

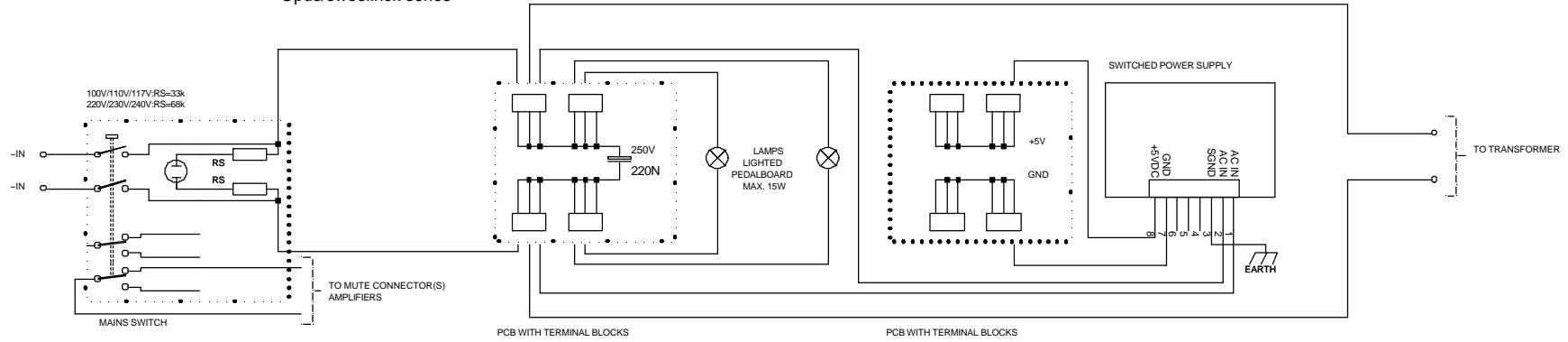
JOHANNUS

SERVICE MANUAL DRAWINGS 9700 TECHNOLOGY

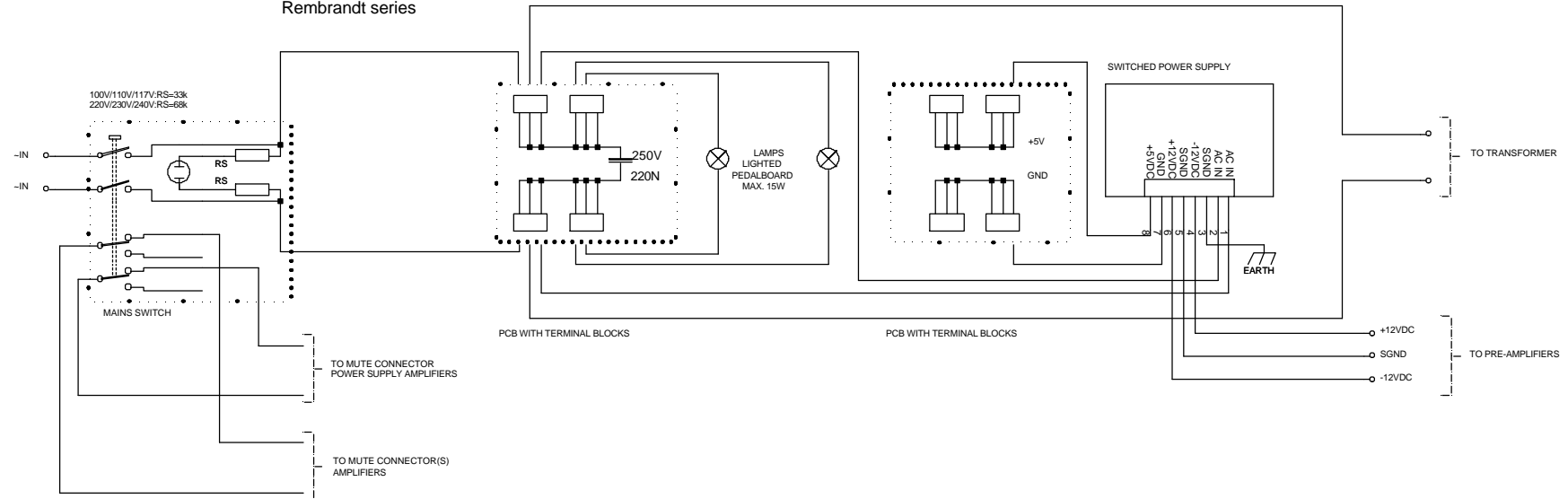


All - series

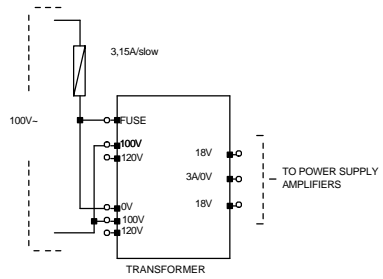
Opus/sweelinck series



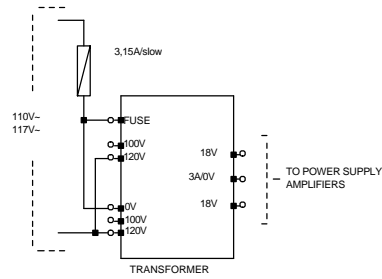
Rembrandt series



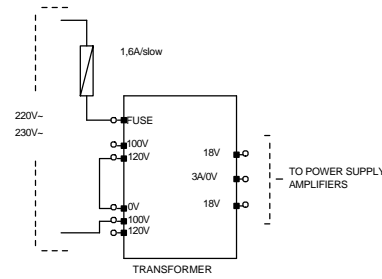
Date: 06-04-1998	Rev: 1.2
Project: MAINS VOLTAGE CIRCUIT	
Company: JOHANNUS ORGELBOUW B.V.	Page: 1.1-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



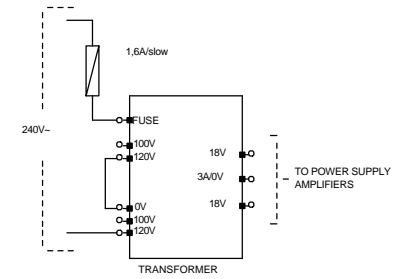
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 100V- 50/60Hz



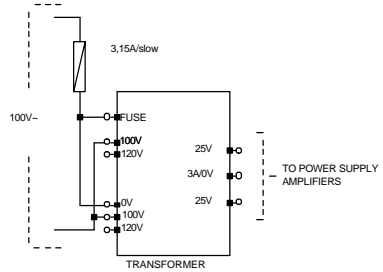
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 110V/117V- 50/60Hz



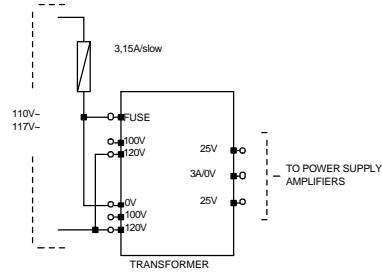
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 220V/230V- 50/60Hz



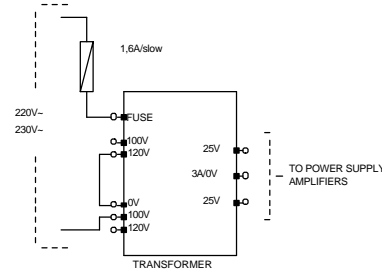
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 240V- 50/60Hz



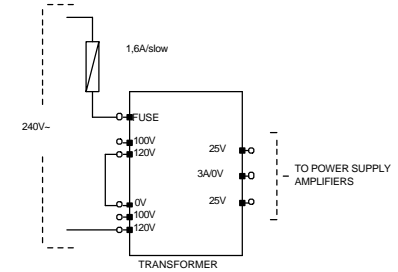
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 100V- 50/60Hz



TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 110V/117V- 50/60Hz

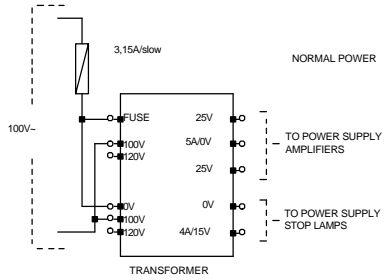


TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 220V/230V- 50/60Hz

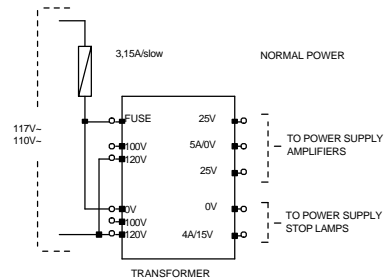


TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 240V- 50/60Hz

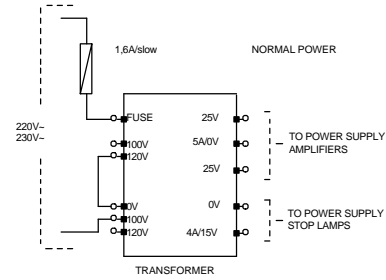
Date: 06-04-1998	Rev: 1.2
Project: TRANSFORMERS Opus/Sweelinck	
Company: JOHANNUS ORGELBOUW B.V.	Page: 1.1-2
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



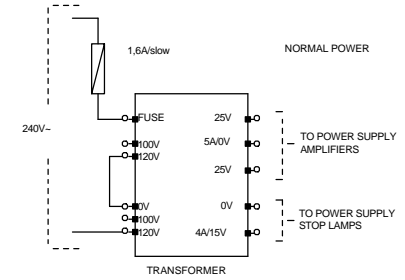
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 100V- 50/60Hz



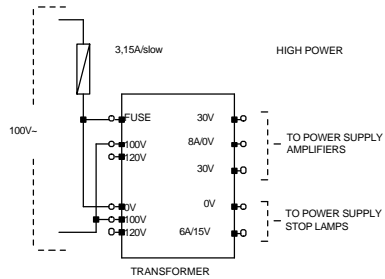
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 110V/117V- 50/60Hz



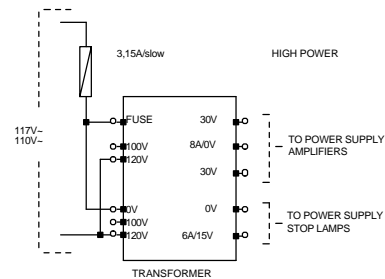
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 220/230V- 50/60Hz



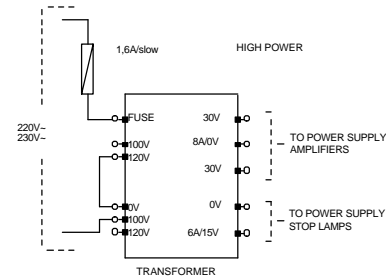
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 240V- 50/60Hz



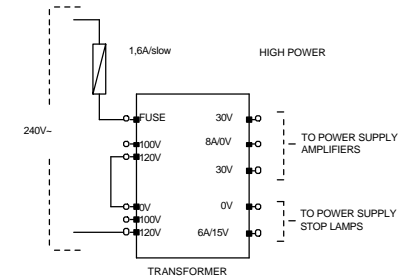
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 100V- 50/60Hz



TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 110V/117V- 50/60Hz



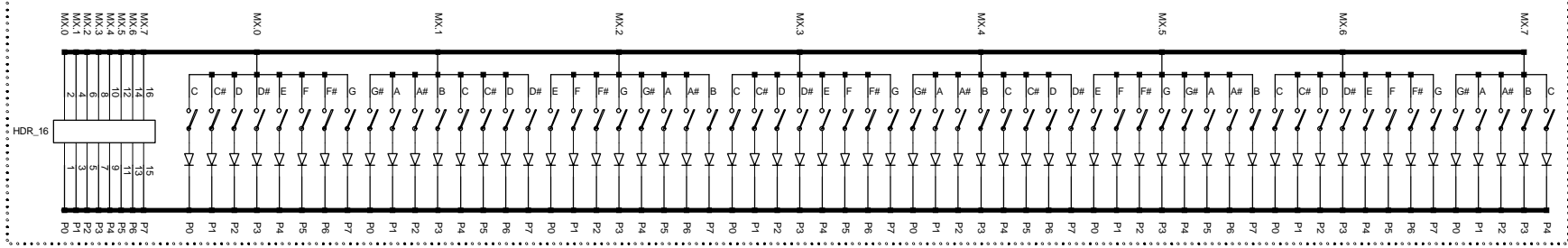
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 220/230V- 50/60Hz



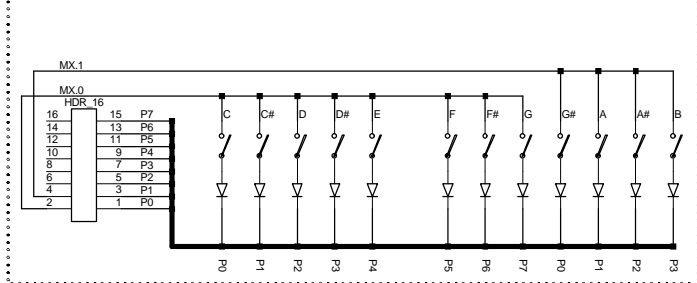
TRANSFORMER CONNECTIONS FOR COUNTRIES WITH 240V- 50/60Hz

Date: 06-04-1998	Rev: 1.2
Project: TRANSFORMERS Rembrandt	
Company: JOHANNUS ORGELBOUW B.V.	Page: 1.1-3
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

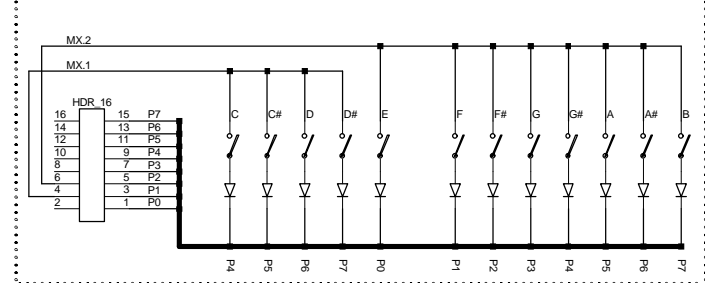
KEYBOARD PCB



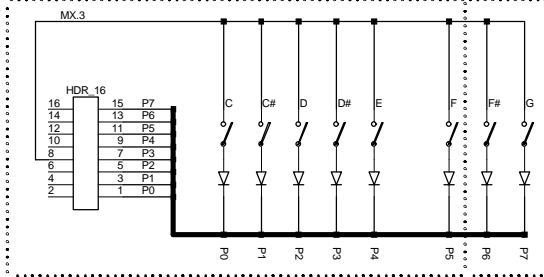
PEDALBOARD PCB 1st OCTAVE (PCB-NR 3270)



PEDALBOARD PCB 2nd OCTAVE (PCB-NR 3280)

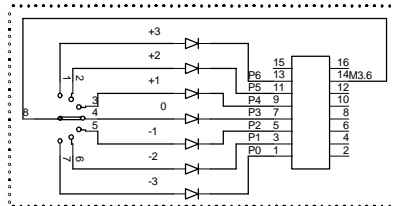


PEDALBOARD PCB 3rd OCTAVE (PCB-NR 3290)

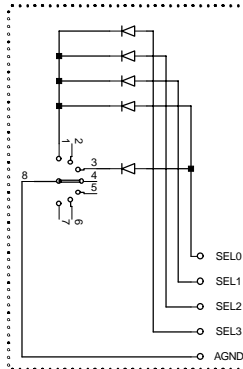


ALL CONNECTORS: TO MASTER PROCESSOR CARD
ALL DIODES: 1N4148

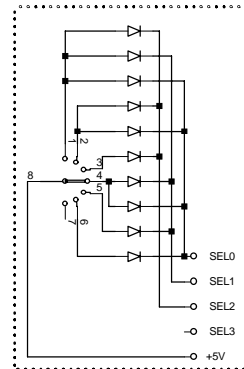
Date: 06-04-1998	Rev: 1.2
Project: SCHEMATIC DIAGRAM KEYBOARD & PEDALBOARD	
Company: JOHANNUS ORGELBOUW B.V.	Page: 2.1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



TRANSPOSER SWITCH



PROGRAM SWITCH REVERB
(ALEXIS)

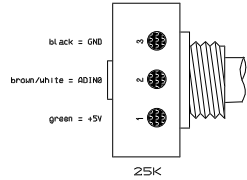


PROGRAM SWITCH ACOUSTICS
(LEXICON)

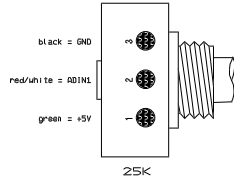
Date: 06-04-1998	Rev: 1.2
Project: TRANSPOSER & ECHO SWITCH	
Company: JOHANNUS ORGELBOUW B.V.	Page: 3.1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

ORGANS WITH 2 EXPRESSION PEDALS

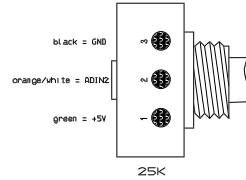
EXPR. PEDAL GREAT/PEDAL



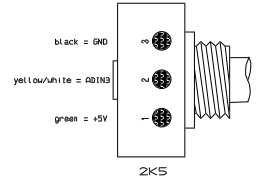
EXPR. PEDAL SWELL/(CHOIR)



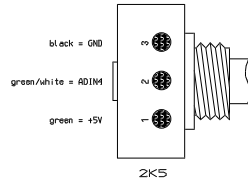
GEN. CRESCENDO PEDAL



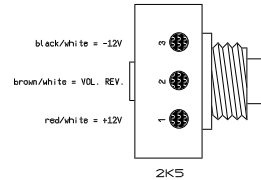
GENERAL VOLUME



PITCH

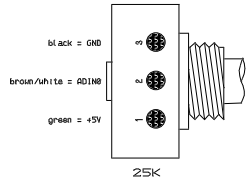


VOLUME REVERB

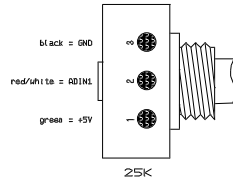


ORGANS WITH 3 EXPRESSION PEDALS

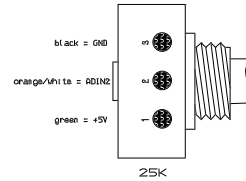
EXPR. PEDAL CHOIR



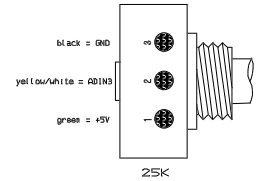
EXPR. PEDAL GREAT/PEDAL



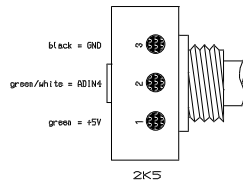
EXPR. PEDAL SWELL



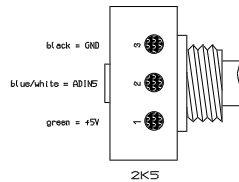
GEN. CRESCENDO PEDAL



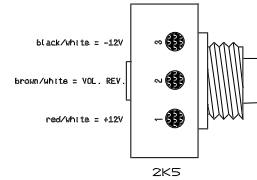
GENERAL VOLUME



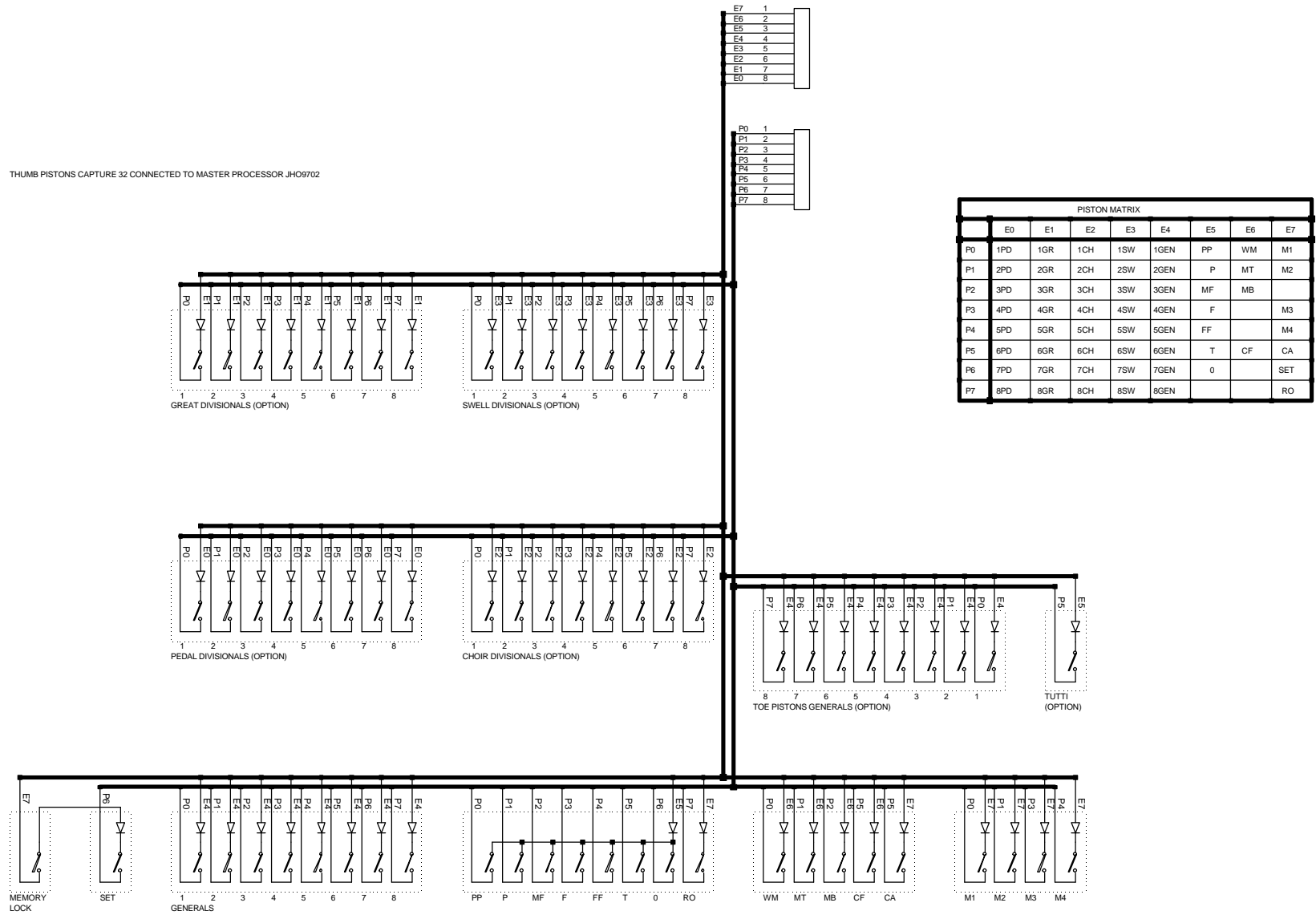
PITCH



VOLUME REVERB



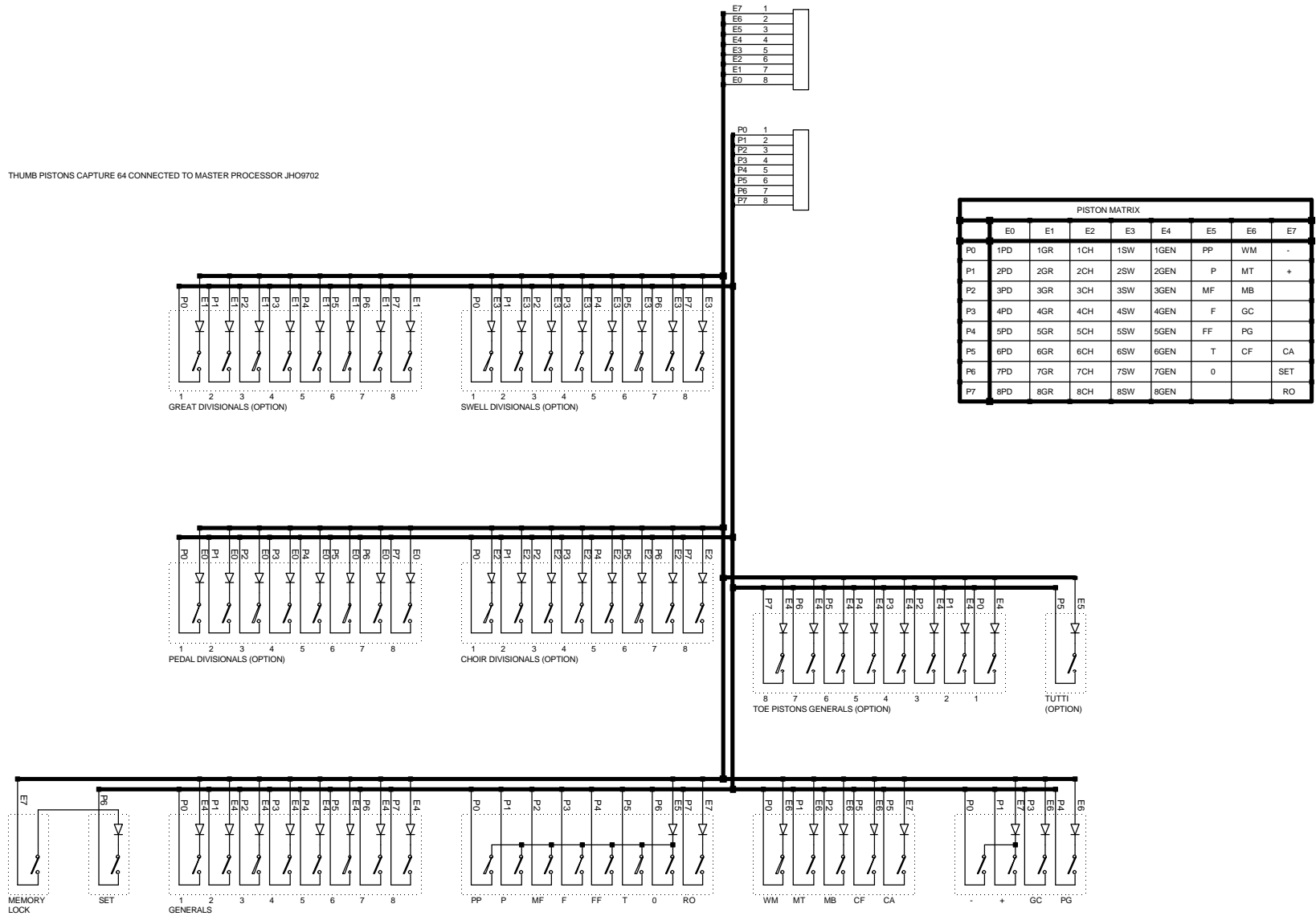
THUMB PISTONS CAPTURE 32 CONNECTED TO MASTER PROCESSOR JHO9702



PISTON MATRIX								
	E0	E1	E2	E3	E4	E5	E6	E7
P0	1PD	1GR	1CH	1SW	1GEN	PP	WM	M1
P1	2PD	2GR	2CH	2SW	2GEN	P	MT	M2
P2	3PD	3GR	3CH	3SW	3GEN	MF	MB	
P3	4PD	4GR	4CH	4SW	4GEN	F		M3
P4	5PD	5GR	5CH	5SW	5GEN	FF		M4
P5	6PD	6GR	6CH	6SW	6GEN	T	CF	CA
P6	7PD	7GR	7CH	7SW	7GEN	0		SET
P7	8PD	8GR	8CH	8SW	8GEN			RO

Date: 06-04-1998	Rev: 1.2
Project: CAPTURE 32	
Company: JOHANNUS ORGELBOUW B.V. Address: Keplerlaan 2 City: 6716 BS Ede Country: The Netherlands	Page: 5.1-1

THUMB PISTONS CAPTURE 64 CONNECTED TO MASTER PROCESSOR JHO9702



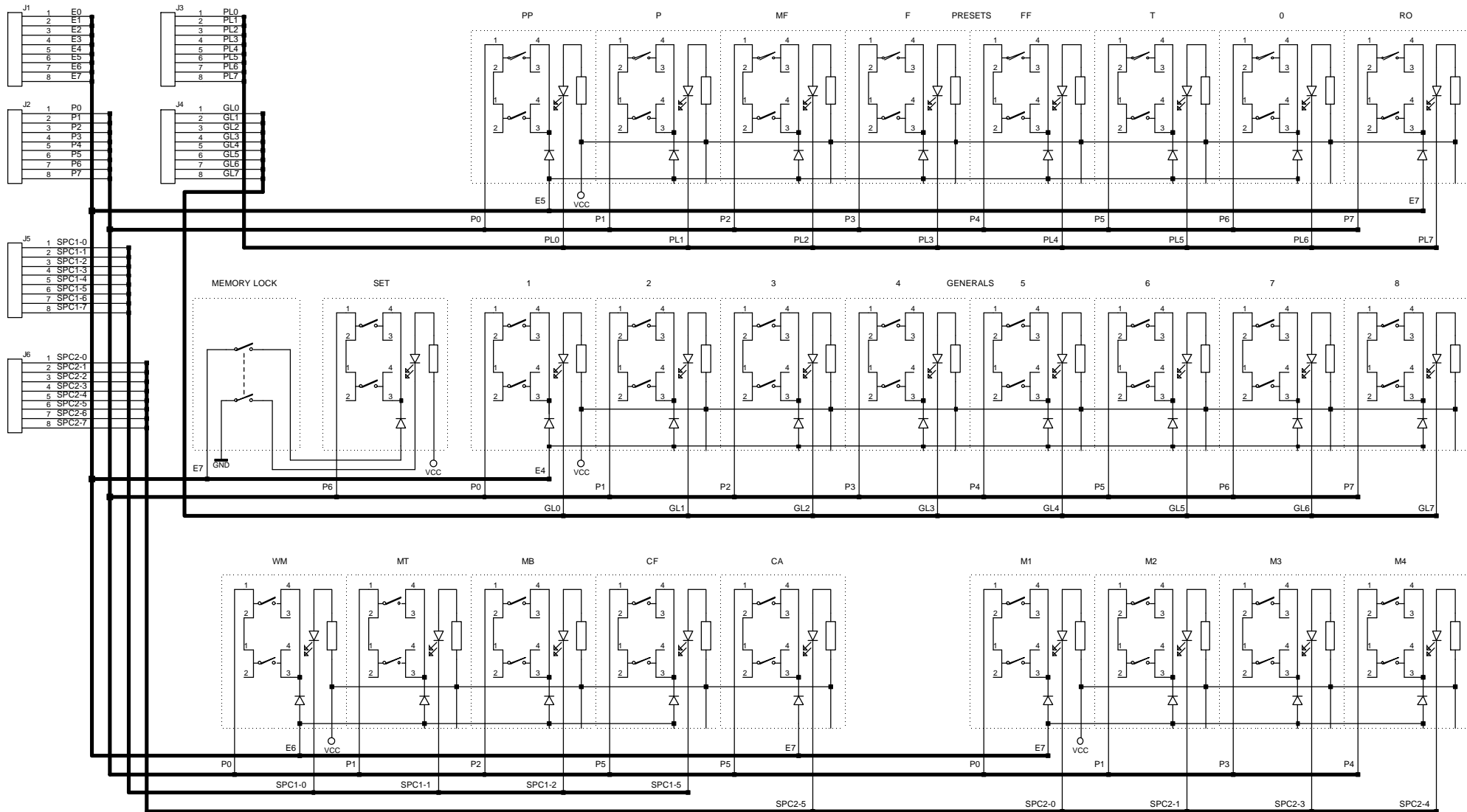
PISTON MATRIX								
	E0	E1	E2	E3	E4	E5	E6	E7
P0	1PD	1GR	1CH	1SW	1GEN	PP	WM	-
P1	2PD	2GR	2CH	2SW	2GEN	P	MT	+
P2	3PD	3GR	3CH	3SW	3GEN	MF	MB	
P3	4PD	4GR	4CH	4SW	4GEN	F	GC	
P4	5PD	5GR	5CH	5SW	5GEN	FF	PG	
P5	6PD	6GR	6CH	6SW	6GEN	T	CF	CA
P6	7PD	7GR	7CH	7SW	7GEN	0		SET
P7	8PD	8GR	8CH	8SW	8GEN			RO

Date: 06-04-1998 Rev: 1.2

Project: CAPTURE 64

Company: Johannus Orgelbouw b.v.
 Address: Morsestraat 28
 City: 6716 AH Ede
 Country: The Netherlands

Page: 5.1-2



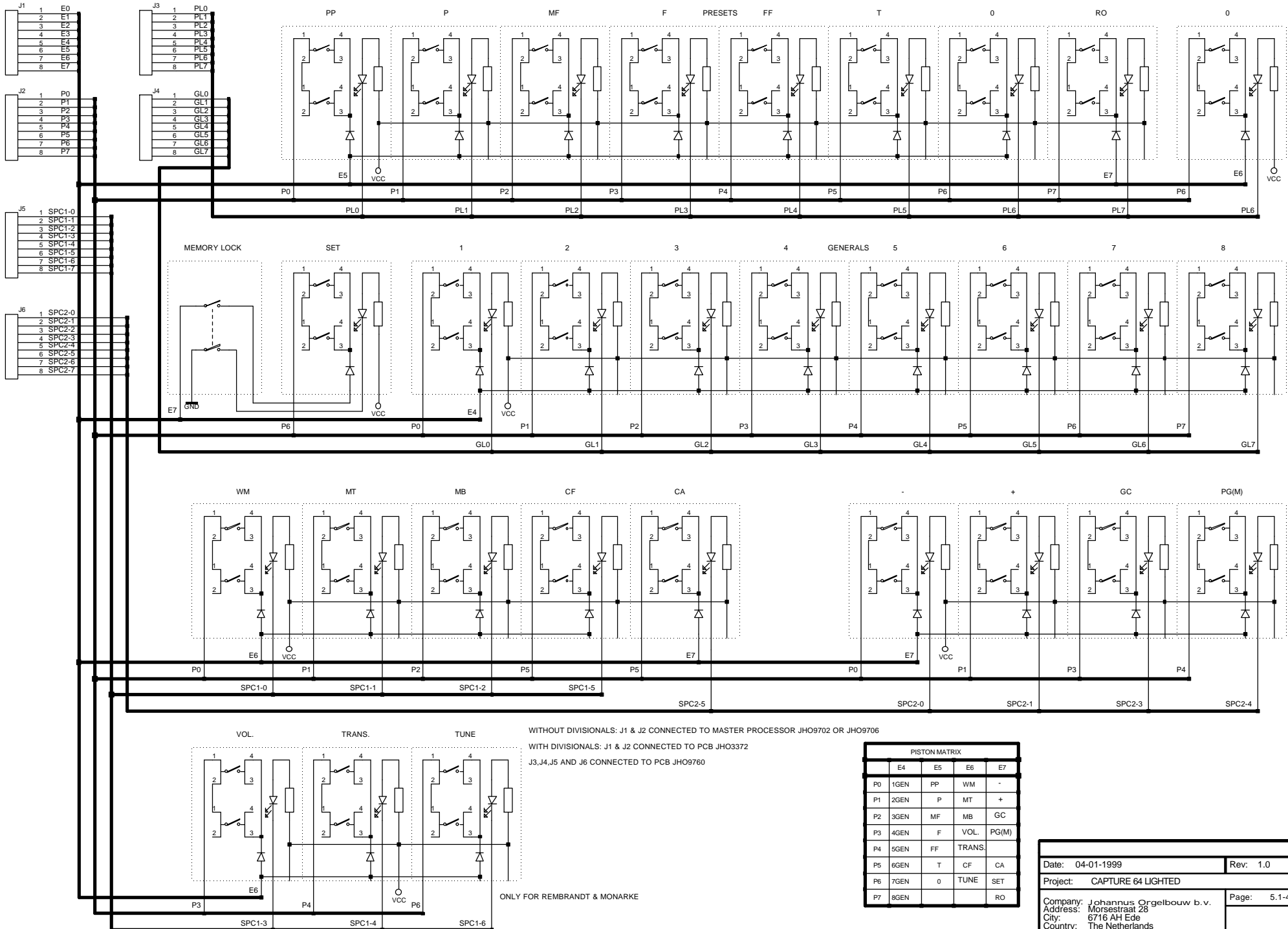
PISTON MATRIX				
	E4	E5	E6	E7
P0	1GEN	PP	WM	M1
P1	2GEN	P	MT	M2
P2	3GEN	MF	MB	
P3	4GEN	F		M3
P4	5GEN	FF		M4
P5	6GEN	T	CF	CA
P6	7GEN	0		SET
P7	8GEN			RO

WITHOUT DIVISIONALS: J1 & J2 CONNECTED TO MASTER PROCESSOR JHO9702 OR JHO9706

WITH DIVISIONALS: J1 & J2 CONNECTED TO PCB JHO3372

J3,J4,J5 AND J6 CONNECTED TO PCB JHO9760

Date: 04-01-1999	Rev: 1.0
Project: CAPTURE 32 LIGHTED	
Company: Johannus Orgelbouw b.v. Address: Morsestraat 28 City: 6716 AH Ede Country: The Netherlands	Page: 5.1-3



WITHOUT DIVISIONALS: J1 & J2 CONNECTED TO MASTER PROCESSOR JHO9702 OR JHO9706

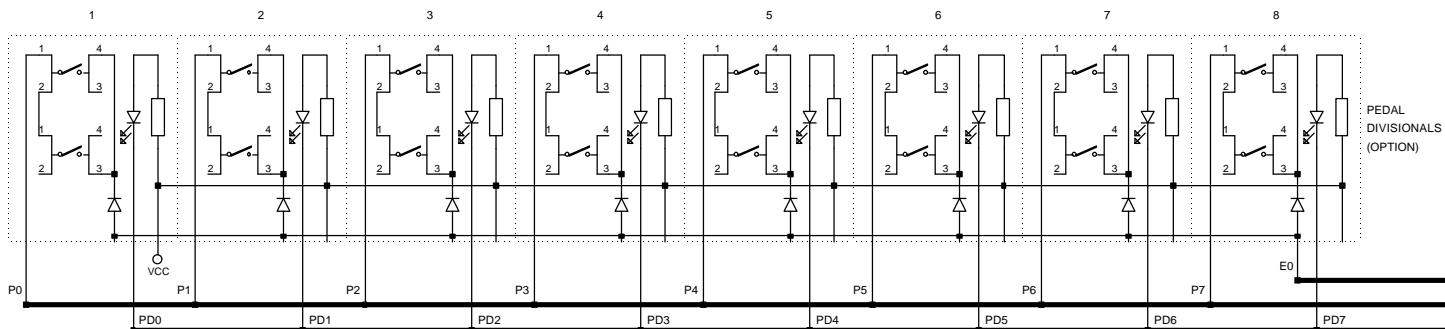
WITH DIVISIONALS: J1 & J2 CONNECTED TO PCB JHO3372

J3,J4,J5 AND J6 CONNECTED TO PCB JHO9760

ONLY FOR REMBRANDT & MONARKE

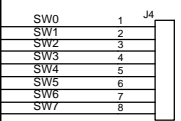
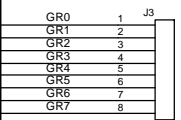
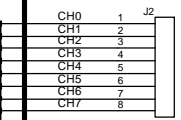
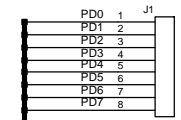
PISTON MATRIX				
	E4	E5	E6	E7
P0	1GEN	PP	WM	-
P1	2GEN	P	MT	+
P2	3GEN	MF	MB	GC
P3	4GEN	F	VOL.	PG(M)
P4	5GEN	FF	TRANS.	
P5	6GEN	T	CF	CA
P6	7GEN	0	TUNE	SET
P7	8GEN		RO	

Date: 04-01-1999	Rev: 1.0
Project: CAPTURE 64 LIGHTED	
Company: Johannus Orgelbouw b.v.	
Address: Morsetraat 28	
City: 6716 AH Ede	
Country: The Netherlands	
Page: 5.1-4	

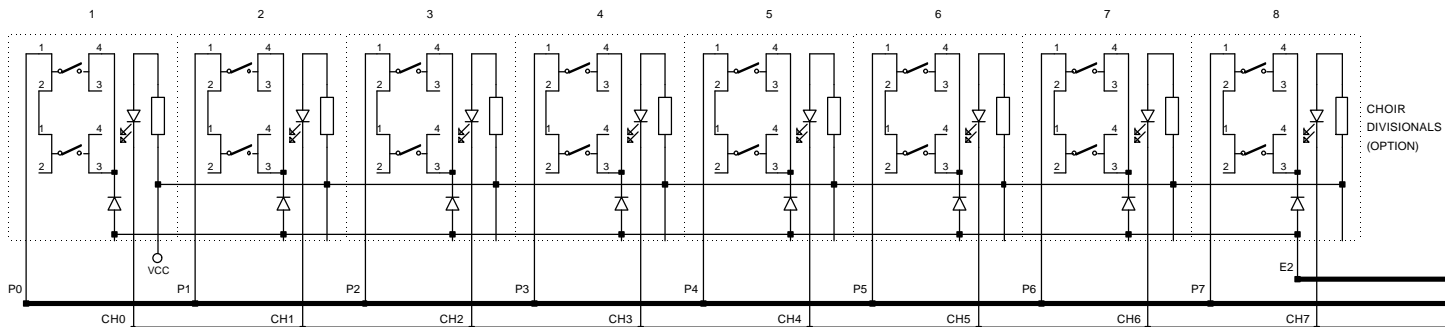


PEDAL DIVISIONALS (OPTION)

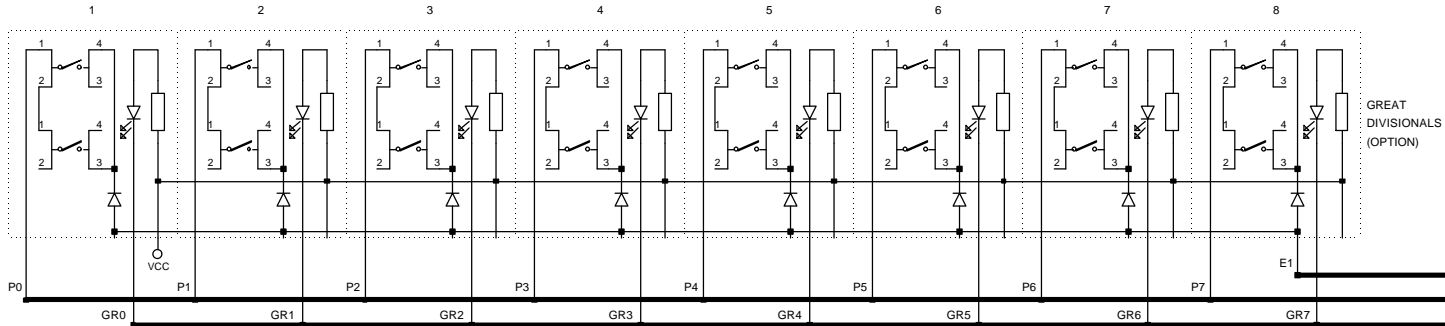
TO PCB JHO3372
 P[0..7]
 E[0..7]



J1,J2,J3 AND J4 CONNECTED TO PCB JHO9760

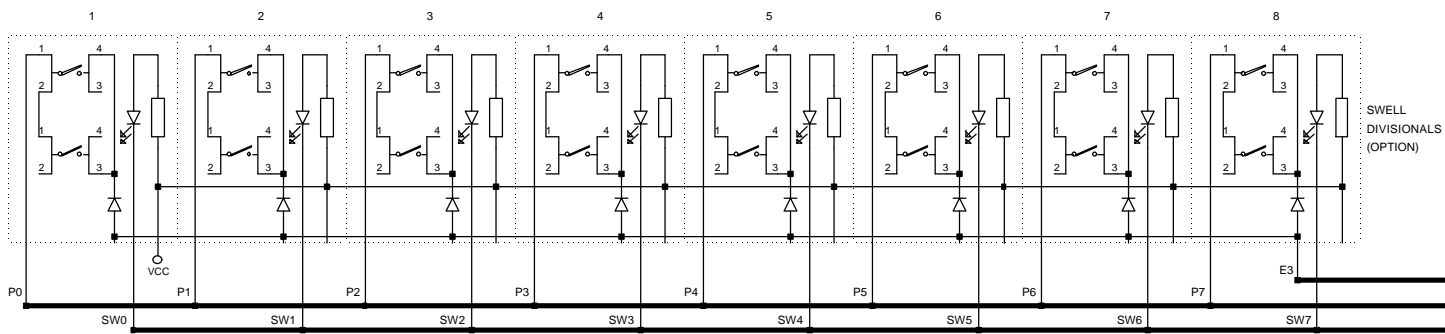


CHOIR DIVISIONALS (OPTION)



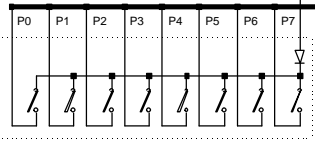
GREAT DIVISIONALS (OPTION)

PISTON MATRIX						
	E0	E1	E2	E3	E4	E5
P0	1PD	1GR	1CH	1SW	1GEN	
P1	2PD	2GR	2CH	2SW	2GEN	
P2	3PD	3GR	3CH	3SW	3GEN	
P3	4PD	4GR	4CH	4SW	4GEN	
P4	5PD	5GR	5CH	5SW	5GEN	
P5	6PD	6GR	6CH	6SW	6GEN	T
P6	7PD	7GR	7CH	7SW	7GEN	
P7	8PD	8GR	8CH	8SW	8GEN	

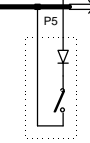


SWELL DIVISIONALS (OPTION)

TO PCB JHO3372
 E4
 E5

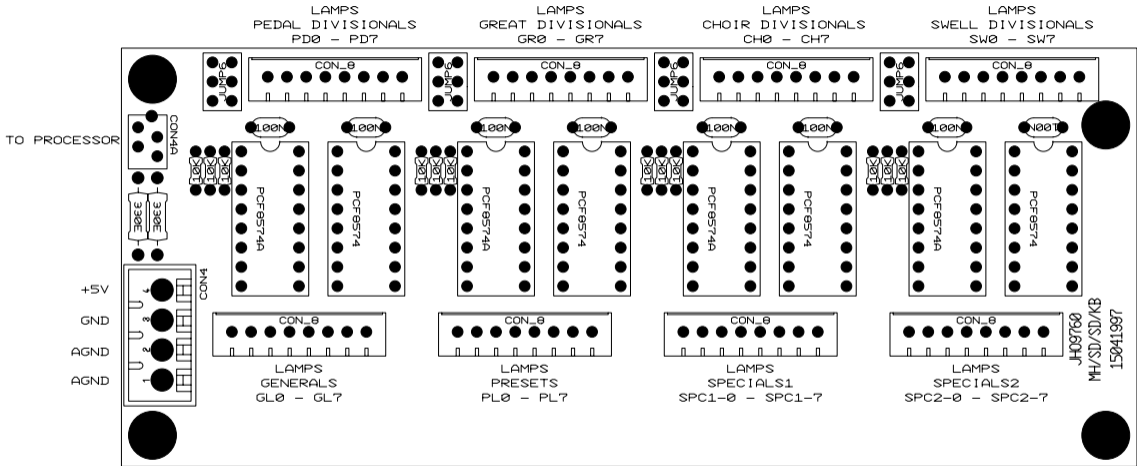


TOE PISTONS GENERALS (OPTION)

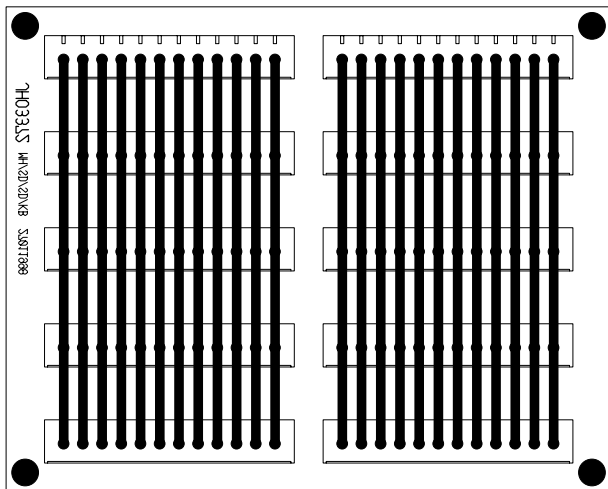


TUTTI (OPTION)

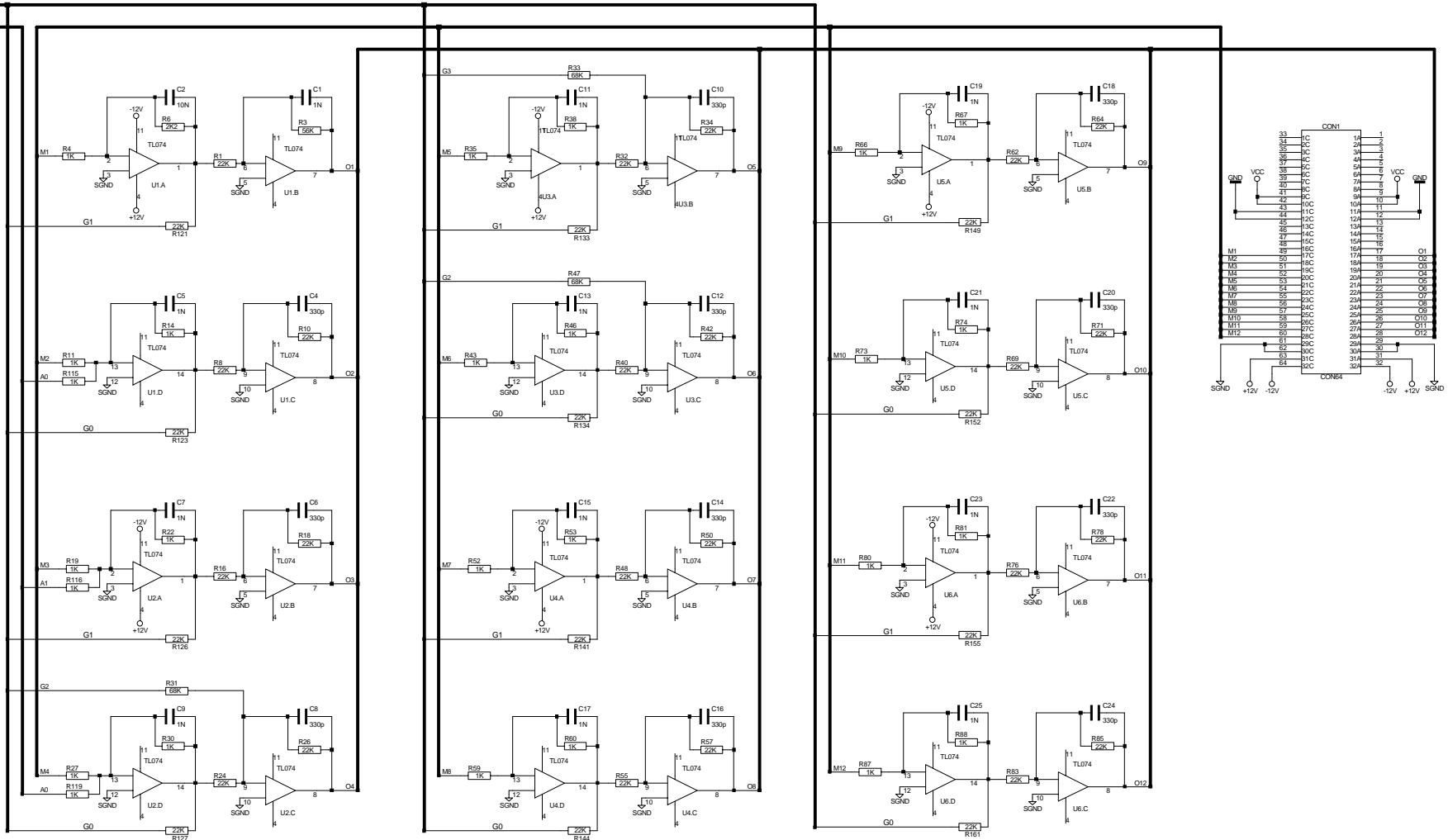
Date: 04-01-1999	Rev: 1.0
Project: DIVISIONALS LIGHTED	
Company: Johannus Orgelbouw b.v.	Page: 5.1-5
Address: Morsestraat 28	
City: 6716 AH Ede	
Country: The Netherlands	



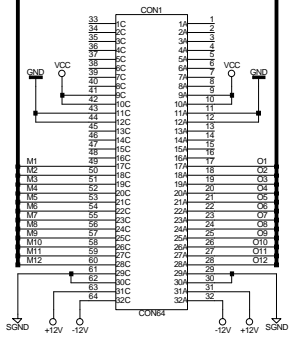
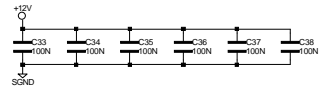
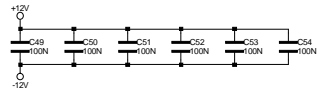
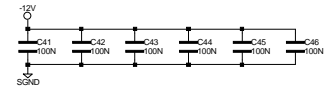
JH03372 CONNECTS THE WIRES OF THE DATA AND
SCAN FROM THE CAPTURE SYSTEM TO PROCESSOR



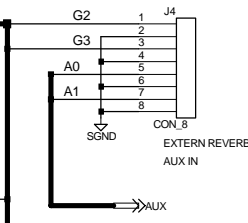
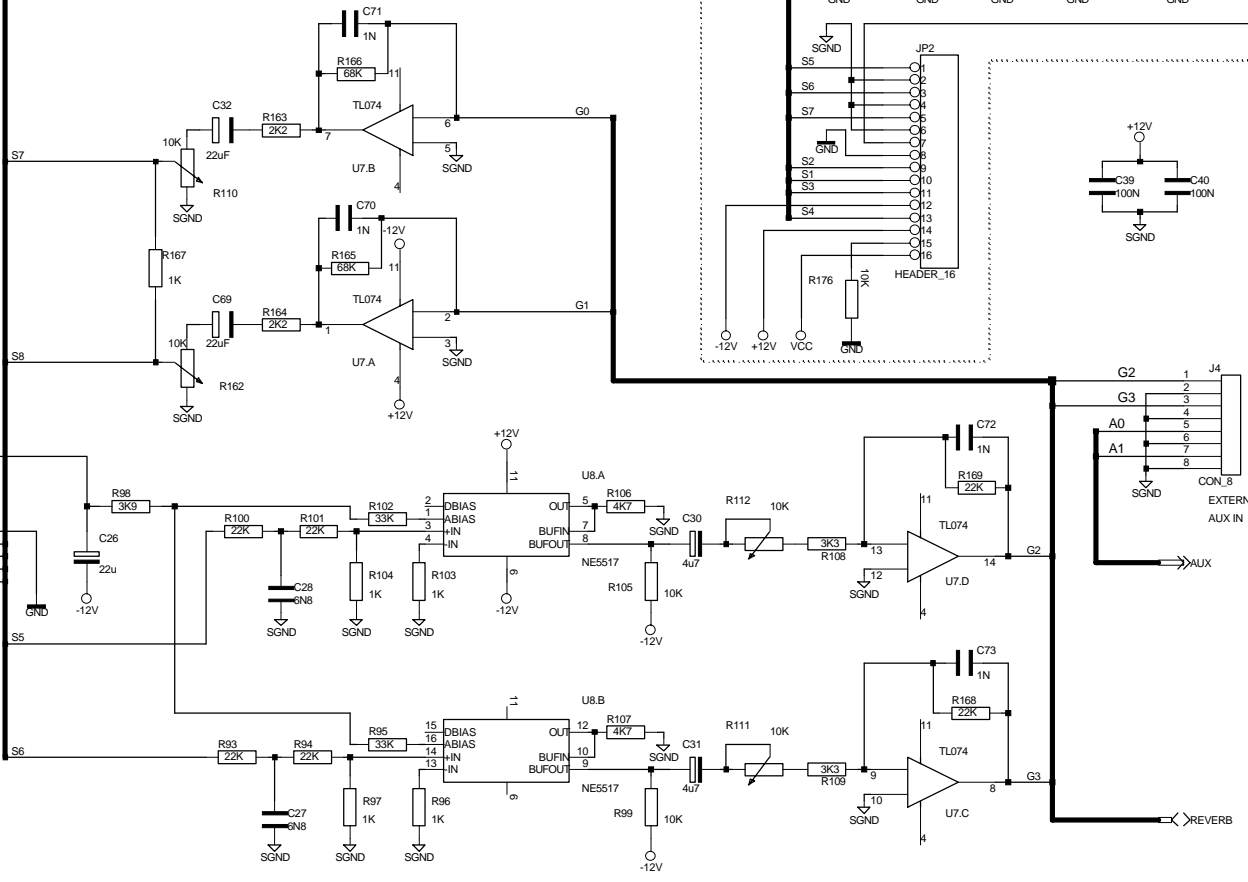
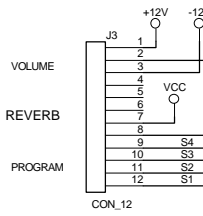
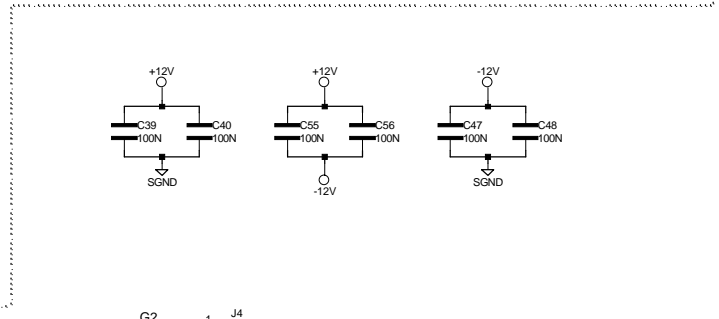
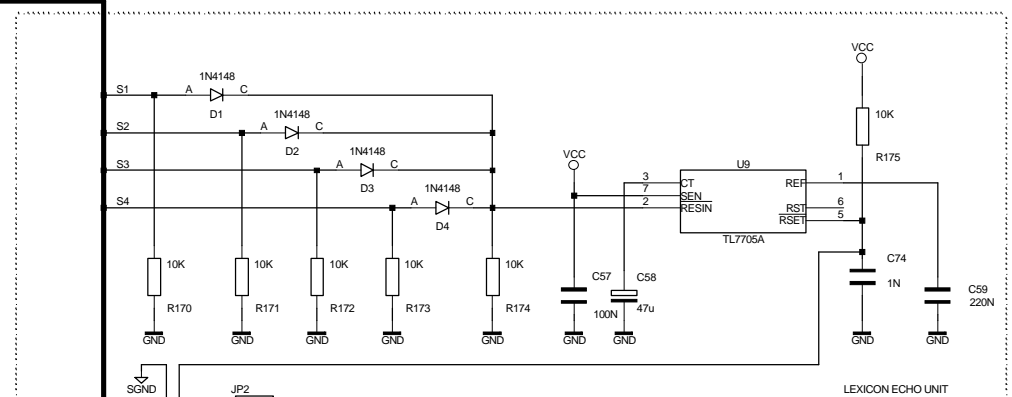
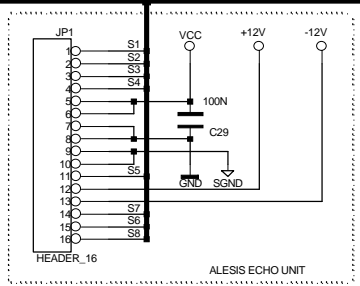
REVEREX
AUX



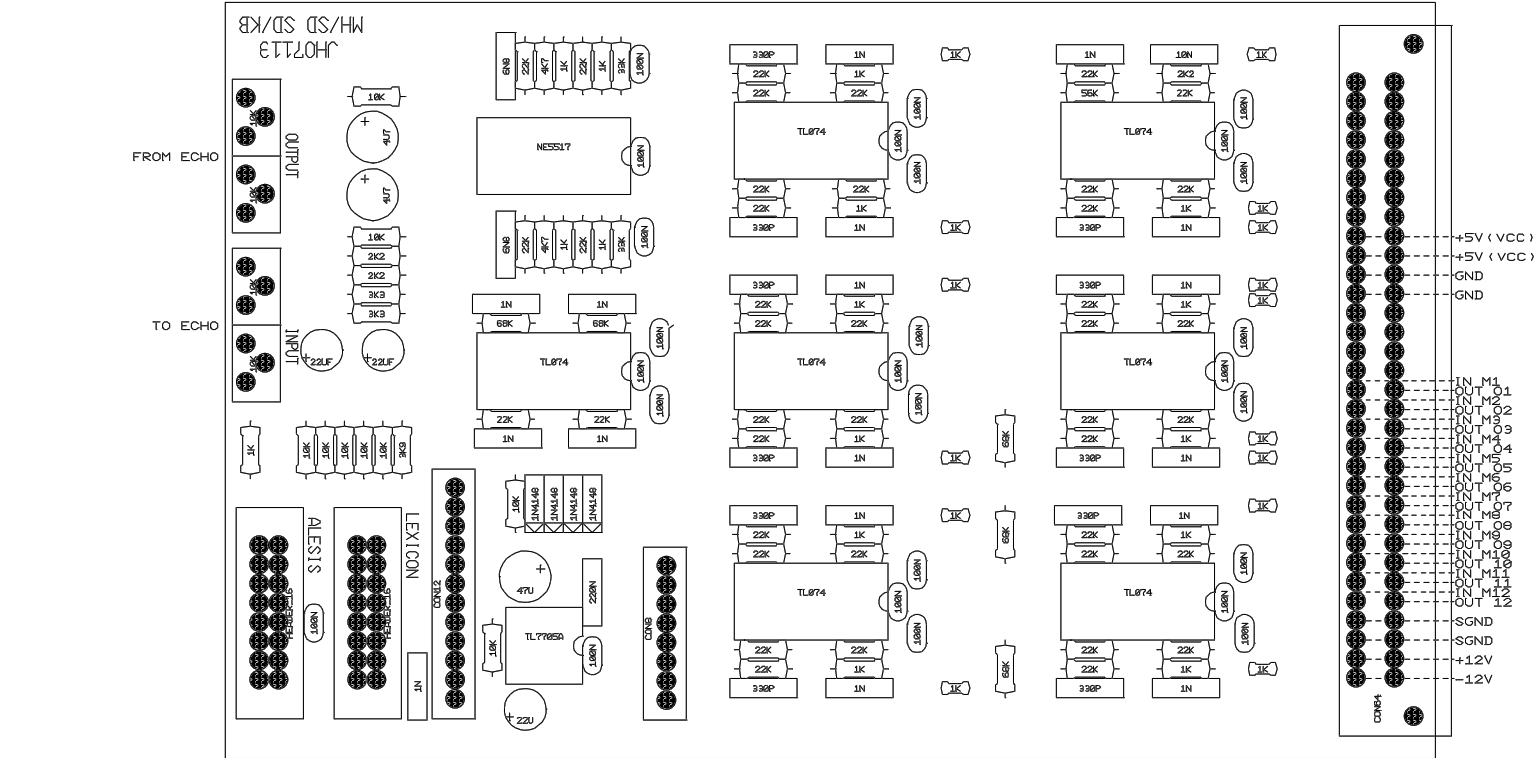
M1, M12 = AUDIO SIGNALS FROM VOICE CARDS
 O1, O12 = AUDIO SIGNALS TO AMPLIFIERS
 G0 = AUDIO TO ECHO (RIGHT)
 G1 = AUDIO TO ECHO (LEFT)
 G2 = AUDIO FROM ECHO (RIGHT)
 G3 = AUDIO FROM ECHO (LEFT)
 A0 = AUX IN (RIGHT)
 A1 = AUX IN (LEFT)



G0 = AUDIO TO ECHO (RIGHT)
 G1 = AUDIO TO ECHO (LEFT)
 G2 = AUDIO FROM ECHO (RIGHT)
 G3 = AUDIO FROM ECHO (LEFT)
 A0 = AUX IN (RIGHT)
 A1 = AUX IN (LEFT)



PCB - JH07113	
Date: 06-04-1998	Rev: 1.2
Project: ECHO	
Company: JOHANNUS ORGELBOUW B.V.	Page: 6.1-2
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

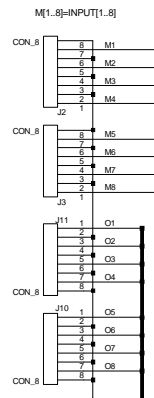
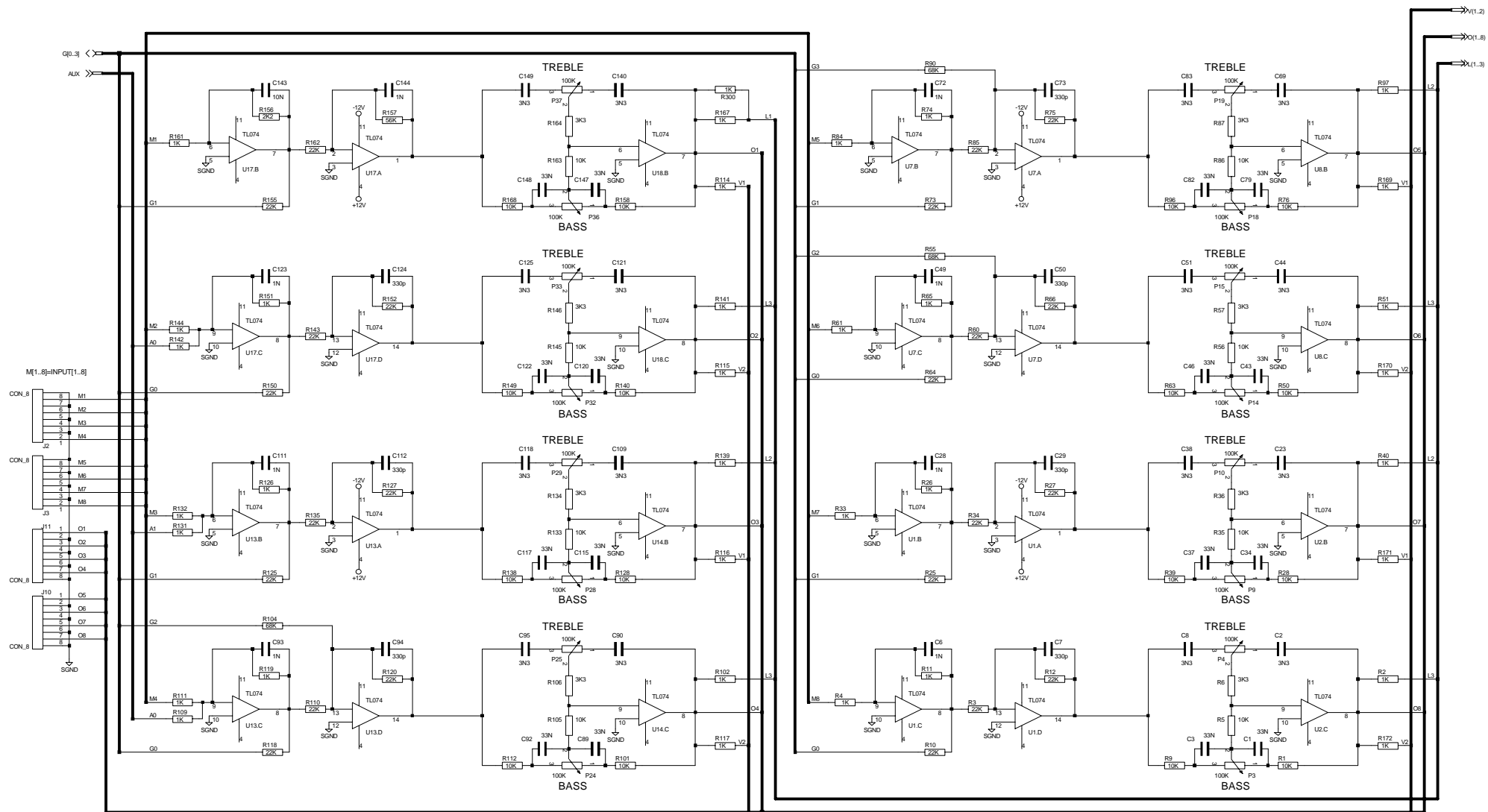


JP2-(HEADER_16)
 INL | OUTL
 INR | -12V
 +12V | OUTR
 SGND | SGND
 GND | GND
 +5V | +5V
 SEL3 (S4) | SEL2 (S3)
 SEL0 (S1) | SEL0 (S1)

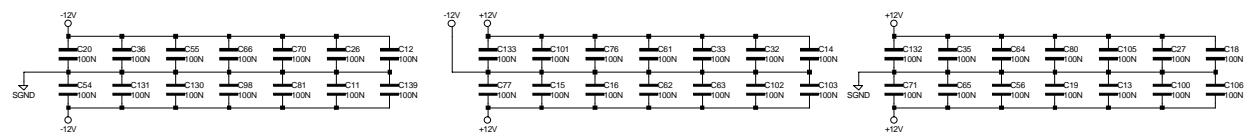
JP1-(HEADER_16)
 +5V | SEL4
 +12V | SEL3 (S4)
 -12V | SEL2 (S3)
 SEL0 (S1) | SEL1 (S2)
 GND | RES
 SGND | IN
 SGND | OUTL
 SGND | OUTR

J3-(CON12)
 SEL0 (S1)
 SEL1 (S2)
 SEL2 (S3)
 SEL3 (S4)
 GND
 +5V
 N.C.
 N.C.
 N.C.
 -12V
 VOL
 +12V

J4-(CON8)
 SGND
 AUX IN (LEFT)
 SGND
 AUX IN (RIGHT)
 SGND
 AUDIO FROM ECHO (LEFT)
 SGND
 AUDIO FROM ECHO (RIGHT)

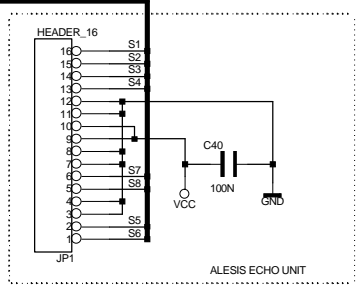


M1..M12 = AUDIO SIGNALS FROM VOICE CARDS
 O1..O12 = AUDIO SIGNALS TO AMPLIFIERS
 G0 = AUDIO TO ECHO (RIGHT)
 G1 = AUDIO TO ECHO (LEFT)
 G2 = AUDIO FROM ECHO (RIGHT)
 G3 = AUDIO FROM ECHO (LEFT)
 A0 = AUX IN (RIGHT)
 A1 = AUX IN (LEFT)

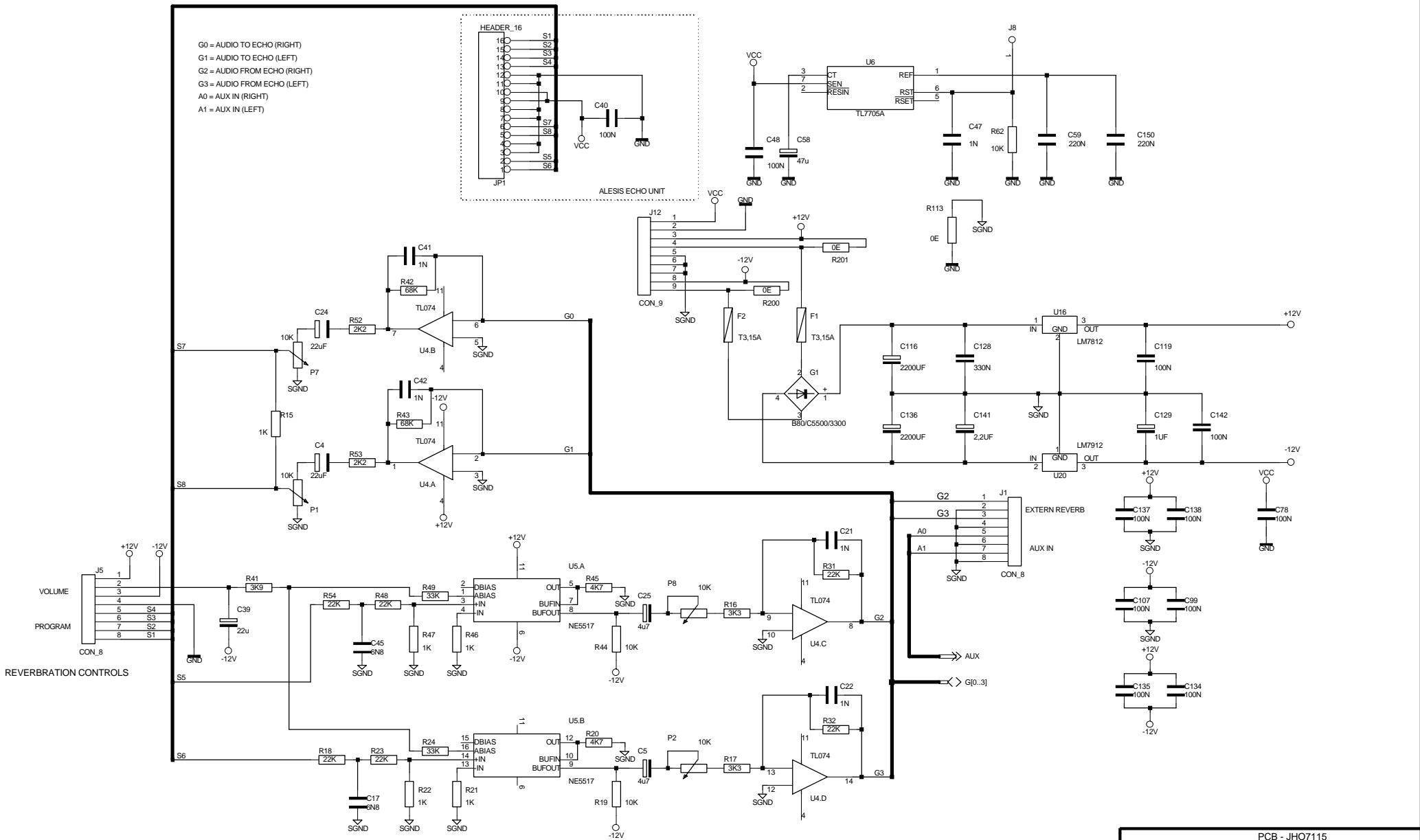


PCB - JHO7115	
Date: 27-04-1998	Rev: 1.2
Project: MIXER (8 CHANNELS)	
Company: JOHANNUS ORGELBOUW B.V.	
Address: Koperlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	
Page: 6.2-1	

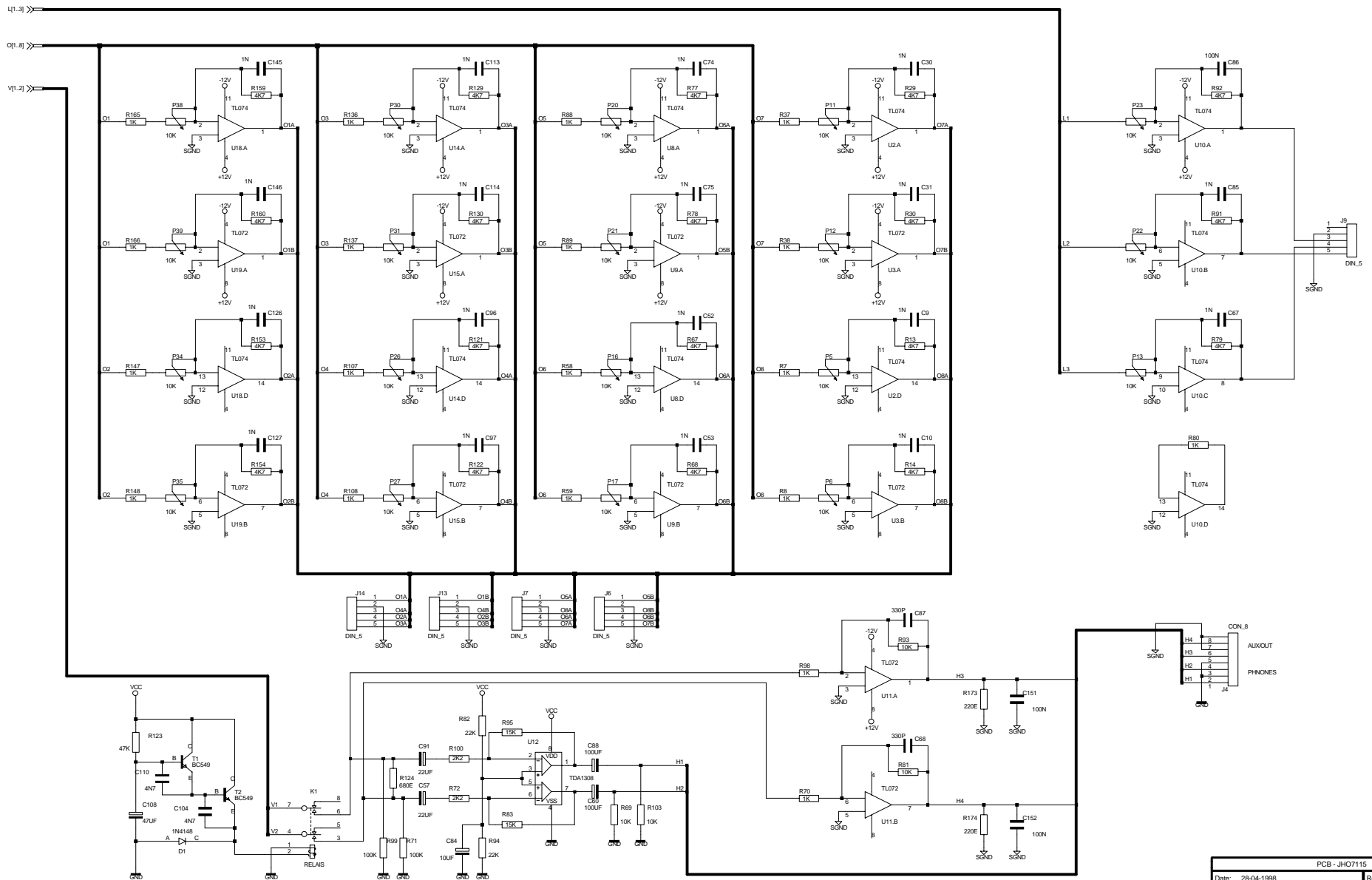
G0 = AUDIO TO ECHO (RIGHT)
 G1 = AUDIO TO ECHO (LEFT)
 G2 = AUDIO FROM ECHO (RIGHT)
 G3 = AUDIO FROM ECHO (LEFT)
 A0 = AUX IN (RIGHT)
 A1 = AUX IN (LEFT)



ALESIS ECHO UNIT



PCB - JH07115	
Date: 27-04-1998	Rev: 1.2
Project: ECHO	
Company: JOHANNUS ORGELBOUW B.V.	
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	
Page: 6.2-2	



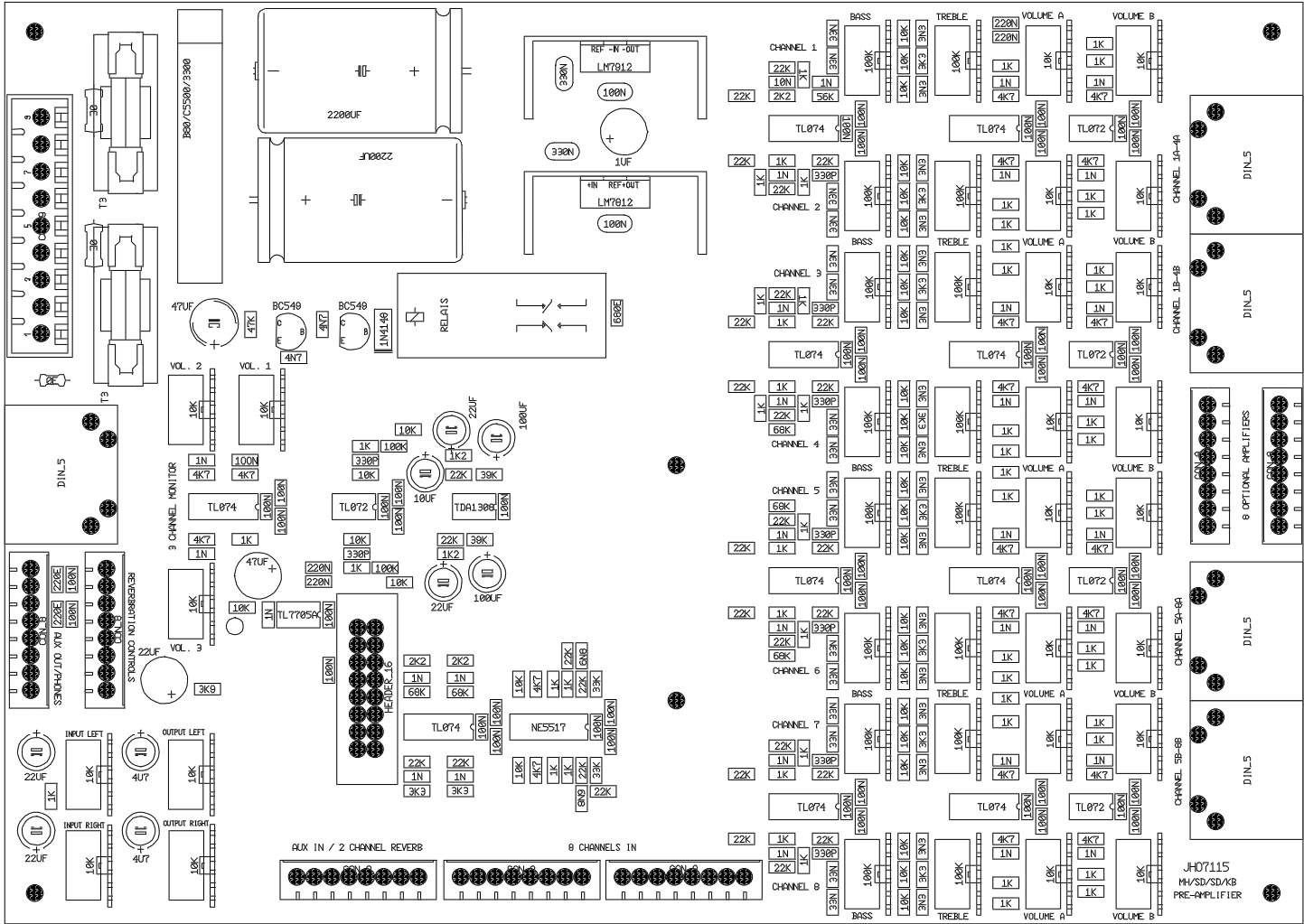
PCB - JHO7115	
Date: 28-04-1998	Rev: 1.2
Project: VOLUME	
Company: JOHANNUS ORGELBOUW B.V.	Page: 6.2-3
Address: Koperlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

-12V
 -12V
 SGND
 SGND
 +12V
 +12V
 GND
 +5V

3 CHANNEL MONITOR

J4 | J5
 SGND : SEL0 (S1)
 AUX OUT RIGHT : SEL1 (S2)
 SGND : SEL2 (S3)
 AUX OUT LEFT : SEL3 (S4)
 GND : GND
 PHONES RIGHT : -12V
 GND : VOL
 PHONES LEFT : +12V

JP1
 SEL0 (S1) | SEL1 (S2)
 SEL2 (S3) | SEL3 (S4)
 GND : GND
 +5V : +5V
 GND : GND
 INL : INR
 GND : GND
 OUTL : OUTR



SGND
 AUX IN RIGHT
 SGND
 AUX IN LEFT
 SGND
 AUDIO FROM ECHO (RIGHT)
 SGND
 AUDIO FROM ECHO (LEFT)
 SGND
 M1
 M2
 M3
 M4
 M5
 M6
 M7
 M8

CHANNEL 1A-4A

CHANNEL 1B-4B

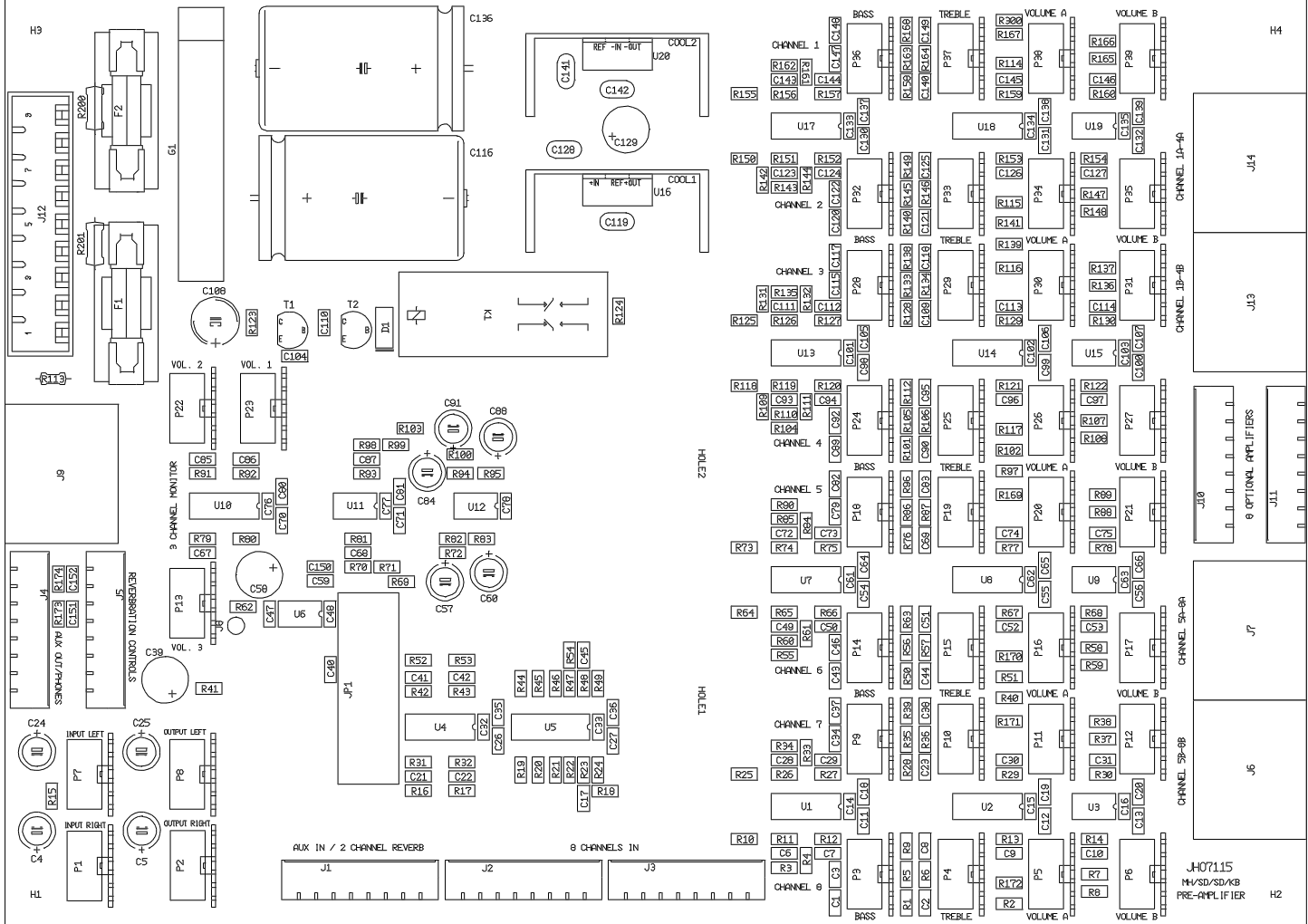
J10 | J11

1/05 : 1/01
 SGND : SGND
 1/06 : 1/02
 SGND : SGND
 1/07 : 1/03
 SGND : SGND
 1/08 : 1/04
 SGND : SGND

CHANNEL 5A-8A

CHANNEL 5B-8B

JH07115
 M4/SD/SDXB
 PRE-AMPLIFIER



JH07115
 M4/SD/SD/KB
 PRE-AMPLIFIER

H2

J6

CHANNEL 5B-8B

CHANNEL 5A-8A

J7

9 OPTIONAL AMPLIFIERS

J10

J11

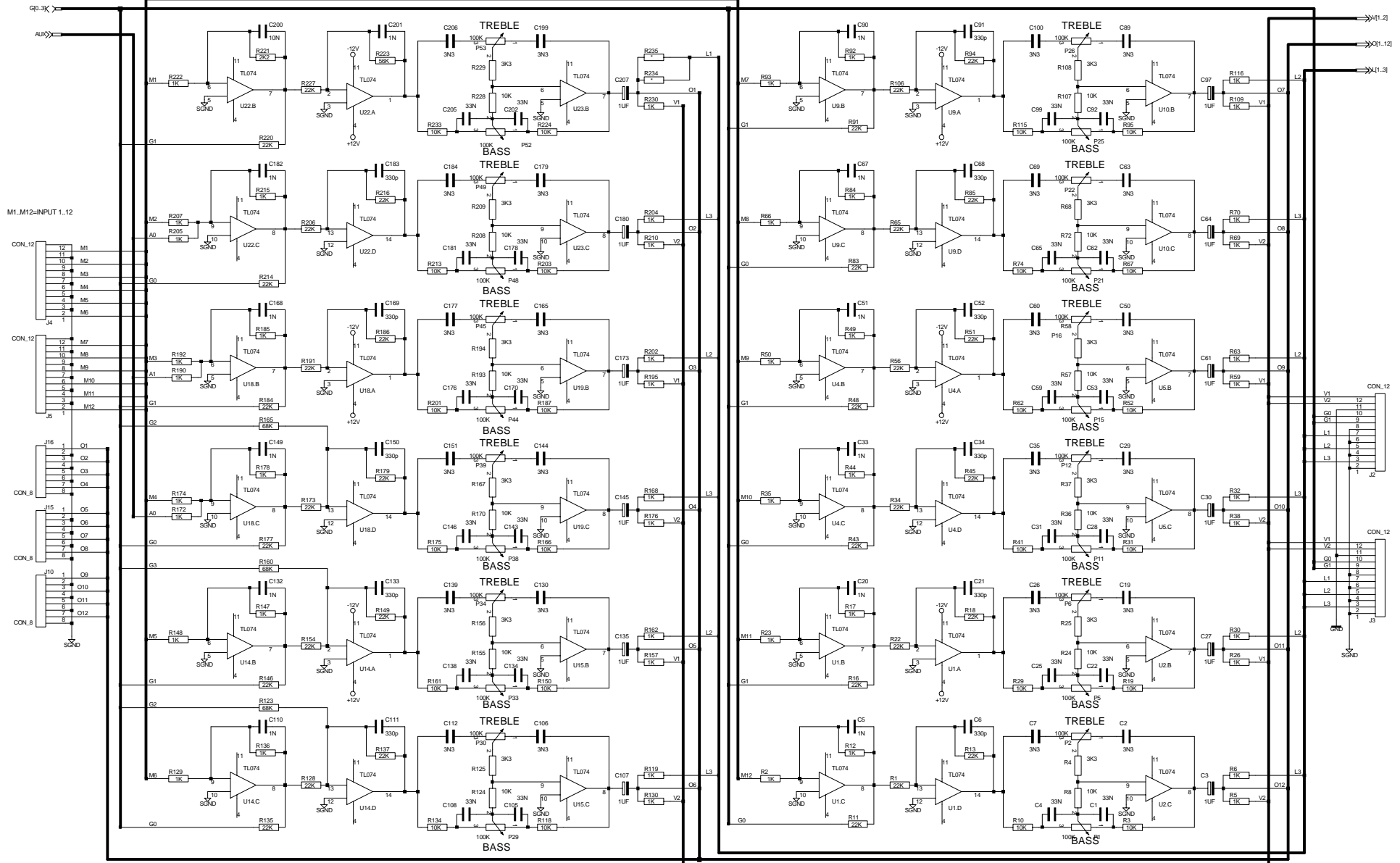
CHANNEL 1B-4B

CHANNEL 1A-4A

J13

J14

H4



M1..M12=INPUT 1..12

CON.12

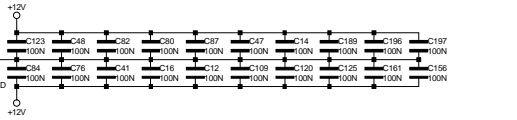
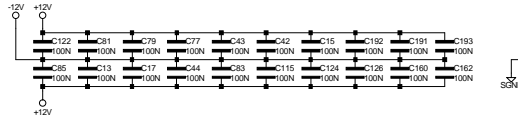
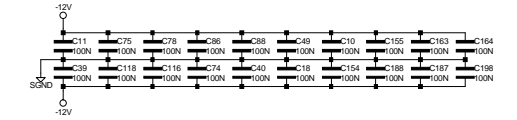
CON.12

CON.8

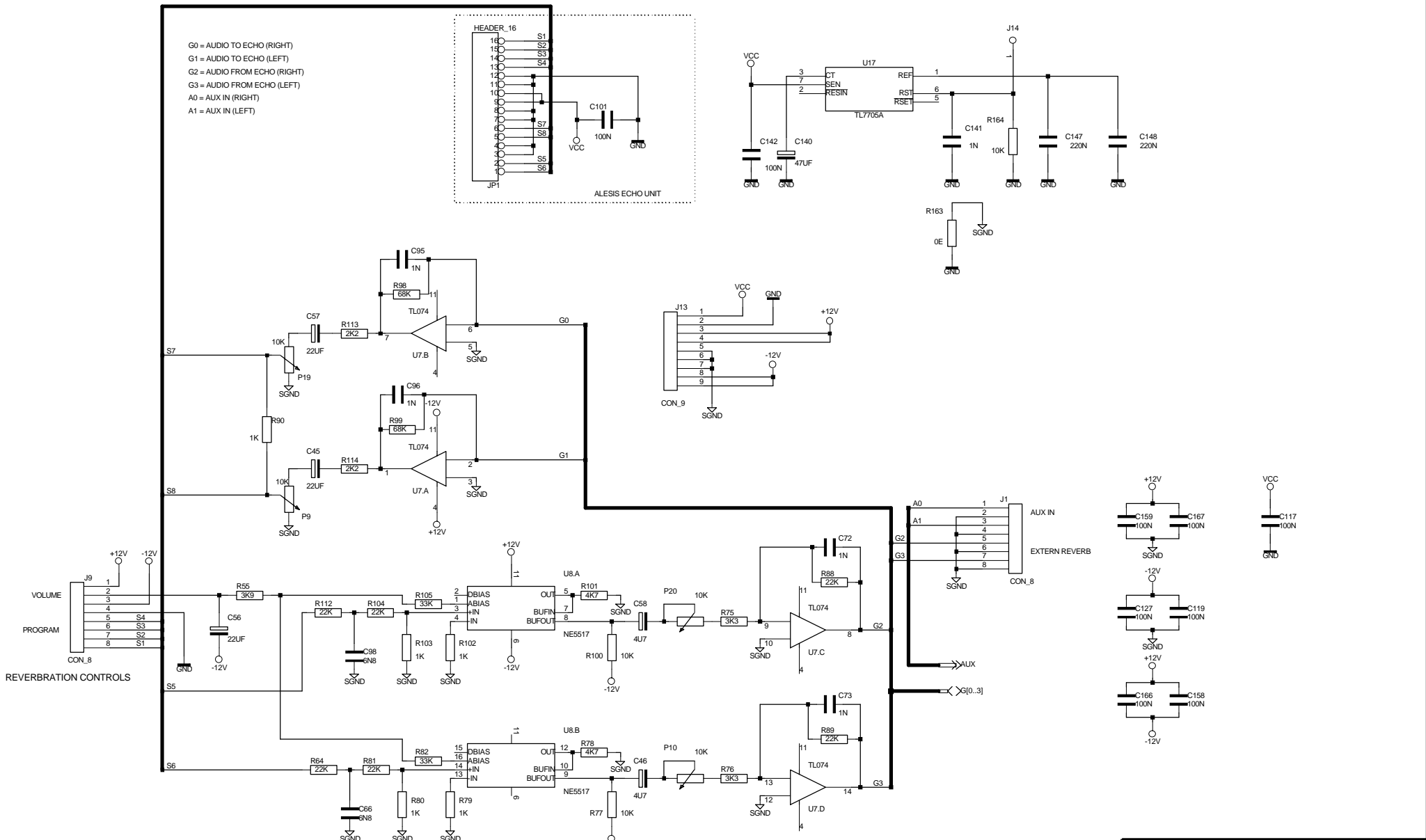
CON.8

CON.8

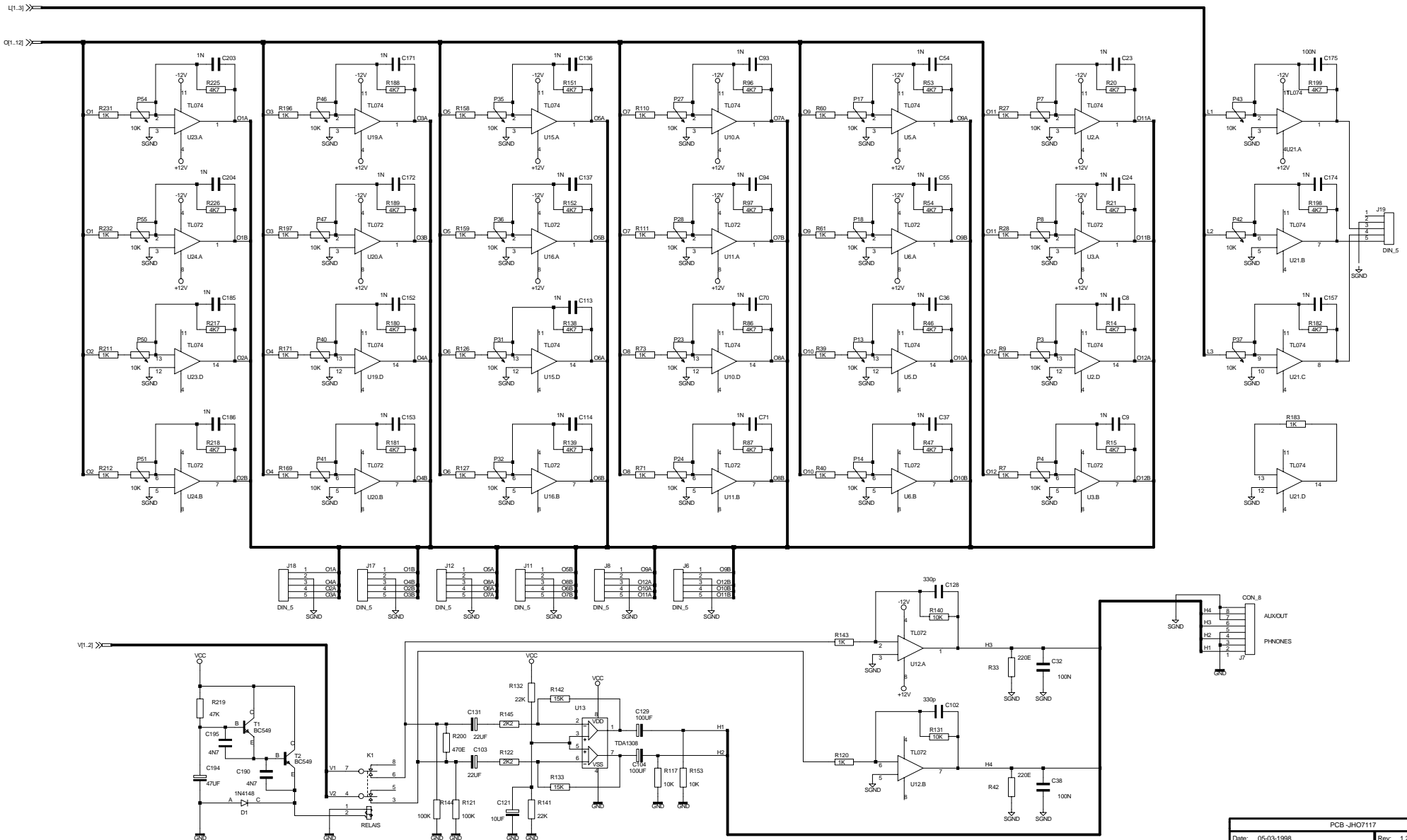
CON.8



PCB - JHO7117	
Date: 04-03-1998	Rev: 1.2
Project: MIXER (12-CHANNELS)	
Company: JOHANNUS ORGELBOUW B.V.	
Address: Kopsstraat 2	
City: 6716 BS Ede	
Country: The Netherlands	
Page: 6.3-1	

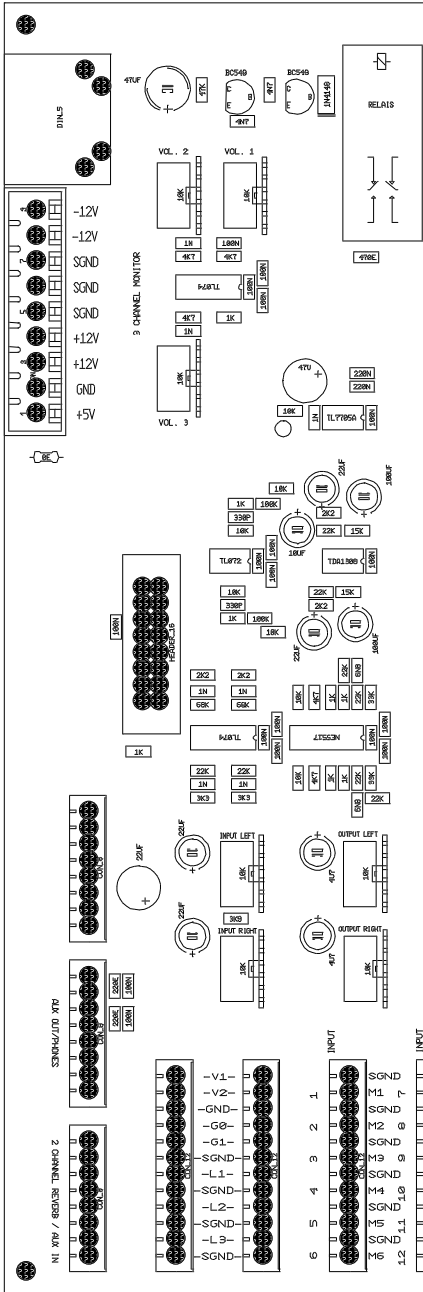


PCB - JH07117	
Date: 04-03-1998	Rev: 1.2
Project: ECHO	
Company: JOHANNUS ORGELBOUW B.V.	Page: 6.3-2
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



PCB-JHO7117	
Date: 05-03-1998	Rev: 1.2
Project: VOLUME	
Company: JOHANNUS ORGELBOUW B.V.	Page: 6.3-3
Address: Koptenhuis 2	
City: 6716 BS Ede	
Country: The Netherlands	

3 CHANNEL MONITOR

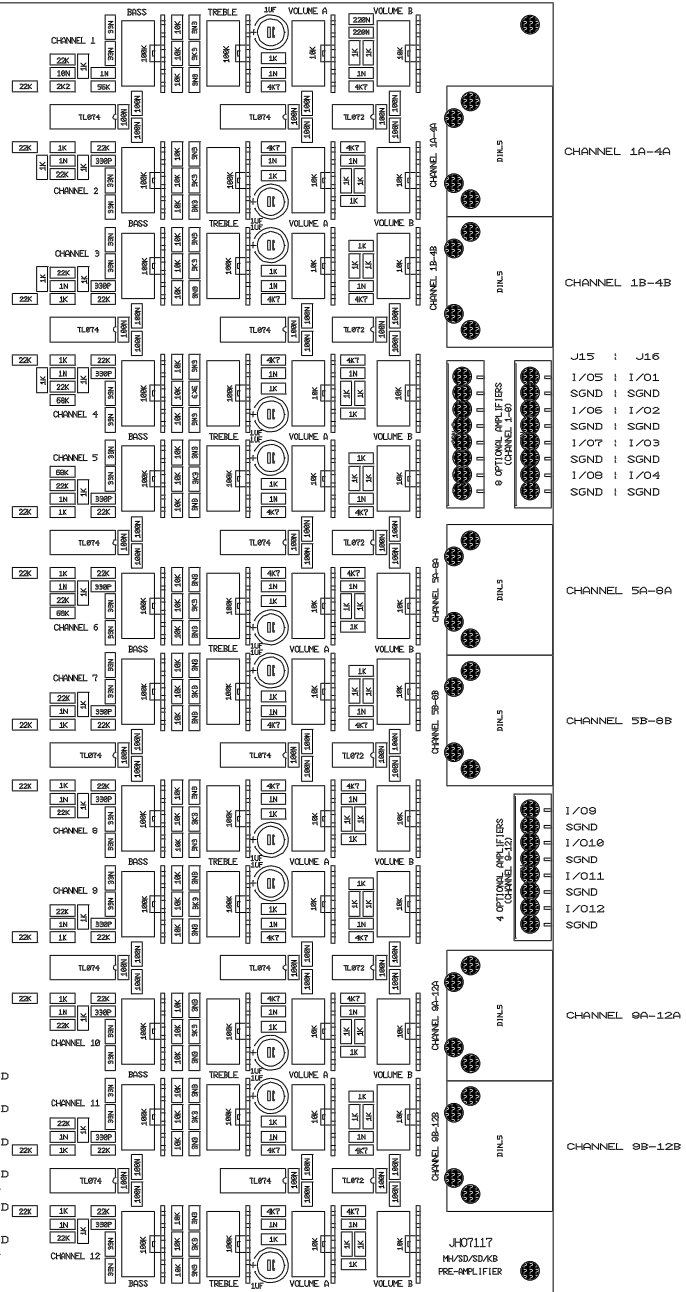


SEL0 (S1) : SEL1 (S2)
 SEL2 (S3) : SEL3 (S4)
 GND : GND
 +5V : +5V
 GND : GND
 INL : INR
 GND : GND
 OUTL : OUTR

SEL0 (S1)
 SEL1 (S2)
 SEL2 (S3)
 SEL3 (S4)
 GND
 -12V
 VOLUME
 +12V

SGND
 AUX OUT RIGHT
 SGND
 AUX OUT LEFT
 GND
 PHONES RIGHT
 GND
 PHONES LEFT

SGND
 AUDIO FROM ECHO (RIGHT)
 SGND
 AUDIO FROM ECHO (LEFT)
 SGND
 AUX IN RIGHT
 SGND
 AUX IN LEFT



CHANNEL 1A-4A

CHANNEL 1B-4B

CHANNEL 5A-8A

CHANNEL 5B-8B

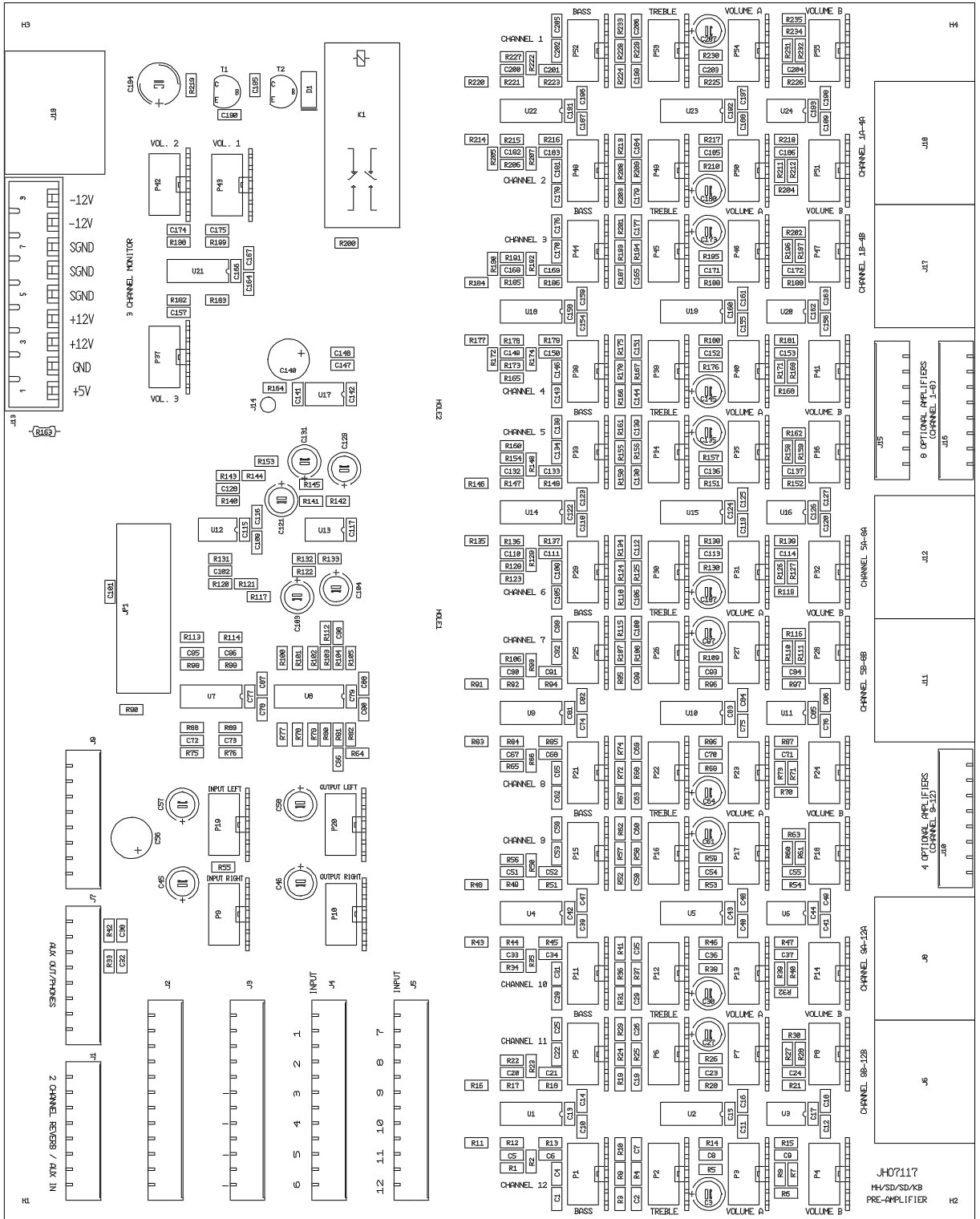
CHANNEL 9A-12A

CHANNEL 9B-12B

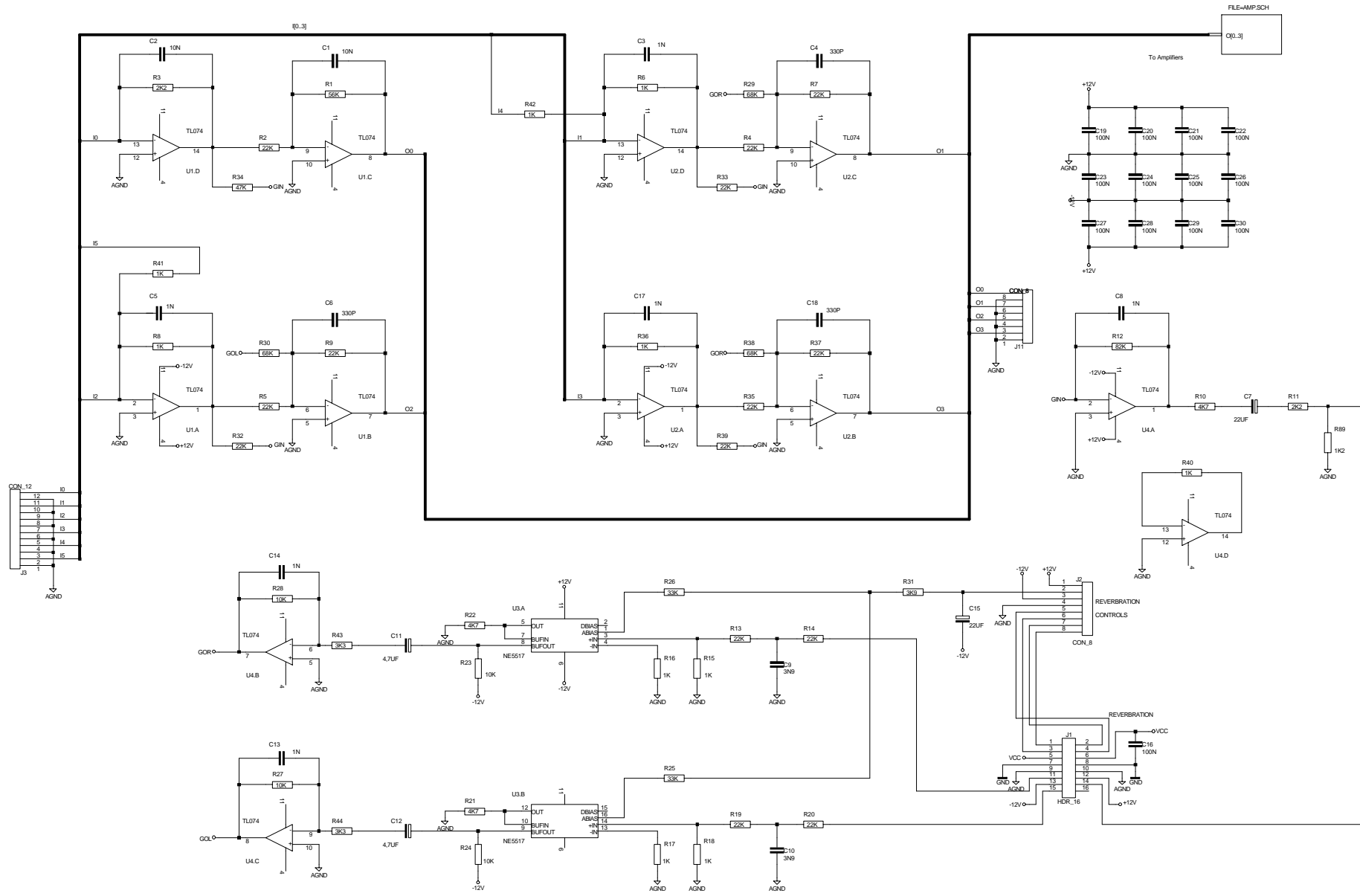
J15 : J16
 1/05 : 1/01
 SGND : SGND
 1/06 : 1/02
 SGND : SGND
 1/07 : 1/03
 SGND : SGND
 1/08 : 1/04
 SGND : SGND

1/09
 SGND
 1/010
 SGND
 1/011
 SGND
 1/012
 SGND

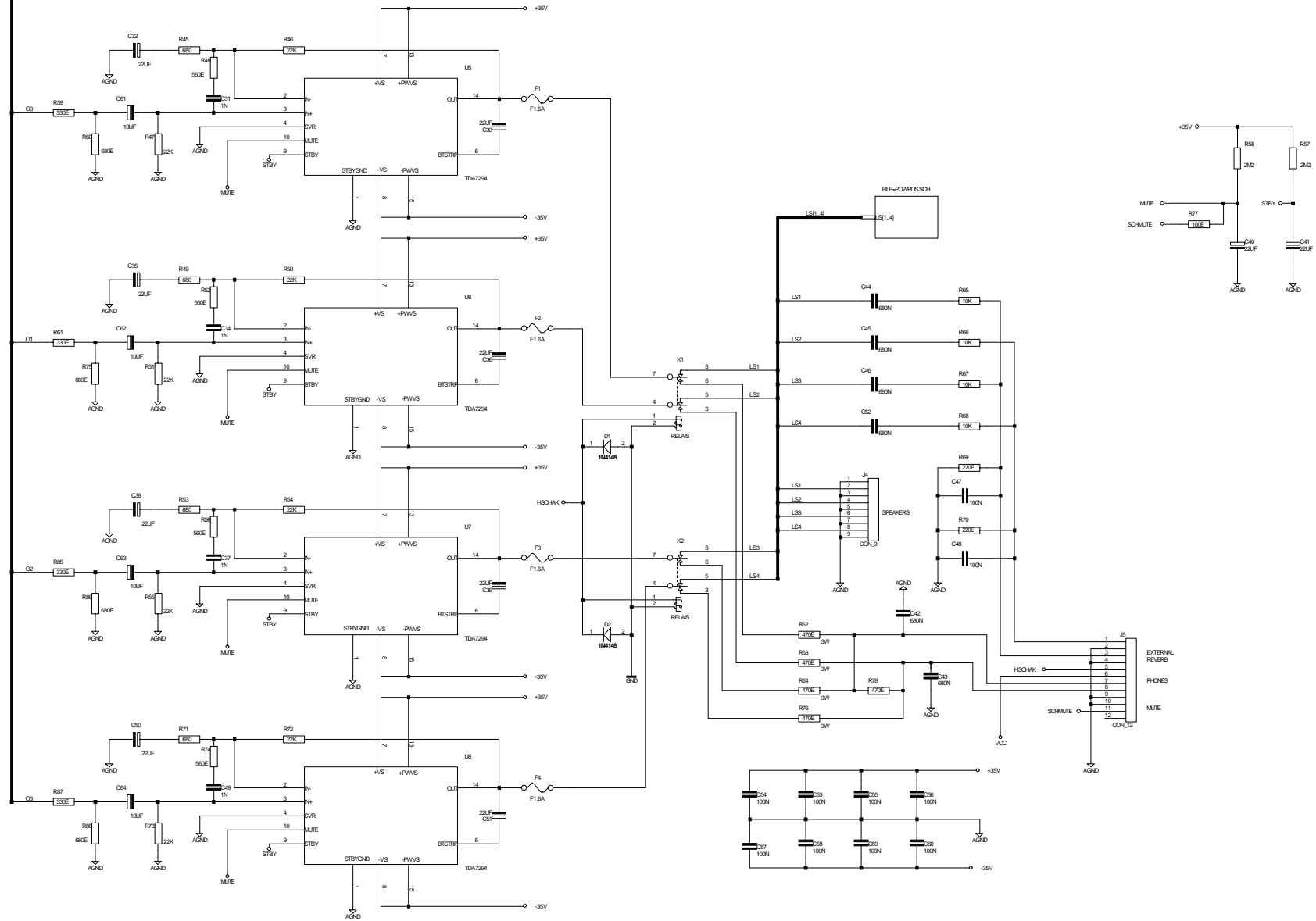
JH07117
 H4/SD/DA/AB
 PRE-AMPLIFIER



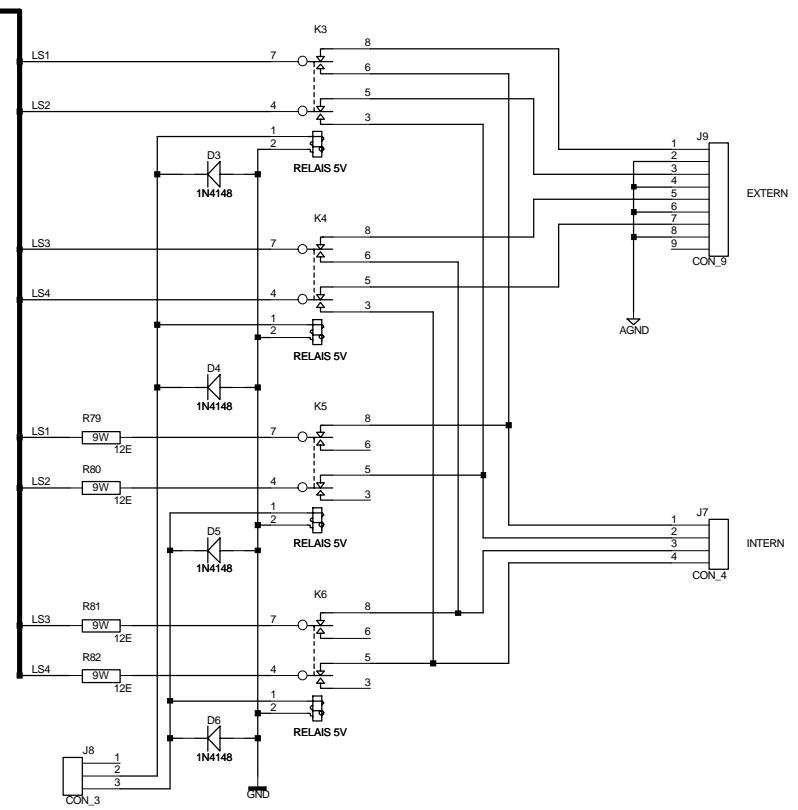
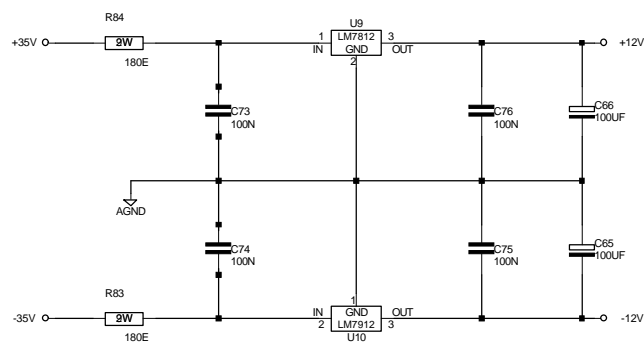
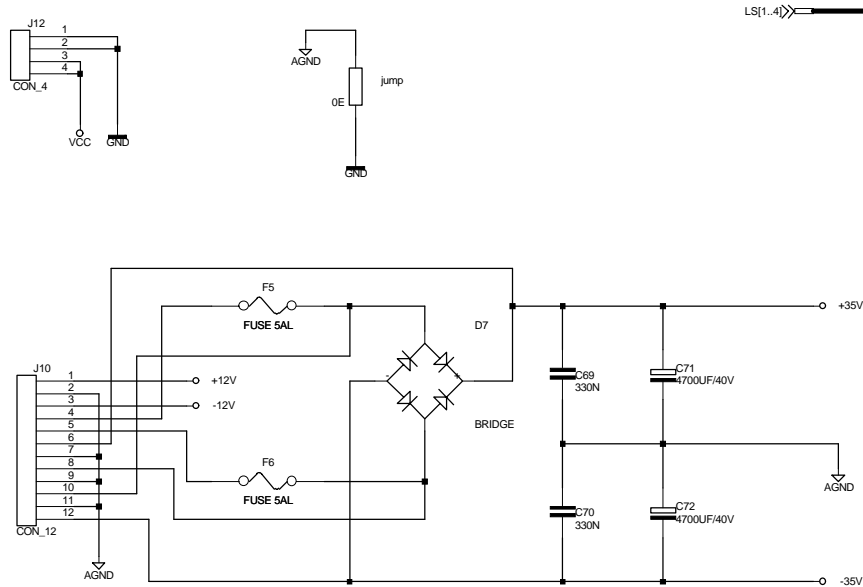
JH07117
MH/SD/SD/K8
PRE-AMPLIFIER



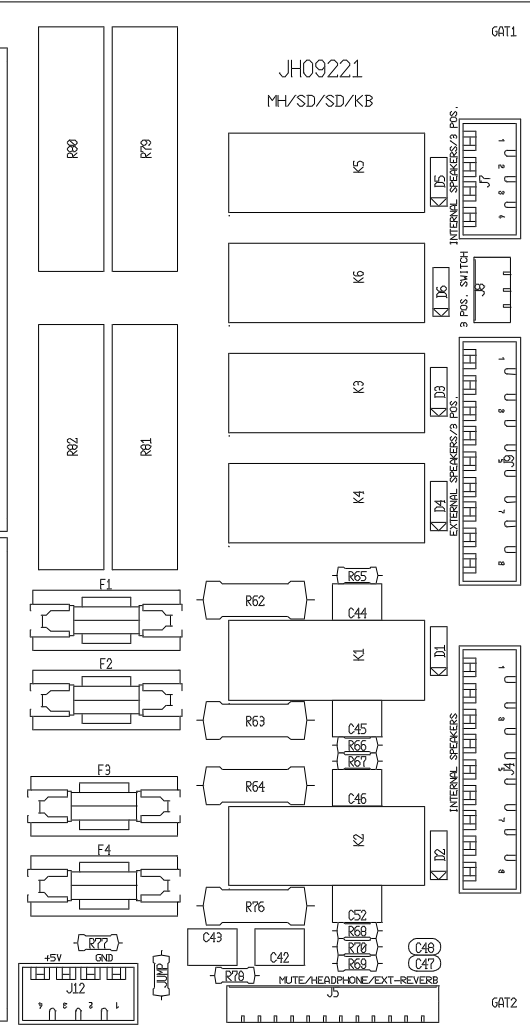
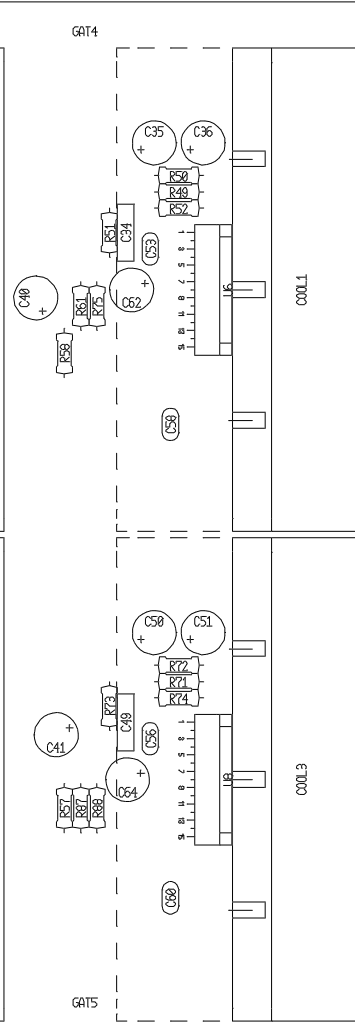
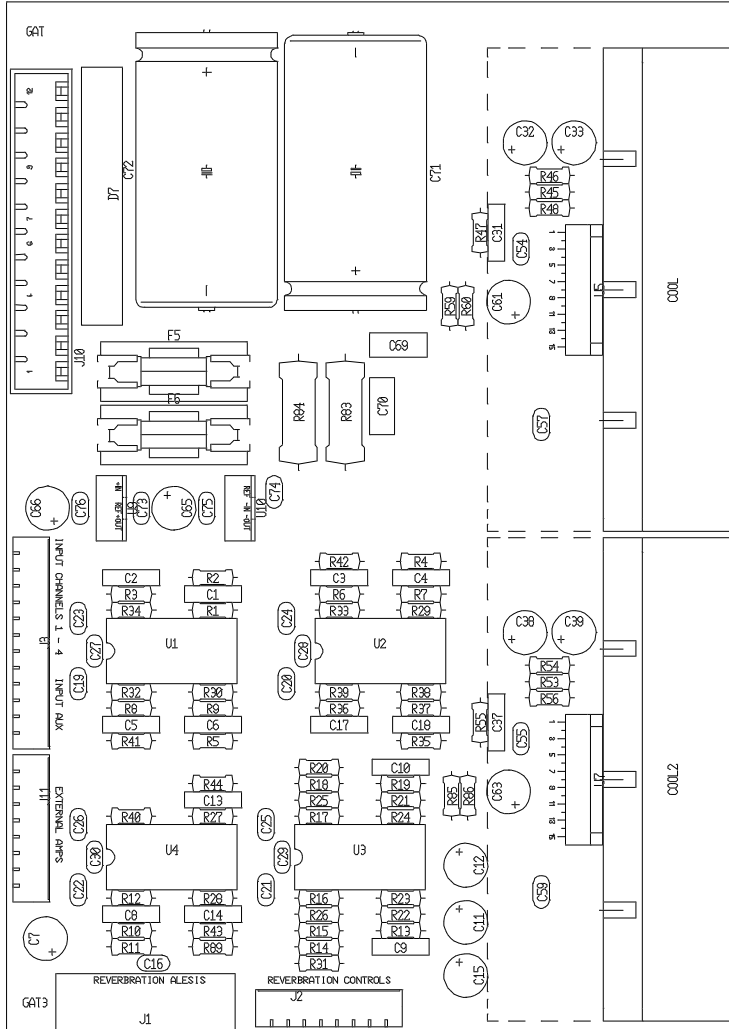
Q10-3

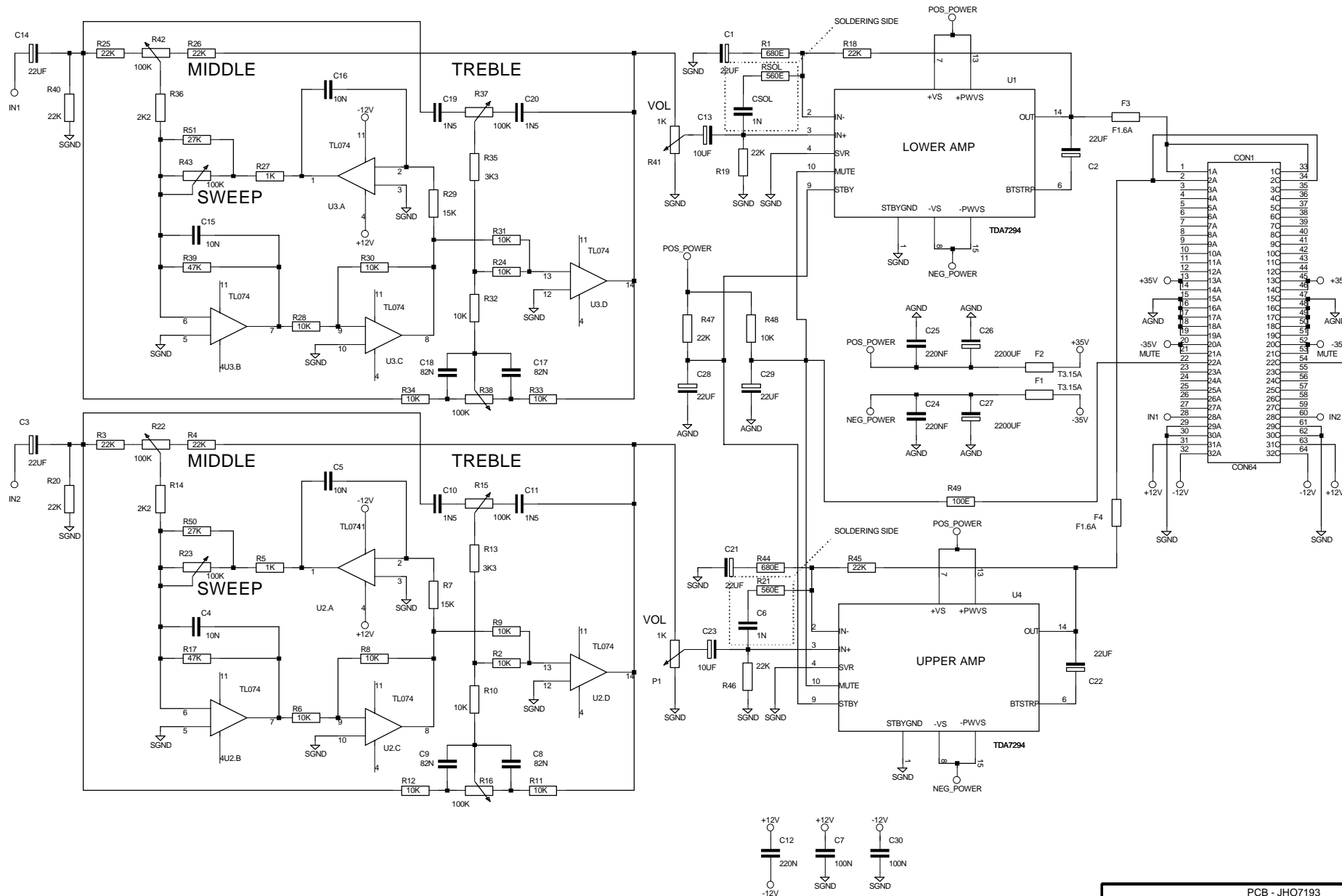


PCB - JHO0221	
Date: 22-04-1998	Rev: 1.2
Project: AMPLIFIERS	
Company: JOHANNUS ORGELBOUW B.V.	Page: 7.1-2
Address: Kapelleman 2	
City: 6716 BS Ede	
Country: The Netherlands	

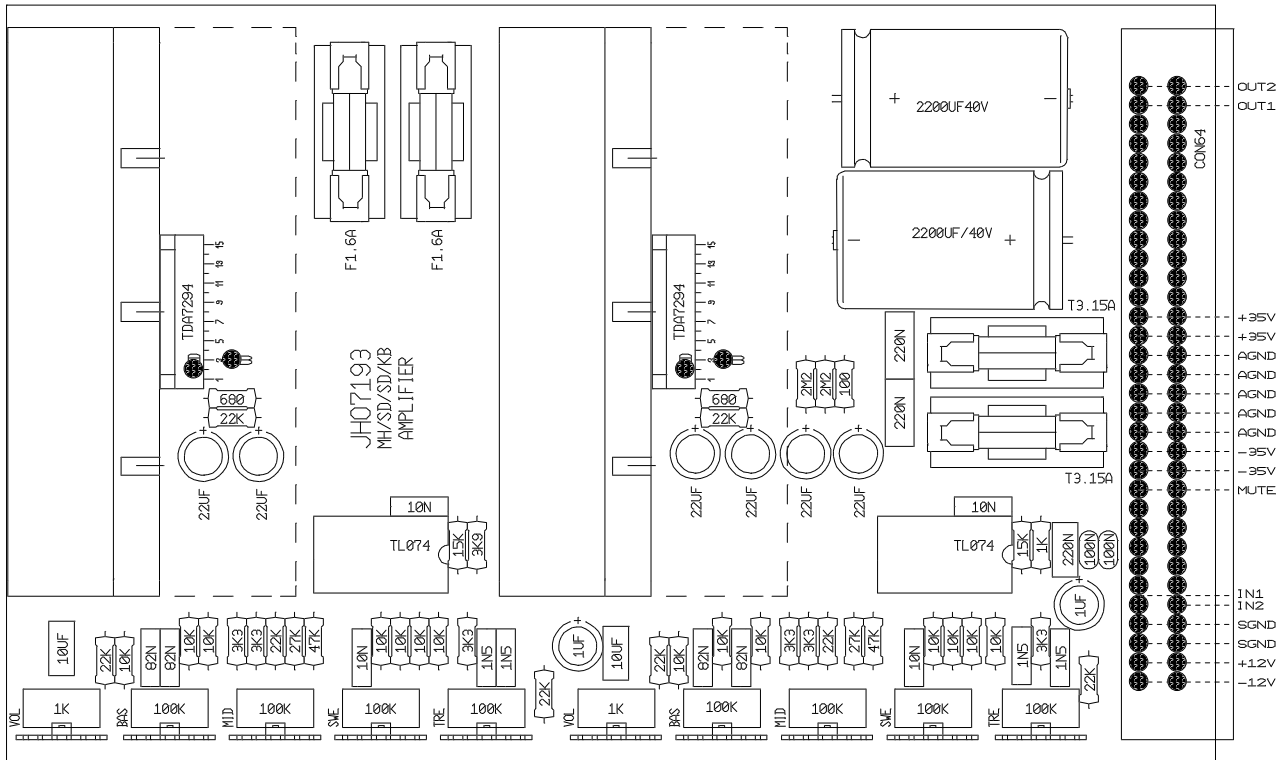


PCB - JHO9221	
Date: 22-04-1998	Rev: 1.2
Project: POWER SUPPLY & 3 - POSITION	
Company: JOHANNUS ORGELBOUW B.V.	Page: 7.1-3
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

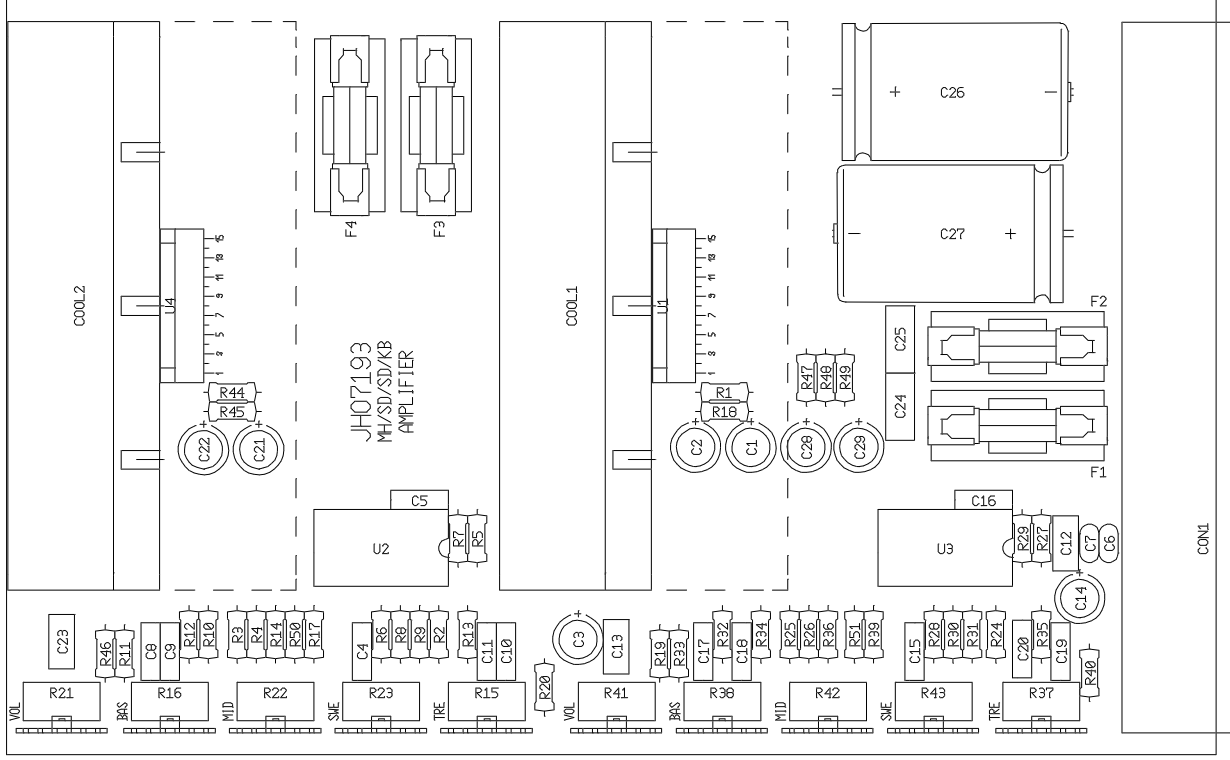


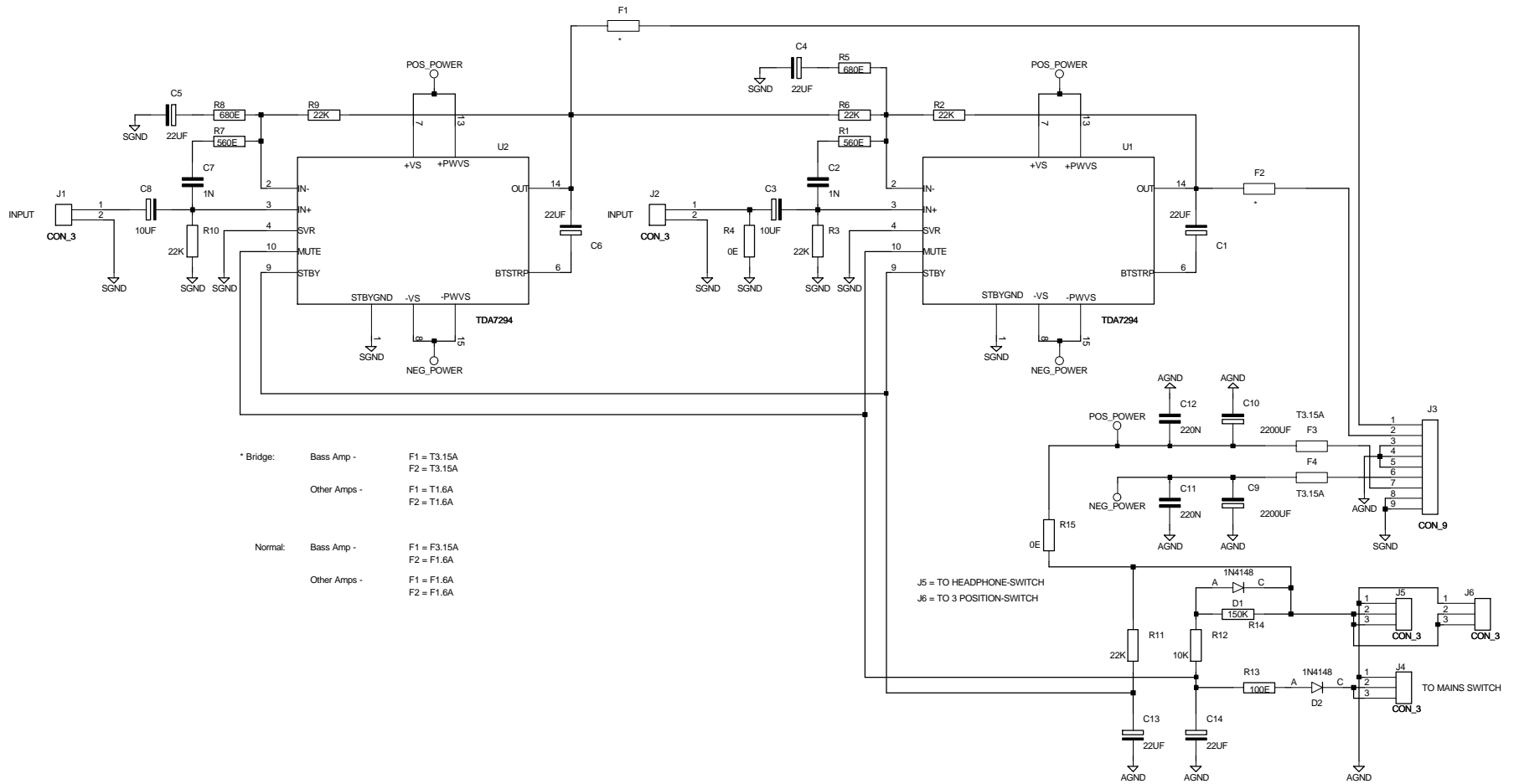


PCB - JHO7193	
Date: 22-04-1998	Rev: 1.2
Project: DUAL AMPLIFIER RACK	
Company: JOHANNUS ORGELBOUW B.V.	
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	
Page: 7.2-1	



MOUNTED ON SOLDERING SIDE



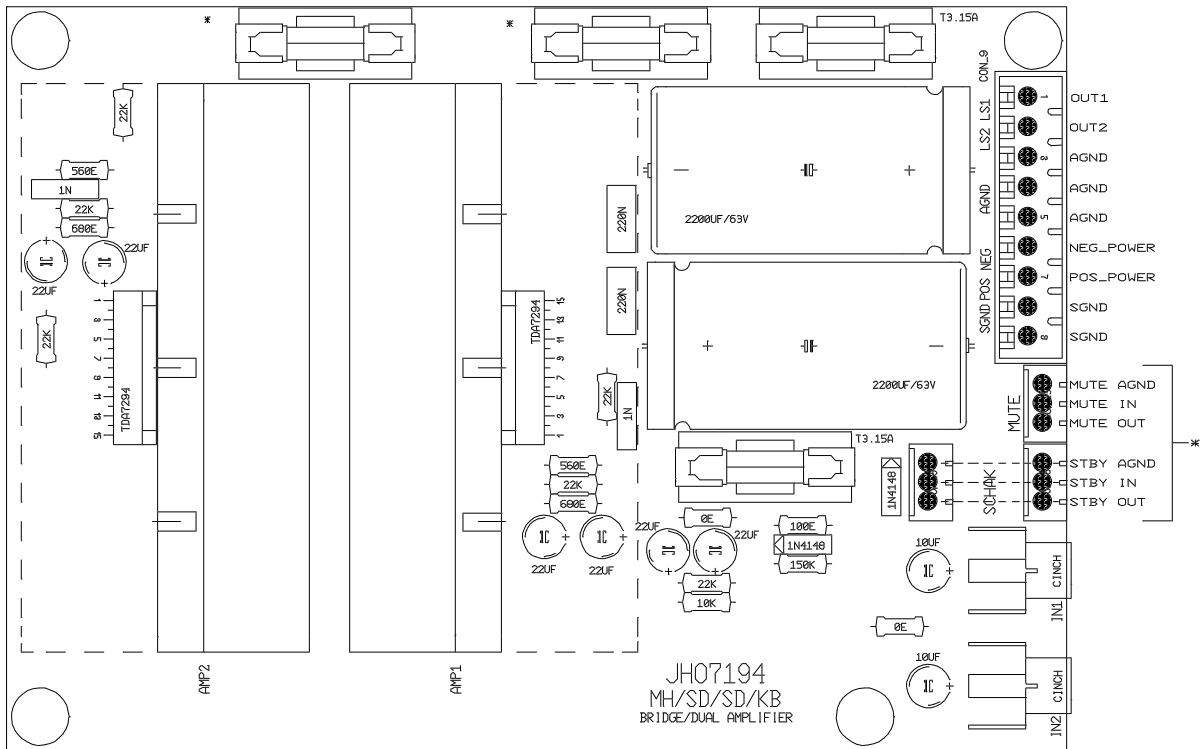


* Bridge: Bass Amp - F1 = T3.15A
 F2 = T3.15A
 Other Amps - F1 = T1.6A
 F2 = T1.6A

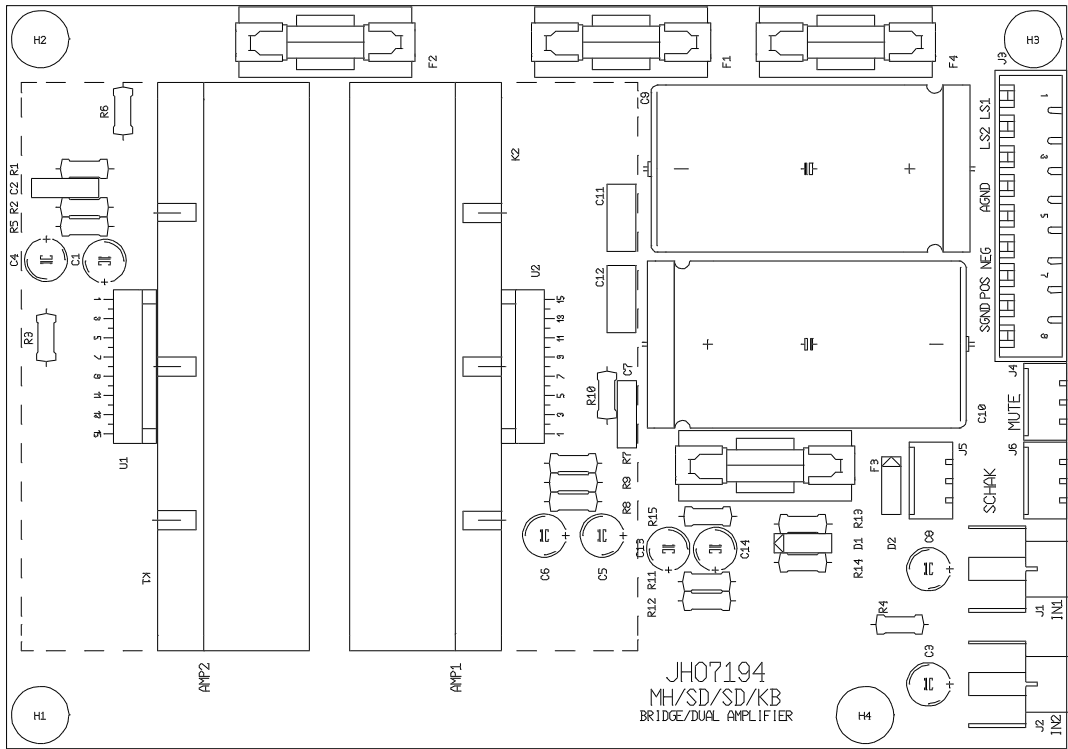
Normal: Bass Amp - F1 = F3.15A
 F2 = F1.6A
 Other Amps - F1 = F1.6A
 F2 = F1.6A

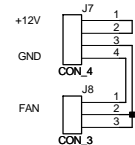
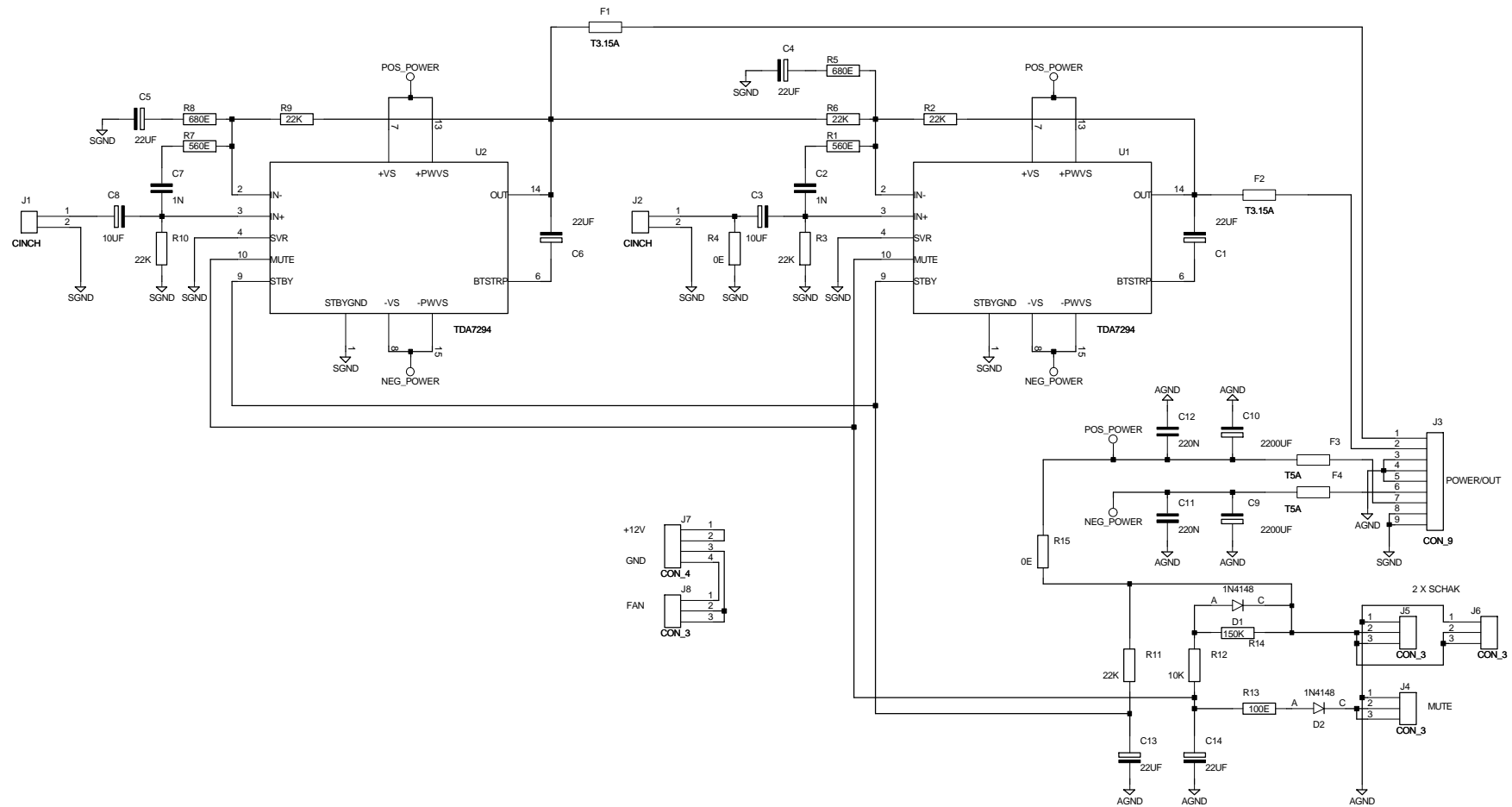
J5 = TO HEADPHONE-SWITCH
 J6 = TO 3 POSITION-SWITCH

PCB - JHO7194	
Date: 27-04-1998	Rev: 1.2
Project: DUAL AMPLIFIER	
Company: JOHANNUS ORGELBOUW B.V.	Page: 7.3-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

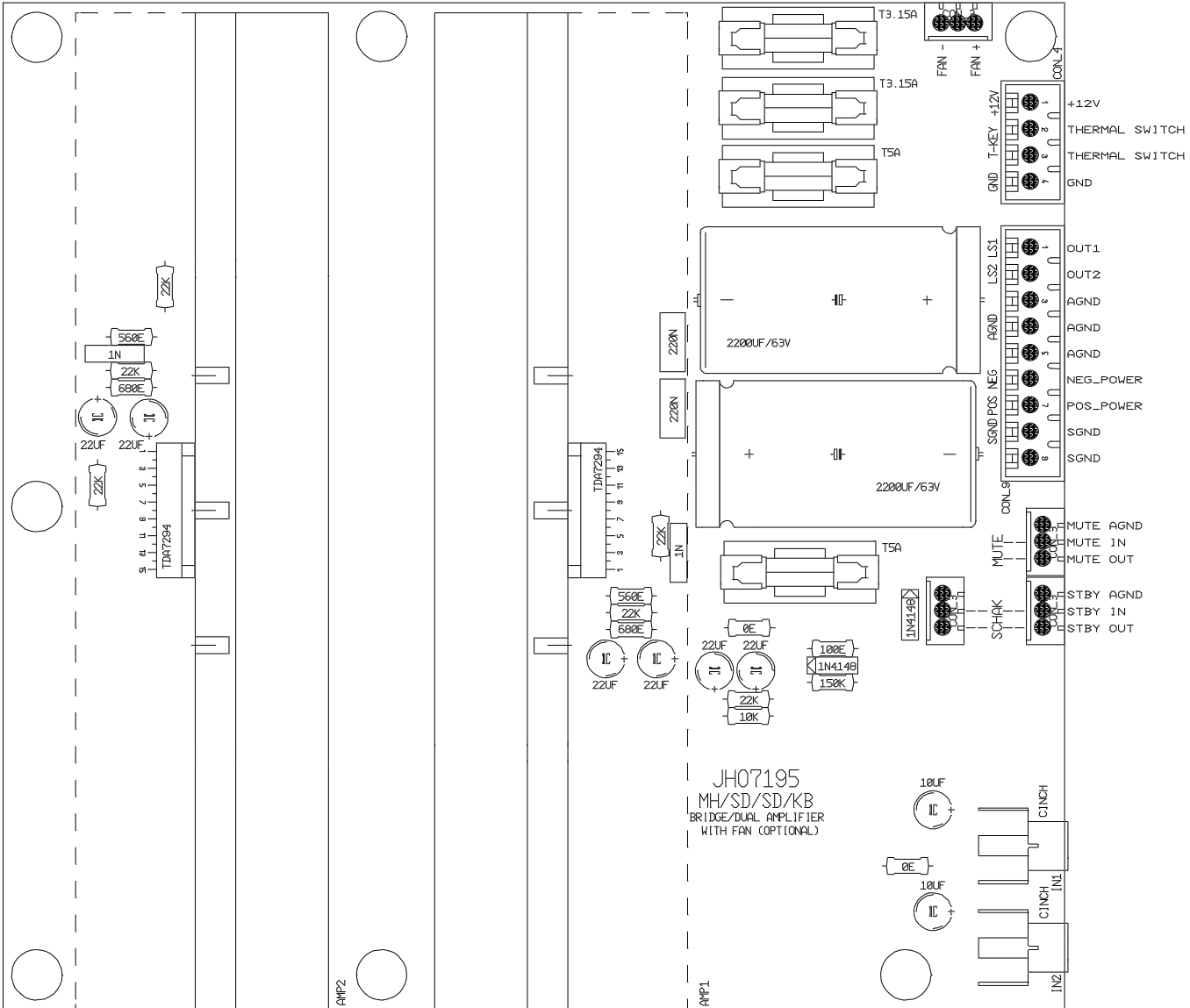


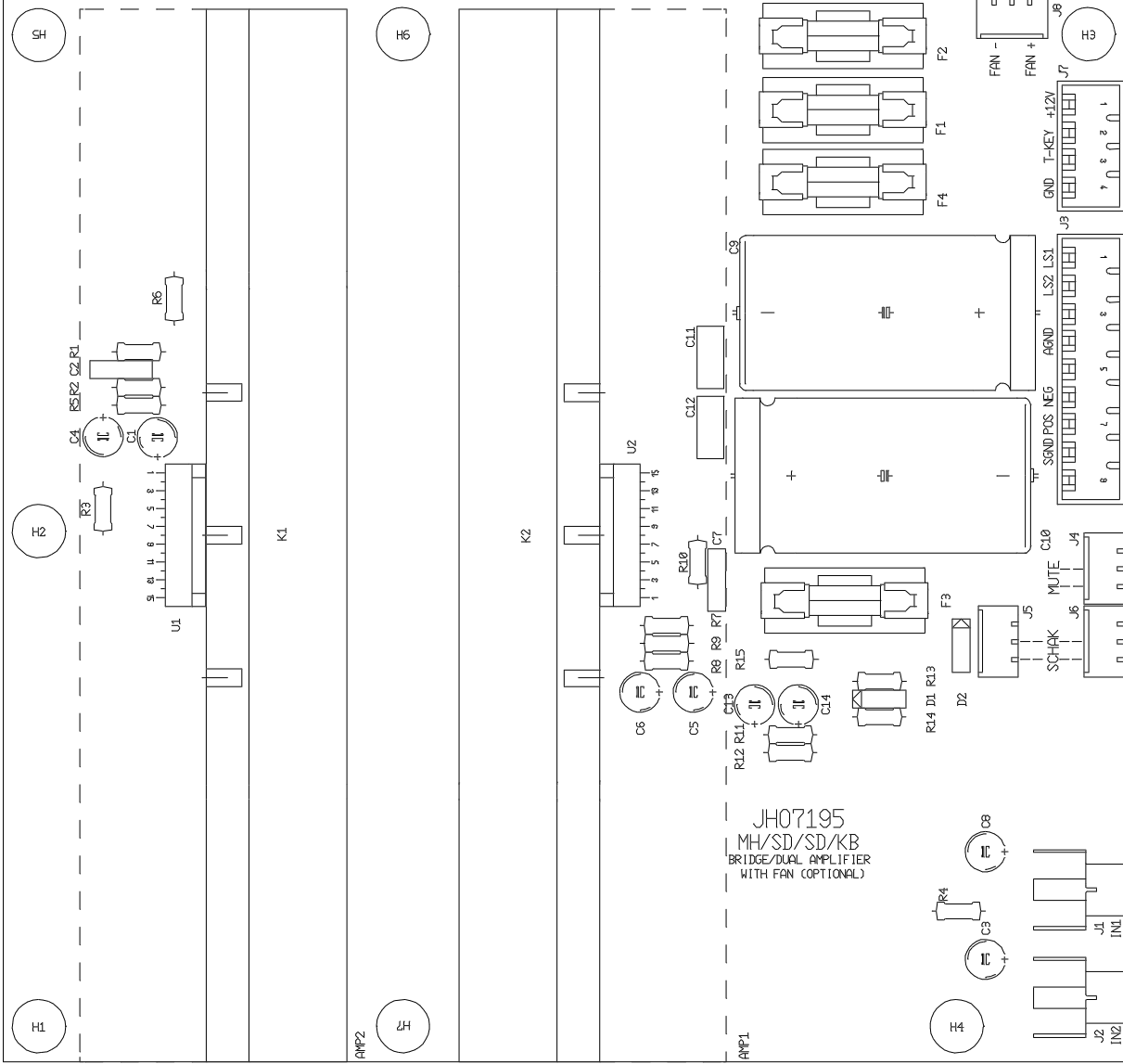
* FOR MORE DETAILS SEE SCHEMATIC DESIGN



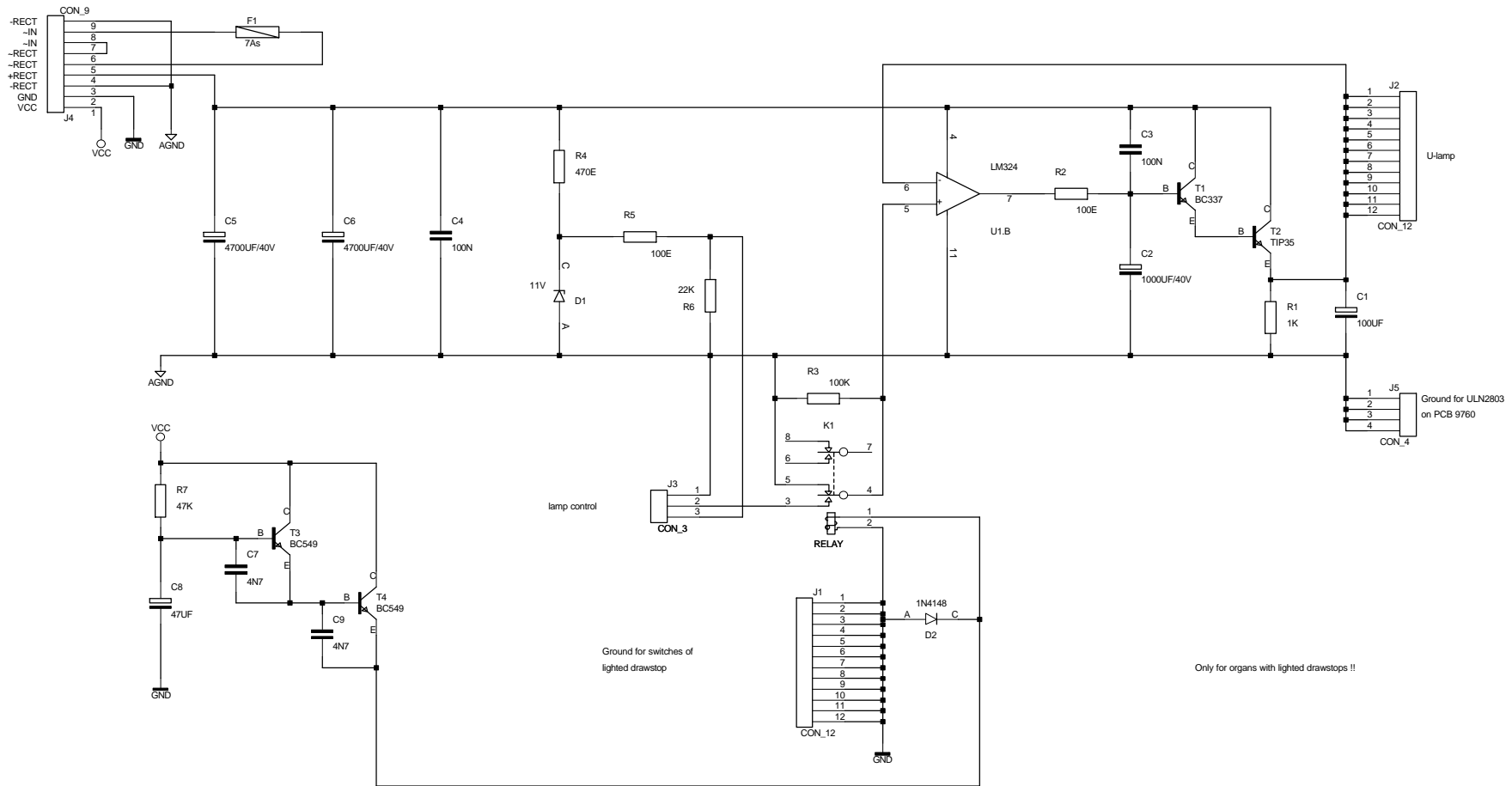


PCB - JHO7195	
Date: 27-04-1998	Rev: 1.2
Project: BASS DUAL/BRIDGE AMPLIFIER	
Company: JOHANNUS ORGELBOUW B.V.	Page: 7.4-1
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



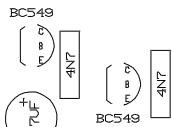
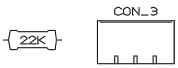
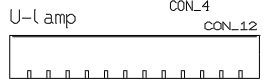
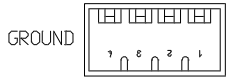
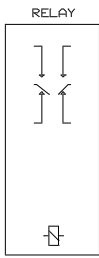
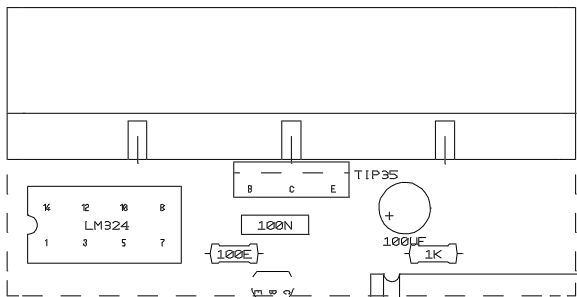
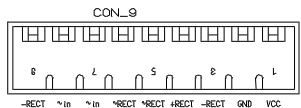
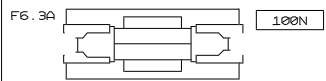
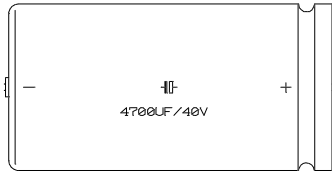
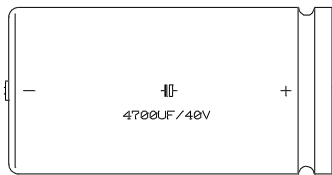


COMPONENTS ARE THE SAME AS PCB JH07194 EXCEPT J7 AND J8



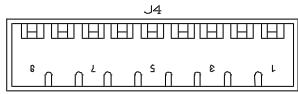
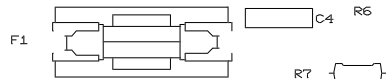
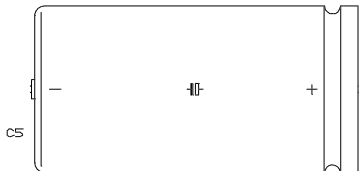
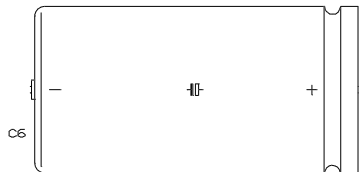
PCB - JHO7153	
Date: 07-10-1997	Rev: 1.2
Project: POWER SUPPLY STOP-LAMPS	
Company: JOHANNUS ORGELBOUW B.V.	Page: 8.1-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

POWER SUPPLY STOP LAMPS
 JHO 7153
 MHNSD\SD\KB

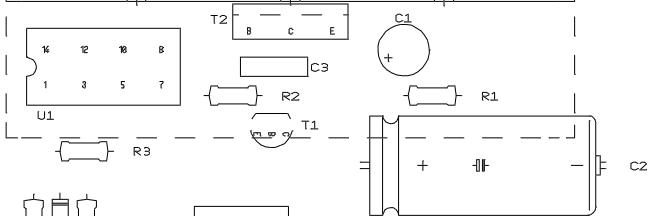
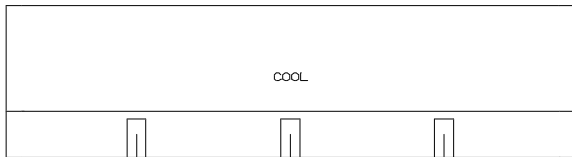


G1

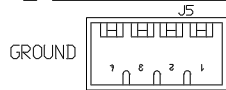
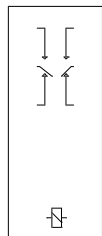
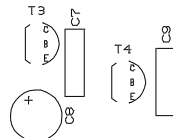
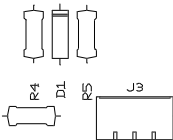
POWER SUPPLY STOP LAMPS
JHO 7153
MHNSD\SD\KB



G4



G2



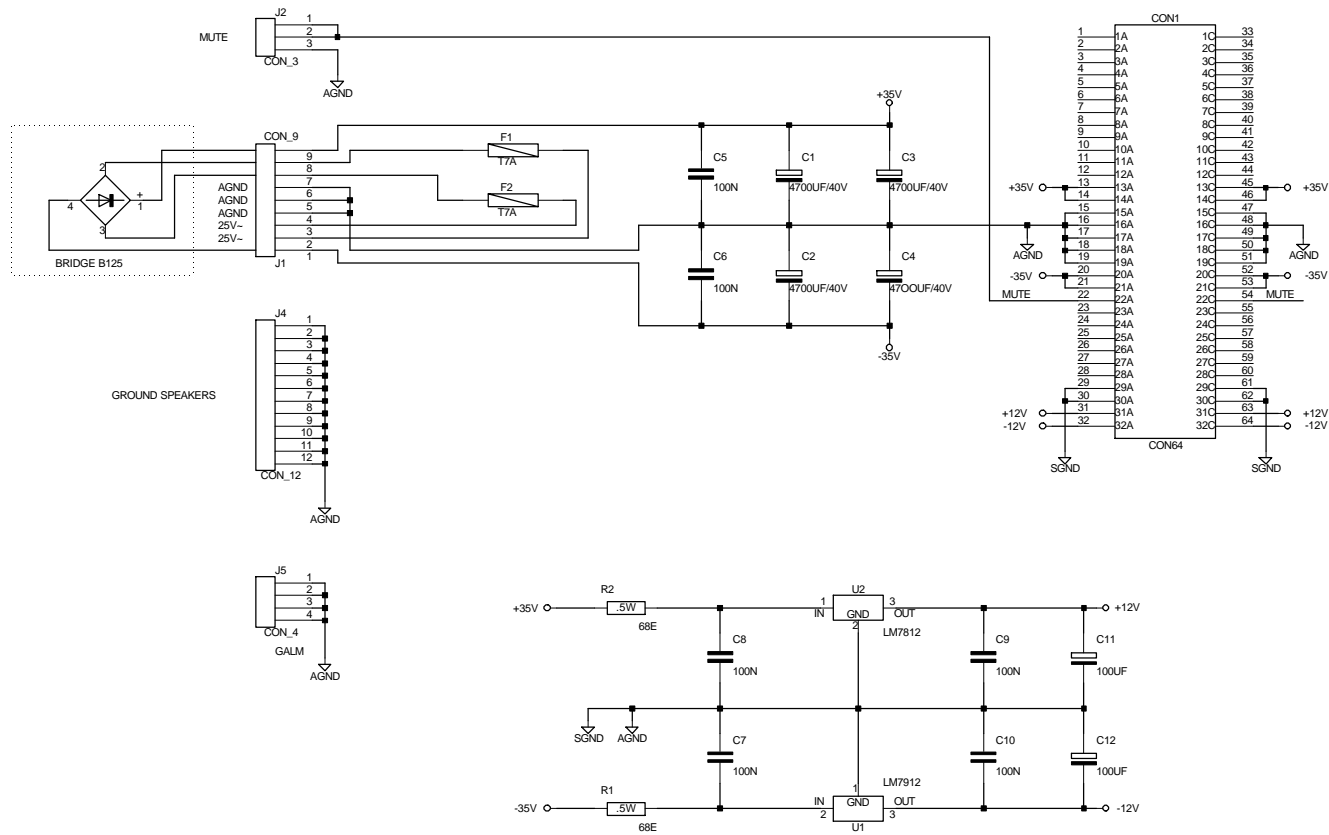
U-lamp



GROUND SWITCH



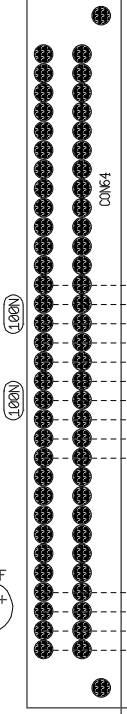
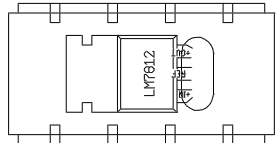
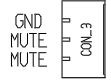
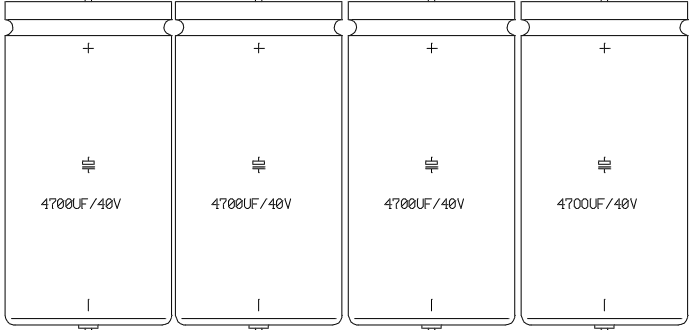
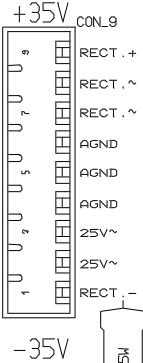
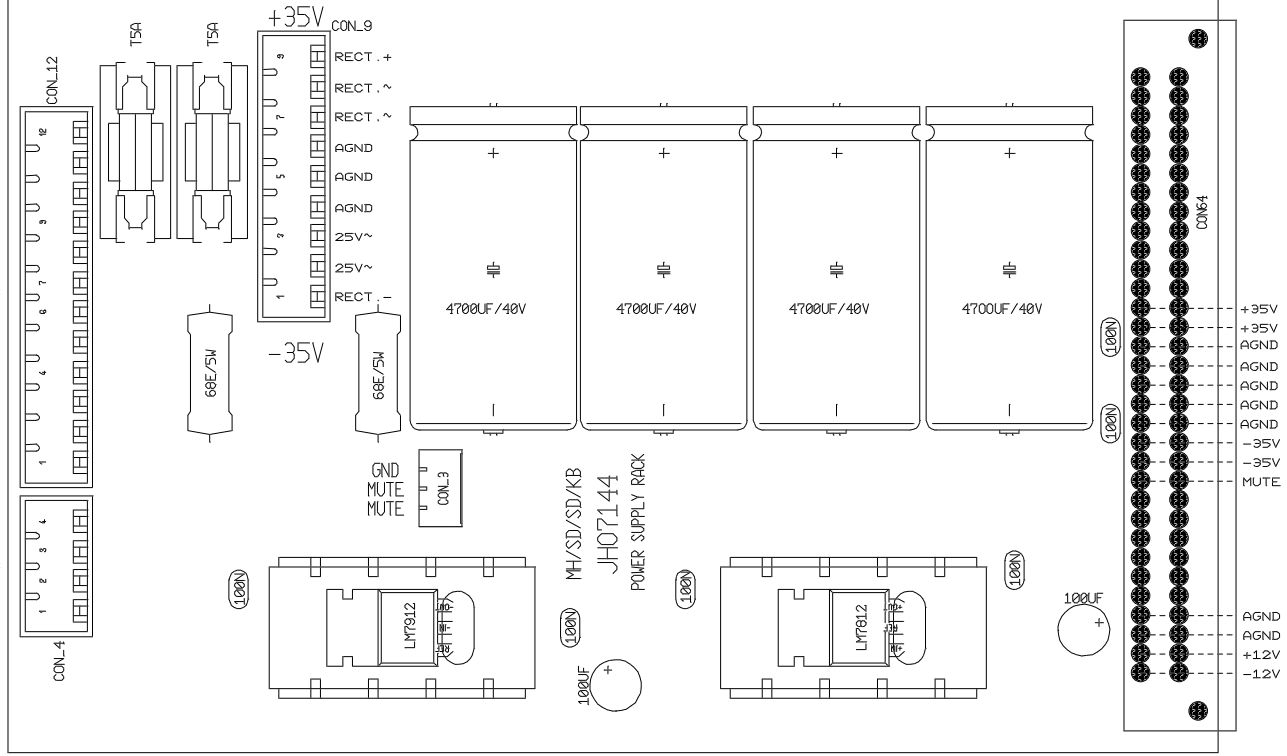
G3



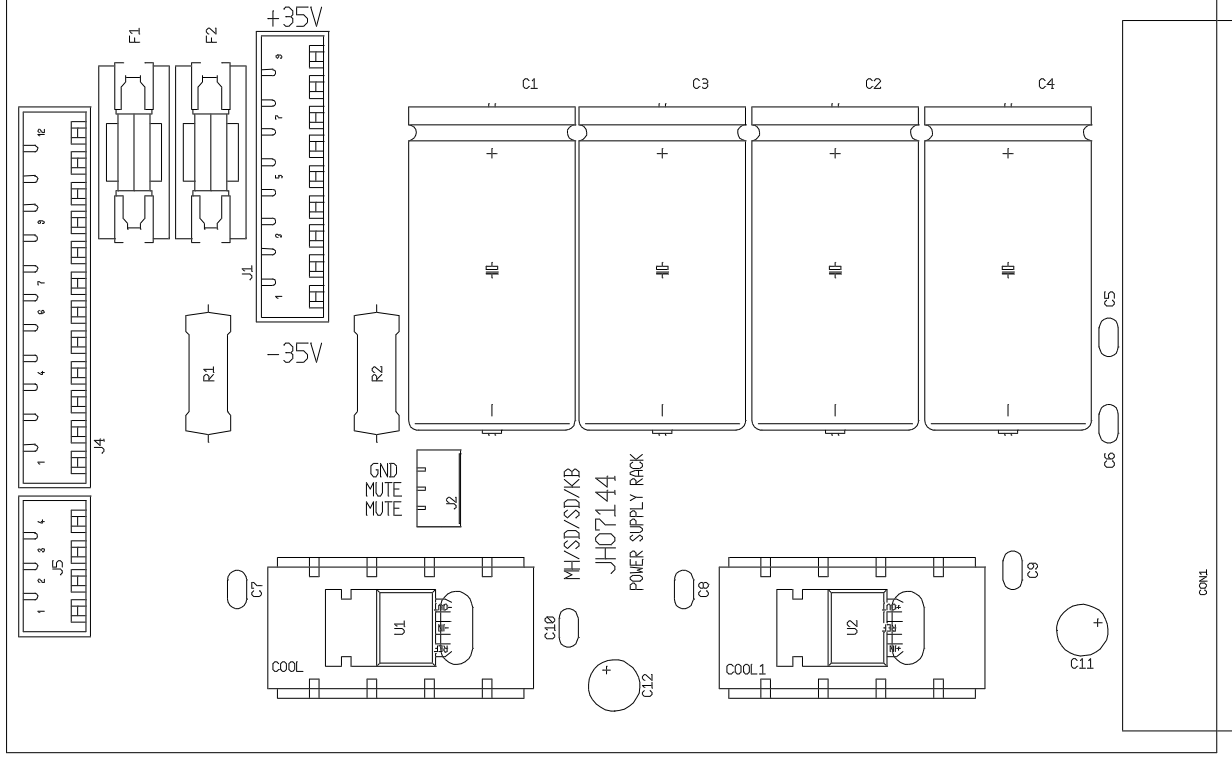
PCB - JHO7144	
Date: 06-04-1998	Rev: 1.2
Project: POWER SUPPLY AMPLIFIER RACK	Page: 8.2-1
Company: JOHANNUS ORGELBOUW B.V.	
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

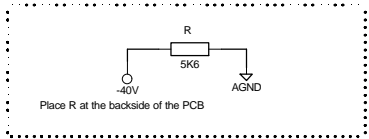
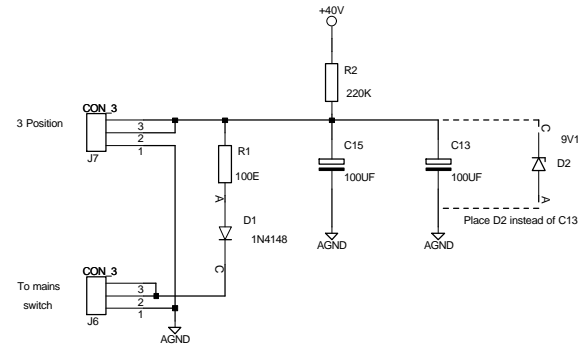
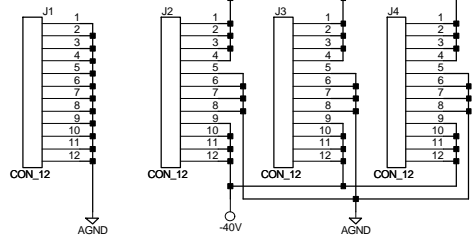
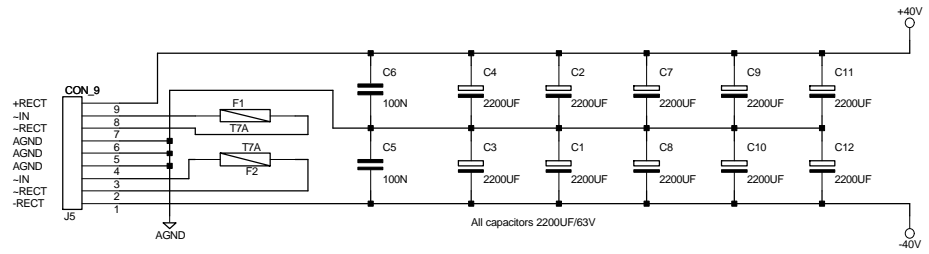
12xAGND/SPEAKERS

4xAGND/SPEAKERS

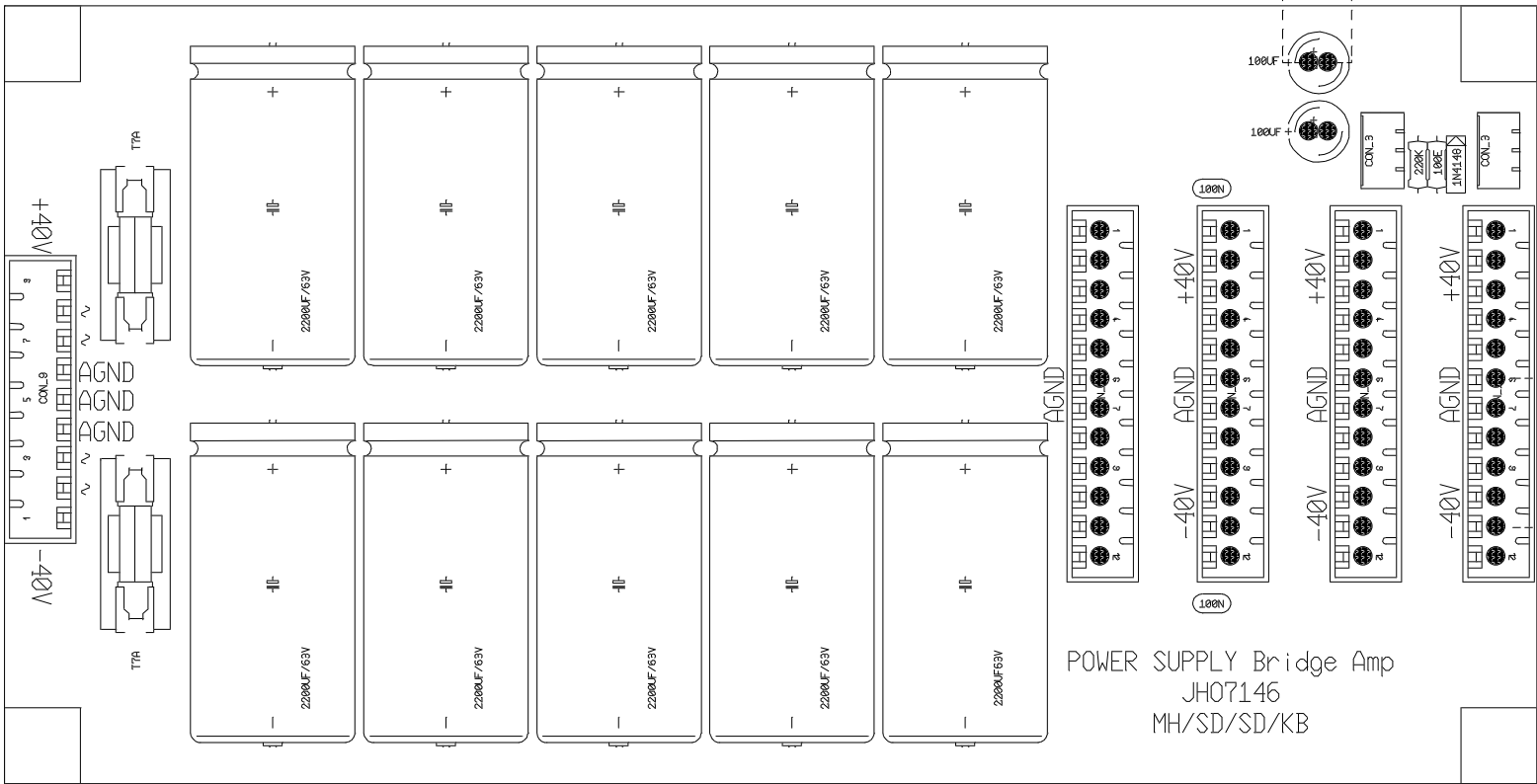


- +35V
- +35V
- AGND
- AGND
- AGND
- AGND
- -35V
- -35V
- MUTE
- AGND
- AGND
- +12V
- -12V

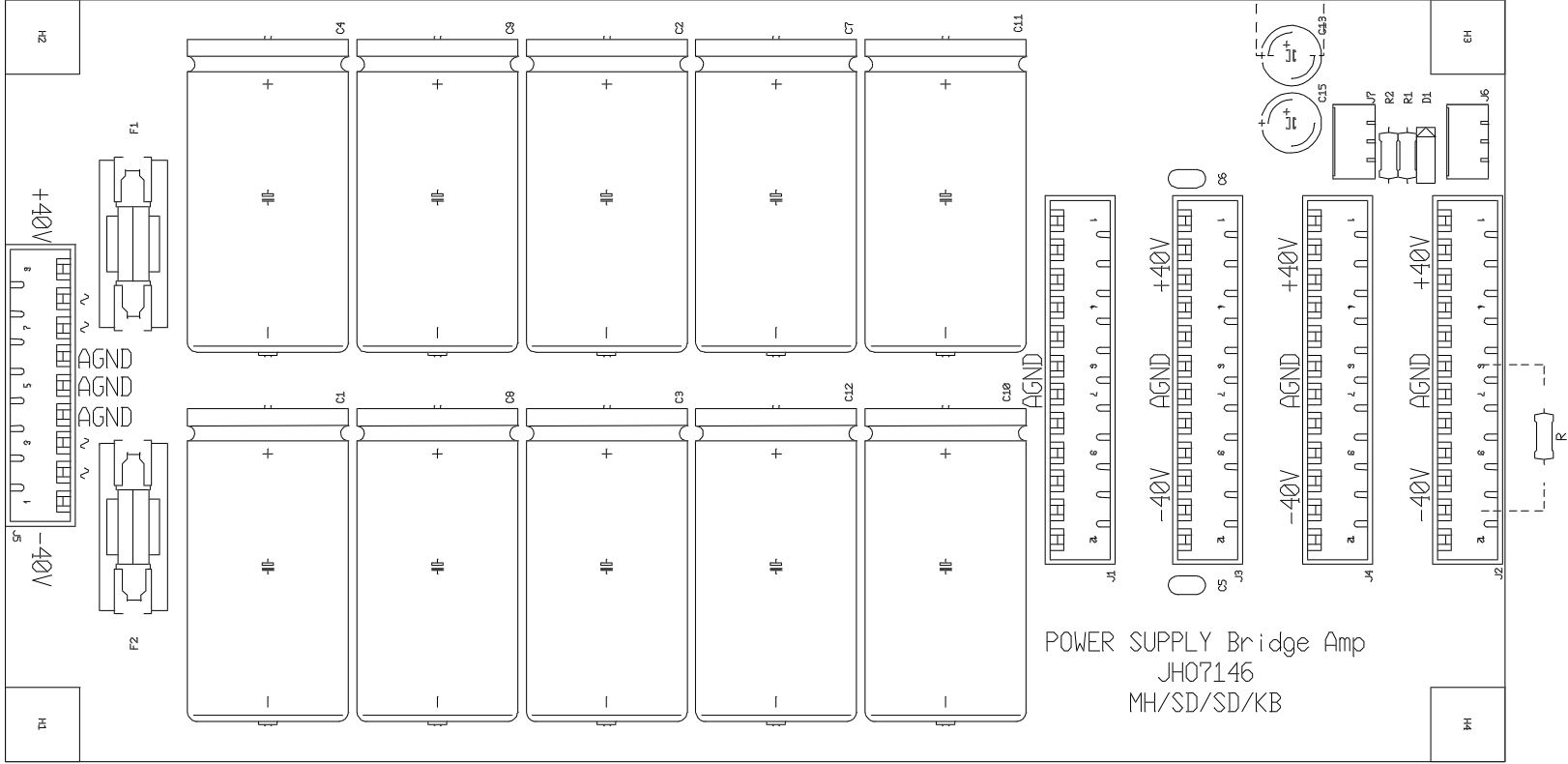




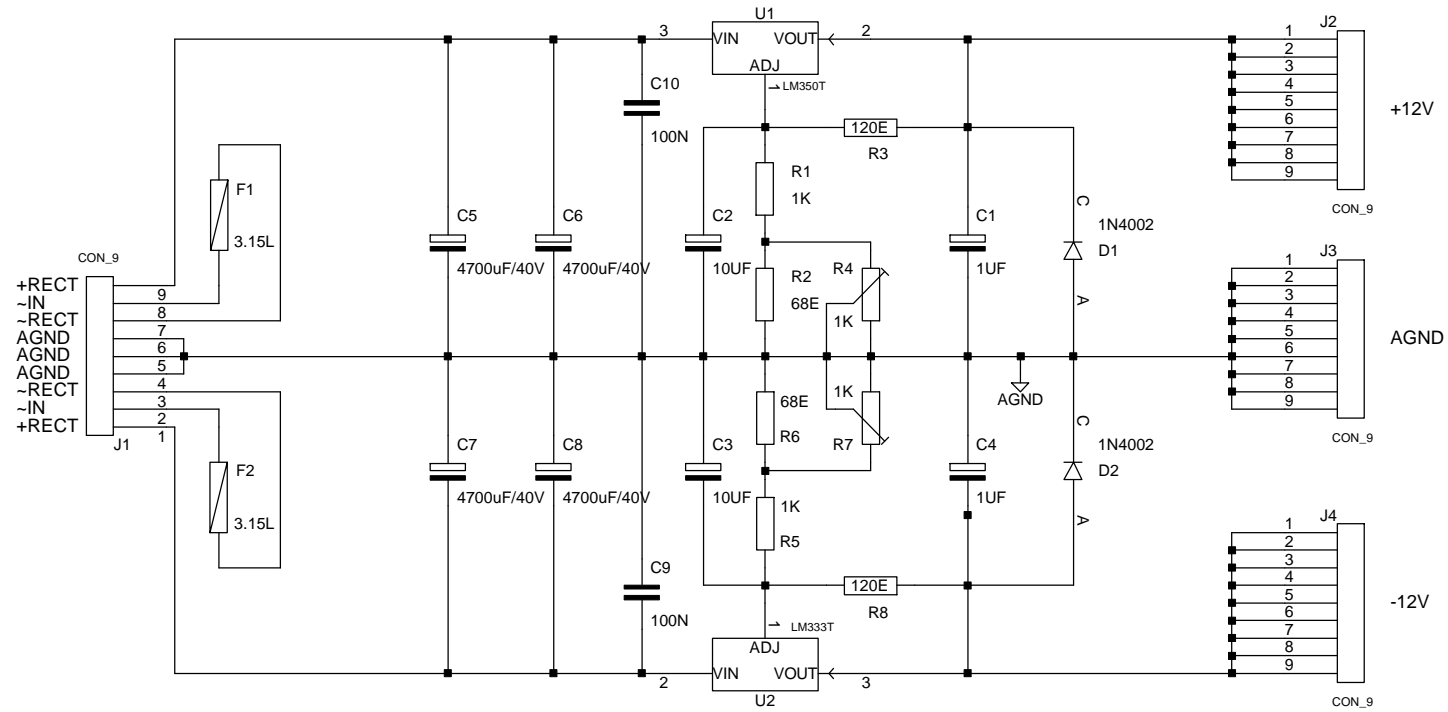
PCB - JHO7146	
Date: 06-04-1998	Rev: 1.2
Project: POWER SUPPLY BRIDGE AMPLIFIERS	
Company: JOHANNUS ORGELBOUW B.V.	Page: 8.3-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



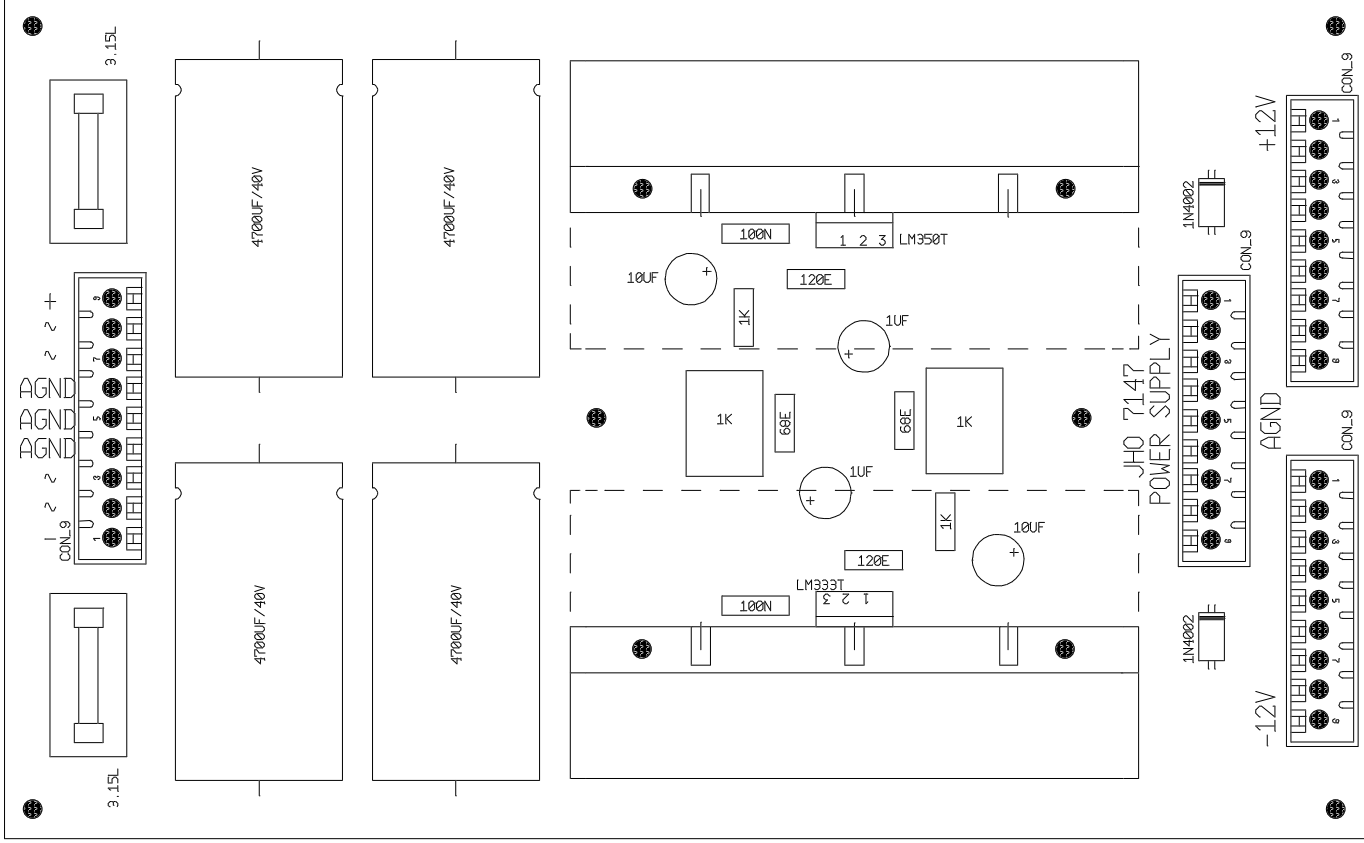
POWER SUPPLY Bridge Amp
JH07146
MH/SD/SD/KB



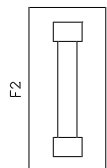
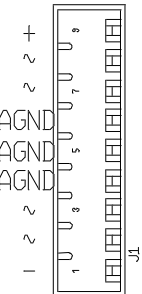
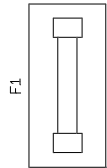
POWER SUPPLY Bridge Amp
 JH07146
 MH/SD/SD/KB



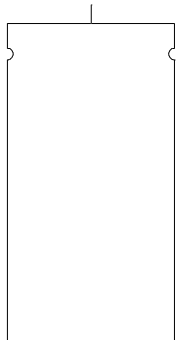
PCB - JHO7147	
Date: 06-05-1999	Rev: 1.0
Project: POWER SUPPLY +/- 12V 3A	
Company: JOHANNUS ORGELBOUW B.V. Address: Keplerlaan 2 City: 6716 BS Ede Country: The Netherlands	Page: 8.4-1



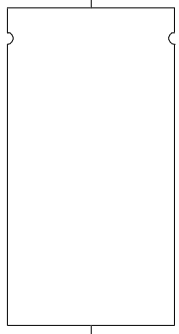
HOLE1



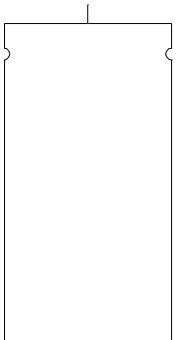
HOLE



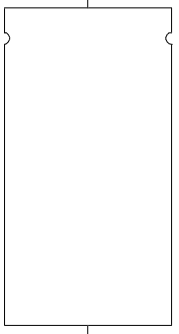
C7



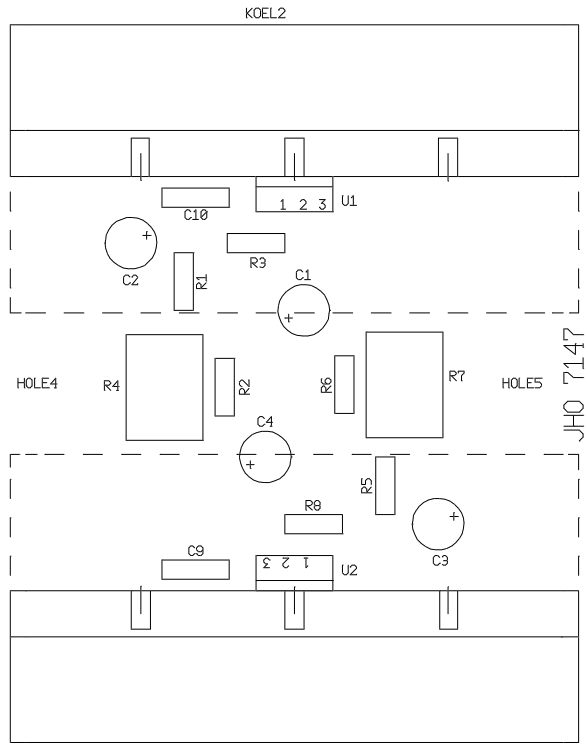
C6



C8



C5



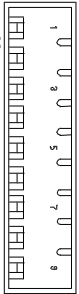
KOEL2

KOEL1

HOLE4

HOLE5

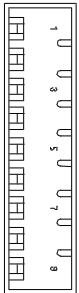
JHO 7147
POWER SUPPLY



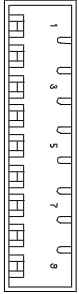
AGND

+12V

-12V



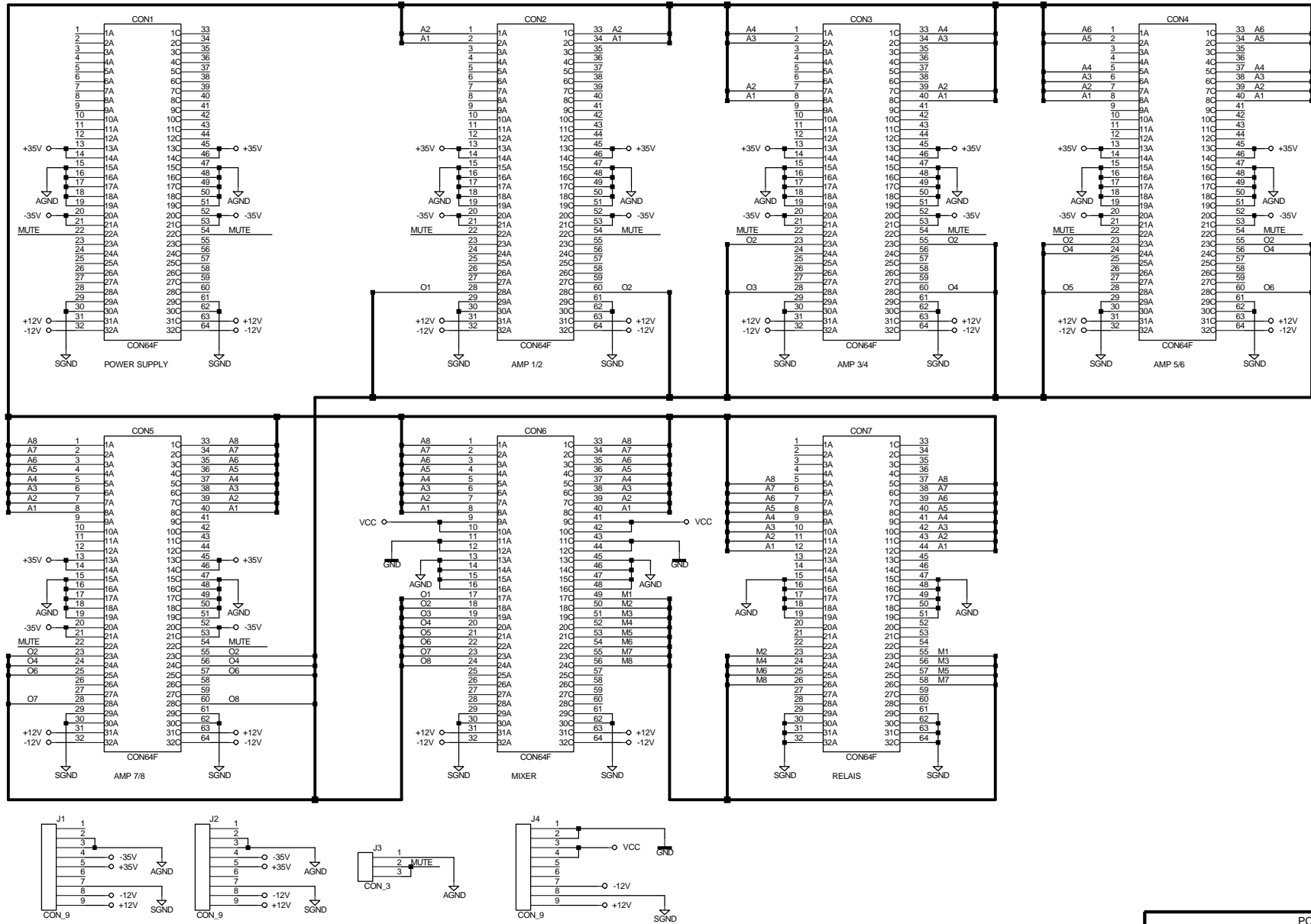
J2



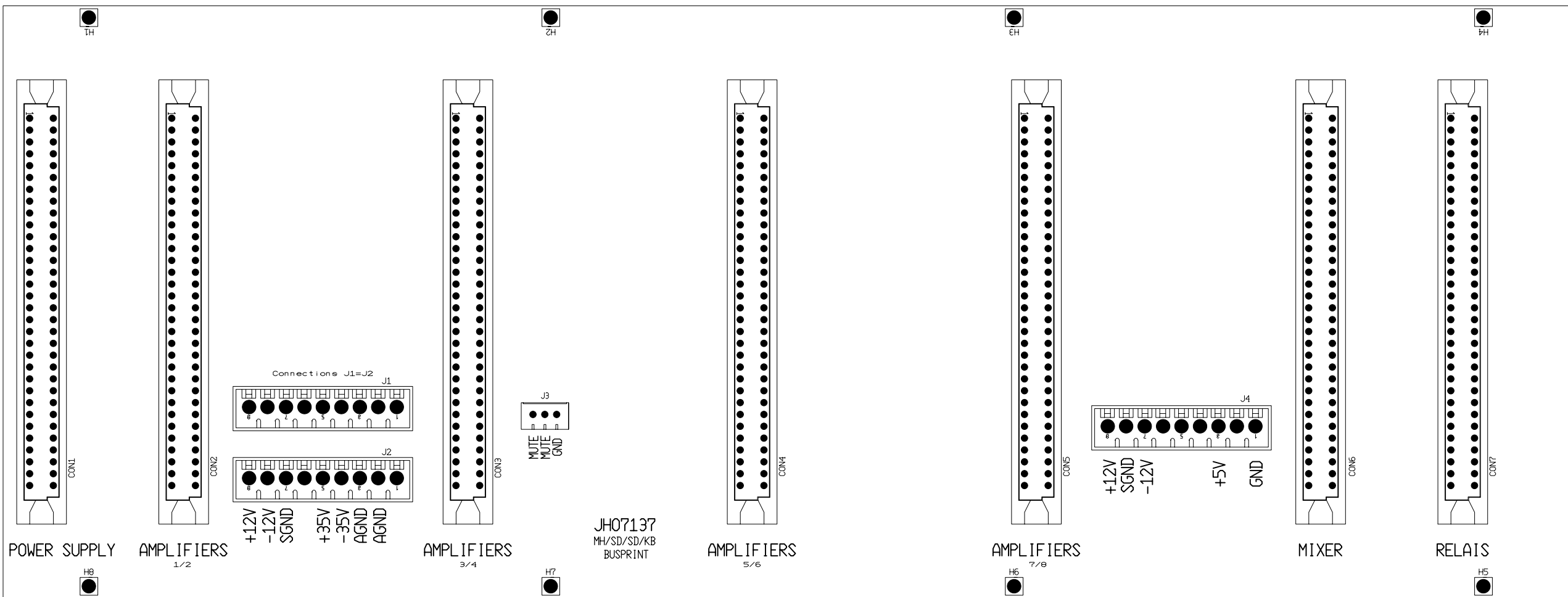
J4

HOLE2

HOLE3



PCB - JHO7137	
Date: 28-04-1998	Rev: 1.2
Project: BUSCARD DUAL POWER AMPLIFIERS 8-CHANNEL	
Company: JOHANNUS ORGELBOUW B.V.	Page: 9.1-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



POWER SUPPLY

AMPLIFIERS
1/2

+12V
-12V
SGND
+35V
-35V
AGND
AGND

AMPLIFIERS
3/4

JHO7137
MH/SD/SD/KB
BUSPRINT

AMPLIFIERS
5/6

AMPLIFIERS
7/8

MIXER

RELAIS

TH

ZH

EH

H4

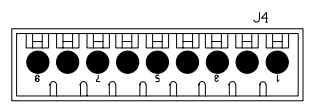
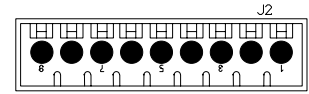
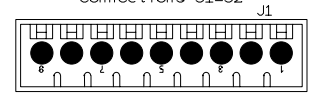
H8

H7

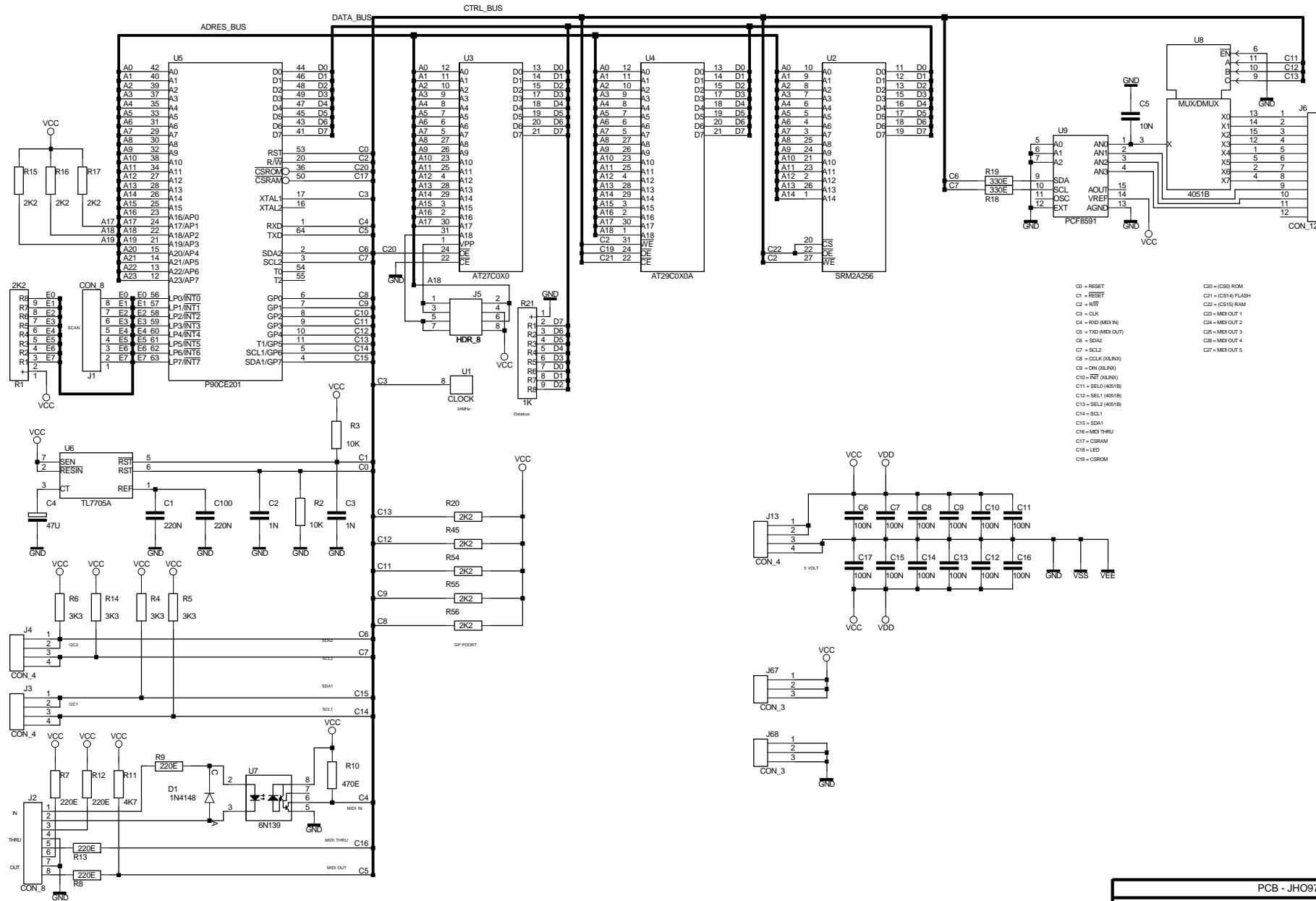
H6

H5

Connections J1=J2

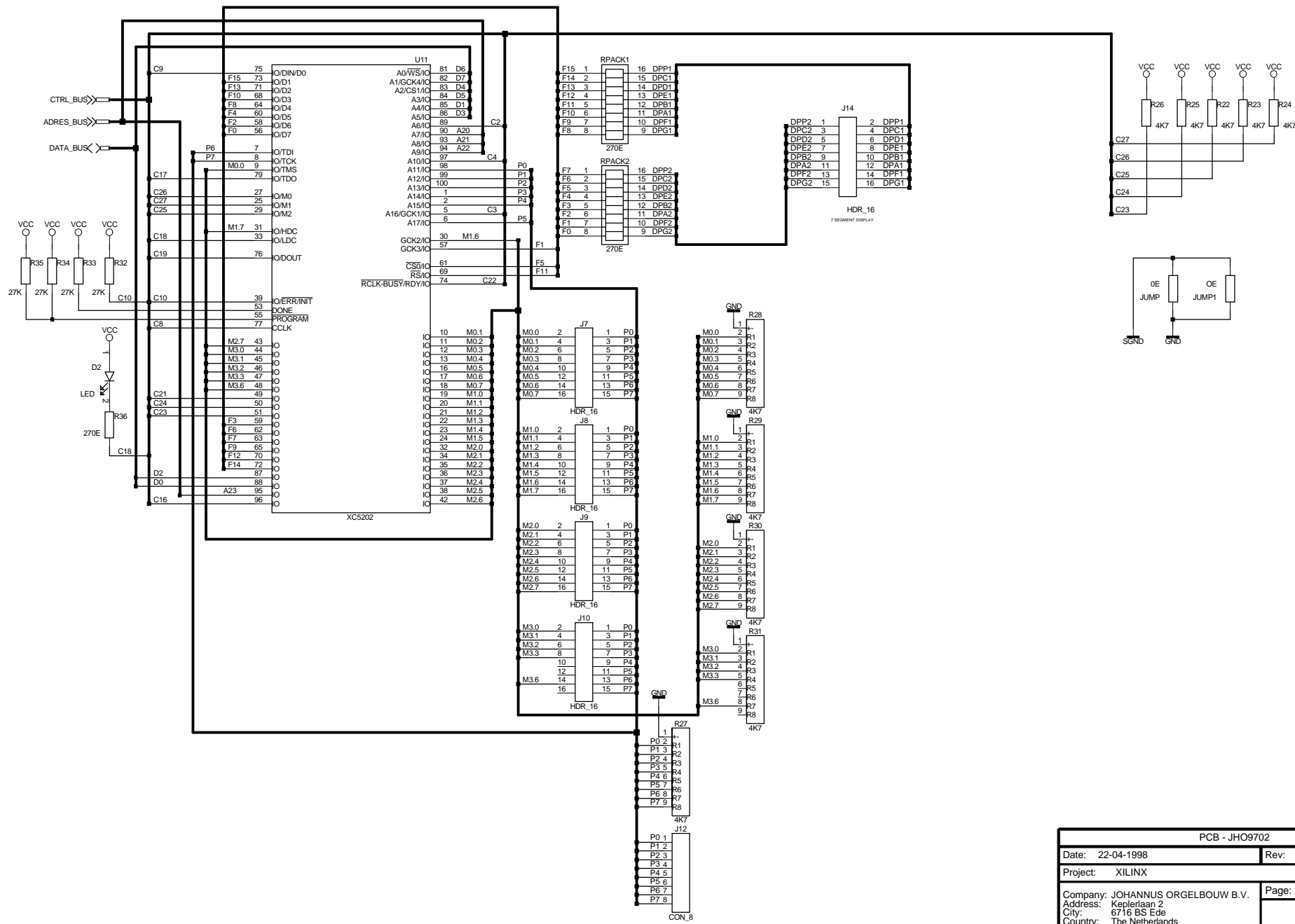


+12V
SGND
-12V
+5V
GND

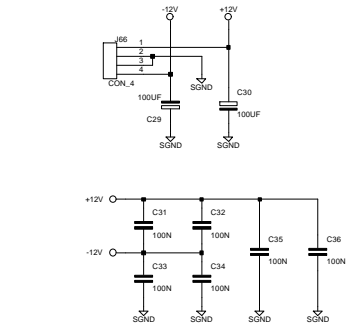
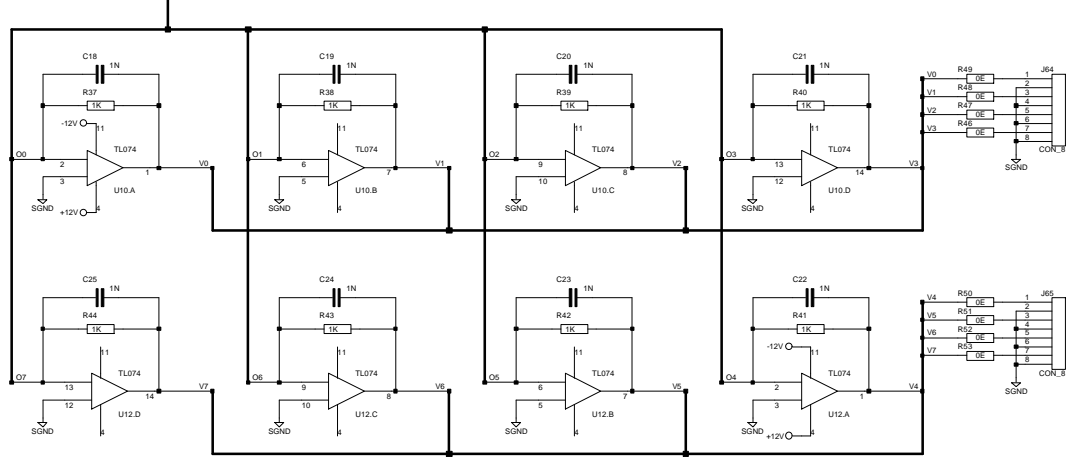
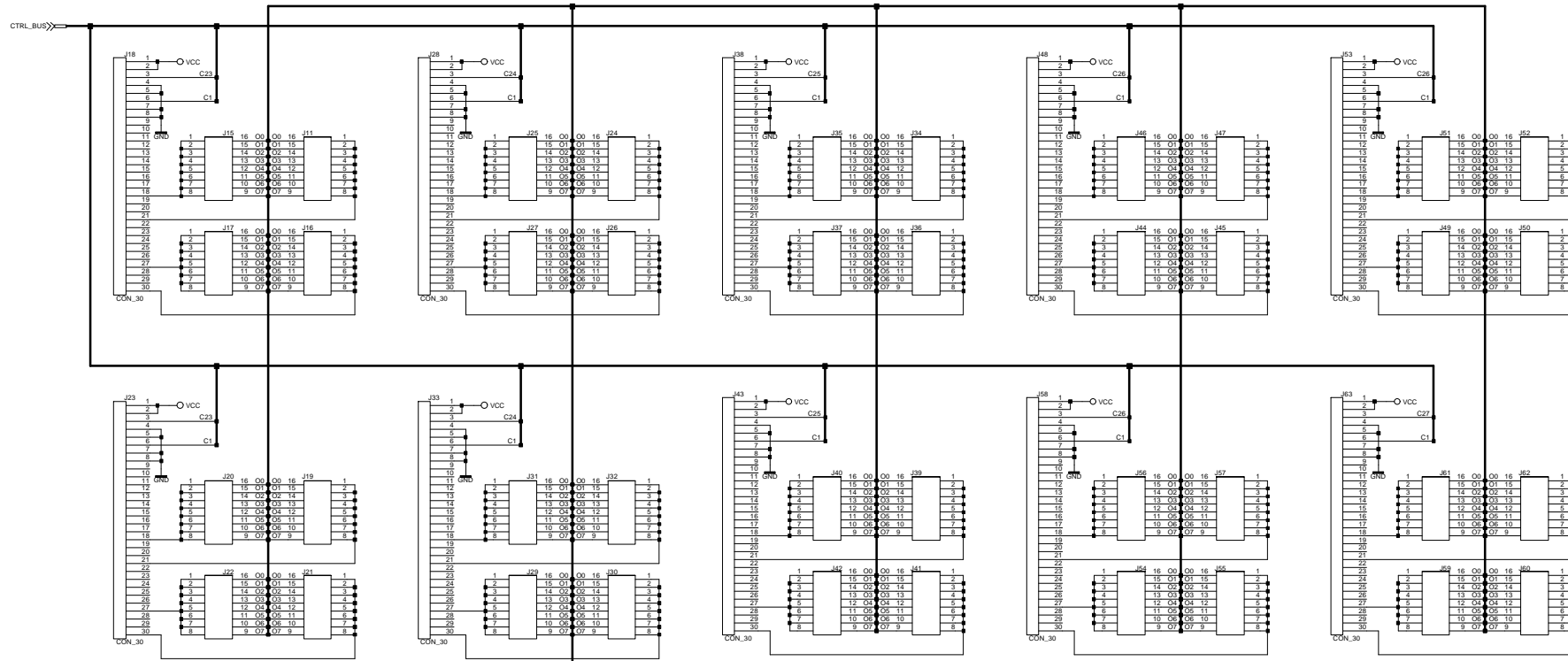


- C0 = RESET
 - C1 = RESET
 - C2 = RST
 - C3 = CLK
 - C4 = RXD (MEDI IN)
 - C5 = TXD (MEDI OUT)
 - C6 = SDA2
 - C7 = SCL2
 - C8 = CCLK (MEDI IN)
 - C9 = DIN (MEDI IN)
 - C10 = RST (MEDI IN)
 - C11 = SEL1 (MEDI IN)
 - C12 = SEL2 (MEDI IN)
 - C13 = SEL3 (MEDI IN)
 - C14 = SCL1
 - C15 = SDA1
 - C16 = MEDI THRU
 - C17 = CSRAM
 - C18 = LED
 - C19 = CSROM
- C20 = (CS) ROM
 - C21 = (CS) FLASH
 - C22 = (CS) RAM
 - C23 = MEDI OUT 2
 - C24 = MEDI OUT 1
 - C25 = MEDI OUT 3
 - C26 = MEDI OUT 4
 - C27 = MEDI OUT 5

PCB - JHO9702	
Date: 22-04-1998	Rev: 1.2
Project: PROCESSOR	
Company: JOHANNUS ORGELBOUW B.V.	Page: 10.1-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



PCB - JHO9702	
Date: 22-04-1998	Rev: 1.2
Project: XILINX	
Company: JOHANNUS ORGELBOUW B.V.	Page: 10.1-2
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

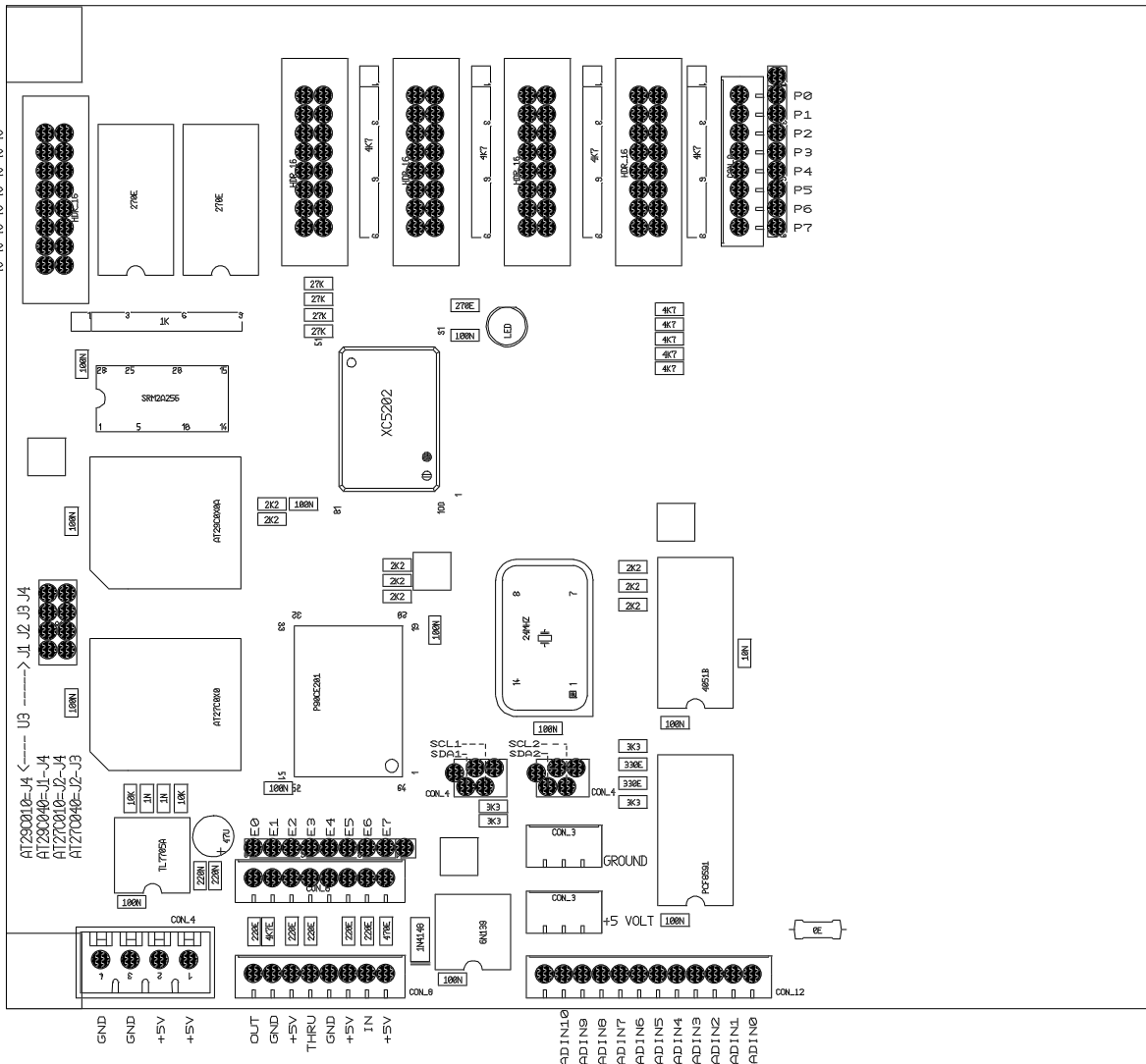


PCB - JHO9702		
Date: 22-04-1998	Rev: 1.2	
Project: VOICE		
Company: JOHANNUS ORGELBOUW B.V.	Keplerlaan 2	Page: 10.1-3
Address: 6716 BS Ede		
City: Ede		
Country: The Netherlands		

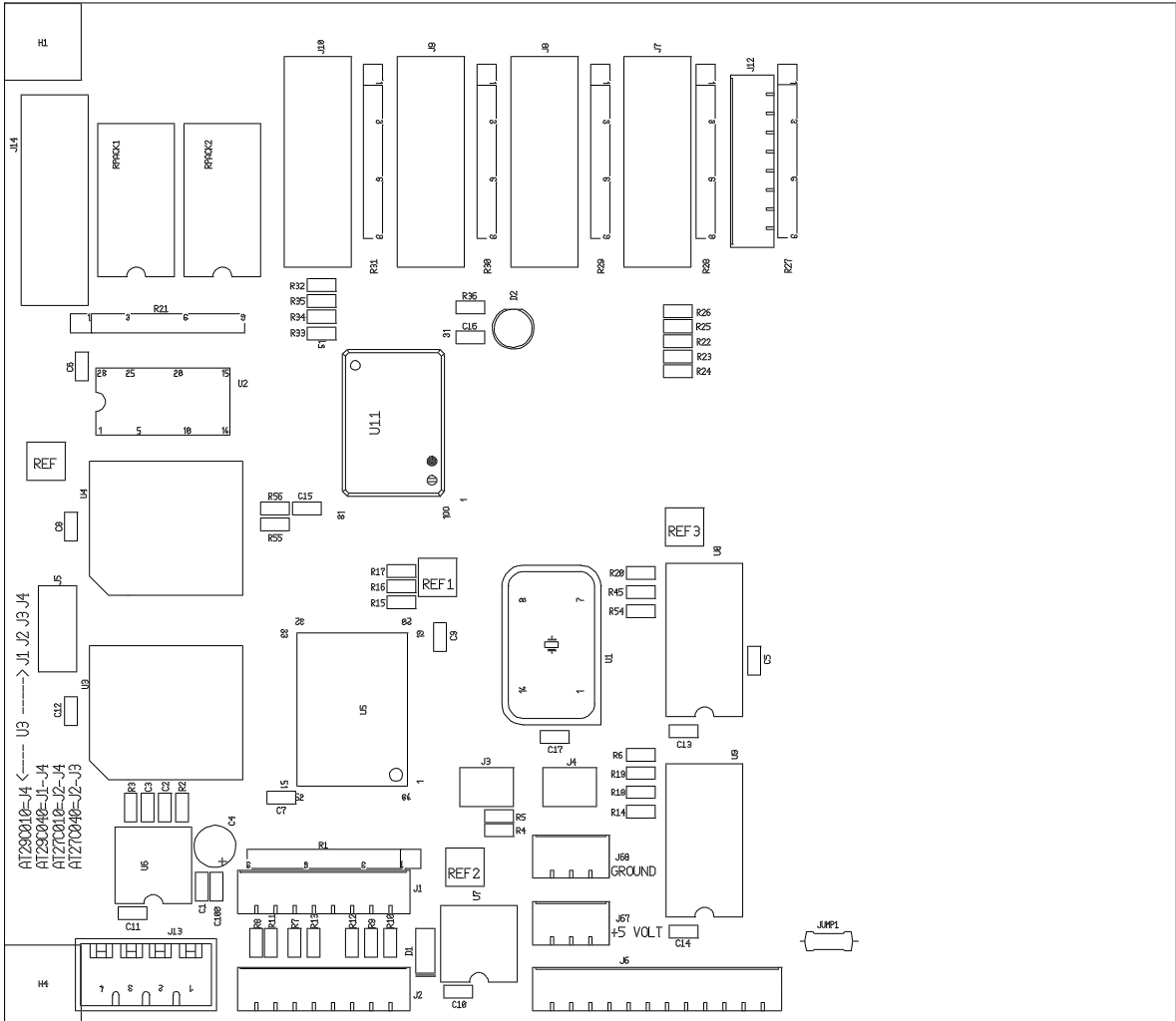
J10-(HDR_16)	J9-(HDR_16)	J8-(HDR_16)	J7-(CHDR_16)
P0:M3.0	P0:M2.0	P0:M1.0	P0:M0.0
P1:M3.1	P1:M2.1	P1:M1.1	P1:M0.1
P2:M3.2	P2:M2.2	P2:M1.2	P2:M0.2
P3:M3.3	P3:M2.3	P3:M1.3	P3:M0.3
P4:	P4:M2.4	P4:M1.4	P4:M0.4
P5:	P5:M2.5	P5:M1.5	P5:M0.5
P6:M3.6	P6:M2.6	P6:M1.6	P6:M0.6
P7:	P7:M2.7	P7:M1.7	P7:M0.7

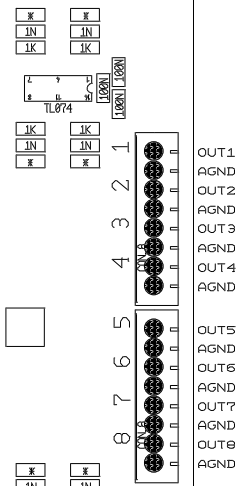
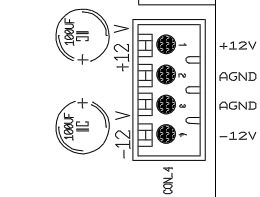
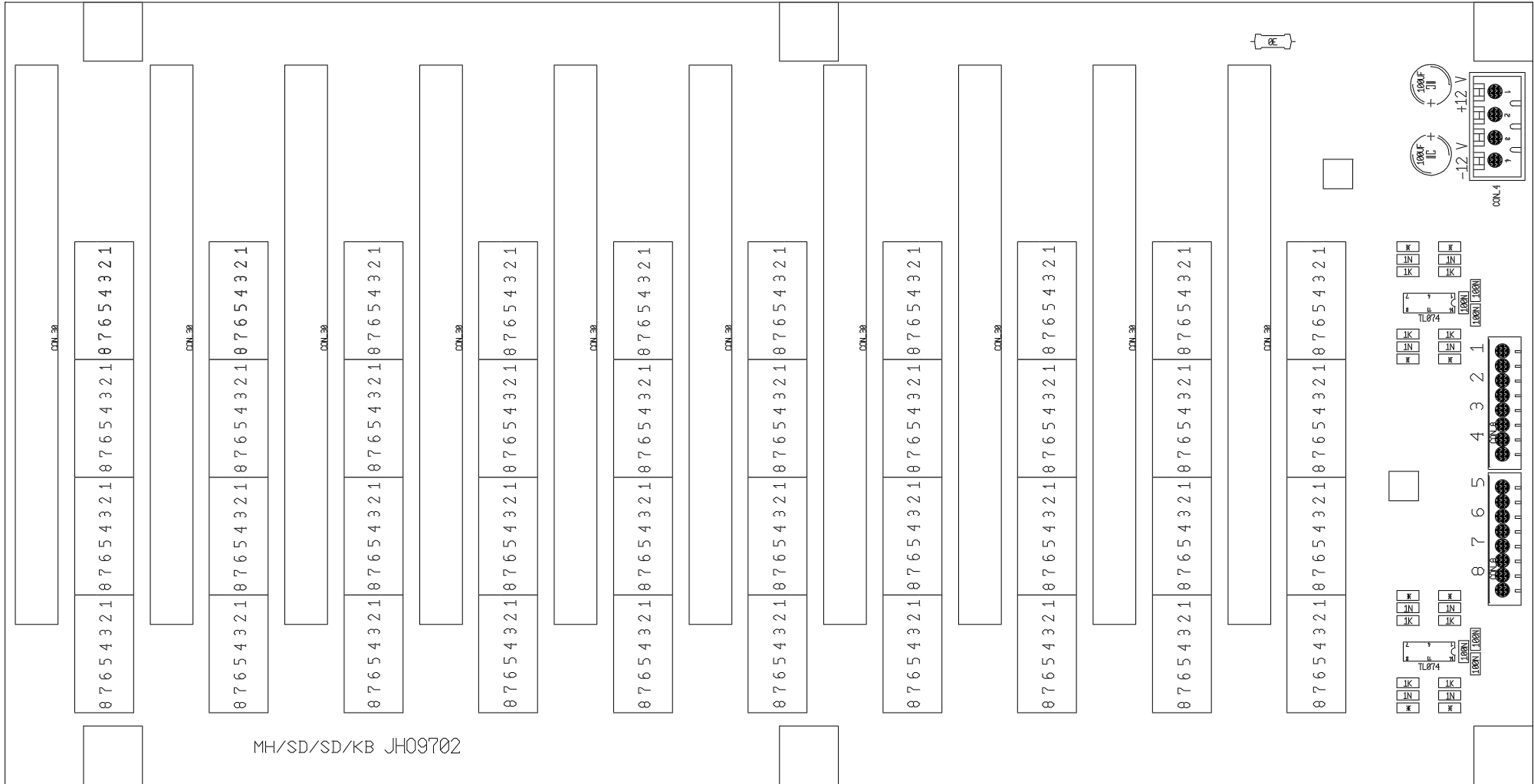
PROCESSOR PART JH09702

DPG1 : DPG2
 DPF1 : DPF2
 DPA1 : DPA2
 DPB1 : DPB2
 DPE1 : DPE2
 DPD1 : DPD2
 DPC1 : DPC2
 DPP1 : DPP2

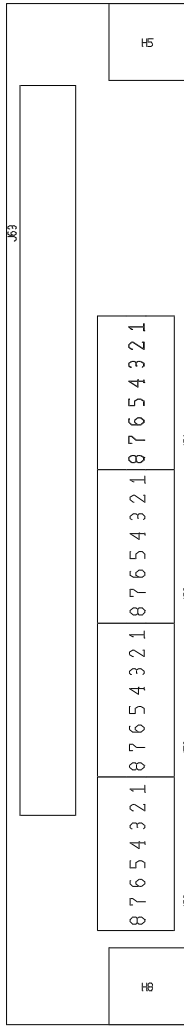


ADIN6
 ADIN5
 ADIN4
 ADIN3
 ADIN2
 ADIN1
 ADING





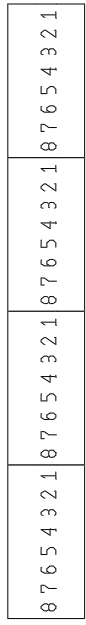
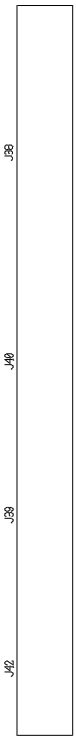
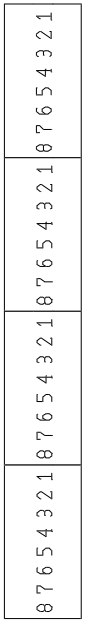
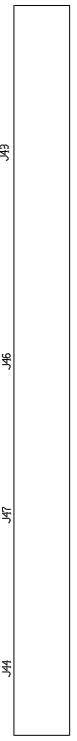
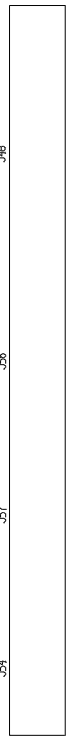
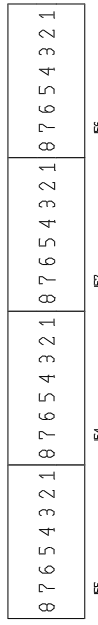
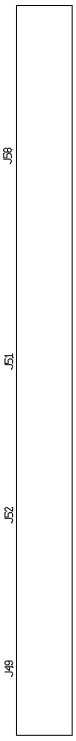
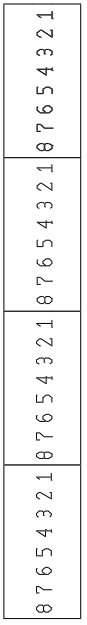
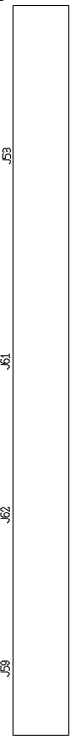
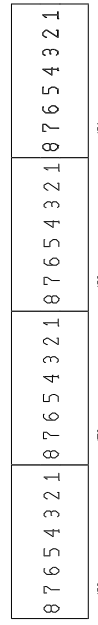
* see schematic design



H8

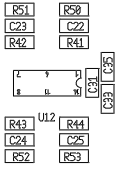
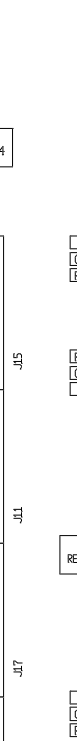
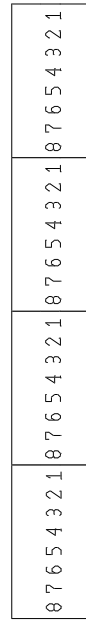
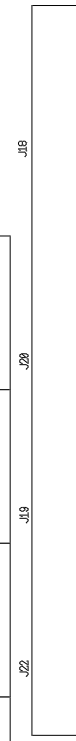
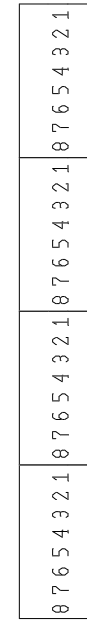
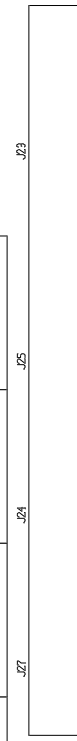
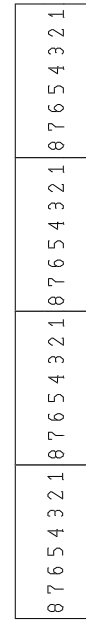
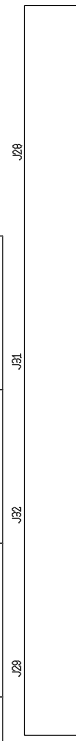
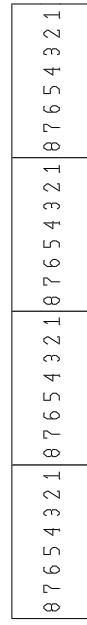
H5

MH/SD/SD/KB JH09702



H8

H5



REF5

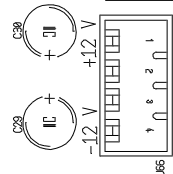
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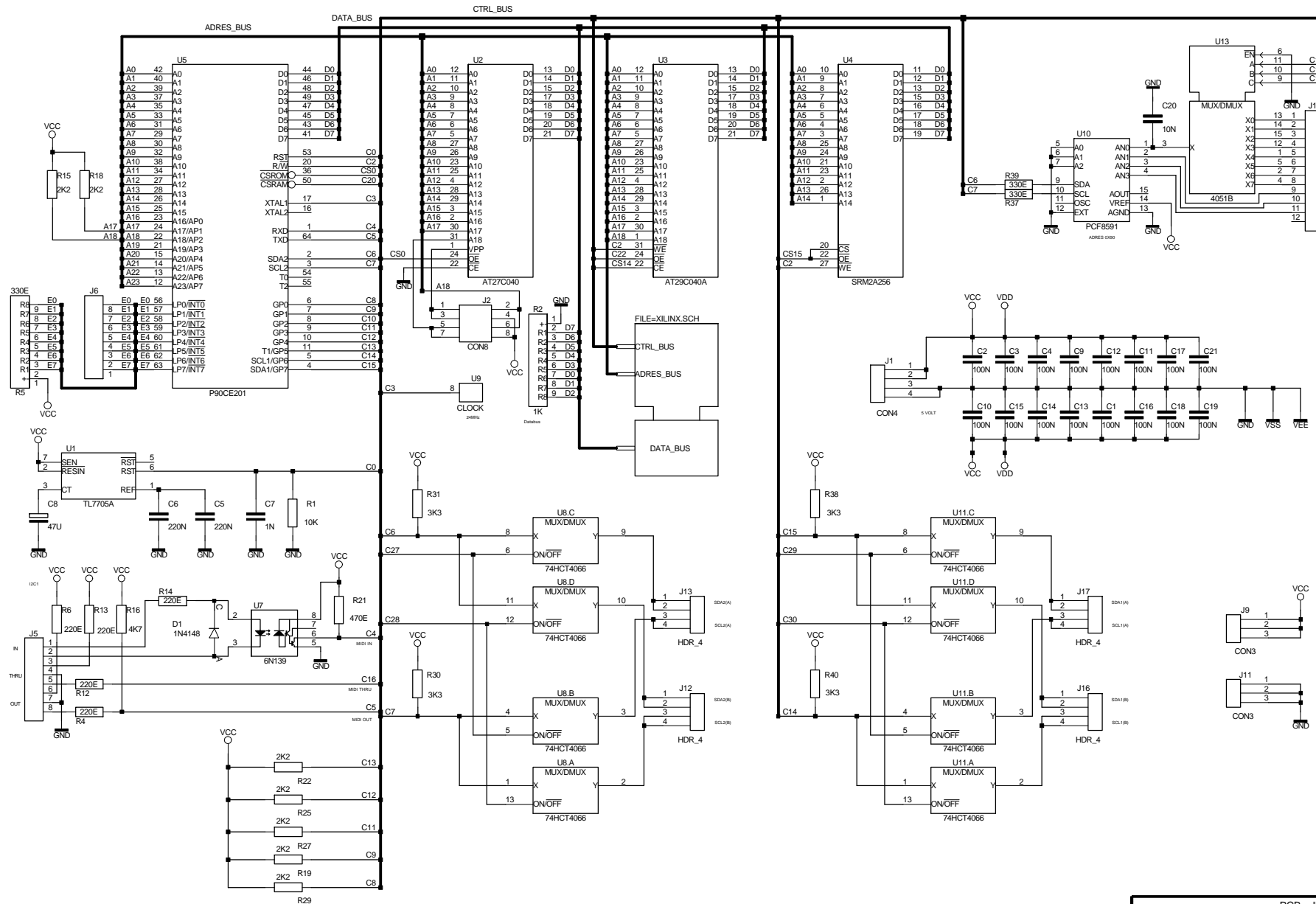
JUPP



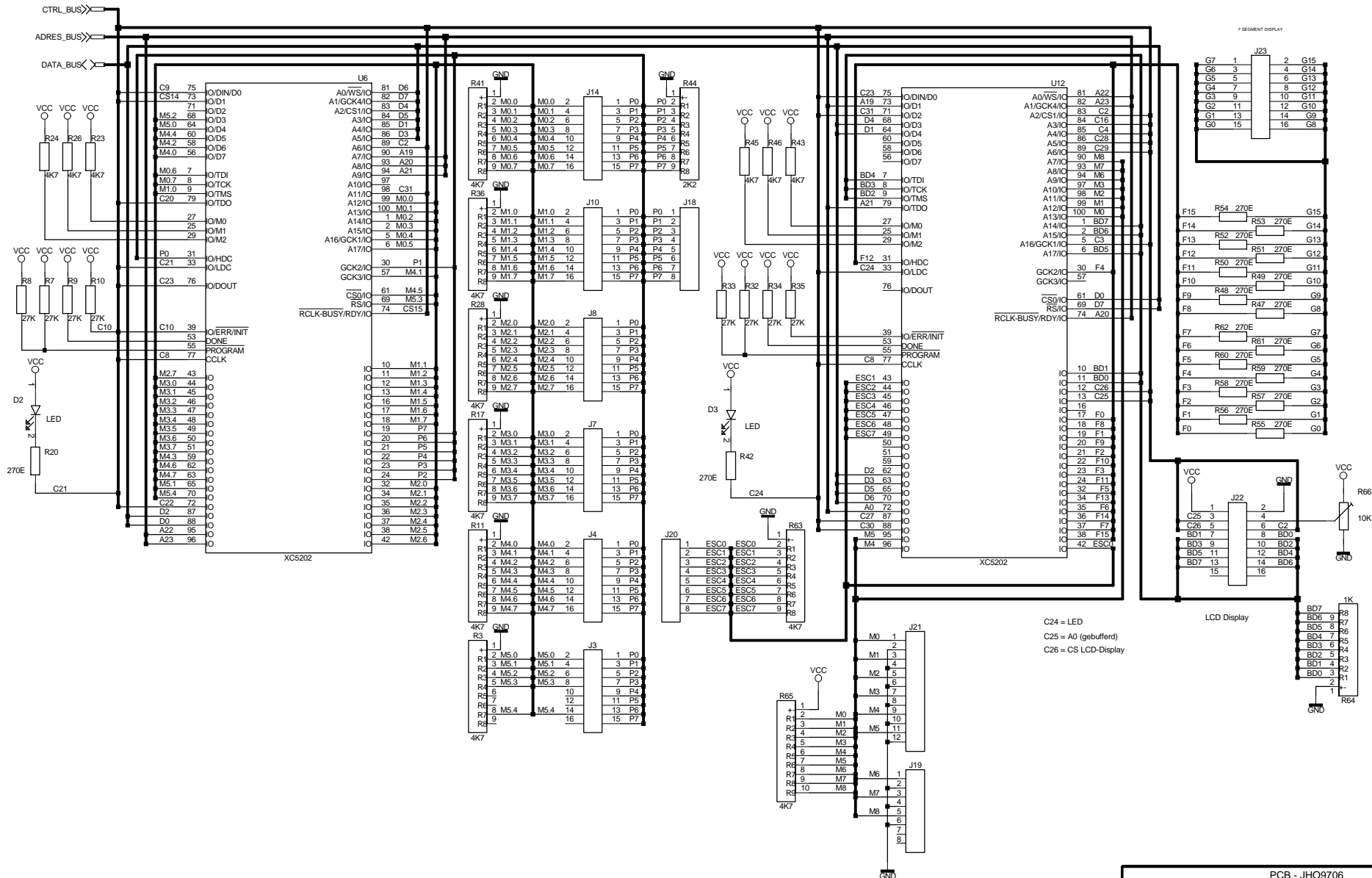
H8

H5





PCB - JHO9706	
Date: 01-06-1998	Rev: 1.2
Project: PROCESSOR (CUSTOM ORGANS)	
Company: JOHANNUS ORGELBOUW B.V.	Page: 10.2-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



PCB - JHO9706	
Date: 01-06-1998	Rev: 1.2
Project: XILINX (PROCESSOR CUSTOM ORGANS)	
Company: JOHANNUS ORGELBOUW B.V.	Page: 10.2-2
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

J3-(HDR_16) J4-(HDR_16) J7-(HDR_16) J8-(HDR_16) J10-(HDR_16) J14-(HDR_16) J18-(CON8) J20-(CON8)

P0:M5_0 P0:M4_0 P0:M2_0 P0:M1_0 P0:M0_0 P0 ESC0

P1:M5_1 P1:M4_1 P1:M3_1 P1:M2_1 P1:M1_1 P1:M0_1 P1 ESC1

P2:M5_2 P2:M4_2 P2:M3_2 P2:M2_2 P2:M1_2 P2:M0_2 P2 ESC2

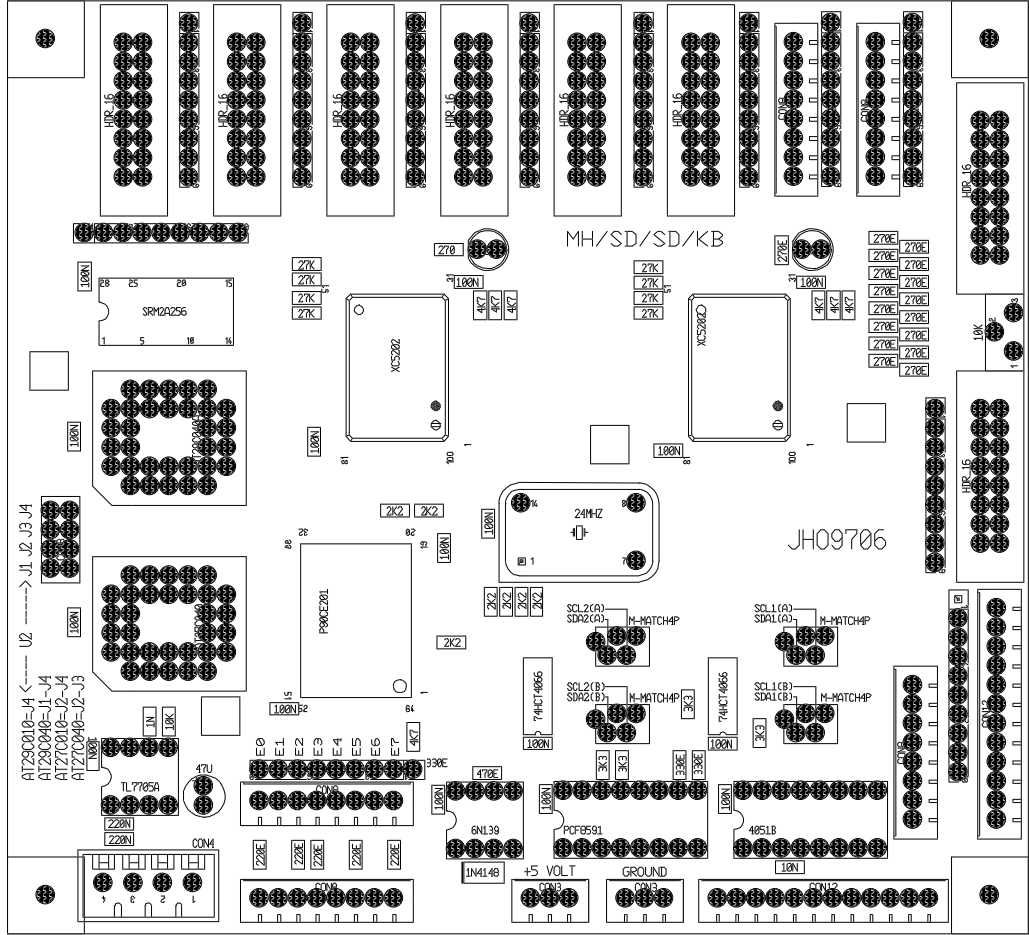
P3:M5_3 P3:M4_3 P3:M3_3 P3:M2_3 P3:M1_3 P3:M0_3 P3 ESC3

P4: P4:M4_4 P4:M3_4 P4:M2_4 P4:M1_4 P4:M0_4 P4 ESC4

P5: P5:M4_5 P5:M3_5 P5:M2_5 P5:M1_5 P5:M0_5 P5 ESC5

P6:M5_6 P6:M4_6 P6:M3_6 P6:M2_6 P6:M1_6 P6:M0_6 P6 ESC6

P7: P7:M4_7 P7:M3_7 P7:M2_7 P7:M1_7 P7:M0_7 P7 ESC7



MH/SD/SD/KB

JH09706

G7:G15
G6:G14
G5:G13
G4:G12
G3:G11
G2:G10
G1:G9
G0:G8

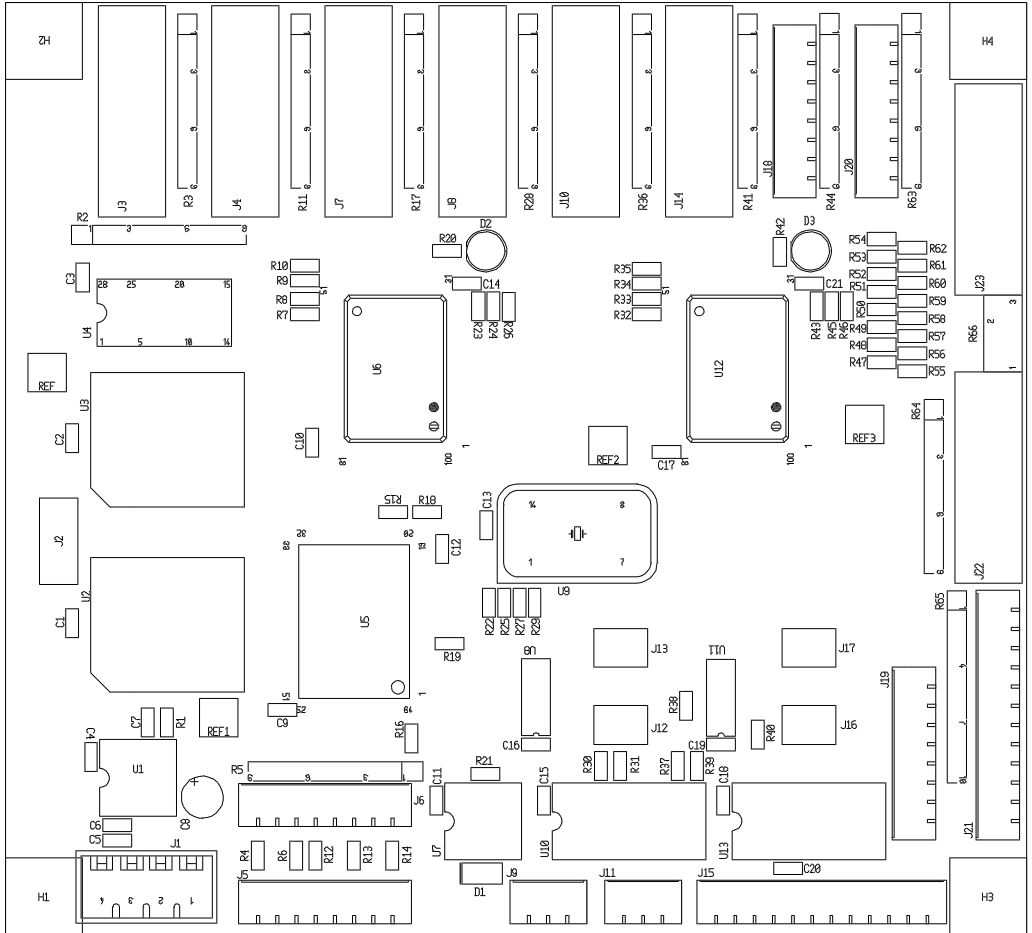
VCC:GND
C25:BACKLIGHT INTENSITY
C26:IC2
BD1:BD0
BD3:BD2
BD5:BD4
BD7:BD6
NC:INC

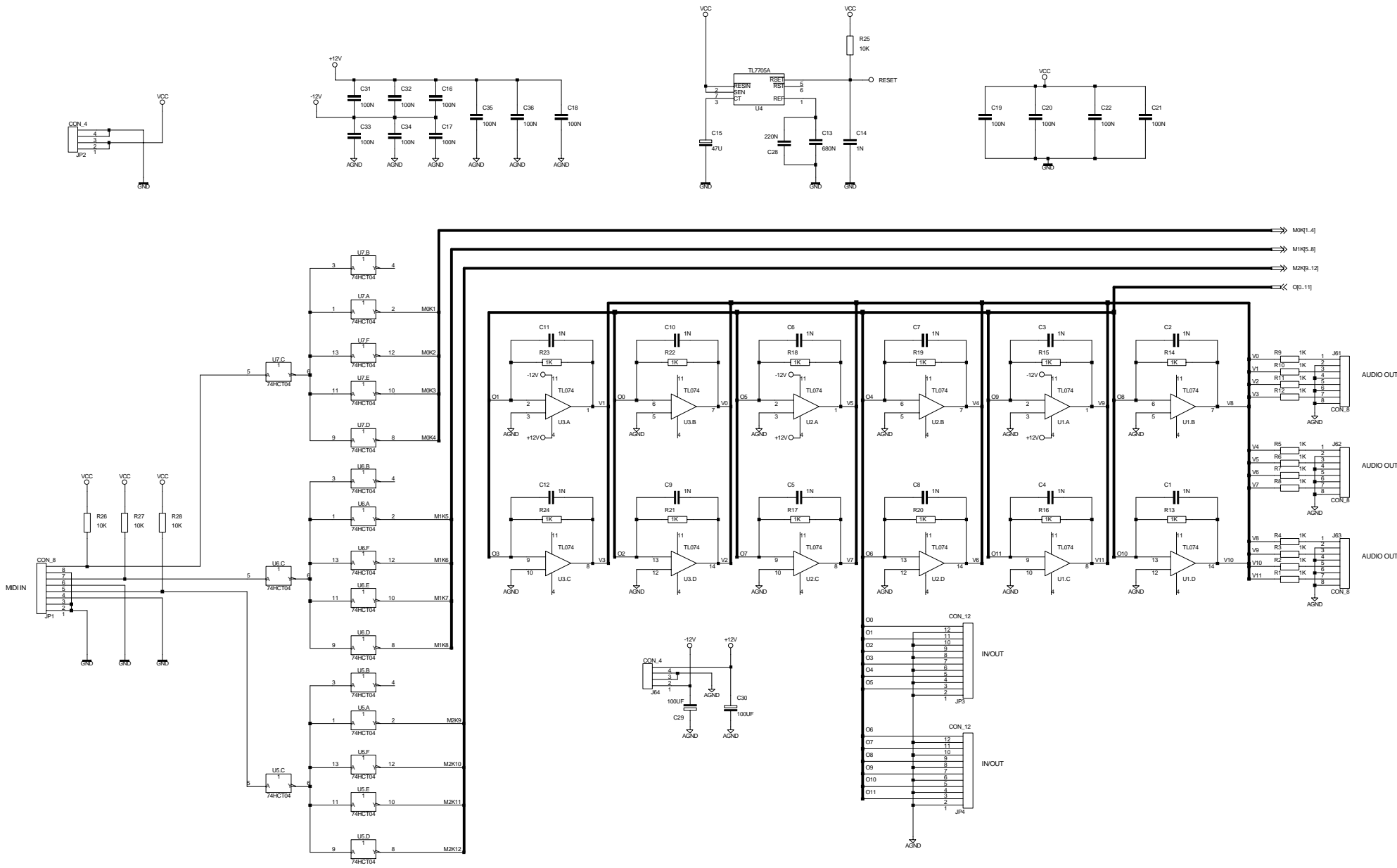
J19:J21
M0
GND
M1
GND
M6:M2
GND:GND
M7:M3
GND:GND
M8:M4
GND:GND
NC:M5
NC:GND

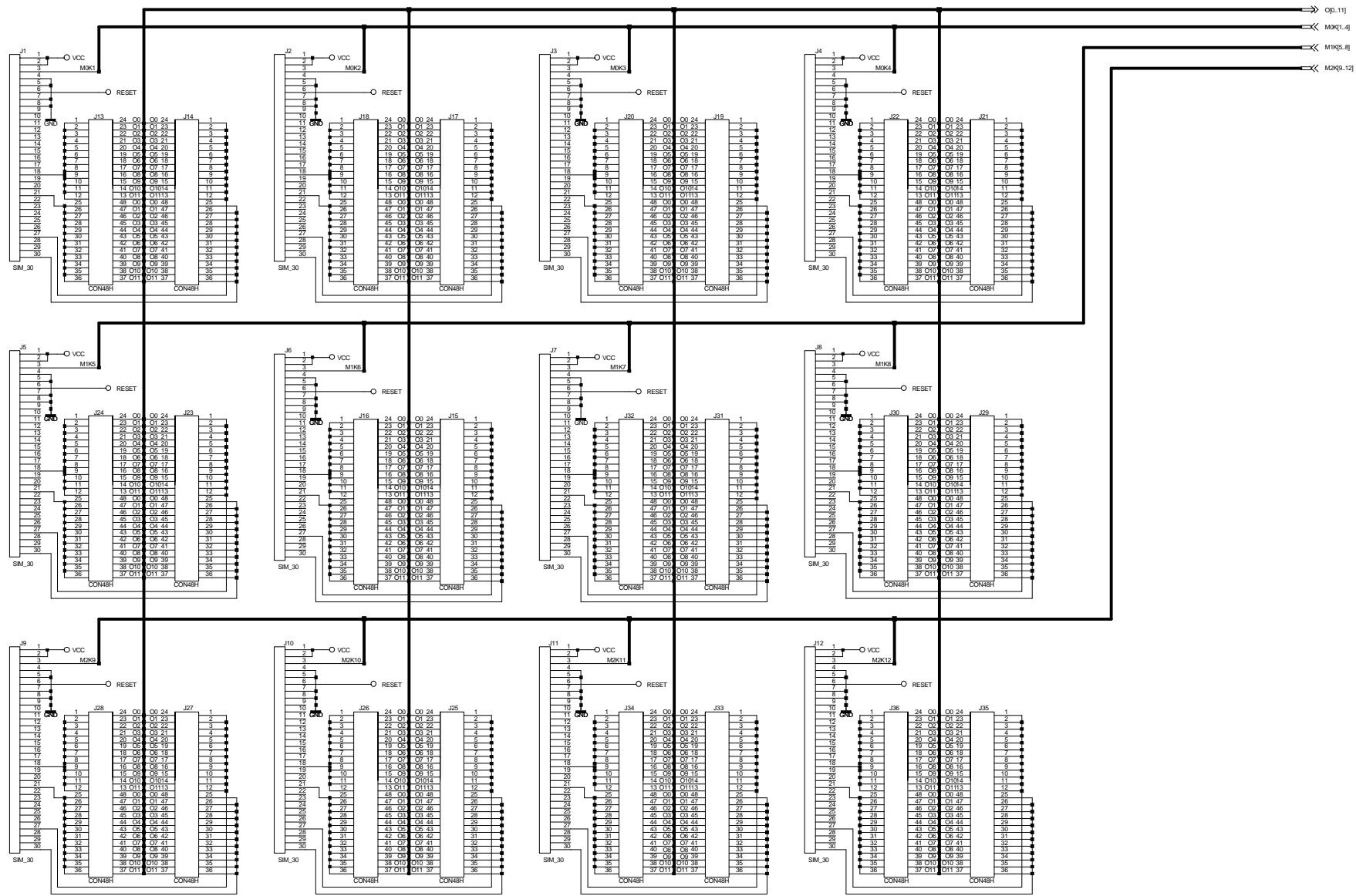
GND GND +5V +5V

OUT GND +5V THRU GND +5V IN IN +5V

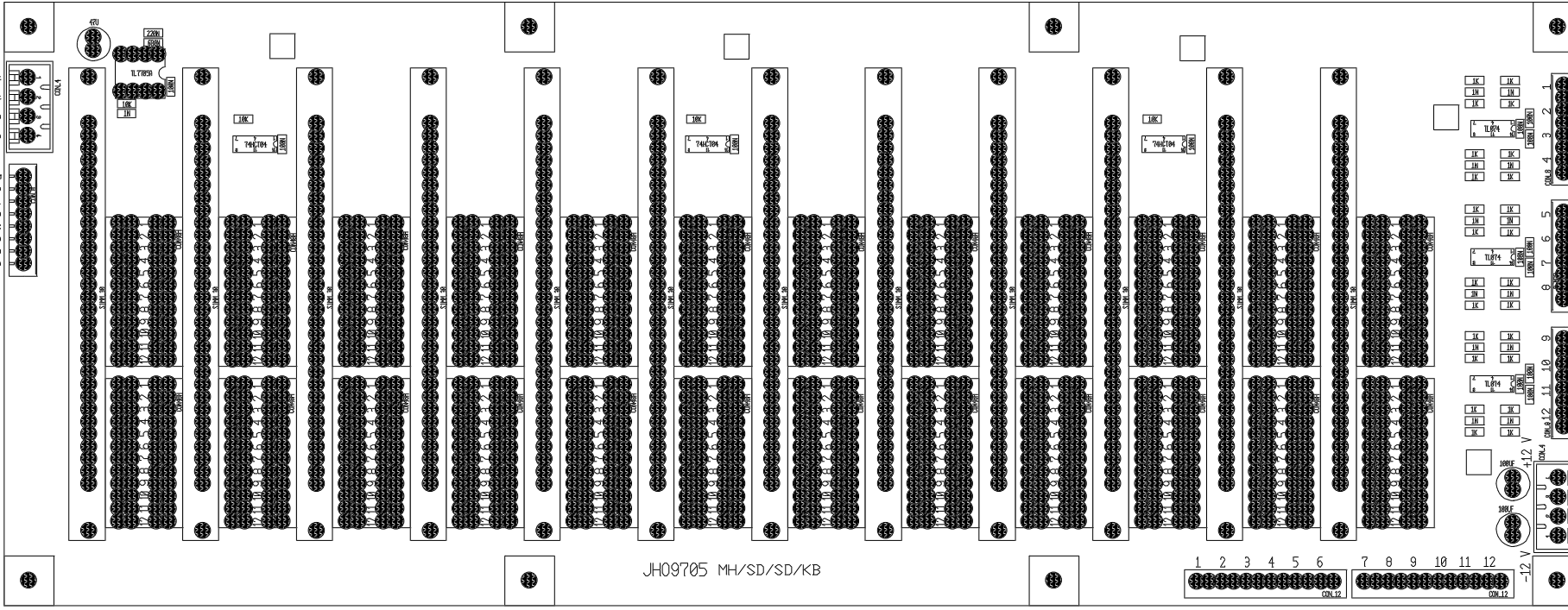
NC AD IN10 AD IN9 AD IN8 AD IN7 AD IN6 AD IN5 AD IN4 AD IN3 AD IN2 AD IN1 AD IN0







VCC
VCC
GND
GND
GND
M1
M2
M3
M4
M5
M6
M7
M8
M9
M10
M11
M12



JH09705 MH/SD/SD/KB

06
AGND
01
AGND
02
AGND
03
AGND
04
AGND
05
AGND
06
AGND
07
AGND
08
AGND
09
AGND
10
AGND
11
AGND
12
AGND

CON.12

CON.12

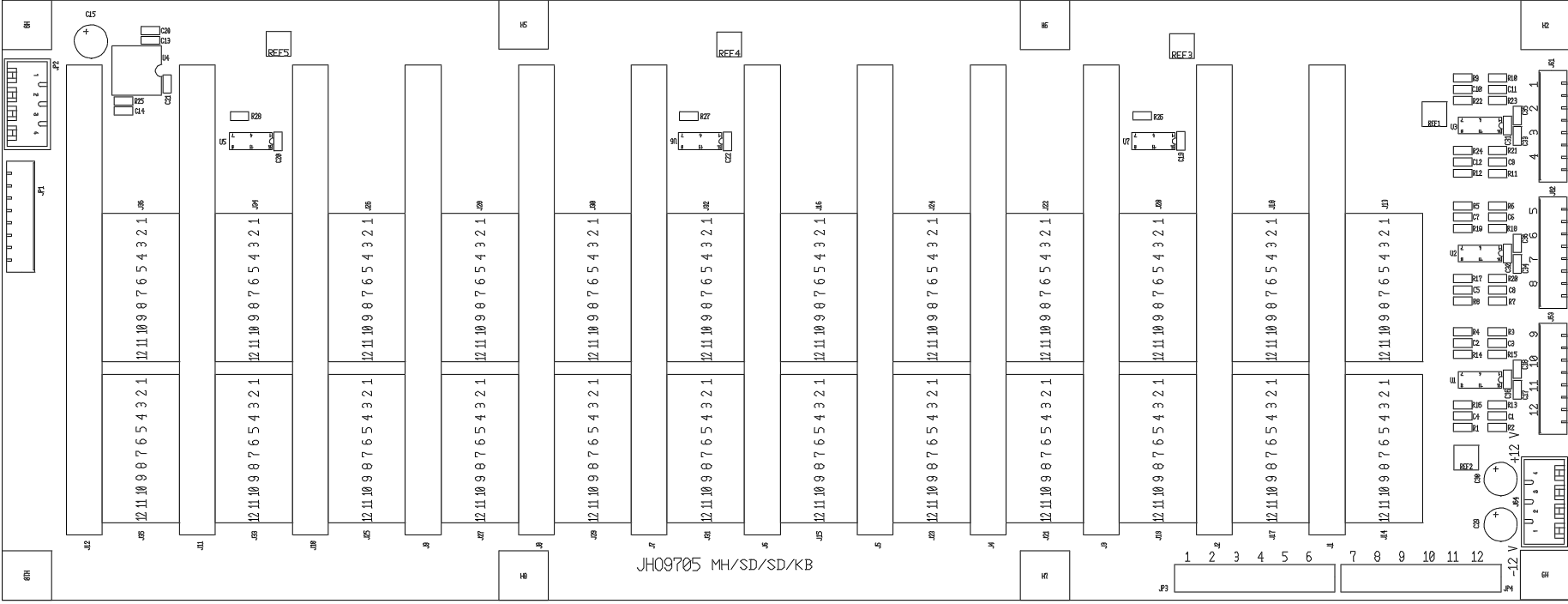
-12V

OUT/V8
AGND
OUT/V1
AGND
OUT/V2
AGND
OUT/V3
AGND

OUT/V4
AGND
OUT/V5
AGND
OUT/V6
AGND
OUT/V7
AGND

OUT/V8
AGND
OUT/V9
AGND
OUT/V10
AGND
OUT/V11
AGND

+12V
AGND
AGND
-12V



JH09705 MH/SD/SD/KB

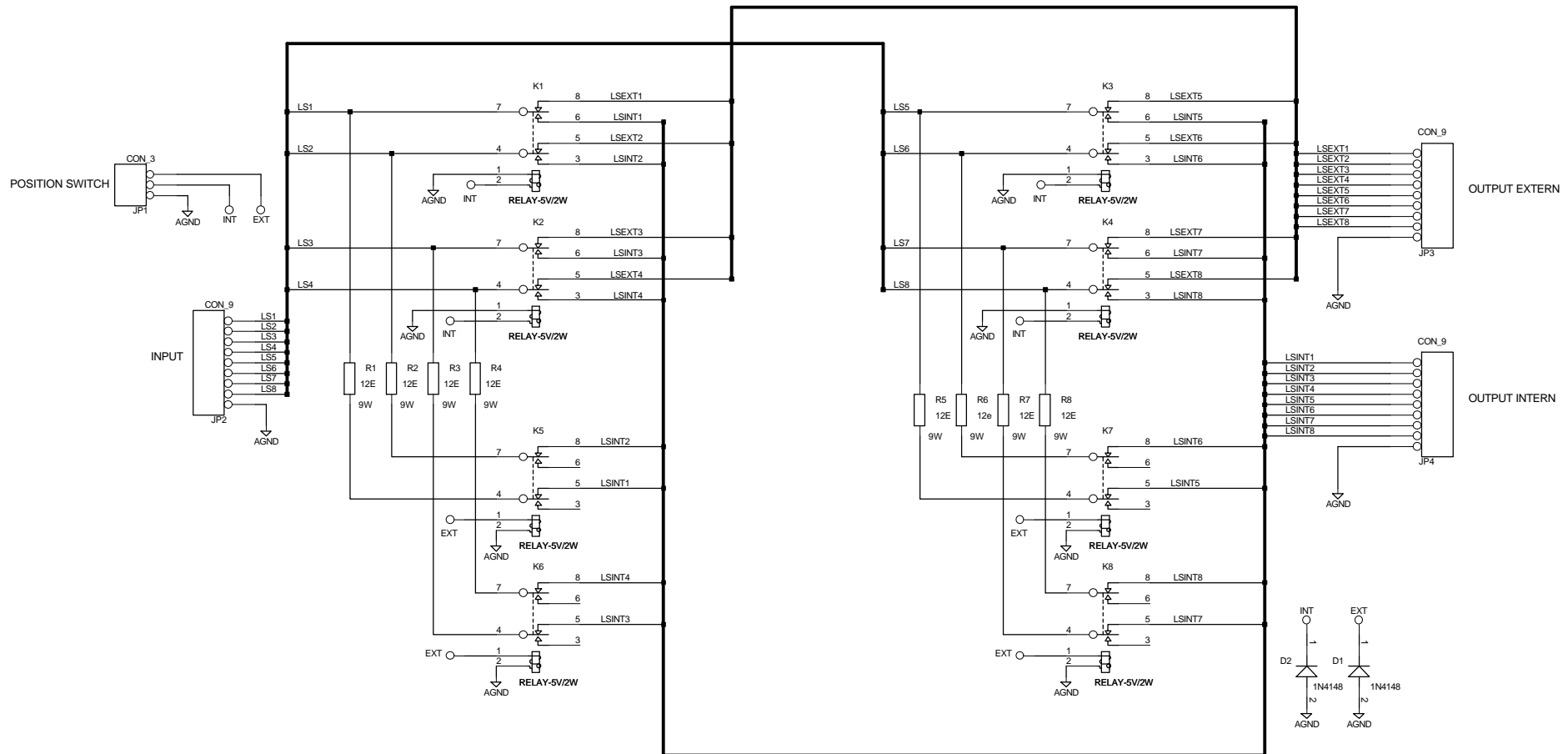
12 V
-12 V

A3
A4

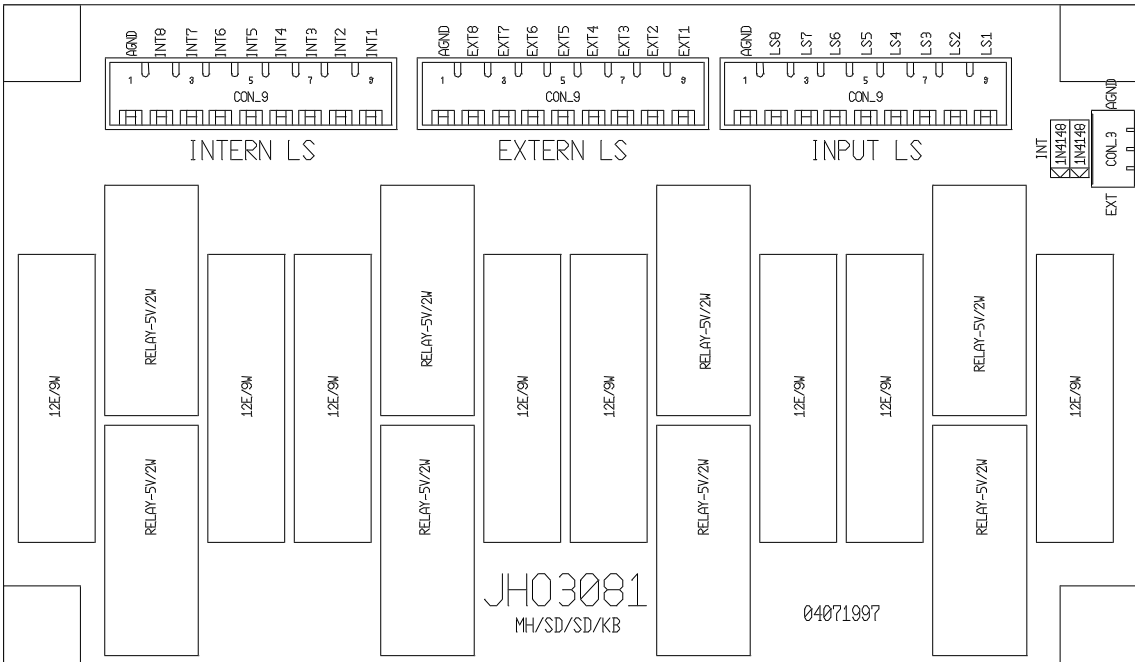
12 11 10 9 8 7 6 5 4 3 2 1

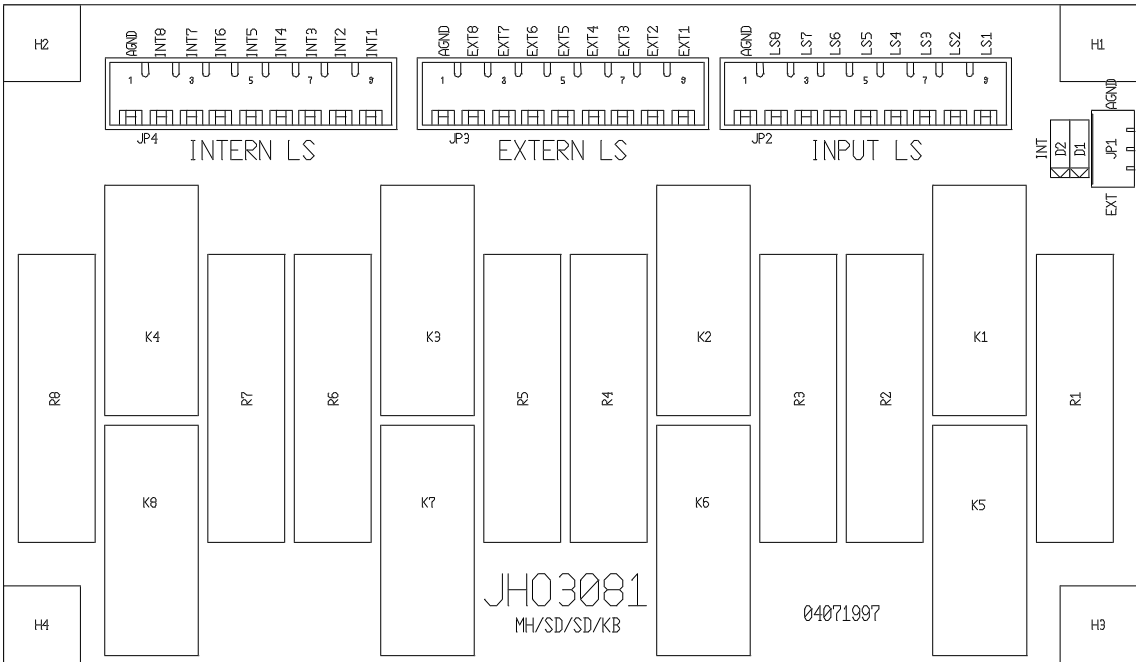
REF.1
REF.2
REF.3
REF.4
REF.5

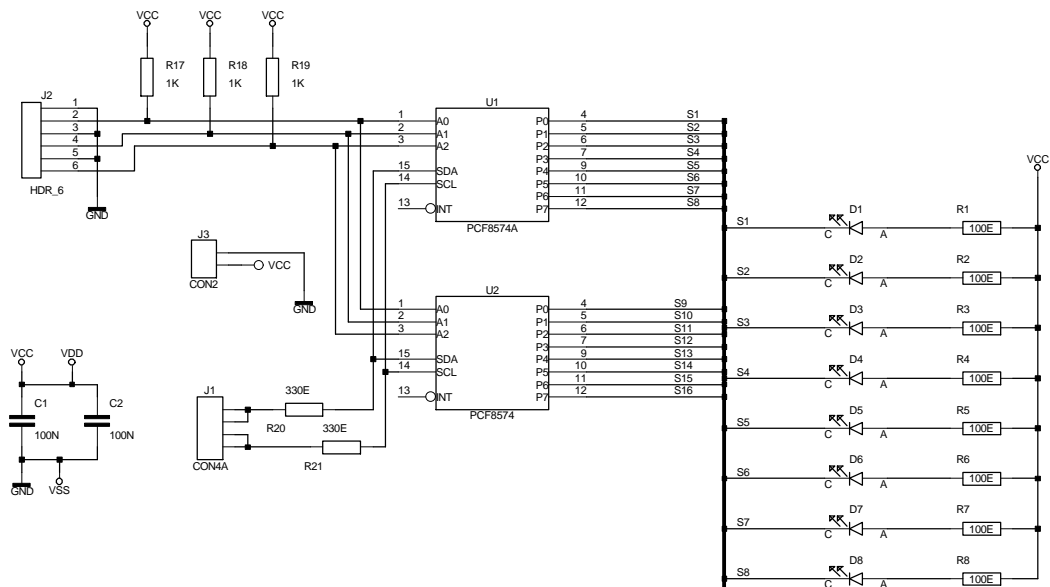
A1
A2



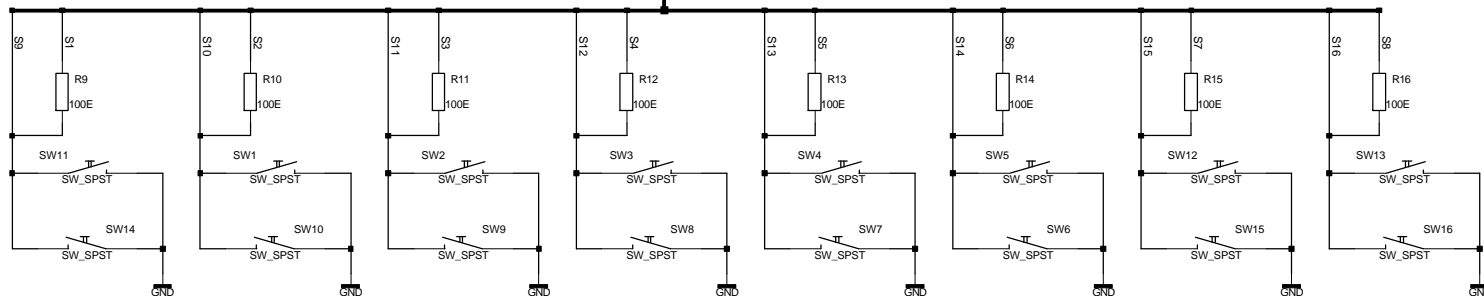
PCB - JHO3081	
Date: 06-04-1998	Rev: 1.2
Project: 3 - POSITION SWITCH	
Company: JOHANNUS ORGELBOUW B.V.	Page: 11.1-1
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	





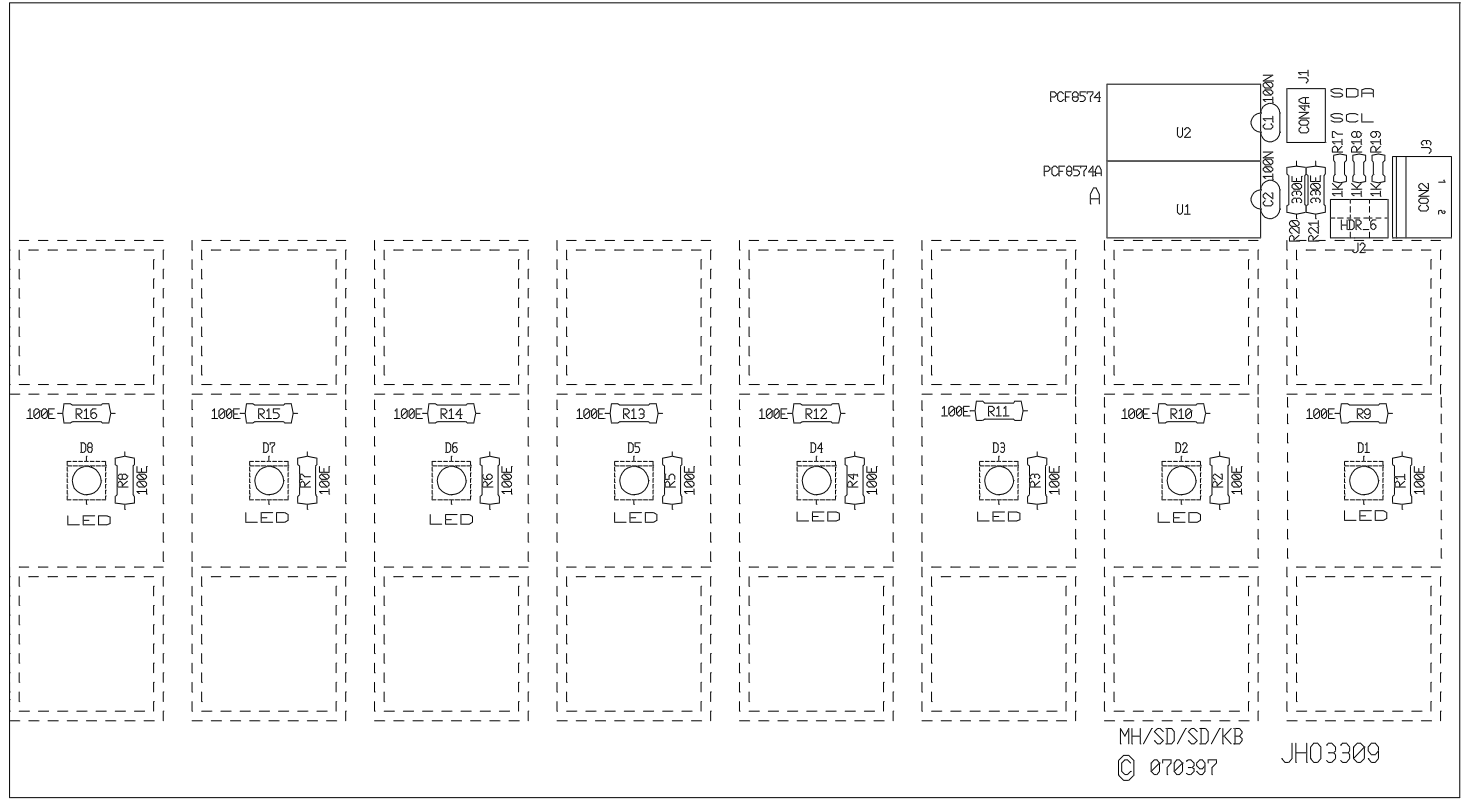


R9..R10 are only placed when U2 is out



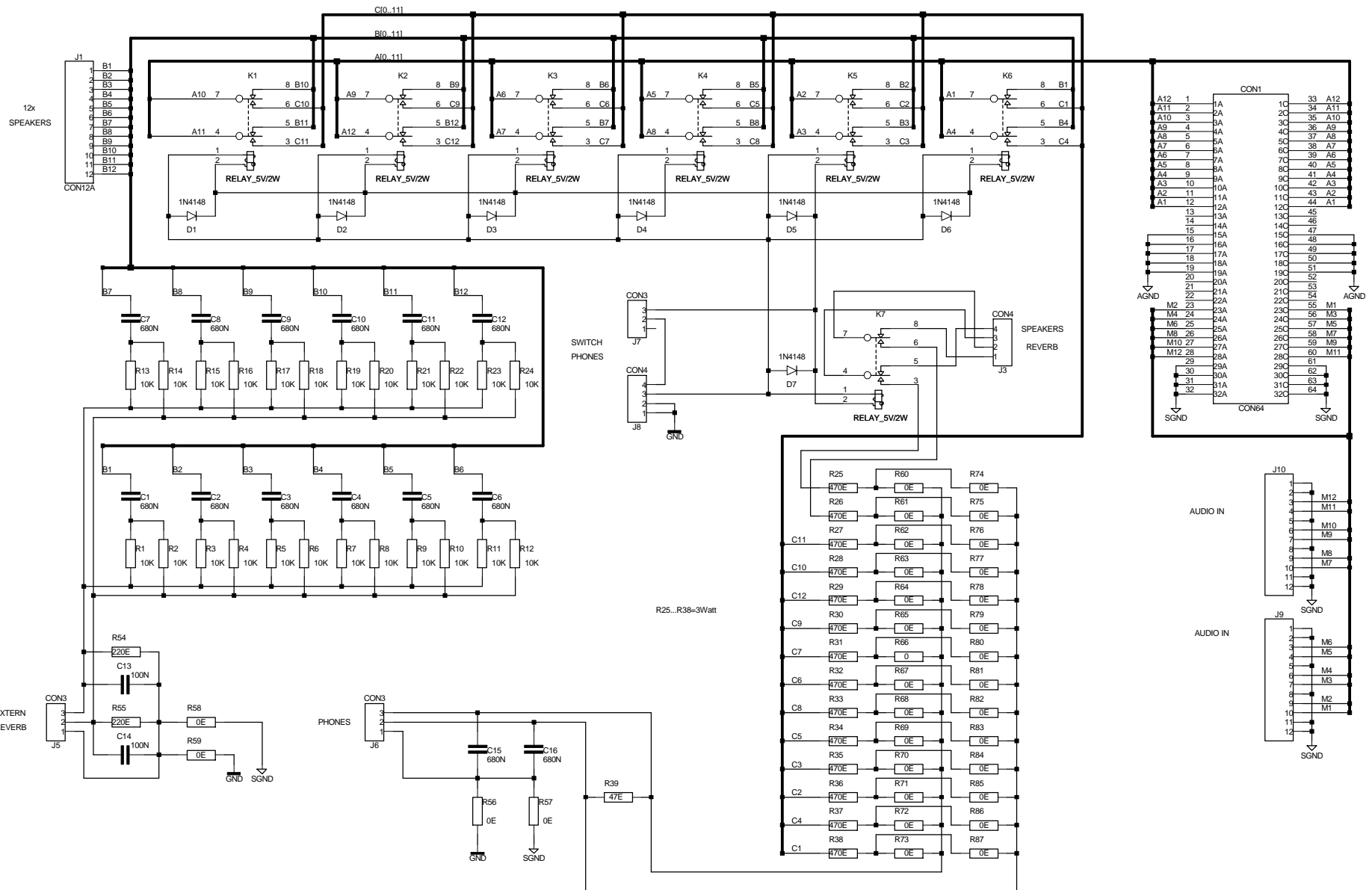
PCB - JHO3309	
Date: 06-04-1998	Rev: 1.2
Project: ROCKERTABS	
Company: JOHANNUS ORGELBOUW B.V.	Page: 12.1-1
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

J2 is address-setting for PCF8574(A)



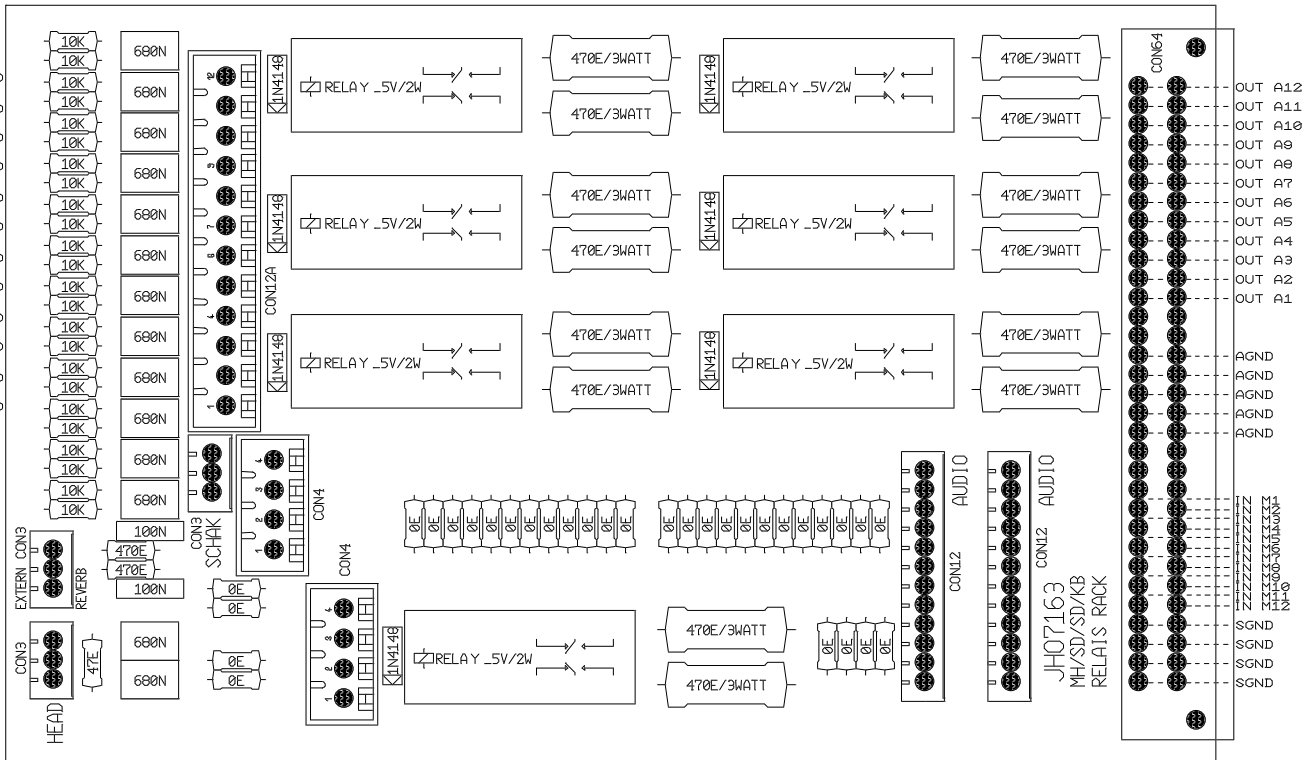
MH/SD/SD/KB
© 070397

JH03309



PCB - JHO7163	
Date: 06-04-1998	Rev: 1.2
Project: RELAY BOARD	
Company: JOHANNUS ORGELBOUW B.V.	Page: 13.1-1
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

J1--(CON12A)
 OUT B12 (LS12)
 OUT B11 (LS11)
 OUT B10 (LS10)
 OUT B9 (LS9)
 OUT B8 (LS8)
 OUT B7 (LS7)
 OUT B6 (LS6)
 OUT B5 (LS5)
 OUT B4 (LS4)
 OUT B3 (LS3)
 OUT B2 (LS2)
 OUT B1 (LS1)



J5--(CON3)
 AUX OUT R
 AUX OUT L
 AUDIO GND

J7--(CON3)
 +5V REL
 +5V
 N.C.

J8--(CON3)
 +5V
 GND REL.
 GND
 GND

J9--(CON4)
 LS ECHO2
 REL. IN ECHO2
 REL. IN ECHO1
 LS ECHO1

J10--(CON12)
 SGND
 SGND
 IN M7
 IN M6
 SGND
 IN M9
 IN M10
 SGND
 IN M11
 IN M12
 SGND
 SGND

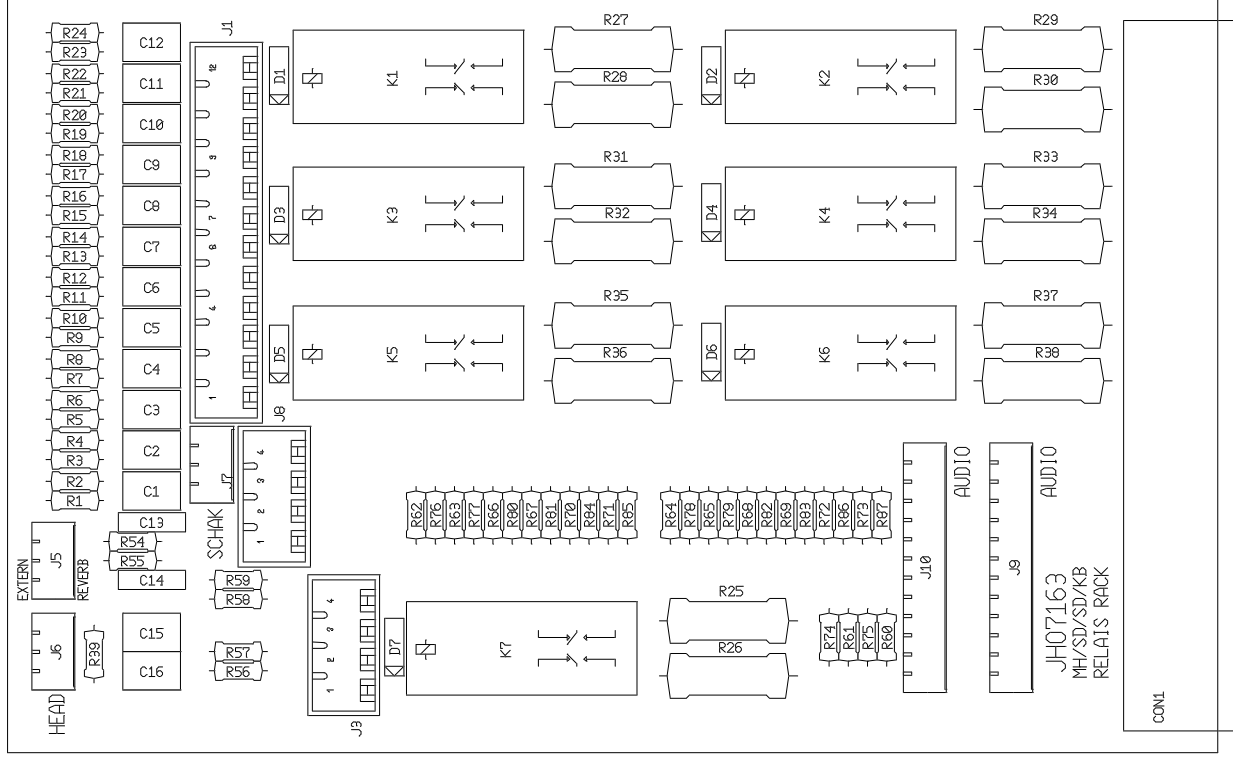
J9--(CON12)
 SGND
 SGND
 IN M1
 IN M2
 SGND
 IN M3
 IN M4
 SGND
 IN M5
 IN M6
 SGND
 SGND

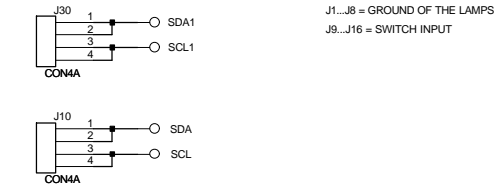
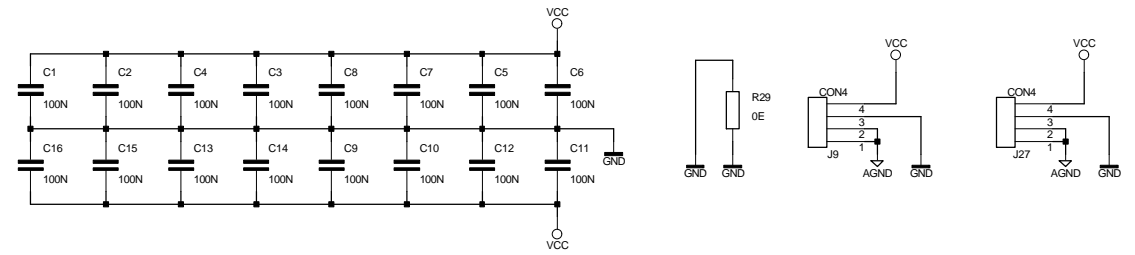
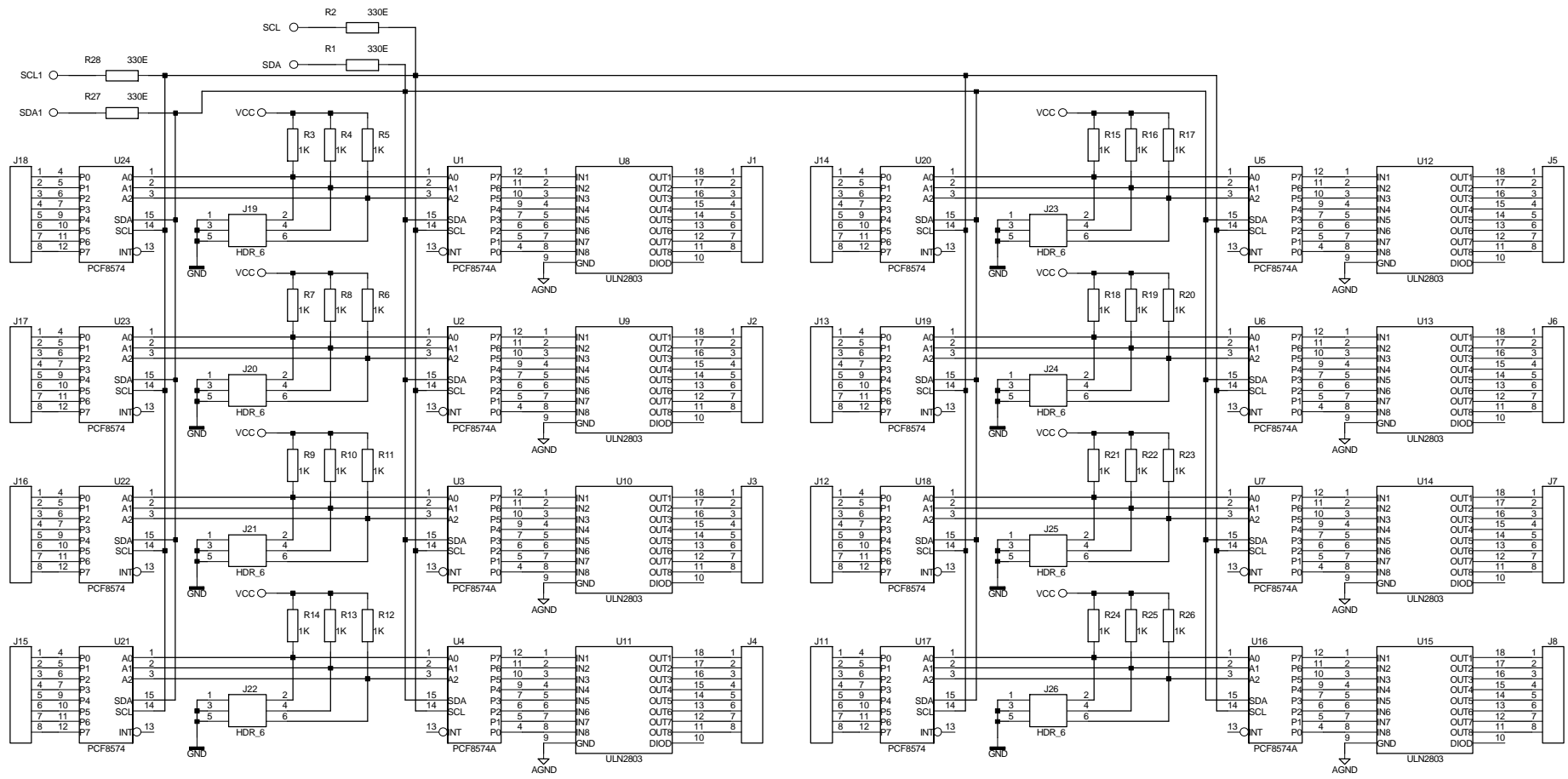
J6--(CON3)
 PH OUT R
 PH OUT L
 AUDIO GND

OUT A12
 OUT A11
 OUT A10
 OUT A9
 OUT A8
 OUT A7
 OUT A6
 OUT A5
 OUT A4
 OUT A3
 OUT A2
 OUT A1

AGND
 AGND
 AGND
 AGND
 AGND

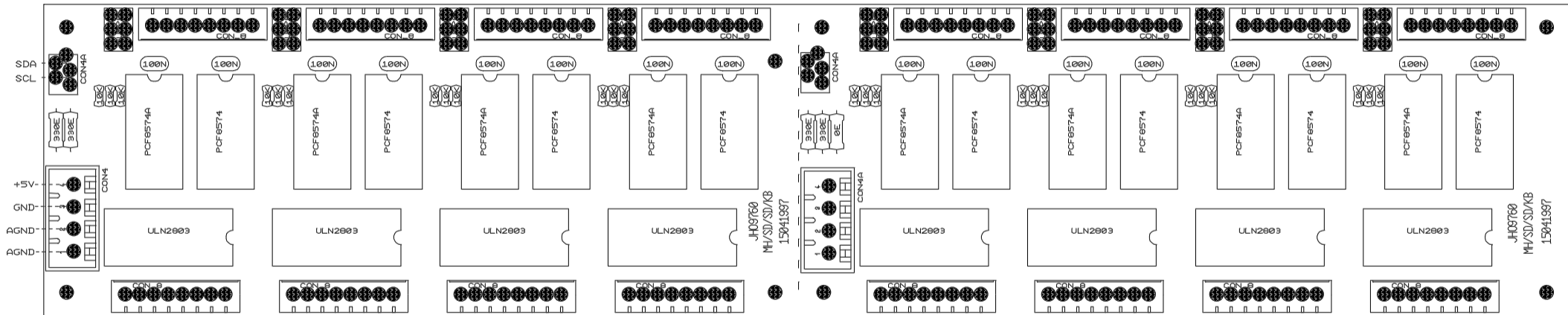
ZZZZZZZZZZZZ
 333333333333
 144400-100140014
 IN 8
 SGND
 SGND
 SGND
 SGND



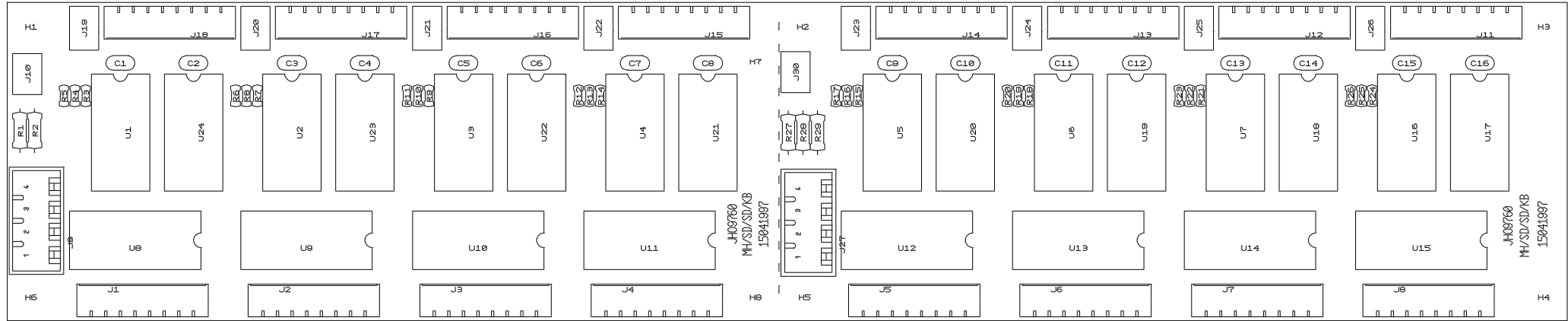


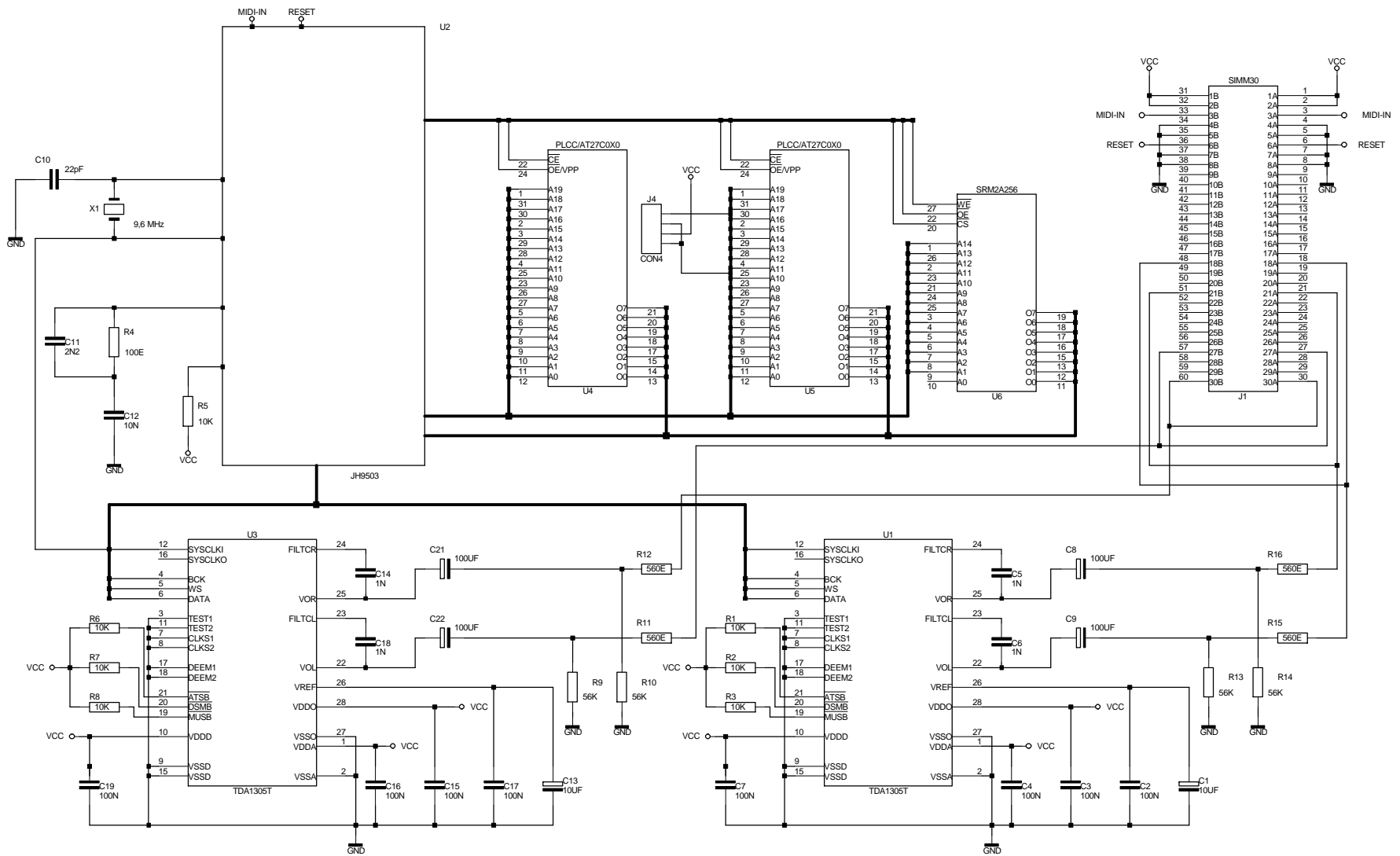
J1...J8 = GROUND OF THE LAMPS
 J9...J16 = SWITCH INPUT

PCB - JHO9760	
Date: 06-04-1998	Rev: 1.2
Project: INTERFACE LAMP	
Company: JOHANNUS ORGELBOUW B.V.	Page: 14.1-1
Address: Keplerlaan 2	
City: 6716 BS Ede	
Country: The Netherlands	



J10 = J30
 J9 = J27





PCB - JH9601	
Date: 07-04-1998	Rev: 1.2
Project: VOICE-CARD	
Company: JOHANNUS ORGELBOUW B.V.	Page: 15.1-1
Address: Keplertaan 2	
City: 6716 BS Ede	
Country: The Netherlands	

