

# JOHANNUS

*SCHMATIC DIAGRAMS*

*OPUS 910*

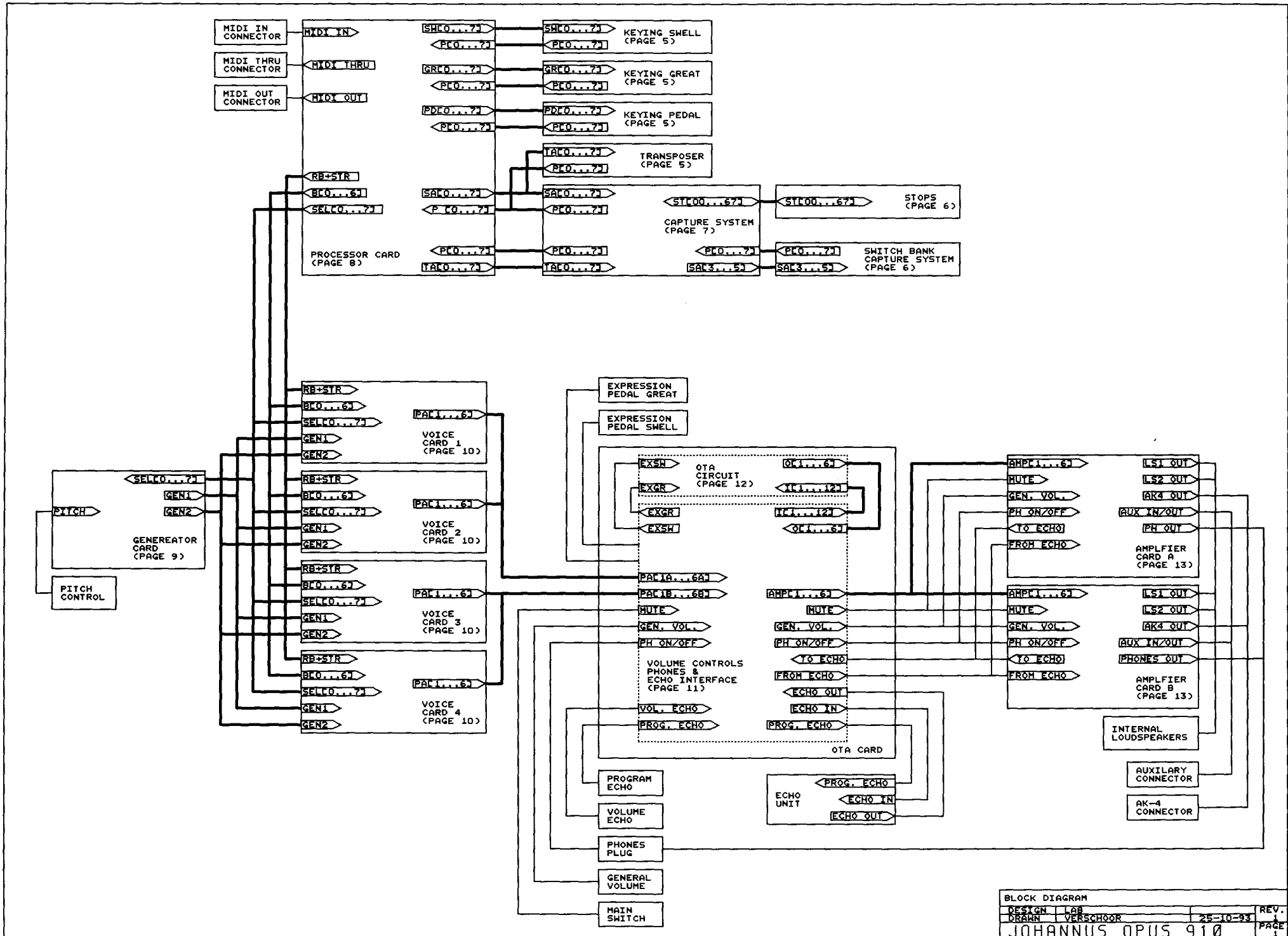
ALTERATIONS RESERVED

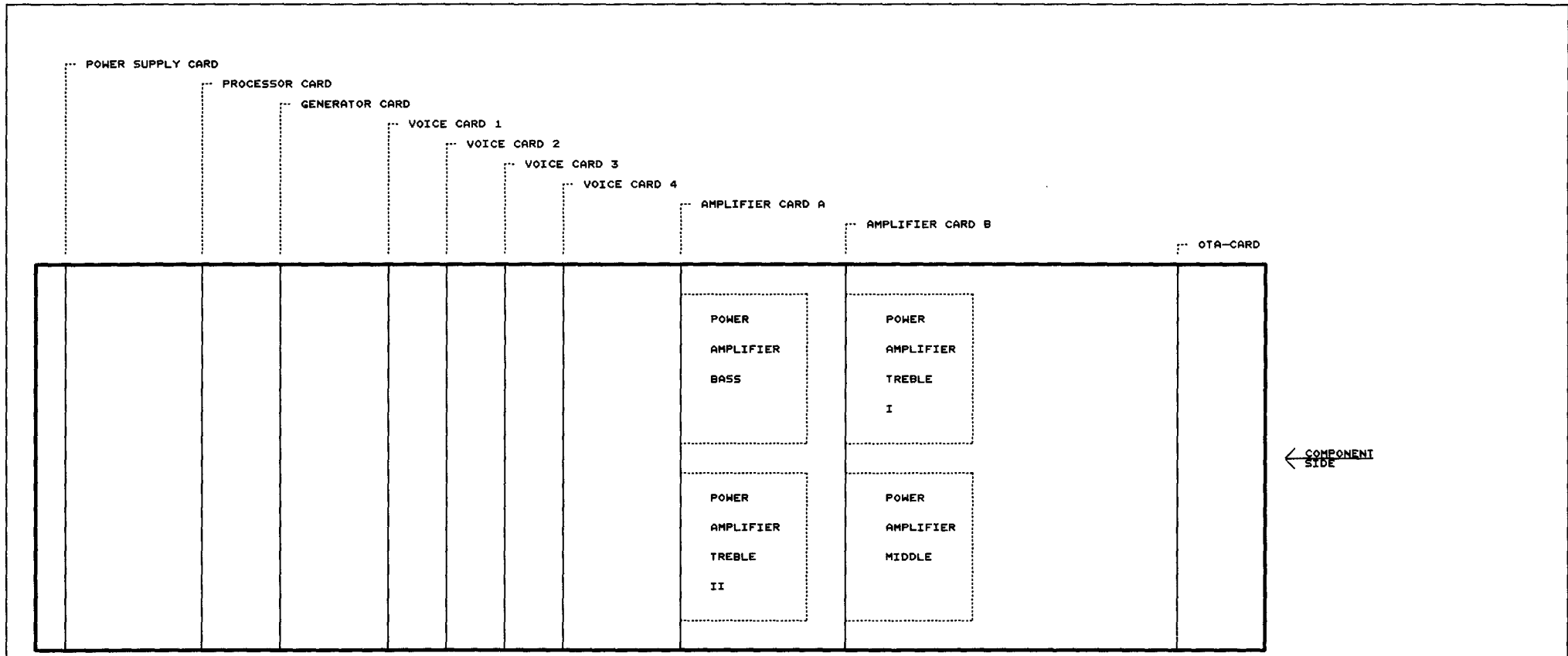
JOHANNUS Orgelbouw b.v.

Morsestraat 28 - 6716 AH Ede - Tel. (08380) 37403 - Fax (08380) 22238

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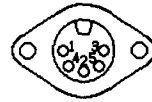


- 1. NOT CONNECTED
- 2. NOT CONNECTED
- 3. NOT CONNECTED
- 4. +5V MIDI IN
- 5. MIDI IN



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

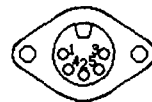
SOLDERING SIDE VIEW

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



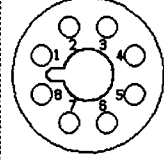
AK-4 OUT

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



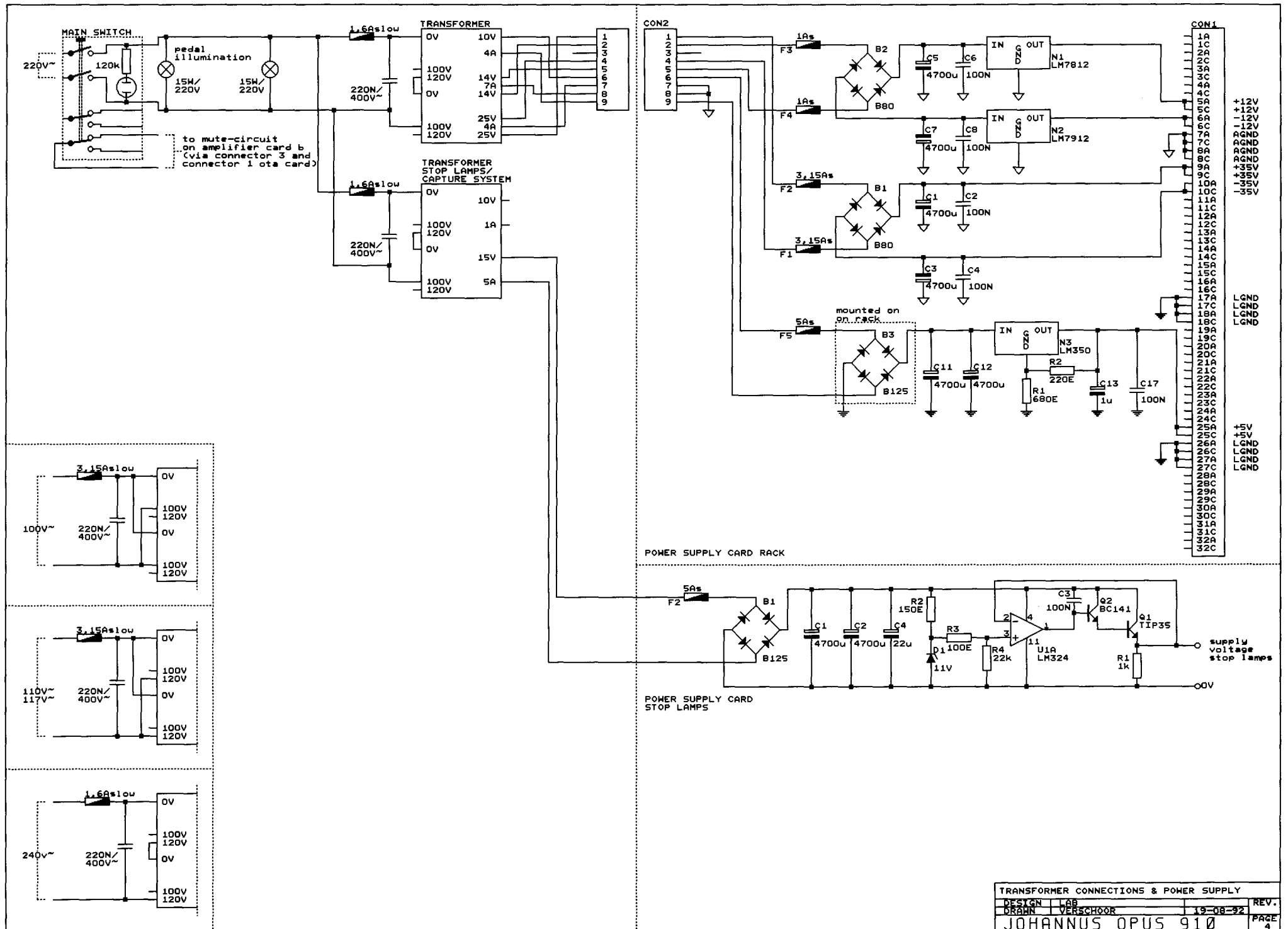
AUX IN/OUT

- 1. - BASS AMPLIFIER
- 2. + BASS AMPLIFIER
- 3. - MIDDLE AMPLIFIER
- 4. + MIDDLE AMPLIFIER
- 5. - TREBLE I AMPLIFIER
- 6. + TREBLE I AMPLIFIER
- 7. - TREBLE II AMPLIFIER
- 8. + TREBLE II AMPLIFIER

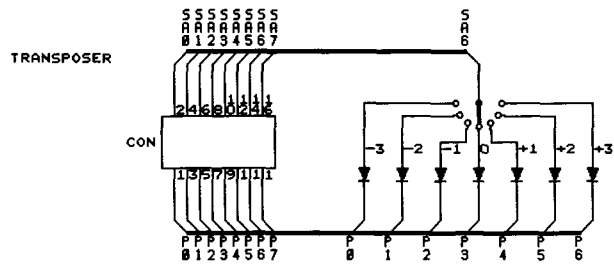
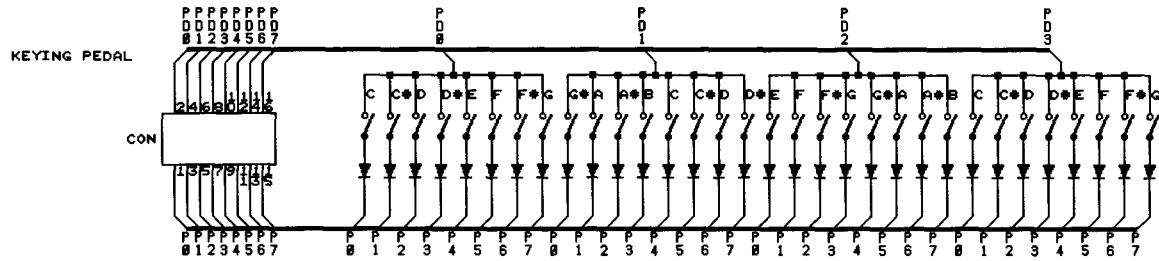
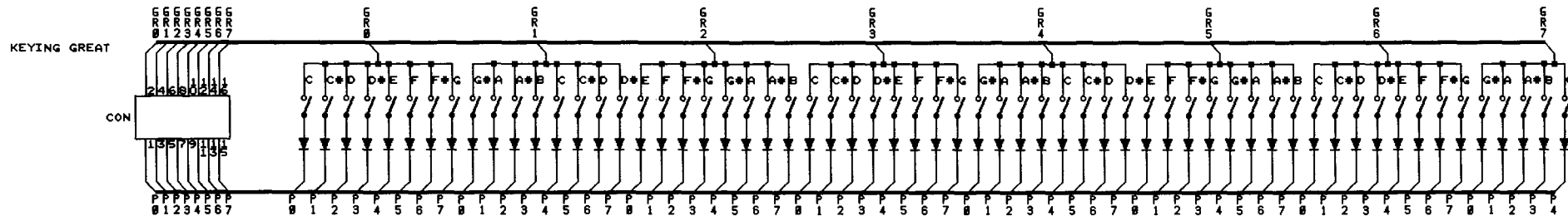
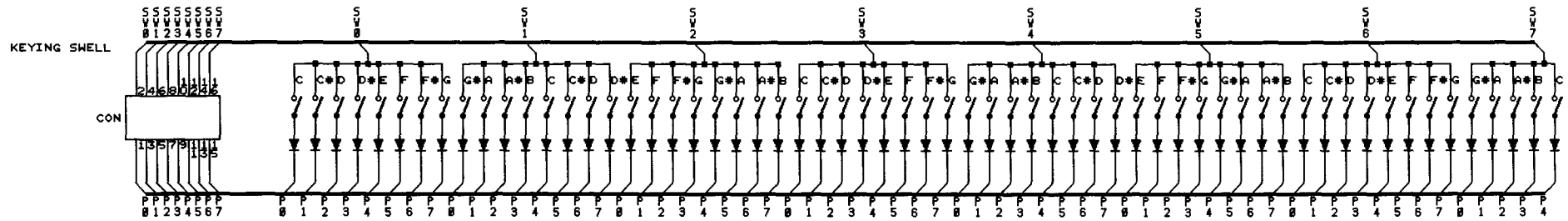


(OPTIONAL)

CON1	CON2	CON3	CON4-5	CON6-8	CON9-10	CON11	CON12	
015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 0200 0210 0220 0230 0240 0250 +5V 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 RB 0200 B6 0210 B4 0220 B2 0230 B0 0240 +5V 0250 LGND 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 GEN2 0200 RB 0210 B6 0220 B4 0230 B2 0240 B0 0250 +5V 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 GEN2 0200 RB 0210 B6 0220 B4 0230 B2 0240 B0 0250 +5V 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 GEN2 0200 RB 0210 B6 0220 B4 0230 B2 0240 B0 0250 +5V 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 LGND 0200 LGND 0210 +5V 0220 LGND 0230 LGND 0240 +5V 0250 LGND 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 LGND 0200 LGND 0210 +5V 0220 LGND 0230 LGND 0240 +5V 0250 LGND 0260 LGND 0270 0280 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 AMP3 0200 AMP4 0210 FROM ECHO A 0220 FROM ECHO B 0230 +12V 0240 -12V 0250 AGND 0260 AGND 0270 +35V 0280 -35V 0290 0300 0310 0320	015 020 030 040 +12V 050 -12V 060 AGND 070 AGND 080 +35V 090 -35V 010 0110 0120 0130 0140 0150 0160 0170 0180 0190 AMP3 0200 AMP4 0210 FROM ECHO A 0220 FROM ECHO B 0230 +12V 0240 -12V 0250 AGND 0260 AGND 0270 +35V 0280 -35V 0290 0300 0310 0320
POWER SUPPLY CARD	PROCESSOR CARD	GENERATOR CARD	VOICE CARD 1-2	VOICE CARD 3-5	AMPLIFIER CARD A & B	AMPLIFIER CARD C	OTA CARD	

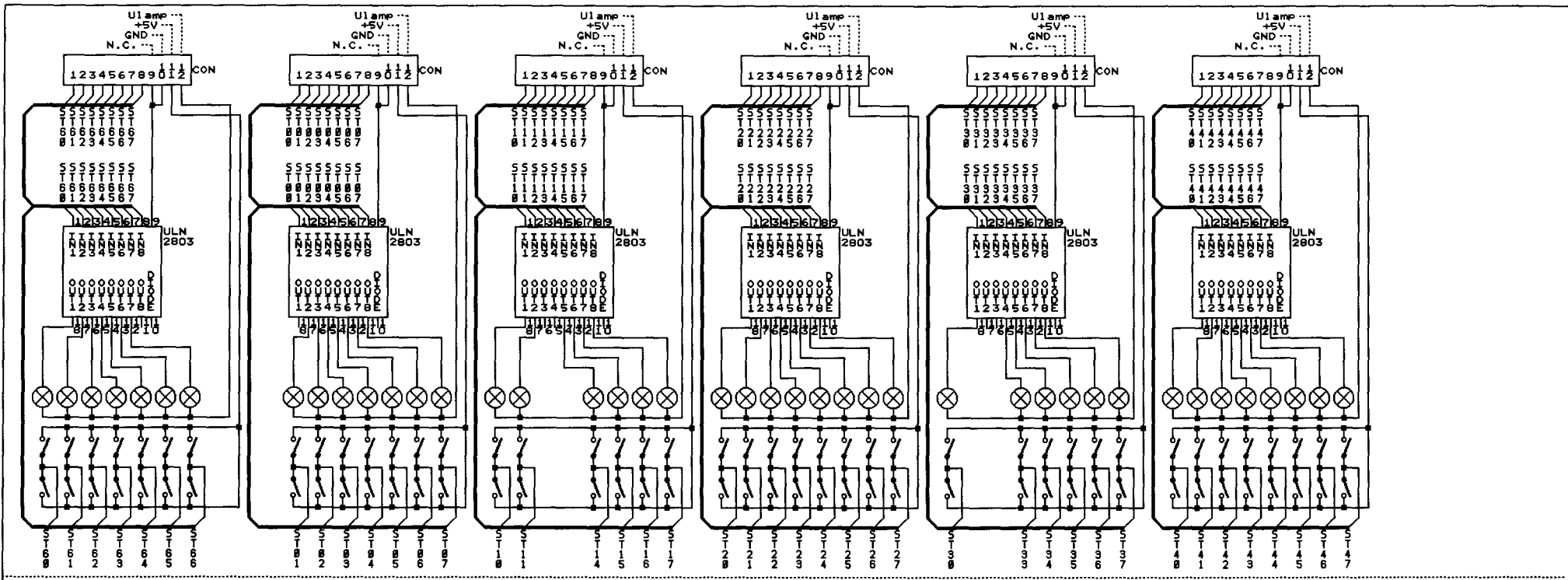


TRANSFORMER CONNECTIONS & POWER SUPPLY			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	19-08-92	PAGE 4
JOHANNUS OPUS 910			

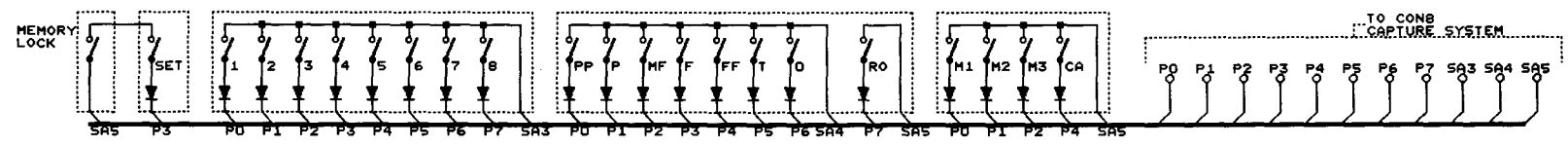


ALL CONNECTORS: TO PROCESSOR CARD  
 ALL DIODES: 1N4148

SCANNING KEYING & TRANSPOSER			
DESIGN	LAB	REV.	
DRAWN	VERSCHOOR	19-08-92	PAGE 5
JOHANNUS OPUS 910			



SWITCH-BANK CAPTURE SYSTEM



TO CONB CAPTURE SYSTEM

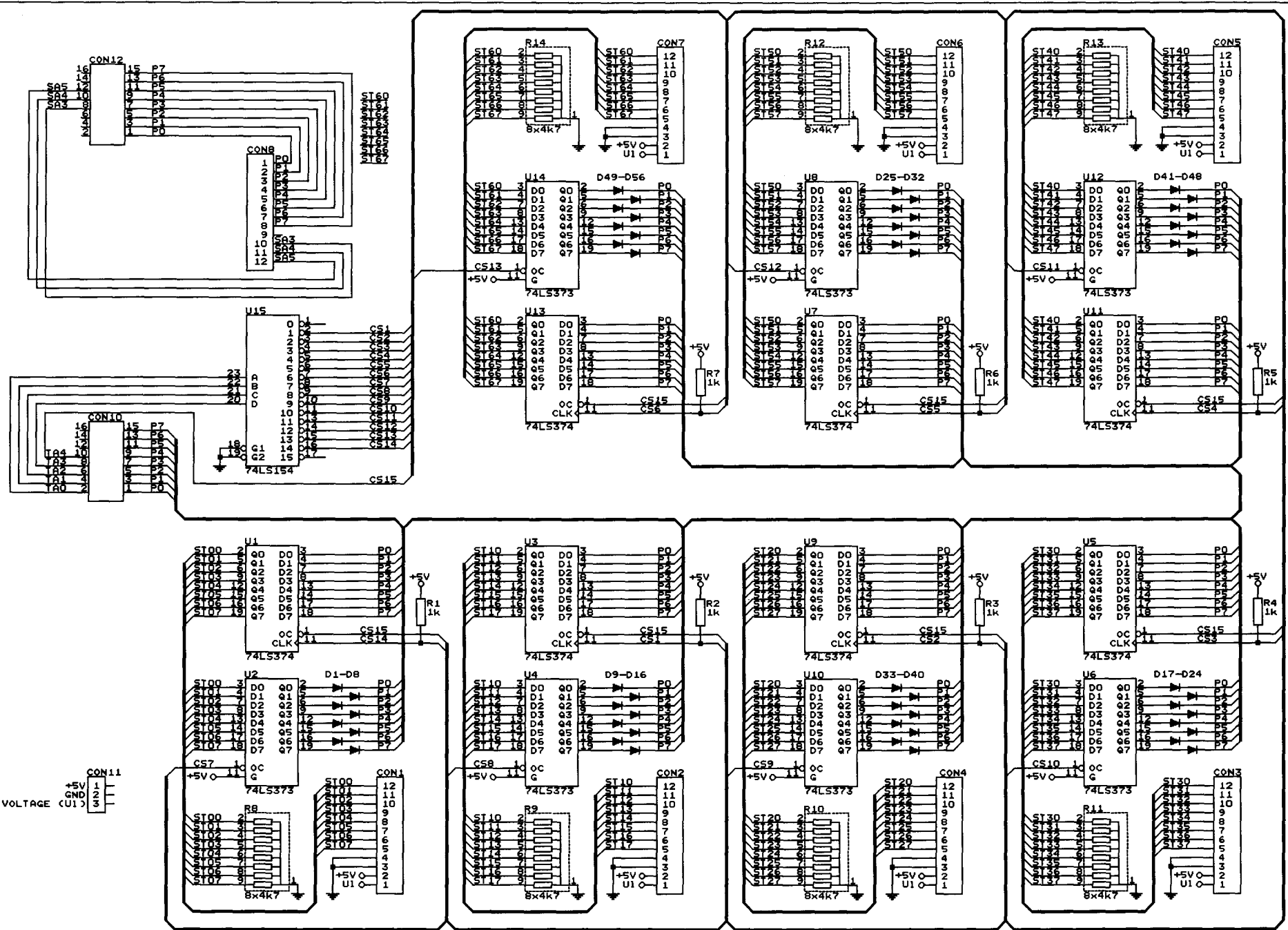
- |   |  |   |  |  |
|---|--|---|--|--|
| <p><b>STOPLIST</b></p> <ul style="list-style-type: none"> <li>ST60 = SWELL TO GREAT</li> <li>ST61 = GREAT TO PEDAL</li> <li>ST62 = SWELL TO PEDAL</li> <li>ST63 = TREMULANT GREAT</li> <li>ST64 = TREMULANT SWELL</li> <li>ST65 = CHORUS</li> <li>ST66 = MANUAL BASS</li> </ul> | <p><b>ACCESSORIES</b></p> <ul style="list-style-type: none"> <li>ST01 = DOUBLE BASS 16'</li> <li>ST02 = SUBBASS 16'</li> <li>ST03 = OCTAVE 8'</li> <li>ST04 = GEDACKT 8'</li> <li>ST05 = BASSFLUTE 4'</li> <li>ST06 = MIXTURE III</li> <li>ST07 = CONTRA TRUMPET 16'</li> <li>ST10 = TRUMPET 8'</li> <li>ST11 = MIDI TO PEDAL (CHAN. 3)</li> </ul> | <p><b>PEDAL</b></p> <ul style="list-style-type: none"> <li>ST14 = BOURDON 16'</li> <li>ST15 = OPEN DIAPASON 8'</li> <li>ST16 = ROHRFLUTE 8'</li> <li>ST17 = GAMBA 8'</li> <li>ST20 = OCTAVE 4'</li> <li>ST21 = OPEN FLUTE 4'</li> <li>ST22 = TWELFTH 2 2/3'</li> <li>ST23 = SUPEROCTAVE 2'</li> <li>ST24 = CONICAL FLUTE 2'</li> <li>ST25 = CORNET IV</li> <li>ST26 = MIXTURE IV-VI</li> <li>ST27 = TRUMPET 8'</li> <li>ST30 = MIDI TO GREAT (CHAN. 1)</li> </ul> | <p><b>GREAT</b></p> <ul style="list-style-type: none"> <li>ST33 = OPEN DIAPASON 8'</li> <li>ST34 = STOPPED FLUTE 8'</li> <li>ST35 = VIOLA 8'</li> <li>ST36 = CELESTE 8'</li> <li>ST37 = OCTAVE 4'</li> <li>ST40 = FLUTE 4'</li> <li>ST41 = FLUTE TWELFTH 2 2/3'</li> <li>ST42 = HALDFLUTE 2'</li> <li>ST43 = TIERCE 1 3/5'</li> <li>ST44 = RAUSCHPFEIFE II-IV</li> <li>ST45 = CROMORNE 8'</li> <li>ST46 = OBOE 8'</li> <li>ST47 = MIDI TO SWELL (CHAN. 2)</li> </ul> | <p><b>SWELL</b></p> <ul style="list-style-type: none"> <li>ST33 = OPEN DIAPASON 8'</li> <li>ST34 = STOPPED FLUTE 8'</li> <li>ST35 = VIOLA 8'</li> <li>ST36 = CELESTE 8'</li> <li>ST37 = OCTAVE 4'</li> <li>ST40 = FLUTE 4'</li> <li>ST41 = FLUTE TWELFTH 2 2/3'</li> <li>ST42 = HALDFLUTE 2'</li> <li>ST43 = TIERCE 1 3/5'</li> <li>ST44 = RAUSCHPFEIFE II-IV</li> <li>ST45 = CROMORNE 8'</li> <li>ST46 = OBOE 8'</li> <li>ST47 = MIDI TO SWELL (CHAN. 2)</li> </ul> |
|---|--|---|--|--|

ALL CONNECTORS: TO CAPTURE SYSTEM  
 ALL STOPLAMPS: 14Vdc/75mA

STOP-BANK AND SWITCH-BANK CAPTURE SYSTEM				REV.
DESIGN	LAB	DATE	REV.	
DRAHN	VERECHOOR	25-10-93		PAGE 6
JOHANNUS OPUS 910				

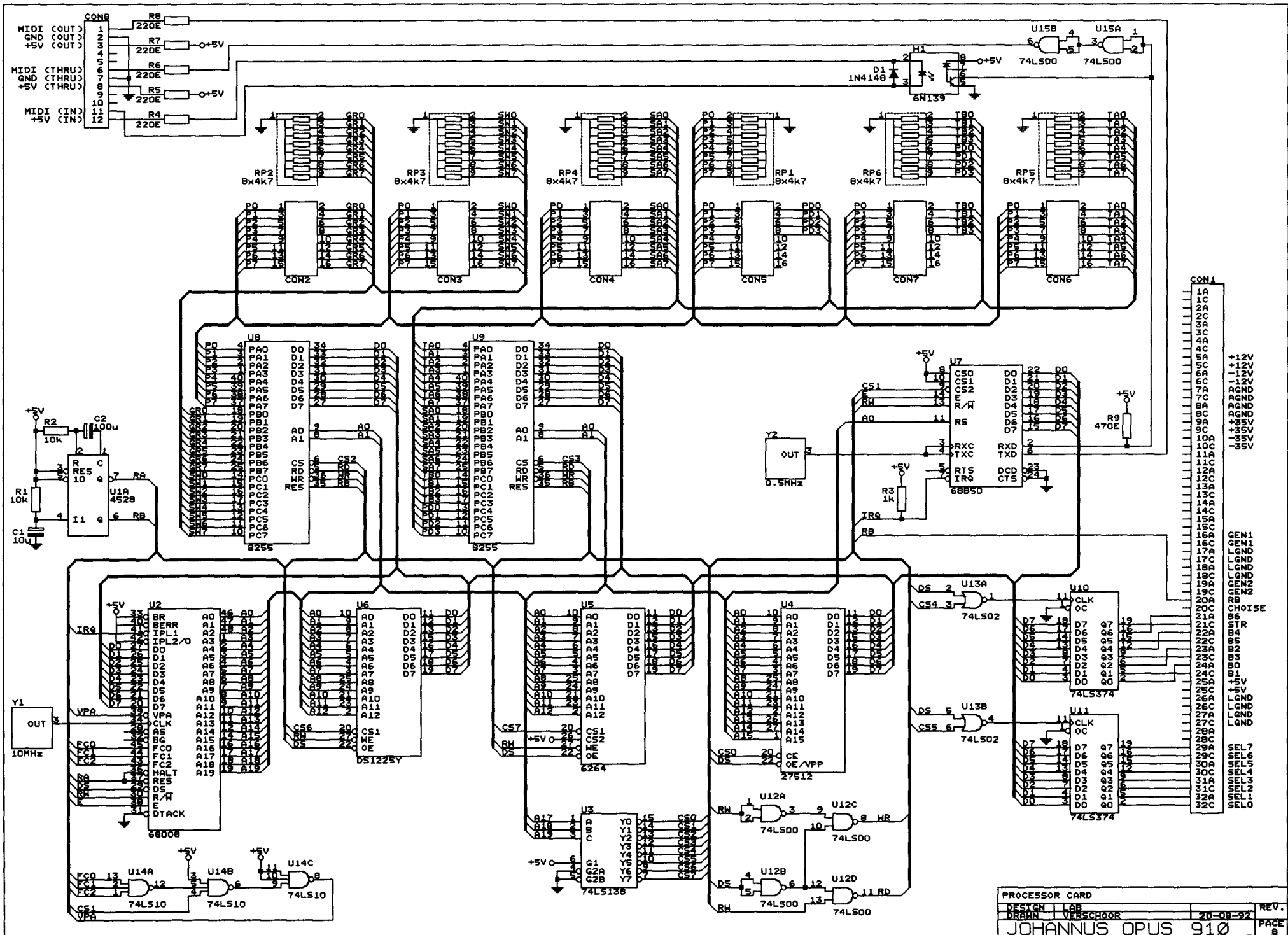


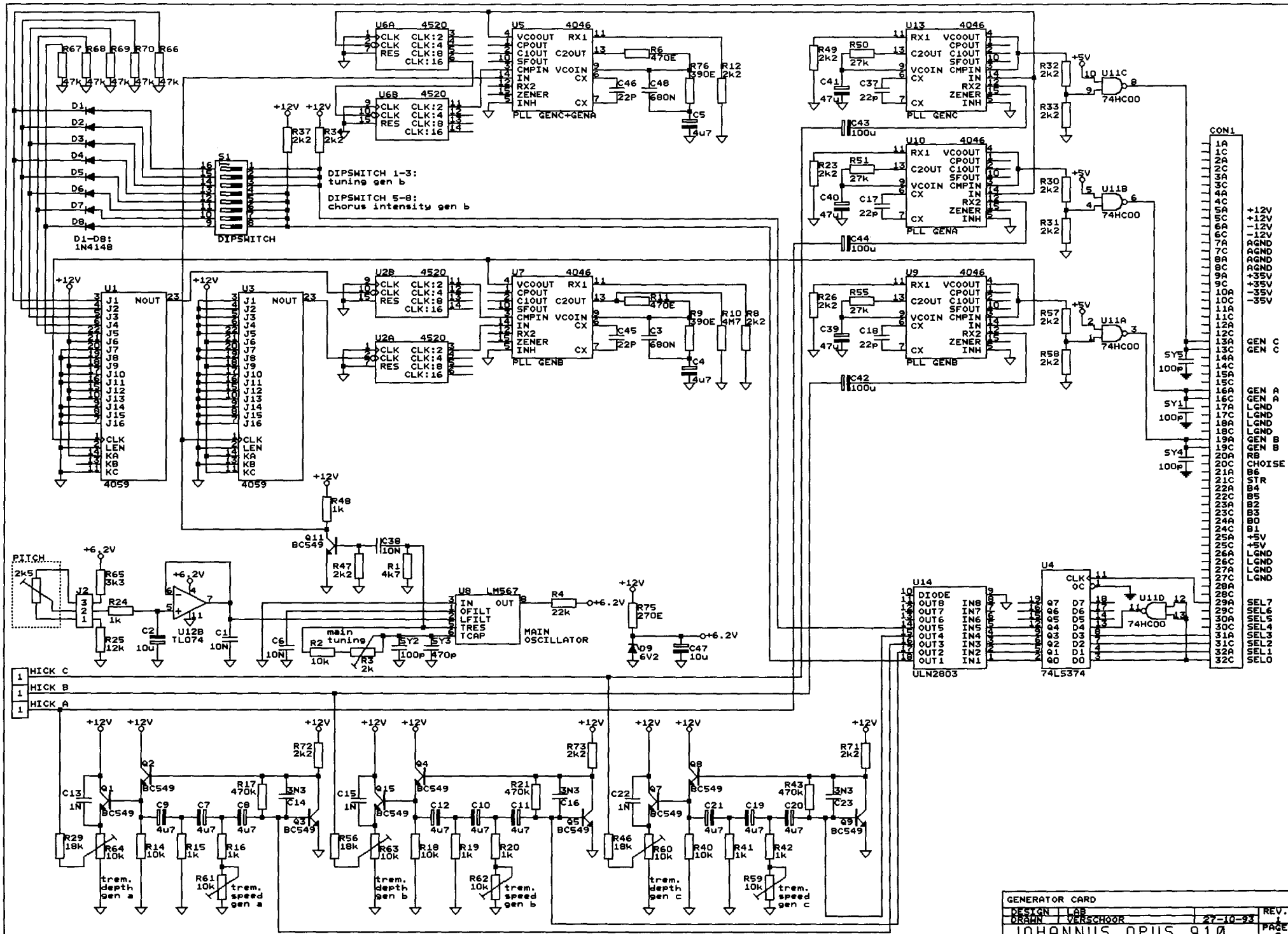
STOPLAMP VOLTAGE (U1)  
 +5V  
 GND  
 U1

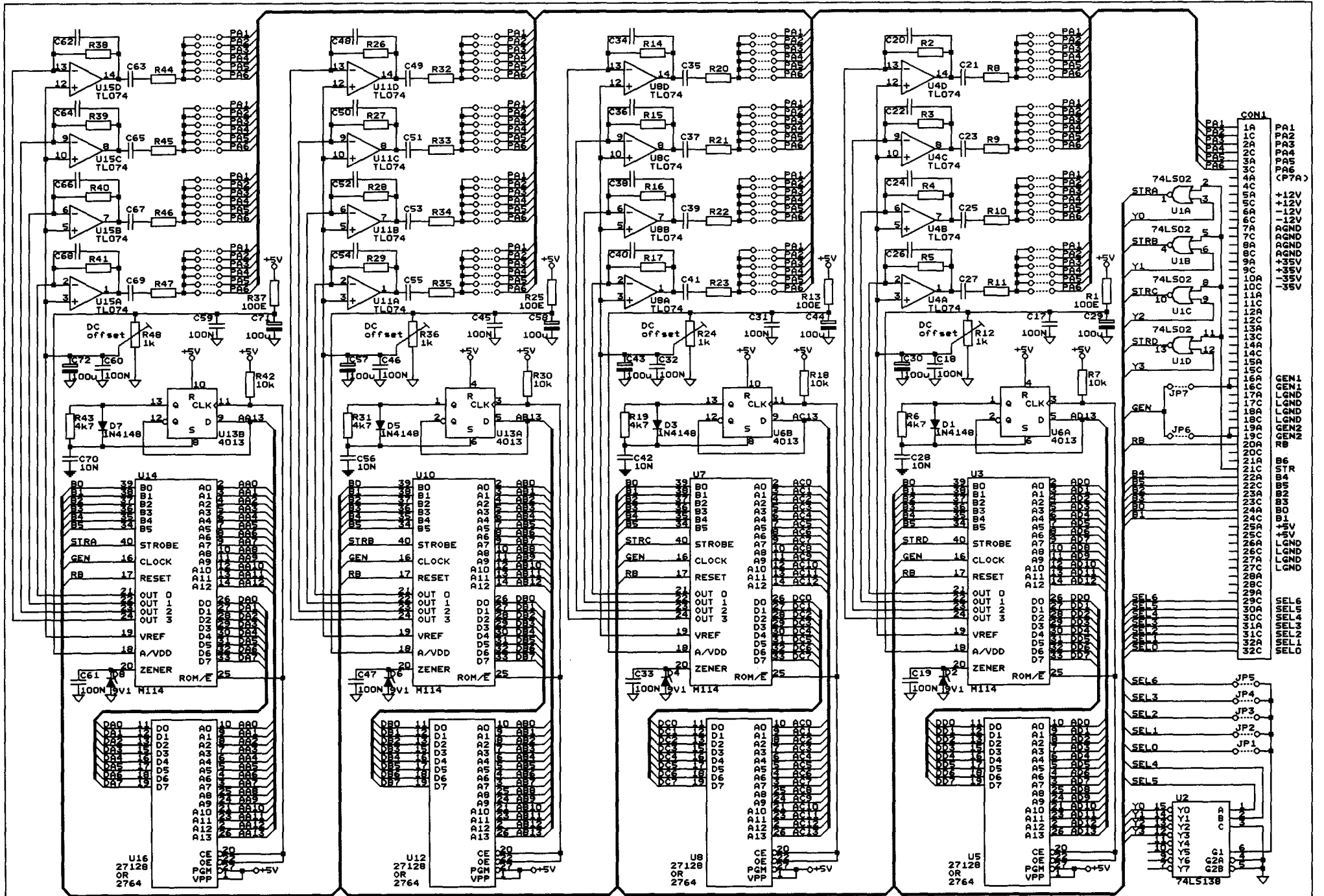


ALL DIODES: 1N4148

CAPTURE SYSTEM			
DESIGN	LAB	25-10-93	REV.
DRAHN	VERSCHOOR		PAGE
JOHANNUS OPUS 910			7

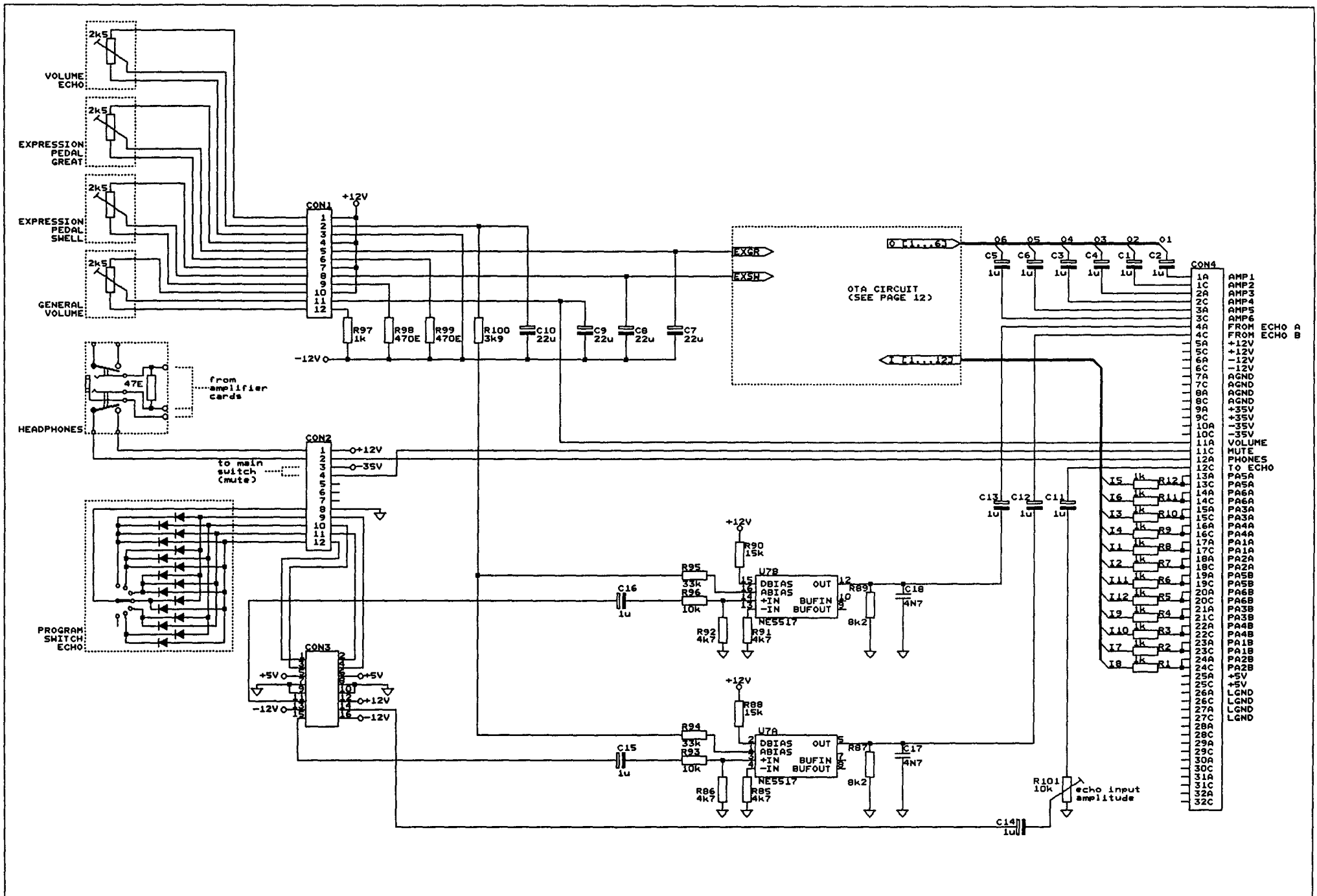






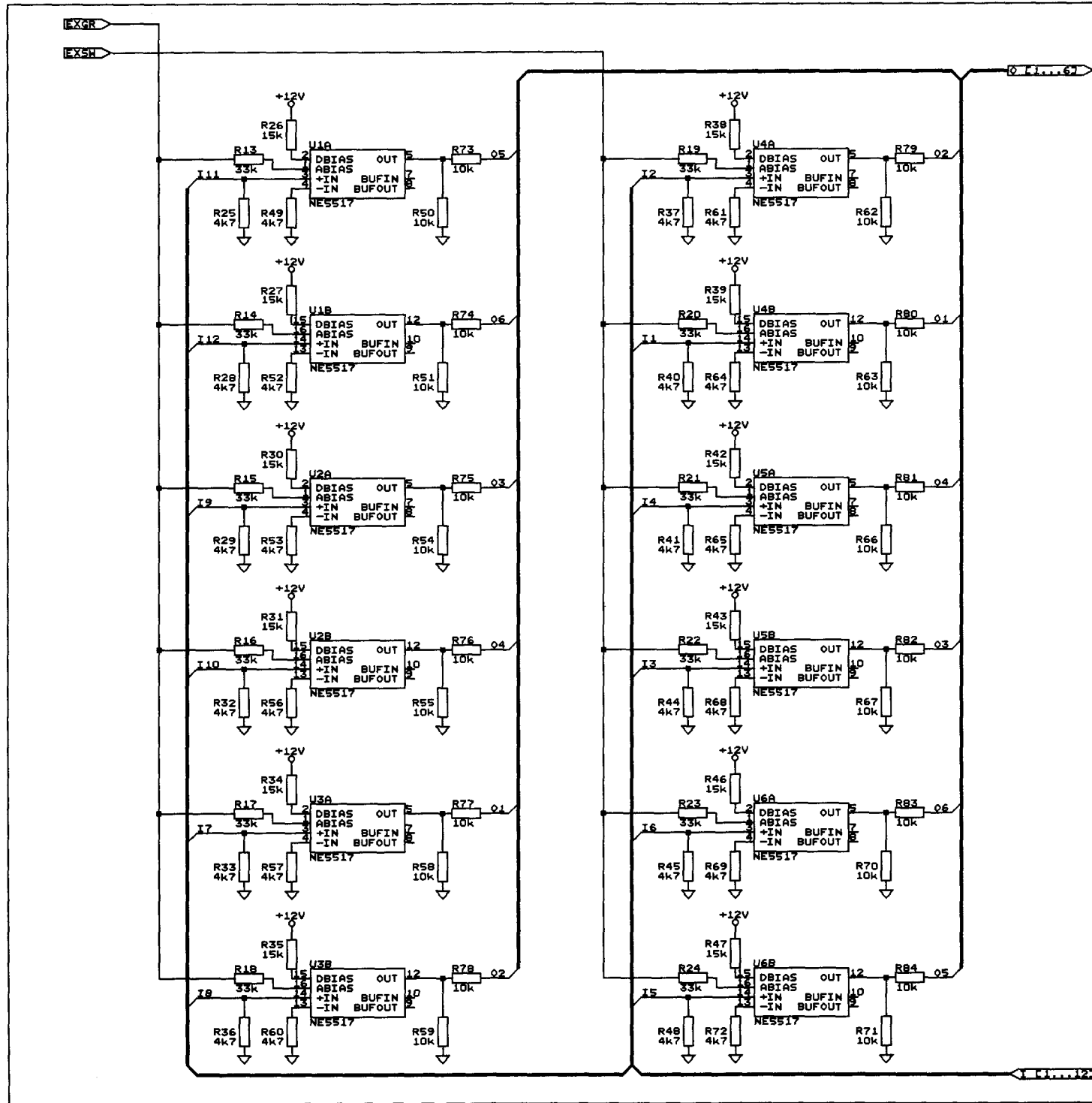
NOTE: IF FOR U5, U8, U12 OR U16 A 2764 EPROM IS PLACED INSTEAD OF A 27128 EPROM, THE 1/2 4013 (U6 AND U13) USED FOR SWITCHING THE UPPER 8K ROM AND THE LOWER 8K ROM, IS NOT NECESSARY.

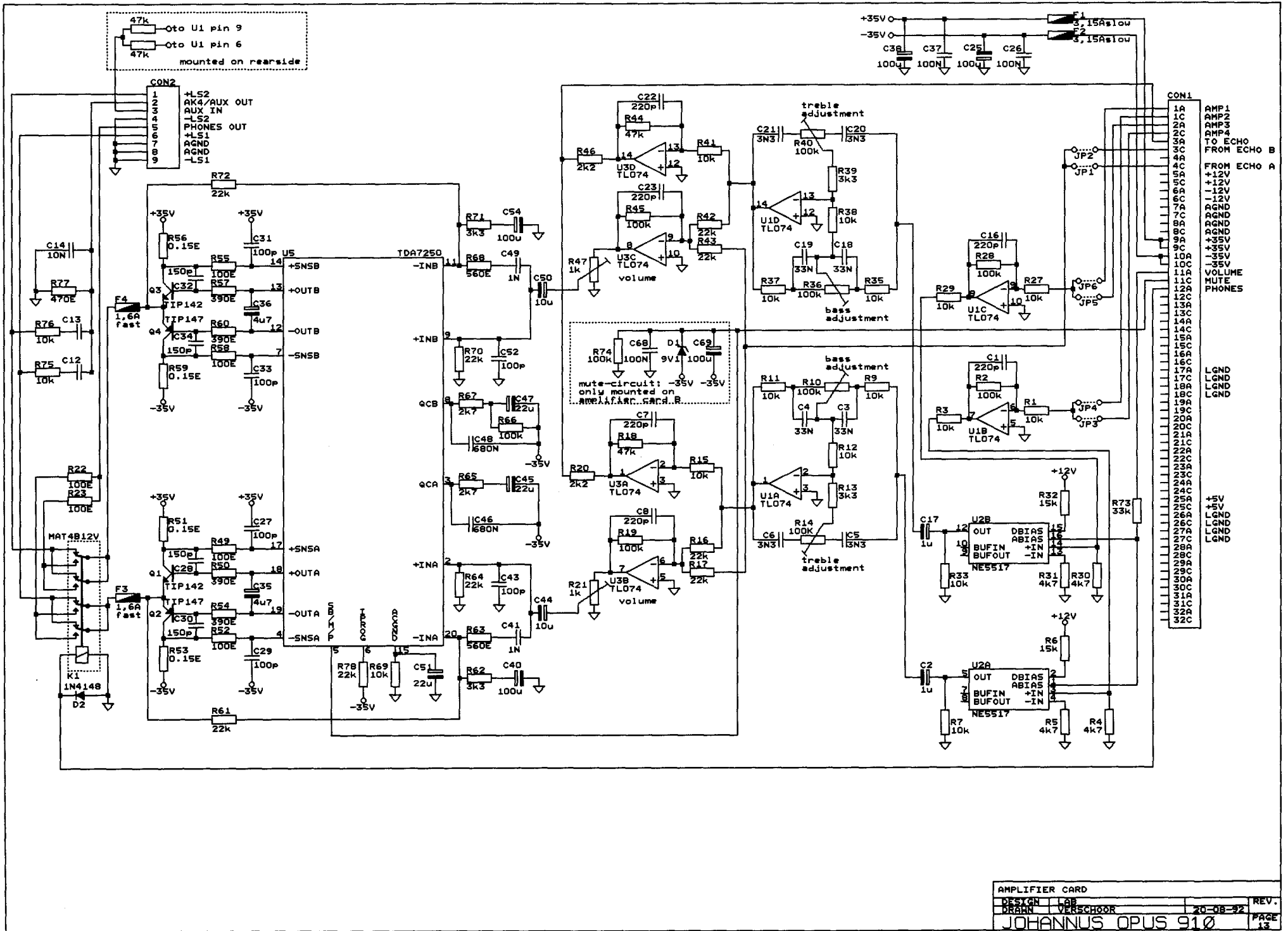
VOICE CARD			
DESIGN	UAB	REV.	
DRAWN	VERSCHOOR	20-08-92	PAGE 10
JOHANNUS OPUS 910			



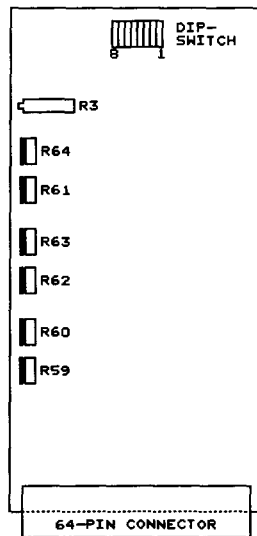
VOLUME CONTROLS; HEADPHONES CONNECTIONS & ECHO INTERFACE (ota card)

DESIGN	LAB	REV.
DRAWN	VERSCHOOR	20-08-92
JOHANNUS OPUS 910		PAGE 11



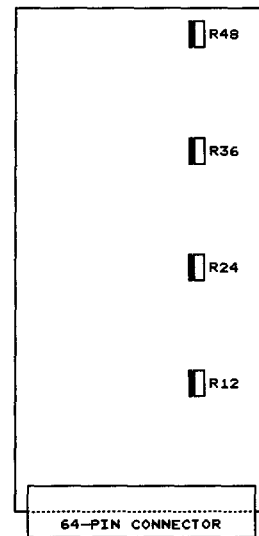


GENERATOR CARD  
(COMPONENT-SIDE VIEW)



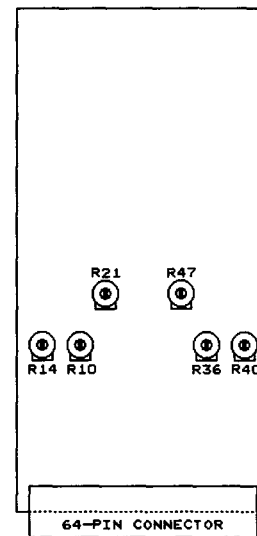
- R3 = MAIN TUNING
- R64 = TREMULANT DEPTH GREAT
- R61 = TREMULANT SPEED GREAT
- R63 = TREMULANT DEPTH SWELL
- R62 = TREMULANT SPEED SWELL
- R60 = TREMULANT DEPTH CHOIR
- R59 = TREMULANT SPEED CHOIR
- DS1-DS3 = TUNING SWELL
- DS4-DS8 = CHORUS INTENSITY SWELL

VOICE CARD  
(COMPONENT-SIDE VIEW)



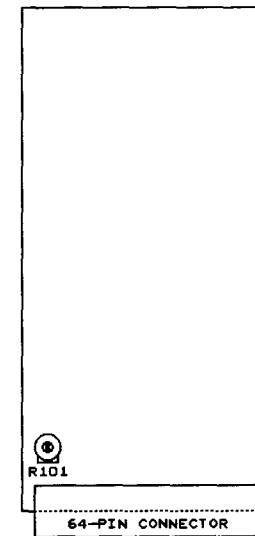
- R12 = DC-OFFSET VOICE D  
(DISTORSION VOICE D)
  - R24 = DC-OFFSET VOICE C  
(DISTORSION VOICE C)
  - R36 = DC-OFFSET VOICE B  
(DISTORSION VOICE B)
  - R48 = DC-OFFSET VOICE A  
(DISTORSION VOICE A)
- NOTE: R12-R24-R36-R48 ARE NOT  
FOR CHANGING VOLUMES!!  
TURNING THESE POTENTIOMETERS  
WILL GIVE DISTORSION!!

AMPLIFIER CARD  
(COMPONENT-SIDE VIEW)



- R10 = BASS LEFT AMPLIFIER
- R14 = TREBLE LEFT AMPLIFIER
- R21 = VOLUME LEFT AMPLIFIER
- R36 = BASS RIGHT AMPLIFIER
- R40 = TREBLE RIGHT AMPLIFIER
- R47 = VOLUME RIGHT AMPLIFIER

OTA CARD  
(COMPONENT-SIDE VIEW)



- R101 = INPUT AMPLITUDE ECHO