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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 5 2 0 =  
= a]terations reserved =

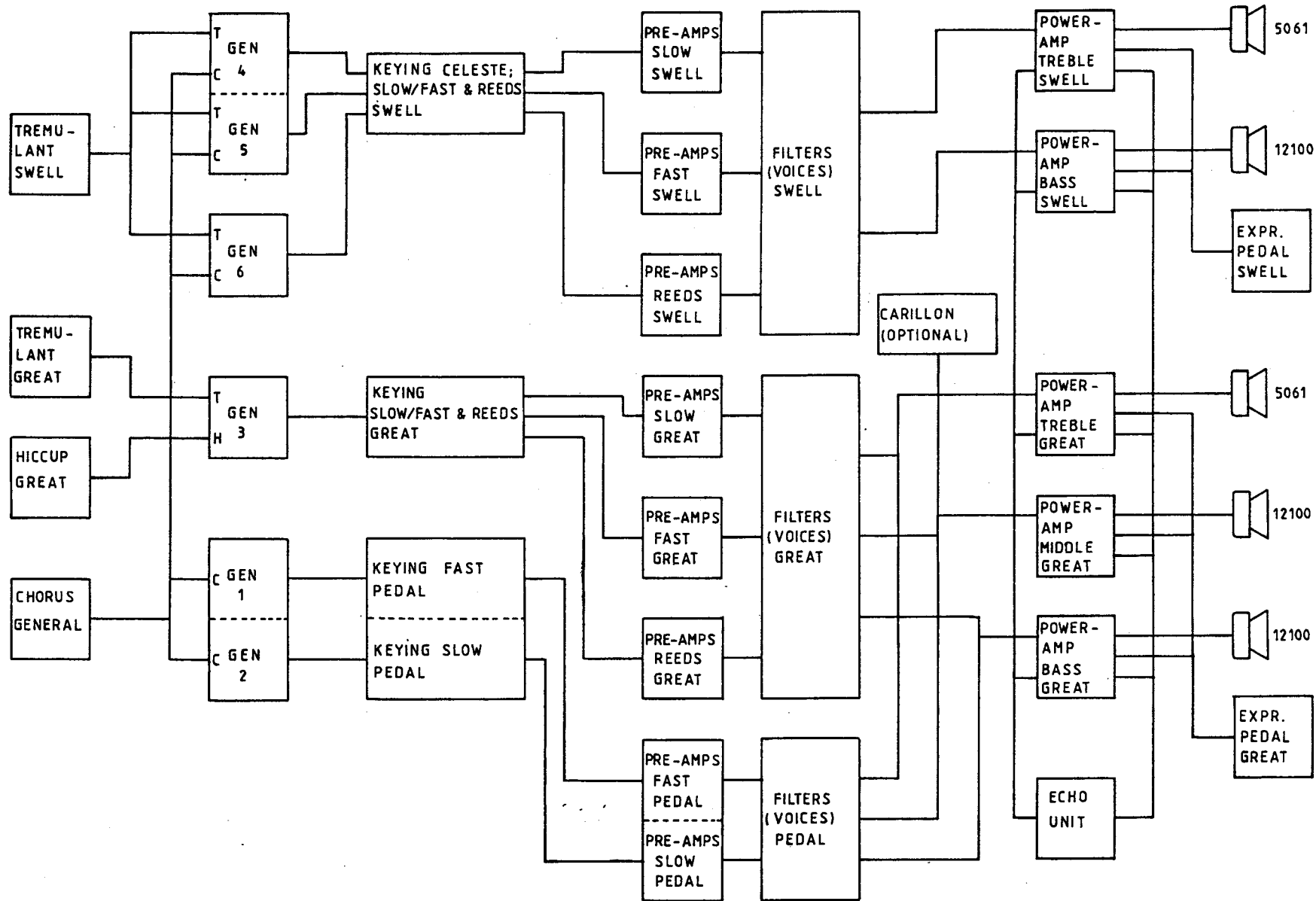
## C O N T E N T S.

1. SIGNAL COURSE VOICES
2. BLOCKDIAGRAM
3. POSITION GUIDE P.C.-BOARDS
4. POWER SUPPLY
5. ACCESSORIES (tremulant & coupler system)
6. GENERATOR (3) GREAT
7. GENERATORS (4 & 5) SWELL
8. GENERATOR (6) CELESTE
9. GENERATOR/KEYING (1) PEDAL (8'-1' fast)
10. GENERATOR/KEYING (2) PEDAL (32'-4' slow)
11. KEYING SLOW-FAST & REEDS GREAT
12. KEYING SLOW-FAST & REEDS SWELL
13. PRE-AMP'S & SUPPLY VOLTAGES PEDAL
14. PRE-AMP'S SLOW GREAT
15. PRE-AMP'S FAST GREAT
16. PRE-AMP'S REEDS GREAT
17. PRE-AMP'S SLOW SWELL
18. PRE-AMP'S FAST SWELL
19. PRE-AMP'S REEDS SWELL
20. VOICES PEDAL
21. VOICES I GREAT
22. VOICES II GREAT & SWITCHSECTION PRESETS
23. VOICES I SWELL
24. VOICES II SWELL & VOICE-GATES
25. POWER AMPLIFIER (universal 5x)
26. INTERFACE INTERN/EXTERN ECHO
27. ECHO UNIT INTERN
28. GENERAL INFORMATION SEMI-CONDUCTORS

	VOICE	PRESET	GEN.	CONSISTS OF	AMPLIFIER	SPEAKER
PEDAL	DOUBLE BASS 16'	F	2	16's + 8's + 4's	BASS GREAT	12100
	VIOLON 16'	--	2	16's + 8's + 4's	MIDDLE GREAT	12100
	SUBBASS 16'	PP	2	16's	BASS GREAT	12100
	PRINCIPAL 8'	MF	1	8'f + 4'f + 2'f + 1'f	BASS GREAT	12100
	VIOLON 8'	--	1	8'f + 4'f + 2'f	TREBLE GREAT	5061
	GEDACKT 8'	P	2	8's	BASS GREAT	12100
	OCTAVE 4'	F	1	4'f + 2'f + 1'f	MIDDLE GREAT	12100
	MIXTURE V RKS	T	1	4'f; 2 2/3'f; 2'f; 1 1/3'f & 1'f	TREBLE GREAT	5061
	BOMBARDE 32'	--	2	32's + 16's + 8's + 4's	BASS GREAT	12100
	CONTRA TRUMPET 16'	T	2	16's + 8's + 4's	BASS GREAT	12100
	TRUMPET 8'	F	1	8'f + 4'f + 2'f + 1'f	TREBLE GREAT	5061
	TRUMPET 4'	T	1	4'f + 2'f + 1'f	MIDDLE GREAT	12100
GREAT	PRINCIPAL 16'	FF	3	16's + 8's + 4's	BASS GREAT	12100
	PRINCIPAL 8'	MF	3	8's + 4'f + 2'f	BASS GREAT	12100
	GAMBA 8'	--	3	8' reeds	MIDDLE GREAT	12100
	STOPPED FLUTE 8'	PP	3	8's with 2 2/3' chiff	MIDDLE GREAT	12100
	OCTAVE 4'	MF	3	4's + 2'f + 1'f	MIDDLE GREAT	12100
	OPEN FLUTE 4'	P	3	4's with 2' chiff	TREBLE GREAT	5061
	TWELFTH 2 2/3'	F	3	2 2/3'f + 1 1/3'f	MIDDLE GREAT	12100
	OCTAVE 2'	F	3	2'f + 1'f	TREBLE GREAT	5061
	FLUTE 2'	FF	3	2's with 1' chiff	MIDDLE GREAT	12100
	CORNET IV RKS	FF	3	4's; 2 2/3's; 2'f & 1 3/5'f	MIDDLE GREAT	12100
	TERZIAN II RKS	T	3	2's & 1 3/5'f	TREBLE GREAT	5061
	MIXTURE V RKS	F	3	4'f; 2 2/3'f; 2'f; 1 1/3'f & 1'f	TREBLE GREAT	5061
	TRUMPET 16'	T	3	16' reeds	BASS GREAT	12100
	TRUMPET 8'	F	3	8' reeds	TREBLE GREAT	5061
	CLARION 4'	T	3	4' reeds	MIDDLE GREAT	12100
SWELL	QUINTATON 16'	T	4/5	16's	BASS SWELL	12100
	PRINCIPAL 8'	MF	4/5	8's + 4's + 2'f	BASS SWELL	12100
	SALICIONAL 8'	FF	4/5	8's + 4's + 2'f	TREBLE SWELL	5061
	CELESTE 8'	--	4/5	8's + 4's + 2'f --	TREBLE SWELL	5061
			6	8' cel (floating)	BASS SWELL	12100
	ROHRFLÖTE 8'	PP	4/5	8's with 2 2/3' chiff	TREBLE SWELL	5061
	GEIGEN PRINCIPAL 4'	MF	4/5	4'f + 2'f + 1'f	TREBLE SWELL	5061
	KOPPELFLÖTE 4'	P	4/5	4's with 2' chiff	BASS SWELL	12100
	NAZARD 2 2/3'	FF	4/5	2 2/3's + 1 1/3'f	BASS SWELL	12100
	WALDFLÖTE 2'	F	4/5	2's with 1' chiff	BASS SWELL	12100
	TIERCE 1 3/5'	--	4/5	1 3/5'f	TREBLE SWELL	5061
	SUPERQUINT 1 1/3'	T	4/5	1 1/3'f	TREBLE SWELL	5061
	SIFFLUTE 1'	T	4/5	1'f	TREBLE SWELL	5061
	SESQUIALTERA II RKS	--	4/5	2 2/3'f & 1 3/5'f	TREBLE SWELL	5061
	RAUSCHPFEIFE III RKS	FF	4/5	2'f; 1 1/3'f & 1'f	TREBLE SWELL	5061
	FAGOTTO 16'	T	4/5	16' reeds	BASS SWELL	12100
	CROMORNE 8'	T	4/5	8' reeds	TREBLE SWELL	5061
	VOX HUMANA 8'	T	4/5	8' reeds	BASS SWELL	12100
	SCHALMEI 4'	T	4/5	4' reeds	TREBLE SWELL	5061

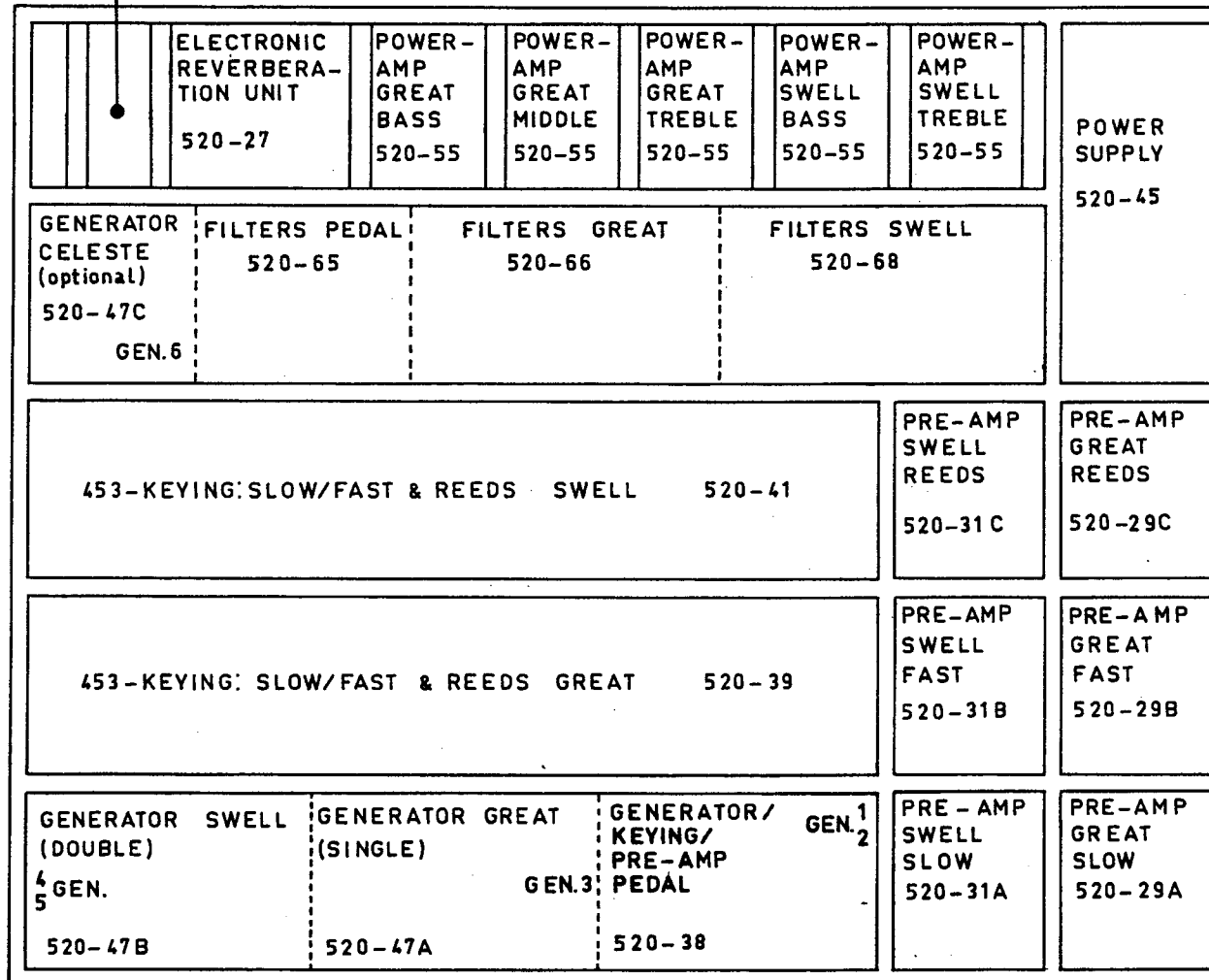
S = SLOW  
F = FAST

SIGNAL COURSE VOICES				JOHANNUS ORGAN OPUS 520
Drawn	Date	Modified	Date	
Verschoor	02-04-84	Verschoor	13-08-84	
DESIGN				
J. Versteegt				
copyright:	JOHANNUS	morsestraat 28	page:	
ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND	1	
		Tel. 08380-37403		



BLOCKDIAGRAM				JOHANNUS ORGAN OPUS 520
Drawn	Date	Modified	Date	
Verschoor	02-04-84			
J.Versteegt				
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				page: 2

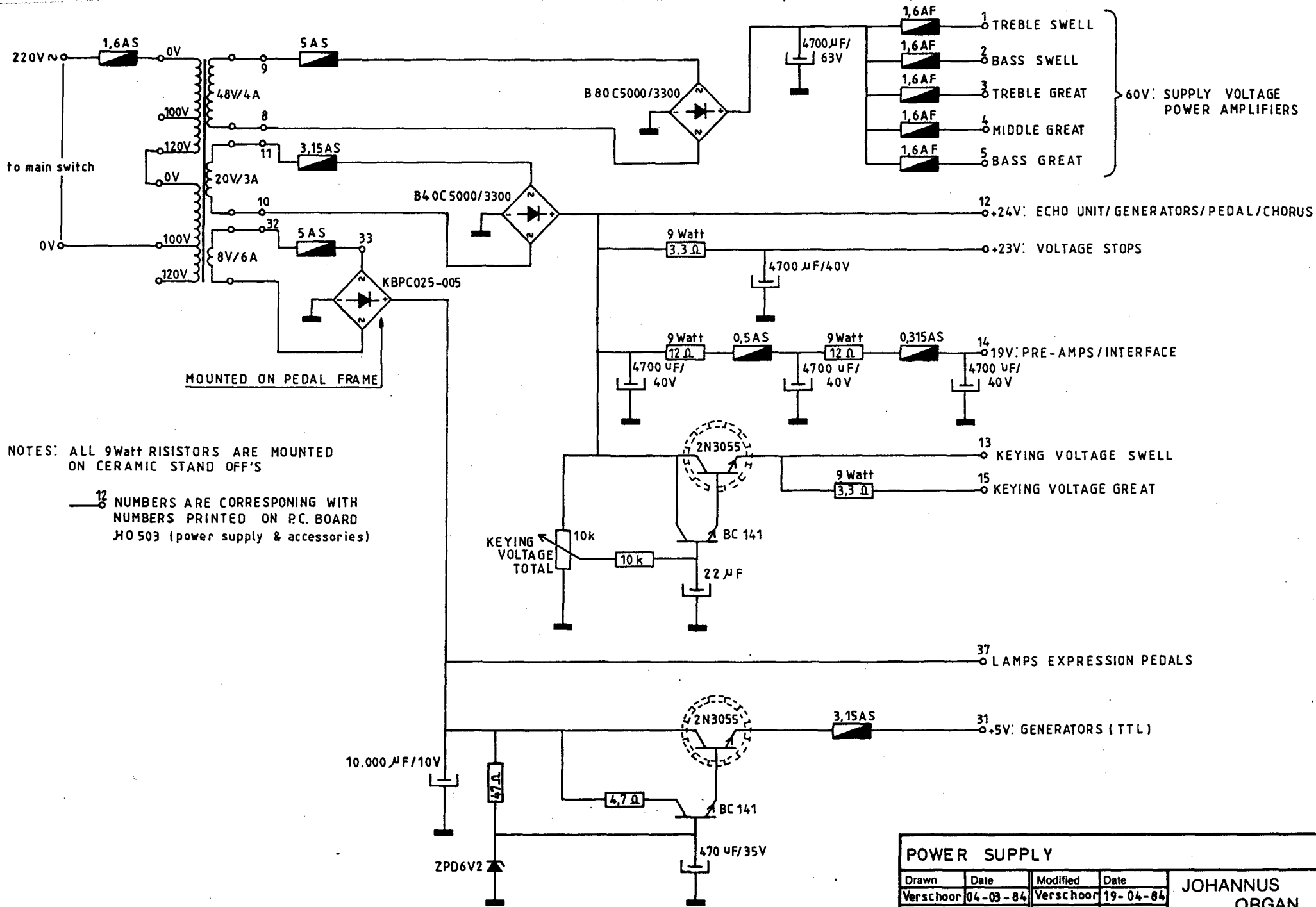
INTERFACE ELECTRONIC  
 REVERBERATION UNIT INT/EXT.  
 520-26



(COPPERSIDE VIEW)

POSITION GUIDE P.C.-BOARDS

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 520
Verschoor	28-02-84			
DESIGN				
J. Versteegt				
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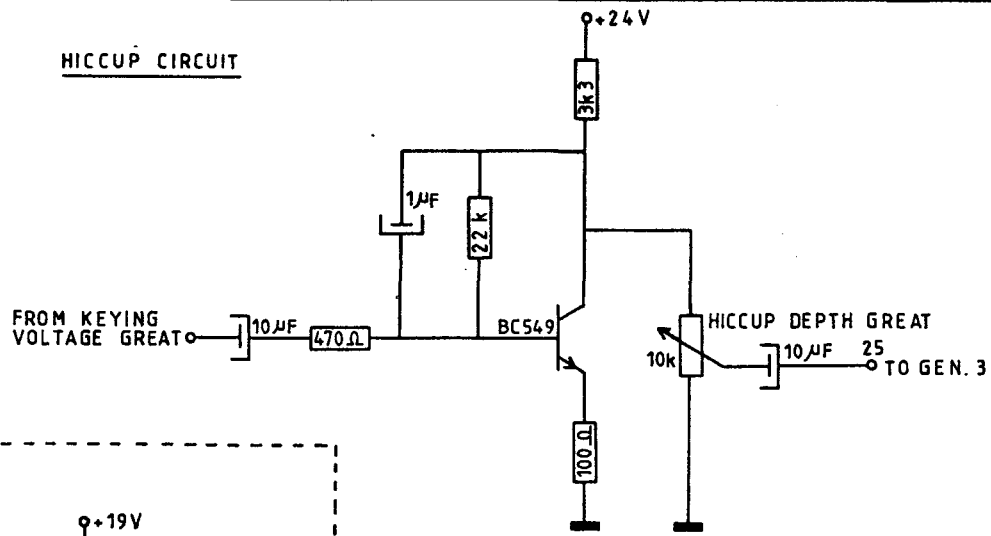
NOTES: ALL 9Watt RESISTORS ARE MOUNTED ON CERAMIC STAND OFF'S

— 12 NUMBERS ARE CORRESPONDING WITH NUMBERS PRINTED ON P.C. BOARD HO 503 (power supply & accessories)

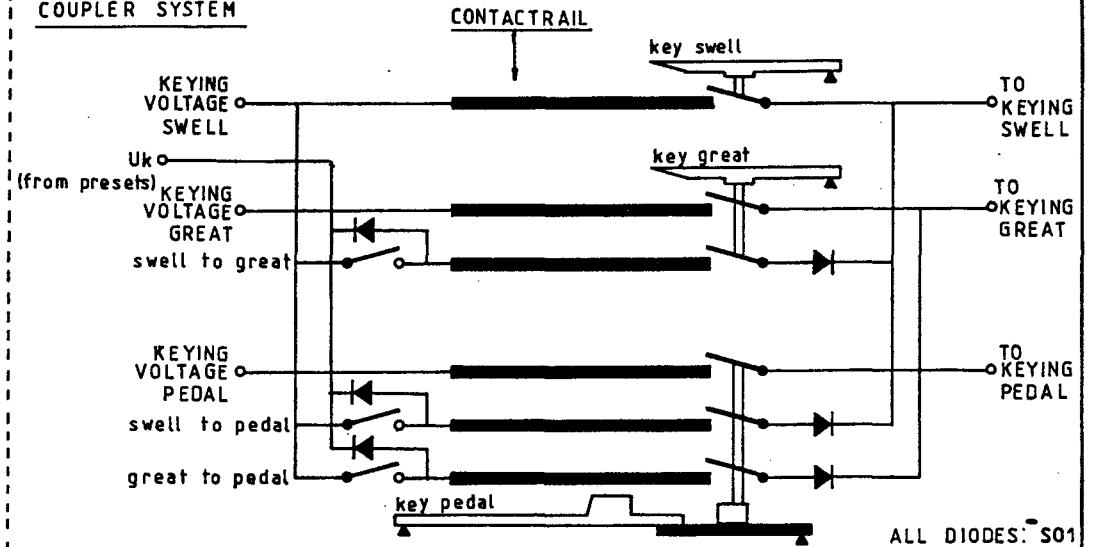
MOUNTED ON PEDAL FRAME

POWER SUPPLY			
Drawn	Date	Modified	Date
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DESIGN			
J.Versteegt			
copyright:	JOHANNUS	morsestraat 28	page:
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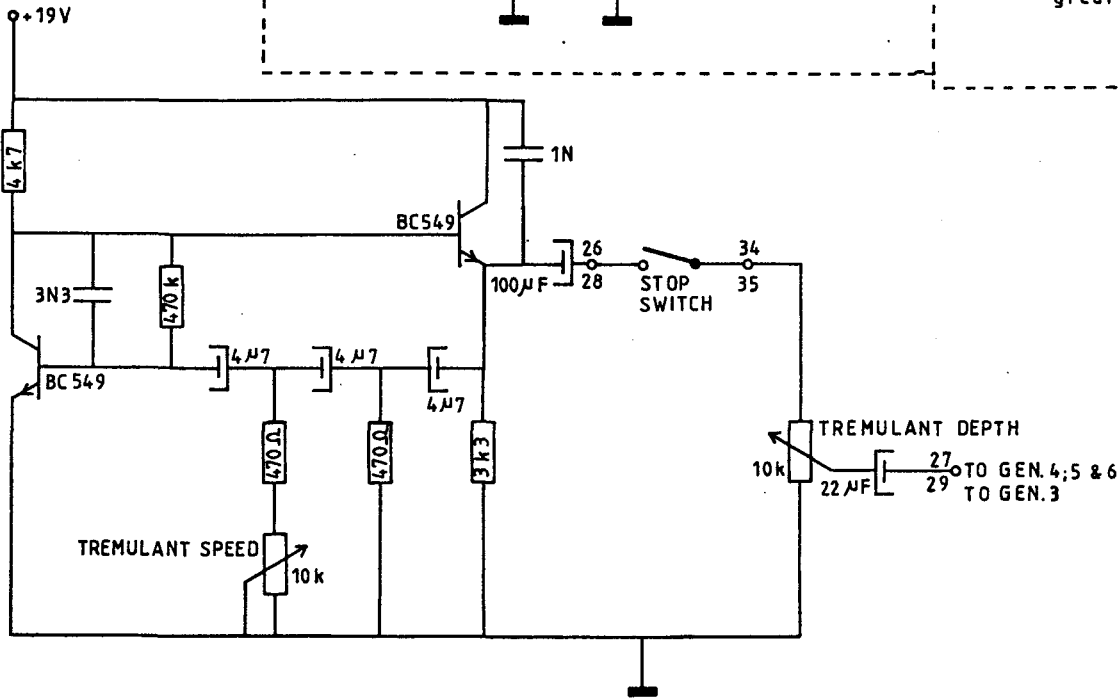
**HICCUP CIRCUIT**



**COUPLER SYSTEM**



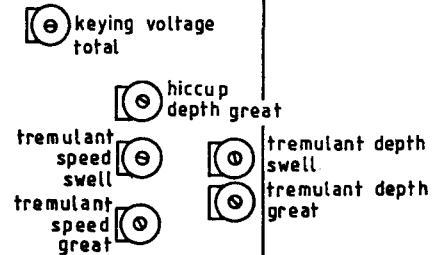
ALL DIODES: S01



**TREMULANT CIRCUIT (2x):** NRS 26; 27 & 34 BELONG TO TREMULANT SWELL  
NRS 28; 29 & 35 BELONG TO TREMULANT GREAT

**POSITION GUIDE CONTROLS ACCESSORIES**

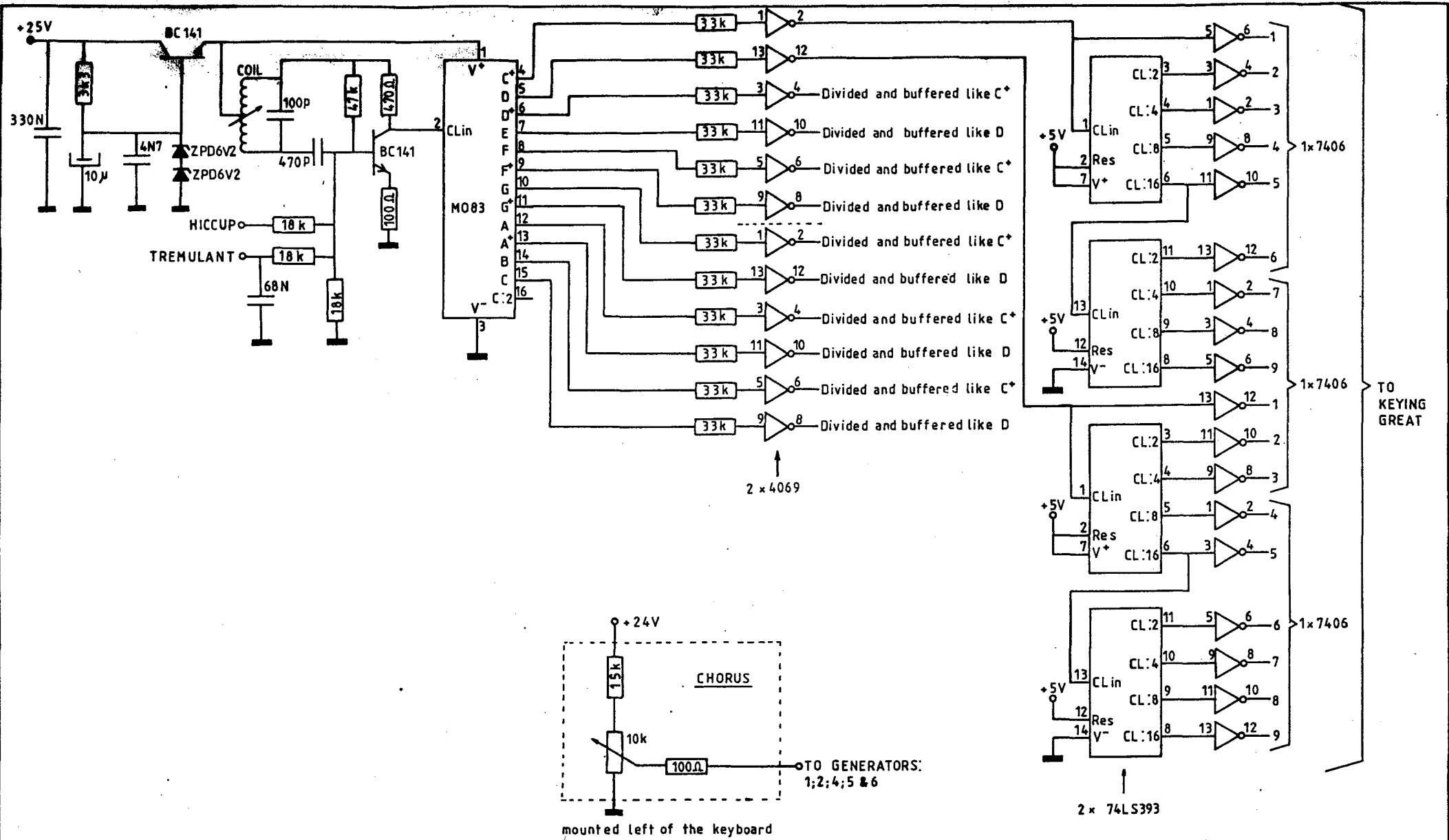
NOTE: — 25 NUMBERS ARE CORRESPONDING WITH NUMBERS PRINTED ON P.C.-BOARD #0503 (power supply & accessories)



Ε020Η.

**ACCESSORIES (tremulant & coupler system)**

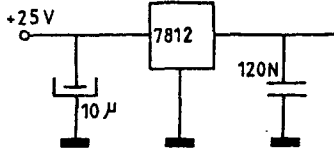
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J.Versteegt				
copyright:	JOHANNUS	morsestraat 28	page:	
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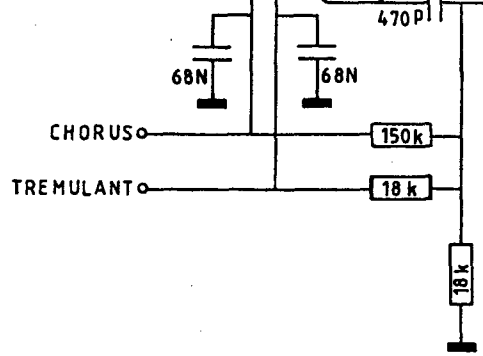
GENERATOR (3) GREAT				JOHANNUS ORGAN OPUS 520
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J.Versteegt				
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				page: 6



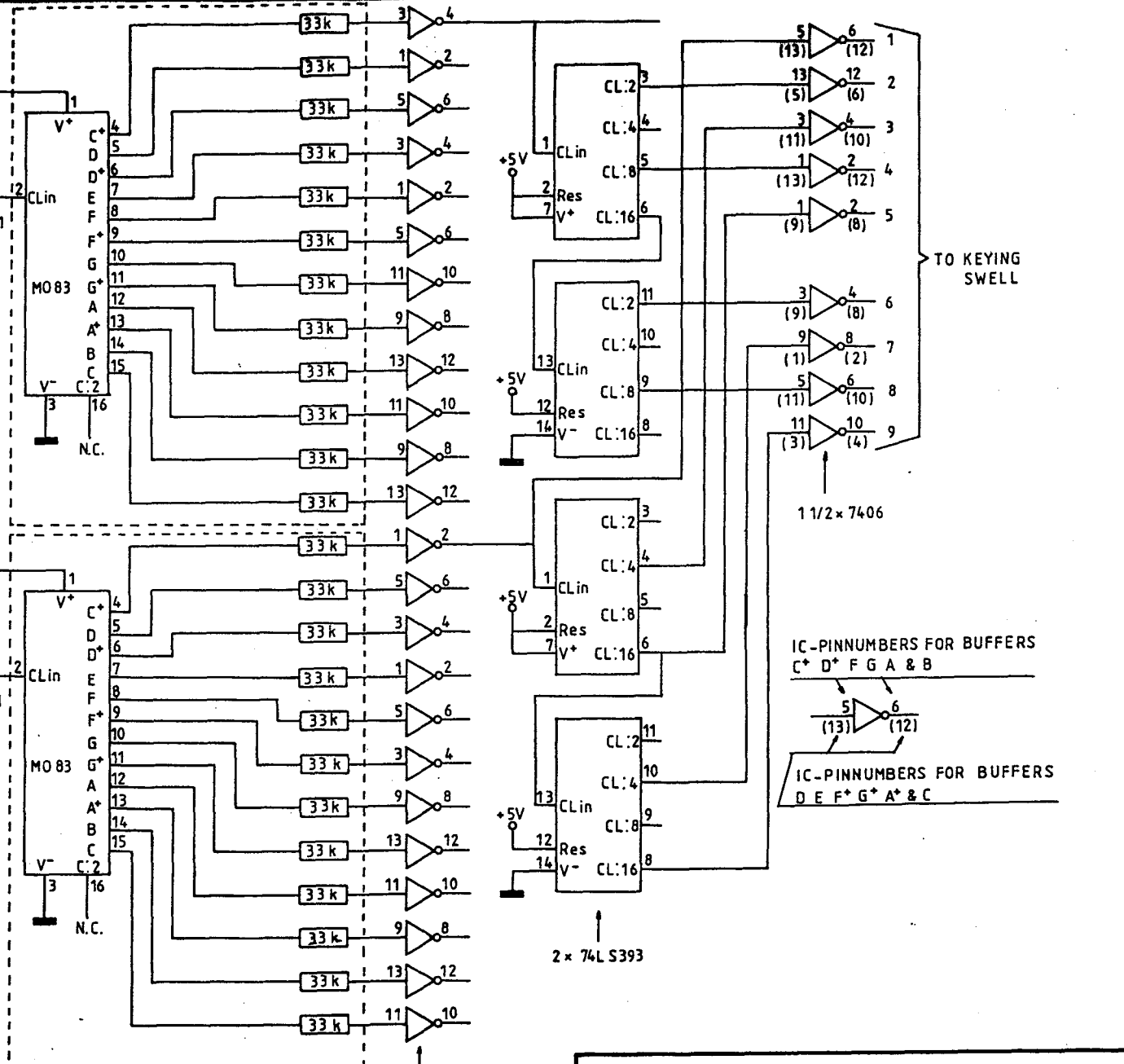
GENERATOR 4



GENERATOR 5



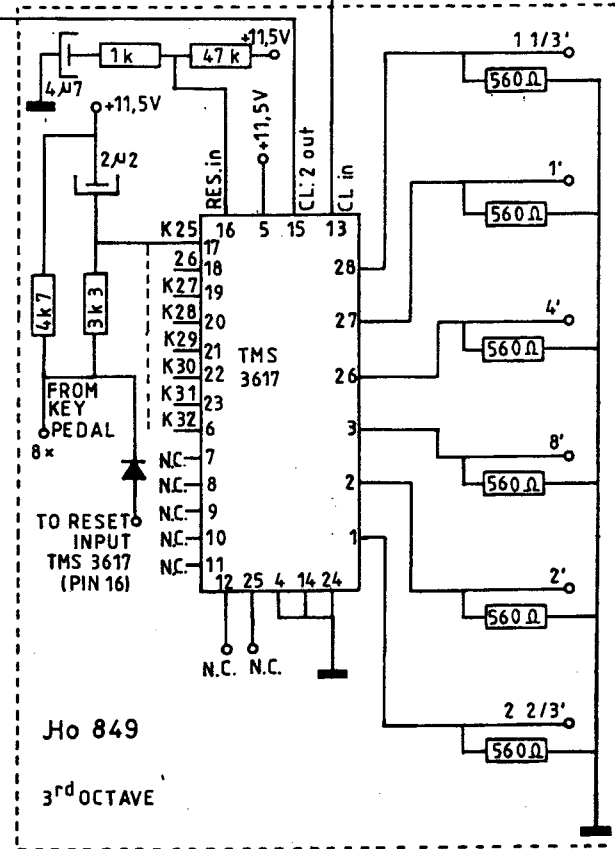
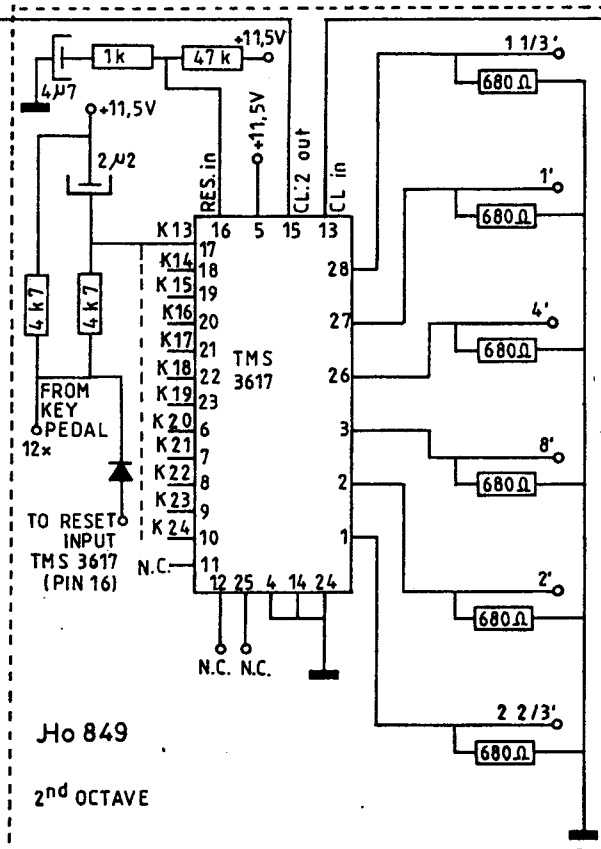
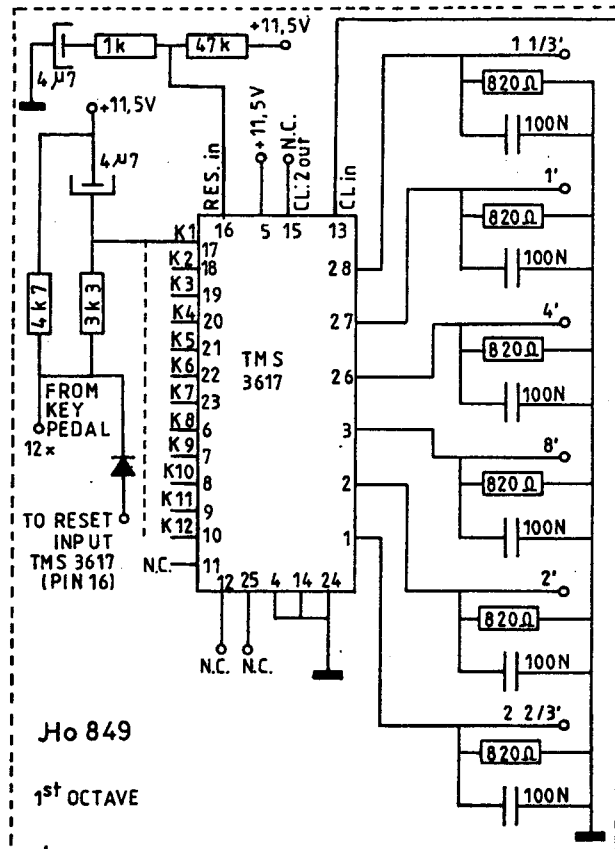
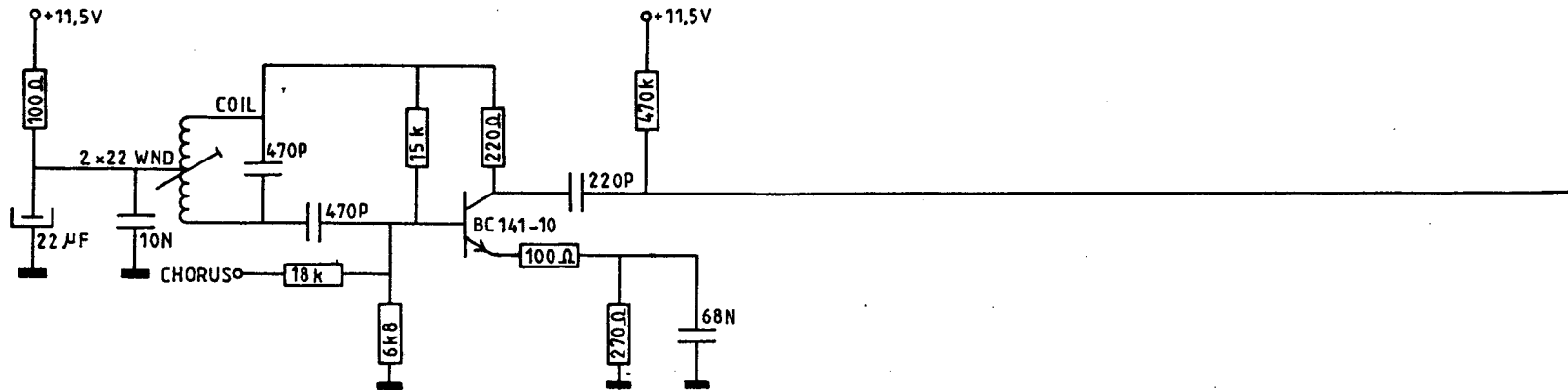
CHORUS  
TREMULANT



MOUNTED ON P.C BOARD MO 639A (2x) 4x 74C04

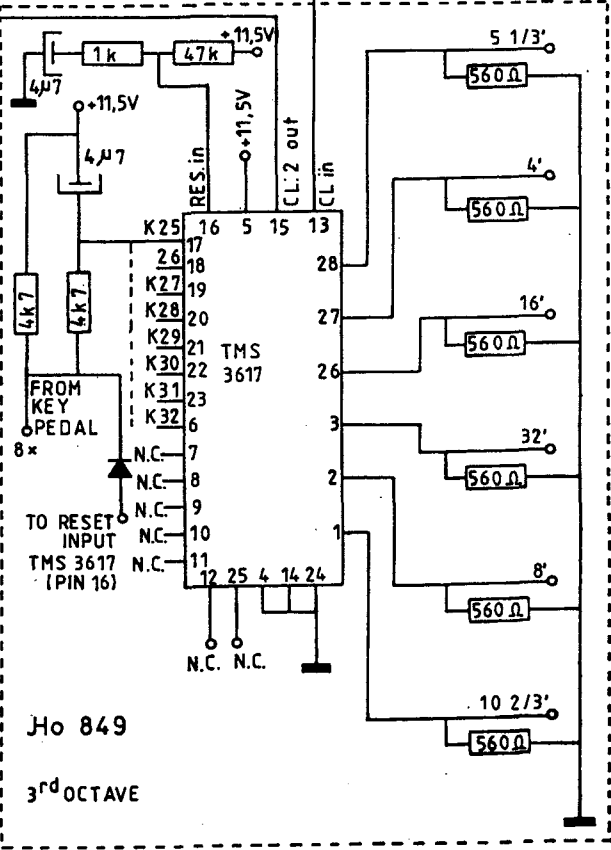
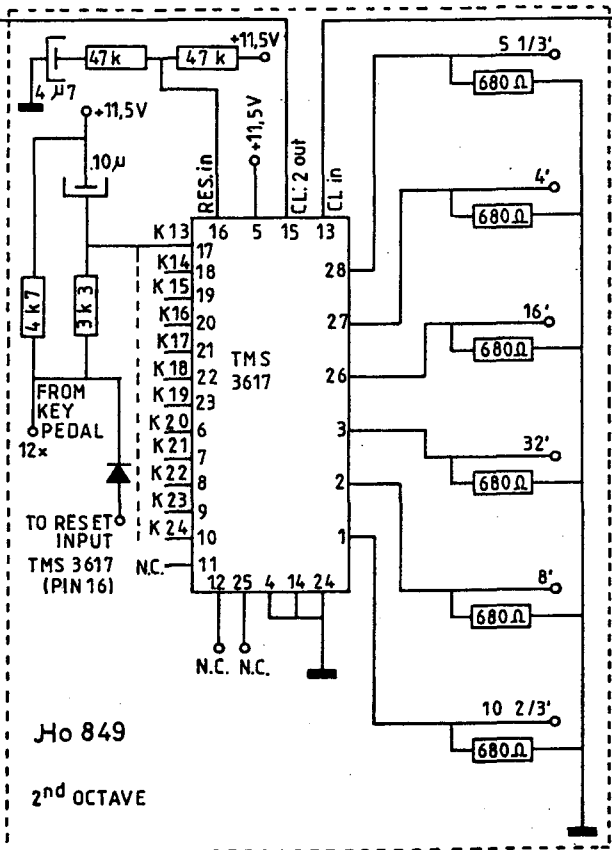
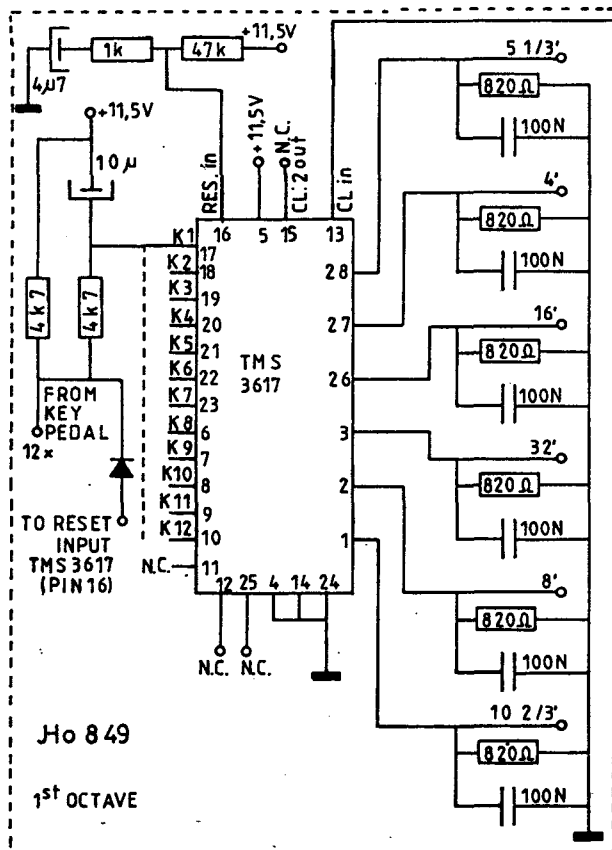
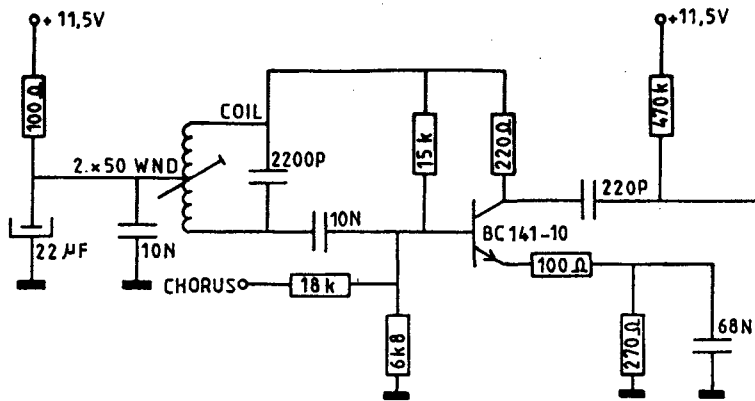
GENERATORS (4 & 5) SWELL				JOHANNUS ORGAN OPUS 520
Drawn	Date	Modified	Date	
Verschoor	24-04-84	Verschoor	29-08-85	
DESIGN				page: 7
J.Versteegt				
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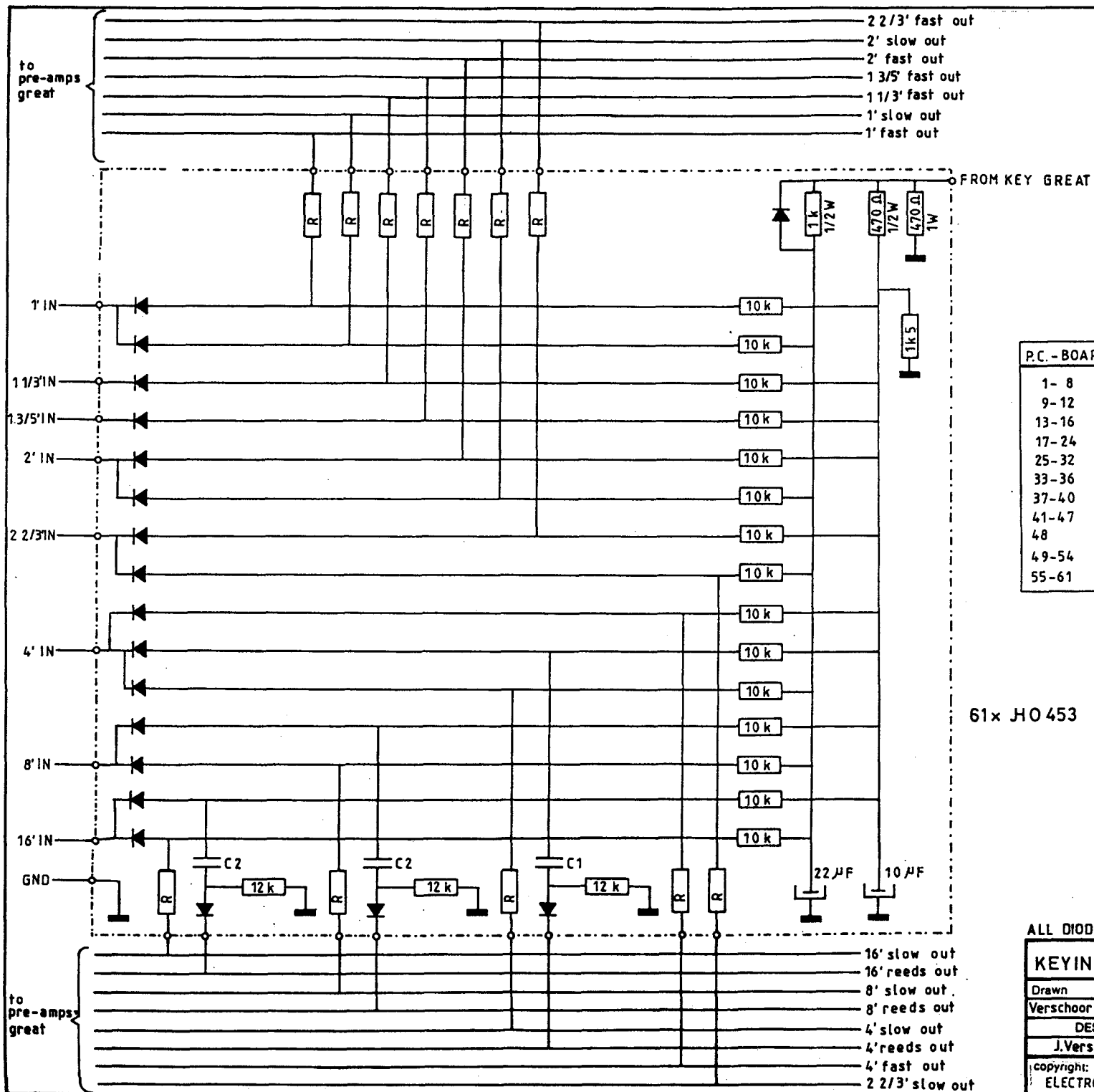


GENERATOR/KEYING (1) PEDAL (8'-1' fast)

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Verhoeven	29-08-85			
DESIGN				
J. Versteeg				
copyright	JOHANNUS	morsestraat 28		page: 9
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GENERATOR/KEYING(2) PEDAL (32'-4' slow)			
Drawn	Date	Modified	Date
Verschuur	29-08-85		
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			page: 10



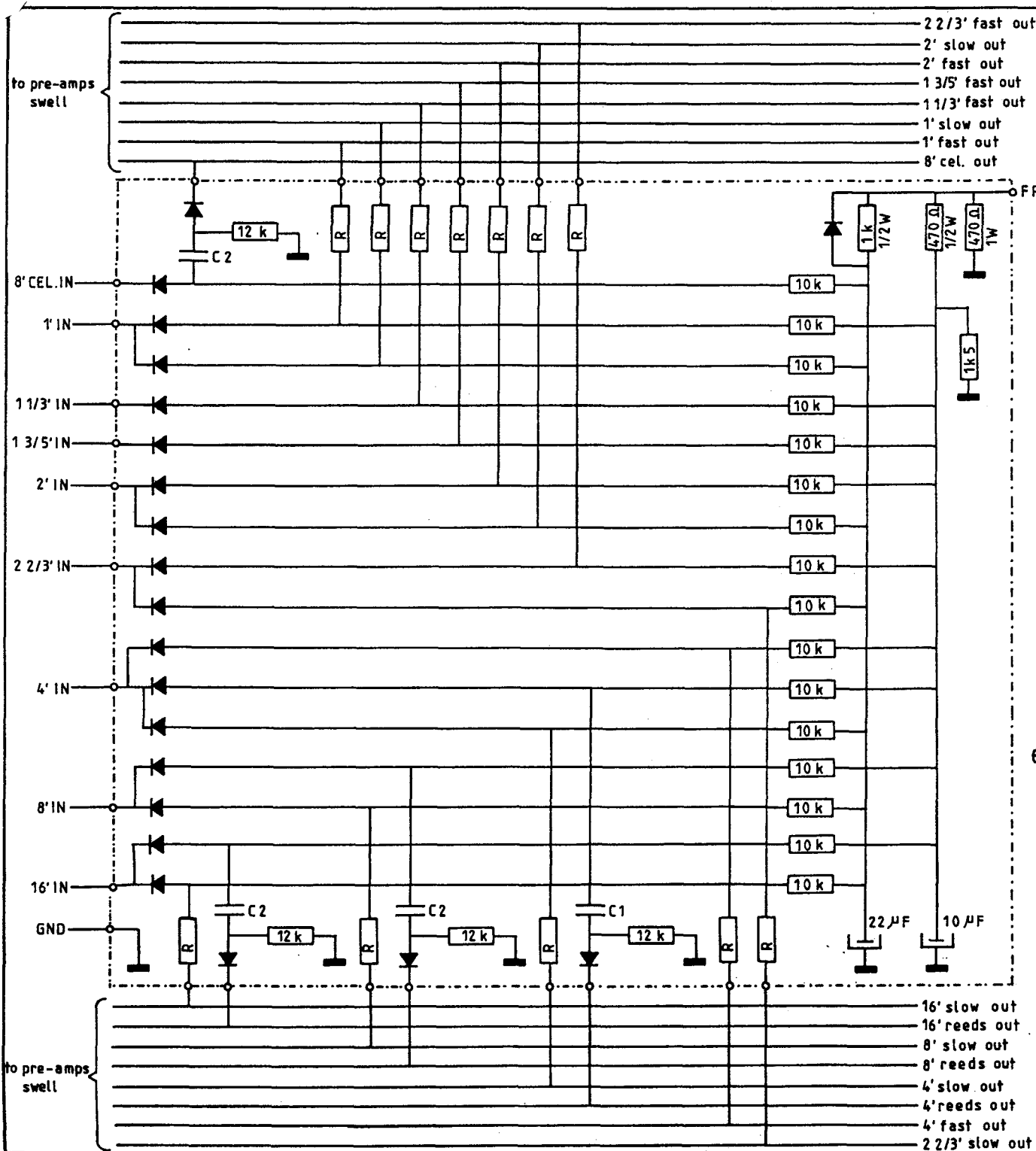
P.C.-BOARD	R	C1	C2
1- 8	68 k	22N	33N
9- 12	56 k	22N	33N
13-16	56 k	15N	22N
17-24	47 k	15N	22N
25-32	39 k	10N	15N
33-36	33 k	10N	15N
37-40	33 k	4N7	10N
41-47	27 k	4N7	10N
48	22 k	4N7	10N
49-54	22 k	1N8	6N8
55-61	18 k	1N8	6N8

61x J0453

ALL DIODES: S01

KEYING SLOW-FAST & REEDS GREAT

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 520
Verschoor	09-04-84			
DESIGN				
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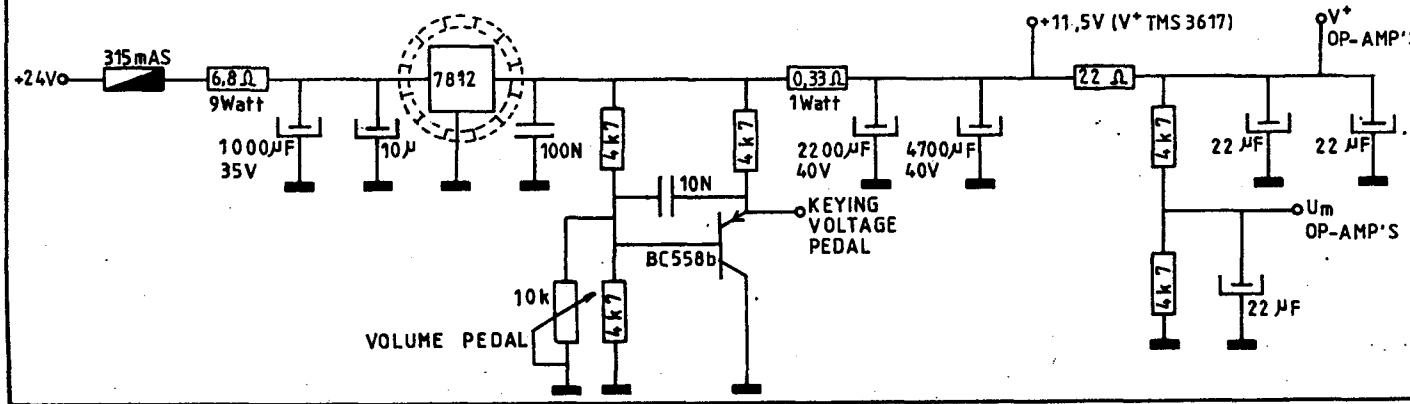
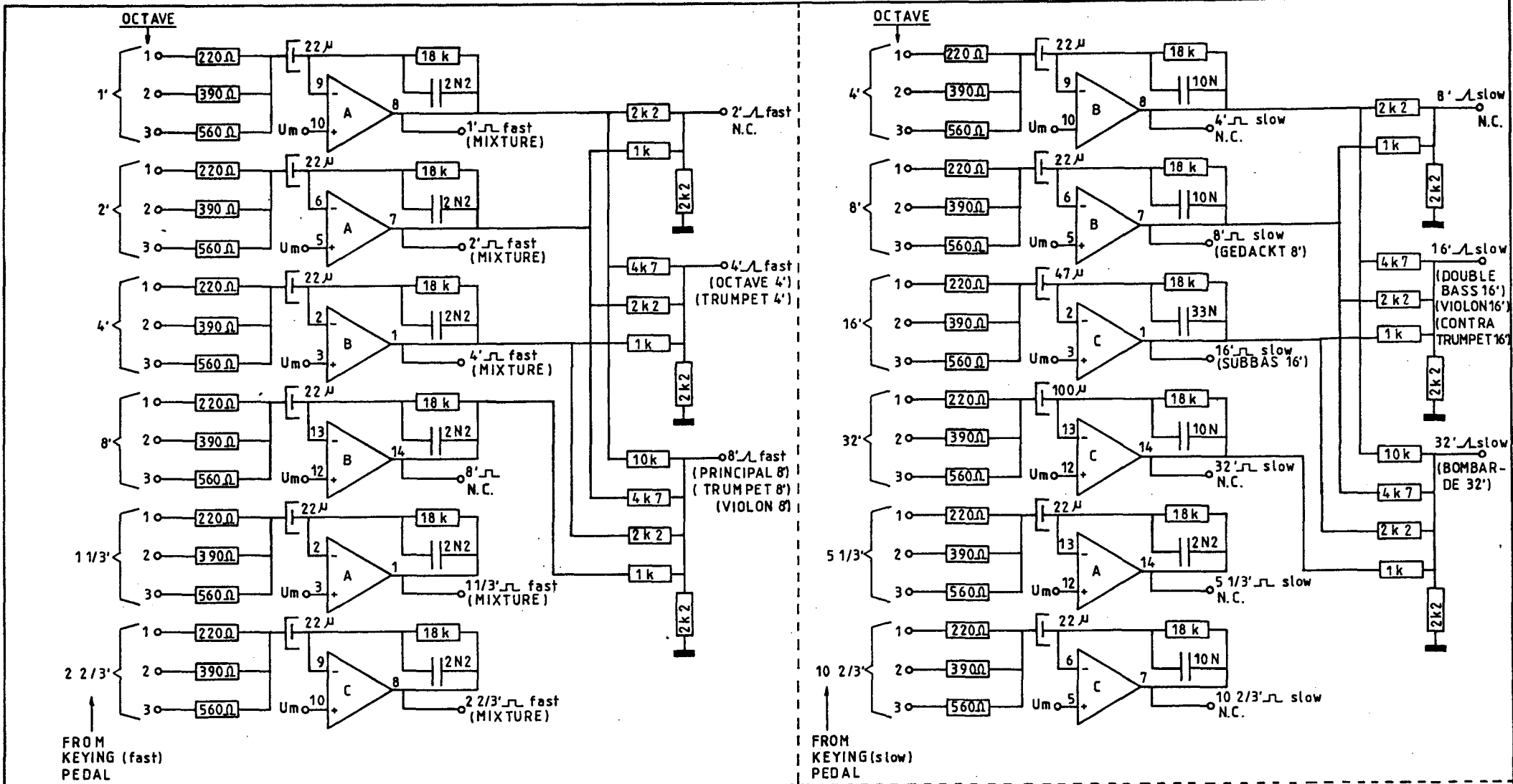


P.C.-BOARD	R	C1	C2
1- 8	68 k	22N	33N
9-12	56 k	22N	33N
13-16	56 k	15N	22N
17-24	47 k	15N	22N
25-32	39 k	10N	15N
33-36	33 k	10N	15N
37-40	33 k	4N7	10N
41-47	27 k	4N7	10N
48	22 k	4N7	10N
49-54	22 k	1N8	6N8
55-61	18 k	1N8	6N8

61x JH0453

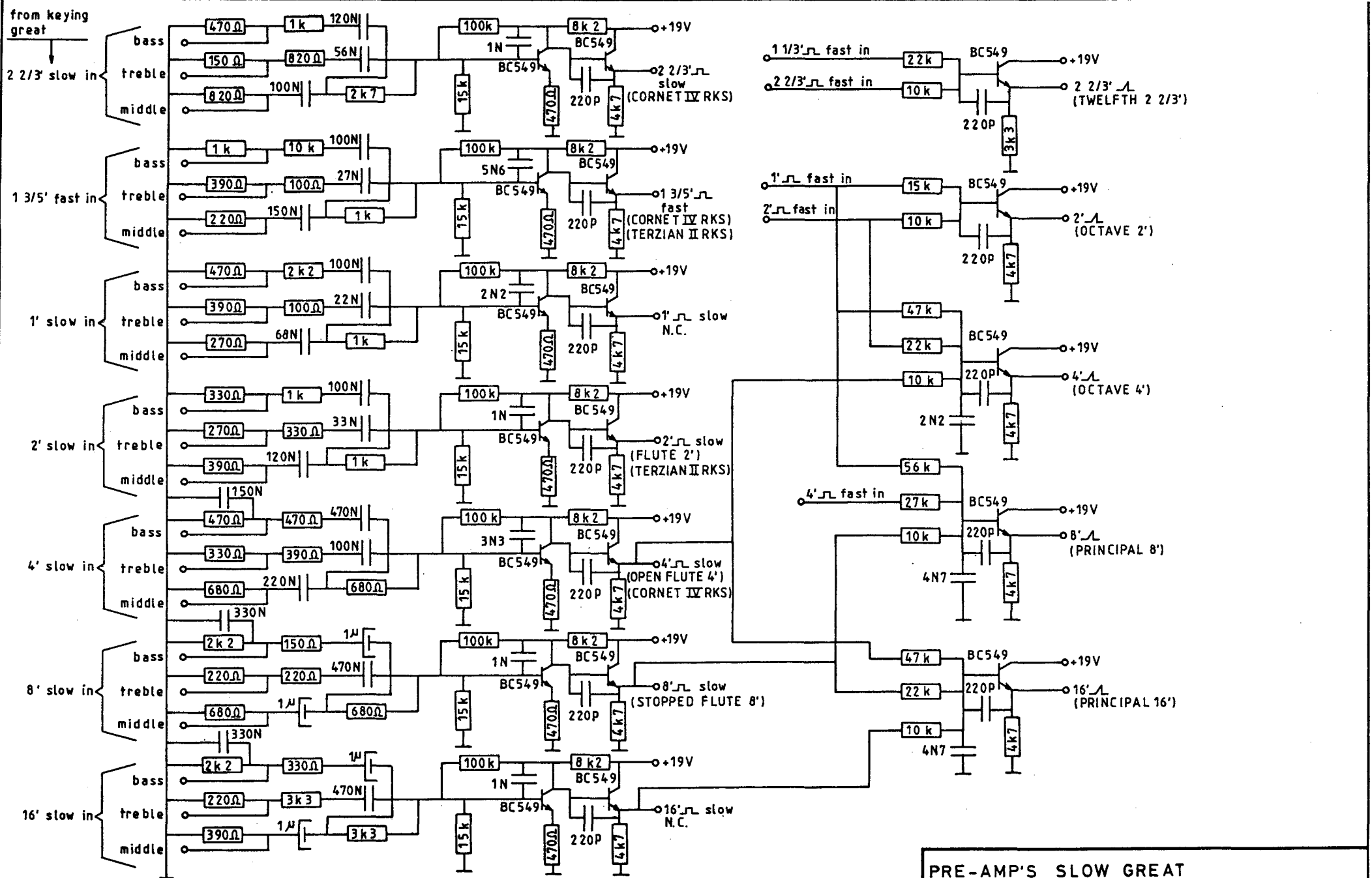
ALL DIODES: S01

KEYING SLOW-FAST & REEDS SWELL				JOHANNUS ORGAN	
Drawn	Date	Modified	Date	OPUS 520	
Verschoor	06-04-84				
DESIGN					
J.Versteegt					
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					page: 12



PRE - AMP'S & SUPPLY VOLTAGES PEDAL			
Drawn	Date	Modified	Date
Verschoor	09-04-84	Verschoor	13-08-84
DESIGN		Verschoor	19-07-85
J.Versteegt		Verschoor	29-08-85
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		morsestraat 28 8716 AH EDE HOLLAND Tel. 08380-37403	
			page: 13

JOHANNUS  
ORGAN  
OPUS 520

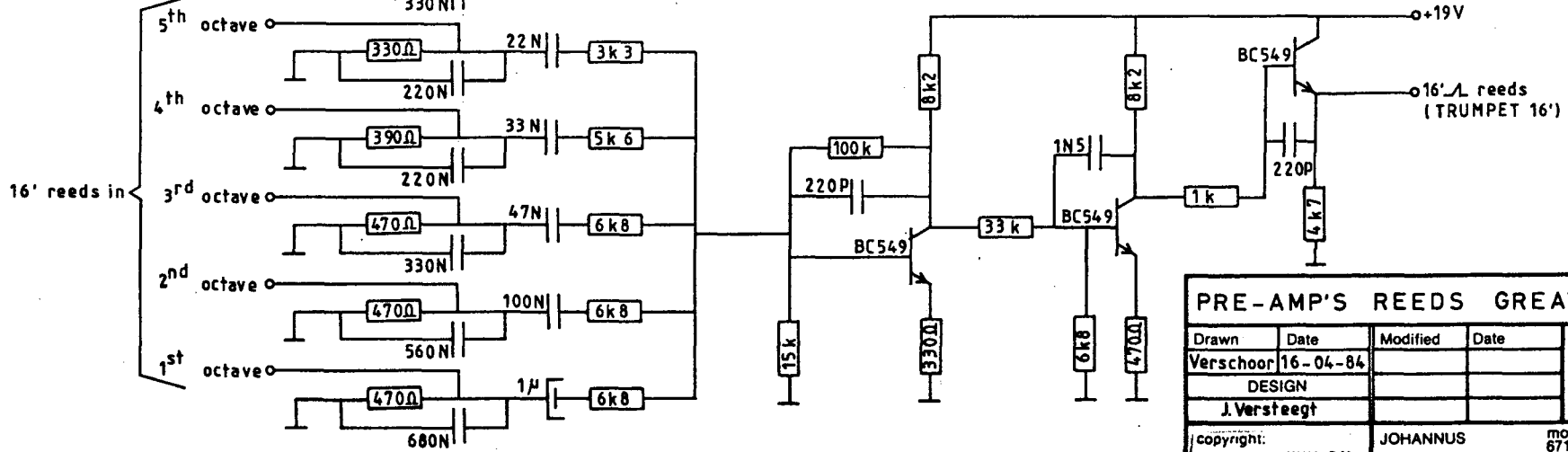
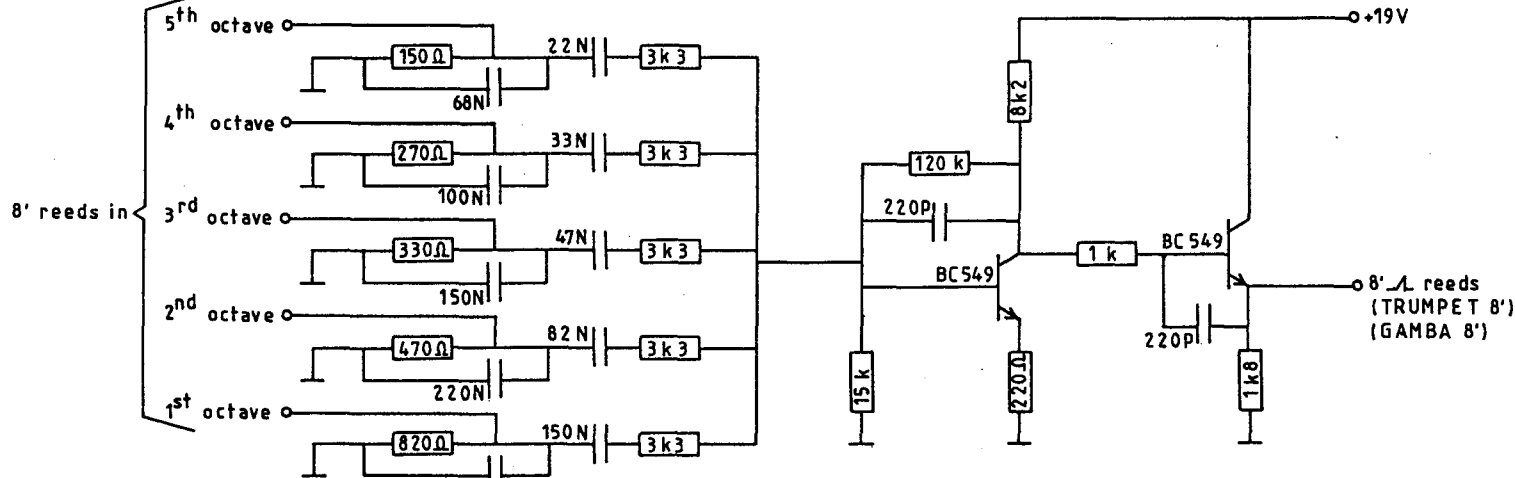
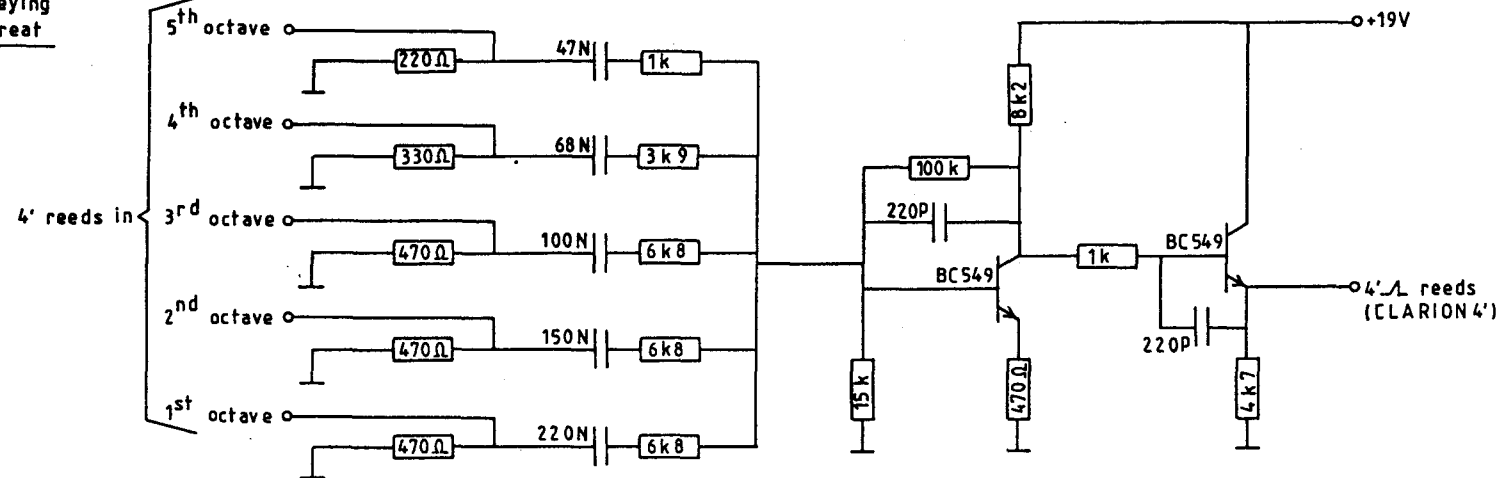


PRE-AMP'S SLOW GREAT				JOHANNUS ORGAN OPUS 520
Drawn	Date	Modified	Date	
Verschoor	10-04-84			
DESIGN				
J.Versteegt				
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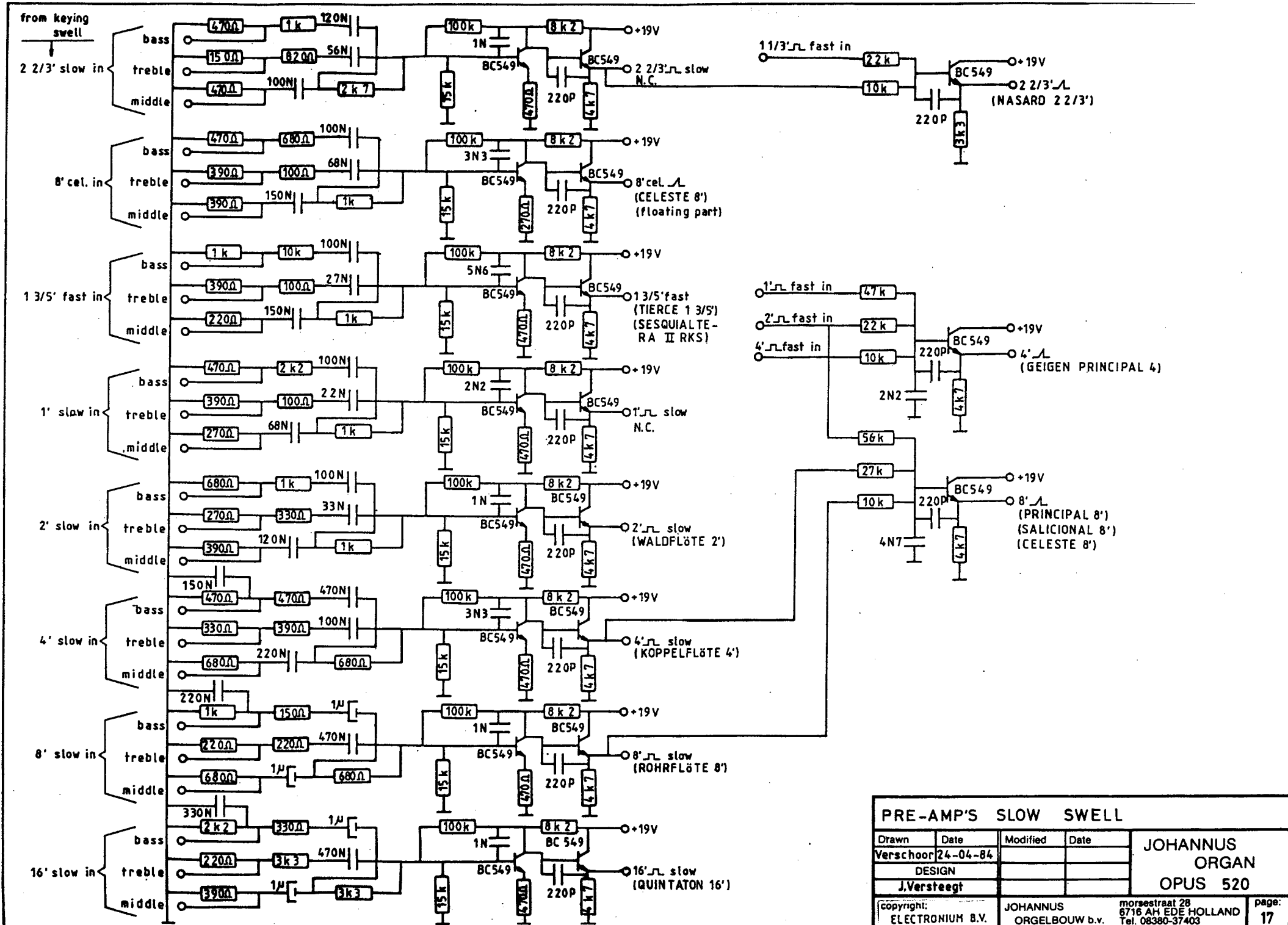
from keying great



PRE-AMP'S REEDS GREAT

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J. Versteegt			

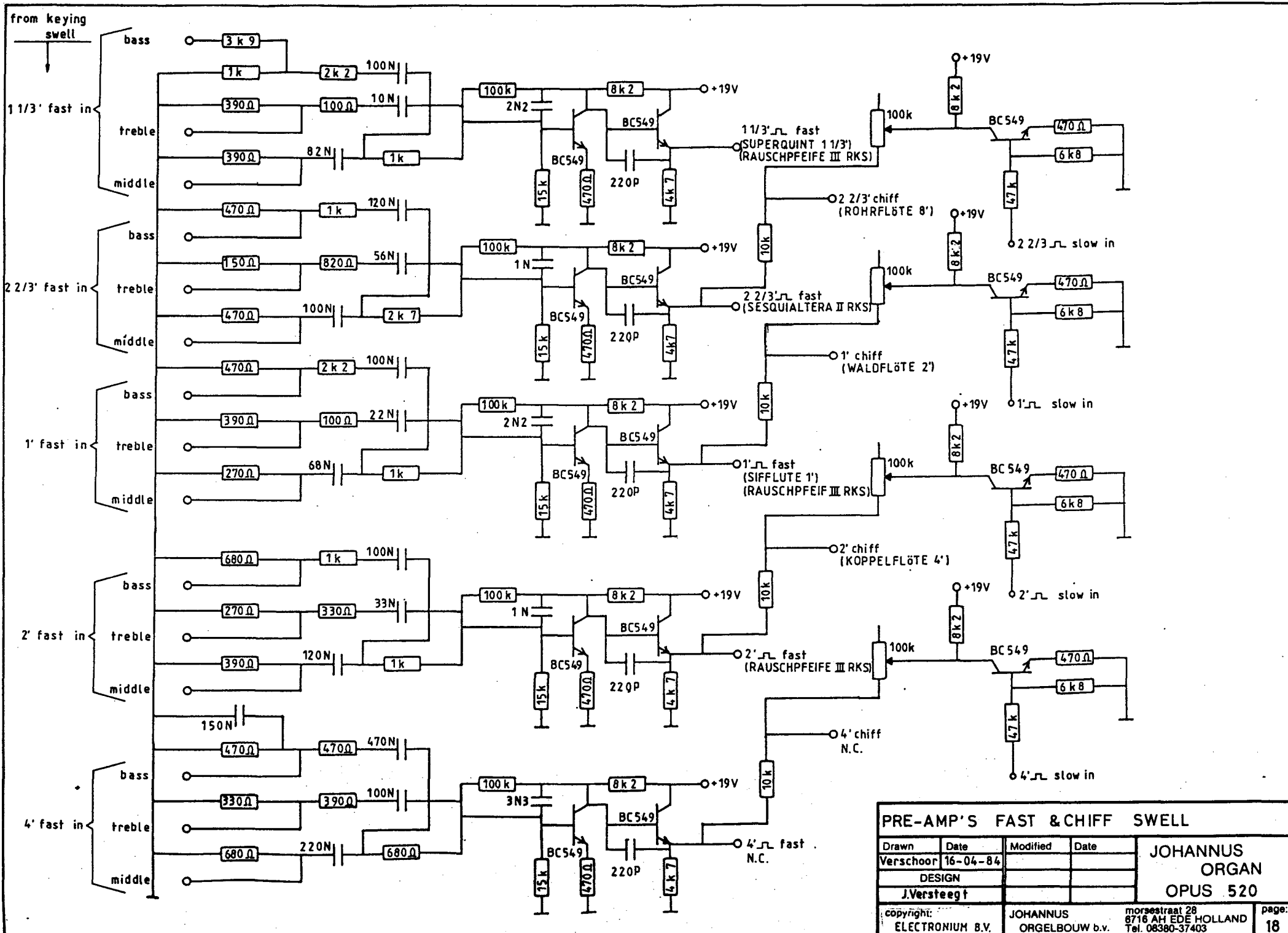
JOHANNUS  
ORGAN  
OPUS 520



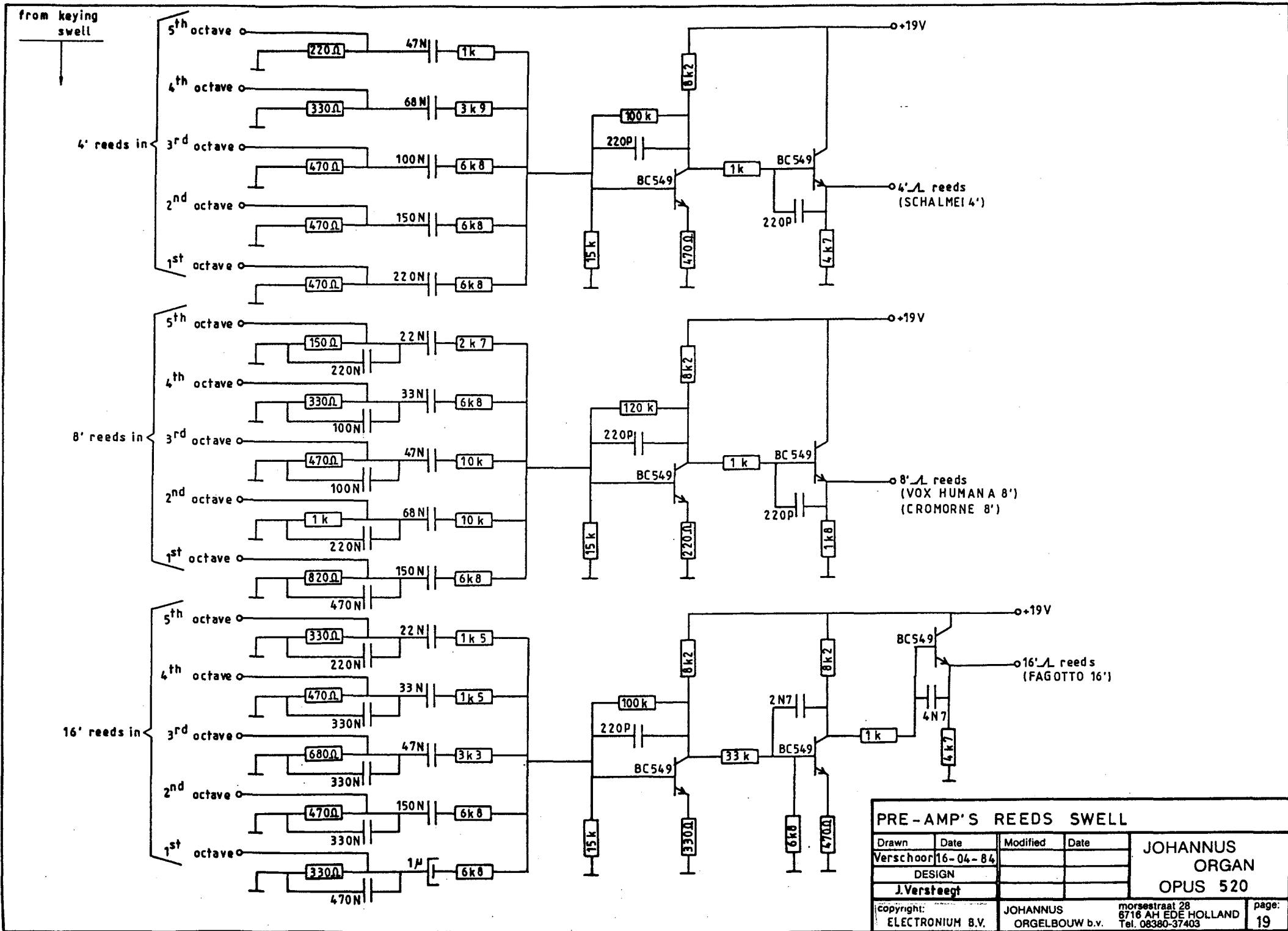
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DESIGN			
J.Versteegt			

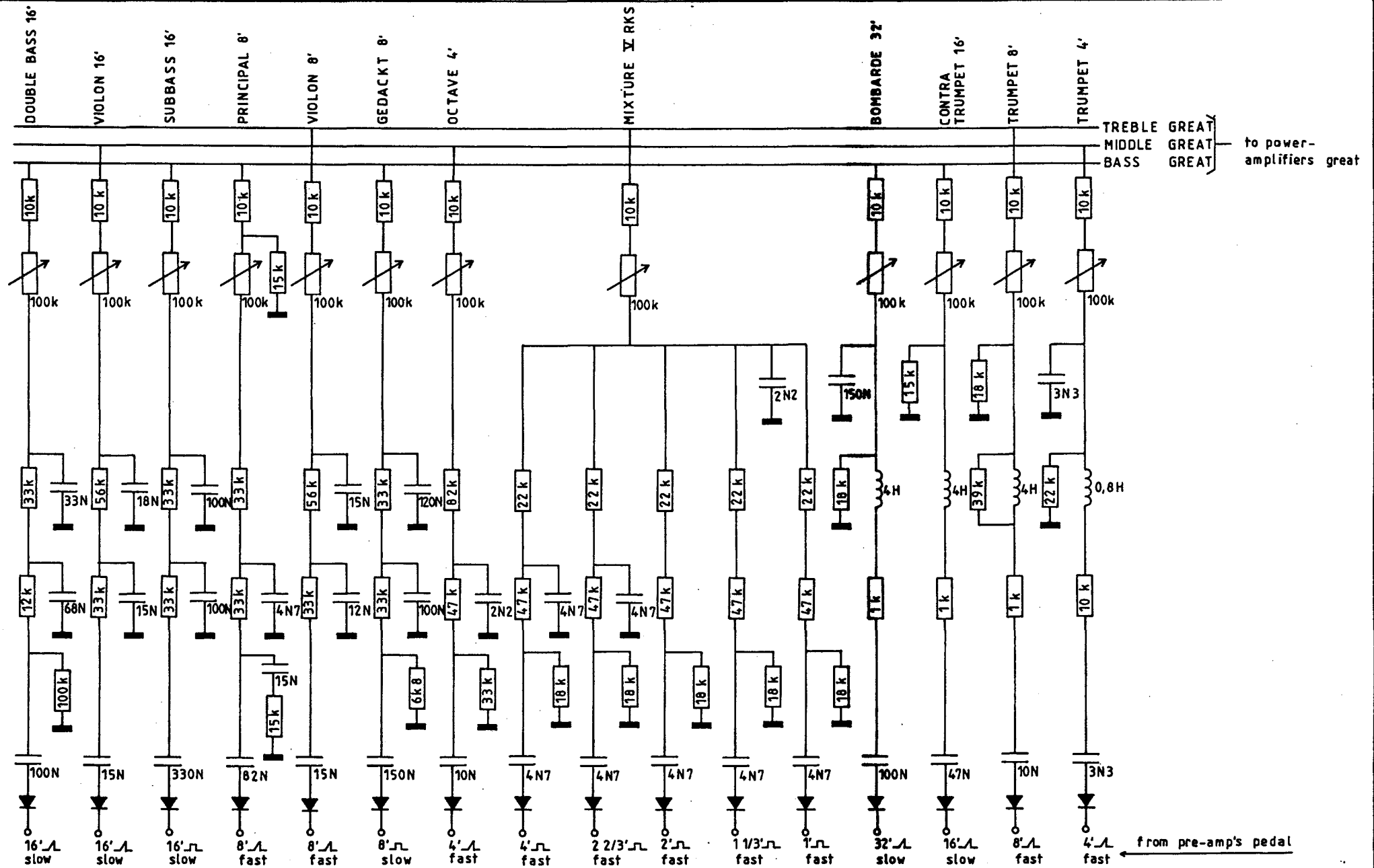
**JOHANNUS  
ORGAN  
OPUS 520**



PRE-AMP'S FAST & CHIFF SWELL			
Drawn	Date	Modified	Date
Verschoor	16-04-84		
DESIGN			
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			page: 18

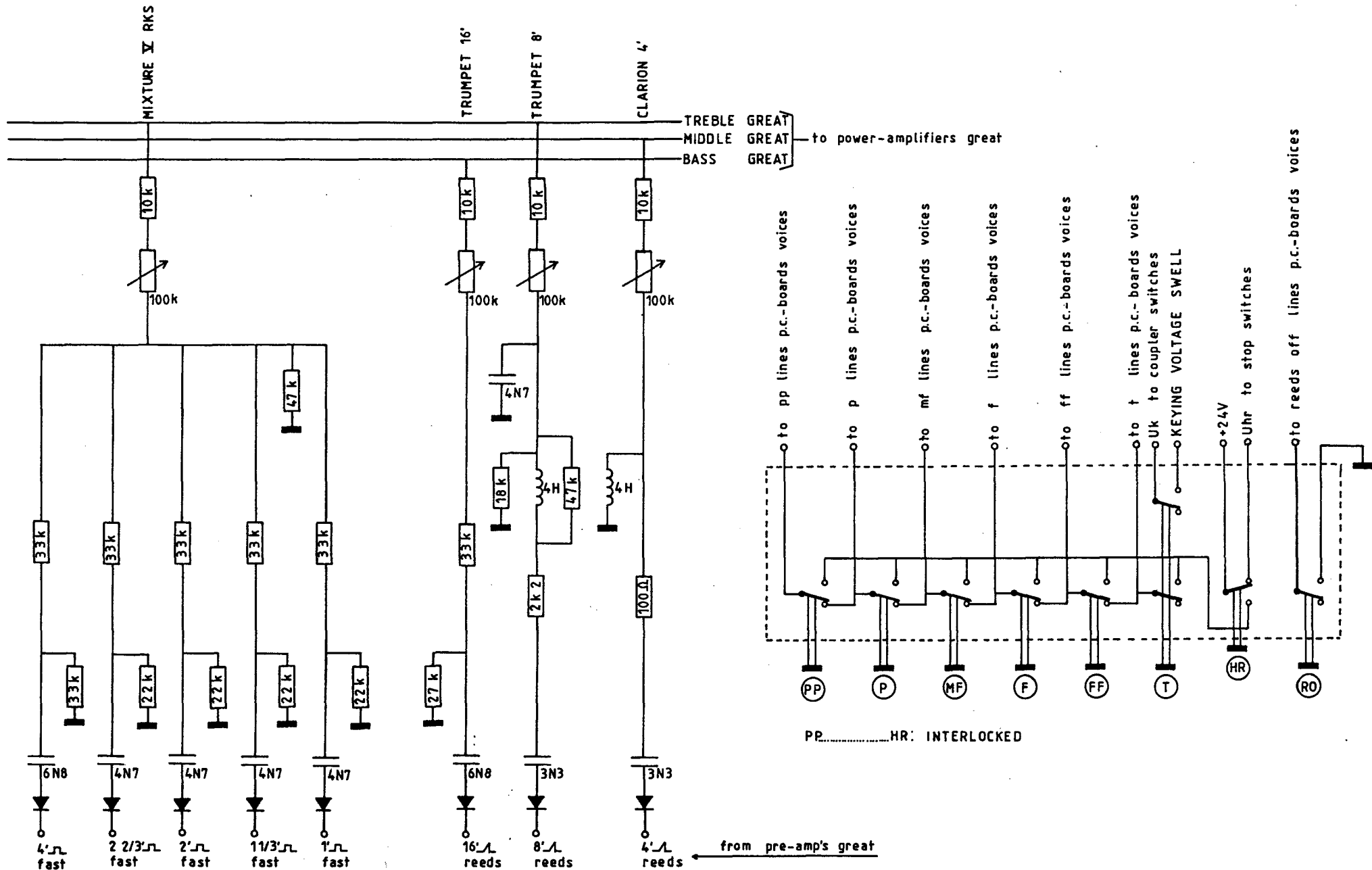


PRE - AMP'S REEDS SWELL			
Drawn	Date	Modified	Date
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DESIGN			
J.Versteegt			
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		Tel. 08380-37403	



VOICES PEDAL			
Drawn	Date	Modified	Date
Verschoor	15-08-84		
DESIGN			
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ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND	
		Tel. 08380-37403	
		page:	20

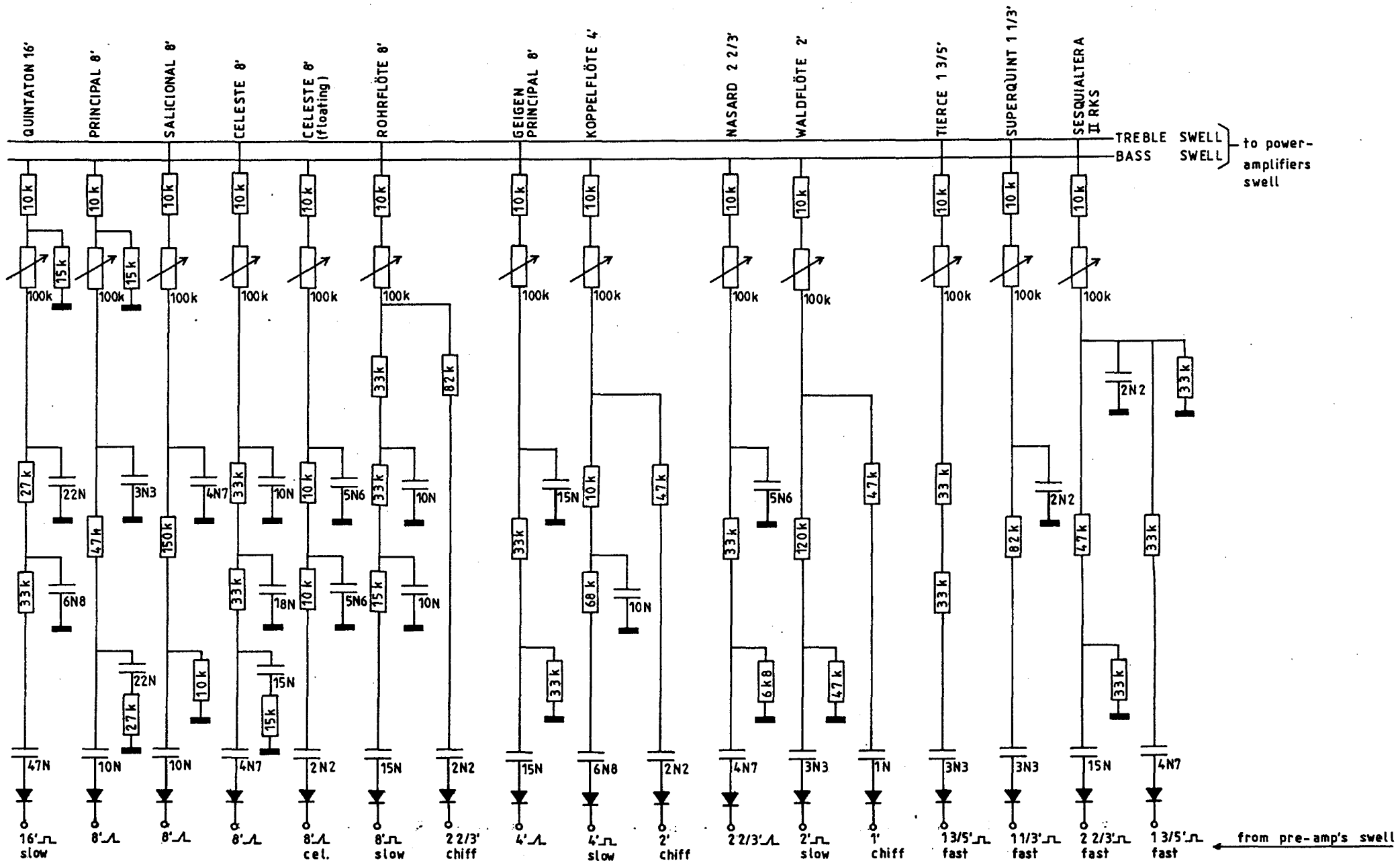




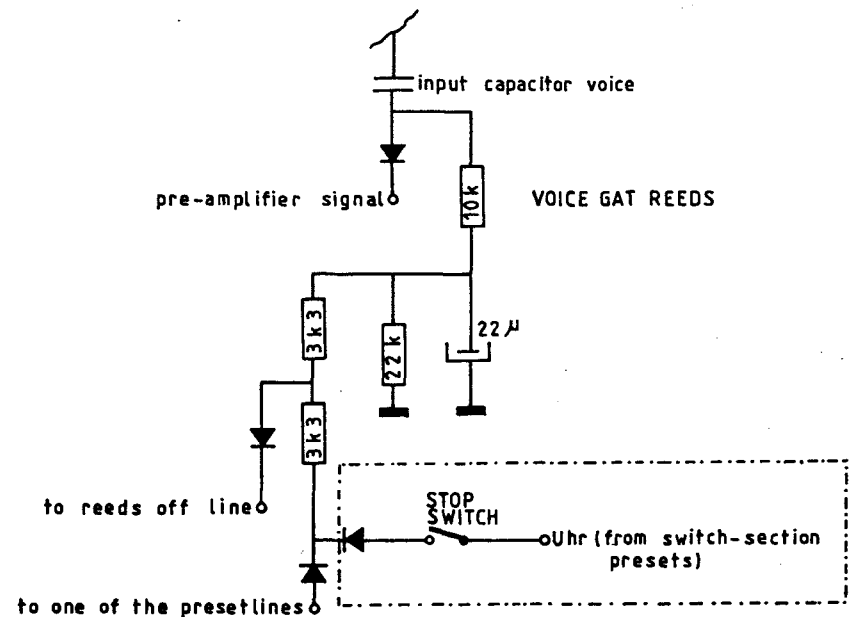
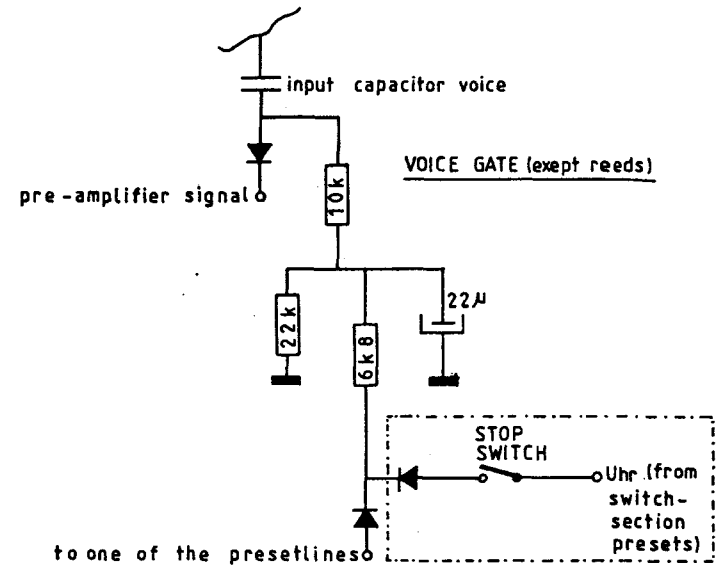
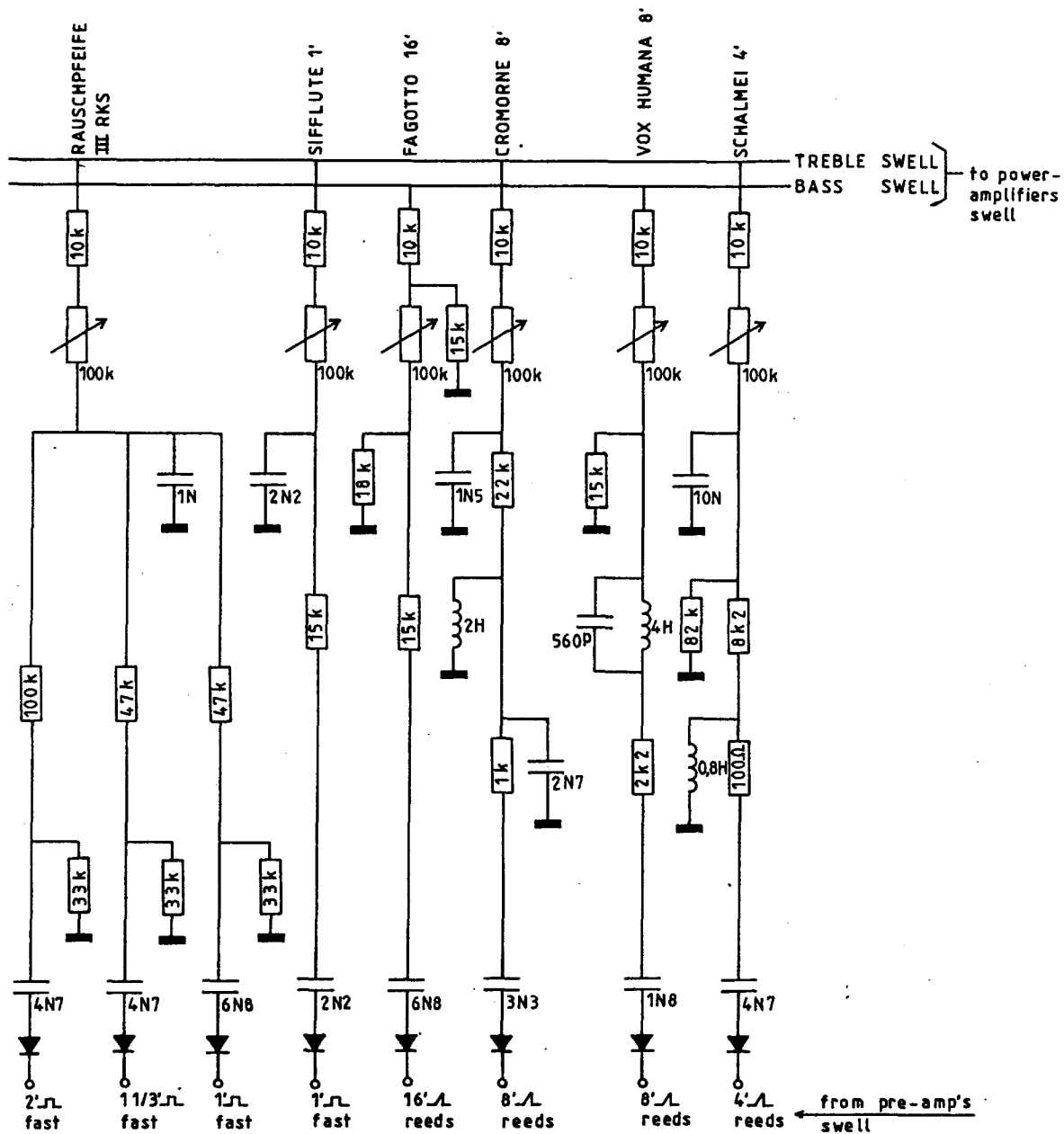
### VOICES II GREAT & SWITCHSECTION PRESETS

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 520
Verschoor	20-08-84			
DESIGN				
J.Versteegt				
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VOICES I SWELL				JOHANNUS ORGAN OPUS 520
Drawn	Date	Modified	Date	
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DESIGN	J.Versteegt			
copyright	JOHANNUS ELECTRONIUM B.V.	morsestraat 28 ORGELBOUW b.v.	page: 23	

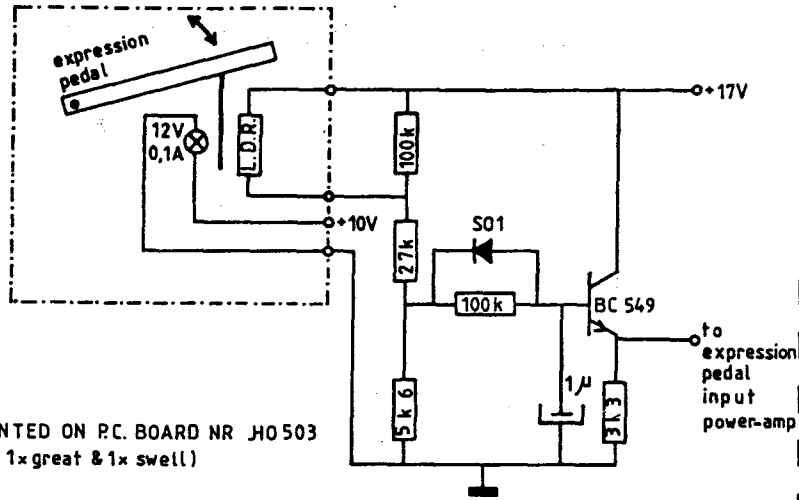


VOICES II SWELL & VOICE GATES

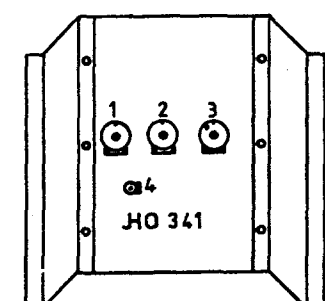
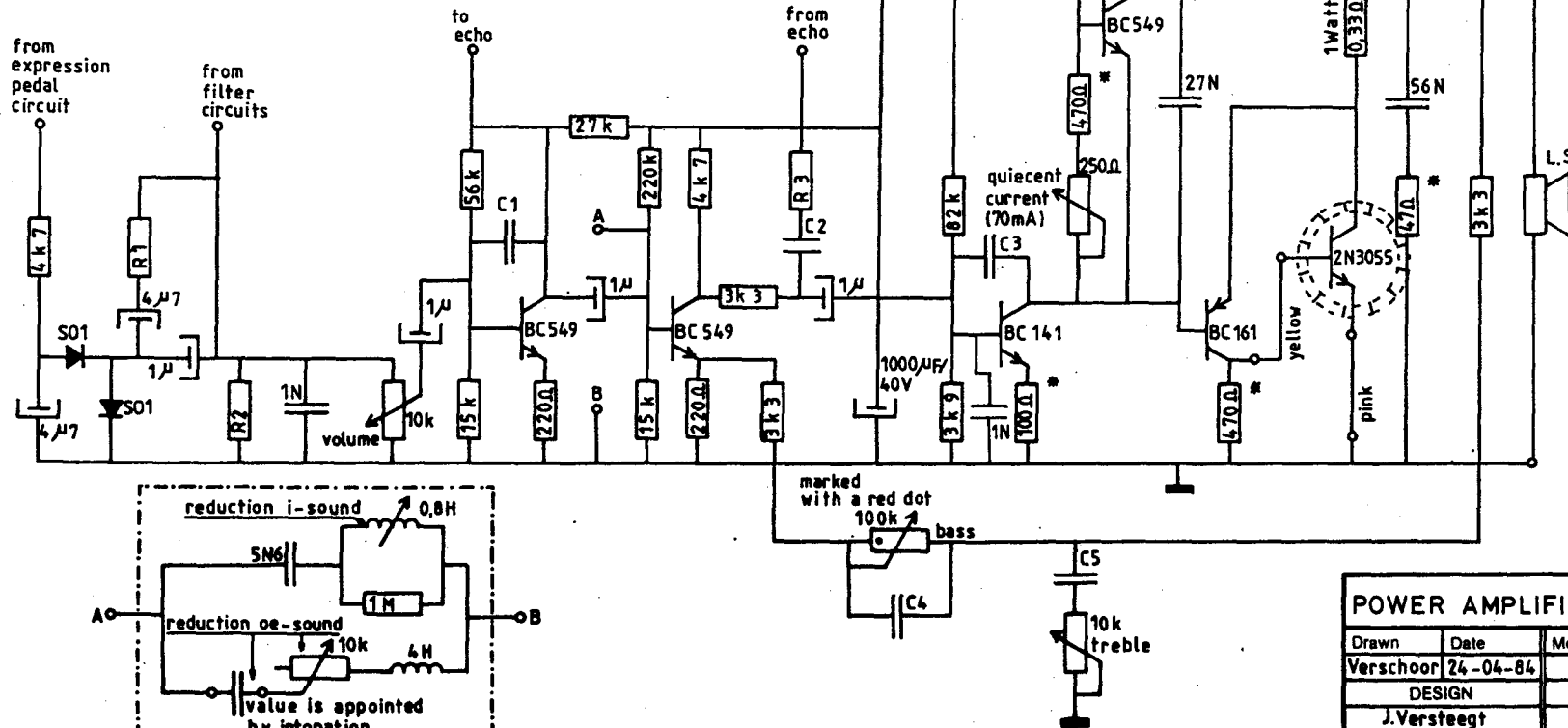
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Verschoor	20-08-84			
DESIGN				
J.Versteegt				
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**NOTE:**  
RESISTORS MARKED WITH A \* ARE MOUNTED ON CERAMIC STAND OFF'S

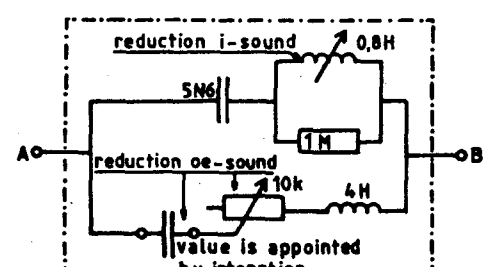
	GREAT + PEDAL			SWELL	
	bass	middle	treble	bass	treble
R1		220Ω	220Ω	220Ω	220Ω
R2	10k	4k7	4k7	10k	4k7
R3	22k		22k	22k	22k
C1	4N7	1N5	470P	1N5	470P
C2			68N		68N
C3	6N8	2N2	470P	1N	470P
C4	150N	150N	150N	150N	150N
C5	330N	100N	47N	150N	47N
L.S.	12100	12100	50 61	12100	5061



MOUNTED ON P.C. BOARD NR JH0503  
(2x: 1x great & 1x swell)



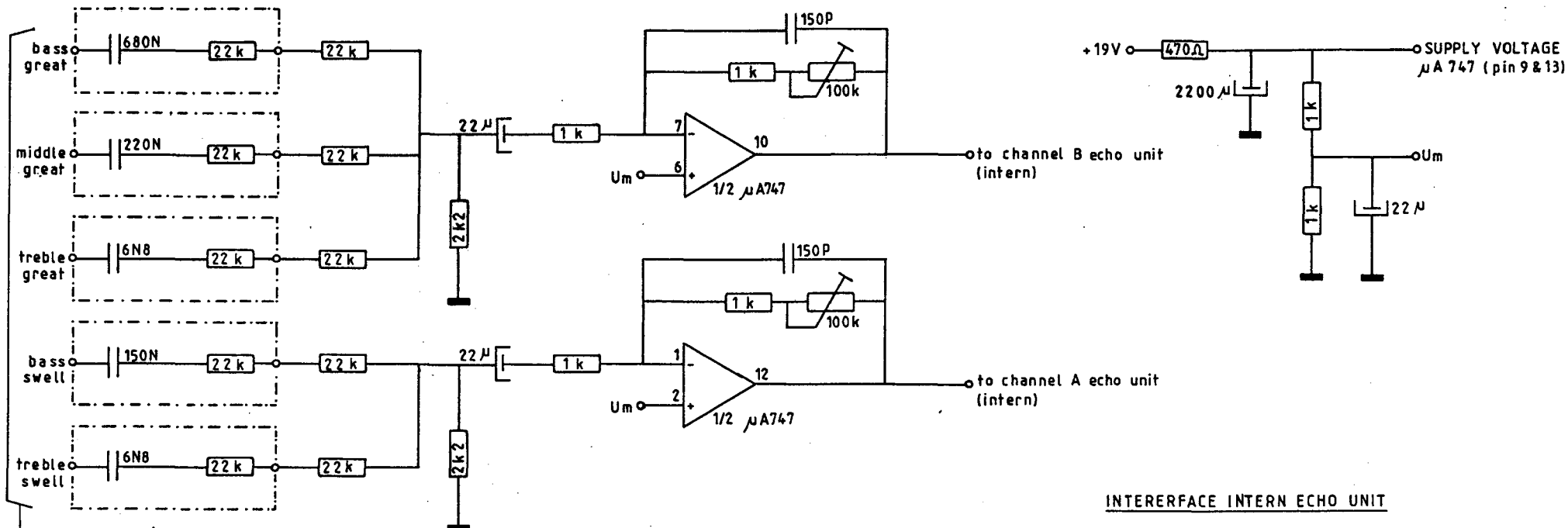
- 1. VOLUME
- 2. TREBLE
- 3. BASS (marked with a red dot)
- 4. QUIECENT CURRENT (70mA)



MOUNTED ON P.C. BOARD NR JH0441

**POWER AMPLIFIER (universal 5x)**

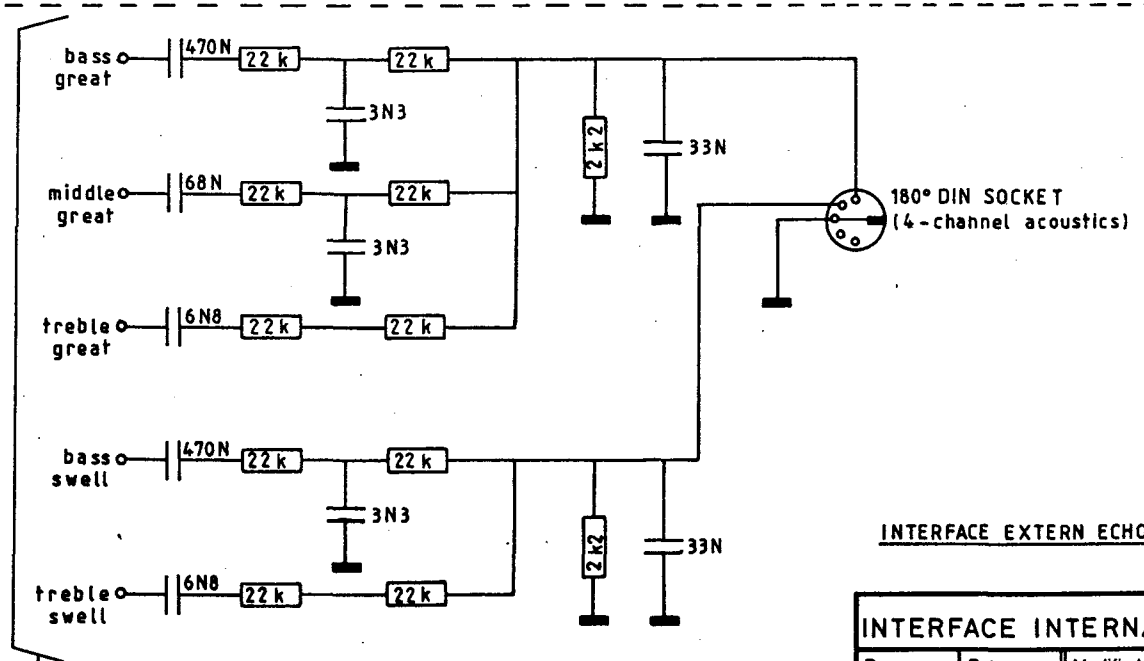
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INTERFACE INTERN ECHO UNIT

mounted on 5 p.c.-boards JH0441

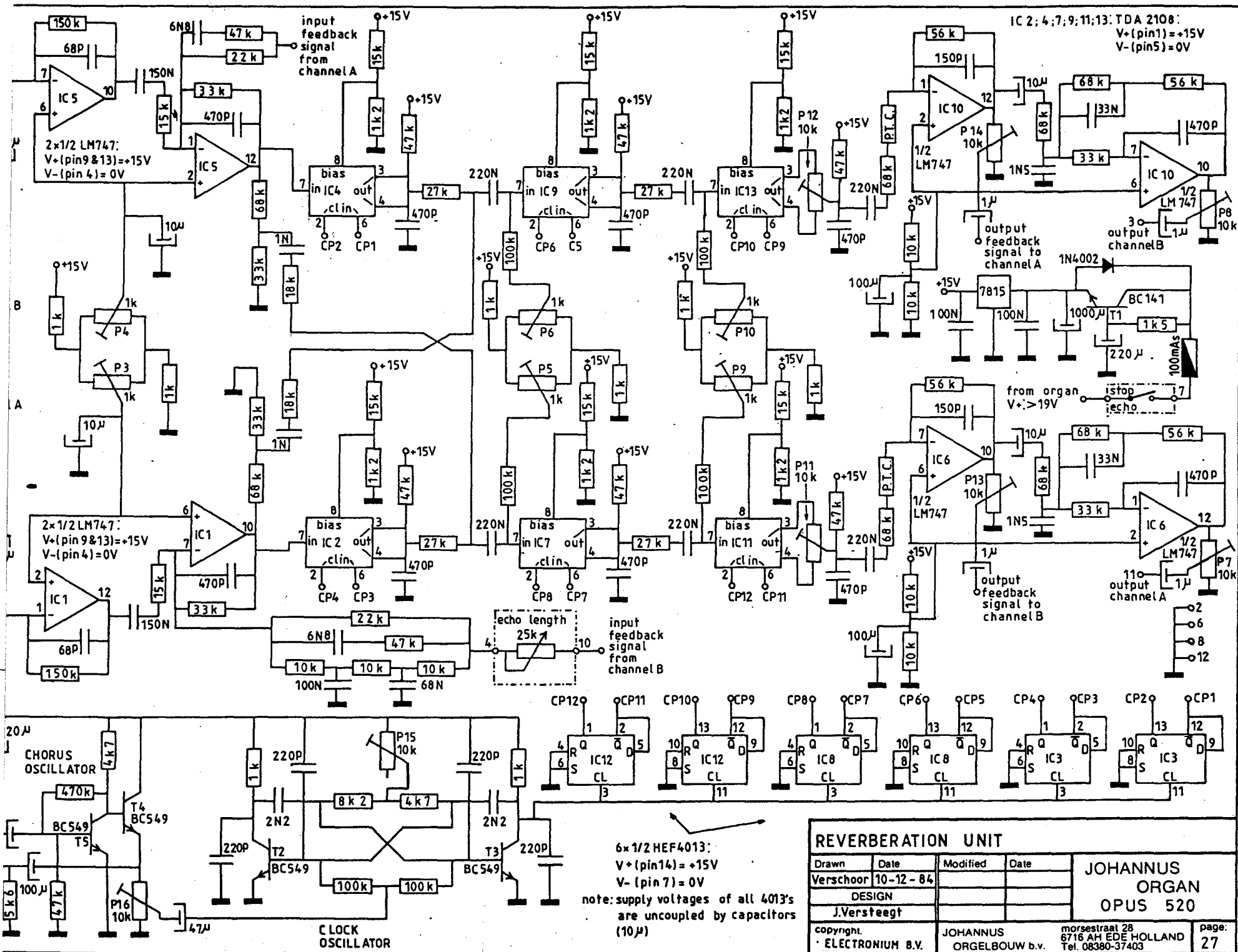
from "to echo" outputs power amplifiers



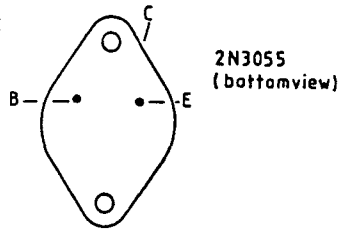
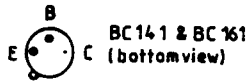
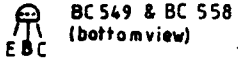
INTERFACE EXTERN ECHO UNIT (4-channel acoustics)

from "REV" outputs power amplifiers

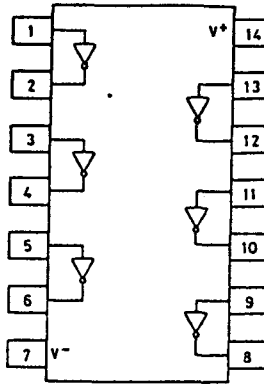
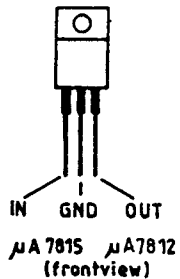
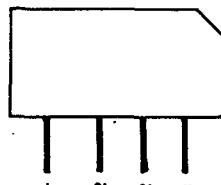
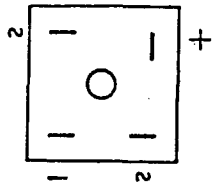
INTERFACE INTERN/EXTERN ECHO			
Drawn	Date	Modified	Date
Verschoor	24-04-84		
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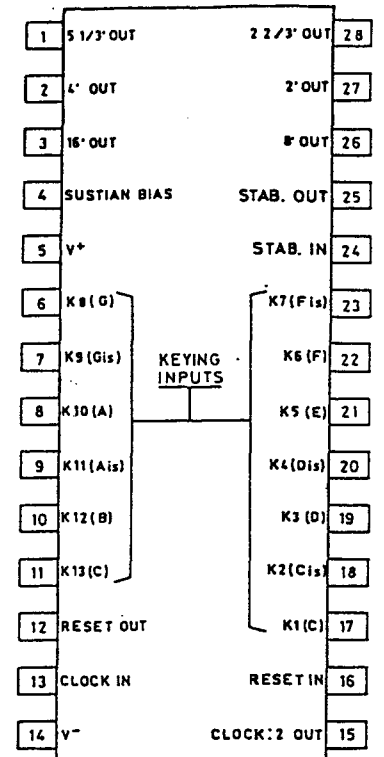
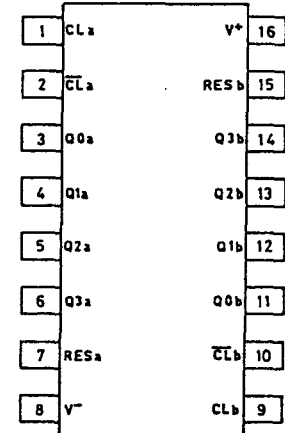
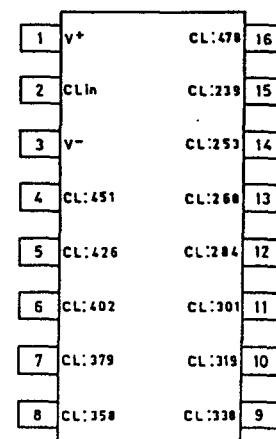
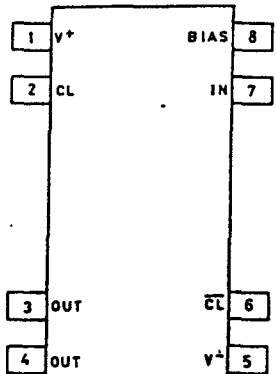
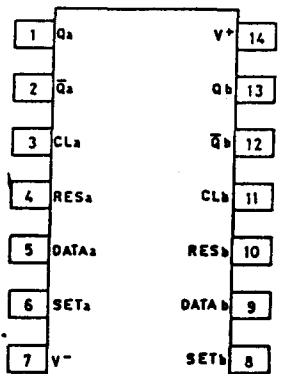
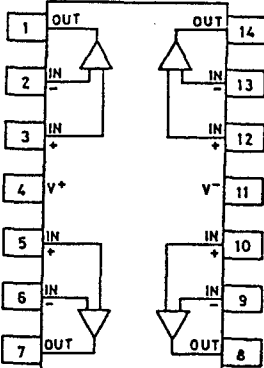
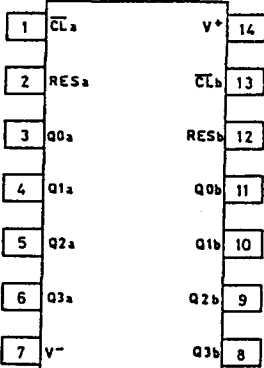
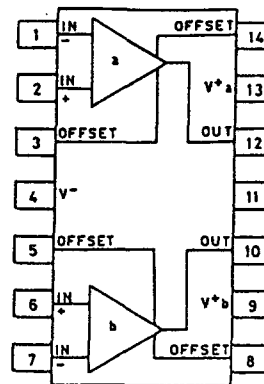
REVERBERATION UNIT				JOHANNUS ORGAN OPUS 520	
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S01  
ZPD 6V2  
1N4002



74C04: hex inverter  
4069: hex inverter



GENERAL INFORMATION SEMI-CONDUCTORS

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