

JOHANNUS

SCHMATIC DIAGRAMS

OPUS 1405

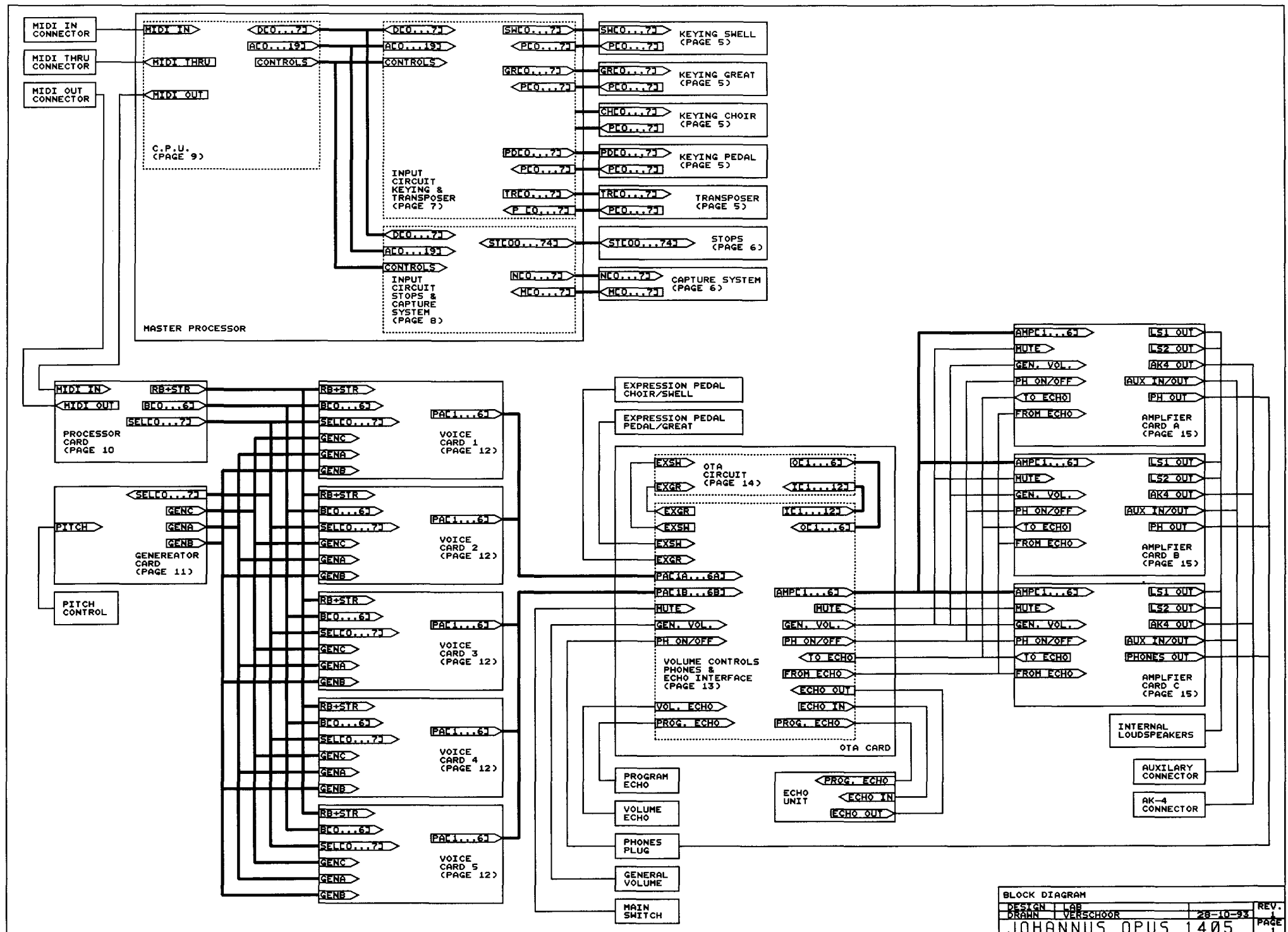
ALTERATIONS RESERVED

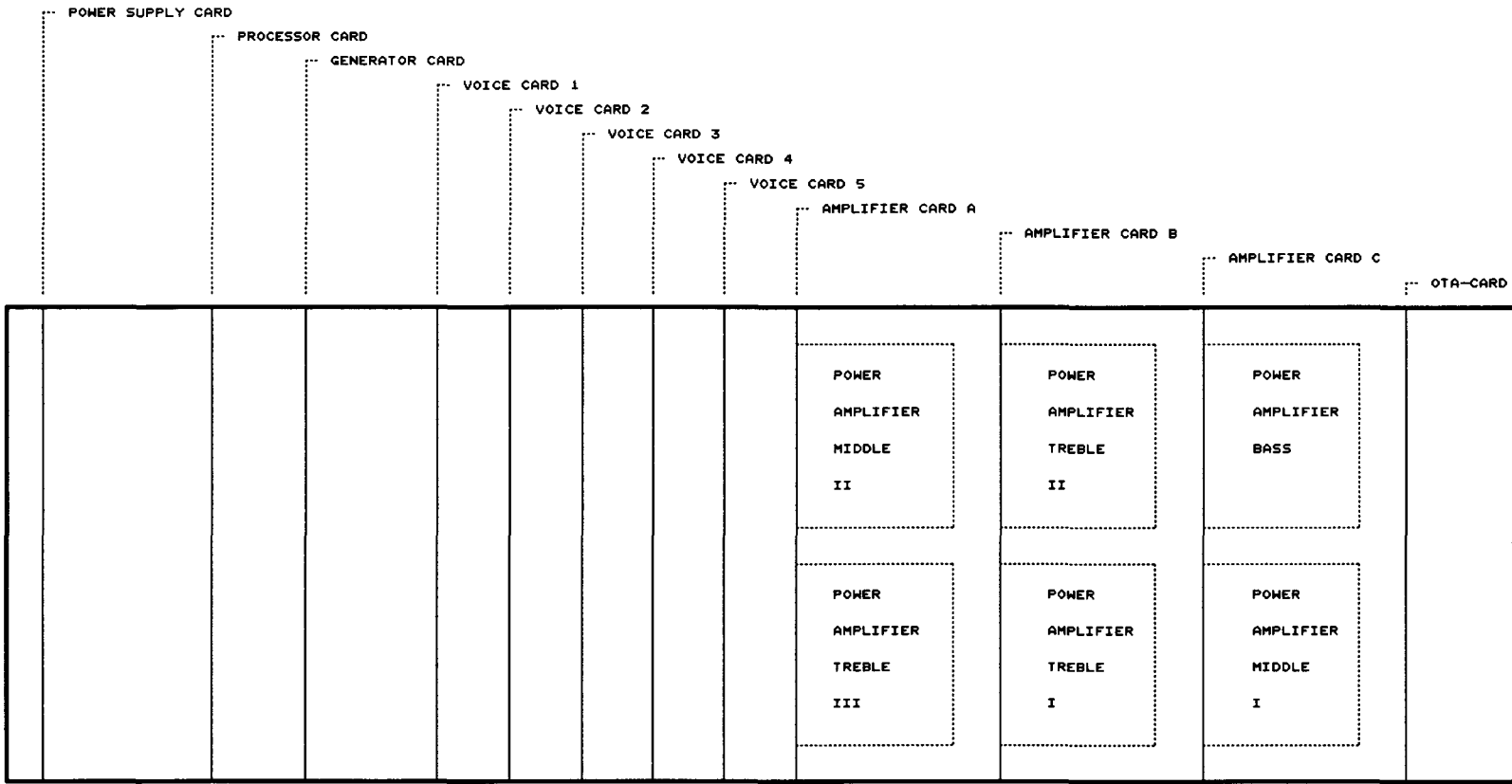
JOHANNUS Orgelbouw b.v.

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

C O N T E N T S

1. BLOCK DIAGRAM
2. POSITION DIAGRAM CARDS (TOPVIEW) & EXTERNAL CONNECTIONS (mounted on the rearside of the organ)
3. PINNING BUS CARD CONNECTORS
4. TRANSFORMER CONNECTIONS & POWER SUPPLY
5. SCANNING KEYING & TRANSPOSER
6. STOP-BANK & SWITCH-BANK CAPTURE SYSTEM
7. INPUT CIRCUIT SCANNING KEYING & TRANSPOSER (master processor)
8. INPUT CIRCUIT STOPS & CAPTURE SYSTEM (master processor)
9. C.P.U. (master processor)
10. PROCESSOR CARD
11. GENERATOR CARD
12. VOICE CARD
13. VOLUMECONTROLS; HEADPHONES CONNECTIONS & ECHO INTERFACE (ota card)
14. EXPRESSION PEDAL CIRCUIT (ota card)
15. AMPLIFIER CARD
16. POSITION DIAGRAM ADJUSTMENTS
INTERNAL POTENTIOMETERS





← COMPONENT SIDE

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



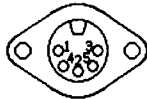
MIDI IN

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

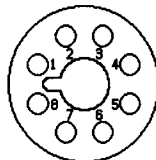
1. AUX OUT CHANNEL A
2. GROUND
3. AUX IN CHANNEL A
4. AUX OUT CHANNEL B
5. AUX IN CHANNEL B



AUX IN/OUT

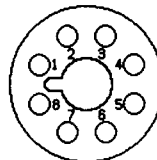
1. - MIDDLE II AMPLIFIER
2. + MIDDLE II AMPLIFIER
3. - TREBLE I AMPLIFIER
4. + TREBLE I AMPLIFIER
5. - TREBLE II AMPLIFIER
6. + TREBLE II AMPLIFIER
7. - TREBLE III AMPLIFIER
8. + TREBLE III AMPLIFIER

1. - BASS AMPLIFIER
2. + BASS AMPLIFIER
3. - MIDDLE I AMPLIFIER
4. + MIDDLE I AMPLIFIER



LS OUT A

(OPTIONAL)

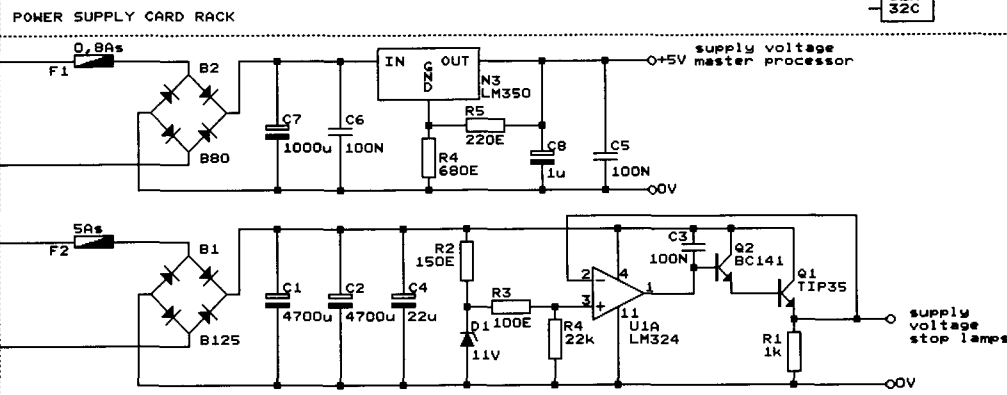
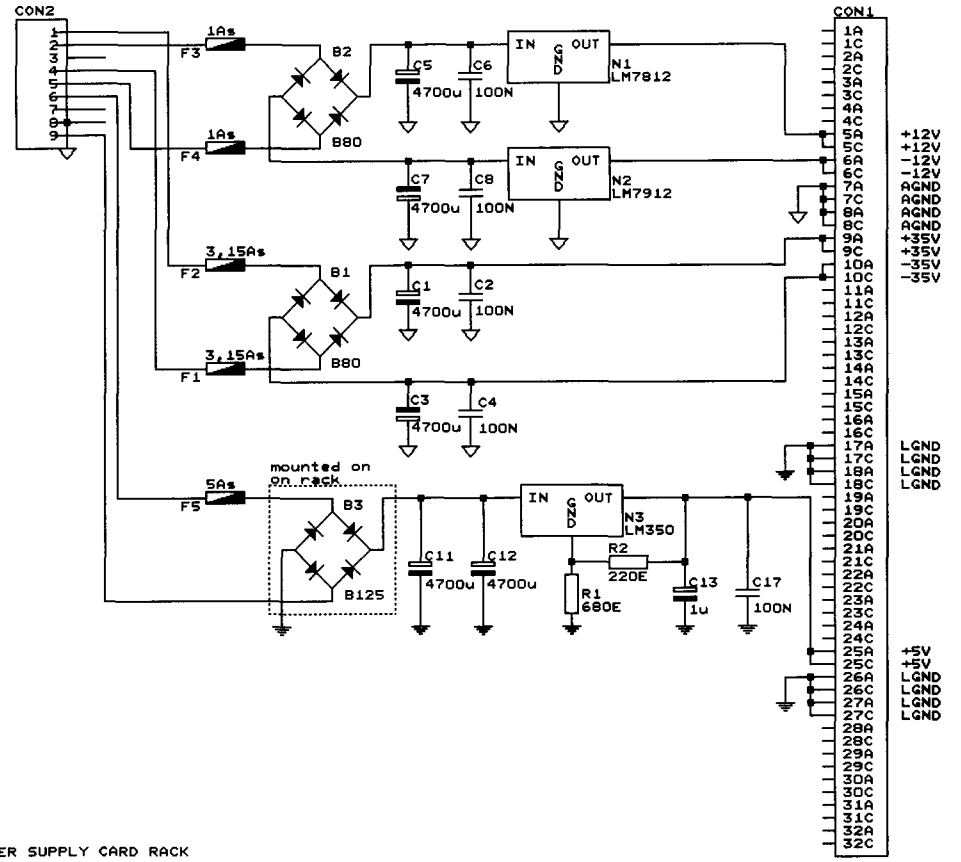
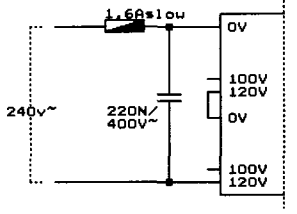
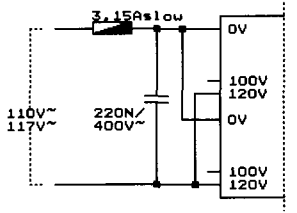
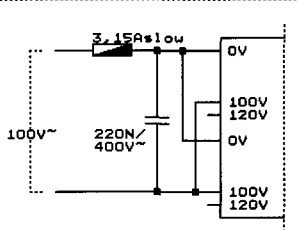
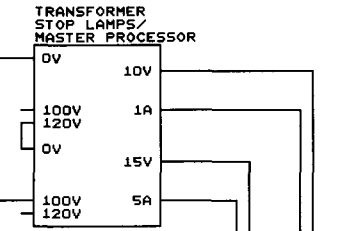
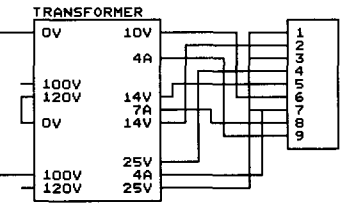
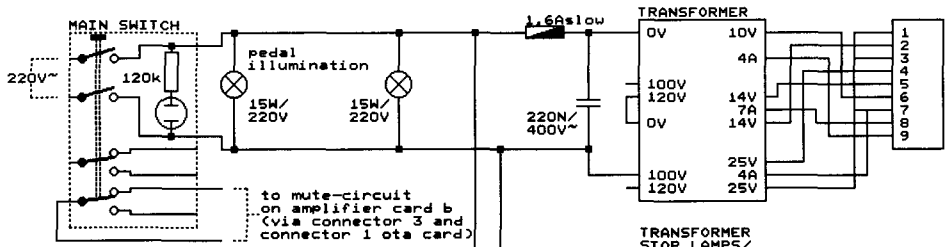


LS OUT B

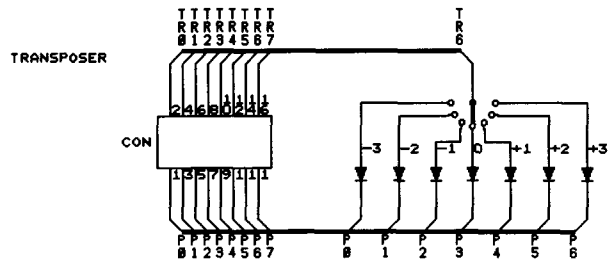
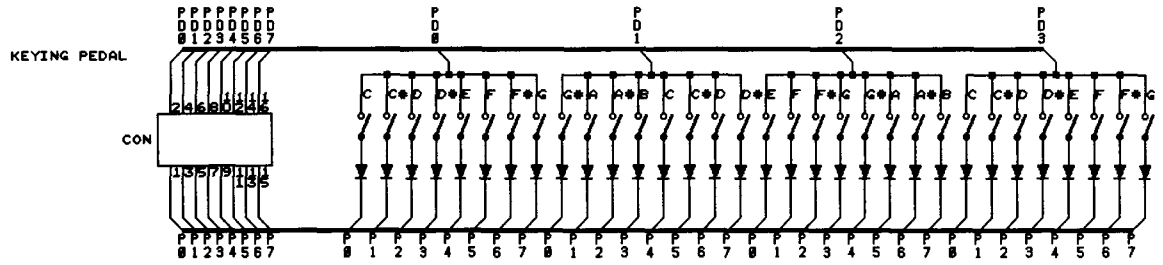
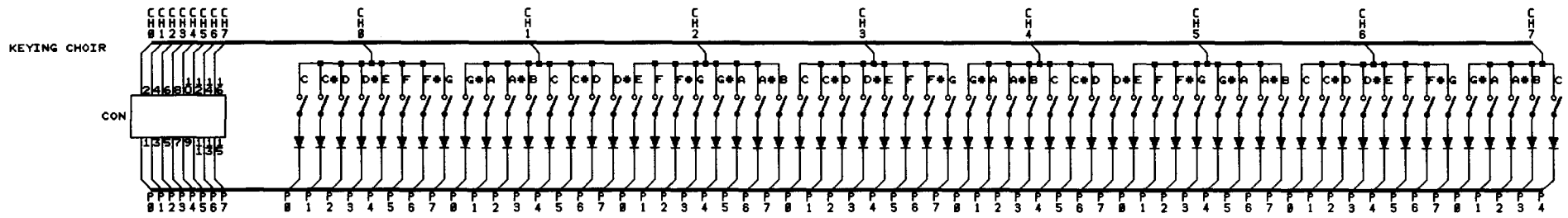
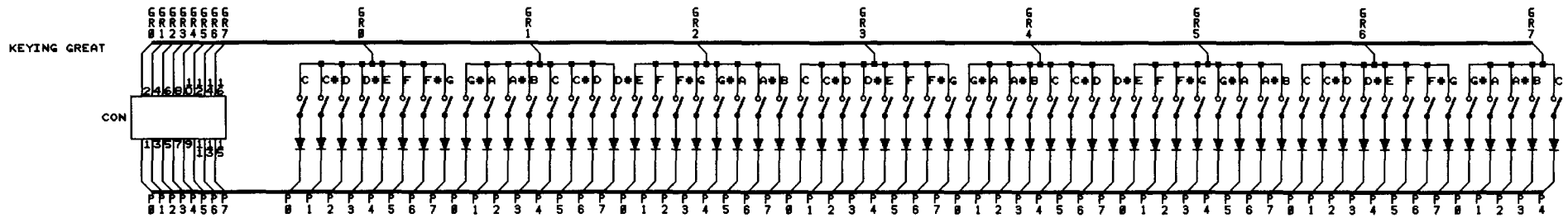
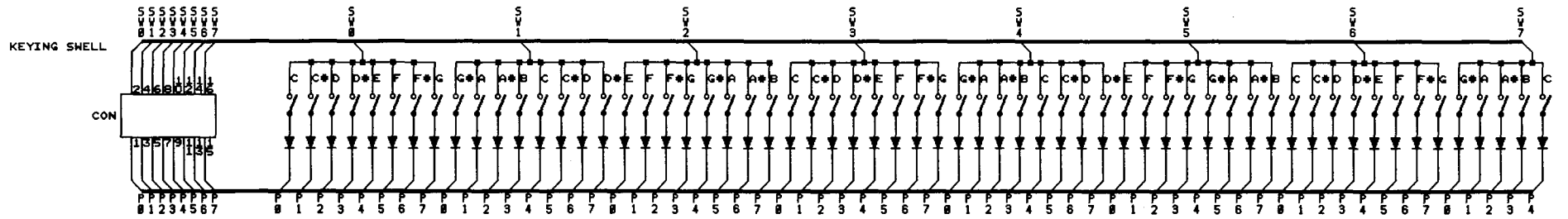
POSITION DIAGRAM CARDS (TOPVIEW) & EXTERNAL CONNECTIONS (mounted on the reverse side of the organ)

DESIGN	LAB	REV.
DRAWN	VERSCHOOR	21-01-93
JOHANNUS OPUS 1405		PAGE 2

CON1		CON2		CON3		CON4-5		CON6-8		CON9-10		CON11		CON12	
018	018	018	018	018	018	018	018	018	018	018	018	018	018	018	018
020	020	020	020	020	020	020	020	020	020	020	020	020	020	020	020
040	040	040	040	040	040	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	-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
080	080	080	080	080	080	080	080	080	080	080	080	080	080	080	080
+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V	+35V
-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V	-35V
010	010	010	010	010	010	010	010	010	010	010	010	010	010	010	010
012	012	012	012	012	012	012	012	012	012	012	012	012	012	012	012
013	013	013	013	013	013	013	013	013	013	013	013	013	013	013	013
014	014	014	014	014	014	014	014	014	014	014	014	014	014	014	014
015	015	015	015	015	015	015	015	015	015	015	015	015	015	015	015
016	016	016	016	016	016	016	016	016	016	016	016	016	016	016	016
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031	031	031	031	031	031	031	031	031	031	031	031	031	031	031	031
032	032	032	032	032	032	032	032	032	032	032	032	032	032	032	032
POWER SUPPLY CARD	PROCESSOR CARD	GENERATOR CARD	VOICE CARD 1-2	VOICE CARD 3-5	AMPLIFIER CARD A & B	AMPLIFIER CARD C	OTA CARD								

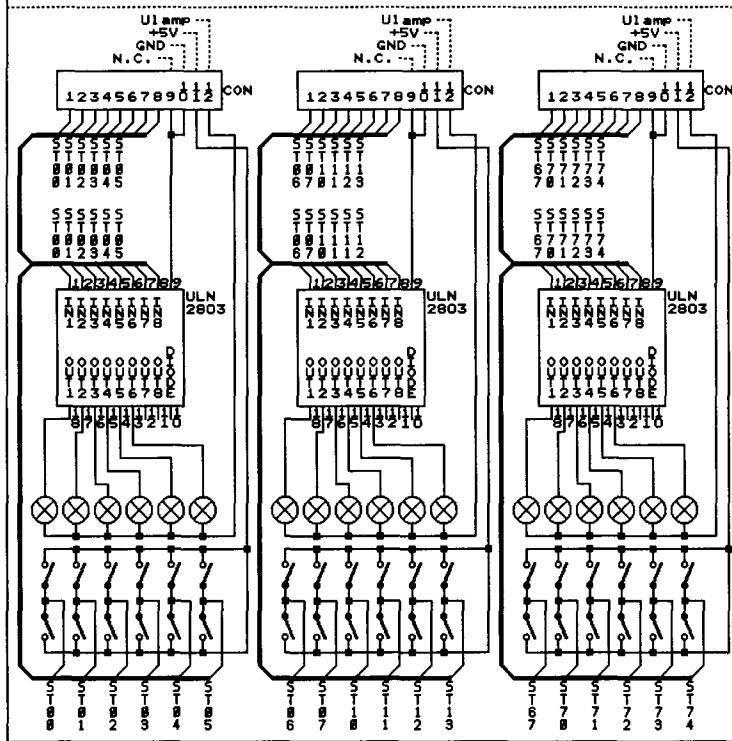
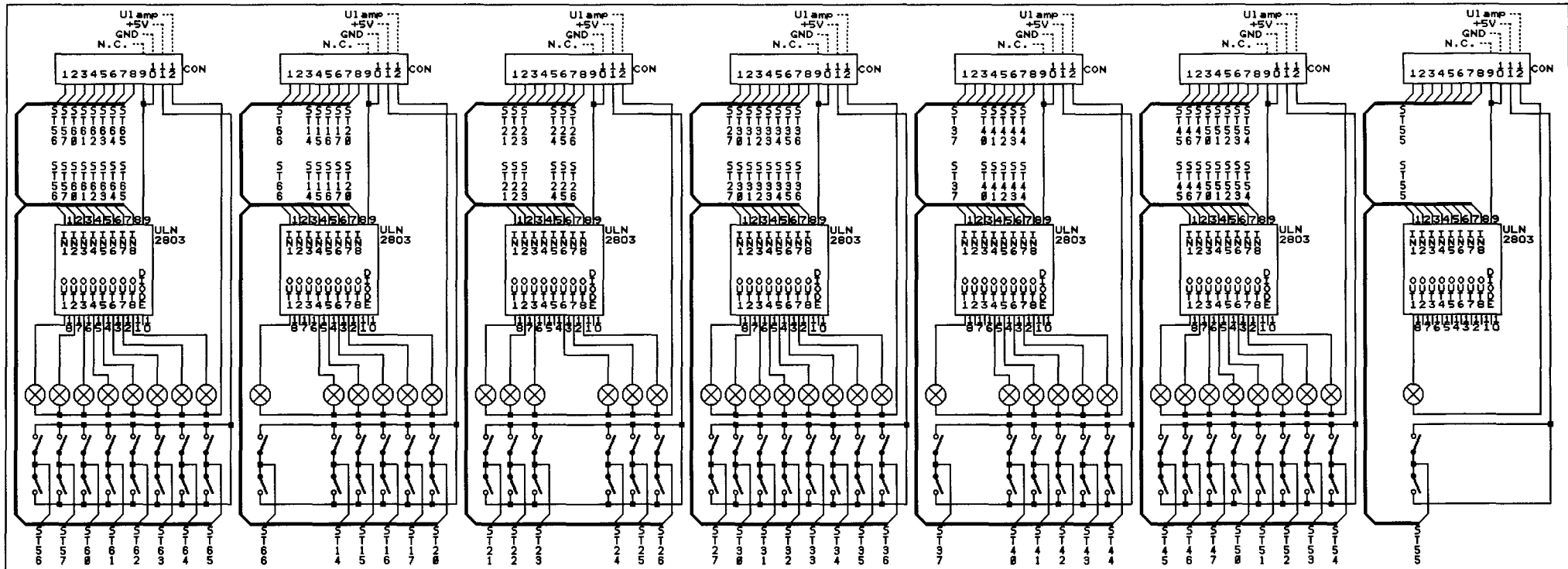


TRANSFORMER CONNECTIONS & POWER SUPPLY			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	21-01-93	PAGE
JOHANNUS OPUS 1405			4

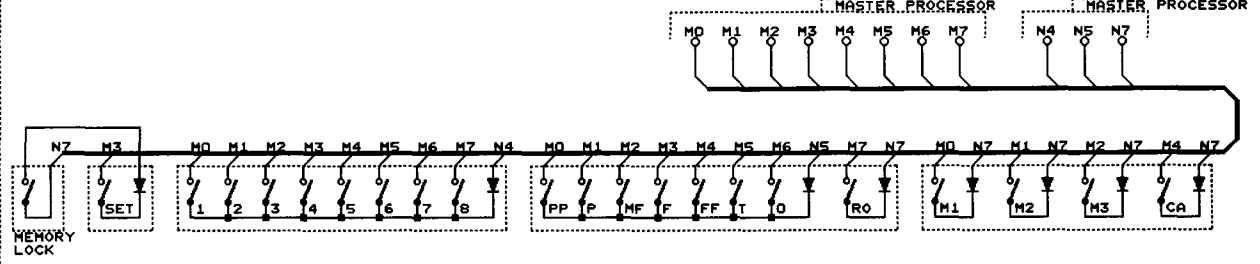


ALL CONNECTORS: TO MASTER PROCESSOR
ALL DIODES: 1N4148

SCANNING KEYING & TRANSPOSER			REV.
DESIGN	LAB		
DRAWN	VERSCHOOR	21-01-93	PAGE
JOHANNUS OPUS 1405			5



SWITCH-BANK CAPTURE SYSTEM



STOPLIST

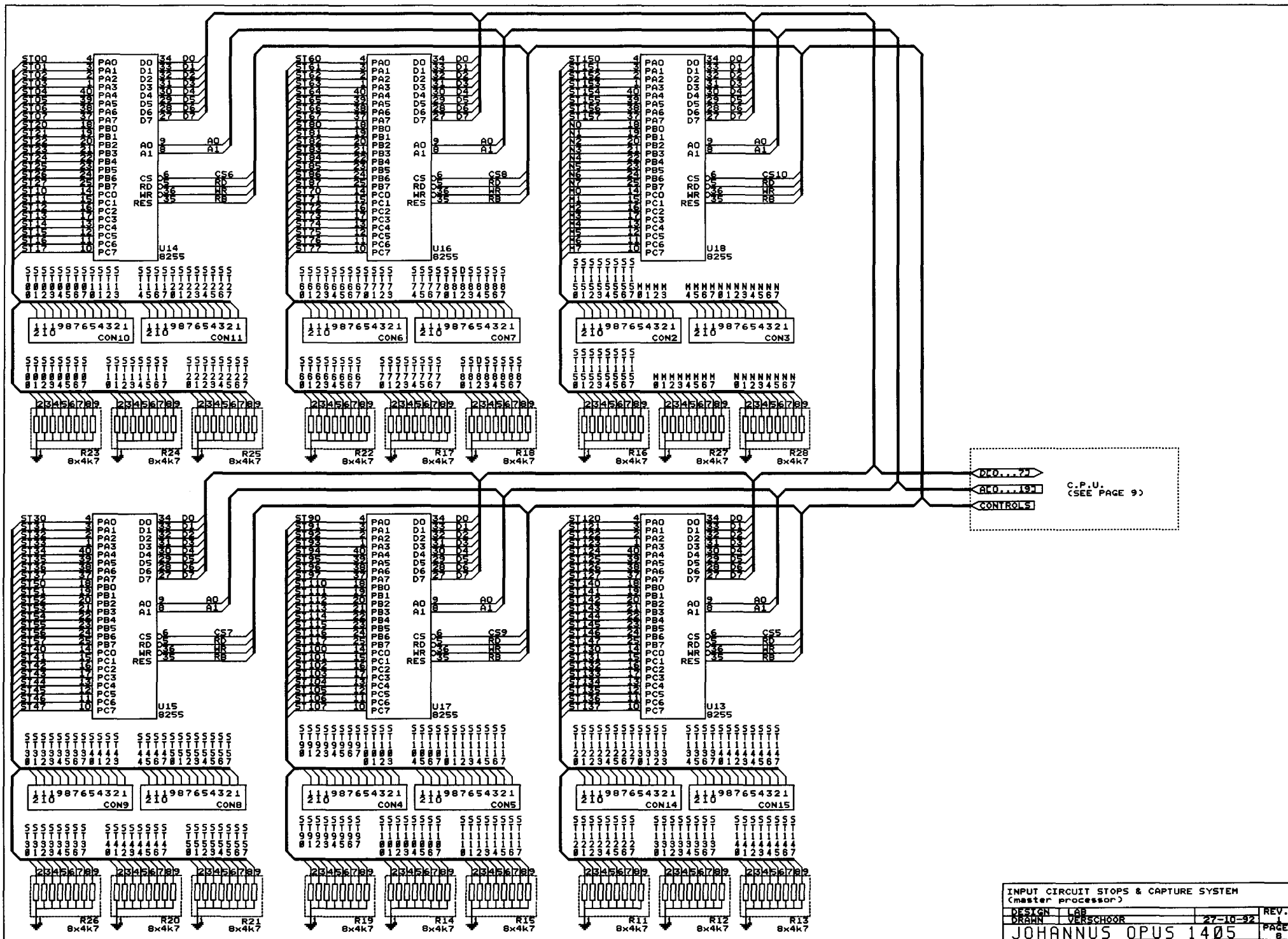
- | | | | |
|---|--|---|---|
| <p>PEDAL</p> <ul style="list-style-type: none"> ST00 = PRINCIPAL 16' ST01 = SUBBASS 16' ST02 = OCTAVE 8' ST03 = GEDACKT 8' ST04 = CHORALBASS 4' ST05 = OPENFLUTE 4' ST06 = FLUTE 2' ST07 = MIXTURE III ST10 = BOMBARDE 32' ST11 = CONTRA TRUMPET 16' ST12 = TRUMPET 8' ST13 = CLARION 4' | <p>CHOIR</p> <ul style="list-style-type: none"> ST14 = BOURDON 8' ST15 = SALICIONAL 8' ST16 = PRESTANT 4' ST17 = ROHRFLUTE 4' ST20 = CONICAL FLUTE 2' ST21 = NASARD 1 1/3' ST22 = MIXTURE IV ST23 = CLARINET 8' | <p>GREAT</p> <ul style="list-style-type: none"> ST24 = BOURDON 16' ST25 = OPEN DIAPASON 8' ST26 = GAMBA 8' ST27 = ROHRFLUTE 8' ST30 = PRINCIPAL 4' ST31 = NACHTHORN 4' ST32 = NAZARD 2, 2/3' ST33 = OCTAVE 2' ST34 = BLOCKFLUTE 2' ST35 = CORNET IV ST36 = MIXTURE III-V ST37 = TRUMPET 8' | <p>SWELL</p> <ul style="list-style-type: none"> ST40 = OPEN DIAPASON 8' ST41 = HOHLFLUTE 8' ST42 = VIOLA 8' ST43 = CELESTE 8' ST44 = OCTAVE 4' ST45 = COPPELFLUTE 4' ST46 = FLUTE TWELFTH 2 2/3' ST47 = WALDFLUTE 2' ST50 = TIERCE 1 3/5' ST51 = SIFFLUTE 1' ST52 = RAUSCHPEIFE IV-VI ST53 = FAGOTTO 16' ST54 = CROMORNE 8' ST55 = HOBO 8' |
|---|--|---|---|

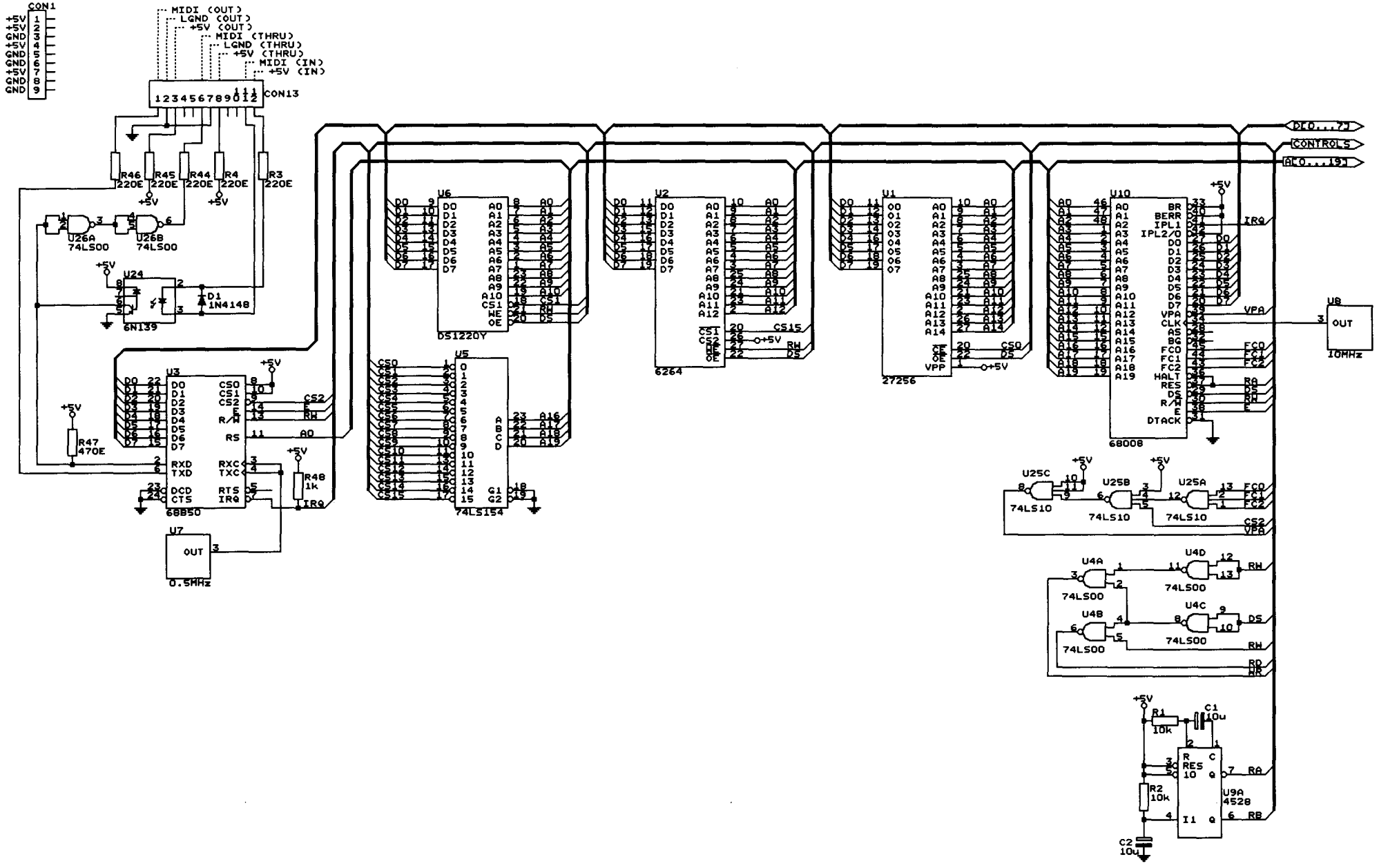
ACCESSORIES

- ST56 = CHOIR TO GREAT
- ST57 = SWELL TO GREAT
- ST60 = SWELL TO CHOIR
- ST61 = CHOIR TO PEDAL
- ST62 = GREAT TO PEDAL
- ST63 = SWELL TO PEDAL
- ST64 = TREMULANT CHOIR
- ST65 = TREMULANT GREAT
- ST66 = TREMULANT SWELL
- ST67 = CHORUS
- ST70 = MANUAL BASS
- ST71 = MIDI TO CHOIR (CHAN. 1)
- ST72 = MIDI TO GREAT (CHAN. 2)
- ST73 = MIDI TO SWELL (CHAN. 3)
- ST74 = MIDI TO PEDAL (CHAN. 4)

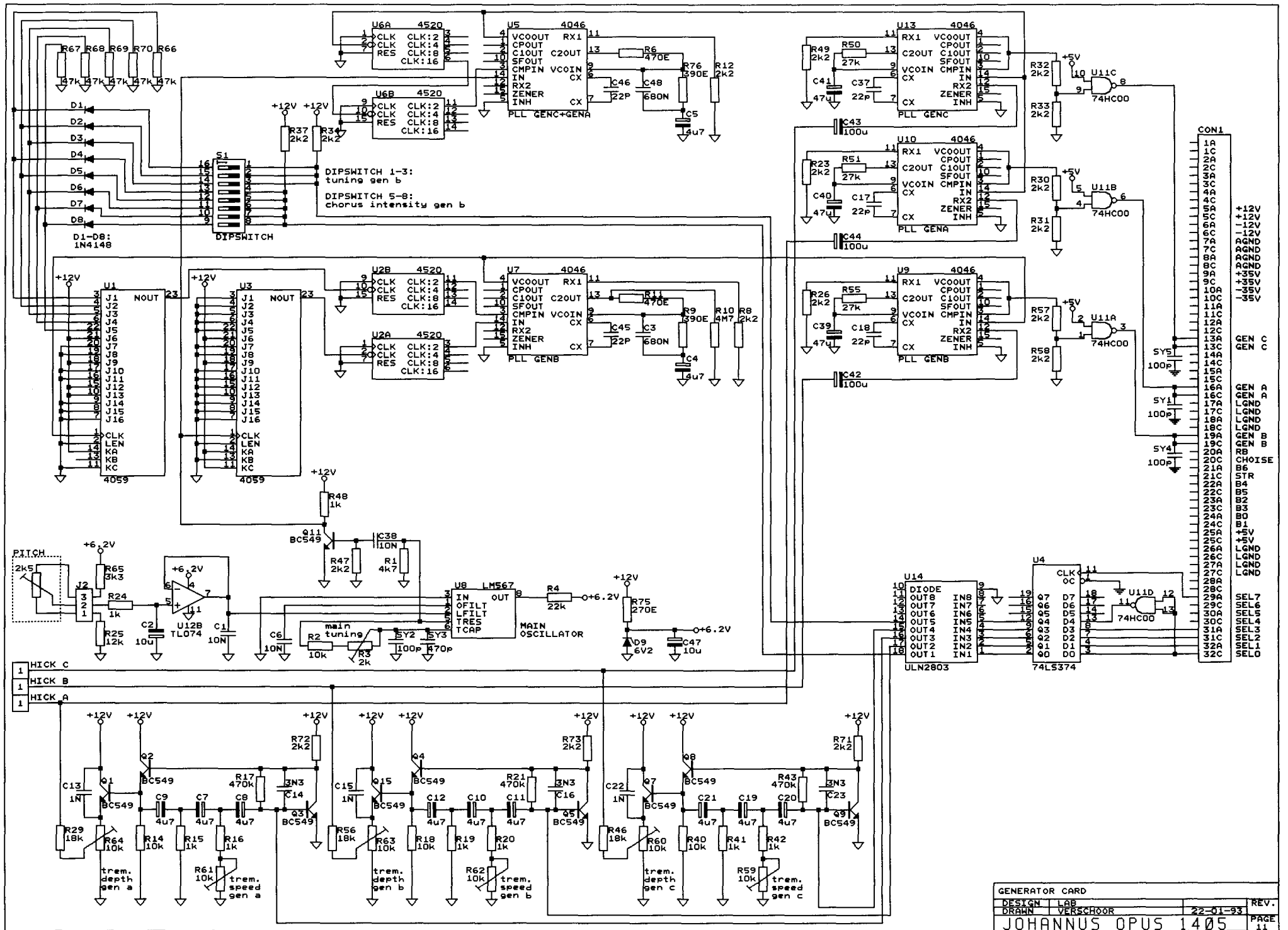
ALL CONNECTORS: TO MASTER PROCESSOR
 ALL STOPLAMPS: 14Vdc/75mA

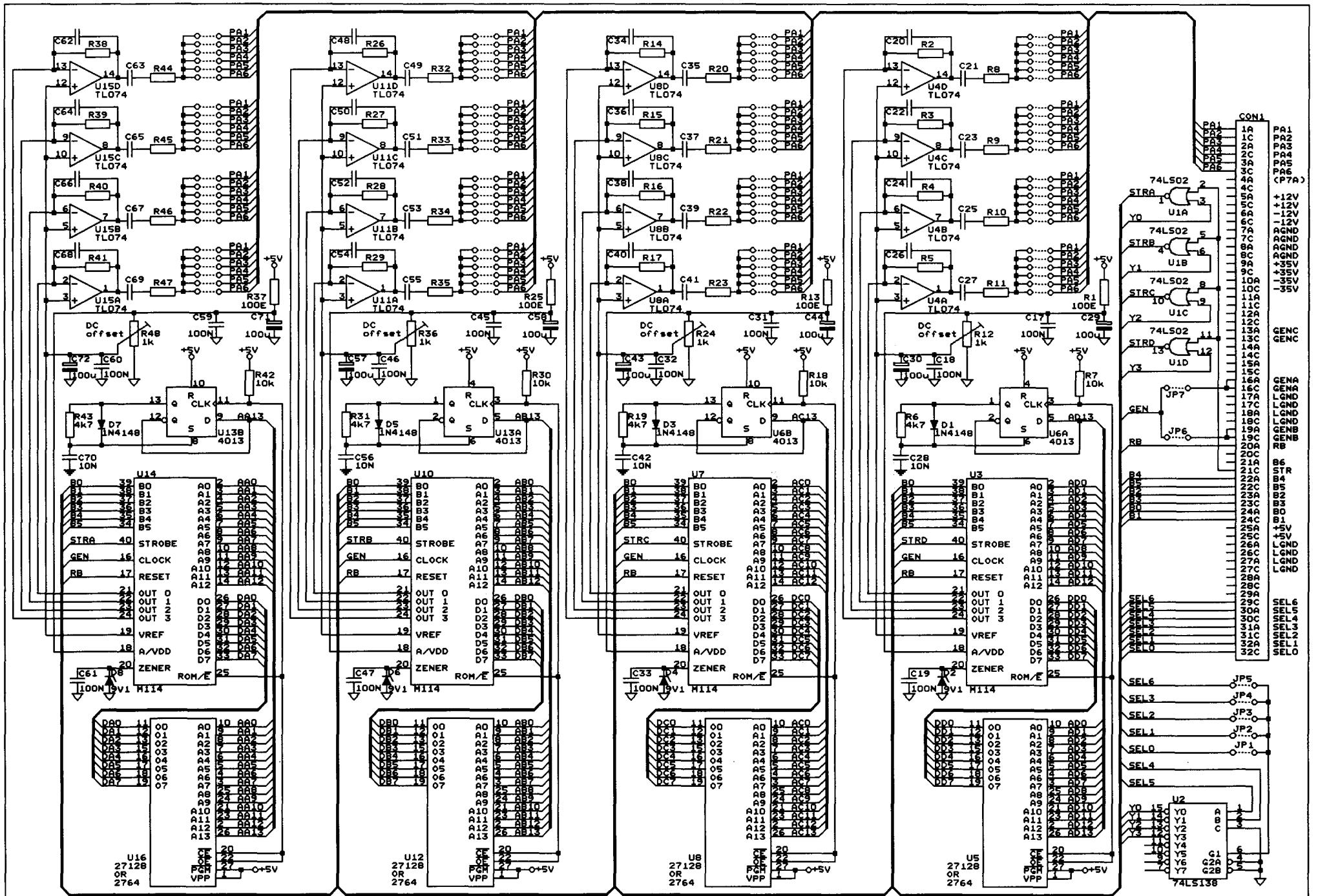
STOP-BANK & SWITCH-BANK CAPTURE SYSTEM		REV.
DESIGN	LAB	
DRAWN	VERSCHOOR	28-10-93
JOHANNUS OPUS 1405		PAGE 6





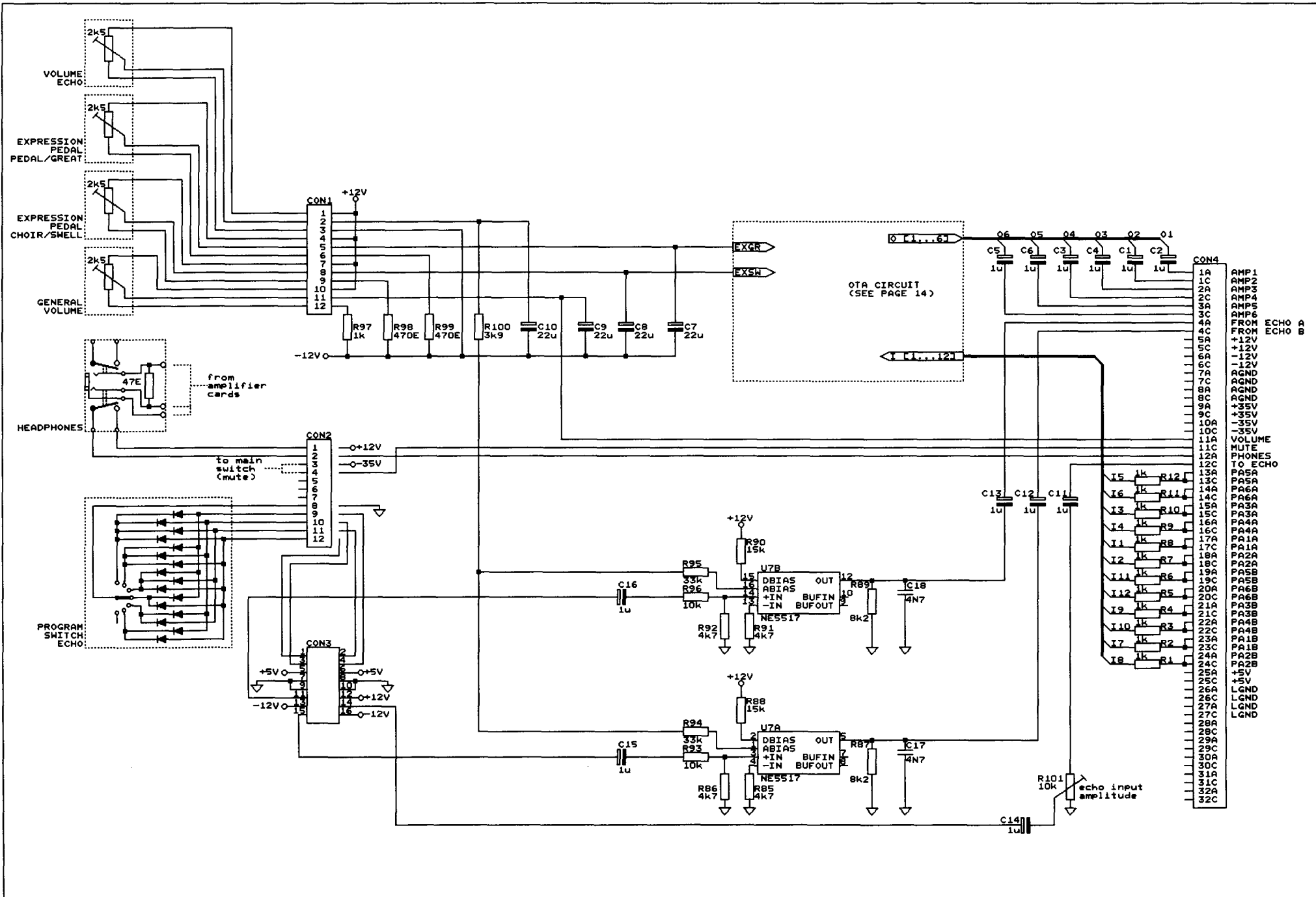
C.P.U. (master processor)			
DESIGN	LAB		REV.
DRAWN	VERSCHOOR	22-01-93	
JOHANNUS OPUS 1405			PAGE 9





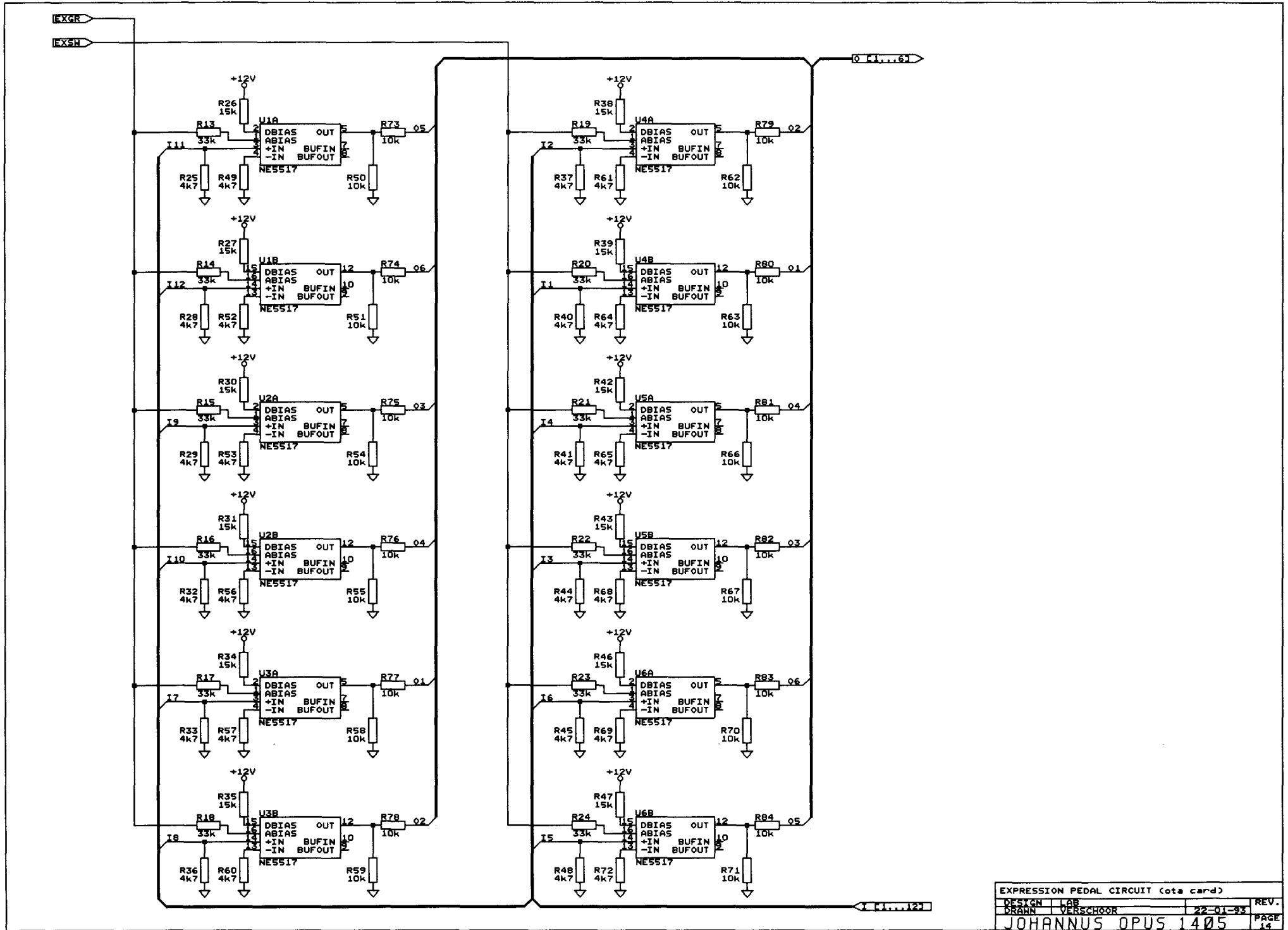
NOTE: IF FOR U5, U8, U12 OR U16 A 2764 EPROM IS PLACED INSTEAD OF A 27128 EPROM, THE 1/2 4013 (U6 AND U13) USED FOR SWITCHING THE UPPER BK ROM AND THE LOWER BK ROM, IS NOT NECESSARY.

VOICE CARD			REV.
DESIGN	LAB		
DRAWN	VERSCHOOR	22-01-93	
JOHANNUS OPUS 1405			PAGE 12

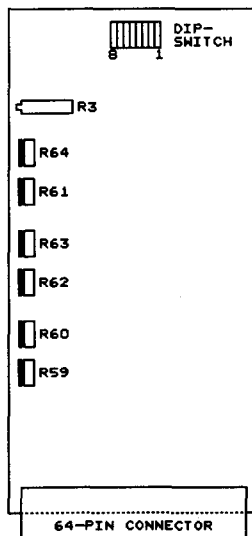


VOLUME CONTROLS; HEADPHONES CONNECTIONS & ECHO INTERFACE (ota card)

DESIGN	LAB		REV.
DRAWN	VERSCHOOR	22-01-93	PAGE
JOHANNUS OPUS 1405			13

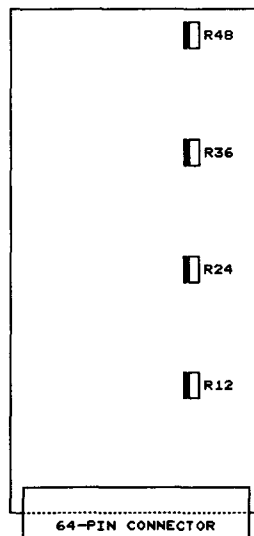


GENERATOR CARD
(COMPONENT-SIDE VIEW)



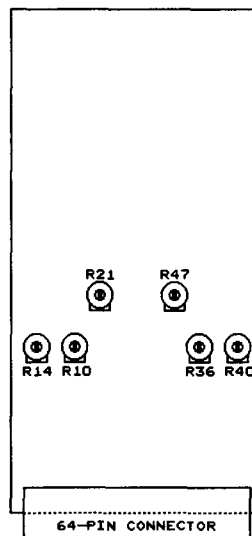
- R3 = MAIN TUNING
- R64 = TREMULANT DEPTH GREAT
- R61 = TREMULANT SPEED GREAT
- R63 = TREMULANT DEPTH SWELL
- R62 = TREMULANT SPEED SWELL
- R60 = TREMULANT DEPTH CHOIR
- R59 = TREMULANT SPEED CHOIR
- DS1-DS3 = TUNING SWELL
- DS4-DS8 = CHORUS INTENSITY SWELL

VOICE CARD
(COMPONENT-SIDE VIEW)



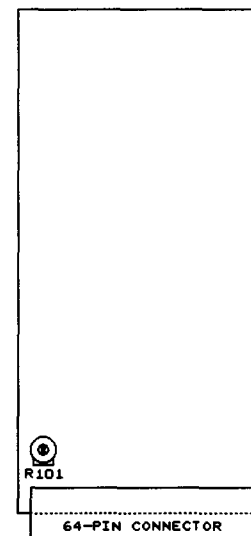
- R12 = DC-OFFSET VOICE D
(DISTORSION VOICE D)
 - R24 = DC-OFFSET VOICE C
(DISTORSION VOICE C)
 - R36 = DC-OFFSET VOICE B
(DISTORSION VOICE B)
 - R48 = DC-OFFSET VOICE A
(DISTORSION VOICE A)
- NOTE: R12-R24-R36-R48 ARE NOT
FOR CHANGING VOLUMES!!
TURNING THESE POTENTIOMETERS
WILL GIVE DISTORSION!!

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