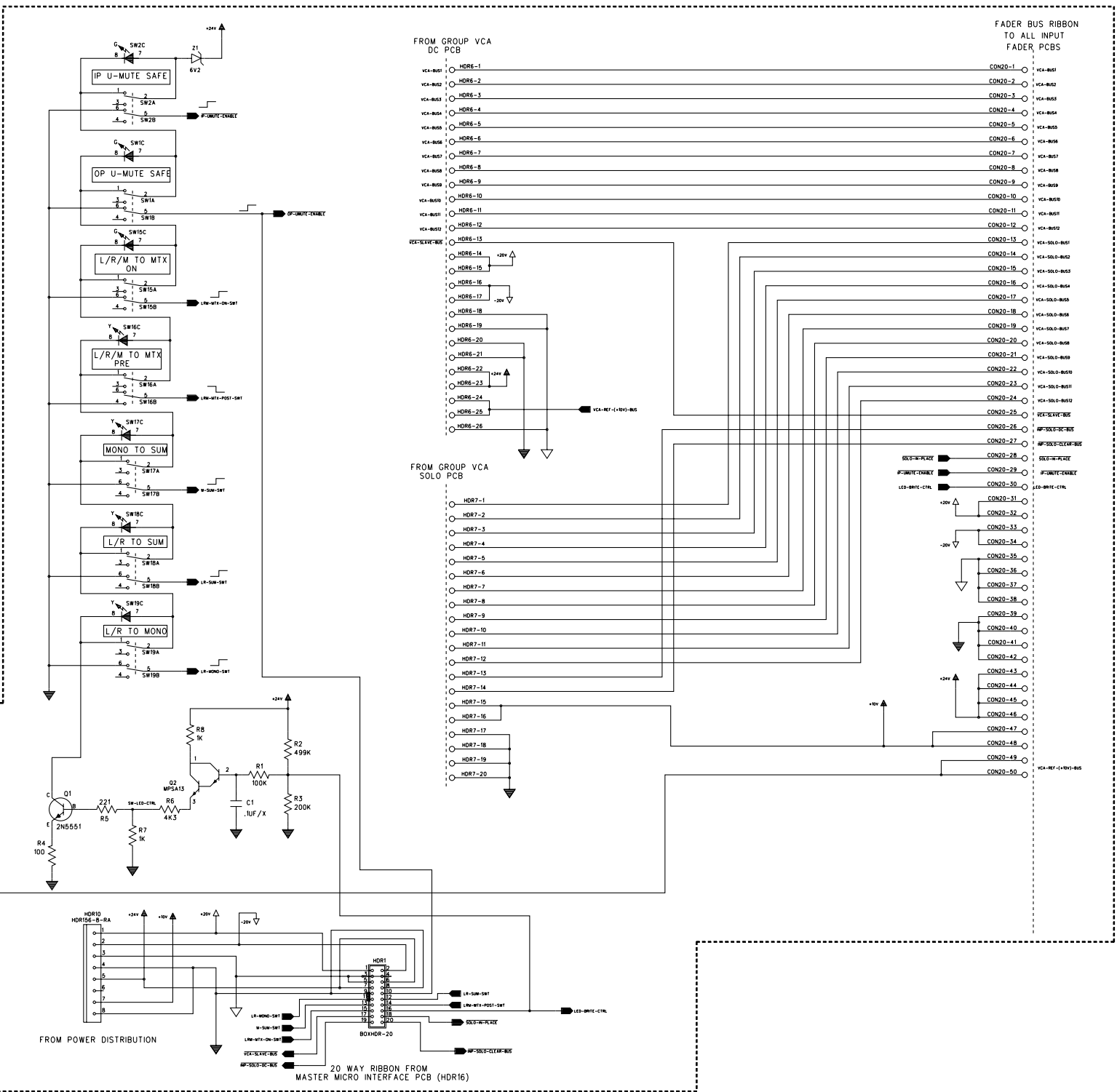
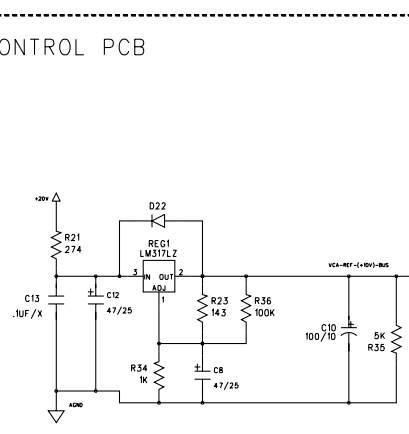
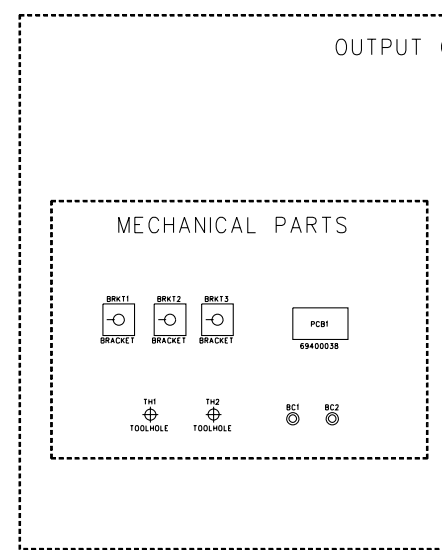
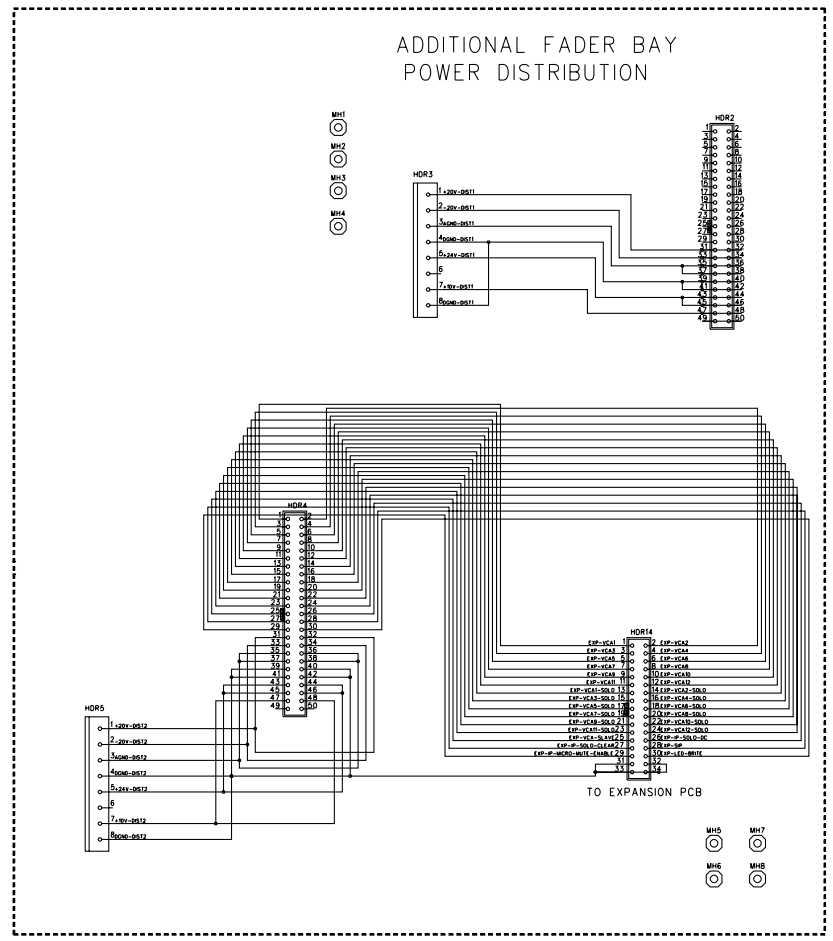


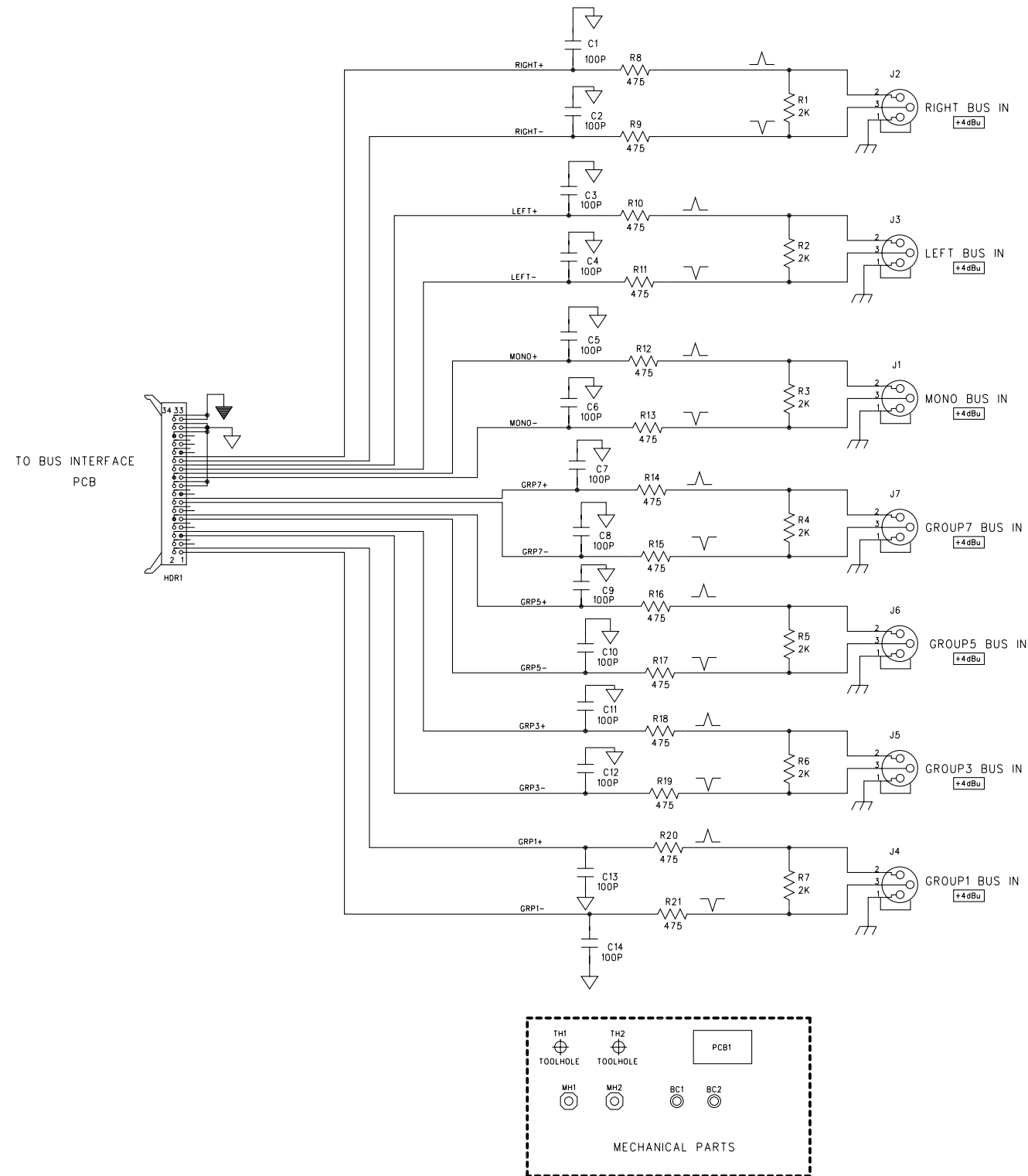


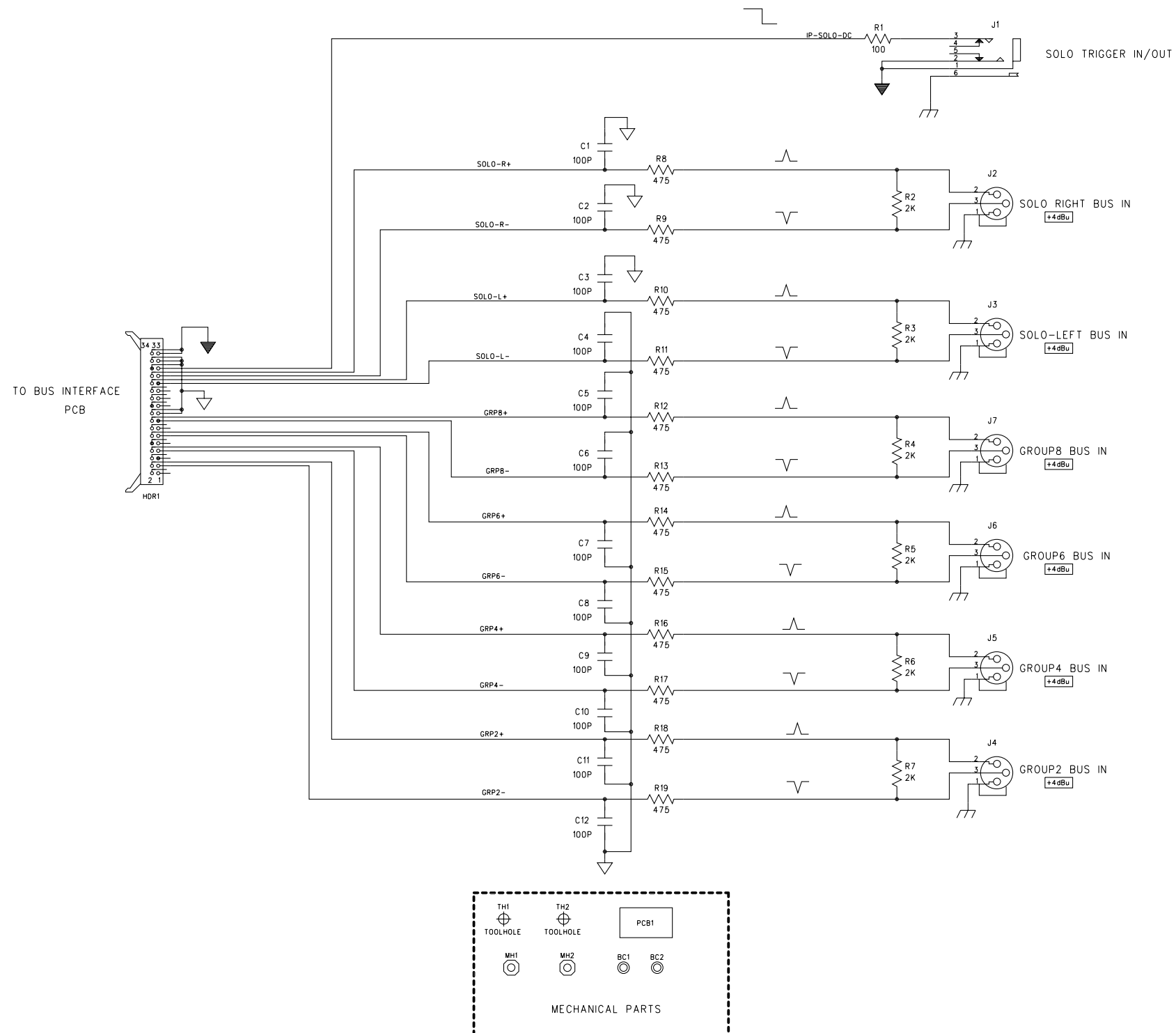


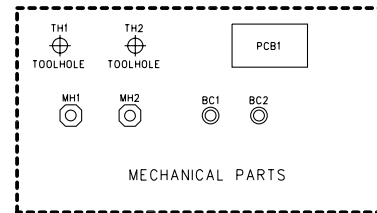
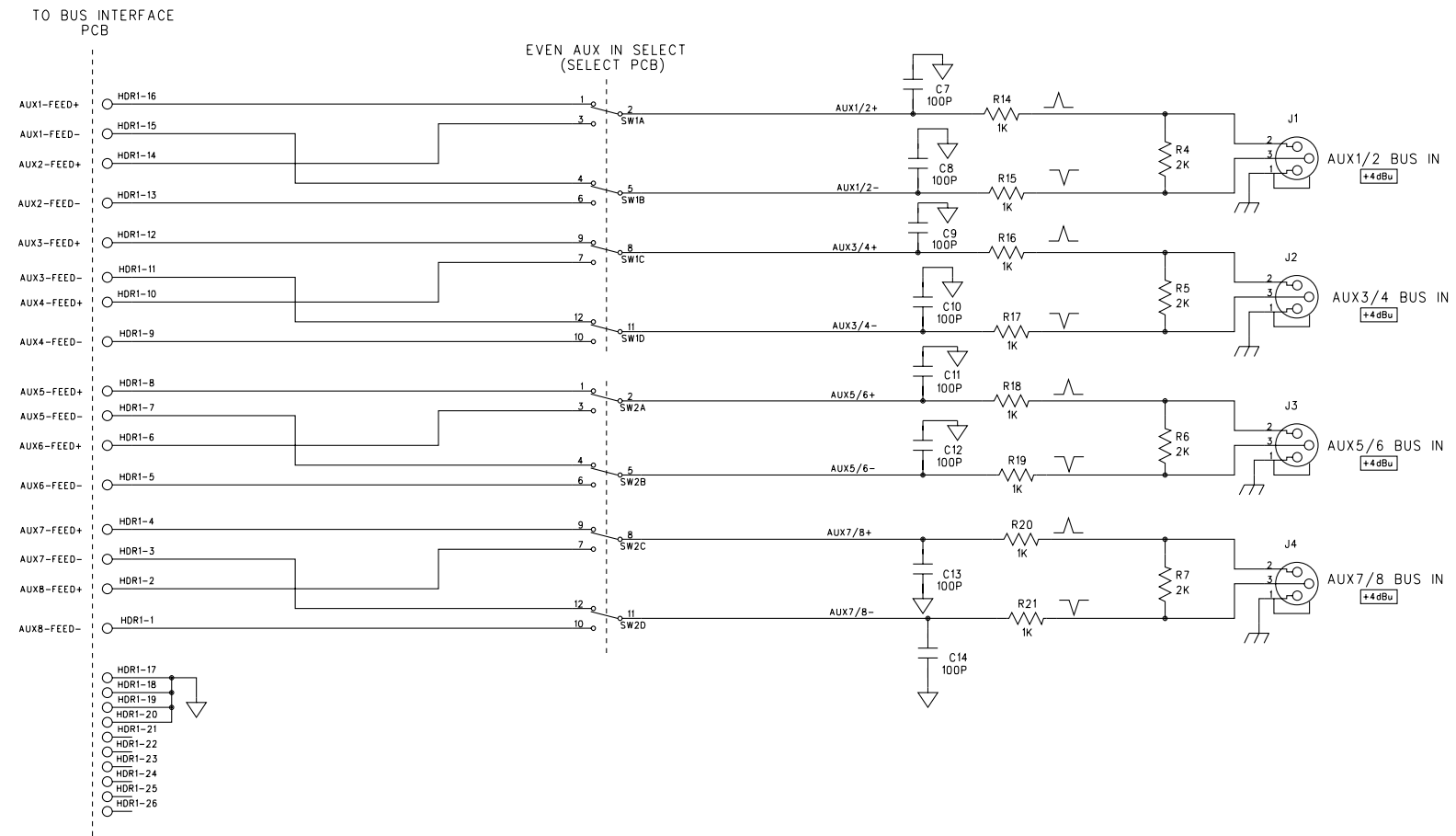
20 WAY RIBBON TO MASTER FADER PCB



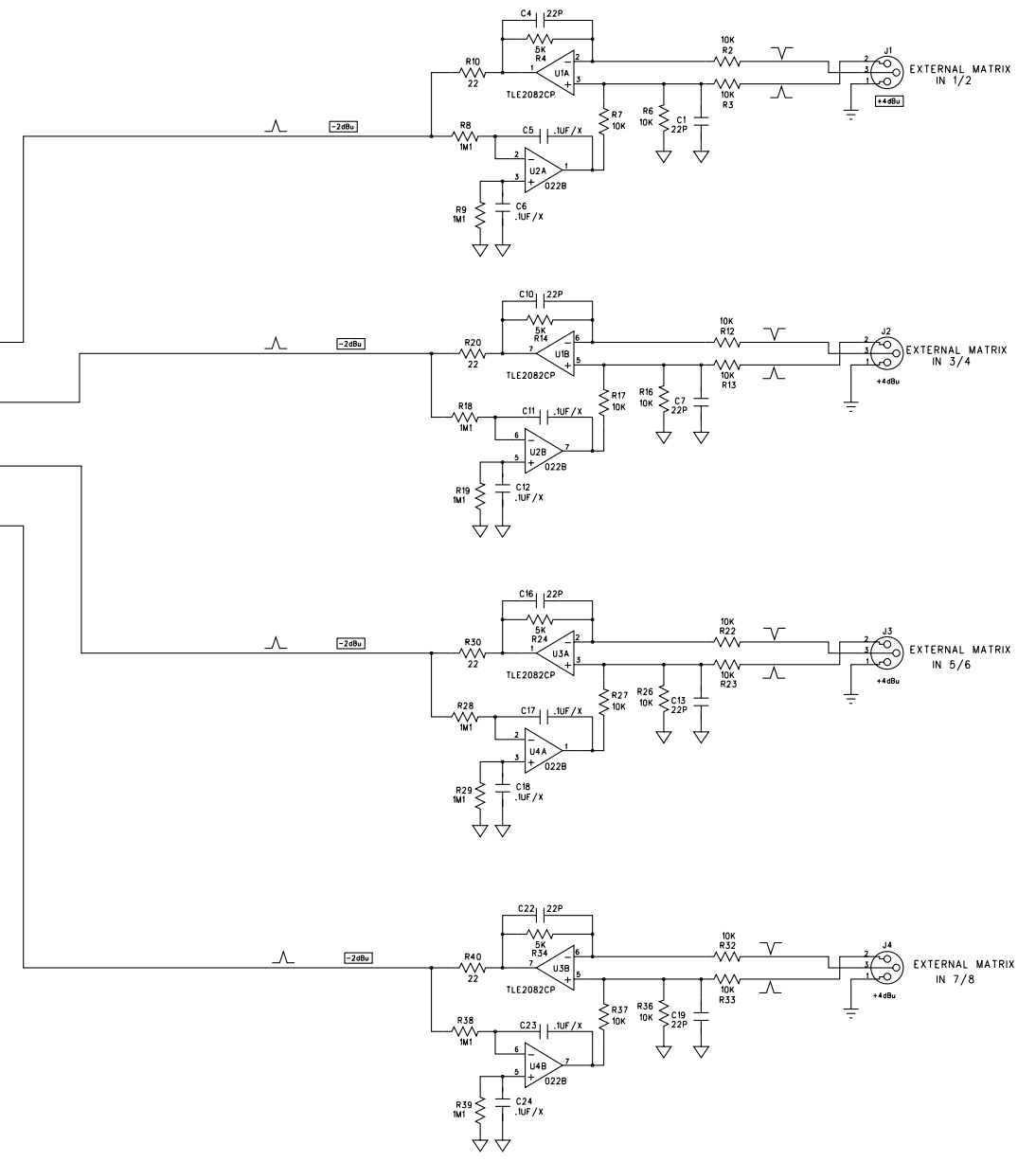
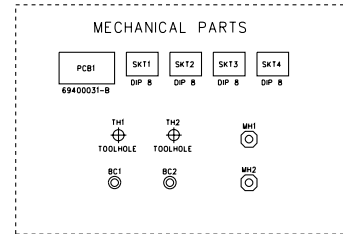
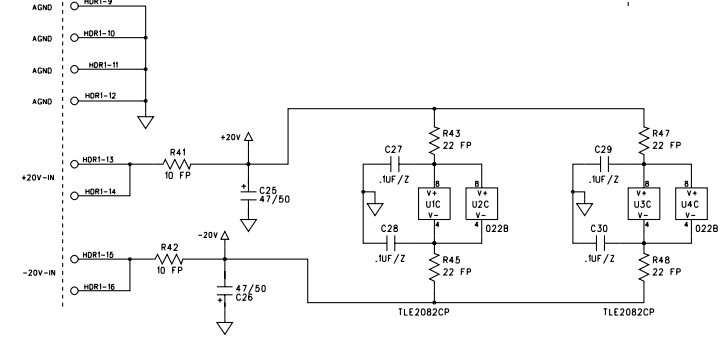
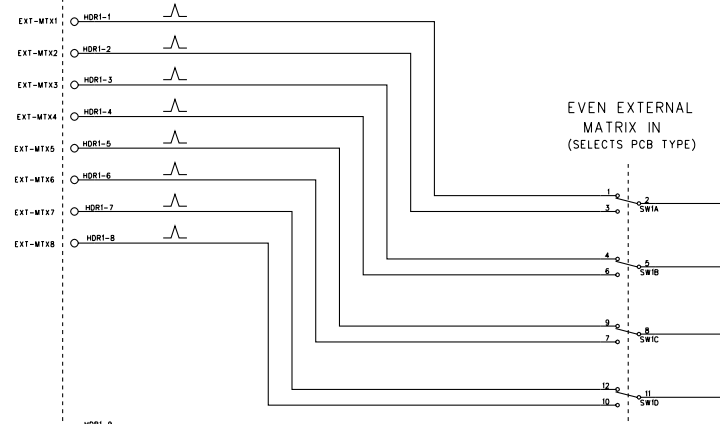




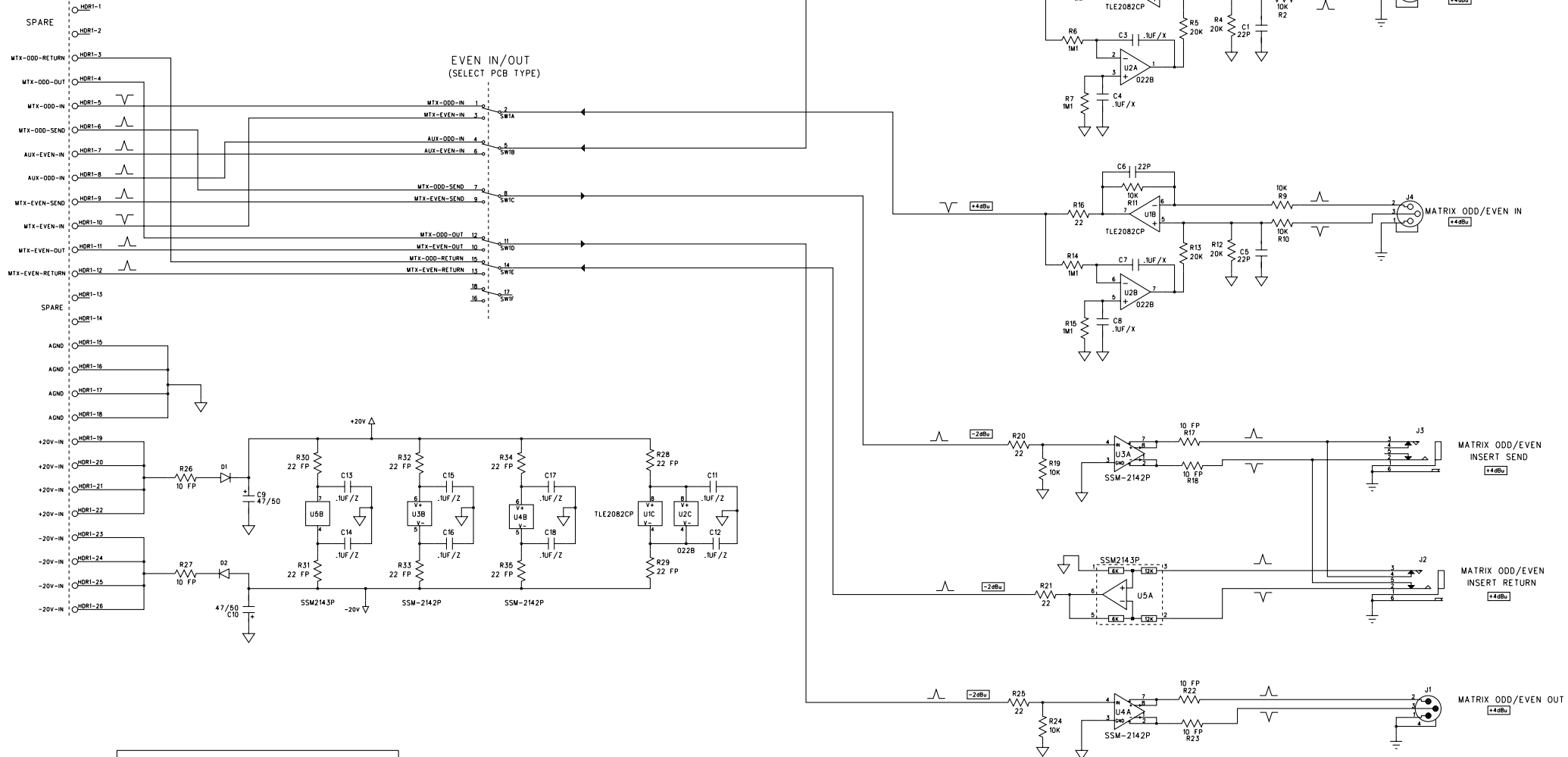




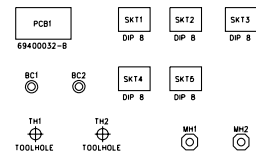
16 WAY EXTERNAL MATRIX RIBBON TO MASTER MOTHERBOARD HDR1

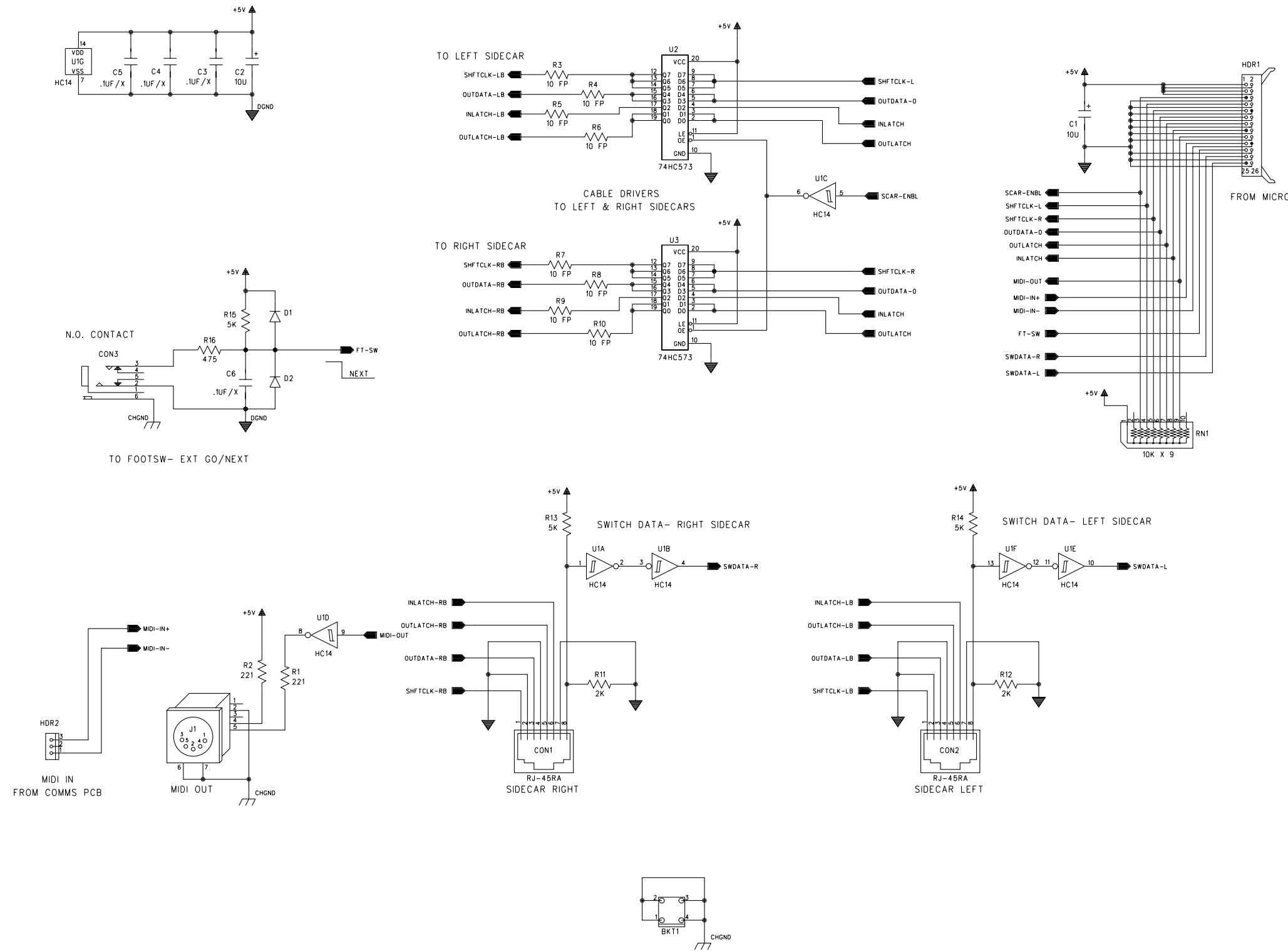


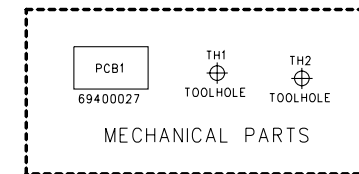
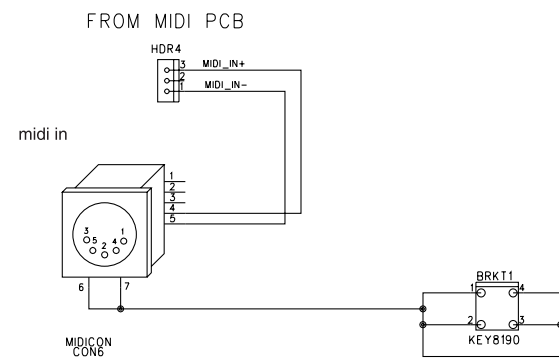
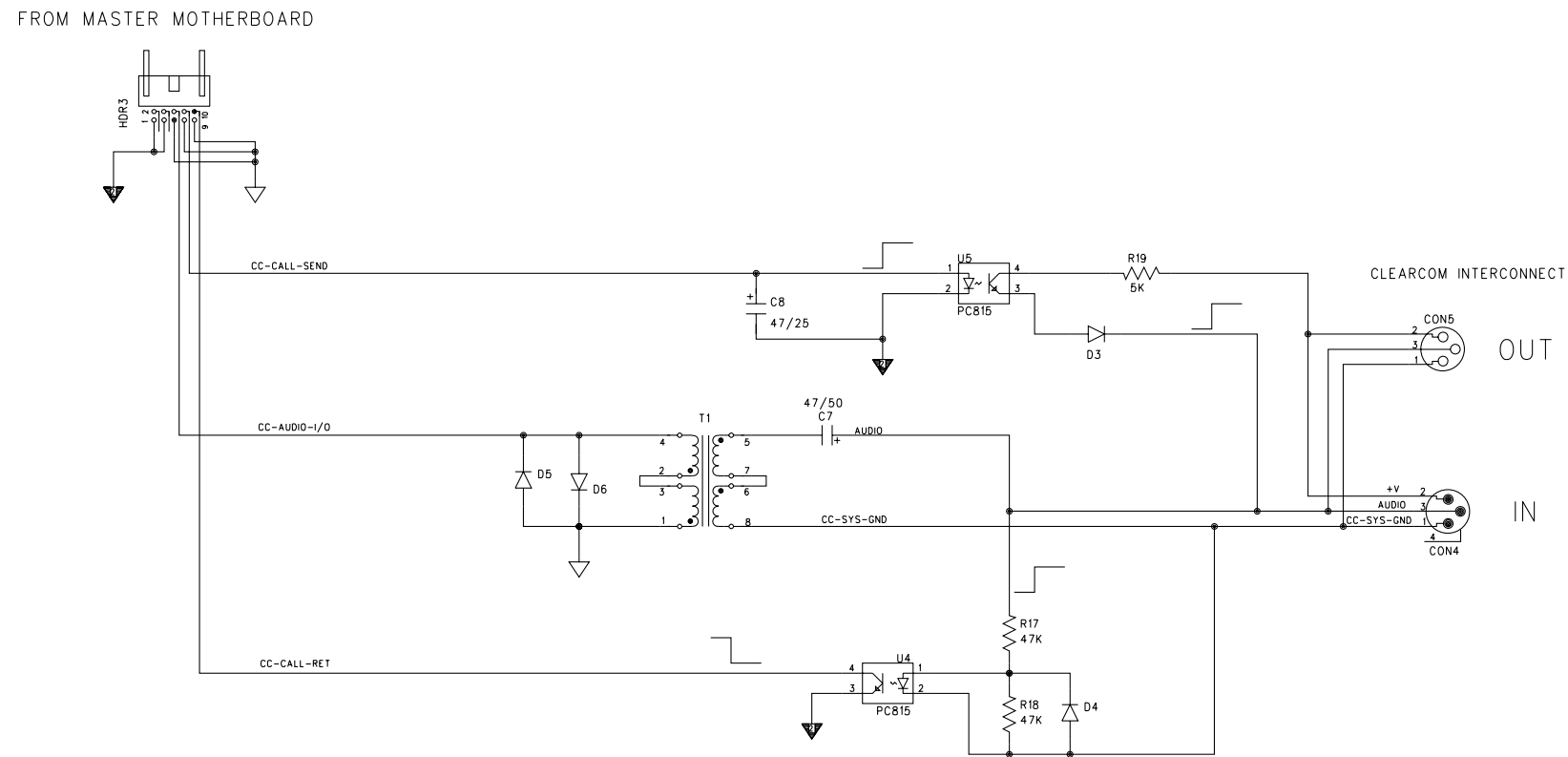
26 WAY OUTPUT MODULE
INTERFACE PCB TO MASTER
MOTHERBOARD HDR2/HDR3/HDR4/HDR5

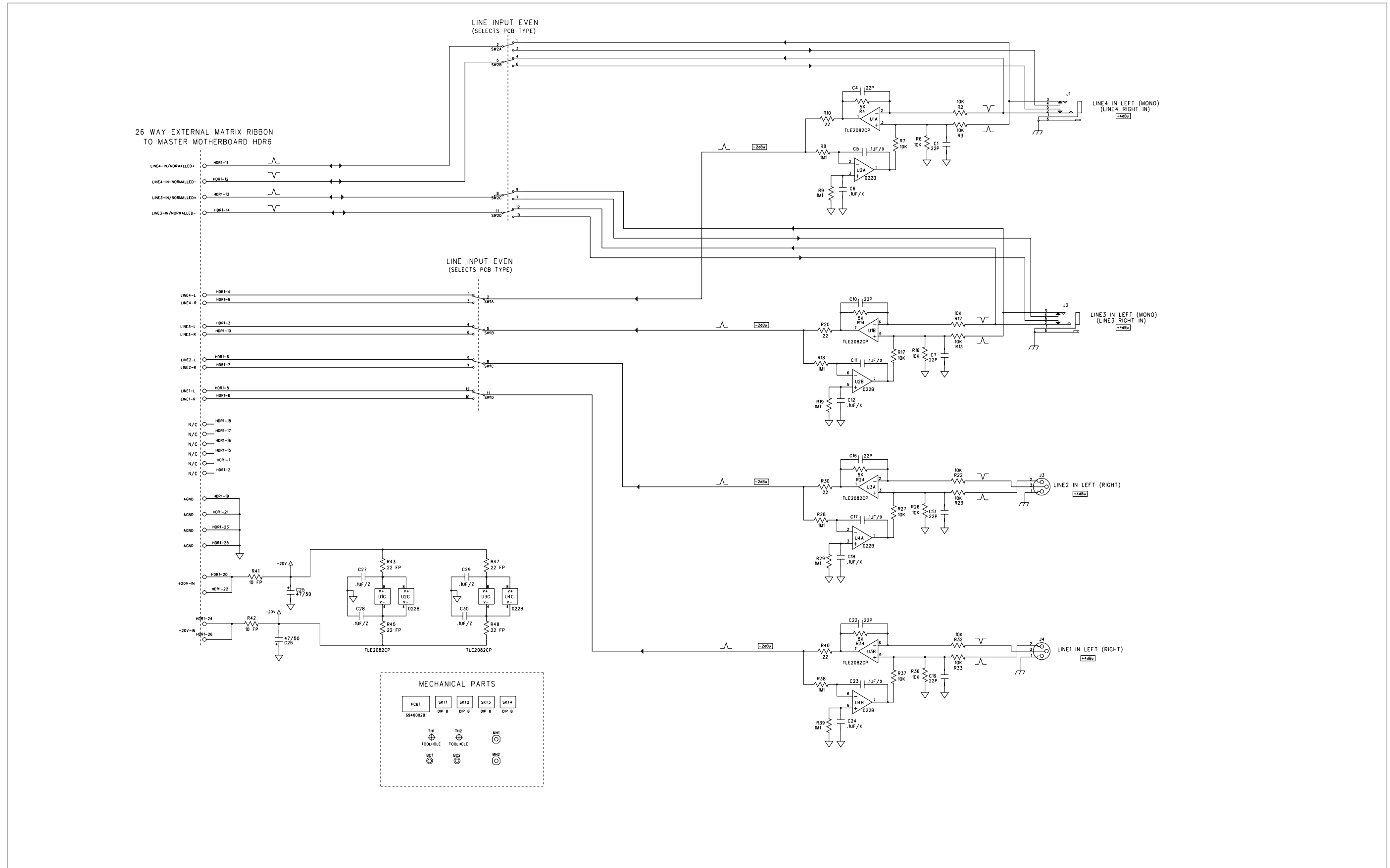


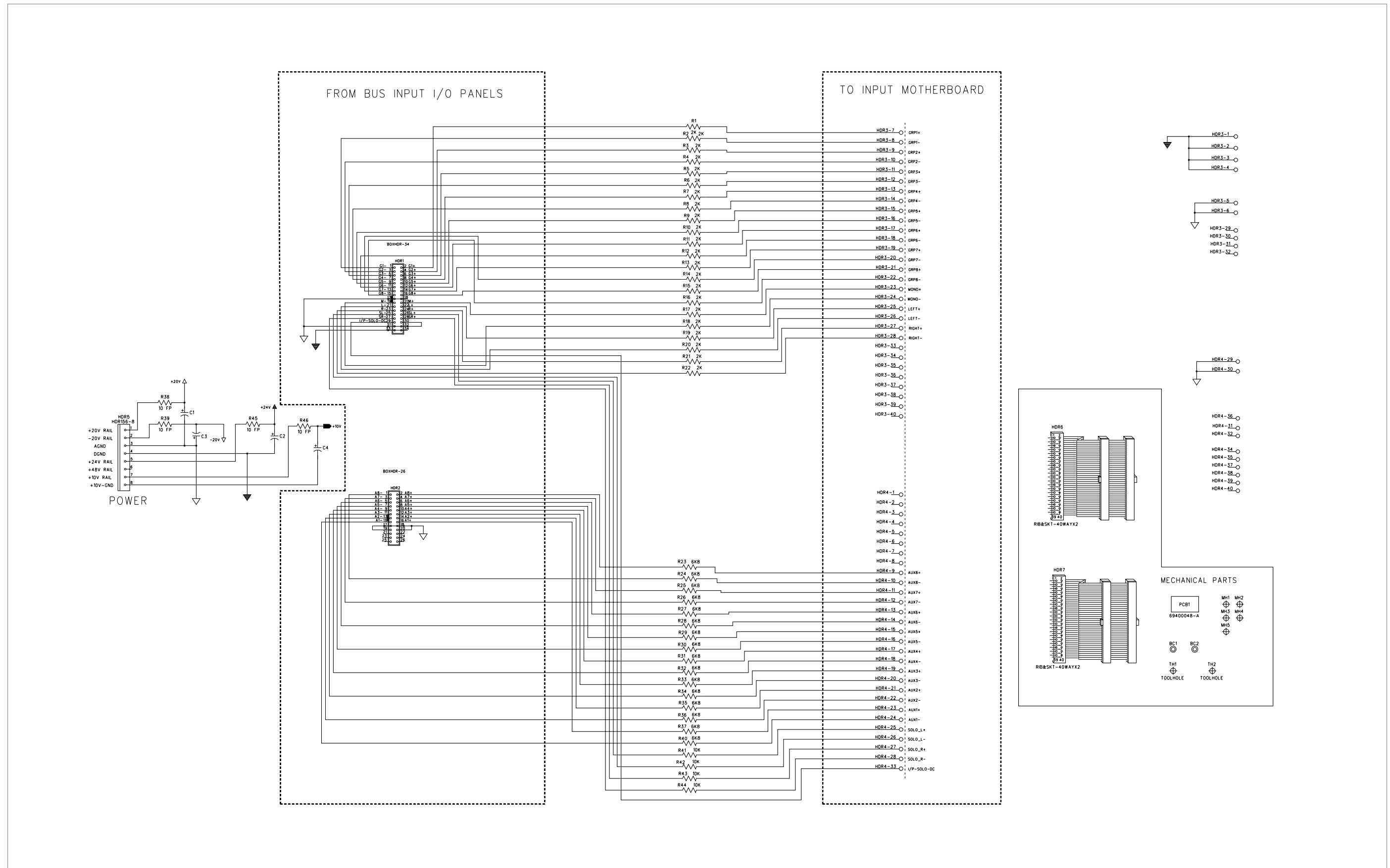
MECHANICAL PARTS

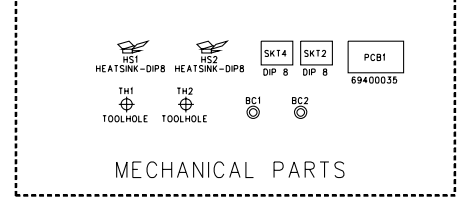
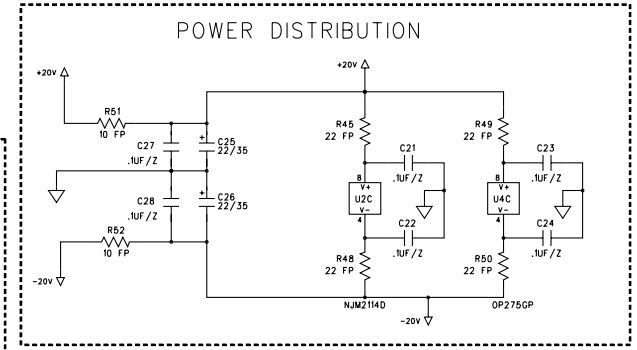
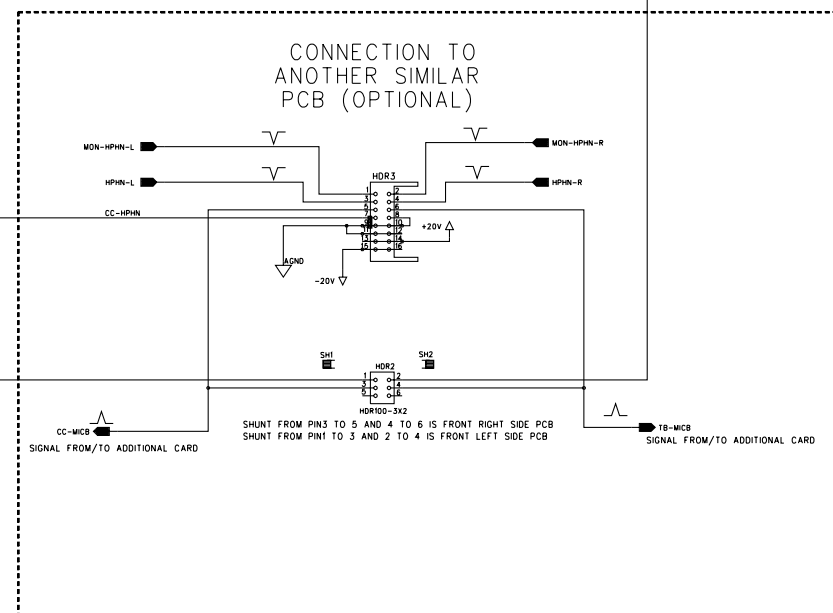
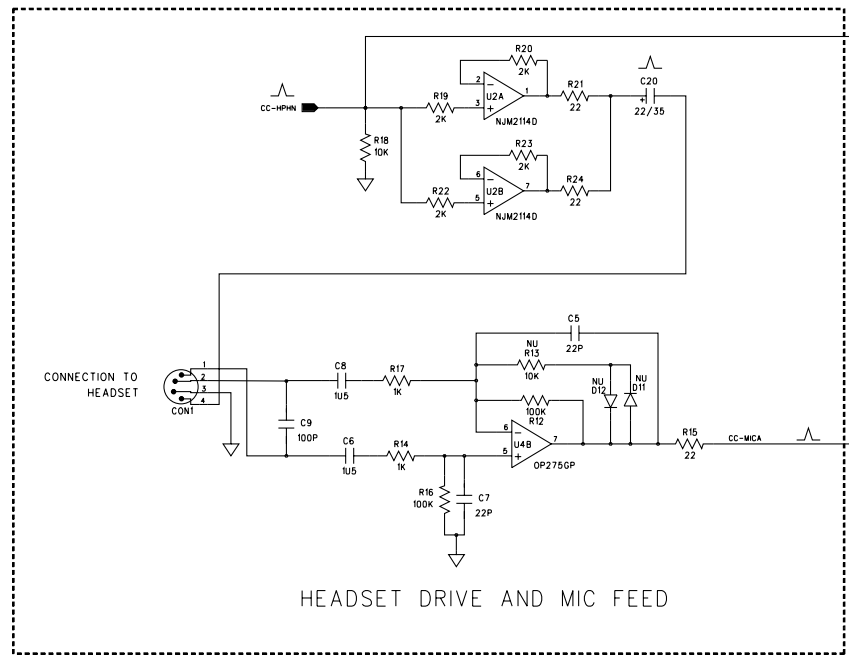
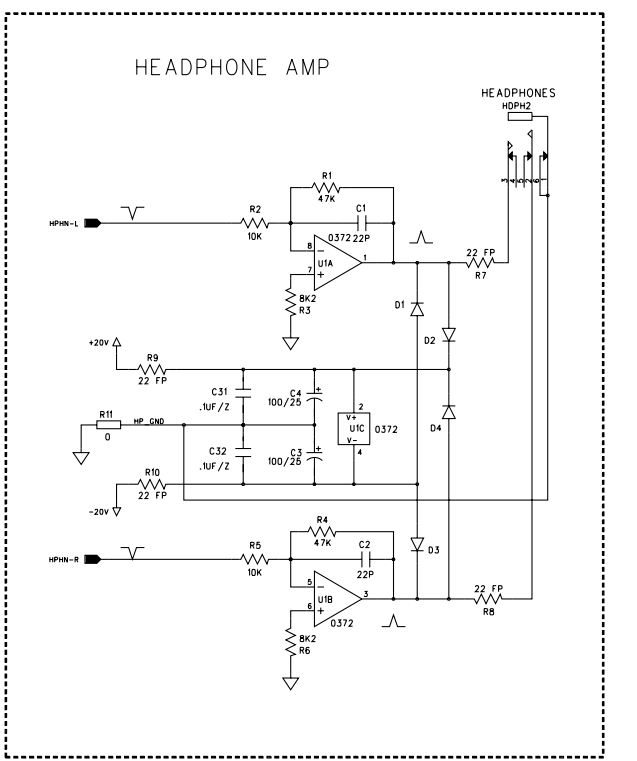
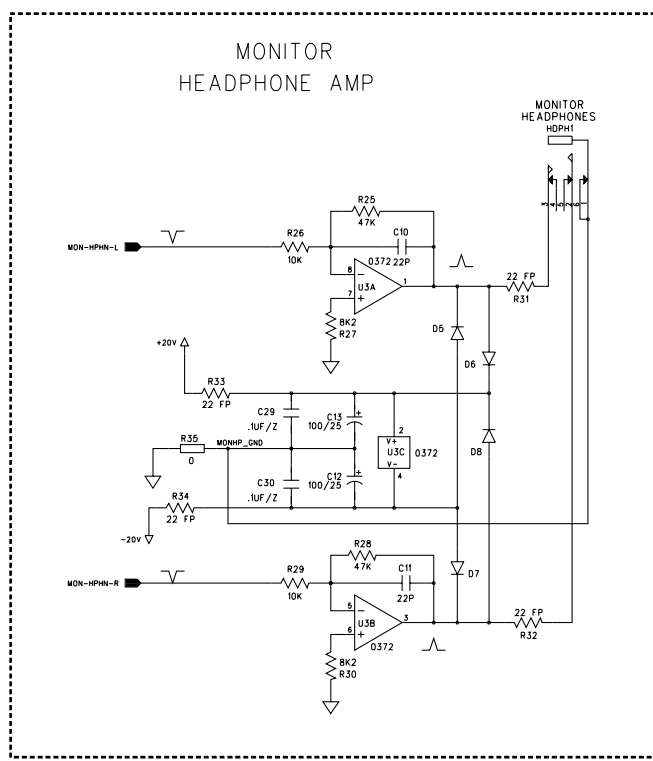
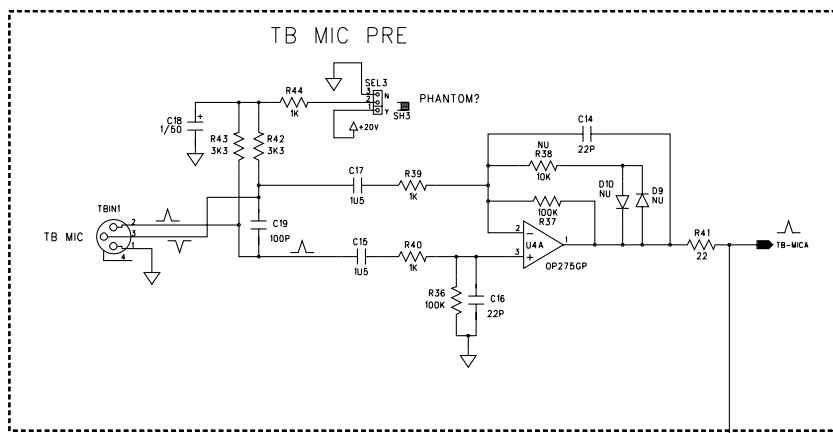
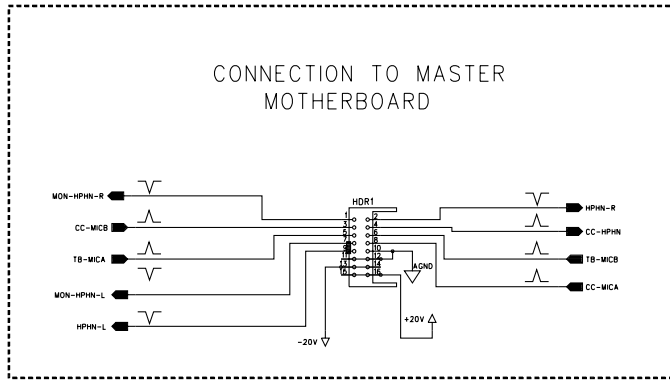


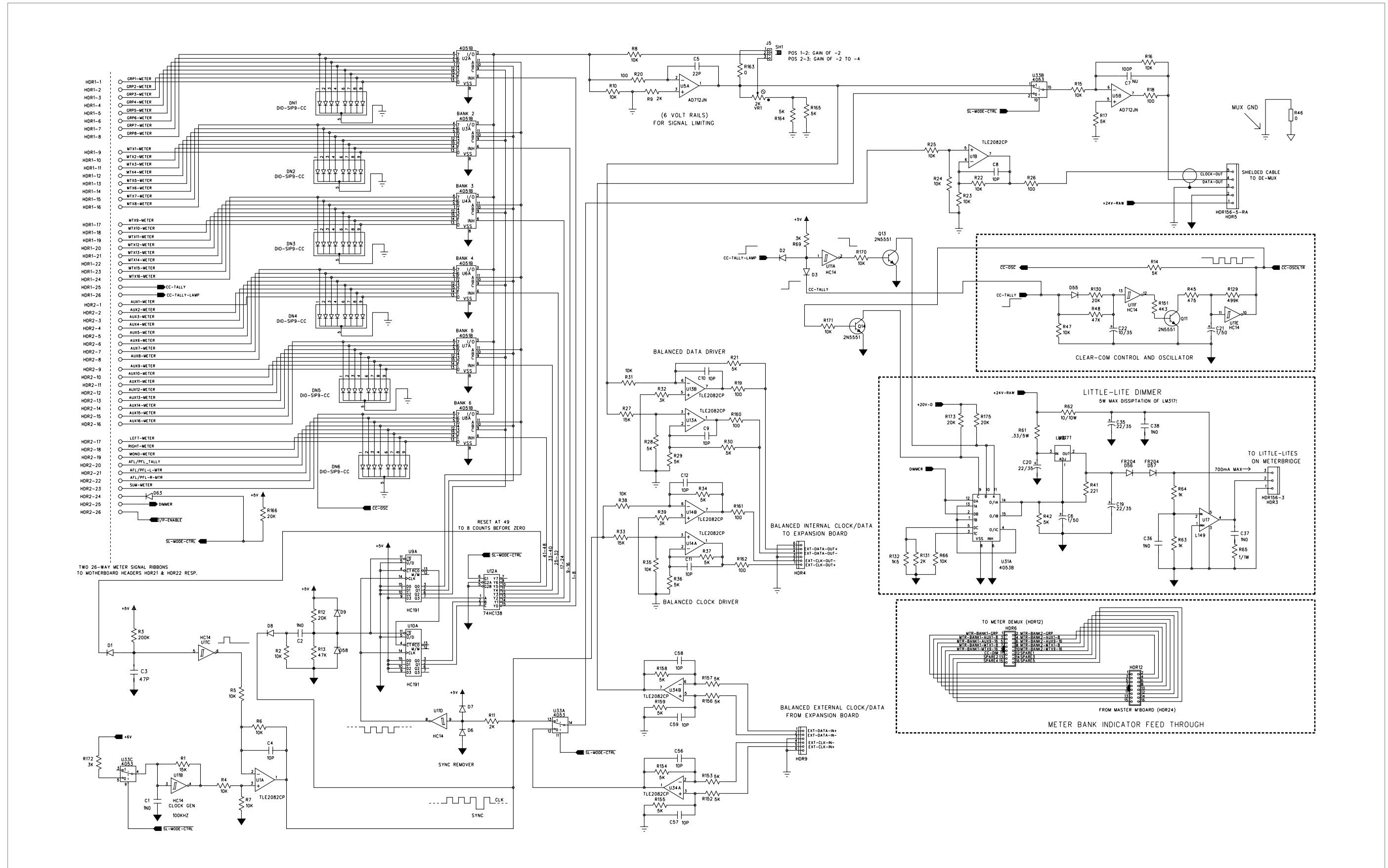


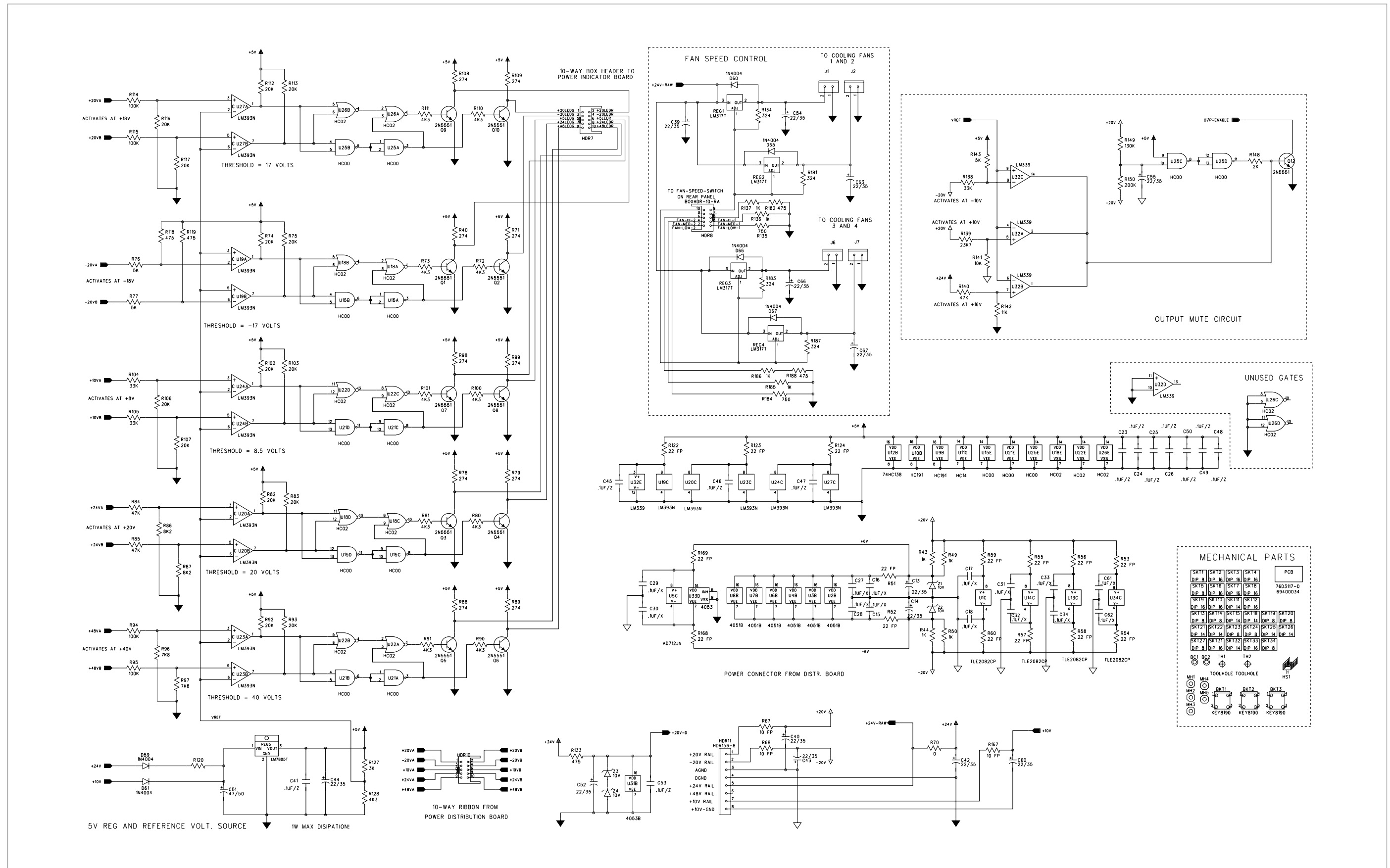


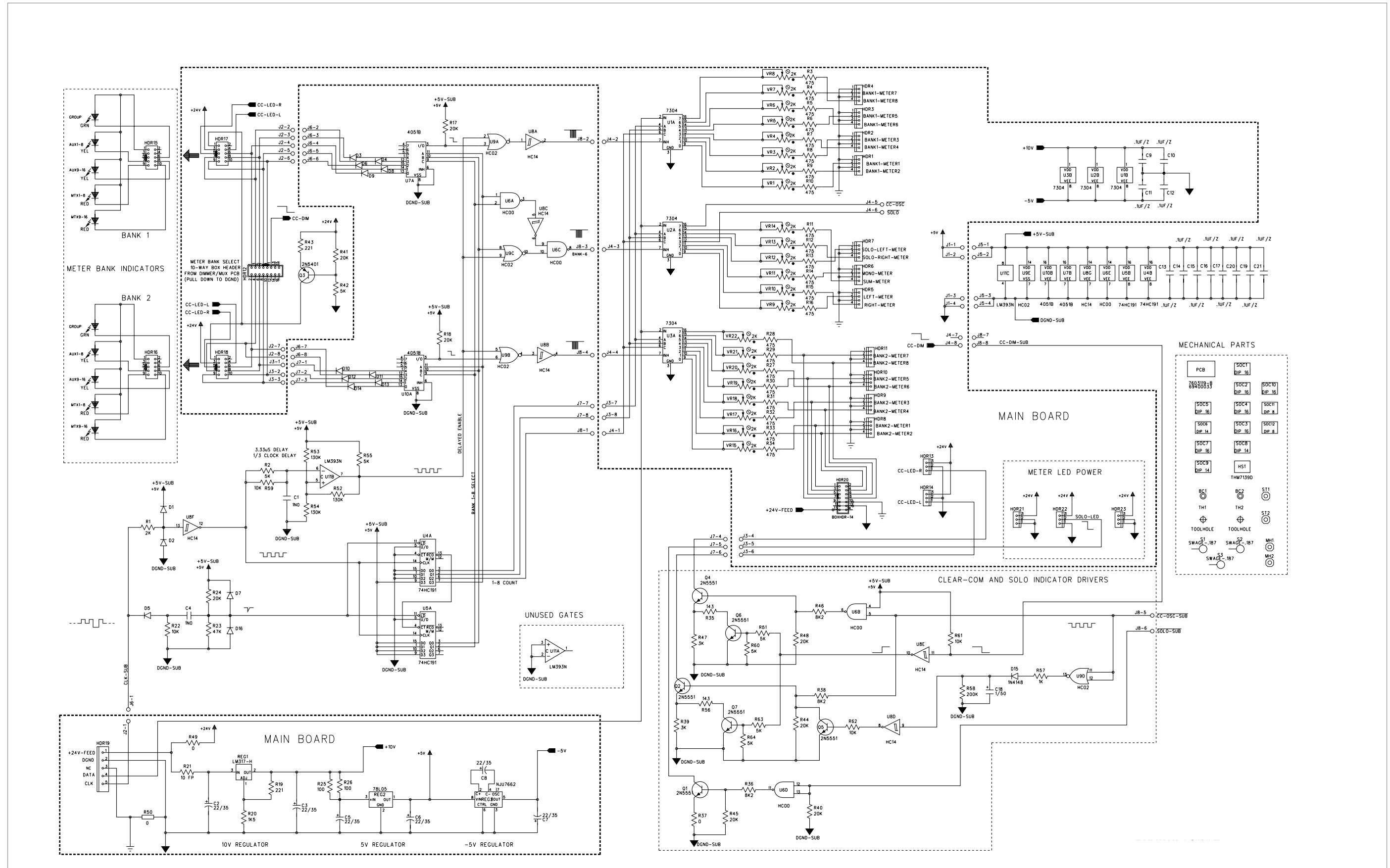


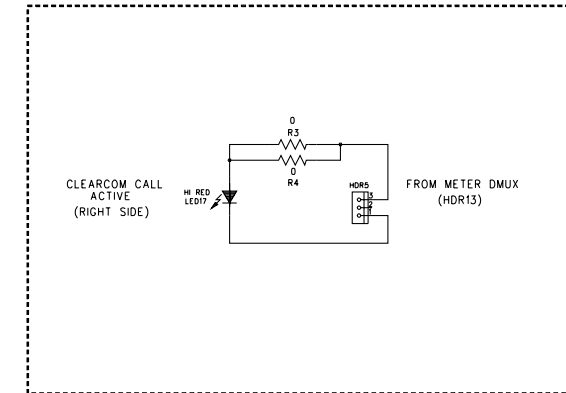
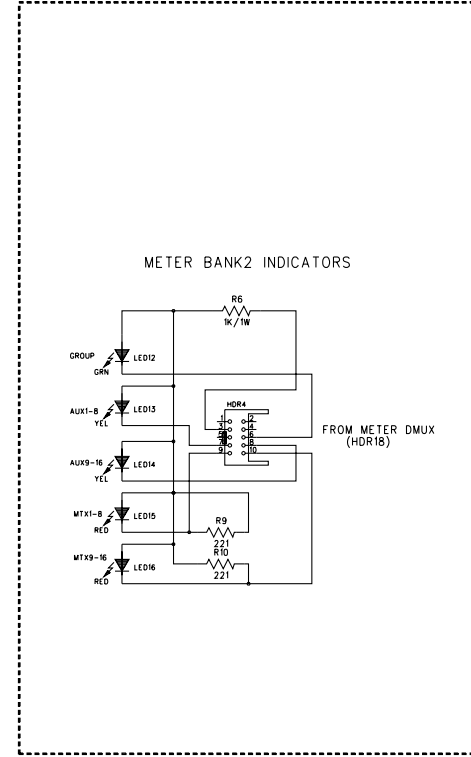
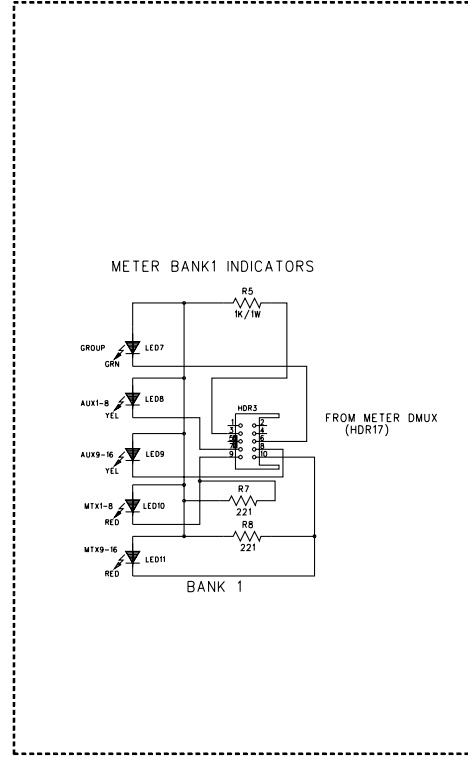
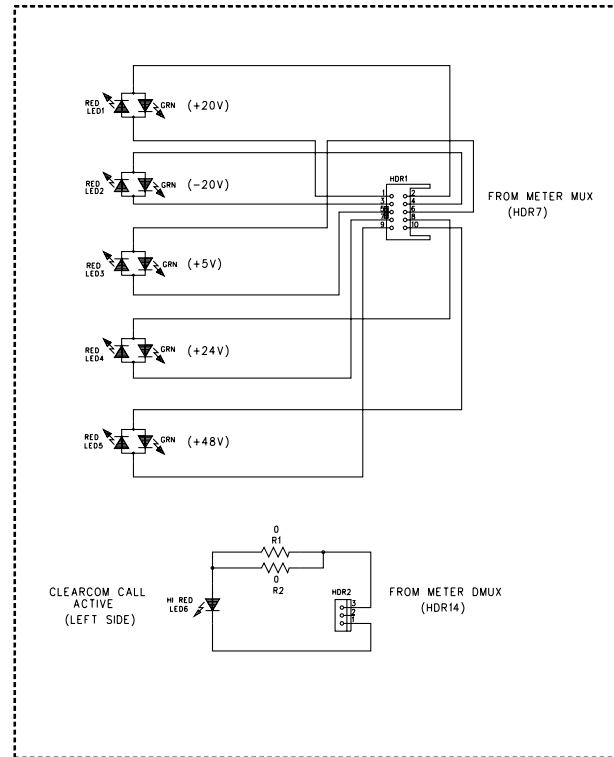




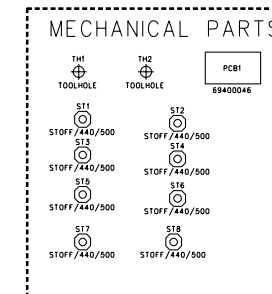


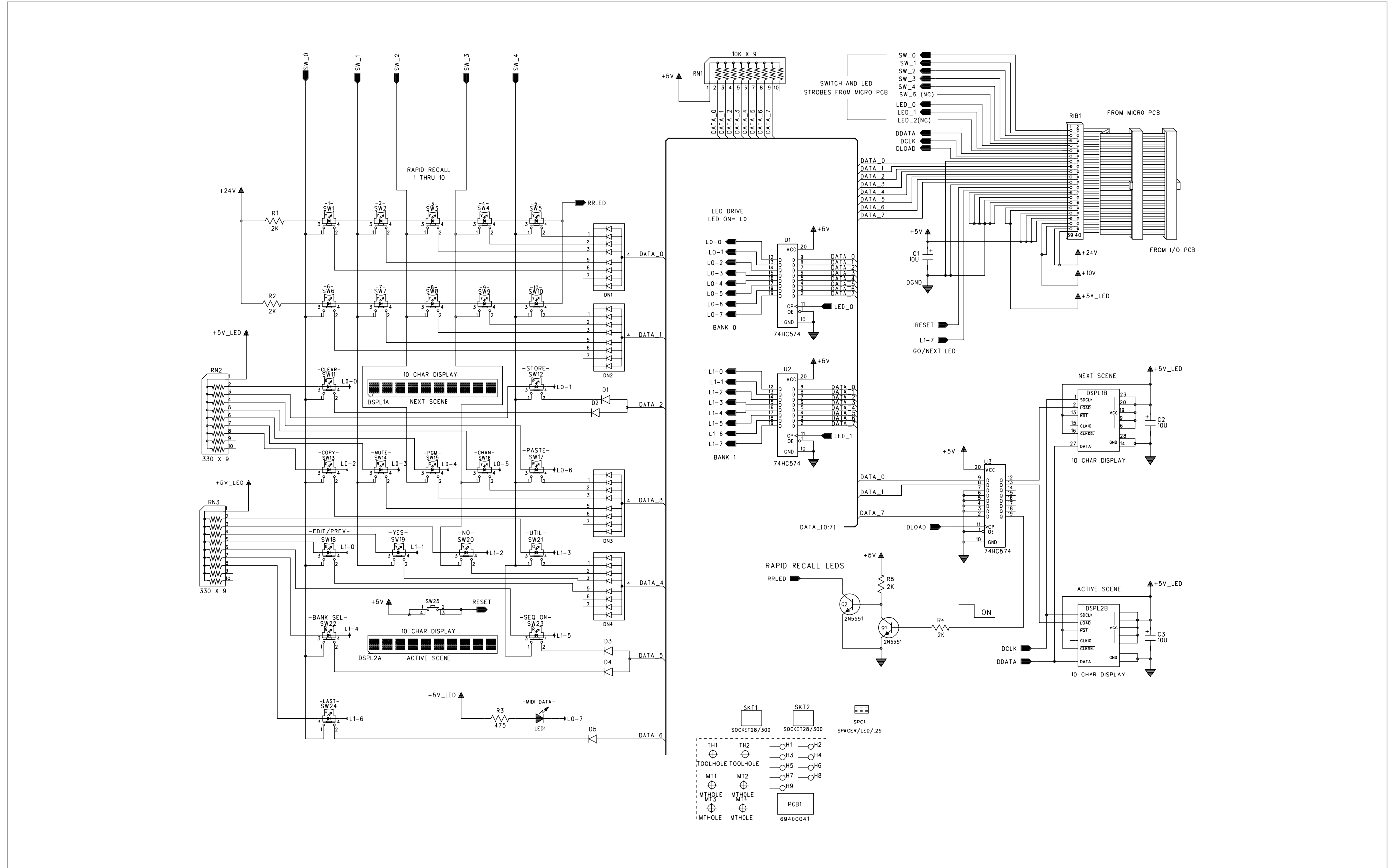


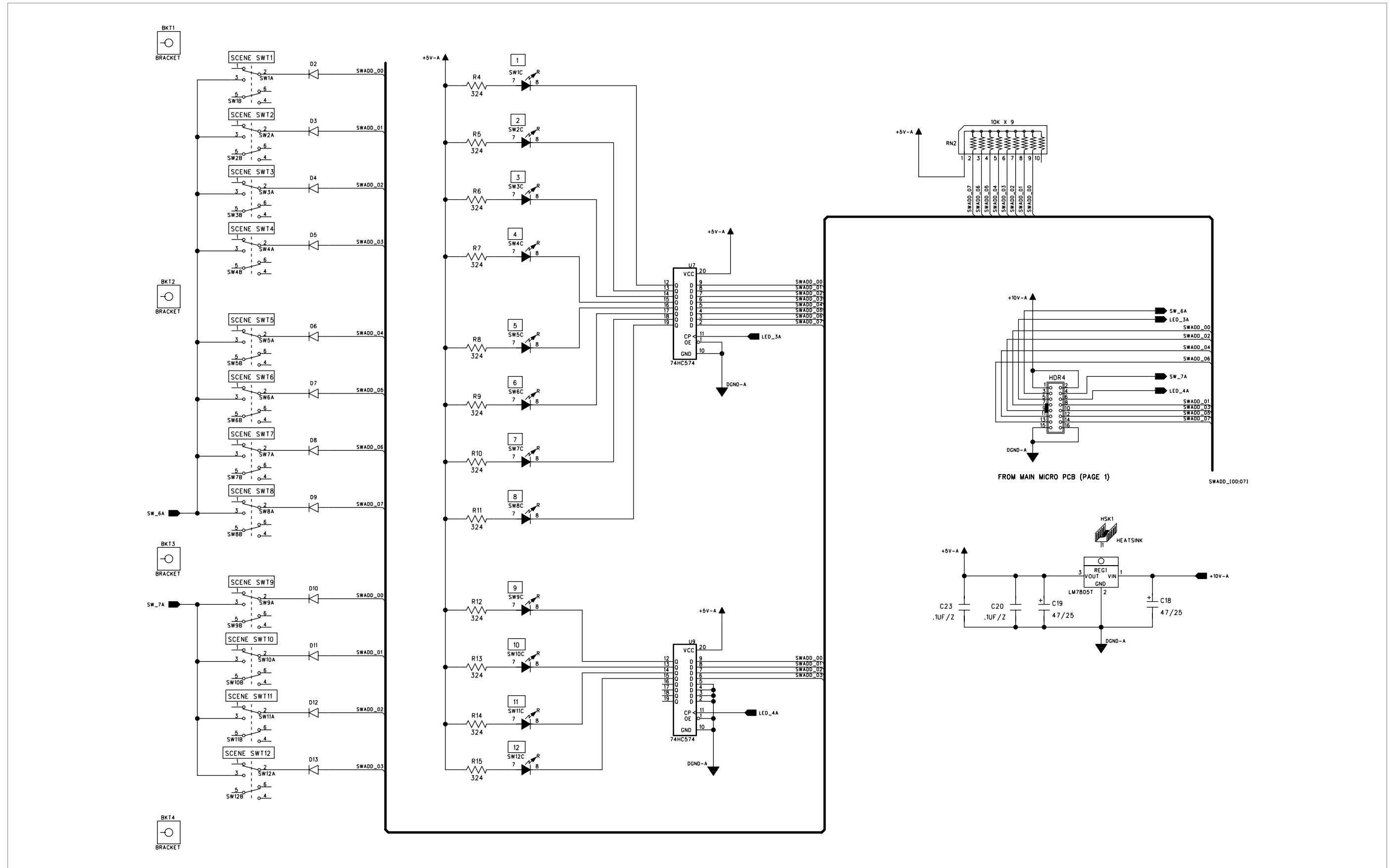


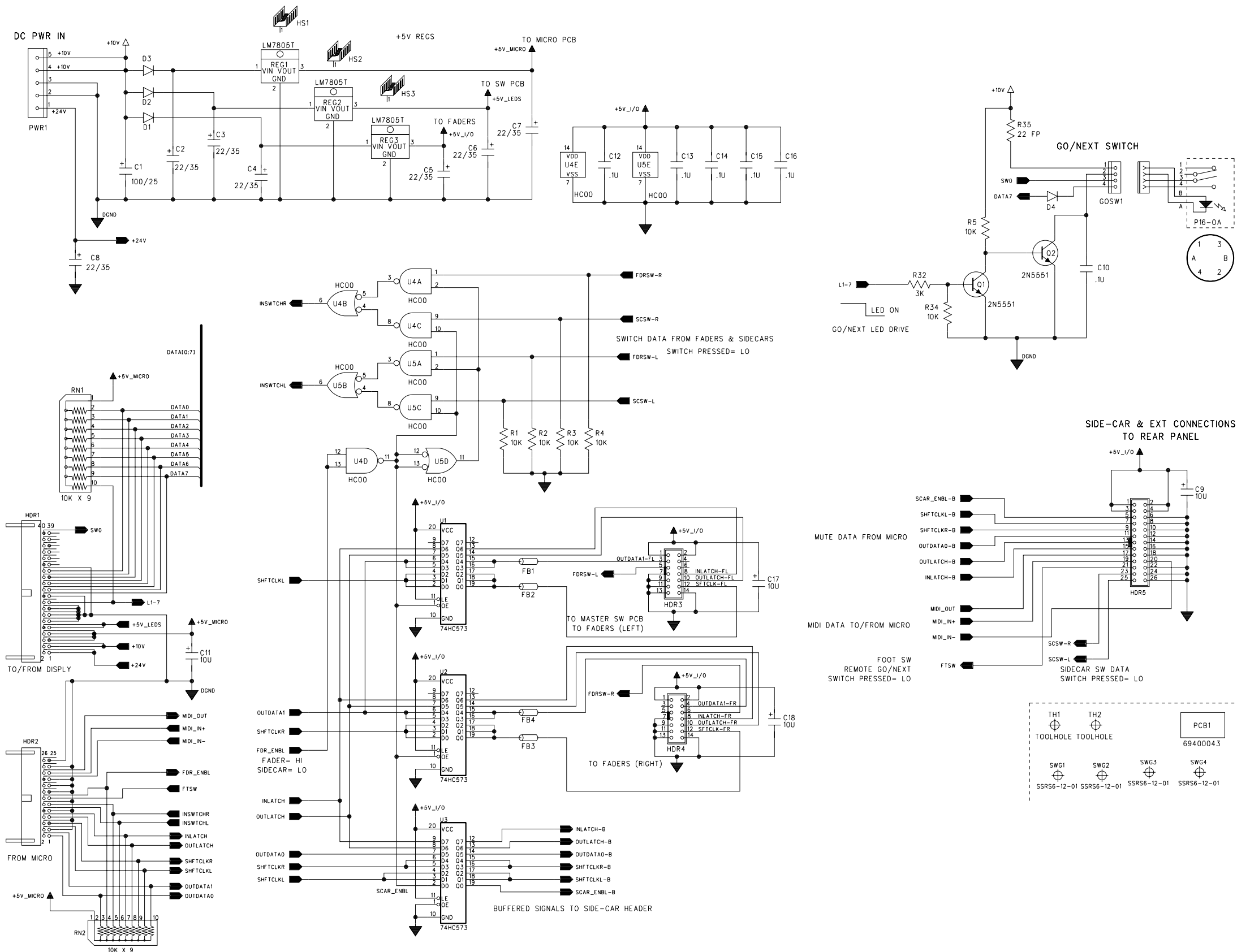


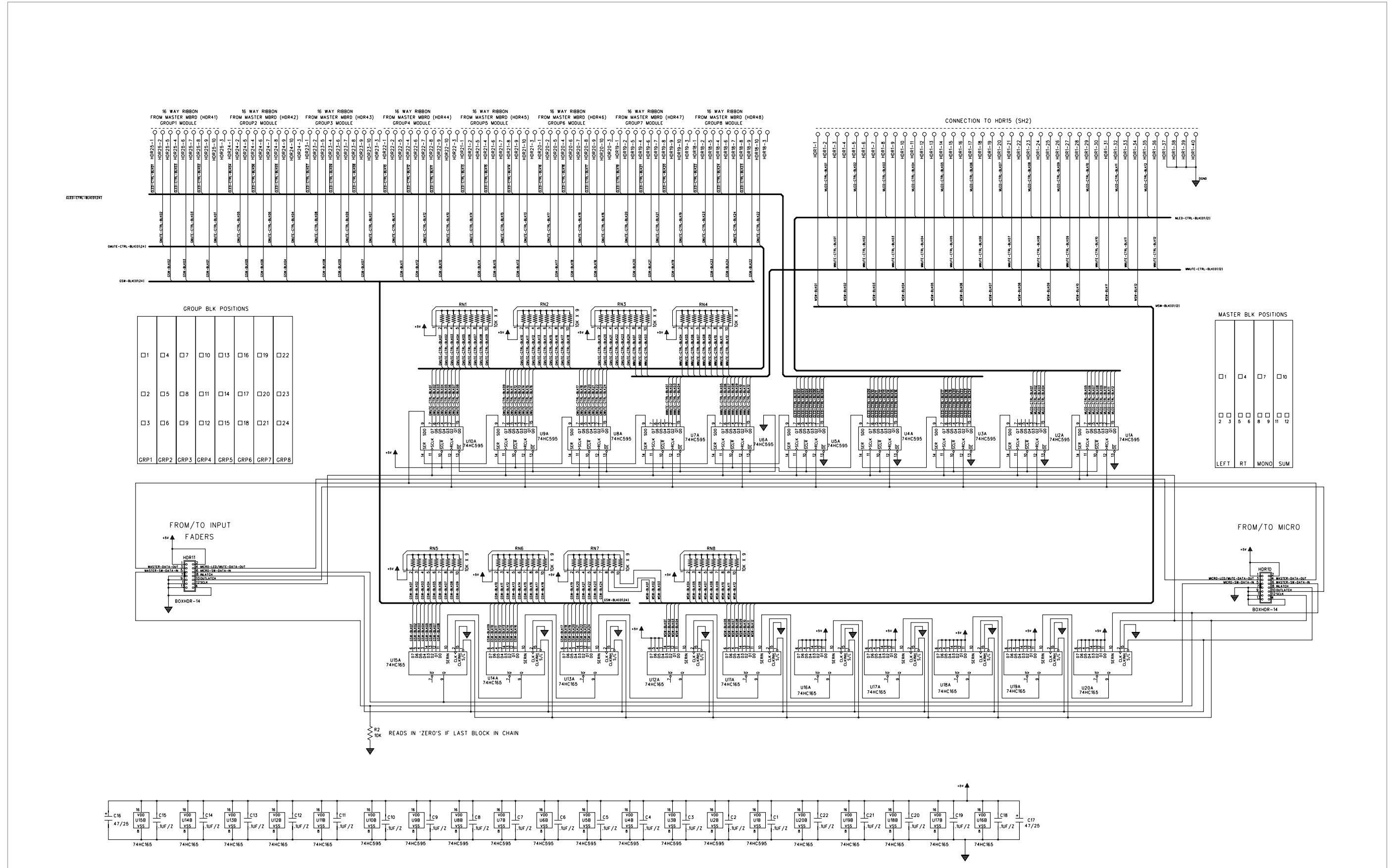
REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	DCO	ENG.	DESCRIPTION
B	A	2/4/99	886	TAZ	REVA TO REV B CHANGE. TO HAVE THE METER BANK SELECT DERIVE IT'S CURRENT LOCALLY AND NOT FROM A INSUFFICIENT CURRENT SOURCE LOCATED ON METER DEMUX PCB. ADDED R5 & R6= 1K 1W ADDED R7- R10 = 221R

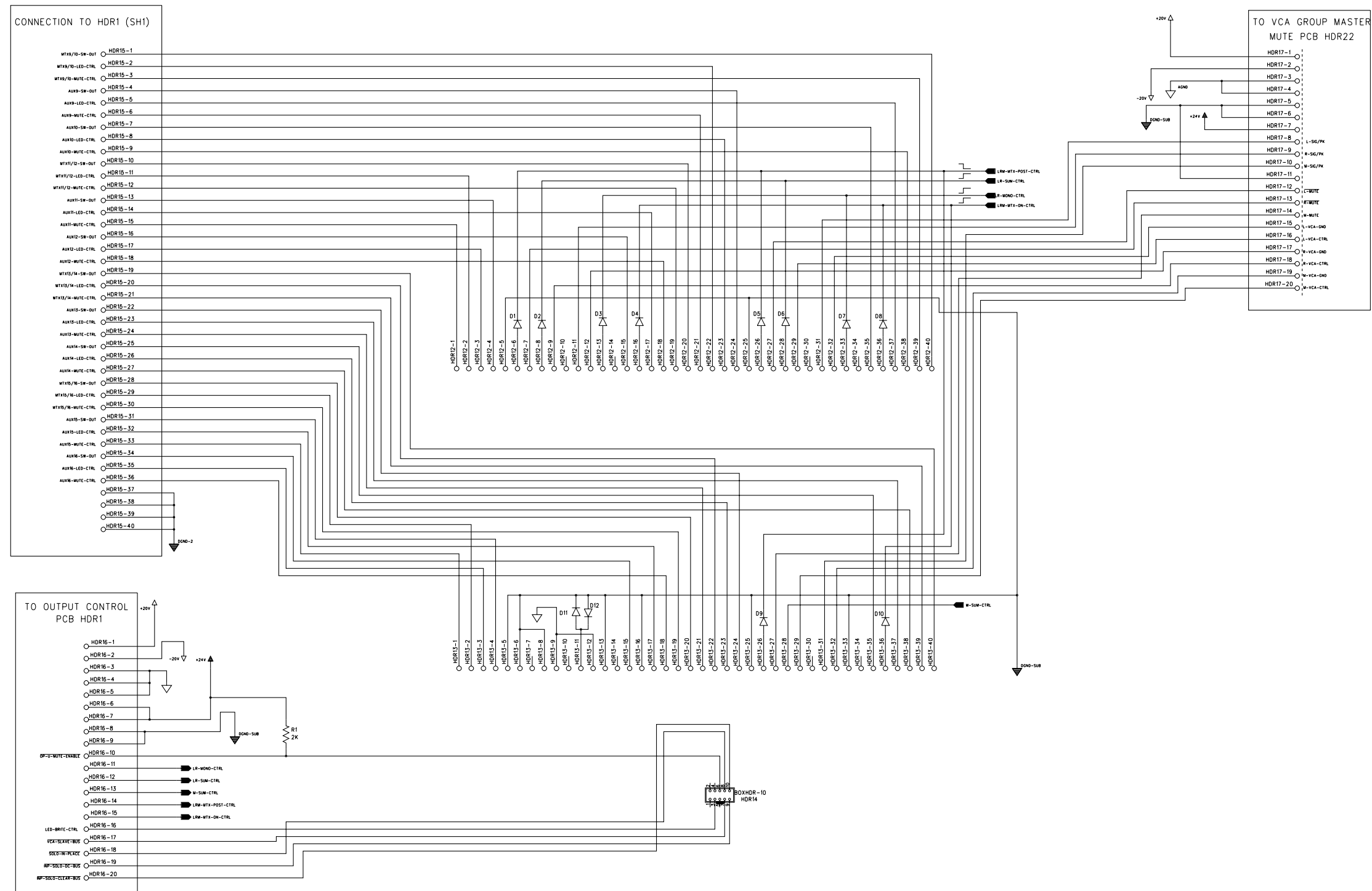




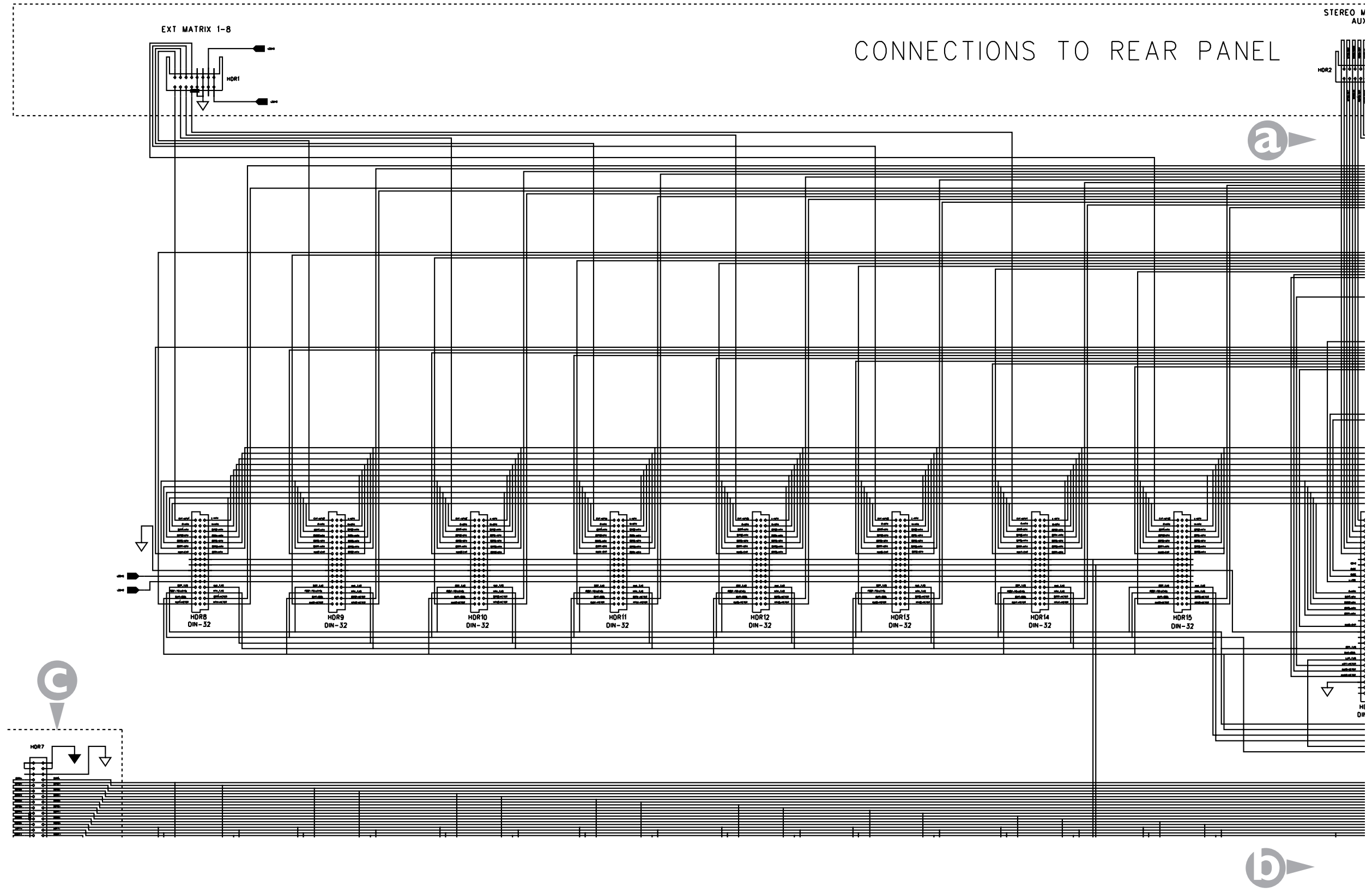






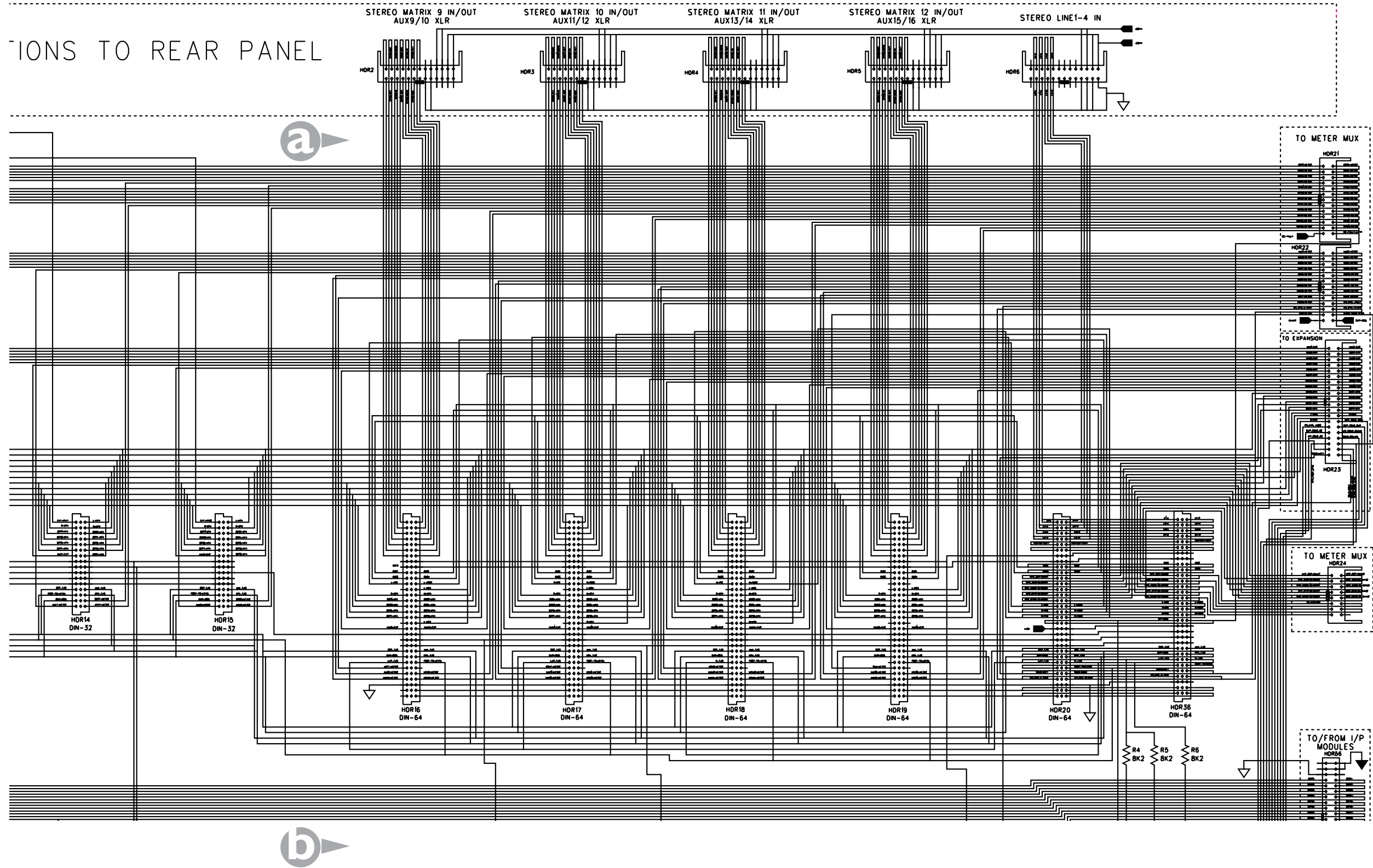


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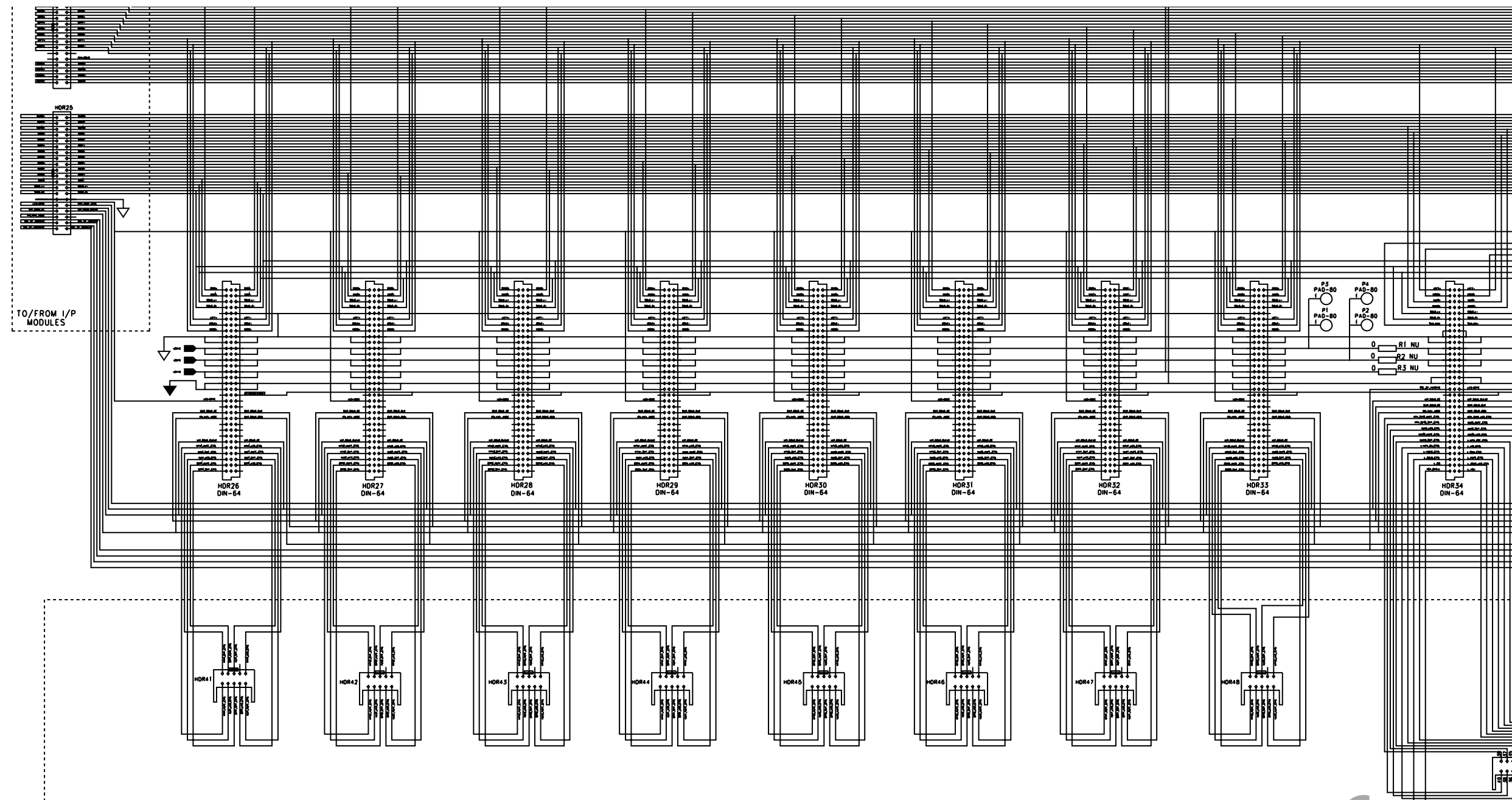
12

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12

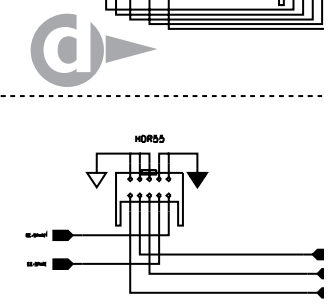
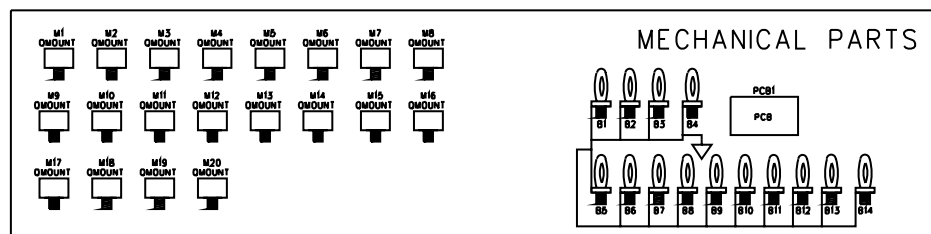
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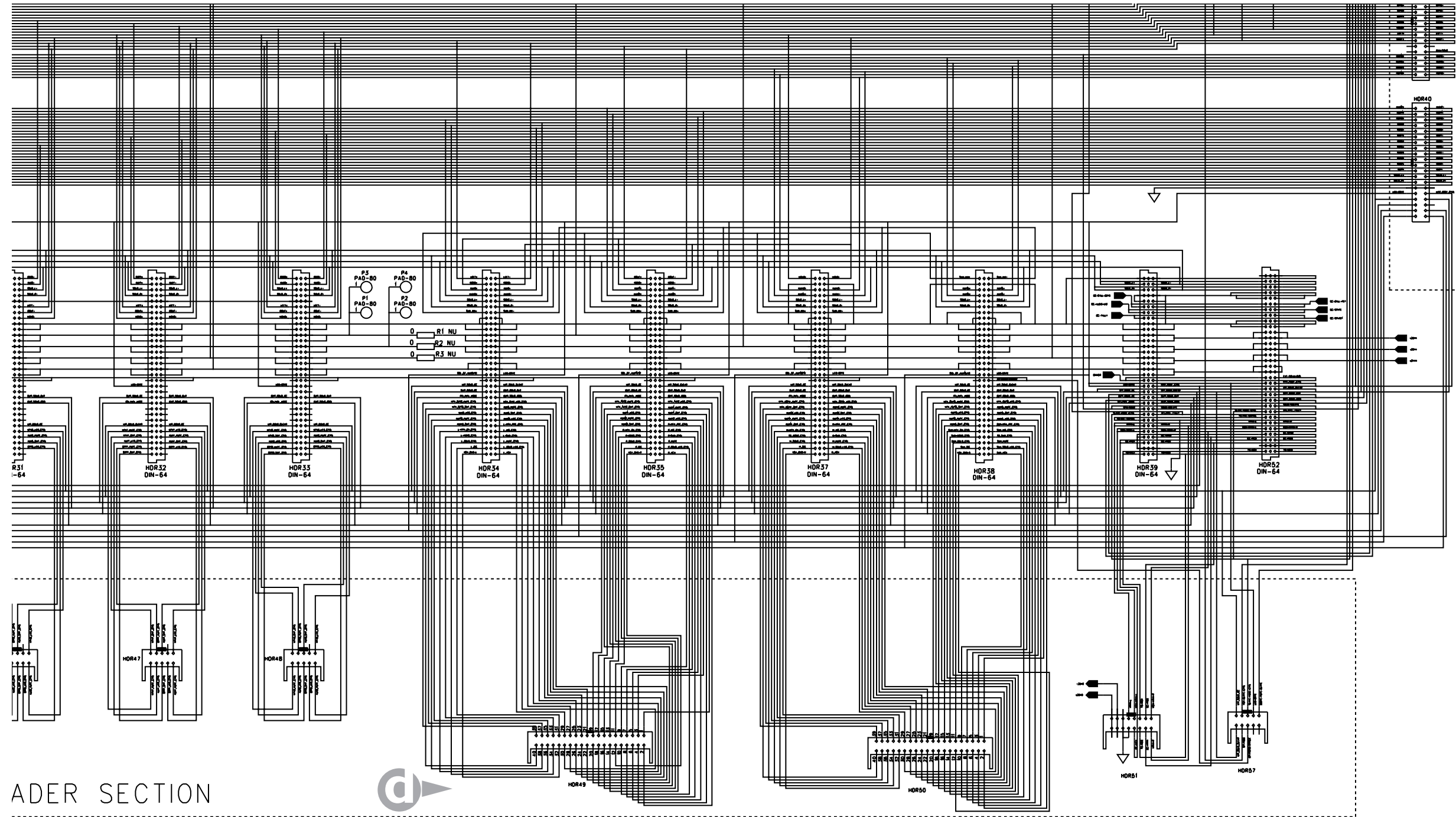
TO/FROM I/P MODULES

12

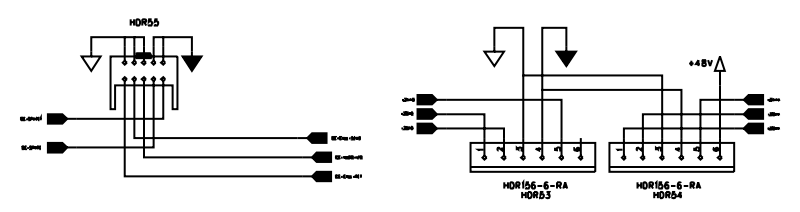
CONNECTIONS TO FADER SECTION



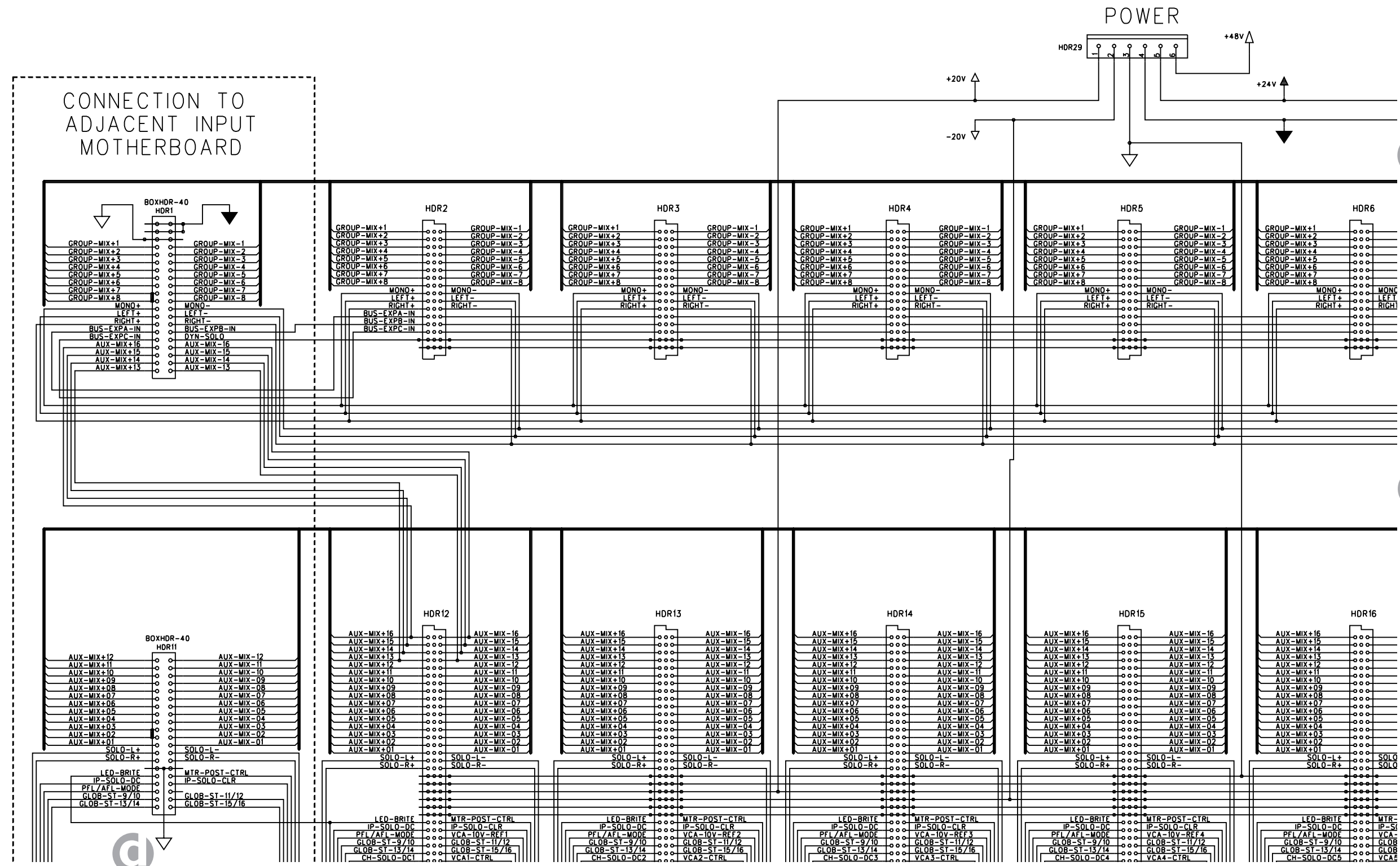
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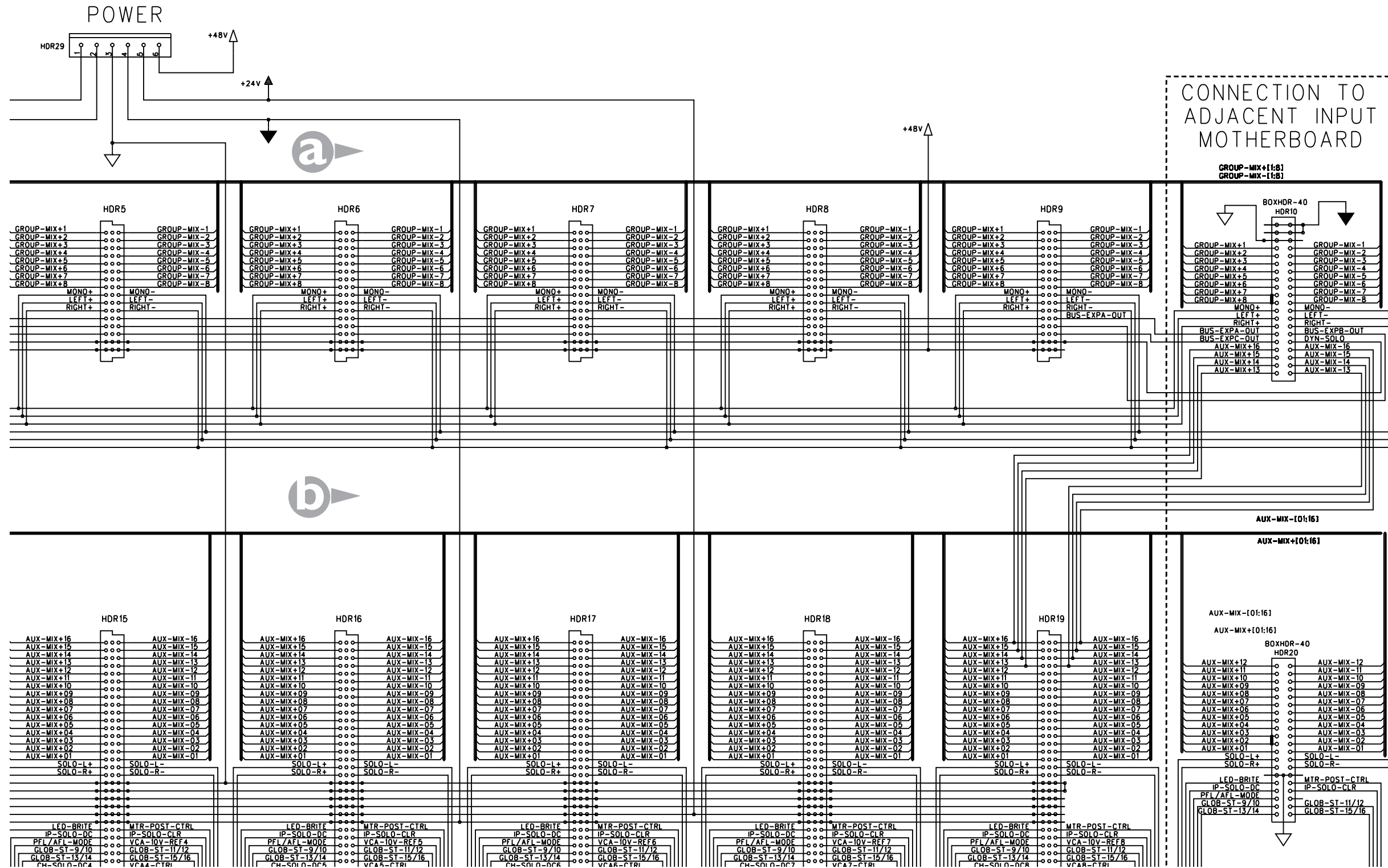
ADER SECTION



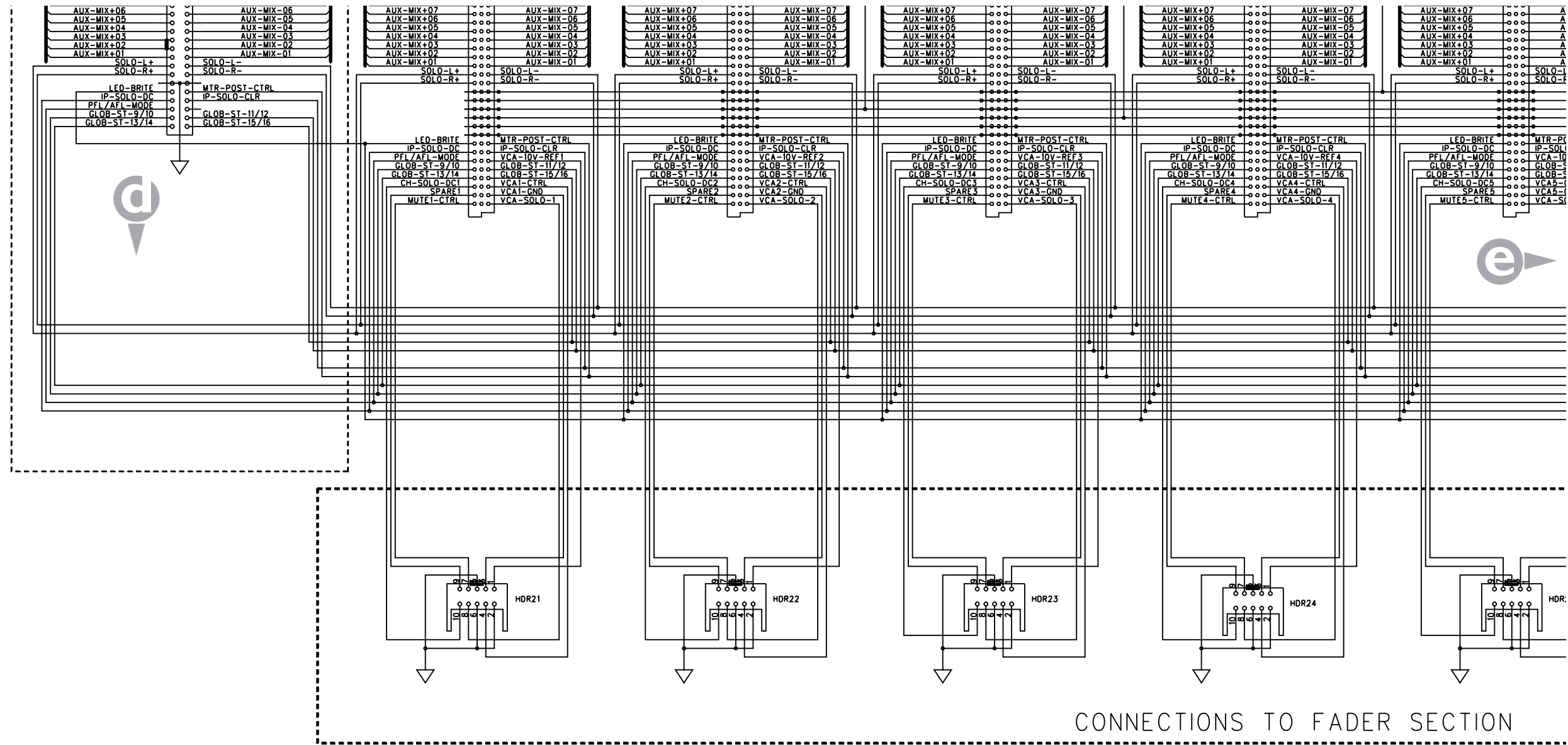
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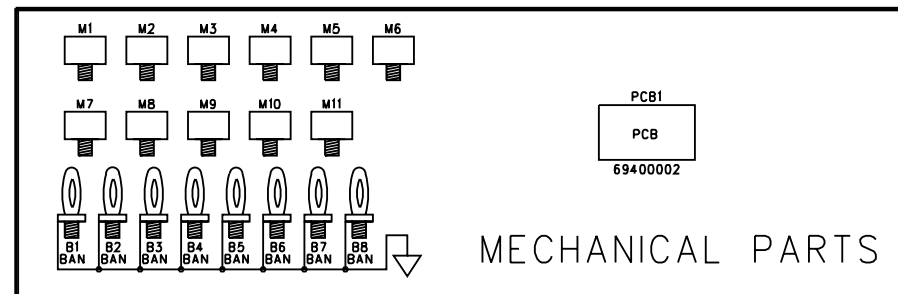
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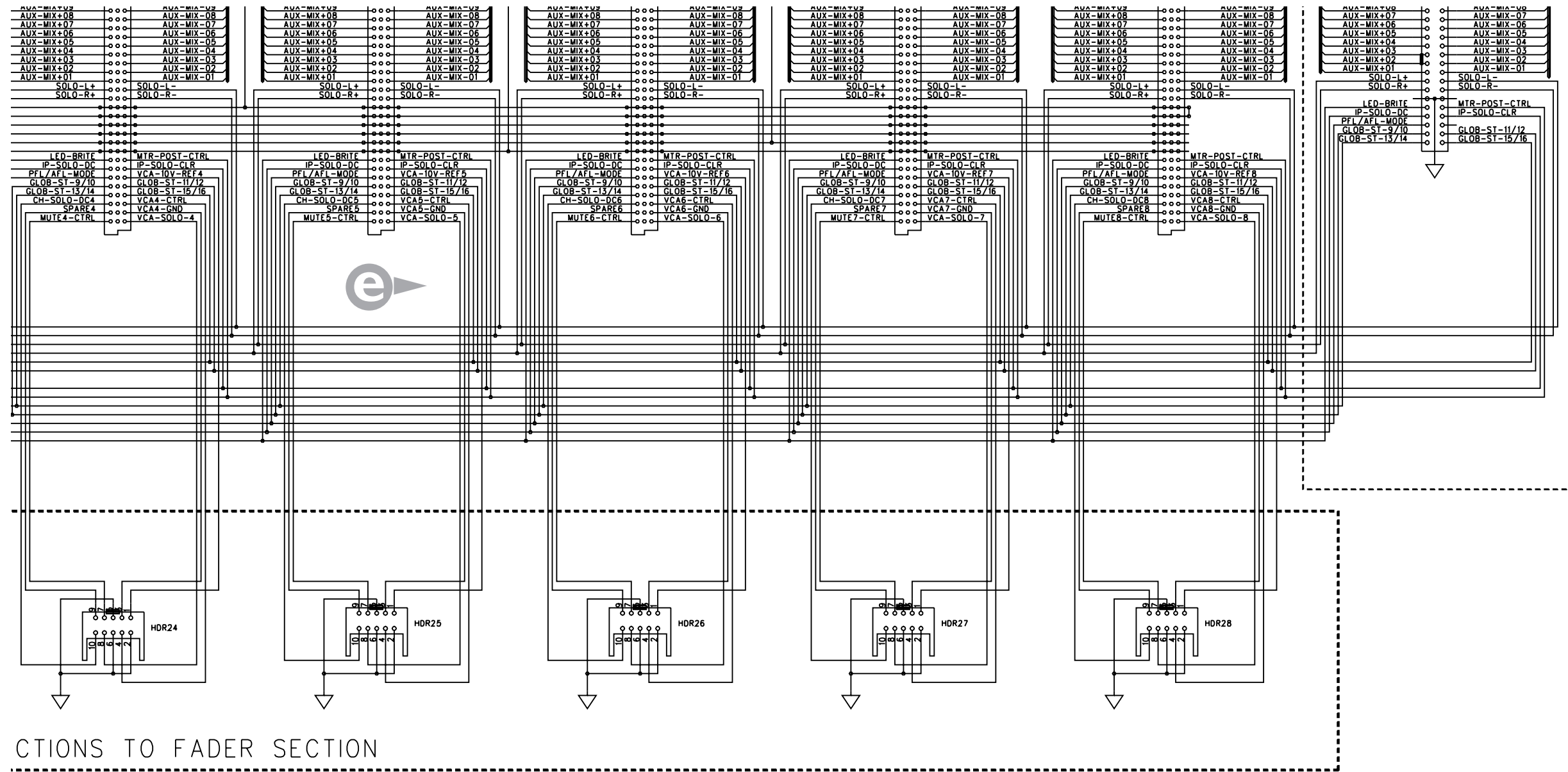
CONNECTIONS TO FADER SECTION



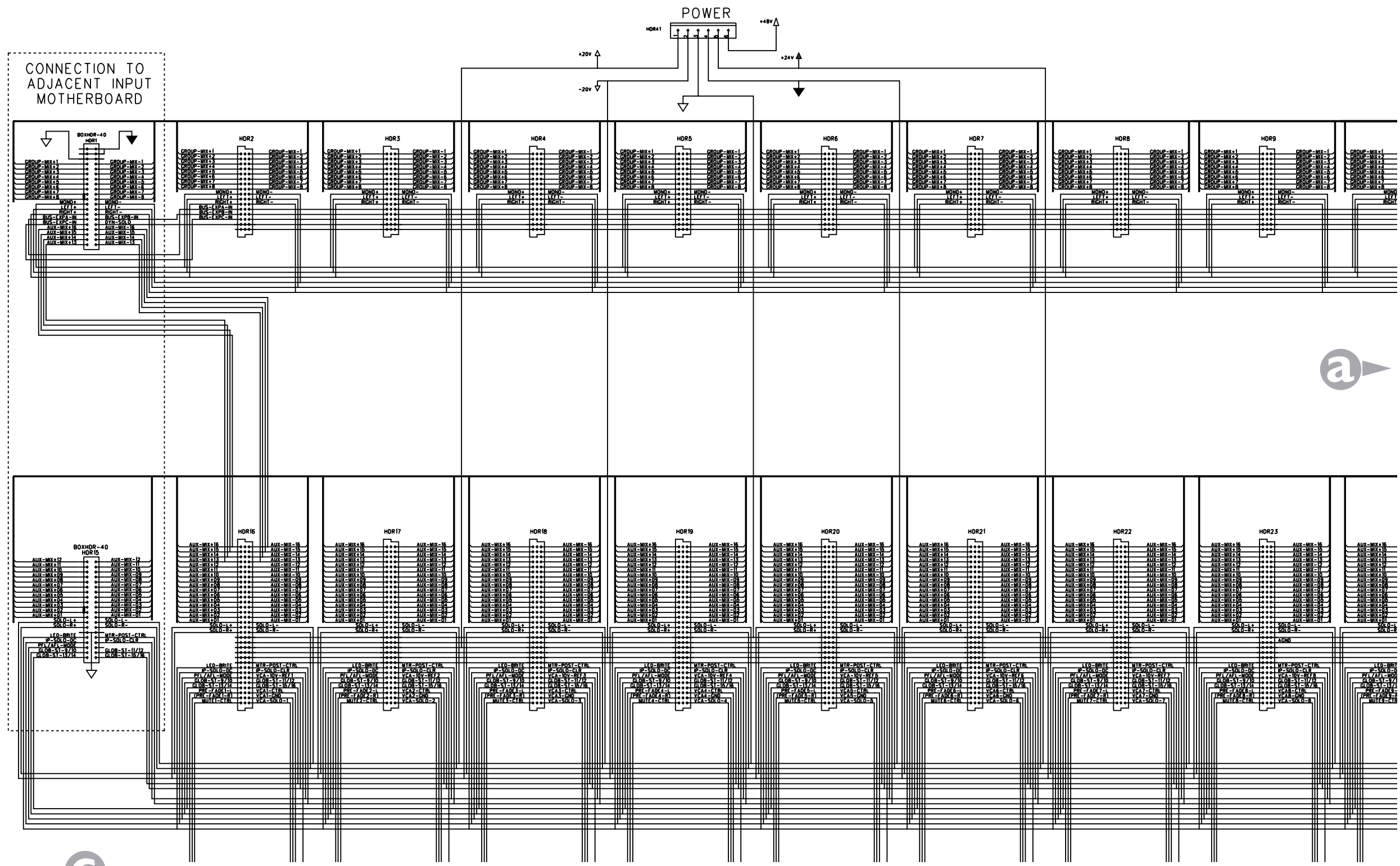
MECHANICAL PARTS

DC0852 - REV CAHNGE FROM B TO C
VCA CTRL POSITION 8 SHORTING
WITH GROUND BRACKET.

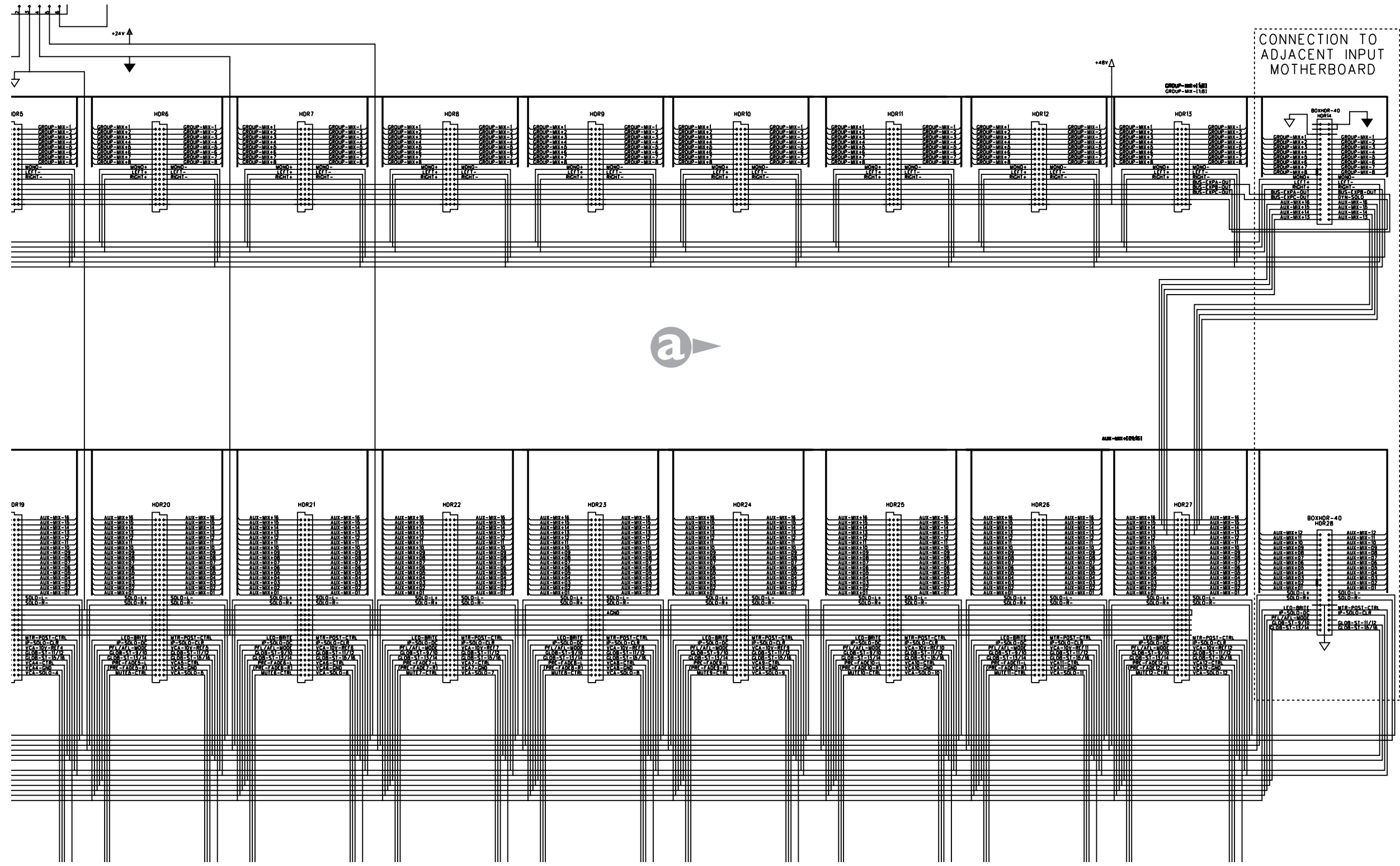
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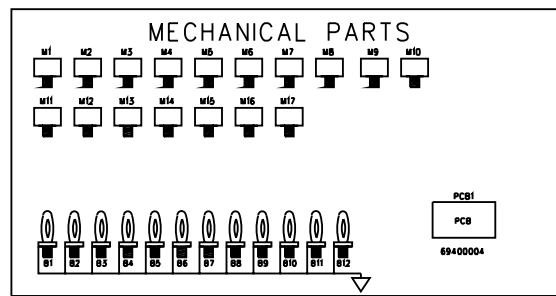
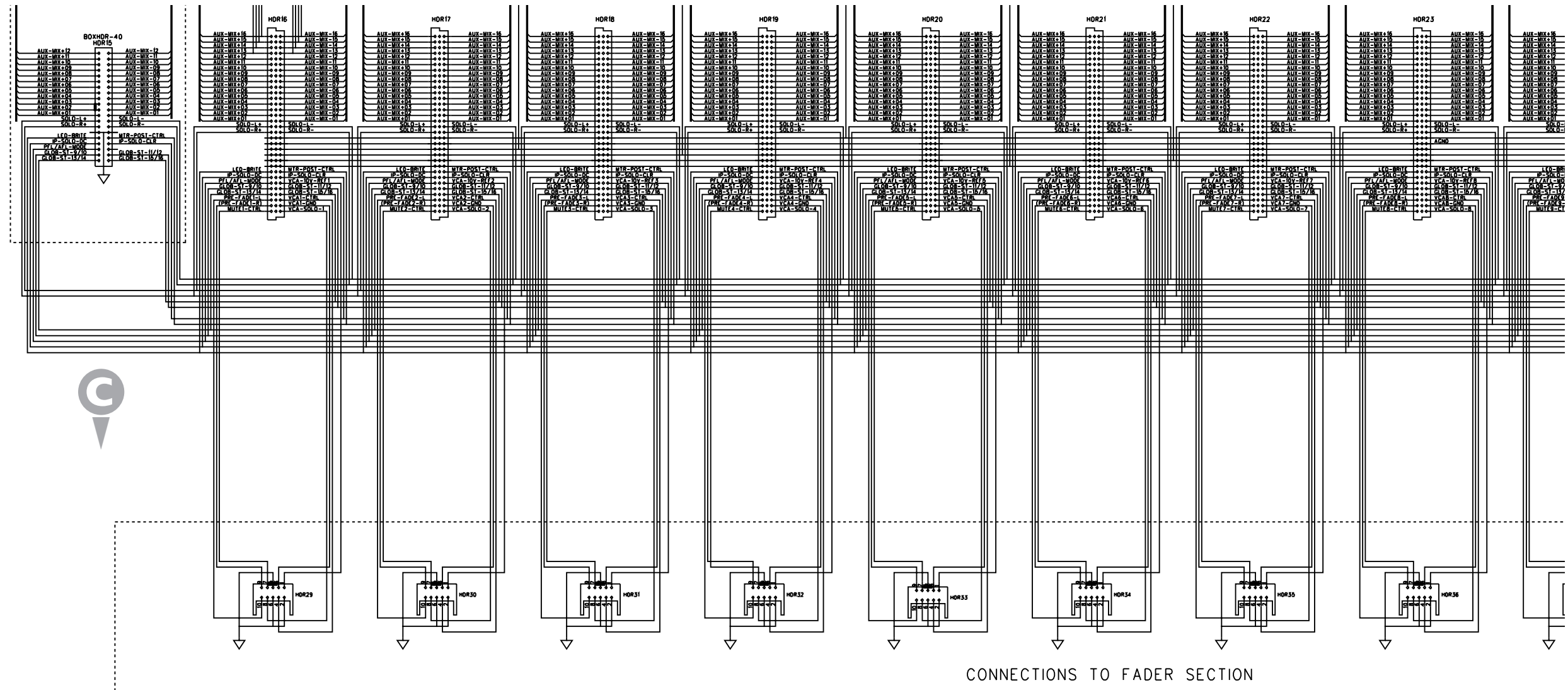


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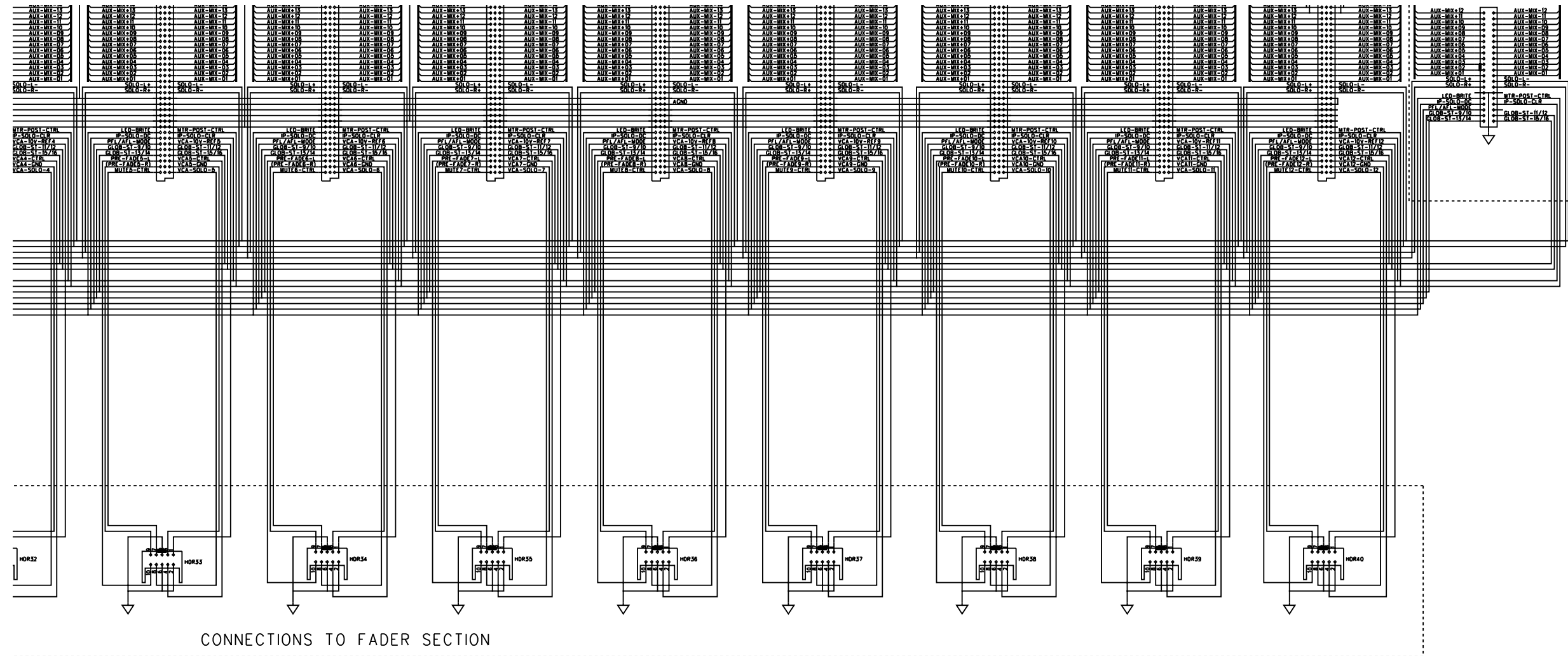


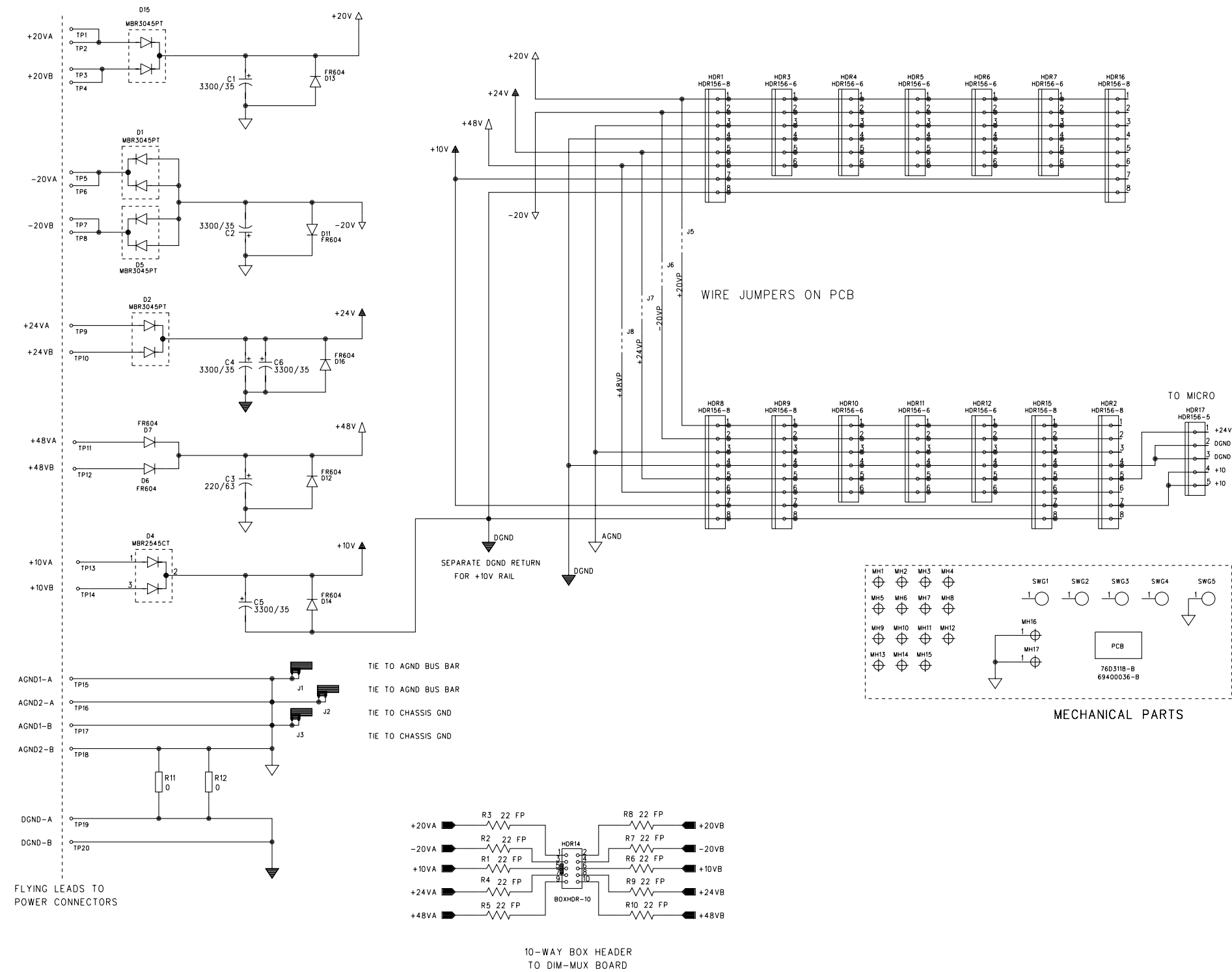
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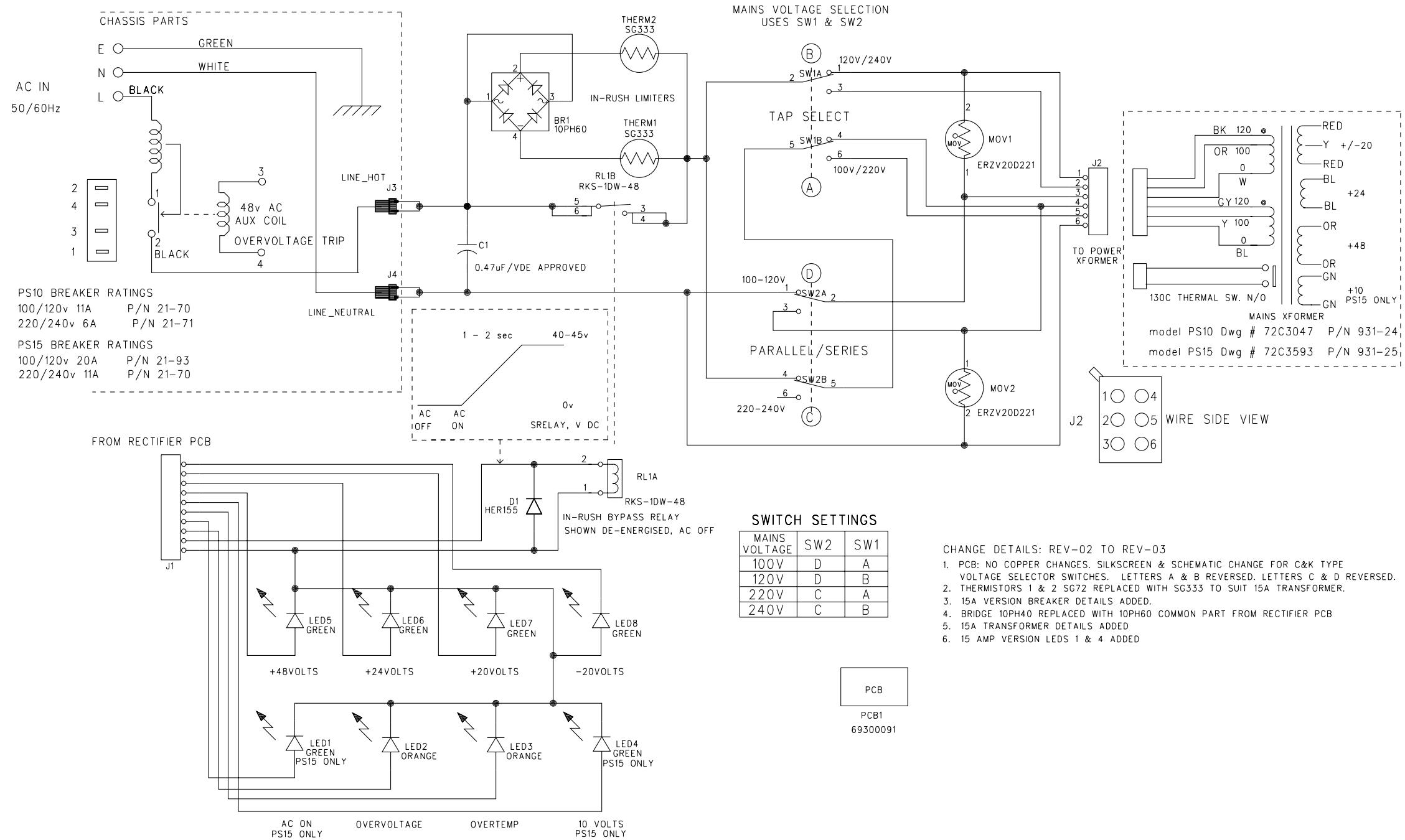
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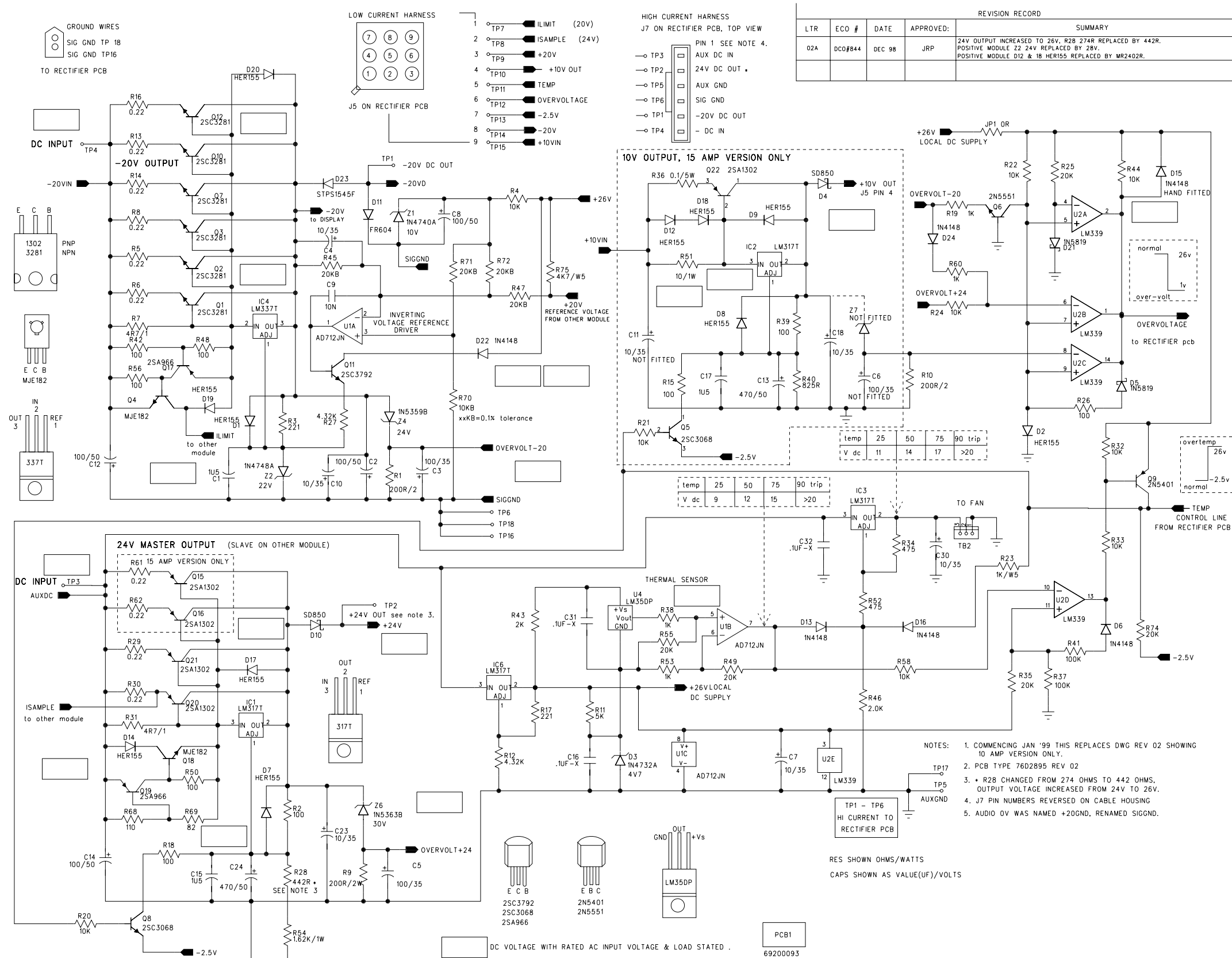


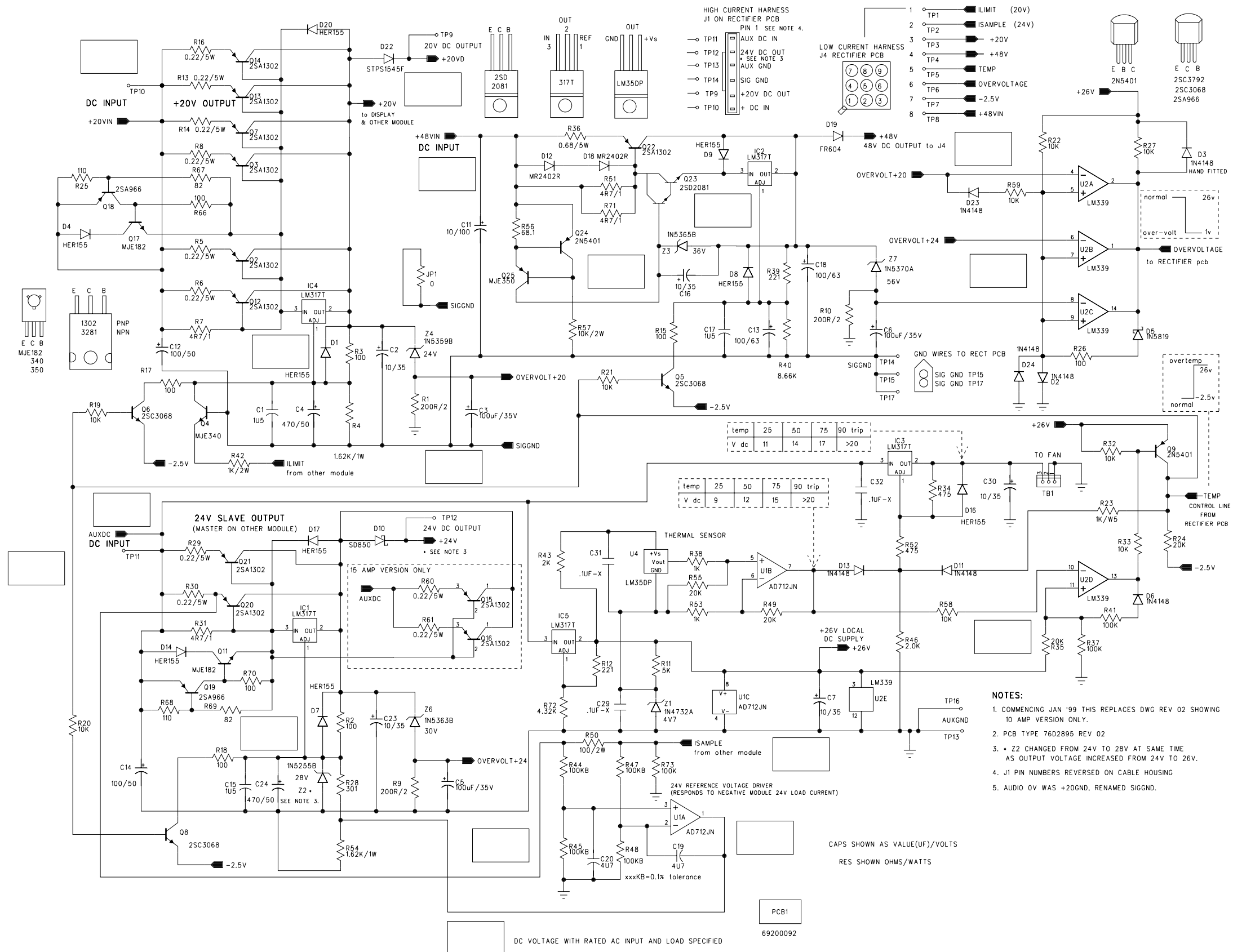
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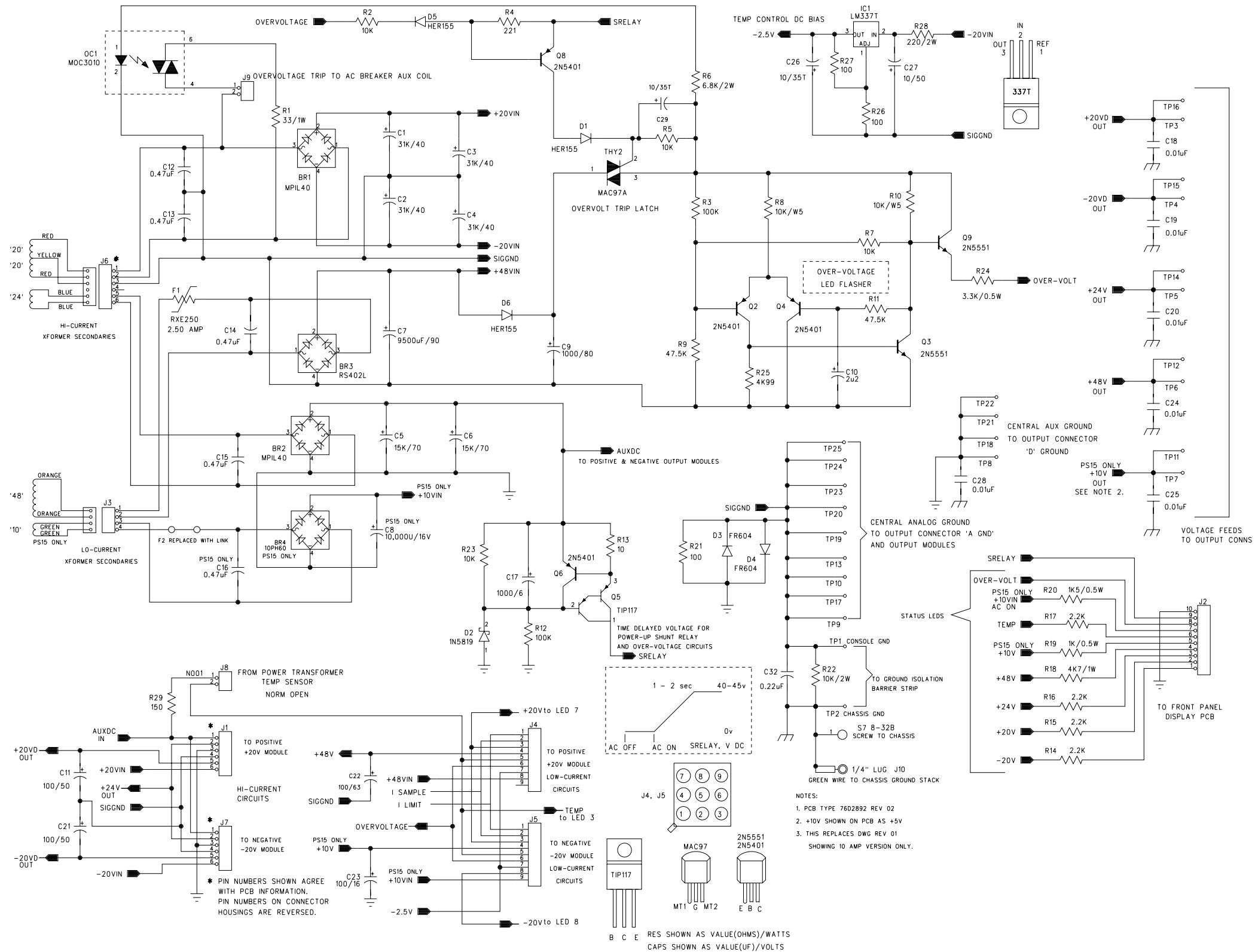


- NOTES:**
1. COMMENCING JAN '99 THIS REPLACES DWG REV 02 SHOWING 10 AMP VERSION ONLY.
 2. PCB TYPE 76D2895 REV 02
 3. Z2 CHANGED FROM 24V TO 28V AT SAME TIME AS OUTPUT VOLTAGE INCREASED FROM 24V TO 26V.
 4. J1 PIN NUMBERS REVERSED ON CABLE HOUSING
 5. AUDIO 0V WAS +20GND, RENAMED SIGGND.

CAPS SHOWN AS VALUE(UF)/VOLTS
RES SHOWN OHMS/WATTS

DC VOLTAGE WITH RATED AC INPUT AND LOAD SPECIFIED

PCB1
69200092





v. 1.0 ED000V12 10/12/99

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