

SERVICE INFORMATION

eminent model 310 unique

INHOUD - CONTENTS - INHALT	PART NO.	SHEET NO.
Signal Flow Diagram	—	015.0145
Wiring Diagram	—	015.0147
Tone panel (Generators and Dividers.)	005.0018	015.0144
Localisation diagram tone panel/manuals	—	015.0144
Sustain gates circuits (manualen)	005.0018	015.0144
Register panel: upper manual voicing	003.2017	015.0133
lower manual voicing	003.2015	015.0134
pedal voicing-divider	003.2015	015.0134
vibrato oscillator	003.2015	015.0134
percussion amplifier	003.2017	015.0133
reverberation circuit	003.2016	015.0135
pre-ampl. circuit	003.2016	015.0135
sustain voicing circuit	003.2016	015.0135
Sustain trigger circuits	005.0045	015.0129
String ensemble voicing circuit	003.2034	015.0143
Orbitone control circuits	012.0007	015.0141
Orbitone amplifier circuit	012.0009	015.0142
Power supply and Amplifier	004.0048	015.0132
Modulator circuit A	012.0013	015.0142
Modulator circuit B	012.0014	015.0142
String control circuit UM	003.2038	015.0143
String control circuit LM	003.2039	015.0143

TECHNISCHER GEGEVENS	TECHNISCHE	TECHNICAL DATA DATEN
Netfrequentie	Mains frequency	Netzfrequenz 50/60 Hz
Netspanning*	Mains voltage*	220 V (115 V)*
Uitgangsvermogen	Audio output	Ausgangsleistung 26 W
<i>Ingang (input):</i> Kristal pickup	<i>Input connection:</i> Record player (crystal)	<i>Eingang (input):</i> Kristal pick-up
Bandrecorder	Tape recorder	Tonbandrecorder 300 mV
Radio	Radio	Rundfunk 150 kOhm
Rithme box	Rhythm unit	Rhythmik box
Uitgang (output)	Output connection	Ausgangabnahme 0,7 V eff.
3 kanaals orbitone systeem	3 channels Orbitone system	3 kanälen Orbitone system 100 Ohm
<i>Hoofdtelefoon</i> <i>stereo etreec:</i> Impedantie hoofdtelf. Maximum vermogen Frequentie bereik	<i>Headphones</i> <i>stereo connection:</i> Impedance headphones Maximum capacity Frequency range	<i>Kopfhöreranschluss</i> <i>(stereo):</i> Impedantie kopfhörer 8-16 Ohm Vermögen maximum 0,5 W Frequenzbereik 25-15000 Hz
<i>Zekeringen:</i> Net (traag) 24 V (traag) 2x	<i>Fuses:</i> Mains (slow action) 24 V. (slow action) 2x	<i>Sicherungen:</i> Netz (träge) 24 V (träge) 2x 1,6 AT 2 AT

* 115-127 Volt

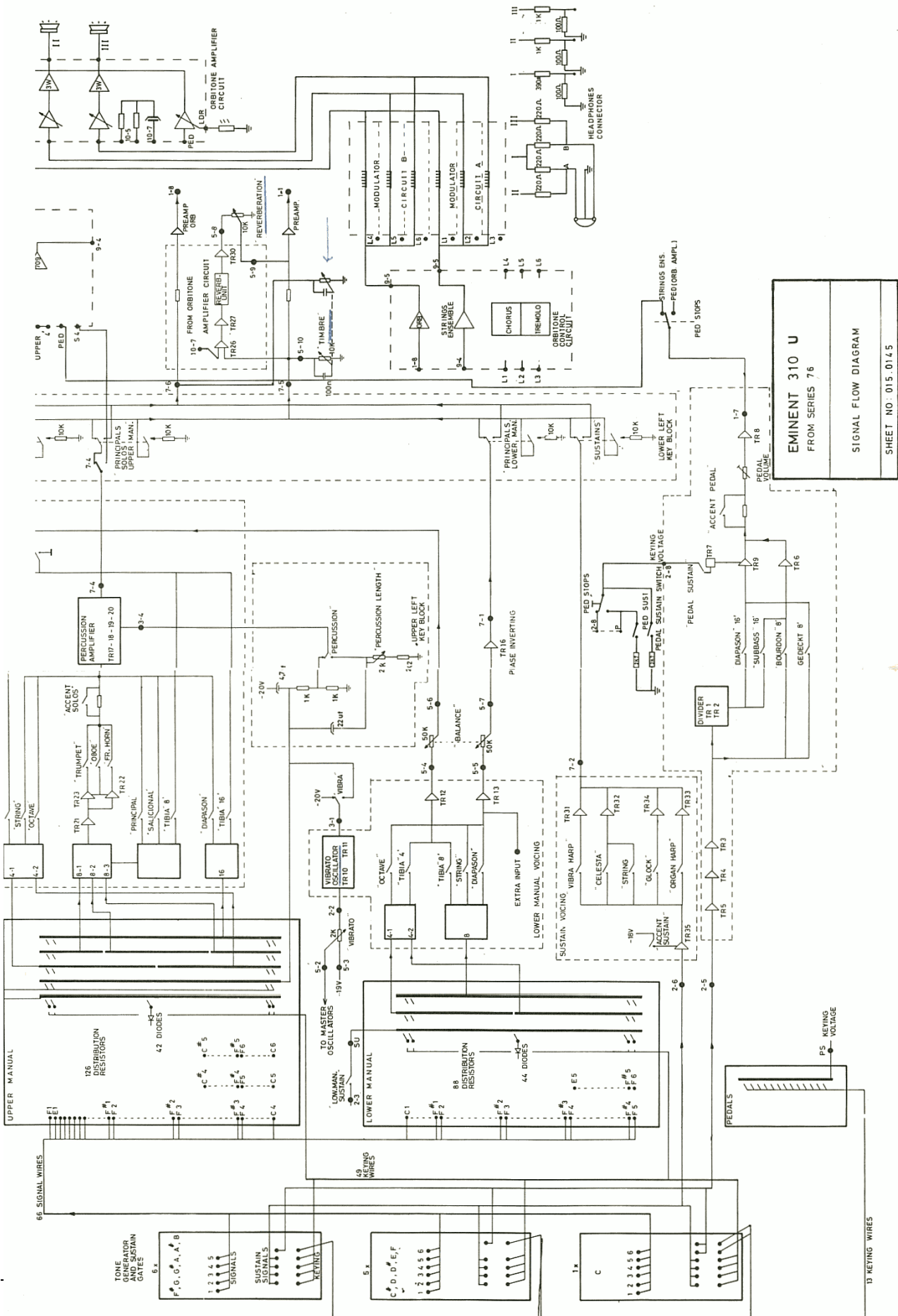
Het orgel is voor 220 Volt uitgevoerd. Voor 110-115-127 Volt omschakeling als volgt te werk te gaan: (zie transformator op de bodem van het orgel).
— De draad op de 220 Volt aansluiting omtrekken naar de 115 Volts aansluiting.
— De netzekering verwisselen voor een zekering die twee maal de waarde heeft.

* 115-127 Volt

Organ is equipped for use with 220 Volt. To change to 115-127 Volt operation do as follows (remove power supply from bottom of cabinet)
— Relocate 220 Volt wire to 115 Volt on transformer.
— Change mains fuse to two times the value of existing one, replace power supply.

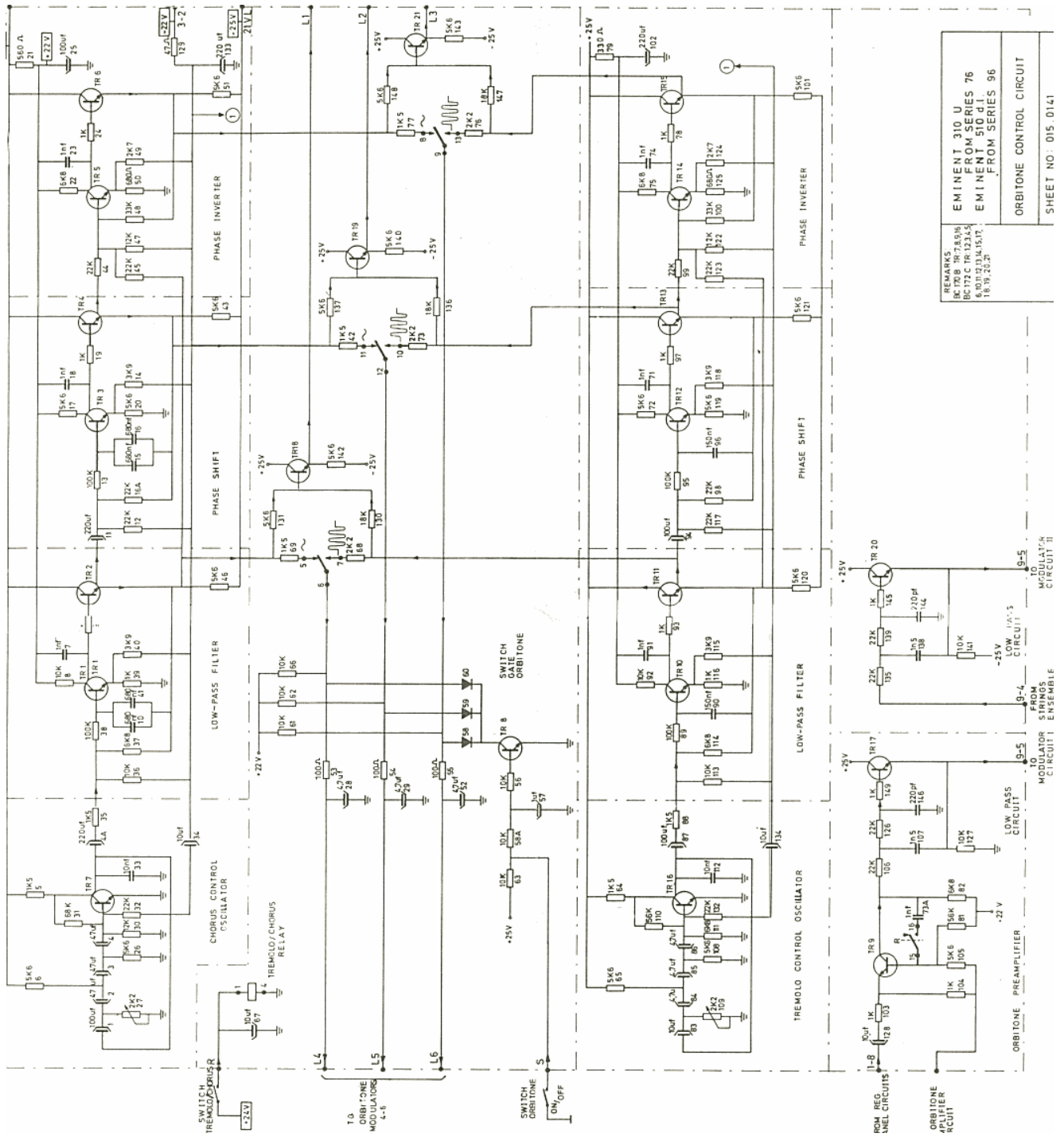
* 115-127 Volt

Die Orgel ist normal für 220 Volt vorgesehen, kann jedoch auch auf 110-115-127 Volt umgeschaltet werden. (siehe Transformator auf dem Boden der Orgel)
— Der Anschlussdraht von 220 Volt ist jeweils auf die gewünschte Voltspannung umzusetzen z. B. auf 115 Volt.
— Netzsicherung ist umzutauschen gegen eine Sicherung mit doppeltem Wert.

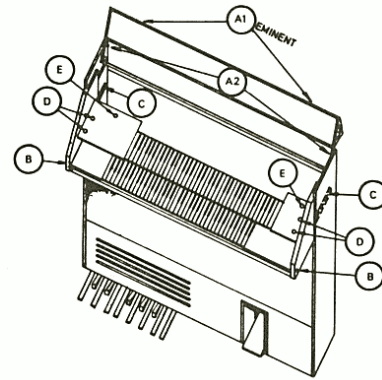


EMINENT 310 U
FROM SERIES 76
SIGNAL FLOW DIAGRAM
SHEET NO. 015-0145

13 KEYING WIRES



- EXTRA INSTEL MOGELIJKHEDEN: (*niet draaien aan afgelakte potmeters!!!*)
- VIBRATO: De snelheid van het vibrato is instelbaar door middel van een instelpotmeter nr. 62 zie tekening Lower Manual Voicing circuit.
- PEDAL: Het pedaal volume is instelbaar door instelpotmeter nr. 50 zie tekening Lower Manual Voicing.
- ADDITIONAL ADJUSTMENT POSSIBILITIES: (*do not rotate sealed potentiometer*)
- VIBRATO: The vibrato rate is adjustable by means of potentiometer no. 62 see drawing Lower Manual Voicing circuit.
- PEDAL: The pedal volume is adjustable by means of potentiometer no. 50 see drawing Lower Manual Voicing.
- EXTRA EINSTELMOGELIJKHEITEN: (*nicht an den mit Lack plombierten Potentiometer drehen*)
- VIBRATO: Die Geschwindigkeit des Vibrator ist regulierbar durch Potentiometer Nr. 62 siehe Zeichnung Lower Manual Voicing circuit.
- PEDAL: Das Pedalvolumen ist mit Hilfe des Potentiometer Nr. 50 regulierbar siehe Zeichnung Lower Manual Voicing.



Demontage Eminent 310 Unique

Demontage Register paneel:

1. Lessenaar verwijderen.
2. eventueel deksel verwijderen.
3. bovenblad opklappen.
4. verwijder schroeven:
5. bij Eminent: A1 (voorzijde lijst)
5. registerpaneel is nu opklapbaar.

BOVENKLAVIER:

6. handel als bij 1 t/m 5
7. bovenklaviersysteem is gedeeltelijk bereikbaar.
8. verwijder aan buitenzijde orgel dekplaatjes B.
9. verwijder schroeven welke nu zichtbaar zijn.
10. verwijder schroeven C in het orgel (e.v. achterschot verwijderen).
11. beide klavieren zijn naar voren omklapbaar.

ONDERKLAVIER:

12. handel als bij 1 t/m 7.
13. verwijder bakstuk links en rechts, zie bij bakstukken.
14. verwijder de zichtbaar gekomen schroeven (links en rechts twee stuks) welke verticaal zijn opgesteld, let op losse moeren. Zie bij D.
15. het bovenklavierdeel is nu los en kan worden opgetild.
16. toetsen van onderklavier zijn nu bereikbaar.

BAKSTUKKEN:

17. *bovenklavier*: verwijder schroeven E (let op losse delen onder het bakstuk). Eventueel klavierlijst los schroeven.
18. *onderklavier*: verwijder twee schroeven achteraan het bakstuk.

Eminent 310

Dismantling Register Panel:

1. Remove Music stand.
2. Remove Cover (if applicable)
3. Fold back top-cover.
4. Remove screws:
Eminent: A1 (at the front of the frame).
Solina: A2 (at the sides).
5. Register panel may now be folded back.

UPPER MANUAL:

6. a. As 1 up to 5 inclusive.
7. Upper manual system can now partly within reach.
8. b. Remove from the outside of the organ cover-plates B.
9. Remove the now visible screws.
10. Remove screws C with are located inside the organ (if applicable remove back cover).
11. Both manuals can now be folded forward.

LOWER MANUAL:

12. As 1 up to 7 inclusive.
13. Remove the left and right hand side keyblock (see keyblocks).
14. Remove the now visible screws (two on the left, two on the right), look out for loose nuts. See D.
15. The part of the upper manual is now loose and can be lifted.
16. Keys of the lower manual are now within reach.

KEYBLOCKS:

17. *Uppermanual*: Remove screws E (look for loose parts under the keyblock). If applicable undo the screws of the keyboard frame.
18. *Lower manual*: Remove two screws at the back of the keyblock.

Eminent 310

Demontage Registerpaneel:

1. Notenpult entfernen.
2. eventuell Deckel entfernen.
3. oberen Brett hochklappen.
4. Schrauben entfernen:
bei Eminent: A1 (vorderseite der Leiste);
bei Solina: A2 (Seiten)
5. Registerpaneel ist jetzt aufzuklappen.

OBERMANUAL:

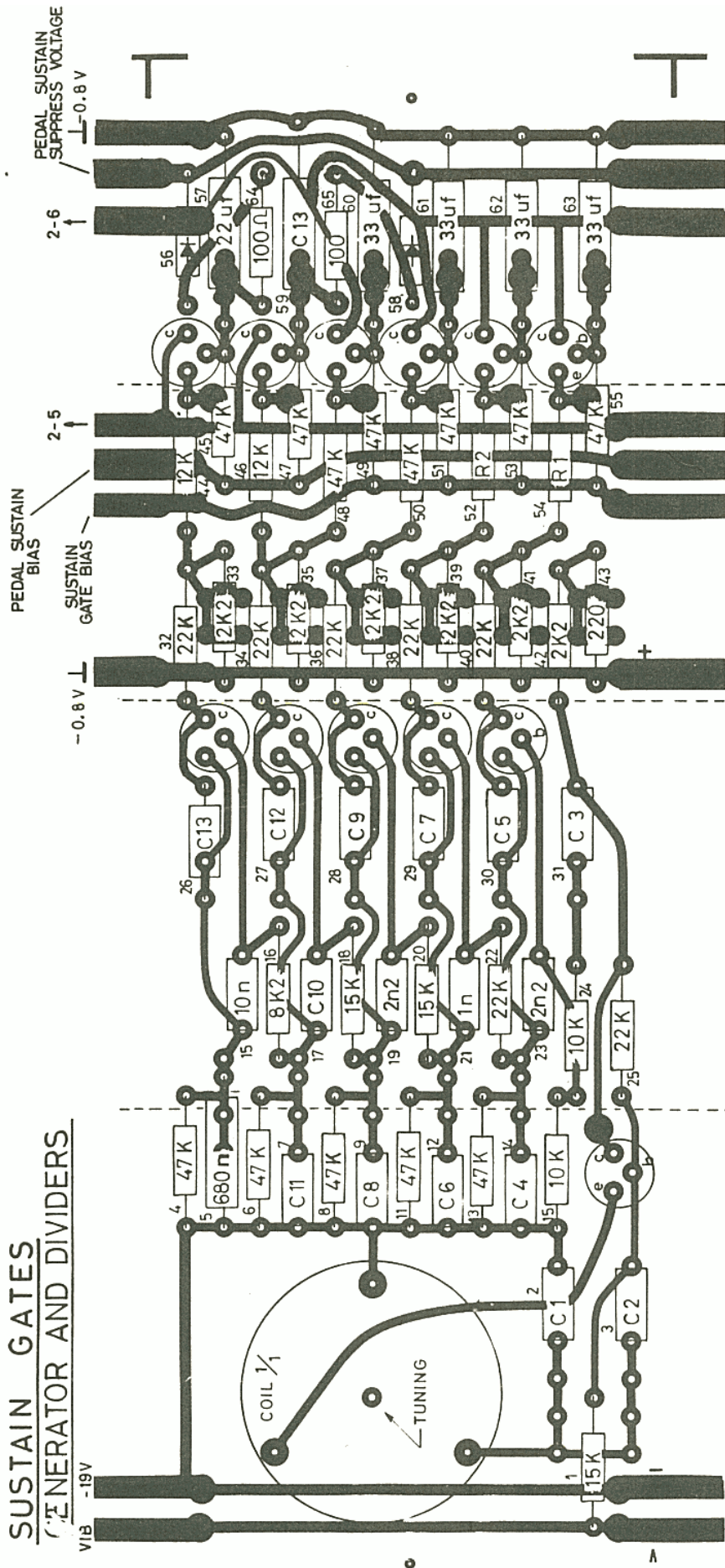
6. a. Handele wie bei 1 bis 5.
7. Obermanualsystem ist teilweise erreichbar.
8. b. Entferne die Bedeckungspaneel an der Aussenseite der Orgel. Punkt B.
9. Entferne die Schrauben welche jetzt sichtbar sind.
10. Entferne Schrauben C in der Orgel. (Eventuell Hinterwand entfernen.)
11. Beide Manuale sind jetzt nach voren umzuklappen.

UNTERMANUAL:

12. Handele wie bei 1 bis 7.
13. Entferne die rechten und die linken Backenstücke.
14. Entferne die jetzt sichtbare Schrauben (Links und Rechts 2 Stück) welche waagrecht sind aufgestellt, beachten Sie bitte die Muttern. Sehe D.
15. Das Obermanual Teil ist jetzt lose und kann aufgehoben werden.
16. Tasten vom Untermanual sind jetzt erreichbar.

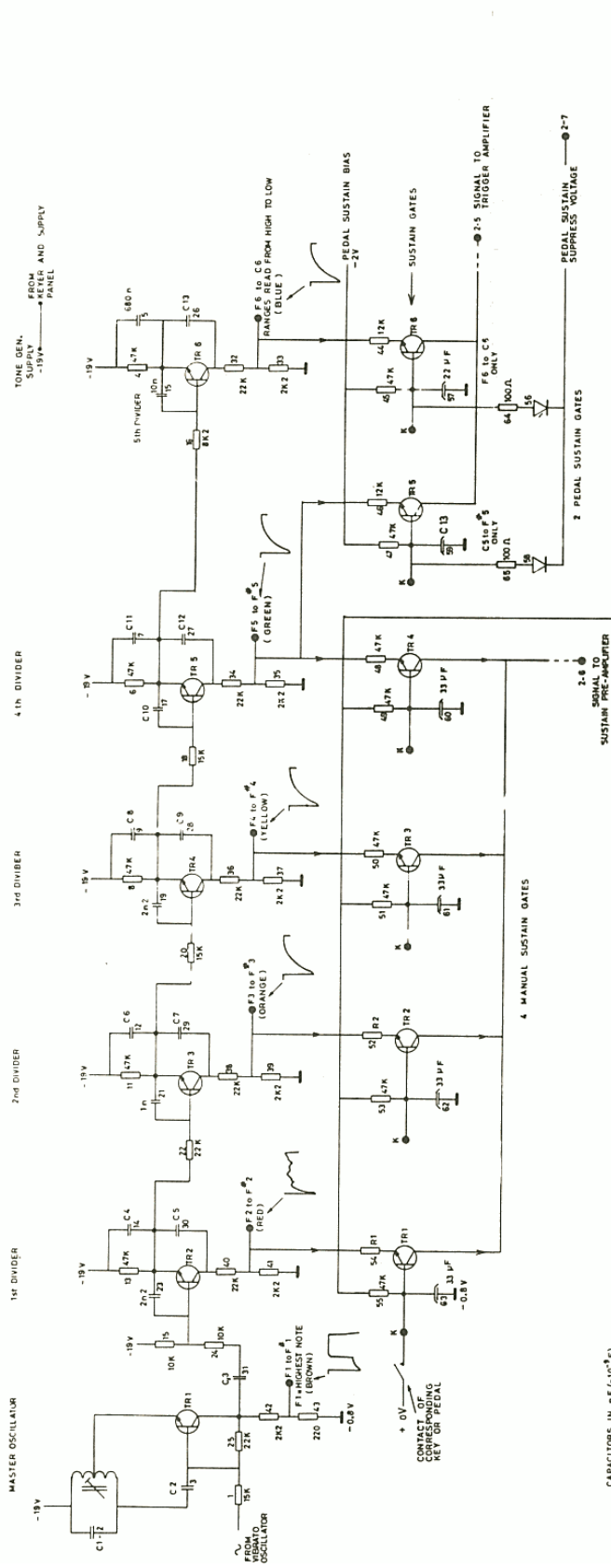
BACKSTÜCKE:

17. *Obermanual*: Entfernen Sie Schrauben E (achten Sie auf die Lose Teile unter das Backenstück). Eventuell Manuelleiste entfernen.
18. *Untermanual*: Entfernen Sie 2 Schrauben hinter dem Backenstück.



NO.	1-14	15-31	32-55	56-65
-----	------	-------	-------	-------

PART NO. 005-0018



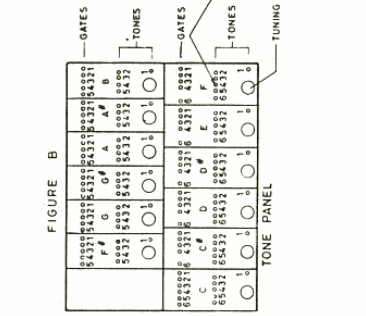
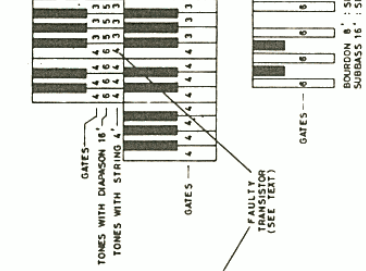
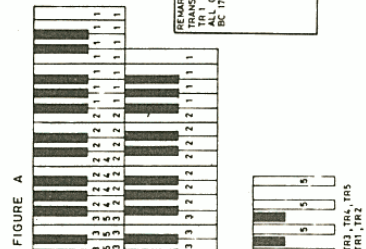
CAPACITORS IN P.F. (x10⁻⁹ F)

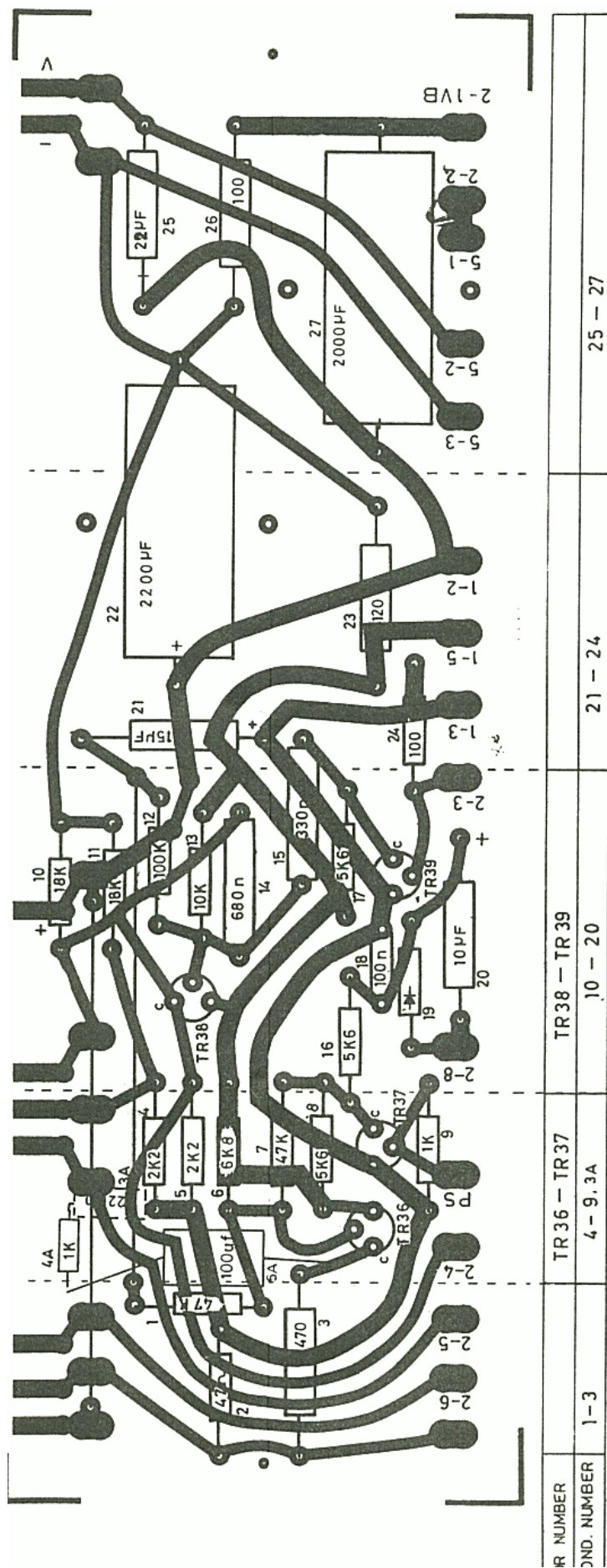
F	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	R1	R2
F	39	27	5.6	2.2	1.8	6.8	48	18	2.2	270	39	82	15K	27K	27K
E	39	27	6.8	2.2	2.7	6.8	68	18	2.2	270	39	82	15K	27K	27K
D	47	27	6.8	2.7	2.2	6.2	82	22	2.2	270	47	100	15K	27K	27K
C	56	33	8.2	3.3	2.7	6.2	100	22	2.2	270	56	100	15K	33K	33K
B	56	33	6.2	3.3	2.7	100	22	5.6	220	56	100	18K	33K	33K	33K
A	68	3.9	8.2	3.9	2.7	12	100	33	10	270	68	18K	33K	33K	33K
H	82	3.9	10	3.9	2.7	12	100	33	10	270	82	18K	33K	33K	33K
G	100	4.7	12	5.6	3.3	15	120	39	10	300	68	22K	39K	39K	39K
F	100	4.7	15	5.6	3.3	15	120	39	10	300	82	22K	39K	39K	39K
F	120	4.7	15	6.8	4.7	15	120	39	10	310	82	22K	39K	39K	39K

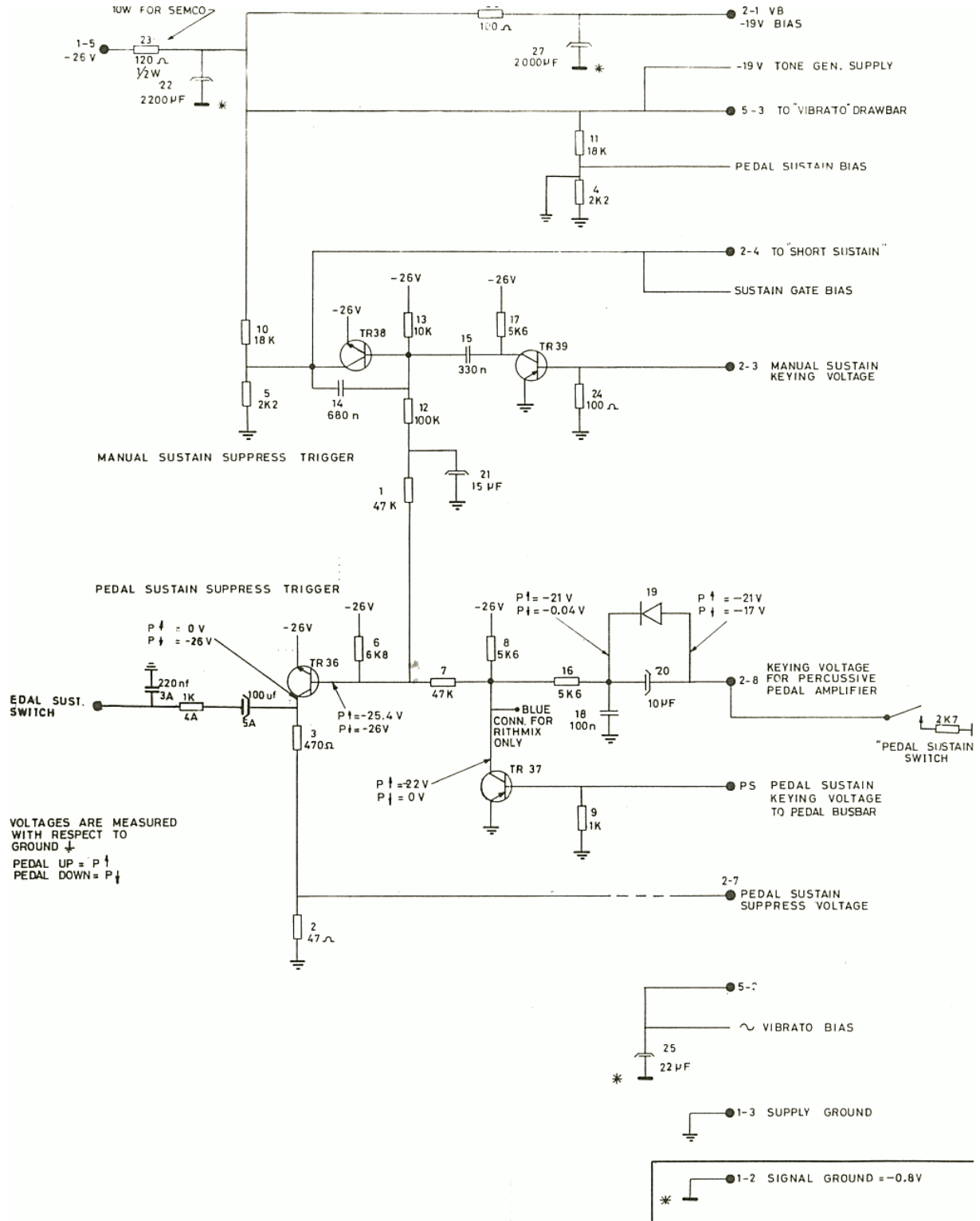
REMARKS:
TRANSISTORS
ALL OTHERS
BC 100 C

EMINENT 310 U
FROM SERIES 73
SHEET NO: 015. 0144

GENERATOR AND
DIVIDERS
SUSTAIN GATES



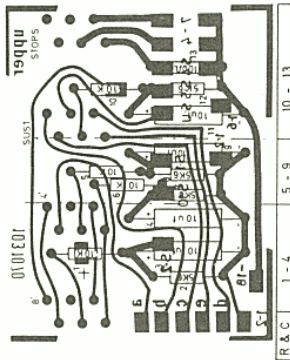




REMARKS:
 TRANSISTORS
 TR 36 BC 108 C
 TR 38 BC 170 B
 TR 37, 39 AC 121 V1

EMINENT 310
 FROM SERIES 76
 015 0129

SUSTAIN TRIGGERS
 FOR THEORY OF SUSTAIN
 SEE "A"



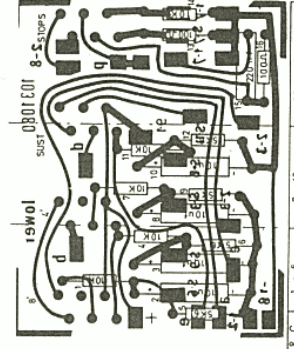
CODE NR	NAME	POSITION NO
314-8108	EL CAPACITOR	3, 4, 9, 11
210-3104	RESISTOR	13
210-3103	RESISTOR	1, 5, 6, 10
210-3352	CIRCUIT BOARD	2, 7, 8, 12

R & C 1 - 4 5 - 9 10 - 13

EMINENT 310U
FROM SERIES 73

STRING CONTROL CIRCUIT U.M.

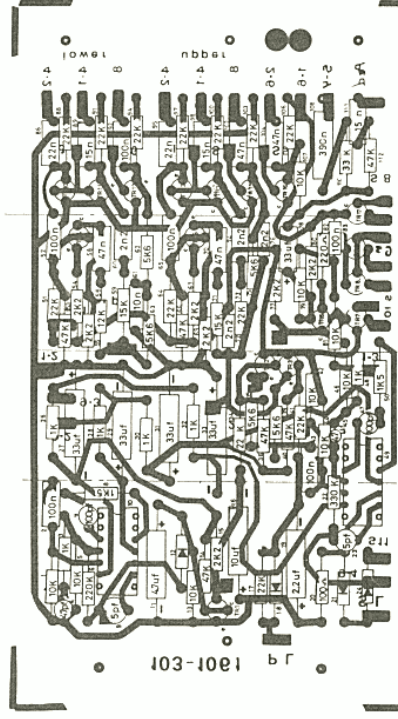
SHEET NO. 003 2038



CODE NR	NAME	POSITION NO
314-8109	EL CAPACITOR	2, 3, 8, 10
210-3104	RESISTOR	15
210-3103	RESISTOR	4, 6, 8, 12
210-3104	RESISTOR	1, 4, 7, 11, 14
210-3104	RESISTOR	13, 15

R & C 1 - 4 5 - 9 10 - 13

210-3333	RESISTOR	110
210-3101 <td>RESISTOR</td> <td>20</td>	RESISTOR	20
210-3221 <td>RESISTOR</td> <td>82</td>	RESISTOR	82
210-3102 <td>RESISTOR</td> <td>3-76-78-30-37-48</td>	RESISTOR	3-76-78-30-37-48
210-3152 <td>RESISTOR</td> <td>8-50</td>	RESISTOR	8-50
210-3322 <td>RESISTOR</td> <td>15-55-69-77-80-54-67</td>	RESISTOR	15-55-69-77-80-54-67
210-3362 <td>RESISTOR</td> <td>35-29-67-63-75</td>	RESISTOR	35-29-67-63-75
210-3103 <td>RESISTOR</td> <td>18-13-47-44-45-79-81-107</td>	RESISTOR	18-13-47-44-45-79-81-107
210-3153 <td>RESISTOR</td> <td>59-71</td>	RESISTOR	59-71
210-3223 <td>RESISTOR</td> <td>13, 34, 41, 51, 64, 73, 88, 91, 96, 97, 100, 103, 106</td>	RESISTOR	13, 34, 41, 51, 64, 73, 88, 91, 96, 97, 100, 103, 106
210-3423 <td>RESISTOR</td> <td>4-36-40-53-66-112</td>	RESISTOR	4-36-40-53-66-112
210-3324 <td>RESISTOR</td> <td>6</td>	RESISTOR	6
210-3334 <td>RESISTOR</td> <td>72</td>	RESISTOR	72
210-2222 <td>CAPACITOR</td> <td>60-72-74-76</td>	CAPACITOR	60-72-74-76
310-2155 <td>RESISTOR</td> <td>80-98-111</td>	RESISTOR	80-98-111
310-2233 <td>RESISTOR</td> <td>86-95</td>	RESISTOR	86-95
310-2473 <td>RESISTOR</td> <td>58-70-72-94</td>	RESISTOR	58-70-72-94
310-2394 <td>RESISTOR</td> <td>08</td>	RESISTOR	08
310-2104 <td>EL CAPACITOR</td> <td>2, 4, 5, 7, 65- 83, 92</td>	EL CAPACITOR	2, 4, 5, 7, 65- 83, 92
314-8228 <td>EL CAPACITOR</td> <td>19</td>	EL CAPACITOR	19
314-8608 <td>EL CAPACITOR</td> <td>15</td>	EL CAPACITOR	15
314-7339 <td>EL CAPACITOR</td> <td>15</td>	EL CAPACITOR	15
316-1479 <td>CAPACITOR</td> <td>27-29-31-33-78</td>	CAPACITOR	27-29-31-33-78
313-1508 <td>CAPACITOR</td> <td>9-23</td>	CAPACITOR	9-23
313-2101 <td>CAPACITOR</td> <td>7-47</td>	CAPACITOR	7-47
431-1323 <td>TRANSISTOR</td> <td>TR 4, 5, 7, 8, 9, 10, 12, 13, 15, 18, 17</td>	TRANSISTOR	TR 4, 5, 7, 8, 9, 10, 12, 13, 15, 18, 17
431-1302 <td>TRANSISTOR</td> <td>TR 2, 3</td>	TRANSISTOR	TR 2, 3
431-1302 <td>TRANSISTOR</td> <td>TR 4</td>	TRANSISTOR	TR 4
431-1692 <td>TRANSISTOR</td> <td>18, 6</td>	TRANSISTOR	18, 6
436-0709 <td>I.C.</td> <td>10-49</td>	I.C.	10-49
420-0180 <td>DIODE</td> <td>12-18-21-24</td>	DIODE	12-18-21-24



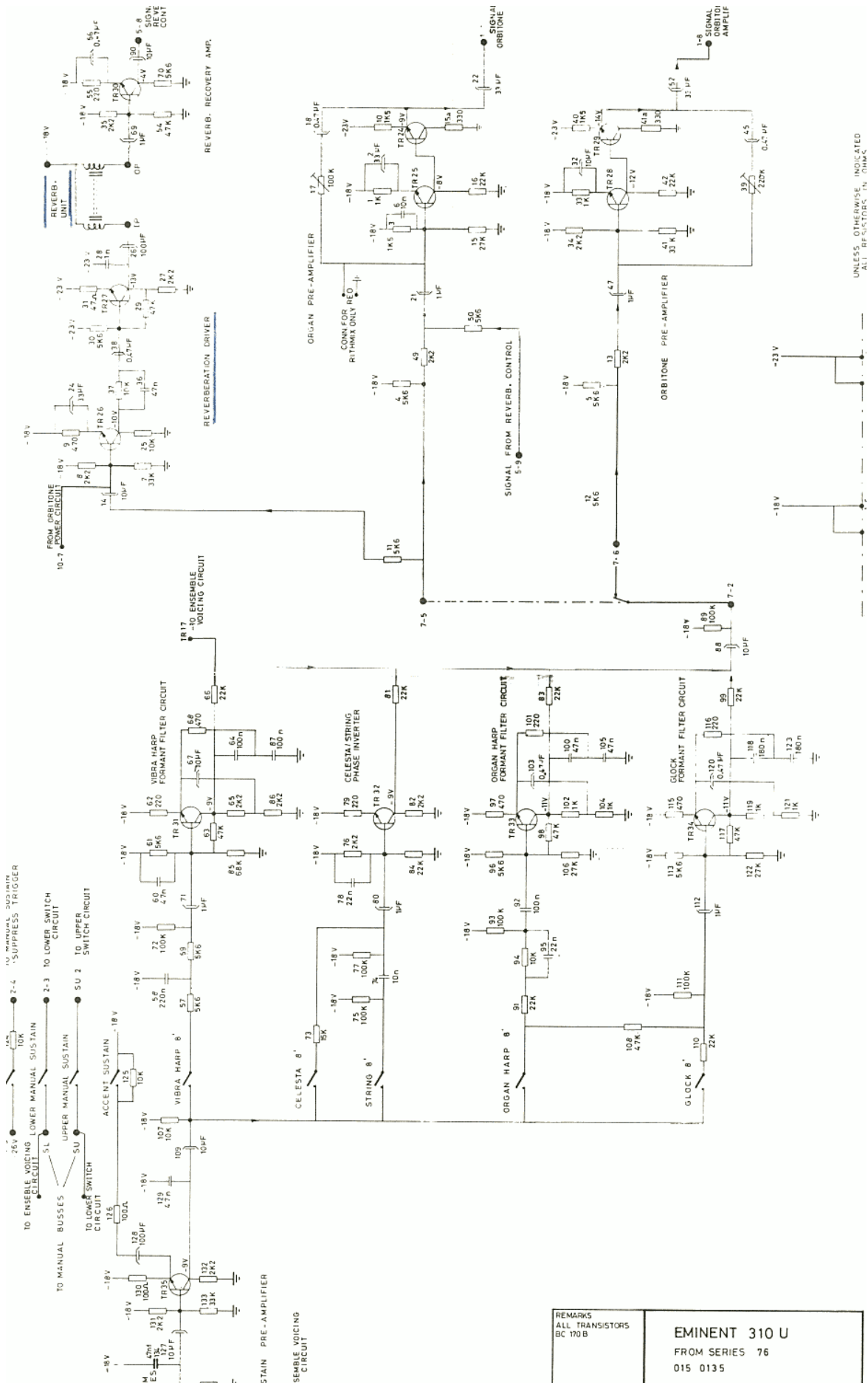
R & C	1 - 24	26 - 50	51 - 85	86 - 112
TRANSISTOR	TR 1	TR 2-3	TR 4-5-6-7-8-9	TR 10-11-12-13-14-15-16-17

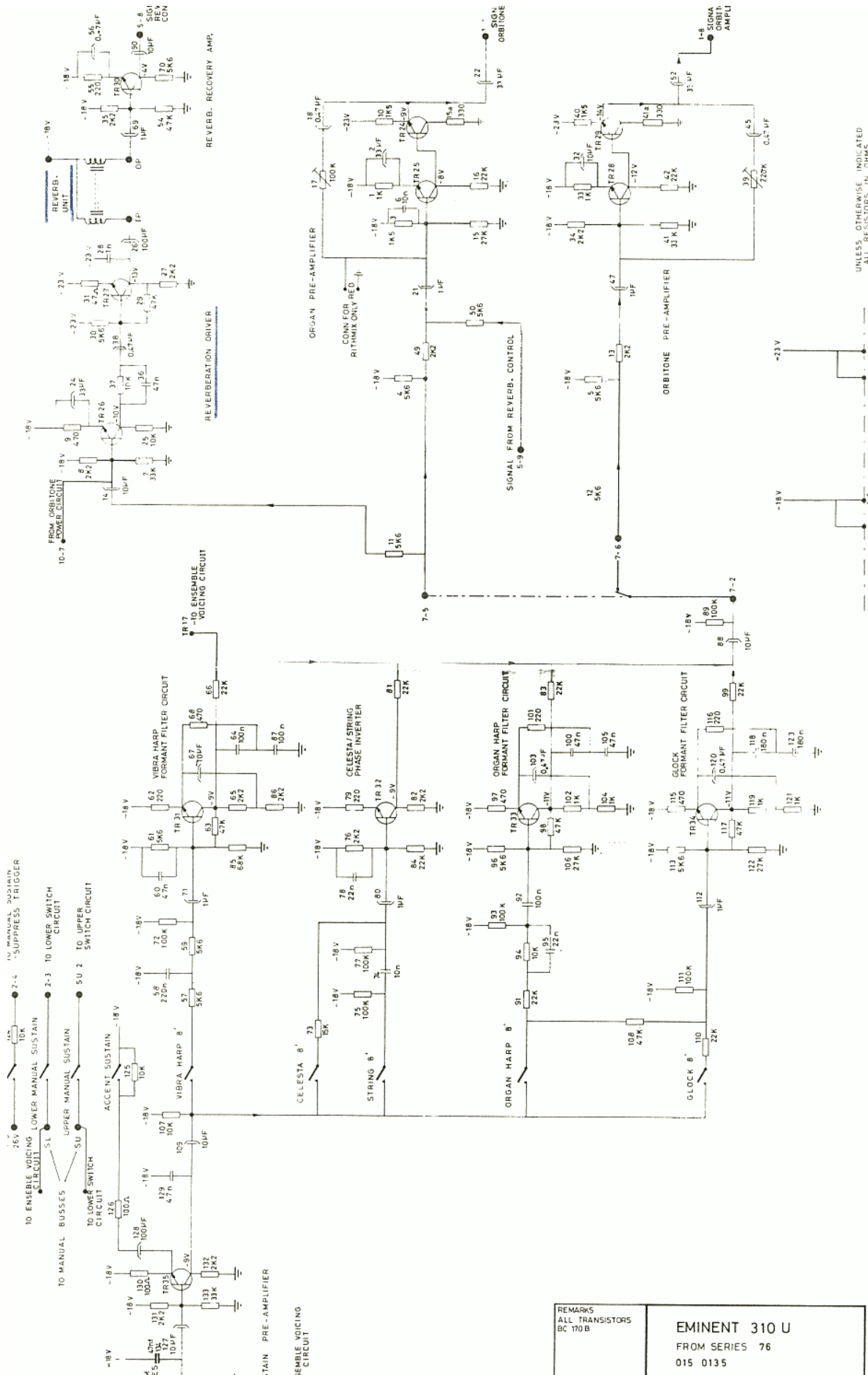
R & C 1 - 24 26 - 50 51 - 85 86 - 112

EMINENT 310U
FROM SERIES 76

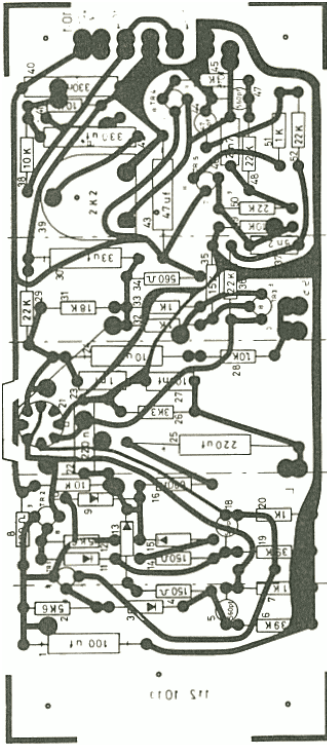
STRING ENSEMBLE CIRCUIT

SHEET NO. 003-2034





UNLESS OTHERWISE INDICATED ALL RESISTORS IN OHMS

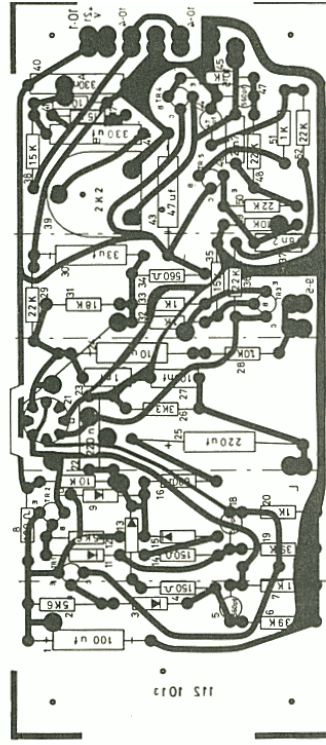


D & C	1-7	8-20	21-28	29-37	38-52
TRANSISTOR	TR 1, 2	TR 3	TR 4, 5		

EMINENT 310 U FROM SERIES 76
 EMINENT 310 d.I. FROM SERIES 96
 SOLINA NL 110 FROM SERIES 12
 SOLINA TL 110 FROM SERIES 1
 SOLINA SL 110 FROM SERIES 86

MODULATOR CIRCUIT A

SHEET NO. 012.0013



R & C	1-7	8-20	21-28	29-37	38-52, 17
TRANSISTOR	TR 1, 2	TR 3	TR 4, 5		

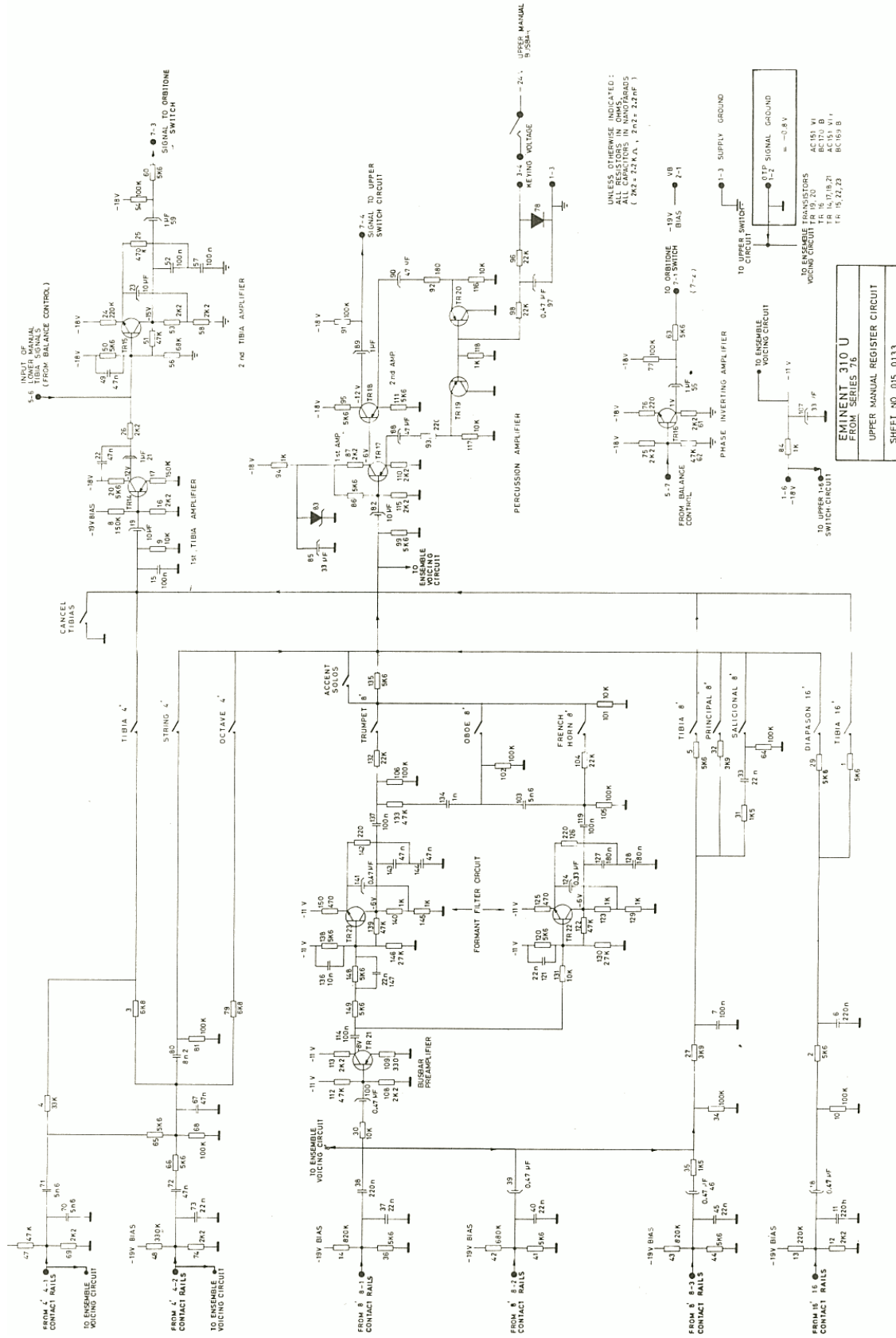
EMINENT 310 U FROM SERIES 76
 EMINENT 310 d.I. FROM SERIES 96
 SOLINA NL 110 FROM SERIES 12
 SOLINA TL 110 FROM SERIES 1
 SOLINA SL 110 FROM SERIES 86

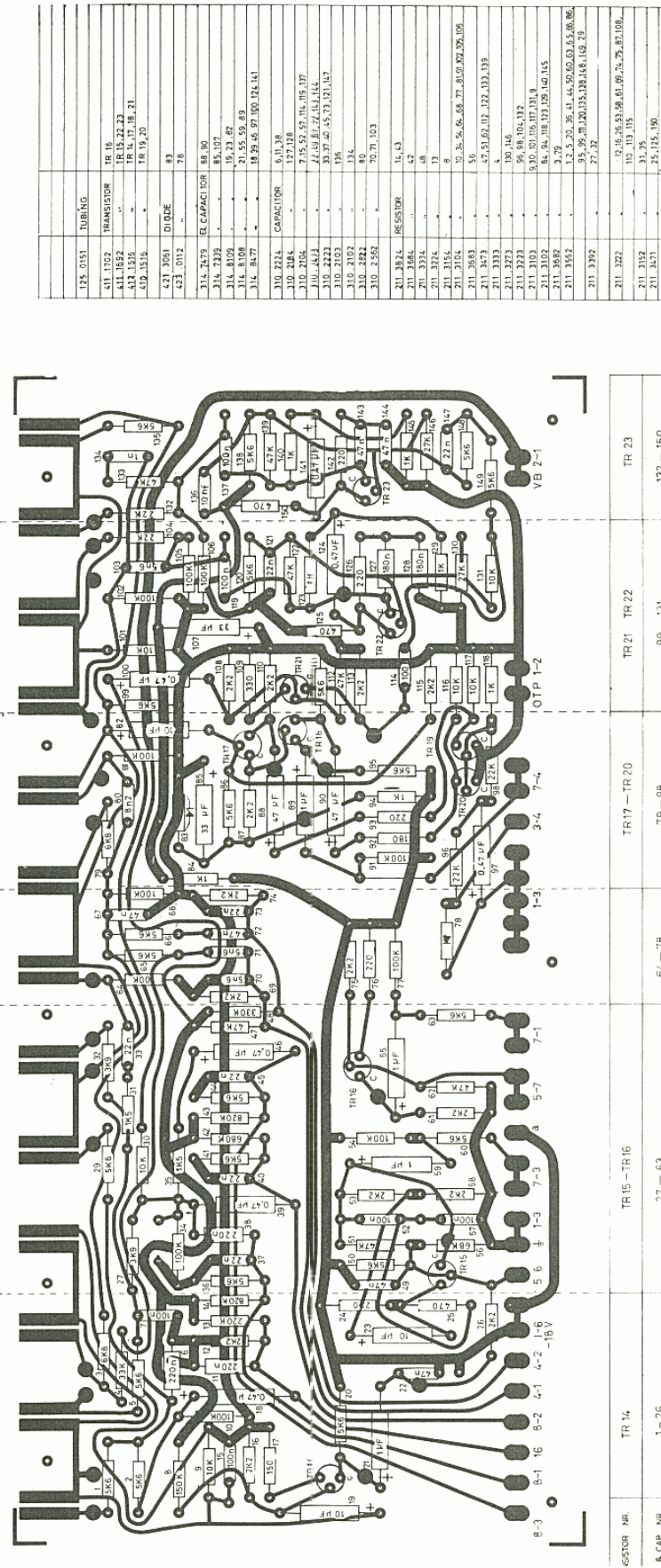
MODULATOR CIRCUIT B

SHEET NO. 012.0014

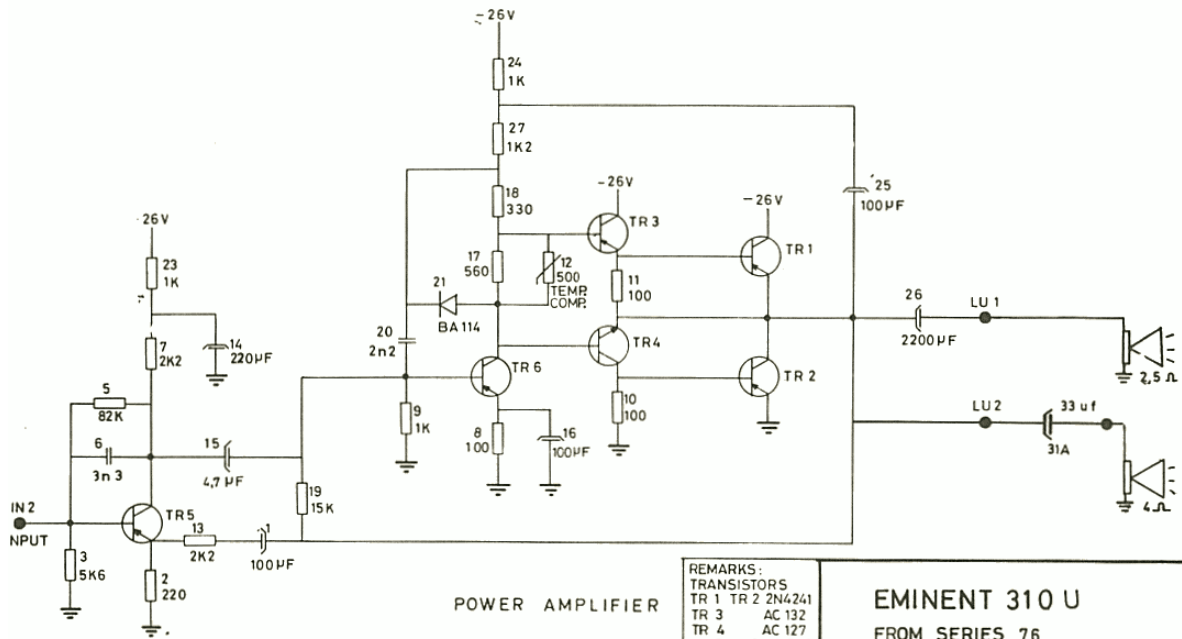
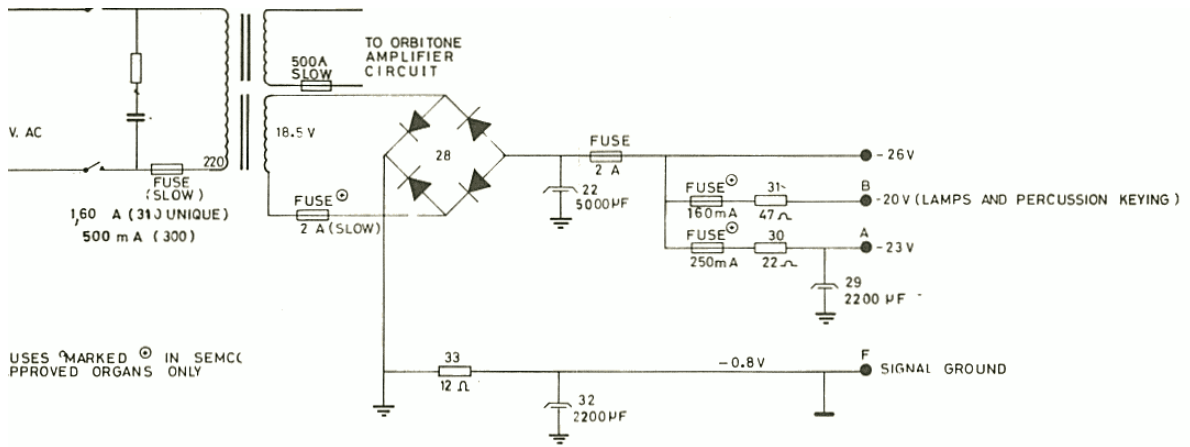
ART. NO.	NAME	POSITION NO.
34.0031	IC	21
34.0055	POT. METER	39
34.0287	DIODE	3, 9, 11, 13, 15
11.1892	TRANSISTOR	TR 4, 5
11.2692	TR	1, 2, 3
14.9721	EL. CAPACITOR	25
14.9729	-	43
14.7109	-	30
14.8109	-	24
13.2679	CAPACITOR	44
13.2651	-	5, 18, 47
13.2672	-	45
13.2682	-	37
13.2107	-	23
13.2104	-	27
13.2324	-	22
13.2334	-	60, 42
13.3122	RESISTOR	29, 31, 36, 48, 50, 52
32.3153	-	35
13.3103	-	10, 28, 41, 49, 38
13.3102	-	7, 20, 32, 33, 45, 51
23.3552	-	2, 12
23.3332	-	76
23.3881	-	15
23.3951	-	34
23.3952	-	8
23.3151	-	4, 14
0100	CIRCUIT BOARD	31

ART. NO.	NAME	POSITION NO.
546.0032	IC	21
23.0055	POT. METER	39
34.0287	DIODE	3, 9, 11, 13, 15
11.1892	TRANSISTOR	TR 4, 5
11.2692	TR	1, 2, 3
14.9721	EL. CAPACITOR	25
14.9729	-	1
14.7109	-	43
14.7139	-	30
14.8109	-	24
13.2679	CAPACITOR	44
13.2651	-	5, 18, 47
13.2672	-	45
13.2682	-	37
13.2107	-	23
13.2104	-	27
13.2324	-	22
13.2334	-	60, 42
13.3103	RESISTOR	6, 19
13.3102	-	29, 31, 36, 48, 50, 52
23.3153	-	17, 35, 38
23.3107	-	10, 28, 41, 49
23.3102	-	7, 20, 32, 33, 45, 51
23.3552	-	2, 12
23.3332	-	26
23.3881	-	15
23.3951	-	34
23.3952	-	8
23.3151	-	4, 14
0100	CIRCUIT BOARD	31





135-0151	TUBING	
511-1323	TRANSISTOR	18, 16
511-1532		18, 15, 22, 23
513-1535		18, 4, 17, 18, 21
513-1535		18, 19, 20
221-3051	DIODE	83
223-0012		76
314-7470	ELCAPACITOR	88, 90
314-7339		85, 107
314-8109		19, 23, 82
314-8108		21, 55, 59, 89
314-8477		18, 39, 45, 97, 100, 124, 141
310-2224	CAPACITOR	6, 11, 13
310-2106		7, 15, 52, 59, 116, 119, 137
310-2222		21, 53, 67, 72, 141, 144
310-2103		39, 37, 46, 45, 73, 121, 142
310-2102		134
310-2222		49
310-2224		70, 71, 103
211-3824	RESISTOR	1, 4, 3
211-3484		42
211-3374		48
211-3374		13
211-3154		52, 34, 56, 68, 77, 81, 92, 95, 106
211-3583		56
211-3473		47, 51, 62, 112, 122, 133, 139
211-3333		4
211-3323		190, 145
211-3323		96, 98, 105, 132
211-3103		93, 95, 105, 107, 111, 118
211-3103		8, 9, 10, 13, 109, 140, 145
211-3102		1, 2, 3, 20, 36, 41, 44, 50, 60, 63, 65, 66, 86
211-3102		95, 99, 100, 106, 138, 148, 149, 152
211-3392		27, 32
211-3392		17, 46, 55, 58, 61, 69, 75, 75, 87, 108
211-3392		119, 119, 119
211-3392		119, 119, 119
211-3392		25, 115, 150

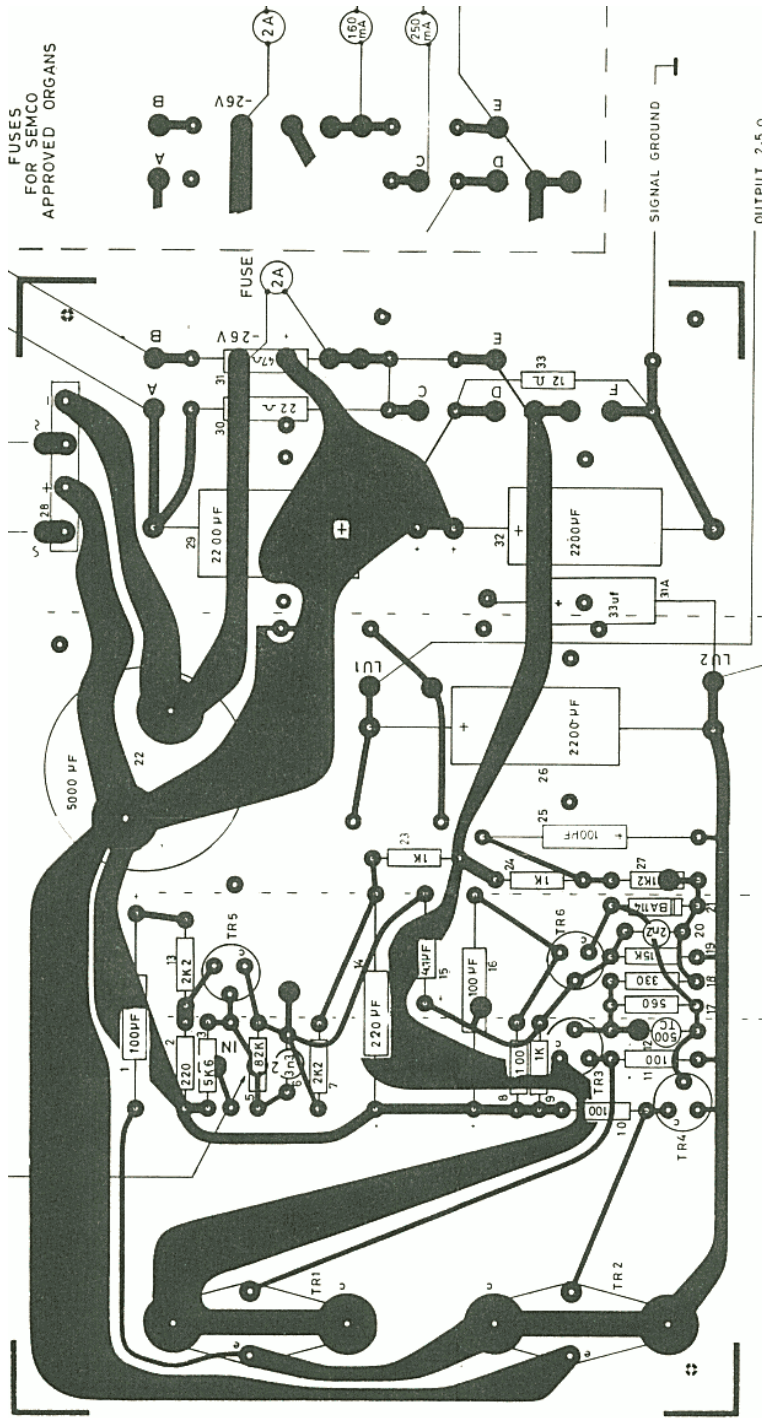


UNLESS OTHERWISE INDICATED:
ALL RESISTORS IN OHMS,
ALL CAPACITORS IN NANOFARADS
(2K2 = 2.2 KΩ, 2n2 = 2.2 nF)

REMARKS:
TRANSISTORS
TR 1 TR 2 2N4241
TR 3 AC 132
TR 4 AC 127
TR 5 TR 6 AC151VI

EMINENT 310 U
FROM SERIES 76
015 . 0132

POWER SUPPLY
AND
AMPLIFIER



TRANSISTOR NUMBER	1 - 4	5 - 5
RES. & COND. NR.	1 - 12	13 - 21
	22 - 27	28 - 33
TUBING		
TUBING		
COOLING PLATE		
COOLING FIN.		
POT. METER	TR 5, 6	
"	TR 3, 4	
"	TR 1, 2	
DIODE	21	
INSULATOR		
LCAPACITOR	22	
"	25, 29, 32	
"	14	
"	1, 15, 25	
"	31A	
APACITOR	20	
"	6	
RESISTOR	33	
"	31	
"	30	
"	5	
"	19	
"	3	
"	7, 13	
"	27	
"	9, 23, 24	
"	17	
"	18	
RESISTOR	2	
PCB BOARD	8, 10, 11	
NAME		POSITION NO :

EMINENT 310
FROM SERIES 76
POWER SUPPLY AND AMPLIFIER

