

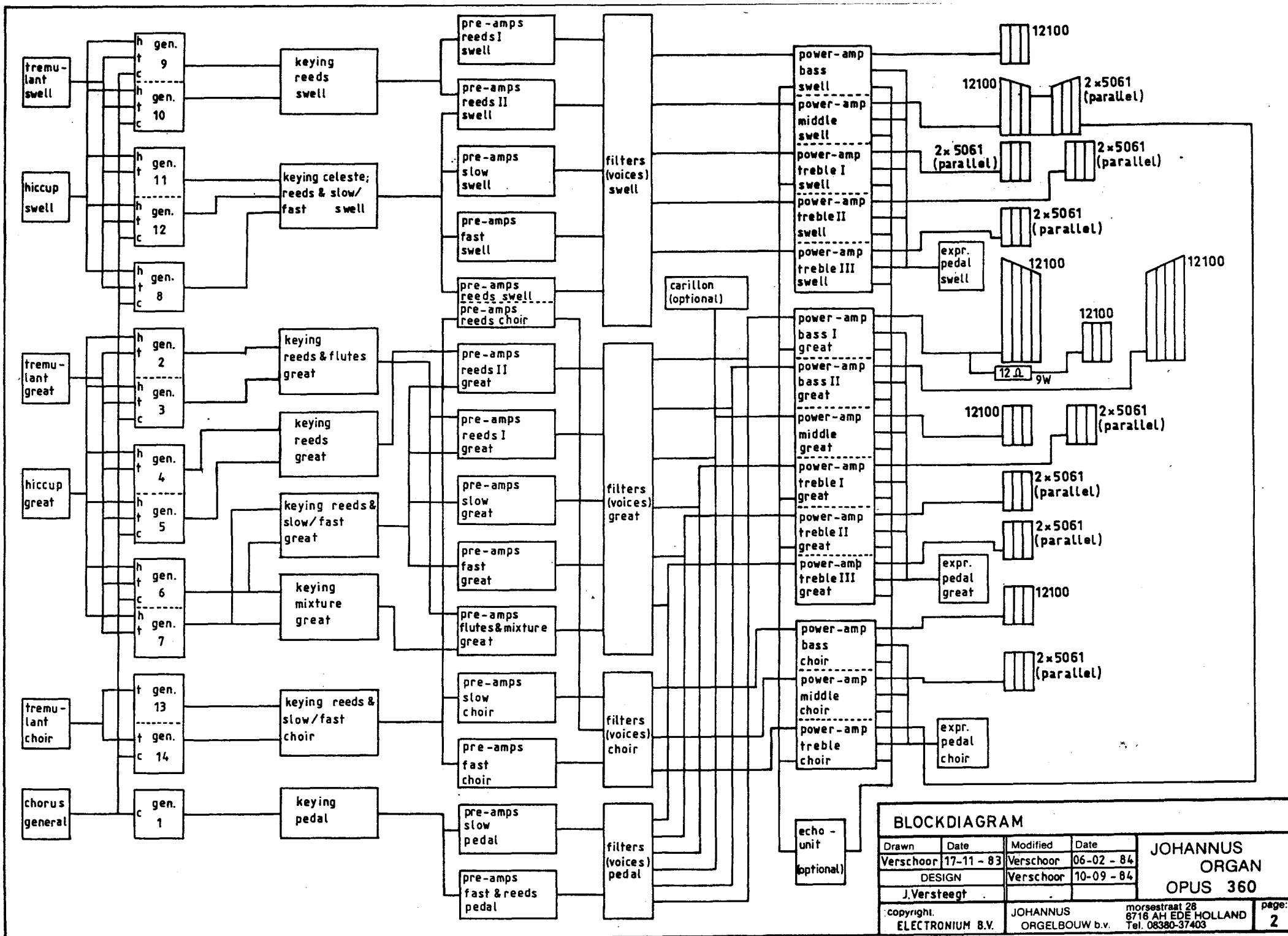
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S C H E M A T I C D I A G R A M S
J O H A N N U S
O P U S 3 6 0
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alterations reserved
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C O N T E N T S

1. SIGNAL COURSE VOICES
2. BLOCKDIAGRAM
3. POSITION GUIDE P.C.-BOARDS (I)
4. POSITION GUIDE P.C.-BOARDS (II)
5. POSITION GUIDE P.C.-BOARDS (III)
TRANSFORMER CONNECTIONS 220V \sim /117V \sim
6. POWER SUPPLY
7. ACCESSORIES (tremulant & coupler system)
8. GENERATOR 1&8 (SINGLE) pedal & celeste
9. GENERATOR 2; 4; 6; 9; 11; 13 (upper) 3; 5; 7; 10; 12; 14 (lower)
10. KEYING PEDAL (p.c.-board 1-6)
11. KEYING PEDAL (p.c.-board 7-32)
12. KEYING CHOIR
13. KEYING SLOW-FAST GREAT
14. KEYING REEDS & FLUTES GREAT (upper)
KEYING REEDS GREAT (lower)
15. KEYING MIXTURE GREAT (upper)
KEYING REEDS SWELL (lower)
16. KEYING SLOW-FAST SWELL
17. PRE-AMP'S SLOW PEDAL
18. PRE-AMP'S FAST & REEDS PEDAL
19. PRE-AMP'S SLOW CHOIR
20. PRE-AMP'S FAST & CHIFF CHOIR
21. PRE-AMP'S REEDS CHOIR & SWELL
22. PRE-AMP'S SLOW GREAT
23. PRE-AMP'S FAST & CHIFF GREAT
24. PRE-AMP'S MIXTURE & FLUTES GREAT
25. PRE-AMP'S REEDS I GREAT
26. PRE-AMP'S REEDS II GREAT
27. PRE-AMP'S SLOW SWELL
28. PRE-AMP'S FAST SWELL
29. PRE-AMP'S REEDS I SWELL
30. PRE-AMP'S REEDS II SWELL
31. VOICES PEDAL
32. VOICES CHOIR
33. VOICES I GREAT
34. VOICES II GREAT
35. VOICES I SWELL
36. VOICES II SWELL & VOICE-GATES
37. POWER AMPLIFIER (universal 14x)
38. LOUDSPEAKER ASSEMBLY
39. INTERFACE INTERN ECHO UNIT (optional)
40. ECHO UNIT INTERN (optional)
41. INTERFACE 4-CHANNEL ACOUSTICS
42. SWITCHSECTION CAPTURE (with position guide)
43. MEMORYSECTION CAPTURE (motherboard JH0655n)
44. POWER SUPPLY CAPTURE (p.c.-board JH0661)
MEMORY INTERFACES CAPTURE (p.c.-board JH0662)
45. GENERAL INFORMATION SEMI-CONDUCTORS

	STOP	PRESET	GEN. CRESC. STEP	GEN.	KEYING	CONSIST OF	POWER AMP	CONN.	SPEAKER
PEDAL	SUBBASS 32'	FF	12	1	360-38	32's	BII GR	3	12100
	DOUBLE BASS 16'	FF	6	1	360-38	16's + 8's + 4's + 2's	BII GR	3	12100
	SUBBASS 16'	PP	1	1	360-38	16's	BI GR	1/2	2x 12100
	PRINCIPAL 8'	MF	4	1	360-38	8's + 4's + 2's	BI GR	1/2	2x 12100
	VIOLON 8'	T	2	1	360-38	8's + 4's + 2's	TII GR	6	2x 5061
	GEDACKT 8'	P	3	1	360-38	8's	M	4	12100
	OCTAVE 4'	F	5	1	360-38	4's + 2'f + 1'f	BII GR	3	12100
	MIXTURE V rks	T	10	1	360-38	4'f; 2 2/3'f; 2'f; 1 1/3'f & 1'f	TI GR	5	2x 5061
	BOMBARDE 32'	--	--	1	360-38	31's + 16's + 8's + 4's	BII GR	3	12100
	CONTRA TRUMPET 16'	T	12	1	360-38	16's + 8's + 4's + 2's	BI GR	1/2	2 x 12100
	TRUMPET 8'	F	9	1	360-38	8's + 4's + 2's	TII GR	6	2x 5061
	TROMBONE 8'	T	10	1	360-38	8' reeds	M GR	4	12100
TRUMPET 4'	FF	11	1	360-38	4' reeds	TIII GR	7	12100	
CHOIR	STOPPED FLUTE 8'	PP	1	13/14	360-40	8's with 2 2/3' chiff	B CH	8	12100
	OCTAVE 4'	MF	3	13/14	360-40	4's + 2'f + 1'f	B CH	8	12100
	FLUTE 4'	P	4	13/14	360-40	4's with 2' chiff	M CH	9	2x 5061
	TWELFTH 2 2/3'	T	9	13/14	360-40	2 2/3' s	M CH	9	2x 5061
	OCTAVE 2'	F	8	13/14	360-40	2'f + 1'f	M CH	9	2x 5061
	CONICAL FLUTE 2'	F	7	13/14	360-40	2's with 1' chiff	B CH	8	12100
	TIERCE 1 3/5'	--	--	13/14	360-40	1 3/5'f	T CH	10	2x 5061
	NASARD 1 1/3'	FF	9	13/14	360-40	1 1/3'f	T CH	10	2x 5061
	OCTAVE 1'	T	9	13/14	360-40	1'f	T CH	10	2x 5061
	SCHARF IV-II rks	T	11	13/14	360-40	1 1/3'f; 1'f; 2/3'f & 1/2'f	T CH	10	2x 5061
	REGAL 8'	--	12	13/14	360-40	8' reeds	T CH	10	2x 5061
	GREAT	PRINCIPAL 16'	T	10	6/7	360-39A	16's + 8's + 4's + 2's	BII GR	3
PRINCIPAL 8'		MF	4	6/7	360-39A	8' reeds	BI GR	1/2	2x 12100
				6/7	360-39A	8' reeds	TIII GR	7	12100
DIAPASON 8'		FF	3	2/3	360-39B	8' reeds	BII GR	3	12100
GAMBA 8'		FF	1	6/7	360-39A	8's + 4'f + 2s + 1'f	M GR	4	12100
STOPPED FLUTE 8'		PP	2	2/3	360-39B	8' flute with	M GR	4	12100
				6/7	360-39A	2 2/3' chiff			
OCTAVE 4'		MF	6	4/5	360-39C	4' reeds	TII GR	6	2x 5061
OPEN FLUTE 4'		P	5	2/3	360-39B	4' flute with	TI GR	5	2x 5061
				6/7	360-39A	2' chiff			
TWELFTH 2 2/3'		FF	9	6/7	360-39A	2 2/3's + 1 1/3'f	TIII GR	7	12100
OCTAVE 2'		F	8	6/7	360-39A	2'f + 1'f	TI GR	5	2x 5061
FLUTE 2'		F	7	2/3	360-39B	2' flute with	TIII GR	7	12100
				6/7	360-39B	1' chiff			
CORNET IV rks		FF	9	6/7	360-39A	4'f; 2 2/3'f; 1 3/5'f &	M GR	4	12100
				2/3	360-39B	2' flute			
TERZIAN II rks	--	--	6/7	360-39A	2'f & 1 3/5'f	TI GR	5	2x 5061	
MIXTURE IX-V rks	T	11	6/7	360-39A	4'f; 2 2/3'f; 2'f; 1 1/3'f; 1'f;	TI GR	5	2x 5061	
			6/7	360-39D	5; 4; 3; 2 & 1				
TRUMPET 16'	T	12	4/5	360-39C	16' reeds	BII GR	3	12100	
TRUMPET 8'	F	10	4/5	360-39C	8' reeds	TII GR	6	2x 5061	
CLARION 4'	T	11	2/3	360-39B	4' reeds	TIII GR	7	12100	
SWELL	BOURDON 16'	FF	10	11/12	360-41A	16's	B SW	11	12100
	PRINCIPAL 8'	MF	3	11/12	360-41A	8' reeds	B SW	11	12100
	SALICIONAL 8'	T	1	9/10	360-41B	8' reeds	TII SW	14	2x 5061
	CELESTE 8'	--	--	11/12	360-41A	8's + 4's + 2's	TIII SW	15	2x 5061
				8	360-41A	8' celeste (floating)	TII SW	14	2x 5061
	ROHRFLÖTE 8'	PP	2	11/12	360-41A	8's with 2 2/3' chiff	M SW	12	12100
	OCTAVE 4'	MF	6	11/12	360-41A	4's + 2'f + 1'f	M SW	12	12100
	GEMSHORN 4'	--	4	9/10	360-41B	4' reeds	B SW	11	12100
	KOPPELFLÖTE 4'	P	5	11/12	360-41A	4's with 2' chiff	TIII SW	15	2x 5061
	NASARD 2 2/3'	F	9	11/12	360-41A	2 2/3's + 1 1/3'f	M SW	12	12100
	OCTAVE 2'	FF	8	11/12	360-41A	2'f + 1'f	TI SW	13	2x 5061
	WALDFLÖTE 2'	FF	7	11/12	360-41A	2's with 1' chiff	TII SW	14	2x 5061
	SUPERQUINT 1 1/3'	T	9	11/12	360-41A	1 1/3'f	TIII SW	15	2x 5061
	SIFFLUTE 1'	T	9	11/12	360-41A	1'f	TI SW	13	2x 5061
	SESQUIALTERA II rks	T	--	11/12	360-41A	2 2/3'f &	M SW	12	12100
				11/12	360-41A	1 1/3'f	TII SW	14	2x 5061
	RAUSCHPFEIFE III rks	FF	11	11/12	360-41A	2 2/3'f; 2'f & 1 1/3'f	TI SW	13	2x 5061
	FAGOTTO 16'	T	12	9/10	360-41B	16' reeds	B SW	11	12100
	CROMORNE 8'	FF	12	11/12	360-41A	8' reeds	TIII SW	15	2x 5061
	VOX HUMANA 8'	F	9	9/10	360-41B	8' reeds	TI SW	13	2x 5061
OBOE 8'	T	10	9/10	360-41B	8' reeds	M SW	12	12100	
SCHALMEI 4'	T	11	9/10	360-41B	4' reeds	TIII SW	15	2x 5061	

SIGNAL COURSE VOICES				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	15-05-85			
DESIGN				
J. Versteegt				
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BLOCKDIAGRAM				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	17-11-83	Verschoor	06-02-84	
DESIGN		Verschoor	10-09-84	
J.Versteegt				copyright: JOHANNUS ELECTRONIUM B.V. ORGELBOUW b.v.
morsestraat 28 8716 AH EDE HOLLAND Tel. 08380-37403				
page: 2				

(COPPERSIDE VIEW)

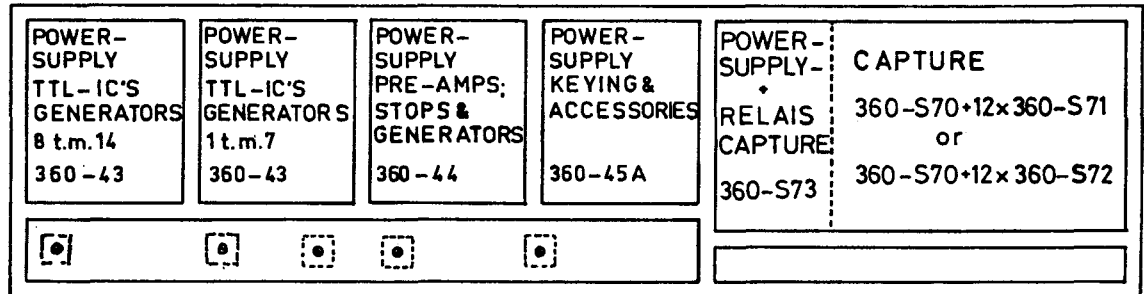
INTERFACE 4-CHANNEL ACOUSTICS	FILTERS PEDAL 360-65	FILTERS GREAT 360-66	FILTERS CHOIR 360-67	FILTERS SWELL 360-68	
GENERATOR GREAT (DOUBLE) REEDS & FLUTES 2 3 GEN. 360-47B	145A-KEYING: MIXTURE GREAT 360-39D			PRE-AMP GREAT MIXTURE & FLUTES 360-29E	PRE-AMP CHOIR & SWELL REEDS 360-30C
GENERATOR GREAT (DOUBLE) REEDS 4 5 GEN. 360-47B	397-KEYING: REEDS & FLUTES GREAT 360-39B			PRE-AMP GREAT REEDS I 360-29C	PRE-AMP GREAT REEDS II 360-29D
GENERATOR GREAT (DOUBLE) SLOW/FAST; REEDS & MIXTURE 6 7 GEN. 360-47B	453-KEYING: SLOW/FAST & REEDS GREAT 360-39A			PRE-AMP GREAT SLOW 360-29A	PRE-AMP GREAT FAST 360-29B
GENERATOR PEDAL (SINGLE) GEN.1 360-47A	453-KEYING: PEDAL 360-38	PRE-AMP PEDAL SLOW 360-28A	PRE-AMP PEDAL FAST & REEDS 360-28B	CARILLON GREAT (OPTIONAL) C 90	

POSITION GUIDE P.C.-BOARDS (I)				JOHANNUS ORGAN	
Drawn	Date	Modified	Date	OPUS 360 DL	
Verschoor	09-08-83	Verschoor	10-09-84		
DESIGN				page: 3	
J. Versteegt					
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(COPPERSIDE VIEW)

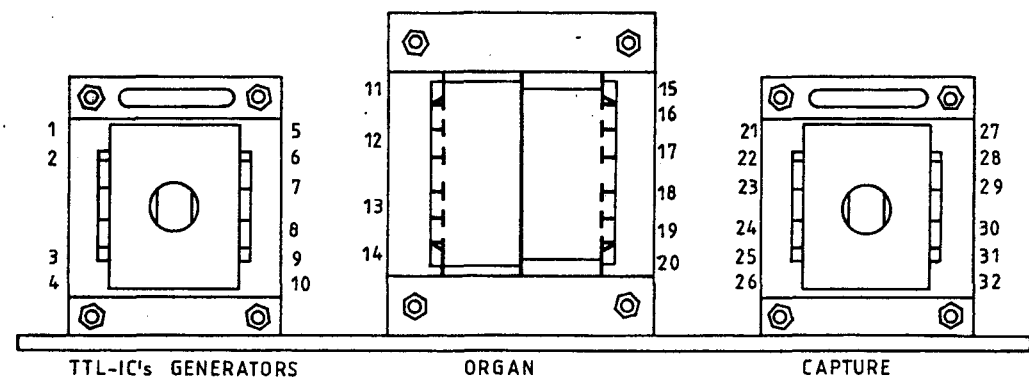
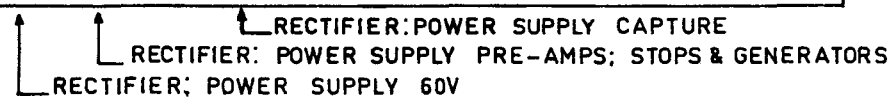
	POWER-AMP CHOIR BASS 360-55	POWER-AMP CHOIR MIDDLE 360-55	POWER-AMP CHOIR TREBLE 360-55	POWER-AMP SWELL BASS 360-55	POWER-AMP SWELL MIDDLE 360-55	POWER-AMP SWELL TREBLE I 360-55	POWER-AMP SWELL TREBLE II 360-55	POWER-AMP SWELL TREBLE III 360-55	
GENERATOR SWELL (SINGLE) CELESTE GEN 8 360-47A	INTERFACE ELECTRONIC REVERBERATION CIRCUIT (INTERN) 360-26A		POWER AMP GREAT BASS I 360-55	POWER AMP GREAT BASS II 360-55	POWER AMP GREAT MIDDLE 360-55	POWER AMP GREAT TREBLE I 360-55	POWER AMP GREAT TREBLE II 360-55	POWER AMP GREAT TREBLE III 360-55	POWER SUPPLY (60V) & EXPRESSION PEDAL CIRCUITS 360-46
GENERATOR SWELL (DOUBLE) REEDS 9 GEN. 10 GEN. 360-47B	398-KEYING: REEDS SWELL 360-41B					PRE-AMP SWELL REEDS I 360-31C	PRE-AMP SWELL REEDS II 360-31D		
GENERATOR SWELL (DOUBLE) SLOW/FAST & REEDS 11 GEN. 12 GEN. 360-47B	453-KEYING: SLOW/FAST & REEDS SWELL 360-41A					PRE-AMP SWELL SLOW 360-31A	PRE-AMP SWELL FAST 360-31B		
GENERATOR CHOIR (DOUBLE) SLOW/FAST & REEDS 13 GEN. 14 GEN. 360-47B	453-KEYING: SLOW/FAST & REEDS CHOIR 360-40					PRE-AMP CHOIR SLOW 360-30A	PRE-AMP CHOIR FAST 360-30B		

POSITION GUIDE P.C.-BOARDS (II)			
Drawn	Date	Modified	Date
Verschoor	09-08-83		
DESIGN			
J.Versteegt			
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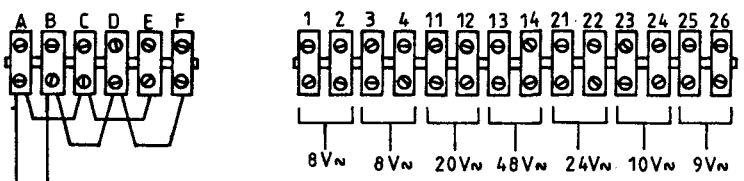


(COMPONENTSIDE VIEW)

NOTE: P.C.-BOARD WITH ACCESSORIES-CONTROLS (360-45B) IS MOUNTED UNDER KEYBOARD (OPTIONAL)



- 1-2 = 8V/6A secondary winding
- 3-4 = 8V/6A secondary winding
- 5 = 0V
- 6 = 100V primary winding
- 7 = 120V
- 8 = 0V
- 9 = 100V primary winding
- 10 = 120V
- 11-12 = 20V/3A secondary winding
- 13-14 = 48V/4A secondary winding
- 15 = 0V
- 16 = 100V primary winding
- 17 = 120V
- 18 = 0V
- 19 = 100V primary winding
- 20 = 120V
- 21-22 = 24V/0,1A secondary winding
- 23-24 = 10V/1A secondary winding
- 25-26 = 9V/10A secondary winding
- 27 = 0V
- 28 = 100V primary winding
- 29 = 120V
- 30 = 0V
- 31 = 100V primary winding
- 32 = 120V

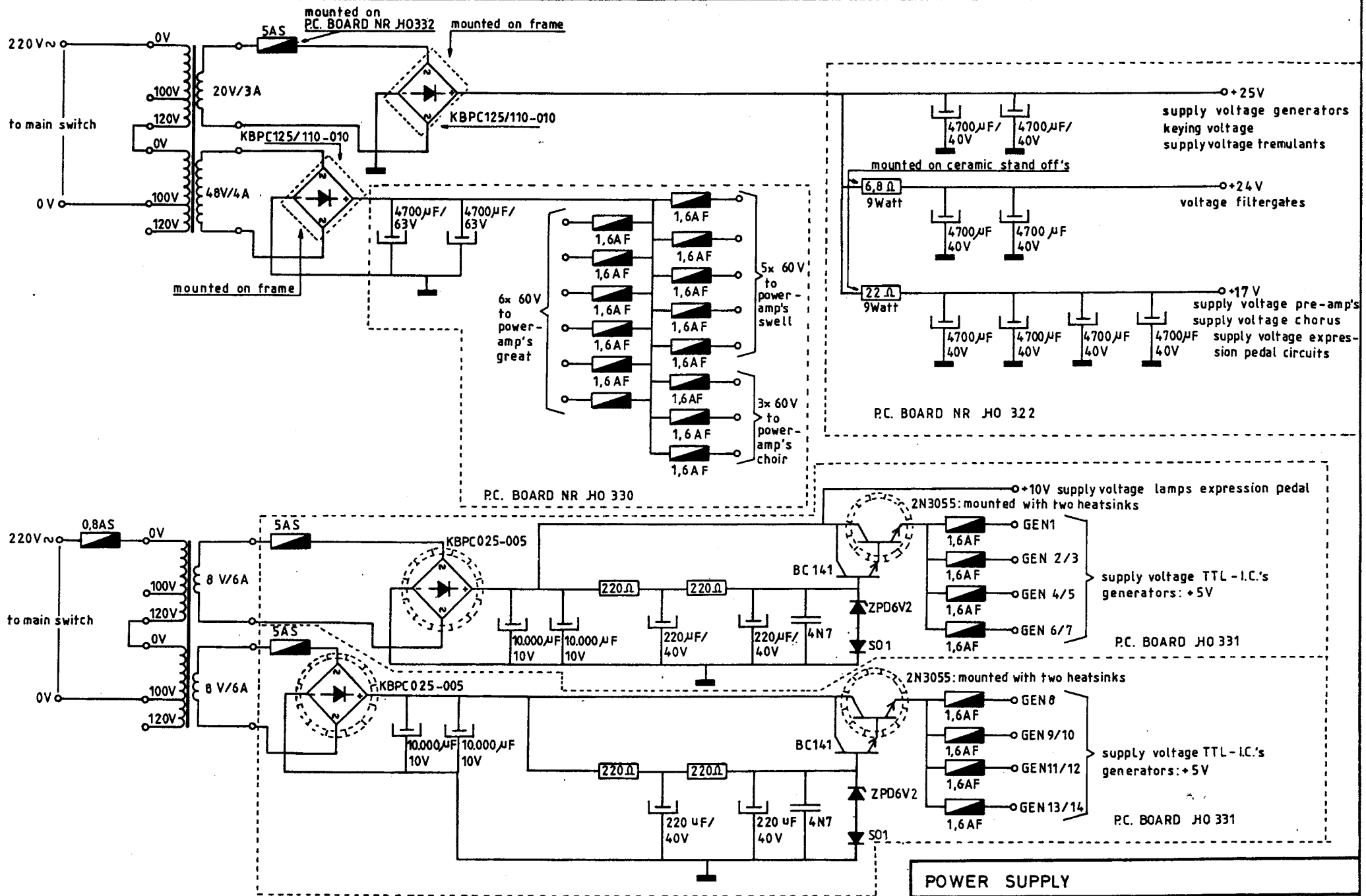


220V_n CONNECTIONS: A-5; 7-8; B-9
 C-15; 17-18; D-19
 E-27; 29-30; F-31

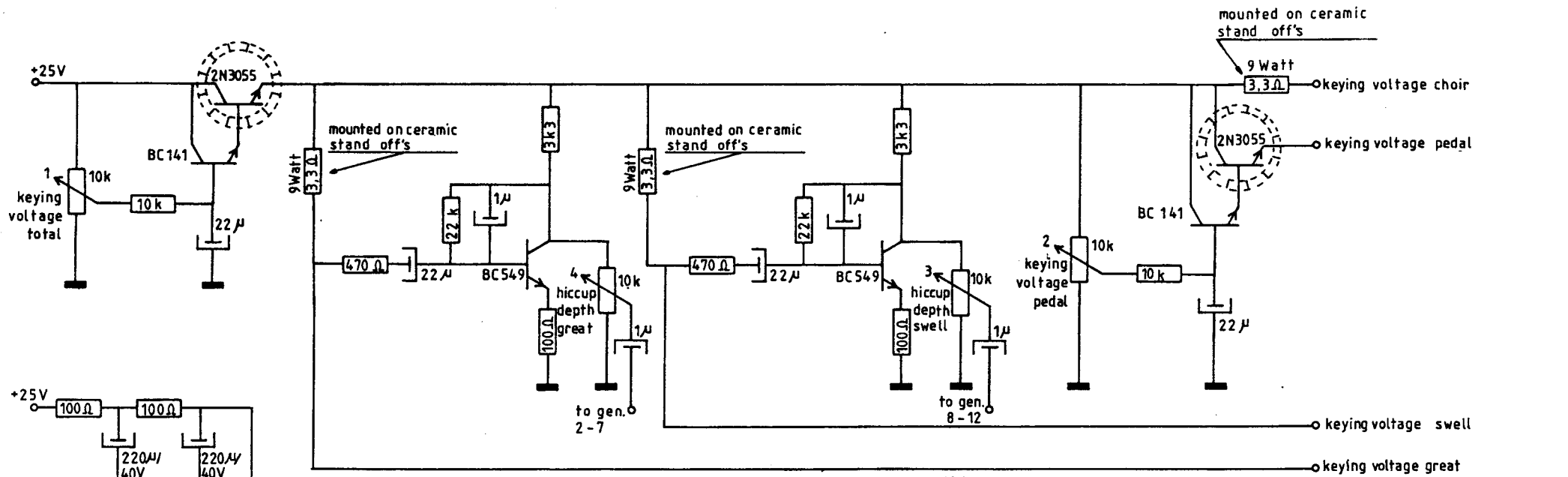
117V_n CONNECTIONS: A-5 & 8; B-7 & 10
 C-15 & 18; D-17 & 20
 E-27 & 30; F-29 & 32

220V_n
or
117V_n

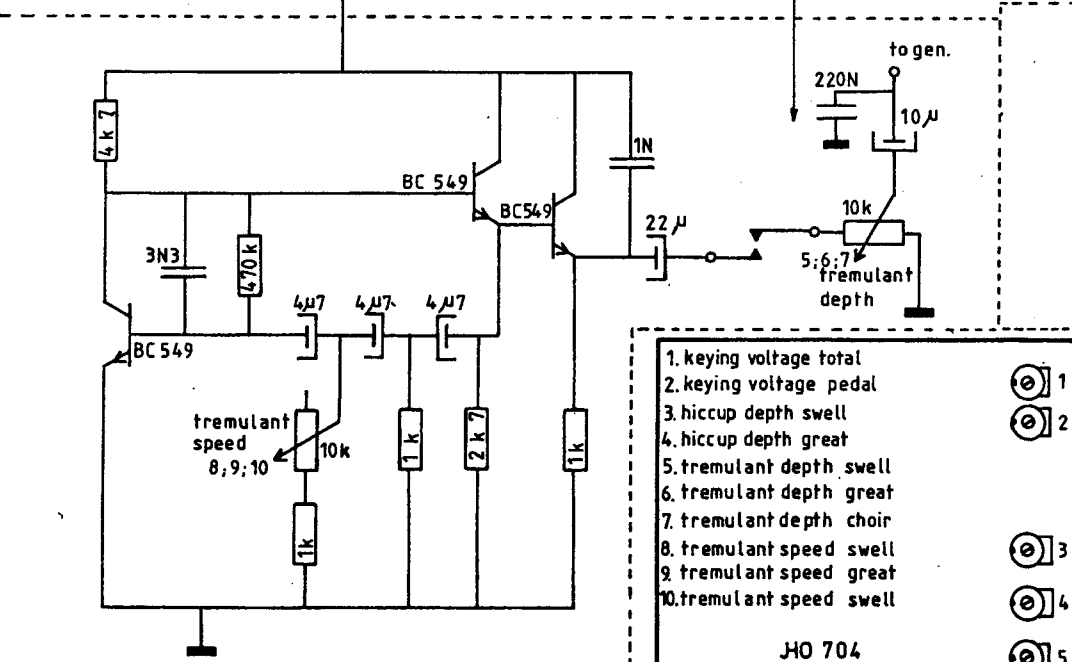
POSITIONGUIDE P.C.-BOARDS (III)			
TRANSFORMER CONNECTIONS 220V _n /117V _n			
Drawn	Date	Modified	Date
Verstchoor	04-10-83		
DESIGN			
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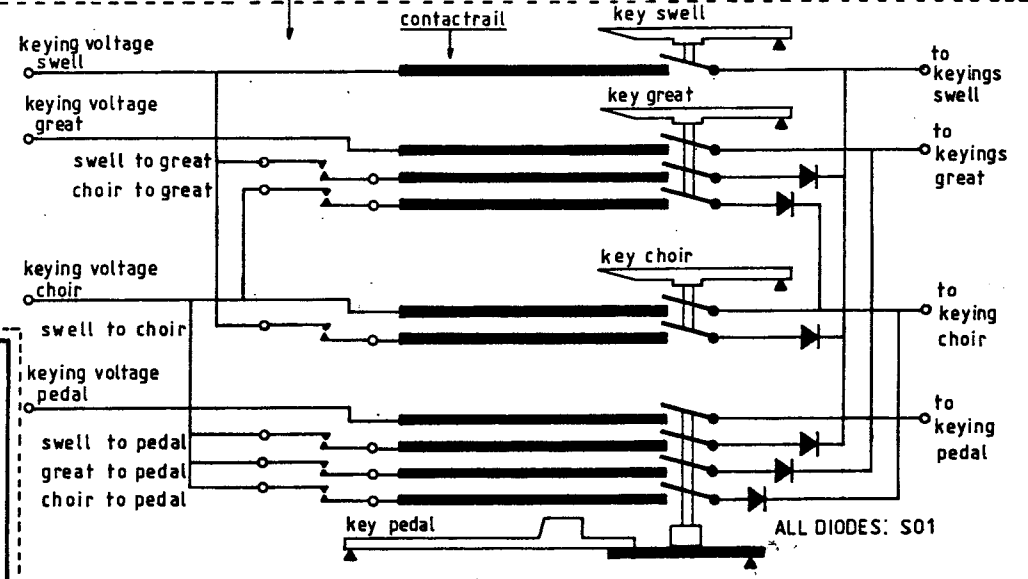
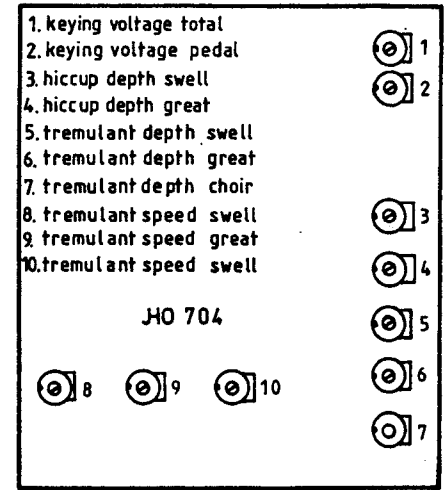
POWER SUPPLY				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	18-11-83	Verschoor	15-04-85	
DESIGN				
J.Versteegt				
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NOTE: Relais are mounted on P.C. board nr JO 661 (setzer)

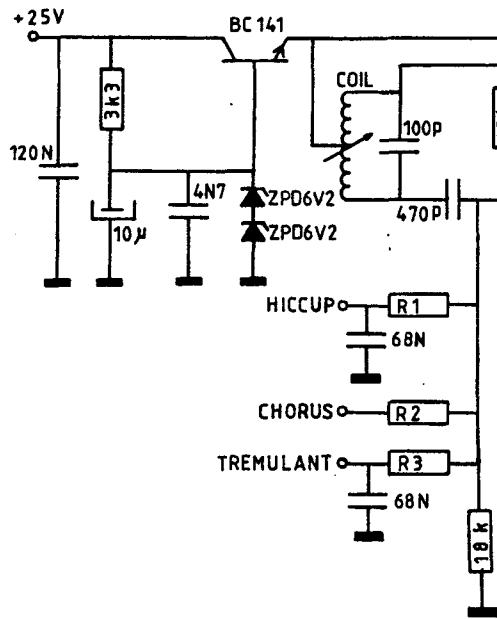


NOTE: if the potentiometers 1-10 are not mounted on P.C.-BOARD nr JO 704; they are mounted under the keyboard.

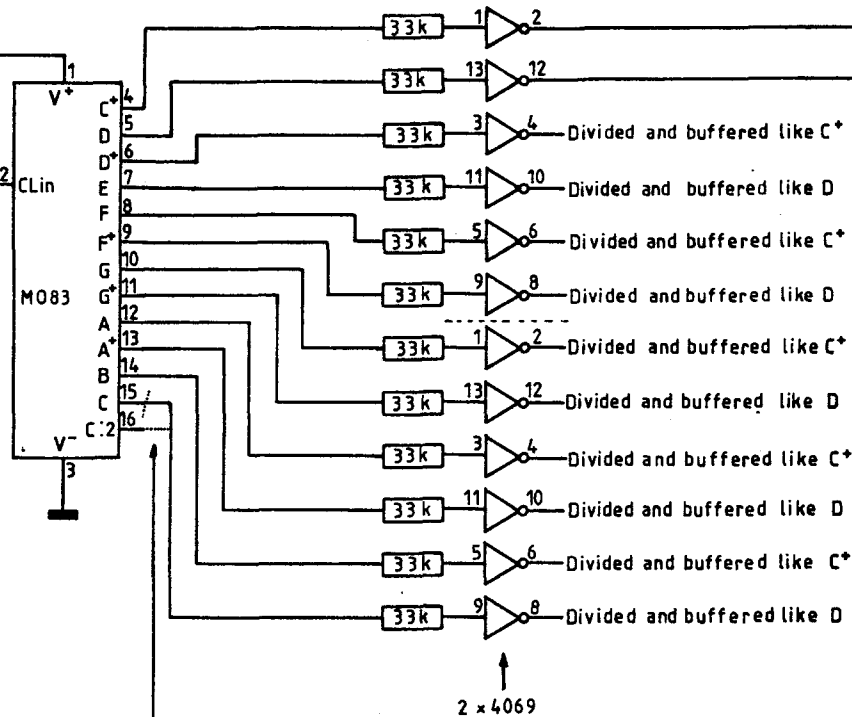


ACCESSORIES (tremulant & coupler system)			
Drawn	Date	Modified	Date
Verschoor	18-11-83	Verschoor	20-05-85
DESIGN			
J.Versteegt			
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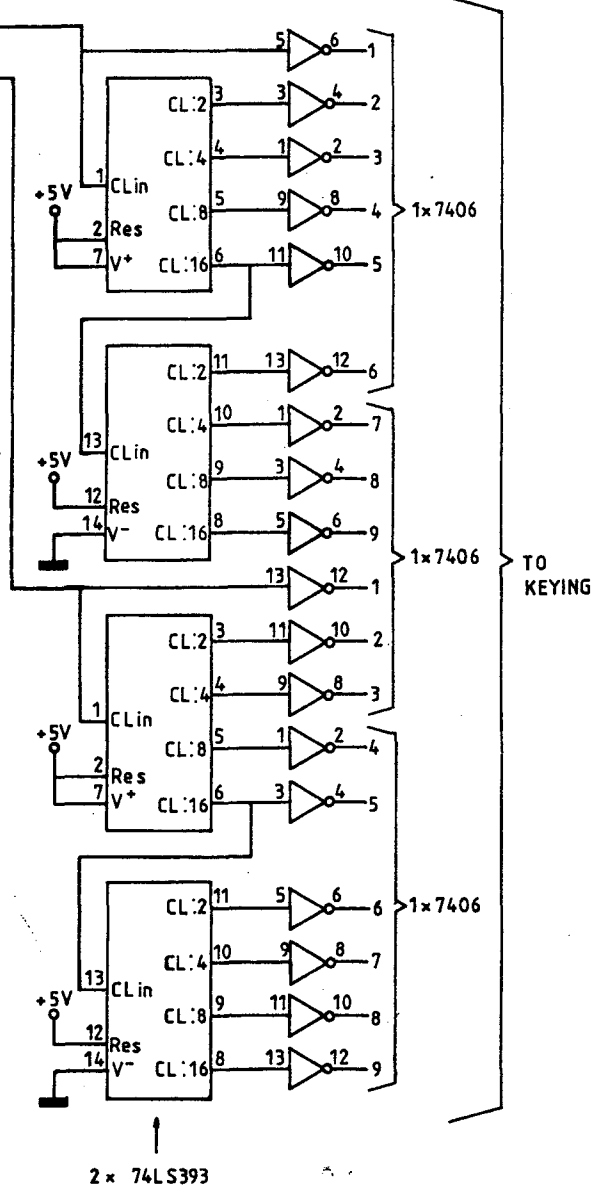
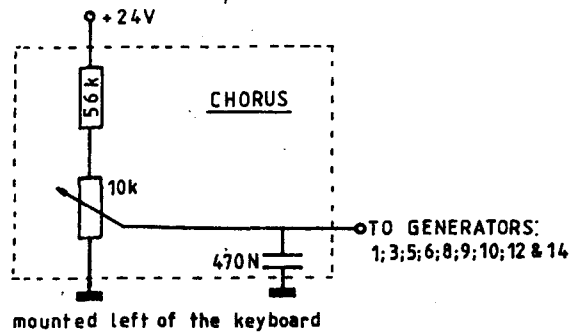
JOHANNUS
ORGAN
OPUS 360



	R1	R2	R3
GENERATOR 1 (pedal)	—	39k	—
GENERATOR 8 (celeste)	18k	56k	18k



For pedal generator: C:2 is used instead of C

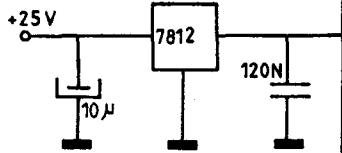


GENERATOR 1 & 8 (SINGLE) pedal & celeste

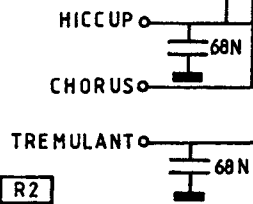
Drawn	Date	Modified	Date
Verschoor	14-11-83	Verschoor	20-05-85
DESIGN		Verschoor	29-08-85

JOHANNUS
ORGAN
OPUS 360

GENERATOR 2;4;6;9;11;13



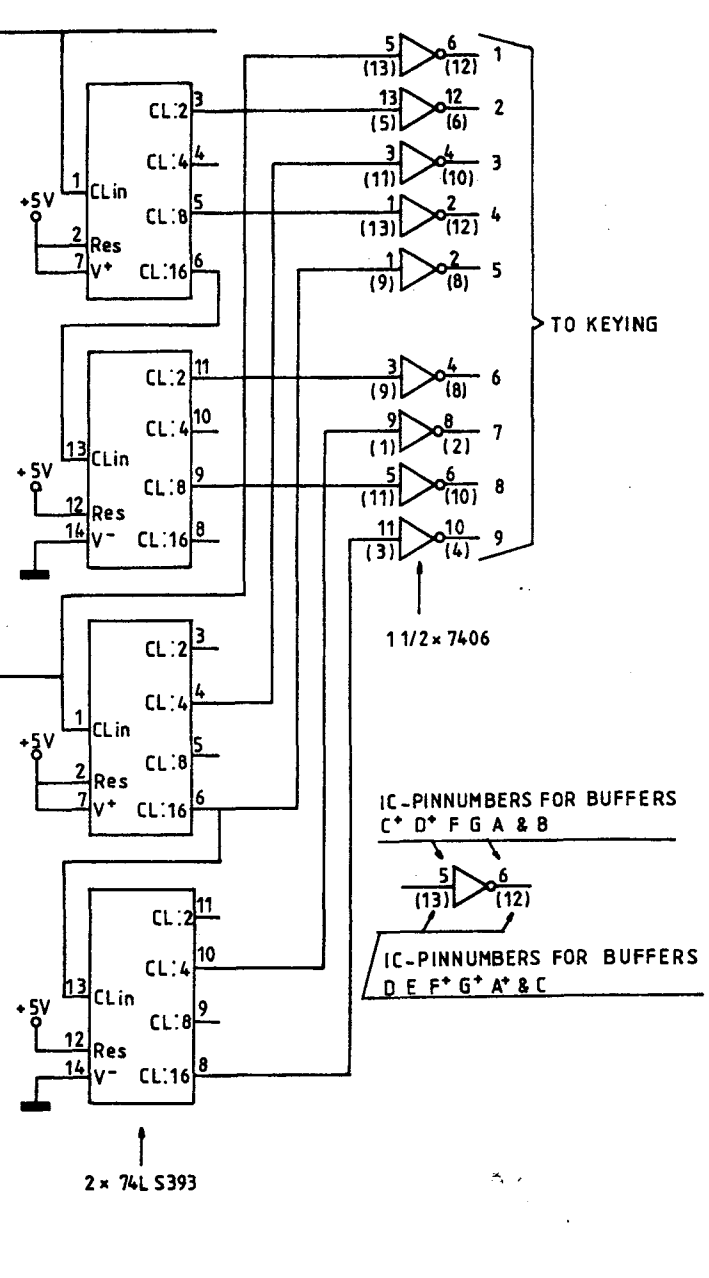
GENERATOR 3;5;7;10;12;14;



	R1	R2
GEN. 2	18k	—
GEN. 3	18k	56k
GEN. 4	18k	—
GEN. 5	18k	100k
GEN. 6	18k	100k
GEN. 7	18k	—
GEN. 9	18k	47k
GEN. 10	18k	56k
GEN. 11	18k	—
GEN. 12	18k	82k
GEN. 13	—	—
GEN. 14	—	330k

MOUNTED ON P.C BOARD JO 639A (2x)

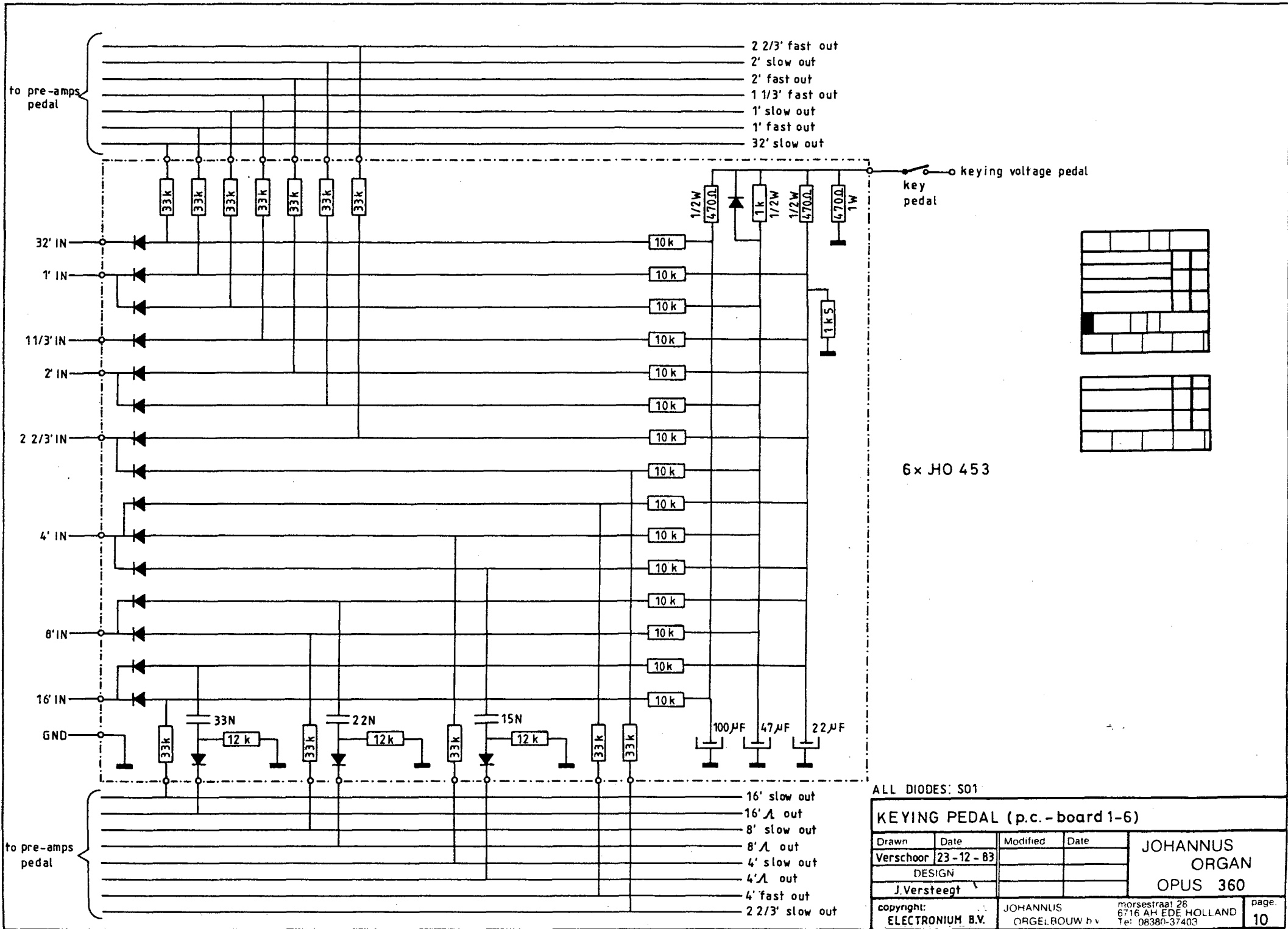
4x 74C04



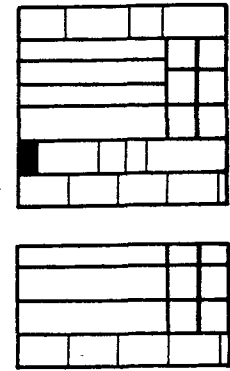
2 x 74LS393

GENERATOR 2;4;6;9;11;13(upper) 3;5;7;10;12;14(lower)

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	15-11-83	Verschoor	20-05-85	
DESIGN		Verschoor	29-08-85	
J.Versteegt				
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				page: 9

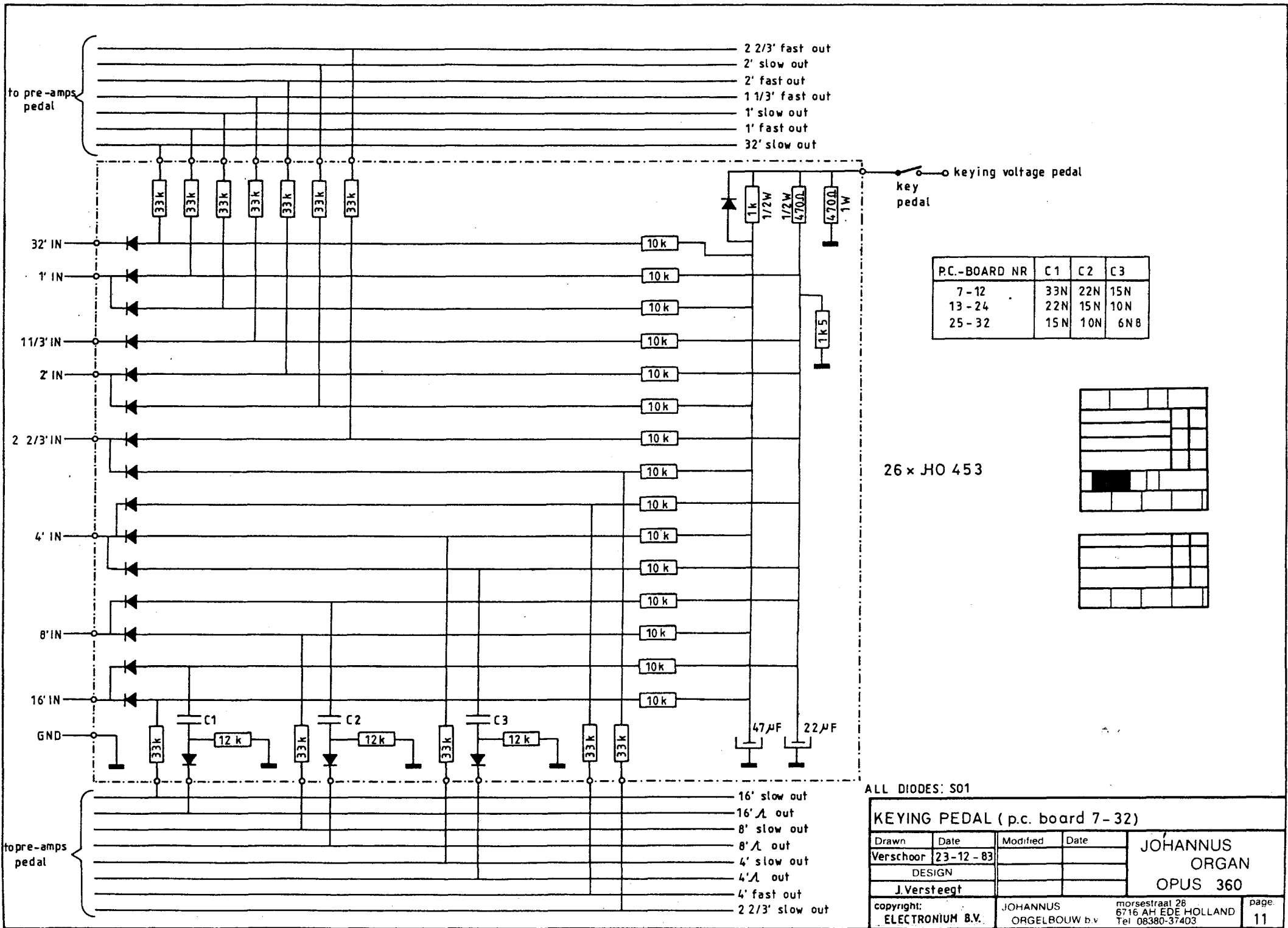


6x JO 453



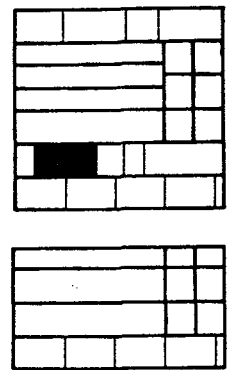
ALL DIODES: S01

KEYING PEDAL (p.c.-board 1-6)				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	23-12-83			
DESIGN				
J.Versteegt				
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ELECTRONIUM B.V.	ORGELBOUW b.v	6716 AH EDE HOLLAND		10
		Tel: 08380-37403		



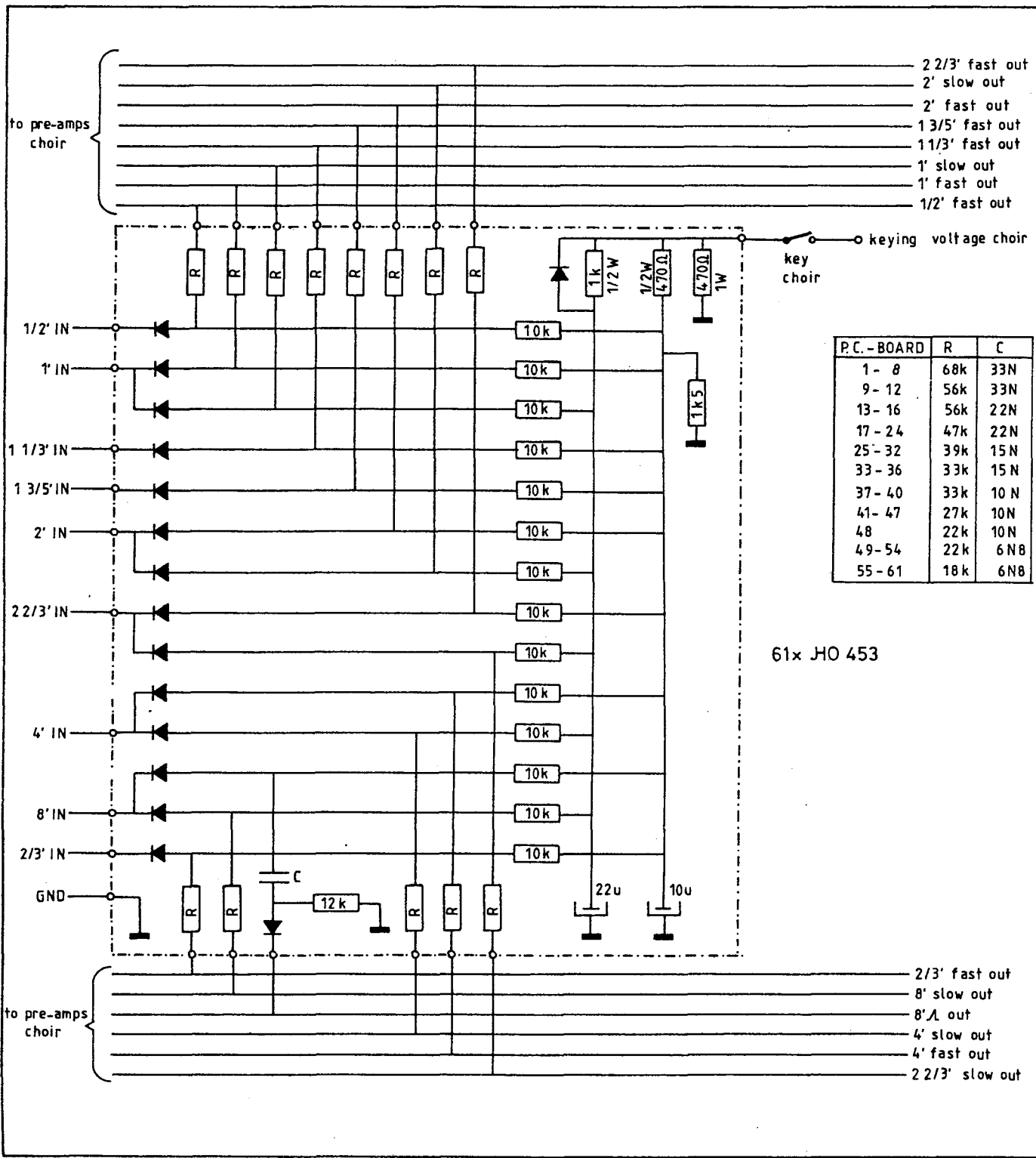
P.C.-BOARD NR	C1	C2	C3
7 - 12	33N	22N	15N
13 - 24	22N	15N	10N
25 - 32	15N	10N	6N8

26 x HO 453



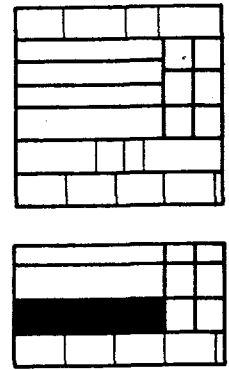
ALL DIODES: S01

KEYING PEDAL (p.c. board 7-32)				JOHANNUS ORGAN	
Drawn	Date	Modified	Date	OPUS 360	
Verschoor	23-12-83				
DESIGN					
J.Versteegt					
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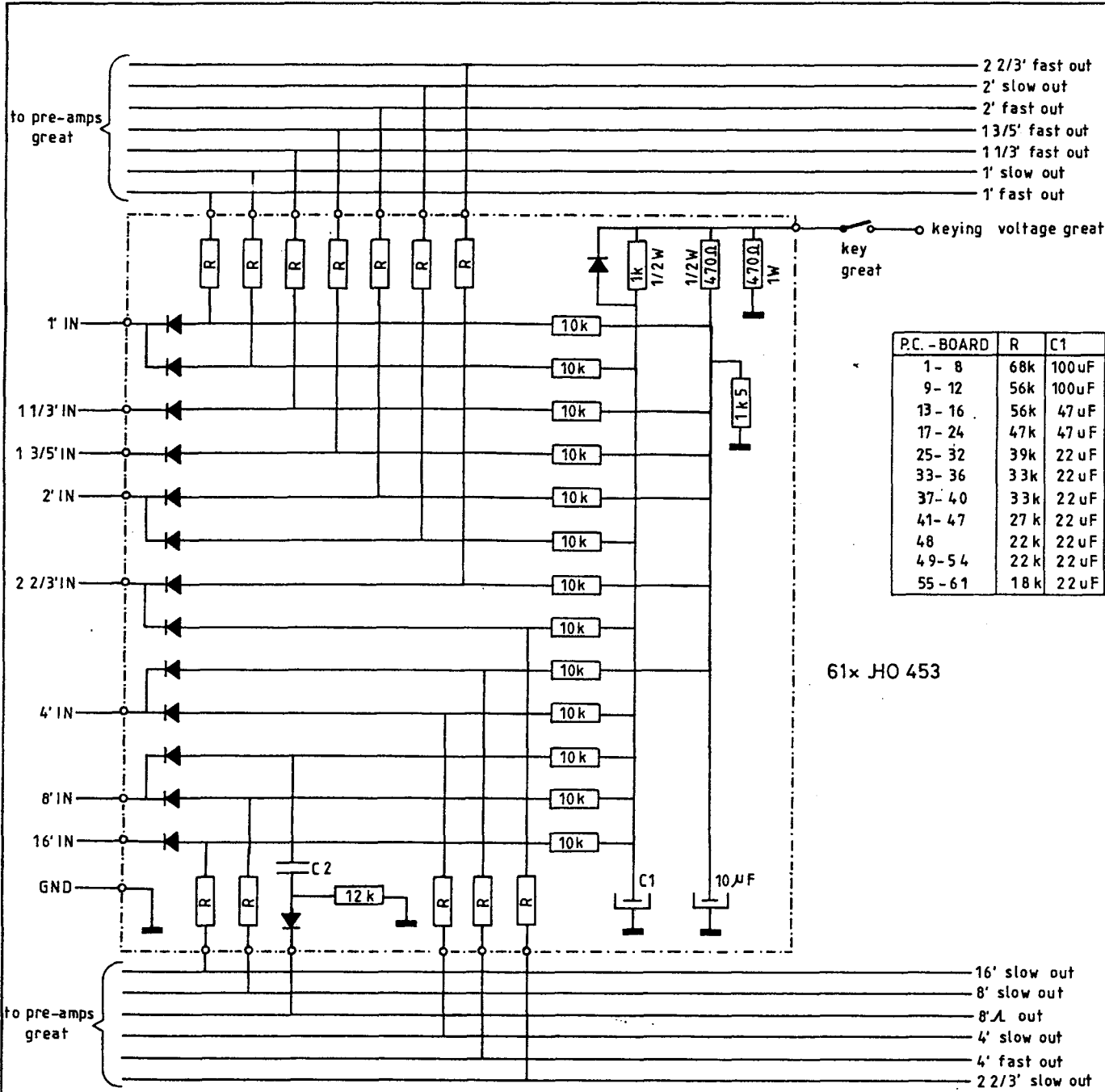
P.C.-BOARD	R	C
1 - 8	68k	33N
9 - 12	56k	33N
13 - 16	56k	22N
17 - 24	47k	22N
25 - 32	39k	15N
33 - 36	33k	15N
37 - 40	33k	10N
41 - 47	27k	10N
48	22k	10N
49 - 54	22k	6N8
55 - 61	18k	6N8

61x JH 453



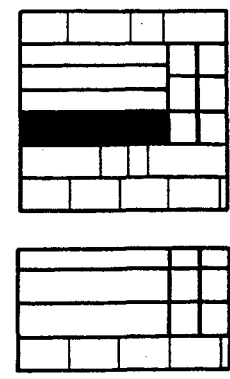
ALL DIODES: S01

KEYING CHOIR				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	27-12-83			J. Versteegt
DESIGN				
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				morsestraat 28 6716 AH EDE HOLLAND Tel 08380-37403
				page: 12



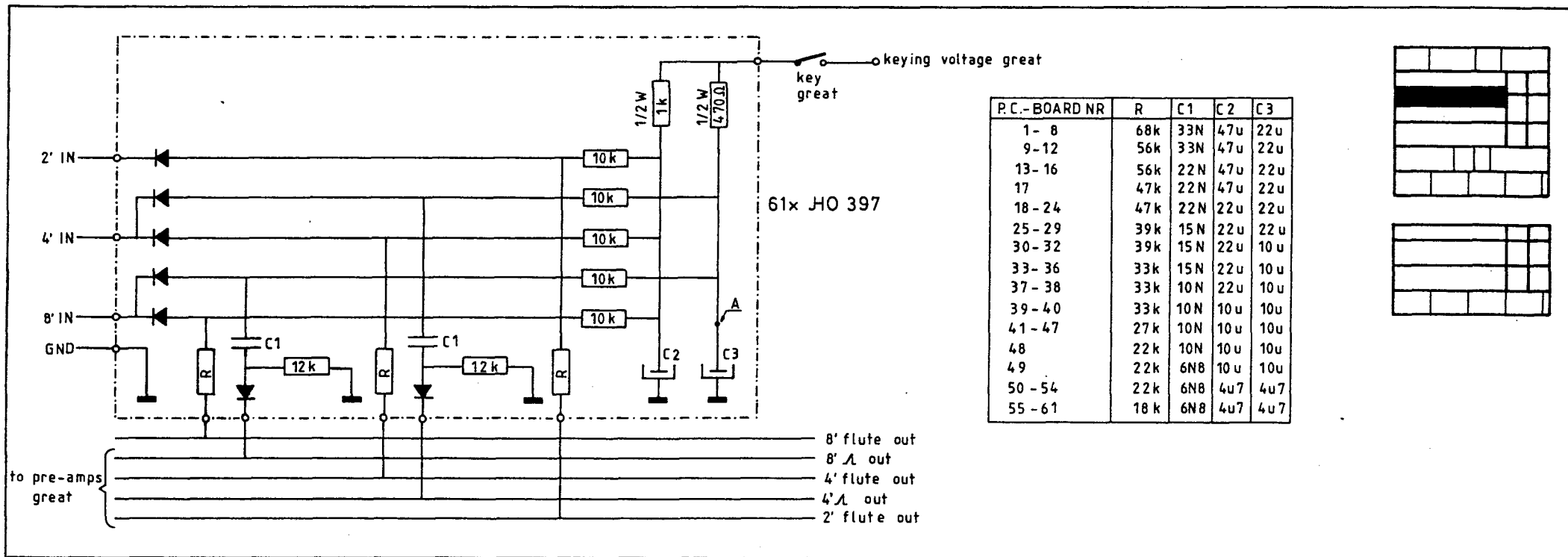
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9 - 12	56k	100uF	33N
13 - 16	56k	47uF	22N
17 - 24	47k	47uF	22N
25 - 32	39k	22uF	15N
33 - 36	33k	22uF	15N
37 - 40	33k	22uF	10N
41 - 47	27k	22uF	10N
48	22k	22uF	10N
49 - 54	22k	22uF	6N8
55 - 61	18k	22uF	6N8

61x JO 453

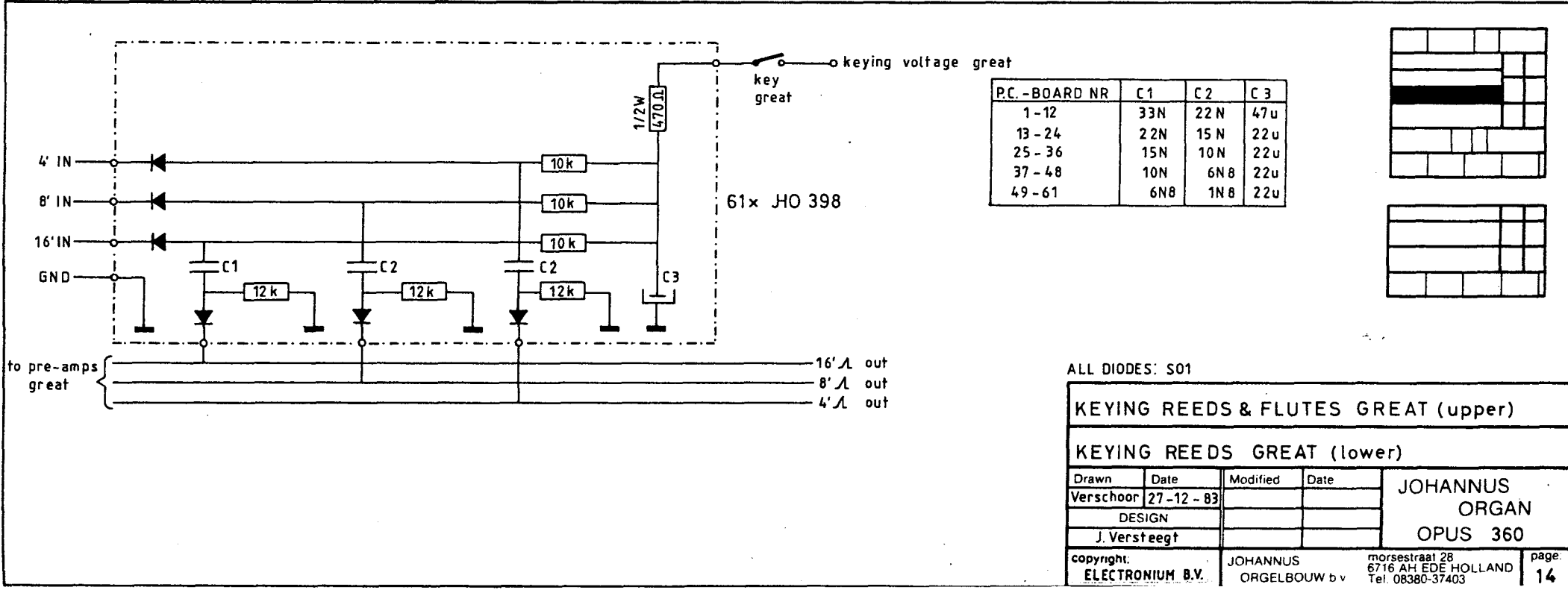
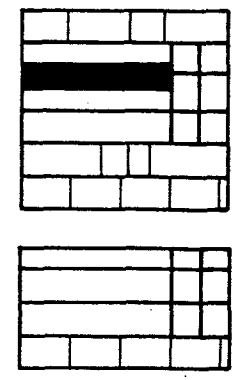


ALL DIODES: S01

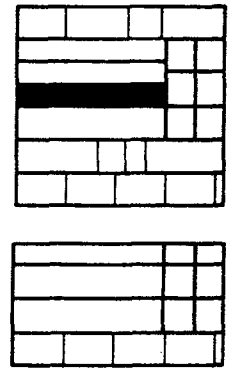
KEYING SLOW-FAST GREAT				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschuur	23-12-83			J. Versteegt
DESIGN				
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				page 13



P.C.-BOARD NR	R	C1	C2	C3
1 - 8	68k	33N	47u	22u
9 - 12	56k	33N	47u	22u
13 - 16	56k	22N	47u	22u
17	47k	22N	47u	22u
18 - 24	47k	22N	22u	22u
25 - 29	39k	15N	22u	22u
30 - 32	39k	15N	22u	10u
33 - 36	33k	15N	22u	10u
37 - 38	33k	10N	22u	10u
39 - 40	33k	10N	10u	10u
41 - 47	27k	10N	10u	10u
48	22k	10N	10u	10u
49	22k	6N8	10u	10u
50 - 54	22k	6N8	4u7	4u7
55 - 61	18k	6N8	4u7	4u7

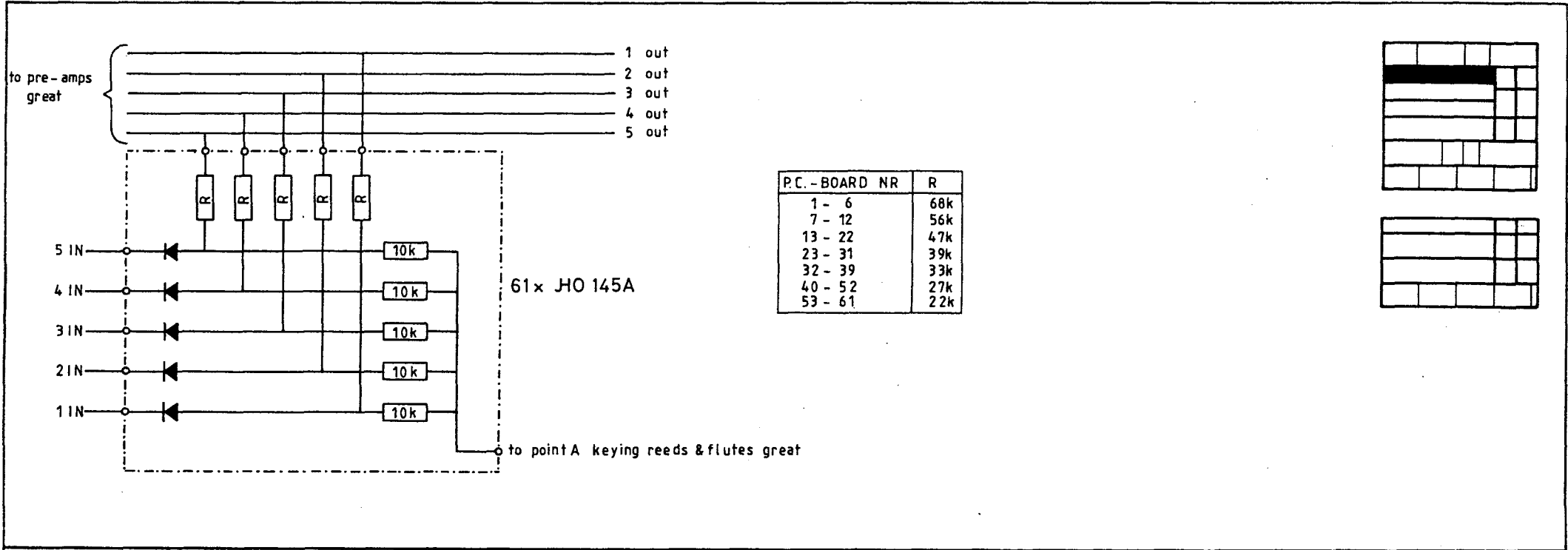


P.C.-BOARD NR	C1	C2	C3
1 - 12	33N	22N	47u
13 - 24	22N	15N	22u
25 - 36	15N	10N	22u
37 - 48	10N	6N8	22u
49 - 61	6N8	1N8	22u

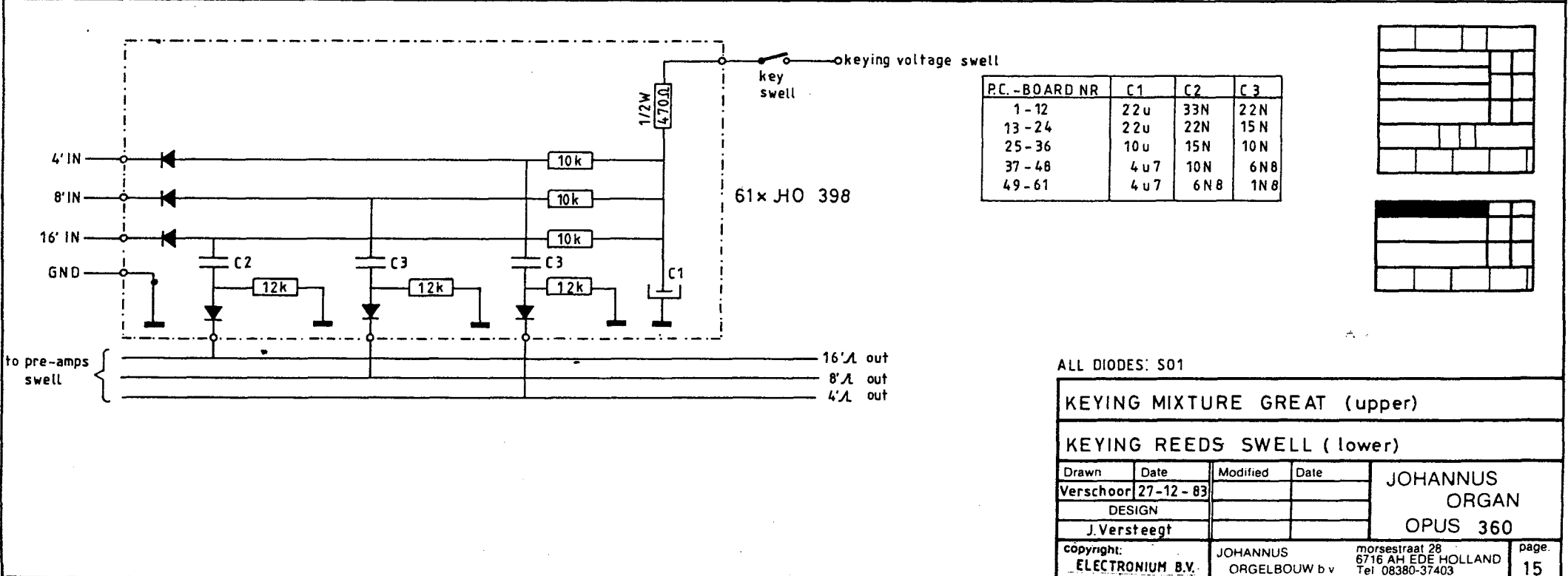
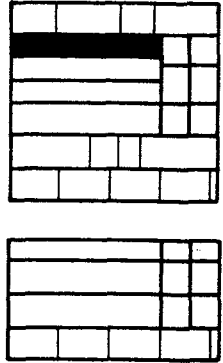


ALL DIODES: S01

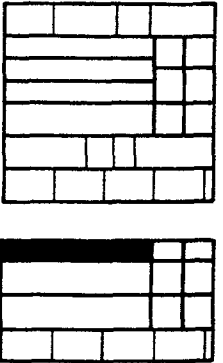
KEYING REEDS & FLUTES GREAT (upper)			
KEYING REEDS GREAT (lower)			
Drawn	Date	Modified	Date
Verschoor	27-12-83		
DESIGN			JOHANNUS ORGAN OPUS 360
J. Versteeg			
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			page: 14



P.C.-BOARD NR	R
1 - 6	68k
7 - 12	56k
13 - 22	47k
23 - 31	39k
32 - 39	33k
40 - 52	27k
53 - 61	22k

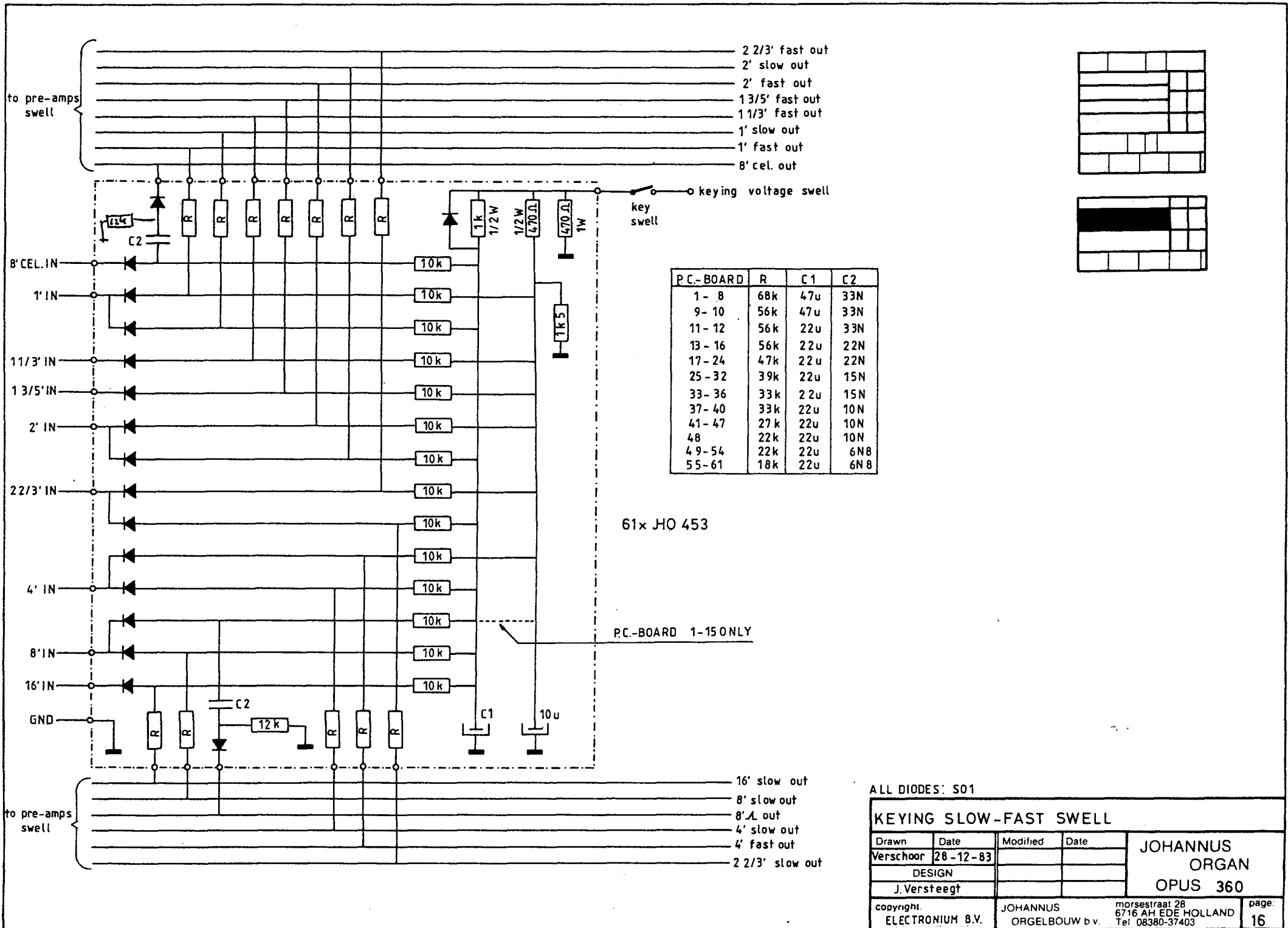


P.C.-BOARD NR	C1	C2	C3
1 - 12	22u	33N	22N
13 - 24	22u	22N	15N
25 - 36	10u	15N	10N
37 - 48	4u7	10N	6N8
49 - 61	4u7	6N8	1N8

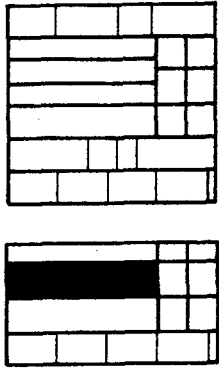


ALL DIODES: S01

KEYING MIXTURE GREAT (upper)			
KEYING REEDS SWELL (lower)			
Drawn	Date	Modified	Date
Verschoor	27-12-83		
DESIGN			JOHANNUS ORGAN OPUS 360
J.Versteegt			
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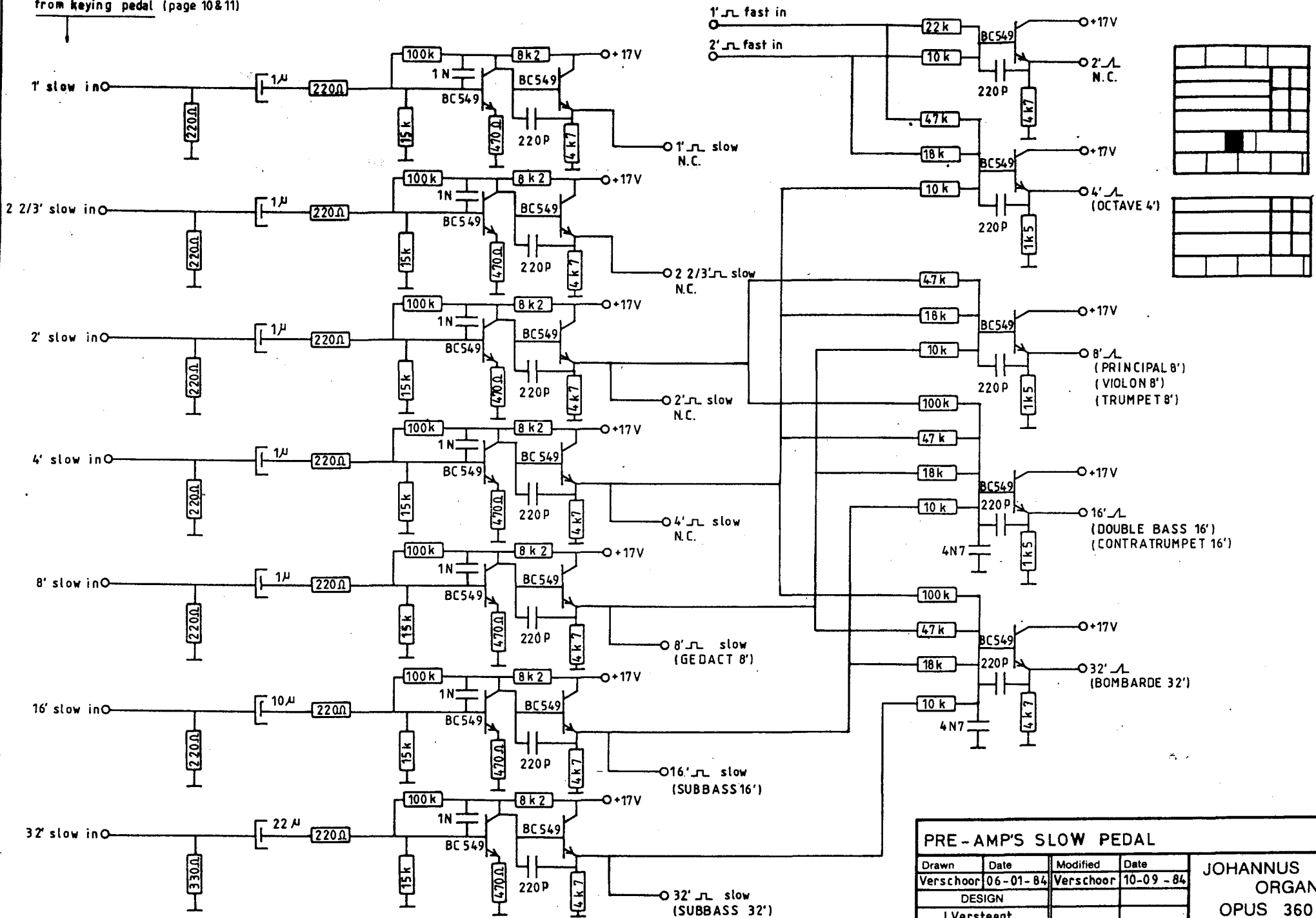
P.C.-BOARD	R	C1	C2
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9 - 10	56k	47u	33N
11 - 12	56k	22u	33N
13 - 16	56k	22u	22N
17 - 24	47k	22u	22N
25 - 32	39k	22u	15N
33 - 36	33k	22u	15N
37 - 40	33k	22u	10N
41 - 47	27k	22u	10N
48	22k	22u	10N
49 - 54	22k	22u	6N8
55 - 61	18k	22u	6N8



ALL DIODES: S01

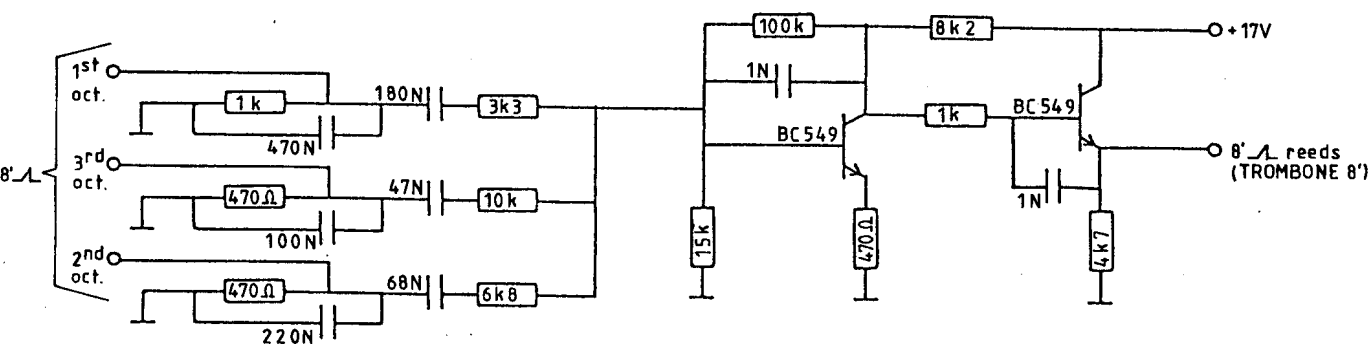
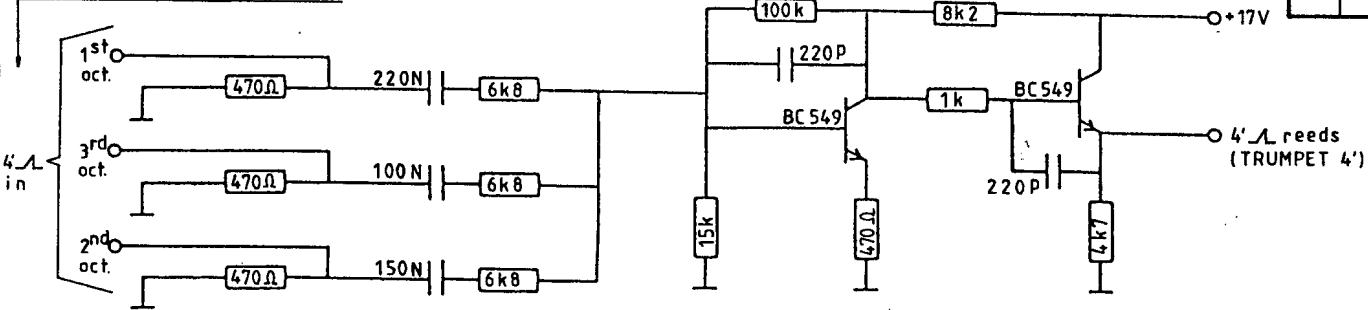
KEYING SLOW-FAST SWELL				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	28-12-83			
DESIGN				J. Versteegt
ELECTRONIUM B.V.				
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		ORGELBOUW b.v.	6716 AH EDE HOLLAND	16
			Tel. 08380-37403	

from keying pedal (page 10 & 11)

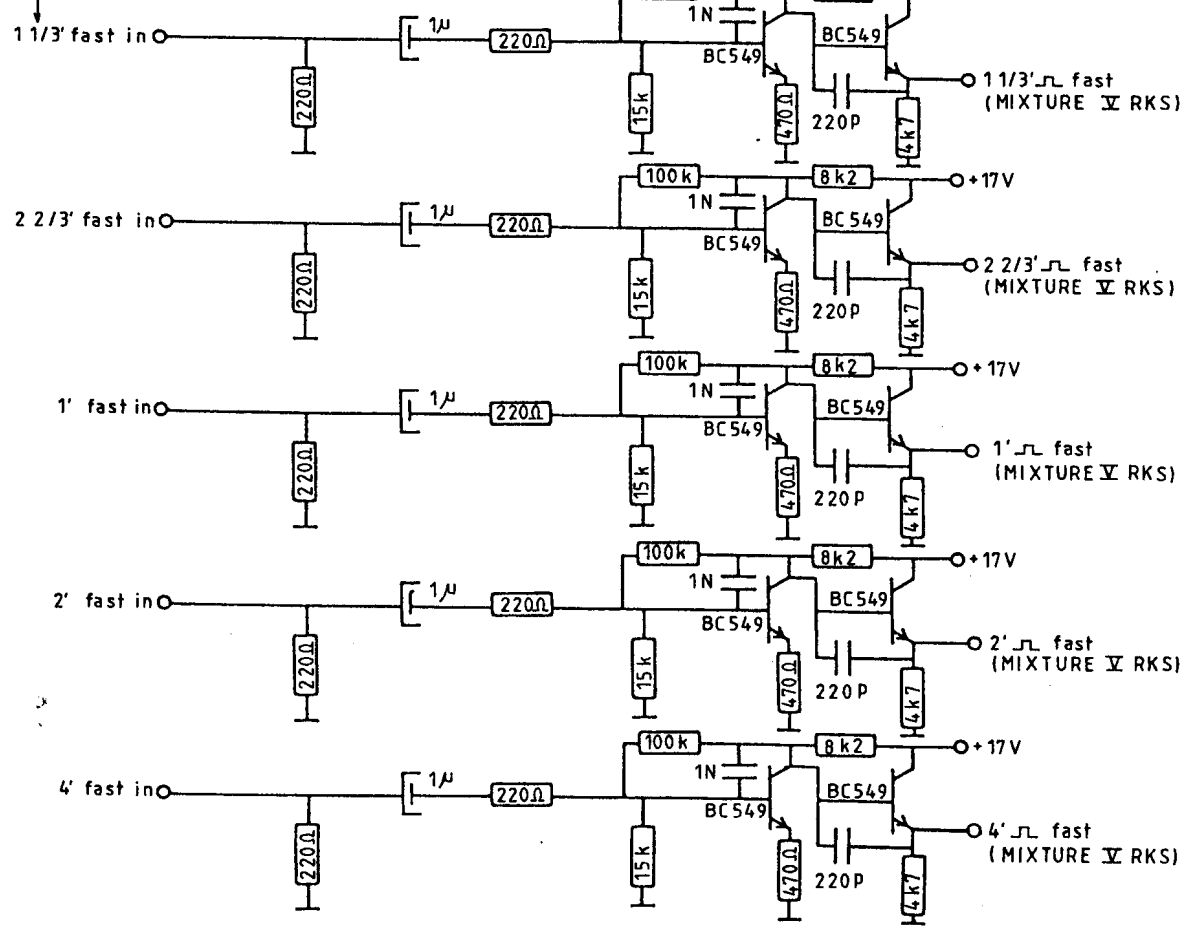


PRE - AMP'S SLOW PEDAL				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	06-01-84	Verschoor	10-09-84	
DESIGN				JOHANNUS ORGELBOUW b.v. morsestraat 28 6716 AH EDE HOLLAND Tel. 08380-37403
J.Versteegt				
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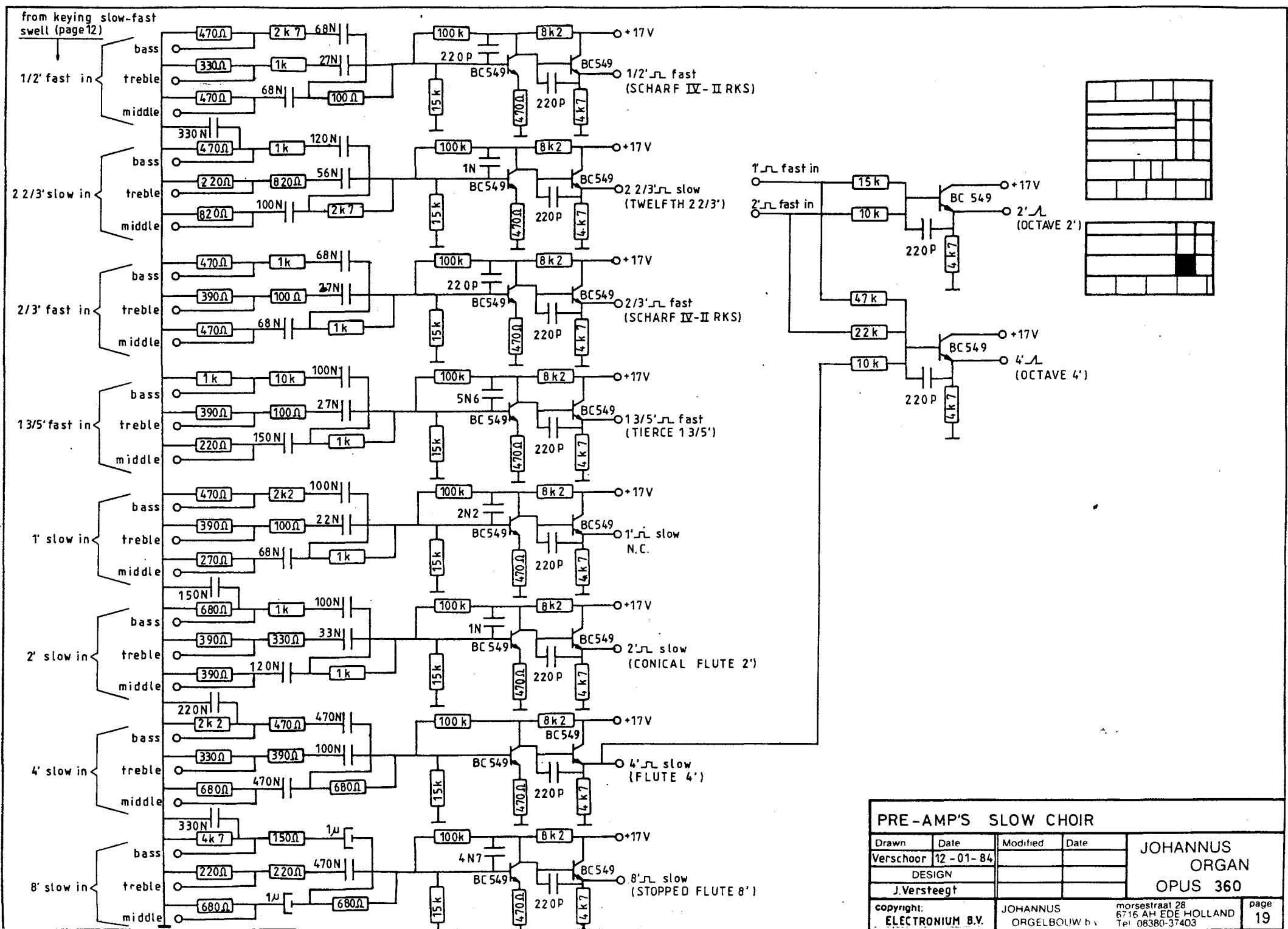
from keying pedal (page 10 & 11)



from keying pedal (page 10 & 11)

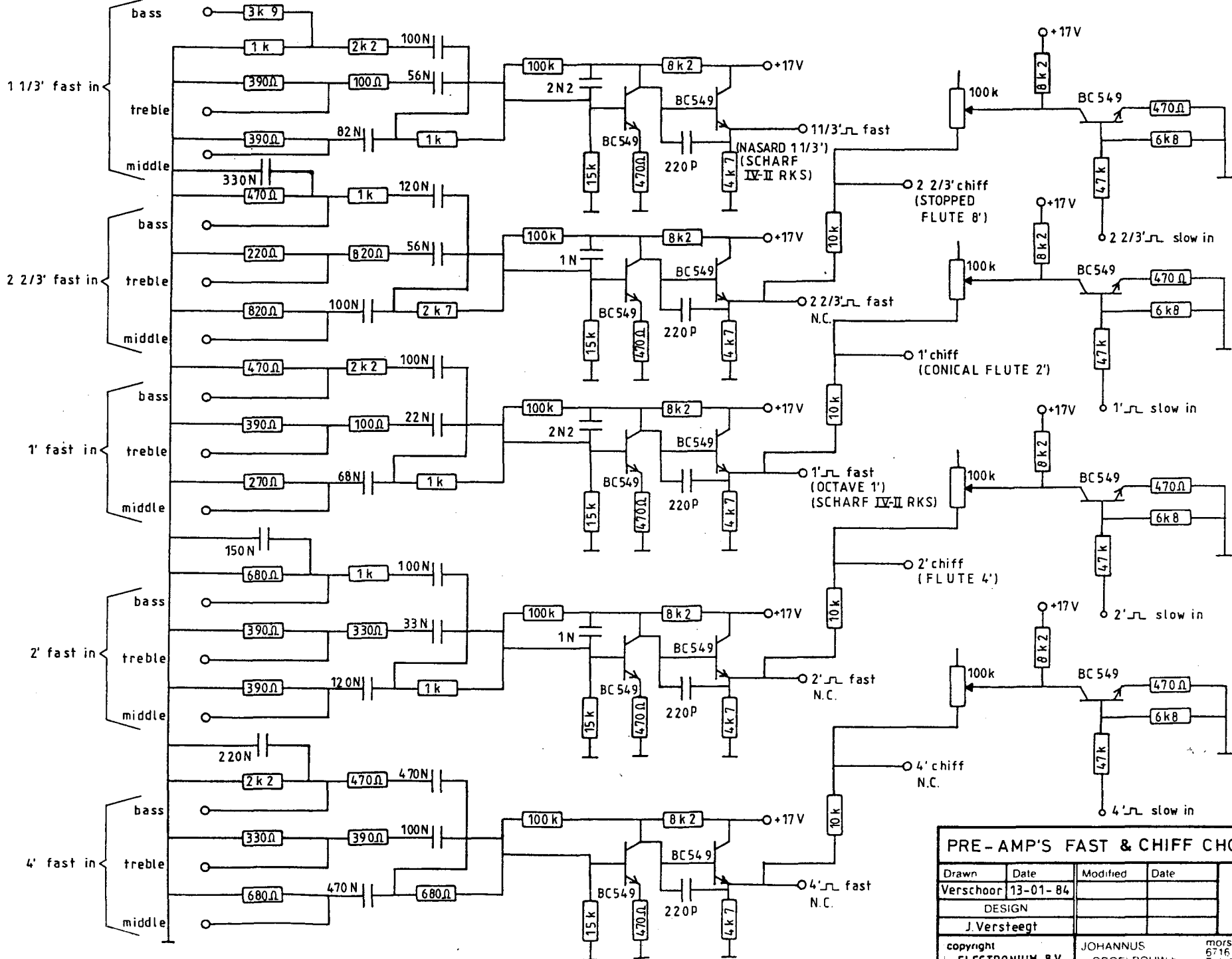


PRE AMPS FAST & REEDS PEDAL		Drawn	Date	JOHANNUS ORGAN OPUS 360
		Verschuur	06-01-84	
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		J. Versteeght		
JOHANNUS ORGELBOUW N.V.		Modified	Date	RIJNSTRAAT 28 6716 AH EDE HOLLAND Tel: 08380-37403
				Page
				18



PRE-AMP'S SLOW CHOIR			
Drawn	Date	Modified	Date
Verschoor	12-01-84		
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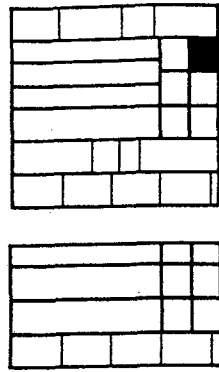
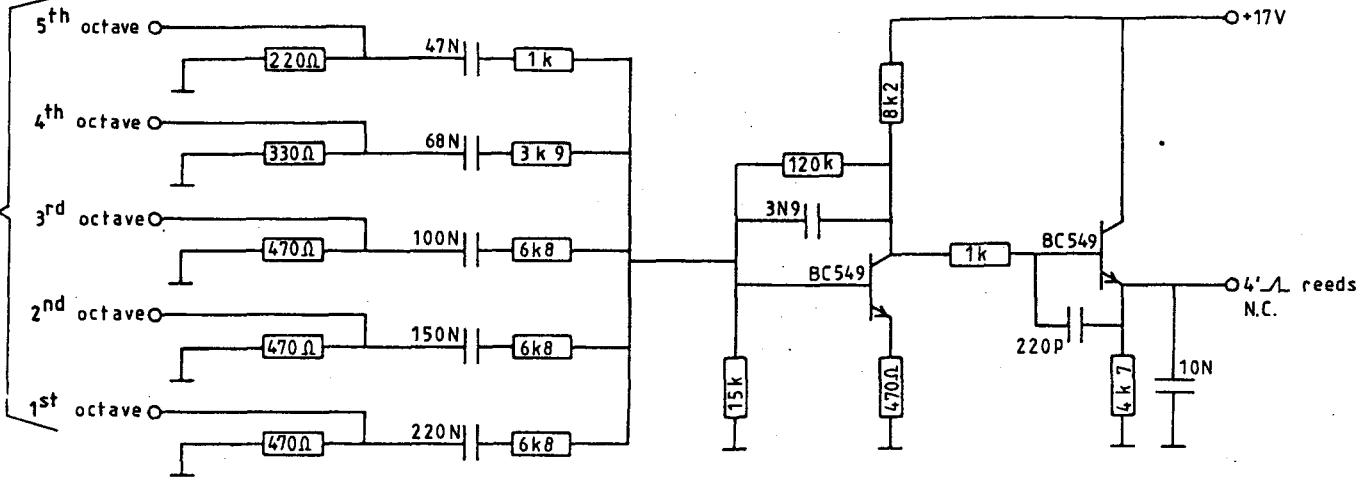
from keying slow-fast
swell (page 12)



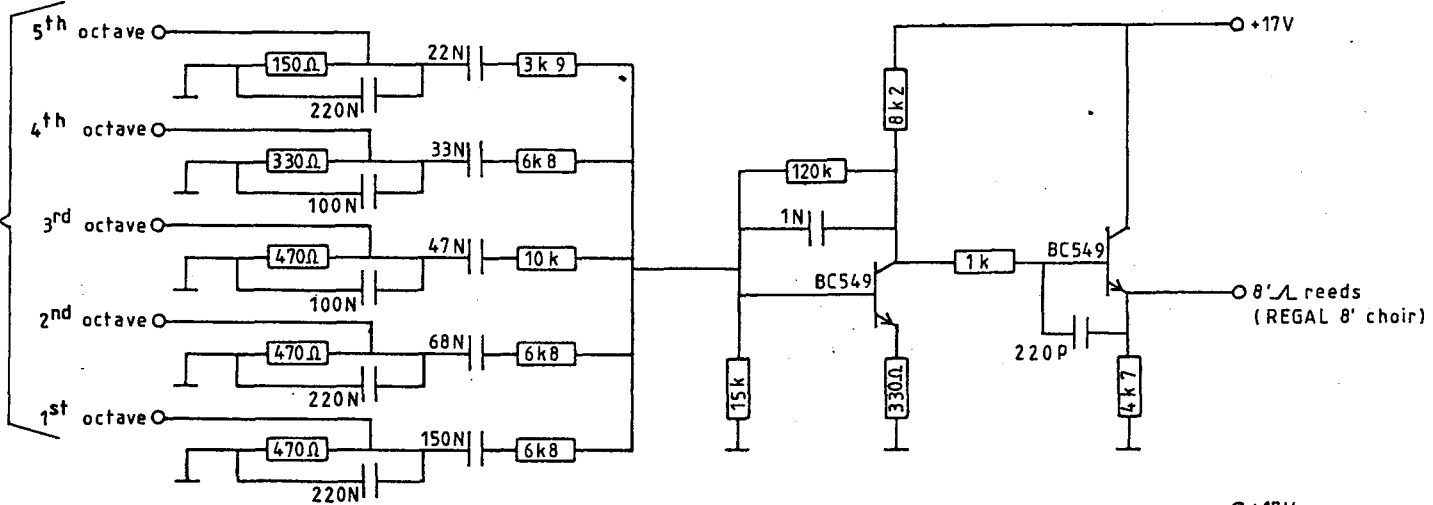
PRE-AMP'S FAST & CHIFF CHOIR

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	13-01-84			
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J. Versteegt				
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ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND		
			Tel: 08380-37403	

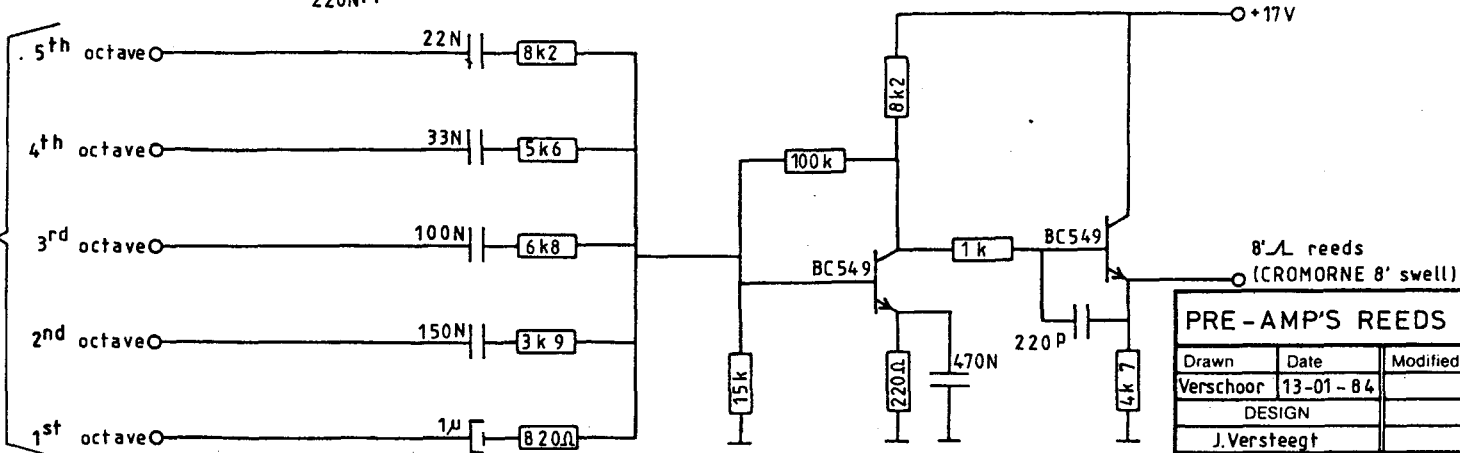
from
keying slow-fast choir
(page 12)



from
keying slow-fast choir
(page 12)



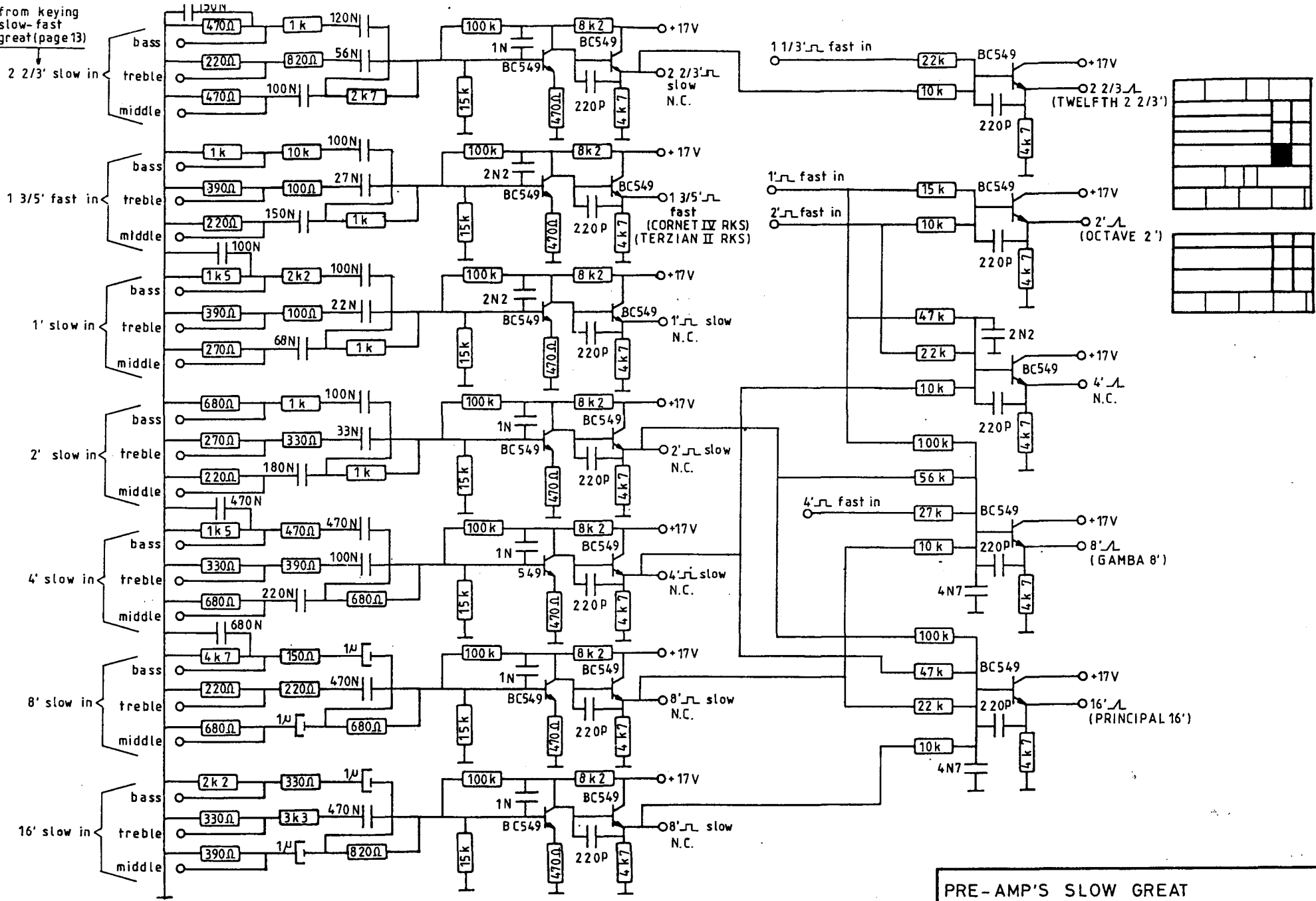
from
keying slow-fast swell
(page 16)



PRE-AMP'S REEDS CHOIR & SWELL

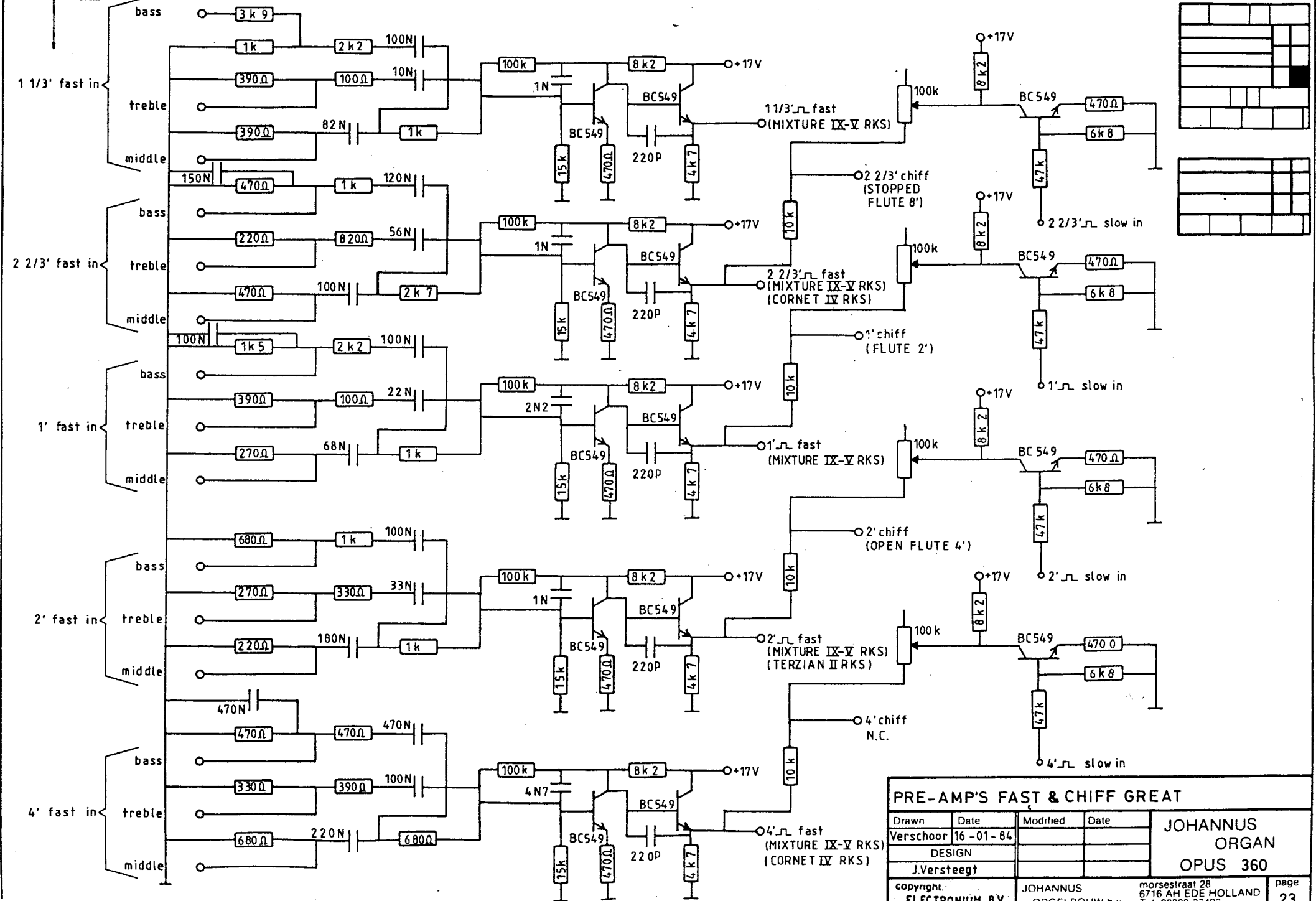
Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	13-01-84			
DESIGN				
J.Versteegt				

from keying
slow-fast
great (page 13)



PRE-AMP'S SLOW GREAT				JOHANNUS ORGAN	
Drawn	Date	Modified	Date		
Verschoor	16-01-84			OPUS 360	
DESIGN					
J.Versteegt					
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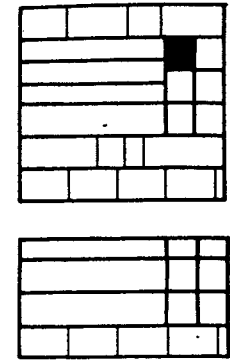
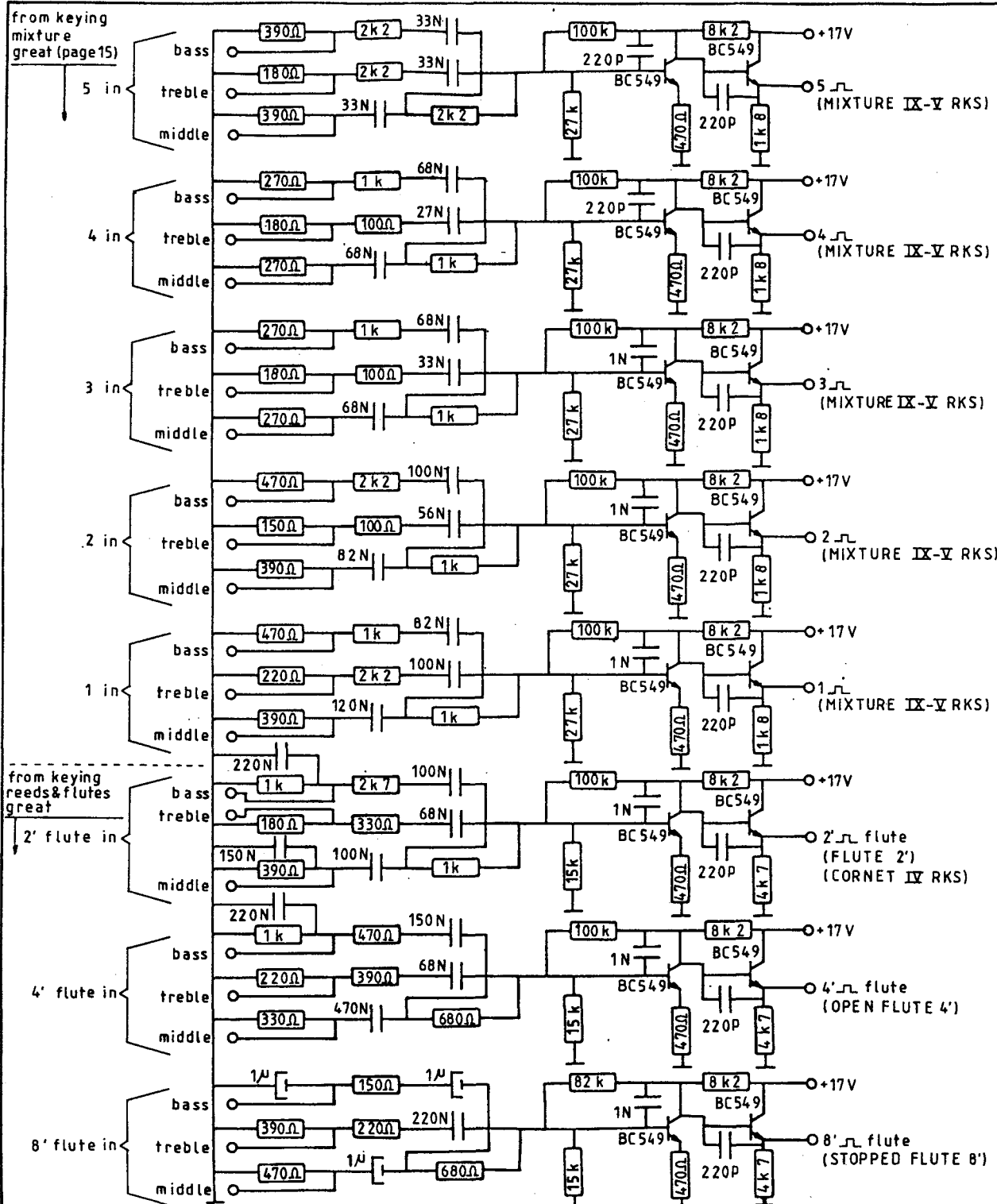
from keying slow-fast
great (page 13)



PRE-AMP'S FAST & CHIFF GREAT			
Drawn	Date	Modified	Date
Verschoor	16-01-84		
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FL ELECTRONIUM B.V.	ORGELBOUW B.V.	6716 AH EDE HOLLAND	
		Tel. 03380-37403	

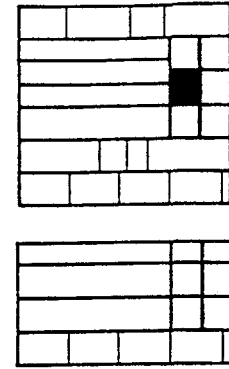
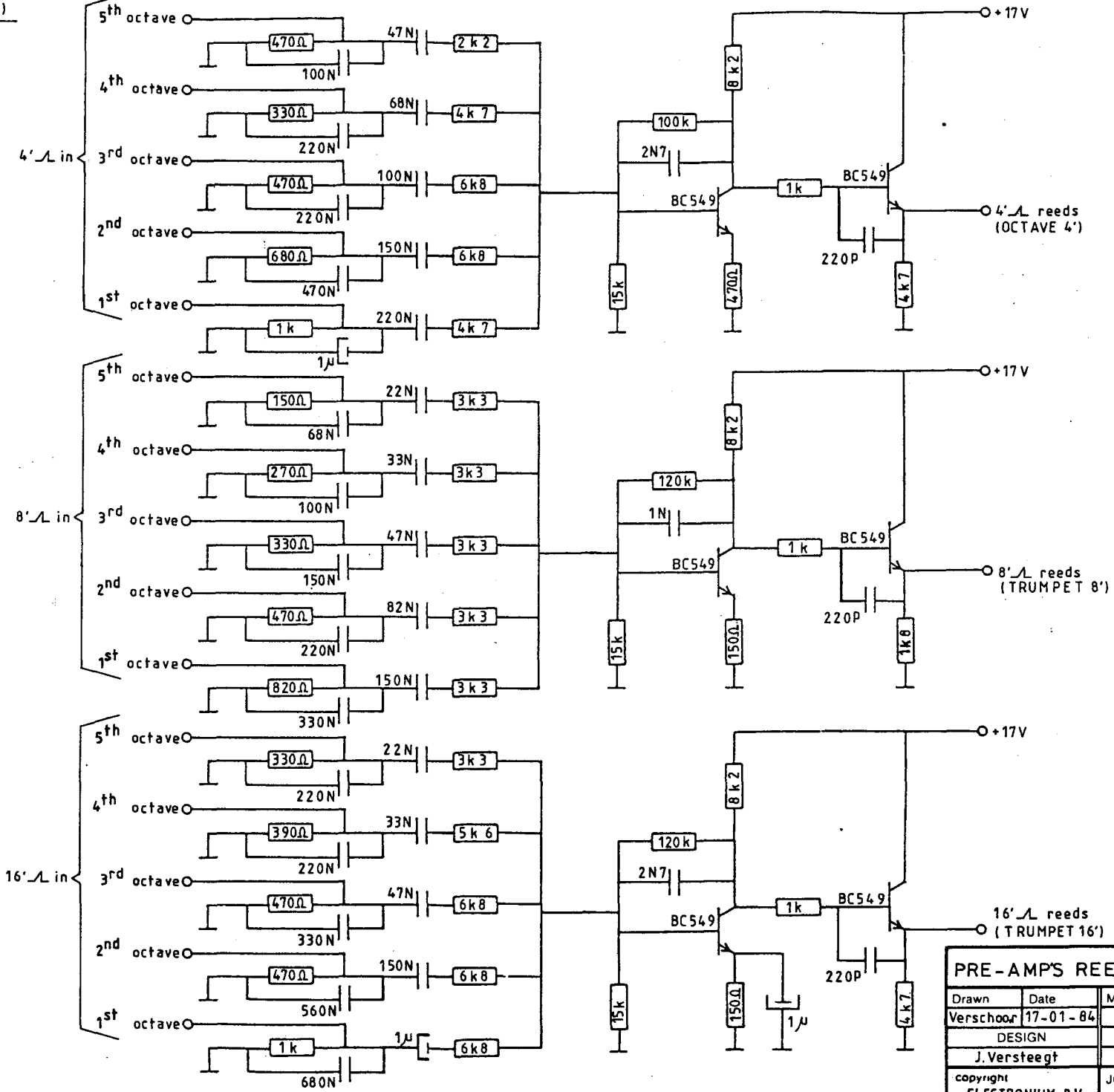
JOHANNUS
ORGAN
OPUS 360
page
23

from keying
mixture
great (page 15)



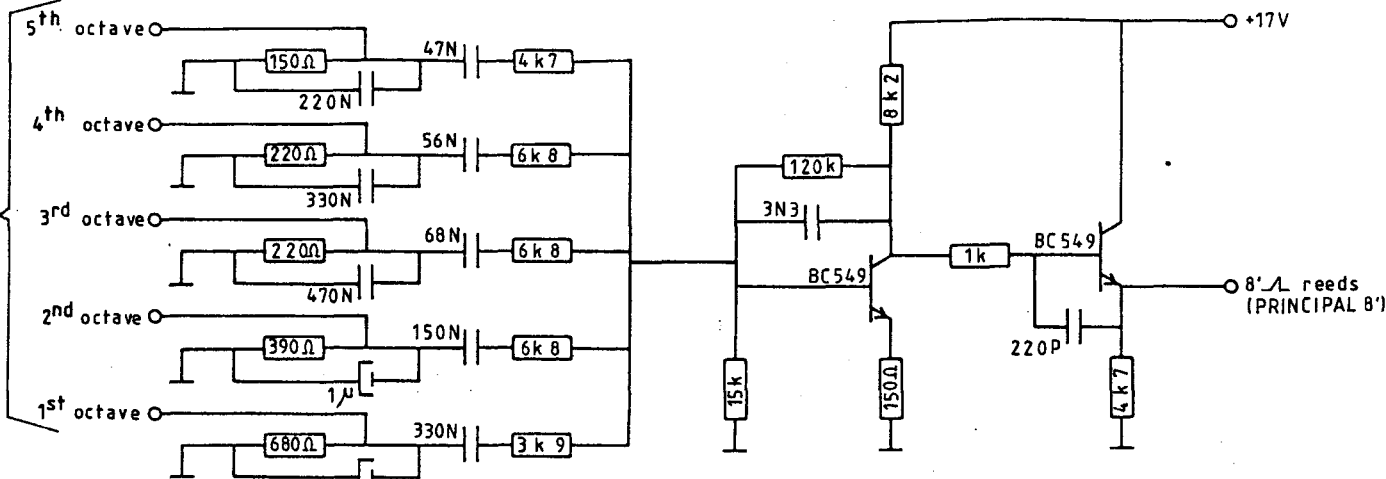
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Drawn	Date	Modified	Date	
Verschoor	16-01-84			
DESIGN				
J.Versteegt				
copyright:	JOHANNUS	morsestraat 28		page: 24
ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND Tel. 08380-37403		

from keying reeds
great (page 14)

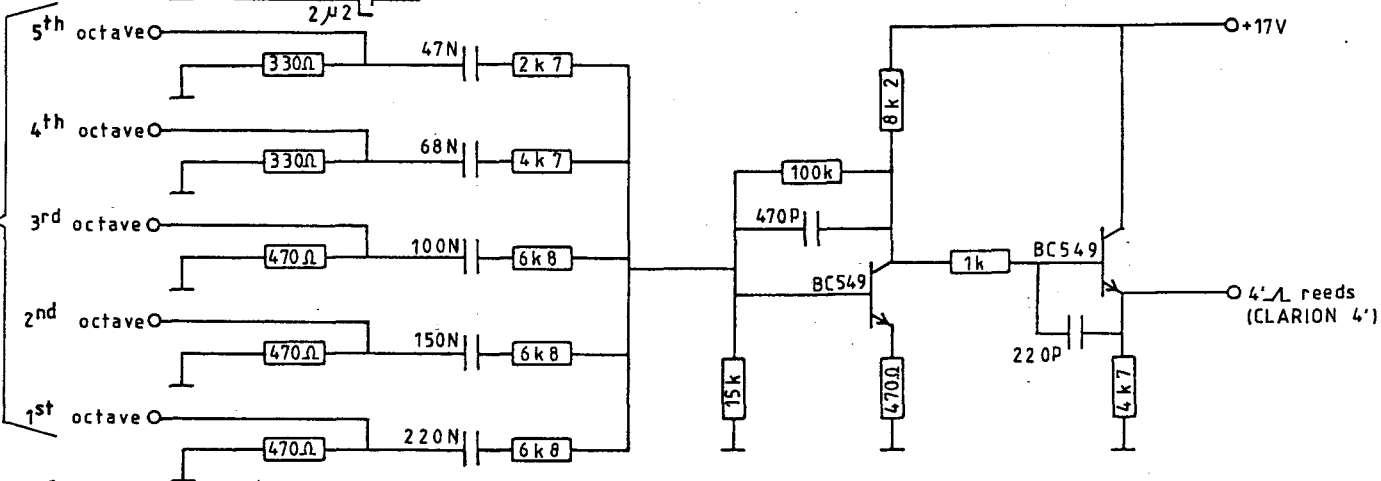


PRE-AMPS REEDS I GREAT				JOHANNUS ORGAN	
Drawn	Date	Modified	Date	OPUS 360	
Verschoor	17-01-84				
DESIGN					
J. Versteegt					
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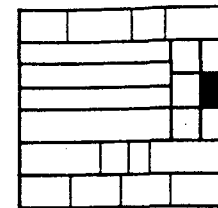
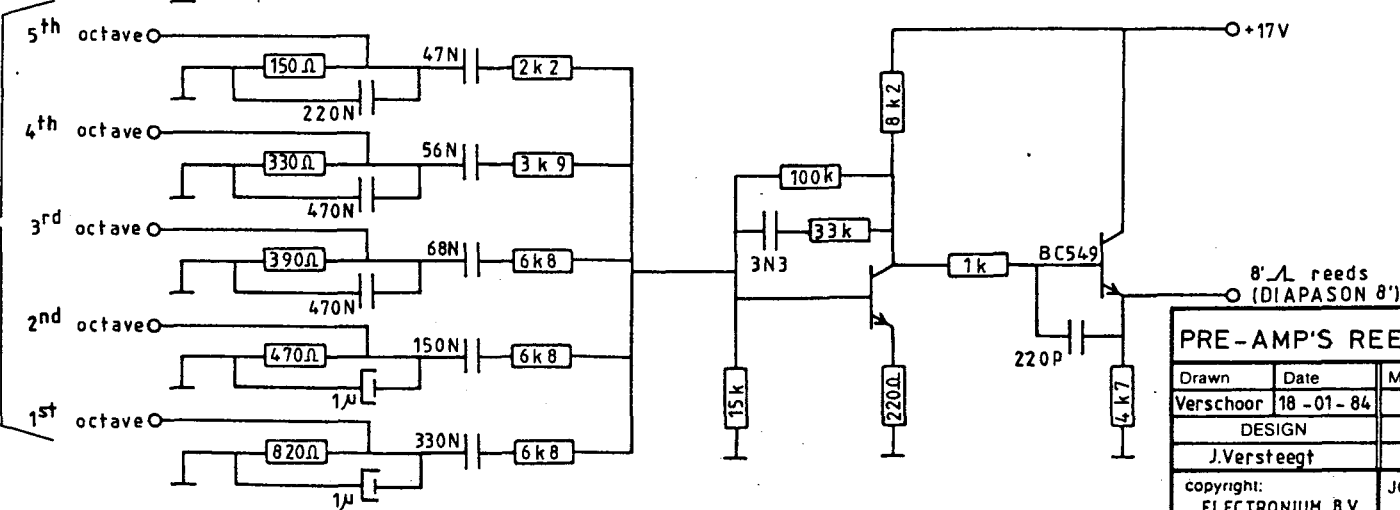
from keying
slow - fast great
(page 13)



from keying
reeds & flutes great
(page 14)



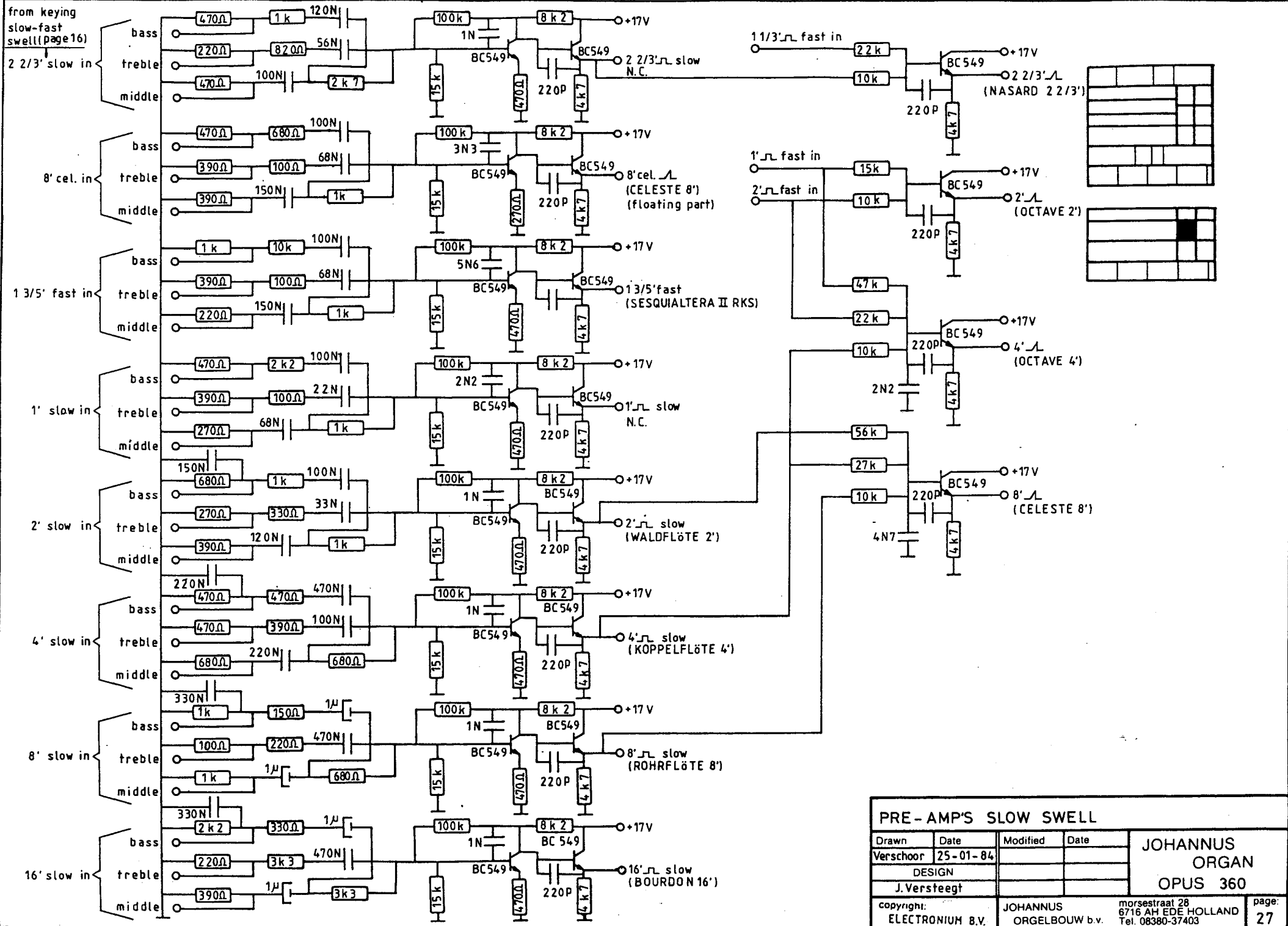
from keying
reeds & flutes great
(page 14)



PRE-AMP'S REEDS II GREAT

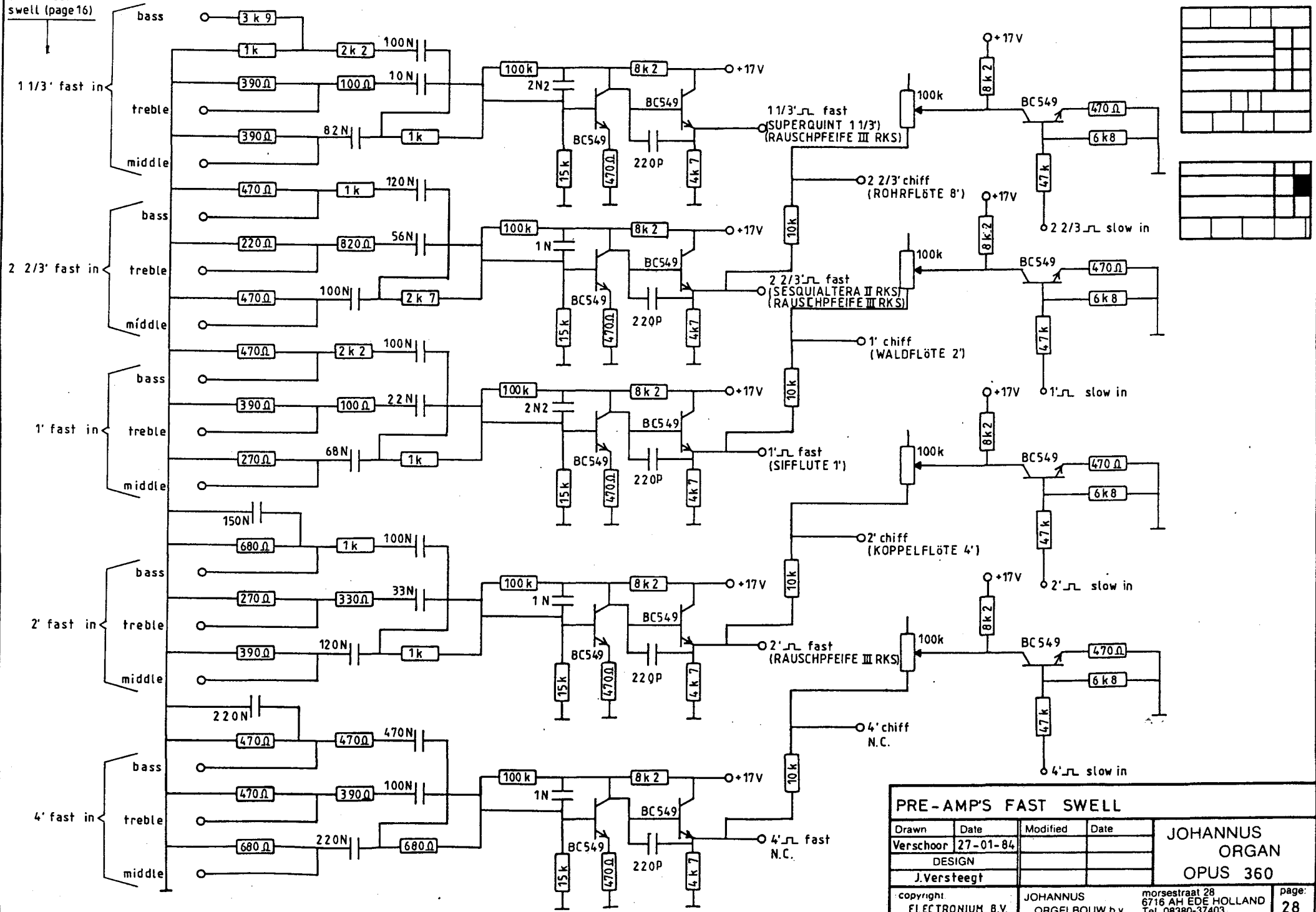
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J.Versteegt			

JOHANNUS
ORGAN
OPUS 360



PRE-AMP'S SLOW SWELL			
Drawn	Date	Modified	Date
Verschoor	25-01-84		
DESIGN			
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		Tel. 08380-37403	
		page:	27

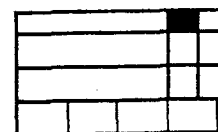
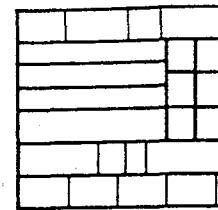
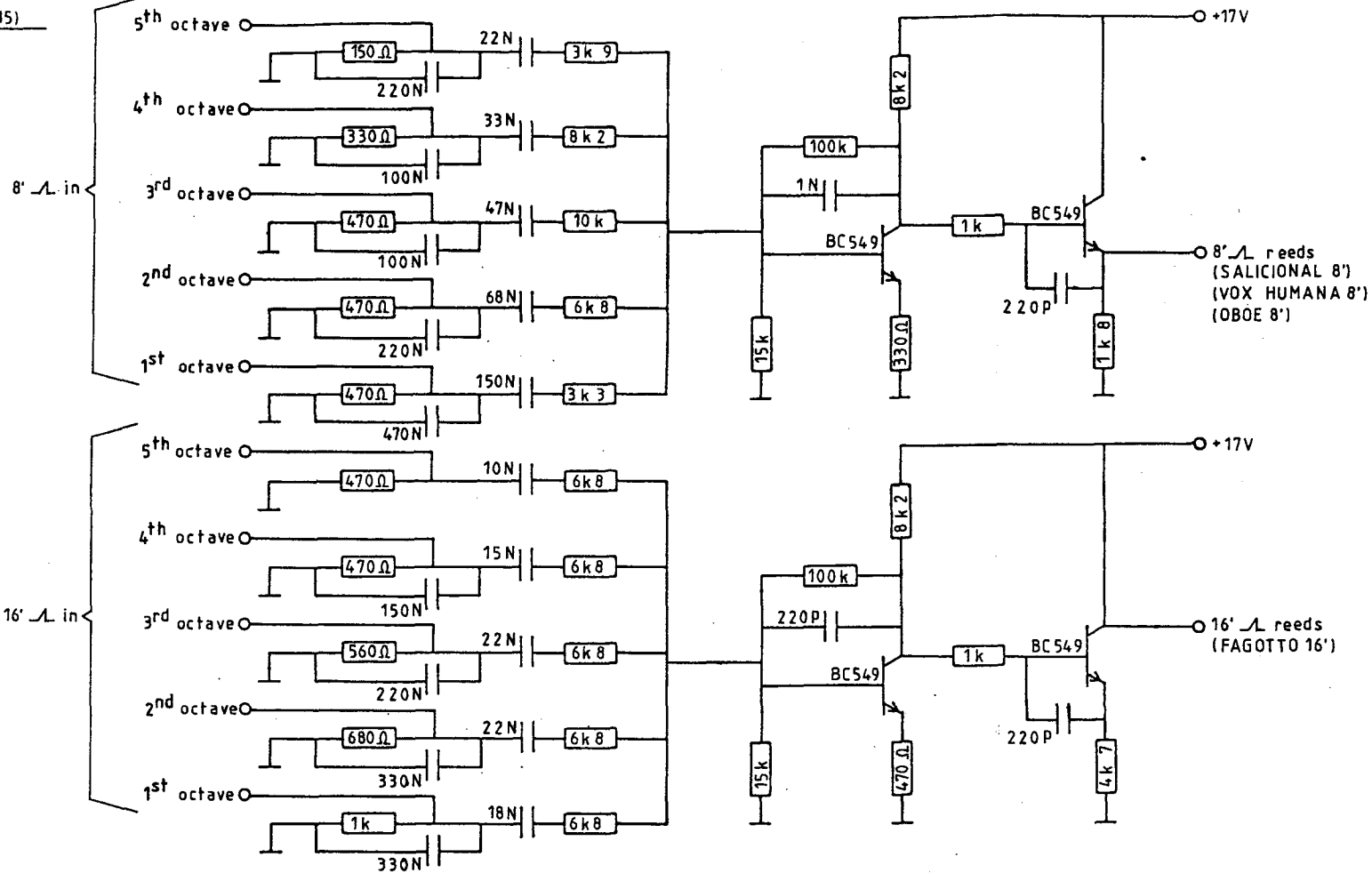
from keying
slow - fast
swell (page 16)



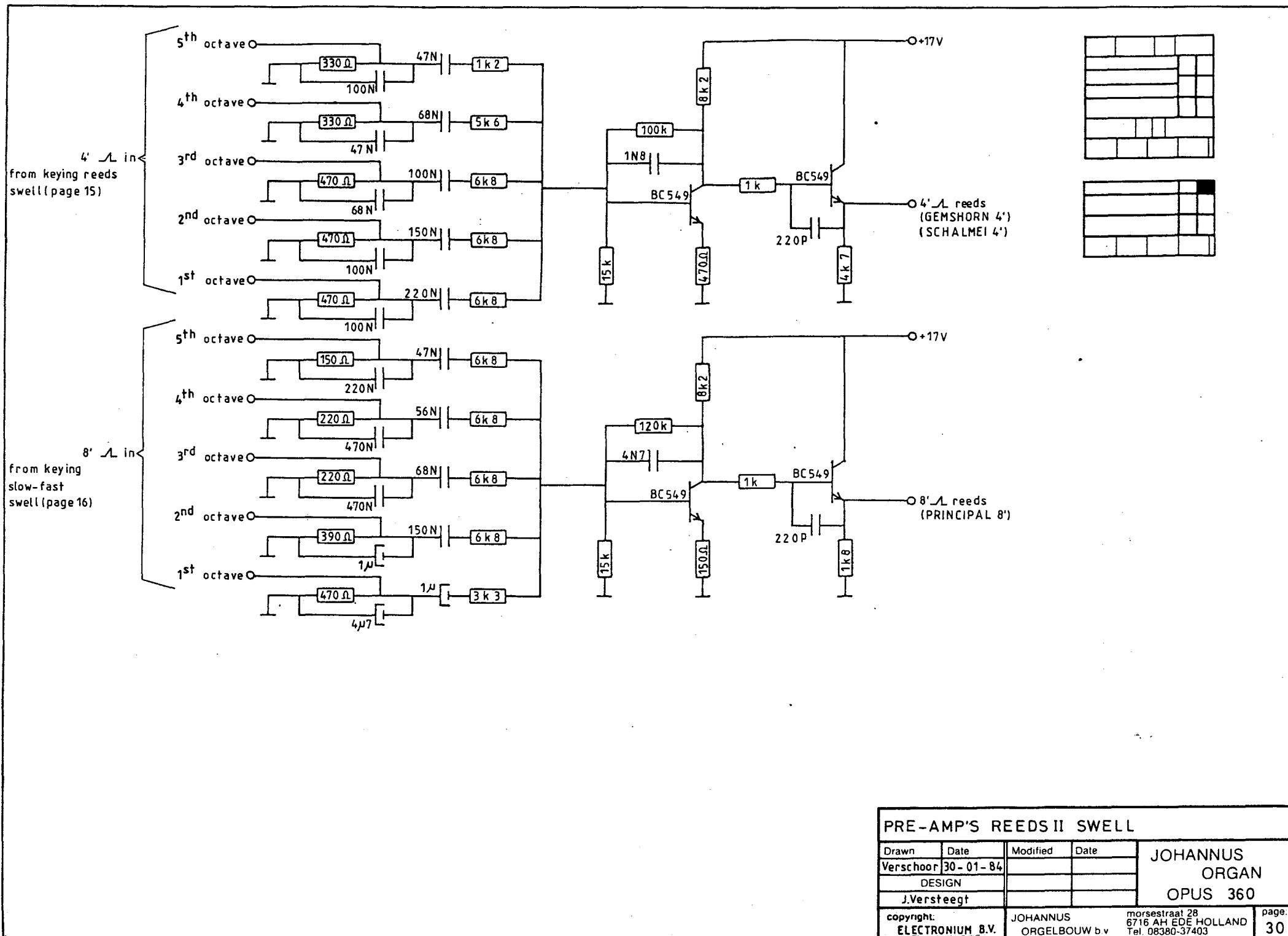
PRE-AMP'S FAST SWELL

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DESIGN				
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ELECTRONIUM B.V.	ORGELBOUW b.v.	6716 AH EDE HOLLAND Tel. 08380-37403		

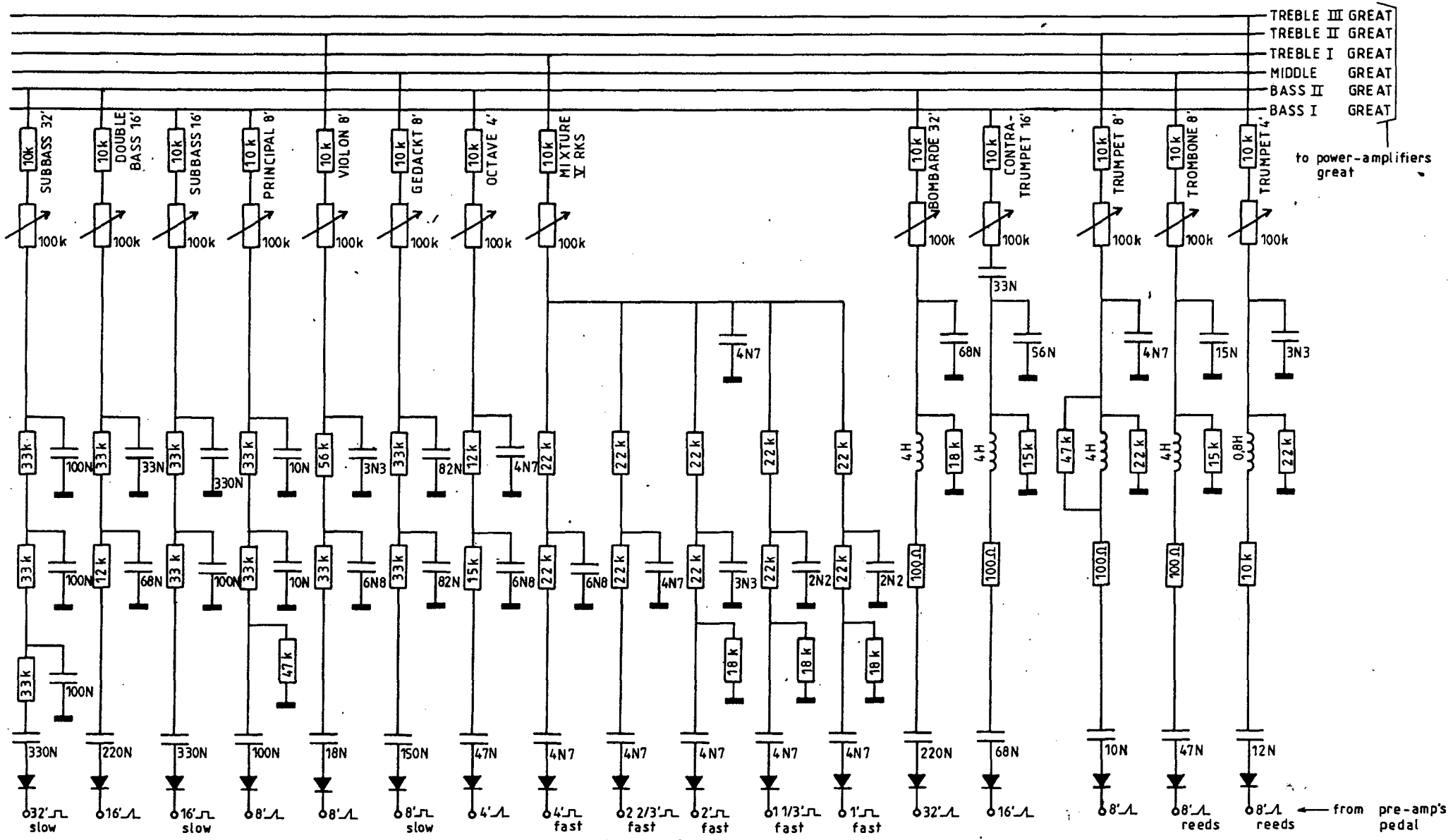
from keying reeds
swell (page 15)



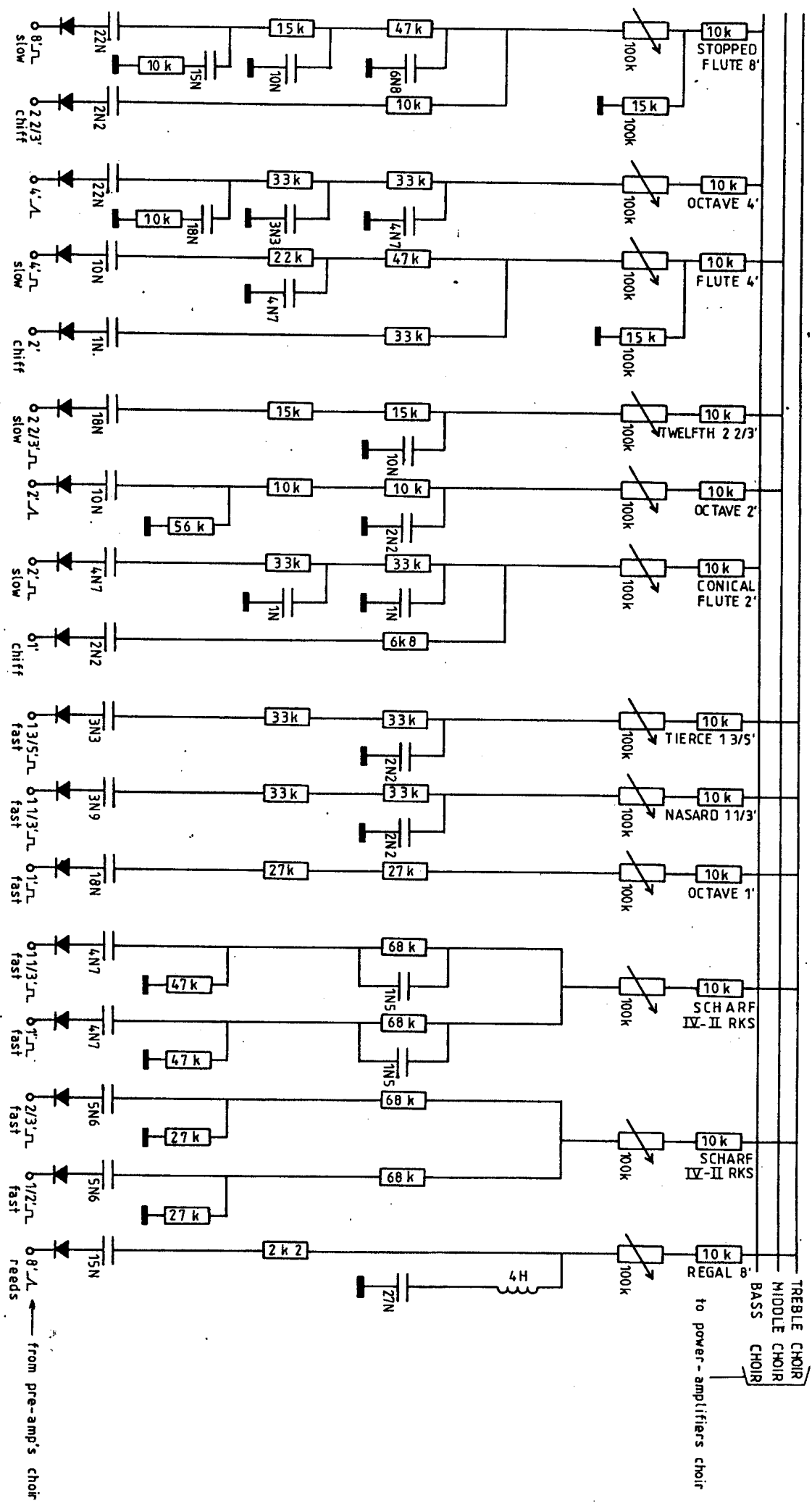
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Drawn	Date	Modified	Date		
Verschoor	27-01-84			OPUS 360	
DESIGN					
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PRE-AMP'S REEDS II SWELL			
Drawn	Date	Modified	Date
Verschoor	30-01-84		
DESIGN			
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			page: 30



VOICES PEDAL			
Drawn	Date	Modified	Date
Verschoor	20-05-85		
DESIGN:			
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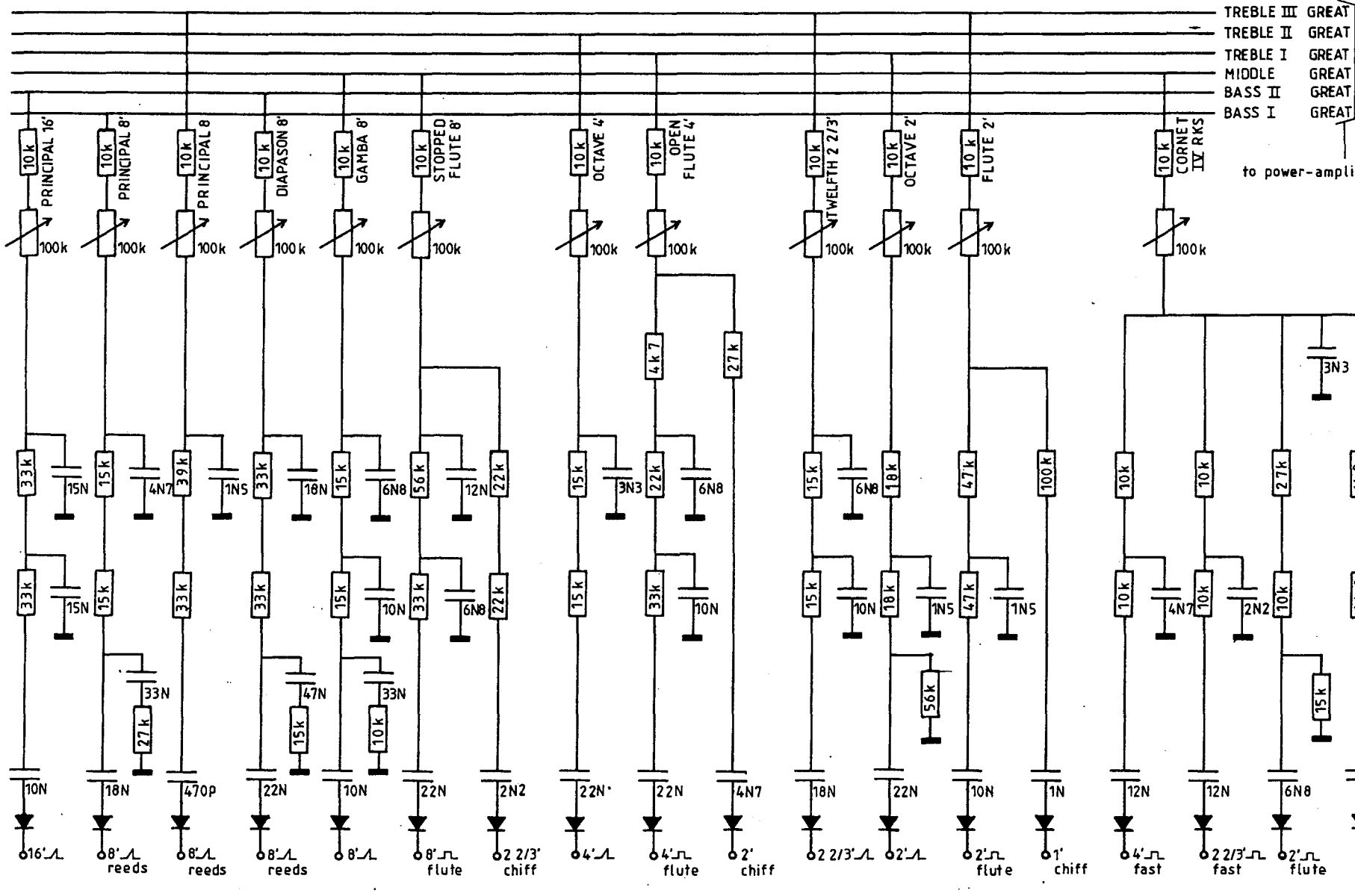
VOICES CHOIR

Drawn	Date	Modified	Date
Verschuur	20-05-85		

DESIGN
J.Versteegjt

JOHANNUS ORGAN
OPUS 360

JOHANNUS ORGELBOUW B.V.
Moorstraat 28
6716 AH EDE HOLLAND
Tel. 08380-37403

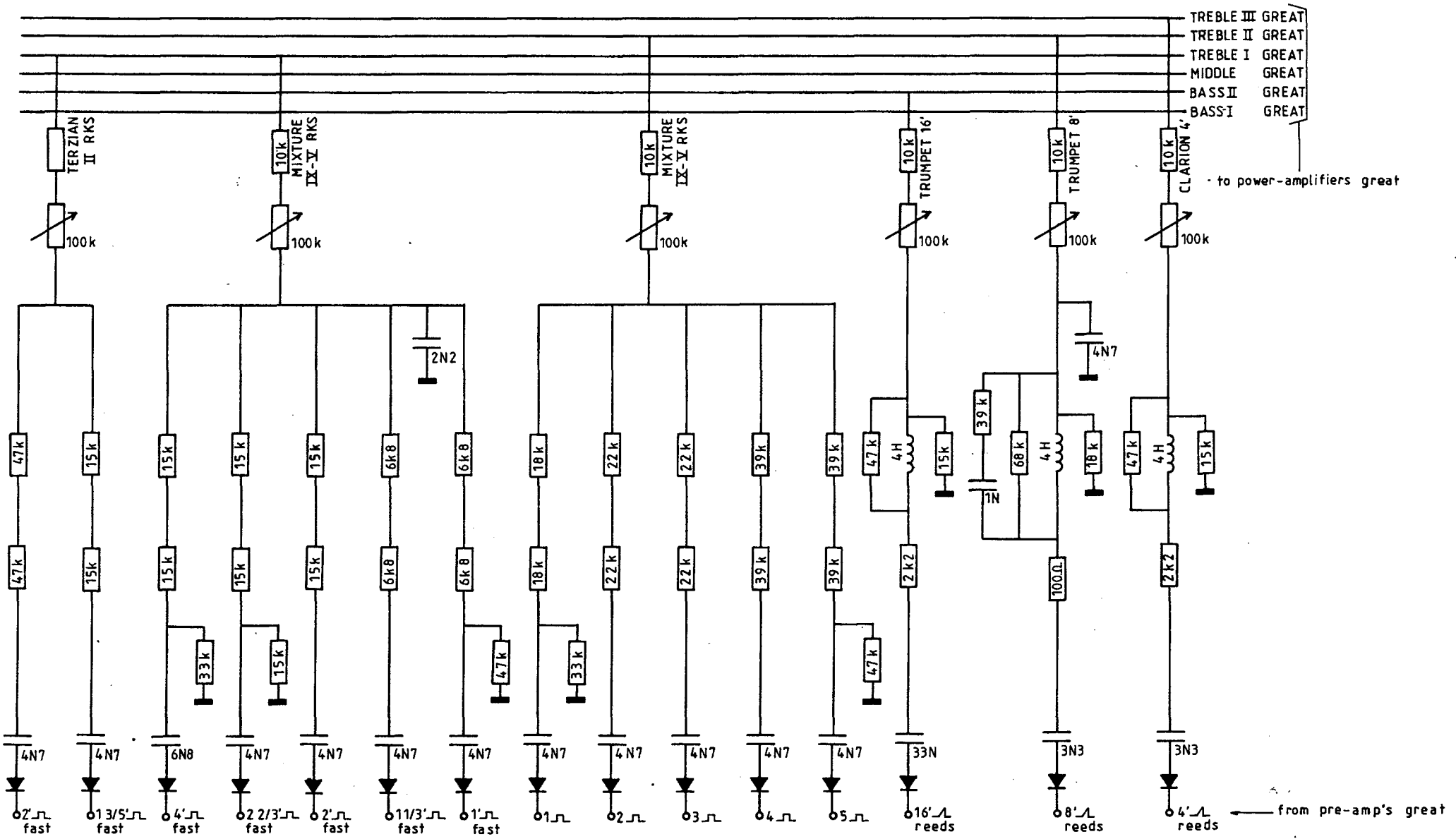


TREBLE III GREAT
 TREBLE II GREAT
 TREBLE I GREAT
 MIDDLE GREAT
 BASS II GREAT
 BASS I GREAT

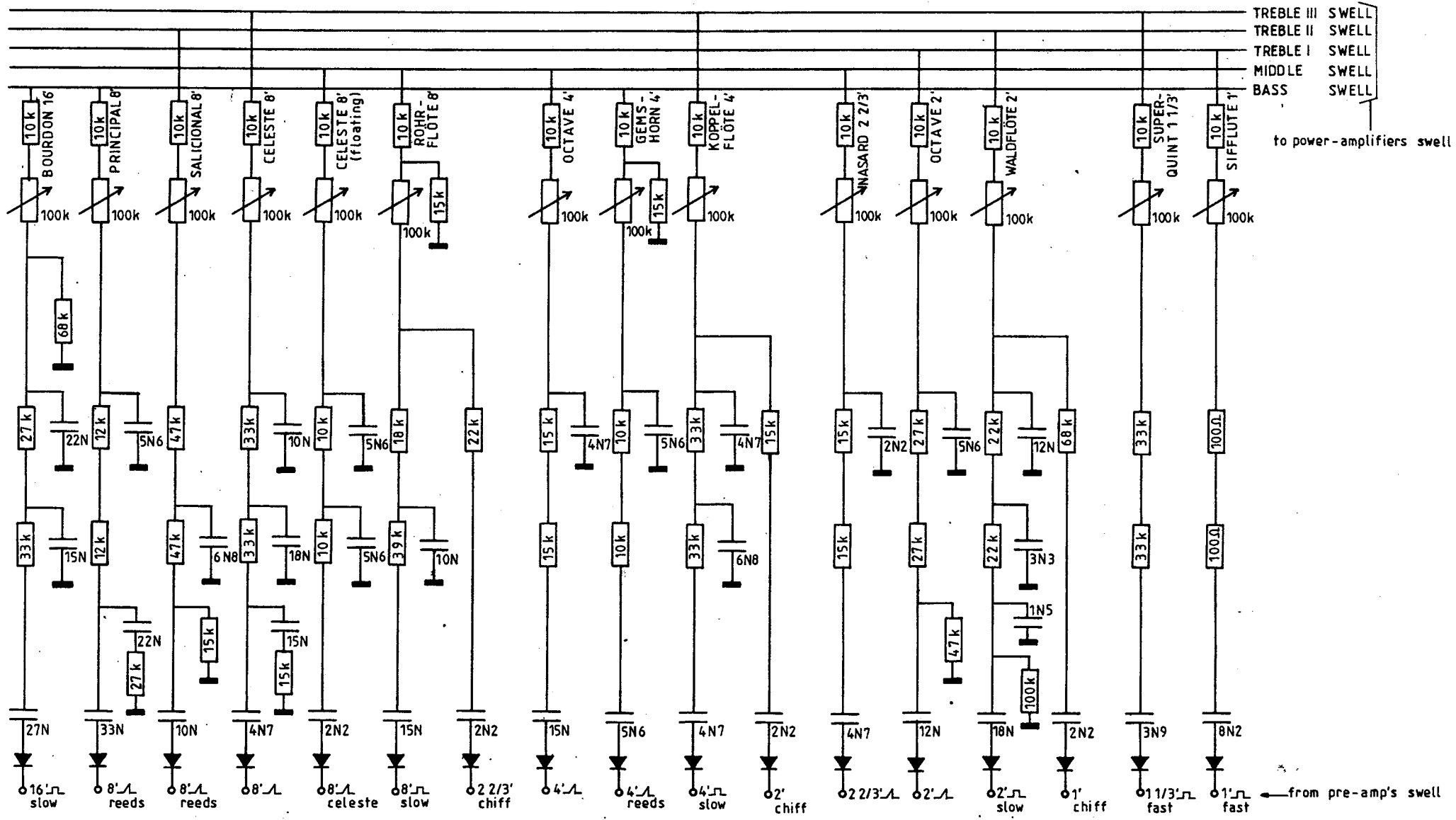
to power-amplifiers great

← from pre-amp's great

VOICES I GREAT				JOHANNUS ORGAN OPUS 360
Drawn	Date	Modified	Date	
Verschoor	20-05-85			
DESIGN				
J.Versteegt				
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VOICES II GREAT			
Drawn	Date	Modified	Date
Verschoor	21-05-85		
DESIGN			
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		Tel. 08380-37403	

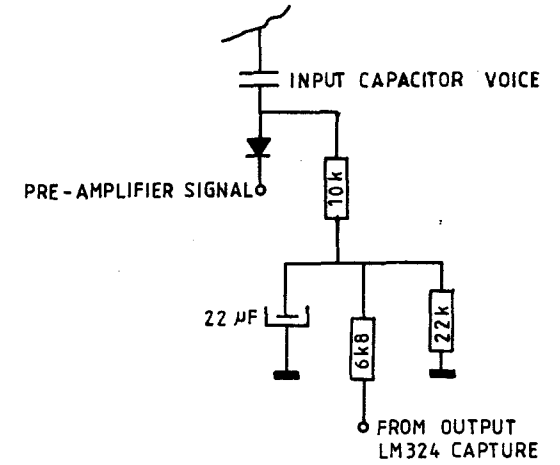
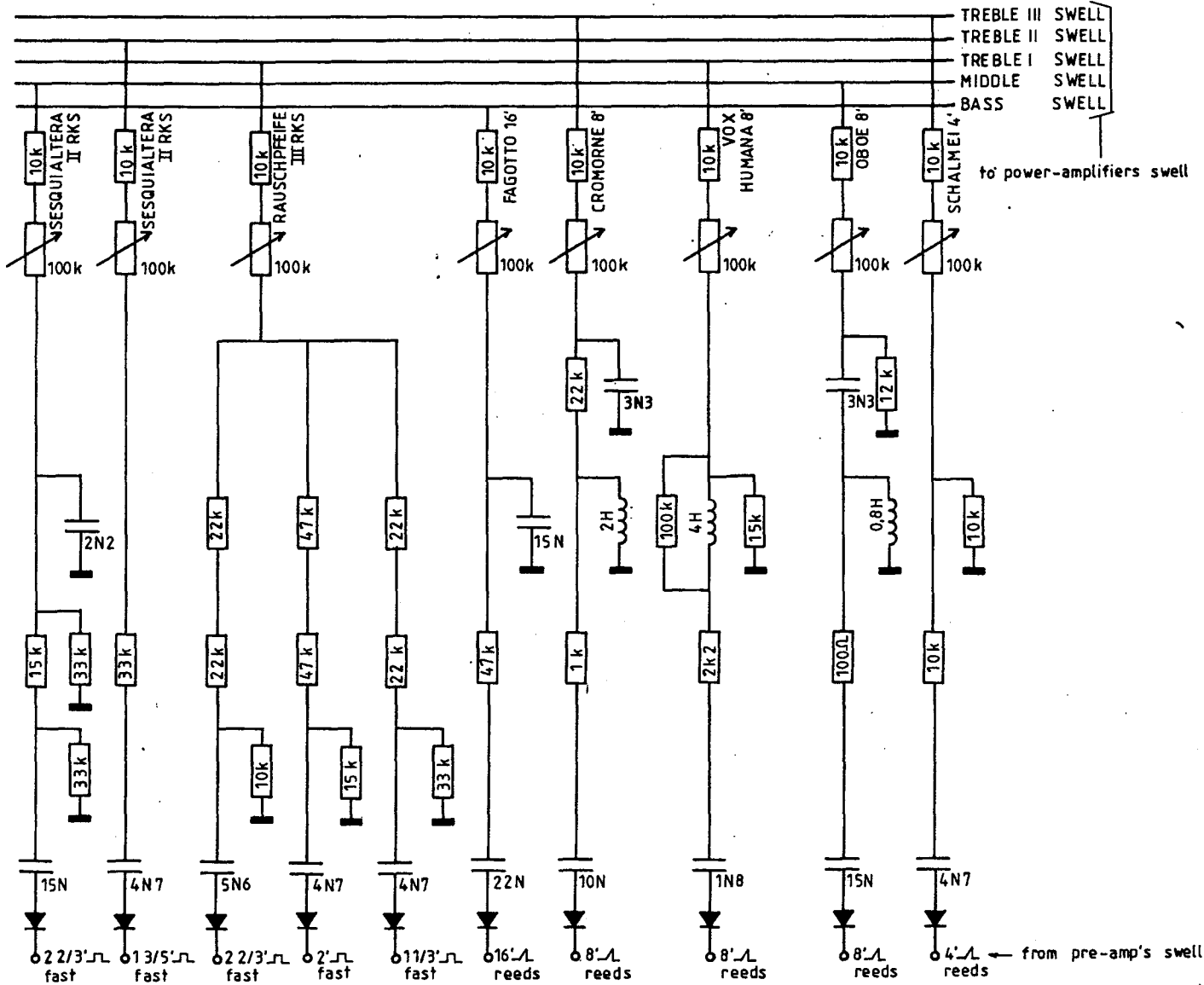


TREBLE III SWELL
 TREBLE II SWELL
 TREBLE I SWELL
 MIDDLE SWELL
 BASS SWELL

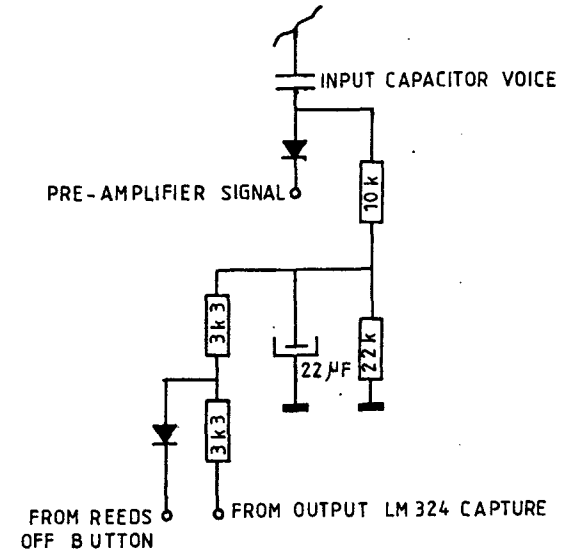
to power-amplifiers swell

← from pre-amp's swell

VOICES I SWELL			
Drawn	Date	Modified	Date
Verschuur	22-05-85		
DESIGN			
J.Versteegt			
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			page: 35



VOICE-GATE (except reeds)



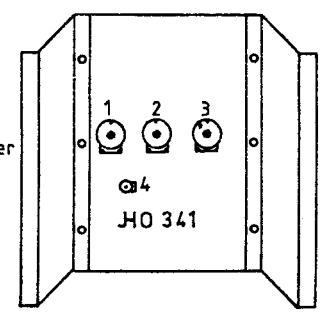
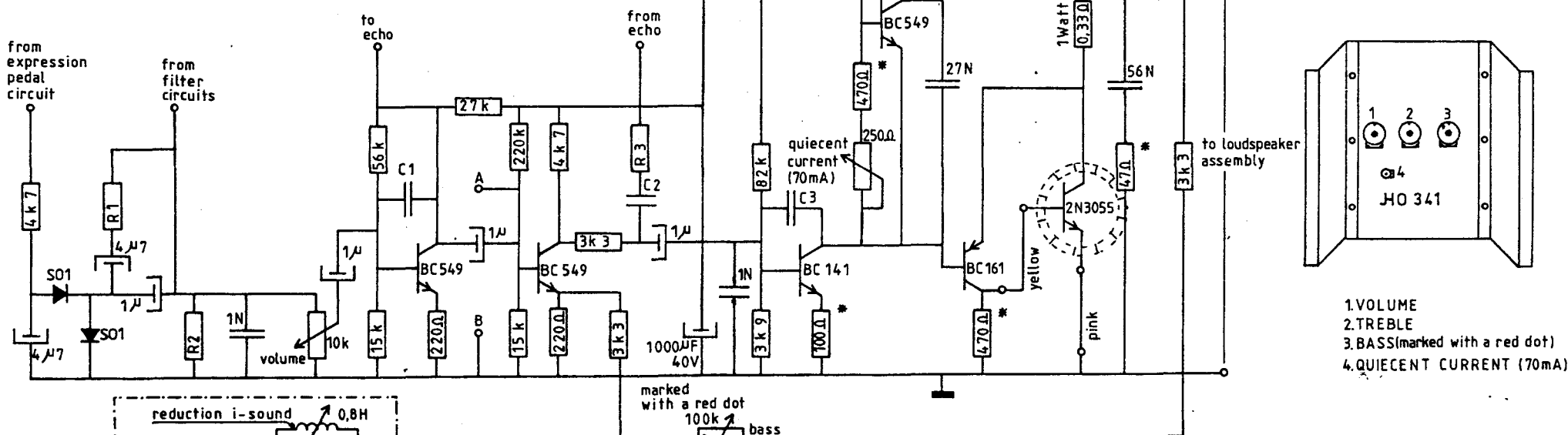
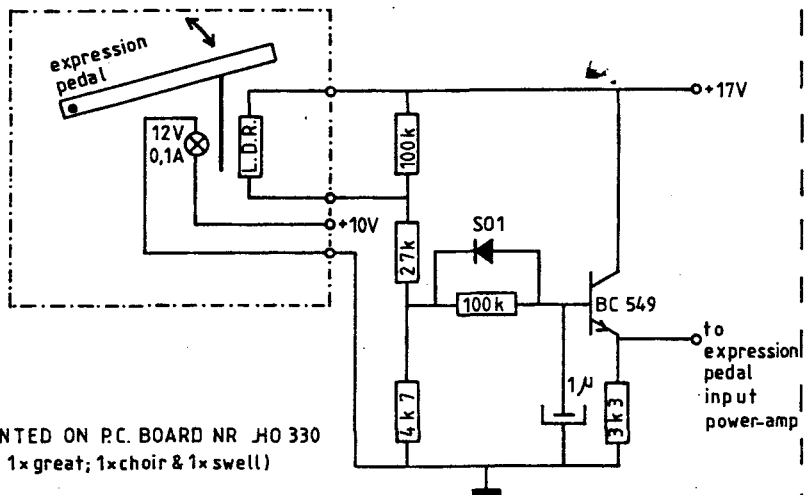
VOICE-GATE (reeds)

VOICES II SWELL

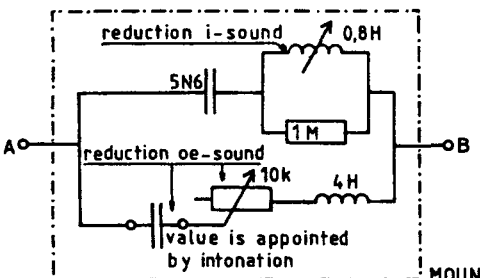
Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	22-05-85			
DESIGN				
J.Versteegt				
copyright:	JOHANNUS		morsestraat 28	
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				page: 36

NOTE:
RESISTORS MARKED WITH A * ARE MOUNTED ON CERAMIC STAND OFF'S

	R1	R2	R3	C1	C2	C3	C4	C5
GREAT + PEDAL								
BI	1k	10k	10k	4N7	—	6N8	150N	330N
BII	1k	10k		3N3	—	5N6	150N	220N
M	220Ω	4k7		1N5	—	470P	150N	100N
TI	220Ω	4k7	33k	470P	15N	470P	150N	47N
TII	220Ω	4k7	15k	470P	10N	470P	150N	22N
TIII	220Ω	4k7		470P	—	470P	150N	47N
SWELL								
B	220Ω	4k7	10k	3N9	—	6N8	150N	220N
M	220Ω	4k7		1N5	—	5N6	150N	100N
TI	220Ω	4k7	18k	470P	10N	470P	150N	47N
TII	220Ω	4k7		470P	—	470P	150N	47N
TIII	220Ω	4k7		470P	—	470P	150N	47N
CHOIR								
B	220Ω	4k7		1N	—	6N8	150N	220N
M	220Ω	4k7		1N	—	1N	150N	100N
T	220Ω	4k7	15k	470P	68N	470P	150N	22N



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

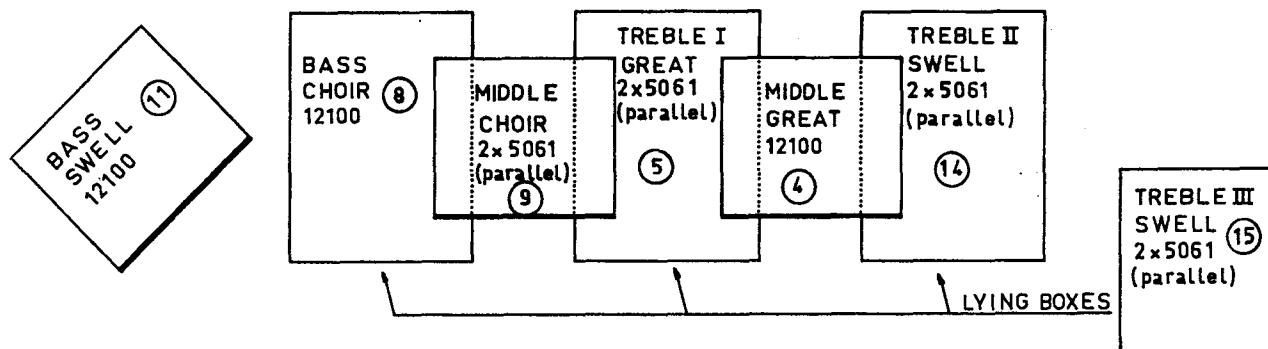


MOUNTED ON P.C. BOARD NR JO 441

POWER AMPLIFIER (universal 14x)

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	28-11-83	Verschoor	22-05-85	
DESIGN				
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TOP VIEW LOUDSPEAKERS
SITUATED BEHIND THE FRONT-SPEAKERS



LOUDSPEAKER:	DIRECTED:
1	GREAT B I SLOPING UPWARDS; TO THE RIGHT
2	GREAT B I FORWARD (with serial resistor 12Ω/9W)
3	GREAT B II SLOPING UPWARDS; TO THE LEFT
4	GREAT M FORWARD
5	GREAT T I SLOPING UPWARDS; FORWARD
6	GREAT T II BACKWARDS
7	GREAT T III BACKWARDS
8	CHOIR B UPWARDS
9	CHOIR M SLOPING UPWARDS; FORWARD
10	CHOIR T SLOPING UPWARDS; FORWARD
11	SWELL B SLOPING TO THE RIGHT; FORWARD
12	SWELL M FORWARD
13	SWELL T I SLOPING UPWARDS; BACKWARDS
14	SWELL T II SLOPING UPWARDS; BACKWARDS
15	SWELL T III SLOPING UPWARDS; TO THE LEFT

FRONT VIEW
FRONT-SPEAKERS

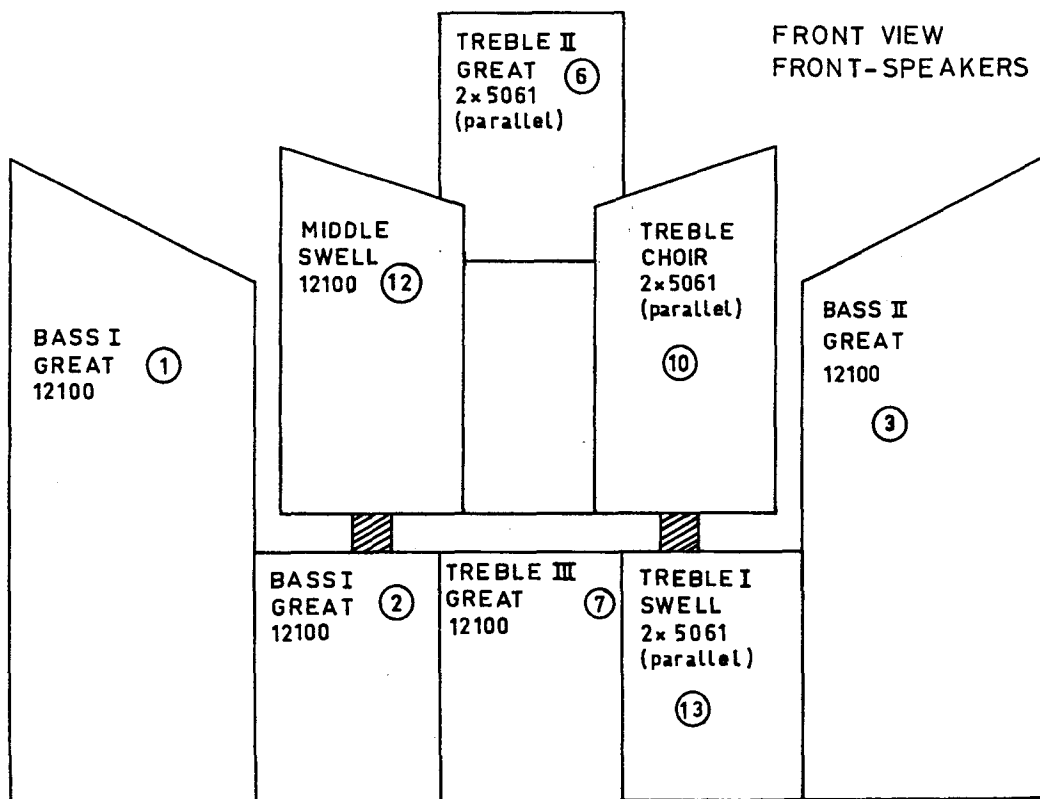
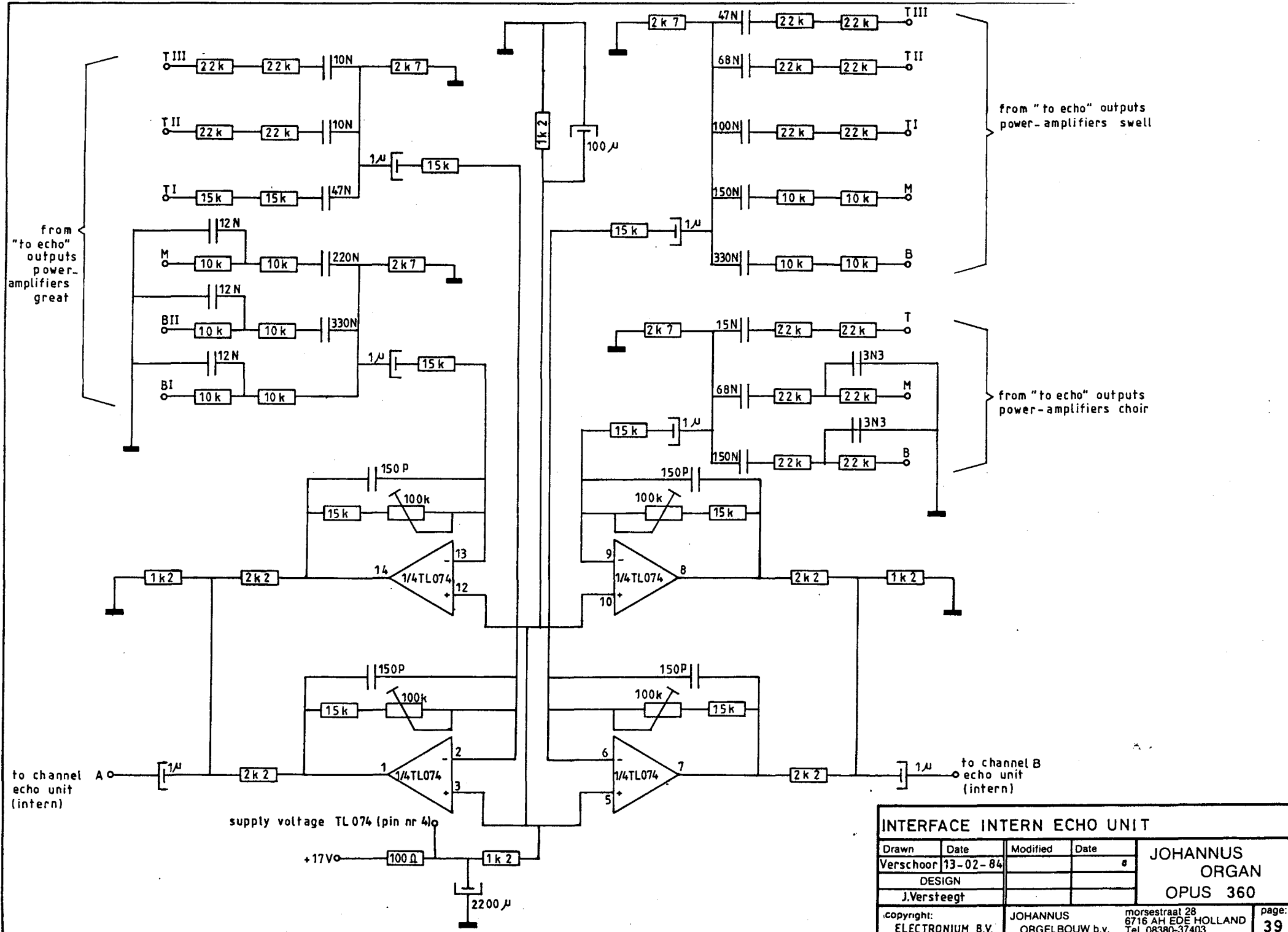


TABLE OF STOPS FOR CONTROLLING OF THE
RIGHT INTERCONNECTIONS BETWEEN ORGAN
AND LOUDSPEAKER ASSEMBLY

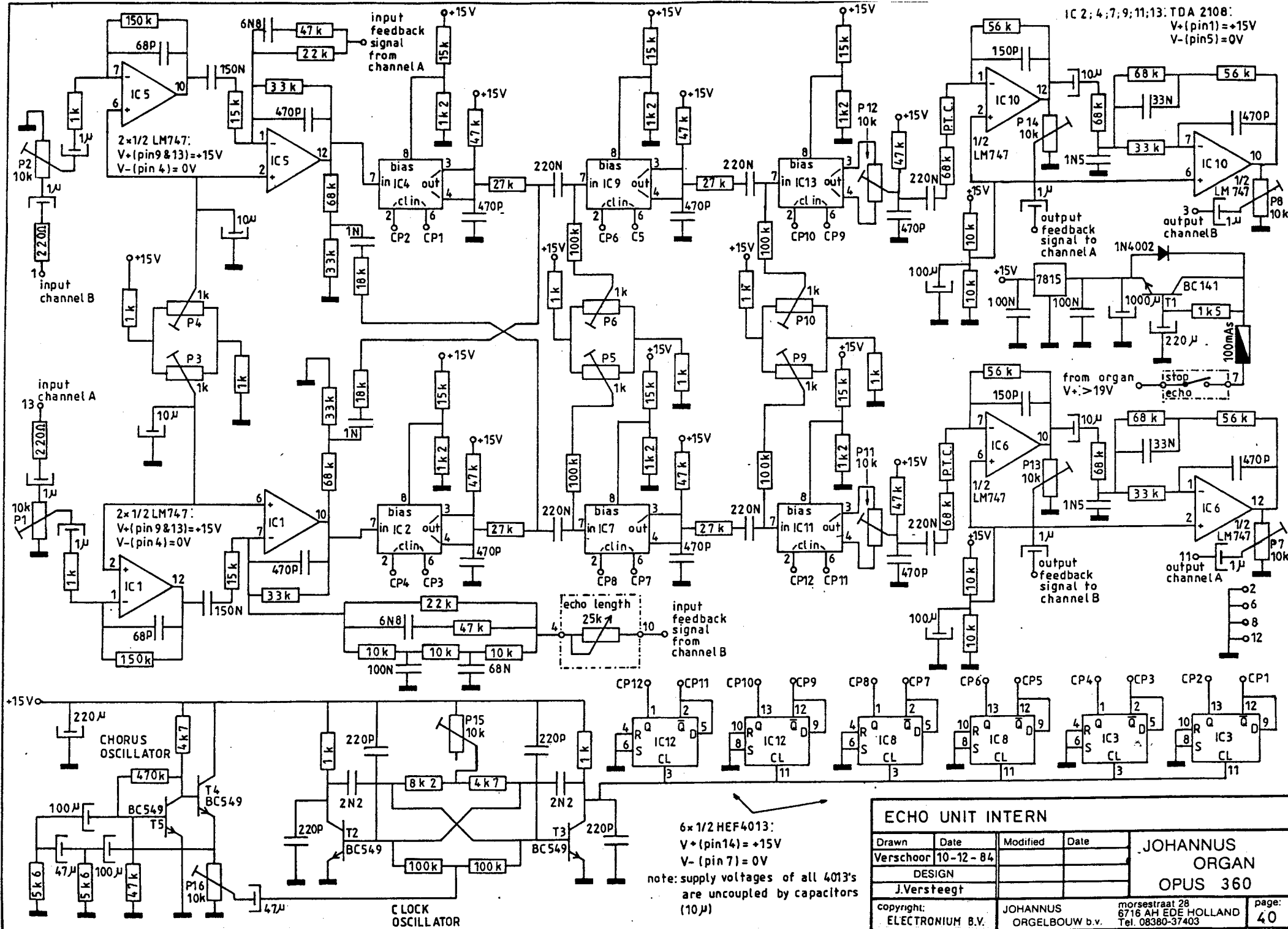
GREAT B I	PRINCIPAL 8'
GREAT B II	PRINCIPAL 16'
GREAT M	STOPPED FLUTE 8'
GREAT T I	OPEN FLUTE 4'
GREAT T II	TRUMPET 8'
GREAT T III	CLARION 4'
CHOIR B	STOPPED FLUTE 8'
CHOIR M	FLUTE 4'
CHOIR T	OCTAVE 1'
SWELL B	PRINCIPAL 8'
SWELL M	OCTAVE 4'
SWELL T I	OCTAVE 2'
SWELL T II	WALDFLÖTE 2'
SWELL T III	KOPPELFLÖTE 4'

LOUDSPEAKER ASSEMBLY

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	02-02-84			
DESIGN				
J. Versteegt				
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INTERFACE INTERN ECHO UNIT			
Drawn	Date	Modified	Date
Verschoor	13-02-84		s
DESIGN			
J.Versteegt			
copyright:	JOHANNUS	morsestraat 28	page:
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IC 2, 4, 7, 9, 11, 13: TDA 2108:
 V+(pin1)=+15V
 V-(pin5)=0V

2x1/2 LM747:
 V+(pin9 & 13)=+15V
 V-(pin4)=0V

2x1/2 LM747:
 V+(pin9 & 13)=+15V
 V-(pin4)=0V

echo length
 25k

CHORUS
 OSCILLATOR

CLOCK
 OSCILLATOR

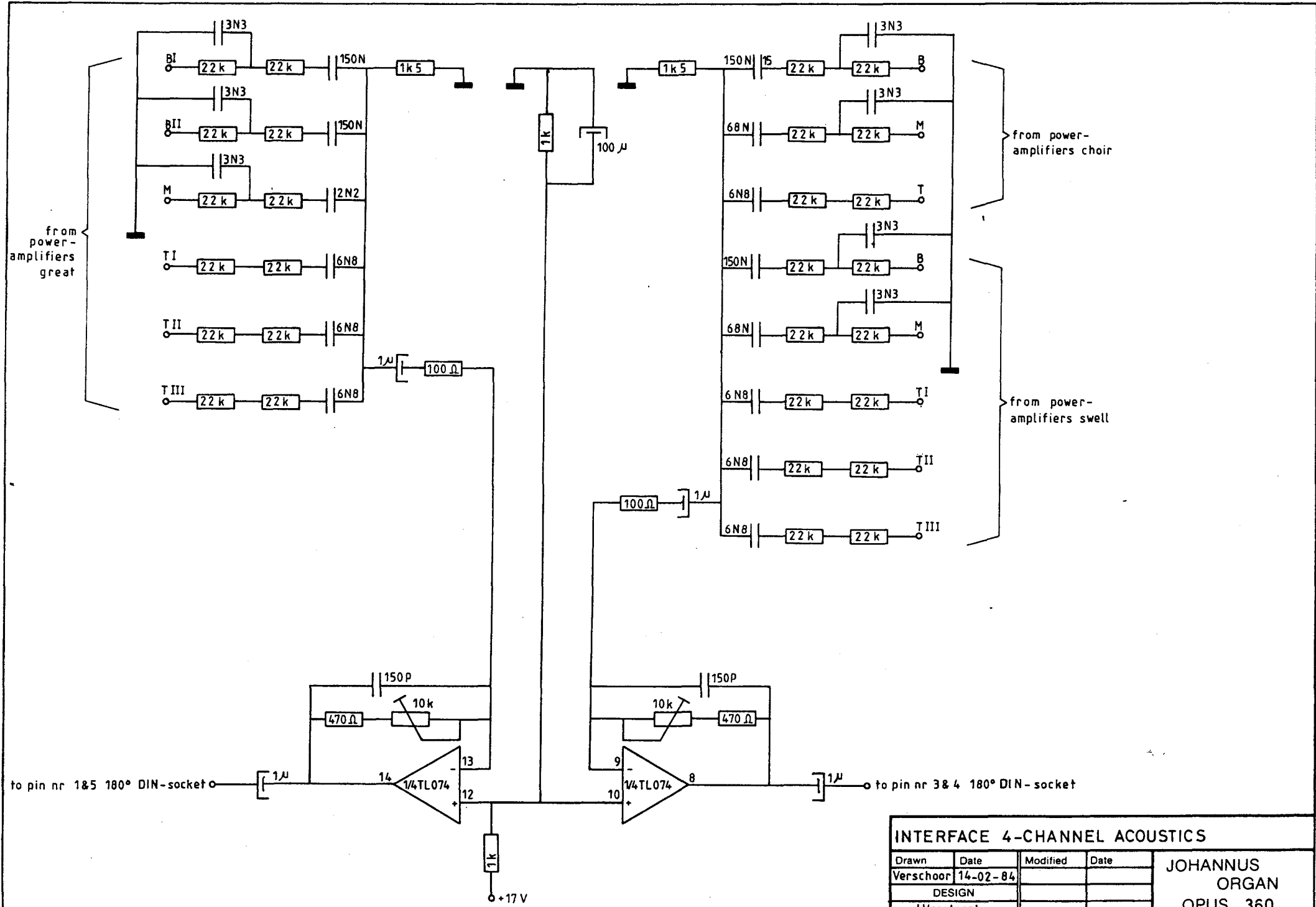
6x 1/2 HEF4013:
 V+(pin14)= +15V
 V-(pin7)= 0V
 note: supply voltages of all 4013's
 are uncoupled by capacitors
 (10µ)

ECHO UNIT INTERN

Drawn	Date	Modified	Date
Verschoor	10-12-84		
DESIGN			
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from power-amplifiers choir

from power-amplifiers swell

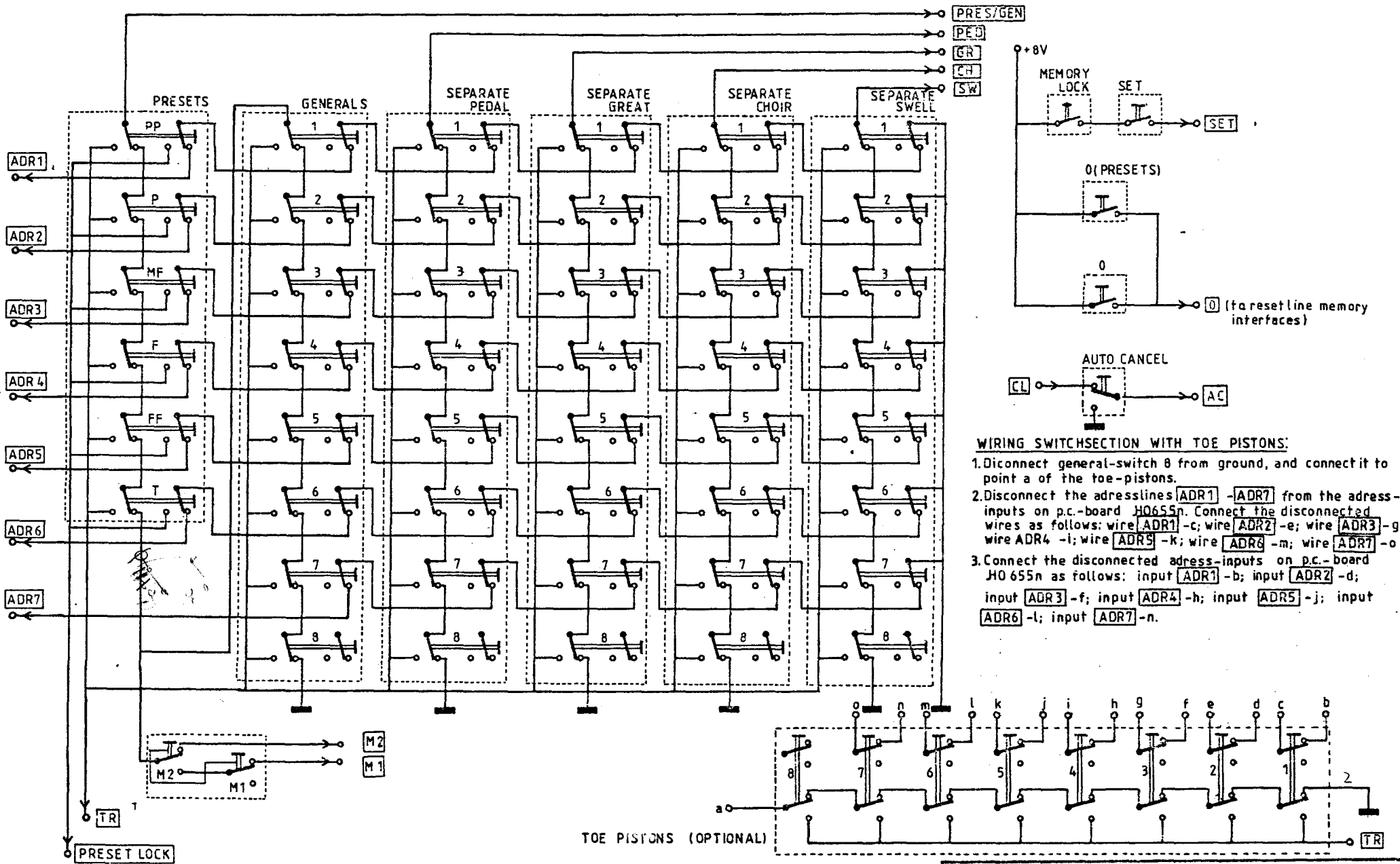
to pin nr 1&5 180° DIN-socket

to pin nr 3&4 180° DIN-socket

+17V

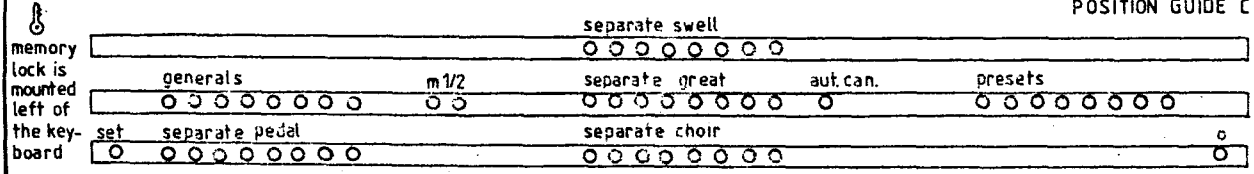
INTERFACE 4-CHANNEL ACOUSTICS			
Drawn	Date	Modified	Date
Verschoor	14-02-84		
DESIGN			
J.Versteegt			
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OPUS 360



WIRING SWITCHSECTION WITH TOE PISTONS:

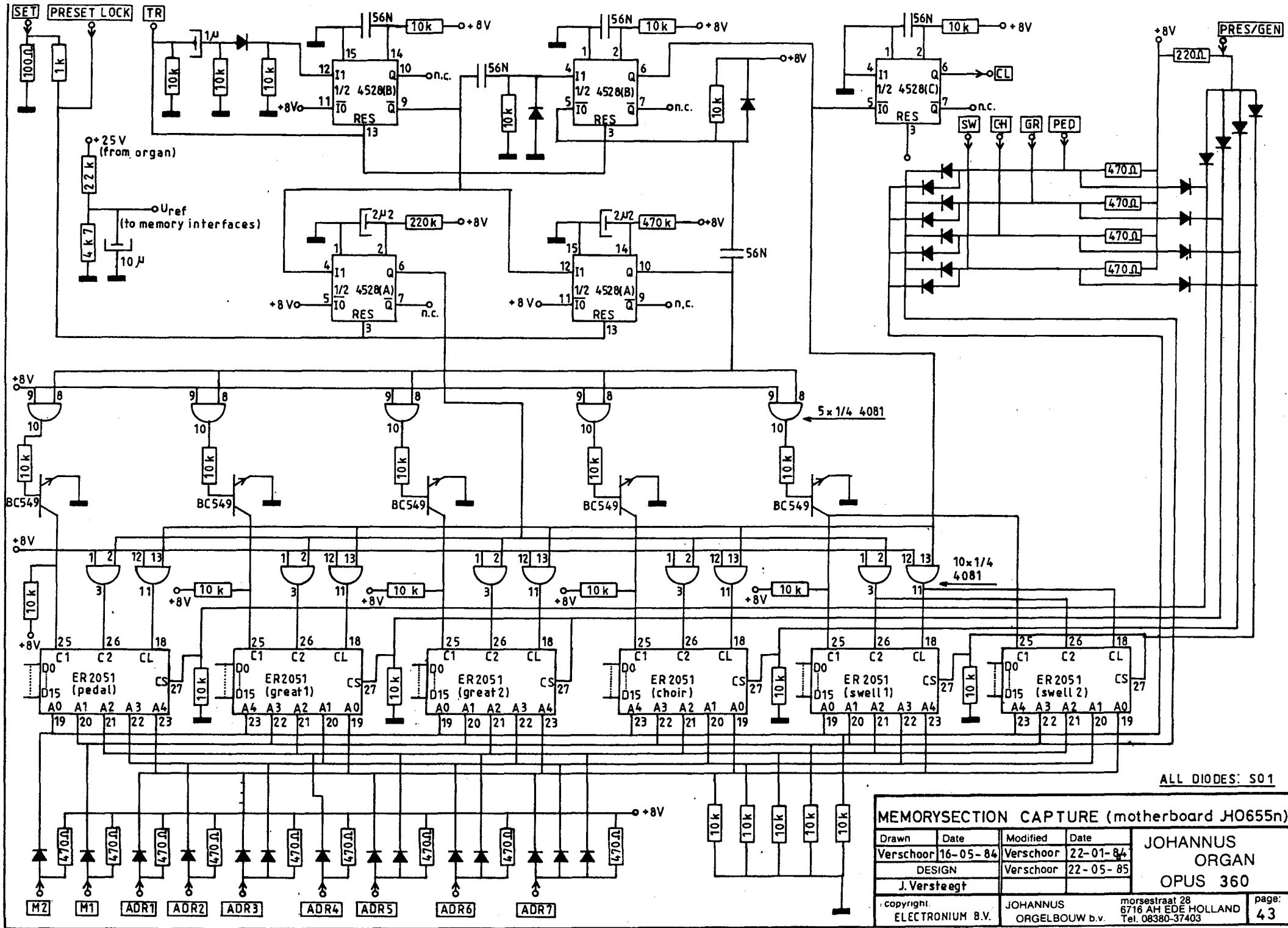
1. Disconnect general-switch 8 from ground, and connect it to point a of the toe-pistons.
2. Disconnect the addresslines **ADR1** -**ADR7** from the address-inputs on p.c.-board **H0655n**. Connect the disconnected wires as follows: wire **ADR1** -c; wire **ADR2** -e; wire **ADR3** -g; wire **ADR4** -i; wire **ADR5** -k; wire **ADR6** -m; wire **ADR7** -o
3. Connect the disconnected address-inputs on p.c.-board **H0655n** as follows: input **ADR1** -b; input **ADR2** -d; input **ADR3** -f; input **ADR4** -h; input **ADR5** -j; input **ADR6** -l; input **ADR7** -n.



POSITION GUIDE CAPTURE BUTTONS

SWITCHSECTION CAPTURE (with position guide)

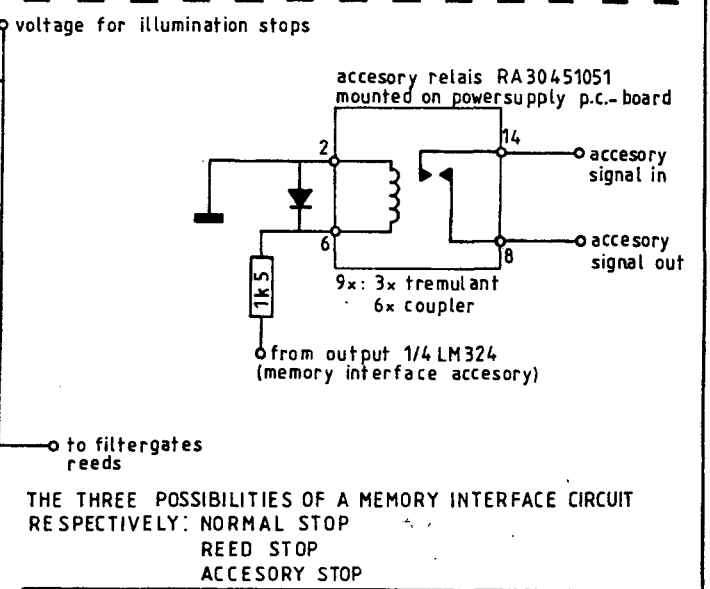
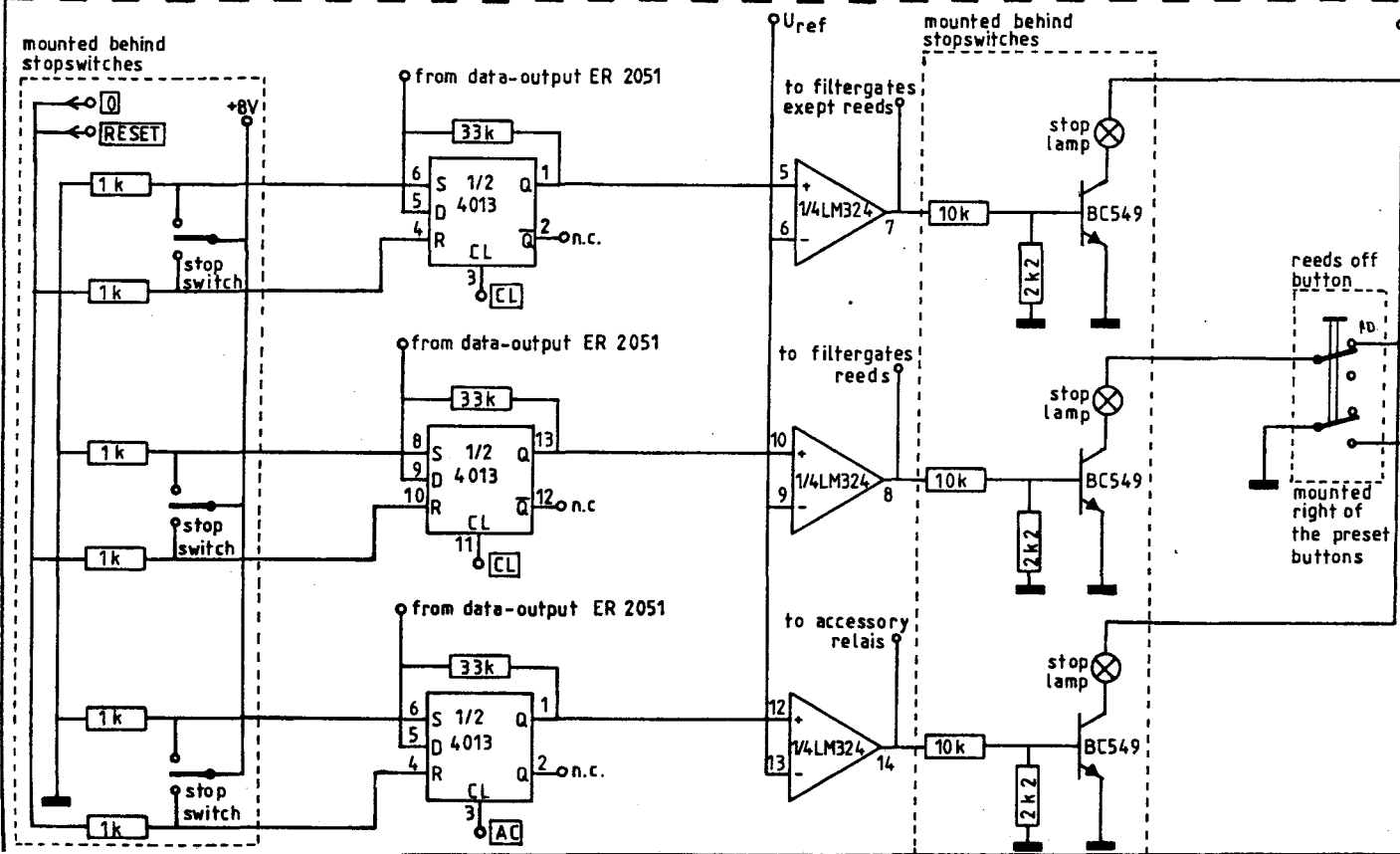
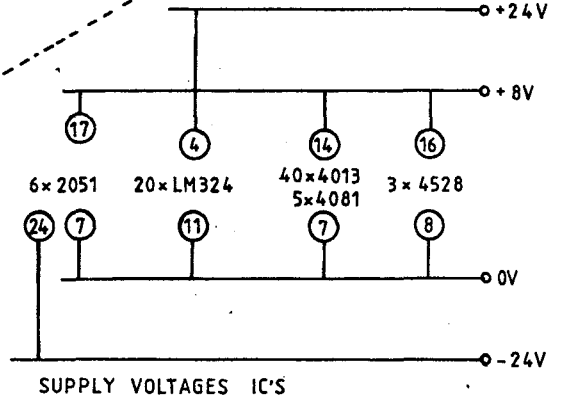
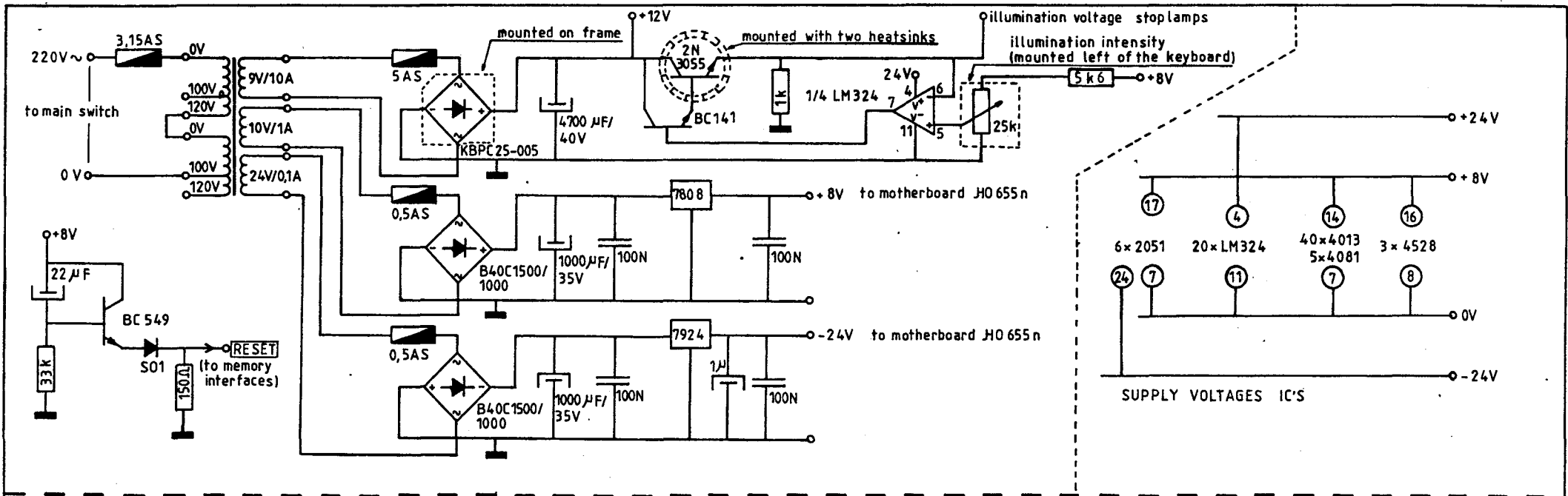
Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	21-10-83	Verschoor	21-01-85	
DESIGN		Verschoor	01-07-85	
J.Versteegt				page: 42
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ALL DIODES: S01

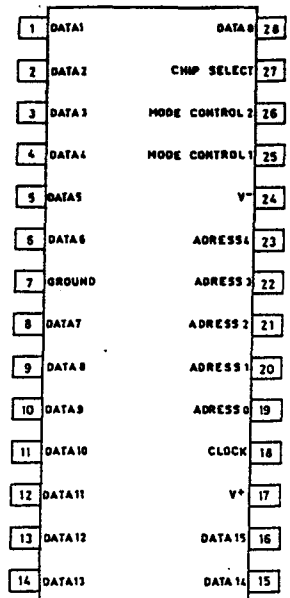
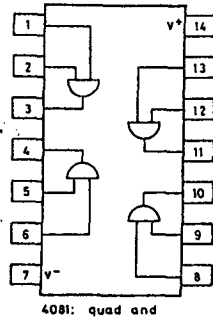
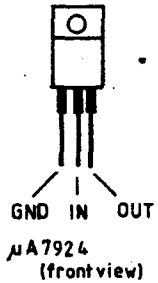
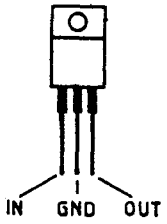
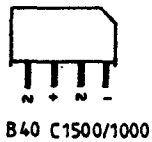
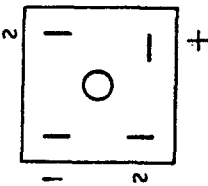
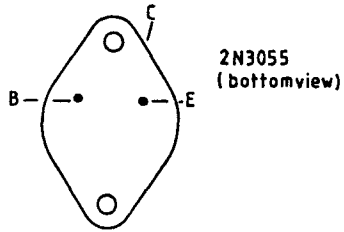
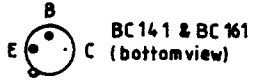
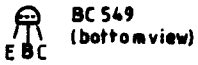
MEMORYSECTION CAPTURE (motherboard JO655n)			
Drawn	Date	Modified	Date
Verschoor	16-05-84	Verschoor	22-01-84
DESIGN		Verschoor	22-05-85
J.Versteeg			
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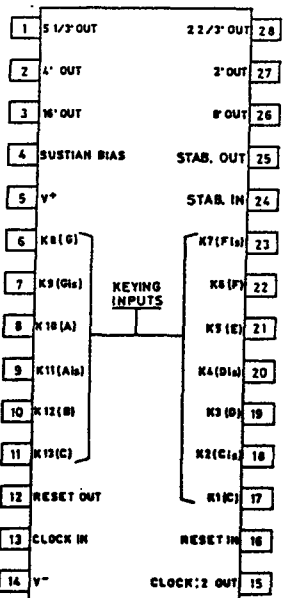


THE THREE POSSIBILITIES OF A MEMORY INTERFACE CIRCUIT
RESPECTIVELY: NORMAL STOP
REED STOP
ACCESSORY STOP

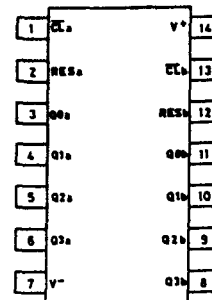
POWER SUPPLY CAPTURE (p.c.-board J0661)			
MEMORY INTERFACES CAPTURE (p.c.-board J0662)			
Drawn	Date	Modified	Date
Verschoor	31-10-83	Verschoor	28-01-85
DESIGN		Verschoor	22-05-85
J.Versteegt			
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			page: 44



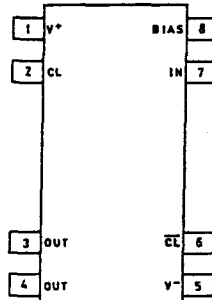
ER 2051: 512 bit (32x16) electrically alterable read only memory



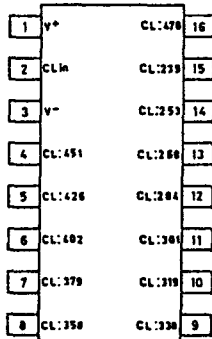
TMS 3617: top octave synthesizer with dividers and keyings



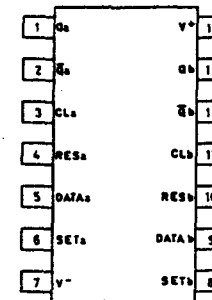
74LS393: dual 4-bit binary ripple counter



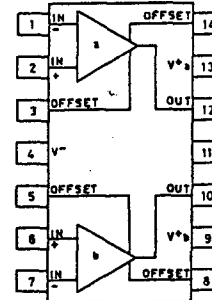
TDA 2108: delay line



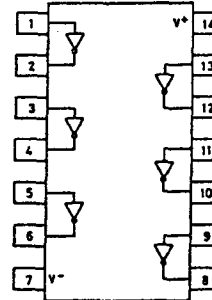
M083: top octave synthesizer



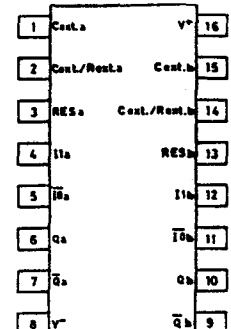
4013: dual D-flip-flop



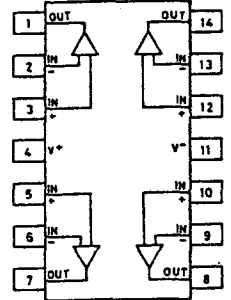
µA747: dual opamp



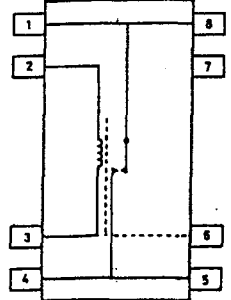
7406: hex inverter buffer/driver (open collector)
7404: hex inverter



4528: dual monostable multivibrator



TL074: quad opamp
LM324: quad opamp



RA30451051: reed relays

GENERAL INFORMATION SEMI-CONDUCTORS

Drawn	Date	Modified	Date	JOHANNUS ORGAN OPUS 360
Verschoor	15-02-84	Verschoor	29-08-85	
DESIGN				
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