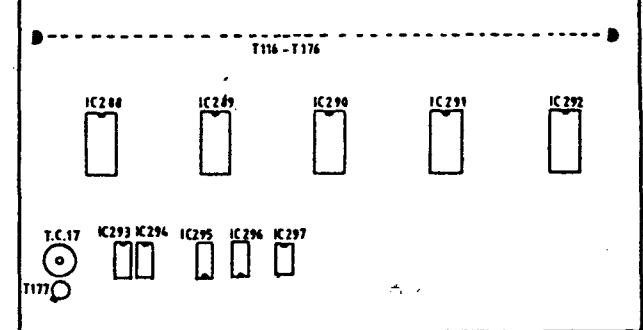
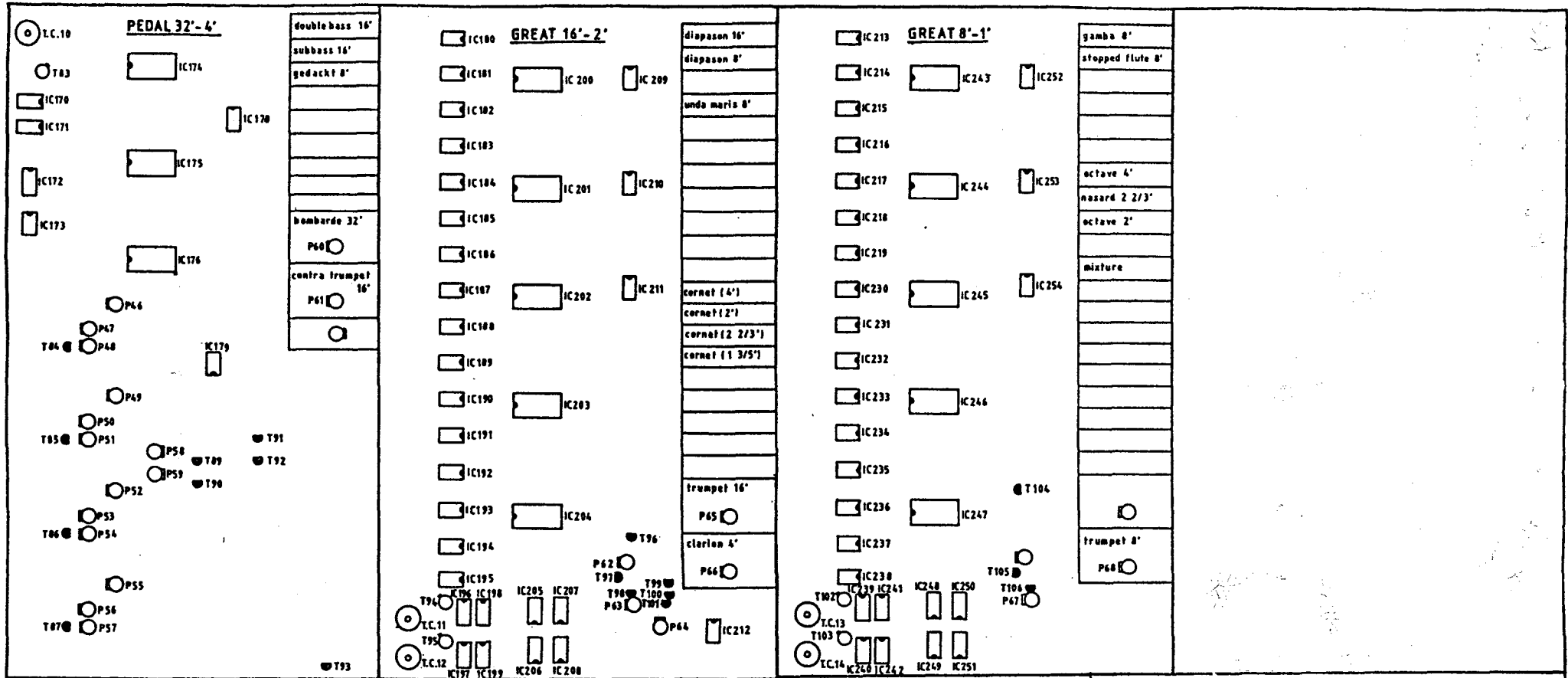


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S C H E M A T I C D I A G R A M S
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alterations reserved

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POSITION DIAGRAM (part 2)

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P1: volume treble choir amplifier
 P2: bass adjustment treble choir amplifier
 P3: treble adjustment treble choir amplifier
 P4: volume treble swell amplifier
 P5: bass adjustment treble swell amplifier
 P6: treble adjustment treble swell amplifier
 P7: volume middle swell amplifier
 P8: bass adjustment middle swell amplifier
 P9: treble adjustment middle swell amplifier
 P10: volume bass swell amplifier
 P11: bass adjustment bass swell amplifier
 P12: treble adjustment bass swell amplifier
 P13: linearity expression pedal swell
 P14: volume trumpet 8' pedal
 P15: volume trumpet 4' pedal
 P16: tremulant speed swell
 P17: hick depth swell 16'-2'
 P18: tremulant depth swell
 P19: volume fagotto 16' swell
 P20: volume cromorne 8' swell
 P21: hick depth swell 8'-1'
 P22: volume vox humana 8' swell
 P23: volume schalmei 4' swell
 P24: amplitude output channel A echo unit
 P25: amplitude output channel B echo unit
 P26: colckripple elimination delay line echo unit channel B
 P27: clockripple elimination delay line echo unit channel A
 P28: amplitude feed-back signal channel A to channel B
 P29: amplitude feed-back signal channel B to channel A
 P30: DC-offset IC 79
 P31: DC-offset IC 80
 P32: colckfrequence -
 P33: amplitude chorus
 P34: DC-offset IC 82
 P35: DC-offset IC 83
 P36: DC-offset IC 85

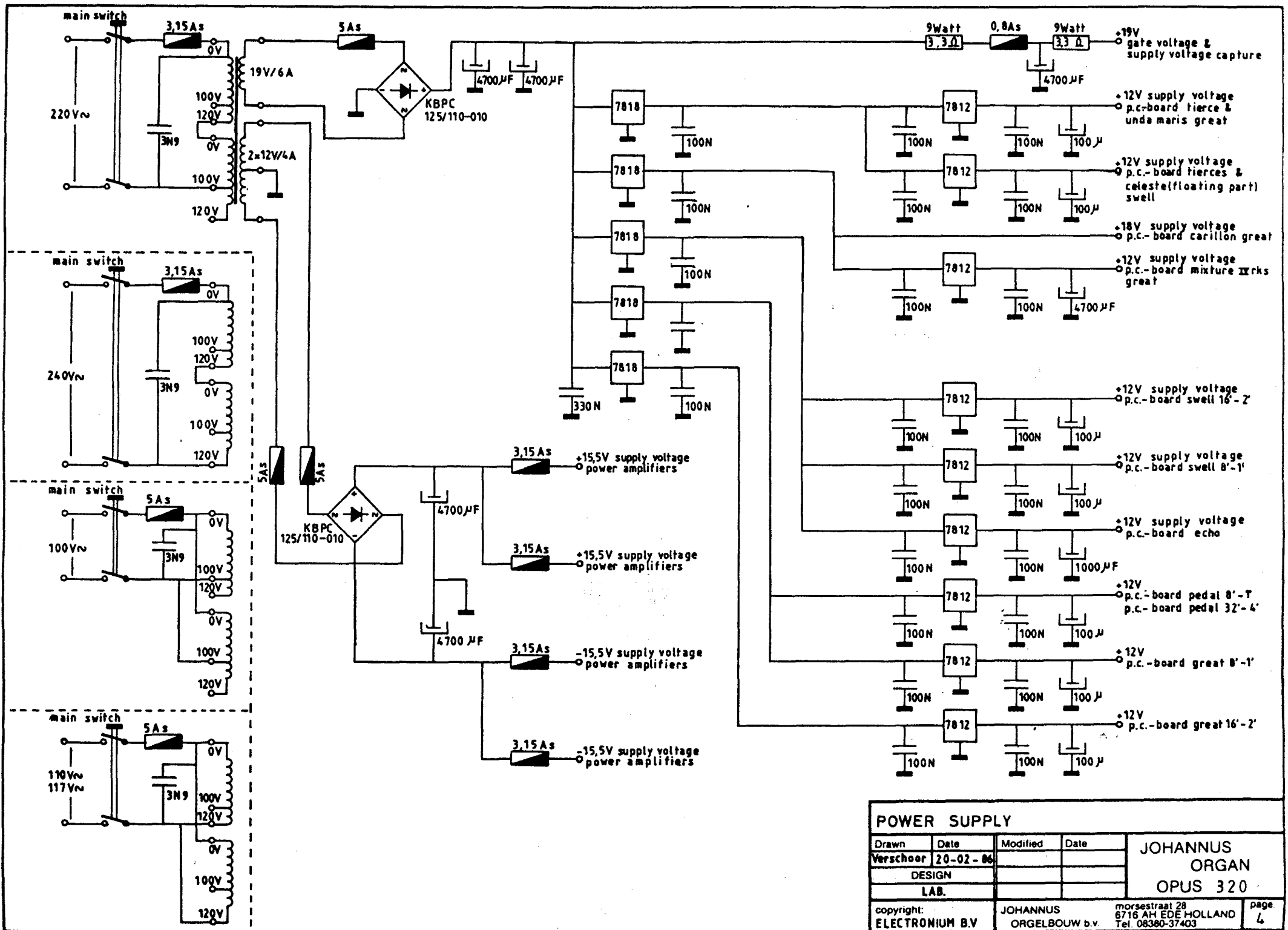
P37: DC-offset IC 86
 P38: DC-offset IC 87
 P39: DC-offset IC 88
 P40: amplitude input channel B echo unit
 P41: amplitude input channel A echo unit
 P42: squelch length carillon
 P43: volume carillon (intern)
 P44: sustain length 2'; 2 2/3' & 4' carillon
 P45: sustain length 6 2/5' carillon
 P46: volume bass choir amplifier
 P47: bass adjustment bass choir amplifier
 P48: treble adjustment bass choir amplifier
 P49: volume treble pedal/great amplifier
 P50: bass adjustment treble pedal/great amplifier
 P51: treble adjustment treble pedal/great amplifier
 P52: volume middle pedal/great amplifier
 P53: bass adjustment middle pedal/great amplifier
 P54: treble adjustment middle pedal/great amplifier
 P55: volume bass pedal/great amplifier
 P56: bass adjustment bass pedal/great amplifier
 P57: treble adjustment bass pedal/great amplifier
 P58: linearity expression pedal choir
 P59: linearity expression pedal great
 P60: volume bombarde 32' pedal
 P61: volume contra trumpet 16' pedal
 P62: tremulant speed great
 P63: hick depth great 16'-2'
 P64: tremulant depth great
 P65: volume trumpet 16' great
 P66: volume clarion 4' great
 P67: hick depth great 8'-1'
 P68: volume trumpet 8' great

T.C. 1: tuning pedal 8'-1'
 T.C. 2: tuning 2nd & 4th octave swell 16'-2'
 T.C. 3: tuning 1st; 3rd & 5th octave swell 16'-2'
 T.C. 4: tuning 2nd; 4th & 5th octave swell 8'-1'
 T.C. 5: tuning 1st & 3rd octave swell 8'-1'
 T.C. 6: tuning unda maris great
 T.C. 7: tuning tierce great
 T.C. 8: tuning celeste & tierce swell
 T.C. 9: tuning carillon
 T.C. 10: tuning pedal 32'-4'
 T.C. 11: tuning 2nd & 4th octave great 16'-2'
 T.C. 12: tuning 1st; 3rd & 5th octave great 16'-2'
 T.C. 13: tuning 2nd; 4th & 5th octave great 8'-1'
 T.C. 14: tuning 1st & 3rd octave great 8'-1'
 T.C. 17: tuning mixture great

IC 1; 28; 29; 61; 62; 113; 114; 121; 163; 170; 196; 197; 239; 240; 271; 272; 293.....MO 83
 IC 2; 30; 31; 63; 64; 115; 116; 122; 123; 164; 165; 171; 198; 199; 241; 242; 273; 274; 294.....4512
 IC 3; 37; 38; 70; 71; 117; 118; 124; 125; 166; 167; 172; 205; 206; 248; 249; 280; 281; 295.....4046
 IC 4; 39; 40; 72; 73; 119; 120; 126; 127; 168; 169; 173; 207; 208; 250; 251; 282; 283; 297.....4520
 IC 5-7; 32-36; 65-69; 154-159; 174-176; 200-204; 243-247; 275-279; 288-292.....TMS 3617
 IC 8-11; 41-44; 74-77; 89; 101; 102; 160; 177-179; 209-212; 252-254; 284-287; 297.....TL 074
 IC 12-27; 45-60; 180-195; 213-238; 255-270.....LM 339
 IC 78; 90.....NE 570
 IC 79; 80; 82; 83; 85-88.....TDA 2108
 IC 81.....4093
 IC 84; 139-153; 161; 162.....LM 324
 IC 91-100; 103-112.....TMS 3615
 IC 128; 129.....4528
 IC 130.....4013
 IC 131-134.....4081
 IC 135-138.....ER 2051

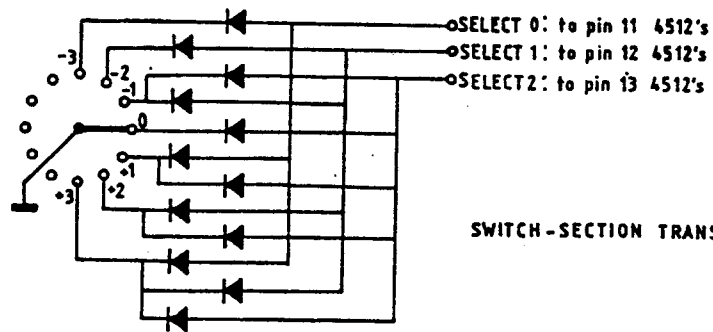
T 1; 11; 12; 19; 20; 32-34; 36; 82; 83; 94; 95; 102; 103; 107; 108; 177.....BC 141
 T 2-7; 10; 13-18; 21-27; 29; 30; 35A-35C; 37-80; 84-90; 93; 96-101; 104-106; 109-176.....BC 549
 T 8; 9; 91; 92.....BC 337
 T 28; 31.....BC 558
 T 35D.....BC 161
 T 53E.....2N3055
 T 81.....J 174

LEGEND POSITION DIAGRAMS			
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Verscheer	28-04-86		
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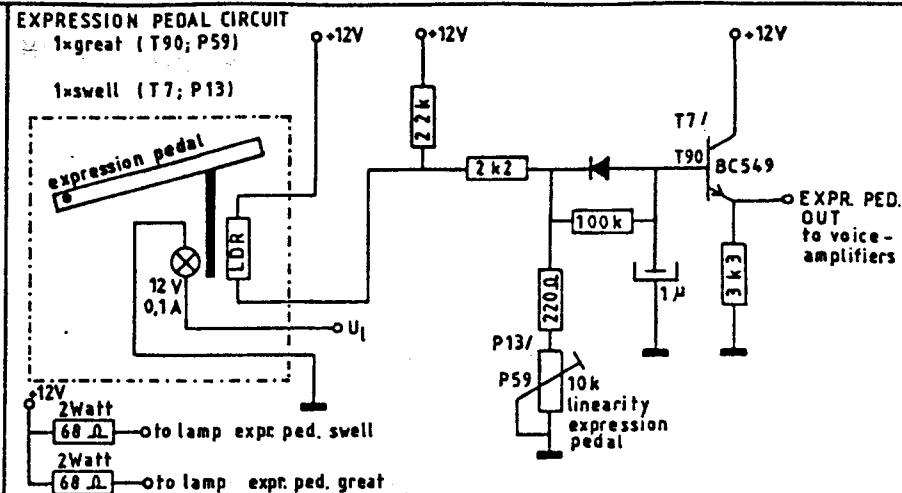


POWER SUPPLY			
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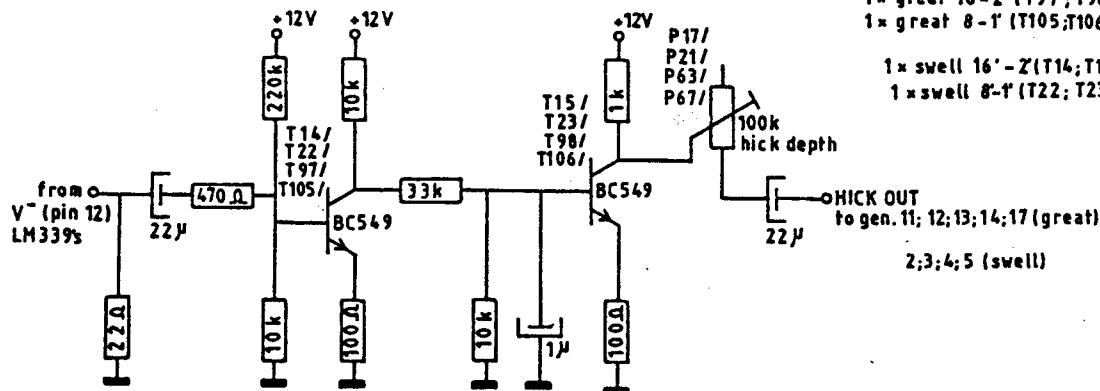
SWITCH-SECTION TRANSPOSER



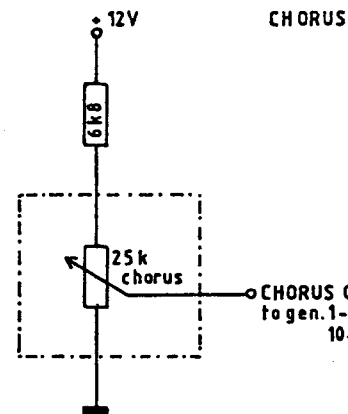
HICK CIRCUIT

1 x great 16'-2' (T97; T98; P63)
1 x great 8'-1' (T105; T106; P67)

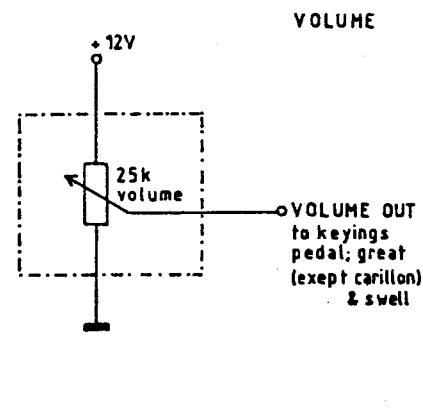
1 x swell 16'-2' (T14; T15; P17)
1 x swell 8'-1' (T22; T23; P21)



CHORUS



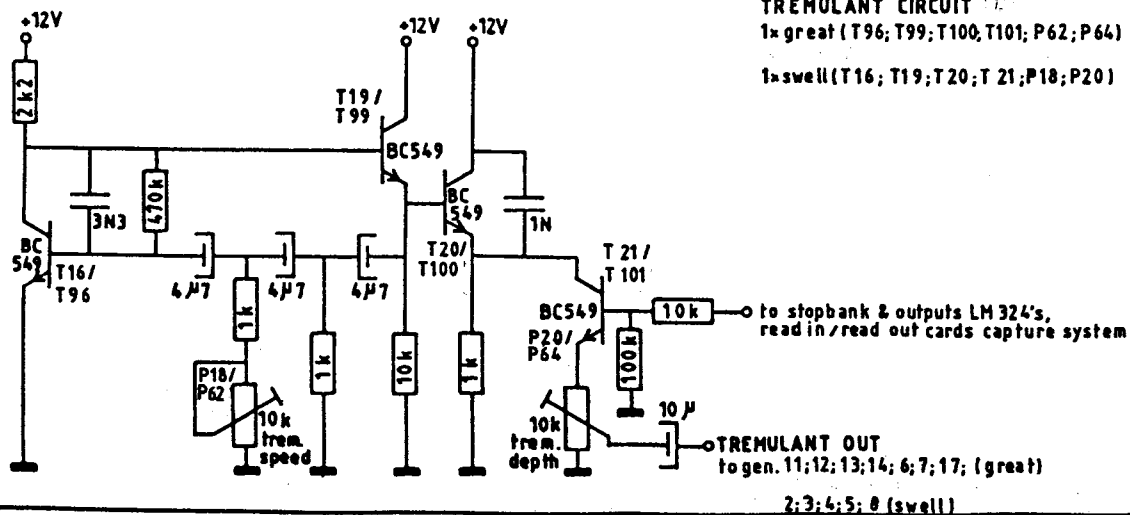
VOLUME



TREMULANT CIRCUIT

1 x great (T96; T99; T100; T101; P62; P64)

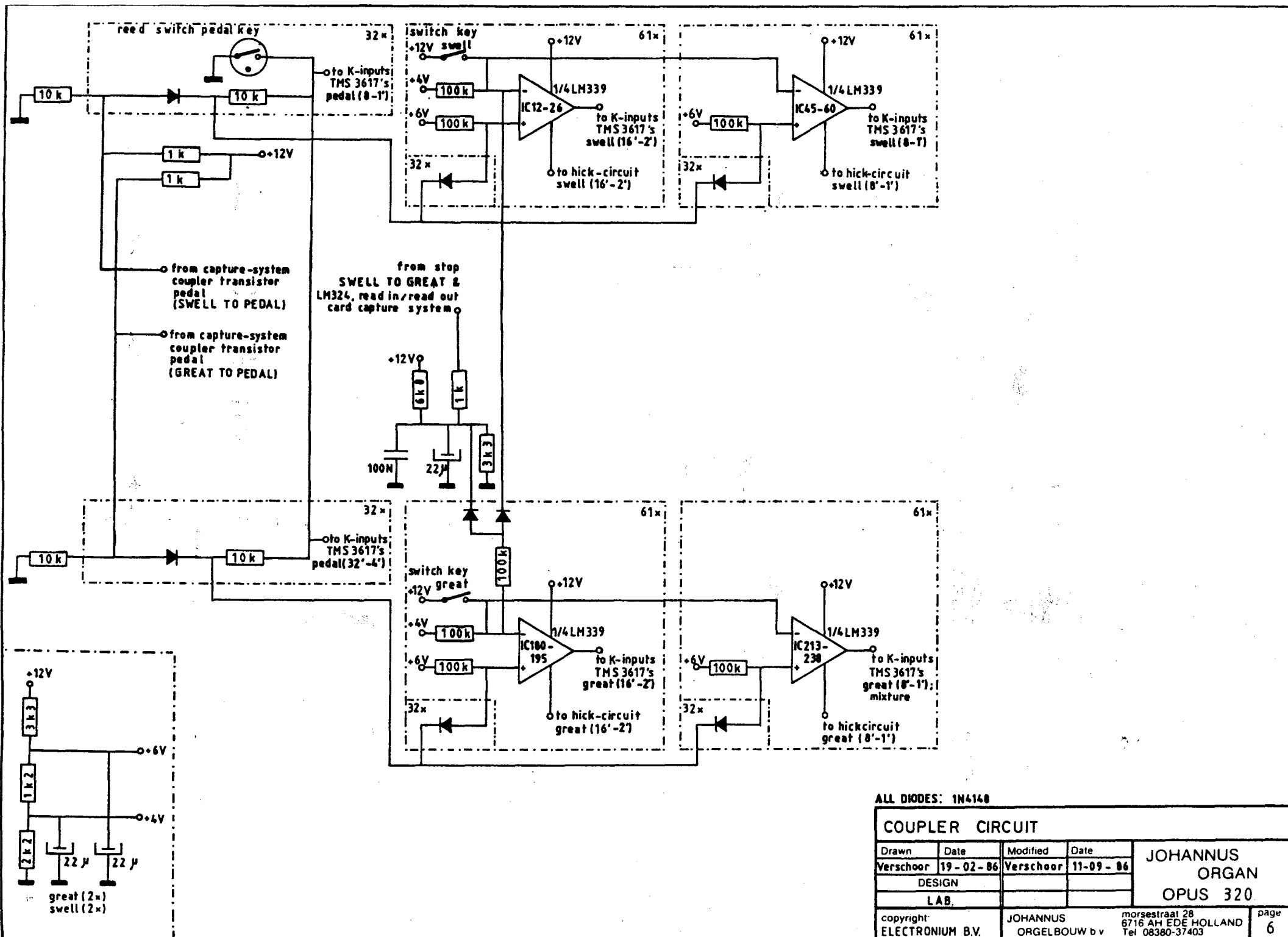
1 x swell (T16; T19; T20; T21; P18; P20)



ALL DIODES: 1N4148

SWITCH-SECTION TRANSPOSER;			
HICK CIRCUIT ; TREMULANT CIRCUIT ;			
EXPRESSION PEDAL CIRCUIT ; CHORUS & VOLUME			
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Verschoor	03-04-86		
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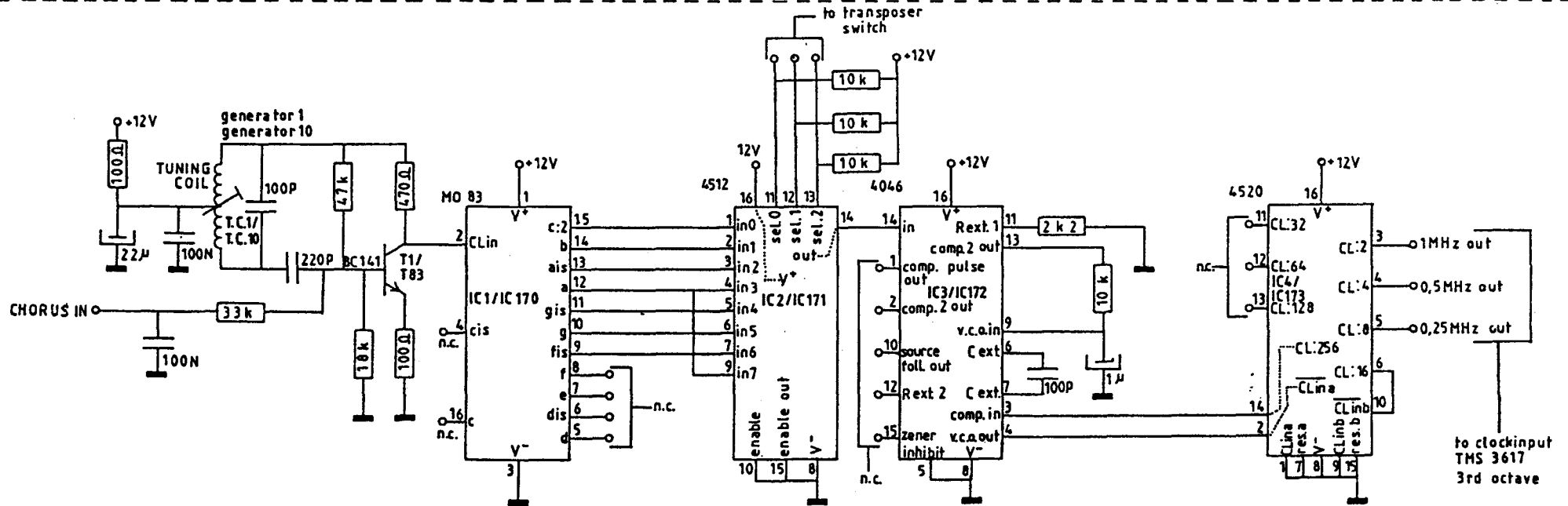
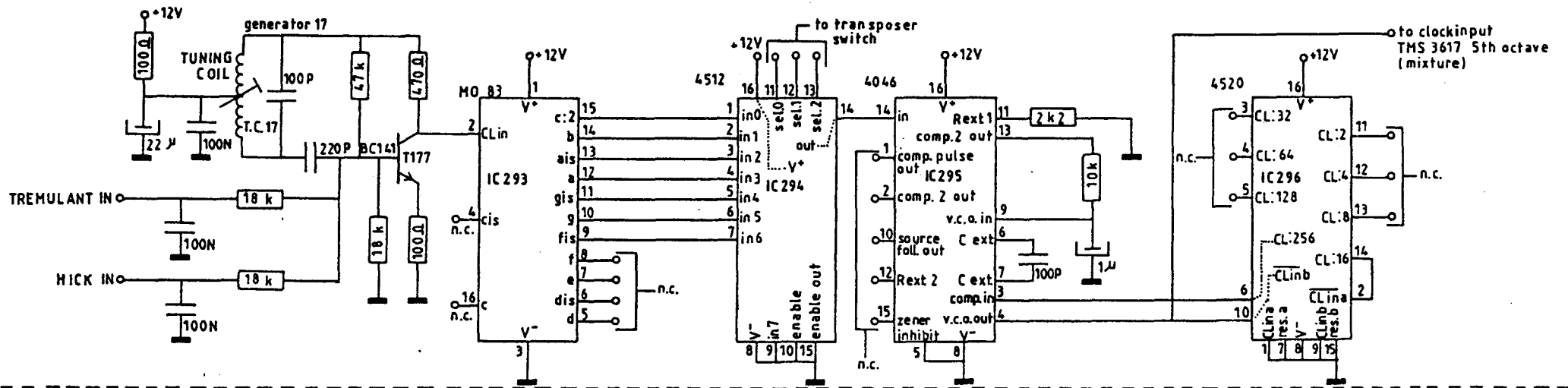
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COUPLER CIRCUIT

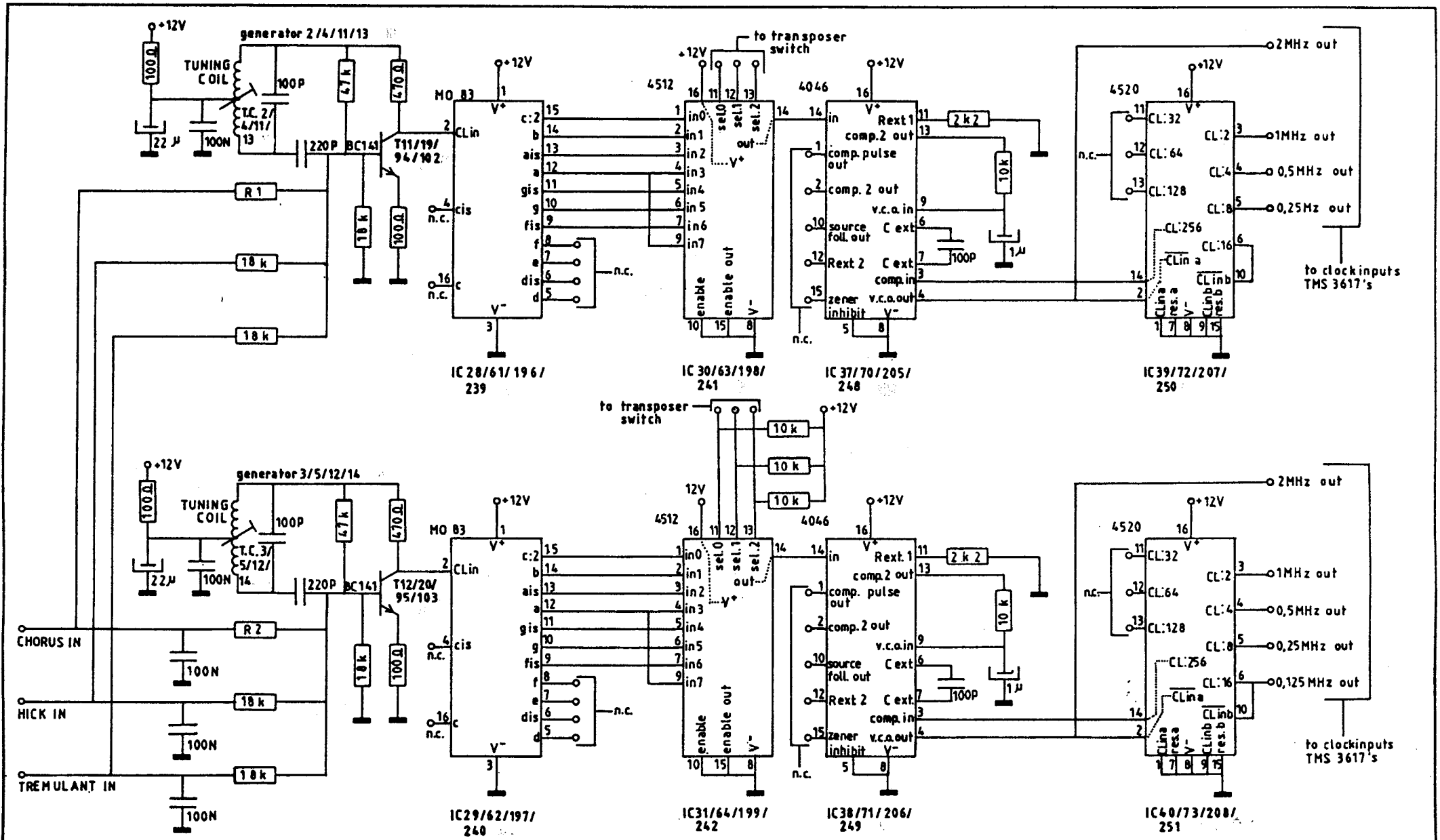
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Verschoor	19-02-86	Verschoor	11-09-86	
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GENERATORS / TRANSPOSERS MIXTURE (upper) &

PEDAL (2x lower)

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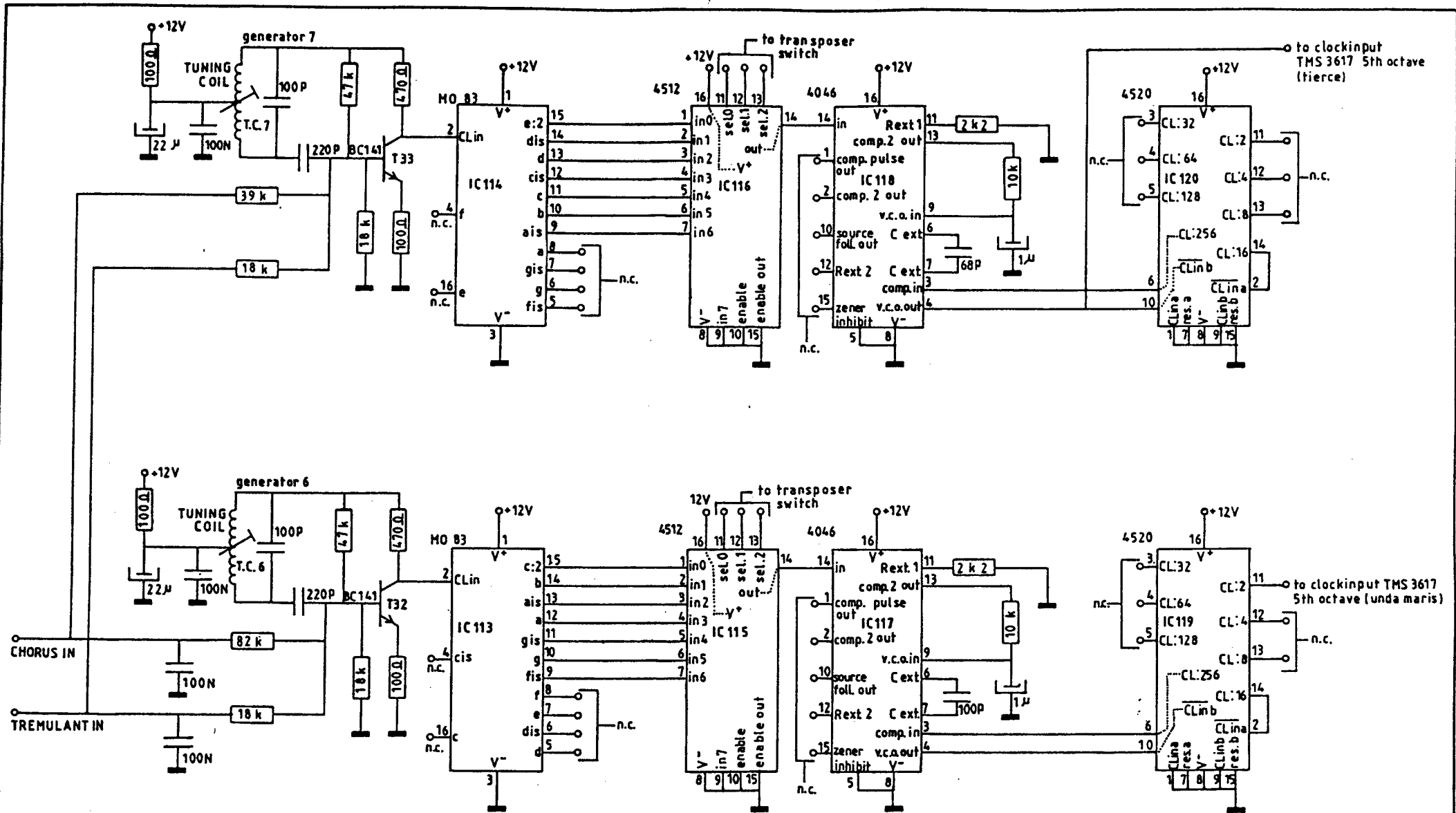


- generator 2: R1=27k
- 4: R1=60k
- 11: R1=39k
- 13: R1=150k
- 15: R1=
- 3: R2=33k
- 5: R2=82k
- 12: R2=47k
- 14: R2=

GENERATORS / TRANSPOSERS MANUALS

(2x GREAT - 2x SWELL)

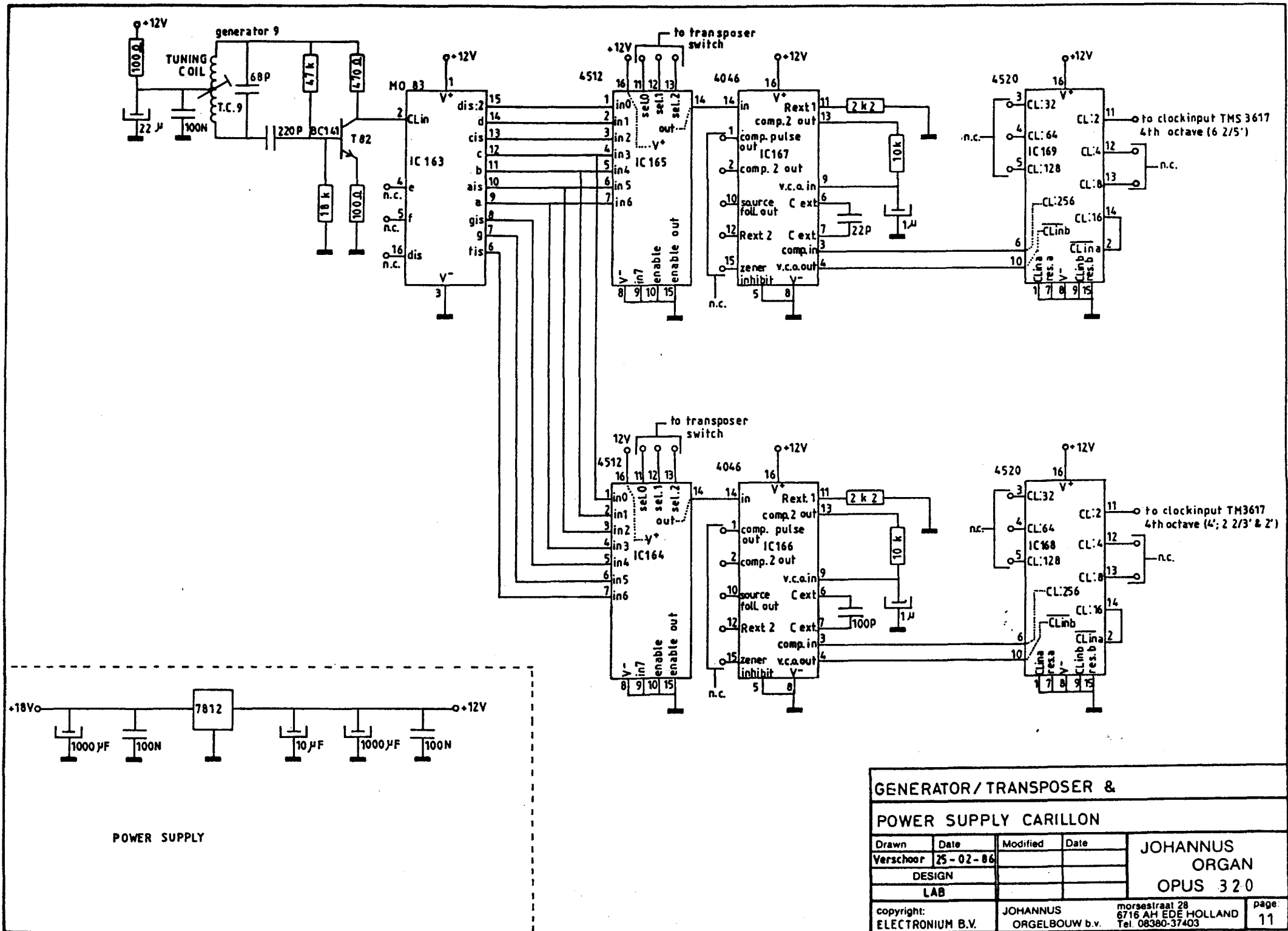
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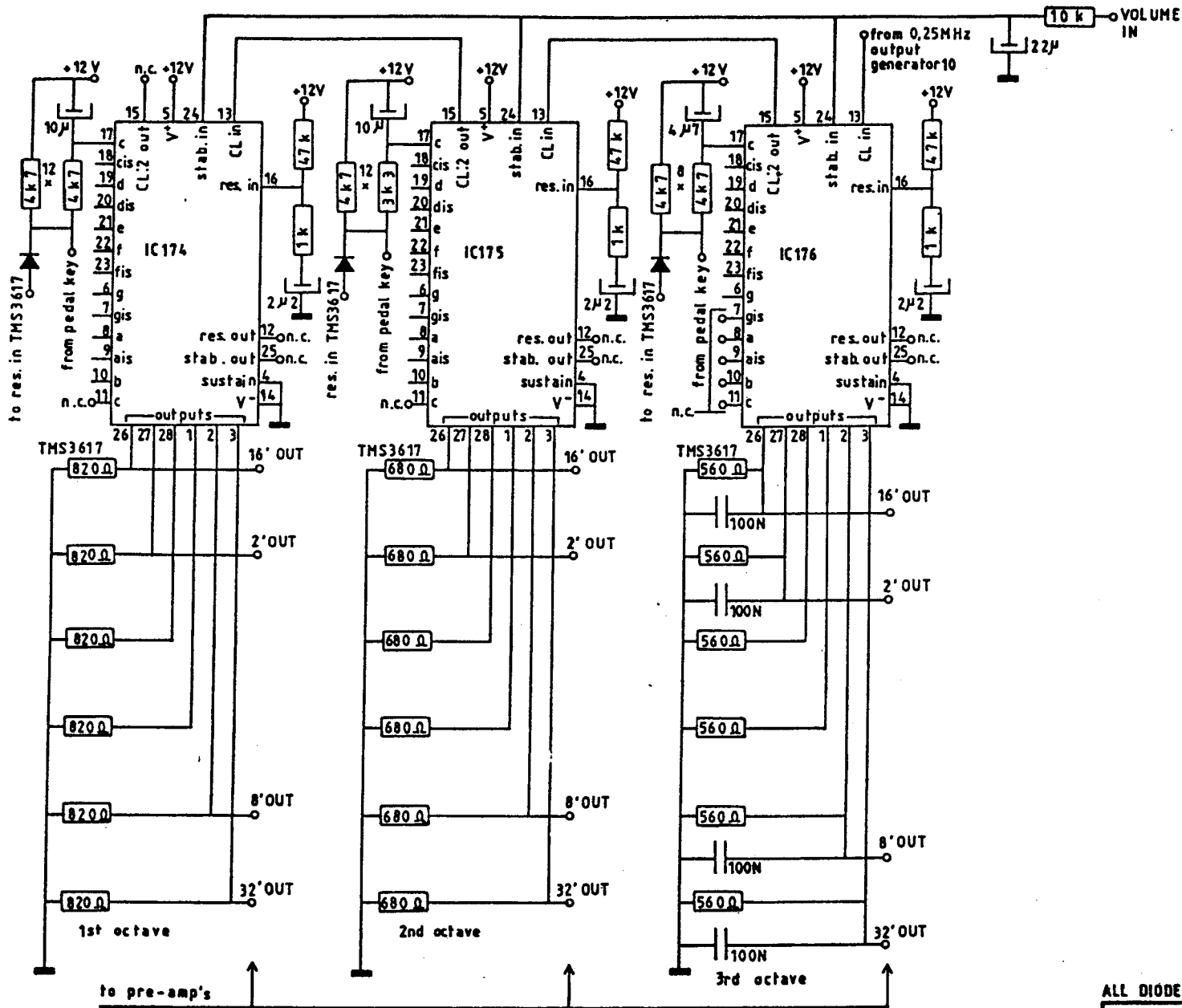
GENERATORS / TRANSPOSERS UNDA MARIS &

TIERCE GREAT

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Verschoor	25-02-86			
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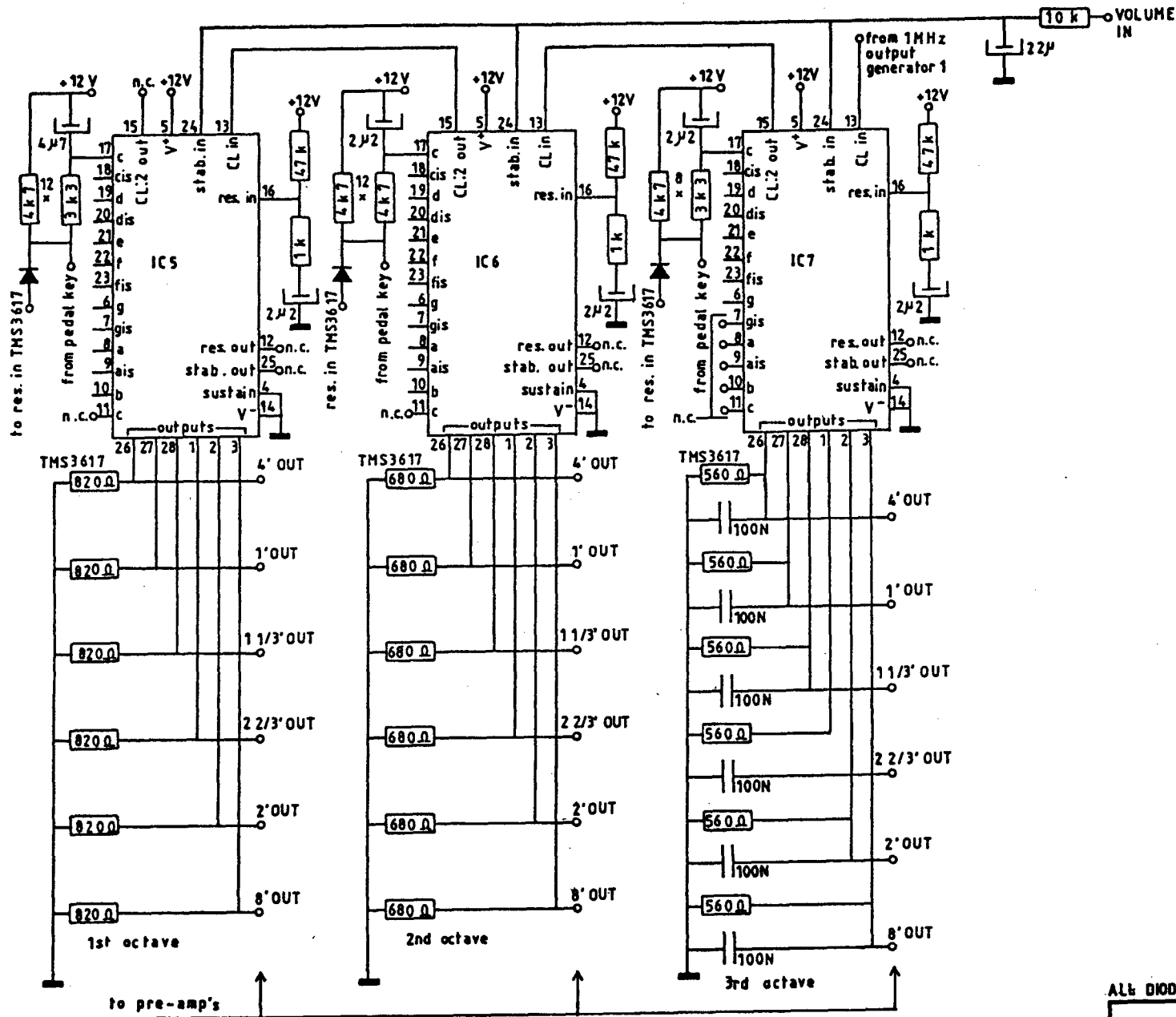
GENERATOR/TRANSPOSER &			
POWER SUPPLY CARILLON			
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Verschoor	25-02-86		
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ALL DIODES M4148

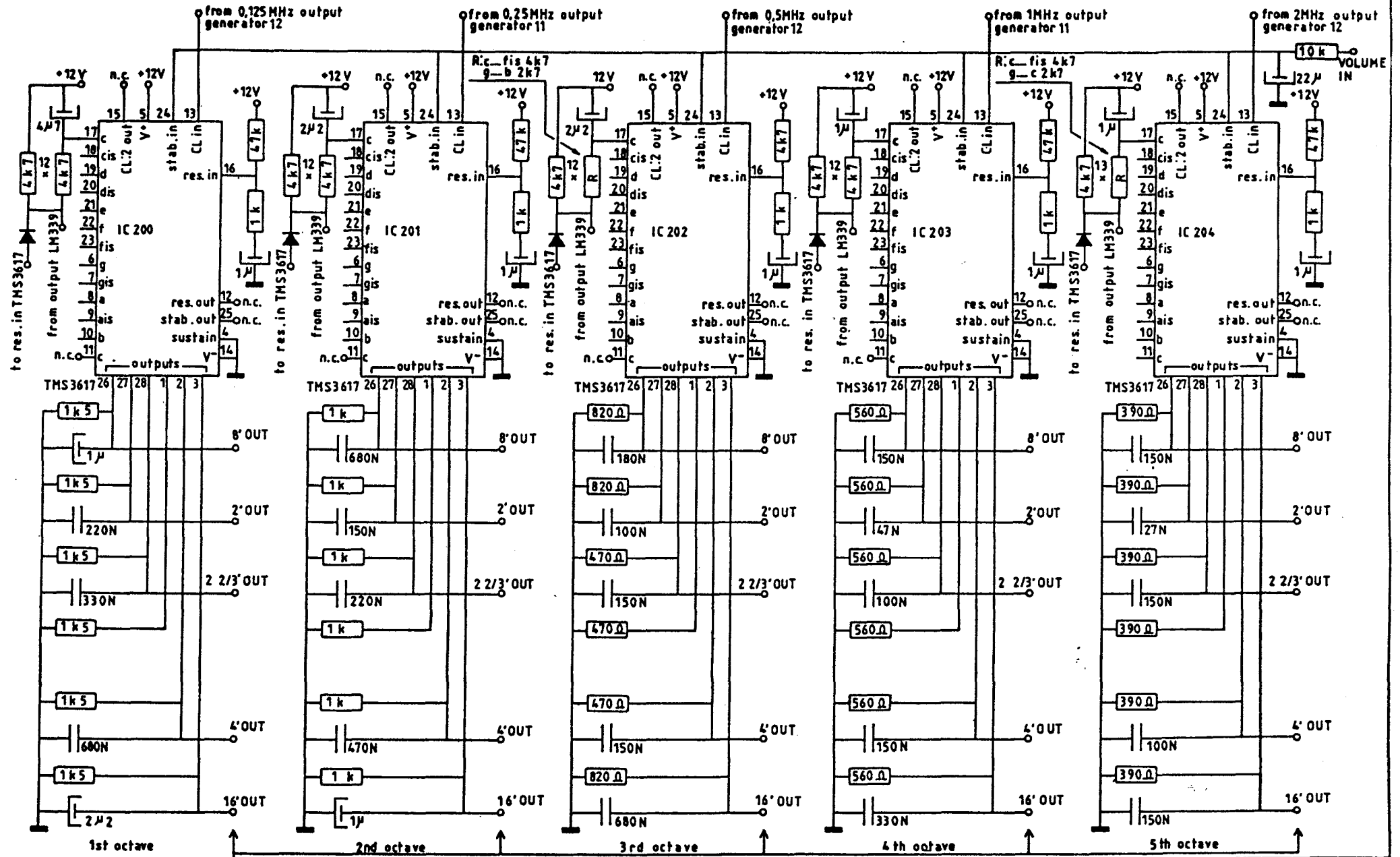
KEYING PEDAL (32'-4')

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Verschoor	11-03-86			
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ALL DIODES 1N4148

KEYING PEDAL (8'-1')				JOHANNUS ORGAN OPUS 320	
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				morsestraat 26 6716 AH EDE HOLLAND Tel. 08380-37403	
					page: 13

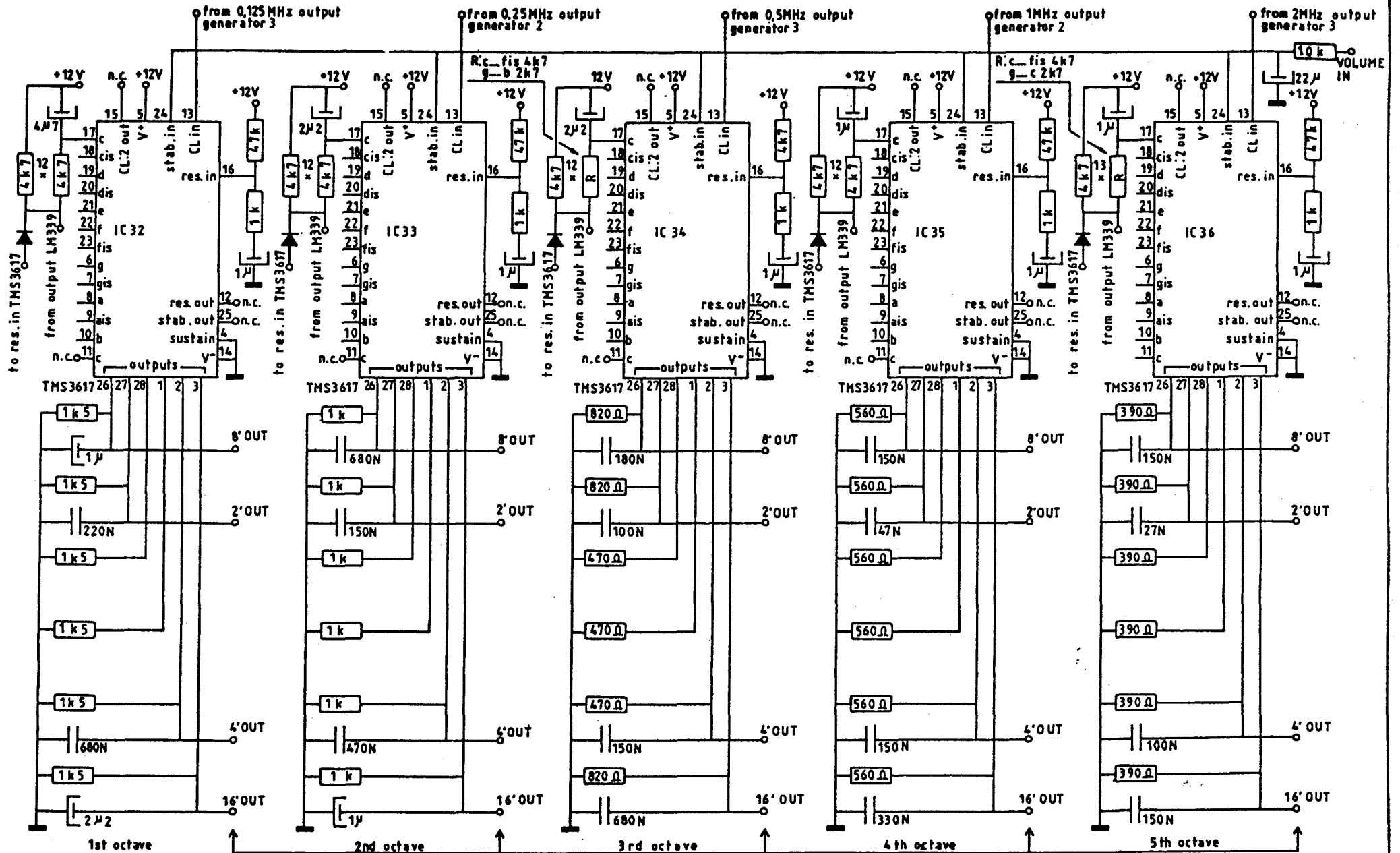


ALL DIODES: 1N4148

KEYING GREAT (16'-2')

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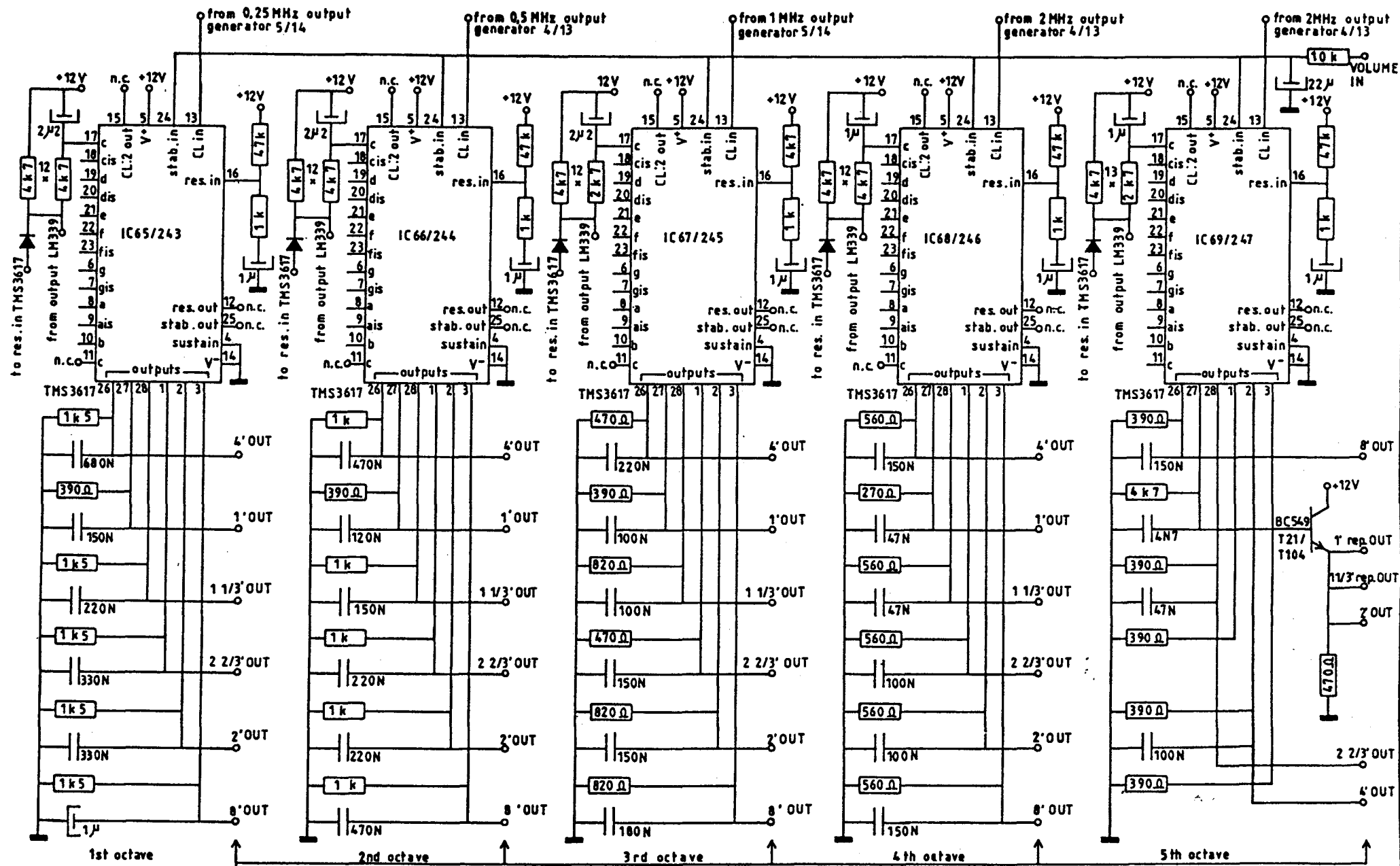
to pre-amp's



ALL DIODES: 1N4148

KEYING SWELL (16'-2')

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to pre-amp's

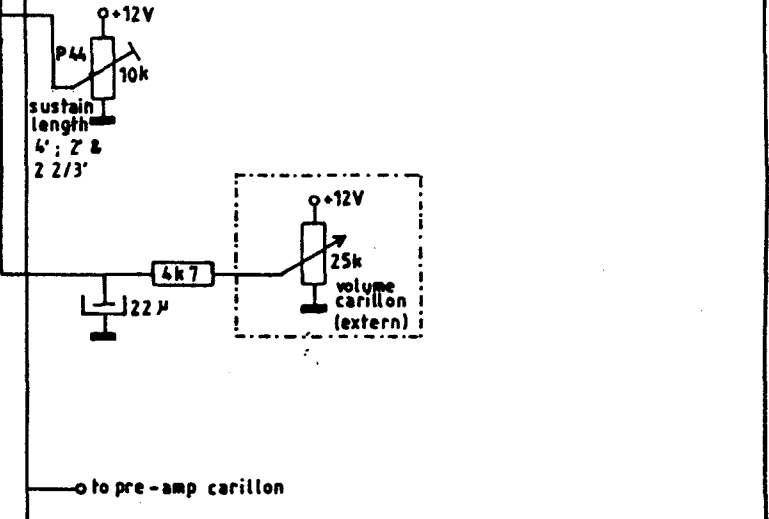
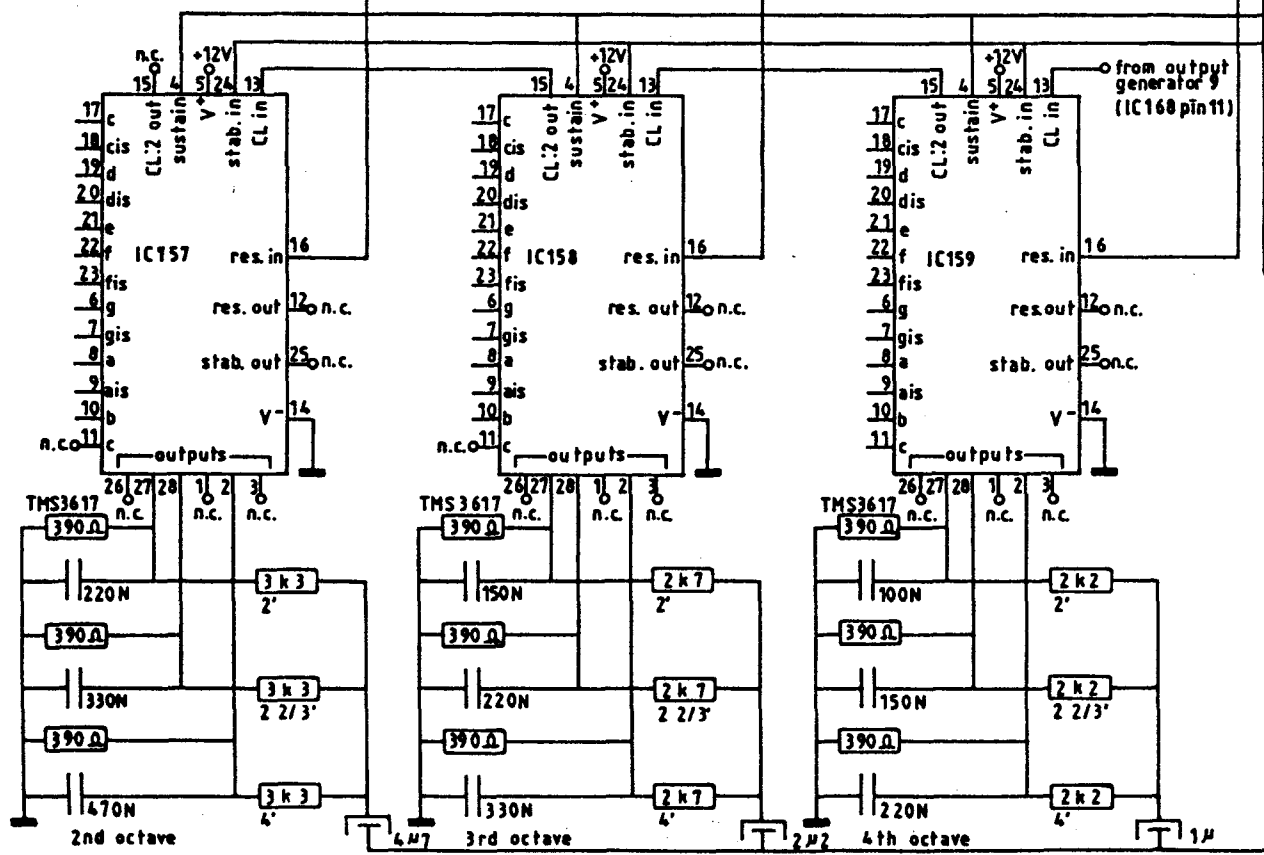
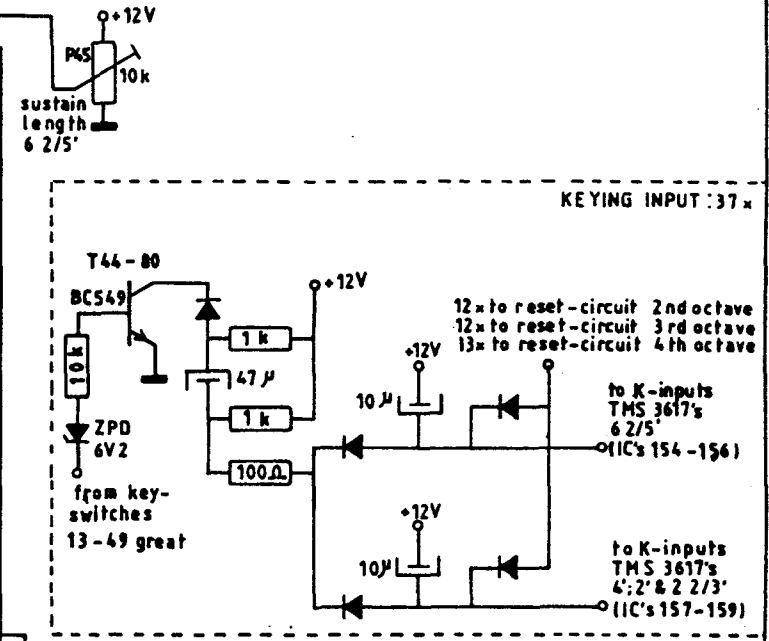
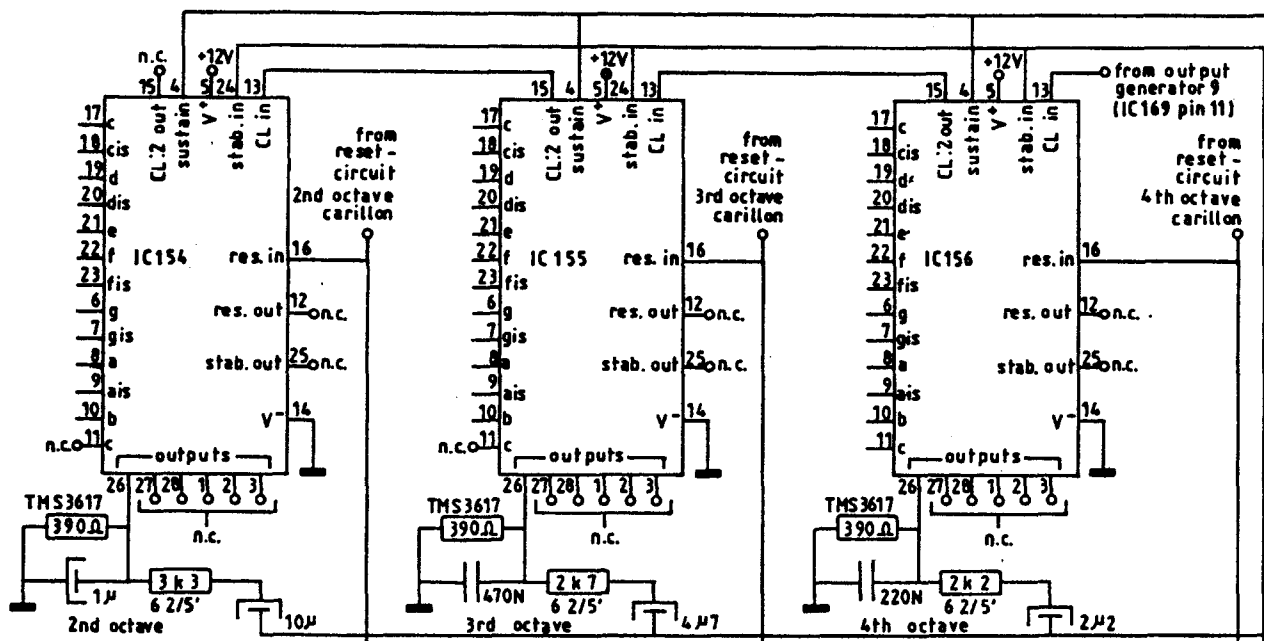
ALL DIODES: 1N4148

KEYING GREAT (8'-1') & SWELL (8'-1')

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Verschoor	06-03-86		
DESIGN			
LAB.			

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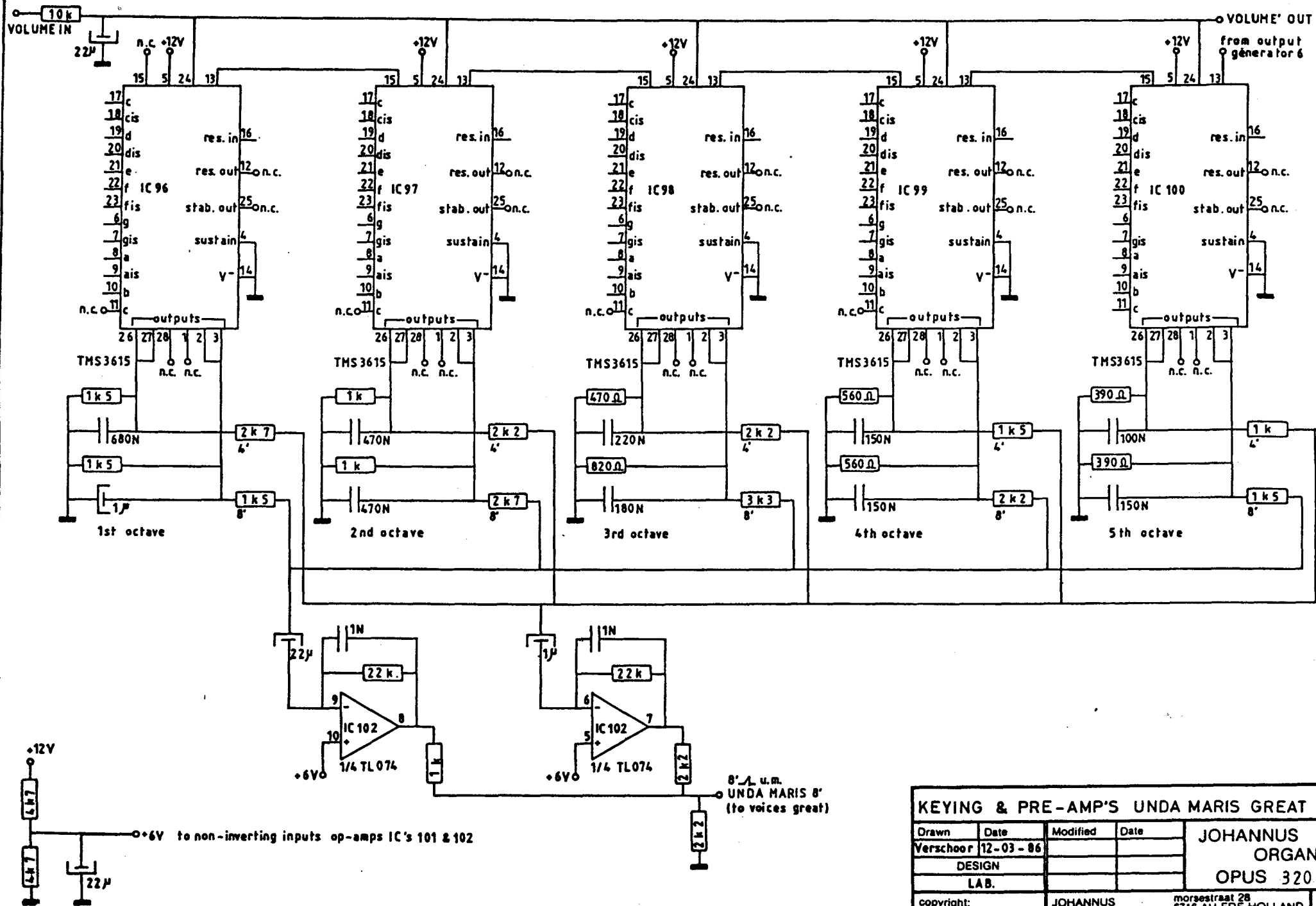


ALL DIODES: 1N4140

KEYING CARILLON			
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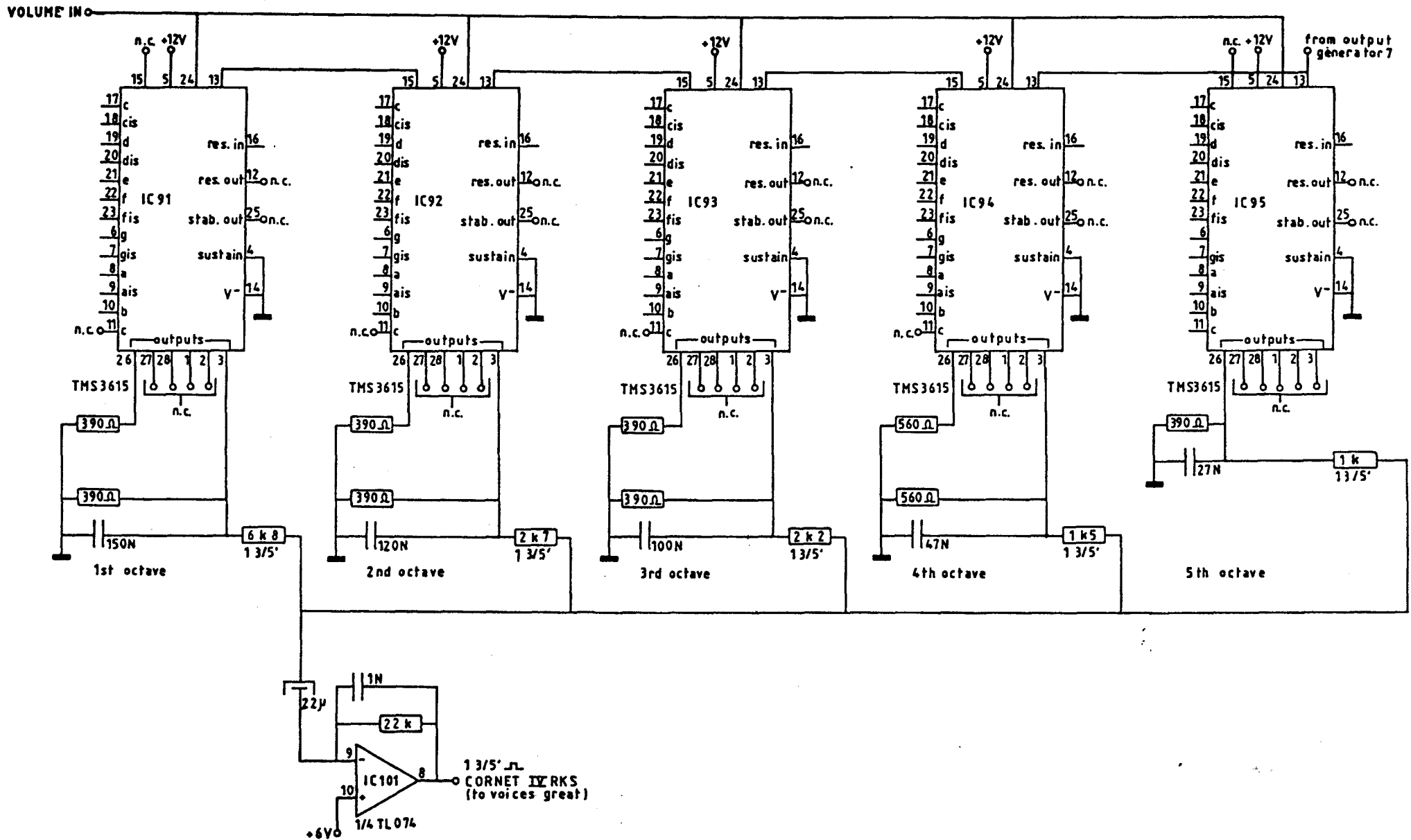
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NOTE: the K -inputs (pin 6-11 and pin 17-23) and the reset-input (pin 16) of the LC's TMS 3615 are connected with the corresponding pins of the TMS3617's on the P.C.-board of great 8'



KEYING & PRE-AMP'S UNDA MARIS GREAT			
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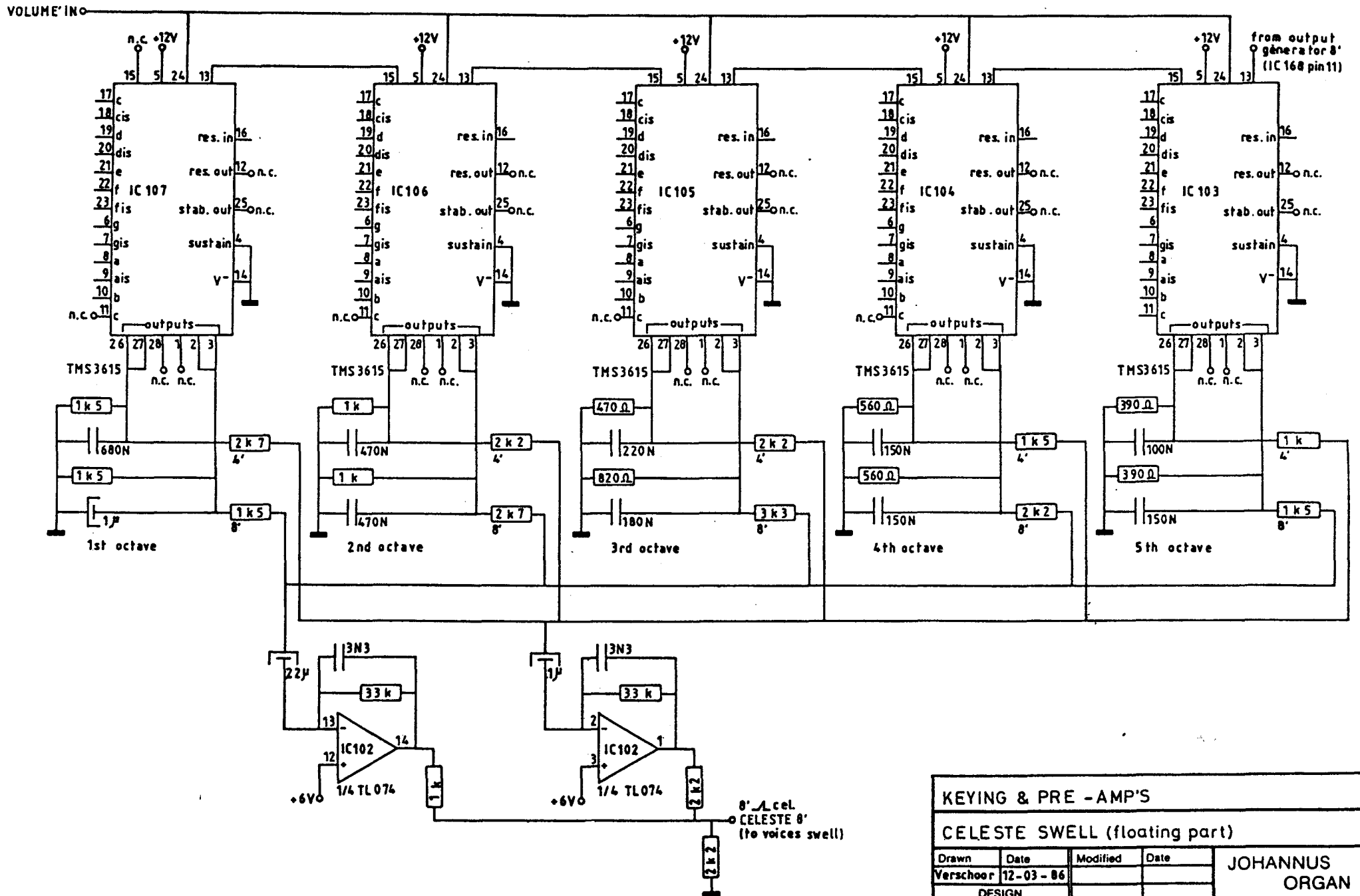
NOTE: the K-inputs (pin 6-11 and pin 17-23) and the reset-input (pin 16) of the LC's TMS 3615 are connected with the corresponding pins of the TMS3617's on the P.C.-board of great 8'



KEYING & PRE-AMP TIERCE GREAT

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Verschoor	12-03-86			
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				page: 20

NOTE: the K-inputs (pin 6-11 and pin 17-23) and the reset-input (pin 16) of the LC's TMS 3615 are connected with the corresponding pins of the TMS3617's on the P.C.-board of swell 8'

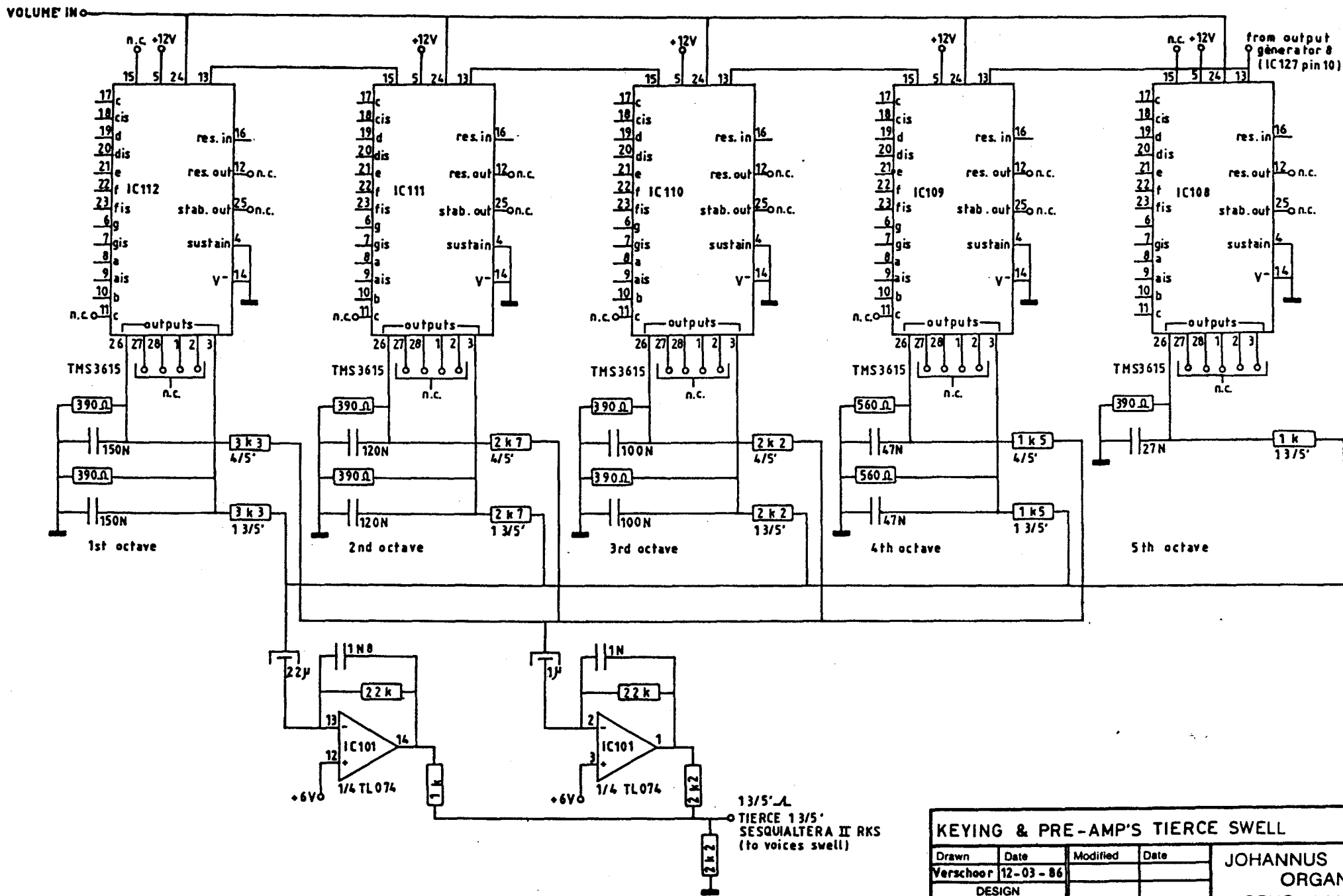


KEYING & PRE - AMP'S

CELESTE SWELL (floating part)

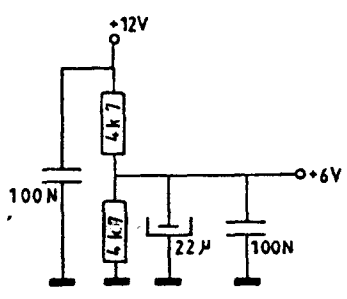
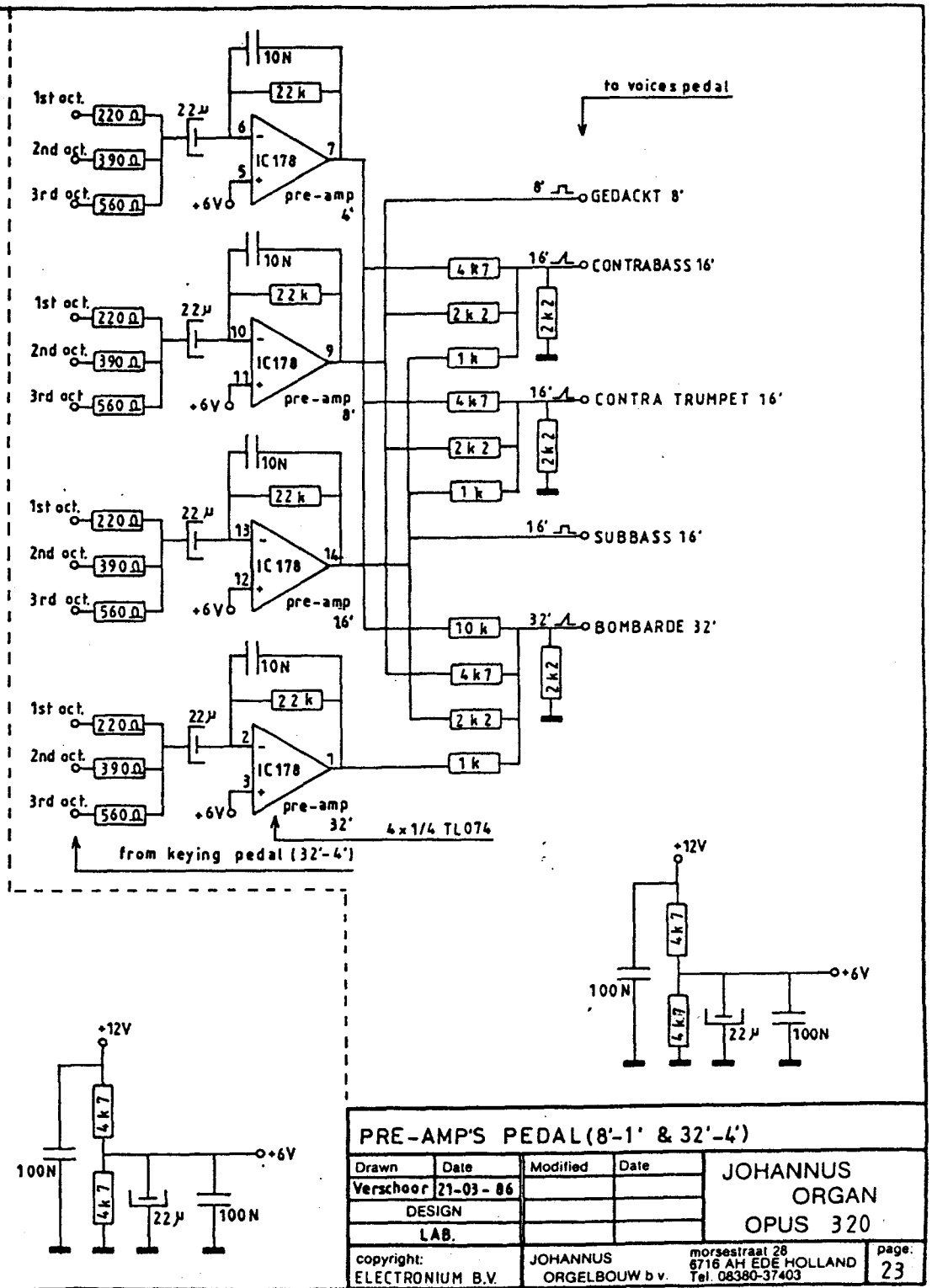
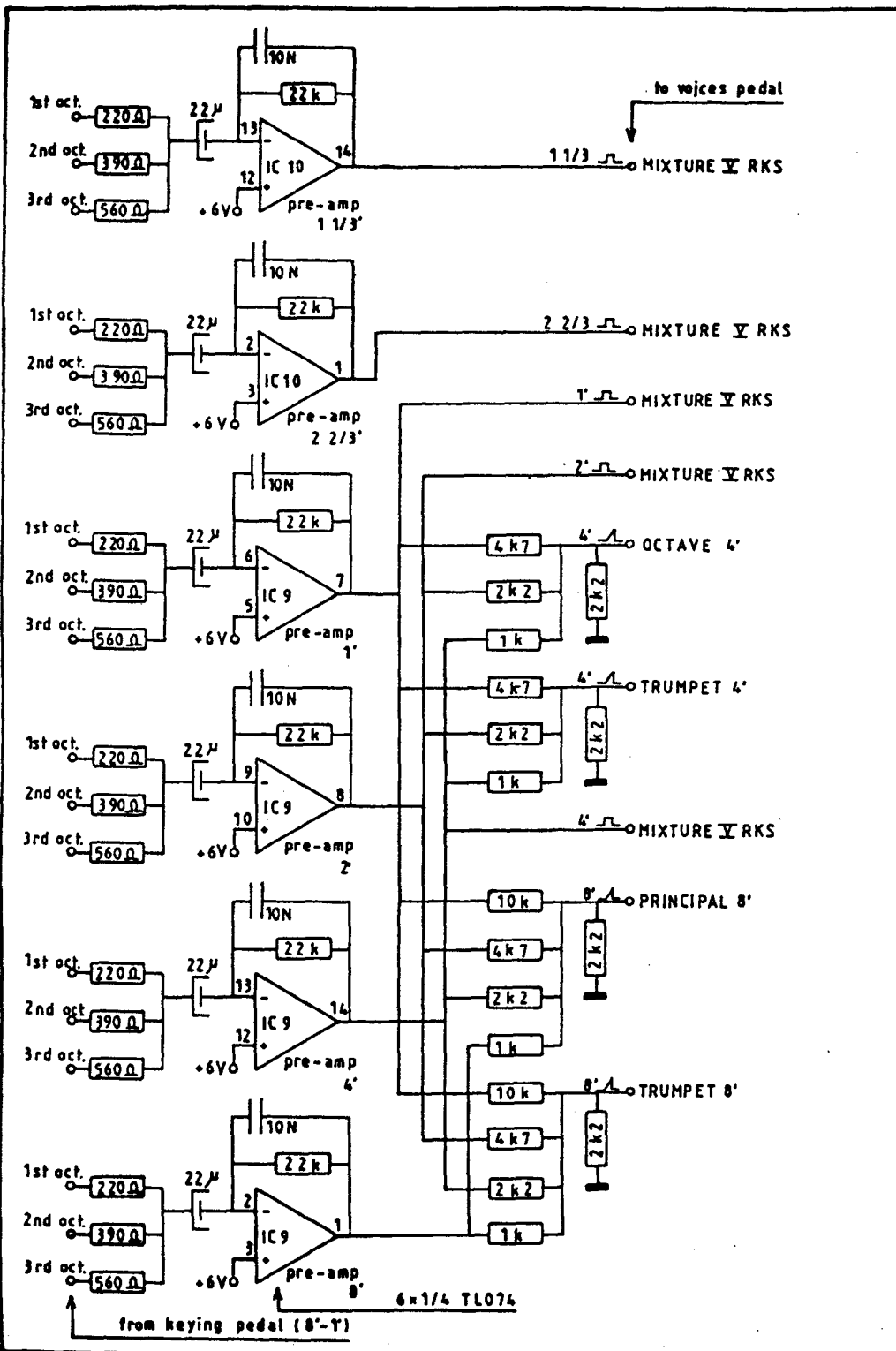
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		Tel. 08380-37403		

NOTE: the K-inputs (pin 6-11 and pin 17-23) and the reset-input (pin 16) of the LC's TMS 3615 are connected with the corresponding pins of the TMS3617's on the P.C.-board of swell 8'



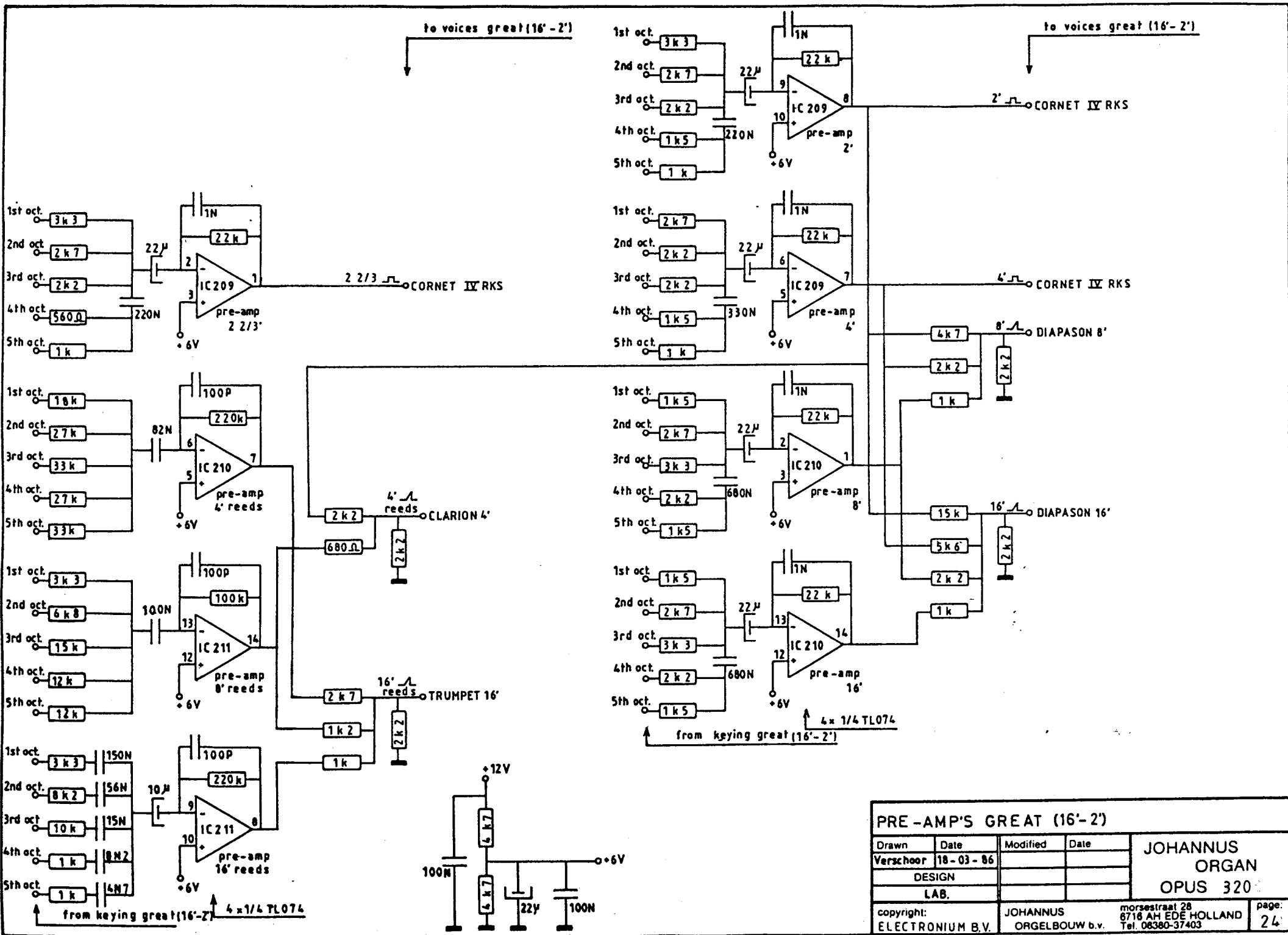
KEYING & PRE-AMP'S TIERCE SWELL

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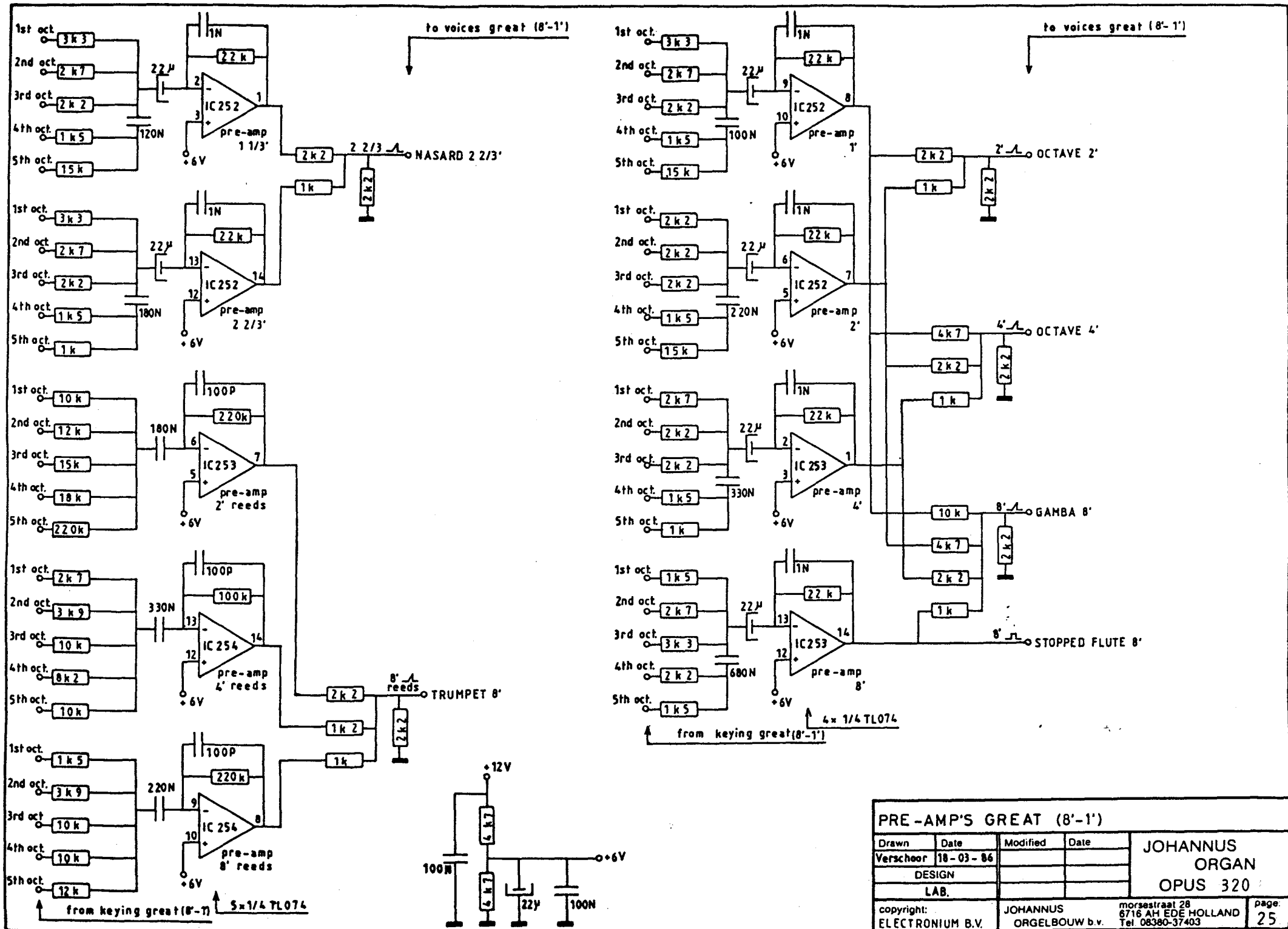
PRE-AMPS PEDAL (8'-1' & 32'-4')

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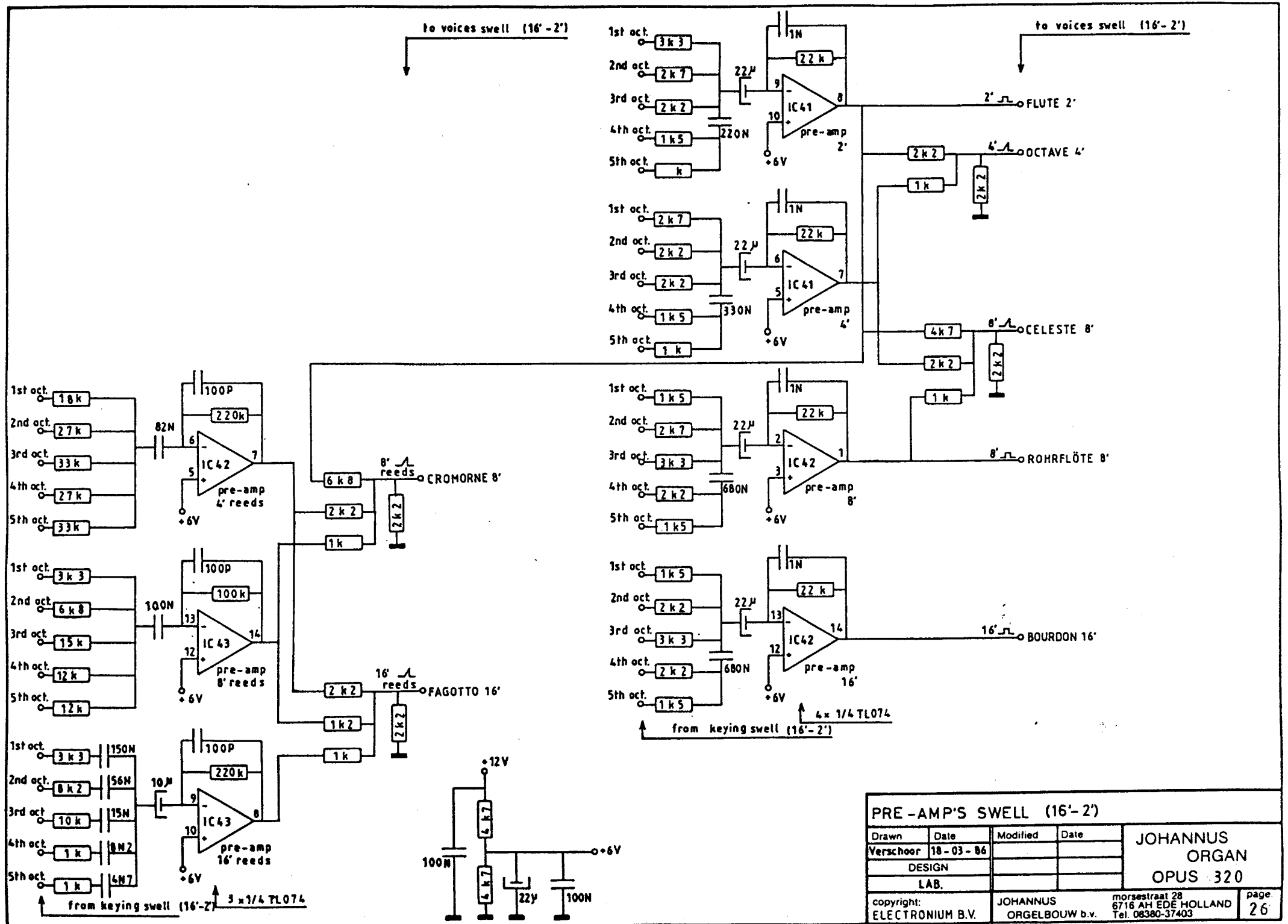


PRE-AMP'S GREAT (16'-2')

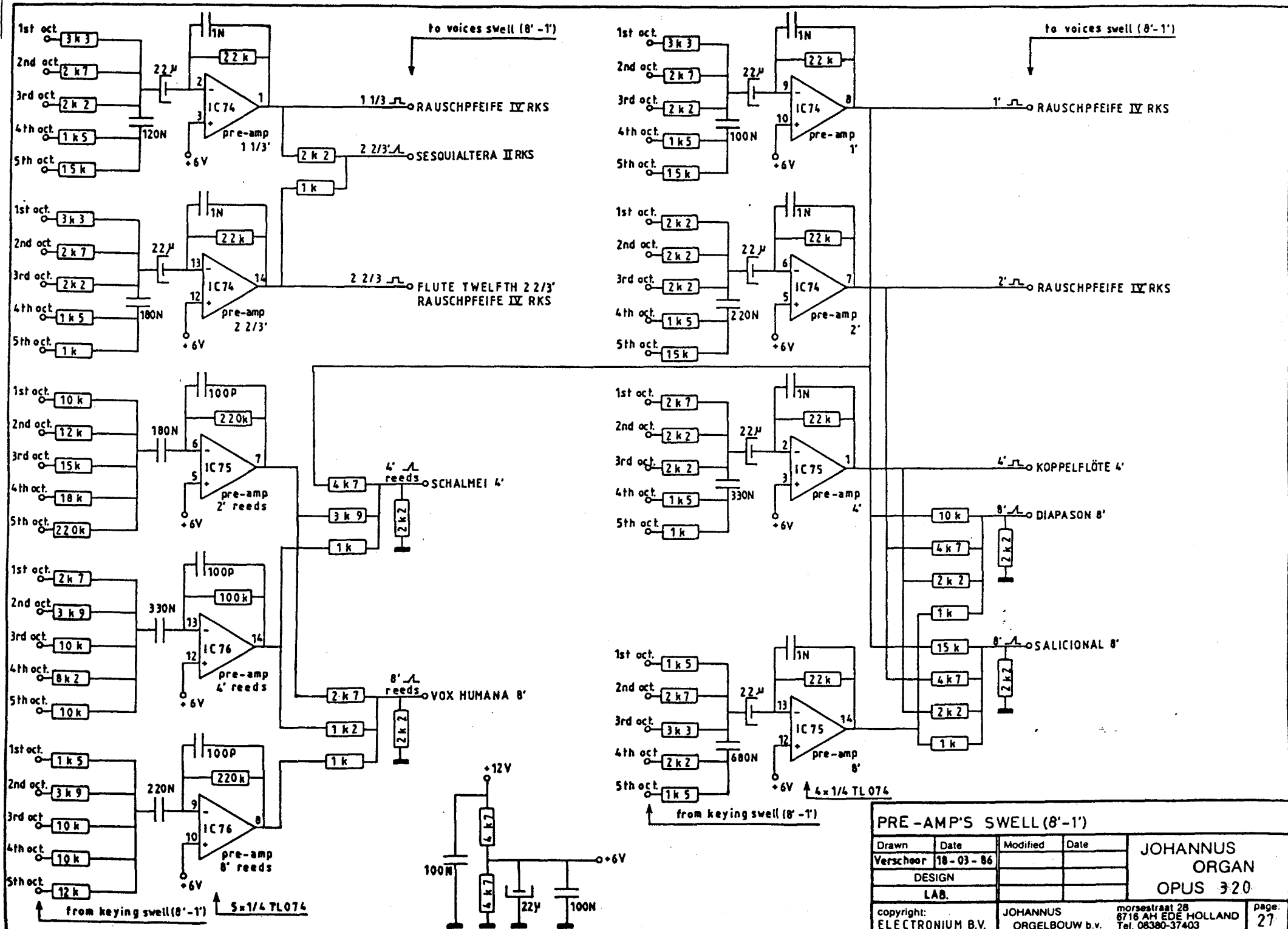
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LAB.				
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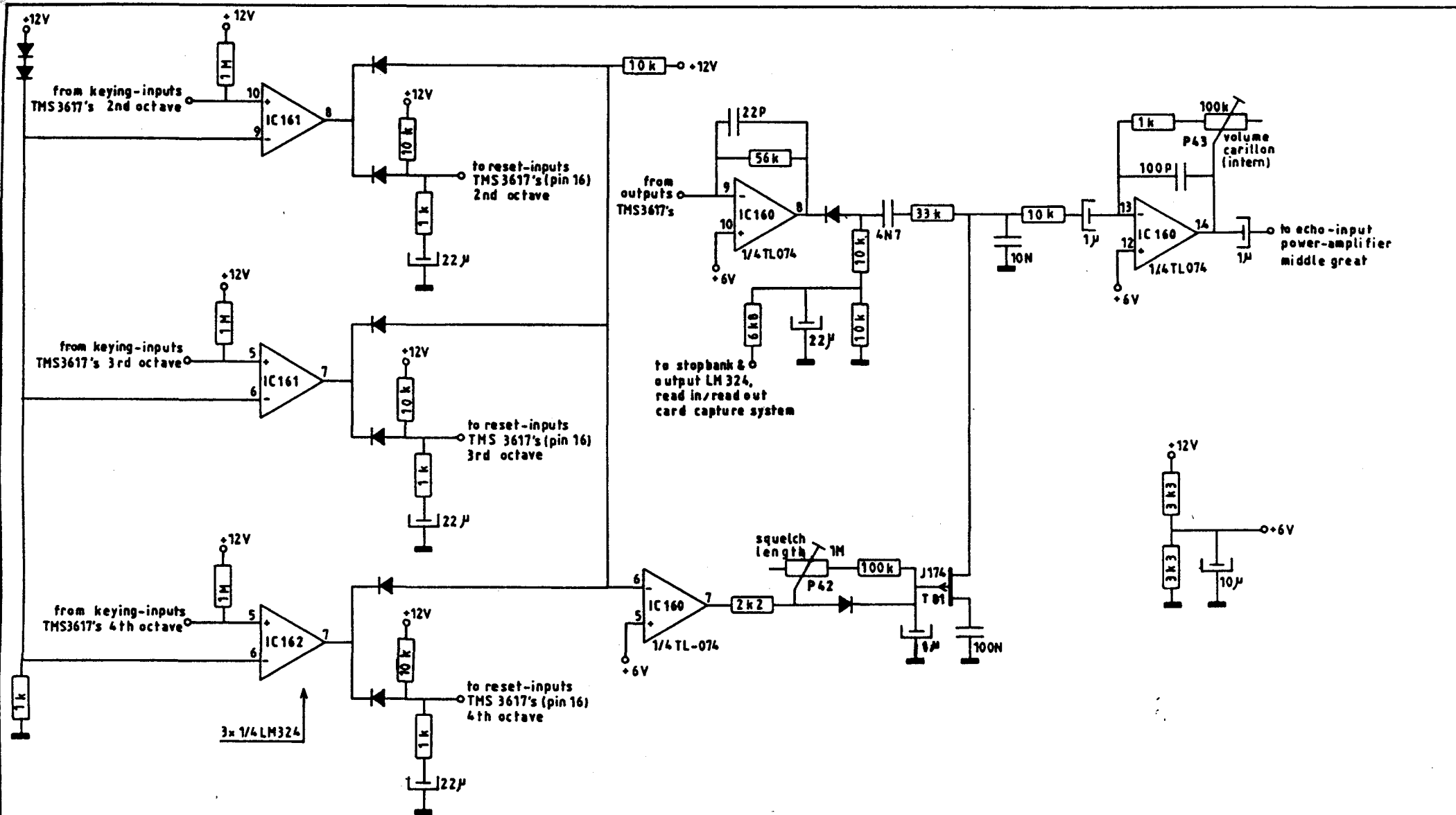


PRE-AMP'S GREAT (8'-1')			
Drawn	Date	Modified	Date
Verschoor	18-03-86		
DESIGN			
LAB.			
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		page:	25



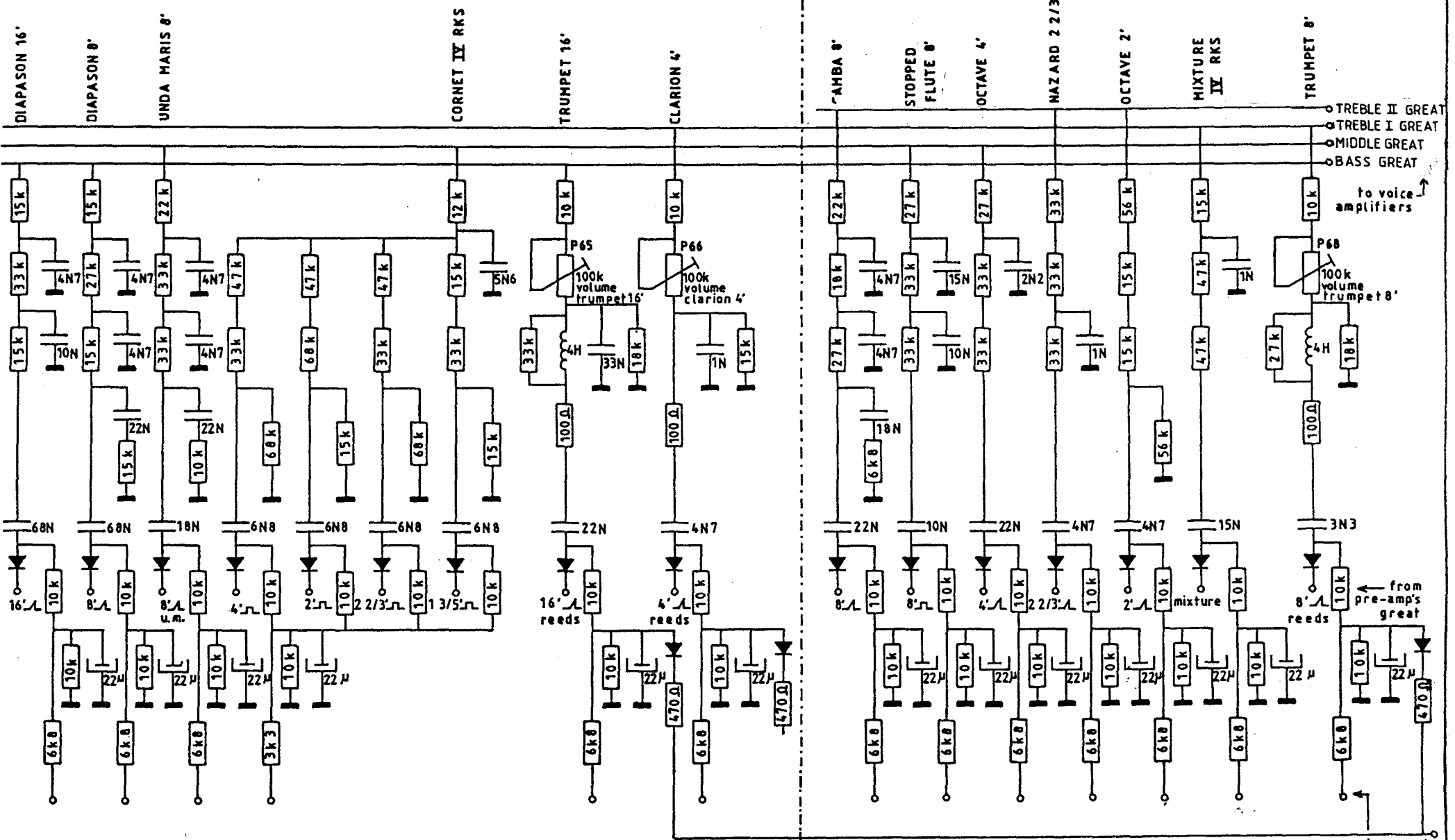
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Drawn	Date	Modified	Date
Verschoor	18-03-86		
DESIGN			
LAB.			
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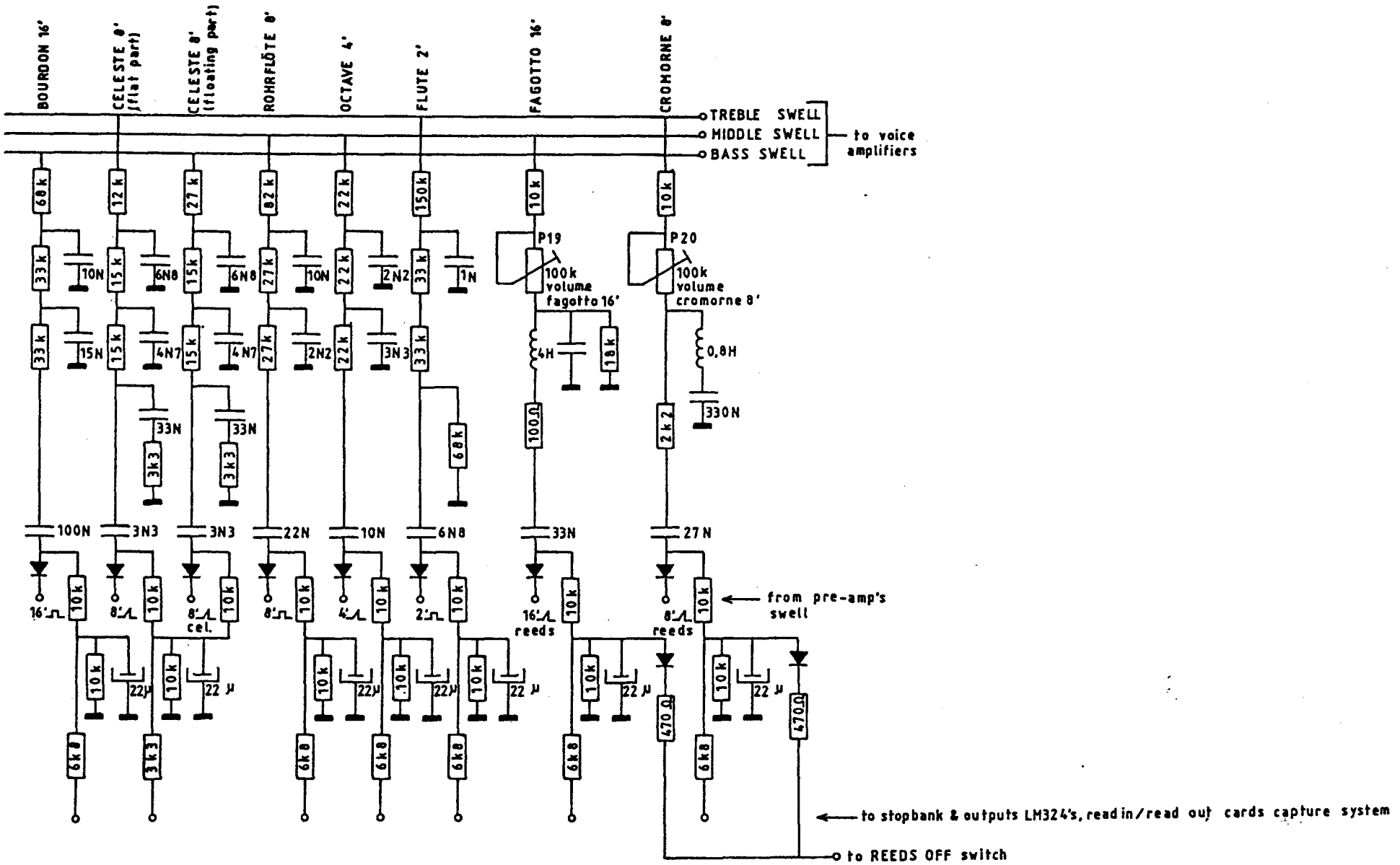
PRE-AMPS; RESET/SQUELCH-CIRCUIT &				JOHANNUS ORGAN OPUS 320
VOICE CARILLON				
Drawn	Date	Modified	Date	
Verschoor	17-03-86			
DESIGN				
LAB.				
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ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND		page
		Tel 08380-37403		28



to stopbank & outputs LM324's, read in/read out cards capture system REEDS OFF switch

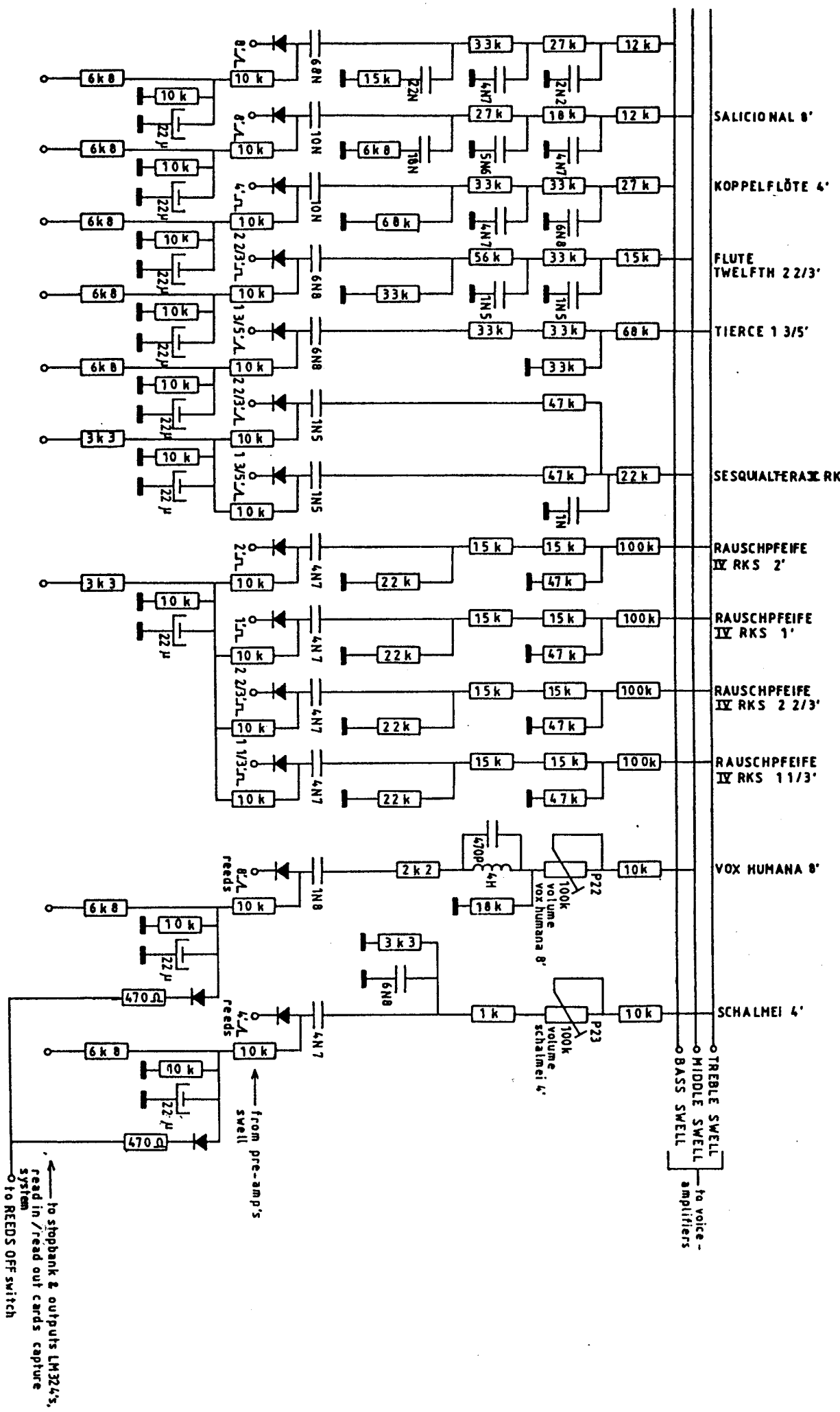
ALL DIODES: 1N4148

VOICES GREAT				JOHANNUS ORGAN OPUS 320	
Drawn	Date	Modified	Date		
Verschoor	01-04-86			JOHANNUS ORGELBOUW b.v. morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403	
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ALL DIODES: 1N4148

VOICES SWELL (part 1)				JOHANNUS ORGAN OPUS 320
Drawn	Date	Modified	Date	
Verschoor	01 - 04 - 86			
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LAB.				
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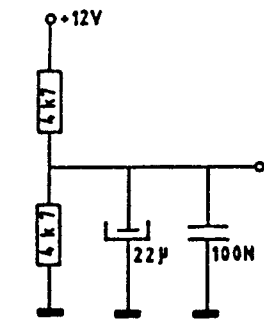
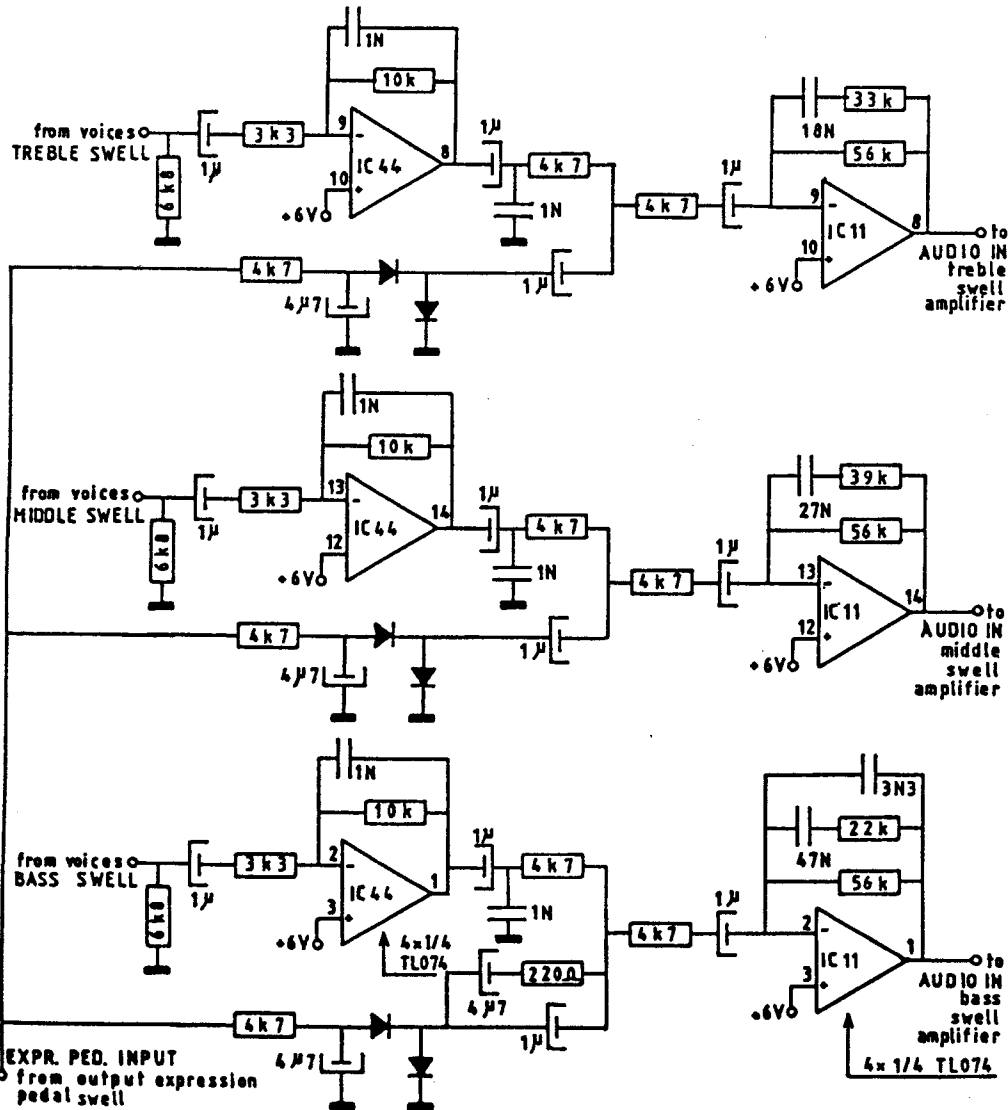
ALL DIODES: 1N4148

VOICES SWELL (part 2)

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OPUS 320

Drawn	Date	Modified	Date
Verschoor 01-04-86			
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	ORGELBOUW b.v.	6716 AH EDE HOLLAND	32
		Tel 08380-37403	

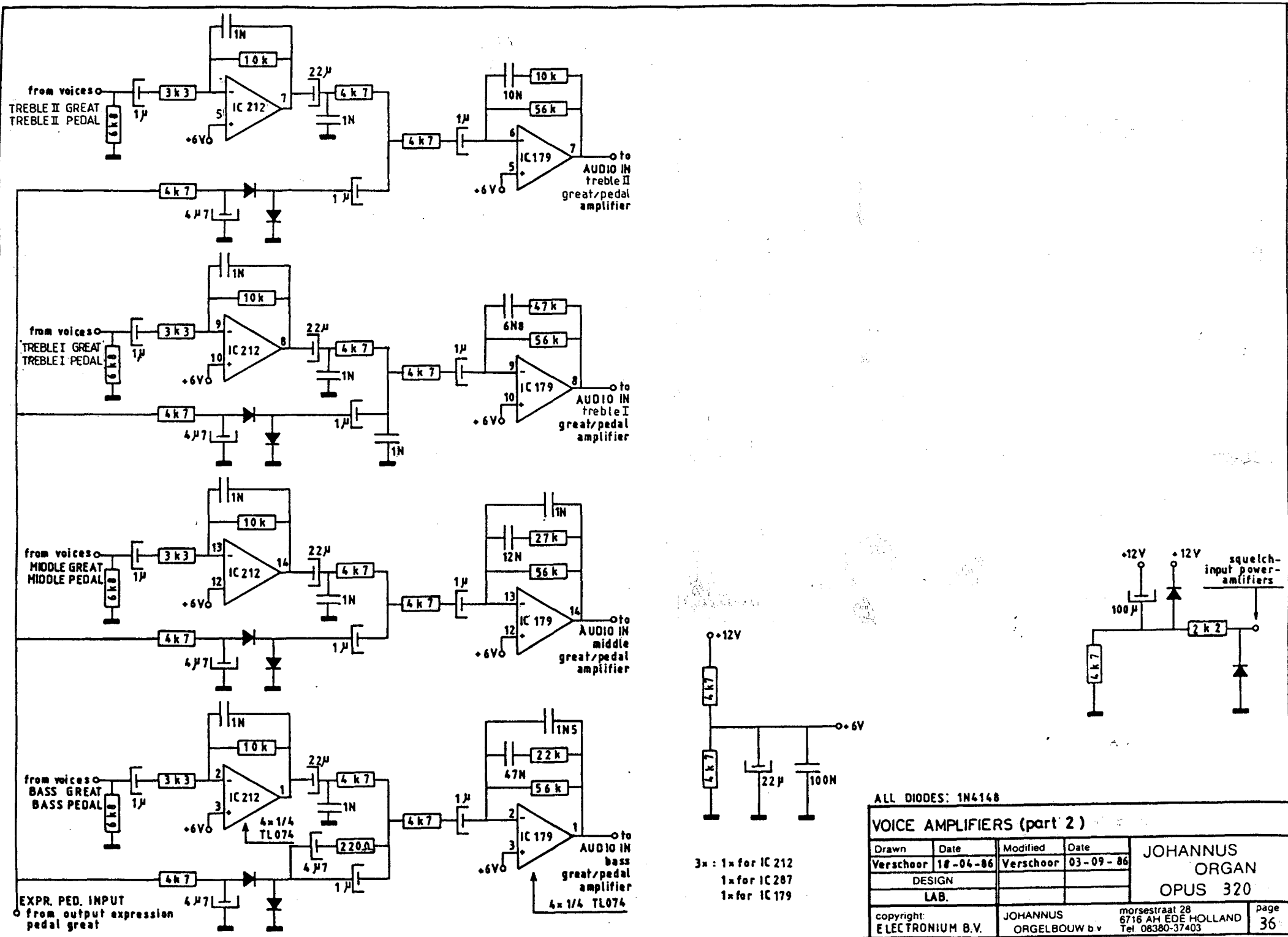
to stopbank & outputs LM324's,
read in / read out cards capture
of to REEDS OFF switch



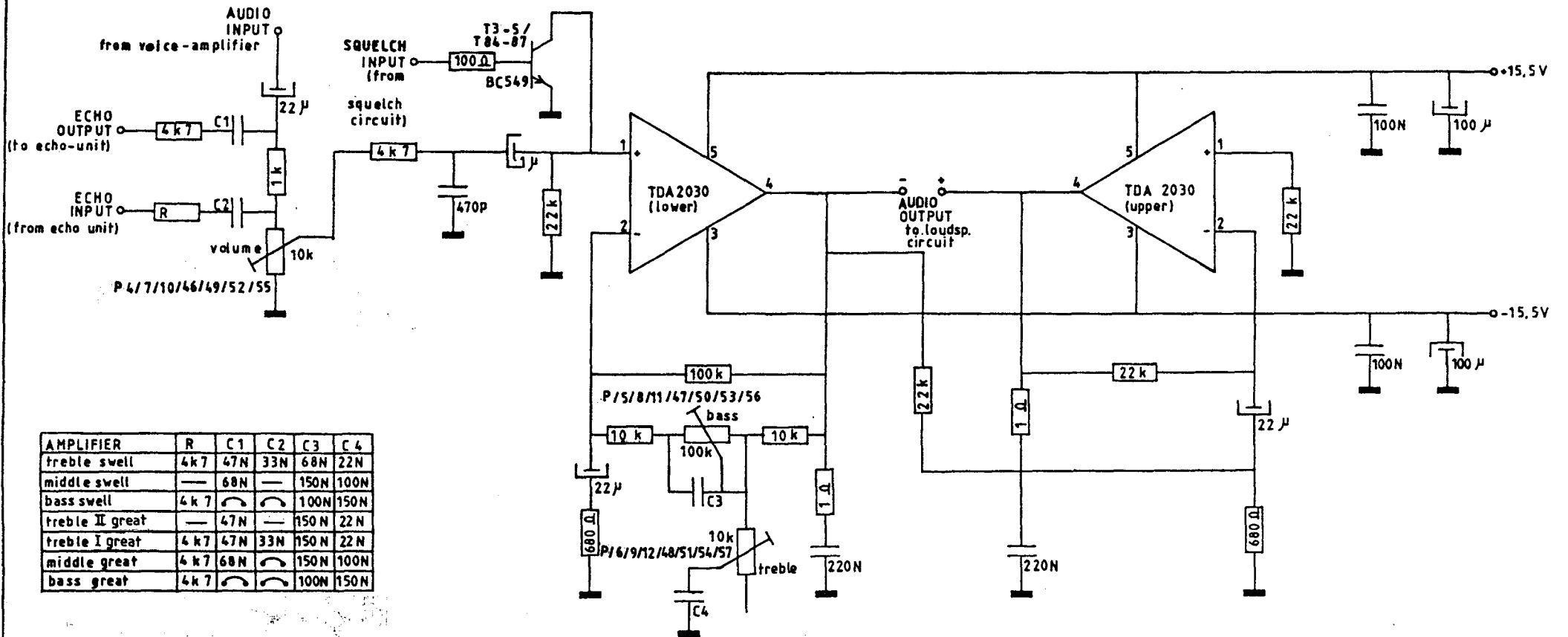
2x : 1x for IC64
1x for IC11

ALL DIODES: 1N4148

VOICE AMPLIFIERS (part 1)				JOHANNUS ORGAN OPUS 320	
Drawn	Date	Modified	Date		
Verschoor	18-06-86	Verschoor	03-09-86	LAB.	
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				page: 35	



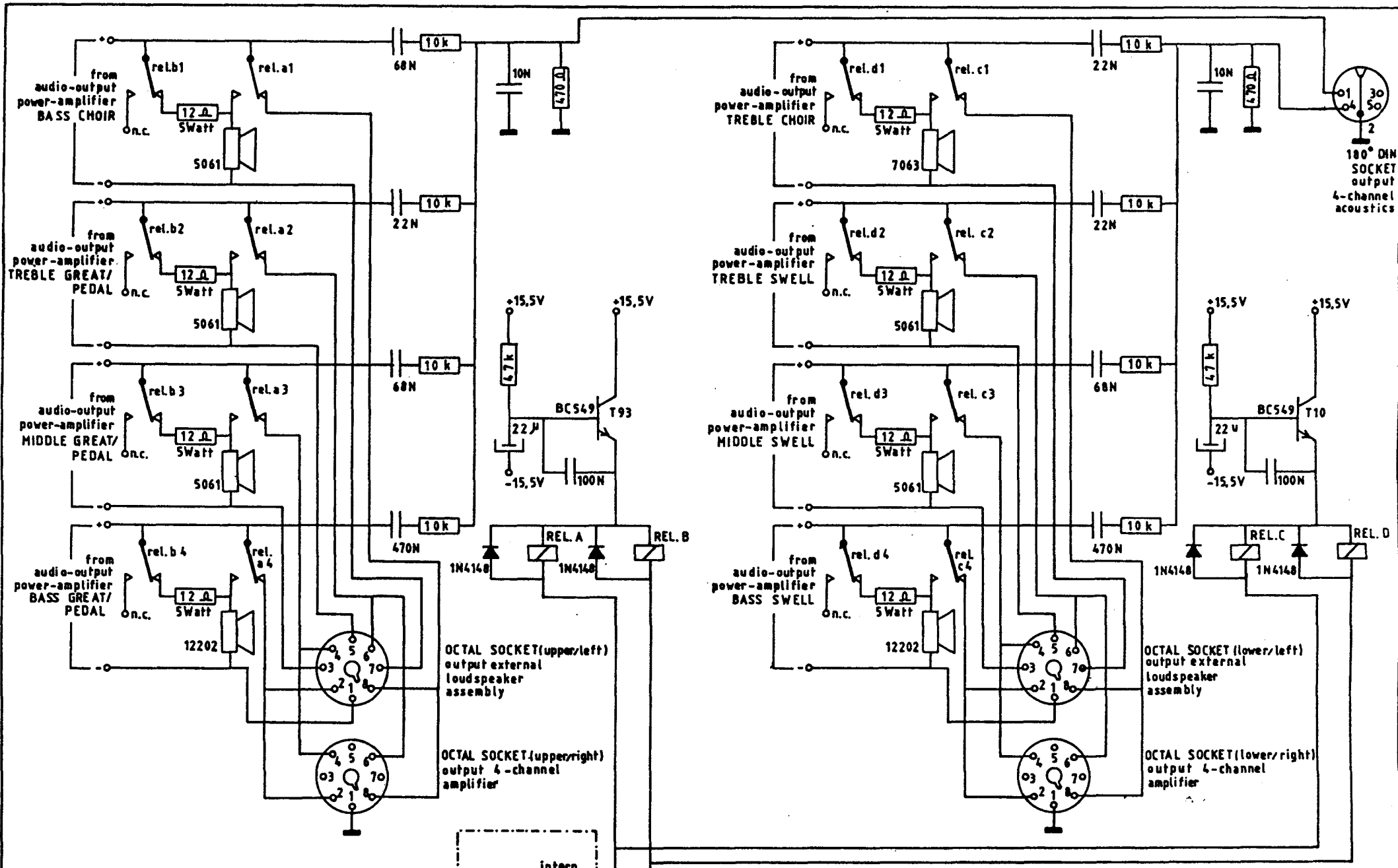
3x : 1x for IC 212
1x for IC 207
1x for IC 179



AMPLIFIER	R	C1	C2	C3	C4
treble swell	4k7	47N	33N	68N	22N
middle swell	—	68N	—	150N	100N
bass swell	4k7	↷	↷	100N	150N
treble II great	—	47N	—	150N	22N
treble I great	4k7	47N	33N	150N	22N
middle great	4k7	68N	↷	150N	100N
bass great	4k7	↷	↷	100N	150N

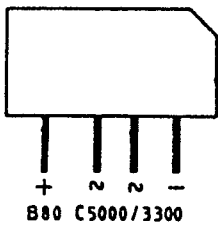
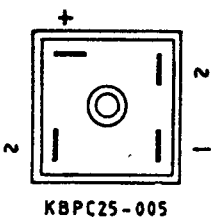
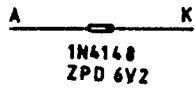
POWER - AMPLIFIER (7 x)

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 320
Verschoer	19-02-86			
DESIGN				
LAB				
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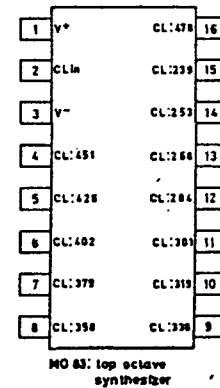
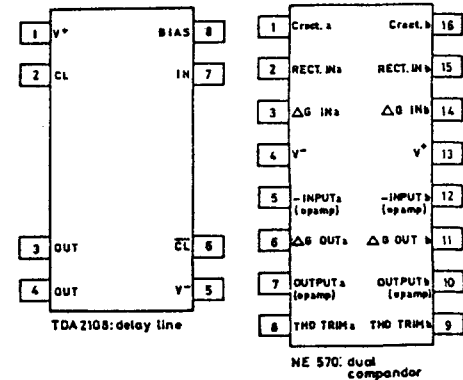
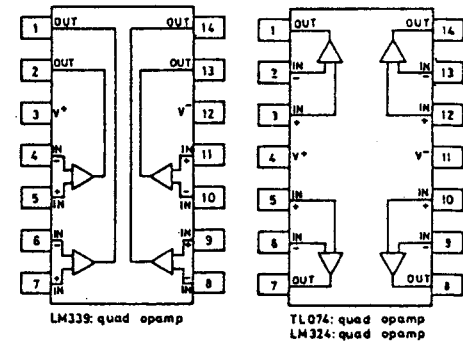
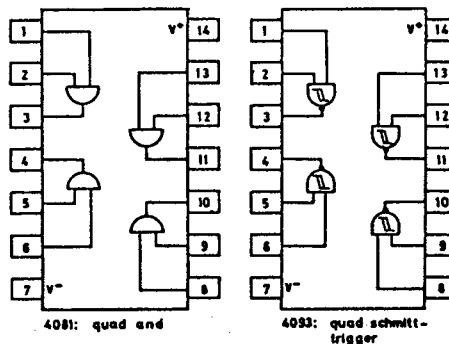
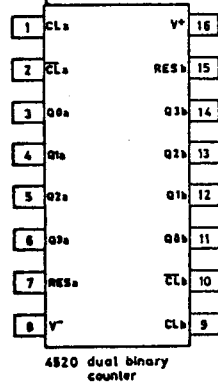
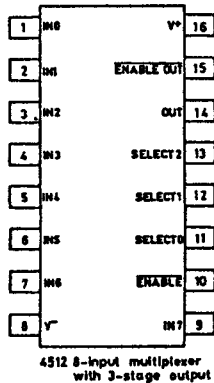
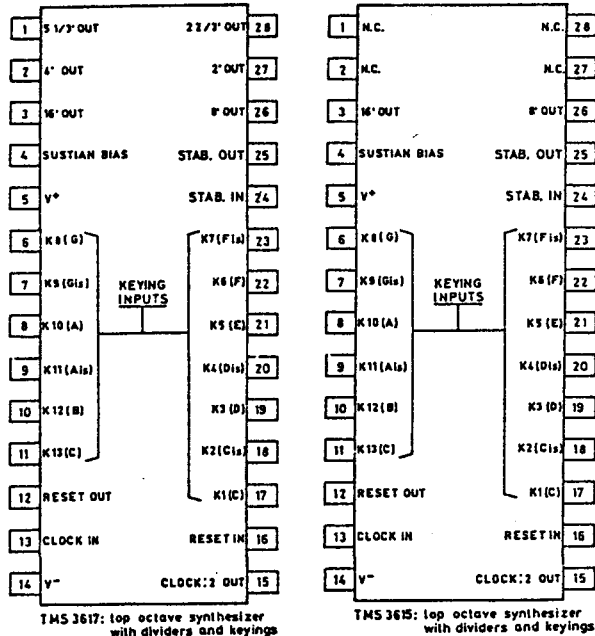
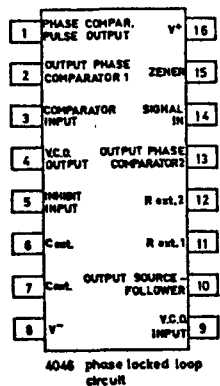
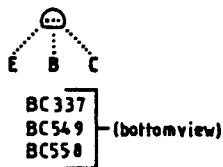
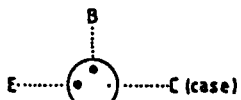


LOUDSPEAKER - CIRCUIT			
Drawn	Date	Modified	Date
Verschoor	15-05-86		
DESIGN			
LAB.			
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1=non-inverting input
2=inverting input
3=V⁻
4=output
5=V⁺ TDA 2030



GENERAL INFORMATION SEMI-CONDUCTORS			
Drawn	Date	Modified	Date
Verscheer	07-05-86		
DESIGN			
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