

# VA-76

## V-ARRANGER KEYBOARD

### SERVICE NOTES

*First edition*

**Issued by RES**

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### Specifications

**Keyboard:** 76 keys, weighted synthesizer action, velocity-sensitive, Aftertouch

**Controllers:** Tempo/Data dial, assignable PAD buttons x 2, D Beam Controller, Bender/Modulation Lever, Touch Controller (Ribbon Controller), Master Volume knob, Keyboard/Accomp Balance knob, M-FX knob (Multi-effect control)

**Tone generation:**

**PCM:** 128-voice polyphonic, GM2/GS compatible, 32 multitimbral parts, 3,646 sounds (48MB worth of PCM samples) 116 Drum Sets incl. oriental Drum Sets.

**VariPhrase:** 4 Phrase lines, realtime change of Formant, Pitch and Time Stretch, 48 Factory Phrases (16 MB), 16 User phrases (max. 8 MB in RAM)

**Digital effects:** Reverb (8 types), Chorus (8 types), Delay (10 types), Parametric EQ, M-FX (DSP, 89 types)

**Arranger (automatic accompaniment):** 128 Music Styles in ROM, 64 Disk Link Styles from Zip or floppy disk, Disk User style (instant access to one Style on Zip/Floppy disk), 16 Acoustic Styles, Style Orchestrator & Morphing. 8-track User Styles Composer, SMF-to-Style Converter

**Memories:** 128 User Programs, 4 programmable One Touch memories for each Style, 5 Super Tones memories for instant Tone access (with programmable User level)

**Display:** Backlit VGA Touch Screen (LCD), new graphic user interface with animated icons

**Navigation:** Virtual band (interactive Easy Routing), automatic and/or via button Song and Style navigation system on Zip

**Sequencer:** Realtime SMF Player (with Minus-One function), Easy 2-track recorder, 16-track sequencer with extensive editing function, Song Header Post Edit, Lyrics (edit & display)

**Data storage:** Zip drive (IDE/ATAPI), floppy disk drive (2DD/2HD), realtime load from Zip & FDD, File types managed: Styles, Song SMF, User Program, MIDI sets, VariPhrases

**Connections:** Output 1 (L/mono, R), Output 2 (L/R), VariPhrase Sampling Input & Gain, Sustain, Foot pedal (expression), Foot switch, Foot Controller (FC-7), Phones

**Power Supply:** 100V~240 (universal)

**Dimension:** 1267(W) x 150 (H) x 407 (D) mm

**Weight:** 19 Kg

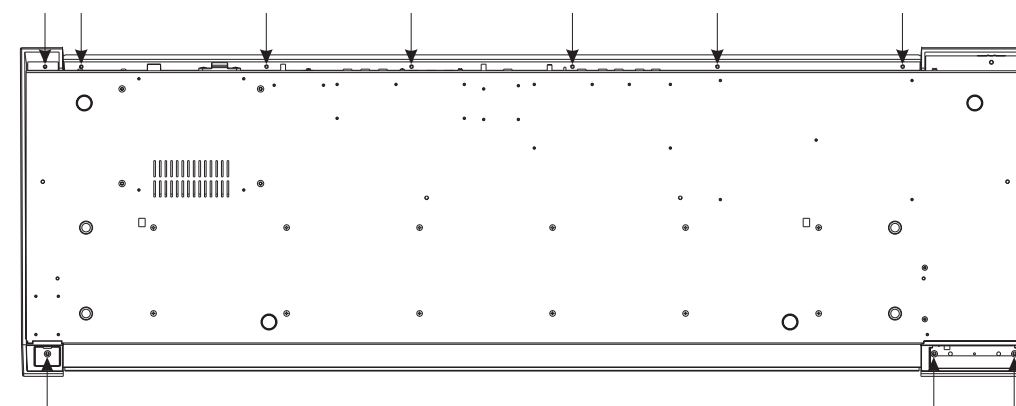
**Accessories:** See details on page 9

**Options:** PK-5 Dynamic MIDI Pedal, FC-7 Foot Controller, MSA/MSD/MSE series floppy disks (Roland & third-party), RH-25/50 Headphones, DP-2 Pedal switch, DP-6 Pedal switch (pino type), BOSS FS-5U Foot Switch, EV-5 Expression pedal, BOSS FV-300L Foot Volume/Expression pedal, KC-100/300/500 Keyboard Amplifiers

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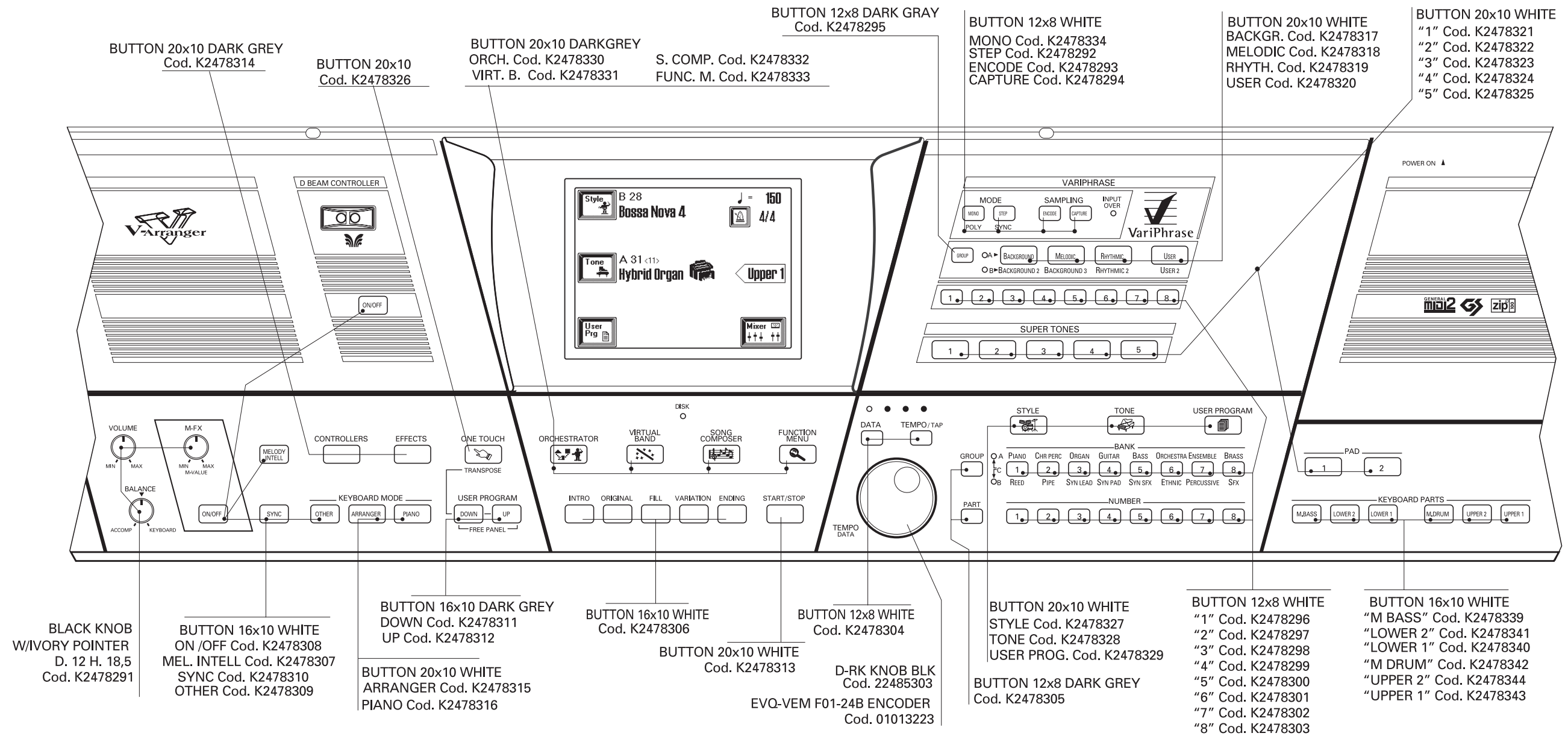


### DISASSEMBLY

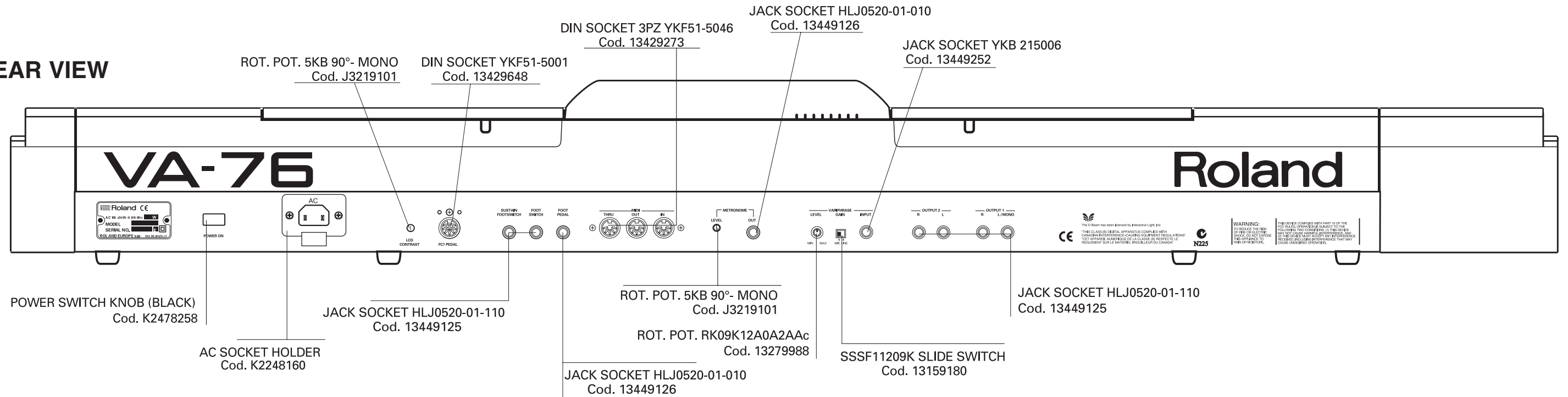


BOTTOM CABINET ASSY REMOVAL SCREW:  
SELF TAP. SCREW 3,5 x16 TCTCPRBZ cod. J2289131

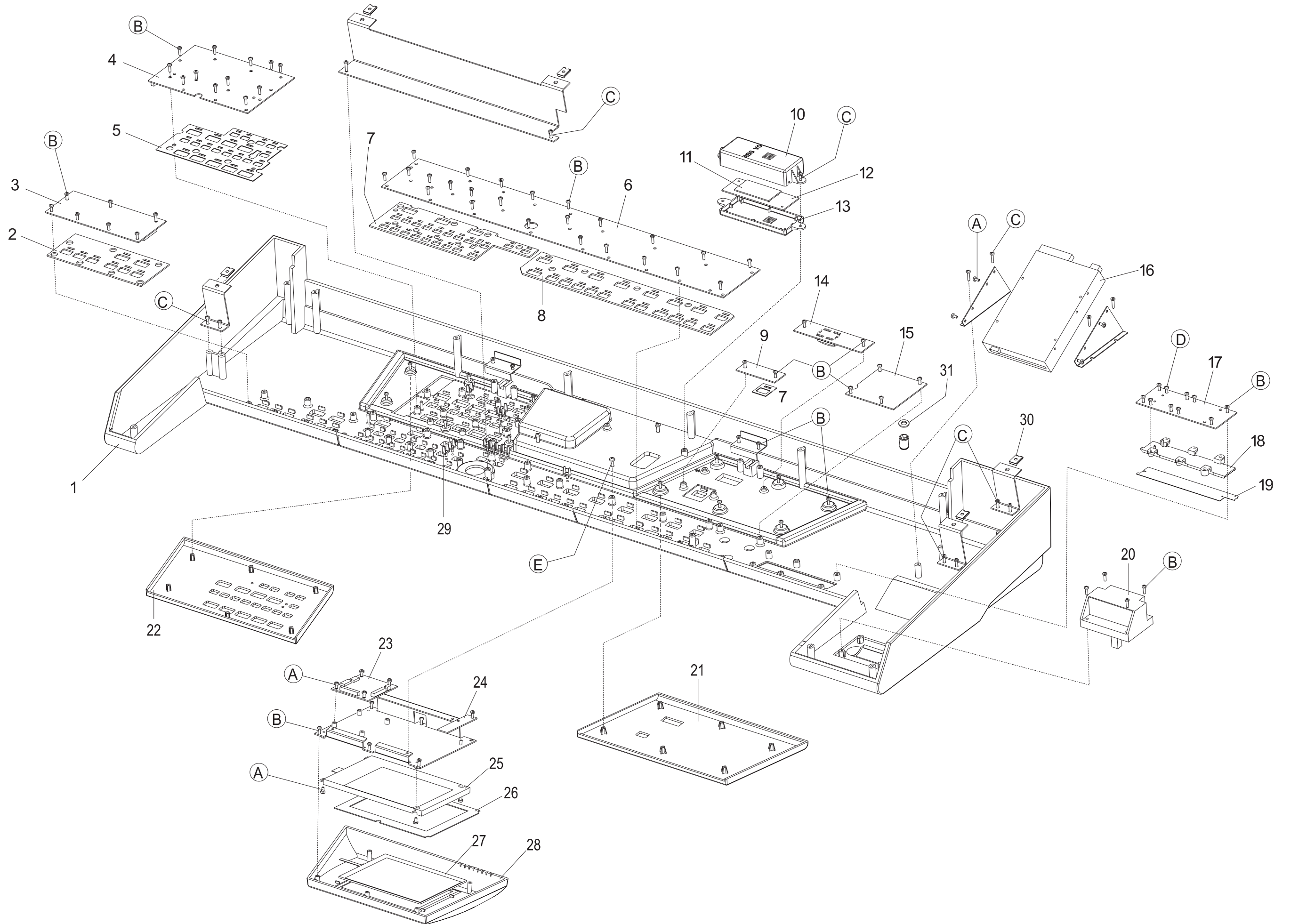
LOCATION OF CONTROLS



REAR VIEW



EXPLODED VIEW ( TOP)





## PARTS LIST OF EXPLODED VIEW (TOP)

No.	Part No.	Description
1	7771011000	VARN.+SILK. TOP CBNT VA-76
2	K2268168	VIBRATION DAMPER PL45N VA-76
3	7771002000	PAD CONTROL PCB ASSY VA-76
4	7770109000	CONTROL VE-VP1 PCB ASSY VA-7/ VA-76
5	K2268166	VIBRATION DAMPER F/ VARIIPH. CONTROL BOARD
6	7771003000	CONTROL PCB ASSY VA-76
7	K2268164	RIGHT VIBRATION DAMPER PL45N VA-7/ VA-5
8	K2268165	LEFT VIBRATION DAMPER PL45N VA-7/VA-5
9	7770108000	SWITCH D. BEAM PCB ASSY
10	K2248127	PROTECTING BOX COVER F/INVERTER
11	00900901	INVERTER MODULE CXA-M10AL
12	7711203000	INVERTER PCB ASSY
13	K2248128	PROTECTING BOX BASE F/INVERTER
14	7700609000	CONTROL PCB ASSY F/D-BEAM
15	7770106000	POTENTIOMETER PCB ASSY
16	J2409102	FLOPPY D. DRIVER JU-257 A786P
17	7770107000	RIBBON PCB ASSY
18	K2198105	SENSOR SUPPORT
19	01121790	RIBBON SENSOR
20	70564101	TURBOLESS PITCH BENDER PBH0201
21	7771014000	VARN.+SILK. LEFT TEMPLATE F/ TOP CBNT
22	7771013000	VARN.+SILK. RIGHT TEMPLATE F/ TOP CBNT
23	7770101000	LCD CONTROL PCB ASSY
24	7770125000	TERMISTOR ASSY
25	7711210000	LCD LM320191 (SHARP) ASSY
26	K224815201	BLACK ANTIDUST PL45N LCD VA-7 / VA-5
27	02126390	TOUCH SCREEN SENSOR EMU601A2MA16
28	7771012000	VARN. COVER F/LCD VA-76
29	K2238127	DIFFUSER FOR LED VA-7
30	J2159103	DOUBLE ELASTIC PLATE
31	K2248150	FELT WASHER I/D 7 E/D 13 TH. 1,5

(Screw)

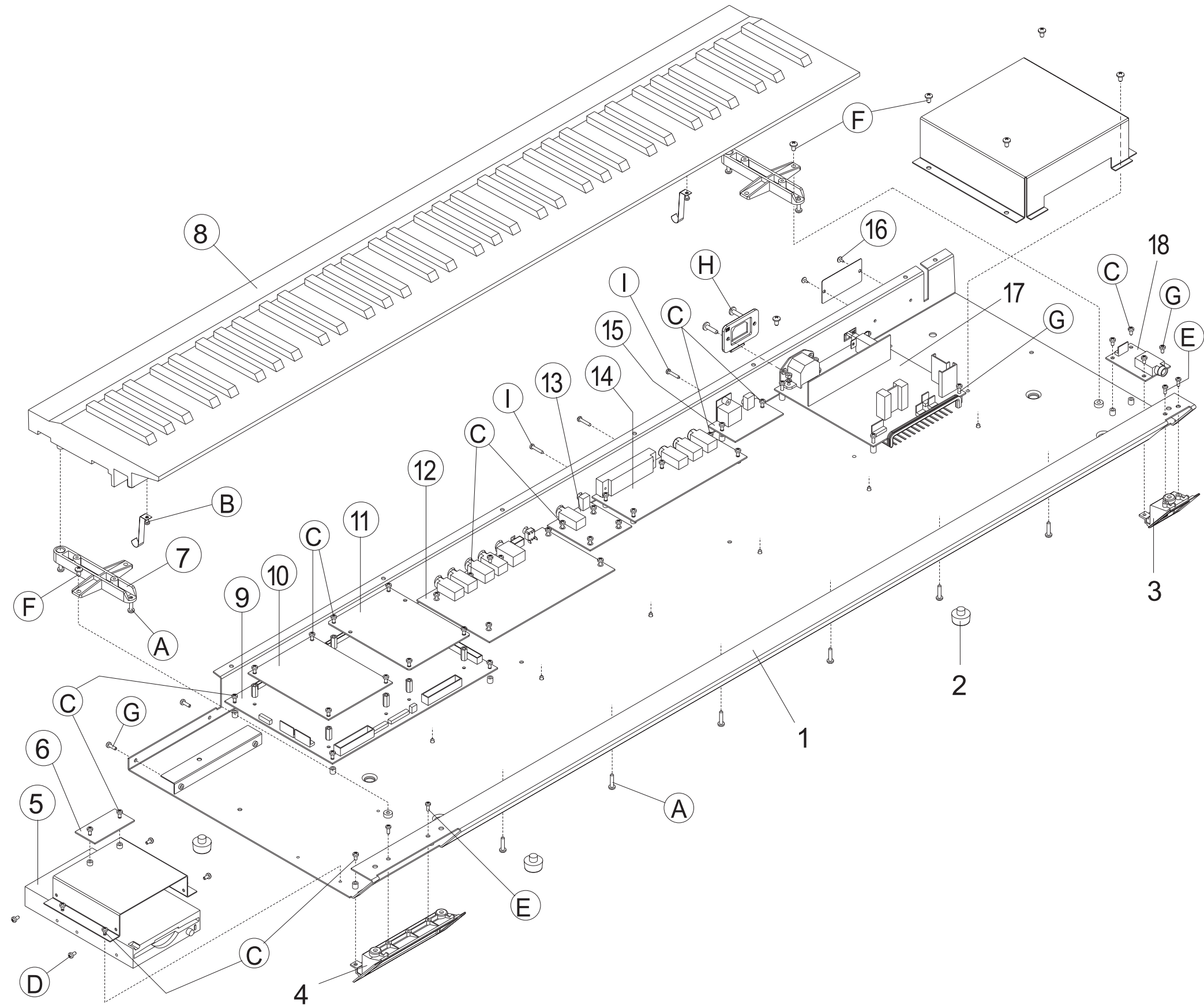
A	J2289193	SELF LOCK SCREW M3x6 TCTC H.6
B	J2289125	SCREW 2,9x10 TCTCPR TROP
C	J2289130	SCREW 2,9x13 TCTCPR TROP
D	J2289126	SELF TAP SCREW 2,9x8 TCTCPRBZ
E	J2289116	SELF TAP SCREW 3,5x13 TCTC

## PARTS LIST OF EXPLODED VIEW (BOTTOM)

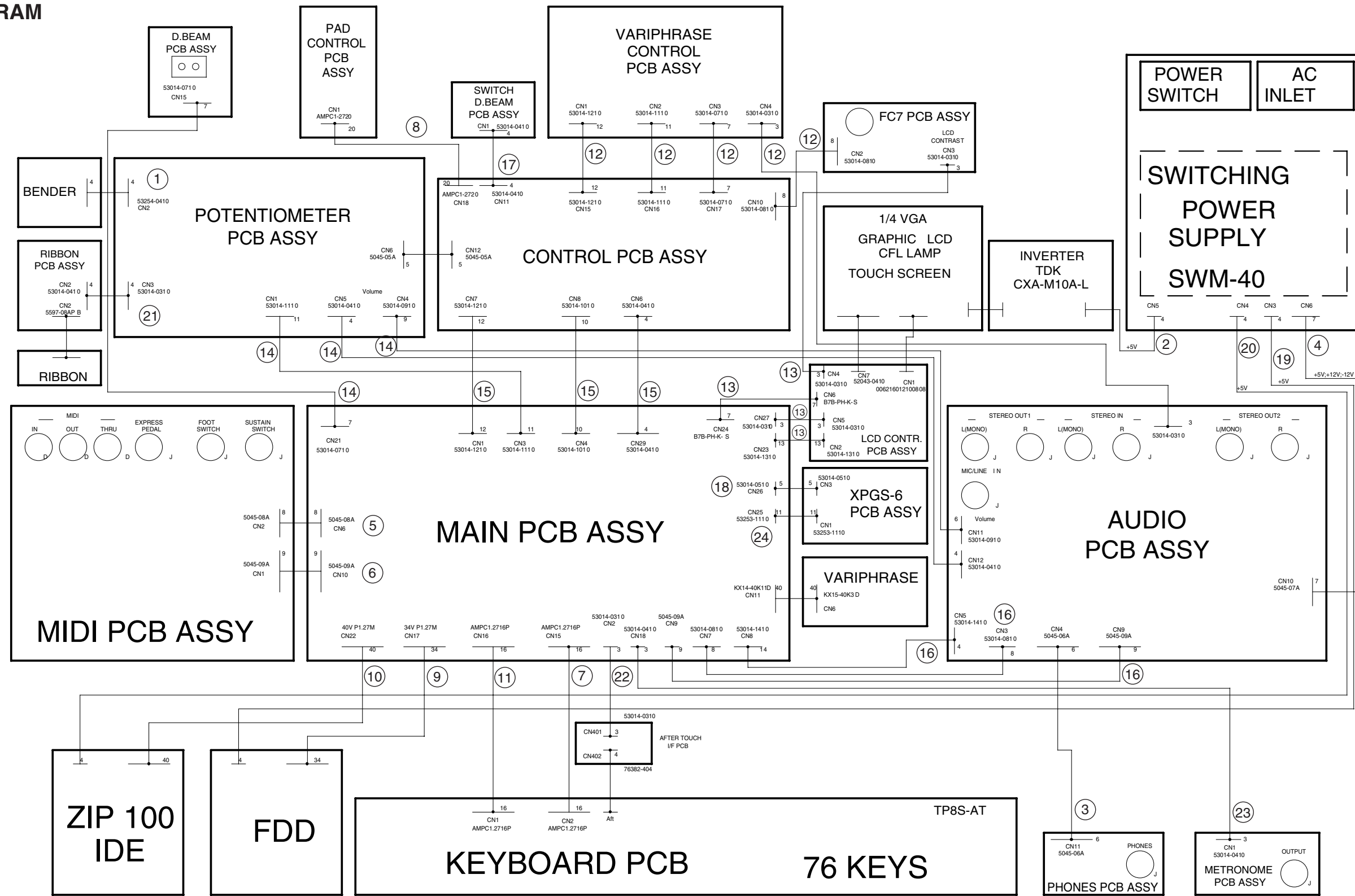
No.	Part No.	Description
1	7771015000	VARN.+SILK. BOTTOM CBNT VA-76
2	J2359105	PRESSURE RUBBER SFF-018
3	K2248138	HEADPHONE BLIND (BLACK) G-1000/VA-76
4	K2248136	GRILL F/ZIP DRIVE G-1000/VA-76
5	J2409105	ZIP DRIVER IDE
6	7700420000	BOUNCE-TO-AFTERTOUCH ASSY
7	K1188128	KEYBOARD SUPPORT G-1000
8	7699510000	76-KEY KEYBOARD ASSY TP/8S-AT
9	7771001000	MAIN BOARD PCB ASSY VA-76
10	7770132000	MODULE XPGS-6 PCB ASSY
11	7770112000	VARIIPHRASE VE-VP1 PCB ASSY VA-7/VA-76
12	7771004000	AUDIO PCB ASSY VA-76
13	7700105001	METRONOME PCB ASSY
14	7770105000	MIDI PCB ASSY VA-7/ VA-5/ VA-76
15	7770102000	FC-7 PCB ASSY VA-7/ VA-5
16	J2159102	PLASTIC RIVET Sr3055
17	K2458146	SWITCHING POWER SUPPLY SWM-40
18	7697205000	HEADPHONES ASSY G-800/ G-1000
A	J2289131	SELF TAP SCREW 3,5x16 TCTCPRBZ
B	J2289101	SELF TAP SCREW 2,9x6 TCTC
C	J2289193	SELF LOCK SCREW M3x6 TCTC H.6
D	J2289111	SELF LOCK SCREW M3x4 TCTC H.6
E	J2289126	SELF TAP SCREW 2,9x8 TCTCPRBZ
F	J2289135	SELF LOCK SCREW M4x7 TCTC H.6
G	J2289108	SELF LOCK SCREW M3x10 TCTC H.6
H	J2289213	SELF TAP SCREW 3,9x16 TCTC
I	J2289202	SELF TAP SCREW 2,9x16 TCTC



EXPLODED VIEW (BOTTOM)



WIRING DIAGRAM



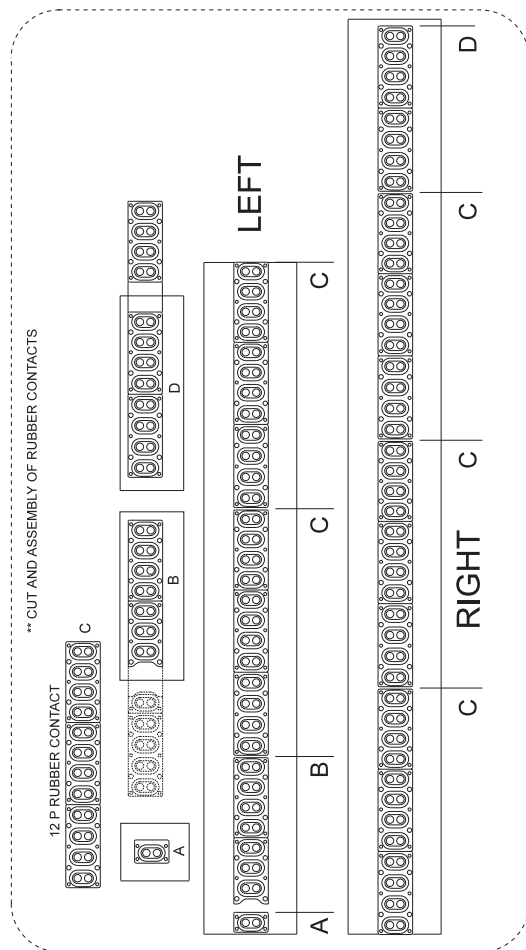
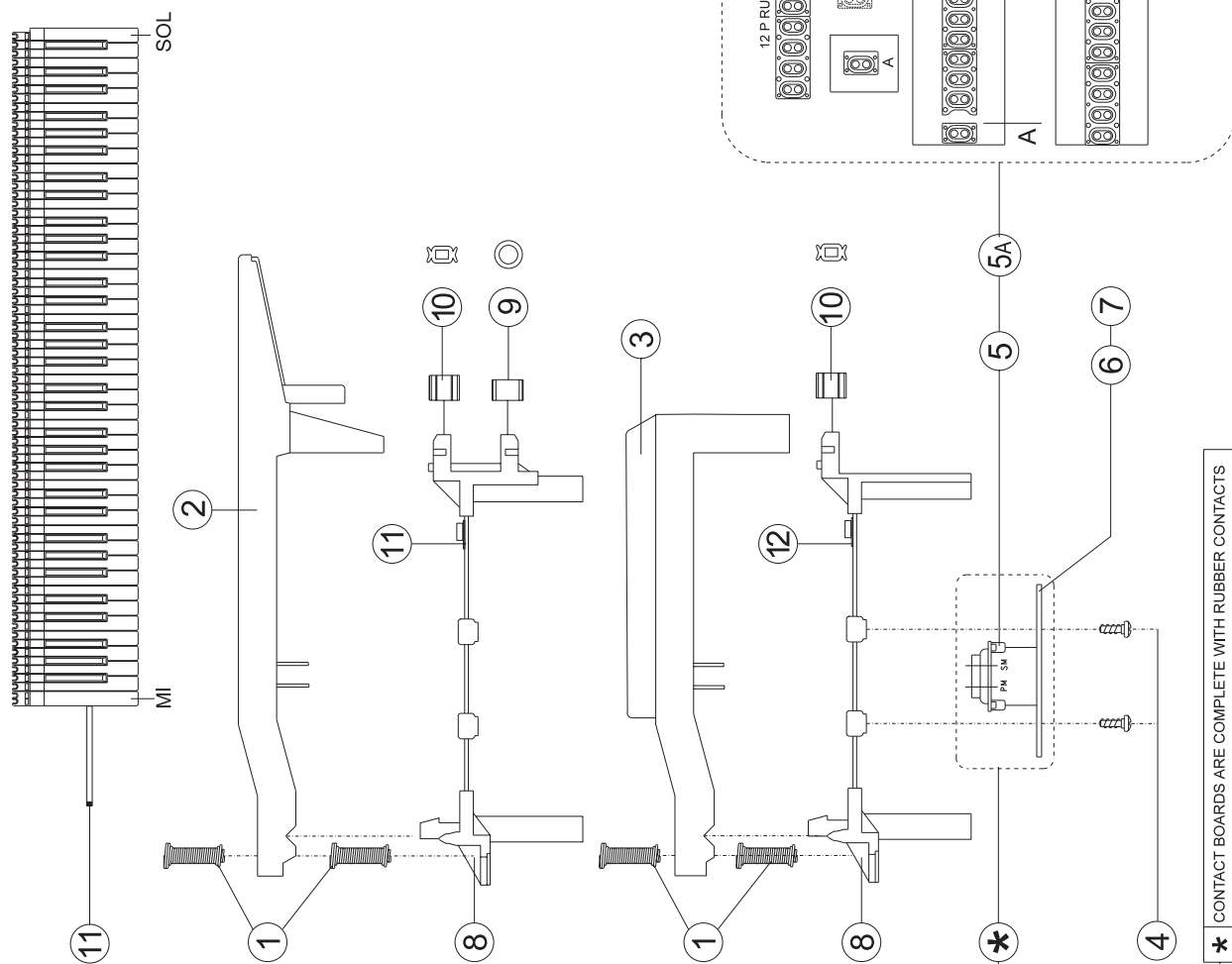
- |          |          |                              |           |            |                               |           |            |                                     |
|----------|----------|------------------------------|-----------|------------|-------------------------------|-----------|------------|-------------------------------------|
| <b>1</b> | 00783234 | BENDER CABLE (35) (W4PC P.2) | <b>10</b> | K3468231   | 40P FLAT CABLE (40) -2C D/D   | <b>19</b> | 7771006000 | 3 CABLE ASSY 2N/1R (130) -2C 4P D/D |
| <b>2</b> | K3468218 | 4P CABLE (72) -2C D/D        | <b>11</b> | 7697223001 | 16P FLAT CABLE (38) -2C       | <b>20</b> | 7771007000 | 3 CABLE ASSY 2V/1R (118) -2C 4P D/R |
| <b>3</b> | K3468226 | 6P CABLE (106) -2C P.2,5 D/R | <b>12</b> | 7770116000 | WIRING ASSY (W/5 CABLE ASSY)  | <b>21</b> | 7771008000 | 4P CABLE (8) -2C P.2 D/R            |
| <b>4</b> | K3468227 | 7P CABLE (60) -2C P.2,5 D/R  | <b>13</b> | 7770118000 | WIRING ASSY (W/4 CABLE ASSY)  | <b>22</b> | 7771009000 | 3P CABLE (28) -2C P.2 D/R           |
| <b>5</b> | K3468228 | 8P CABLE (90) -2C P.2,5 D/R  | <b>14</b> | 7770117000 | WIRING ASSY (W/5 CABLE ASSY)  | <b>23</b> | 7771010000 | 4P CABLE (44) -2C P.2 D/D           |
| <b>6</b> | K3468229 | 9P CABLE (80) -2C P.2,5 D/R  | <b>15</b> | 7770119000 | WIRING ASSY (W/3 CABLE ASSY)  | <b>24</b> | 01121256   | 11P CABLE ASSY (9) -2C P.2          |
| <b>7</b> | K3468153 | 20P FLAT CABLE (52) -2C      | <b>16</b> | 7771005000 | WIRING ASSY (W-2 CABLE ASSY)  |           |            |                                     |
| <b>8</b> | K3468230 | 20P FLAT CABLE (6) -2C D/D   | <b>17</b> | 7698907000 | 4P CABLE ASSY (6) -2C P.2     |           |            |                                     |
| <b>9</b> | K3468190 | 34P FLAT CABLE (52) -2C      | <b>18</b> | 7770306000 | 5P CABLE (8) -2C P.2 D/R VA-5 |           |            |                                     |

# KEYBOARD PARTS LIST

## 76 KEY TP8S/AT KEYBOARD ASSY code 7699510000

### KEYBOARD PARTS LIST

Ref	Description	Code	n.
1	KEY SPRING gr60 or 122	J2179107	76
2	NATURAL KEY C8 (gr20) TP/8S-AT	J2579171	1
	NATURAL KEY C (gr20) TP/8S-AT	J2579172	6
	NATURAL KEY D (gr20) TP/8S-AT	J2579173	6
	NATURAL KEY E (gr20) TP/8S-AT	J2579174	6
	NATURAL KEY F (gr20) TP/8S-AT	J2579175	6
	NATURAL KEY G (gr20) TP/8S-AT	J2579176	6
3	NATURAL KEY A (gr20) TP/8S-AT	J2579177	6
	NATURAL KEY B (gr20) TP/8S-AT	J2579178	6
	NATURAL KEY G2 (gr20) TP/8S-AT	J2579179	1
	SOL	J2579179	1
3	SHARP KEY (gr16) TP/8S	J257918001	31
4	SELF TAP SCREW 2.9x8mm TC TC PR BZ	J2289126	42
5	12P RUBBER CONTACT	22185238	7**
5A	1P CONDUCTIVE RUBBER LR13/1	7625920000	1**
6	LEFT CONTACT PCB ASSY+RUBBER	7695005000	1
7	RIGHT CONTACT PCB ASSY+RUBBER	7695004000	1
8	76-KEY KEYBOARD CHASSIS TP/8S-AT	J2579181	1
9	GUIDE BUSHING INFERIOR	J2359104	45
10	GUIDE BUSHING SUPERIOR	J2359109	76
11	SENSOR AFTER_TOUCH	J3169108	1



# PARTS LIST VA-76 (117V/230V/230VE/240VA)

### SAFETY PRECAUTIONS :

The parts marked have safety-related characteristics. Use only listed parts for replacement.

### CONSIDERATION ON PARTS ORDERING

When ordering any parts listed in the parts list, please specify the following items in the order sheet.

QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex. 10	22575241	Sharp Key	C-20/50
15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

### NOTE:

# The parts marked "# " are new (Initial Parts).

A The parts marked "A" are new (Initial Parts) for RES but already used by RJA

The parts marked have Safety - Related characteristics. Use only listed parts for replacement.

<< EMI >> Component for EMC.

Note: Replacement should be made on a unit basis. No replacements available for individual parts. Replacement only be a unit.

AB = Audio Board	MIDI = Midi Board
AFT = Bounce to AFT B.	MEB = Metronome Board
CB = Control Board	PAB = Power Amp. Board
CVP = Control Variphase B.	PB = Potentiometer Board
DBM = D-Beam Board	PHB = Phones Board
FC7 = FC7 Board	RB = Right Contact B.
IB = Inverter Board	RIB = Ribbon Board
LB = Left Contact B.	SWDBM = Switch D-Beam Board
LCD = LCD Control Board	
MB = Main Board	

### CASING

#	DESCRIPTION	VA-76	Q.ty
# 7771011000	VARN.+SILK. TOP CABINET	VA-76	1
# 7771012000	VARN. COVER F/LCD	VA-76	1
# 7771013000	VARN.+SILK. RIGHT TEMPLATE F/TOP CBNT		1
# 7771014000	VARN.+SILK. LEFT TEMPLATE F/TOP CBNT		1
# 7771015000	VARN.+SILK. BOTTOM CBNT	VA-76	1
02126390	TOUCH SCREEN SENSOR EMU601A2MA16		1
K2128126	BLACK MUSIC REST	VA-7/VA-5/VA-76	1
22208320	MUSIC SCORE HOLDER		1
01121790	RIBBON SENSOR		1

### KNOB BUTTON

22485303	D-RK KNOB	BLK	1
K2478291	BLACK KNOB W/IVORY POINTER D.12 H.18.5		3
K2478258	POWER SWITCH KNOB (BLACK)		1
K2478334	BUTTON 12X8	WHITE (MONO)	1
K2478292	BUTTON 12X8	WHITE (STEP)	1
K2478293	BUTTON 12X8	WHITE (ENCODE)	1
K2478294	BUTTON 12X8	WHITE (CAPTURE)	1
K2478295	BUTTON 12X8	DARK GREY (GROUP)	1
K2478296	BUTTON 12X8	WHITE (1)	3
K2478297	BUTTON 12X8	WHITE (2)	3
K2478298	BUTTON 12X8	WHITE (3)	3
K2478299	BUTTON 12X8	WHITE (4)	3
K2478300	BUTTON 12X8	WHITE (5)	3
K2478301	BUTTON 12X8	WHITE (6)	3
K2478302	BUTTON 12X8	WHITE (7)	3
K2478303	BUTTON 12X8	WHITE (8)	3
K2478304	BUTTON 12X8	WHITE	2
K2478305	BUTTON 12X8	DARK GREY	2
K2478306	BUTTON 16X10	WHITE	5
K2478307	BUTTON 16X10	WHITE (MELODY INTELL)	1
K2478308	BUTTON 16X10	WHITE (ON/OFF)	2
K2478309	BUTTON 16X10	WHITE (OTHER)	1
K2478310	BUTTON 16X10	WHITE (SYNC)	1
K2478311	BUTTON 16X10	DARK GREY (DOWN)	1
K2478312	BUTTON 16X10	DARK GREY (UP)	1
K2478313	BUTTON 20X10	WHITE	1
K2478314	BUTTON 20X10	DARK GREY	2
K2478315	BUTTON 20X10	WHITE (ARRANGER)	1
K2478316	BUTTON 20X10	WHITE (PIANO)	1
K2478317	BUTTON 20X10	WHITE (BACKGROUND)	1
K2478318	BUTTON 20X10	WHITE (MELODIC)	1
K2478319	BUTTON 20X10	WHITE (RHYTHMIC)	1
K2478320	BUTTON 20X10	WHITE (USER)	1
K2478321	BUTTON 20X10	WHITE (1)	2
K2478322	BUTTON 20X10	WHITE (2)	2
K2478323	BUTTON 20X10	WHITE (3)	1
K2478324	BUTTON 20X10	WHITE (4)	1
K2478325	BUTTON 20X10	WHITE (5)	1
K2478326	BUTTON 20X10	WHITE ONE TOUCH	1
K2478327	BUTTON 20X10	WHITE STYLE	1
K2478328	BUTTON 20X10	WHITE TONE	1
K2478329	BUTTON 20X10	WHITE USER PROGRAM	1
K2478330	BUTTON 20X10	DARKGREY ORCHESTRATOR	1
K2478331	BUTTON 20X10	DARK GREY VIRTUAL BAND	1
K2478332	BUTTON 20X10	DARK GREY SONG COMPOS.	1
K2478333	BUTTON 20X10	DARK GREY FUNCTION M.	1
K2478339	BUTTON 16X10	WHITE (M BASS)	1
K2478340	BUTTON 16X10	WHITE (LOWER 1)	1
K2478341	BUTTON 16X10	WHITE (LOWER 2)	1
K2478342	BUTTON 16X10	WHITE (M DRUM)	1
K2478343	BUTTON 16X10	WHITE (UPPER 1)	1
K2478344	BUTTON 16X10	WHITE (UPPER 2)	1

### SWITCH

J3169105	SWITCH	TP-1101A / EVQ-PAE 05 R	SW1=>23, 42, 44, 45=>62 on CB / SW25=41, SW65=>69 on CVP / SW43 on PB / SW24 on SWDBM / on PAD	75
13159180	SLIDE SWITCH	SSSF11209K	SW1 on AB	1



**JACK SOCKET**

13449252	JACK SOCKET	YKB 21-5006	JK6 on AB / JK1 on PHB	2
13449125	JACK SOCKET	HLJ0520-01-110	JK2, 3, 7, 8 on AB / JK2, 3 on MIDI	6
13449126	JACK SOCKET	HLJ0520-01-010	JK1 on MEB / JK4 on MIDI	2
13429273	DIN SOCKET	3PZ YKF51-5046	JK5 on MIDI	1
13429648	DIN SOCKET	YKF51-5001	JK3 on FC7	1

**DISPLAY UNIT**

Note: 7711210000 LCD LM320191(SHARP) ASSY E-600

**DISK DRIVE UNIT**

Note: J2409102	FLOPPY D. DRIVER	JU-257 A786P	1
Note: J2409105	ZIP DRIVER	IDE	1

**BENDER UNIT**

Note: 70564101	TURBOLESS PITCH BENDER	PBH0201	1
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**KEYBOARD ASSY**

7699510000	76-KEY KEYBOARD ASSY TP/8S-AT		1
<b>NOTE:</b> For details, refer to KEYBOARD PARTS LIST (Page 7)			

**POWER SUPPLY UNIT**

Note: # K2458146	SWITCHING POWER SUPPLY	SWM-40	1
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**PCB ASSY**

7697205000	HEADPHONES ASSY	G800/G1000	1
7700105001	METRONOME PCB ASSY	G1000/VA-76	1
7700420000	BOUNCE-TO-AFTERTOUCH ASSY		1
7700609000	CONTROL PCB ASSY F/ D-BEAM		1
7711203000	INVERTER PCB ASSY		1
7770101000	LCD CONTROL PCB ASSY		1
7770102000	FC-7 PCB ASSY	VA-7/VA-5	1
7770105000	MIDI PCB ASSY	VA-7/VA-5/VA-76	1
7770106000	POTENTIOMETER PCB ASSY		1
7770107000	RIBBON PCB ASSY		1
7770108000	SWITCH D.BEAM PCB ASSY		1
7770109000	CONTROL VE-VP1 PCB ASSY	VA-7/VA-76	1
7770125000	TERMISTOR ASSY		1
# 7771002000	PAD CONTROL PCB ASSY	VA-76	1
# 7771003000	CONTROL PCB ASSY	VA-76	1
[E] 7770112000	VARIPHASE VE-VP1 PCB ASSY	VA-7/VA-76	1
[E] 7770132000	MODULE XPGS-6 PCB ASSY		1
[E] # 7771001000	MAIN BOARD PCB ASSY	VA-76	1
# 7771004000	AUDIO PCB ASSY	VA-76	1
7695004000	RIGHT CONTACT BOARD W/RUBBER ASSY		1
7695005000	LEFT CONTACT BOARD W/RUBBER ASSY		1

**IC**

00900901	INVERTER MODULE	CXA-M10AL	on IB	1
15229718RI	I.C. 6N 137	PHOTO-COUPLER	IC6 on MIDI	1
K525816410	I.C. K525816410 64M	STYLE VA-7	IC19 on MB	1
K525816310	I.C. K525816310	MASK ROM	IC4 on MB	1
J5159114	I.C.. 74 HC 14		IC11 on CB	1
15169550RI	I.C. 74 HC138	DIP CMOS	IC7, 8, 9, 10 on CB	4
J5159107	I.C. 74 HC57	CMOS	IC6 on CB	1
00232645	I.C. TC7W14F	FLAT	IC23 on MB	1
15259701	I.C. 74 HC 00	FLAT CMOS	IC6 on MB	1
J5259127	I.C. 74 HC 10	FLAT	IC29 on MB	1
K5258109	I.C. 74 HC 74	FLAT CMOS	IC8 on MB	1
J5259102	I.C. 74 HC 273	FLAT CMOS	IC40 on MB	1
J5259128	I.C. 74 HC 393	FLAT	IC28 on MB	1
00343823	I.C. M60205-0601FP	(CUSTOM IC)	IC3 on MB	1
00129278	I.C. SSC1080 FOB	(CUSTOM IC)	IC10 on MB	1
00788356	I.C. M38881M2-058FP		IC13 on MB	1
J5259110	I.C. HM62256LFP-7T	FLAT SRAM	IC12 on MB	1
J5259120	I.C. HM5118160CJ-6	FLAT	IC21 on MB	1
01561945	I.C. FLASH MEM LH28F160S5T-70		IC20 on MB (Blank)	1
15199780	I.C. HD63266FP-64A	FDC	IC16 on MB	1
J5259116	I.C.SED1335F0B	(LCD CONTROLLER)	IC11 on MB	1
15159113	I.C. 4051 BCP	CMOS	IC4 on PB	1
15259884	I.C. TC7S08F	CMOS	IC15 on MB	1
15259885	I.C. TC7S32F	CMOS	IC7, 14, 39 on MB	3
15259887	I.C. TC7SU04F	FLAT CMOS	IC30, 22 on MB	2
J5169105	I.C. TC7W08F	FLAT	IC36 on MB	1
15249104	I.C. TC7S04F	FLAT	IC38 on MB	1
00232634	I.C. TC7W74F		IC37 on MB	1
00236845	I.C. TC 74VHC245F		IC32, 31 on MB	2
J5259136	I.C. TC 7W34FU		IC41=>44 on MB	4
15169334	I.C. 74 LS 05 N		IC5 on MIDI	1
15219183	I.C. M51953 AL	(STANDING)	IC5 on MB	1
15189251	I.C. M5218 P	(OP AMP)	IC2 on MEB / IC1, 2 on PB	3
15189210	I.C. BA 5218F	(OP AMP)	IC9, 16, 19 on AB	3

15189186	I.C. UPC 4570C	(OP AMP)	IC3 on PB / IC2 on LCD	2
15289105	I.C. UPC 4570G	(OP AMP)	IC1, 26, 27 on MB / IC8, 12, 18 on AB	6
15189189	I.C. UPC 4570HA VERT.	(OP.AMP)	IC10 on DBM	1
15199904	I.C. M51953 BL	(STANDING)	IC5 on AB	1
J5189102	I.C. TD 62593 AP	DIP	IC5 on CB	1
00458312	I.C. NJM 2360M	FLAT	IC1 on LCD	1
01451578	I.C. AK4324-VF-E2	DAC	IC11, 20 on AB	2
01780112	I.C. AK4522-VF	AD/DA	IC4 on AB	1
15289117	I.C. NJM 5532MD-TE1	(OP AMP)	IC7, 10, 14, 17, 21 on AB	5
15199286	I.C. AN78L05M FLAT	(REGULATOR)	IC2 on AB	1
J5259133	I.C. TA7805 AF		IC3 on AB	1
7770115000	I.C. IDE IC33 MAIN-B. VA-7/VA-76		IC33 on MB (Programmed)	1

**TRANSISTOR**

15119155RI	TRANSISTOR	BC/560-B	Q5, 8 on AB / Q9 on MIDI	3
15119154RI	TRANSISTOR	BC/549-B	Q12=>25 on CB / Q1, 3 on MIDI	16
15129114	TRANSISTOR	2SC-1815GR	Q1, 2, 3 on LCD / Q17 on DBM	4
15119113	TRANSISTOR	2SA-1015 GR	Q4, 5 on LCD	2
15319101	TRANSISTOR	2SC-2412K	Q4, 6, 7 on AB	3
15309101	TRANSISTOR	2SA-1037KR	Q7 on MB	1
15129427	TRANSISTOR	2SC-2235Y	Q16 on DBM	1
15139124	TRANSISTOR	2SK-363 GR FET	Q3 on AB	1
15119163	TRANSISTOR	RN2227	Q1=>11, 26 on CB	12
15329104	TRANSISTOR	2SK-368GR FET CHIP	Q8 on MB	1

**DIODE**

15019159RI	DIODE	1N-4148	on CB/on PAD/on CVP/D1, 2, 3, 4, 7 on MIDI/D27 on SWDBM/D54 on PB	246
15339105	DIODE	DAN-202K	D13, 14 on MB / D1 on AB	3
15339108	DIODE	DA-204K	D1=>8, D16 on MB / D4 on AB	10
00893912	DIODE	SFPB-56 CHIP	D1 on LCD	1
15339109	DIODE	DAP 202K CHIP	D12, 15 on MB	2
J5339102	DIODE	RB706F-40T106	D1 on AB	1
15029320RI	LED DIODE	TLHG4401 - GREEN	D87, 147, 148, 149, 169 on CB	5
01341623	DIODE LED	TLN 201	D216 on DBM	1
01342578	PHOTO DIODE	TPS 708	D215 on DBM	1
J5029111	LED DIODE	L-59SRSGW-CC	D36=>43, 60=>67, 84, 85 on CB	18
J5029112	LED DIODE	5 L-53 SRD-D / RED	D89, 143, 146, 150, 171, 179 on CB / all on CVP	37
J5029113	LED DIODE	5 L-53 SED / ORANGE	10 on PAD / D88, D170, D90, 91, 138=>142, 126, 172, 127=>132, 173 on CB / D129 on PB / D105 on SWDBM / D122, 123 on CVP	32
J5019106	ZENER DIODE	BZX55C 5,1V	D10 on MB / D1, 3 on PB	3
J5019116	DIODE TRANSIL	BZW04-5V8B	D3 on RIB	1
J5019105	DIODE	1N 4002	D3, 5 on AB	2

**RESISTOR**

J3919104	RESISTOR ARRAY	EXB-A10E-103-J	RA1, 2, 6=>10, 15, 27=>31 on MB	13
J3919107	RESISTOR ARRAY	EXB-V8V-101-JV	RA12, 13, 44, 45 on MB	4
J3919108	RESISTOR ARRAY	EXB-V8V-103-JV	RA3, 4, 5, 11, 14, 16, 32, 33, 35 on MB	9
J3919109	RESISTOR ARRAY	EXB-V8V-470-JV	RA17=>26 on MB	10
J3919111	RESISTOR ARRAY	EXB-V8V-391-JV	RA34 on MB	1
J3919112	RESISTOR ARRAY	EXB-A10E-102-J	RA36, 39, 42 on MB	3
J3919114	RESISTOR ARRAY	EXB-V8V-330-JV	RA37, 38, 40, 41 on MB	4
13819131RI	UNINFL.RES.	10 OHM 0.6W 5%	R82 on DBM	1
13819132RI	UNINFL.RES.	100 OHM 0.6W 5%	R42, 51 on AB / R3, 4 on MEB	4
J3809155	UNINF. RESISTOR	2200 0.6W 5%	R20, 21 on LCD	2
J3809153	UNINFL.RESISTOR	0.22 0.6W 5%	R1 on LCD	1
J3809134	UNINFL.RES.	27 OHM 0.6W 5%	R32 on CB	1
J3809150	UNINFL.RES.	33 OHM 1/4W 5%	R62=>78, R80=>85 on CB / R116, 117 on AB	25
J3809157	THERMISTOR NTC	10K PH 5%	on TB	1

**POTENTIOMETER**

13289186	ROT.POT.	10KB 11K1130	VR1 on PB	1
00459901	ROT. POT.	10KB 14K 1230	VR3 on PB	1
13289185	ROT. POT.	10KB 11K1130	VR2 on PB	1
13299206	TRIMMER POT.	EVND 8AA03B24	VR1 on MB	1
J3219101	ROT.POT.	5KB 90° - MONO	VR1 on FC7	2
13279988	ROT.POT.	RK09K12A0A2Aac	VR1 on AB	1

**CAPACITOR**

01015912	POL. COND.	0805 2.2N 5%	C21 on AB	1
15359774	POLYEST.COND.	0805 680P 5%	C40 on AB	1
01349378	COND. TANTALIUM	TCFGA0J475M8R	C20 on AB	1
J3629144	ELECTRL.COND.	470UF 16V AX	C22 on CB	1
13639154	ELECTRL.COND.-V	1000UF 16V	C48 on DBM	1
J3629103	ELECTRL.COND.	100U 25V P5	C69, 70 on MB / C25, 36, 37, 54, 55, 62, 63, 74, 75, 76, 174, 180, 189, 190 on AB / C1 on MIDI / C4, 5 on MEB	18
J3629147	ELECTR. COND.	220U 25V P.5	C114, 115 on AB	2
J3629133	ELECTROL.COND.	22U 25V P5	C18, 38 on AB	2
J3629135	ELECTRL. COND.	470U 35V P5	C2 on IB	1
J3629132	ELECTRL.COND.	100U 50V P5	C2, C4 on LCD	2
J3629104	ELECTRL.COND.	10U 50V P5	C7, 10, 14, 17, 27, 35, 42, 47, 50, 173, 176 on AB	11
J3629105	ELECTRL.COND.	47U 50V P5	C36, 39 on AB / C1, 3, 7, 8 on LCD	6
J3629107	ELECTRL.COND.	1UF 100V P5	C116 on AB	1
J5369103	ELECTR. COND. RV2	100U 16V (SMD)	C71, 203, 215, 216, 219 on MB	5
J5369104	ELECTR. COND. RV2	10U 16V (SMD)	C2, 38 on MB	2
J5369105	ELECTR. COND. RV3	33U 16V (SMD)	C1, 15, 17, 93, 96, 118, 147, 148, 175, 176, 202 on MB	11
J5369102	ELECTR.COND. RV2	47U 16V SMD	C188, 201 on MB	2
J5369106	ELECTR. COND. RV2	1U 50V (SMD)	C68 on MB	1

J3629149	ELECTR.COND.	100U 16V H.7	C17, 19 on PB	2
J3629143	ELECTR. COND.	10U 16V H.7	C44, 45 on DBM	2
J3629137	ELECTR. COND.	33U 16V H.7	C21 on CB / C4, 8, 12 on PB	4
J3629150	ELECTR.COND.	47U 16V H.7	C19 on CB	1
J3629142	ELECTR. COND.	1U 63V H.7	C8 on RIB / C43 on DBM	2
13649103J0	UNPOL.COND.	10U 16 P5	C109, 113, 117, 118, 181, 182, 191, 198 on AB / C3 on MEB	9
00239412	POLYEST.COND.	AMZV0050J122 0200	C53, 61, 178, 188 on AB	4
00239390	POLYEST.COND.	AMZV0050J561 0200	C56, 64, 183, 192 on AB	4

**INDUCTOR, COIL, FILTER**

<<EMI>>	22448240	NOISE SUP.	BL02RN2-R62	L1, 2, 3 on PHB	3
<<EMI>>	12449370	NOISE SUP.	SBT-0160W	L4, 7, 13, 15, 16 on AB / L1, 2 on MEB / L5, 7, 9, 10, 11 on MIDI	12
<<EMI>>	12449326	NOISE SUP.	SBT-0460	L6, 12 on MIDI / L4 on FC7	3
<<EMI>>	13529187	NOISE SUP.	ELKTR391CA	FL1 on PB / FL1=>7 on FC7	8
<<EMI>>	J2399103	CHIP NOISE	SUP. ELKS471FA	FL2=>8, FL10 on MB	8
<<EMI>>	J2399104	CHIP NOISE	SUP. EXCCL4532U1	L2=>9, L18, 39=>42, 44, 45, 51, 52, 53 on MB / L10 on AB	19
<<EMI>>	00452034	CHIP NOISE	SUP. BK2125HM102	L21=>38, L43, 59 on MB	20
<<EMI>>	00907856	NOISE SUP.	BLM21A601SPT CHIP	L3, 5, 6 on AB	3
<<EMI>>	12449449	INDUCTOR	RCH-875-151K	L1 on LCD	1

**CRYSTAL, RESONATOR**

00894023	X-TAL 20 MHZ	MA-406	X1 on MB	1
00894034	X-TAL 16 MHZ	MA-406	X2 on MB	1

**RELAY**

12439224RI	RELAY	DS2YS-12V	RL1, 2 on AB	2
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**ENCODER**

01013223	EVQ-VEM F01-24B ENCODER		ENC1 on CB	1
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**CONNECTOR**

13419677RI	16P FEM. CONNECTOR AMP 1.27		CN16 on MB / CN1 on LB	2
13369689RI	20P FEM. CONNECTOR AMP 1.27		CN18 on CB / CN1 on PAD /CN15 on MB / CN2 on RB	4
J3429123	8P FEM. CONNECTOR IL-404-08S-LW		CN1 on RIB	1
01454112	12P CONN. 006216012100808		CN1 on LCD	1
J3429125	FEMALE CONNECTOR 52043-0410		CN7 on LCD	1
13439479RI	MALE CONN.AMP 6W STANDING		CN6 on PB	1
13369550RI	40P MALE CONN. P. 1.27		CN22 on MB	1
13419676RI	8P MALE CONN. P/2.5 MOLEX		CN6 on MB / CN2 on MIDI	2
13369688RI	4P MALE CONN. P 2.5 M		CN1 on IB	1
J3439103	6P MALE CONNECTOR P 2.5 M		CN4 on AB / CN1 on PHB	2
J3439106	9P MALE CONNECTOR P 2.5 M		CN9, 10 on MB / CN9 on AB / CN1 on MIDI	4
J3439113	7P MALE CONNECTOR P 2.5 M		CN10 on AB	1
J3439120	4P MALE CONN. P.2 M		CN29 on MB / CN12 on AB / CN1 on MEB / CN3 on PB / CN2 on RIB / CN18 on MB	6
J3439122	8P MALE CONNECTOR P.2 M		CN7 on MB / CN3 on AB / CN2 on FC7	3
J3439125	5P MALE CONNECTOR P.2 M		CN26 on MB	1
J3439151	9P MALE CONNECTOR P.2 M		CN11 on AB / CN4 on PB	2
J3439141	10P MALE CONNECTOR P.2 M		CN4 on MB	1
J3439143	34P MALE CONN. P. 1.27 M		CN17 on MB	1
J3439124	10P MALE CONN. P. 2 M 90°		CN8 on CB	1
J3439126	12P MALE CONN. P.2 M		CN1 on MB / CN1 on CVP	2
J3439146	11P MALE CONNECTOR P.2 M		CN3, 25 on MB / CN2 on CVP / CN1 on PB	4
J3439147	14P MALE CONNECTOR P.2 M		CN8 on MB / CN5 on AB	2
J3429120	3P MALE CONNECTOR P.2 M		CN27, 2 on MB/CN13 on AB/CN5 on LCD/CN4 on CVP/CN401 on AFT	6
J3439148	7P MALE CONNECTOR P.2 M		CN21 on MB / CN3 on CVP	2
J3439159	4P MALE CONN. 53254 90° P.2		CN2 on PB	1
J3439162	13P MALE CONN. P.2 M		CN23 on MB / CN2 on LCD	2
J3439168	4P MALE CONNECTOR 76384-404		CN402 on AFT	1
13369568	B3B-PH-K-S CONNECTOR		CN4 on LCD / CN3 on FC7	2
13369503	B7B-PH-K-S CONNECTOR		CN24 on MB / CN6 on LCD	2
01349645	2P MALE CONNECTOR S2(4-2.3)B-XH-A		CN2 on IB	1
J3439171	4P MALE CONNECTOR 90° P.2 M		CN6, 11 on CB / CN5 on PB / CN1 on SWDBM	4
02230034	KX14-40K11D CONNECTOR		CN11 on MB	1
J3439172	8P MALE CONNECTOR 90°P.2 M		CN10 on CB	1
J3439173	7P MALE CONNECTOR 90°P.2 M		CN17 on CB	1
J3439174	9P MALE CONNECTOR 90°P.2 M		CN4 on PB	1
J3439175	11P MALE CONNECTOR 90° P.2 M		CN16 on CB / CN1 on PB	2
J3439176	12P MALE CONNECTOR 90°P.2 M		CN7, 15 on CB	2

**WIRING, CABLE**

00783234	BENDER CABLE (35) (W4PC P.2)		For details refer to "WIRING DIAGRAM" on page 6.	1
K3468218	4P CABLE (72) -2C D/D		"	1
#	K3468226	6P CABLE (106) -2C P.2,5 D/R	"	1
#	K3468227	7P CABLE (60) -2C P.2,5 D/R	"	1
#	K3468228	8P CABLE (90) -2C P.2,5 D/R	"	1
#	K3468229	9P CABLE (80) -2C P.2,5 D/R	"	1
#	K3468153	20P FLAT CABLE (52) -2C	"	1
#	K3468230	20P FLAT CABLE (6) -2C D/D	"	1
#	K3468190	34P FLAT CABLE (52) -2C	"	1
#	K3468231	40P FLAT CABLE (40) -2C D/D	"	1
7697223001	16P FLAT CABLE (38) -2C		"	1
7770116000	WIRING ASSY (W/5 CABLE ASSY)		"	1
7770118000	WIRING ASSY (W/4 CABLE ASSY)		"	1
7770117000	WIRING ASSY (W/5 CABLE ASSY)		"	1
7770119000	WIRING ASSY (W/3 CABLE ASSY)		"	1

#	7771005000	WIRING ASSY (W/2 CABLE ASSY) VA-76	"	"	1
	7698907000	4P CABLE ASSY (6) -2C P.2	"	"	1
	7770306000	5P CABLE (8) -2C P.2 D/R VA-5	"	"	1
#	7771006000	3 CABLE ASSY 2N/1R (130) -2C 4P D/D	"	"	1
#	7771007000	3 CABLE ASSY 2V/1R (118) -2C 4P D/R	"	"	1
#	7771008000	4P CABLE (8) -2C P.2 D/R	"	"	1
#	7771009000	3P CABLE (28) -2C P.2 D/R	"	"	1
#	7771010000	4P CABLE (44) -2C P.2 D/D	"	"	1
	01121256	11P CABLE ASSY (9) -2C P.2	"	"	1

**SCREW**

J2289101	SELF TAP.SCREW	2.9X 6 TC TC		2
J2289202	SELF TAP.SCREW	2.9X16 C C		3
J2289116	SELF TAP.SCREW	3.5X13 TC TC		4
J2289162	SELF TAP. SCREW	3.5X16 C.C		5
J2289213	SELF TAP.SCREW	3.9X16 TC TC		2
J2289126	SELF TAP.SCREW	2.9X 8 TCTCPRBZ		8
J2289125	SCREW	2.9X10 TC TC PR TROP		83
J2289130	SCREW	2.9X13 TC TC PR TROP		14
J2289131	SELF TAP.SCREW	3.5X16 TCTCPRBZ		30
J2289108	SELF LOCK.SCREW	M3X10 TCTC H.6		8
J2289111	SELF LOCK.SCREW	M3X4 TCTC H. 6		4
J2289193	SELF LOCK.SCREW	M3X6 TC TC H.6		60
J2289135	SELF LOCK.SCREW	M4X 7 TCTC T.8		6

**PACKING**

#	K2638254	CENTRAL PROTECTION	VA-76	1
	K263819201	RIGHT POLYST. END-SIDE	G-1000	1
	K263819301	LEFT POLYST. END-SIDE	G-1000	1
	K2678119	CARTENE ENVELOPE HD CM.170X56		1
	K2678102	POLYETH. ENVELOPE 25X45		1
	K2678106	POLYETH.ENVELOPE 40X55		1
#	K2618245	OUTER PACKING	VA-76	1

**MISCELLANEOUS**

K2168114	LED SPACER H.1.8 E.D.9			18
00453223	LED SPACER H. 7 E.D. 5			2
K2168117	LED SPACER H.1.5 D.E.5.5			69
K216810801	SPACER F/LED H. 5.5 - E/D 5.5			5
J2359105	PRESSURE RUBBER SFF-018			4
J2159102	PLASTIC RIVET SR3055			2
J2159103	DOUBLE ELASTIC PLATE			5
K2248150	FELT WASHER I/D 7 E/D 13 TH.1.5			3
K2268164	RIGHT VIBRATION DAMPER PL45N	VA-7/VA-5		1
K2268165	LEFT VIBRATION DAMPER PL45N	VA-7/VA-5		1
K2268166	VIBRATION DAMPER F/VARIPH. CONTROL BOARD			1
#	K2268168	VIBRATION DAMPER PL45N	VA-76	1
	K224815201	BLACK ANTIDUST PL45N LCD	VA-7/VA-5	1
	K2148114	HEXAGONAL ROD M3 6X14		8
	K2248127	PROTECTING BOX COVER F/INVERTER		1
	K2248128	PROTECTING BOX BASE F/INVERTER		1
	K2248136	GRILL F/ZIP DRIVE	G-1000/VA-76	1
	K1188128	KEYBOARD SUPPORT	G-1000	2
	K2248138	HEADPHONE BLIND (BLACK)	G1000/VA-76	1
	01343089	D-BEAM CONTROLLER ESCT BLK		1
	K2198105	SENSOR SUPPORT	EM-20	1
	K2238127	DIFFUSER FOR LED	VA-7	10
	K253810302	FUSE WARNING LABEL		1

**ACCESSORIES**

#	7771016000	ZIP DISK DEMO/STYLE/SONG/SAMPLE	VA-76	1
	K6018109	MIDI GUIDE	1	1
#	K6018420	OWNER'S MANUAL (E)	VA-76	1
#	K6018428	OWNER'S MANUAL (D)	VA-76	1
#	K6018429	OWNER'S MANUAL (F)	VA-76	1
#	K6018430	OWNER'S MANUAL (I)	VA-76	1
#	K6018431	OWNER'S MANUAL (OL)	VA-76	1
#	K6018432	"MUSIC ASSISTANT" O.MANUAL	VA-76	1
#	K6018422	MIDI IMPLEMENTATION MANUAL	VA-76	1
Δ	J3439155	CABLE CEE XVIIIG-H05VVVF2X1-C17W	(230V)	1
Δ	J3439128	CABLE 498/3 SJT 2X18 AWG-C17	(117V)	1
Δ	13499152RI	CABLE BS/13/H05VV-F3G0 75-V	(230VE)	1
Δ	J3439167	CABLE SAA/2-H05VV5 2X1-C17W	(240VA)	1

**OPTIONS**

7700136000	PROTECTION F/ZIP DRIVE ASSY	G-1000/VA-76	1
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## HOW TO SAVE - HOW TO VERSION UP

Since VA-76 has a flash memory for the System program registration, and a flash memory for the Variphase program registration you can update:

-the System program, the test program or the Variphase program by floppy disks

### Item Required

VA-76 System Program up disk (code: 7771017000)  
 VA-7/5/76 Test program disk (code: 7770134001)  
 VA-7/76 VP Program up disk (code: 7770135001)

### ATTENTION:

The **Test program** was not installed in this instrument (otherwise it would have occupied too much memory space).

If you want to install it, you have to load the Test Program from the "**VA-76 Test program disk**" you've been provided with.

### WARNING:

**Loading the Test Program causes the System Program of your VA-76 to be lost.** Therefore every time you want to carry out some checks in your VA-76 and consequently have to install the related Test Program, **we strongly recommend** you to make a back-up copy of your VA-76 current System program, according to the procedure described in the << [How to save the System Version or the Test Program onto Floppy disk](#) >> paragraph.

Of course, once you've completed your checks, you'll have to reload the System Program (that had been erased when installing the Test Program), as described in the << [How to update the System Program or the Test Program by floppy disk](#) >> paragraph.

## How to visualize the "System Program" version

Turn the instrument on while keeping the [PIANO + ONE TOUCH + INTRO] buttons pressed, the display shows:

```
VA -76   ***SYSTEM MENU***

BANK1: SYSTEM VERSION
BANK2: SYSTEM LOAD
BANK3: SYSTEM SAVE
```

You can check the instrument software version, pressing the [BANK/1] button.

After a few seconds the display shows:

```
VA -76   Virtual Arranger

          Ver. XX . XX
Day  Month  Day no.  Time  Year
CPU Bios Version: Ver. XX . XX
Flash : xxxxxxxx Size : xxxxxxx byte
```

To exit from this screen display, turn the instrument off.

## How to save the "System program" or the "Test Program" onto Floppy Disk.

Insert a formatted Floppy Disk in which you'll save either the "System Program" or the "Test Program" Turn the instrument on while keeping the [PIANO] + [ONE TOUCH] + [INTRO] buttons pressed.

The display shows:

```
VA -76   ***SYSTEM MENU***

BANK1: SYSTEM VERSION
BANK2: SYSTEM LOAD
BANK3: SYSTEM SAVE
```

Choose in the menu the option "SYSTEM SAVE" pressing [BANK/3] button

The display shows:

```
VA -76   ***SYSTEM SAVE***

NUMBER1: CONTINUE
NUMBER2: EXIT
```

Choose in the menu the option "CONTINUE" pressing [NUMBER/1] button

The display shows:

```
VA -76   ***SYSTEM SAVE***

System size [ BYTE ]      XXXXXXXX
Checksum Calculation ..... DONE
System saving .....      XXXXXXXX
ATTENTION !! Do not turn instrument off
```

Then after a few seconds the display will show:

```
VA -76   ***SYSTEM SAVE***

System size [ BYTE ]      XXXXXXXX
Checksum Calculation ..... DONE
System saving .....      COMPLETED

<< TURN THE INSTRUMENT AGAIN >>
```

When the program saving operation has been completed it will be confirmed by the "System saving COMPLETED" message appearing on the display.

To go back to the initial program, after a few seconds you have to turn the instrument off and then on again.



## How to update the System program or the Test program by Floppy disk

Insert the floppy disk containing either the System program (VA-76 System program up disk code 7771017000) or the Test program (VA-7/5/76 Test program disk code 7770134001) into the FDD.  
Turn the instrument on while keeping the [PIANO] + [ONE TOUCH] + [INTRO] buttons pressed.  
The display shows:

```
***SYSTEM MENU***

BANK1: SYSTEM VERSION
BANK2: SYSTEM LOAD
BANK3: SYSTEM SAVE
```

Choose in the menu the option "SYSTEM LOAD" pressing [BANK/2] button

The display shows:

```
***SYSTEM LOAD***

NUMBER1: CONTINUE
NUMBER2: EXIT
```

Choose in the menu the option "CONTINUE" pressing [NUMBER/1] button

After a few seconds, the display shows:

```
***SYSTEM LOAD***
Program loading ..... -----
Program checking ..... -----
Flash updating ..... -----

<< TURN INSTRUMENT ON AGAIN >>
```

If the loading operation of the Flash has been completed, you'll have the confirmation if the message "COMPLETED" is displayed.

**After a few seconds, you have to turn the instrument off and then on again.**

## How to update the Variphase program by floppy disk

You can update the VP program by using a floppy disk (VA-76 VP program up disk code: 7770135001)

Put the VP program up disk on your VA-76  
Turn it on while pressing the [BACKGROUND] + [MELODIC] + [RHYTHMIC] buttons

The following writings will appear on the screen:

```
**** VARIPHASE FUNCTION MENU ****

1. UPDATE VERSION BY FLOPPY DISK
2. THRU MODE

Version: XX.XX           Day Month Year
```

Select point 1 "UPDATE VERSION" on the display.

Wait until the update is finished, then power off and on the instrument again.

## TEST MODE

After loading the Test program, turn the instrument on, the display shows

```
-----MODEL SELECTION-----

_BANK_

1 VA 7
2 VA 5
3 VA 76
```

Press BANK 3 to select VA-76. The display shows the VA-76 test main menu  
The Test Menu will be displayed, which is divided into two major groups: BANK and NUMBER.

```
VA-76 test Ver. x x . x x

-BANK-                                -NUMBER-
1 Switch                               1 Flash
2 Encoder                               2 Rom Style
3 Adc                                   3 Ram
4 Lcd                                   4 IDE
5 Led                                   5 FDD
6 Keyscan                               6 Midi
7 Touch screen                          7 Audio Test
8 Variph Test

DATE: (day) (month) xx xx:xx:xx (year)
```

## First group of test => BANK

### 1. SWITCH test

Press the [BANK/1] button, the display shows:

```

VA-76 SWITCH TEST

Nome  XXXXX
      O N /OFF
*****
*****
*****
Next.  XXXXX
Press Bank 8 and Bank5 to exit
  
```

**Action:** every button, when pressed, will generate a sound. The LCD will consequently show the button name on the top of the left side as well as its ON/OFF status. On the bottom of the left side the name of the following button to be pressed will be shown. Every time a button has been checked, the asterisks disappear from the display.

Once all buttons of the control panel and of the FC7 pedalboard have been subsequently pressed, you will automatically exit the Switch Test and get back to the Test Menu.

If the Switch test has been already carried out previously and you want to exit it, you can do it by pressing the Bank 8 button first and then the Bank 5 one.

### 2. ENCODER check

Press the [BANK/2] button, the display shows:

```

VA-76 TEST ENCODER

ENCODER  →          XXX

Press Bank 5 to exit
  
```

**Action:** A value (here represented by XXX) will be visualized in the upper right corner of the LCD. Moving the encoder rightwards, this value will increase up to +255. Moving the encoder leftwards, it will decrease until 0.

To exit, press [BANK/5].

### 3. ADC Check

Press the [BANK/3] button, the display shows:

```

VA-76 ADC TEST
Bender (0 +/- 127)      D.Beam C. (0 - 127) **
Modulation (0 - 127)
Ribbon (0 - 127)       Sust Foot switch (On/Off )
Balance (0 +/- 127)   Foot switch (On /Off)
M - FX (0 + 127)      Express (0 - 127)

Press BANK 5 to exit
  
```

**Action:** The LCD visualizes the values of the functions you are testing. These values vary from 0 to +127 or to -127.

To exit, press [BANK 5].

### 4. LCD Check

Press the [BANK/4] button, the display shows:

```

VA-76 LCD TEST
Press BANK 1      blue   Test
Press BANK 2      white  Test
Press BANK 3      gray   Test
Press BANK 4      normal Test
Press BANK 6      image  Test

Press BANK5 to exit
  
```

**Action:**

If you press the [BANK/1] button, the display will be blue

If you press the [BANK/2] button, the display will be white;

If you press the [BANK/3] button, the display will be gray;

If you press the [BANK/4] button, the display will show some numbers (normal)

If you press the [BANK/6] button, the display will show an image

To exit, press [BANK/5].

### 5. LED Check

Press the [BANK/5] button, the display shows:

```

VA-76 LED TEST
Press BANK 1      to orange colors
Press BANK 2      to orange colors
Press BANK 3      to orange colors
Press BANK 4      All led   ON
Press BANK 6      Sequence  ON

Press BANK5 to exit
  
```

**Action:**

If you press the [BANK/1] button, all orange leds light

If you press the [BANK/2] button, all green leds light

If you press the [BANK/3] button, all red leds light

If you press the [BANK/4] button, all the leds light

If you press the [BANK/6] button, all the leds light in sequence

Note: All the LEDs will light one after the other and, at the end of the sequence, they will all light.

To exit, press [BANK/5].

### 6. KEYSKAN Check

Press the [BANK/6] button, the display shows:

```

VA-76 KEY SCAN TEST
Key =           C
Velocity =      0/127
Octave =        2
After Touch =   0/127

Press BANK5 to exit
  
```

**Action:** a piano sound will be heard every time a key is pressed; you'll hear the aftertouch effect if you press a key till the end of its stroke. The LCD shows the key name, the velocity value, the number of the octave used and the After touch value.

To exit, press [BANK/5].

## 7. TOUCH SCREEN Test

Note: to carry out this test, a normal pen is required.  
Press the [BANK/6] button, the display shows:

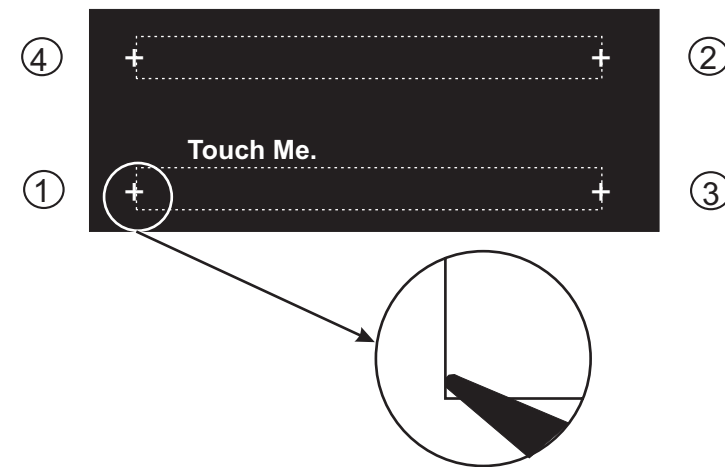
**VA-76 TOUCH SCREEN TEST**  
**BANK1 - calibrate**  
**BANK2 - touch X, Touch Y test**  
  
**Press BANK5 to exit**

- **BANK1 - calibrate**

Action : Pressing the [BANK/1] button, you enter the Calibration test.

**VA-76 TOUCH SCREEN TEST**  
**BANK1 - Exit calibrate**  
**BANK2 - Confirm calibration**  
  
**Press BANK5 to exit**

Action: Pressing the [BANK/1] button, you exit the Calibration test.  
 Pressing the [BANK/2] button, you enter the LCD calibration test.  
 Note: Once you enter the Calibration test, you can not exit unless you carry out the calibration operations.  
 The display shows:



Touch the left lower corner of each slit with the pen for a few seconds, according to the numbering shown in the following picture. When the VA-76 recognizes the touch, + will change into 0.  
 This way, the writing "Touch me" will appear to show the correct order, so please follow this indication. During the calibration, do not touch any point except "Touch me". After touching the four points, the calibration ends and the display will show one of the following displays:

**Calibration OK**  
  
**Press BANK5 to exit**

Note: The calibration set will be memorized on the VA-76 internal flash, by turning it on while keeping the [Melody Intelligence] button pressed, after having loaded the System program.  
 When the calibration fails, the following display will appear.

**NG. Calibration**

You have to carry out the calibration again.  
 Press the [BANK/5] button to go to the next test.

- **BANK2 - touch X, Touch Y test**

Action : Pressing the [BANK/2] button, you enter the test to check the LCD "darkest" area, the display shows:

**Touch X - 1**  
**Touch Y - 1**  
  
**Press BANK5 to exit**

Action: Touch with a pen the upper left corner of the LCD in its darkest area. Pass the pen through the LCD, horizontally first (from the left to the right) and check that the X value is 320. Then repeat the operation from downwards to upwards and check that the Y value is 240. The acceptable variation from these values is +/- 5%.

To exit, press [BANK/5]

## 8. VARIPHRASE Test

Press the [BANK/8] button, the display shows:

**VA-7 VARIPHRASE TEST**  
  
**Press one of the Vph Bank Switches**  
  
**Press BANK5 to exit**

Note:  
 Connect the VA-76 to an external amplifier.  
 Pressing one of the four buttons in the Variphase area ([Background], [Melodic], [Rhythmic] or [User]), you hear a Variphase sound.  
 In order to test the Variphase sampling, connect a microphone to the microphone input. Put the Variphase input gain switch on mic position and verify that, while sampling your voice, the INPUT OVER led turns on when you raise your voice causing the Variphase overload.

To exit, press [BANK/5].



## Second group of test => NUMBER

### 1. FLASH test

Press the [NUMBER/1] button, the display shows:

```

VA-76  FLASH  TEST

Writing      24
Verifying    24
Flash       OK or Error
Press BANK 5 to exit
  
```

Action: The display visualizes the 24 blocks written and then verified in the flash. OK will be visualized if everything works properly. ERROR will be visualized if there are any anomalies.

To exit, press [BANK/5]

Note: if there is an asterisk (\*) beside the "Flash Test" item within the Main Menu, this means that this kind of check has already been carried out.

### 2. ROM STYLE Test

Press the [NUMBER/2] button the display shows:

```

ROM STYLE TEST

OK or ERROR

Press BANK 5 to exit
  
```

To exit, press [BANK/5]

### 3. RAM Test

Press the [NUMBER/3] button, the display shows:

```

VA-76  RAM TEST

OK or ERROR

Press BANK 5 to exit
  
```

To exit, press [BANK/5]

### 4. IDE Test

Press the [NUMBER/4] button the display shows:

```

VA-76  IDE TEST

IDE: initializing...
** OK or ERROR**
Drive checking...
** OK or ERROR**

Press BANK 5 to exit
  
```

Action: Before inserting the zip disk in the VA-76 zip disk driver, make sure that it has been formatted by a VA-76, a G-1000 or an EM-2000.

Note: If the zip disk is not inserted before entering the test mode, the writing NOT READY will appear in the drive checking space.

To exit, press [BANK/5]

### 5 FDD Test

Press the [NUMBER/5] button the display shows:

```

VA-76  FDD TEST

Writing...
Reading...
Verifying
>>>> OK <<<<
Please eject disk
  
```

After a few seconds, the display will show:

```

VA-76  FDD TEST

Writing...
Reading...
Verifying
>>>> OK <<<<
Press BANK 5 to exit
  
```

Action: If the floppy disk has not been inserted in the drive, the following writing will be visualized on the bottom of the lcd: PLEASE INSERT DISK.

If the result isn't OK, one of the following errors will appear on the display:

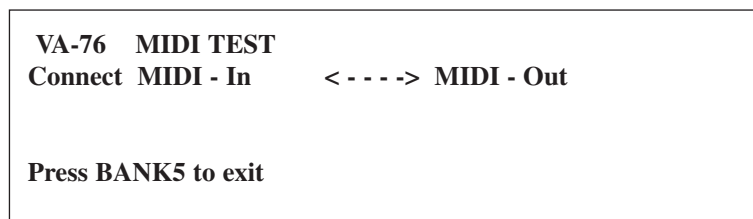
- Read Error
- Write Error - Verify Error

CAUTION: To check the FDD, use only a formatted disk, either DD or HD type.

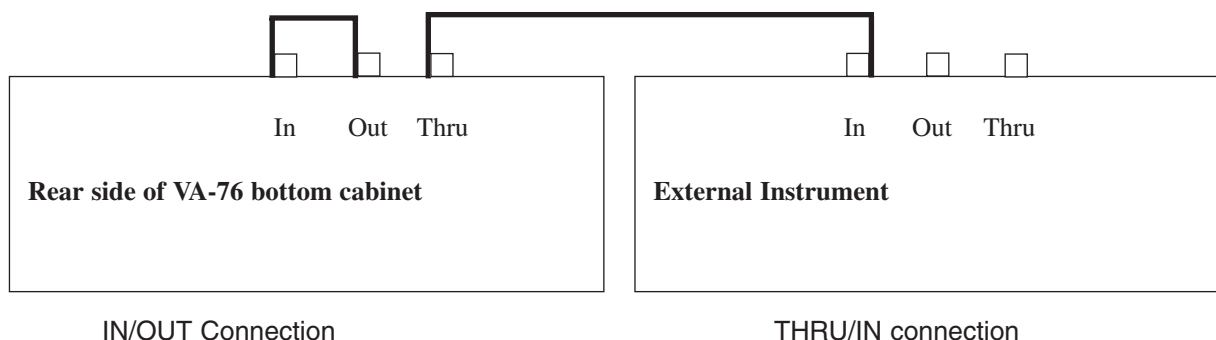
To exit, press [BANK/5]

## 6 MIDI & THRU test

Press the [NUMBER/6] button, the display shows:



Cable connections to check the MIDI outputs:



While the "VA-76 MIDI TEST" screen display is shown, connect the Midi Cables between VA-76 and an external instrument as shown in the above diagram.

Make sure that either the "OK" or the "ERROR" message appear on the display.

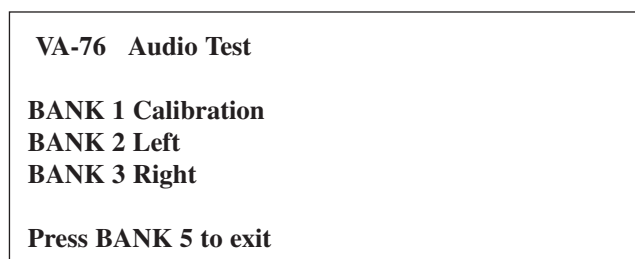
Then keep the cable connection between the IN and OUT sockets of VA-76 and connect VA-76 with another external instrument by using its "Midi Thru" output and the second Midi Cable.

If the result of this Midi Test is "OK", you'll hear an intermittent sound coming from the second external instrument.

To exit, press the [BANK/5].

## 7 Audio Test

Press the [NUMBER/7] button. You've entered the "Audio Test" mode and the display shows:



Before checking the output level, put the Volume potentiometer to MAX.

Connect two mono jacks to OUTPUT1 R/L. Please note that the test can be carried out on OUTPUT1 only. Pressing the [Bank/1] button "Calibration", a sine wave sound (frequency 415 Hz, amplitude 3Vpp) will come out from the OUTPUT1 R/L channels.

Pressing the [BANK/2] - Left button, a sine wave sound (frequency 215 Hz, amplitude 3Vpp) will come out from the OUTPUT1 L channel.

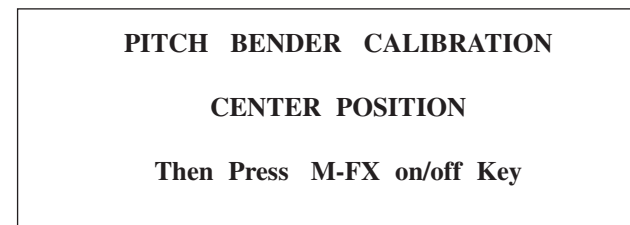
Pressing the [BANK/3] - Right button, a sine wave sound (frequency 415 Hz, amplitude 3Vpp) will come out from the OUTPUT1 R channel.

To exit, press [BANK/5].

## CALIBRATION PROCEDURE TO REPLACE THE PITCH BENDER

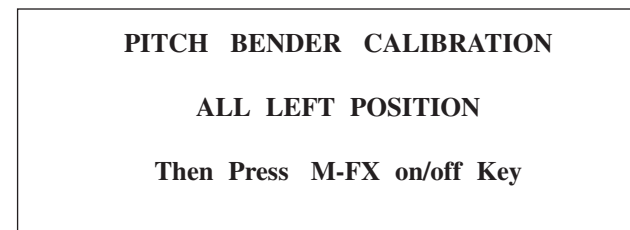
Load the "System Program" into the instrument. Turn VA-76 on while keeping the [ORCHESTRATOR] button pressed.

After a few seconds, the display will show:



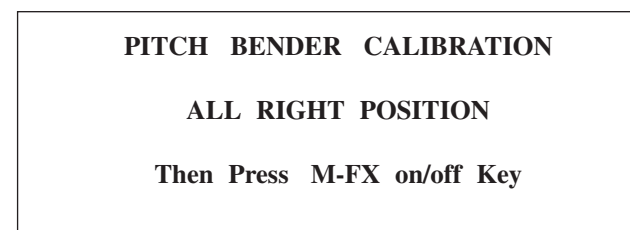
Put the Bender lever in the middle while pressing the M-FX [ON/OFF] button at the same time.

The display shows:



Move the Bender lever completely towards left while pressing the M-FX [ON/OFF] button at the same time.

The display shows:



Move the Bender lever completely towards right while pressing the M-FX [ON/OFF] button at the same time. When the calibration has been completed, the instrument will automatically reset and go back to the initial screen display of the software program.

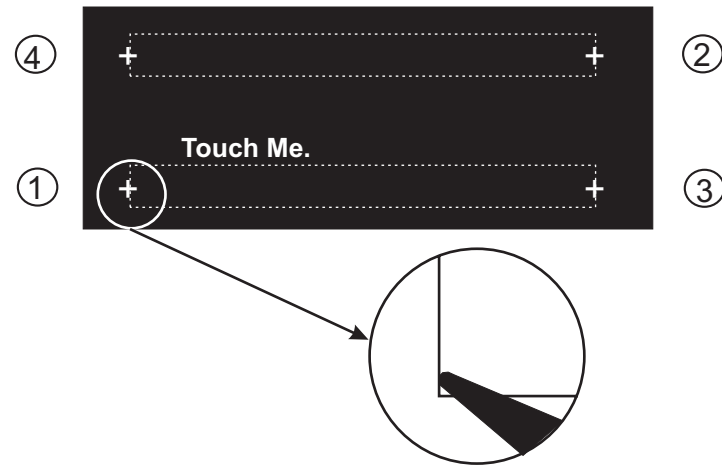
## HOW TO ENTER THE TOUCH SCREEN CALIBRATION

Turn the instrument on while keeping the [SONG COMPOSER] button pressed.

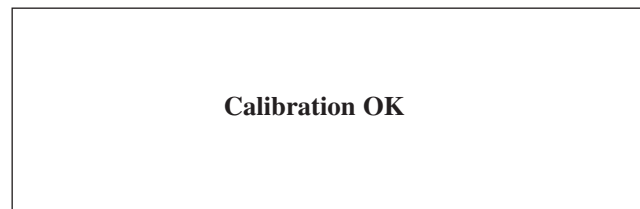
**Note:** When entered the Calibration test, you cannot exit unless you carry out the calibration operation. To perform this test, a normal pen is required.

Press the left lower corner of each slit with the pen for a few seconds, according to the numbering shown in the following picture.

When the VA-76 recognizes the touch, + will change into 0.

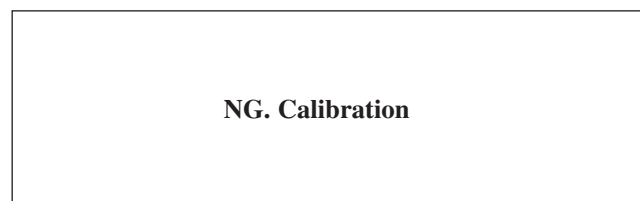


This way, the writing "Touch me" will appear to show the correct order, so please follow this indication. During the calibration, do not touch any point except "Touch me". After touching the four points, the calibration ends and the display will show one of the following displays:



If Calibration OK appears, the instruments will reset and get back to the normal working display. **Note:** The calibration set will be memorized on the VA-76 internal flash, by turning it on while keeping the [MELODY INTELL.] + [CONTROLLERS] + [EFFECTS] buttons pressed.

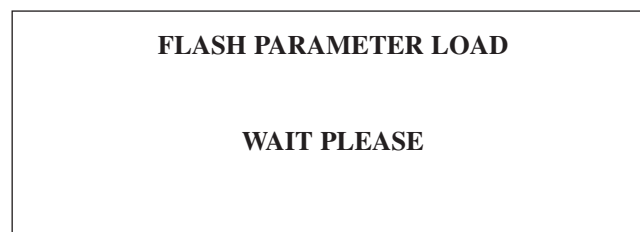
If the calibration fails, the following display appears.



You have to carry out the calibration again.

### HOW TO INIZIALIZE THE FLASH AREA

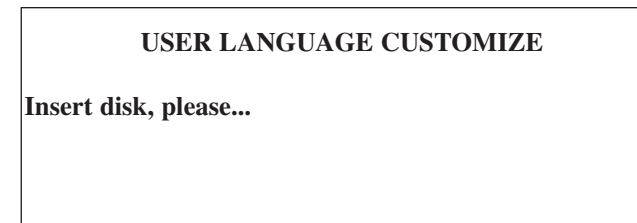
Turn the instrument on while keeping the [MELODY INTELL.] button pressed. After a few seconds, the display shows:



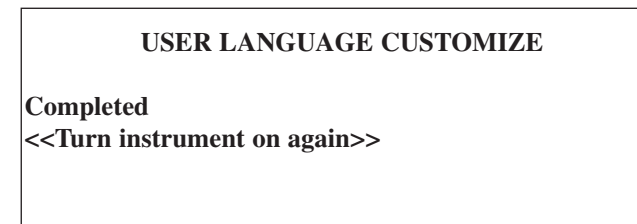
When the saving operation has been completed, the instrument will exit and get back to the VA-76 initial display. **CAUTION:** After that, you have to re-load the FACTORY USER PROGRAMS by means of the ZIP DISK DEMO/STYLE/SONG/SAMPLE VA-76(#7771016000).

### HOW TO LOAD THE 6th LANGUAGE

Turn the instrument on while keeping the [VIRTUAL BAND] button pressed. The display shows:



Insert the floppy disk containing the XXXXXXXX.lan file. After a few seconds, the display shows:

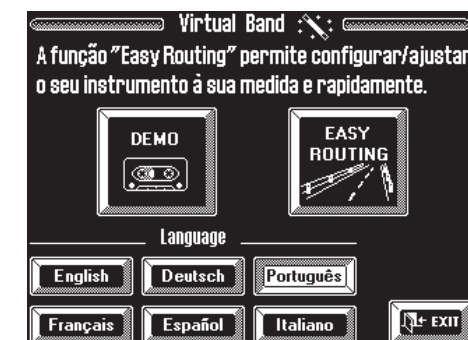
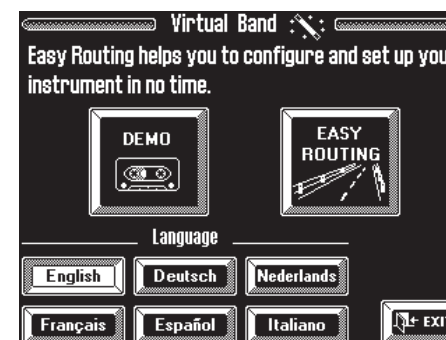


Turn the instrument off and on again.

**Caution:**

Loading the 6th language will cause the loss of the Netherlands language.

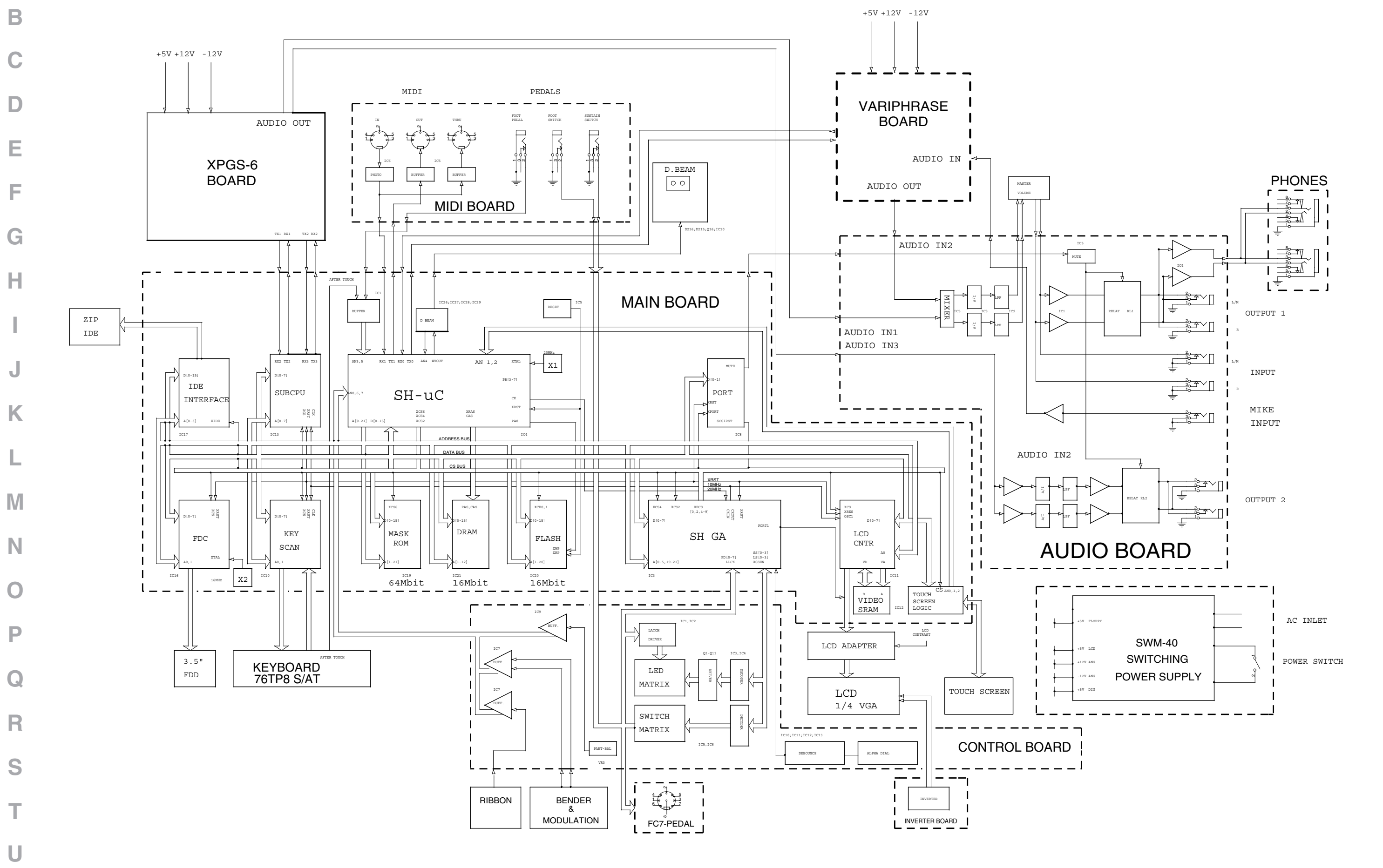
Example:





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

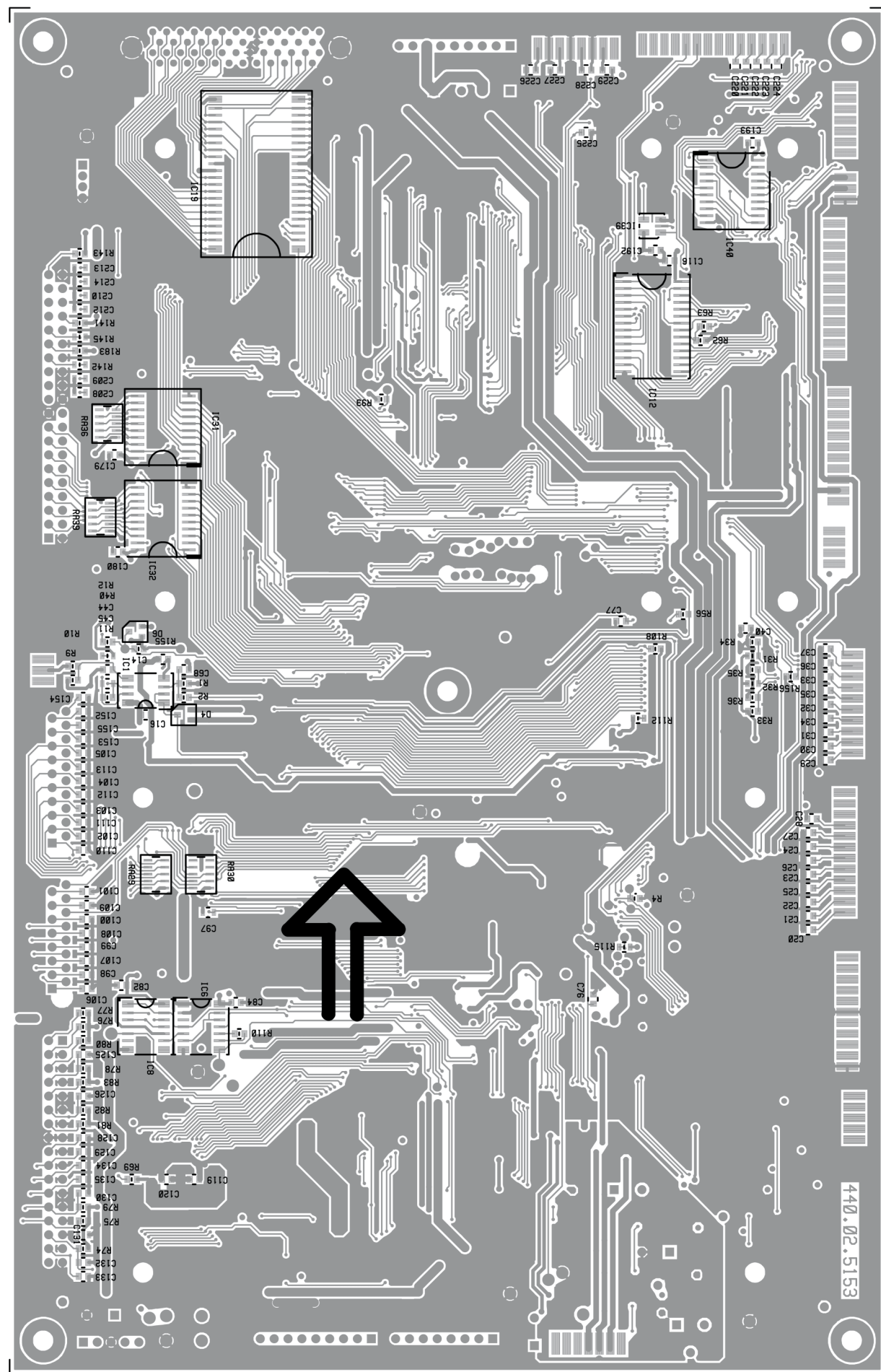
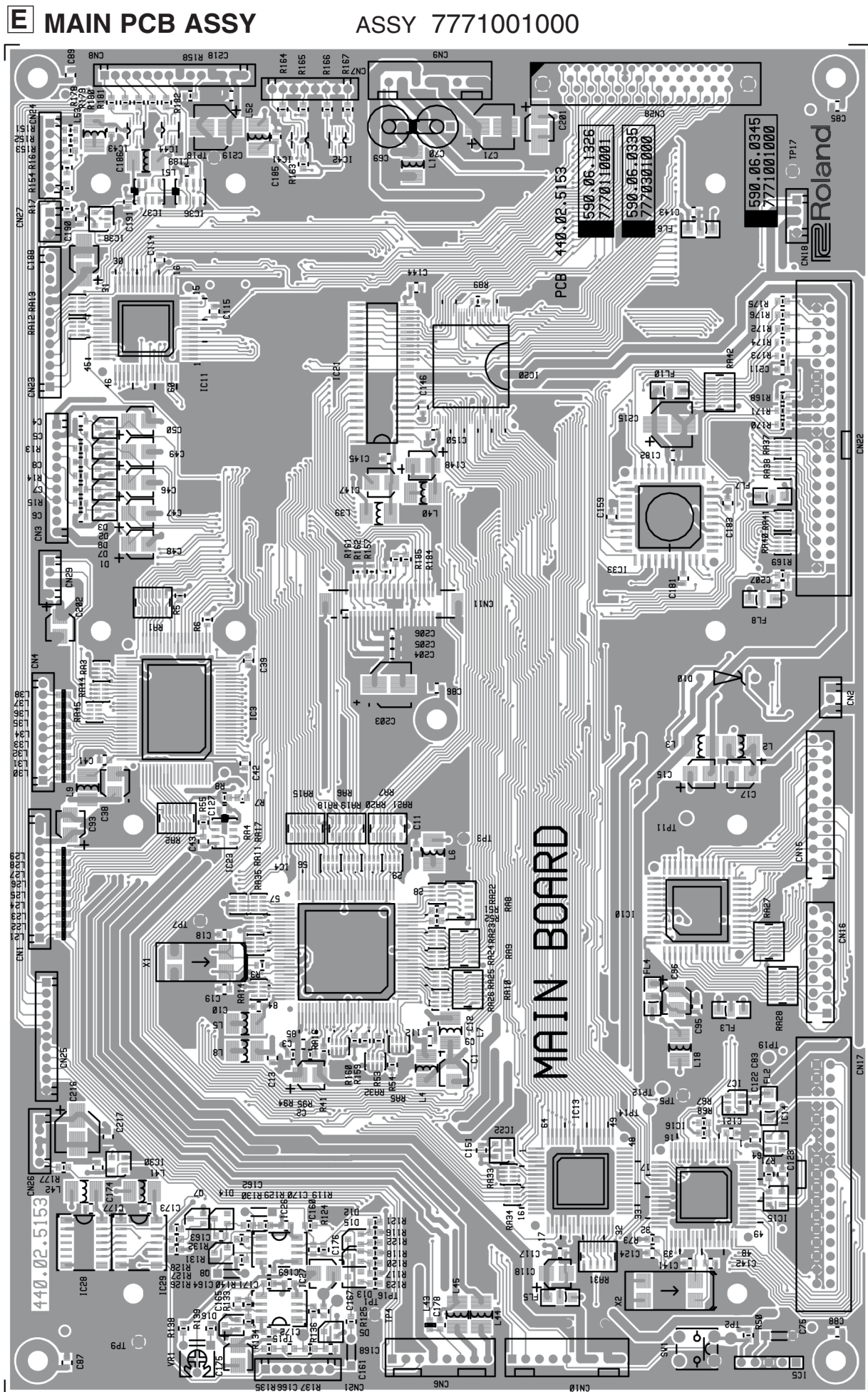
A **BLOCK DIAGRAM**



B  
C  
D  
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

A  
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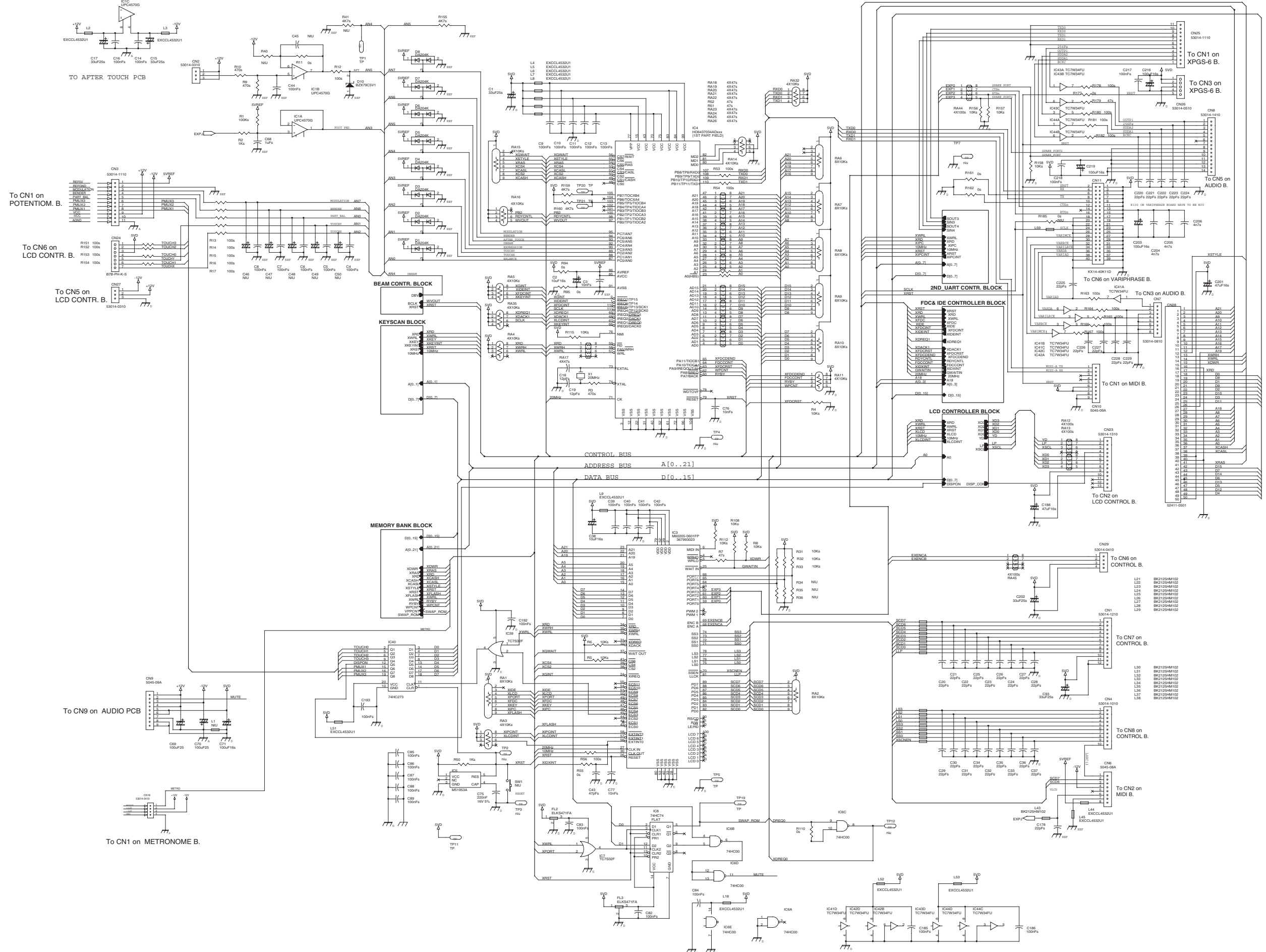




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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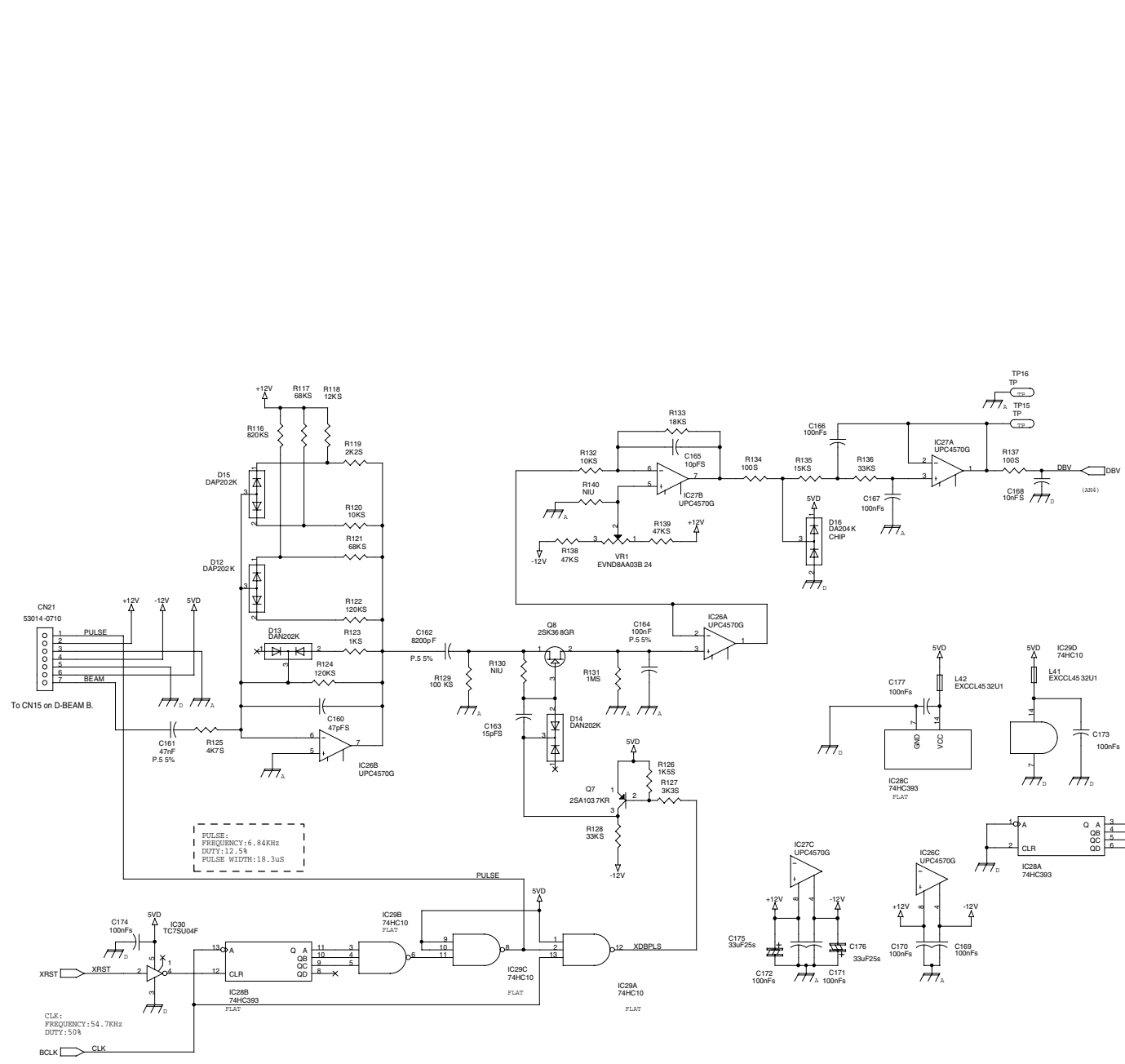
### CIRCUIT DIAGRAM (MAIN PCB ASSY)



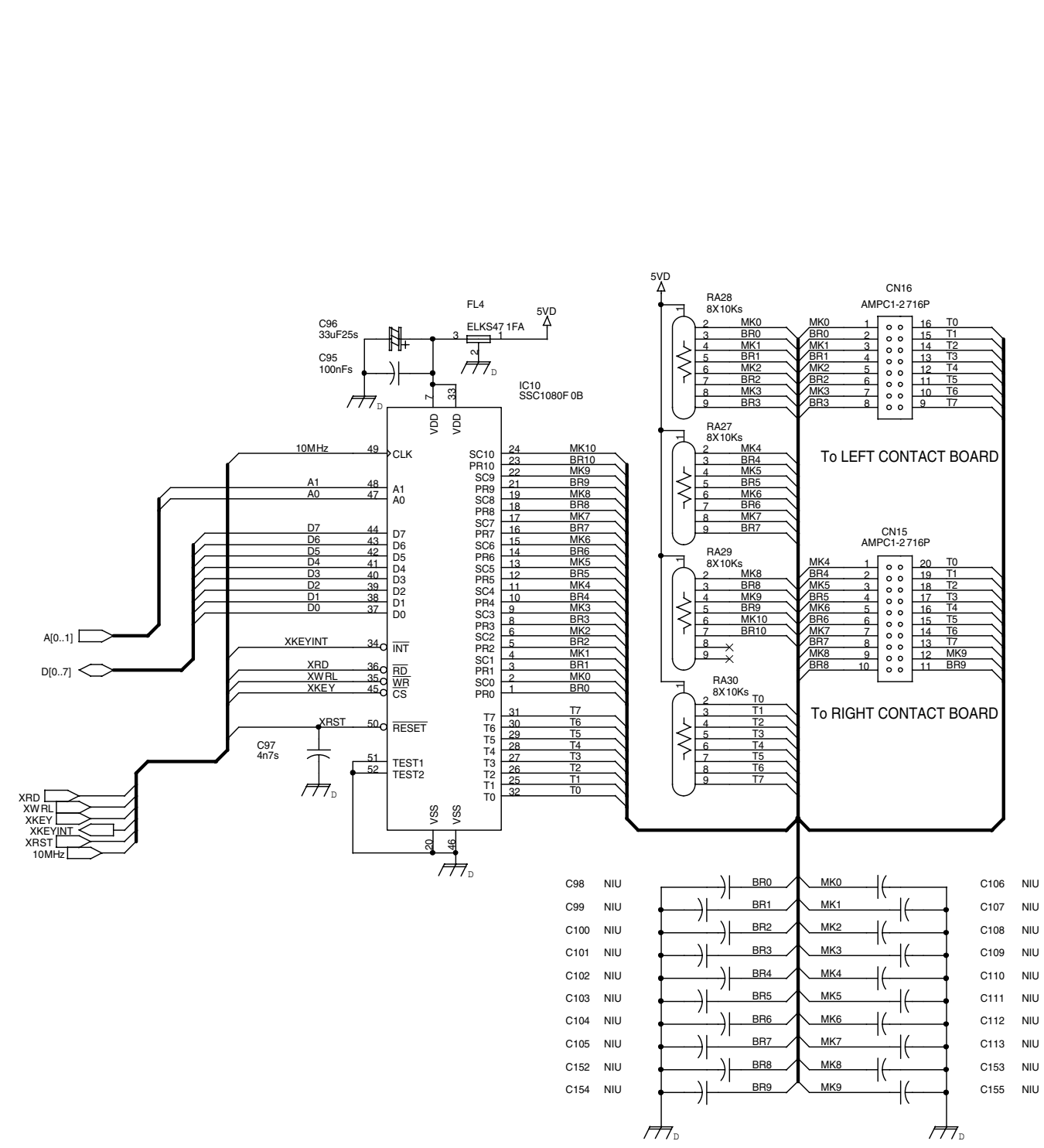
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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CIRCUIT DIAGRAM (MAIN PCB ASSY/ Beam Control. Block)



CIRCUIT DIAGRAM (MAIN PCB ASSY/ Keyscan Block)

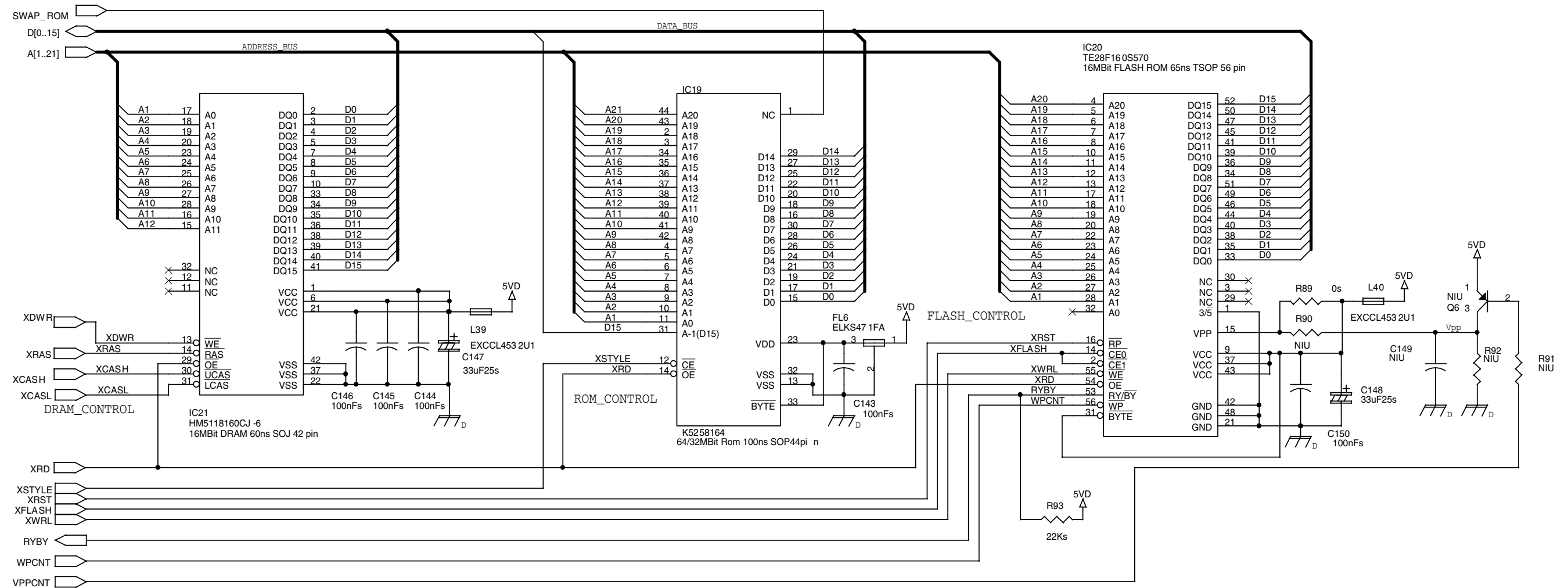




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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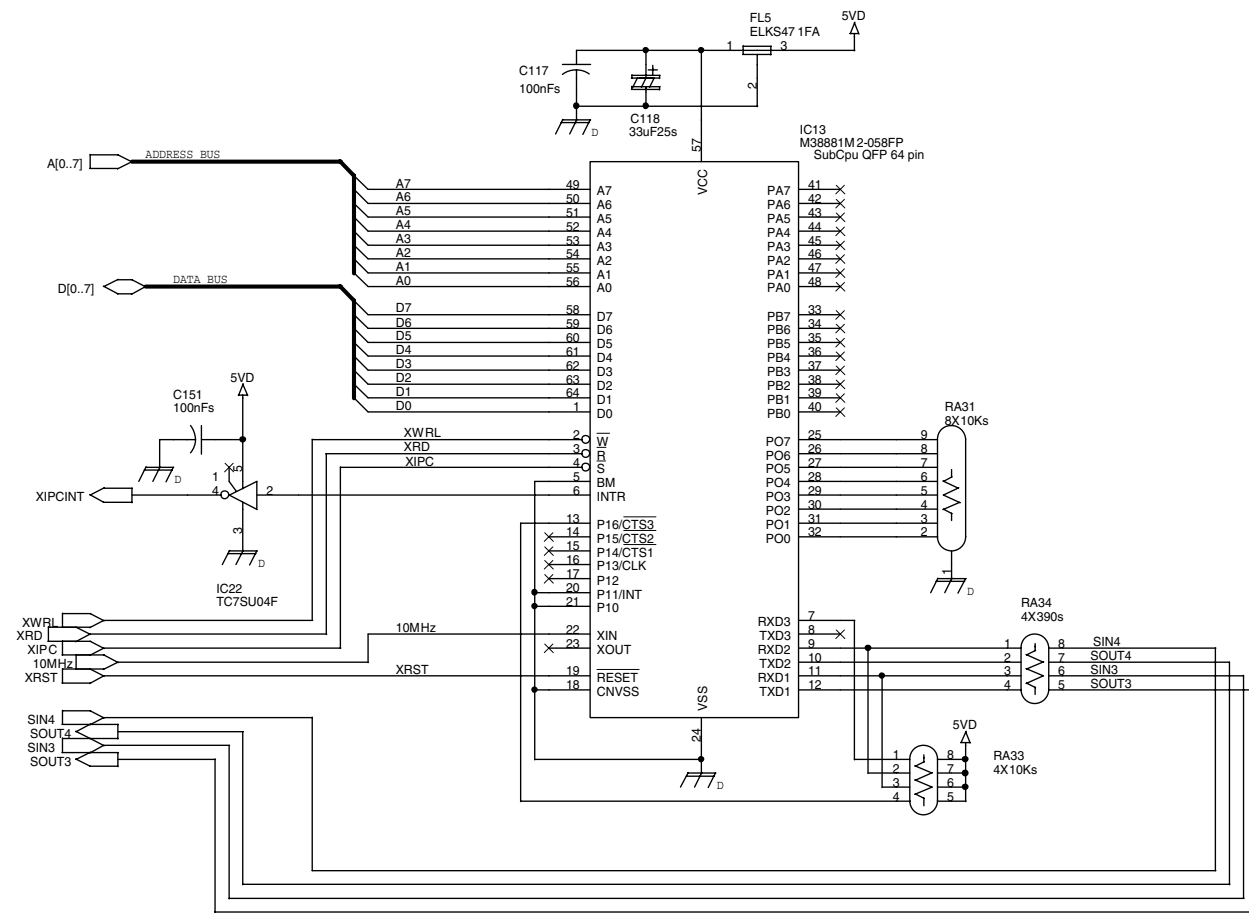
### CIRCUIT DIAGRAM (MAIN PCB ASSY/ Memory Bank Block)



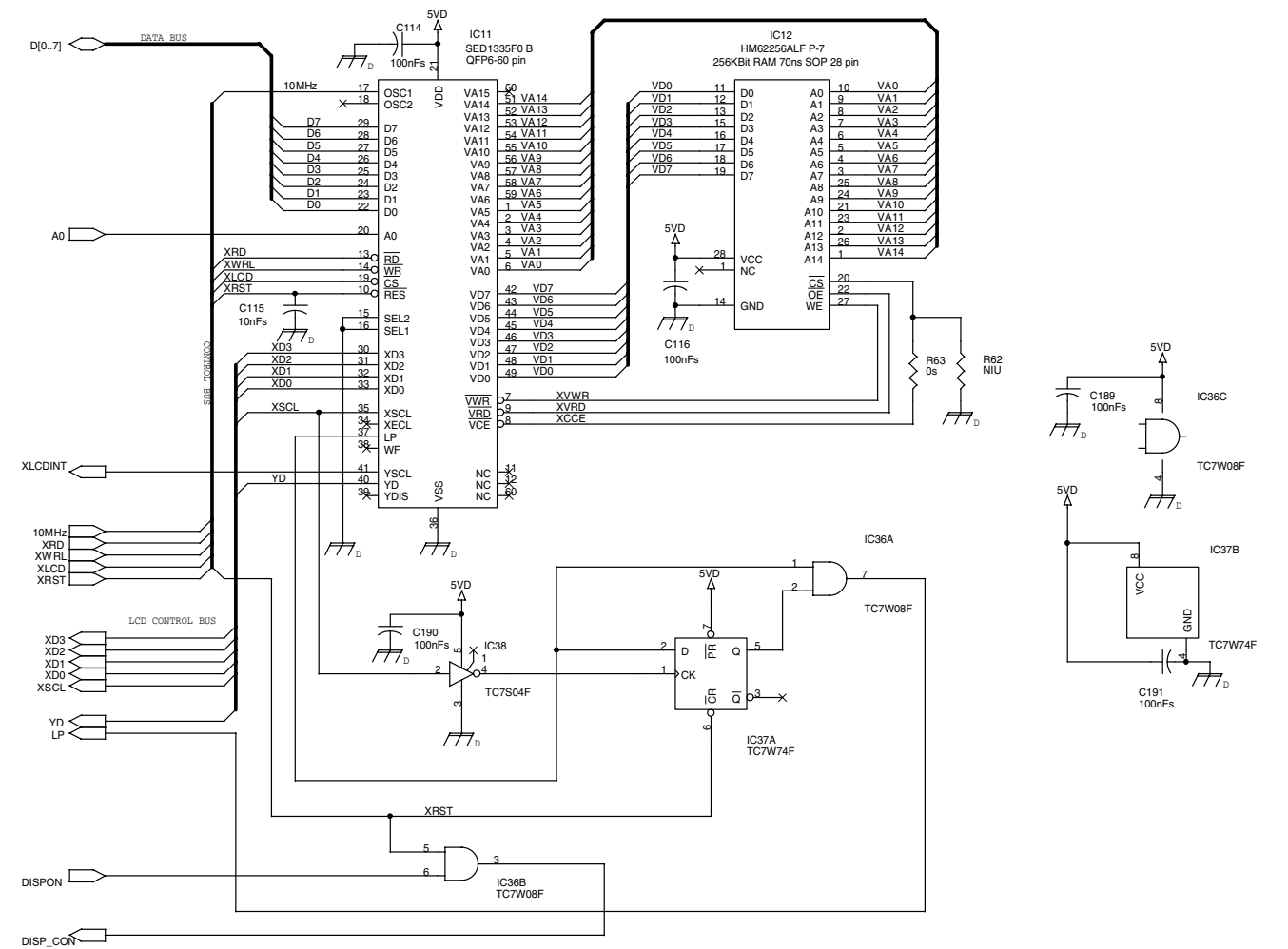
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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CIRCUIT DIAGRAM (MAIN PCB ASSY/ 2nd Uart Contr. Block)



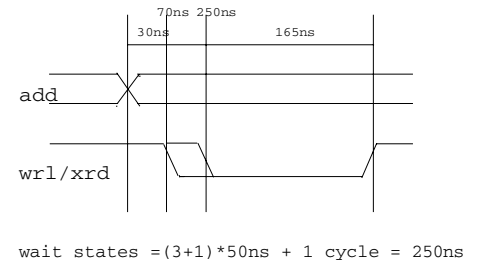
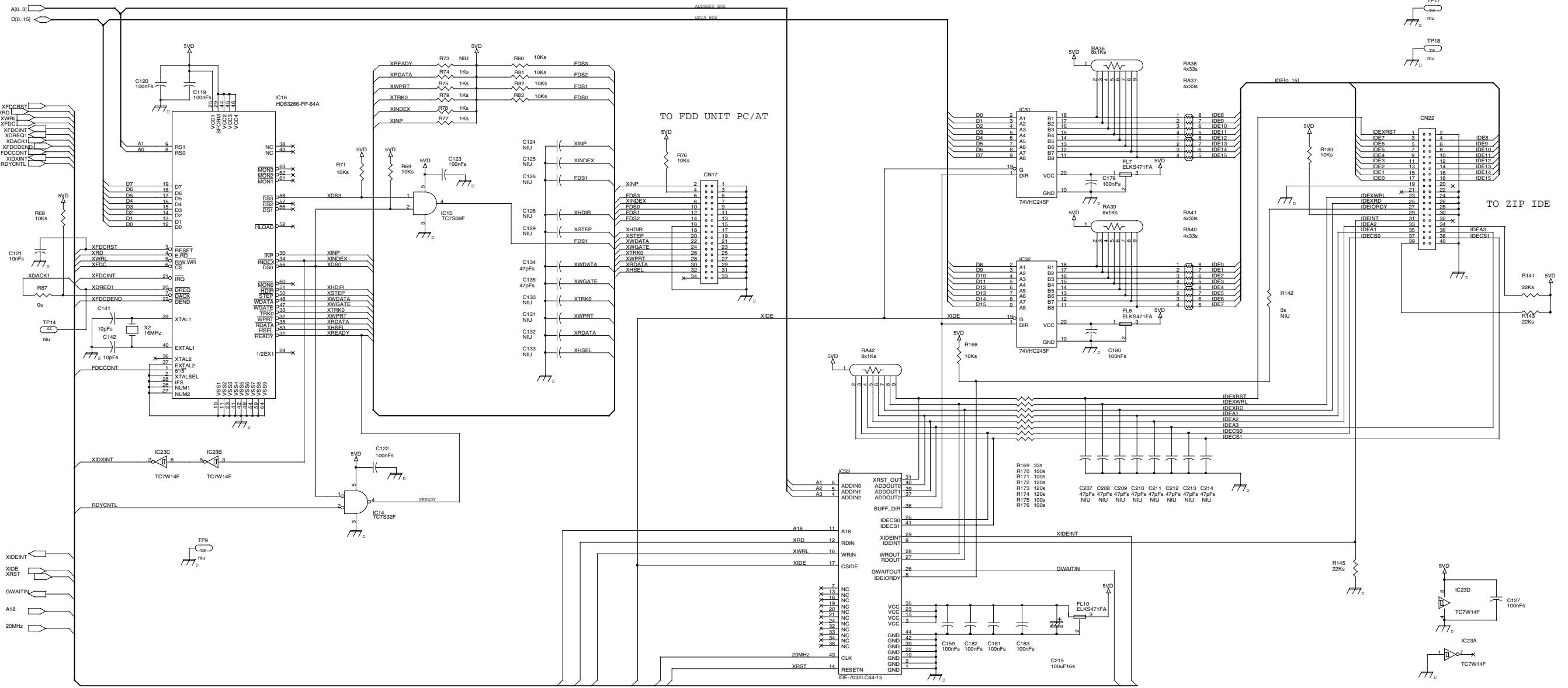
CIRCUIT DIAGRAM (MAIN PCB ASSY/ LCD Contr. Block)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

A  
B  
C  
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### CIRCUIT DIAGRAM (MAIN PCB ASSY/ FDC & IDE Contr. Block)



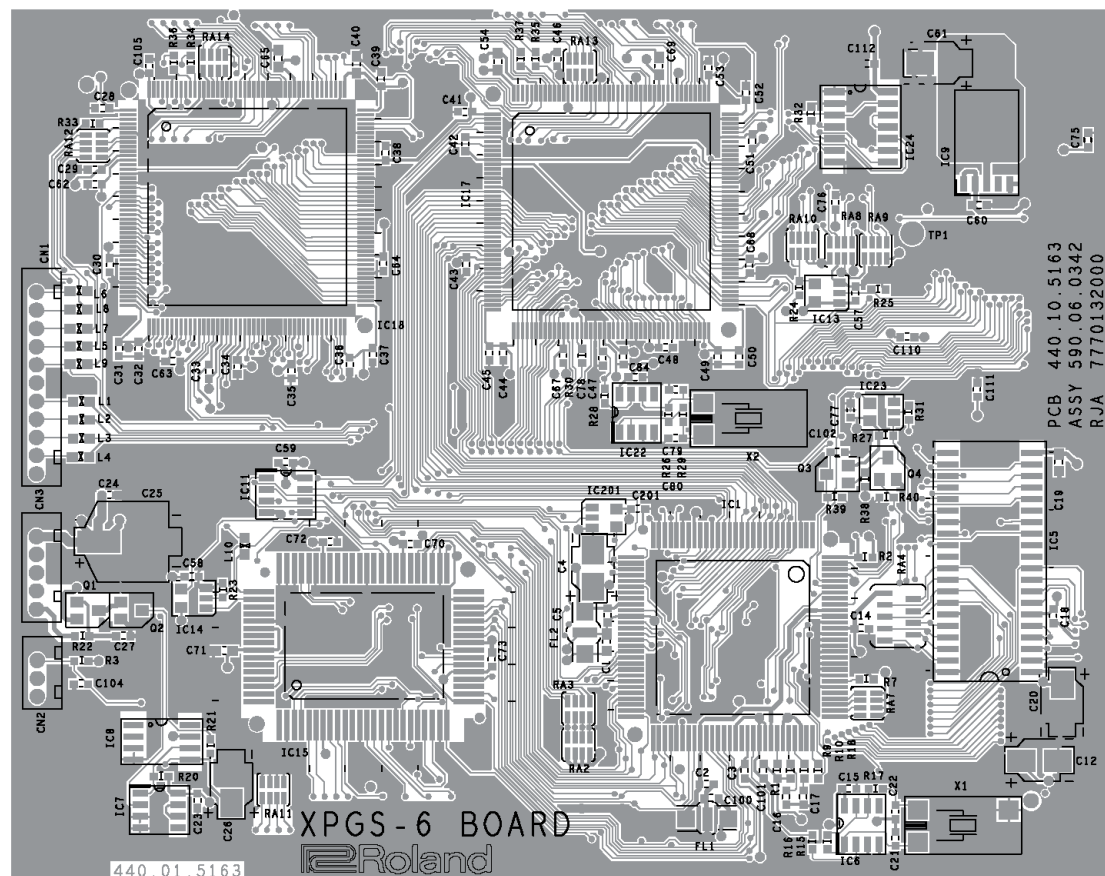
IDE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

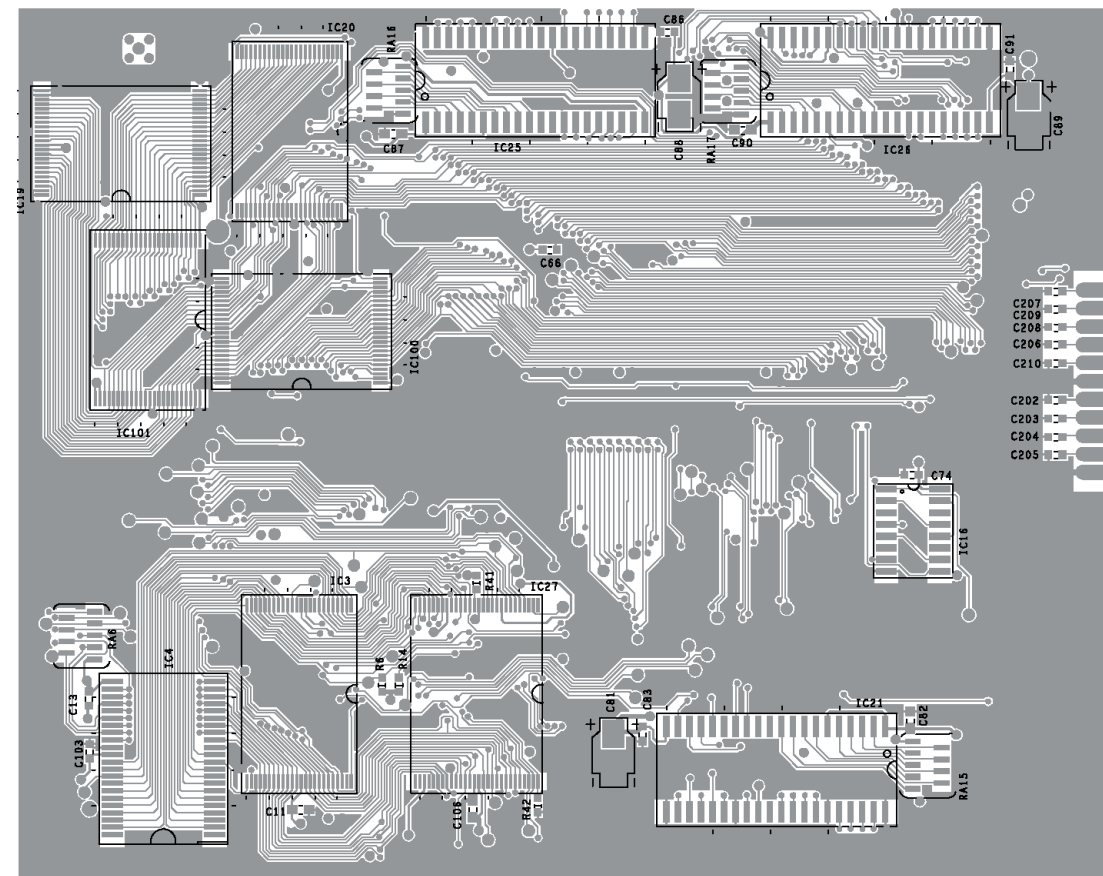
A  
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**E** MODULE XPGS-6 PCB ASSY ASSY 7770132000

**Note:** Replacement should be made on a unit basis. No replacements available for individual parts.  
Replacement only be a unit.

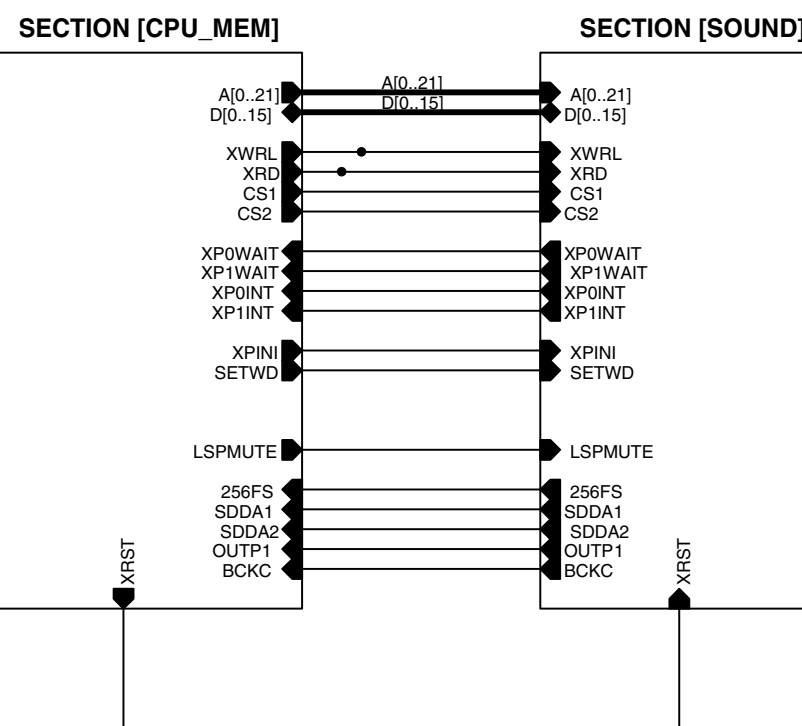


View from component side



View from solder side

**CIRCUIT DIAGRAM ( XPGS-6 PCB ASSY)**

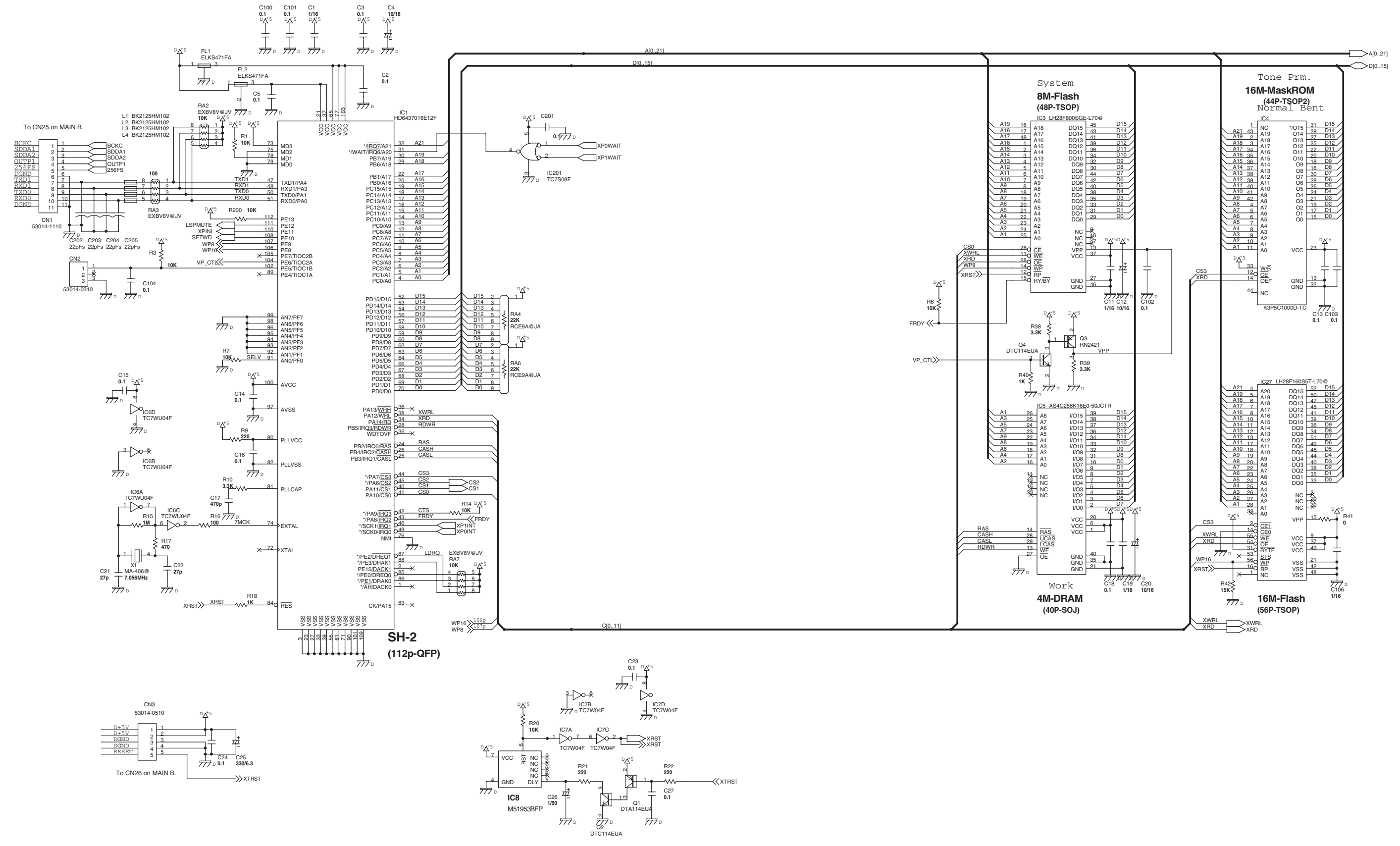




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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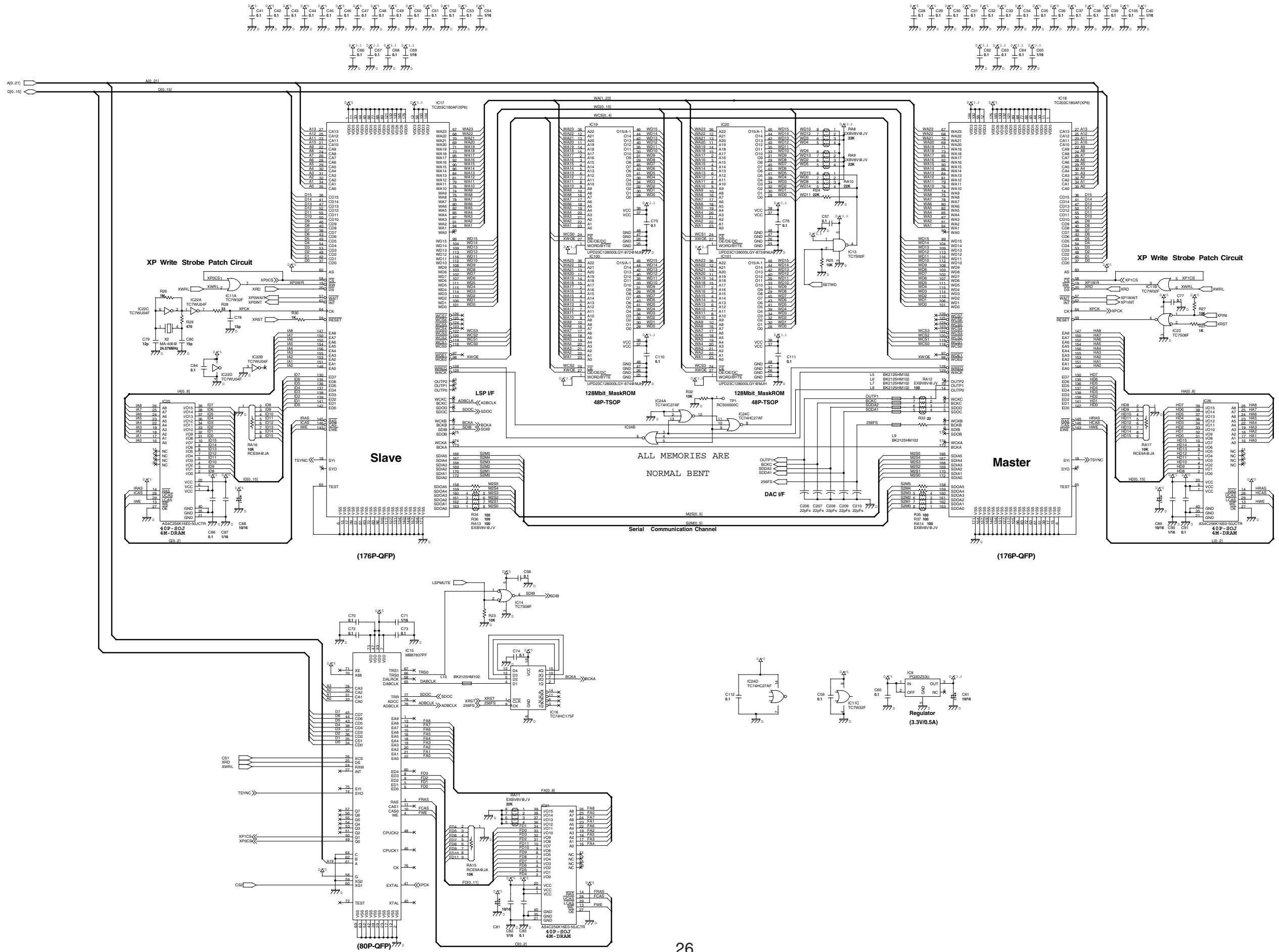
### CIRCUIT DIAGRAM ( XPGS-6 PCB ASSY/ CPU\_MEM Section)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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CIRCUIT DIAGRAM ( XPGS-6 PCB ASSY/ SOUND Section)

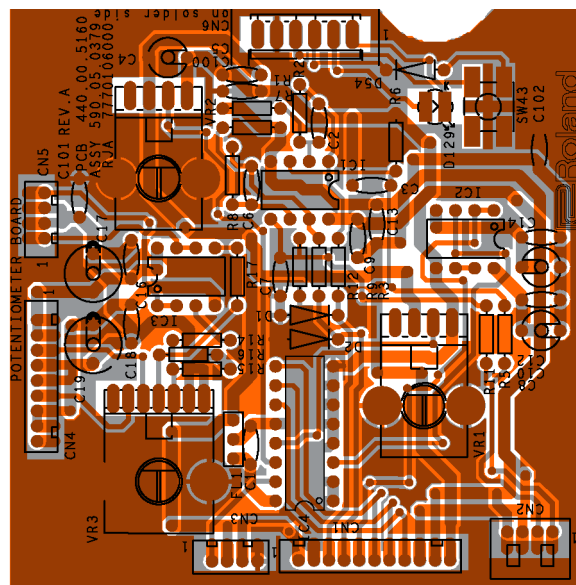


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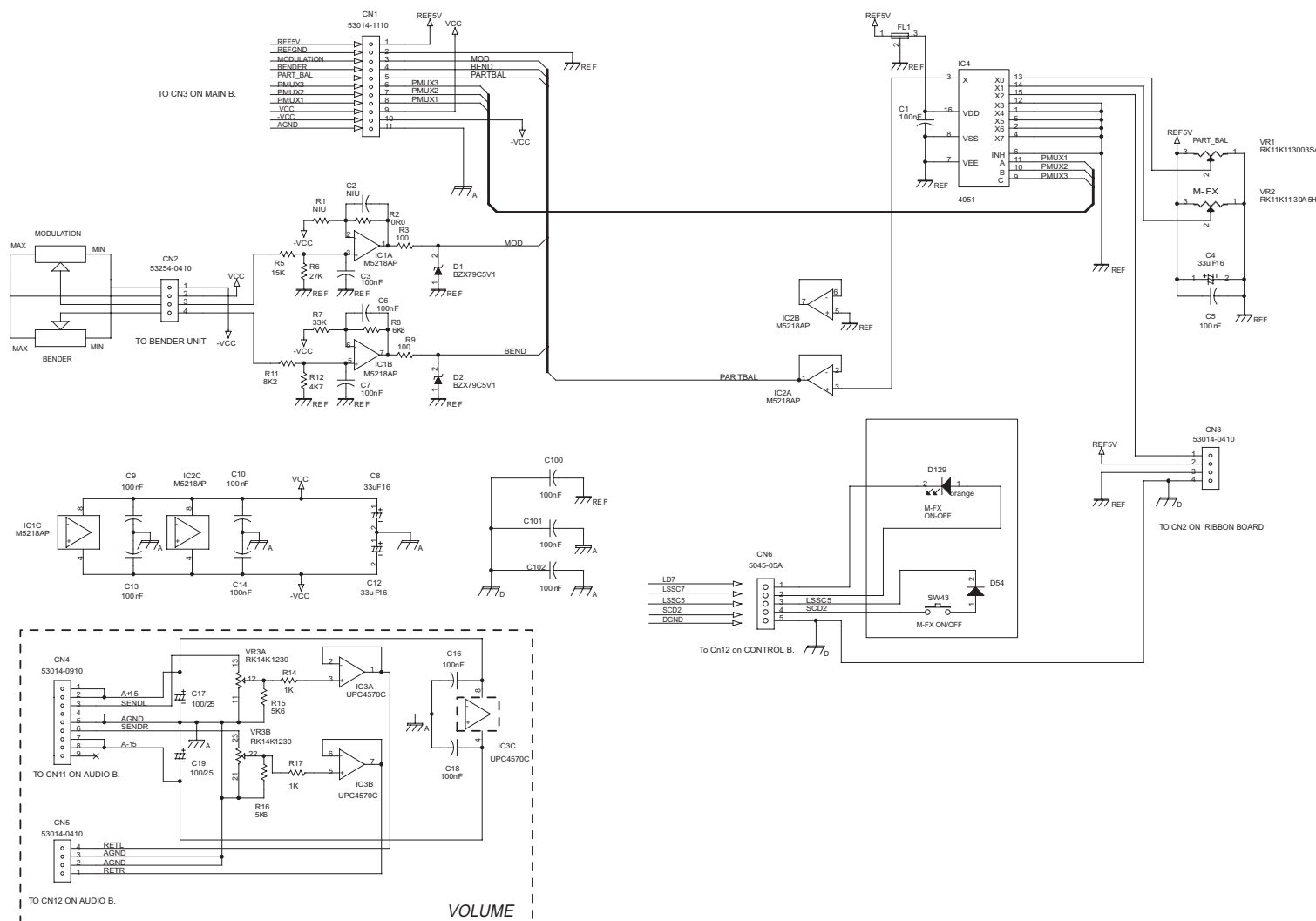
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### POTENTIOMETER PCB ASSY & CIRCUIT DIAGRAM

ASSY 7770106000

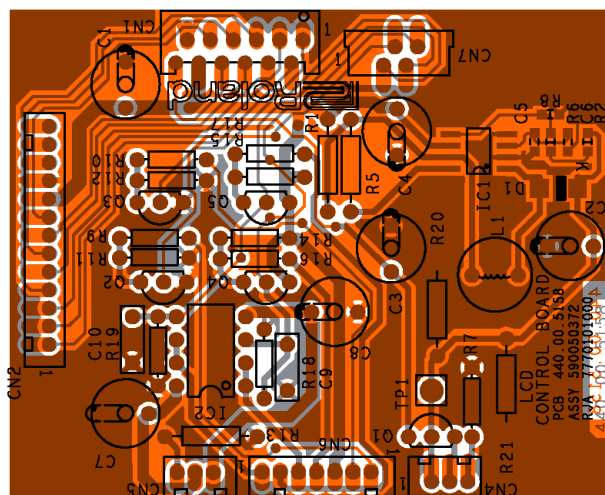


View from component side

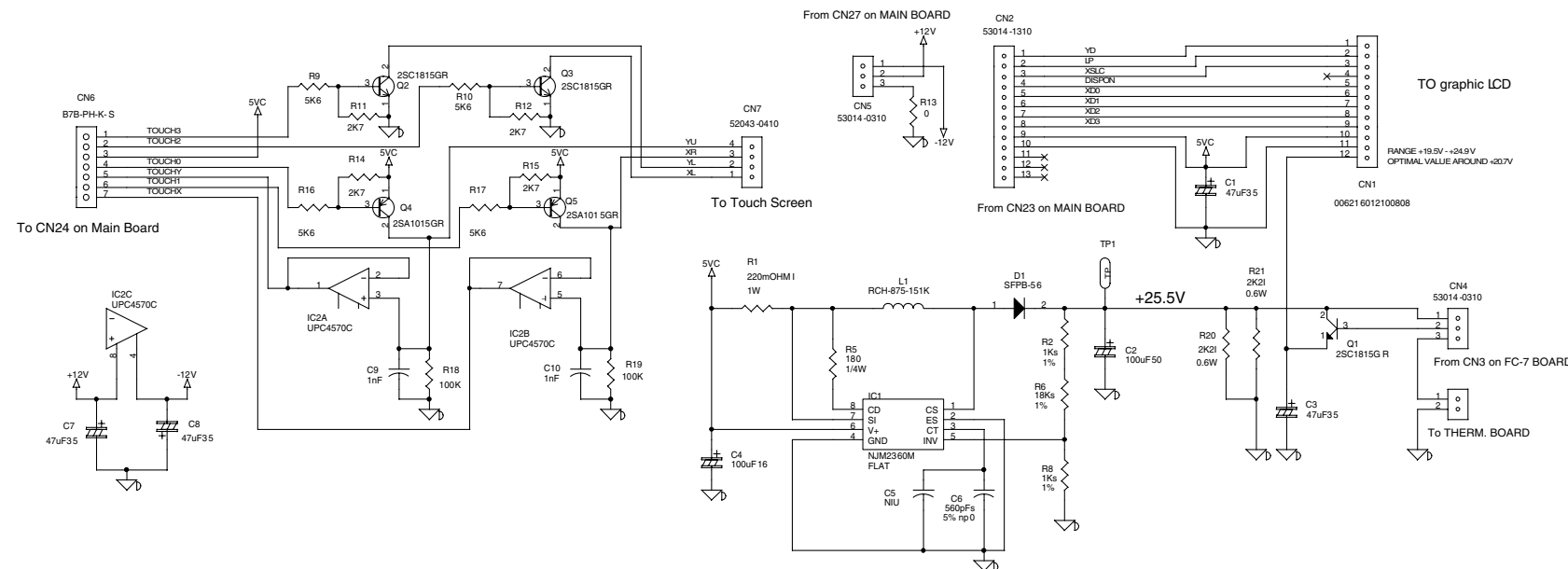


### LCD CONTROL PCB ASSY & CIRCUIT DIAGRAM

ASSY 7770101000



View from component side



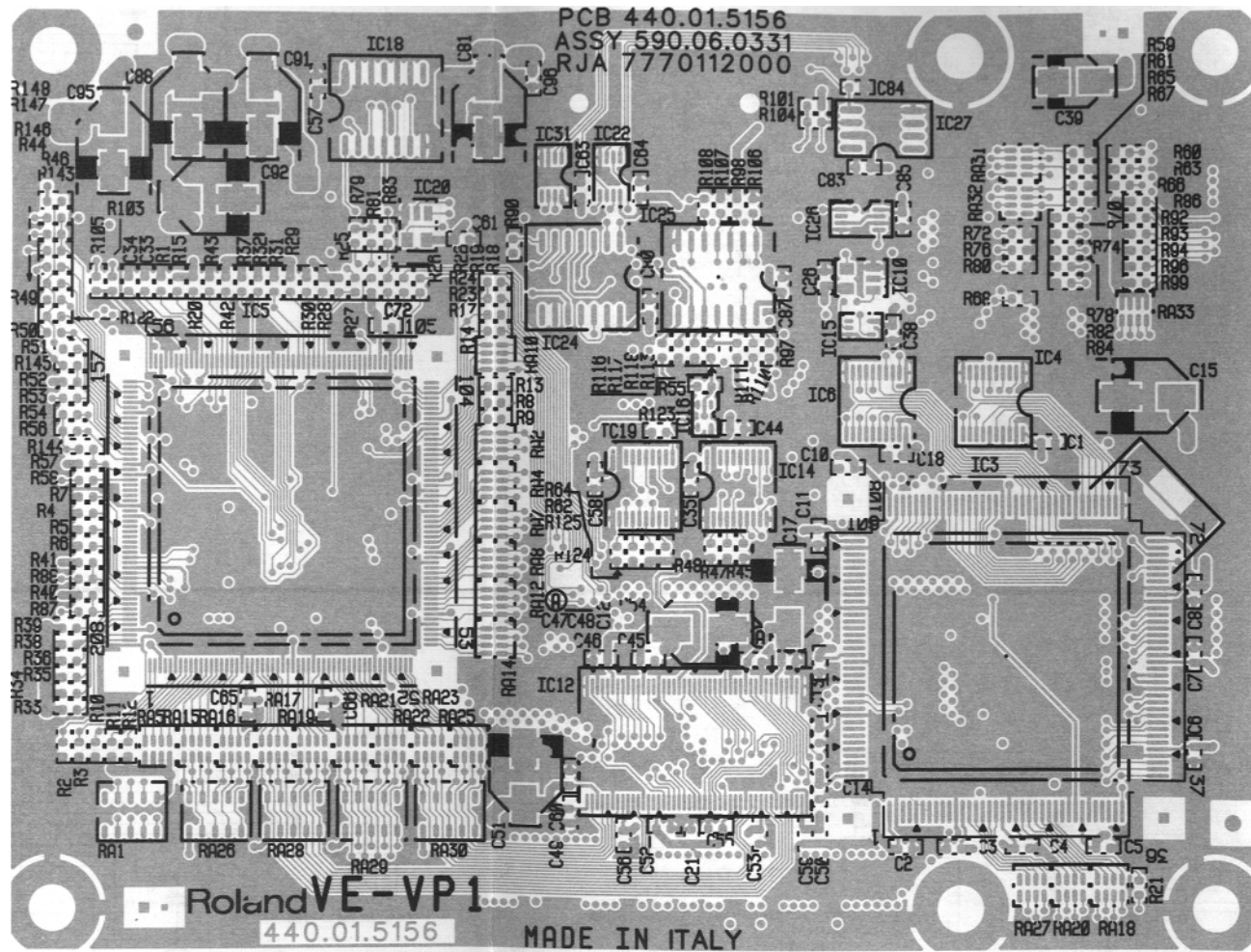


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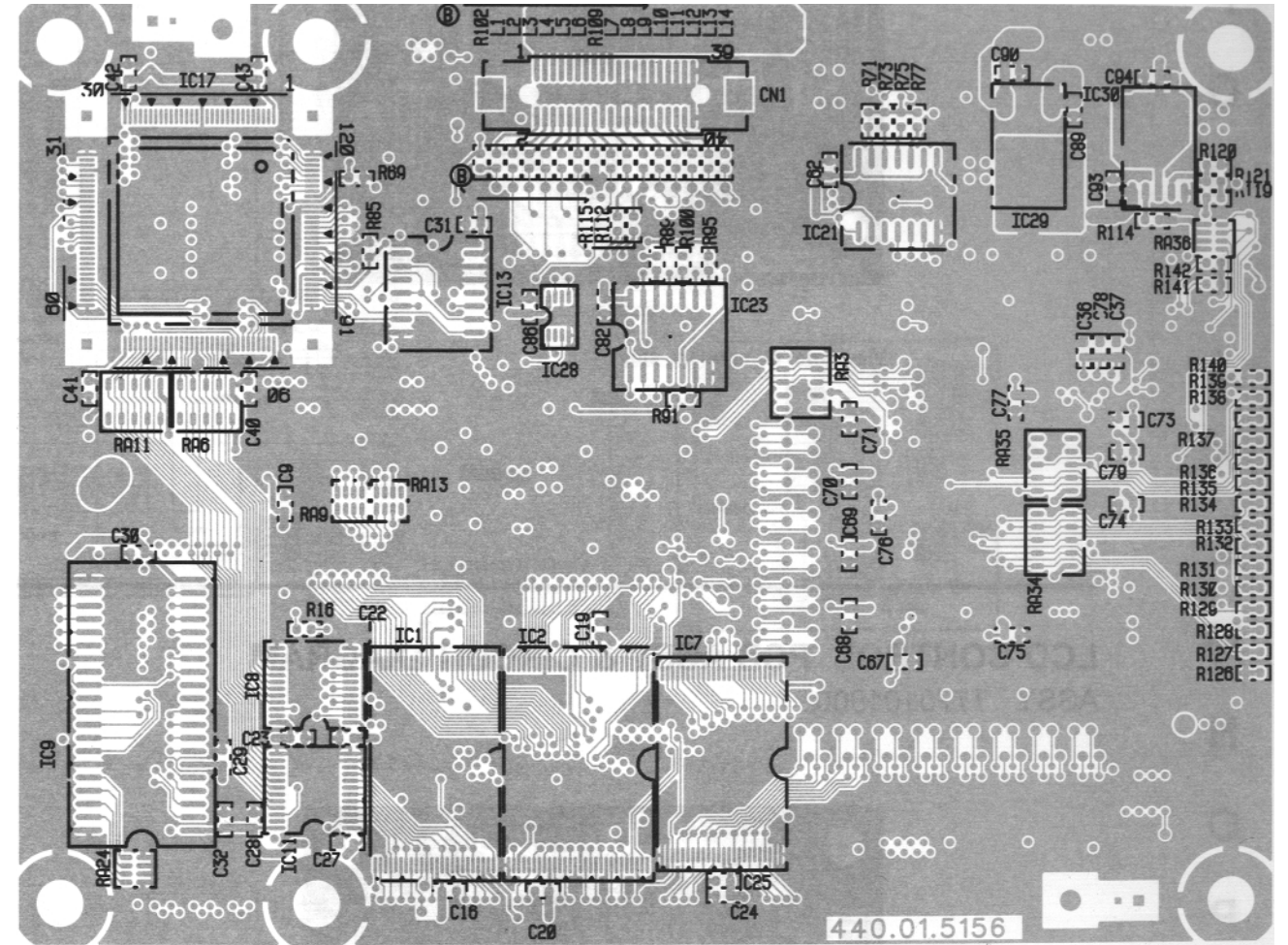
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**E** VARIPHRASE VE-VP1 PCB ASSY ASSY 7770112000

Note: Replacement should be made on a unit basis. No replacements available for individual parts.  
Replacement only be a unit.



View from component side



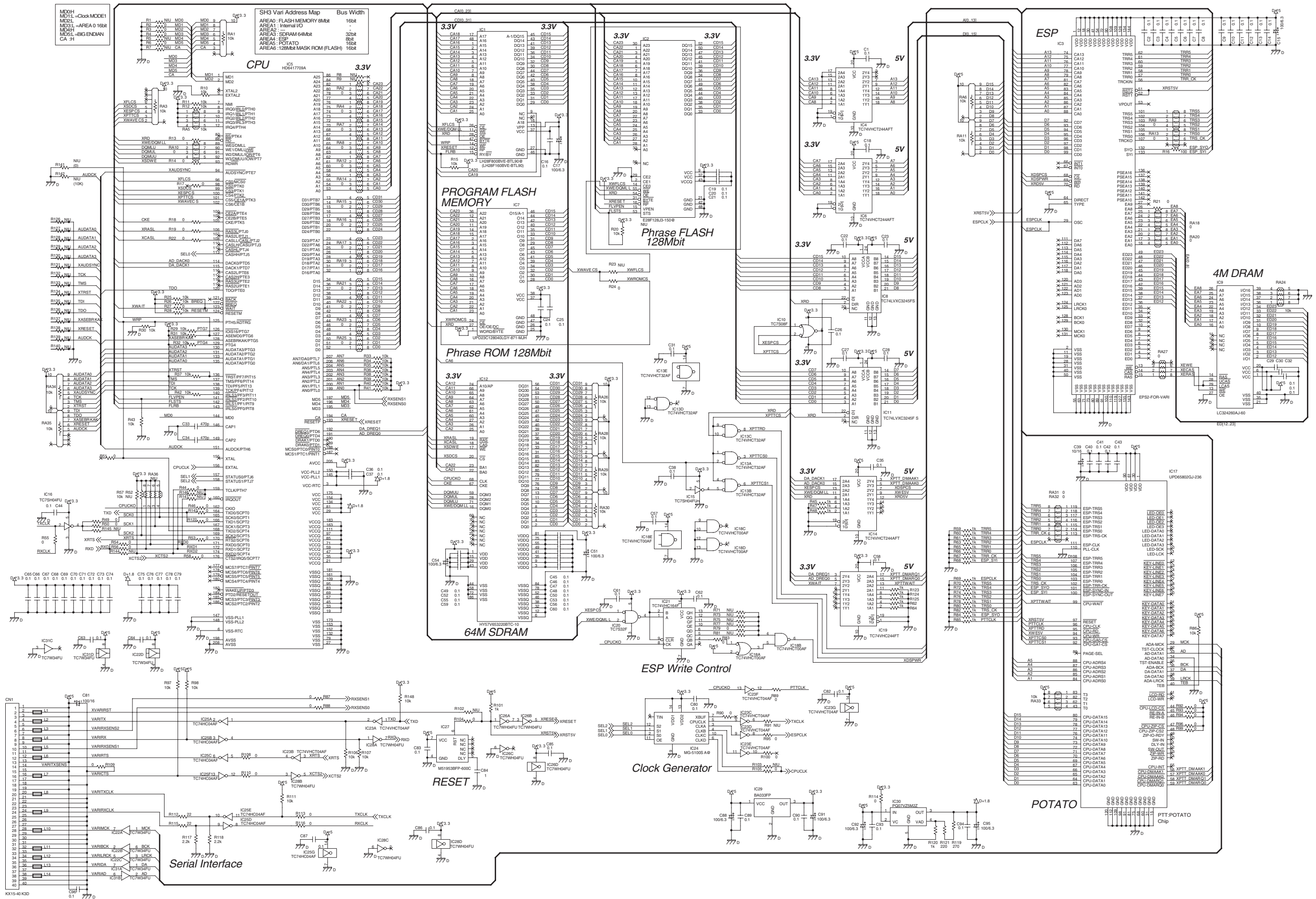
View from solder side



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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# CIRCUIT DIAGRAM (VARIPHASE VE-VP1 PCB ASSY)

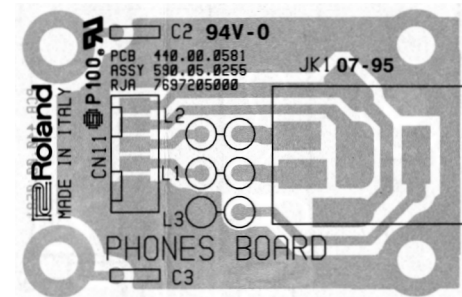


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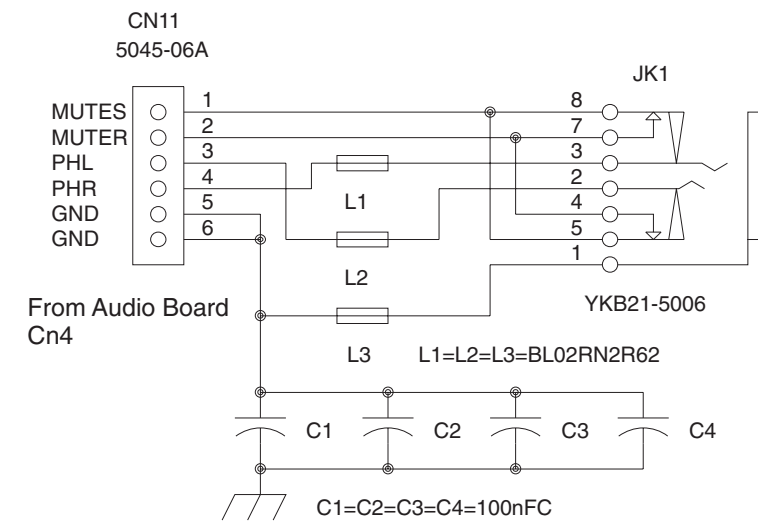
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### PHONES PCB ASSY & CIRCUIT DIAGRAM

ASSY 7697205000

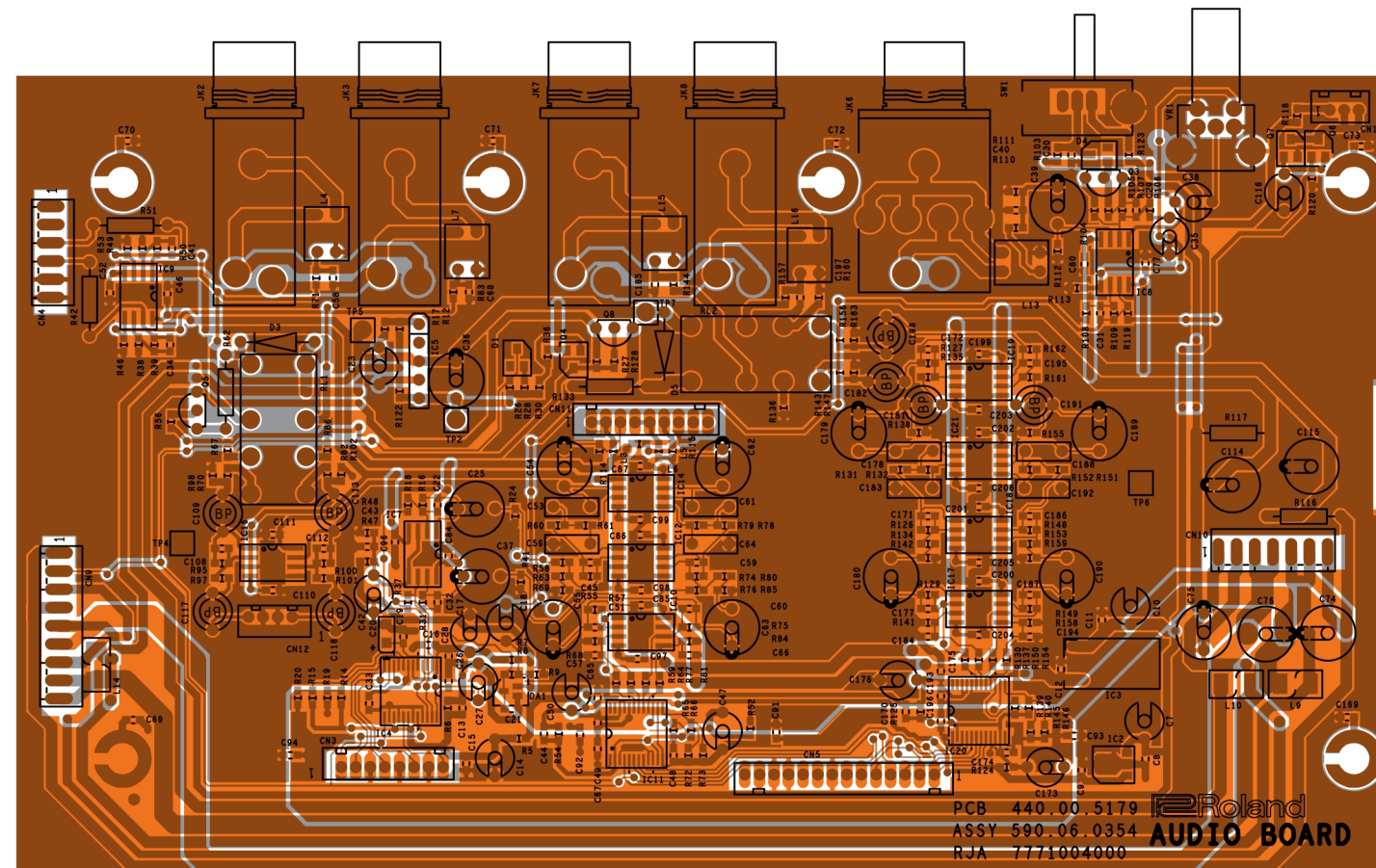


View from component side



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### AUDIO PCB ASSY ASSY 7771004000

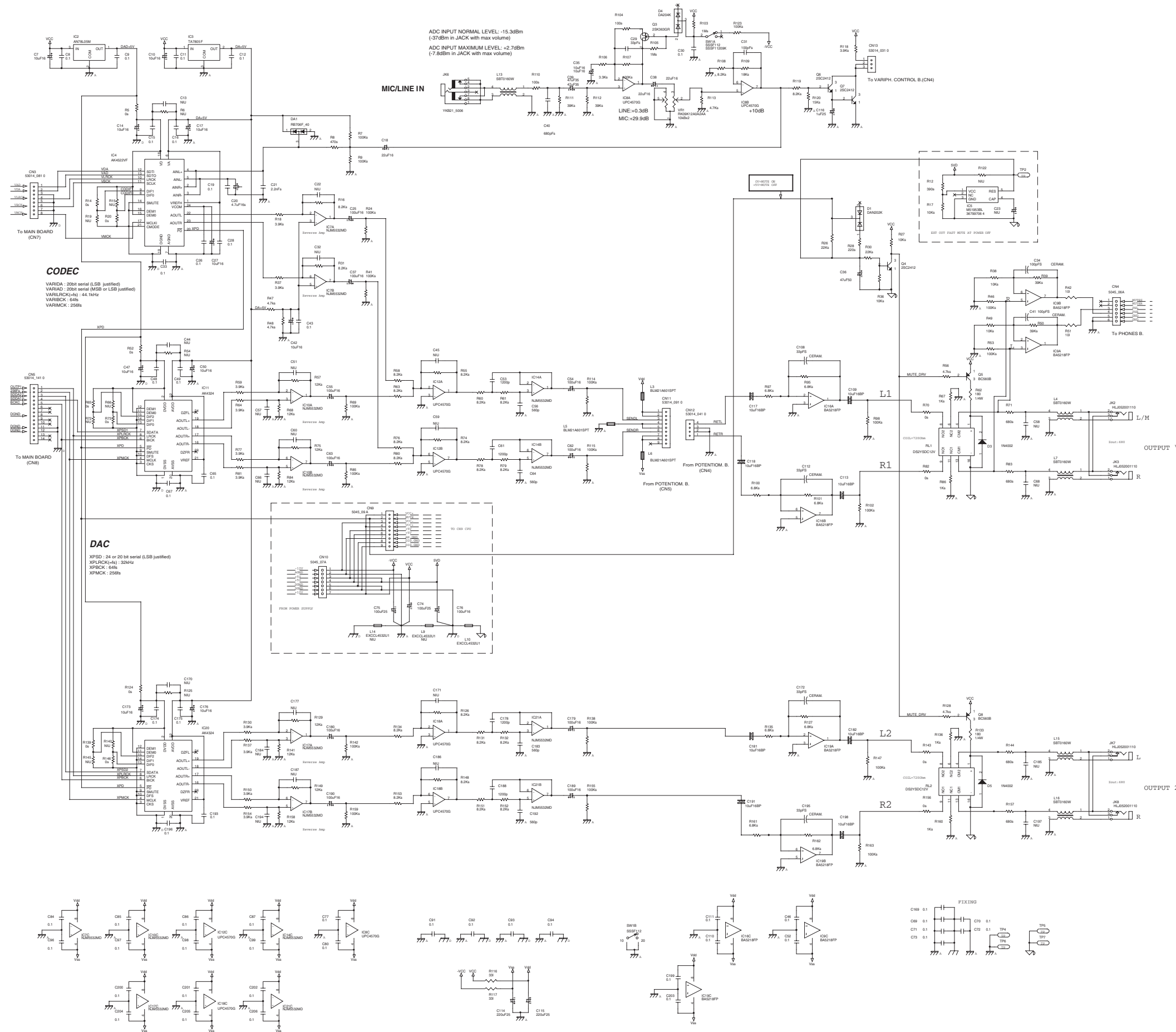


View from component side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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### CIRCUIT DIAGRAM (AUDIO PCB ASSY)



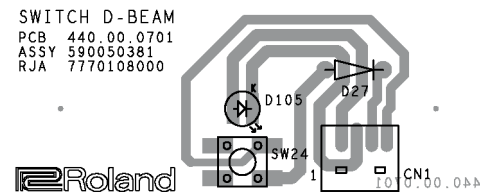


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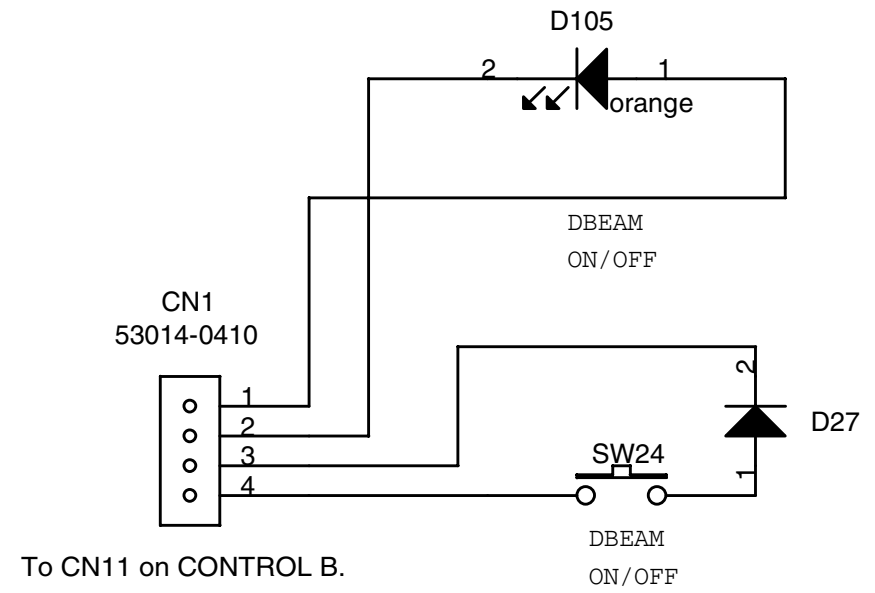
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### SWITCH D-BEAM PCB ASSY & CIRCUIT DIAGRAM

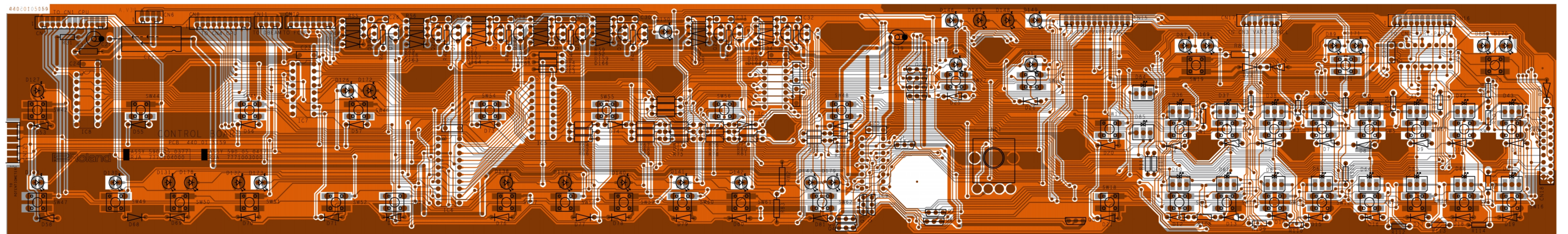
ASSY 7770108000



View from component side



### CONTROL PCB ASSY ASSY 7771003000



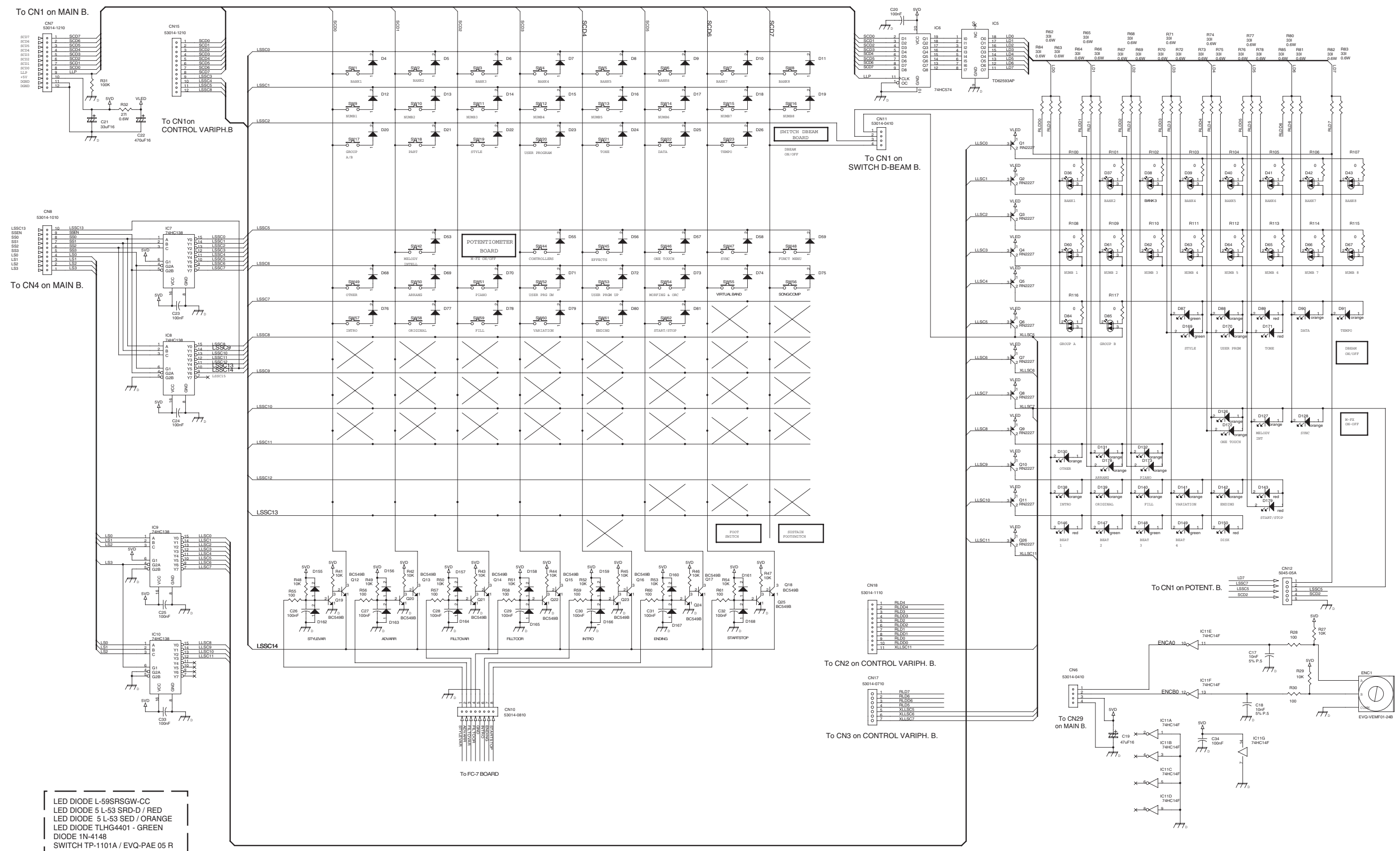
View from component side



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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# CIRCUIT DIAGRAM ( CONTROL PCB ASSY)

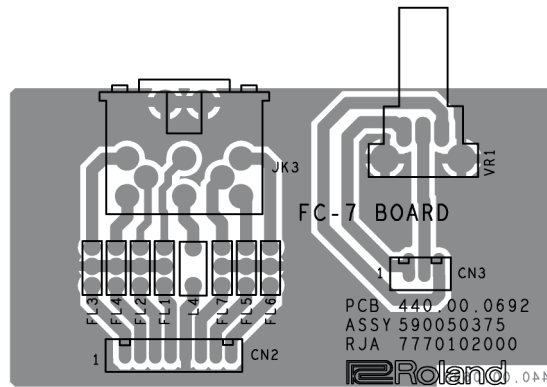


- LED DIODE L-59SRSGW-CC
- LED DIODE 5 L-53 SRD-D / RED
- LED DIODE 5 L-53 SED / ORANGE
- LED DIODE TLHG4401 - GREEN
- DIODE 1N-4148
- SWITCH TP-1101A / EVQ-PAE 05 R

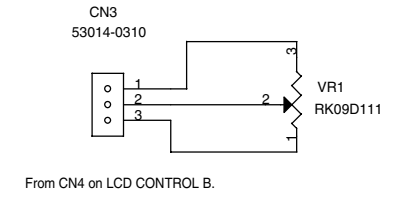
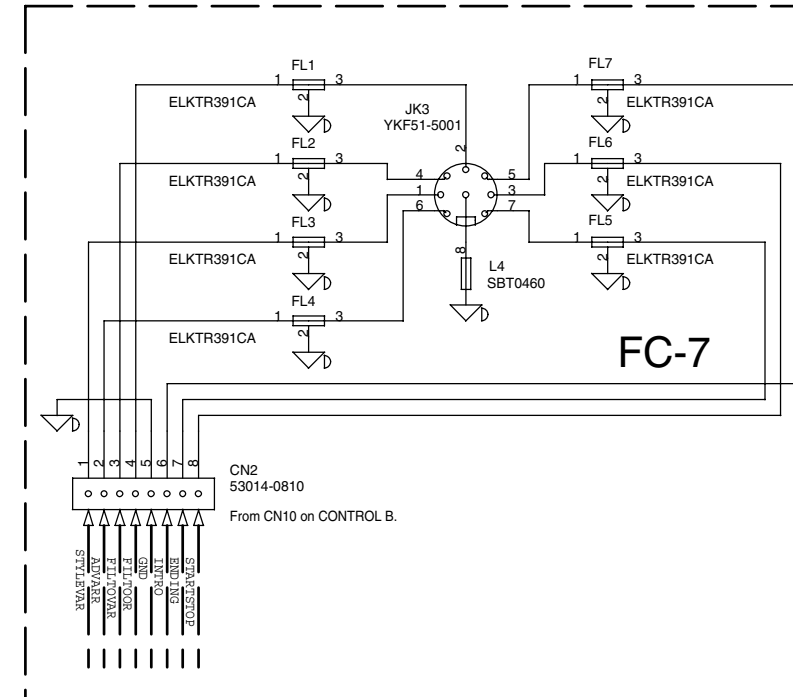
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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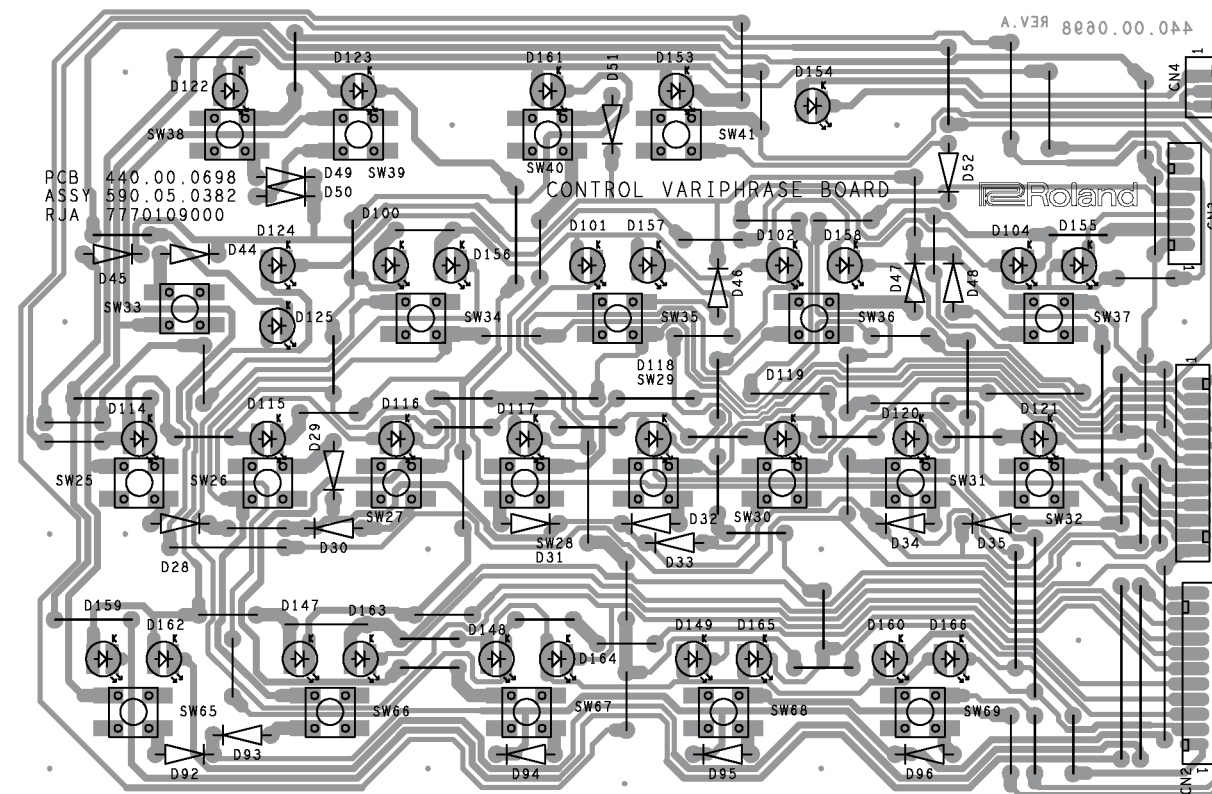
**FC-7 PCB ASSY & CIRCUIT DIAGRAM**  
ASSY 7770102000



View from component side



**CONTROL VE-VP1 PCB ASSY** ASSY 7770109000

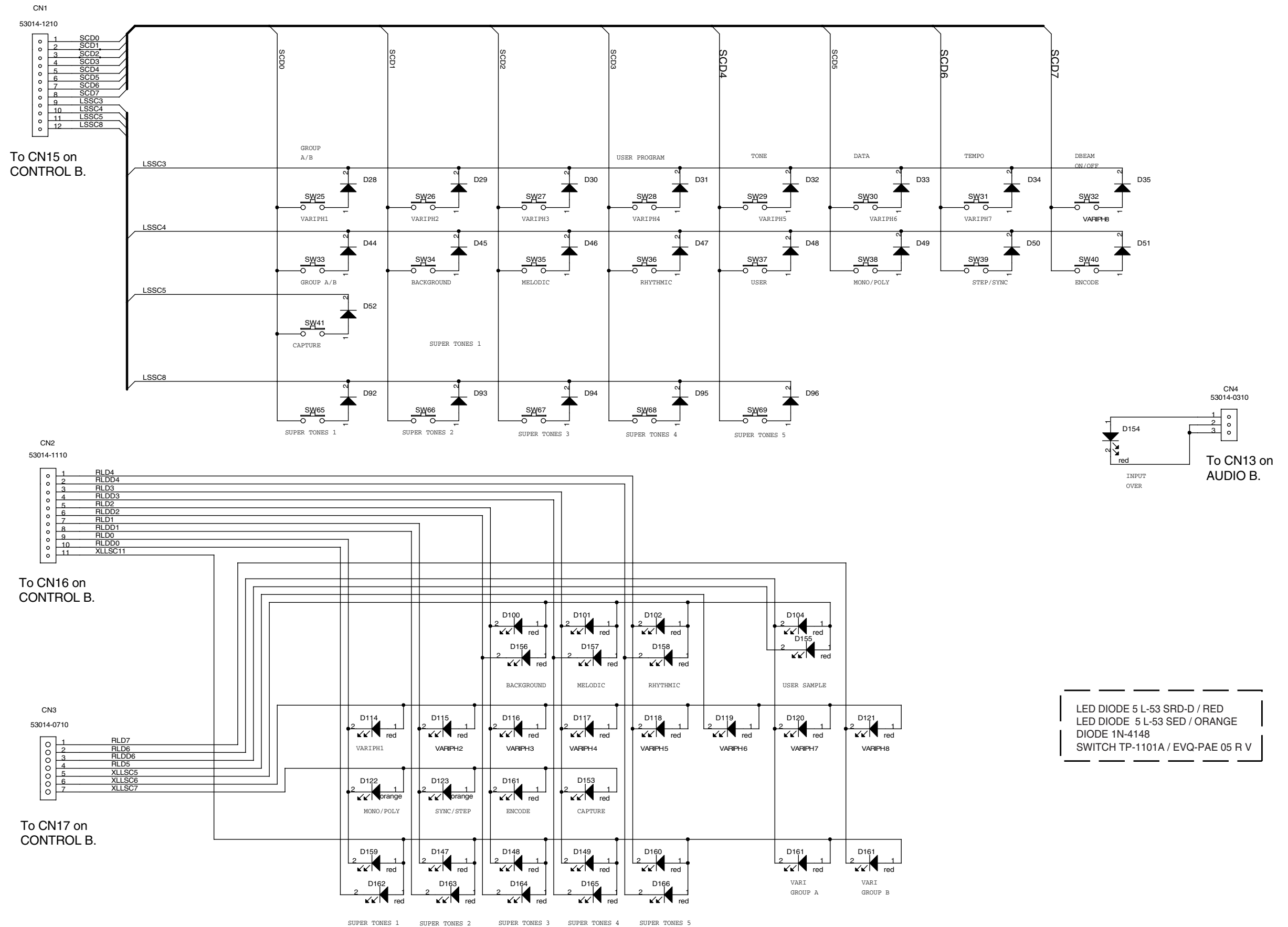


View from component side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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### CIRCUIT DIAGRAM (CONTROL VE-VP1 PCB ASSY)



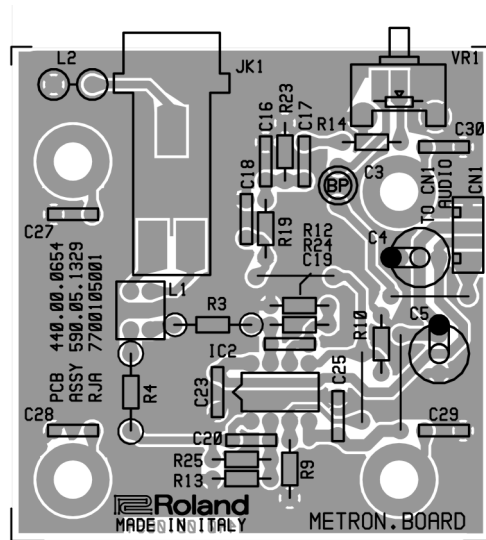
LED DIODE 5 L-53 SRD-D / RED  
 LED DIODE 5 L-53 SED / ORANGE  
 DIODE 1N-4148  
 SWITCH TP-1101A / EVQ-PAE 05 R V



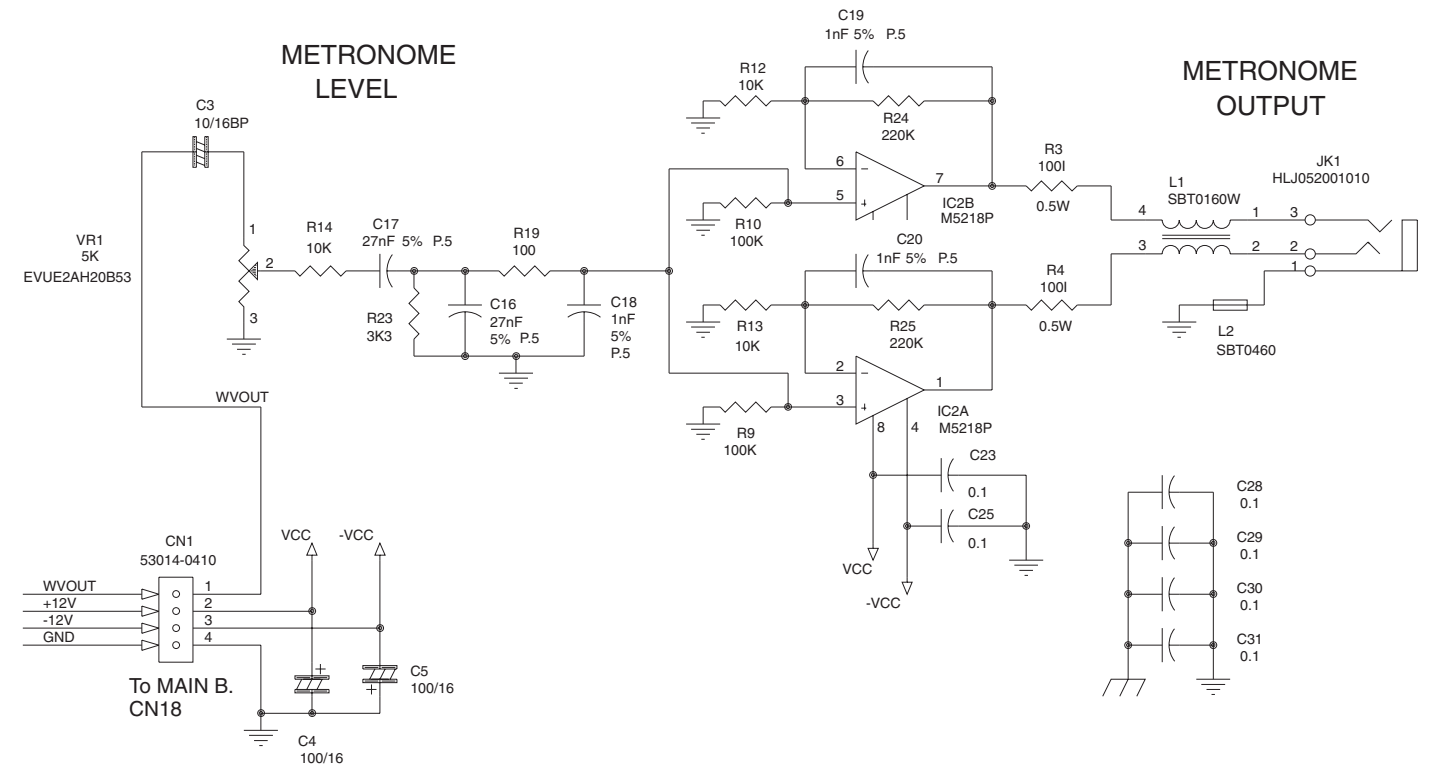
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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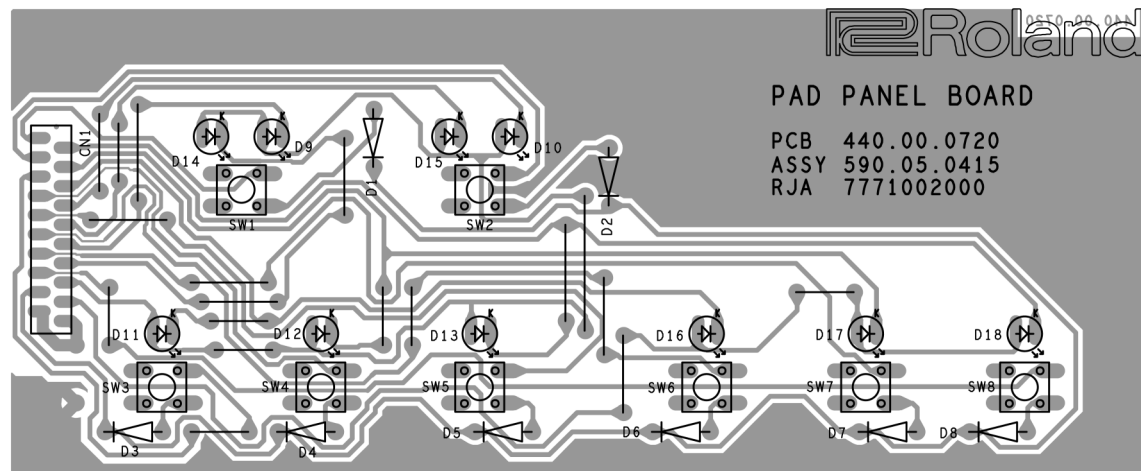
**METRONOME PCB ASSY & CIRCUIT DIAGRAM**  
ASSY 7700105001



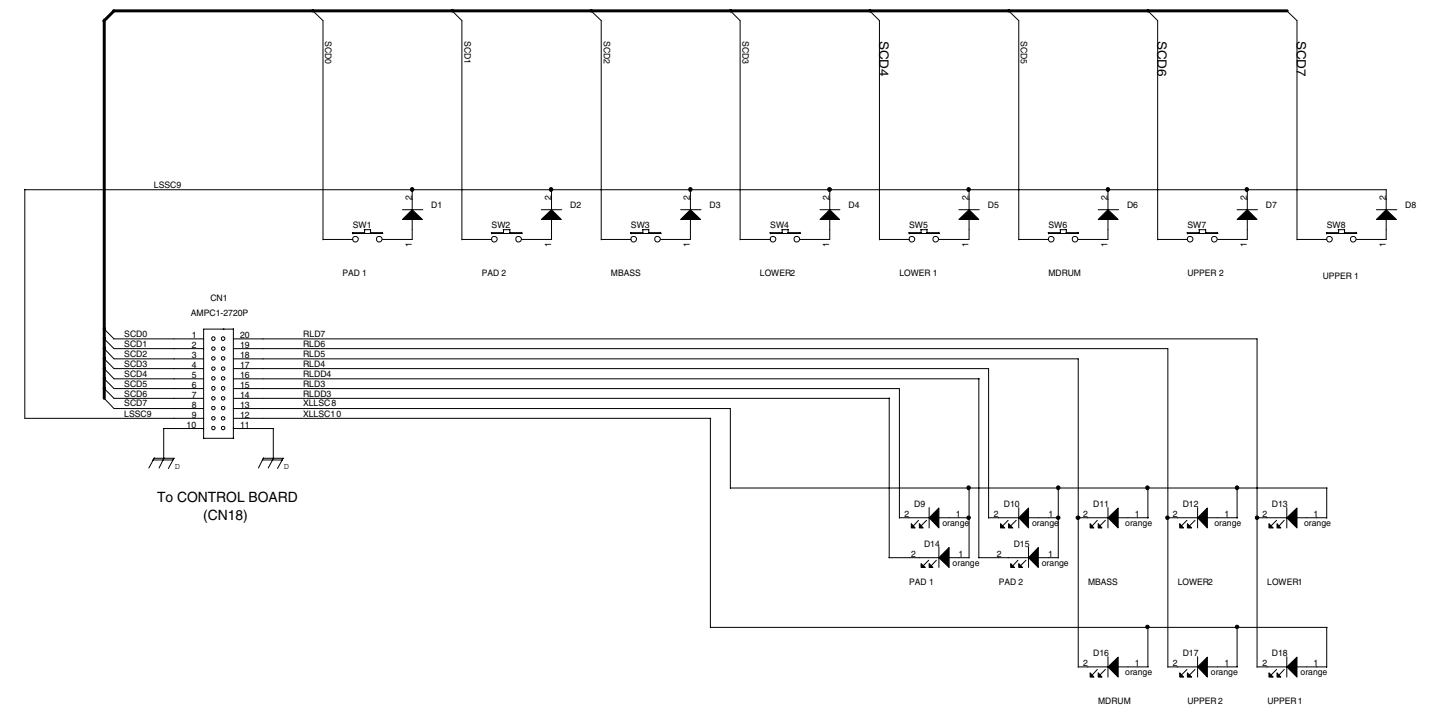
View from component side



**PAD CONTROL PCB ASSY** ASSY 7771002000



View from component side

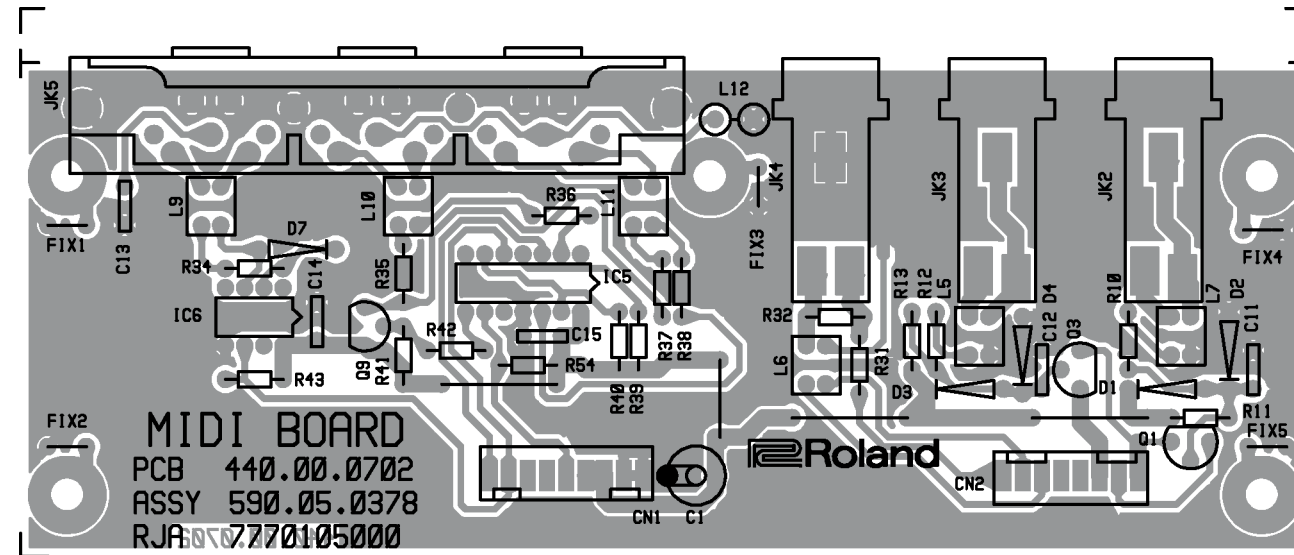


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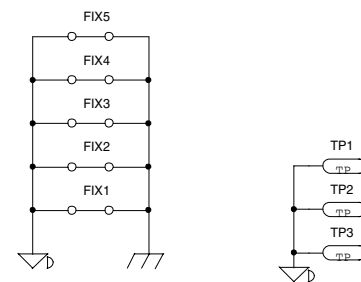
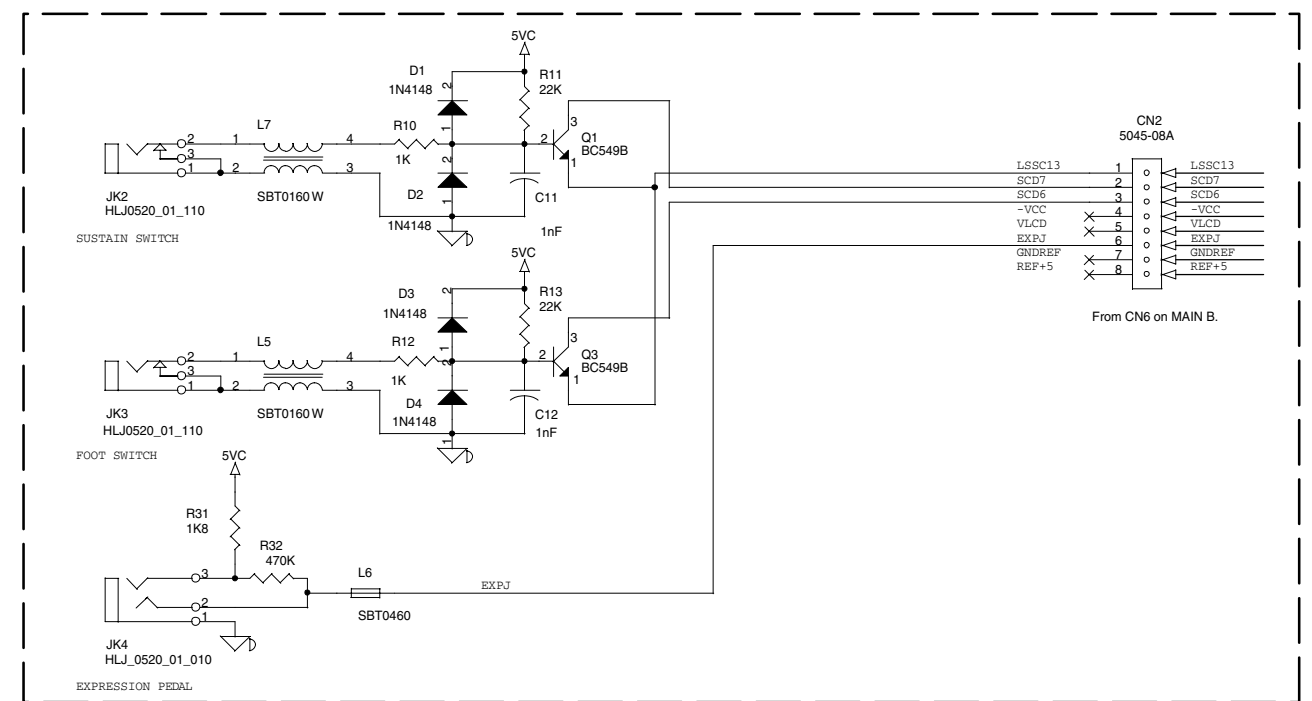
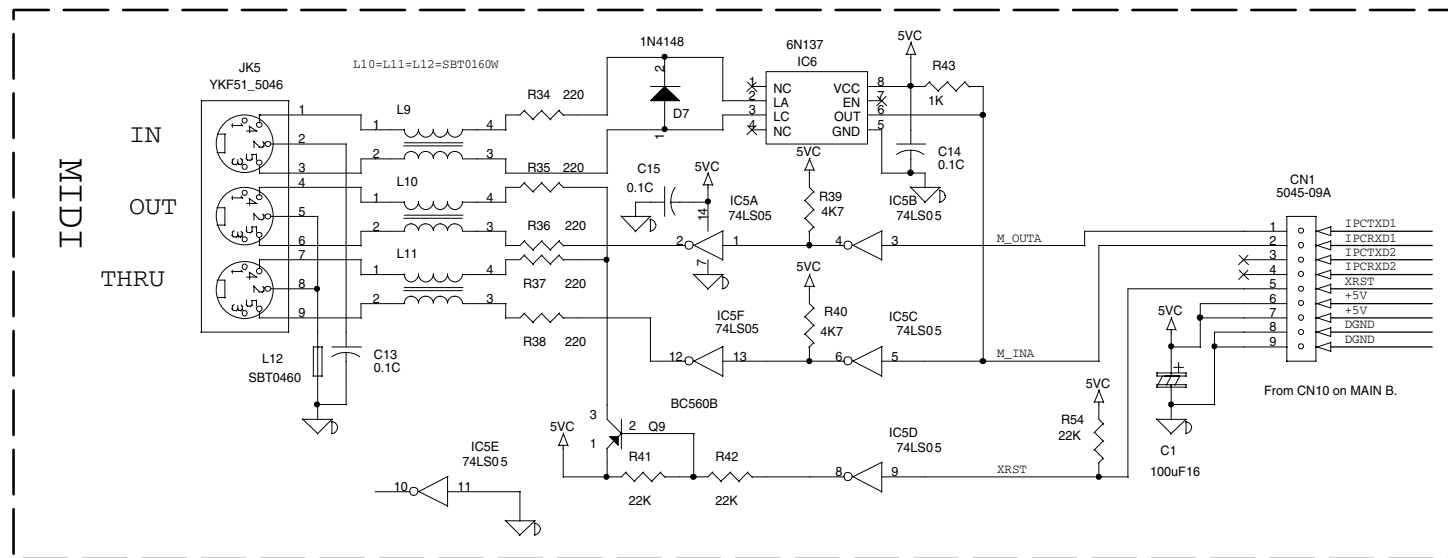
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### MIDI PCB ASSY & CIRCUIT DIAGRAM

ASSY 7770105000



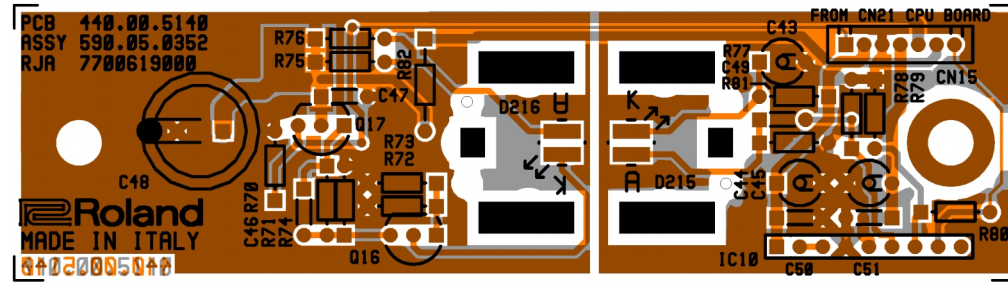
View from component side



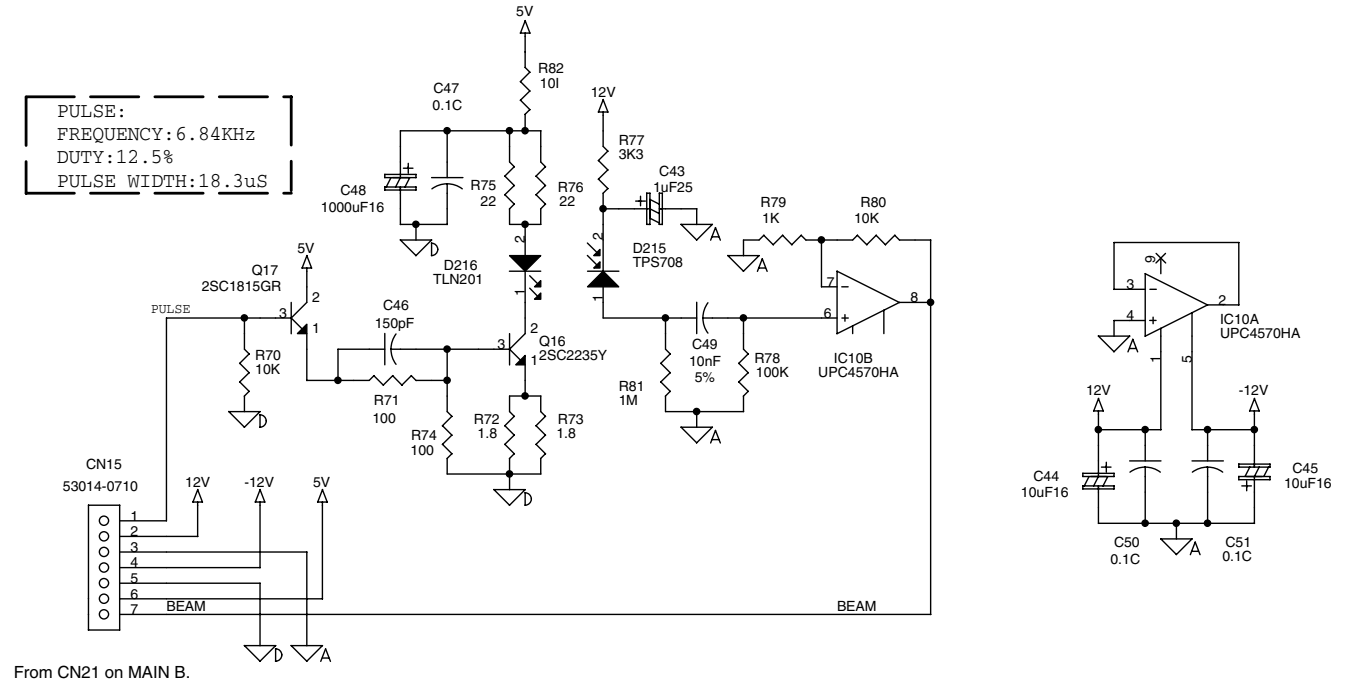
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

**A D-BEAM PCB ASSY & CIRCUIT DIAGRAM**

ASSY 7700609000

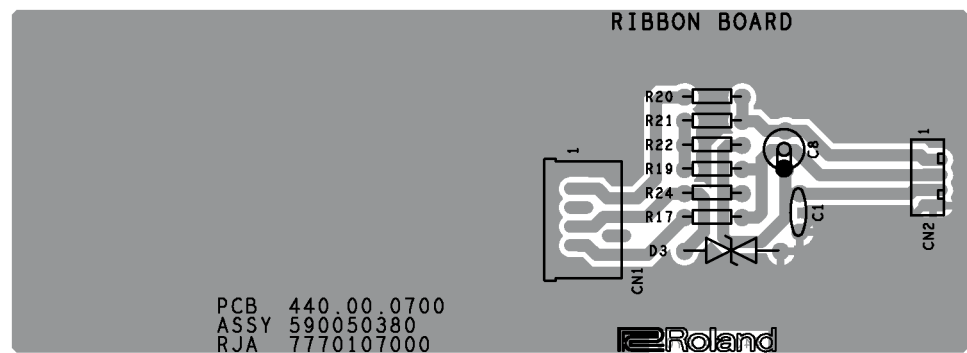


View from component side

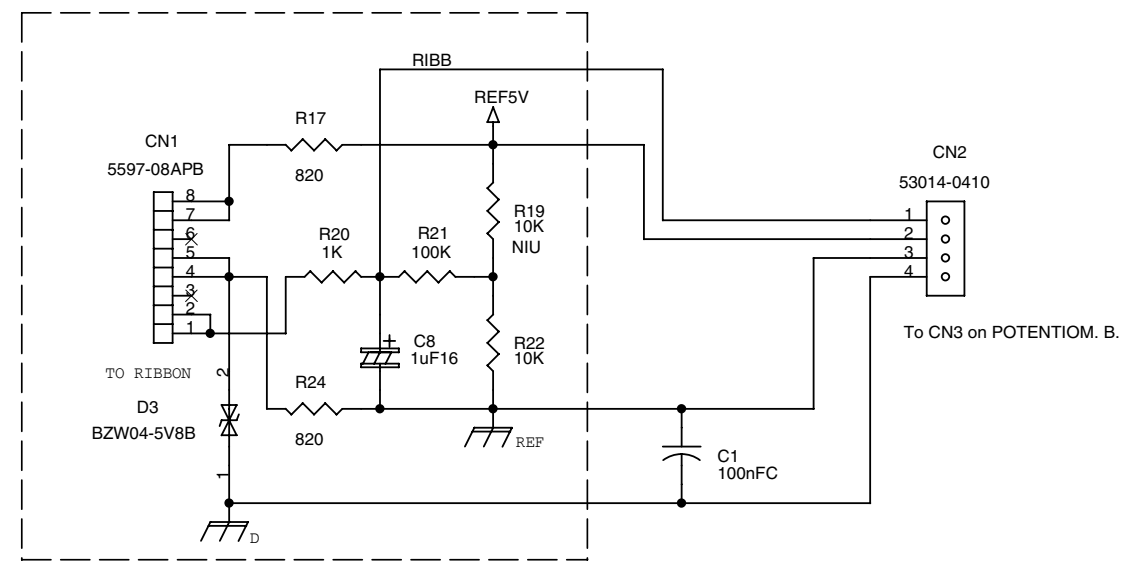


**I RIBBON PCB ASSY & CIRCUIT DIAGRAM**

ASSY 7770107000

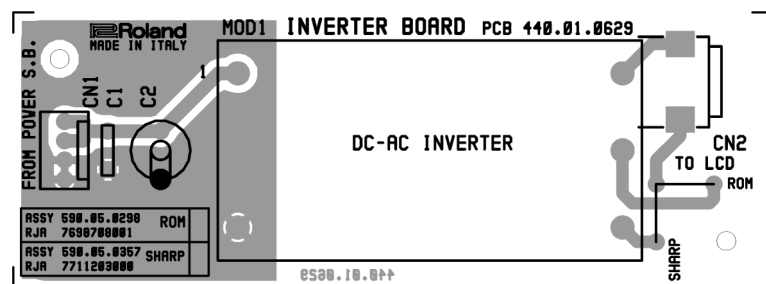


View from component side

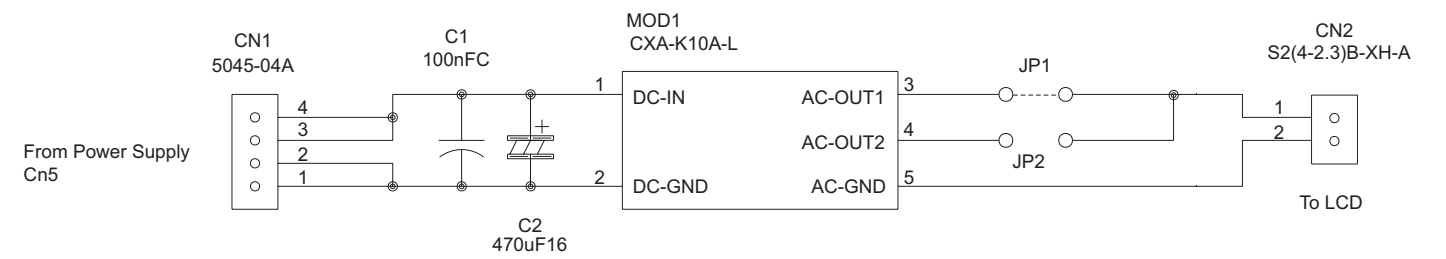


**O INVERTER PCB ASSY & CIRCUIT DIAGRAM**

ASSY 7711203000



View from component side

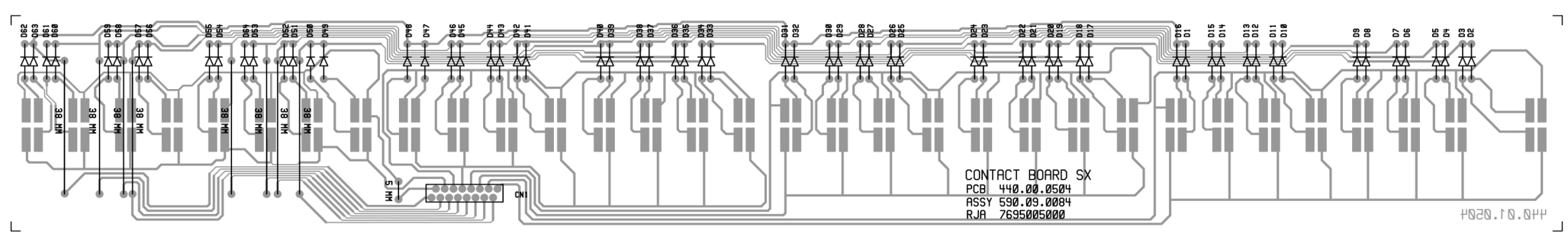




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

A

**LEFT CONTACT PCB ASSY w/RUBBER** ASSY 7695005000



View from component side

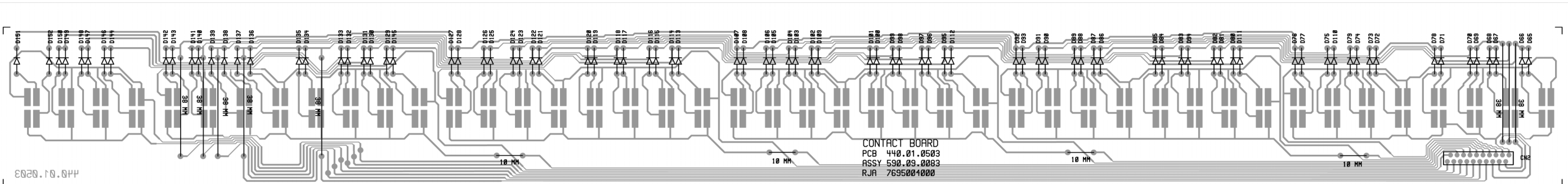
B

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**RIGHT CONTACT PCB ASSY w/RUBBER** ASSY 7695004000



View from component side

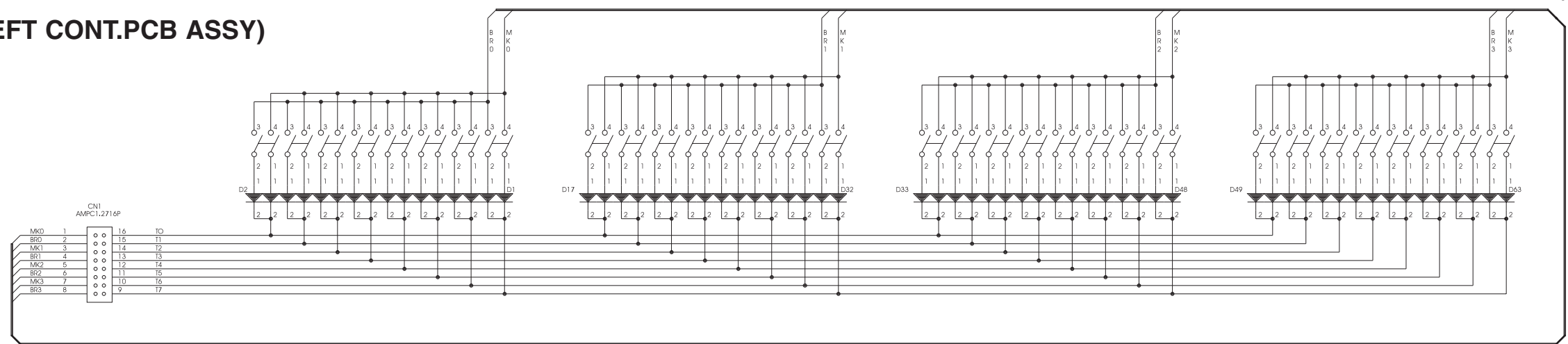
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**CIRCUIT DIAGRAM (LEFT CONT.PCB ASSY)**



J

K

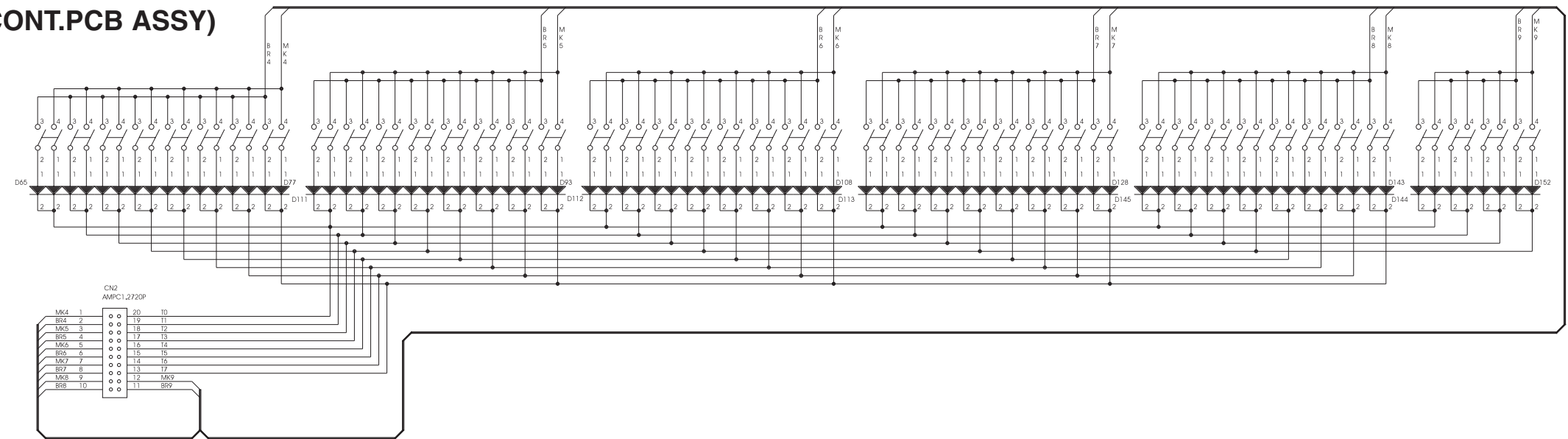
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**CIRCUIT DIAGRAM (RIGHT CONT.PCB ASSY)**



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