

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	PROTOTYPE RELEASE		
2	PROTOTYPE RELEASE		
3	PROTOTYPE RELEASE		
4	PROTOTYPE RELEASE		
A	PROTOTYPE RELEASE		
B	PROTOTYPE RELEASE		
C	RELEASE FOR PRODUCTION PER ER#42-541	01-25-95	T.M.
D	REVISED PER ECO# 3065	3/21/95	TM

- SHT 1 COVER SHEET
- SHT 2 CHANNELS 1 & 2 INPUT DIFF AMPS AND FRONT PANEL CONNECTORS.
- SHT 3 CHANNELS 3 & 4 INPUT DIFF AMPS.
- SHT 4 HEADPHONE AMP AND GUITAR & MIC INPUT PREAMPS.
- SHT 5 CHANNELS 1 & 2 INPUT MUTING, PRE-EMPHASIS AND FILTER.
- SHT 6 CHANNELS 3 & 4 INPUT MUTING, PRE-EMPHASIS AND FILTER.
- SHT 7 CHANNELS 1 & 2 A/D CONVERTER.
- SHT 8 CHANNELS 3 & 4 A/D CONVERTER AND MASTER CLOCK GENERATOR.
- SHT 9 D/A CONVERTER AND SAMPLE AND HOLDS.
- SHT 10 OUTPUT FILTERS, DE-EMPHASIS AND PRE MIXING.
- SHT 11 CHANNELS 1 & 2 OUTPUT DRIVERS WITH MUTING AND POST MIXING.
- SHT 12 CHANNELS 3 & 4 OUTPUT DRIVERS WITH MUTING AND POST MIXING.
- SHT 13 VOLTAGE REGULATORS, +4/-10 SWITCH AND OFF BOARD CONNECTORS.

- 3. ALL 0.1UF BYPASS CAPACITORS ARE 50V +80/-20% Z5U.
- 2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 16V MINIMUM.
- 1. ALL RESISTOR VALUES ARE IN OHMS, 1/8W 5%.

NOTES - UNLESS SPECIFIED OTHERWISE:

COVER SHEET

ENSONIQ Corp 155 GREAT VALLEY PKWY, MALVERN PA 19355				
APPROVALS	DATE	PCB SCHEMATIC ANALOG BOARD SHAKER		
DWN BY: BAVL	8-4-94			
CHKD BY:				
APPD BY:		SIZE B	DWG. NO. 4010025101	REV D
USED ON:	SCALE	—	SHEET	1 OF 13

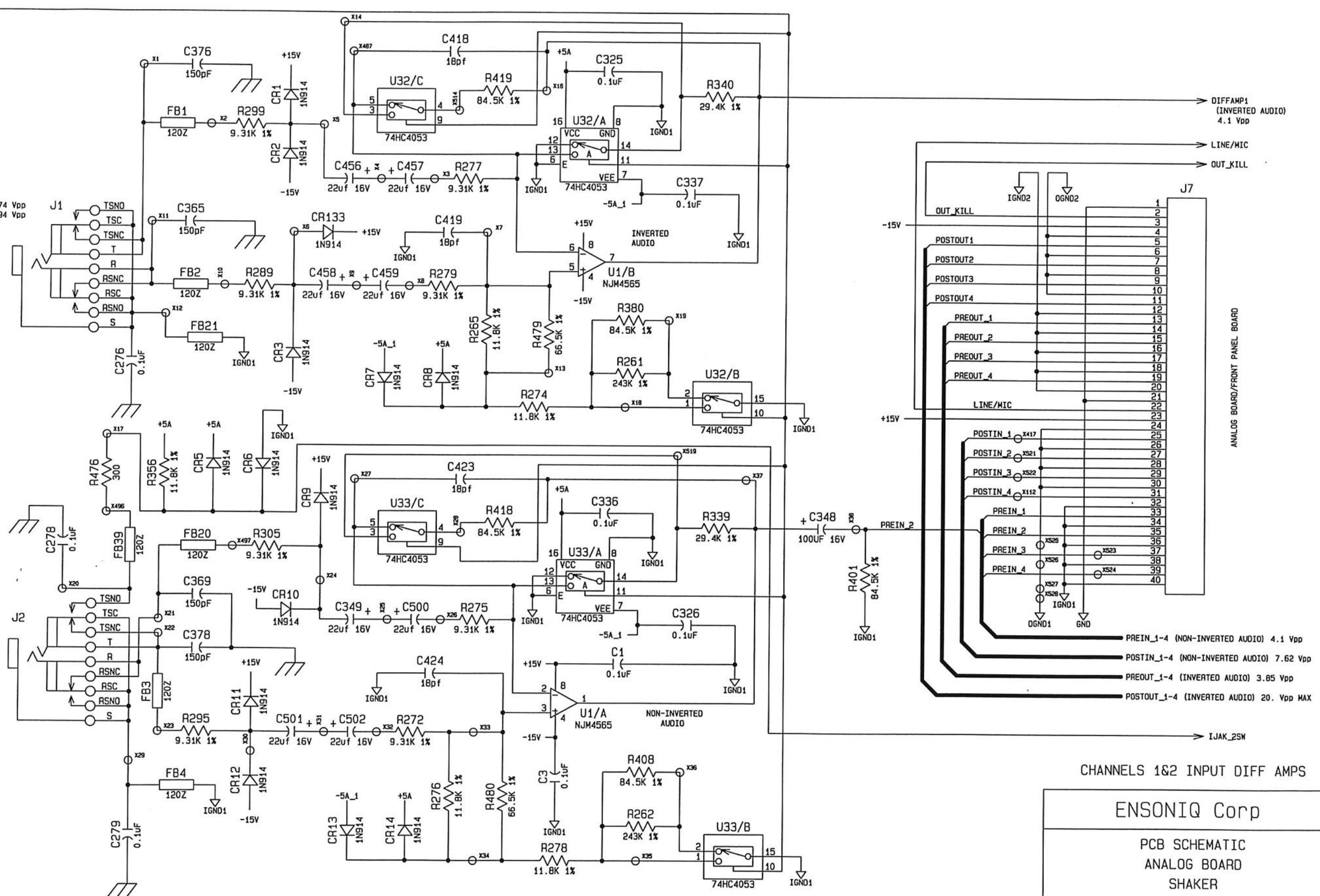
+4/-10

+4.dBu = 3.474 Vpp
-10.dBV = .894 Vpp

1 IN
(L/MONO)

STEREO

2 IN
(R)



DIFFAMP1
(INVERTED AUDIO)
4.1 Vpp

LINE/MIC

OUT_KILL

ANALOG BOARD/FRONT PANEL BOARD

PREIN_1-4 (NON-INVERTED AUDIO) 4.1 Vpp
POSTIN_1-4 (NON-INVERTED AUDIO) 7.62 Vpp
PREOUT_1-4 (INVERTED AUDIO) 3.85 Vpp
POSTOUT_1-4 (INVERTED AUDIO) 20. Vpp MAX

IJAK_25M

CHANNELS 1&2 INPUT DIFF AMPS

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	2	13

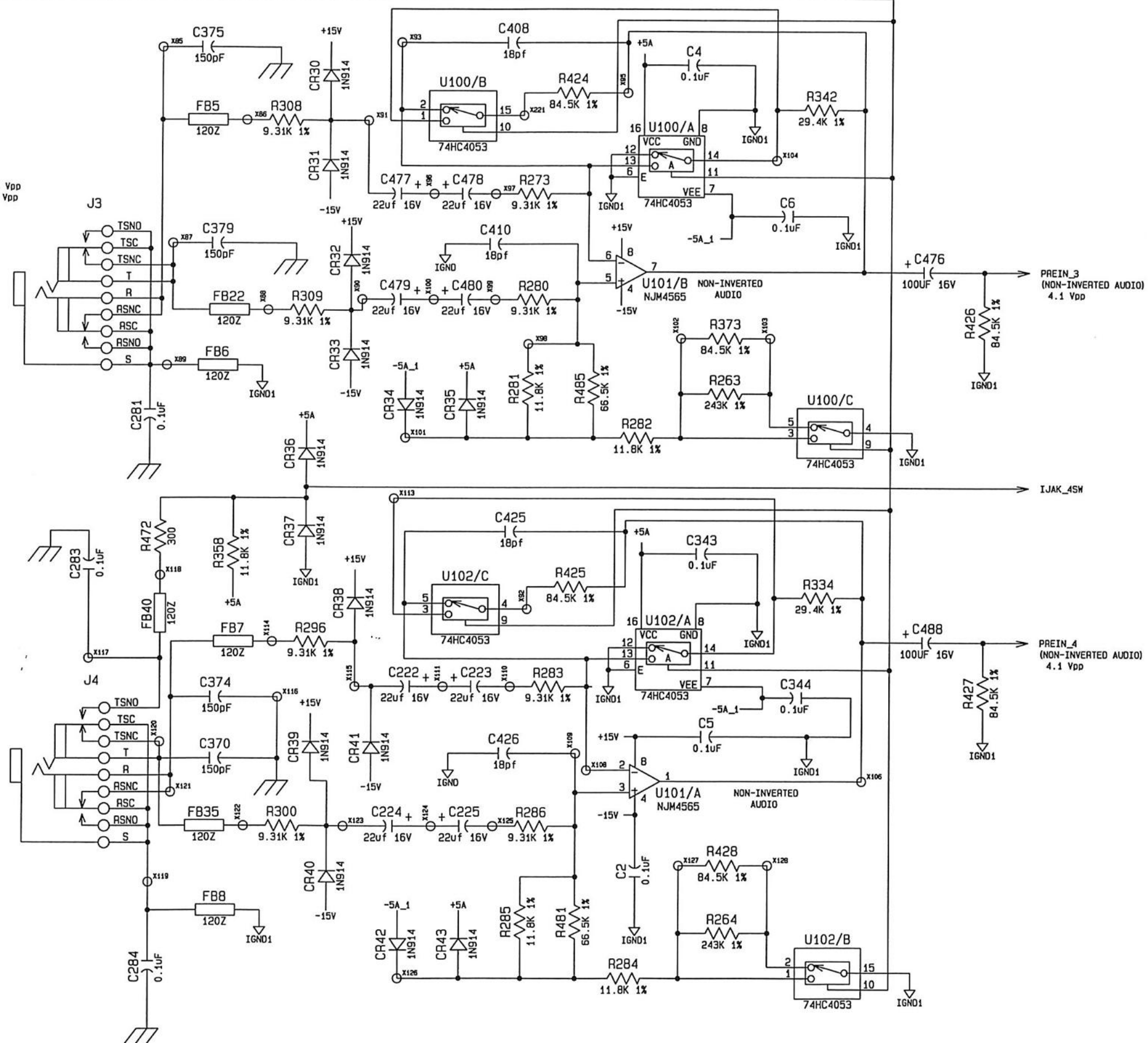
+4/-10

+4. dBu = 3.474 Vpp
-10 dBV = .894 Vpp

3 IN
(L/MONO)

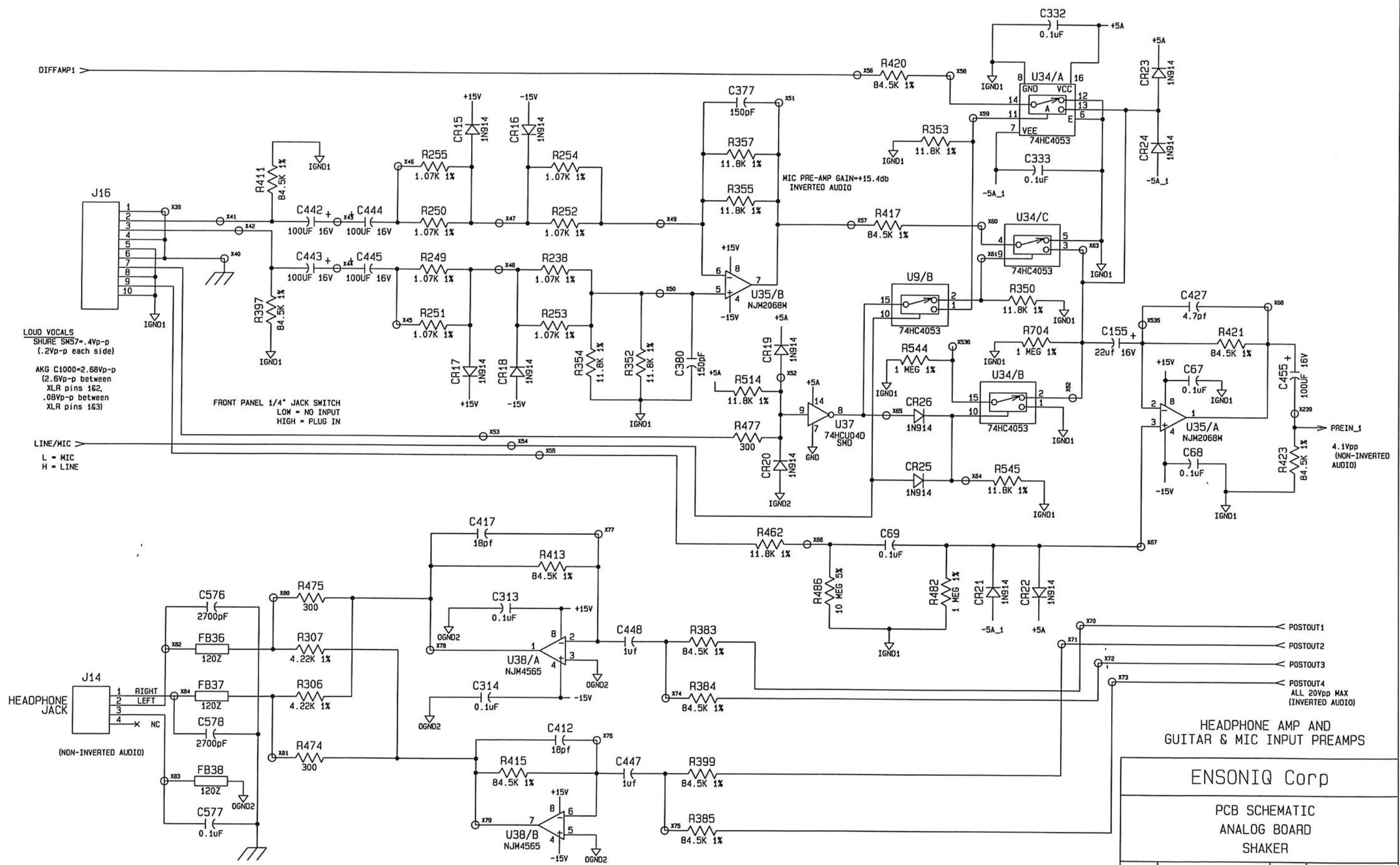
STEREO

4 IN
(R)



CHANNELS 1&2 INPUT DIFF AMPS

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	3	13



LOUD VOCALS
SHURE SM57 = .4Vp-p
(.2Vp-p each side)
AKG C1000 = 2.68Vp-p
(2.6Vp-p between
XLR pins 1&2,
.08Vp-p between
XLR pins 1&3)

FRONT PANEL 1/4" JACK SWITCH
LOW = NO INPUT
HIGH = PLUG IN

LINE/MIC
L = MIC
H = LINE

HEADPHONE JACK
(NON-INVERTED AUDIO)

MIC PRE-AMP GAIN = +15.4db
INVERTED AUDIO

PREIN_1
4.1Vpp
(NON-INVERTED AUDIO)

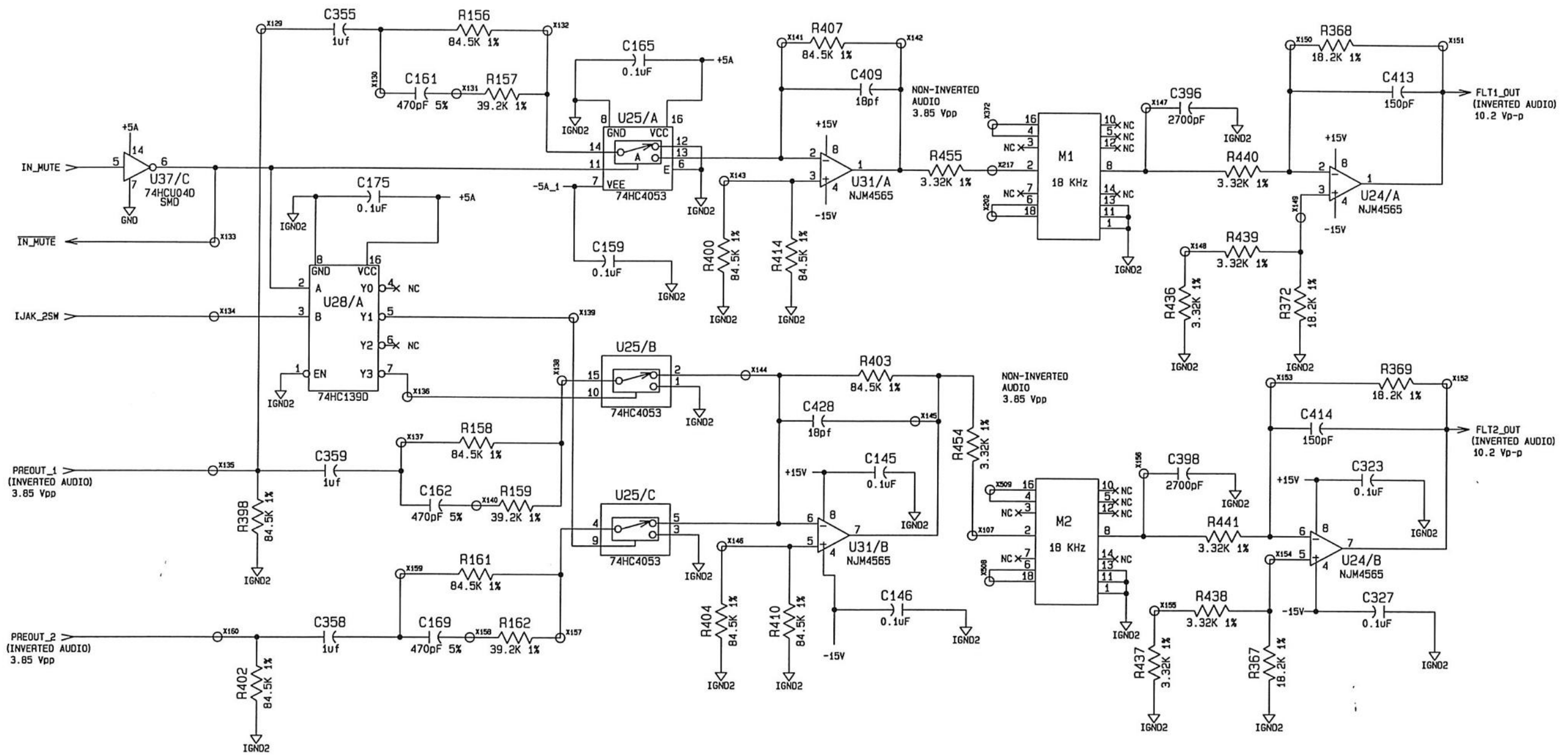
POSTOUT1
POSTOUT2
POSTOUT3
POSTOUT4
ALL 20Vpp MAX
(INVERTED AUDIO)

HEADPHONE AMP AND
GUITAR & MIC INPUT PREAMPS

ENSONIQ Corp

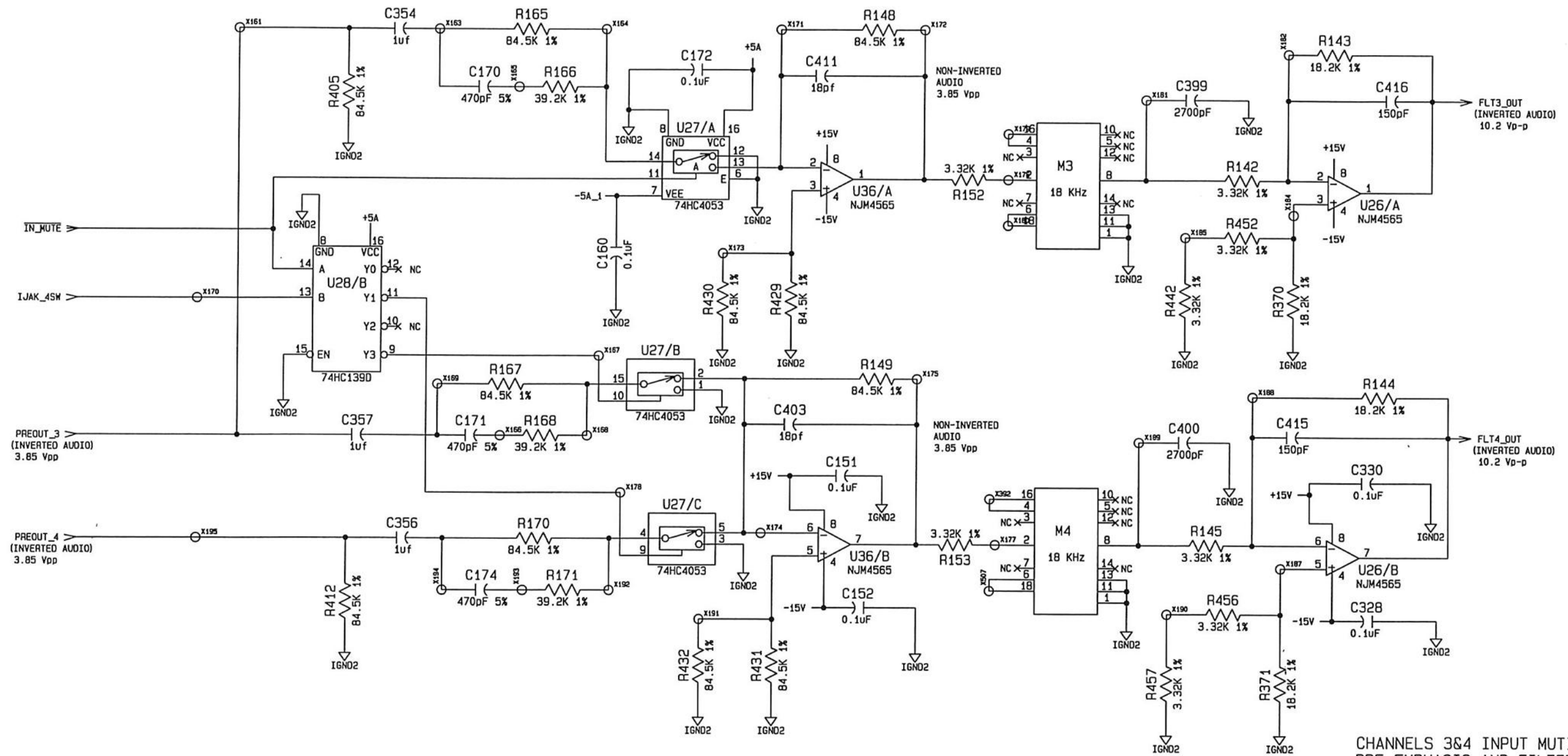
PCB SCHEMATIC
ANALOG BOARD
SHAKER

SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	4	13



CHANNELS 1&2 INPUT MUTING,
PRE-EMPHASIS AND FILTER.

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	5	13

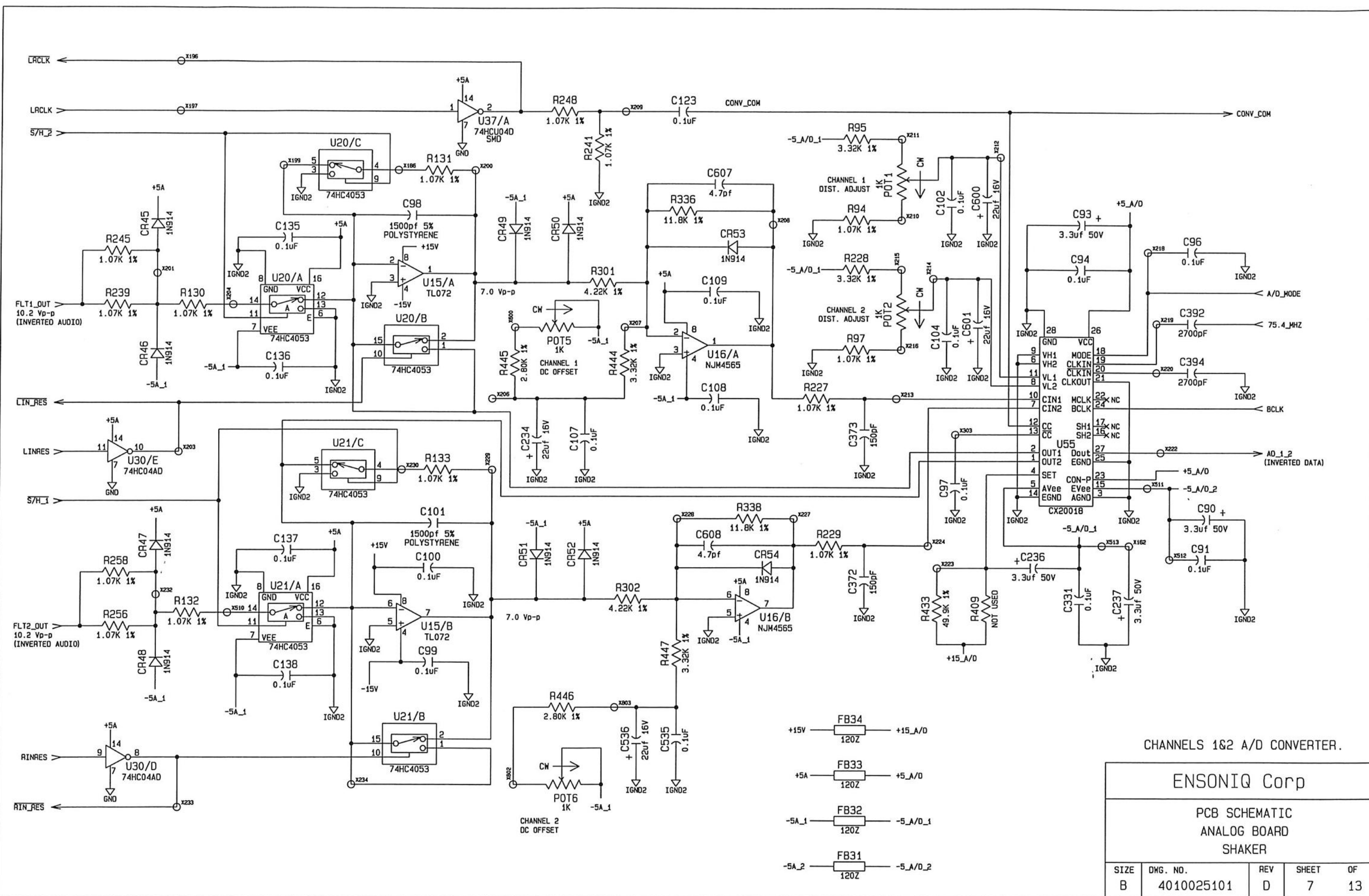


CHANNELS 3&4 INPUT MUTING,
PRE-EMPHASIS AND FILTER.

ENSONIQ Corp

PCB SCHEMATIC
ANALOG BOARD
SHAKER

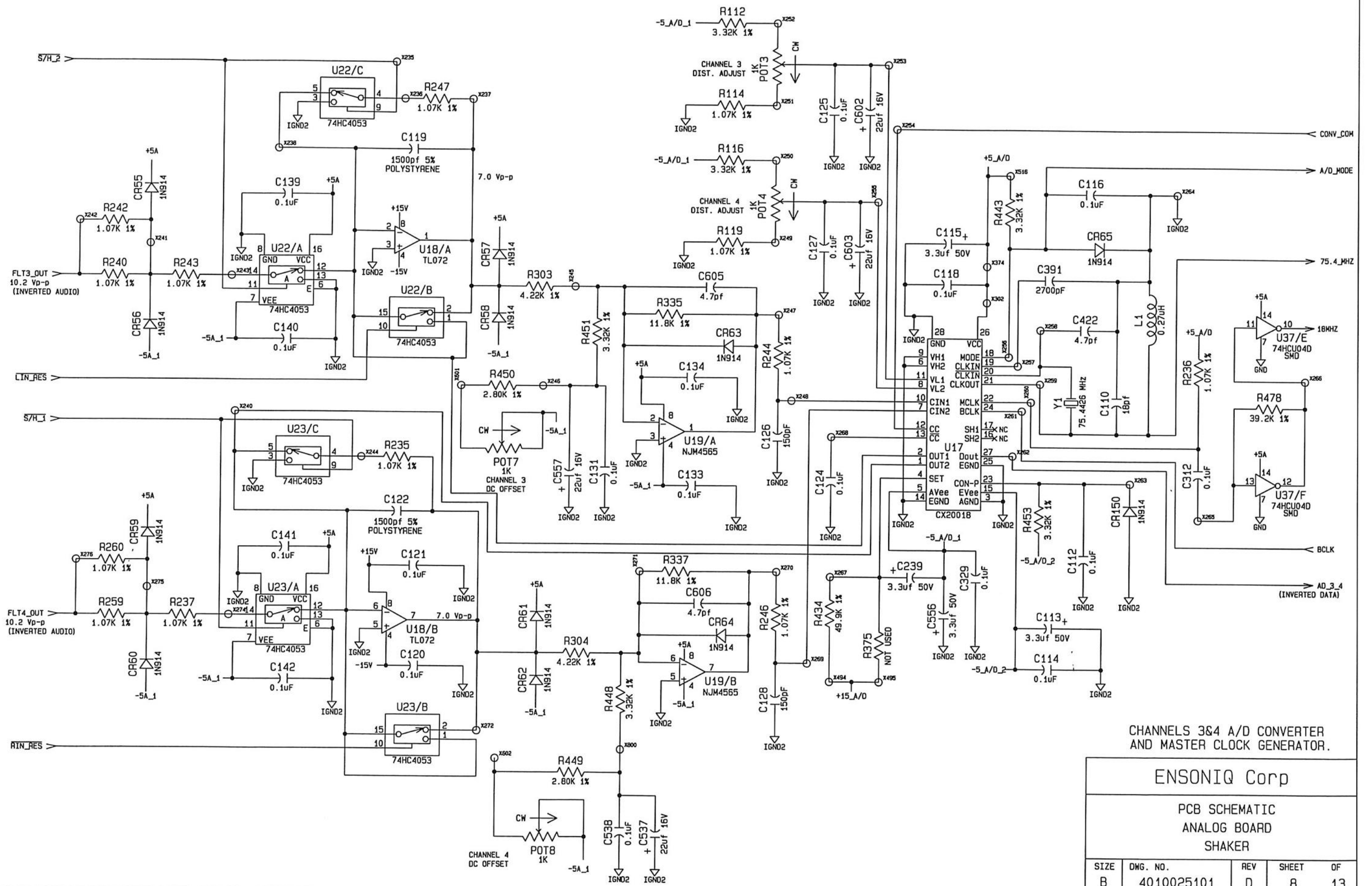
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	6	13



CHANNELS 1&2 A/D CONVERTER.

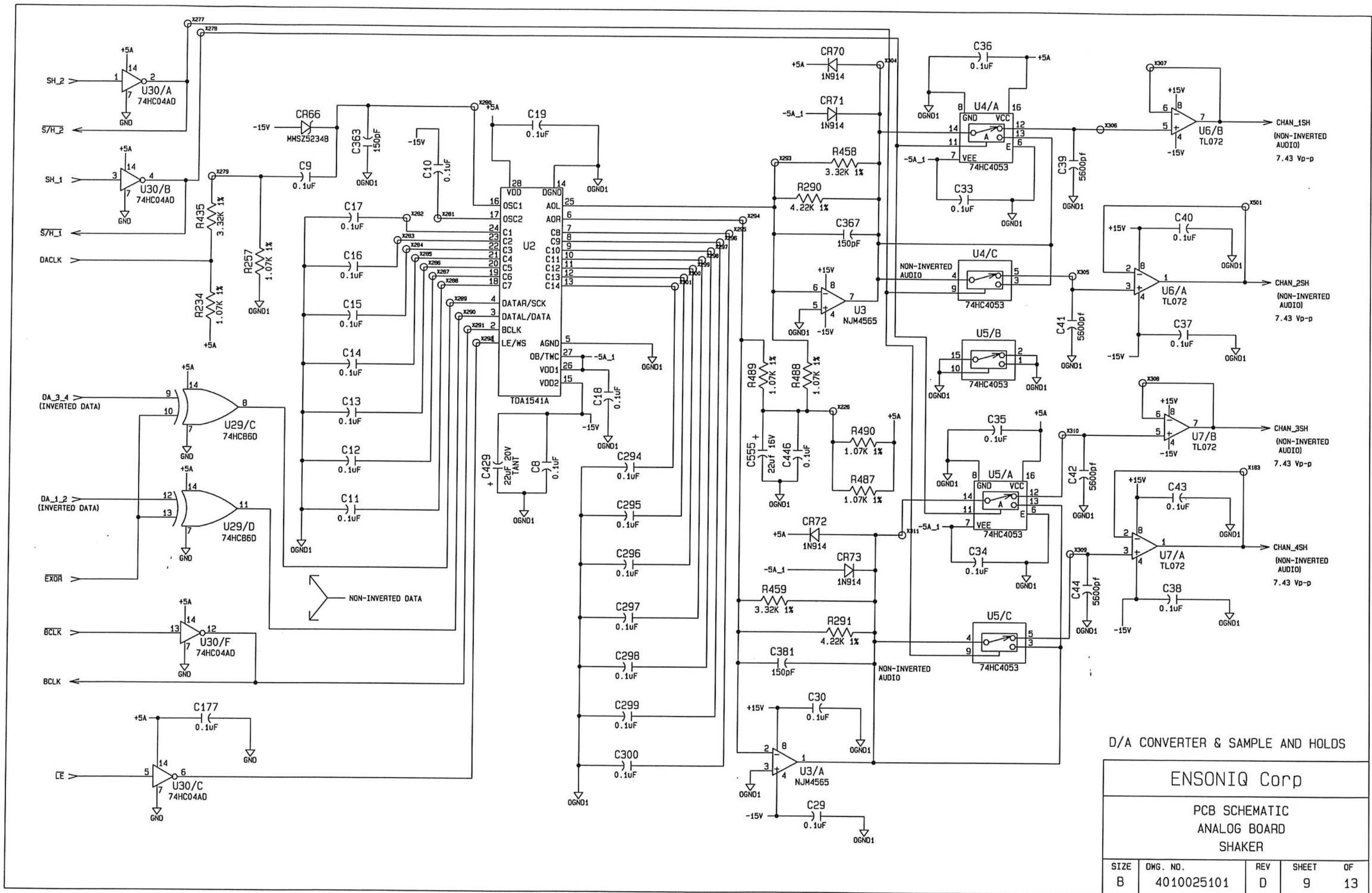
ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	7	13

- +15V — FB34 — +15_A/D
- +5A — FB33 — +5_A/D
- 5A_1 — FB32 — -5_A/D_1
- 5A_2 — FB31 — -5_A/D_2



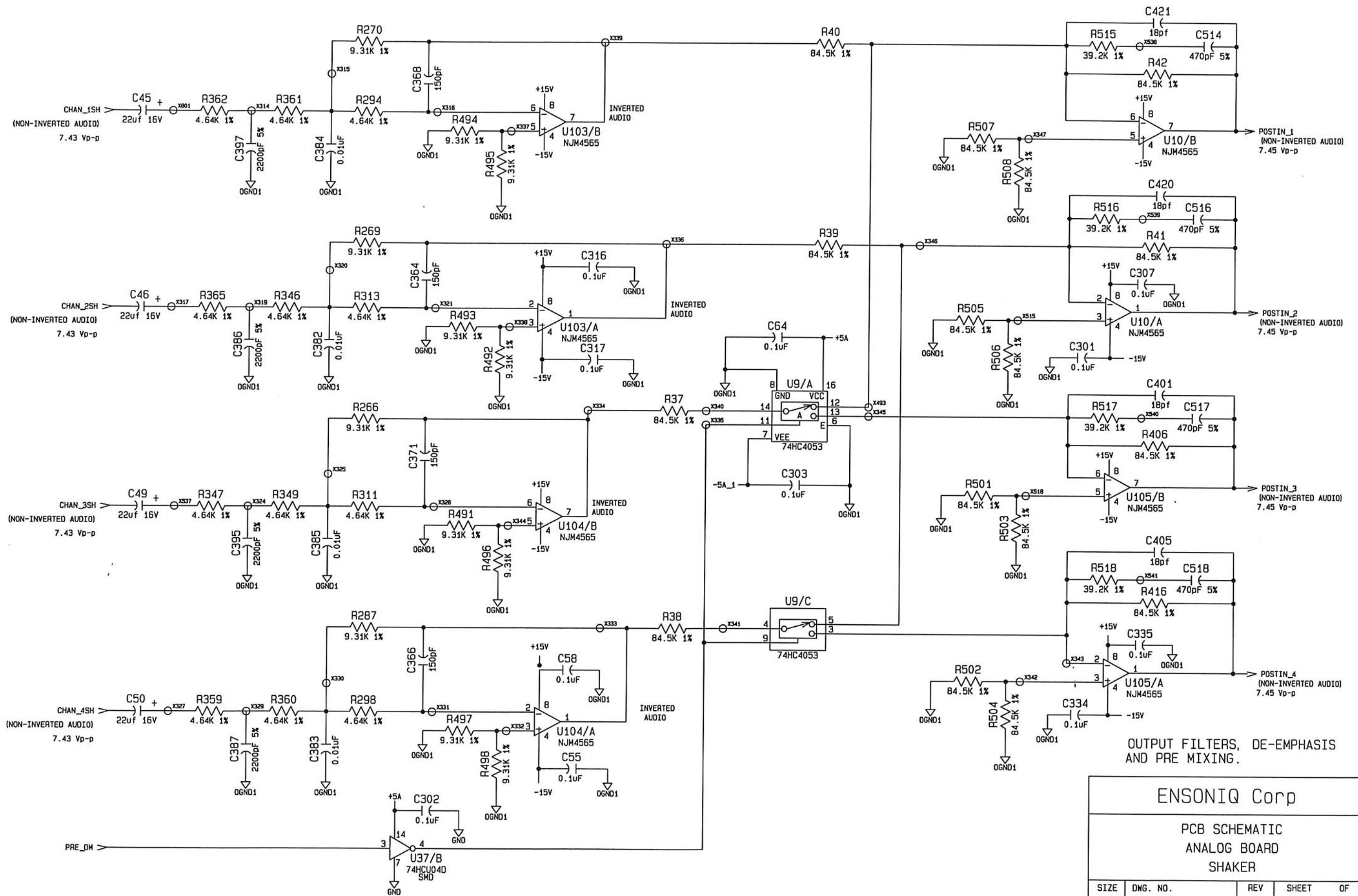
CHANNELS 3&4 A/D CONVERTER AND MASTER CLOCK GENERATOR.

ENSONIQ Corp				
PCB SCHEMATIC				
ANALOG BOARD				
SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	8	13



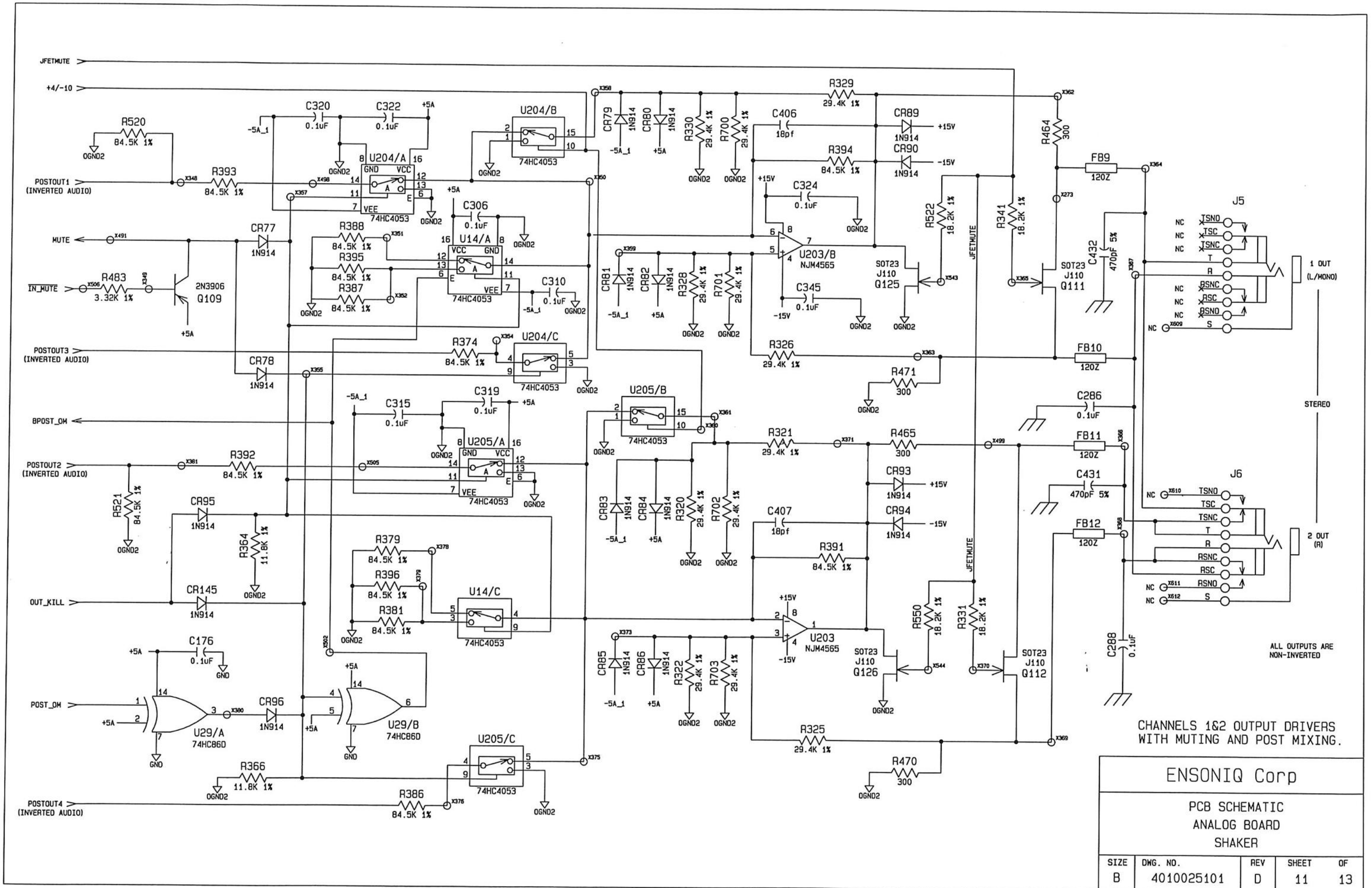
D/A CONVERTER & SAMPLE AND HOLDS

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	9	13



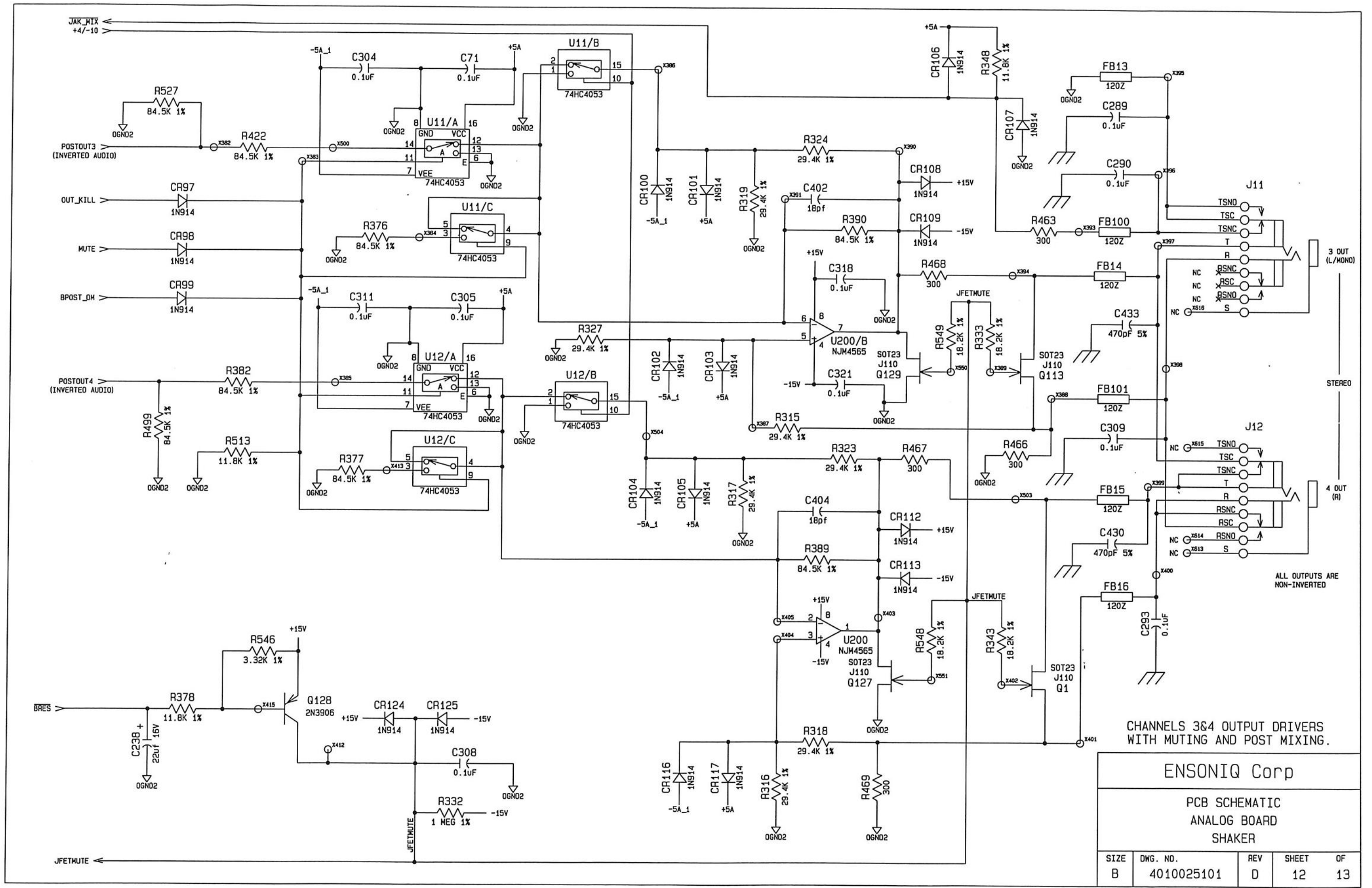
OUTPUT FILTERS, DE-EMPHASIS
AND PRE MIXING.

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	10	13



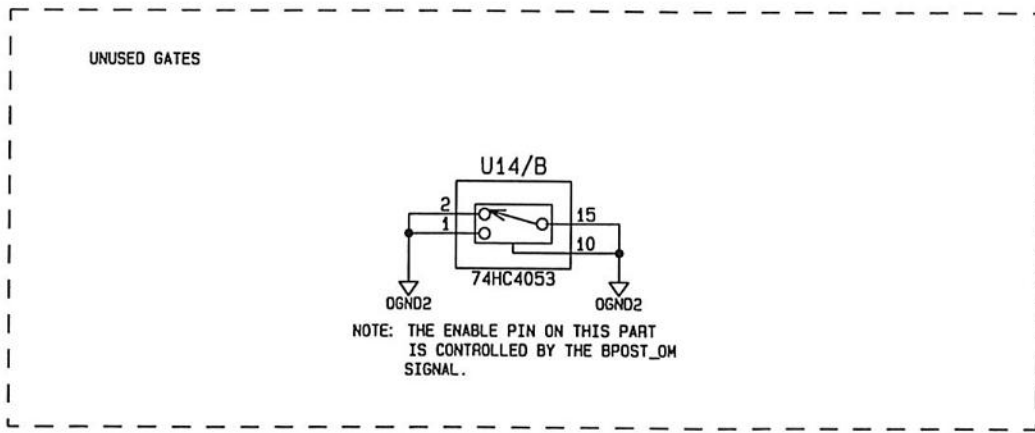
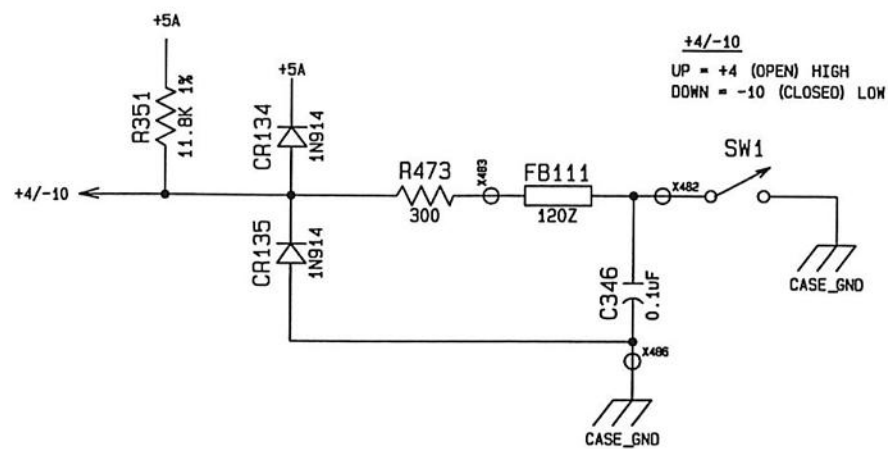
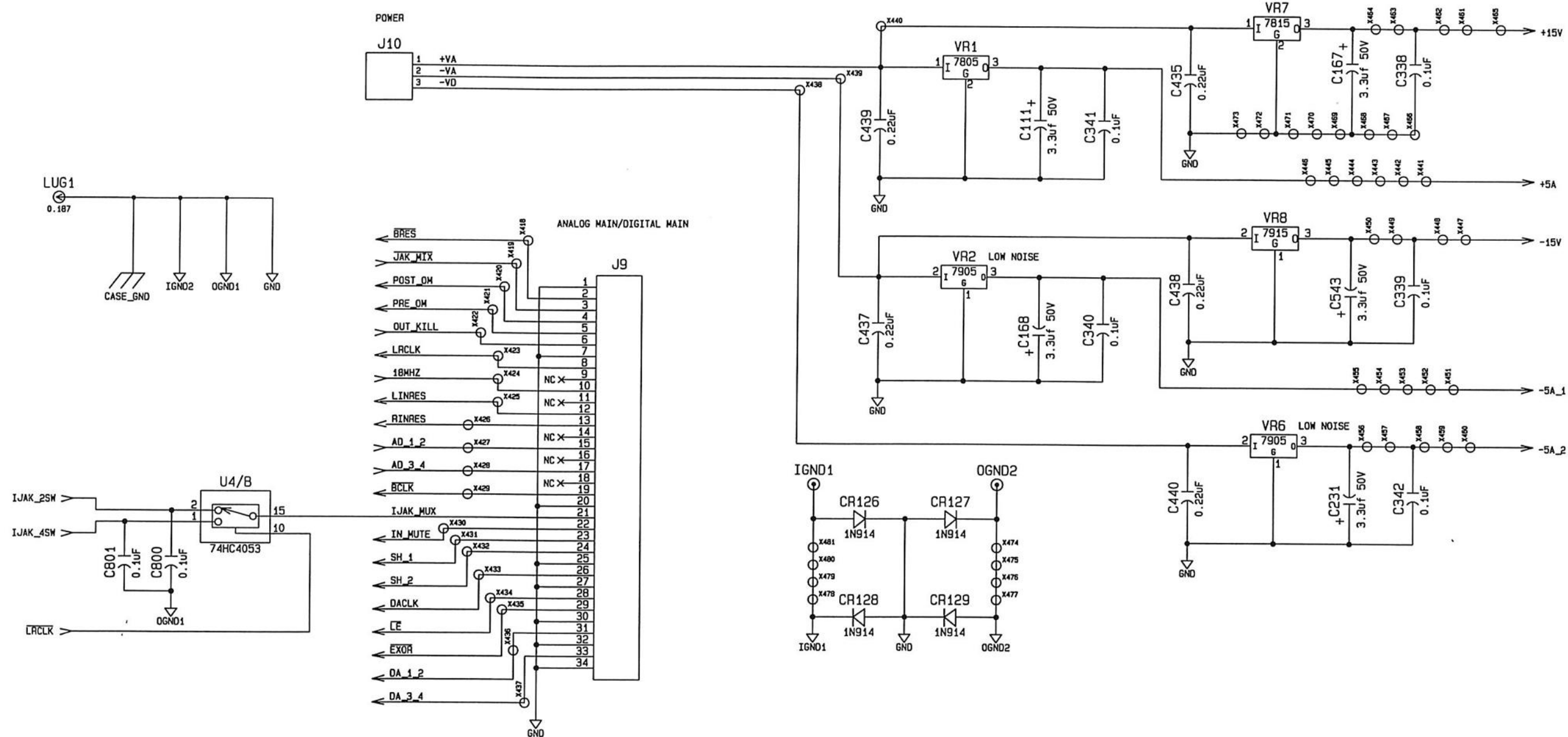
CHANNELS 1&2 OUTPUT DRIVERS WITH MUTING AND POST MIXING.

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	11	13



CHANNELS 3&4 OUTPUT DRIVERS WITH MUTING AND POST MIXING.

ENSONIQ Corp				
PCB SCHEMATIC				
ANALOG BOARD				
SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	12	13



VOLAGE REGULATORS, +4/-10 SWITCH AND OFF BOARD CONNECTORS.

ENSONIQ Corp				
PCB SCHEMATIC ANALOG BOARD SHAKER				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025101	D	13	13

SHT 1 COVER SHEET
 SHT 2 MICROPROCESSOR, ROM, RAM, I/O
 SHT 3 GATE ARRAY
 SHT 4 MIDI, CLOCKS
 SHT 5 ESP 1
 SHT 6 ESP 2
 SHT 7 ESP 3
 SHT 8 ESP 4
 SHT 9 KEYPAD/DISPLAY, FOOTSWITCH INPUTS
 SHT 10 BYPASS CAPS, POWER SUPPLY CONN., UNUSED GATES
 SHT 11 CV PEDAL A/D CONVERTER

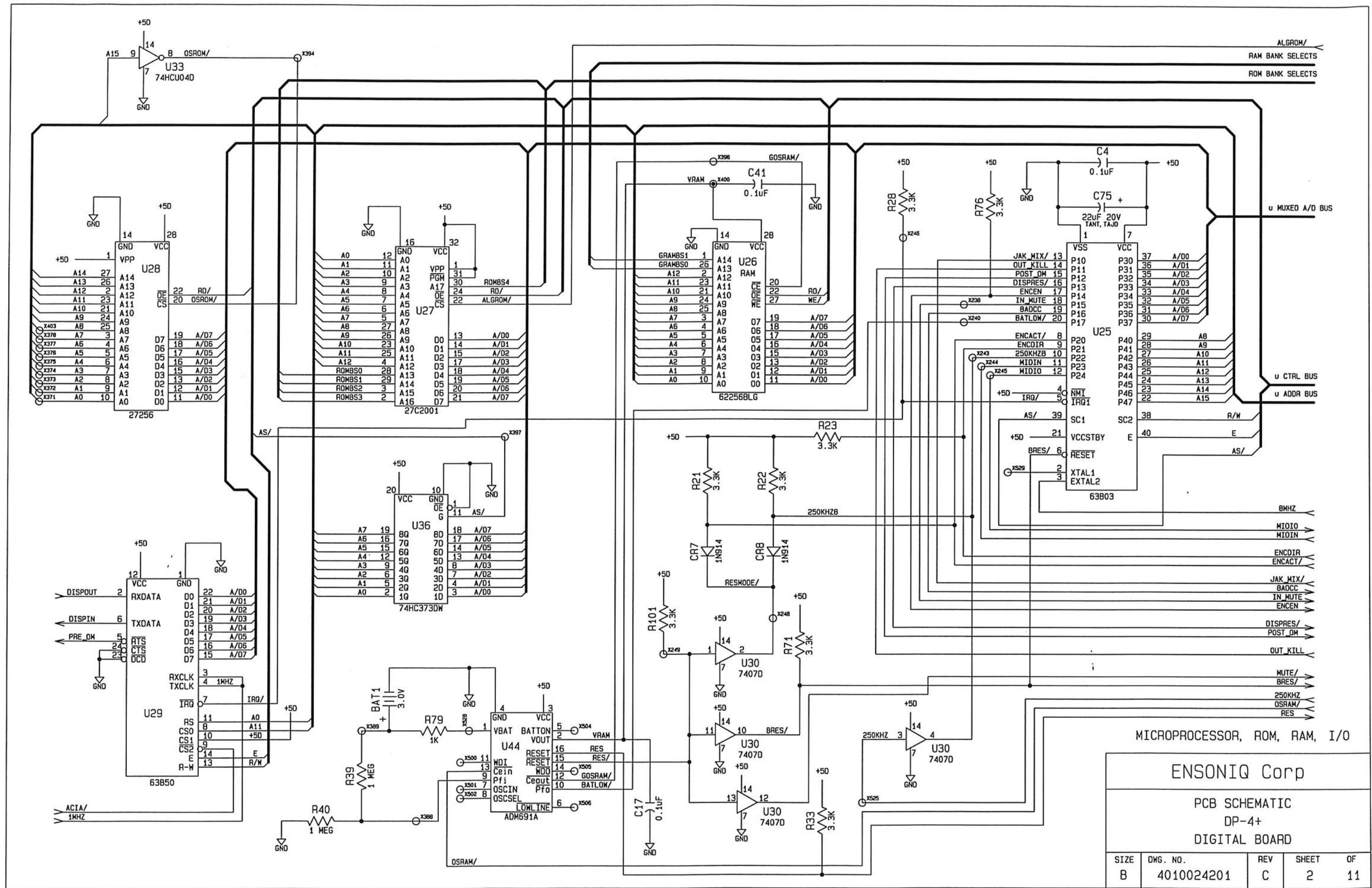
5. INSTALL JUMPER R80, REMOVE JUMPER R81.
 4. FOR ESP VOLTAGE OF 5.25V.
 INSTALL: VR2, R74, R75, C115, C116 & C121.
 REMOVE: VR3 & C114.
 FOR ESP VOLTAGE OF 5.00V.
 INSTALL: VR3, C114 & C116.
 REMOVE: VR2, R74, R75, C115 & C121.
 3. ALL 0.1UF BYPASS CAPACITORS ARE 25V +80/-20% Z5U.
 2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 16V MINIMUM.
 1. ALL RESISTOR VALUES ARE IN OHMS, 1/8W 5%.

NOTES - UNLESS SPECIFIED OTHERWISE:

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	PROTOTYPE RELEASE		
2	PROTOTYPE RELEASE		
3	PROTOTYPE RELEASE		
4	PROTOTYPE RELEASE		
5	PROTOTYPE RELEASE		
6	PROTOTYPE RELEASE		
7	PROTOTYPE RELEASE		
A	RELEASED PER EDR 42-528	12-21-94	AKS
B	REVISED PER ECO 3057	2-4-95	AKS
C	REVISED PER ECO 3070	3-20-95	AKS

COVER SHEET

ENSONIQ Corp 155 GREAT VALLEY PKWY, MALVERN PA 19355				
APPROVALS	DATE	PCB SCHEMATIC DP-4+ DIGITAL BOARD		
DWN BY: AKS	02-18-94			
CHKD BY:				
APPD BY:		SIZE B	DWG. NO. 4010024201	REV C
USED ON: DP-4 PRO	SCALE —	SHEET 1 OF 11		

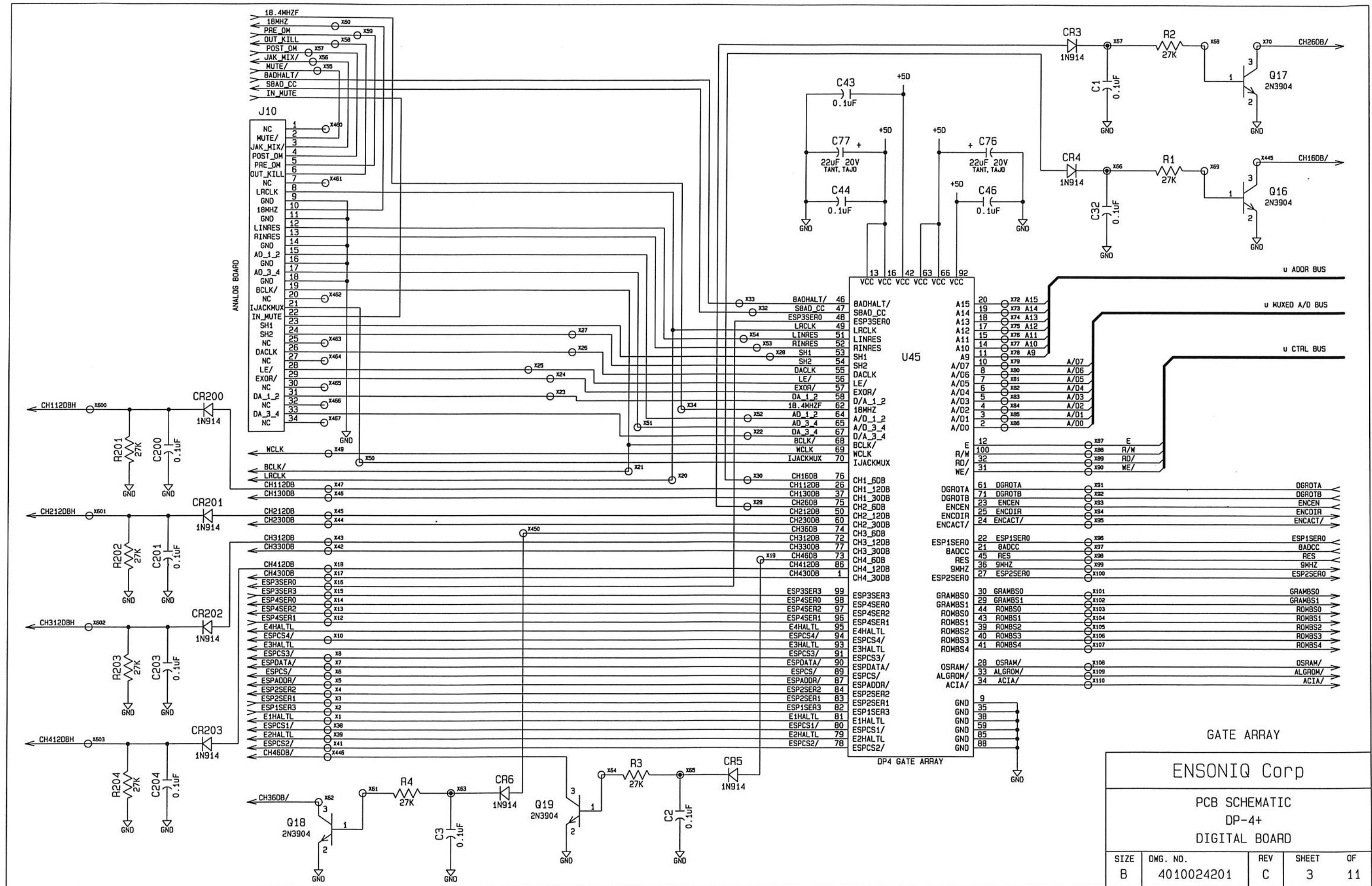


MICROPROCESSOR, ROM, RAM, I/O

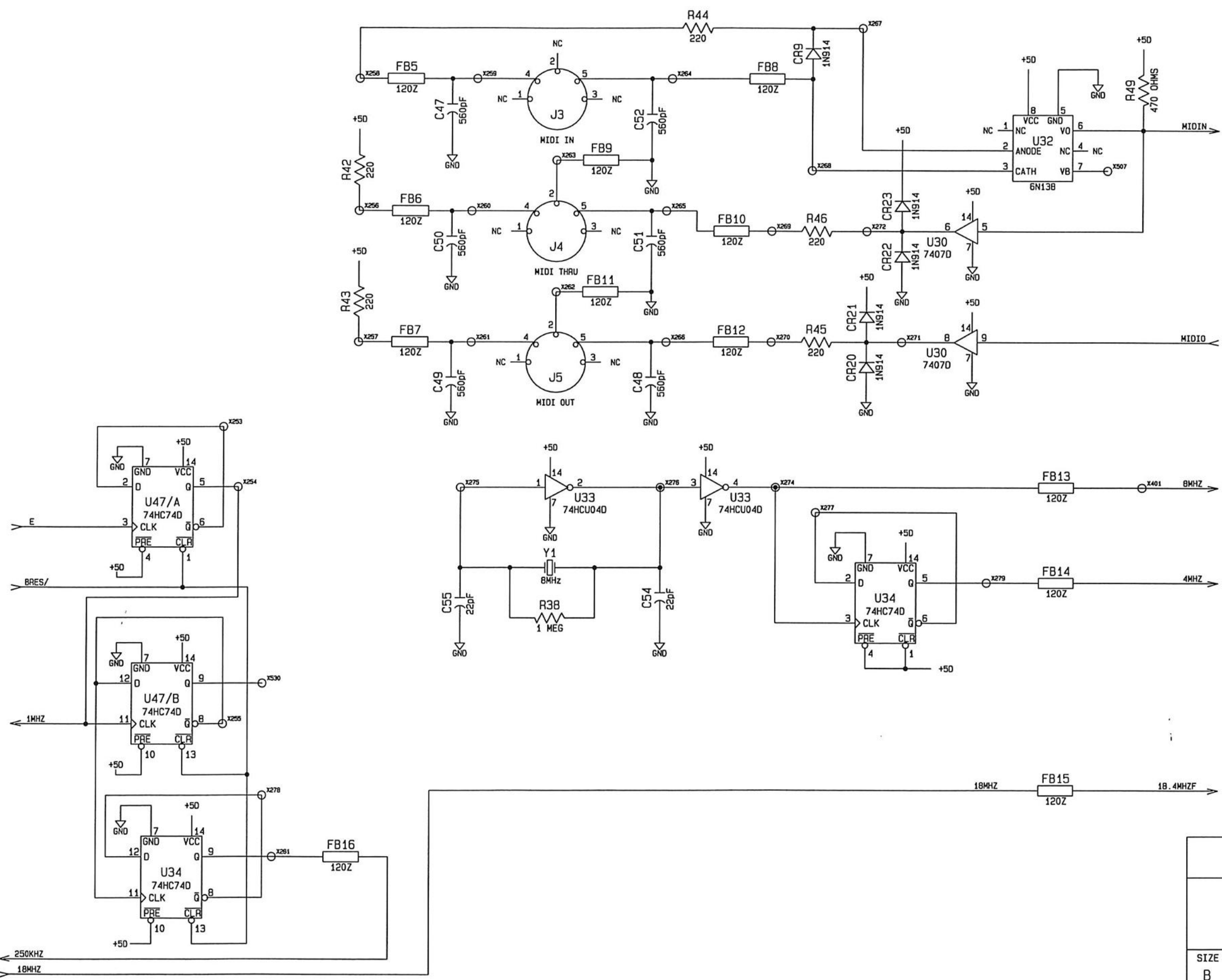
ENSONIQ Corp

PCB SCHEMATIC
DP-4+
DIGITAL BOARD

SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	2	11

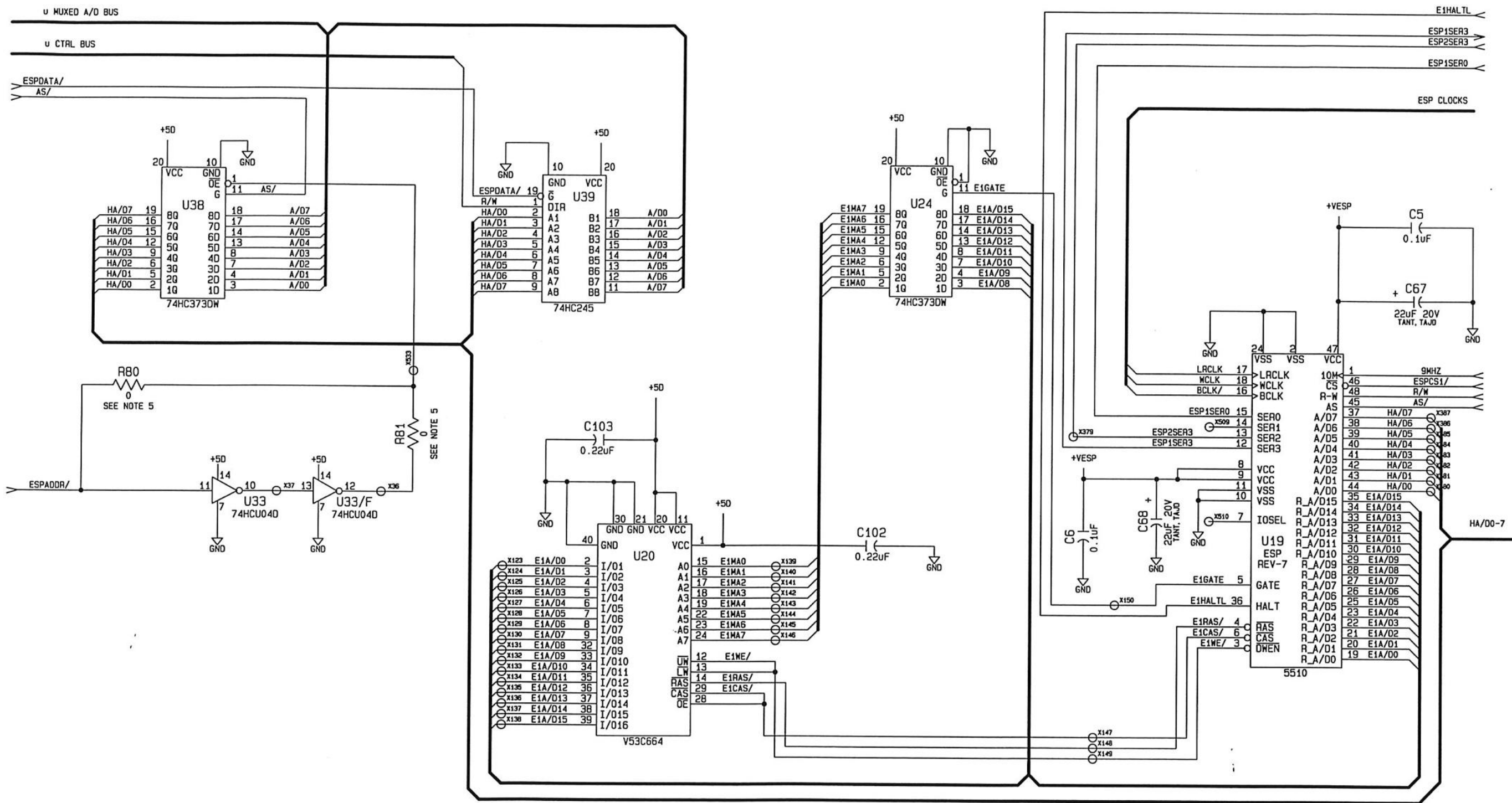


GATE ARRAY				
ENSONIQ Corp				
PCB SCHEMATIC				
DP-4+				
DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	3	11



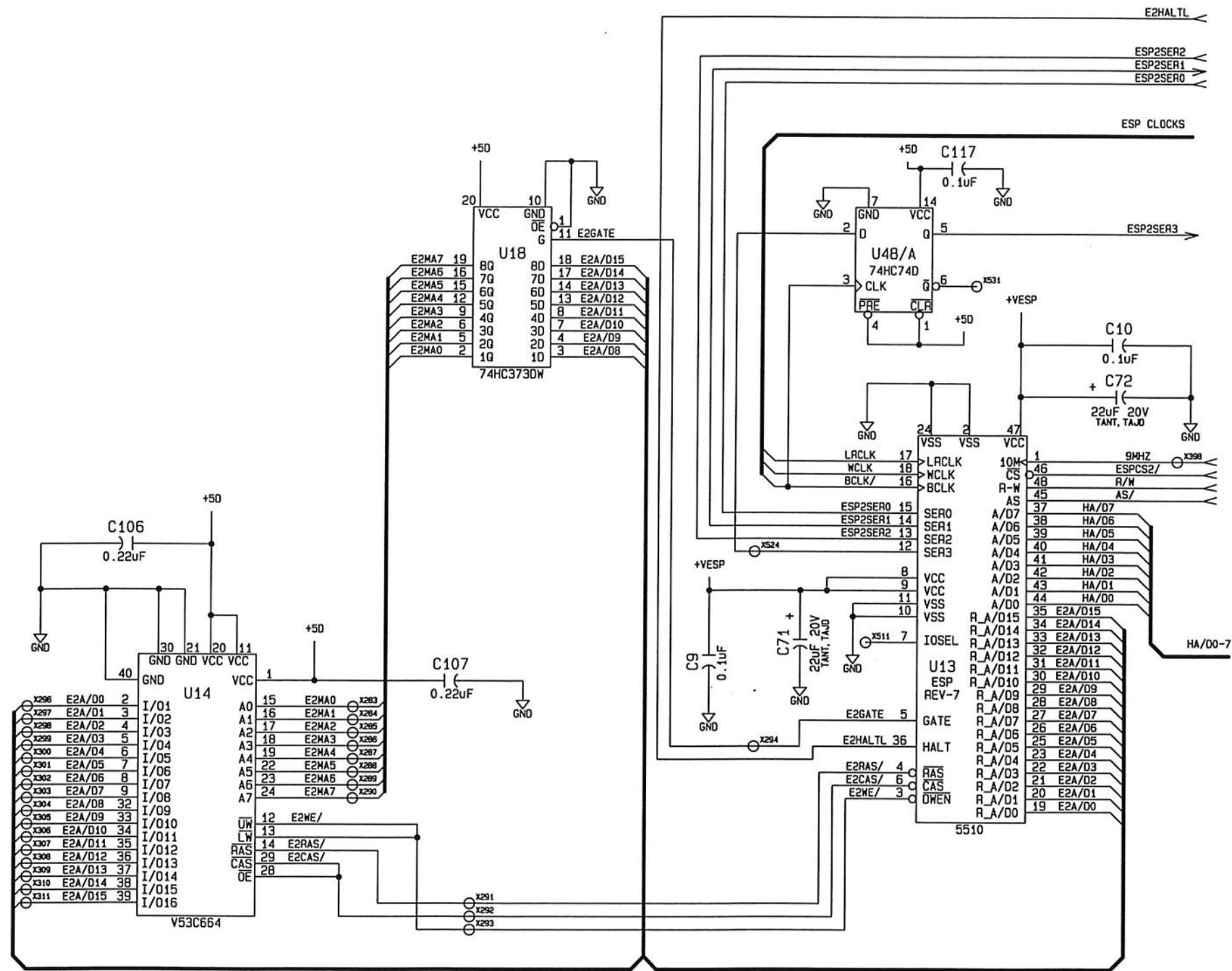
MIDI, CLOCKS

ENSONIQ Corp				
PCB SCHEMATIC				
DP-4+				
DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	4	11



ESP 1

ENSONIQ Corp				
PCB SCHEMATIC				
DP-4+				
DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	5	11

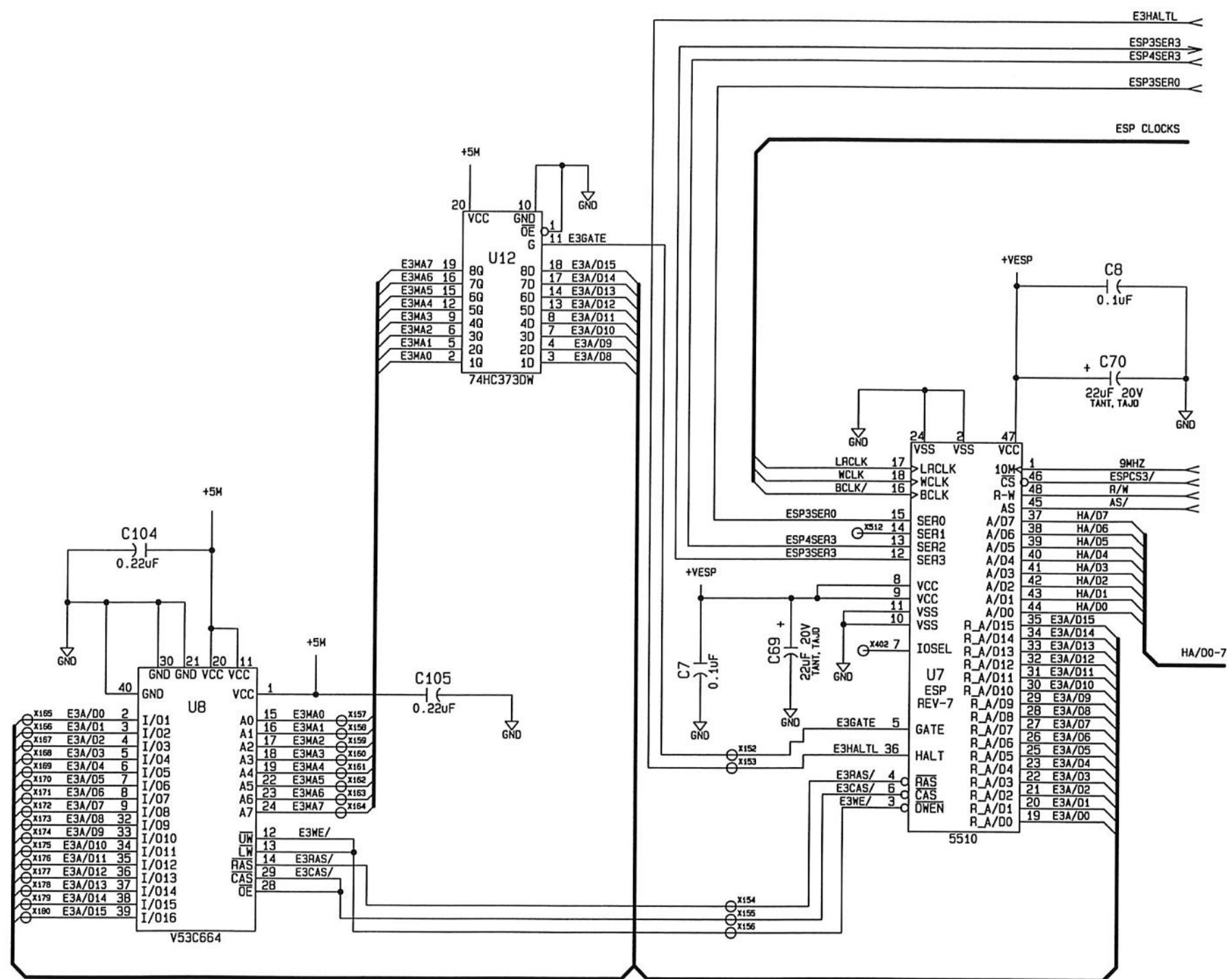


ESP 2

ENSONIQ Corp

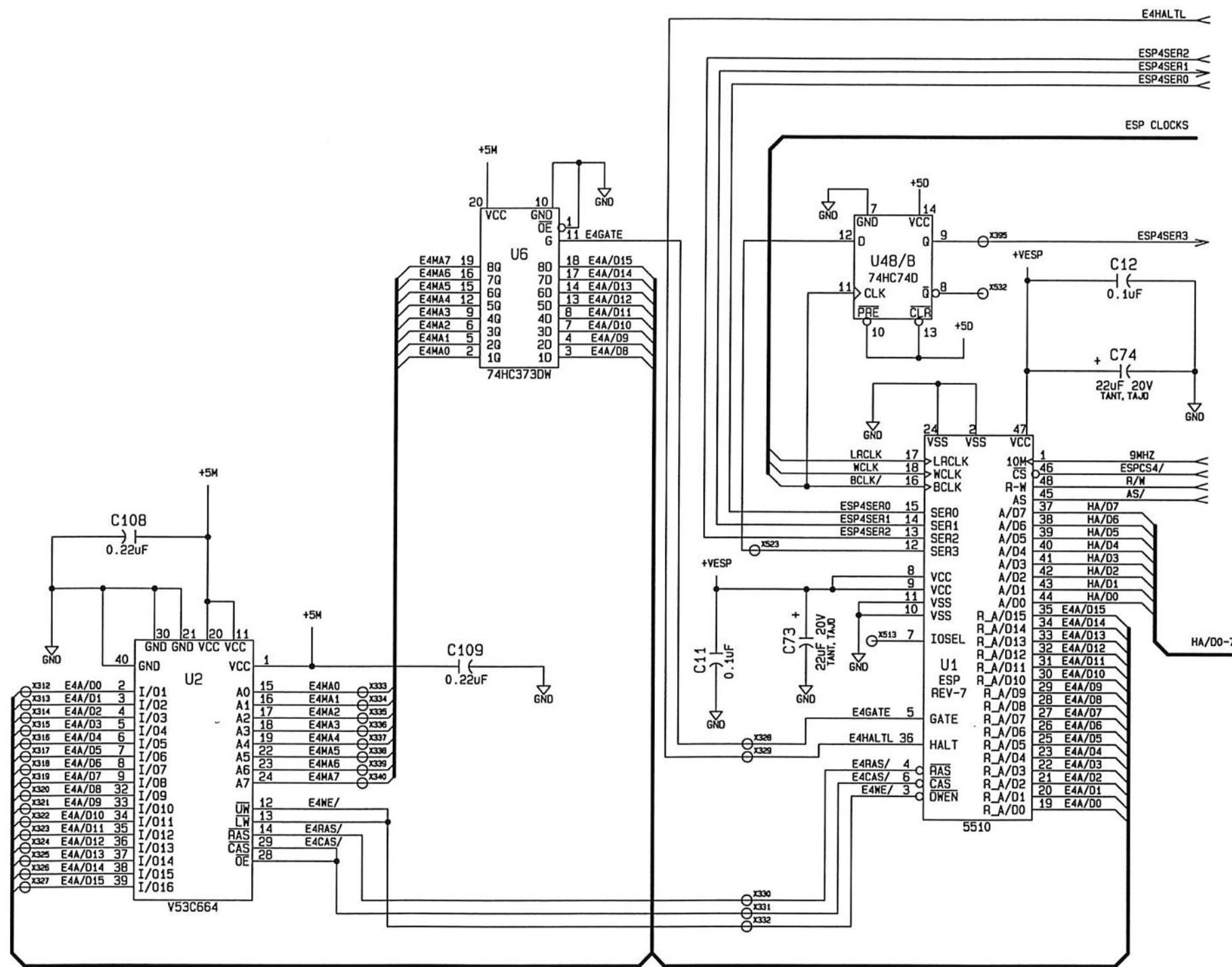
PCB SCHEMATIC
DP-4+
DIGITAL BOARD

SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	6	11



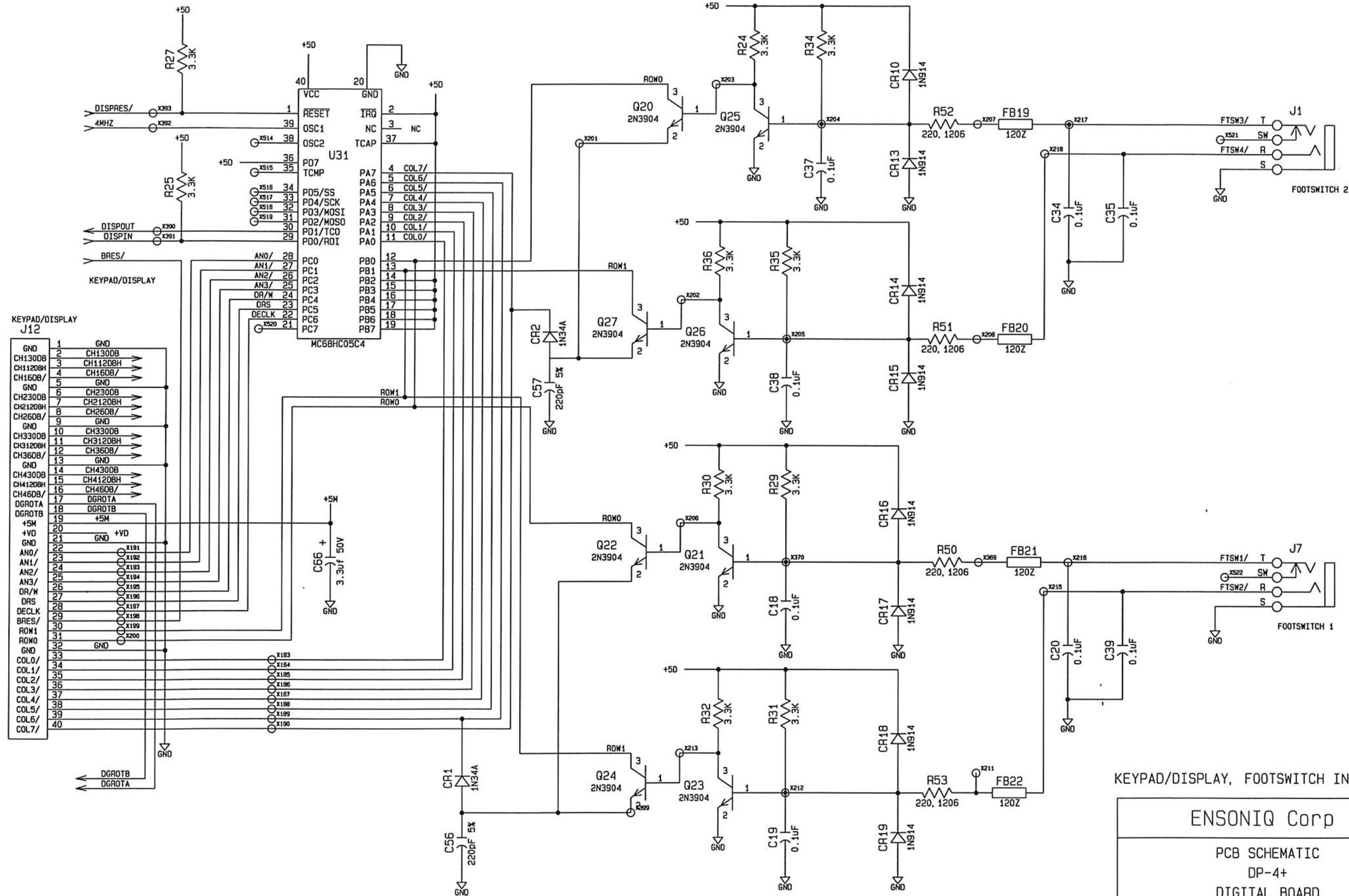
ESP 3

ENSONIQ Corp				
PCB SCHEMATIC DP-4+ DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	7	11

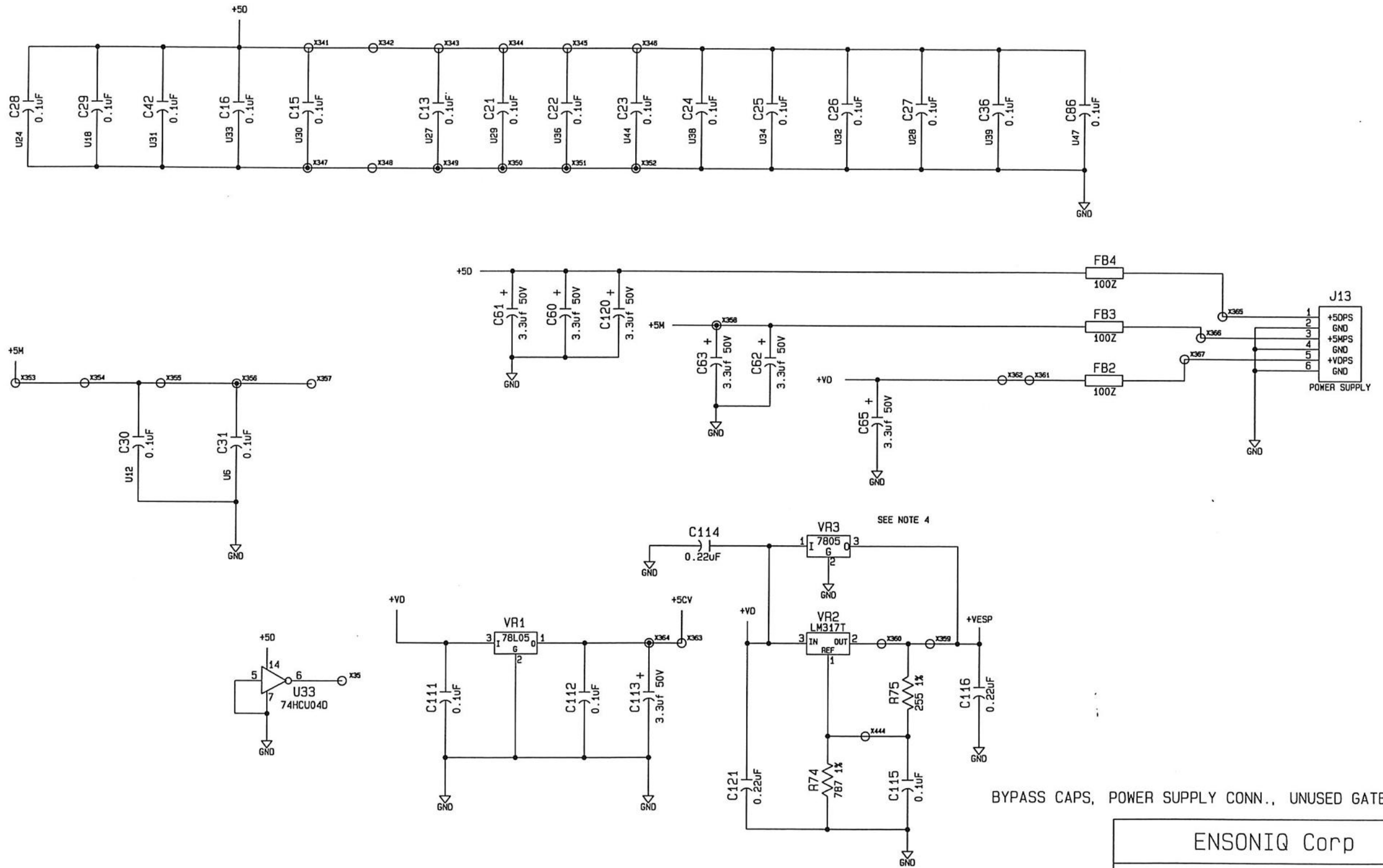


ESP 4

ENSONIQ Corp				
PCB SCHEMATIC DP-4+				
DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	8	11

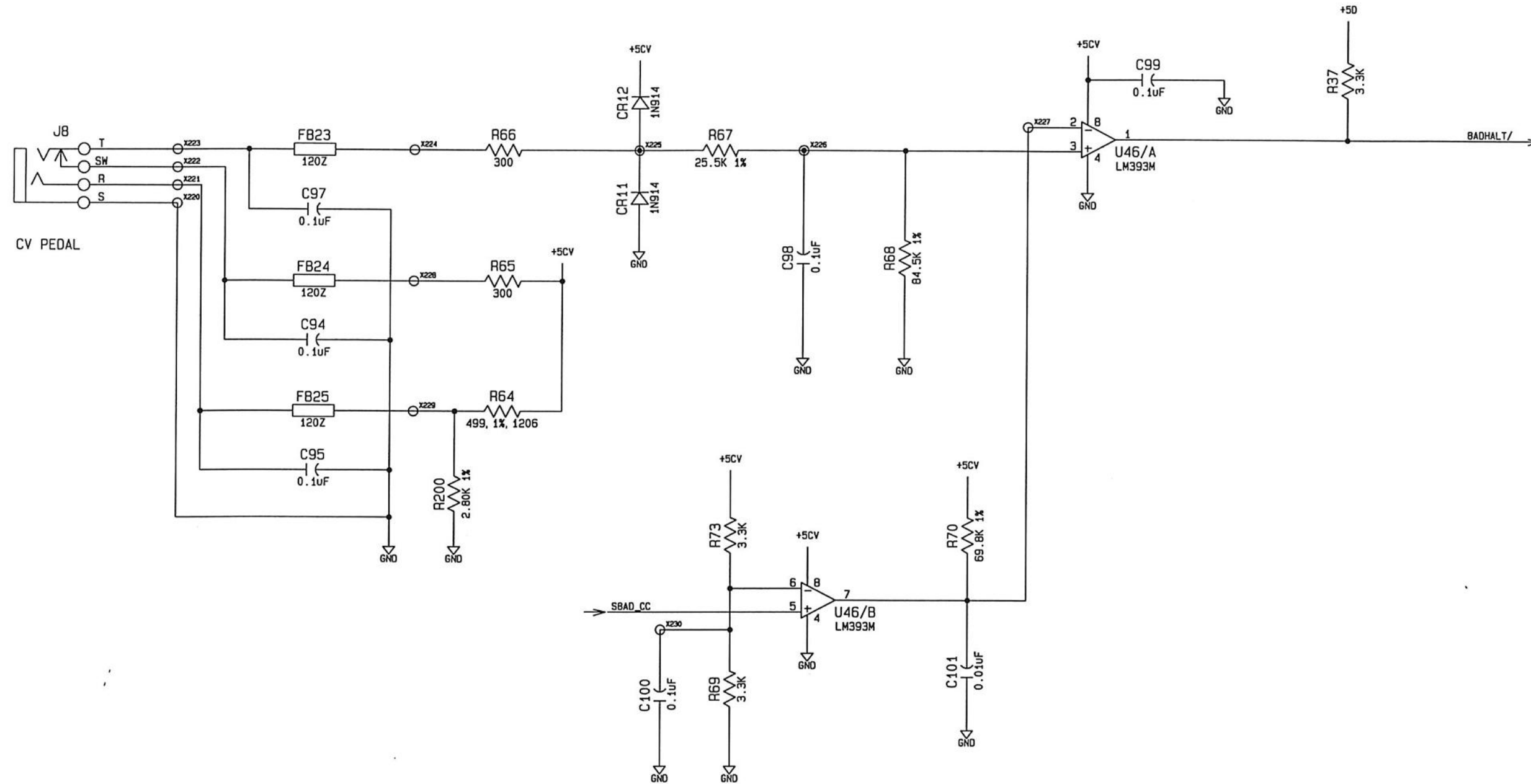


ENSONIQ Corp				
PCB SCHEMATIC				
DP-4+				
DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	9	11



BYPASS CAPS, POWER SUPPLY CONN., UNUSED GATES

ENSONIQ Corp				
PCB SCHEMATIC DP-4+ DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	10	11



CV PEDAL A/D CONVERTER

ENSONIQ Corp				
PCB SCHEMATIC DP-4+ DIGITAL BOARD				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024201	C	11	11

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	PROTOTYPE RELEASE		
2	PROTOTYPE RELEASE		
3	PROTOTYPE RELEASE		
4	PROTOTYPE RELEASE		
A	PRODUCTION RELEASE PER EDR 42-528		
B	REVISED PER ECO 3035	01-17-95	AKS
C	REVISED PER ECO 3063	03-29-95	AKS
D	REVISED PER ECO 3088	5-17-95	AKS

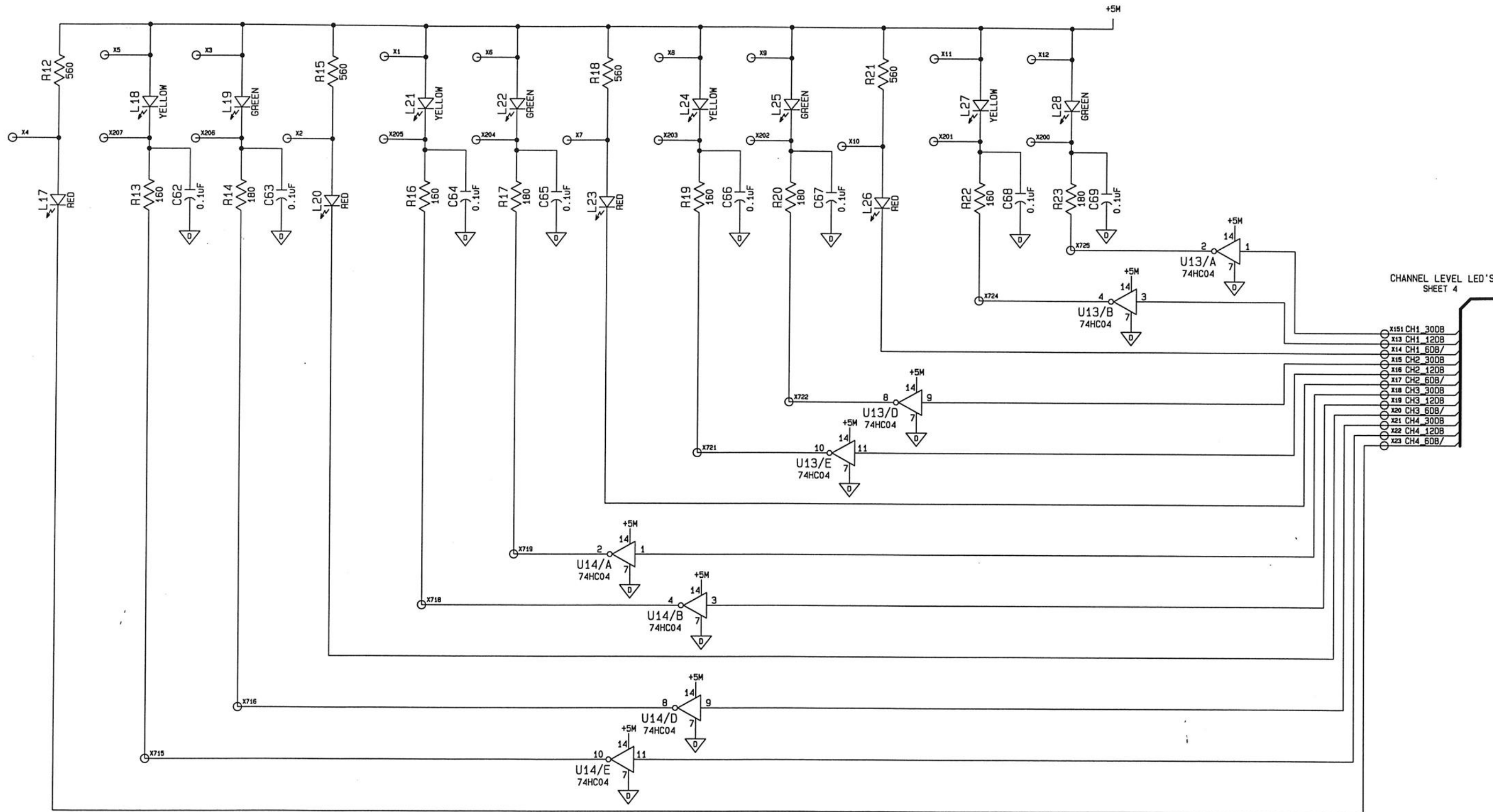
- SHT 1 COVER SHEET
- SHT 2 INPUT LEVEL LED'S AND POWER CAPS
- SHT 3 INPUT / OUTPUT LEVEL CONTROLS
- SHT 4 DISPLAY, BUTTONS / LEDS
- SHT 5 MUTE, MIC / LINE CONTROLS

2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 16V MINIMUM.
 1. ALL RESISTOR VALUES ARE IN OHMS, 1/10W 5%.

NOTES - UNLESS SPECIFIED OTHERWISE:

COVER SHEET

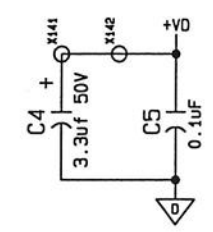
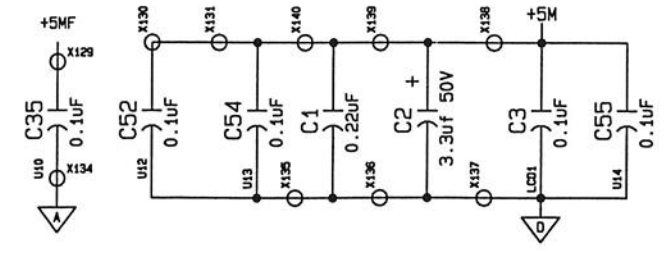
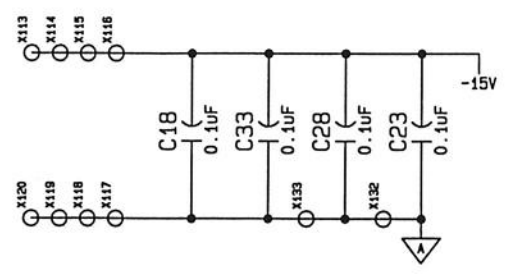
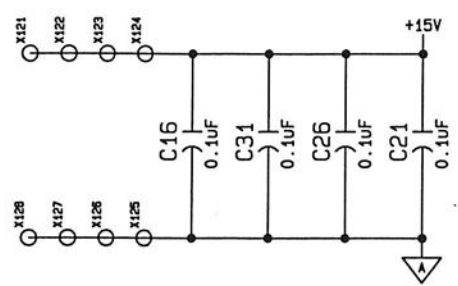
ENSONIQ Corp 155 GREAT VALLEY PKWY, MALVERN PA 19355					
APPROVALS		DATE		PCB SCHEMATIC KEYPAD / DISPLAY DP-4+	
DWN BY: BAVL		05-02-94			
CHKD BY:					
APPD BY:		SIZE	DWG. NO.	REV	
		B	4010024101	D	
USED ON: DP-4+		SCALE	—	SHEET 1 OF 5	



CHANNEL LEVEL LED'S
SHEET 4

- X151 CH1_300B
- X13 CH1_120B
- X14 CH1_60B/
- X15 CH2_300B
- X16 CH2_120B
- X17 CH2_60B/
- X18 CH3_300B
- X19 CH3_120B
- X20 CH3_60B/
- X21 CH4_300B
- X22 CH4_120B
- X23 CH4_60B/

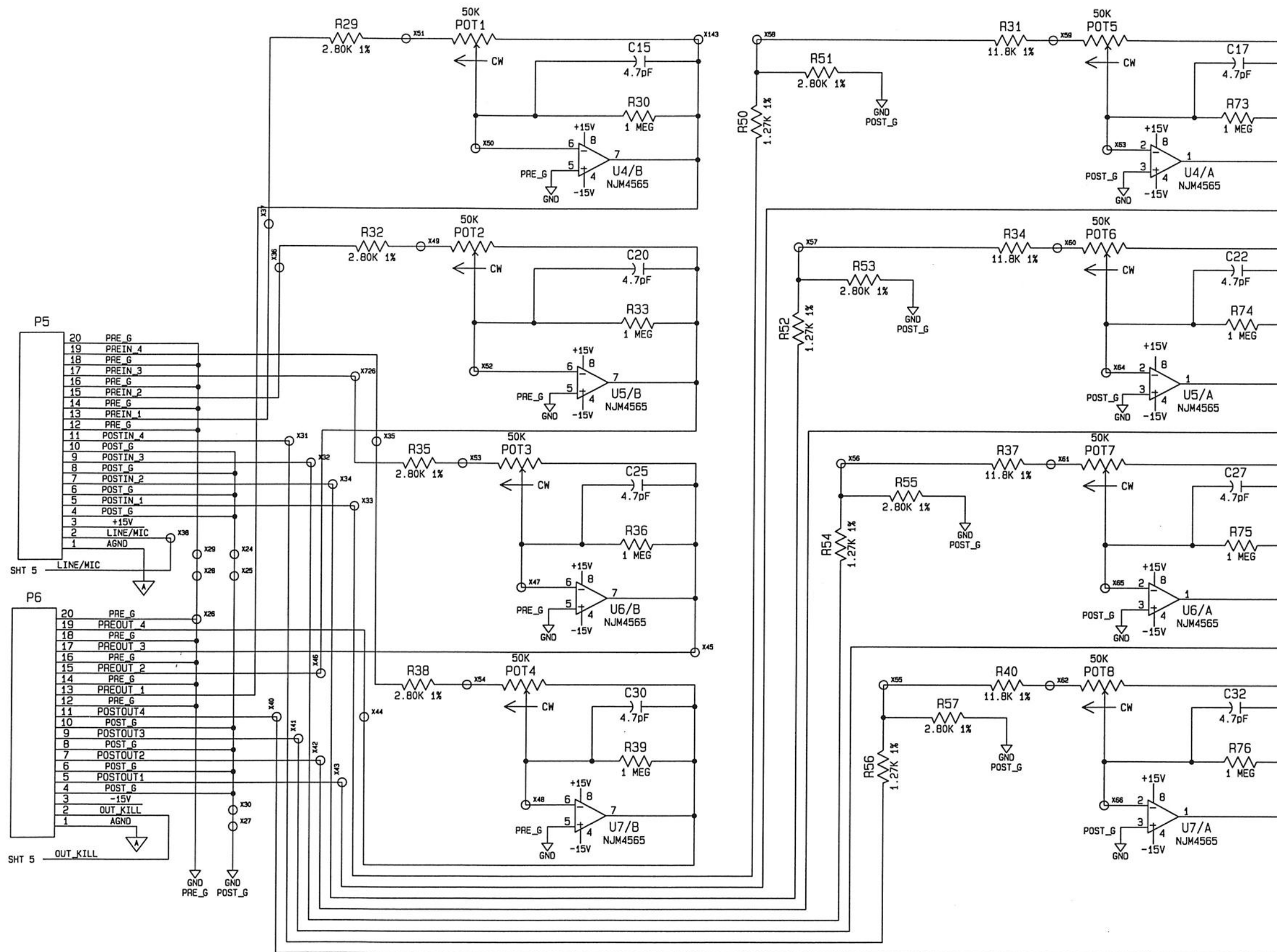
INPUT LEVEL LED'S & POWER CAPS.



ENSONIQ Corp

PCB SCHEMATIC
KEYPAD / DISPLAY
DP-4+

SIZE	DWG. NO.	REV	SHEET	OF
B	4010024101	D	2	5

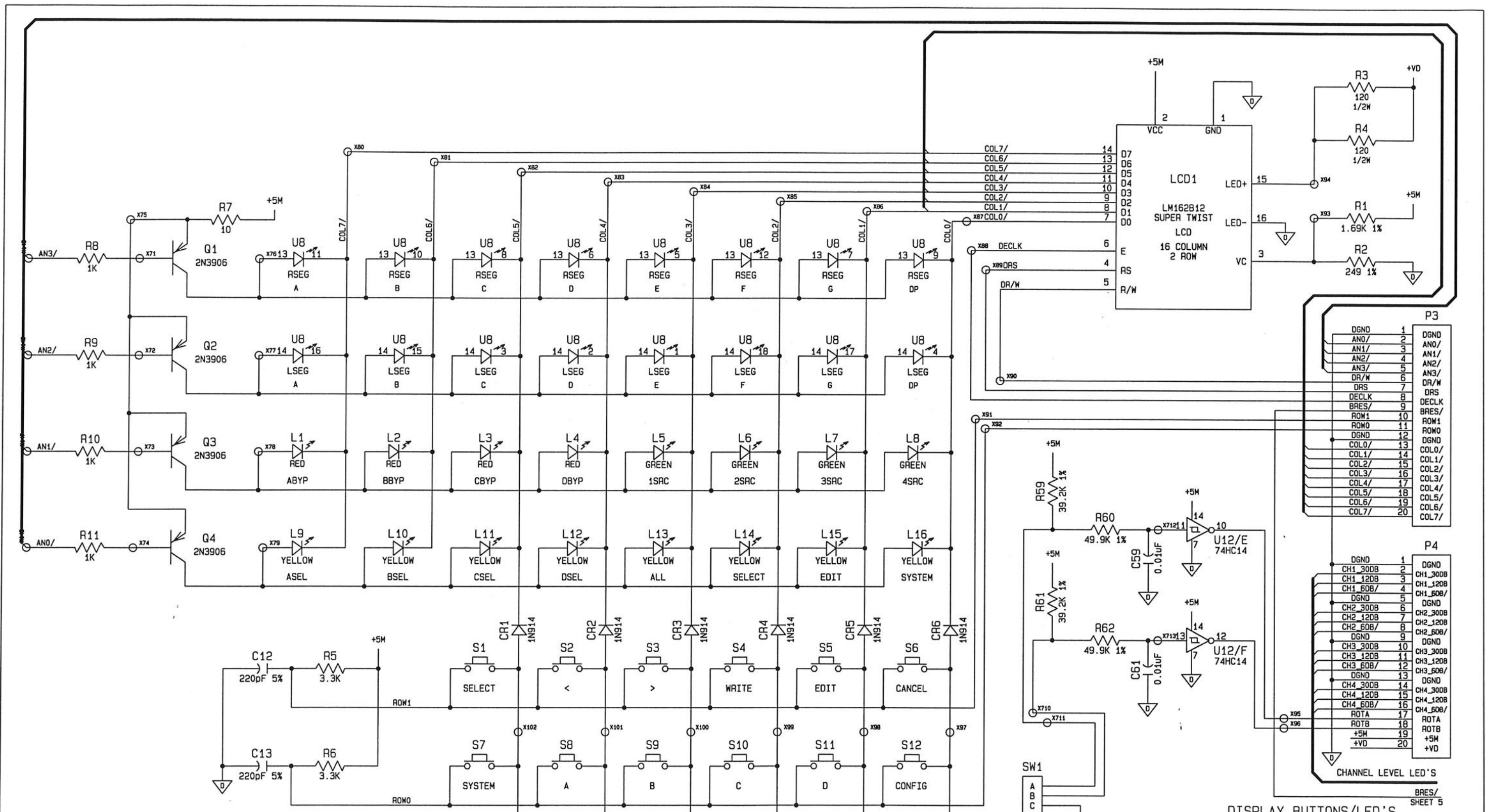


INPUT/OUTPUT LEVEL CONTROLS

ENSONIQ Corp

PCB SCHEMATIC
KEYPAD / DISPLAY
DP-4+

SIZE	DWG. NO.	REV	SHEET	OF
B	4010024101	D	3	5



DISPLAY, BUTTONS/LED'S

ENSONIQ Corp

PCB SCHEMATIC
KEYPAD / DISPLAY
DP-4+

SIZE	DWG. NO.	REV	SHEET	OF
B	4010024101	D	4	5

P3

DGND	1	DGND
AN0/	2	AN0/
AN1/	3	AN1/
AN2/	4	AN2/
AN3/	5	AN3/
DR/W	6	DR/W
DRS	7	DRS
DECLK	8	DECLK
BRES/	9	BRES/
ROW1	10	ROW1
ROW0	11	ROW0
DGND	12	DGND
COL0/	13	COL0/
COL1/	14	COL1/
COL2/	15	COL2/
COL3/	16	COL3/
COL4/	17	COL4/
COL5/	18	COL5/
COL6/	19	COL6/
COL7/	20	COL7/

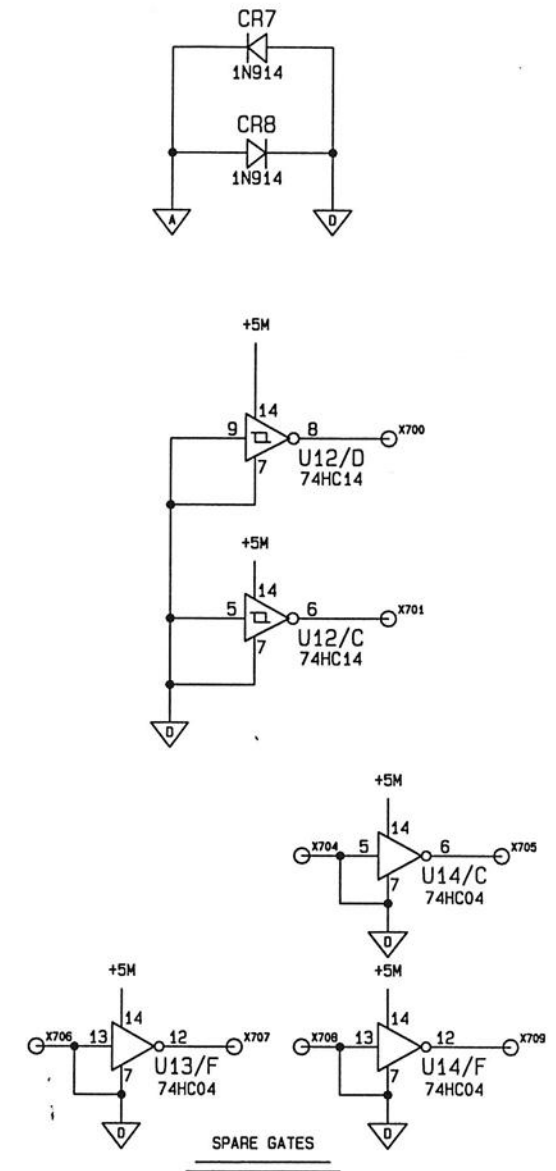
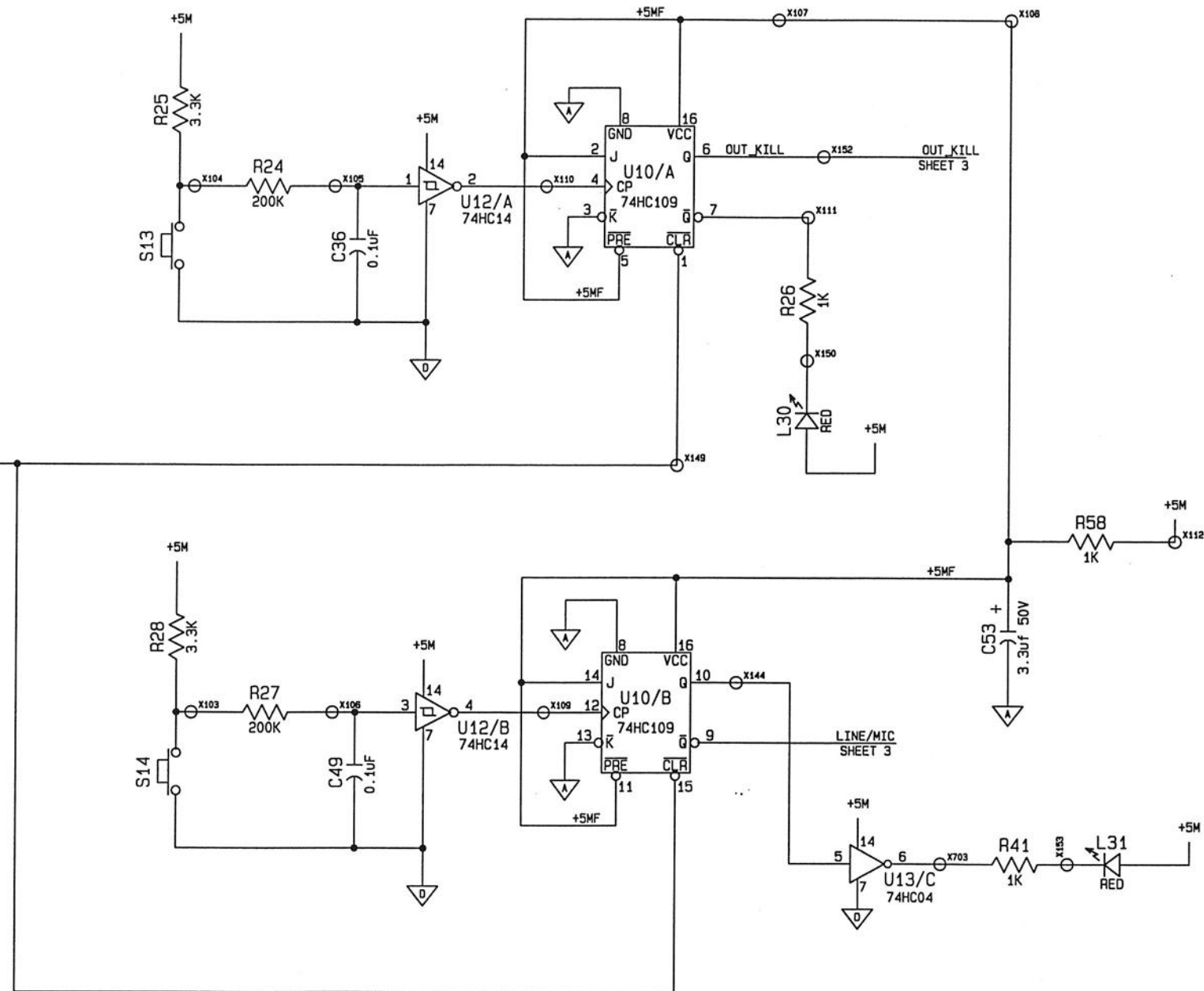
P4

DGND	1	DGND
CH1_300B	2	CH1_300B
CH1_120B	3	CH1_120B
CH1_60B/	4	CH1_60B/
DGND	5	DGND
CH2_300B	6	CH2_300B
CH2_120B	7	CH2_120B
CH2_60B/	8	CH2_60B/
DGND	9	DGND
CH3_300B	10	CH3_300B
CH3_120B	11	CH3_120B
CH3_60B/	12	CH3_60B/
DGND	13	DGND
CH4_300B	14	CH4_300B
CH4_120B	15	CH4_120B
CH4_60B/	16	CH4_60B/
ROTA	17	ROTA
ROTB	18	ROTB
+5M	19	+5M
+VD	20	+VD

CHANNEL LEVEL LED'S

BRES/ SHEET 5

BRES/
SHEET 4



MUTE, MIC/LINE CONTROLS

ENSONIQ Corp				
PCB SCHEMATIC KEYPAD / DISPLAY DP-4+				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010024101	D	5	5

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	PROTOTYPE RELEASE		
A	RELEASED PER EDR 42-531	12-21-94	AKS
B	REVISED PER ECO 3058	2-16-95	AKJ

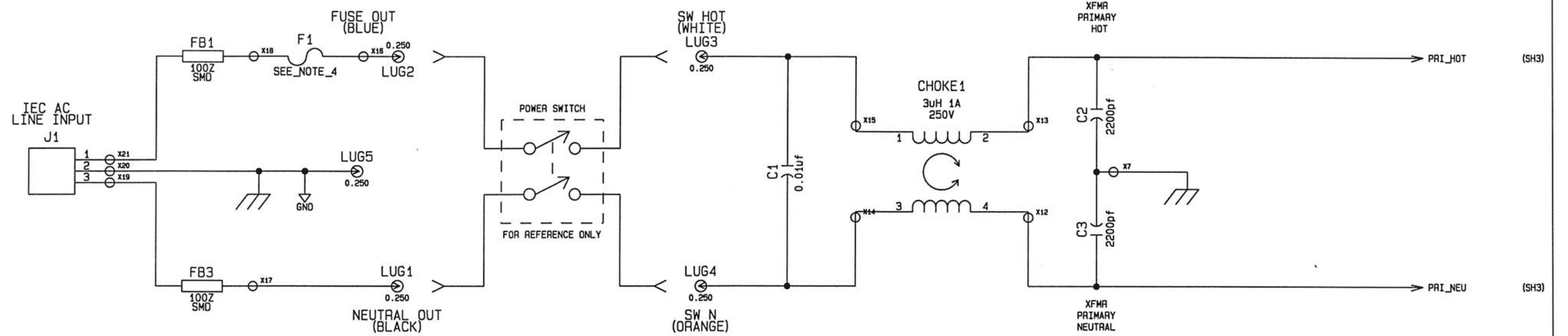
SHT 1 COVER SHEET
SHT 2 LINE FILTER
SHT 3 TRANSFORMER, DC RECTIFIED
SHT 4 DC REGULATED

7. FOR 100V/115V UNITS INSTALL JUMPERS R1, R2
REMOVE JUMPER R3
FOR 230V/240V UNITS INSTALL JUMPER R3
REMOVE JUMPERS R1, R2
6. LUG1, LUG3 AND LUG4 ARE 0.250 QUICK DISCONNECT LUGS.
5. LUG2 IS A 0.187 QUICK DISCONNECT LUG.
4. ALL FUSES ARE 250V, 5 X 20MM.
FOR IEC ASSY: F1 = T1.0A
F2, F3 = F2.0A
F4, F5 = F1.6A
FOR UL ASSY: F1 = 1.0A. SLOW BLOW
F2, F3 = F2.0A
F4, F5 = F1.6A
3. ALL 0.1UF BYPASS CAPACITORS ARE 50V +80/-20% Z5U.
2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 16V MINIMUM.
1. ALL RESISTOR VALUES ARE IN OHMS, 1/10W 5%.

NOTES - UNLESS SPECIFIED OTHERWISE:

COVER SHEET

ENSONIQ Corp 155 GREAT VALLEY PKWY, MALVERN PA 19355					
APPROVALS		DATE		PCB SCHEMATIC POWER SUPPLY DP-4+	
DWN BY: AKS		08-20-94			
CHKD BY:					
APPD BY:		SIZE	DWG. NO.	REV	
		B	4010025201	B	
USED ON: DP-4 PRO		SCALE	—	SHEET 1 OF 4	



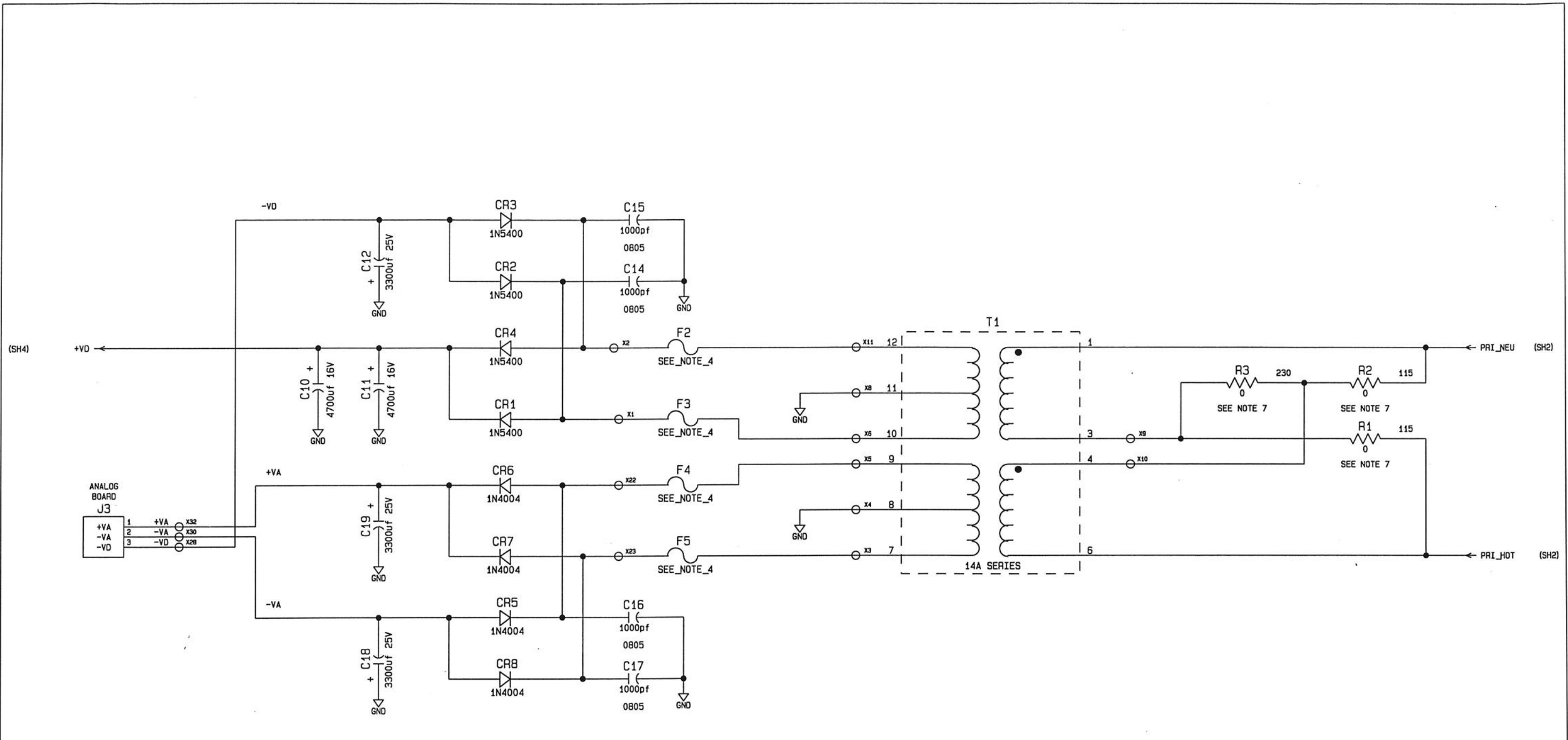
PRIMARY

LINE FILTER

ENSONIQ Corp

PCB SCHEMATIC
POWER SUPPLY
DP-4+

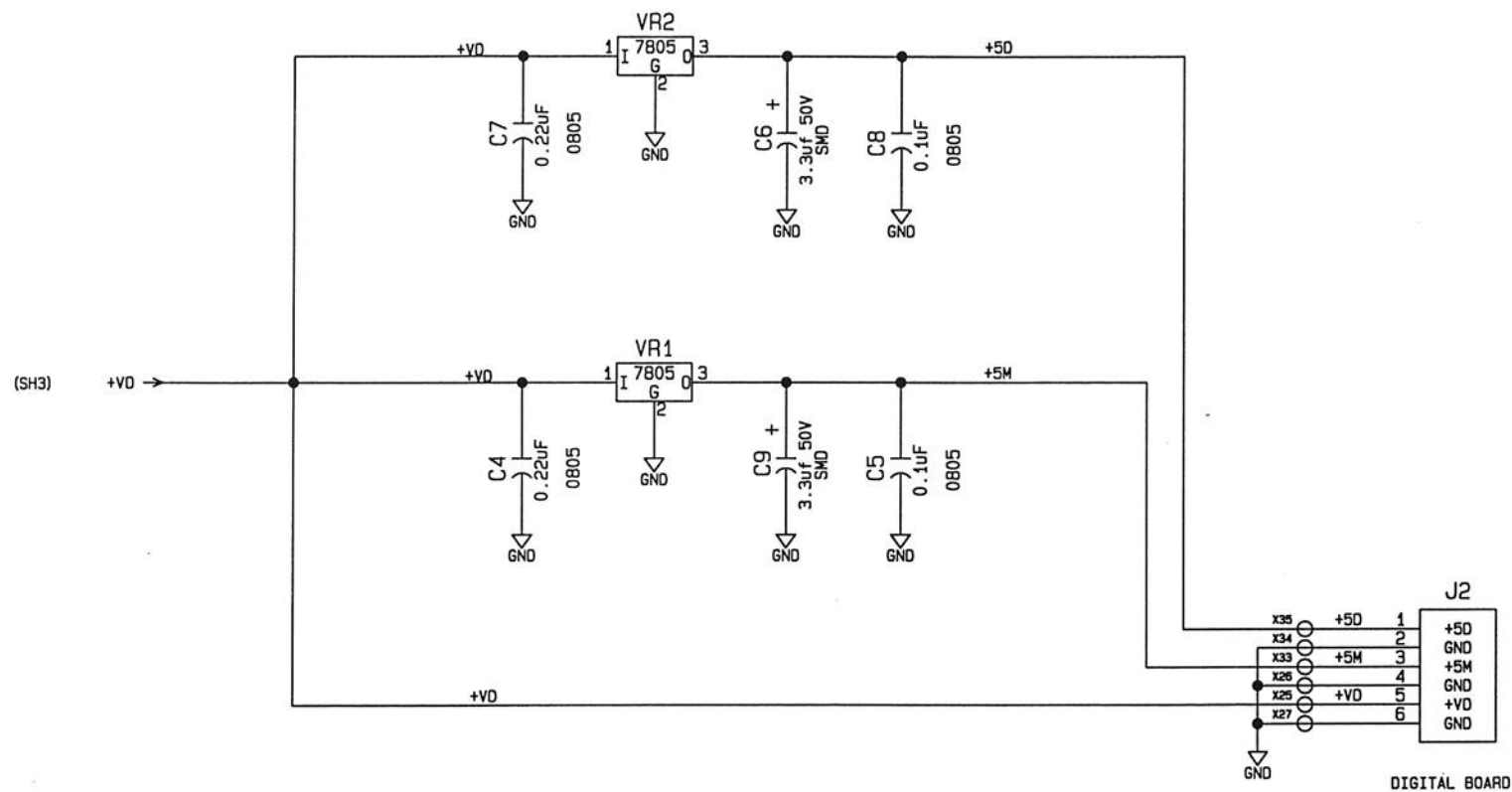
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025201	B	2	4



SECONDARY

TRANSFORMER, DC RECTIFIED

ENSONIQ Corp				
PCB SCHEMATIC POWER SUPPLY DP-4+				
SIZE	DWG. NO.	REV	SHEET	OF
B	4010025201	B	3	4



SECONDARY

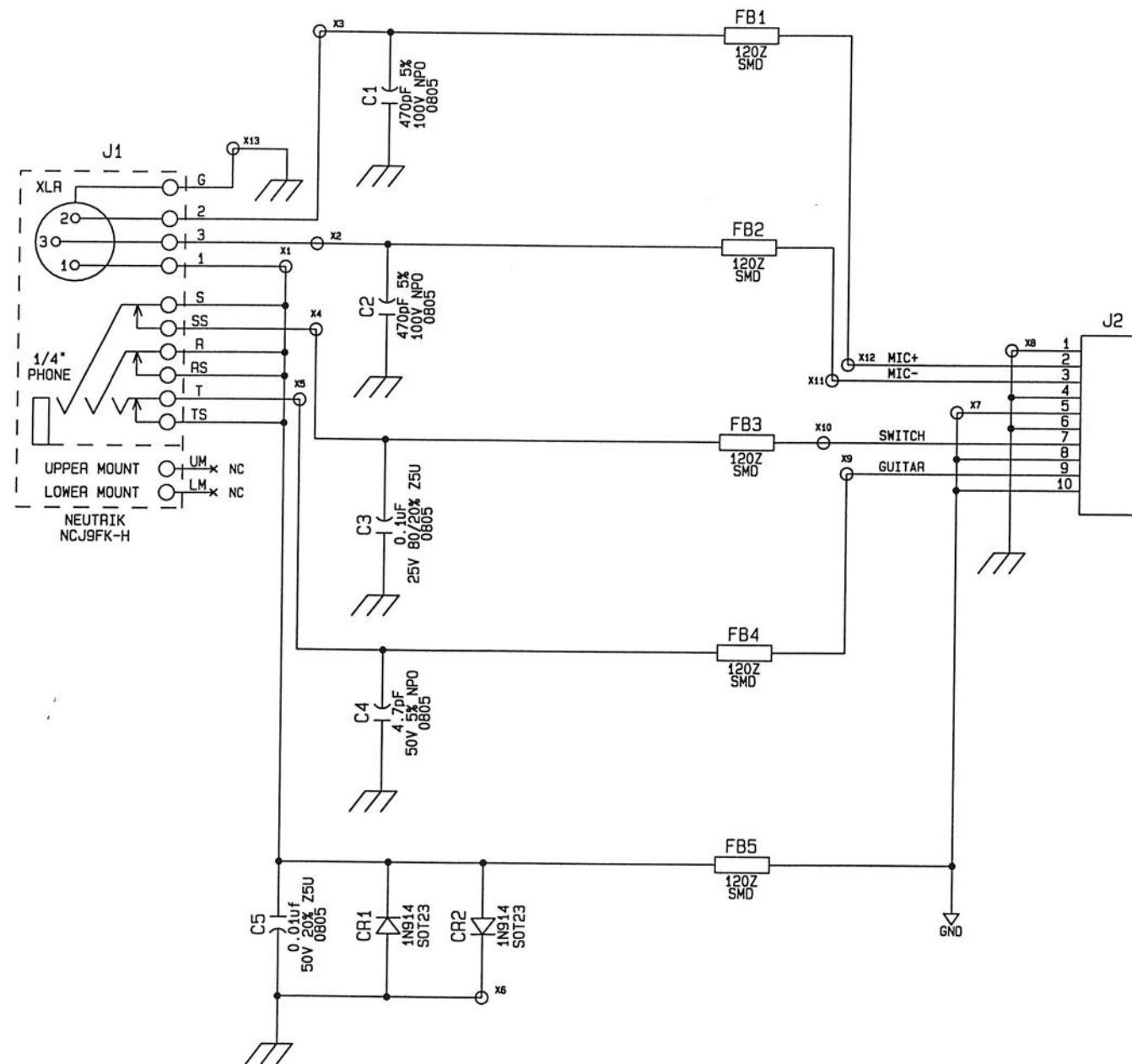
DC REGULATED

ENSONIQ Corp

PCB SCHEMATIC
POWER SUPPLY
DP-4+

SIZE	DWG. NO.	REV	SHEET	OF
B	4010025201	B	4	4

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	PROTOTYPE RELEASE	9-29-94	TM
A	PRODUCTION RELEASED PER EDR 42-521	12/23/94	TM



2. ALL CAPACITOR VALUES ARE IN MICROFARADS, 16V MINIMUM.
 1. ALL RESISTOR VALUES ARE IN OHMS, 1/8W 5%.
- NOTES - UNLESS SPECIFIED OTHERWISE:

ENSONIQ CORP
 155 GREAT VALLEY PKWY, MALVERN PA 19355

APPROVALS	DATE	PCB SCHEMATIC XLR/JACK BOARD SHAKER			
DRAWN BY: B.CARR	8-17-94			SIZE	DWG. NO.
CHECKED BY:				B	4010026301
APPROVED BY:				REV A	
USED ON: XXX		SCALE	—	SHEET 1 OF 1	