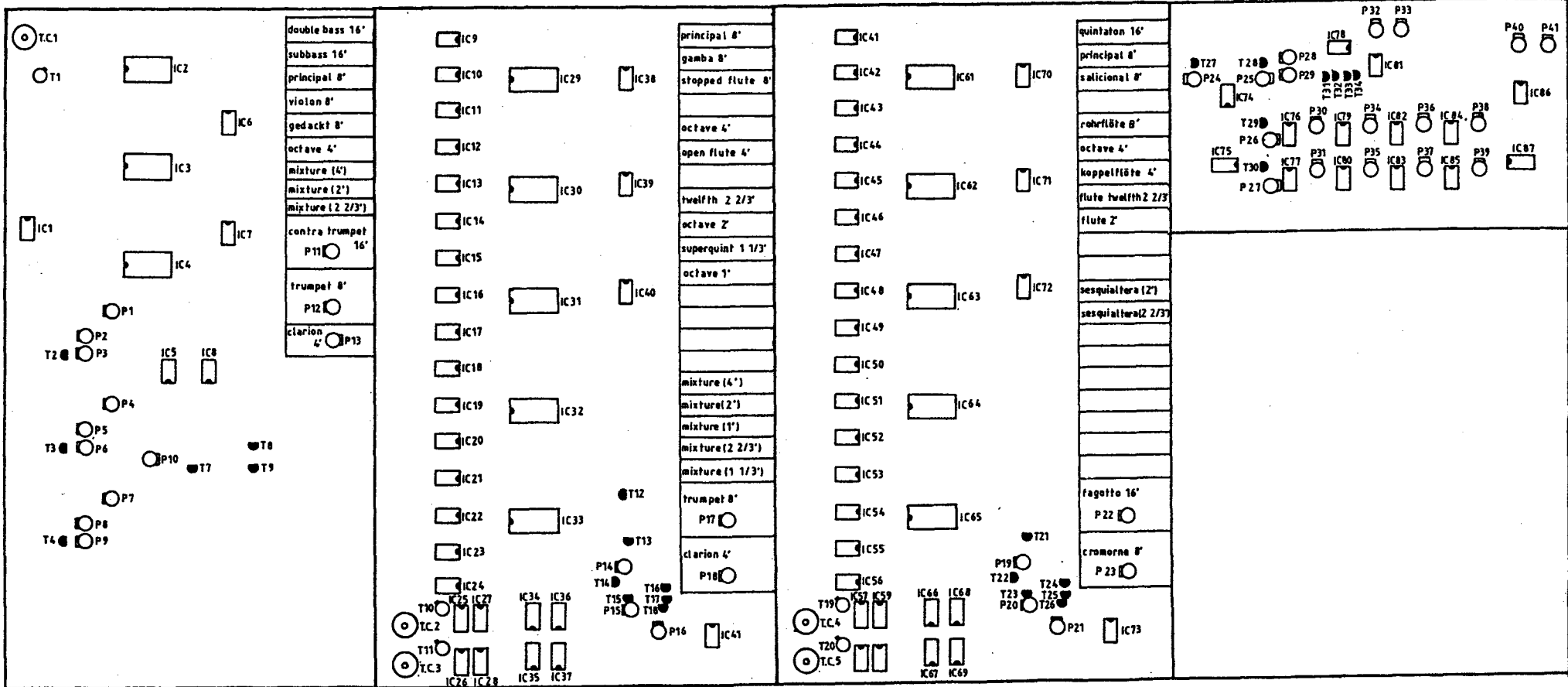


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=====
S C H E M A T I C   D I A G R A M S
J O H A N N U S
O P U S   2 2 5
alterations reserved
```

## C O N T E N T S

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2. POWER SUPPLY
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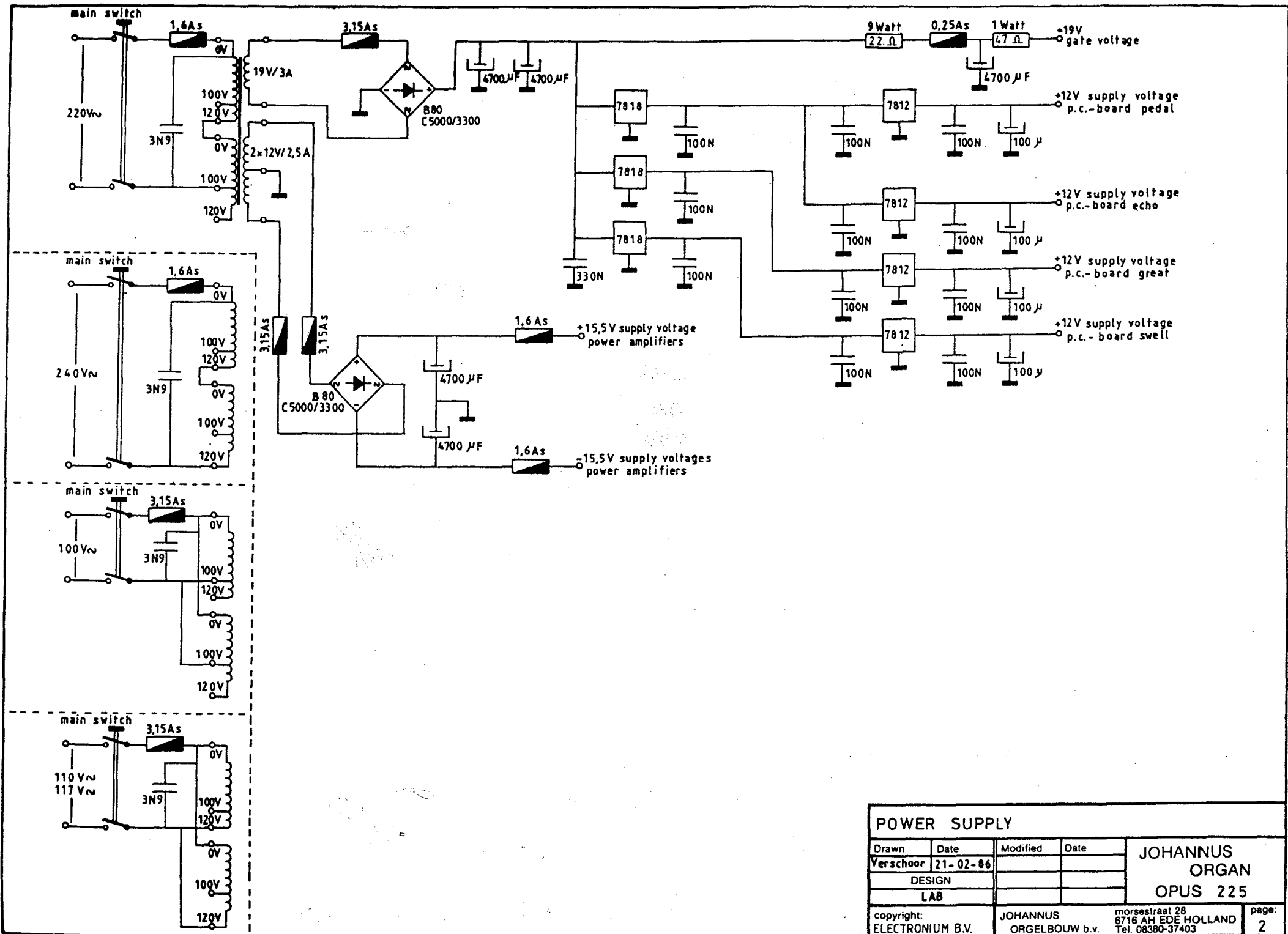
- P1: volume treble amplifier
- P2: bass adjustment treble amplifier
- P3: treble adjustment treble amplifier
- P4: volume middle amplifier
- P5: bass adjustment middle amplifier
- P6: treble adjustment middle amplifier
- P7: volume bass amplifier
- P8: bass adjustment bass amplifier
- P9: treble adjustment bass amplifier
- P10: linearity expression pedal
- P11: volume contra trumpet 16' pedal
- P12: volume trumpet 8' pedal
- P13: volume clarion 4' pedal
- P14: tremulant speed great
- P15: hick depth great
- P16: tremulant depth great
- P17: volume trumpet 8' great
- P18: volume clarion 4' great
- P19: tremulant speed swell
- P20: hick depth swell
- P21: tremulant depth swell
- P22: volume fagotto 16' swell
- P23: volume cromorne 8' swell

- P24: amplitude output channel A echo unit
  - P25: amplitude output channel B echo unit
  - P26: clockripple 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 76
  - P31: DC-offset IC 77
  - P32: clockfrequence
  - P33: amplitude chorus
  - P34: DC-offset IC 79
  - P35: DC-offset IC 80
  - P36: DC-offset IC 82
  - P37: DC-offset IC 83
  - P38: DC-offset IC 84
  - P39: DC-offset IC 85
  - P40: amplitude input channel B echo unit
  - P41: amplitude input channel A echo unit
- T.C.1: tuning pedal
  - T.C.2: tuning 2nd; 4th & 5th octave great
  - T.C.3: tuning 1st & 3rd octave great
  - T.C.4: tuning 2nd & 4th octave swell
  - T.C.5: tuning 1st; 3rd & 5th octave swell

- IC 1; 36; 37; 68; 69.....4520
  - IC 2-4; 29-33; 61-65.....TMS 3617
  - IC 5-8; 38-41; 70-74; 86.....TL 074
  - IC 9-24; 41-56.....LM 339
  - IC 25; 26; 57; 58.....MO 83
  - IC 27; 28; 59; 60.....4512
  - IC 34; 35; 66; 67.....4046
  - IC 75; 87.....NE 570
  - IC 76; 77; 79; 80; 82-85.....TDA 2108
  - IC 78.....4093
  - IC 81.....LM 324
- T 1; 10; 11; 19; 20.....BC 141
  - T 2-7; 12-18; 21-30; 32; 33.....BC 549
  - T 8; 9.....BC 337
  - T 31; 34.....BC 558

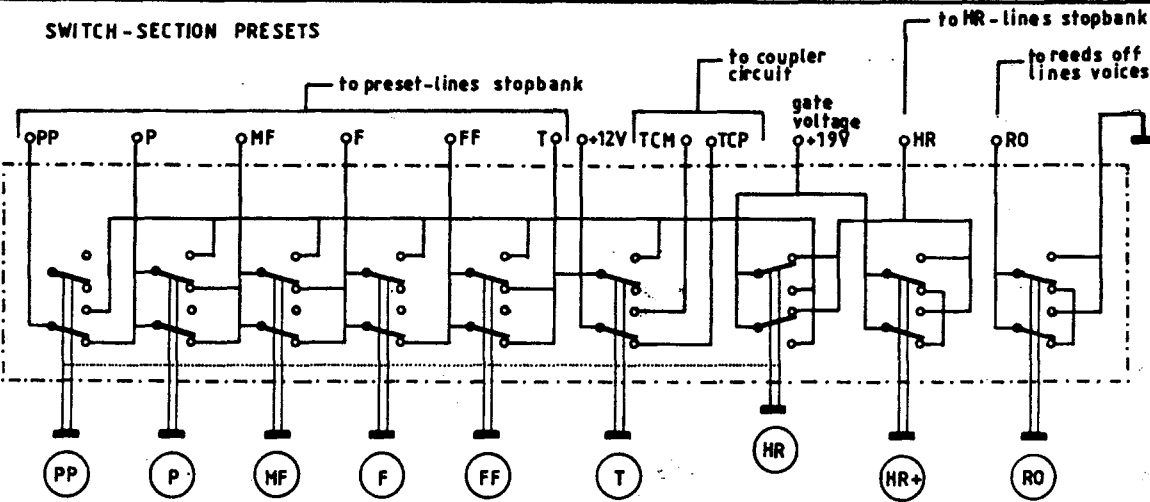
T5 & T6 ARE DISPOSED

POSITION DIAGRAM				JOHANNUS ORGAN OPUS 225
Drawn	Date	Modified	Date	
Verschuur	07-04-06			
DESIGN				
LAB.				
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				page: 1

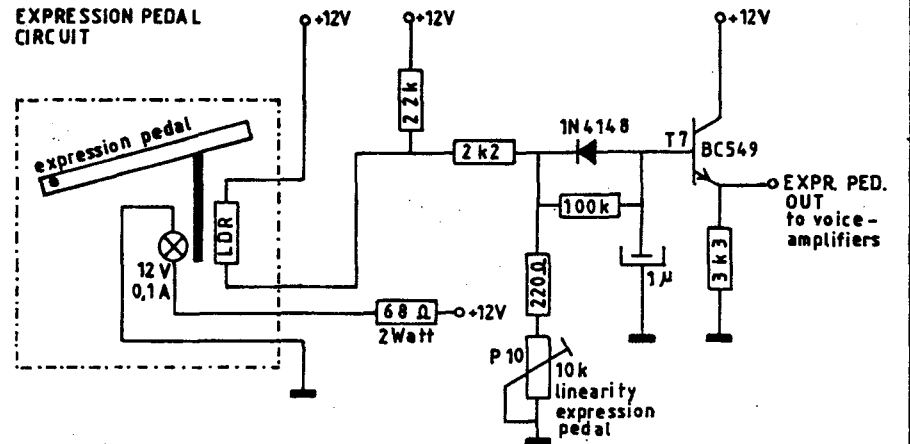


POWER SUPPLY				JOHANNUS ORGAN OPUS 225
Drawn	Date	Modified	Date	
Verschoor	21-02-86			
DESIGN				
LAB				
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SWITCH-SECTION PRESETS

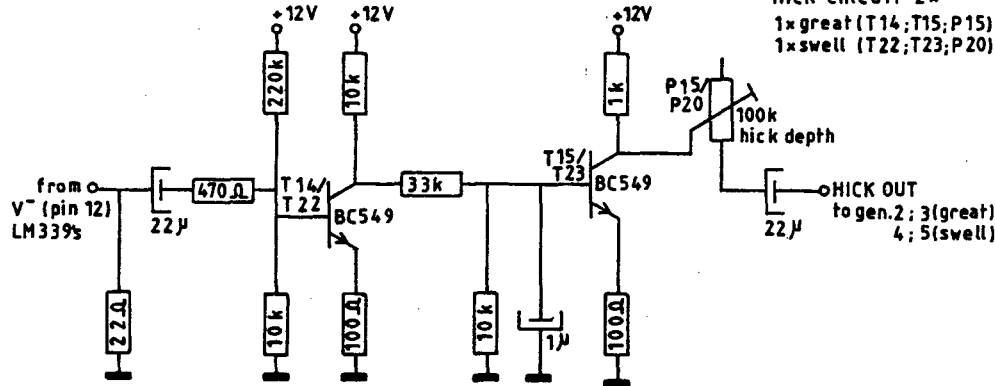


EXPRESSION PEDAL CIRCUIT

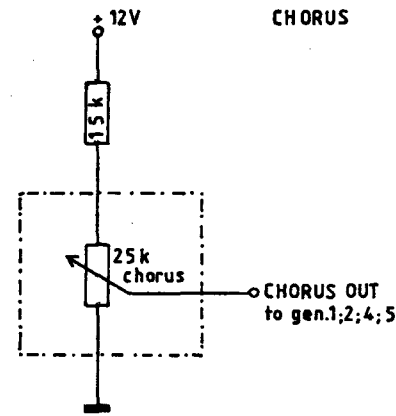


HICK CIRCUIT 2x

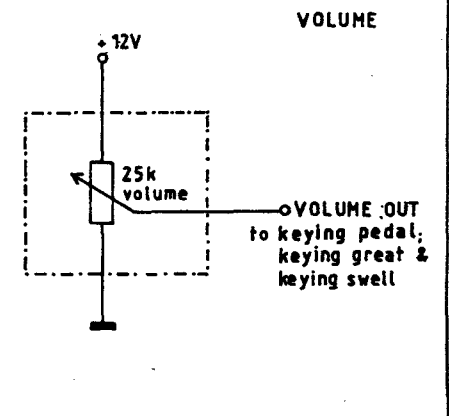
1x great (T14; T15; P15)  
1x swell (T22; T23; P20)



CHORUS

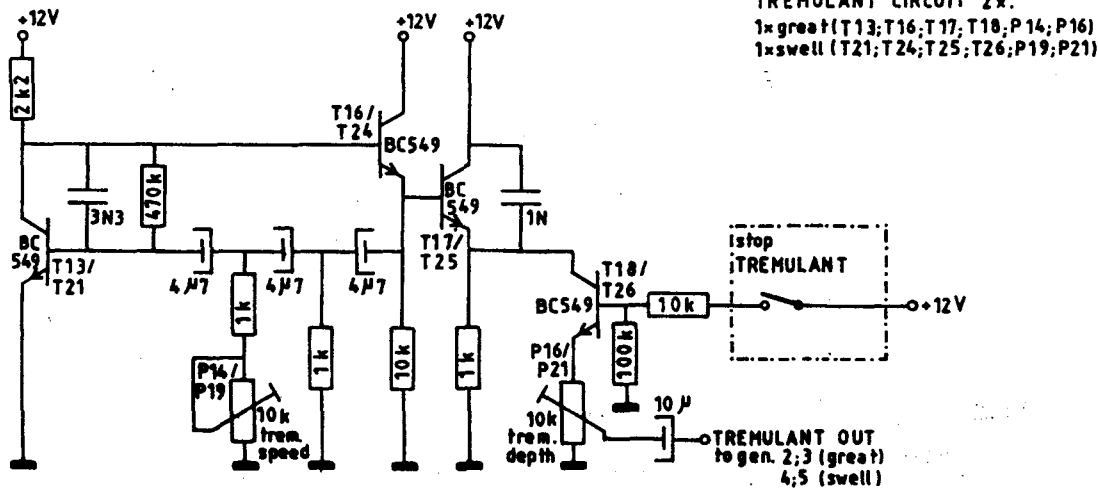


VOLUME



TREMULANT CIRCUIT 2x:

1x great (T13; T16; T17; T18; P14; P16)  
1x swell (T21; T24; T25; T26; P19; P21)

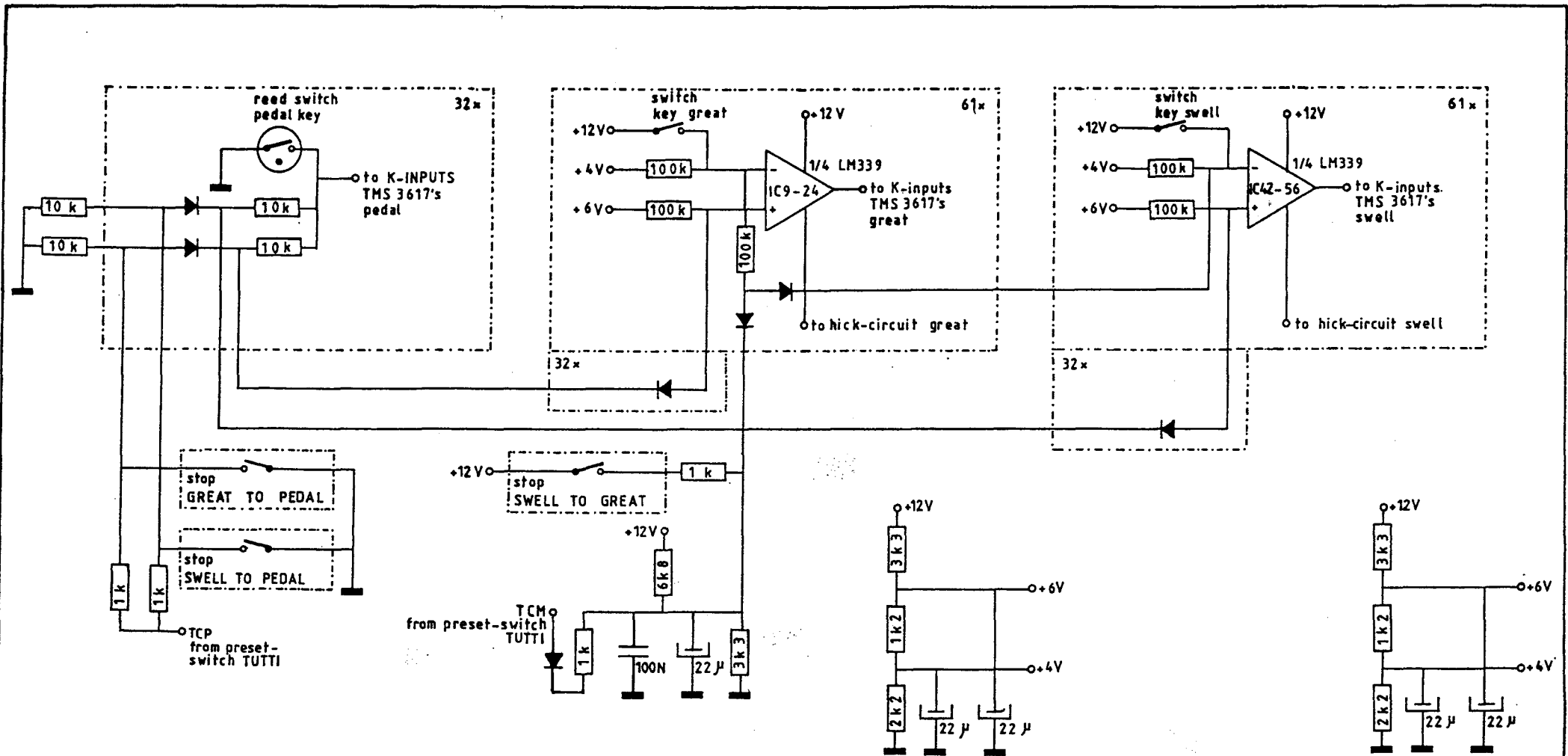


SWITCH - SECTION

PRESETS ; HICK CIRCUIT ; TREMULANT CIRCUIT ;

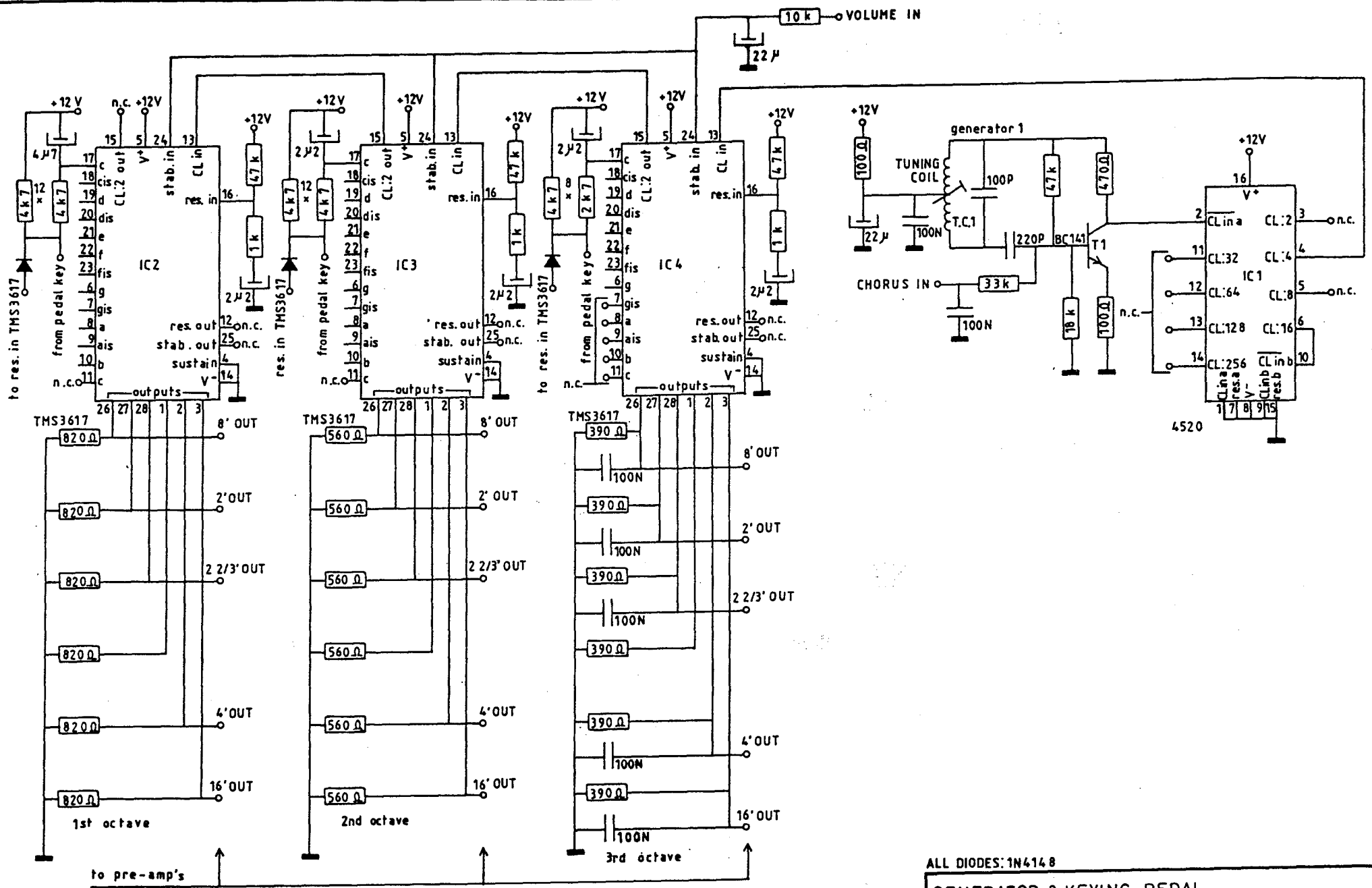
EXPRESSION PEDAL CIRCUIT ; CHORUS & VOLUME

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 225
Verschoor	03-04-86			
DESIGN				
LAB.				
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COUPLER CIRCUIT				JOHANNUS ORGAN OPUS 225
Drawn	Date	Modified	Date	
Verschoer	19-02-86			
DESIGN				
LAB.				
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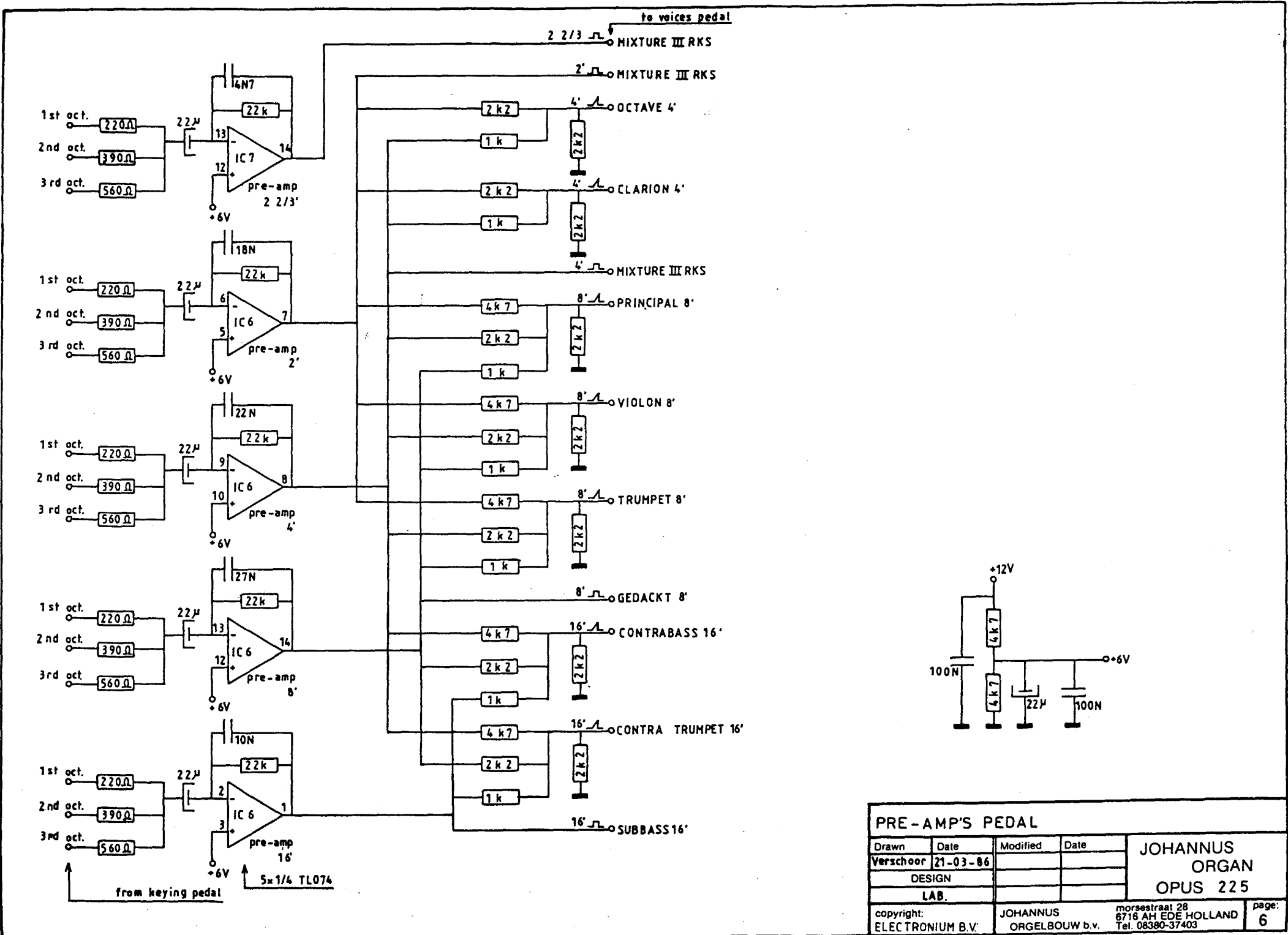
ALL DIODES: 1N4148

**GENERATOR & KEYING PEDAL**

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DESIGN			
LAB.			

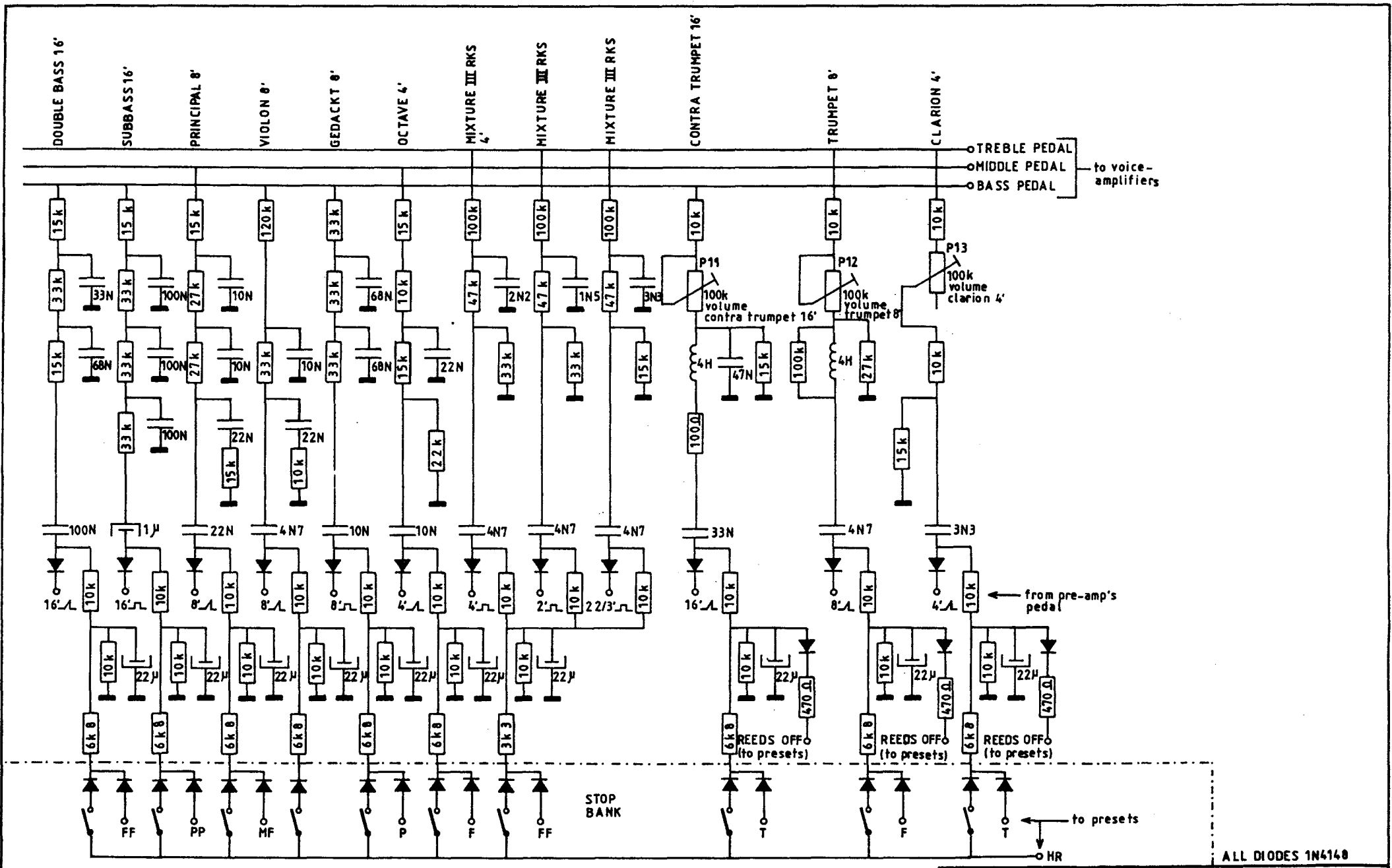
JOHANNUS ORGAN  
OPUS 225

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PRE-AMP'S PEDAL				JOHANNUS ORGAN OPUS 225	
Drawn	Date	Modified	Date		
Verschoor	21-03-86				
DESIGN					
LAB.					
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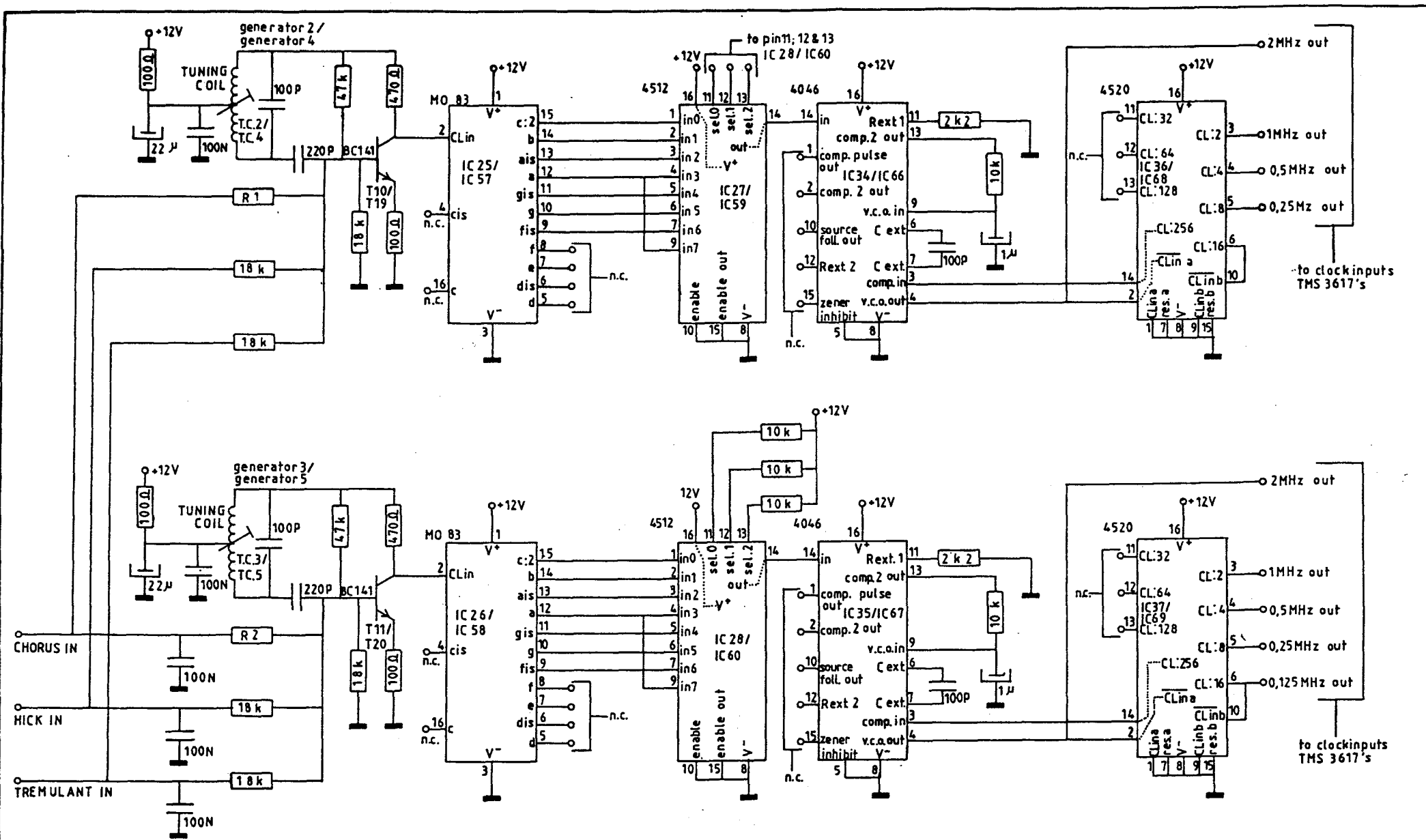




ALL DIODES 1N4148

**VOICES PEDAL**

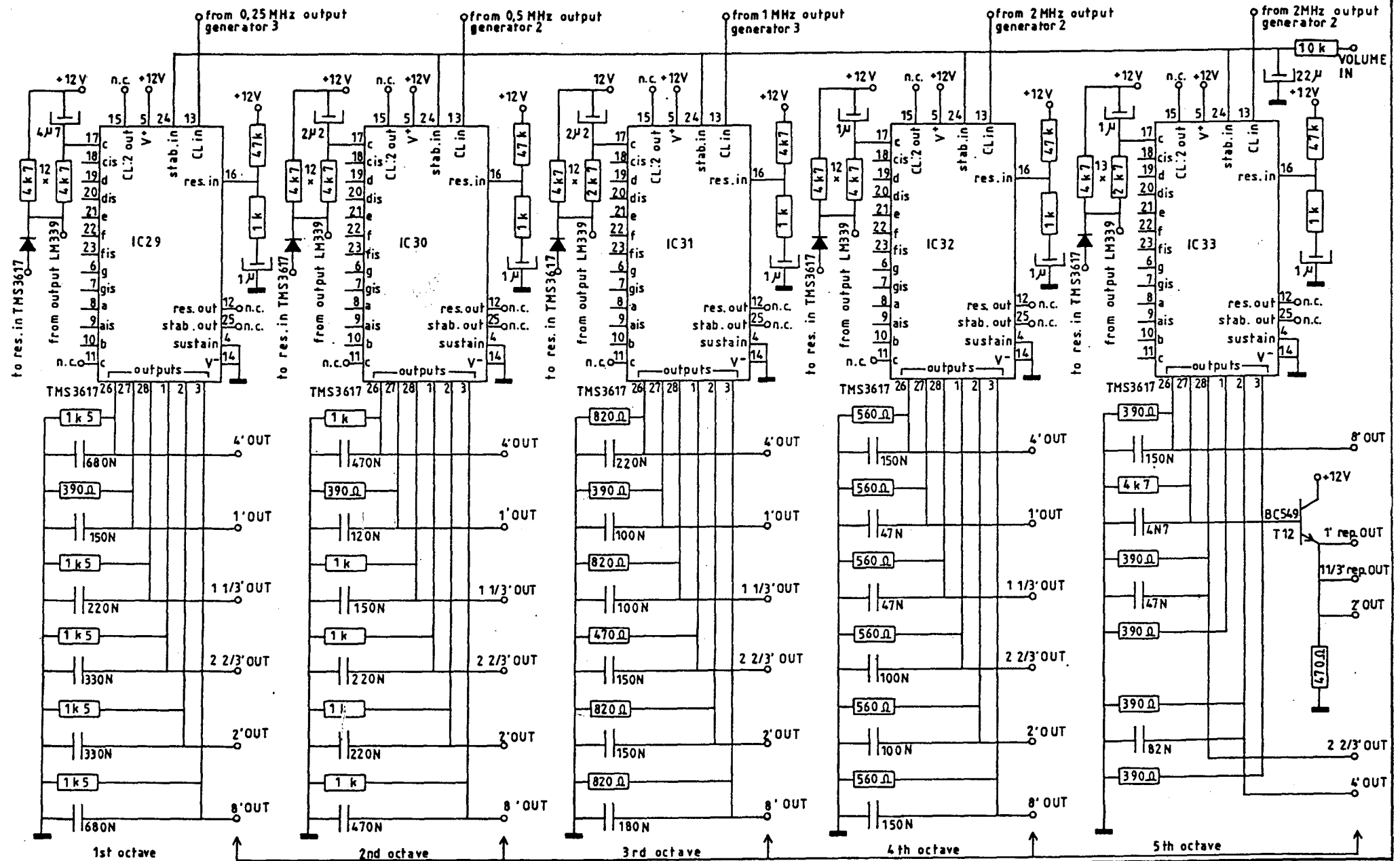
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DESIGN				
LAB.				
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generator 2 : R1= 100k  
 generator 4 : R1= 33k  
 generator 3 : R2= —  
 generator 5 : R2= 56k

GENERATORS MANUALS (1xGREAT & 1xSWELL)

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 225
Verschoor	25 - 02 - 86			
DESIGN				
LAB				
copyright: ELECTRONIUM BV.	JOHANNUS ORGELBOUW b.v.	morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403	page: 8	

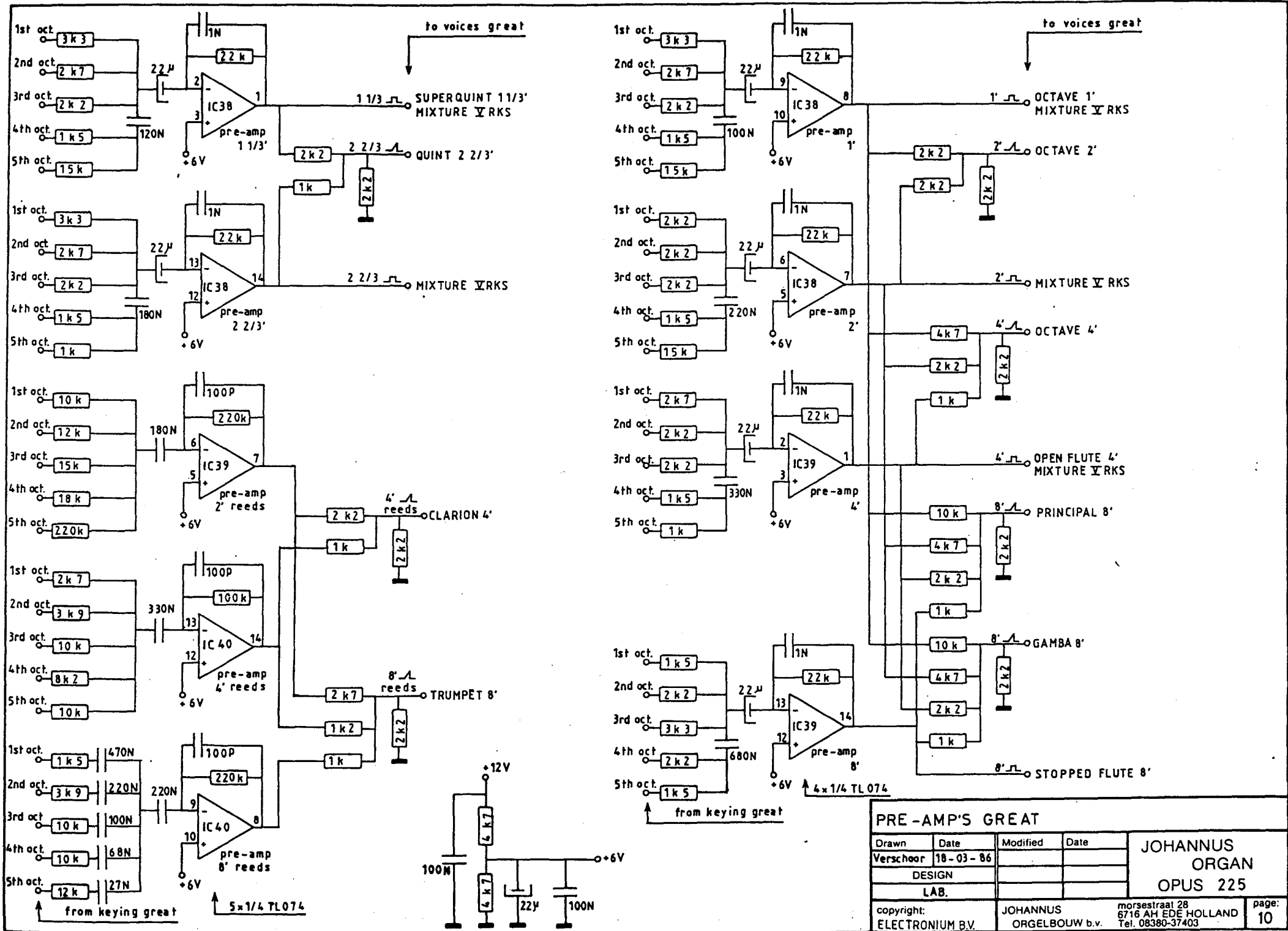


ALL DIODES: 1N4148

KEYING GREAT

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 225
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DESIGN				
LAB.				
copyright:	JOHANNUS ORGELBOUW b.v.		morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403	page: 9

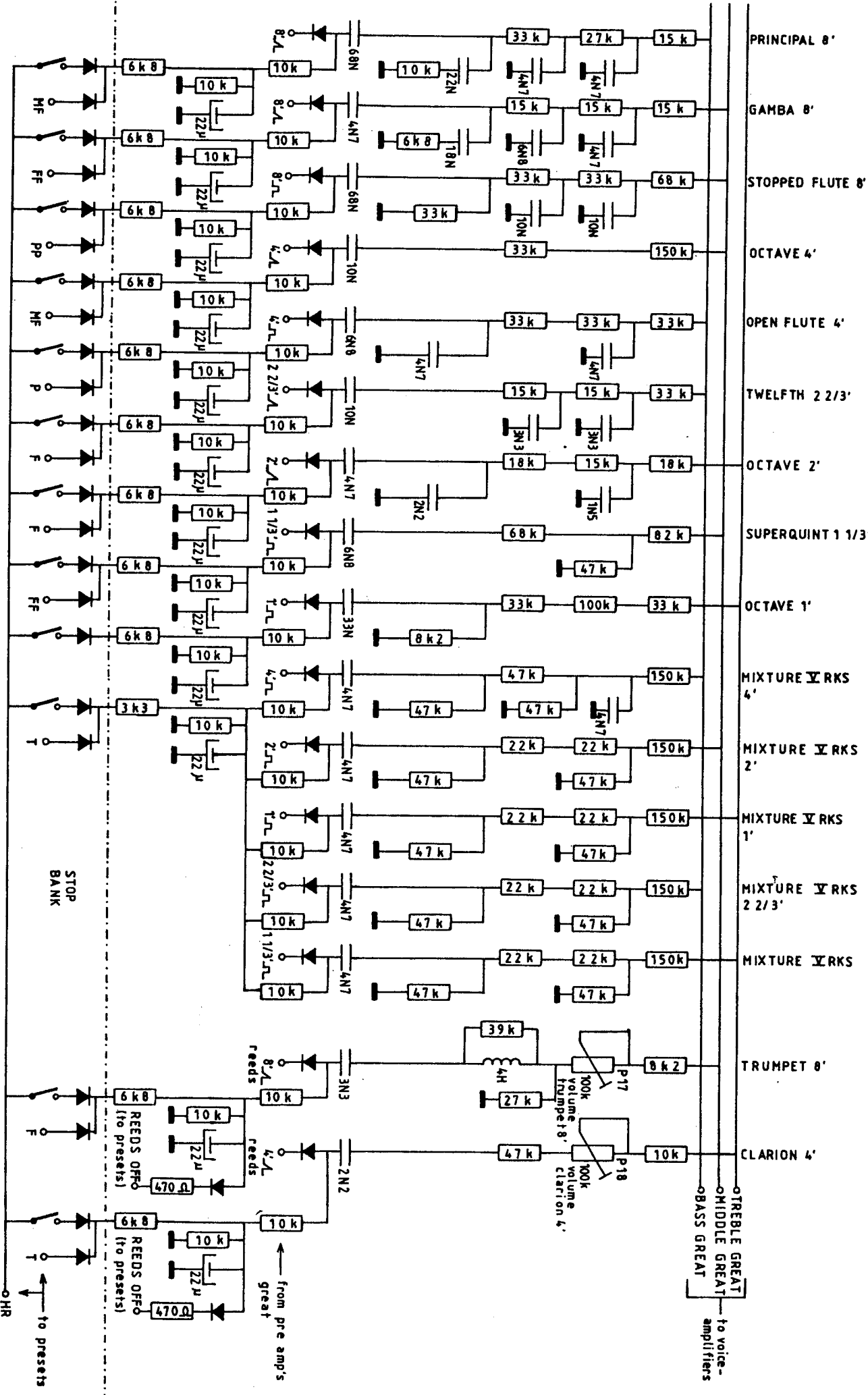
to pre-amp's



PRE-AMP'S GREAT

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DESIGN			
LAB.			

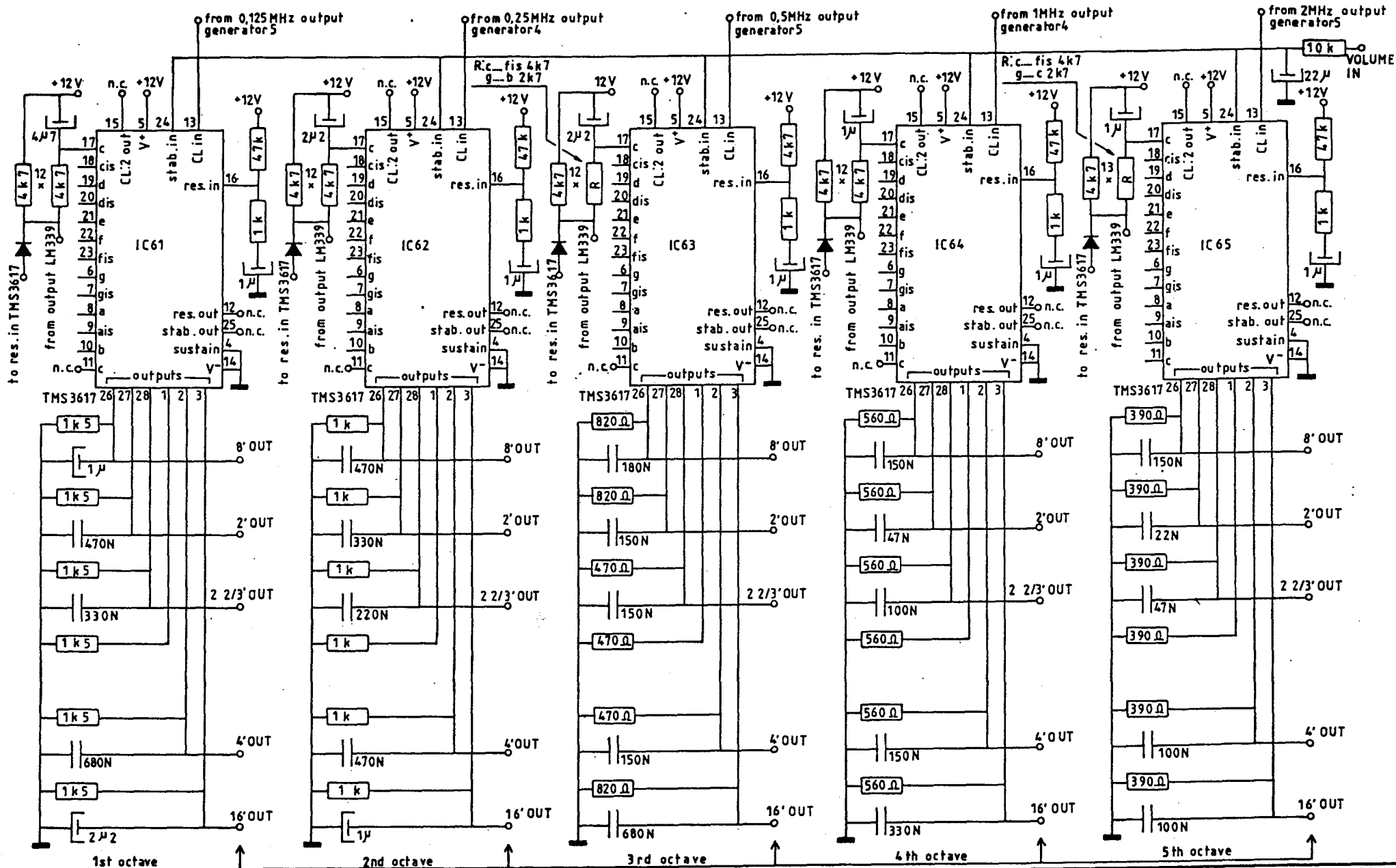
JOHANNUS  
ORGAN  
OPUS 225



ALL DIODES: 1N4148

VOICES GREAT

Drawn	Date	Modified	Date
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DESIGN			
LAB.			
JOHANNUS ORGANUS OPUS 225			
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no. 128	7/6, AH, EDE, HOLLAND		
tel. 08580-31403			
page:	11		

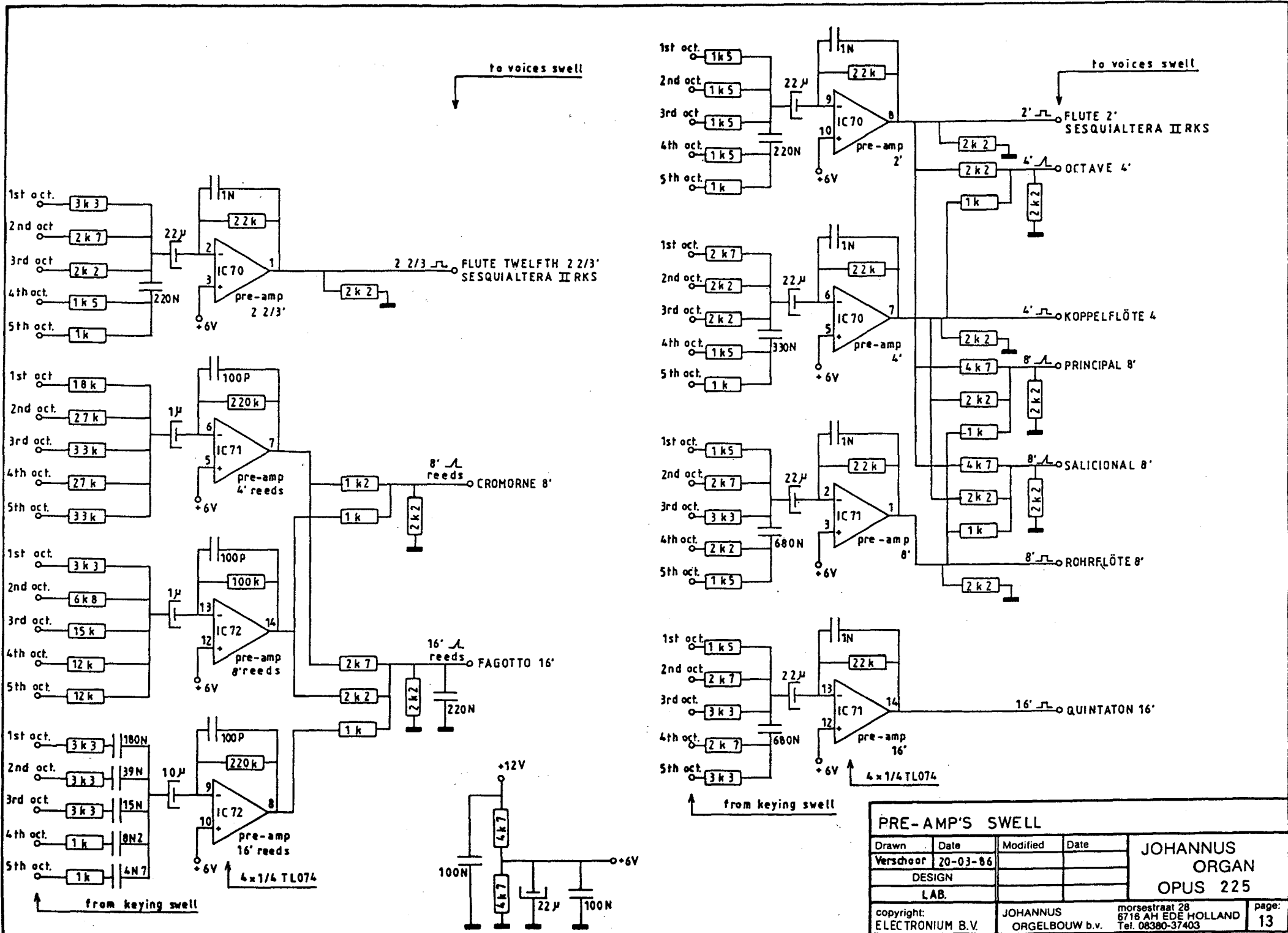


ALL DIODES: 1N4148

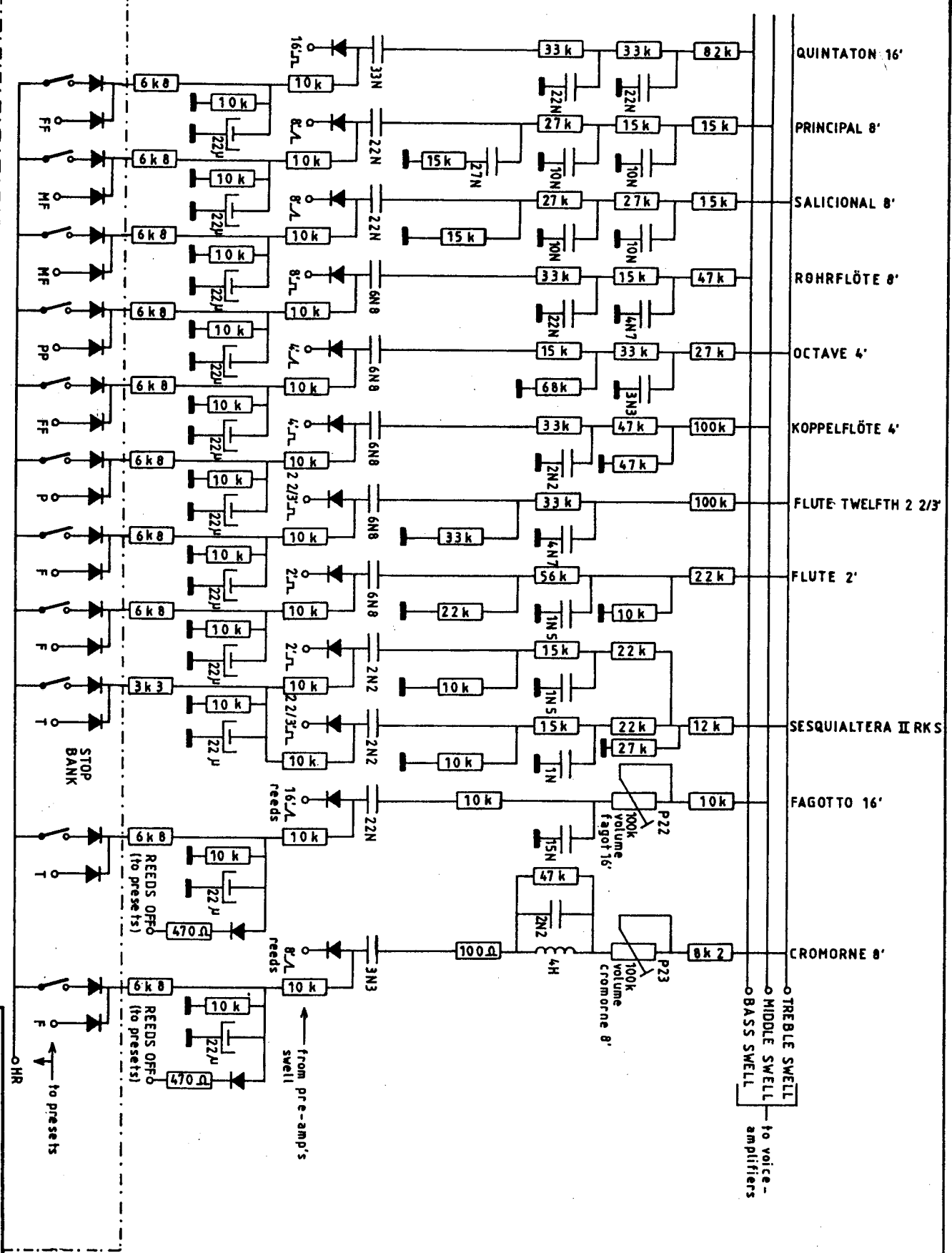
KEYING SWELL

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DESIGN				
LAB.				
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to pre-amp's



PRE-AMP'S SWELL				JOHANNUS ORGAN OPUS 225		
Drawn	Date	Modified	Date			JOHANNUS ORGELBOUW b.v. morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403
Verschoor	20-03-86			page:		
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LAB.						
copyright: ELECTRONIUM B.V.		JOHANNUS ORGELBOUW b.v.				

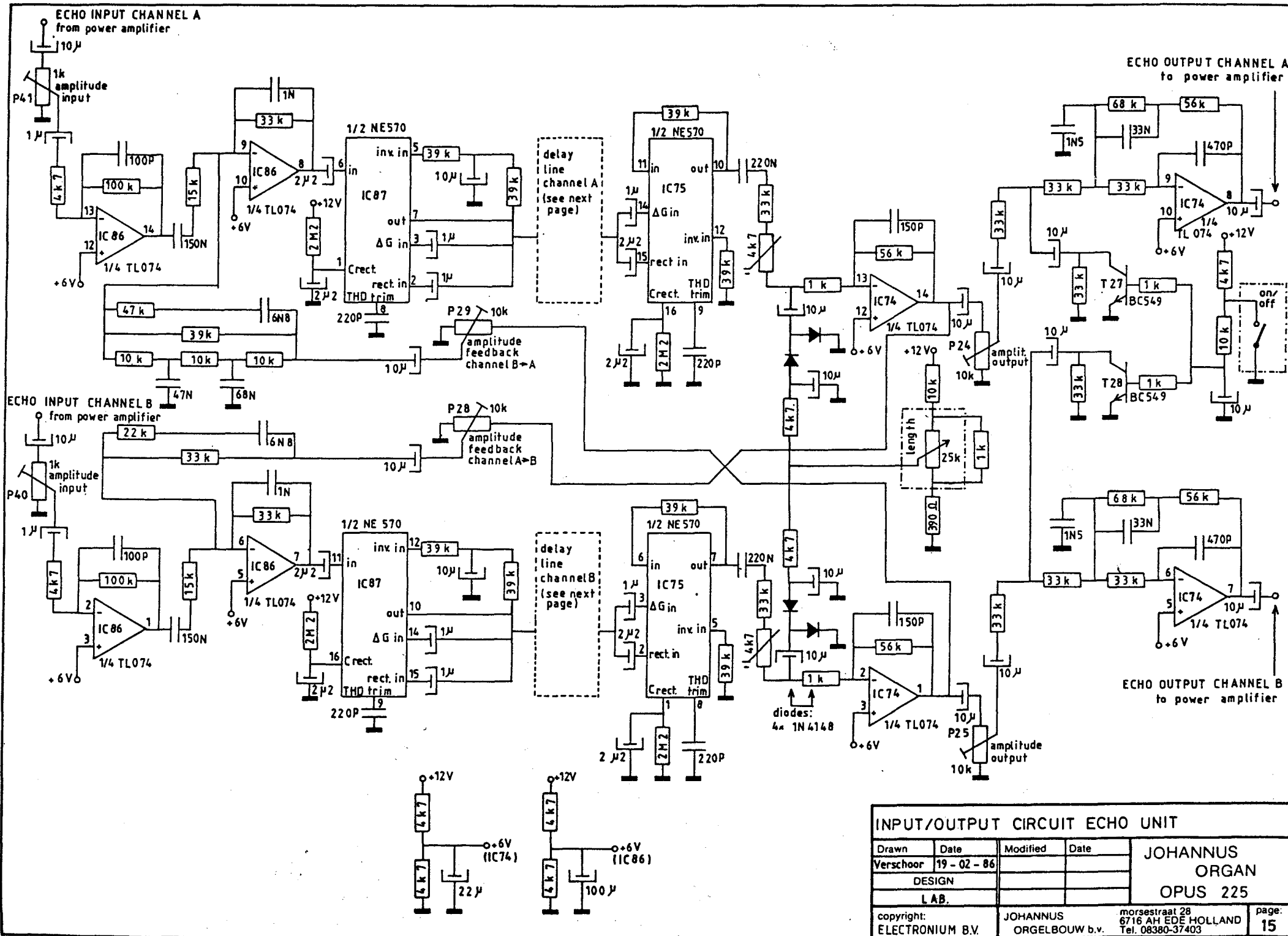


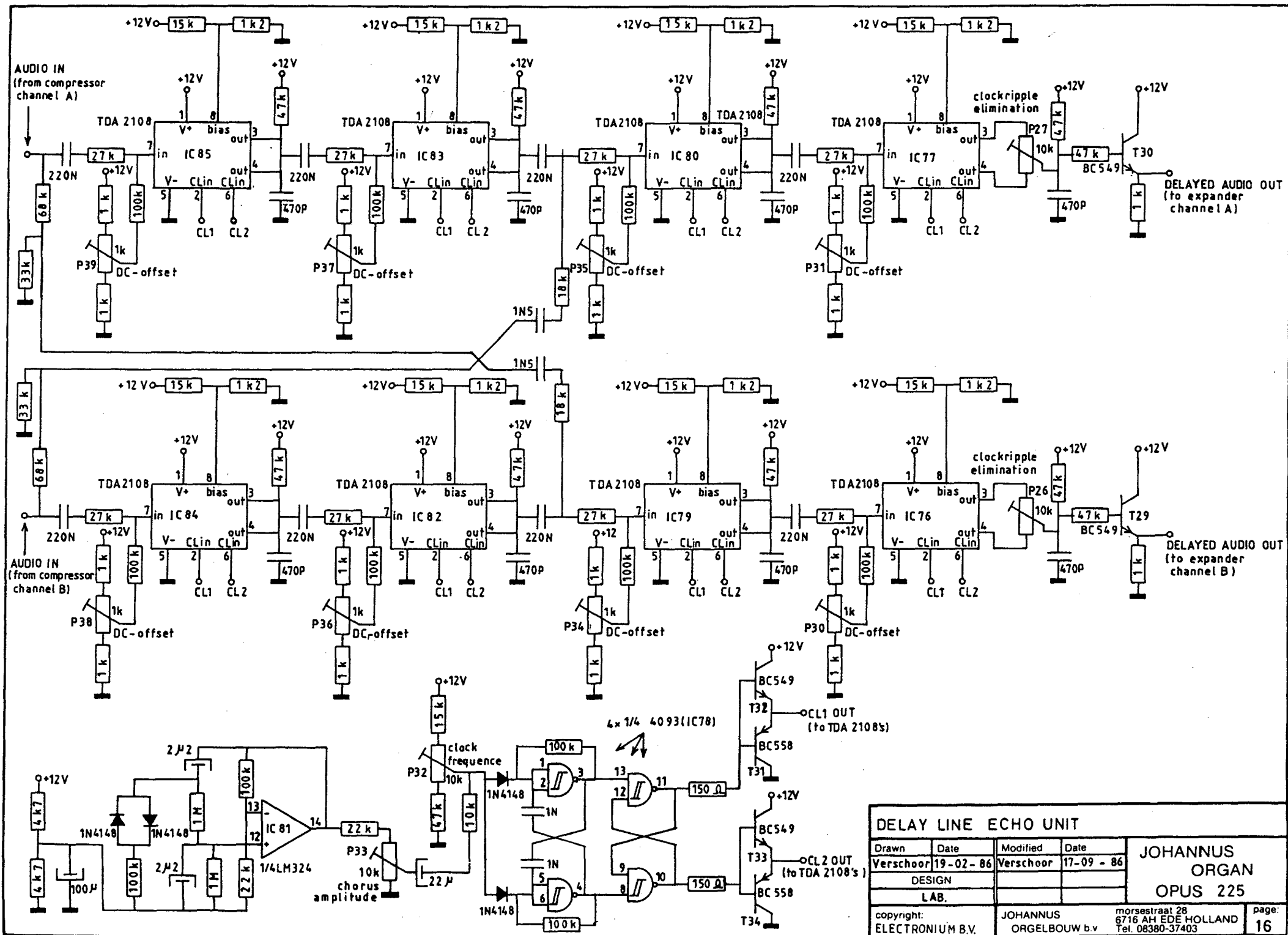
**VOICES SWELL**

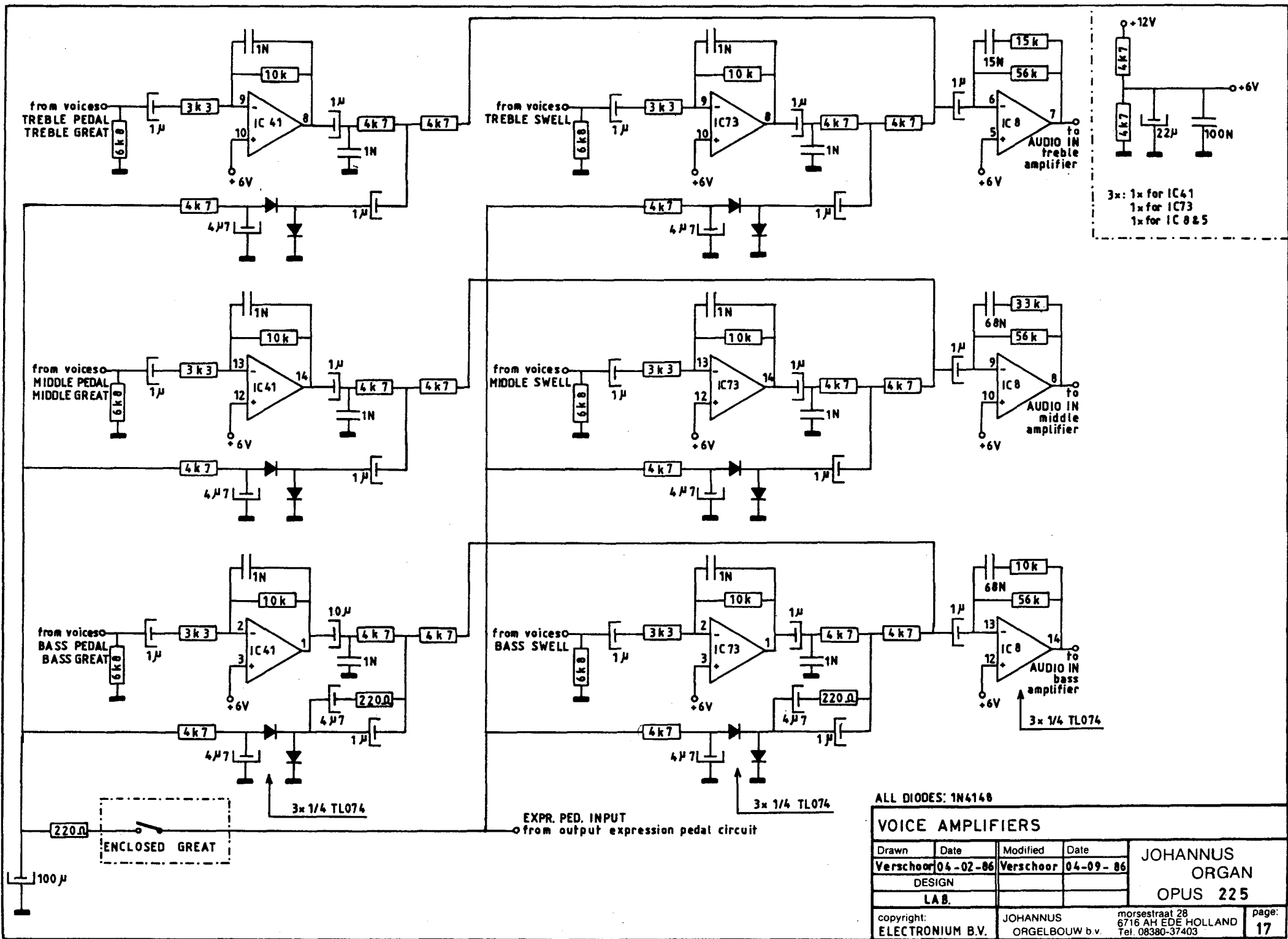
ALL DIODES: 1N4148

Drawn	Date	Modified	Date
Versthoor	24-03-86		
DESIGN			
LAB			
JOHANNUS ORGAN OPUS 225			
copyright: ELECTRONIUM B.V.	JOHANNUS ORGELBOUW b.v.		Morsstraat 28 6716 AH EDE HOLLAND Tel. 06380-57403
			page: 14









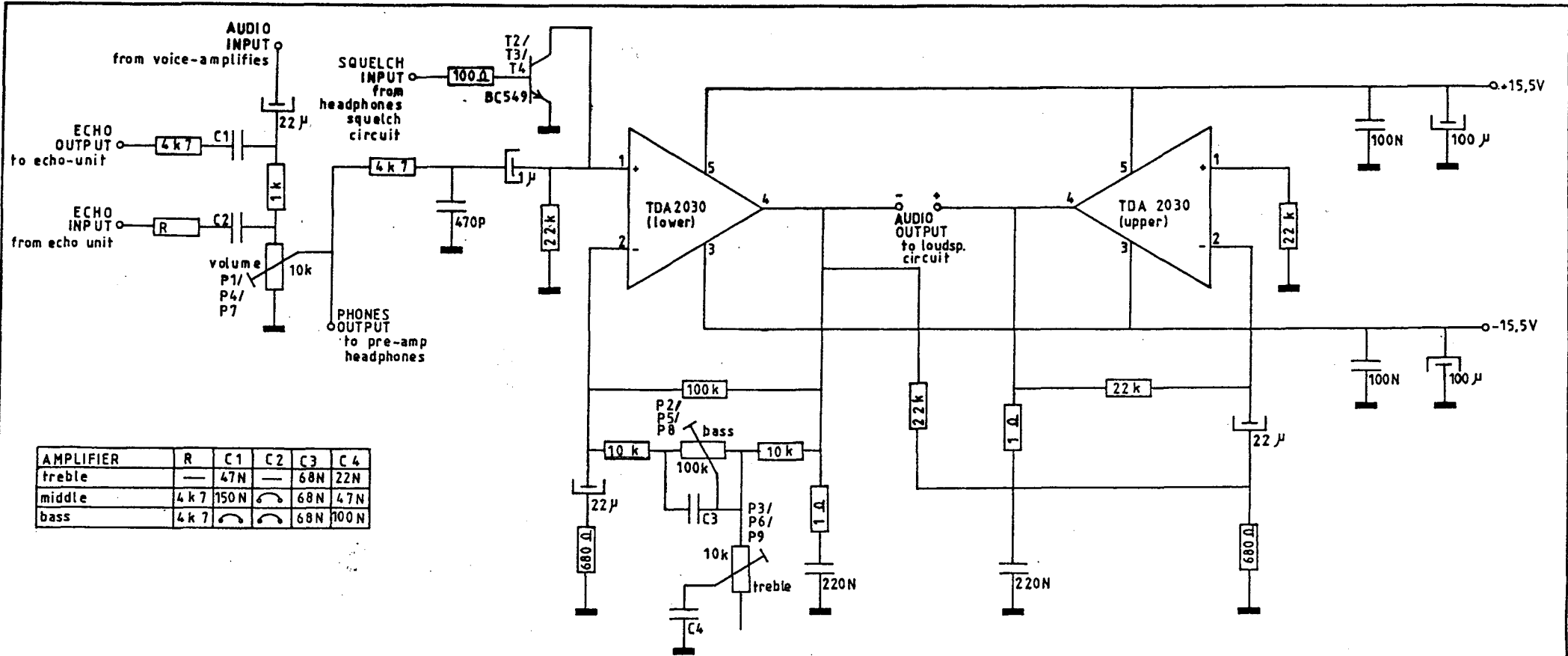
3x: 1x for IC41  
 1x for IC73  
 1x for IC8 & 5

ALL DIODES: 1N4148

**VOICE AMPLIFIERS**

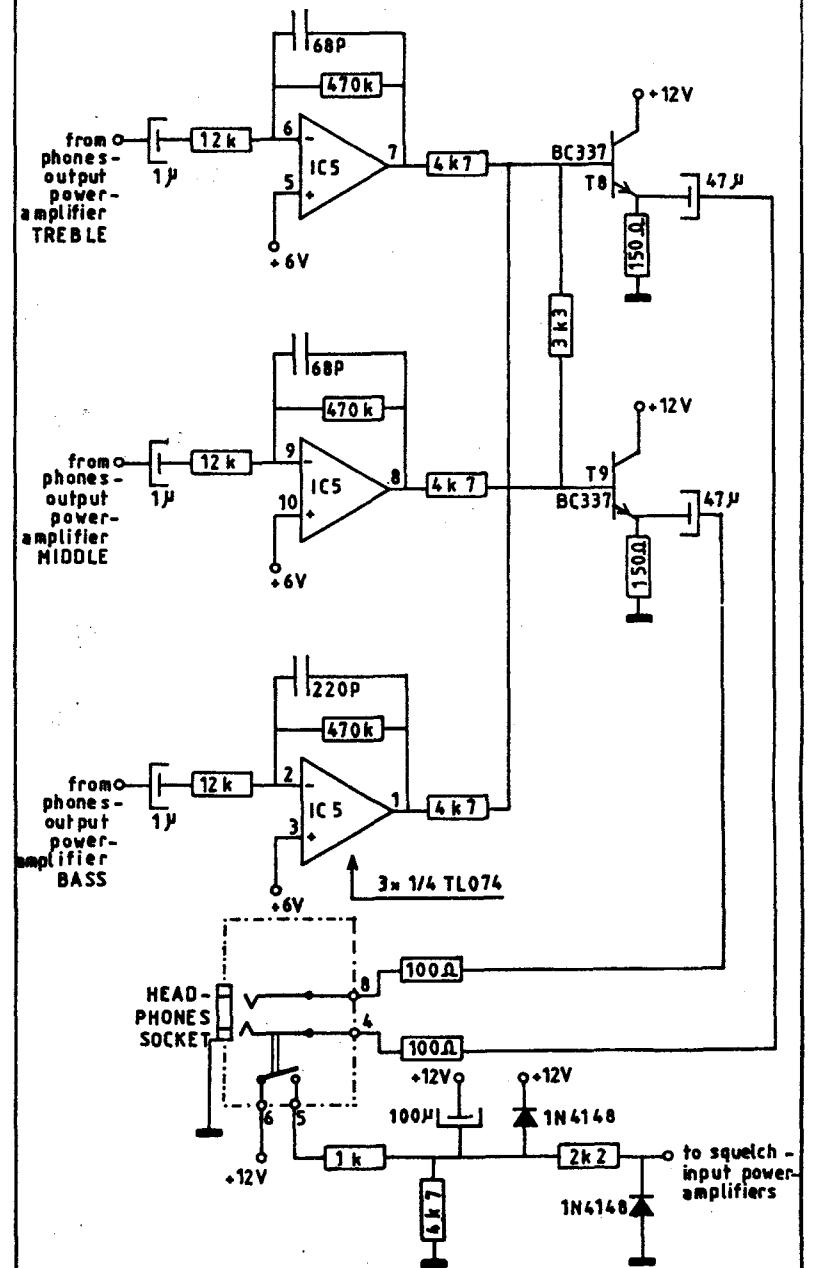
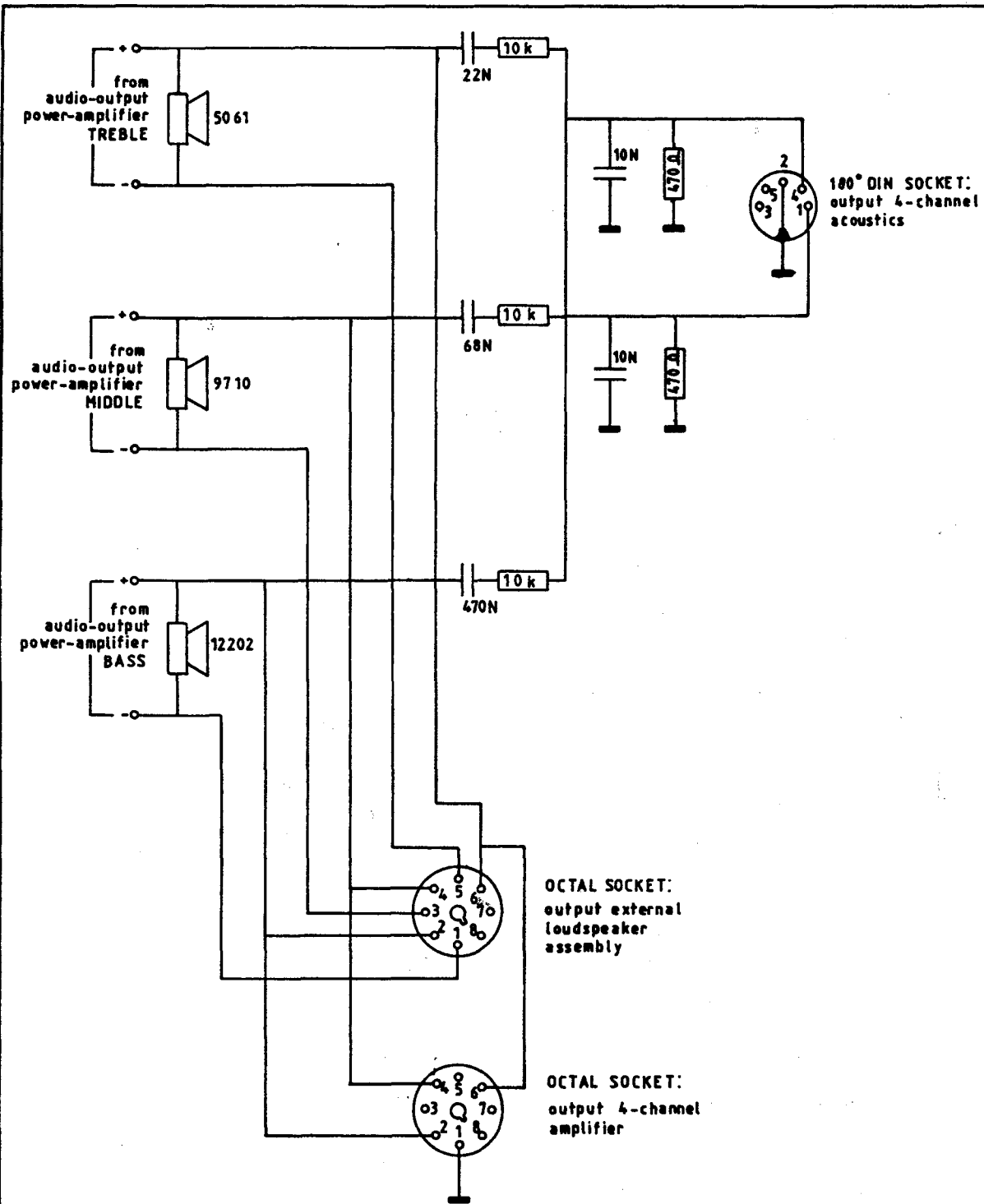
Drawn	Date	Modified	Date
Verschoor	04-02-86	Verschoor	04-09-86
DESIGN			
L.A.B.			
copyright:	JOHANNUS ORGELBOUW b.v.		morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403
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 OPUS 225**



POWER - AMPLIFIER (3 x)			
Drawn	Date	Modified	Date
Verschoor	19-02-86		
DESIGN			
LAB			
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ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND	18
		Tel. 08380-37403	

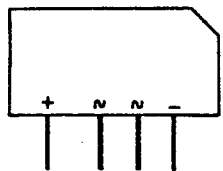
JOHANNUS  
ORGAN  
OPUS 225



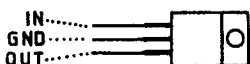
### LOUDSPEAKER - & HEADPHONES - CIRCUIT

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 225
Verschoor	04-04-86			
DESIGN				
LAB.				
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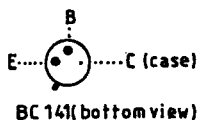
A — 1N4148 — K



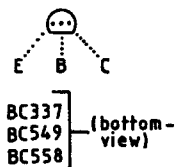
B80 C5000/3300



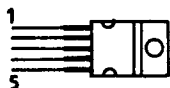
μA 7812  
μA 7818



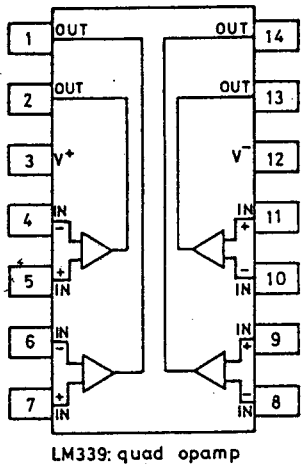
BC 141 (bottom view)



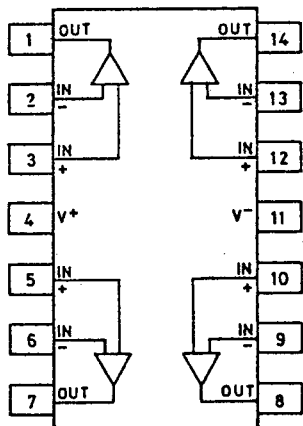
BC337  
BC549  
BC558 (bottom view)



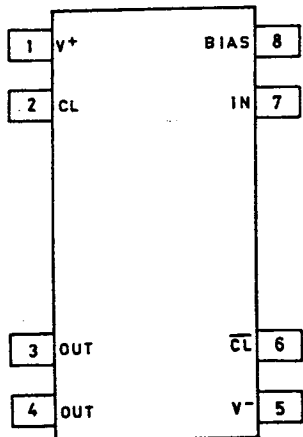
1=non-inverting input  
2=inverting input  
3=V<sup>-</sup>  
4=output  
5=V<sup>+</sup> TDA 2030



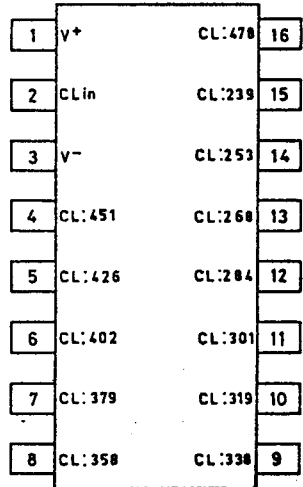
LM339: quad opamp



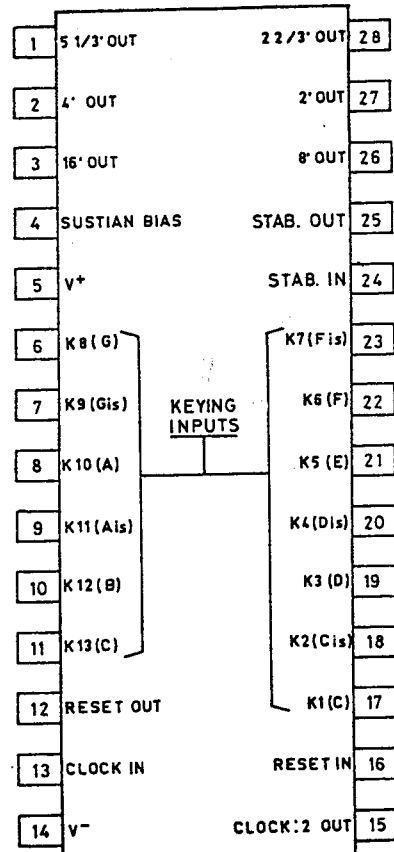
TL074: quad opamp  
LM324: quad opamp



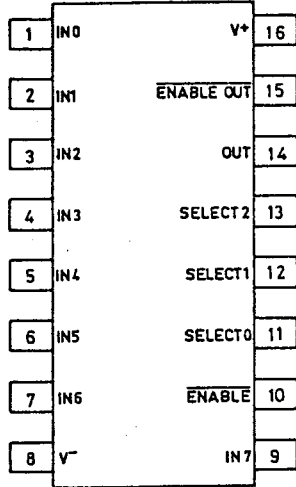
TDA 2108: delay line



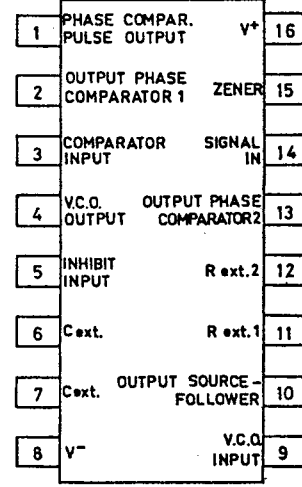
MO 83: top octave synthesizer



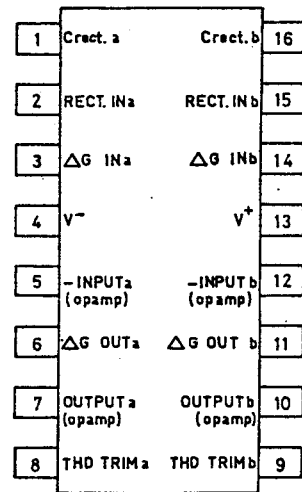
TMS 3617: top octave synthesizer with dividers and keyings



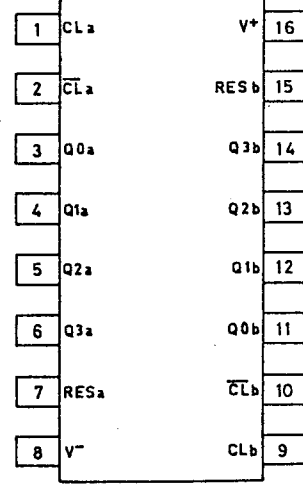
4512 8-input multiplexer with 3-stage output



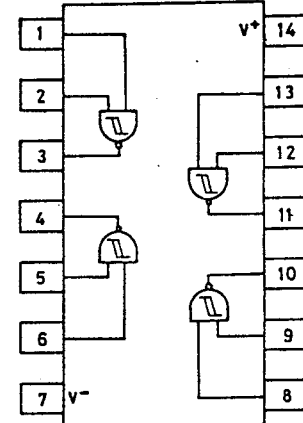
4046 phase locked loop circuit



NE 570: dual comparator



4520 dual binary counter



4093: quad schmitt-trigger

GENERAL INFORMATION SEMI-CONDUCTORS

Drawn	Date	Modified	Date
Verschuur	07-04-86		
DESIGN			

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