

JOHANNUS

SCHEMATIC DIAGRAMS

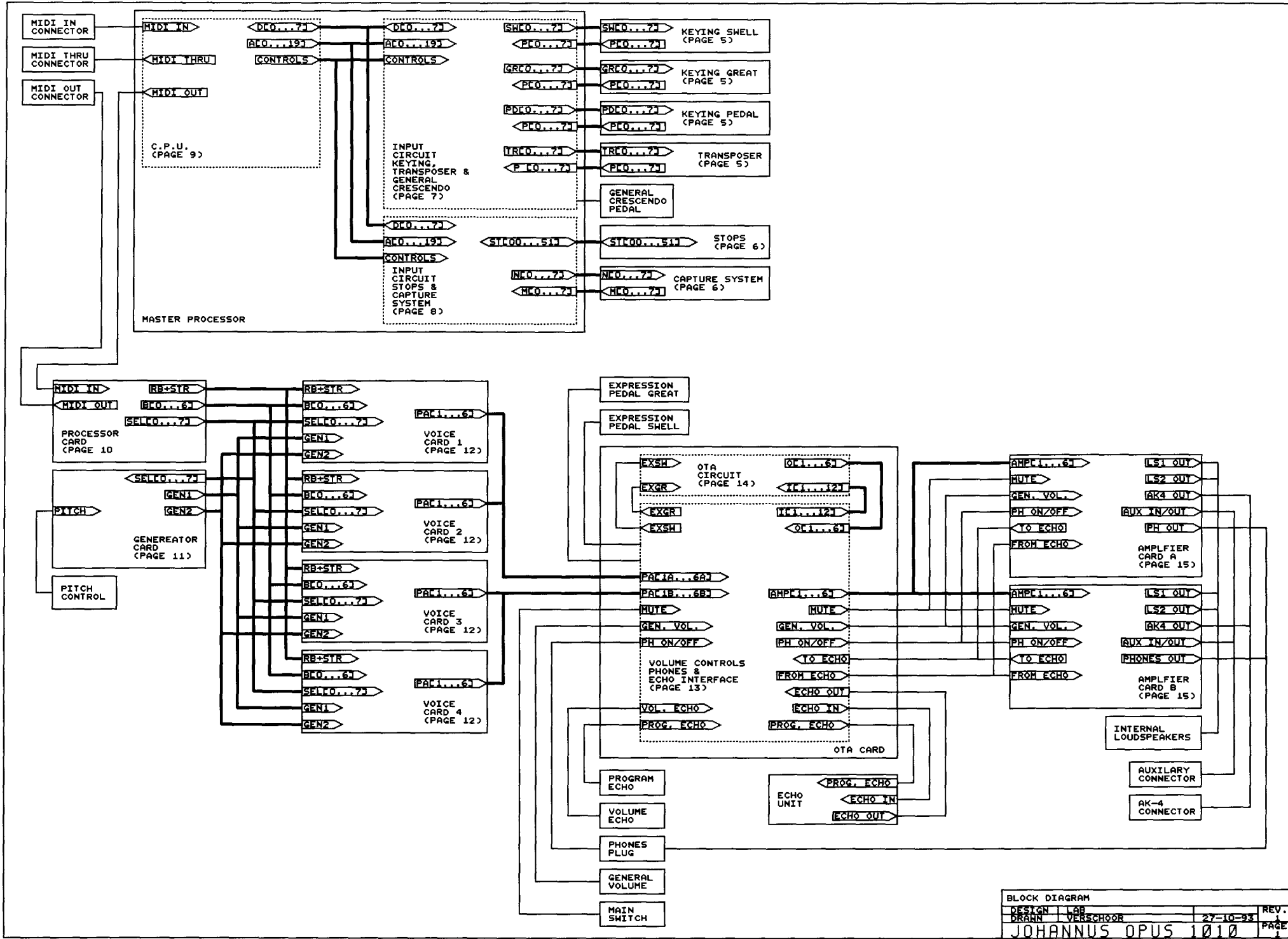
OPUS 1010

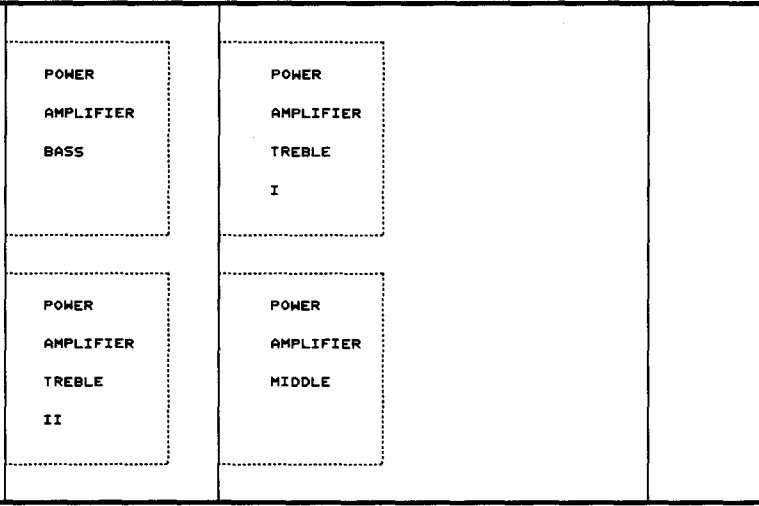
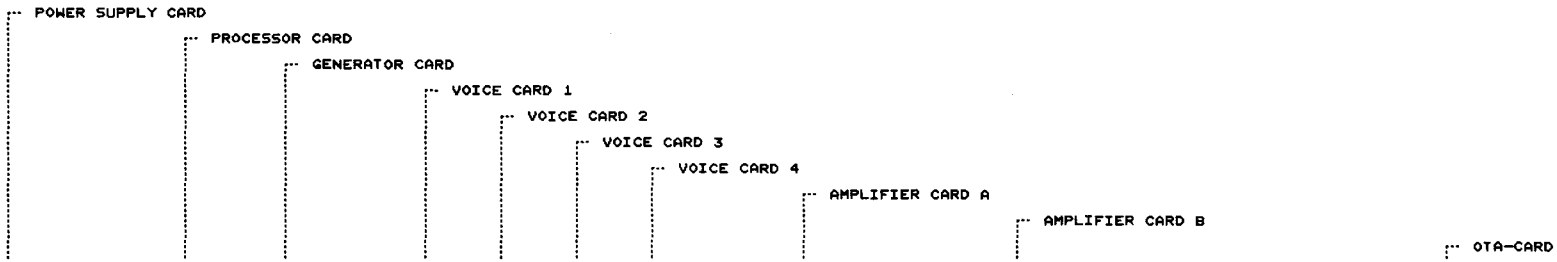
ALSO USABLE FOR OPUS 1020

ALTERATIONS RESERVED

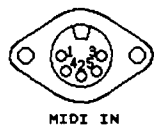
JOHANNUS Orgelbouw b.v.

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

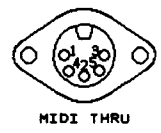




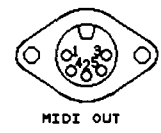
- 1. NOT CONNECTED
- 2. NOT CONNECTED
- 3. NOT CONNECTED
- 4. +5V MIDI IN
- 5. MIDI IN



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

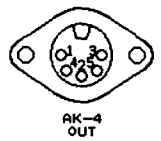


- 1. NOT CONNECTED
- 2. NOT CONNECTED
- 3. NOT CONNECTED
- 4. +5V MIDI OUT
- 5. MIDI OUT

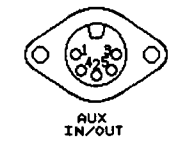


SOLDERING SIDE VIEW

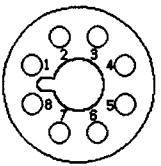
- 1. AK-4 OUT CHANNEL A
- 2. GROUND
- 3. NOT CONNECTED
- 4. AK-4 OUT CHANNEL B
- 5. NOT CONNECTED



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

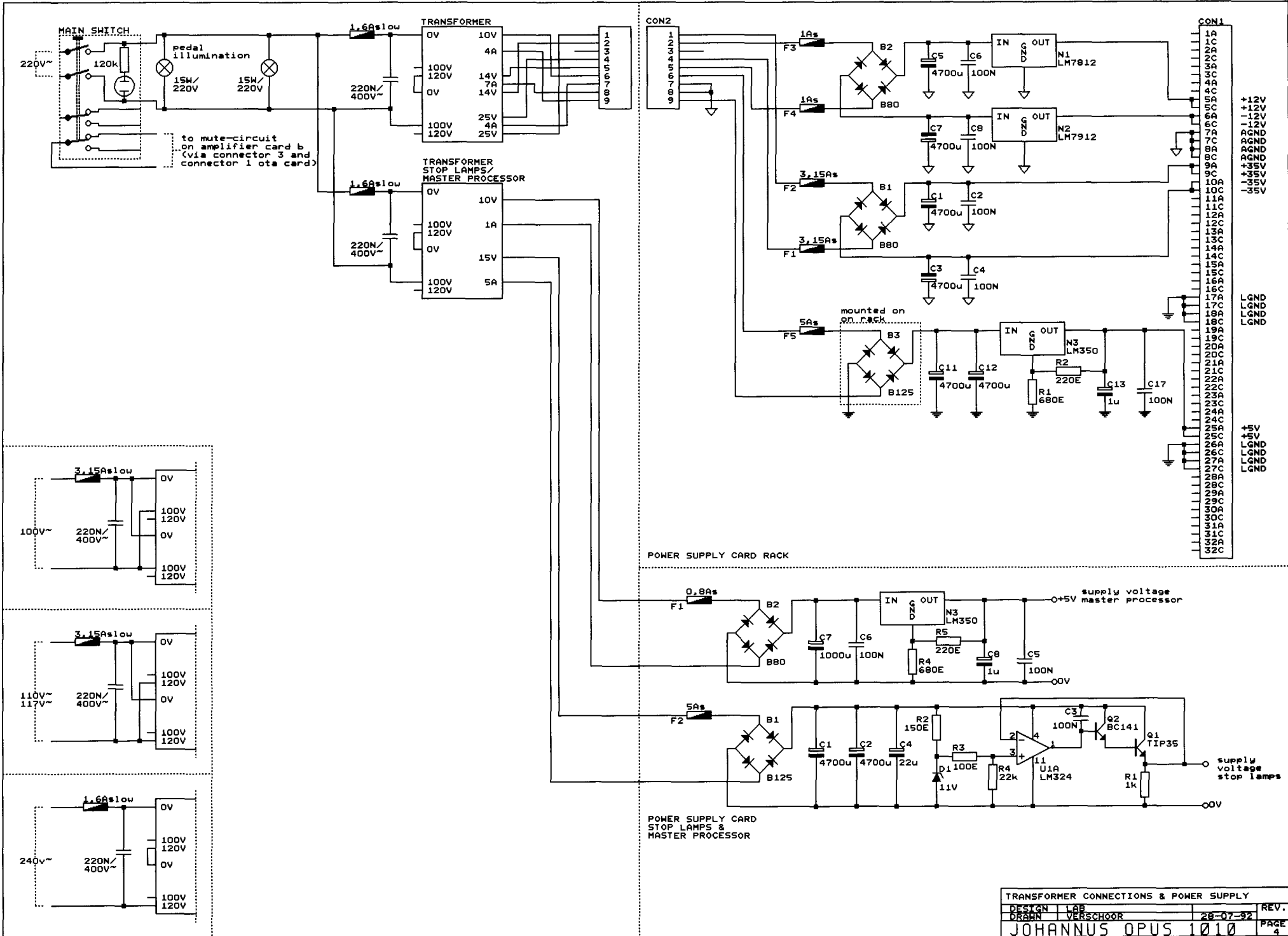


- 1. - BASS AMPLIFIER
- 2. + BASS AMPLIFIER
- 3. - MIDDLE AMPLIFIER
- 4. + MIDDLE AMPLIFIER
- 5. - TREBLE I AMPLIFIER
- 6. + TREBLE I AMPLIFIER
- 7. - TREBLE II AMPLIFIER
- 8. + TREBLE II AMPLIFIER

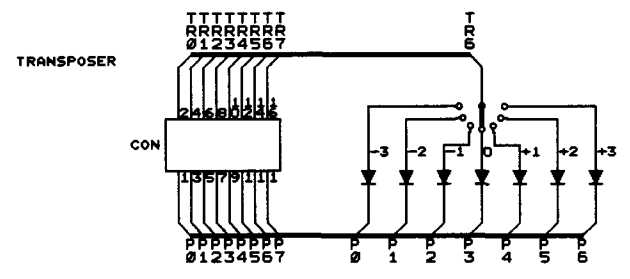
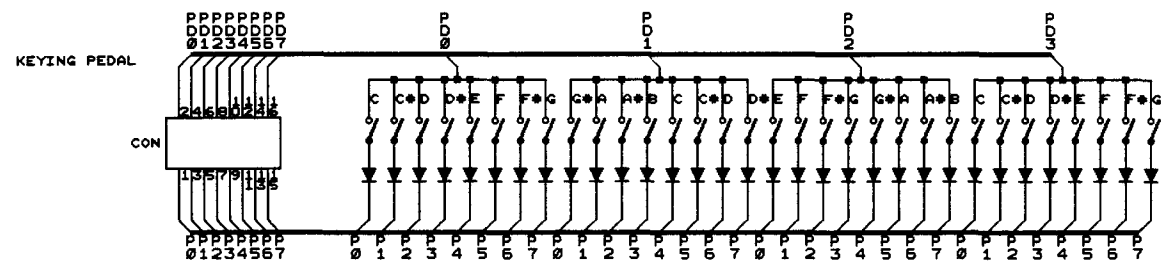
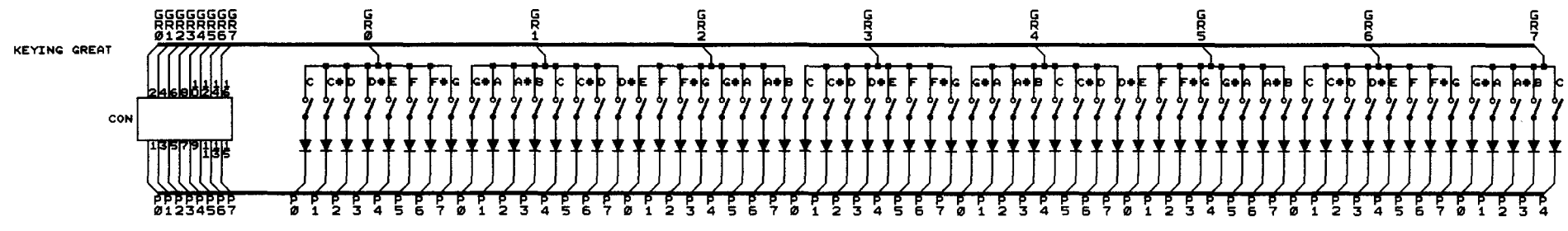
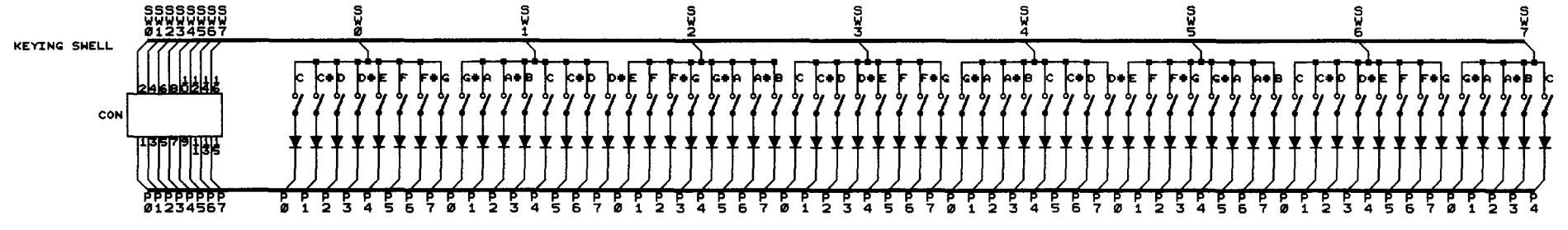


(OPTIONAL)

CON1	CON2	CON3	CON4-5	CON6-8	CON9-10	CON11	CON12
8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 0 1 6 0 0 1 7 0 0 1 8 0 0 1 9 0 0 2 0 0 0 2 1 0 0 2 2 0 0 2 3 0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 0 2 9 0 0 3 0 0 0 3 1 0 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 0 1 6 0 0 1 7 0 0 1 8 0 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0	8 1 5 0 2 0 0 3 0 0 4 0 +12V 0 5 0 -12V 0 6 0 AGND 0 7 0 +35V 0 9 0 -35V 0 1 0 0 1 1 0 0 1 2 0 0 1 3 0 0 1 4 0 0 1 5 0 GEN1 0 1 6 0 LGND 0 1 7 0 0 1 8 0 GEN2 0 1 9 0 RB 0 2 0 0 B6 0 2 1 0 B4 0 2 2 0 B2 0 2 3 0 B0 0 2 4 0 +5V 0 2 5 0 LGND 0 2 6 0 0 2 7 0 0 2 8 0 SEL7 0 2 9 0 SEL5 0 3 0 0 SEL3 0 3 1 0 SEL1 0 3 2 0
POWER SUPPLY CARD	PROCESSOR CARD	GENERATOR CARD	VOICE CARD 1-2	VOICE CARD 3-5	AMPLIFIER CARD A & B	AMPLIFIER CARD C	OTA CARD

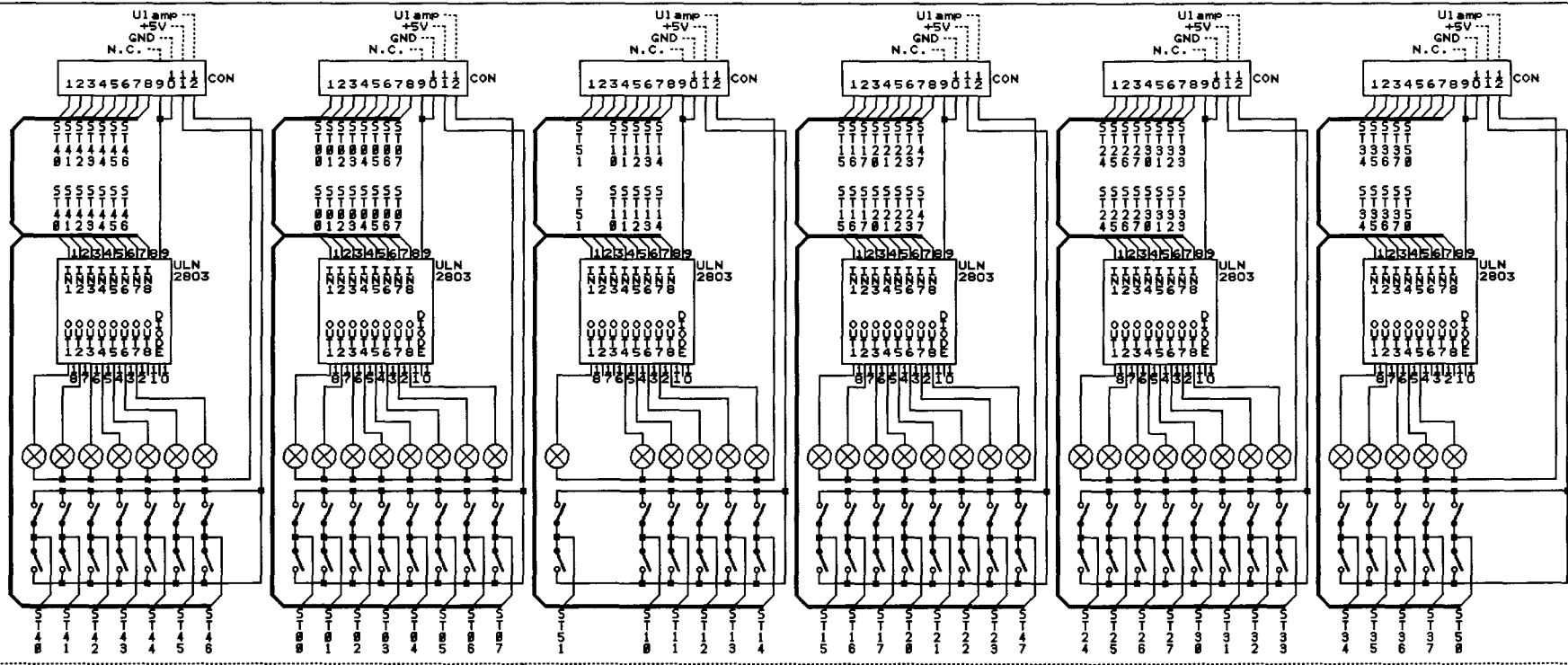


TRANSFORMER CONNECTIONS & POWER SUPPLY			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	28-07-92	PAGE
JOHANNUS OPUS 1010			4

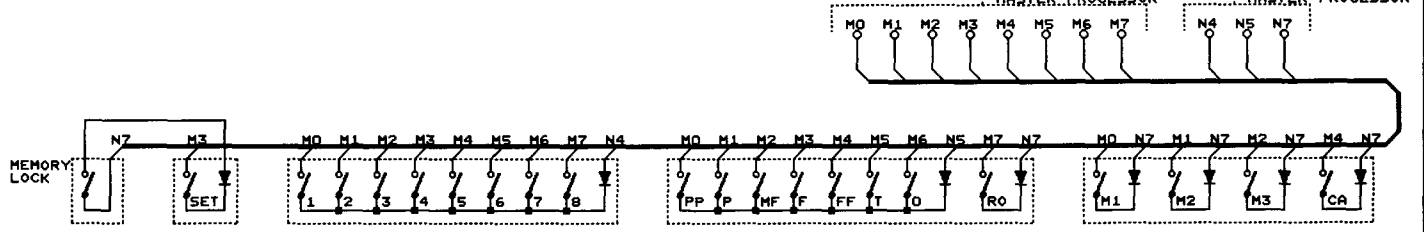


ALL CONNECTORS: TO MASTER PROCESSOR
 ALL DIODES: 1N4148

SCANNING KEYING & TRANSPOSER		REV.
DESIGN	LAB	
DRAWN	VERSCHOOR	28-07-92
JOHANNUS OPUS 1010		PAGE 5



SWITCH-BANK CAPTURE SYSTEM



STOPLIST

ACCESSORIES

- ST40 = SHELL TO GREAT
- ST41 = GREAT TO PEDAL
- ST42 = SHELL TO PEDAL
- ST43 = TREMULANT GREAT
- ST44 = TREMULANT SHELL
- ST45 = CHORUS
- ST46 = MANUAL BASS

PEDAL

- ST00 = DOUBLE BASS 16'
- ST01 = SUBBASS 16'
- ST02 = OCTAVE 8'
- ST03 = GEDACKT 8'
- ST04 = BASSFLUTE 4'
- ST05 = MIXTURE III
- ST06 = CONTRA TRUMPET 16'
- ST07 = TRUMPET 8'
- ST51 = MIDI TO PEDAL (CHAN. 3)

GREAT

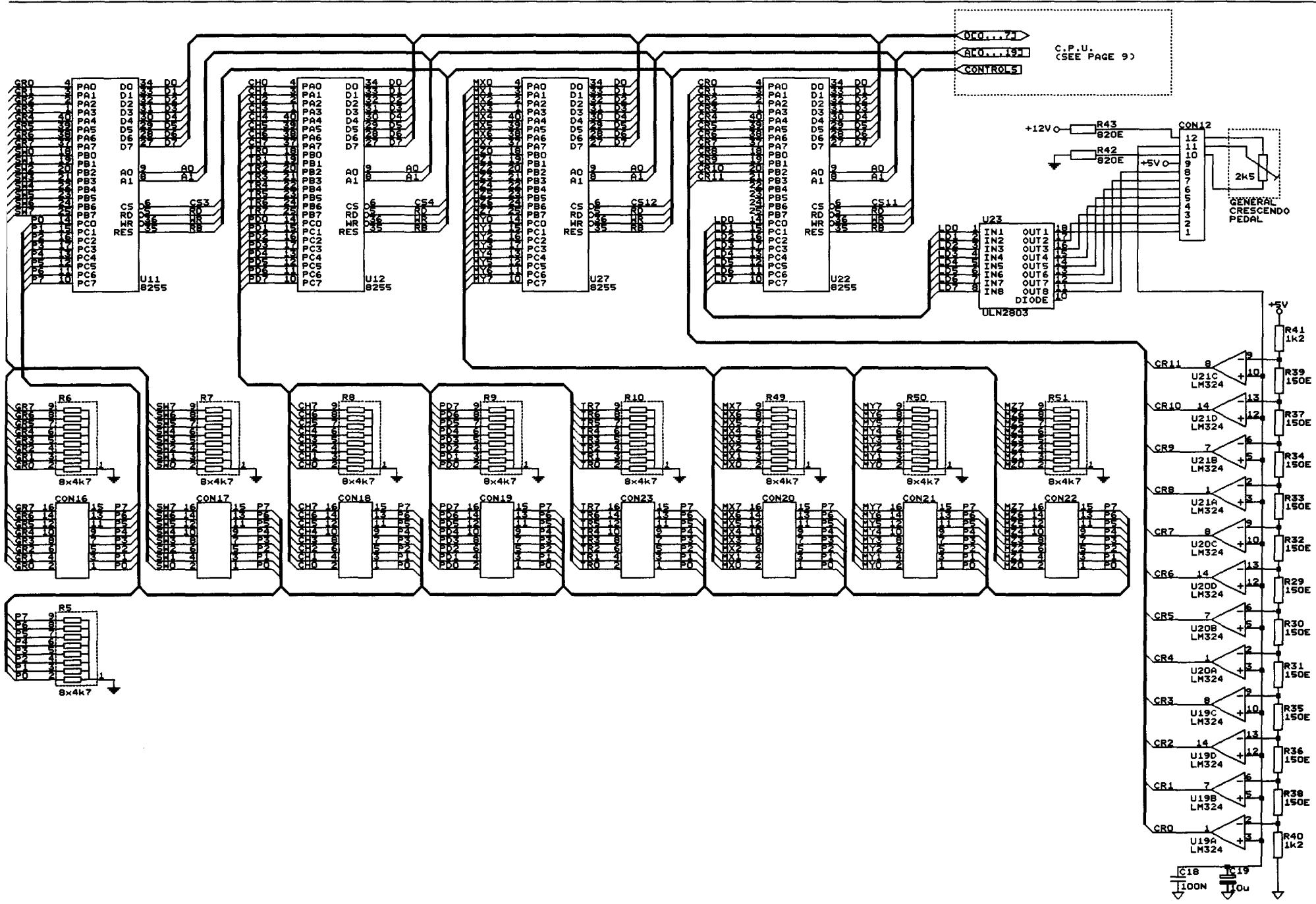
- ST10 = BOURDON 16'
- ST11 = OPEN DIAPASON 8'
- ST12 = ROHRFLUTE 8'
- ST13 = GAMBA 8'
- ST14 = OCTAVE 4'
- ST15 = OPEN FLUTE 4'
- ST16 = TWELFTH 2 2/3'
- ST17 = SUPEROCTAVE 2'
- ST20 = CONICAL FLUTE 2'
- ST21 = CORNET IV
- ST22 = MIXTURE IV-VI
- ST23 = TRUMPET 8'
- ST47 = MIDI TO GREAT (CHAN. 1)

SWELL

- ST24 = OPEN DIAPASON 8'
- ST25 = STOPPED FLUTE 8'
- ST26 = VIOLA 8'
- ST27 = CELESTE 8'
- ST30 = OCTAVE 4'
- ST31 = FLUTE 4'
- ST32 = FLUTE TWELFTH 2 2/3'
- ST33 = HALDFLUTE 2'
- ST34 = TIERCE 1 3/5'
- ST35 = RAUSCHPEIFE II-IV
- ST36 = CROMORNE 8'
- ST37 = OBOE 8'
- ST50 = MIDI TO SHELL (CHAN. 2)

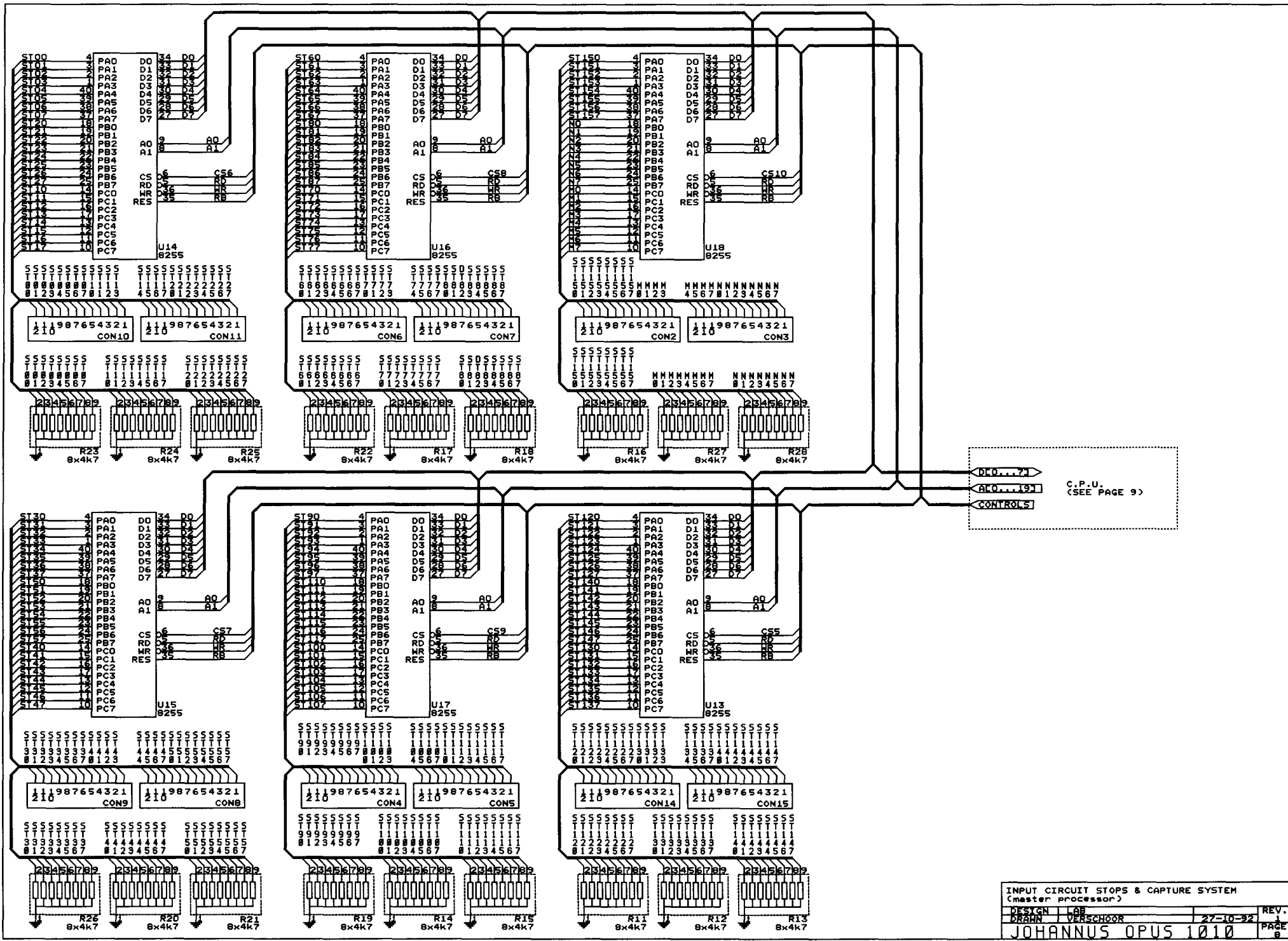
ALL CONNECTORS: TO MASTER PROCESSOR
ALL STOPLAMPS: 14Vdc/75mA

STOP-BANK AND SWITCH-BANK CAPTURE SYSTEM			
DESIGN	LAB	REV.	
DRAWN	VERSCHOOR	27-10-92	PAGE 6
JOHANNUS OPUS 1010			



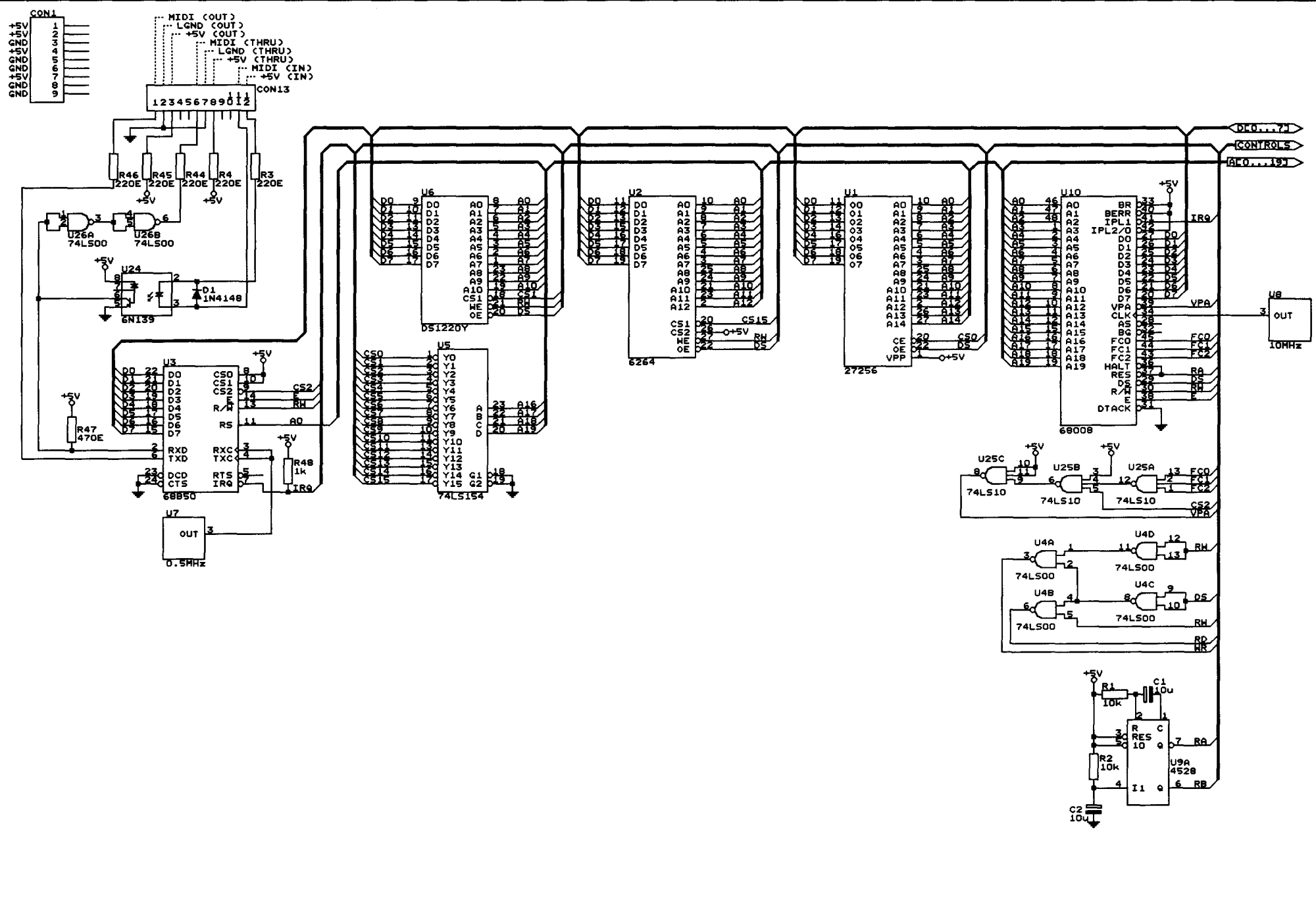
INPUT CIRCUIT SCANNING KEYING, TRANSPOSER & GENERAL CRESCENDO CIRCUIT (master processor)

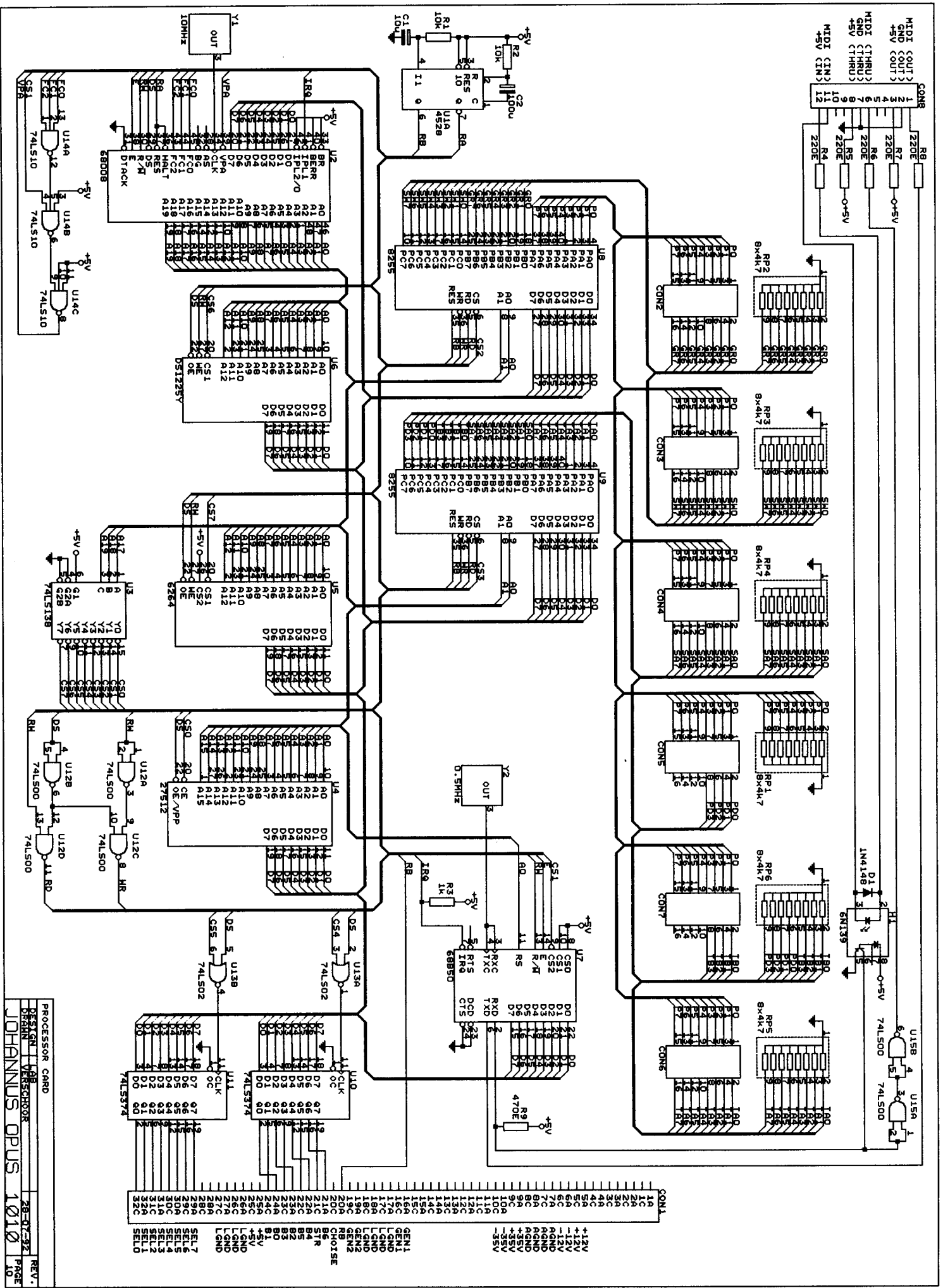
DESIGN	LAB	REV.
DRAHN	VERSCHOOR	28-07-92
JOHANNUS OPUS 1010		PAGE 7

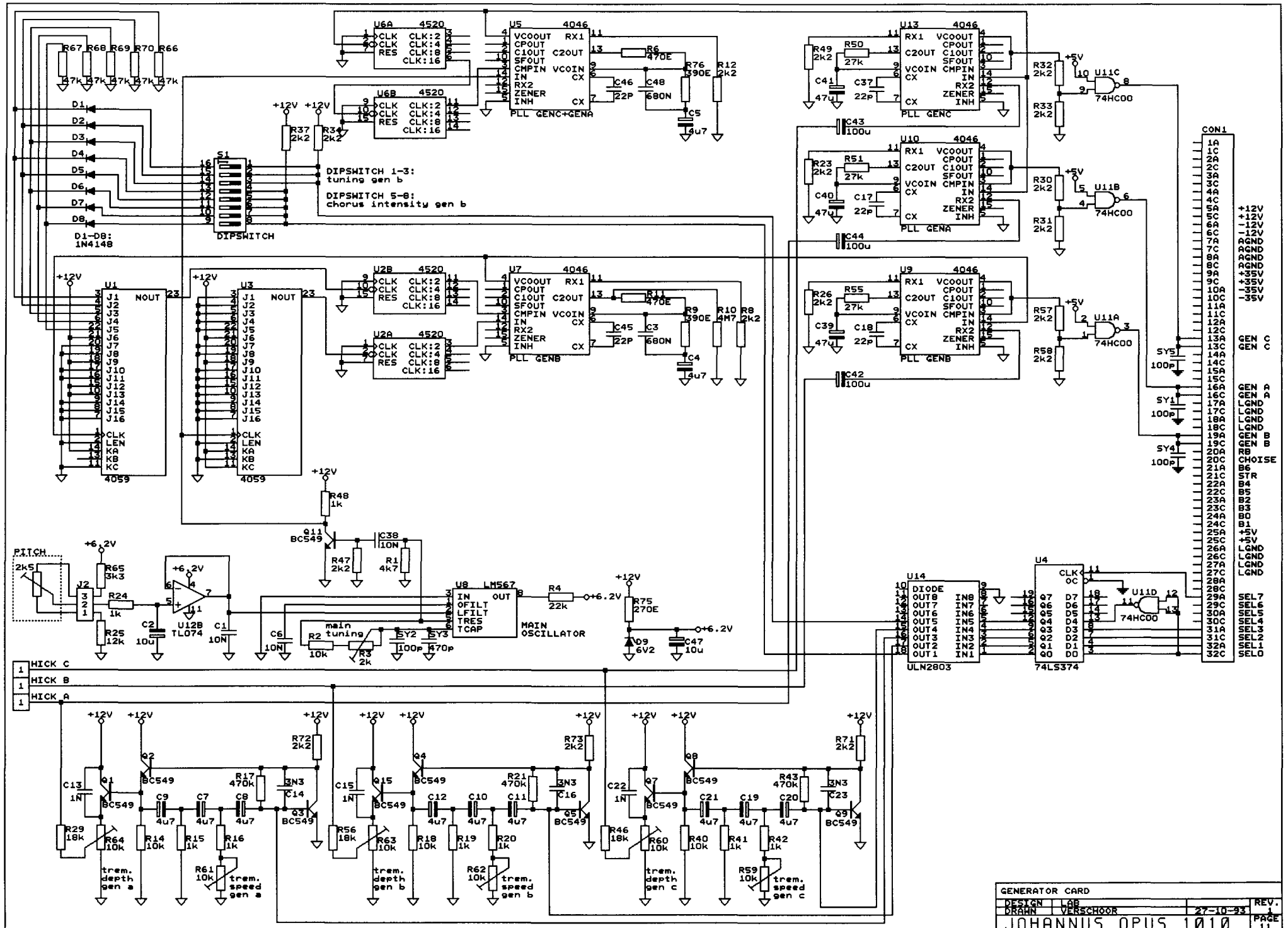


D-O...7
 A-O...13
 CONTROLS
 C.P.U.
 (SEE PAGE 9)

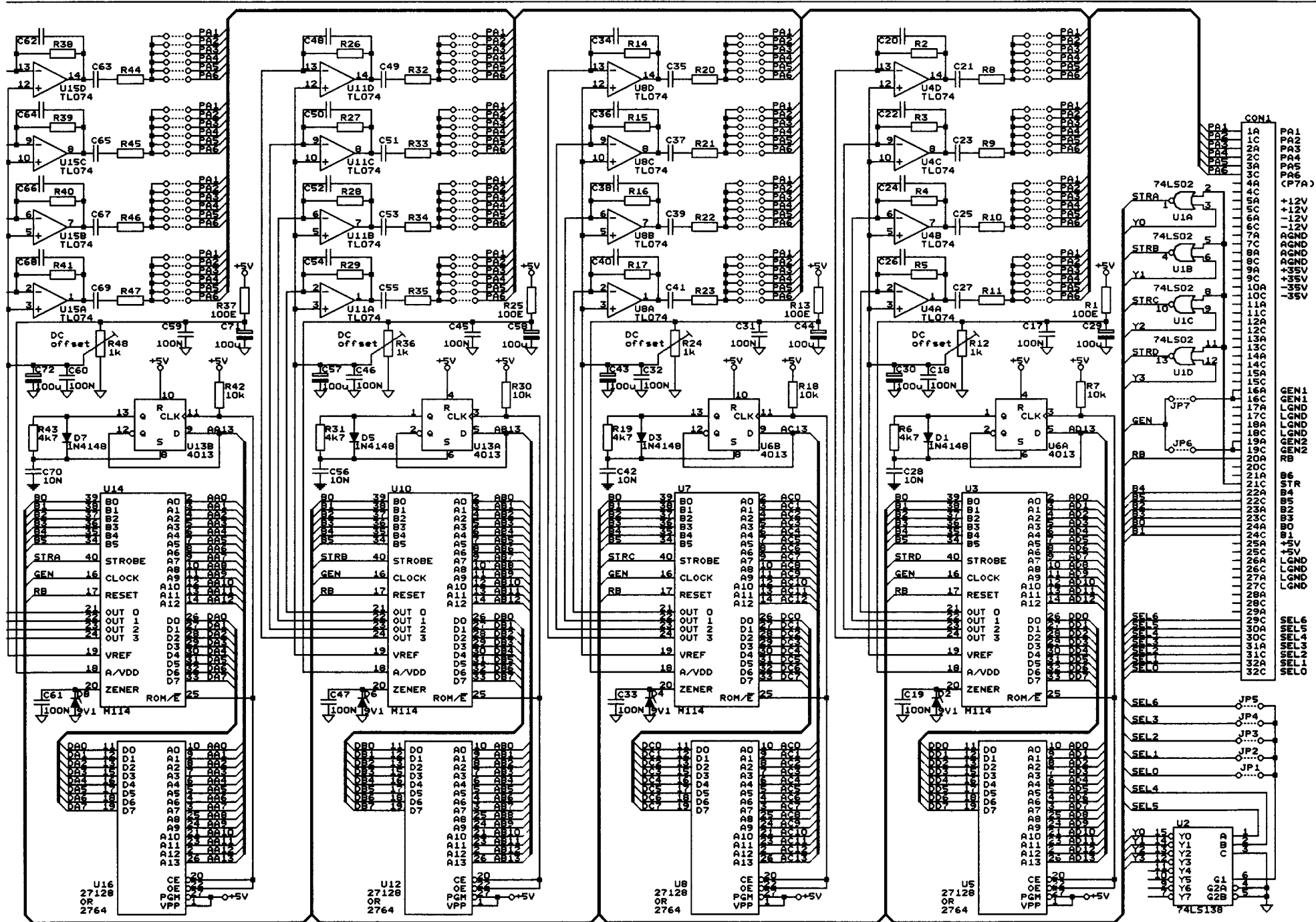
INPUT CIRCUIT STOPS & CAPTURE SYSTEM (master processor)			
DESIGN	LAB	27-10-92	REV. 1
DRAWN	VERSCHOOR		PAGE 8
JOHANNUS OPUS 1010			





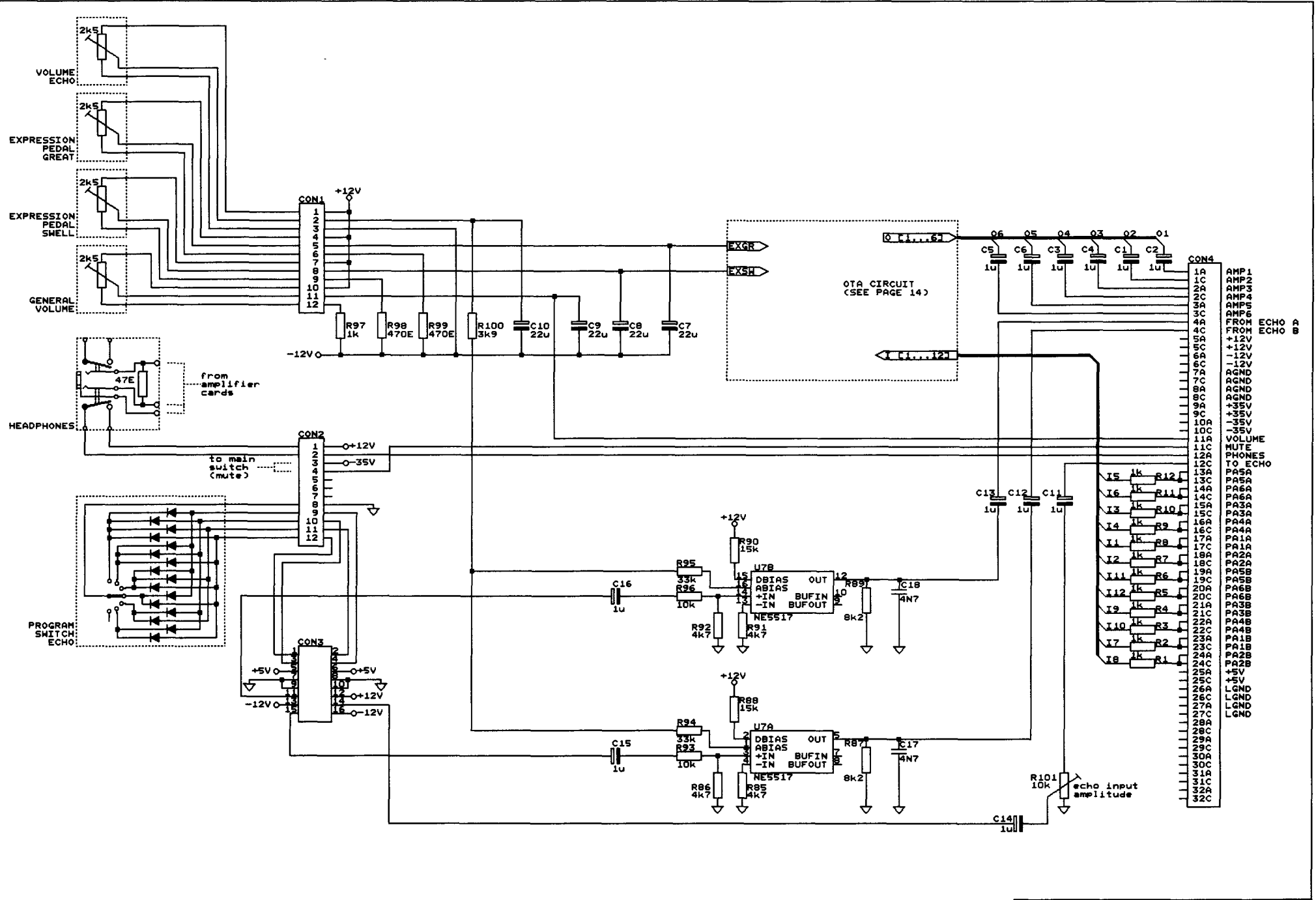


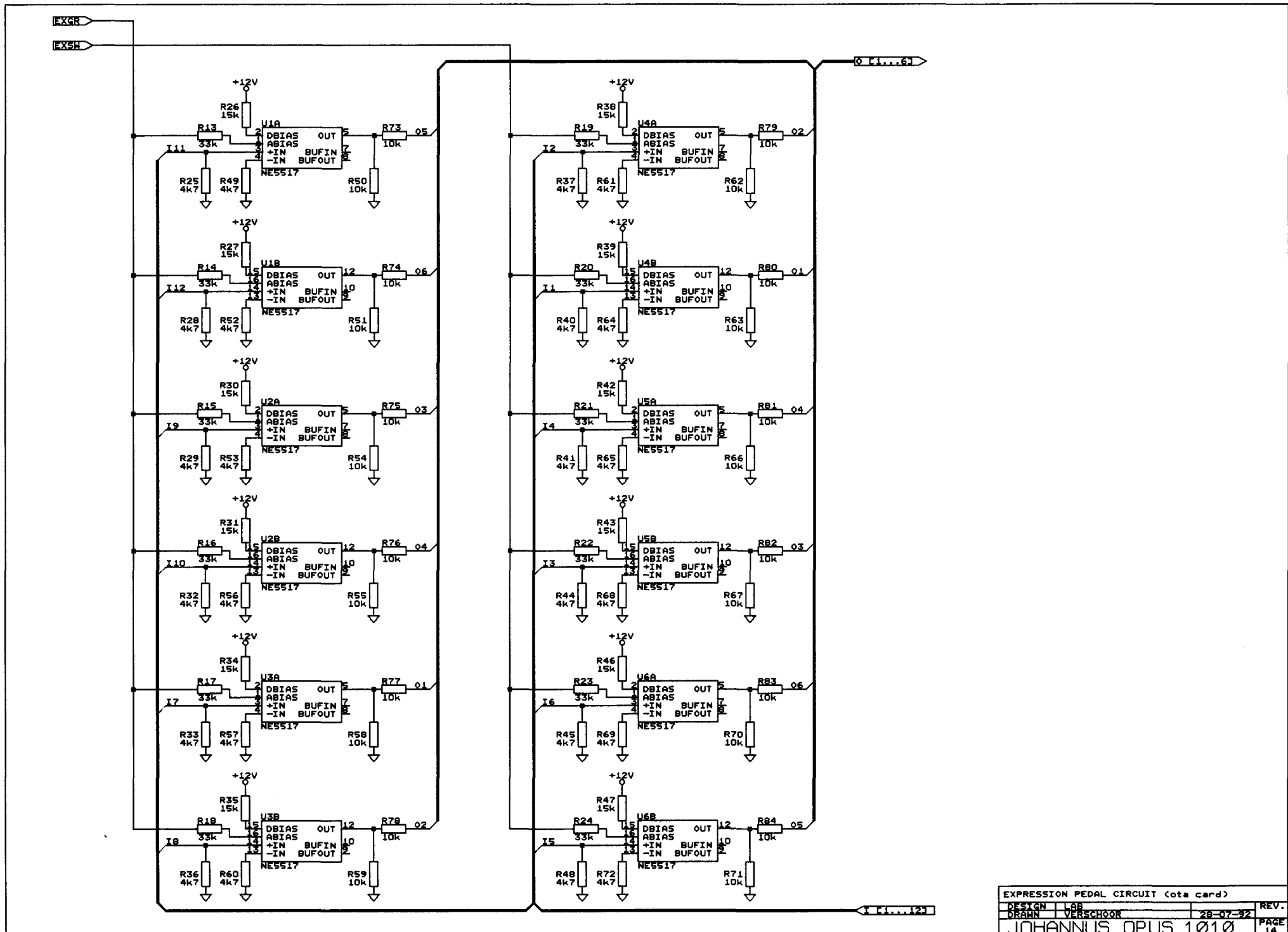
GENERATOR CARD			
DESIGN	LAB		REV. 1
DRAWN	VERSCHOOR	27-10-93	PAGE 11
JOHANNUS OPUS 1010			

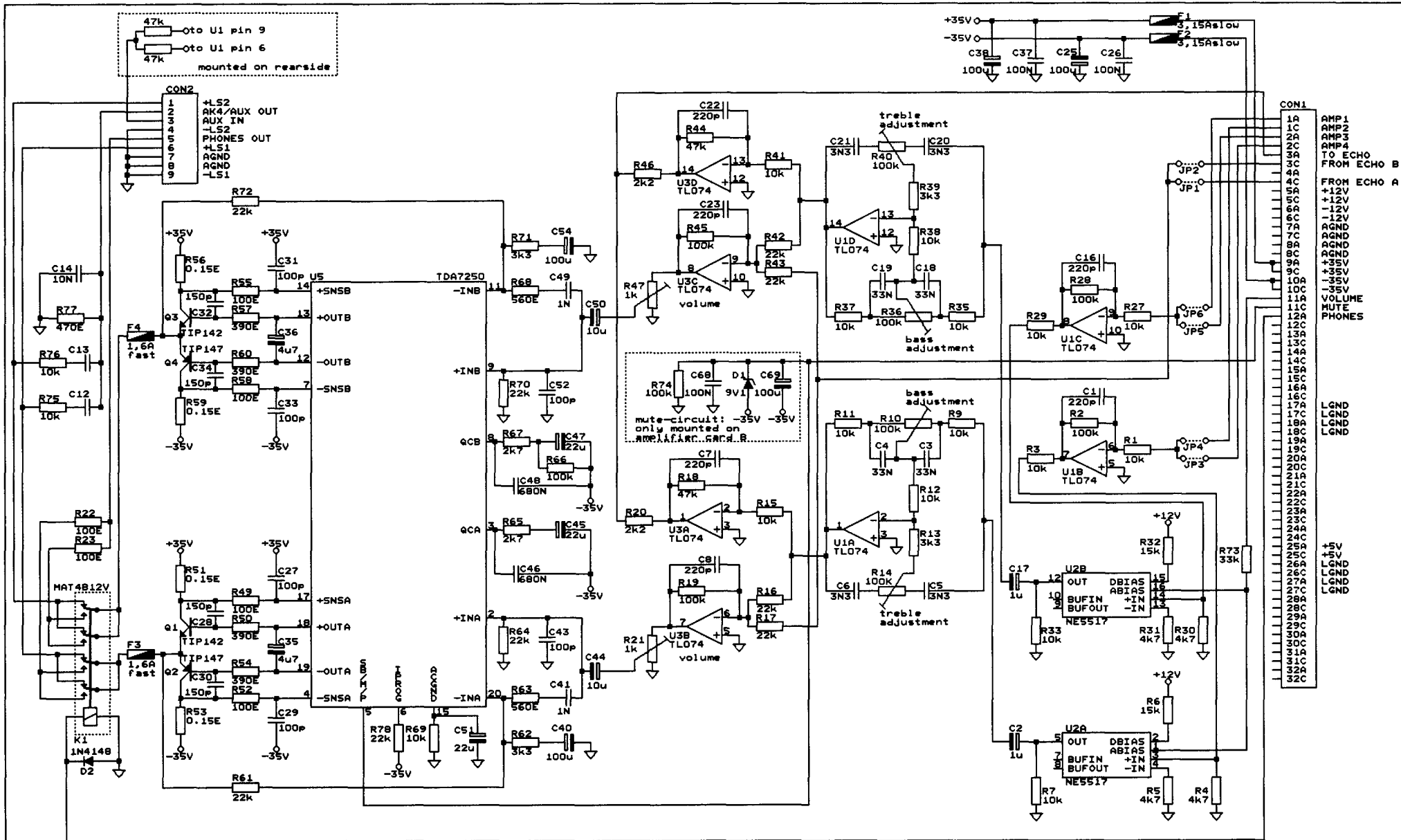


NOTE: IF FOR U5, U8, U12 OR U16 A 2764 EPROM IS PLACED INSTEAD OF A 27128 EPROM, THE 1/2 4013 (U6 AND U13) USED FOR SWITCHING THE UPPER 8K ROM AND THE LOWER 8K ROM, IS NOT NECESSARY.

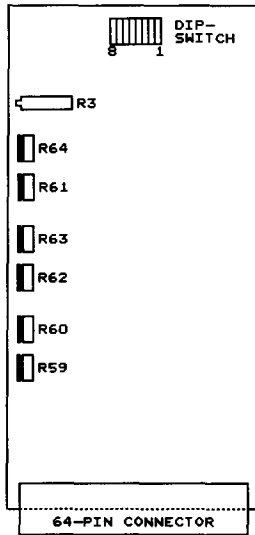
VOICE CARD		DESIGN	LAB	REV.
DRAWN		VERSCHOOR		28-07-92
JOHANNUS OPUS 1010				PAGE 12





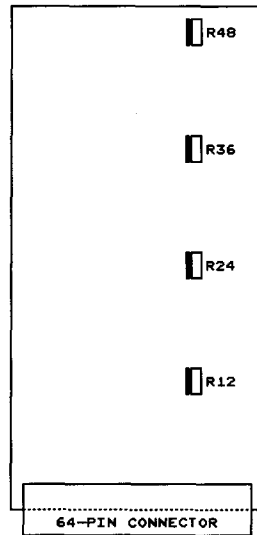


GENERATOR CARD
(COMPONENT-SIDE VIEW)



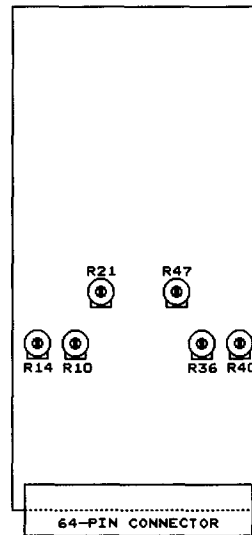
- R3 = MAIN TUNING
- R64 = TREMULANT DEPTH GREAT
- R61 = TREMULANT SPEED GREAT
- R63 = TREMULANT DEPTH SWELL
- R62 = TREMULANT SPEED SWELL
- R60 = TREMULANT DEPTH CHOIR
- R59 = TREMULANT SPEED CHOIR
- DS1-DS3 = TUNING SWELL
- DS4-DS8 = CHORUS INTENSITY SWELL

VOICE CARD
(COMPONENT-SIDE VIEW)



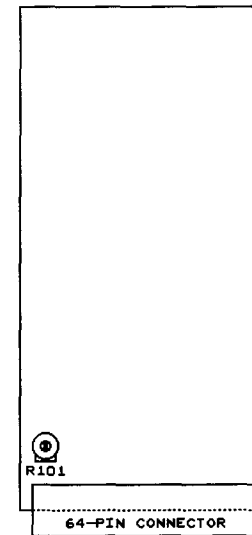
- R12 = DC-OFFSET VOICE D
(DISTORSION VOICE D)
 - R24 = DC-OFFSET VOICE C
(DISTORSION VOICE C)
 - R36 = DC-OFFSET VOICE B
(DISTORSION VOICE B)
 - R48 = DC-OFFSET VOICE A
(DISTORSION VOICE A)
- NOTE: R12-R24-R36-R48 ARE NOT
FOR CHANGING VOLUMES!!
TURNING THESE POTENTIOMETERS
WILL GIVE DISTORSION!!

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