

EG-101

groovekeyboard

SERVICE NOTES

First Edition

Issued by RES

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Specifications

GENERAL
49 Keys - Velocity-sensitive keyboard
3 x Seven-segment display
Separate Sampler Volume control
Two-way Bass Reflex System
Operating system in Flash ROM

TONE GENERATION & SOUNDS
24-voice Polyphony
11 multitimbral Parts
448 Tones and 12 Drum Kits

CONTROLLERS
D-Beam™
Pitch Bender/Modulation Lever
7 Knobs
TAP Tempo

D-BEAM Quick Parameters
CUT-OFF + Resonance
Tempo Down
AD LIB
(36 possibilities)

STYLES
64 Styles on ROM
Divisions: Intro - Original - Fill - Variation - Ending-Basic/Advanced.
64 User memories
Effects assignable to Parts
Realtime mute of Parts and Drum instruments
Drum track substitution with sampled phrase
Drum instrument substitution with sample

RPS
64 RPS Sets of 12 Phrases each
64 User RPS Memories
Auto-Sync with sampled Loops
Effects assignable to last selected Phrase
Realtime Mute of drum instruments
Quick RPS Transpose
HOLD Control

ARPEGGIO
Range (Octave)
Grid (Quantize)
Type (Up - Down - Up/Down - Random)
Realtime Control of Decay
Always synchronized to general tempo

PORTAMENTO
Monophonic with Rate Control

RECORDER

REALTIME TONE/TRACK/EFFECT EDIT FUNCTIONS
Cut-Off, Resonance, Pan Pot, Part Volume, Reverb Time, Reverb Level

CONNECTIONS
Output (L - R): RCA x2
Input (L - R): RCA x2
Foot Switch
Headphones
MIDI IN-OUT
DC IN (12 V - 2 A)

Stereo output level
Output line: - 13 dBm
Master Vol. :Max
Tone :Sine bass (A224)
Reverb :Off
Play :C4 key

Stereo output impedance
Output line: 1,6 K ohms

Amplifier
2 x 15 W musical output power

Speakers
Two-way Bass Reflex System
2 Woofer (diameter: 90 mm)
2 Tweeter

Power supply
12V, 2A (ACJ AC/DC Adapter)

SAMPLER SECTION
R-DAC Sampling Technology (Roland Digital Audio Coding)
4 Pads X 4 Banks (16 locations), direct triggering via Keyboard or pads.
4 Mbit Flash ROM
Up to 32 sec. in HI-FI grade (128 sec. in LO-FI grade)
Auto Sync with Styles and RPS
Sampler effects: Pitch Shift, Time Stretch, Ring Mod *, Filter *
(* Effects also available on Line-IN or Mic-IN)
HOLD Control
MIC-IN + Effects

Sampling Frequency:
HI-FI : 31.25Khz
LO-FI: 7.81Khz

Data format
EG-101 Original Format

Signal processing
AD conversion: 16 bit
DA conversion: 16 bit

Nominal Input level
Input (mic): -54 to -25 dBm
Input (line): -20 to +8 dBm

Input impedance
50 K ohms (line)
4.5 K ohms (mic)

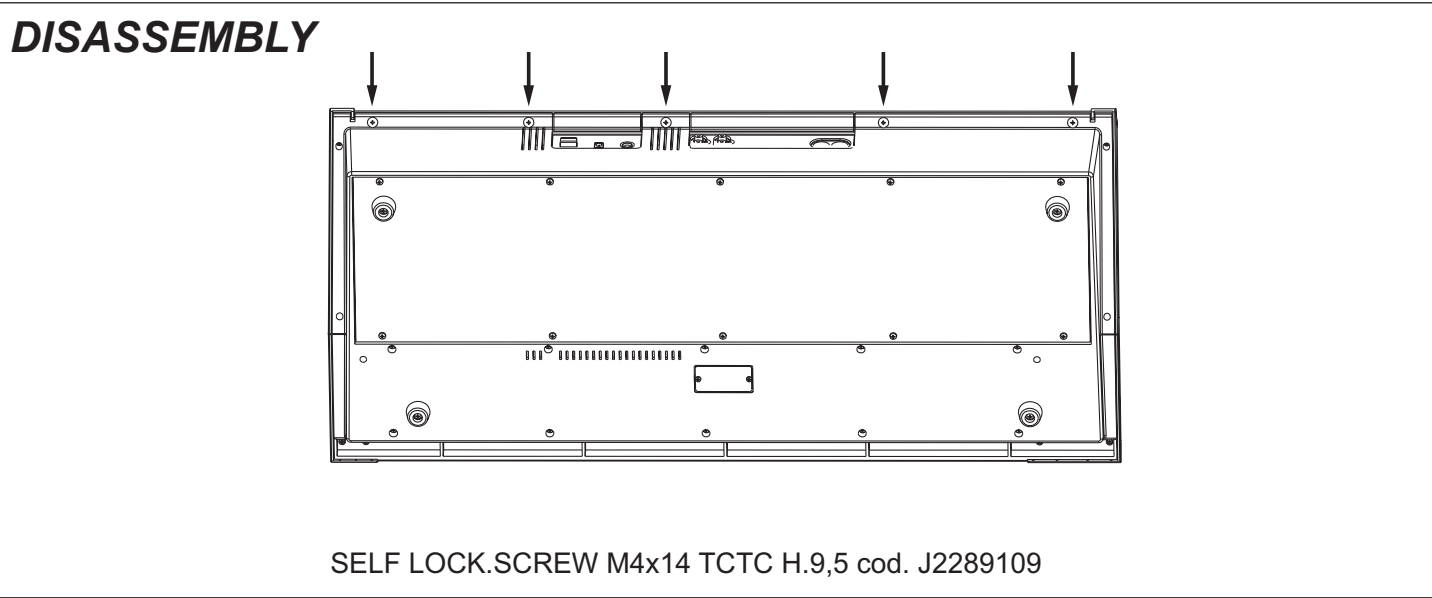
*0 dBm = 0775 Vrms

WEIGHT AND DIMENSIONS
Weight: 11,100 Kg
Dimensions: 835 x 377 x 192 mm

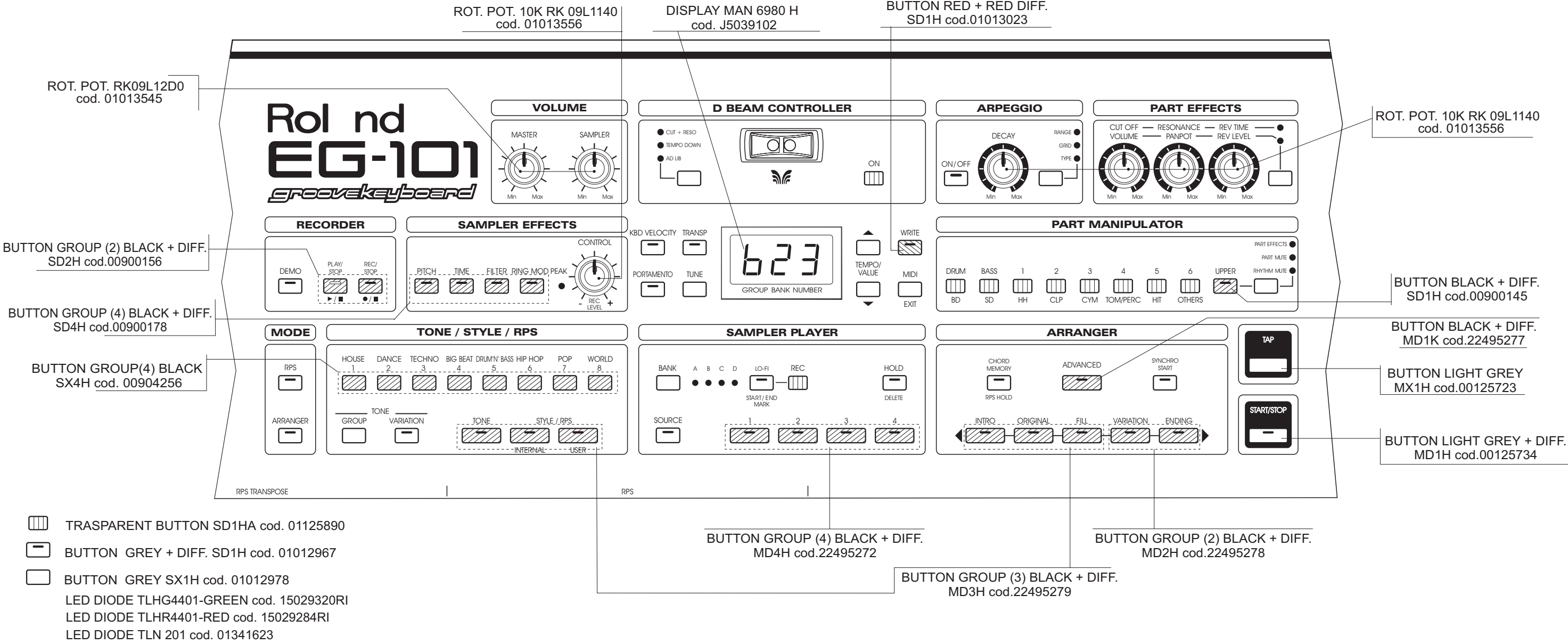
ACCESSORY
See page 6

OPTIONS
RH-20/80/120 Headphones; DP2 Sustain Pedal; BOSS FV-300L Volume Pedal;
KC-100/300/500 Keyboard Amplifiers

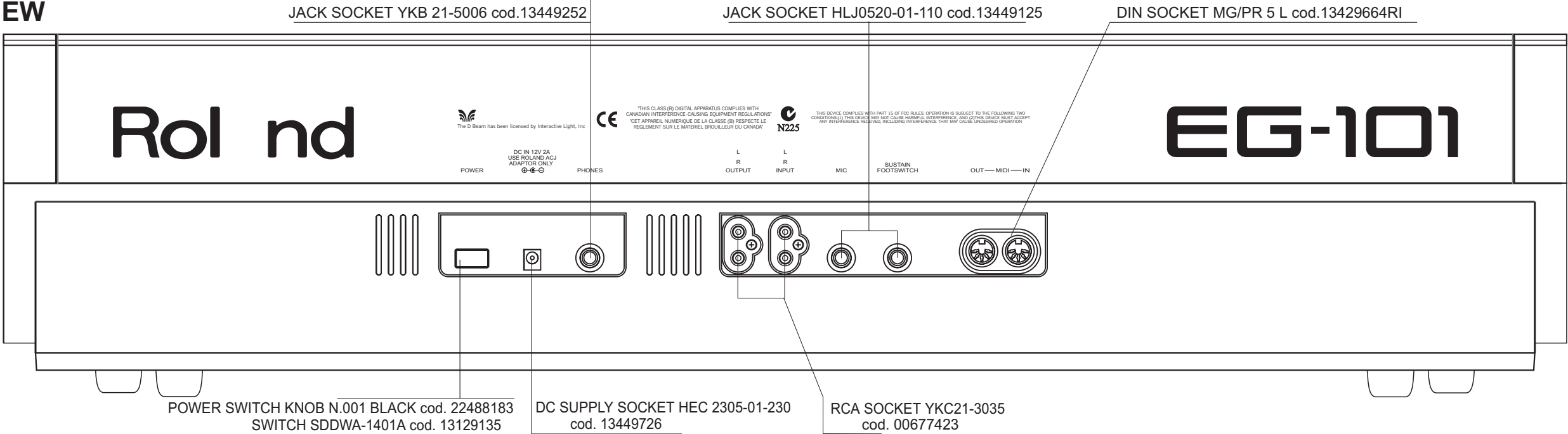
*In the interest of product improvement, the specifications and/or appearance of this unit are subject to change whitout prior notice.



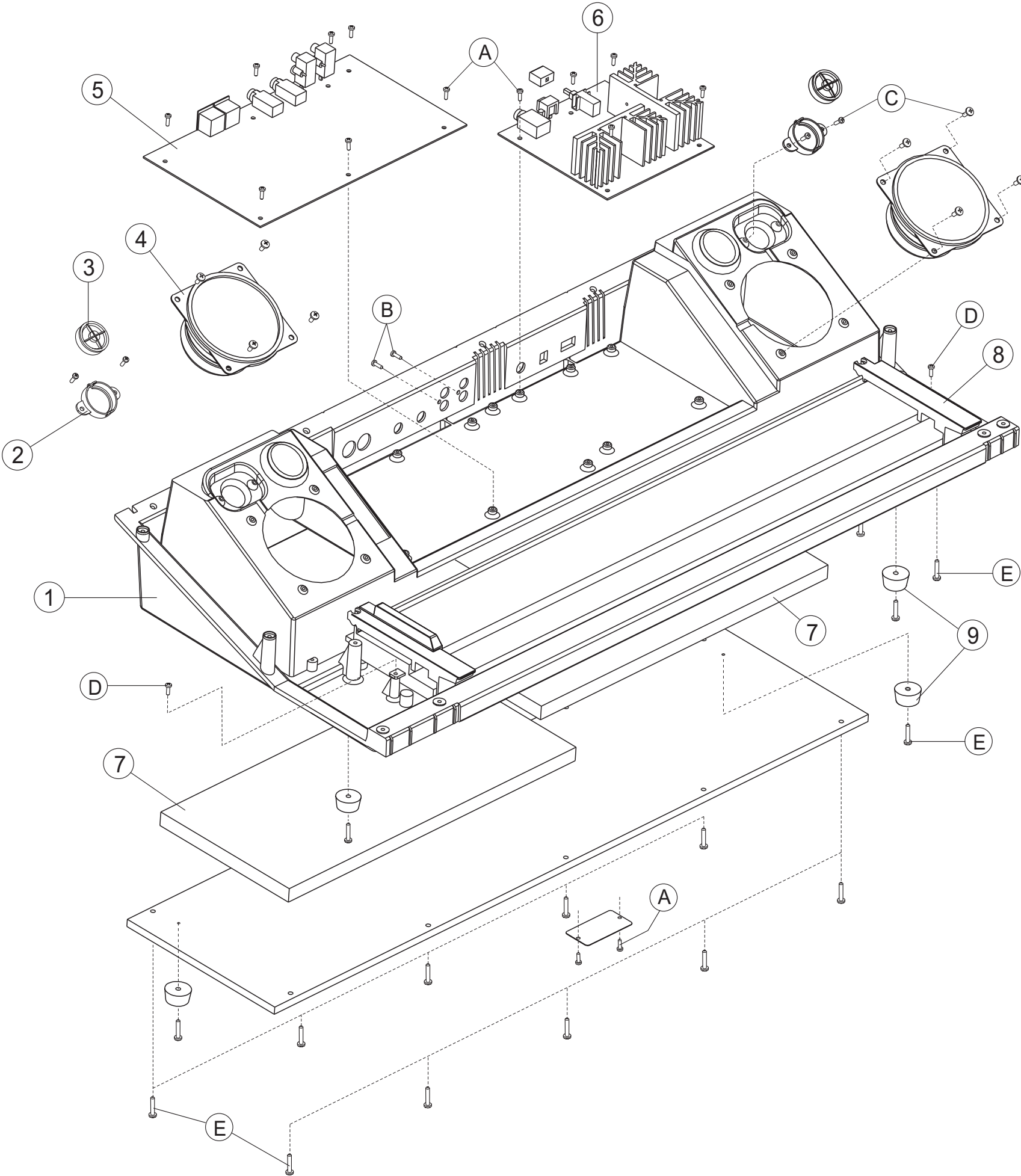
LOCATION OF CONTROLS



REAR VIEW



EXPLODED VIEW (BOTTOM)



No	PART NAMES	PART NUMBERS
1	VARNISHED BOTTOM	7700505000
2	TWEETER SUPPORT	K1188130
3	TWEETER SPEAKER W/ CABLES	K2418118
4	WOOFER SPEAKER D.90 mm	K2418117
5	MAIN BOARD PCB ASSY <i>Note: includes CPU MODULE ASSY</i>	7700501000
6	AMPLIFIER ASSY	7700512000
7	SOUND-PROOF. FOAM 375x170x15	K2268155
8	49-KEY TP/ 7BA KEYBOARD ASSY	7700509000
9	RUBBER FOOT MP-600	12359104
SCREW		
A	SCREW 2,9x10 TCTC PR TROP	J2289125
B	SELF TAP SCREW 2,9x10 TCTC	J2289102
C	SCREW 3,5x9,5 TCPR TFR H.8	J2289115
D	SCREW 2,9x13 TCTC PR TROP	J2289130
E	SCREW 3,5x16 TC PR TFR H.8 BR	J2289186

PARTS LIST EG-101 (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).
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.

MB = Main Board
AMP.B. = Amplifier Board (& **CPU B** = CPU Module Board)
CB = Control Board
CT.B = Contact Board

CASING

#	7700505000	VARNISHED BOTTOM	EG-101
#	7700507000	R VARN. SIDE PANEL	EG-101
#	7700508000	L VARN. SIDE PANEL	EG-101
#	7700504000	VARN+SILK. TOP CABINET	EG-101
#	7700506000	SILKSCREENED PLEXIGLASS	EG-101
#	K224814501	LOUDSPEAKER GRILL	EG-101

KNOB BUTTON

00900156	D S-KEYTOP SD2H BLK		
01013023	D S-KEYTOP SD1H DRD		
00900145	D S-KEYTOP SD1H BLK		
00900178	D S-KEYTOP SD4H BLK		
01012978	D S-KEYTOP SX1H MCG		
00904256	D S-KEYTOP SX4H BLK		
22495277	D S-KEYTOP MD1H BLK 249-277(W/WINDOW)		
00125734	D S-KEYTOP MD1H LCG		
00125723	D S-KEYTOP MX1HLCG <PIANO ONE TOUCH PGRM>		
01125890	D S-KEYTOP MD1H-A CLR		
01012967	D S-KEYTOP SD1H MCG		
22495272	D S-KEYTOP (W/LED WINDOW) MD4H BLK 249-272		
22495279	D S-KEYTOP MD3H BLK 249-279(W/WINDOW)		
22495278	D S-KEYTOP MD2H BLK (W/WINDOW)		
7098007000	BLACK KNOB W/GREY INSERT		
22488183	POWER SWITCH KNOB N.001-BLACK		

SWITCH

01232201	SWITCH W/ORANGE LED	SKHJGS	SW41>SW48, SW63, SW64 on CB
13129135	SWITCH	SDDWA-1401A	SW1 on AMP.B.
J3169105	SWITCH	TP-1101A / EQV-PAE 05 R	All on CB
13159187	SLIDE SWITCH	SSSS2-22-01	S1 on CPU B.

JACK, SOCKET

13449252	JACK SOCKET	YKB 21-5006	JK2 on AMP.B
13449125	JACK SOCKET	HLJ0520-01-110	JK3, JK4 on MB
13429664RI	DIN SOCKET	MG/PR 5L	JK1, JK2 on MB
00677423	RCA SOCKET	YKC 21-3035	JK5, JK6 on MB

DISPLAY UNIT

Note :	J5039102	DISPLAY	MAN 6980 H	IC1, 2, 3 on CB
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BENDER UNIT

Note :	K3278106	PITCH BENDER ‘SW’ +CABLE (36)		
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SPEAKER

K2418117	WOOFER SPEAKER D.90 MM		
K2418118	TWEETER SPEAKER W/CABLES		

KEYBOARD ASSY

#	7700509000	49-KEY TP/7BA KEYBOARD ASSY	
NOTE : For details, refer to KEYBOARD PARTS LIST (Page 4)			

PCB ASSY

#	7700512000	AMPLIFIER ASSY	EG-101
#	7700503000	CONTROLS PCB ASSY	EG-101
#	 7700501000	MAIN BOARD PCB ASSY	EG-101
#	7700510000	CONTACT PCB ASSY +RUBBER	EG-101
NOTE : The MAIN BOARD PCB ASSY includes CPU MODULE PCB ASSY			

IC

#	15229718RI	I.C. 6N 137	PHOTO-COUPLER	IC2 on MB
#	K525814710	I.C. ROM K525814710	EG-101	IC3 on CPU B.
	01233545	I.C. ROM UPD23C32000AGX306		IC5 on CPU B.
	J5259109	I.C. HD6415108F10 FLAT	CPU	IC4 on CPU B.
#	K525814811	I.C. HD6433042SB87F	EG-101	IC14 on CPU B.
#	J5159115	I.C. 74 HC 10		IC11 on MB
	15169550RI	I.C. 74 HC138	DIP CMOS	IC4, IC5 on CB
#	J5159106	I.C. 74 HC238	CMOS	IC8 on CB / IC6, IC7 on MB
	J5159113	I.C. 74 HC 393		IC10 on MB
	15249111	I.C. TC7WU04 F FLAT	CMOS	IC6 on CPU B.
#	J5259113	I.C. 74 HC 390 FLAT	CMOS	IC15 on CPU B.
	01341234	I.C. MBCG24512 FLAT	IC CUSTOM	IC11 on CPU B.
	J5259107	I.C. HM628128ALFP-7 FLAT	SRAM	IC7, IC8 on CPU B.
#	J5259110	I.C. HM62256LFP-7T FLAT	SRAM	IC2 on CPU B.
	J5259130	I.C. M5M5256DVP-55LL FLAT		IC13 on CPU B.
	01341167	I.C. FLASH LH28F400SUT-NF60	FLASH MEMORY	IC12 on CPU B.
#	J5259129	I.C. FLASH E28F800B5B70	FLASH MEMORY	IC9 on CPU B.
	15239229	I.C. TC6116-GP4	CUSTOM IC	IC1 on CPU B.
	J5169108	I.C. TC 4052		IC12 on CB
#	K5258146	I.C. TC74VHC139F FLAT		IC10 on CPU B.
#	J5259126	I.C. TC7SH32F FLAT		IC16 on CPU B.
	15219183	I.C. M51953 AL	STANDING	IC3 on MB
	15189251	I.C. M5218 P	OP AMP	IC4, 5, 12>15, 17 on MB
#	15289702	I.C. UPD6376	DAC	IC1 on MB
	15149134	I.C. TD62785P	INTERF.DRIVER IC	IC6 on CB
	15189250	I.C. M5218 AL	STANDING	IC9, 10, 11 on CB
#	J5189105	I.C. TD 62384 AP		IC7 on CB
#	J5189106	I.C. M5222P DIP		IC16 on MB
	00905034	I.C. AK5330-VM FLAT	A/D CONVERTOR	IC9 on MB
	01340789	I.C. BU9480F FLAT	D/A CONVERTER	IC8 on MB
#	15199197RI	I.C. 7805 CV TO220		IC1 on AMP.B.
	J5199111	I.C. TDA 7370 BV		IC2 on AMP.B.

TRANSISTOR

15119155RI	TRANSISTOR	BC/560-B	Q1,2,3 on CB / Q1,4,6,9 on MB
J5119101	TRANSISTOR	BD 371 C	Q8 on MB
15119154RI	TRANSISTOR	BC/549-B	Q2,3,5,14, 17 on MB
15129114	TRANSISTOR	2SC-1815GR	Q4 on CB
15129136	TRANSISTOR	2SC-2878-A/B	Q10,11,12, 13 on MB
15129427	TRANSISTOR	2SC-2235Y	Q5 on CB
15139123	TRANSISTOR	2SK-184 GR FET	Q7,15,16 on MB

DIODE

15019159RI	DIODE	1N-4148	on CB / D1>D13, D17, 18, 20 on MB
15029320RI	LED DIODE	TLHG4401 - GREEN	D117 on CB
15029284RI	LED DIODE	TLHR4401 - RED	All on CB
01341623	DIODE LED	TLN 201	D73 on CB
01342578	PHOTO DIODE	TPS 708	D72 on CB
J5019101	ZENER DIODE	BZX79C 4V7	D16,D19 on MB
J5019106	ZENER DIODE	BZX79C 5V1	D15 on MB
15091172RI	DIODE	BY 251	D2 on AMP .B.
J5019105	DIODE	1N 4002	D1 on AMP .B.

RESISTOR

J3919104	RESISTOR ARRAY	EXB-A10E-103-J	RA1>RA4, RA9>RA11 on CPU B.
J3919107	RESISTOR ARRAY	EXB-V8V-101-JV	RA8, RA12 on CPU B.
J3919108	RESISTOR ARRAY	EXB-V8V-103-JV	RA5>RA7 on CPU B.
13819132RI	UNINFL.RES.	100 OHM 0.6W 5%	R2 > R9 on CB
13819131RI	UNINFL.RES.	10 OHM 0.6W 5%	R9 on CB / R46, 132 on MB
#	J3809153	UNINFL.RESISTOR	R133 on MB
	J3809136	UNINFL. RES.	R2 on AMP. B.
	J3809144	UNINFL.RESISTOR	R1 on CB
	13819302RI	CARBON RESISTOR	R7,8 on AMP. B.
	J3809139	OXIDE RESISTOR	R1 on AMP. B.

POTENTIOMETER

01013545	POTENT. (ROTARY)	RK09L12D0 10KBX2	VR1, 2, 3, 4, 5 on CB
01013556	POTENT. (ROTARY)	RK09L1140 10KB	VR6, 7, on CB
13299206	TRIMMER POTENT.	EVND8AA03B24	VR1 on MB

CAPACITOR

13529147RI	CAPAC.ARRAY	8X100 PF	CA1 on MB
J3629108	ELCTRL.COND.	1000UF 16V AX	C8 on CB
13639154	ELECTRL.COND.	-V 1000UF 16V	C24, 25 on MB.
J3629134	ELECTRL.COND.	-V 2200UF 16V	C12 on MB.
13639661RI	ELECTRL.COND.	-V 2200UF 25V	C14 on AMP. B.
13649662RI	ELECTRL.COND.	-V 3300UF 25V	C12 on AMP. B.
J3629117	ELECTRL.COND.	-V 4700UF 25V	C13 on AMP. B.
J3629103	ELECTRL.COND.	100U 25V P5	C17, 18 on AMP. B. / C13, 14, 108 on MB.
J3629147	ELECTR. COND.	220U 25V P.5	C10 on AMP. B.
J3629104	ELECTRL.COND.	10U 50V P5	C3, 11 on AMP. B. / C31, 33, 35, 45, 56, 58, >63, 6769, 75, 76, 94, 95, 98, 102, 103 on MB.
J3629105	ELECTRL.COND.	47U 50V P5	C8 on AMP. B./ C23, 50, 51 on MB.
J3629107	ELECTRL.COND.	1UF 100V P5	C49, 57, 80 on MB.
J5369101	ELECTR. COND.	22U 16V (SMD)	C20>24, 48 on CPU B.
J3629143	ELECTR. COND.	10U 16V H.7	C11, 26, 28, 37, 71, 73 on MB./ C1>C5, C24>C29 on CB
J3629137	ELECTR. COND.	33U 16V H.7	C11, 13, 21, 23 on CB
J3629141	ELECTR. COND.	4.7U 50V H.7	C22 on MB.
J3629142	ELECTR. COND.	1U 63V H.7	C32 on CB
J3629149	ELECTR.COND.	100U 16V H.7	C29 on MB./ C30 on CB
13649103J0	UNPOL.COND.	10U 16 P5	C52, 53, 90, 91, 92, 93 on MB.

INDUCTOR, COIL, FILTER

<<EMI>> 22448240	NOISE SUP.	BL02RN2-R62	L2, 3, 4 on AMP. B
<<EMI>> 12449382RI	NOISE SUP.	PLT1-R53C	L1 on AMP. B
<<EMI>> 12449370	NOISE SUP.	SBT-0160W	L2, 4, 5 on MB
<<EMI>> 12449326	NOISE SUP.	SBT-0460	L3 on MB
<<EMI>> 13529187	NOISE SUP.	ELKTR391CA	FL1>FL13 on MB
<<EMI>> 12449380	NOISE SUP.	EXC-ELDR25V	L1, 7, 8, 9 on MB

CRYSTAL, RESONATOR

00894023	QUARTZ	20,000 MHZ MA-406	X1 on CPU B.
00894034	QUARTZ	16,000 MHZ MA-406	Y1 on CPU B.

CONNECTOR

13419677RI	16P FEM. CONNECTOR	AMP 1.27	CN2,CN3 on MB/CN1, CN2 on CT.B
13369689RI	20P FEM. CONNECTOR	AMP 1.27	CN3, CN4 on CB/CN1, CN4 on MB
13369688RI	4P MALE CONN.	P 2.5 M	CN1 on AMP.B
J3439151	9P MALE CONNECTOR	P.2 M	CN3 on AMP.B./CN5, CN6 on MB/ CN2 on CB
J3429120	3P MALE CONNECTOR	P.2 M	CN2 on AMP.B./CN7, CN8 on MB/CN1 on CB
# J3439169	40P MALE CONNECTOR.	4/146461/0	

WIRING, CABLE

# K3468202	4P CABLE	(66/52)	(W-4PC)	CN1 on AMP.B.to SPEAKERS
K3468162	20P FLAT CABLE	(56)	2C	CN4 on MB to CN3 on CB
K3468178	20P FLAT CABLE	(44)	2C/D	CN1 on MB to CN4 on CB
# 2347827801	16P FLAT CABLE	(22)	2C	CN2 on MB to CN1 on CT.B / CN3 on MB to CN2 on CT.B
# 7700511000	3+2 COAXIAL CBL ASSY	(44)	P.2	CN6 on MB to CN2 on CB
# 7700513000	1P COAXIAL CBL ASSY	(40)	2C	CN7 on MB to CN1 on CB
# 7700514000	1P COAXIAL CBL ASSY	(12)	2C	CN8 on MB to CN2 on AMP.B
# 7700515000	9P CABLE ASSY	(10)	2C P.2	CN5 on MB to CN3 on AMP.B

AC INLET

 13449726	DC SUPPLY SOCKET	HEC 2305-01-230	JK1 on AMP.B
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BATTERY

12569149RI	LITHIUM BATTERY	CR2032	
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SCREW

J2289122	SCREW	2.2X6 TC TC	BRUN
J2289102	SELF TAP.SCREW	2.9X10 TC TC	
J2289125	SCREW	2.9X10 TC TC PR TROP	
J2289130	SCREW	2.9X13 TC TC PR TROP	
J2289147	SELF LOCK.SCREW	M3X12 TCTC H.6	
J2289109	SELF LOCK.SCREW	M4X14 TCTC H. 9.5	
J2289193	SELF LOCK.SCREW	M3X6 TC TC H.6	
J2289115	SCREW	3.5X9.5 TC PR TFR H.8	
J2289149	SCREW	3X20 TC TFR H.7	
J2289186	SCREW	3.5X16 TCPR TFR H.8 BRUN	

J2289113	NUT	3MA H.3
J2139101	FLAT WASHER	I/D 4
J2139102	TOOTHED WASHER	I/D 3

PACKING

# K2638215	RIGHT POLYST. END SIDE	EG-101
# K2638216	LEFT POLYST. END SIDE	EG-101
K2678105	CARTENE ENVELOPE HD 140X57	
K2678106	POLYETH.ENVELOPE 40X55	
# K2618203	OUTER PACKING	EG-101
# K2628105	SHEARED CARDBOARD SHEET	EG-101

MISCELLANEOUS

K2168102	SPACER FOR LED	H.2.8 D.E. 5.5
K2168109	SPACER FOR LED	H.10 - D.E. 5.5
00453223	LED SPACER	H. 7 E.D. 5
12359104	RUBBER FOOT	MP-600
12569420	SOCKET FOR BATTERY	CR2032
K2228103	SPEAKER GASKET	107/88 TH.2
# K2268155	SOUND-PROOF.FOAM	375X170X15
# K2258117	MYLAR SHIELD	170X100 EG-101
1342982301	POWER SUPPLY SOCKET HOLDER	N°2
K1188130	TWEETER SUPPORT	EM2000/EG101
01343089	D-BEAM CONTROLLER	ESCT BLK

ACCESSORIES

2244861102	ADAPTOR ACJ 230V 12V 2A SA	(230V)
2244861002	ADAPTOR ACJ 230VE 12V 2A SA	(230VE)
2244861401	ADAPTOR ACJ 240VA 12V 2A SA	(240VA)
2244861201	ADAPTOR ACJ 120V 1.75A SA	(117V)
K6018109	MIDI GUIDE	
# K6018331	OWNER'S MANUAL (E/D/F)	
# K6018340	MIDI IMPLEMENT. MANUAL	



E MAIN PCB ASSY

When you replace the MAIN BOARD, You must reperform DBeam adjustment.
Refer to [DBeam value setting] item in the Test Mode.

— For Nordic Countries —

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som
anbefalt av apparatfabrikanten.
Brukt batteri returneres
apparatleverandøren.

Eksplodingsfara vid felaktigt batteribyte.
Använd samma batterityp eller en
ekvivalent typ som rekommenderas av
apparatillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

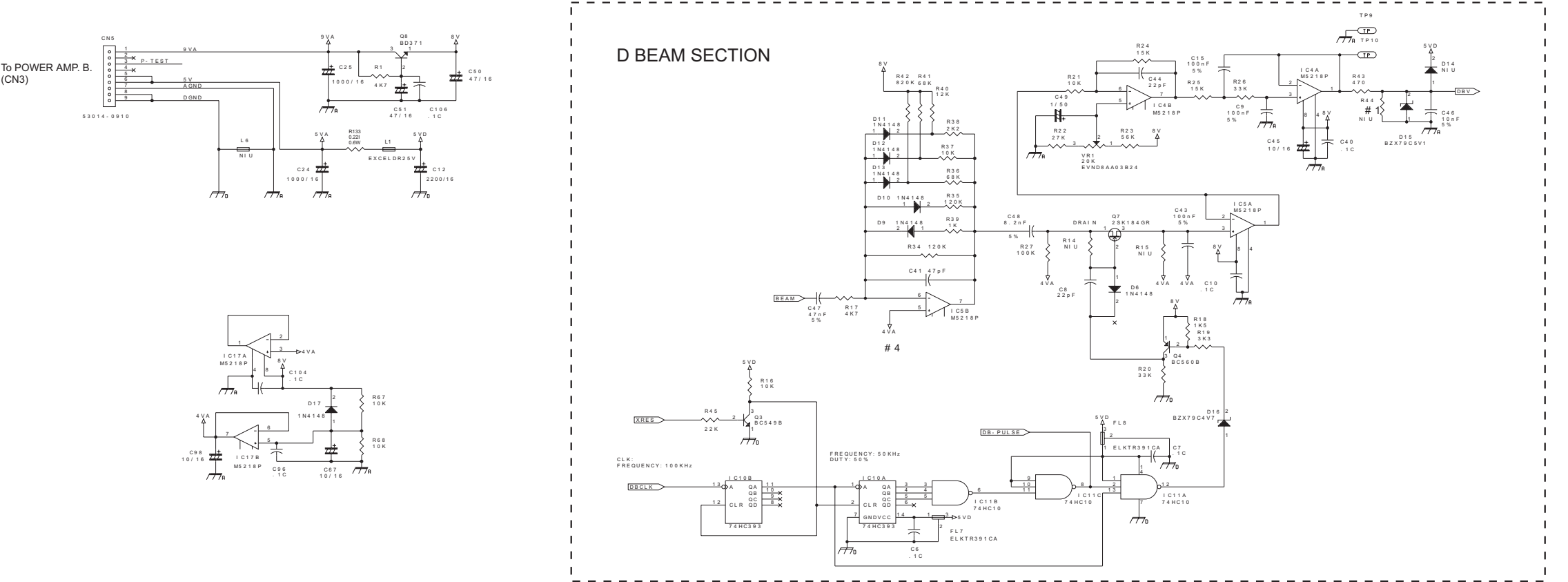
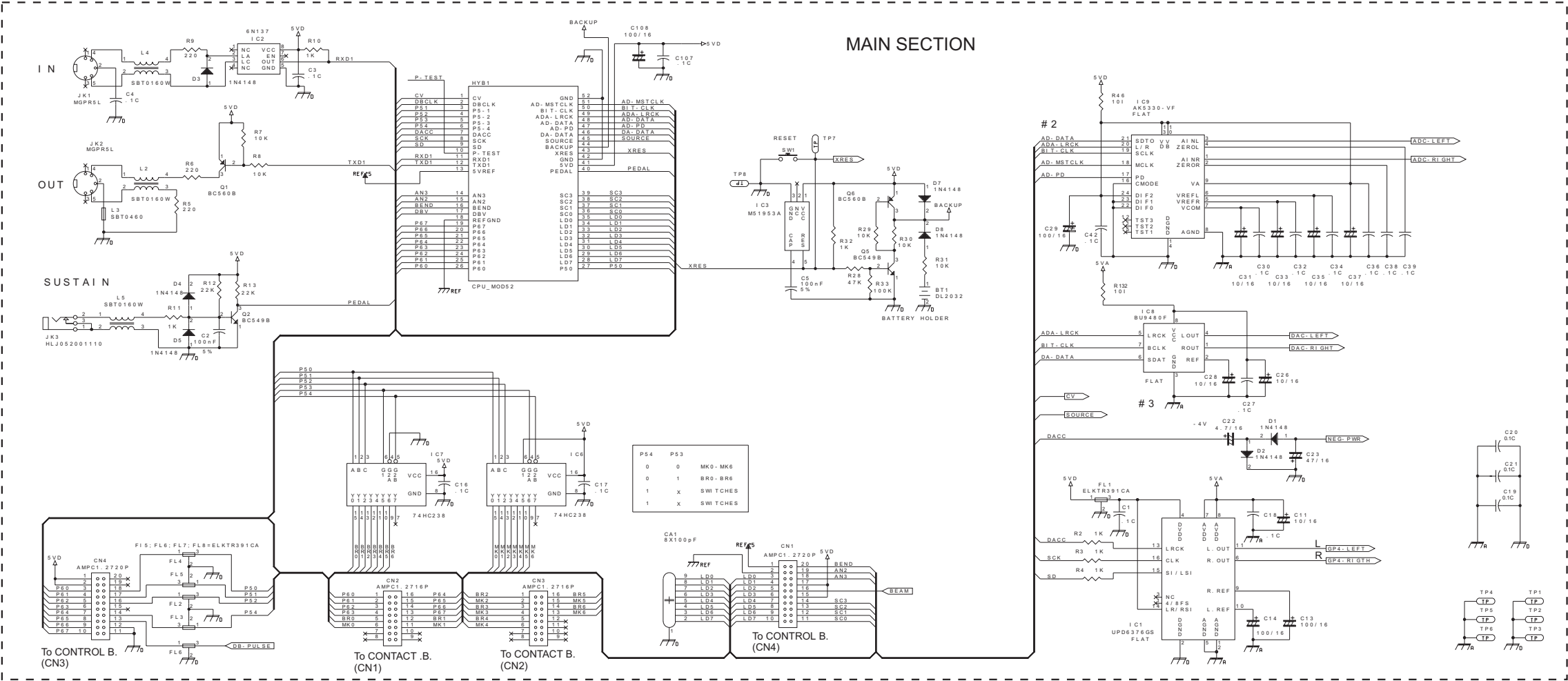
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.



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 1/2 (MAIN PCB ASSY)



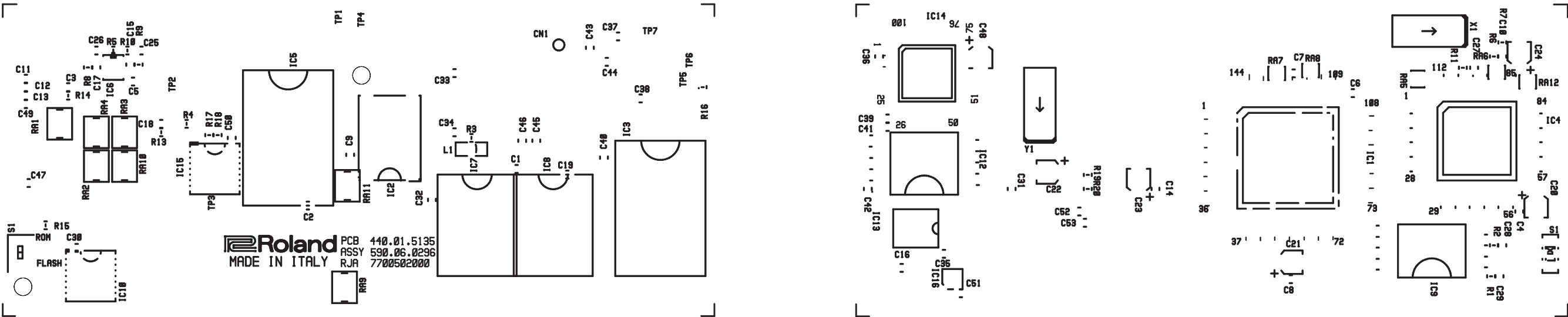
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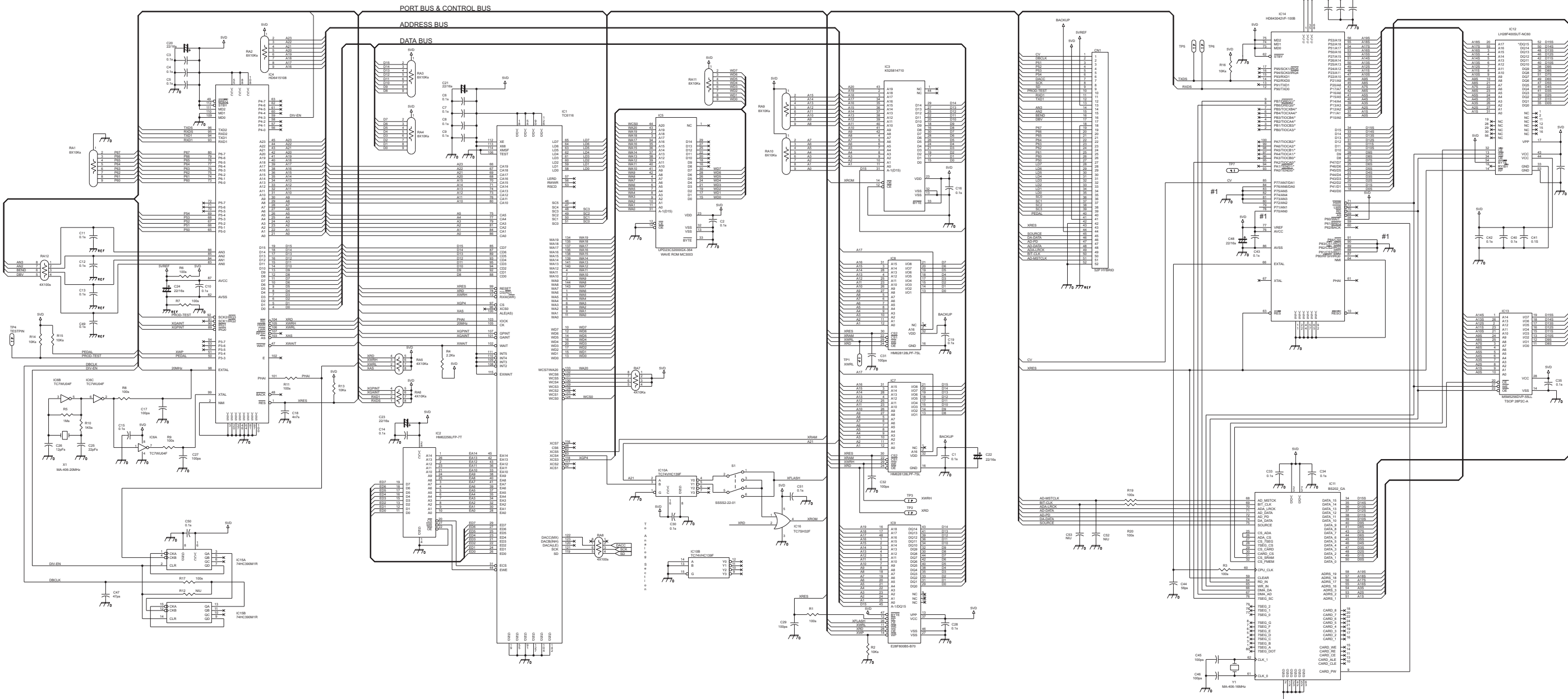
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U

CIRCUIT DIAGRAM 3/3 (CPU MODULE PCB ASSY NOTE: To supply with MAIN PCB ASSY 7700501000)



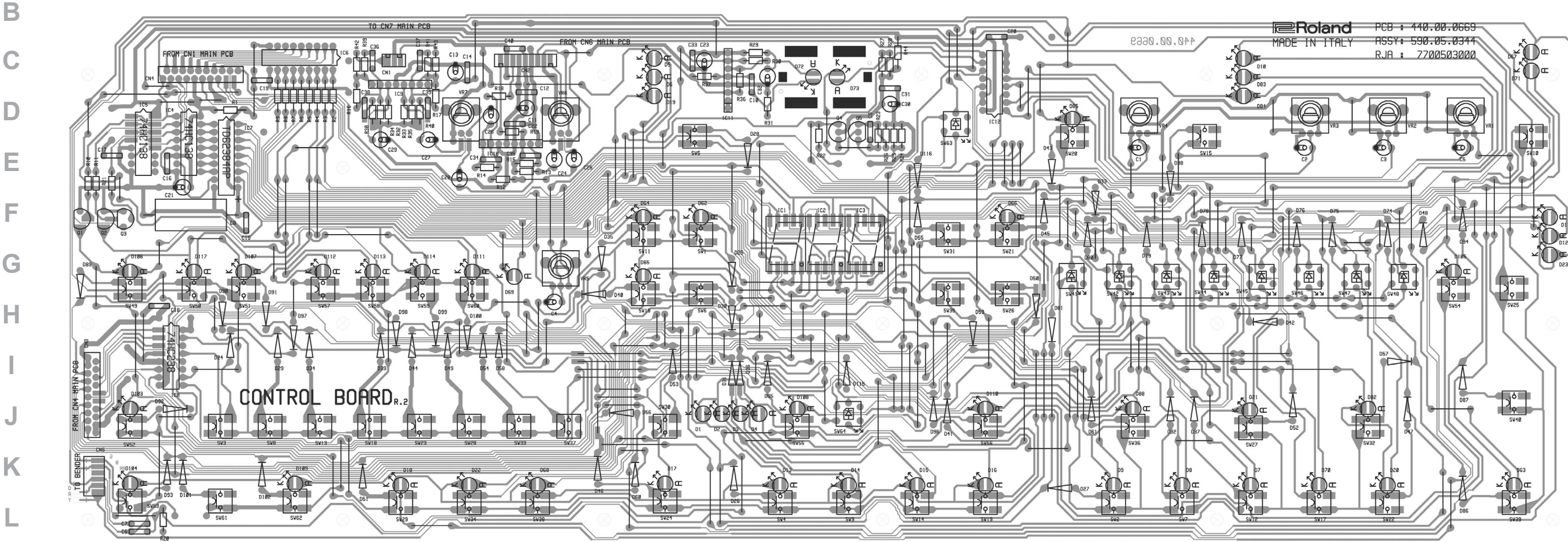
View from component side

View from solder side



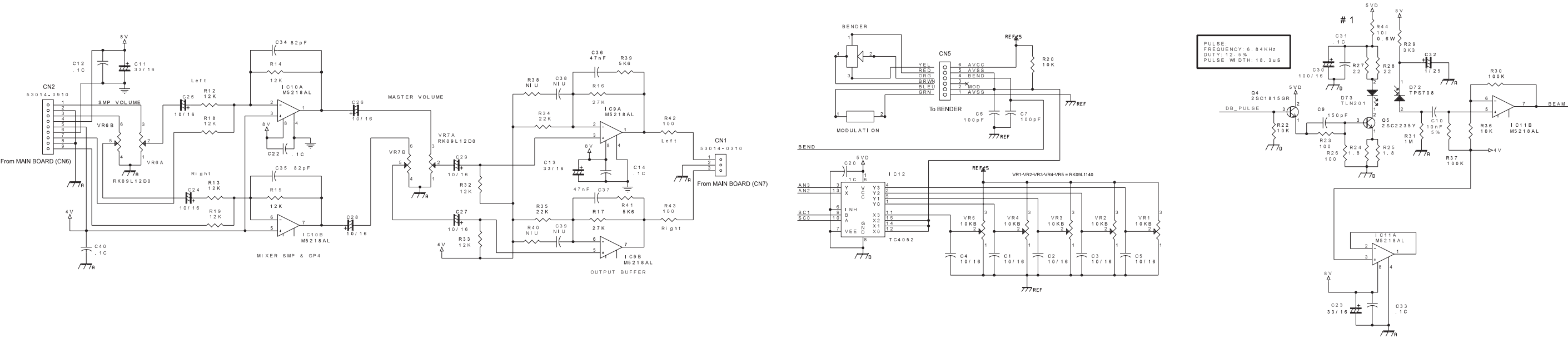
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

A CONTROL PCB ASSY ASSY 7700503000



View from component side

CIRCUIT DIAGRAM 1/2(CONTROL PCB ASSY)



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DIODE RES. CODE RJA CODE MODEL

590.09.0091	7695402000	PC SERIES
590.09.0180	7700510000	EG SERIES

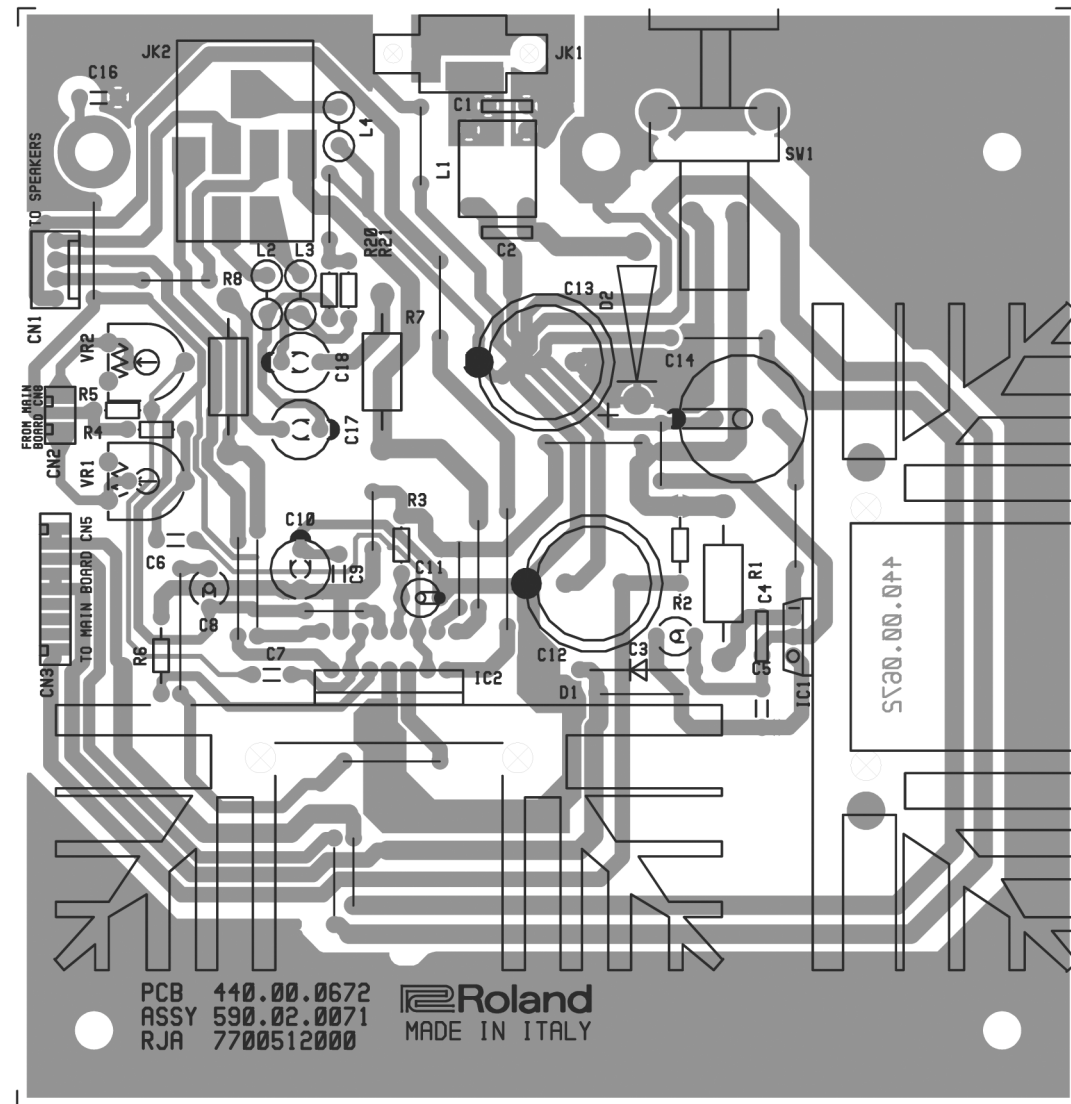
MADE IN ITALY

Component List:

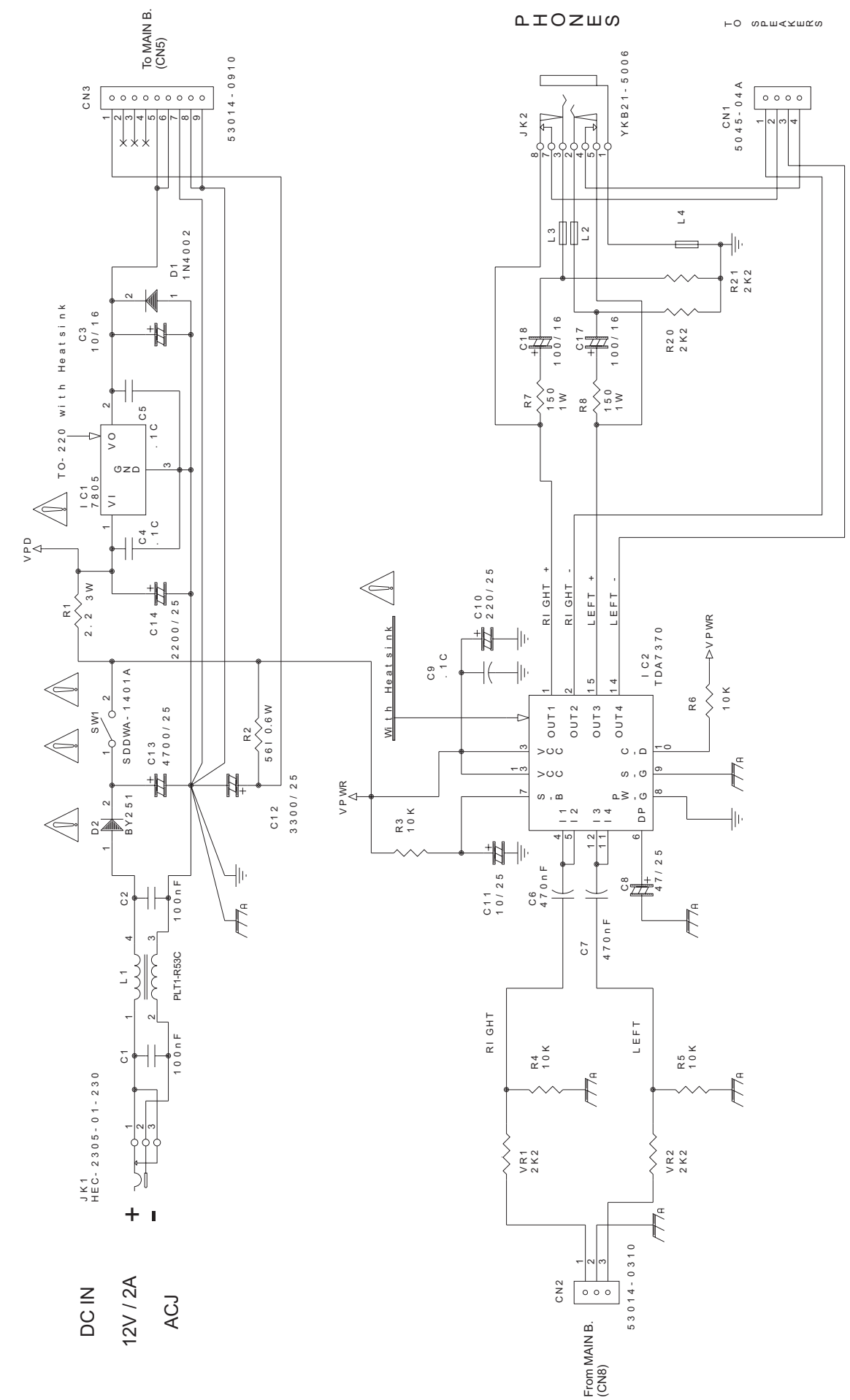
- D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100

POWER AMP PCB ASSY & CIRCUIT DIAGRAM

ASSY 7700512000



View from component side



HOW TO SAVE /HOW TO VERSION UP

As EG-101 has a Flash memory to record the Main Program, some of styles and samples, each section can be saved and/or updated.

What you need to save and/or update your data:

- 1) Either a PC provided with a sequencer software (Note #1) or an SMF reader, like the Sound Brush (Note #2);
- 2) The disk containing the **"prg_xxx.mid"** file (code: 7700518000) if you want to update the program to the 'x.xx' version.
- 3) The disk containing the **"fct_stl-mid"** file (code: 7700516000) if you want to load the factory styles again.
- 4) The disk containing the **"smp_fct-mid"** file (code: 7700517000) if you want to load the factory samples again.
- 5) Some 720K or 1.44M disks if you want to save the data included in EG-101.

Note #1.

Our engineers have tested these operations by using "Cubase" and "Logic". Other sequencer software may not support these data transfer operations. Cubase is a registered trademark of Steinberg Soft- und Hardware GmbH, while Logic is a registered trademark of Emagic Soft- und Hardware GmbH.

Nota #2.

Set your Sound Brush into the "Auto Play = off" as well as into the "Single Mode" modes.

HOW TO SAVE DATA (DUMP TX)

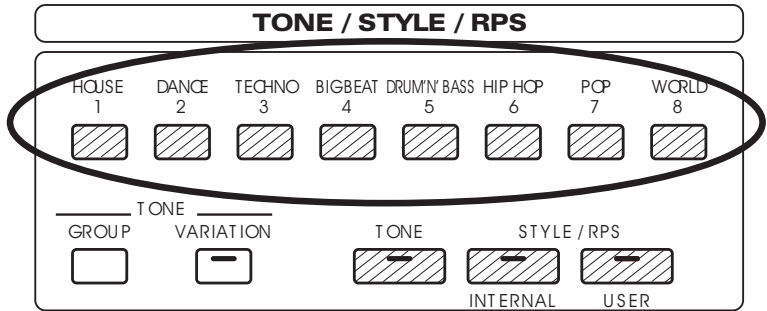
In EG-101 the "dump" operation into a sequencer, no matter whether it's a PC or a Sound Brush, can be carried as follows:

- (a) Turn the instrument on while pressing and keeping pressed the MIDI button.
- (b) The 7-seg display shows "dMP" (dump) and the instrument is ready to transmit a Dump.



NOTE: before starting a Dump operation, wait for the dMP writing shown on the display to stop flashing.

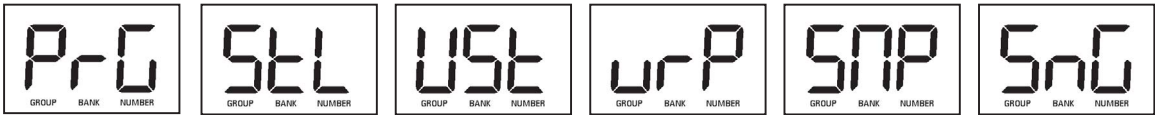
- (c) Connect the MIDI OUT of EG-101 with the MIDI IN of a PC provided with a sequencer software (e.g. Cubase, Audio Logic, see Note #1) or of an SMF reader (e.g. Sound Brush) and activate Record either in the PC or in the Sound Brush.
- (d) Press one of the six Tone/Style/RPS buttons depending on the parameter for which you want to carry out the 'Dump' operation:



- a) **HOUSE/1** = **Program**
- b) **DANCE/2** = **Styles**
- c) **TECHNO/3** = **Style User**
- d) **BIG BEAT** = **RPS User**
- e) **DRUM'N'BASS** = **Samples**
- f) **HIP HOP** = **Song**

(e) At the end of the 'Dump' operation, the display shows "dMP" once again.

(f) Turn the instrument off and then on again.



- a) **Program**
- b) **Styles**
- c) **Style User**
- d) **RPS User**
- e) **Samples**
- f) **Song**

PROGRAM & STYLE FLASH UPDATE

This procedure concerns only the "Dump" operations for the Program and the Styles. We suggest you saving the content of the SRAM memory (User Style - User RPS - Song) before carrying out the "Dump" procedure.

- (a) Turn the instrument on while keeping pressed the REC and PLAY buttons in the Recorder section.
- (b) The 7-seg display shows "UPd" (update) and the instrument is now ready to be update.



(c)

USING A PC

Connect the MIDI OUT of a PC provided with a sequencer software (e.g. Cubase, Audio Logic, see Note #1) to the MIDI IN of EG-101. Set "On" the transmission of the F8 messages (Sync Out) in the sequencer software provided in your PC. Load the Program MidiFile **"prg_XXX.mid"** (or the Style Midifile **"fct_stl.mid"**) into the sequencer of your PC. Start Playback in your sequencer.

USING A SOUND BRUSH

Connect the MIDI OUT of a Sound Brush to the MIDI IN of EG-101.
Set your Sound Brush into the "Auto Play = off" as well as into the "Single Mode" modes
Copy the Program MidiFile **"prg_xxx.mid"** " (or the Style Midifile **"fct_stl.mid"**) onto a floppy disk .
Then insert the floppy disk into the Sound Brush.
Start Playback in your Sound Brush.

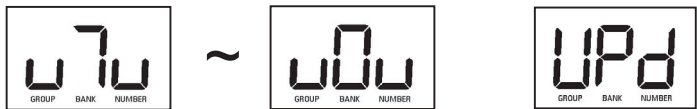
- (d) While dumping the Program the display shows a number increasing from 1 to 6 followed then by 'b' (boot block).



- (e) At the end of the Dump operation, the display will show "Upd" again.
- (f) Turn the instrument off.
- (g) Turn the instrument on again, while keeping pressed the Write button (Factory Setup).
The Factory Setup is necessary because during the "Dump" operation the whole content of the SRAM memory has been erased.

Style Dump

While dumping a Style the display shows a number increasing from 7 to 10 (here it shows only '0' for a practical reason).



NOTICE: The instrument can receive only the Program and Style Dump, so any other file will be disregarded.

SAMPLE FLASH UPDATE

This procedure concerns only the Dump operation of the Samples.

- (a) Turn the instrument on while pressing and holding down the REC button in the Sample Player section.
- (b) The 7-segment display will show "UPd" (update); this means the instrument is ready to receive a Dump.



- (c) USING A PC

Connect the MIDI OUT of a PC provided with a sequencer software (e.g. Cubase, Audio Logic, see Note #1) to the MIDI IN of EG-101.
Set "On" the transmission of the F8 messages (Sync Out) in the software sequencer provided in your PC.
Load the Sample MidiFile **"smp_fct.mid"** into the sequencer of your PC .
Start Playback in your sequencer.

USING A SOUND BRUSH

Connect the MIDI OUT of a Sound Brush to the MIDI IN of EG-101.
Set your Sound Brush into the "Auto Play = off" as well as into the "Single Mode" modes
Copy the Sample MidiFile **"smp_fct.mid"** onto a floppy disk .
Then insert the floppy disk into the Sound Brush.
Start Playback in your Sound Brush.

NOTE: A **".mid"** file different from the Sample file (like Program, Style) causes the instrument to stall. In this event you have to load Style User and RPS User again, because the RAM area has been damaged.

- (d) At the end of the 'Dump' operation the display will show "Upd" again.
- (e) Turn the instrument off and than turn it on again for normal operations.

Sample Dump

While dumping a Sample , the display shows 'S' together with a number ranging from 1 to 32.



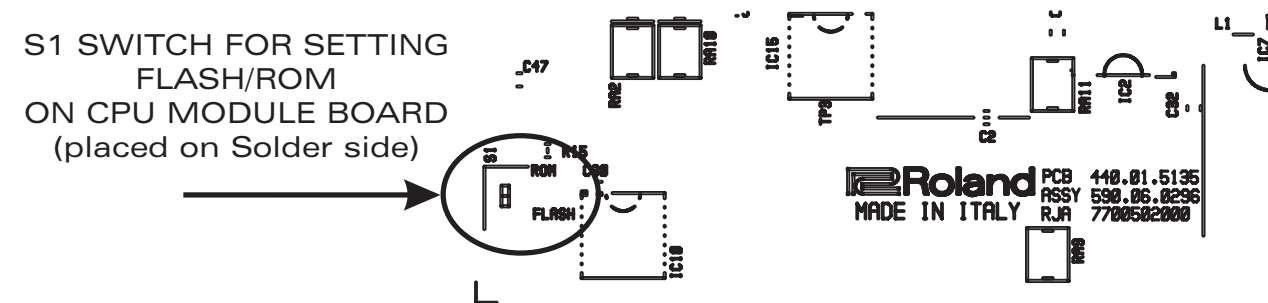
NOTICE: At the end of a Dump operation, if on the EG-101 display an error message,  **Flash Sampler Error** , you have to set the Tempo in the sequencer of your PC at **30 Bpm** in the sequencer of your PC and at **10 Bpm** in the Sound Brush; then repeat the Dump procedure described above.

EMERGENCY UPDATE of the PROGRAM FLASH

Possible voltage drops and/or possible errors while updating the program are not supposed to cause the complete lost of the program; you should be able to update the program again anyway, simply by repeating the procedure described earlier on.

Should this be not possible, act as follows:

- (a) Make sure you've turned the instrument off and that you've pulled out the mains cable from the mains socket; after that open the instrument and move the '**Flash/ROM**' switch to the **ROM position** on CPU MODULE BOARD.



- (b) Then turn the instrument on and the display will show "UPd" (update).



- (c) **USING A PC**

Connect the MIDI OUT of a PC provided with a sequencer software (e.g. Cubase, Audio Logic, see Note #1) to the MIDI IN of EG-101.

Set "On" the transmission of the F8 messages (Sync Out) in the software sequencer provided in your PC.

Load the Program MidiFile "**prg_XXX.mid**" into the sequencer of your PC .

Start Playback in your sequencer.

USING A SOUND BRUSH

Connect the MIDI OUT of a Sound Brush to the MIDI IN of EG-101.

Set your Sound Brush into the "Auto Play = off" as well as into the "Single Mode" modes

Copy the Program MidiFile "**prg_XXX.mid**" onto a floppy disk .

Then insert the floppy disk into the Sound Brush.

Start Playback in your Sound Brush.

- (d) At the end of the Dump operation, the display will show "Upd" again.

- (e) Turn the instrument off, open it and set the 'Flash/ROM' switch back to Flash.

- (f) Turn the instrument on while pressing and keeping pressed the Write button (Factory Setup). The Factory Setup is necessary because during the "Dump" operation the whole content of the RAM memory has been erased.

Program Dump

While dumping the Program the display shows a number increasing from 1 to 6 followed The 'b' character indicates the boot block data.



FLASH UPDATE : STYLE USER - RPS USER - SONG

These procedures do not require the instrument to be turned off.

EG-101 recognizes the System Exclusive message automatically and starts the Update function related to:

Style User
RPS User
Song

When receiving a System Exclusive, the display shows: SYS



The Update function is finished when the SYS message on the display disappears.

ERROR MESSAGGES DURING THE FLASH UPDATE OPERATION



File Not Accepted



Checksum Error



Wrong Model ID



Too Long System Exclusive



Wrong System Exclusive Address



RX Communication Fault



Flash Memory Error



Framing / Over Run Error



Flash Sampler Error

NOTE: ***Should one of the above listed error messages appear during the Flash Update operation, you have to turn the instrument off and start the "Flash Update" procedure again from the beginning.***

FACTORY SETUP

EG-101 is provided with a function called Factory Setup, which retrieves all the settings originally determined by the factory, namely:
STYLE USER PROGRAMS
RPS USER PROGRAMS

Procedure

- a) Turn EG-101 off (Power Off)
- b) Press the **WRITE** button and, while keeping it pressed, turn EG-101 on again.
- c) The display will show the message:



IDENTIFYING THE VERSION NUMBER

Hold down the "DANCE/2" button while turning the instrument on, the display will show the current software FLASH Version number.

AUDIO TEST

- 1) Set the Master Volume Potentiometer to Max.
- 2) Hold down the "Techno/3" button while turning the instrument on, the display will show "AUD".
- 3) A 440 Hz sine wave will be output from the right speaker and a 880 Hz sine wave will be output from the left speaker.
- 4) Connect the oscilloscope across the right speaker and make sure the signal output level is about 3 Vpp.
- 5) Repeat the above operations to check the left channel.

POTENTIOMETER & D-BEAM TEST

- 1) Hold down the "BIG_BEAT/4" button while turning the instrument on.
- 2) Set on the D-beam on button and then place your hand at about a 30-35 cm distance

above the D-Beam sensor and check that the display shows a value equal to zero; if this is not the value shown, adjust the VR1 trimmer on the Main Board so that zero appears on the display when your hand is at the afore-mentioned distance from the D-Beam sensor; move your hand closer and closer to the D-Beam sensor and check that the value shown on the display slowly increases up to 127; this is the maximum level, which is displayed when your hand is only about 3-4 cm away from the D-Beam sensor.

- 3) Move the Control potentiometer (VR5) and check that, when it reaches its Minimum position, a value of '0' is shown on the display, while a value of '255' has to be shown when it reaches its Maximum position.
- 4) Move the Decay potentiometer (VR4) and check that, when it reaches its Minimum position, a value of '0' is shown on the display, while a value of '127' has to be shown when it reaches its Maximum position.

Repeat the operation described in the above point (3) to check the "Cut_Off" (VR3), "Resonance" (VR2) and "Rev_Time" (VR1) potentiometers.