

SCHEMATIC DIAGRAMS

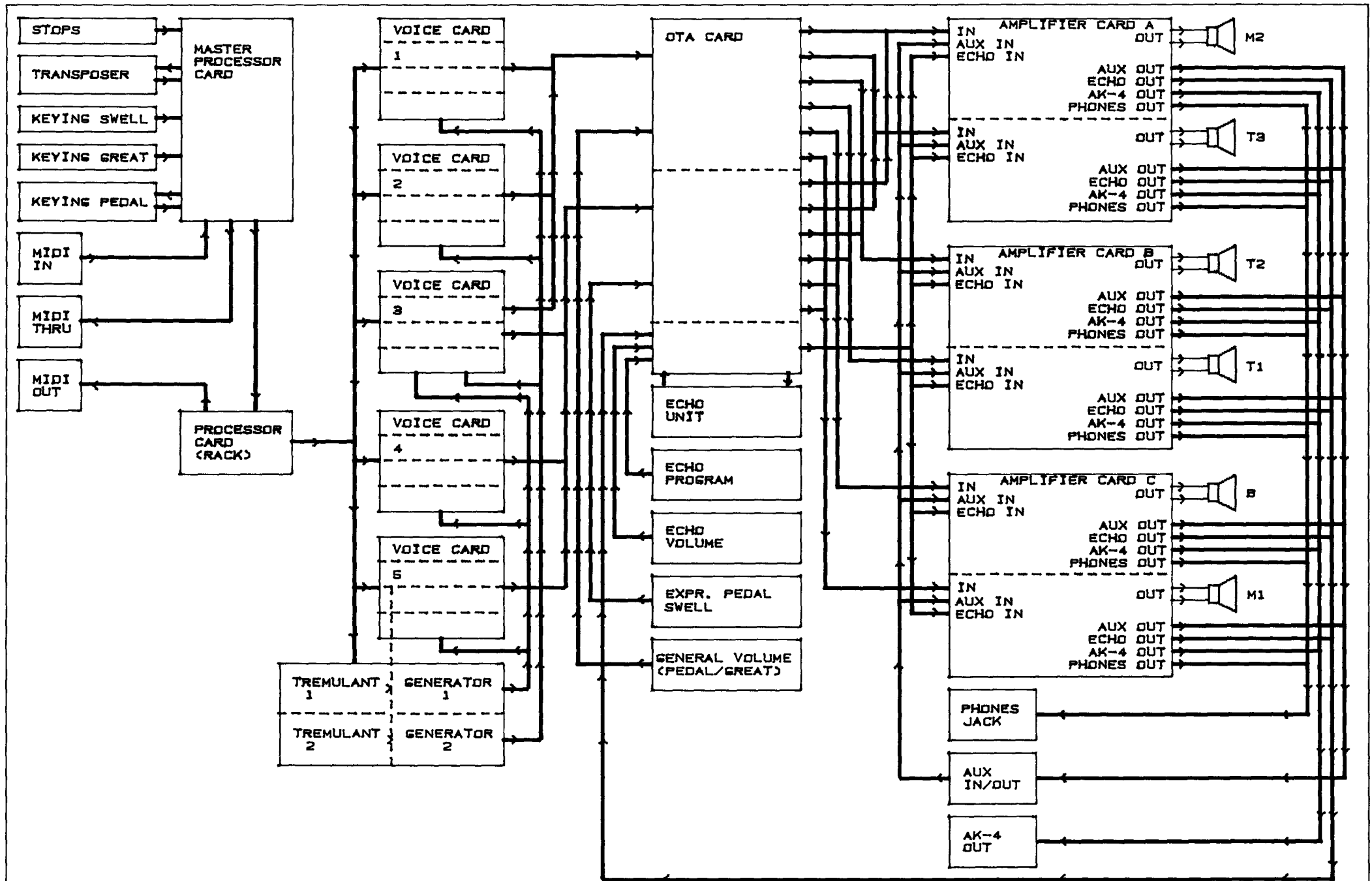
JOHANNUS

POSITIEF 10

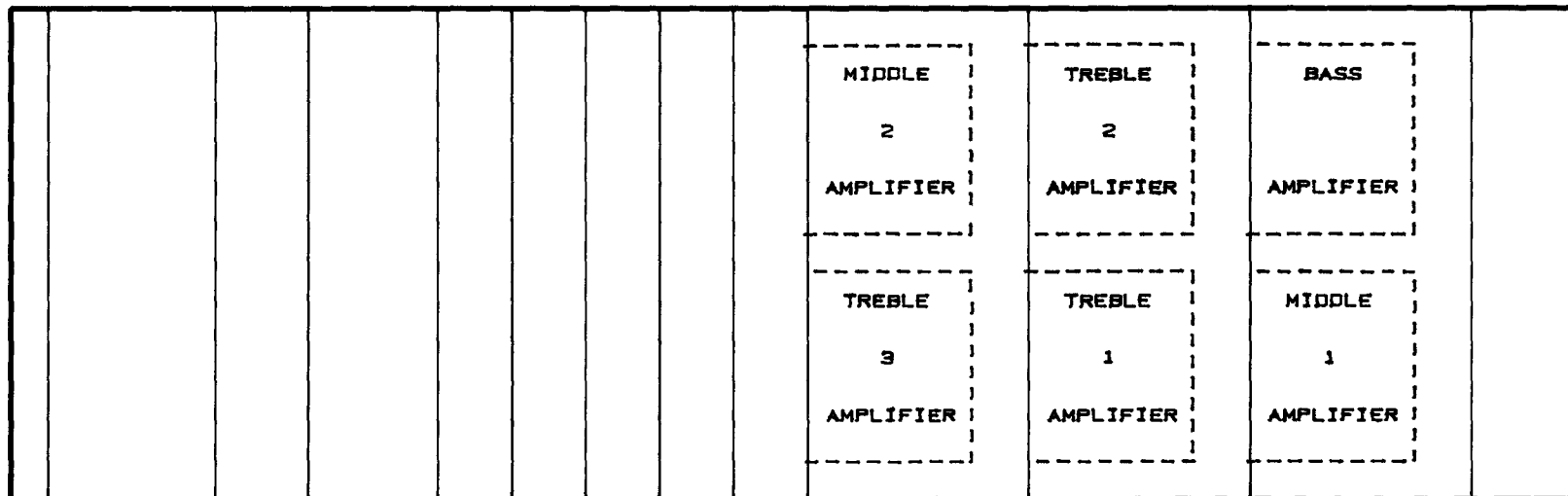
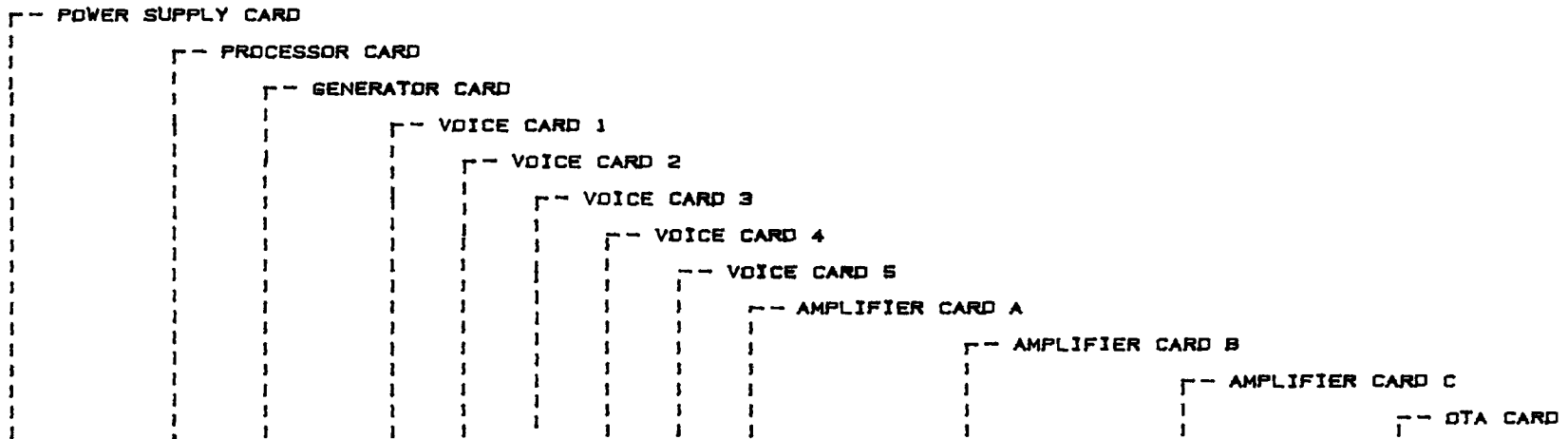
ALTERATIONS RESERVED

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BLOCK DIAGRAM			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	12-09-91	PAGE
JOHANNUS POS 10			1



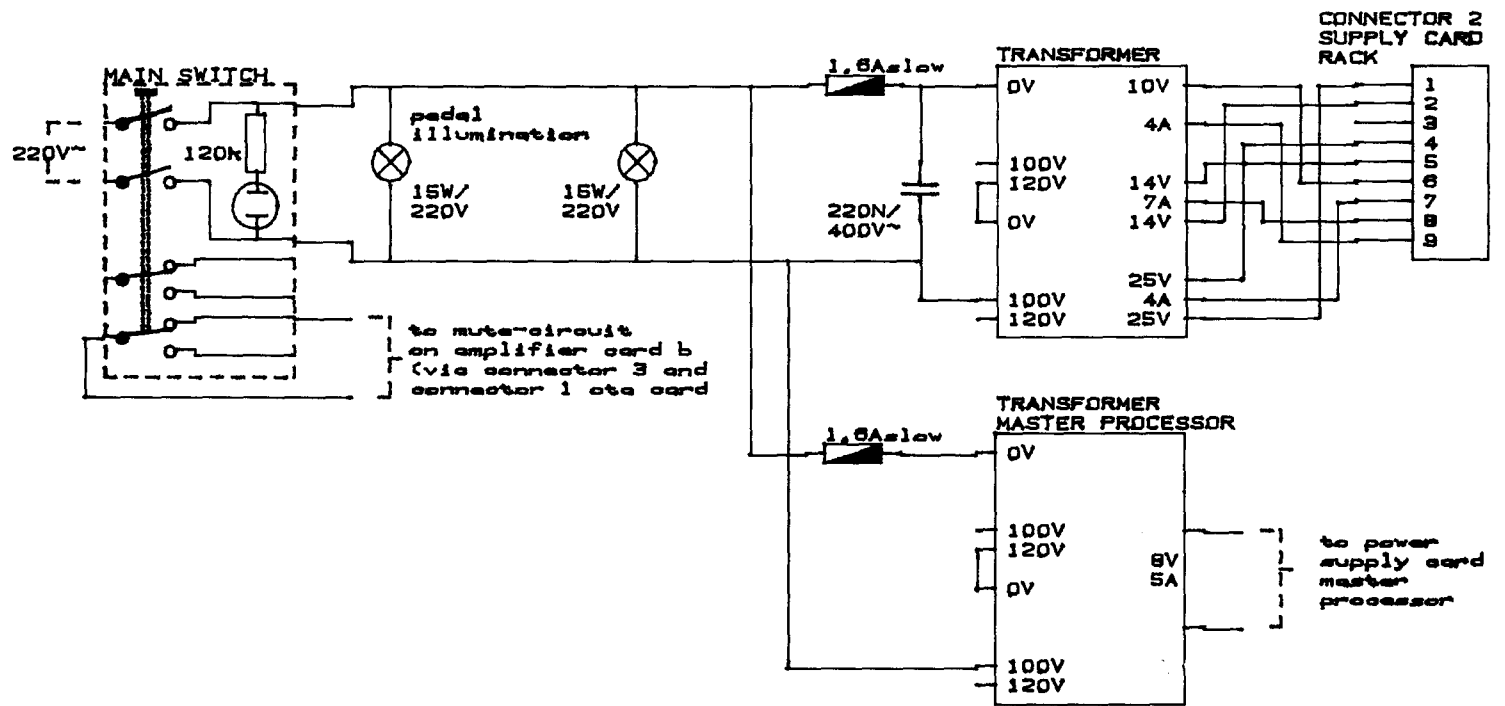
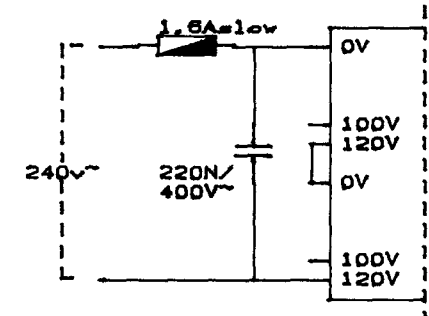
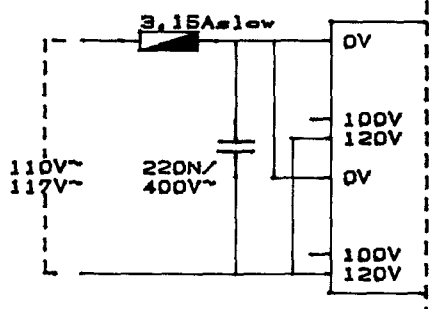
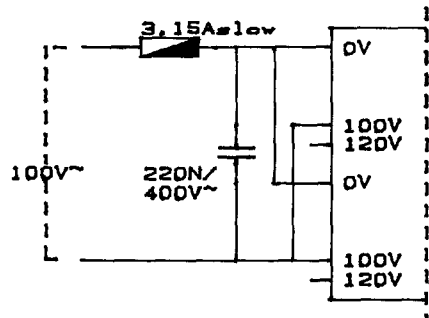
POSITION DIAGRAM CARDS (TOPVIEW)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	12-09-91	PAGE
JOHANNUS POS10			2

CON1		CON2		CON3		CON4-5		CON6-8	
010	020	010	020	010	020	010	020	010	020
030	030	030	030	030	030	030	030	030	030
040	040	040	040	040	040	040	040	040	040
+12V	+12V	+12V	+12V	+12V	+12V	+12V	+12V	+12V	+12V
-12V	-12V	-12V	-12V	-12V	-12V	-12V	-12V	-12V	-12V
AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND
AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND	AGND
+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V
-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V
0110	0110	0110	0110	0110	0110	0110	0110	0110	0110
0120	0120	0120	0120	0120	0120	0120	0120	0120	0120
0130	0130	0130	0130	0130	0130	0130	0130	0130	0130
0140	0140	0140	0140	0140	0140	0140	0140	0140	0140
0150	0150	0150	0150	0150	0150	0150	0150	0150	0150
0160	0160	0160	0160	0160	0160	0160	0160	0160	0160
LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND
LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND
0190	0190	0190	0190	0190	0190	0190	0190	0190	0190
0200	0200	0200	0200	0200	0200	0200	0200	0200	0200
0210	0210	0210	0210	0210	0210	0210	0210	0210	0210
0220	0220	0220	0220	0220	0220	0220	0220	0220	0220
0230	0230	0230	0230	0230	0230	0230	0230	0230	0230
0240	0240	0240	0240	0240	0240	0240	0240	0240	0240
+5V	+5V	+5V	+5V	+5V	+5V	+5V	+5V	+5V	+5V
LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND
LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND	LGND
0270	0270	0270	0270	0270	0270	0270	0270	0270	0270
0280	0280	0280	0280	0280	0280	0280	0280	0280	0280
0290	0290	0290	0290	0290	0290	0290	0290	0290	0290
0300	0300	0300	0300	0300	0300	0300	0300	0300	0300
0310	0310	0310	0310	0310	0310	0310	0310	0310	0310
0320	0320	0320	0320	0320	0320	0320	0320	0320	0320
POWER SUPPLY CARD		PROCESSOR CARD		GENERATOR CARD		VOICE CARD 1-2		VOICE CARD 3-5	

only CON6

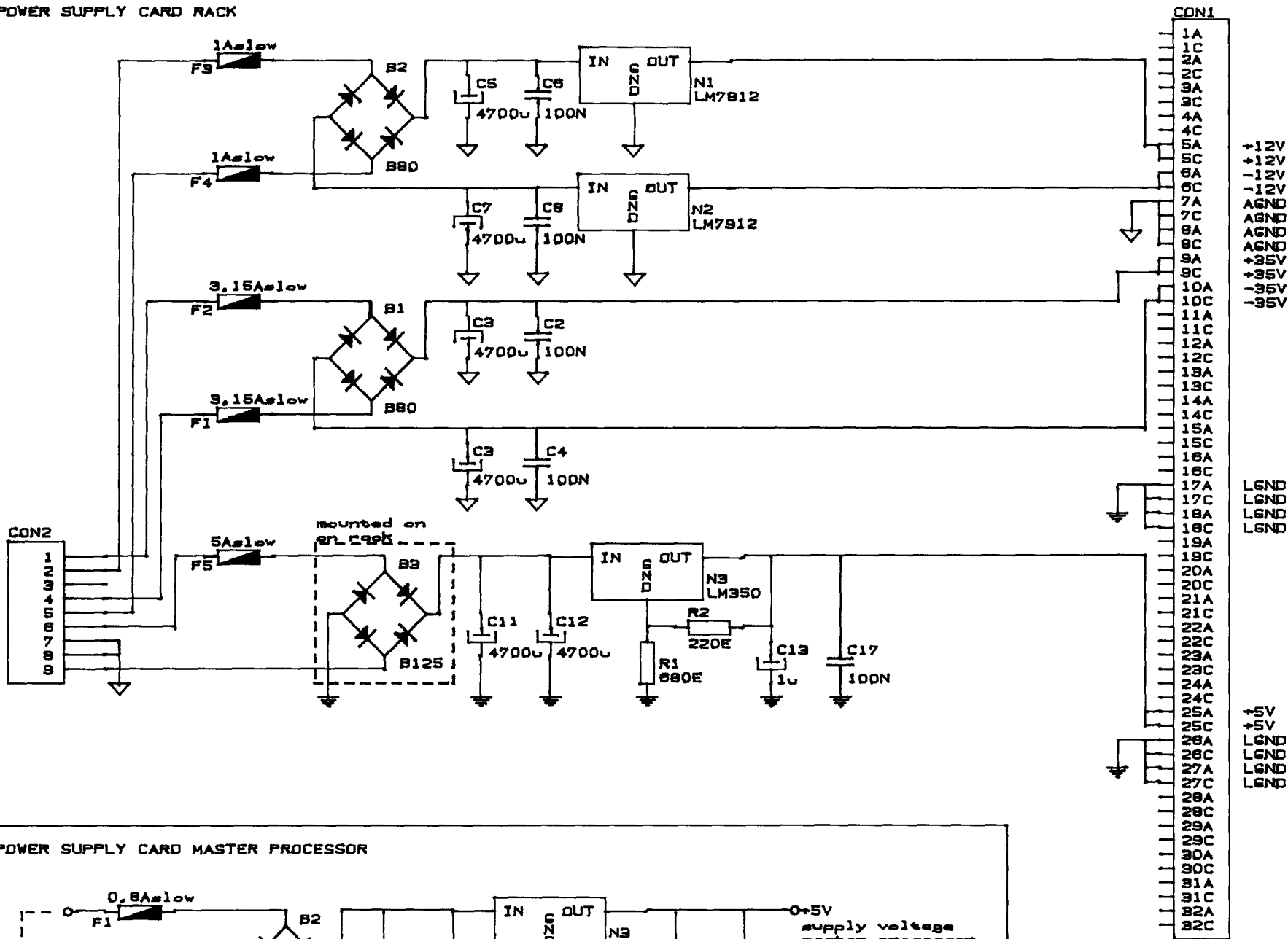
CON9-10		CON11		CON12	
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020	020	020	020	020	020
030	030	030	030	030	030
040	040	040	040	040	040
+12V	+12V	+12V	+12V	+12V	+12V
-12V	-12V	-12V	-12V	-12V	-12V
AGND	AGND	AGND	AGND	AGND	AGND
AGND	AGND	AGND	AGND	AGND	AGND
+35V	+35V	+35V	+35V	+35V	+35V
-35V	-35V	-35V	-35V	-35V	-35V
0110	0110	0110	0110	0110	0110
0120	0120	0120	0120	0120	0120
0130	0130	0130	0130	0130	0130
0140	0140	0140	0140	0140	0140
0150	0150	0150	0150	0150	0150
0160	0160	0160	0160	0160	0160
LGND	LGND	LGND	LGND	LGND	LGND
LGND	LGND	LGND	LGND	LGND	LGND
0190	0190	0190	0190	0190	0190
0200	0200	0200	0200	0200	0200
0210	0210	0210	0210	0210	0210
0220	0220	0220	0220	0220	0220
0230	0230	0230	0230	0230	0230
0240	0240	0240	0240	0240	0240
+5V	+5V	+5V	+5V	+5V	+5V
LGND	LGND	LGND	LGND	LGND	LGND
LGND	LGND	LGND	LGND	LGND	LGND
0270	0270	0270	0270	0270	0270
0280	0280	0280	0280	0280	0280
0290	0290	0290	0290	0290	0290
0300	0300	0300	0300	0300	0300
0310	0310	0310	0310	0310	0310
0320	0320	0320	0320	0320	0320
AMPLIFIER CARD A & B		AMPLIFIER CARD C		OTA CARD	

PINNING BUS CARD CONNECTORS			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	12-09-91	PAGE
JOHANNUS POS 10			3

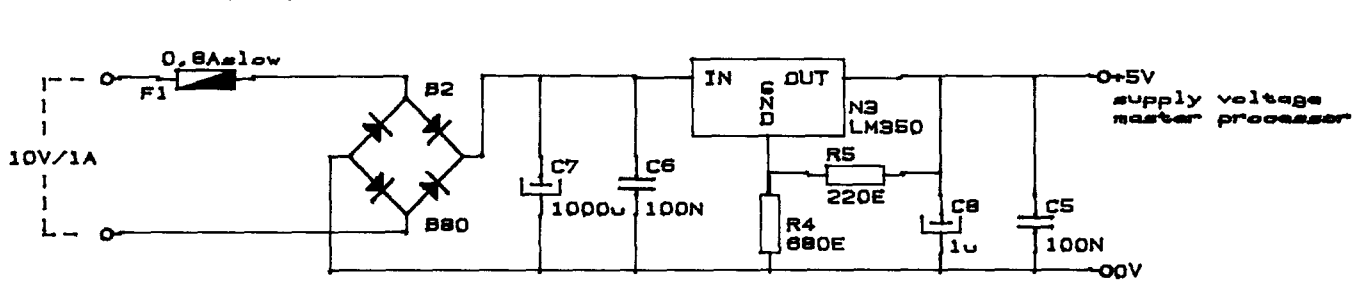


TRANSFORMER CONNECTIONS			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	12-09-91	PAGE
JOHANNUS POS 10			4

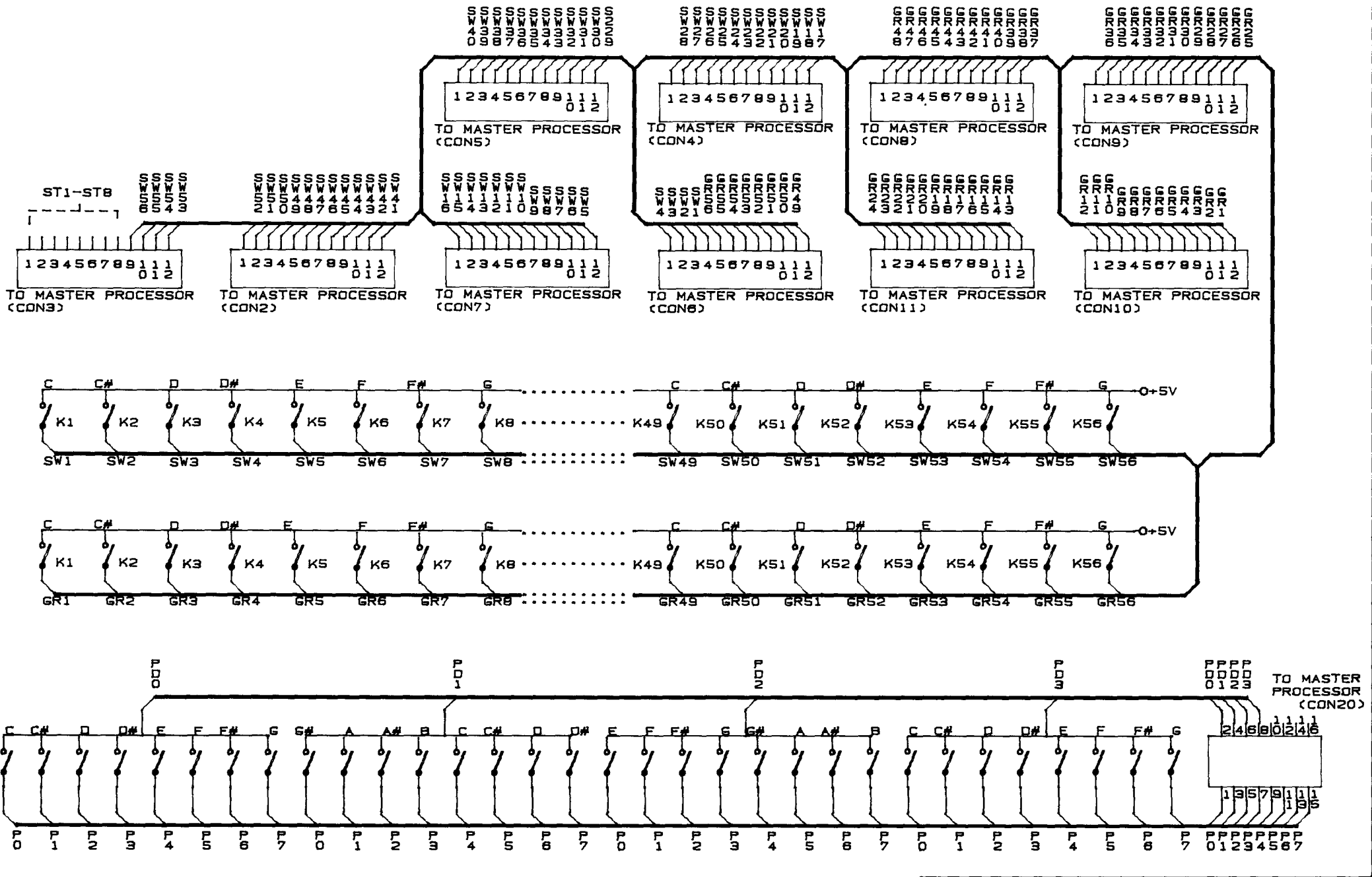
POWER SUPPLY CARD RACK



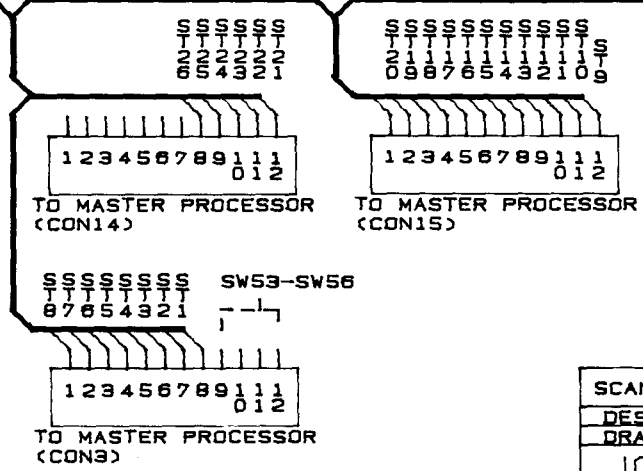
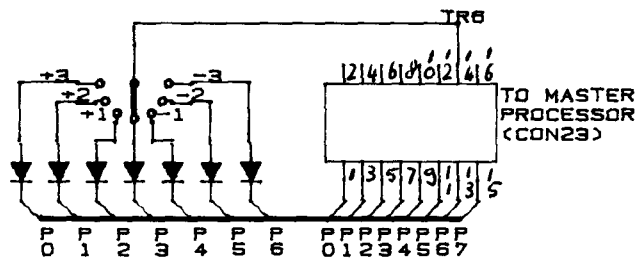
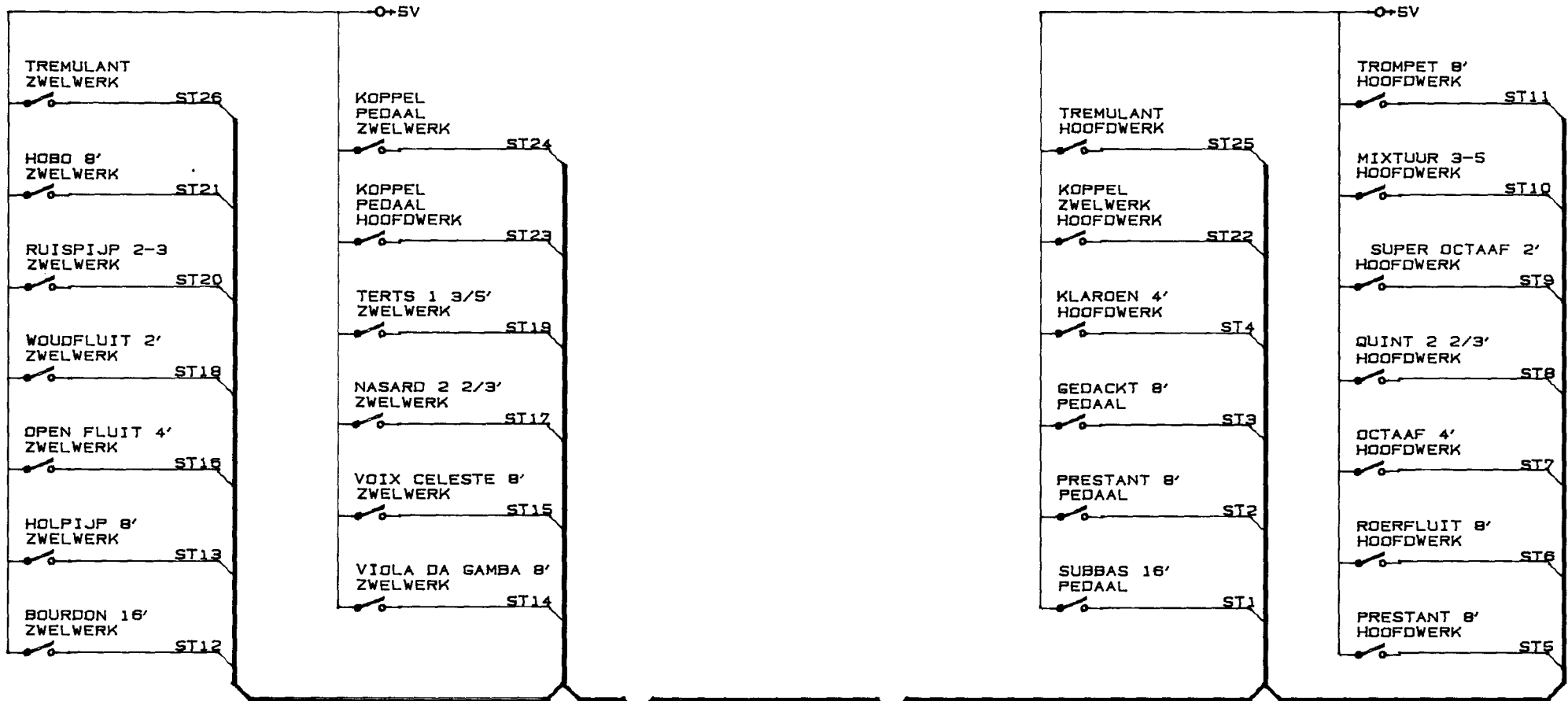
POWER SUPPLY CARD MASTER PROCESSOR



POWER SUPPLIES (power supply cards)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	12-09-91	PAGE
JOHANNUS PS 10			5



SCANNING KEYING			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	24-09-91	PAGE
JOHANNUS POS 10			8

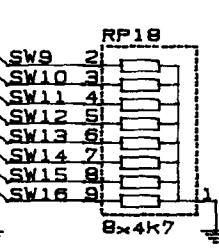
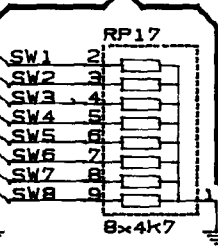
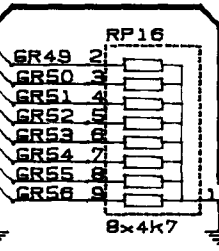
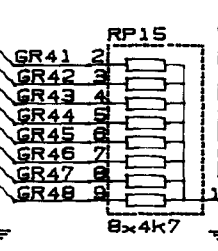
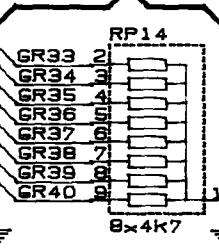
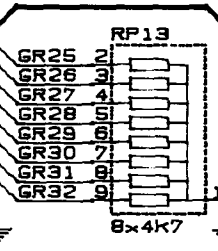
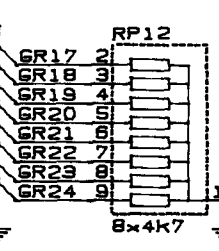
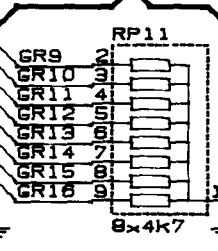
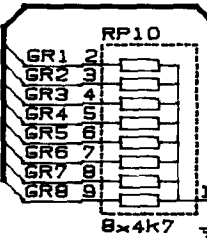
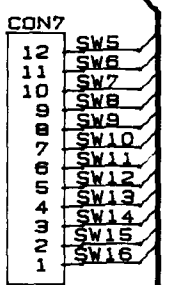
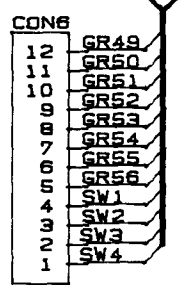
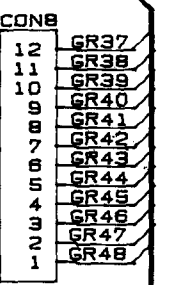
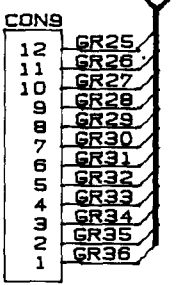
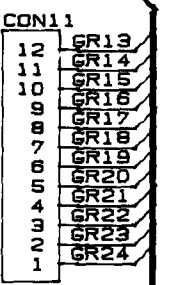
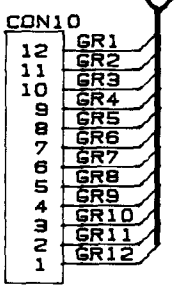
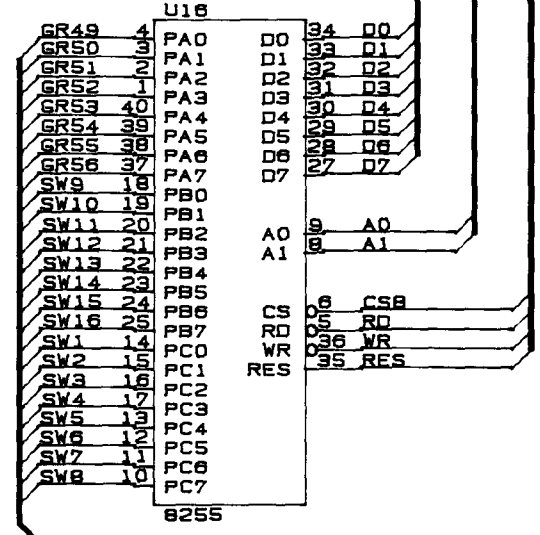
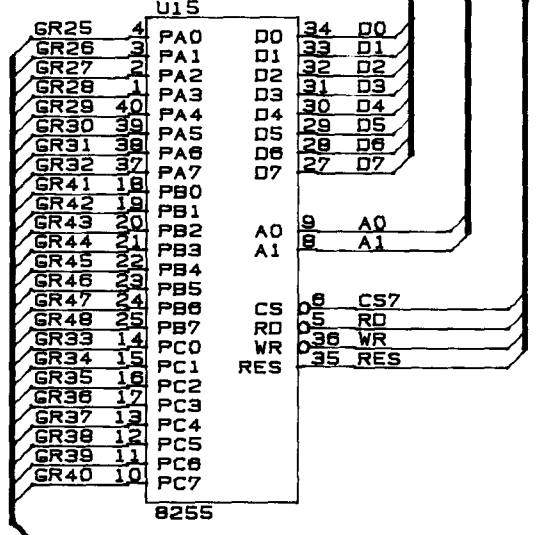
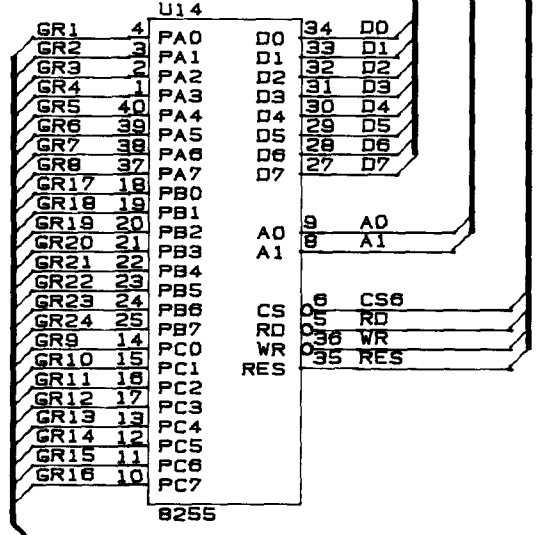


SCANNING STOPS and TRANSPOSER			
DESIGN	LAB	12-01-91	REV.
DRAWN	VERSCHOOR	24-09-91	
JOHANNUS POS 10			PAGE 7

D[0...7]

A[0...19]

CONTROLS



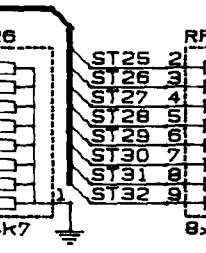
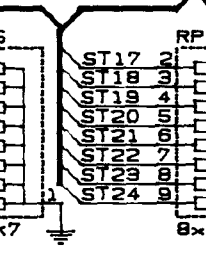
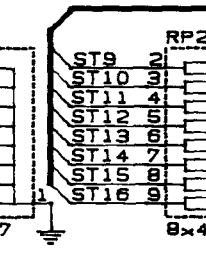
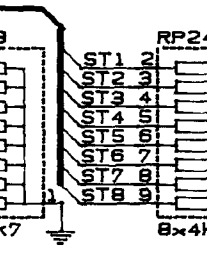
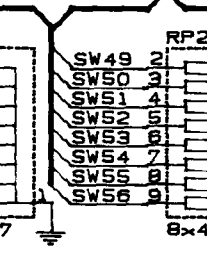
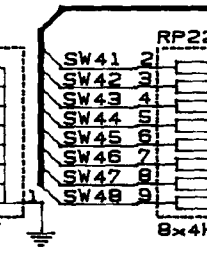
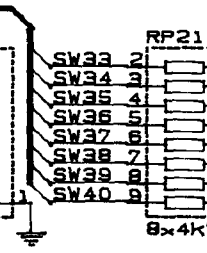
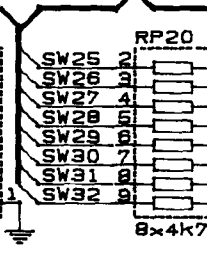
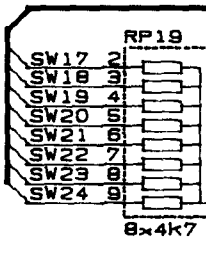
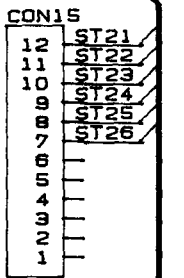
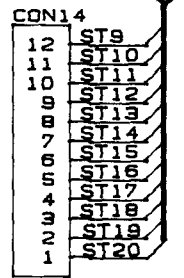
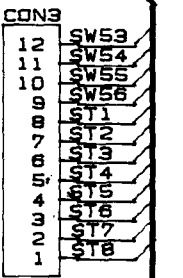
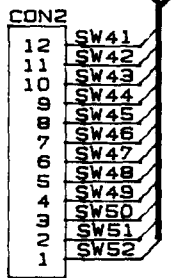
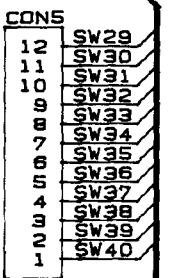
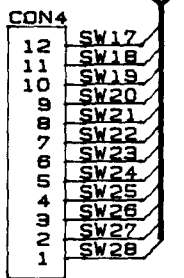
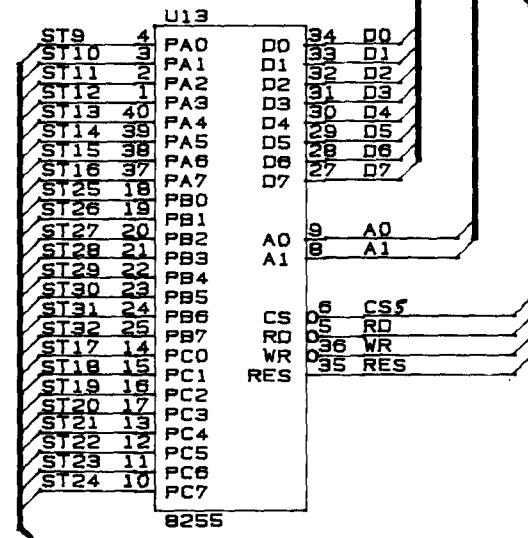
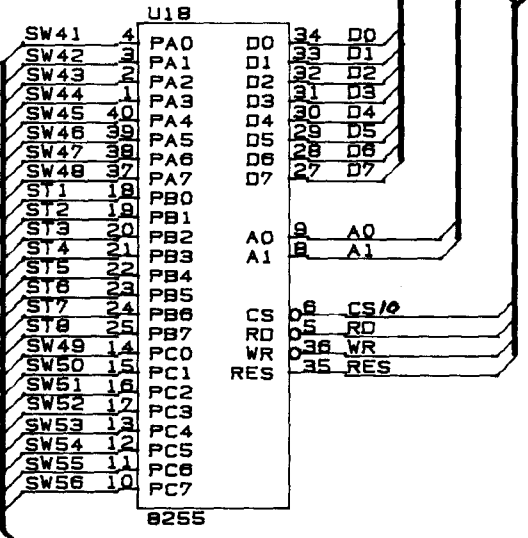
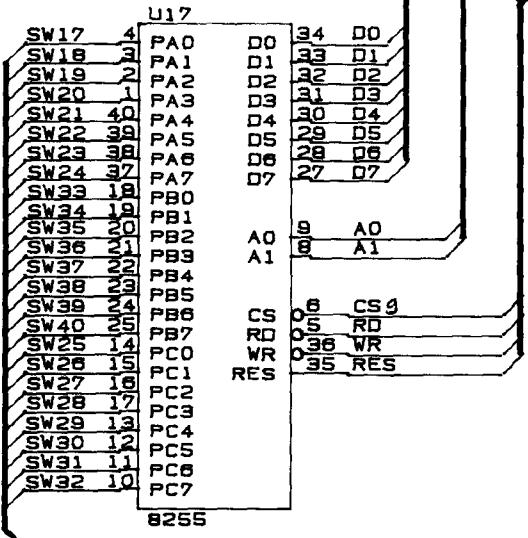
INPUT KEYING GREAT (KEY 1-56) and
KEYING SWELL (KEY 1-16) (master proc.)

DESIGN	LAB	12-01-91	REV.
DRAWN	VERSCHOOR	24-09-91	
JOHANNUS POS 10			PAGE 8

D10...7J

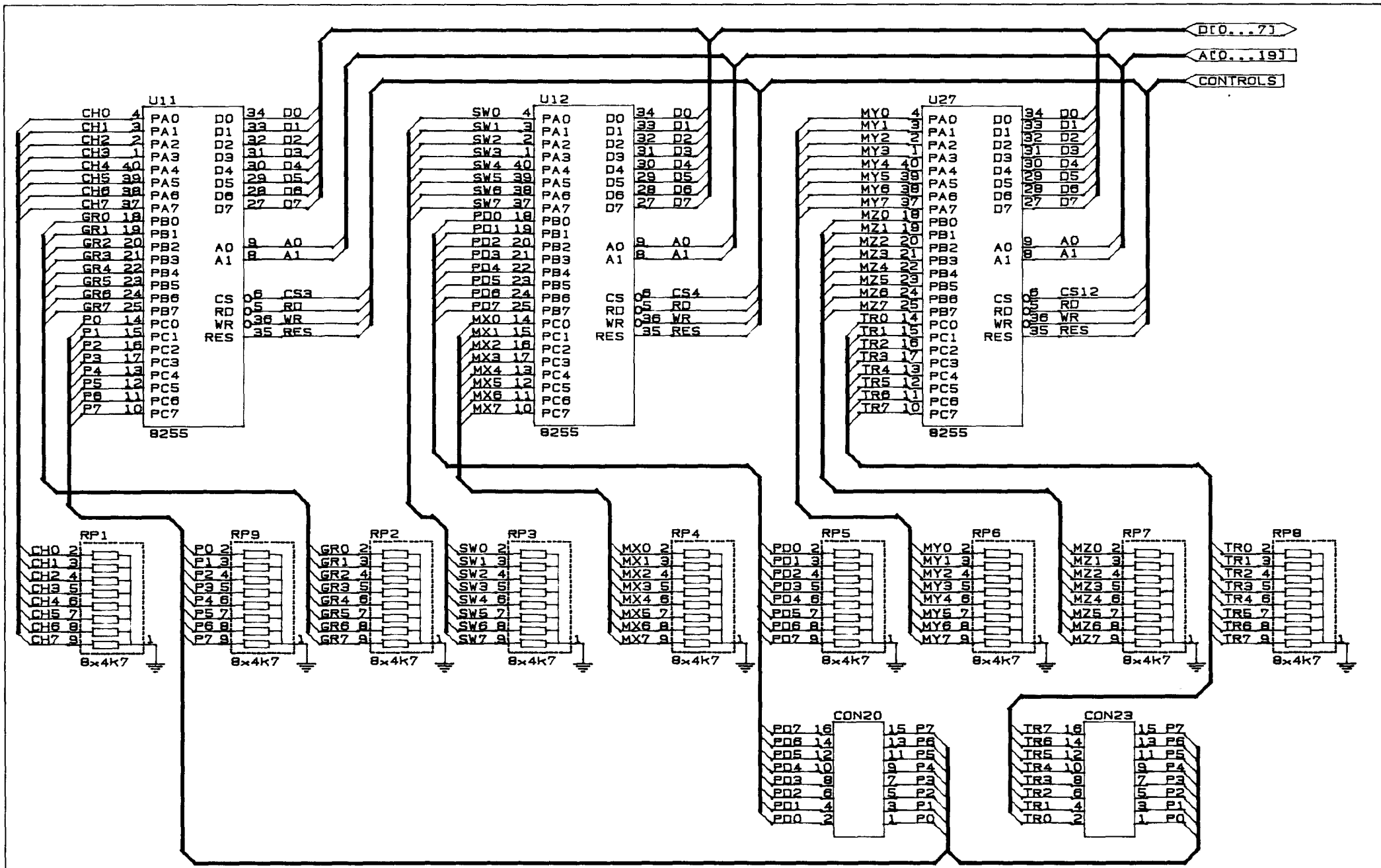
A0...19J

CONTROLS



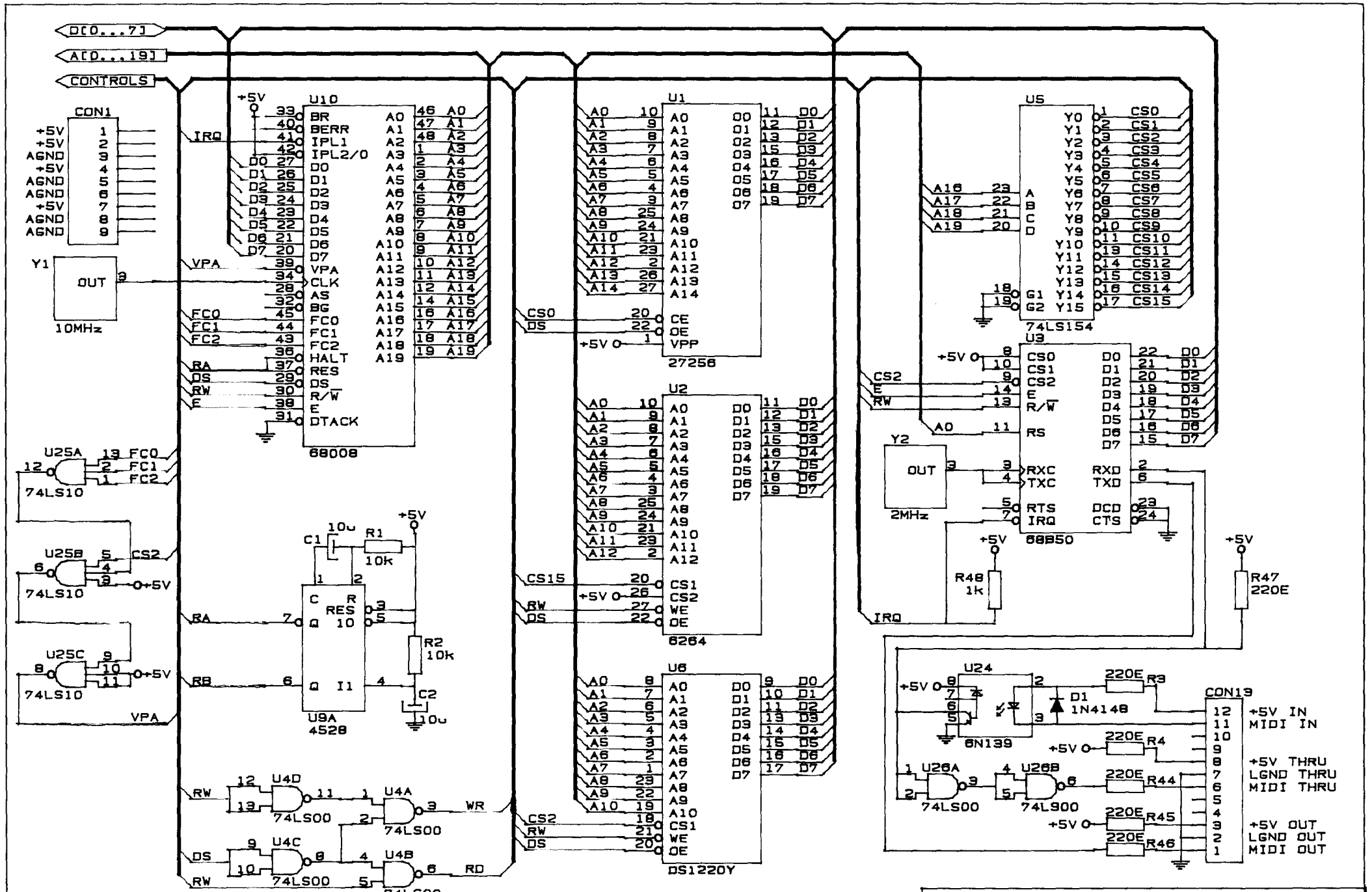
INPUT KEYING SWELL (KEY 16-56) and STOPS (STOP 1-26) (master proc.)

DESIGN	LAB	12-01-91	REV.
DRAWN	VERSCHOOR	24-09-91	
JOHANNUS POS 10			PAGE 9

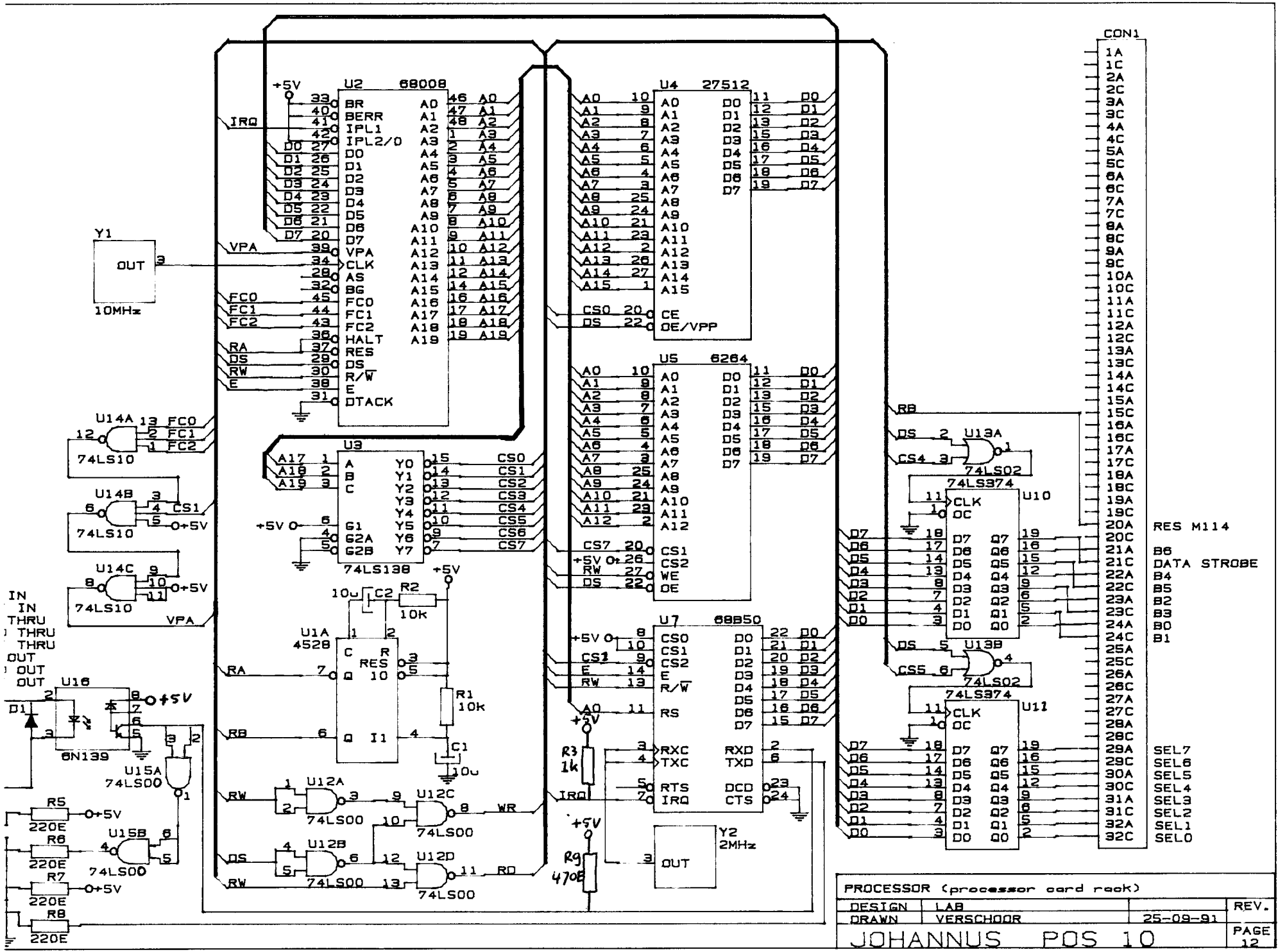


INPUT KEYING PEDAL and TRANSPOSER SWITCH
(master proc.)

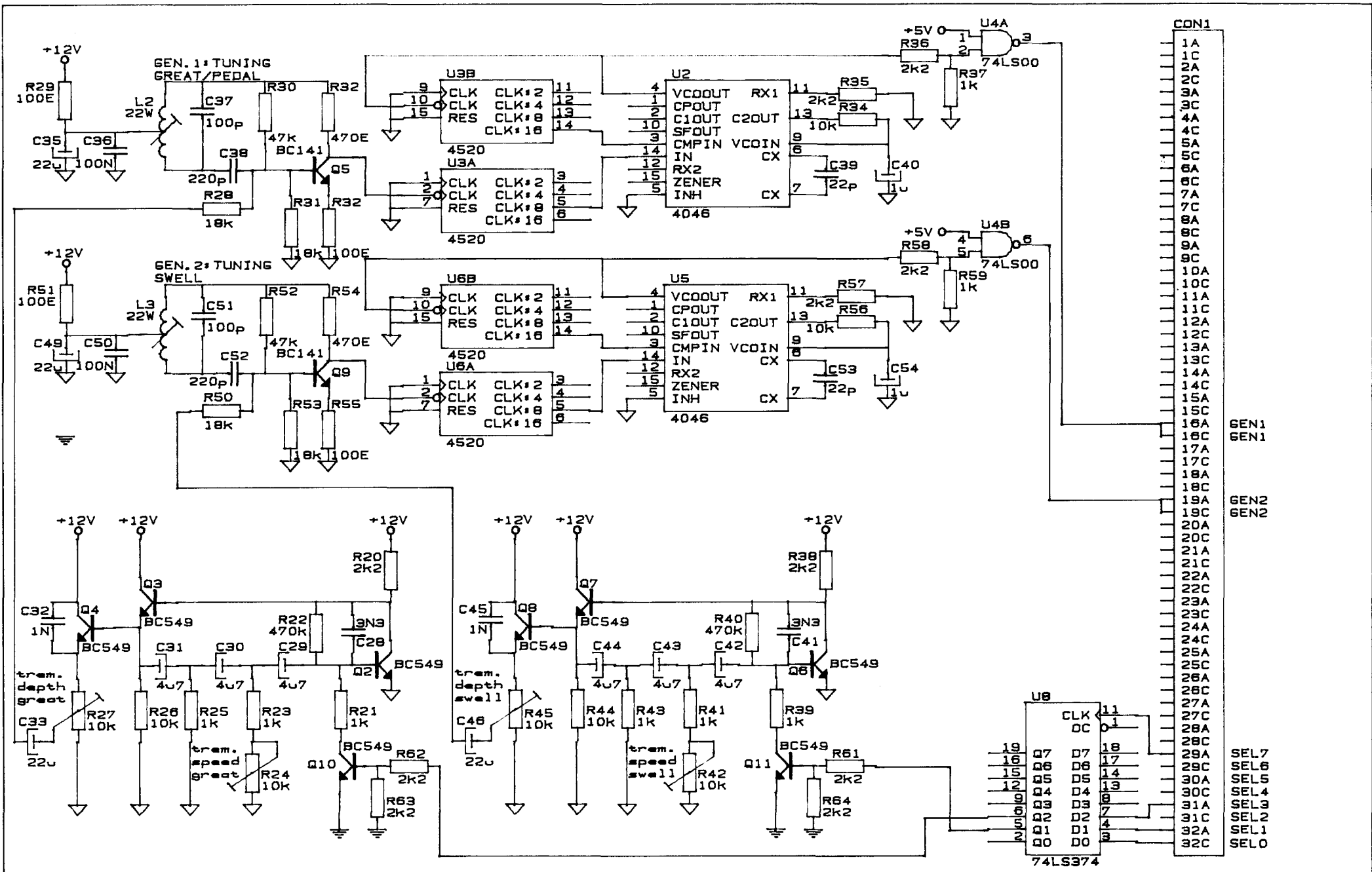
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DRAWN	VERSCHOOR	25-09-91	
JOHANNUS POS 10			PAGE 10



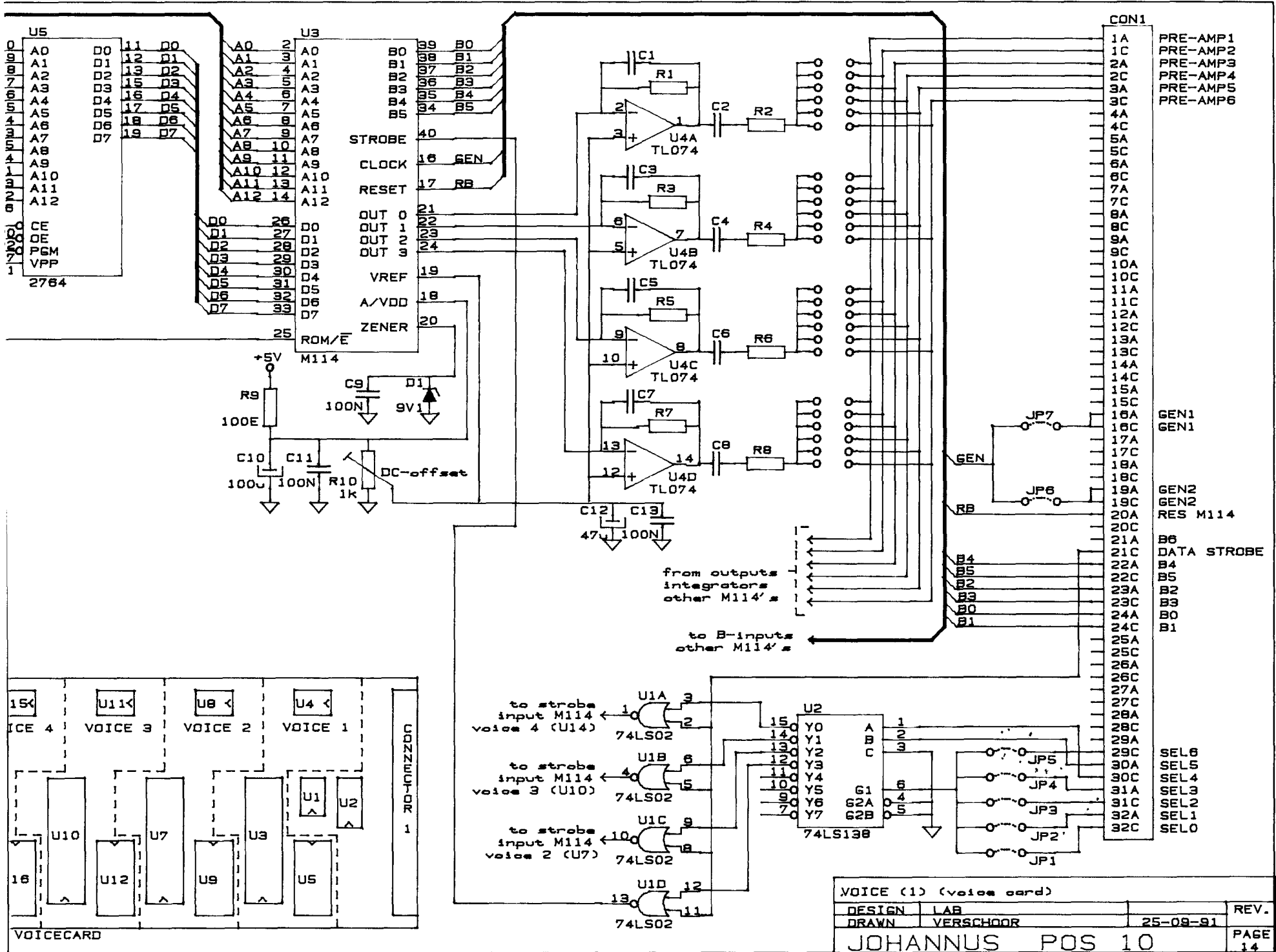
PROCESSOR and MIDI CIRCUIT (master proc.)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	25-09-91	PAGE
JOHANNUS POS 10			11



PROCESSOR (processor card rack)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	25-09-91	
JOHANNUS POS 10			PAGE 12



TUNING GENERATORS and TREMULANTS (generator card)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	07-05-91	
JOHANNUS POS 10			PAGE 13

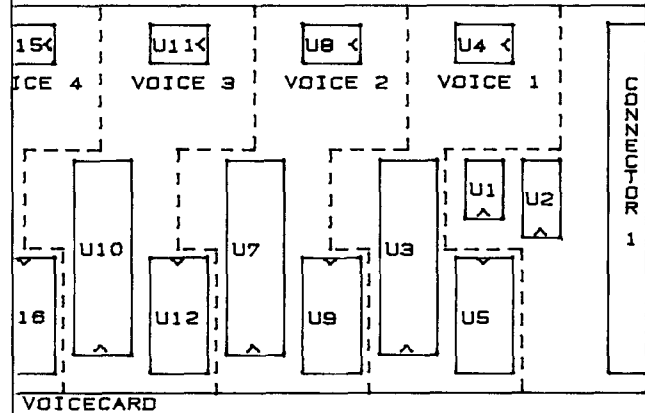


U5
 0 A0 D0 11 D0
 1 A1 D1 12 D1
 2 A2 D2 13 D2
 3 A3 D3 14 D3
 4 A4 D4 15 D4
 5 A5 D5 16 D5
 6 A6 D6 17 D6
 7 A7 D7 18 D7
 8 A8
 9 A9
 10 A10
 11 A11
 12 A12
 13
 14
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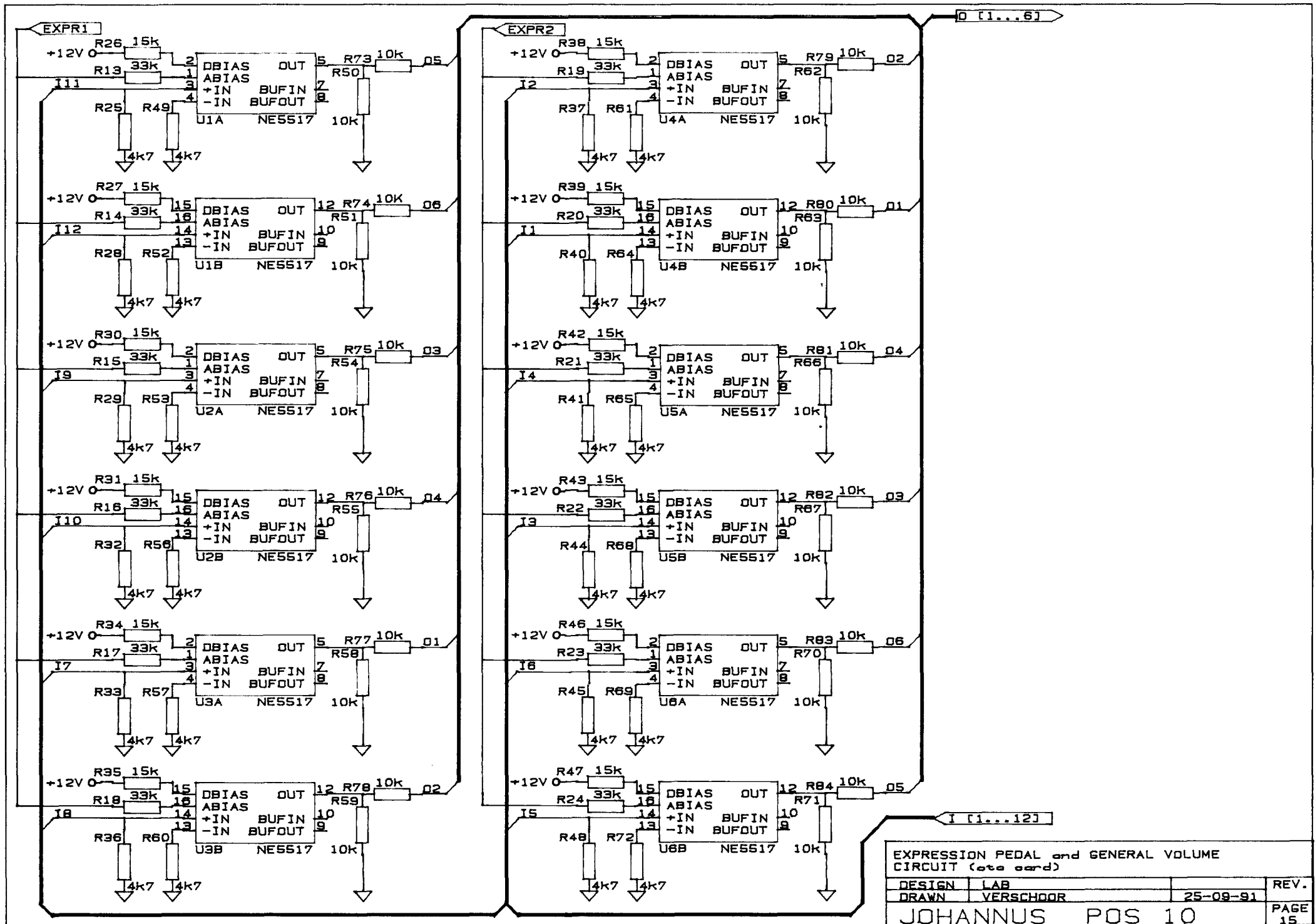
U3
 A0 2
 A1 3
 A2 4
 A3 5
 A4 6
 A5 7
 A6 8
 A7 9
 A8 10
 A9 11
 A10 12
 A11 13
 A12 14
 D0 26
 D1 27
 D2 28
 D3 29
 D4 30
 D5 31
 D6 32
 D7 33
 25
 ROM/E

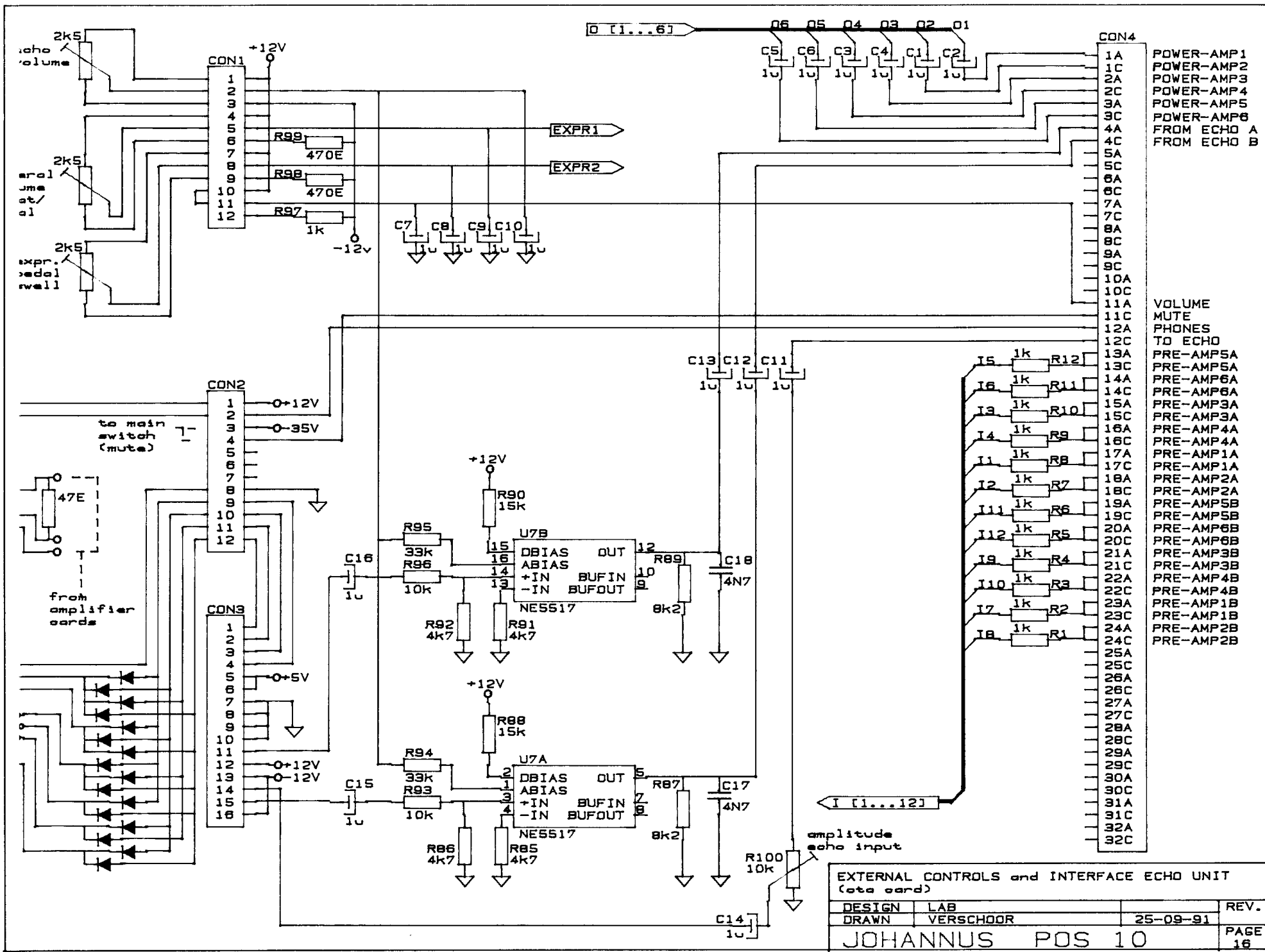
B0 39 B0
 B1 38 B1
 B2 37 B2
 B3 36 B3
 B4 35 B4
 B5 34 B5
 40
 16 GEN
 17 RB
 21
 22
 23
 24
 19
 18
 20
 VREF
 A/VDD
 ZENER

CON1
 1A PRE-AMP1
 1C PRE-AMP2
 2A PRE-AMP3
 2C PRE-AMP4
 3A PRE-AMP5
 3C PRE-AMP6
 4A
 4C
 5A
 5C
 6A
 6C
 7A
 7C
 8A
 8C
 9A
 9C
 10A
 10C
 11A
 11C
 12A
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 13C
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 17C
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 18C
 19A GEN2
 19C GEN2
 20A RES M114
 20C
 21A B6
 21C DATA STROBE
 22A B4
 22C B5
 23A B2
 23C B3
 24A B0
 24C B1
 25A
 25C
 26A
 26C
 27A
 27C
 28A
 28C
 29A
 29C
 29A SEL6
 30A SEL5
 30C SEL4
 31A SEL3
 31C SEL2
 32A SEL1
 32C SEL0



VOICE (1) (voice card)			REV.
DESIGN	LAB		
DRAWN	VERSCHOOR	25-09-91	
JOHANNUS POS 10			PAGE 14

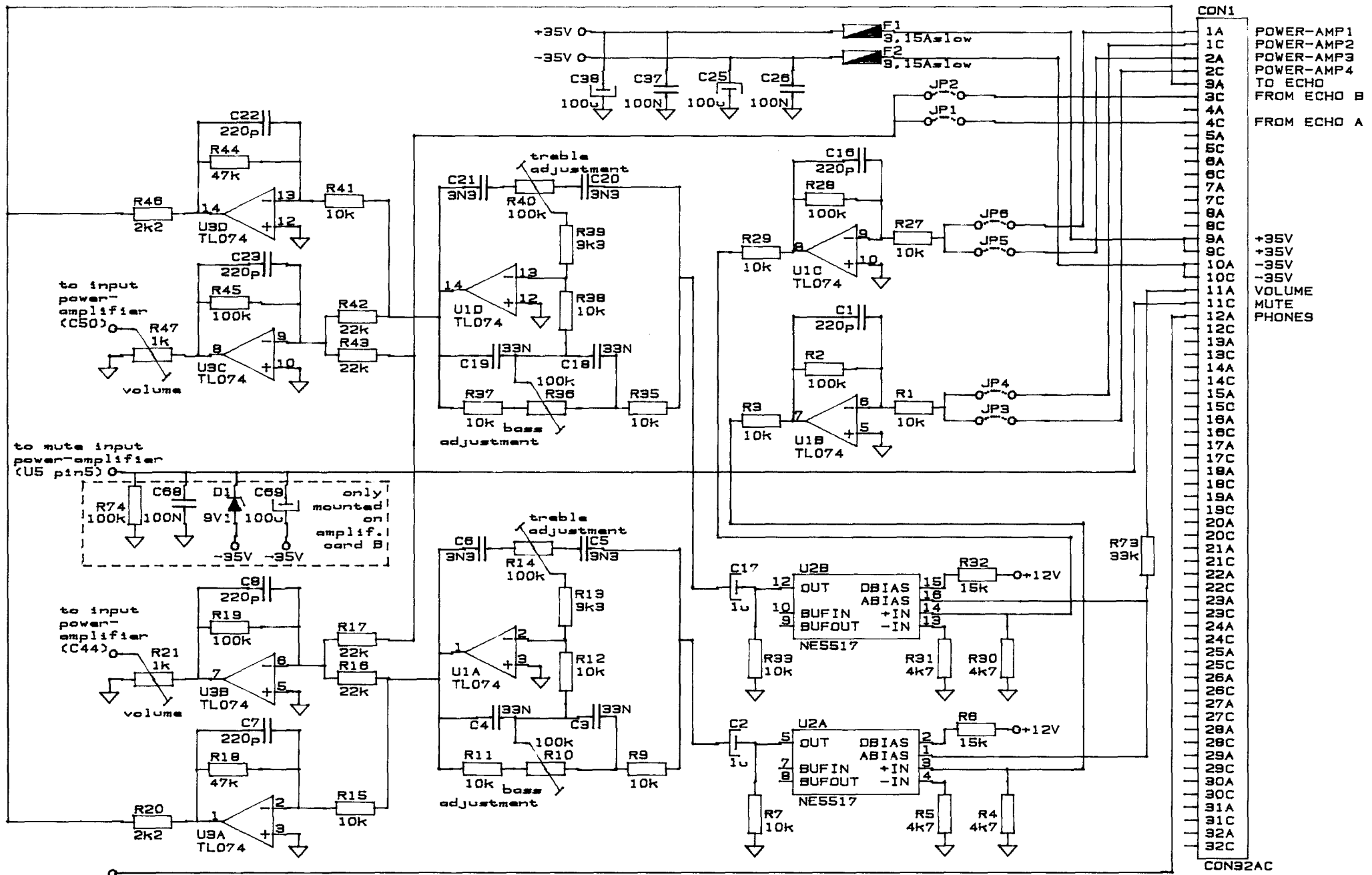




- CON4
- 1A POWER-AMP1
 - 1C POWER-AMP2
 - 2A POWER-AMP3
 - 2C POWER-AMP4
 - 3A POWER-AMP5
 - 3C POWER-AMP6
 - 4A FROM ECHO A
 - 4C FROM ECHO B
 - 5A
 - 5C
 - 6A
 - 6C
 - 7A
 - 7C
 - 8A
 - 8C
 - 9A
 - 9C
 - 10A
 - 10C
 - 11A
 - 11C
 - 12A MUTE
 - 12C PHONES TO ECHO
 - 13A PRE-AMP5A
 - 13C PRE-AMP5A
 - 14A PRE-AMP6A
 - 14C PRE-AMP6A
 - 15A PRE-AMP3A
 - 15C PRE-AMP3A
 - 16A PRE-AMP4A
 - 16C PRE-AMP4A
 - 17A PRE-AMP1A
 - 17C PRE-AMP1A
 - 18A PRE-AMP2A
 - 18C PRE-AMP2A
 - 19A PRE-AMP5B
 - 19C PRE-AMP5B
 - 20A PRE-AMP6B
 - 20C PRE-AMP6B
 - 21A PRE-AMP3B
 - 21C PRE-AMP3B
 - 22A PRE-AMP4B
 - 22C PRE-AMP4B
 - 23A PRE-AMP1B
 - 23C PRE-AMP1B
 - 24A PRE-AMP2B
 - 24C PRE-AMP2B
 - 25A
 - 25C
 - 26A
 - 26C
 - 27A
 - 27C
 - 28A
 - 28C
 - 29A
 - 29C
 - 30A
 - 30C
 - 31A
 - 31C
 - 32A
 - 32C

EXTERNAL CONTROLS and INTERFACE ECHO UNIT (ota card)

DESIGN	LAB	REV.
DRAWN	VERSCHOOR	25-09-91
JOHANNUS POS 10		PAGE 16

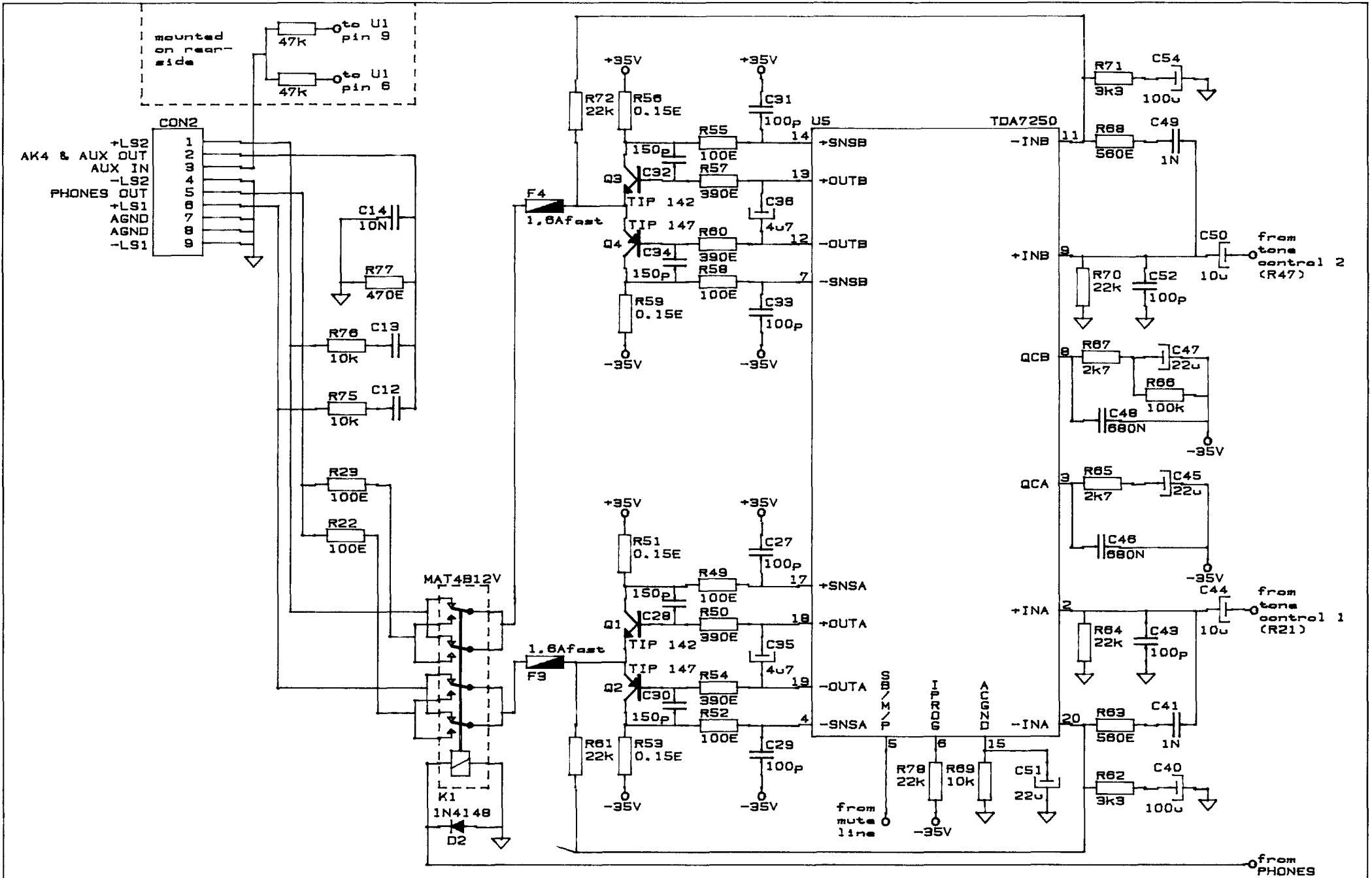


- CON1
- 1A POWER-AMP1
 - 1C POWER-AMP2
 - 2A POWER-AMP3
 - 2C POWER-AMP4
 - 3A TO ECHO
 - 3C FROM ECHO B
 - 4A FROM ECHO A
 - 4C
 - 5A
 - 5C
 - 6A
 - 6C
 - 7A
 - 7C
 - 8A
 - 8C
 - 9A +35V
 - 9C -35V
 - 10A -35V
 - 10C +35V
 - 11A VOLUME
 - 11C MUTE
 - 12A PHONES
 - 12C
 - 13A
 - 13C
 - 14A
 - 14C
 - 15A
 - 15C
 - 16A
 - 16C
 - 17A
 - 17C
 - 18A
 - 18C
 - 19A
 - 19C
 - 20A
 - 20C
 - 21A
 - 21C
 - 22A
 - 22C
 - 23A
 - 23C
 - 24A
 - 24C
 - 25A
 - 25C
 - 26A
 - 26C
 - 27A
 - 27C
 - 28A
 - 28C
 - 29A
 - 29C
 - 30A
 - 30C
 - 31A
 - 31C
 - 32A
 - 32C

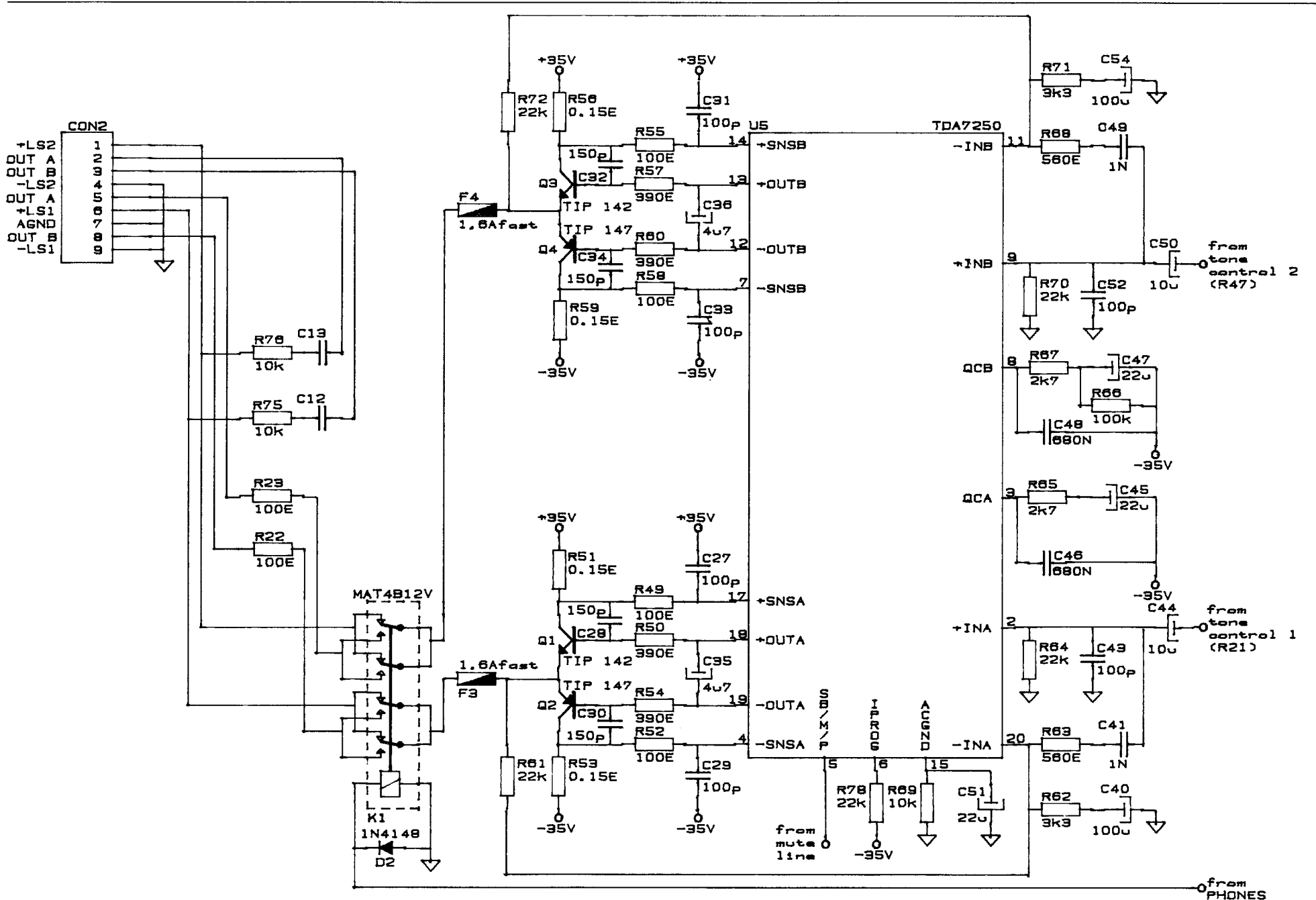
to phones
on/off
relais

PRE-AMPLIFIERS and TONE CONTROLS
(amplifier cards)

DESIGN	LAB	REV.
DRAWN	VERSCHOOR	26-09-91
JOHANNUS POS 10		PAGE 17

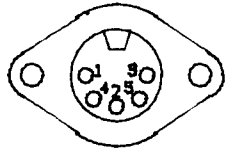


POWER AMPLIFIER (amplifier card A & B)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	28-09-91	
JOHANNUS POS 10			PAGE 18



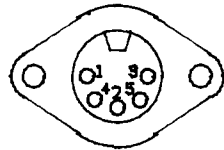
POWER AMPLIFIER (amplifier card C)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	26-09-91	
JOHANNUS POS 10			PAGE 19

1. NOT CONNECTED
2. NOT CONNECTED
3. NOT CONNECTED
4. +5V MIDI IN
5. MIDI IN



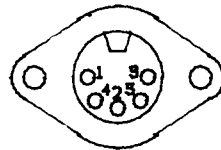
MIDI
IN

1. NOT CONNECTED
2. NOT CONNECTED
3. NOT CONNECTED
4. +5V MIDI THRU
5. MIDI THRU



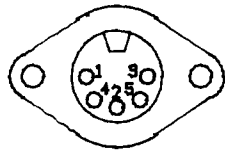
MIDI
THRU

1. NOT CONNECTED
2. NOT CONNECTED
3. NOT CONNECTED
4. +5V MIDI OUT
5. MIDI OUT



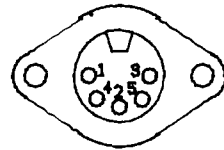
MIDI
OUT

1. AK-4 OUT CHANNEL A
2. GROUND
3. NOT CONNECTED
4. AK-4 OUT CHANNEL B
5. NOT CONNECTED



AK-4
OUT

1. AUX OUT CHANNEL A
2. GROUND
3. AUX IN CHANNEL A
4. AUX OUT CHANNEL B
5. AUX IN CHANNEL B



AUX
IN/OUT

EXTERNAL CONNECTIONS (mounted on the rear side of the organ) <u>SOLDERINGSIDEVIEW</u>			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	26-09-91	
JOHANNUS POS 10			PAGE 20