

# HANDSONIC<sup>®</sup> 10

## HPD-10

## SERVICE NOTES

*Issued by RJA*

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**Roland**

17058413E0

Printed in Japan (0440) (SC-KWS)

# Specifications

## HPD-10: HandSonic 10

### Pad

10 inches, 10 sections, Pressure-Sensitive

### Instruments

410

### Kits

64

### Effects

Ambience (5 types)

Multi-Effects (20 types)

### Style Guide Metronome

86 patterns

### Tempo

40--200

### Coach Mode

QUIET COUNT

RHYTHM CHECK

TIME CHECK

PAD FOLLOW

AUTO UP/DOWN

TAP TEMPO

### Controllers

D Beam Controller

Control Knob

### Display

Icon-driven Backlit LCD

### Connectors

Output Jacks (L/MONO, R)

Phones Jack (Stereo)

Mix In Jack (Stereo)

Trigger Input/Foot Sw Jack (Dual)

MIDI Connectors (IN, OUT)

### Power Supply

AC Adaptor (DC 9 V)

### Current Draw

350 mA

### Dimensions

323 (W) x 427 (D) x 75 (H) mm

12-3/4 (W) x 16-13/16 (D) x 3 (H) inches

### Weight

2.9 kg / 6 lbs 7 oz (excluding AC adaptor)

### Accessories

Owner's Manual English (#04129645)

AC Adaptor

For 117V U	#00905767	ACI-120C
For 117V U/CS	#00905767	ACI-120C
For 230V E	#03017356	PSB-1U (without AC Cord)
	#01903356	AC CORD SET 230V 1.0M FOR PSB
	#00905234	EURO CONVERTER PLUG
For 230V EU	#01018312	ACI-230C
For 240V A	#03017356	PSB-1U (without AC Cord)
	#03785590	AC CORD SET SC-078-NA05 240VA

### Options

Owner's Manual Japanese (#04129623)

Pad Stand (PDS-10)

Carrying Bag (CB-HPD-10)

Foot Switch (BOSS: FS-5U, FS-6)

Pedal Switch (DP-2)

Kick Triggers (KD-7, KD-8, KD-85BK/WT, KD-120BK/WT)

Pads (PD-8, PDX-8, PD-85BK/WT, PD-105BK/WT, PD-125BK/WT)

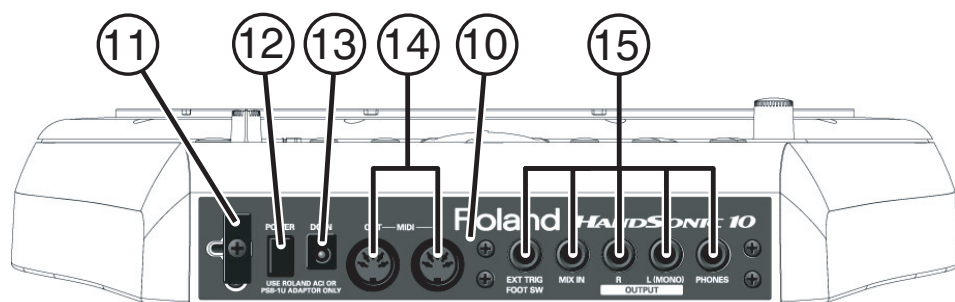
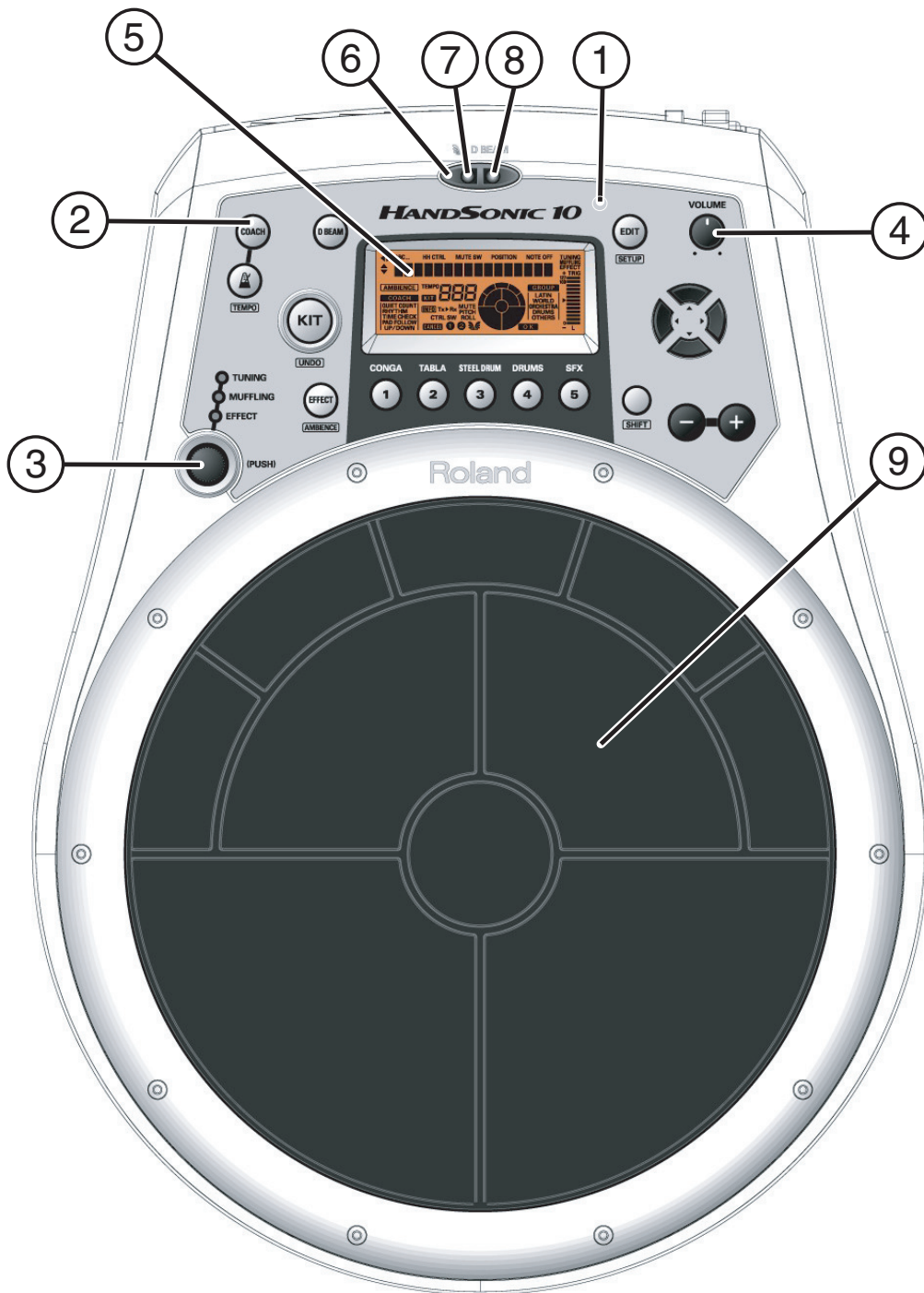
Cymbals (CY-5, CY-8, CY-12R/C, CY-14C, CY-15R)

Connection Cable (PCS-31L)

\* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.



# Location of Controls



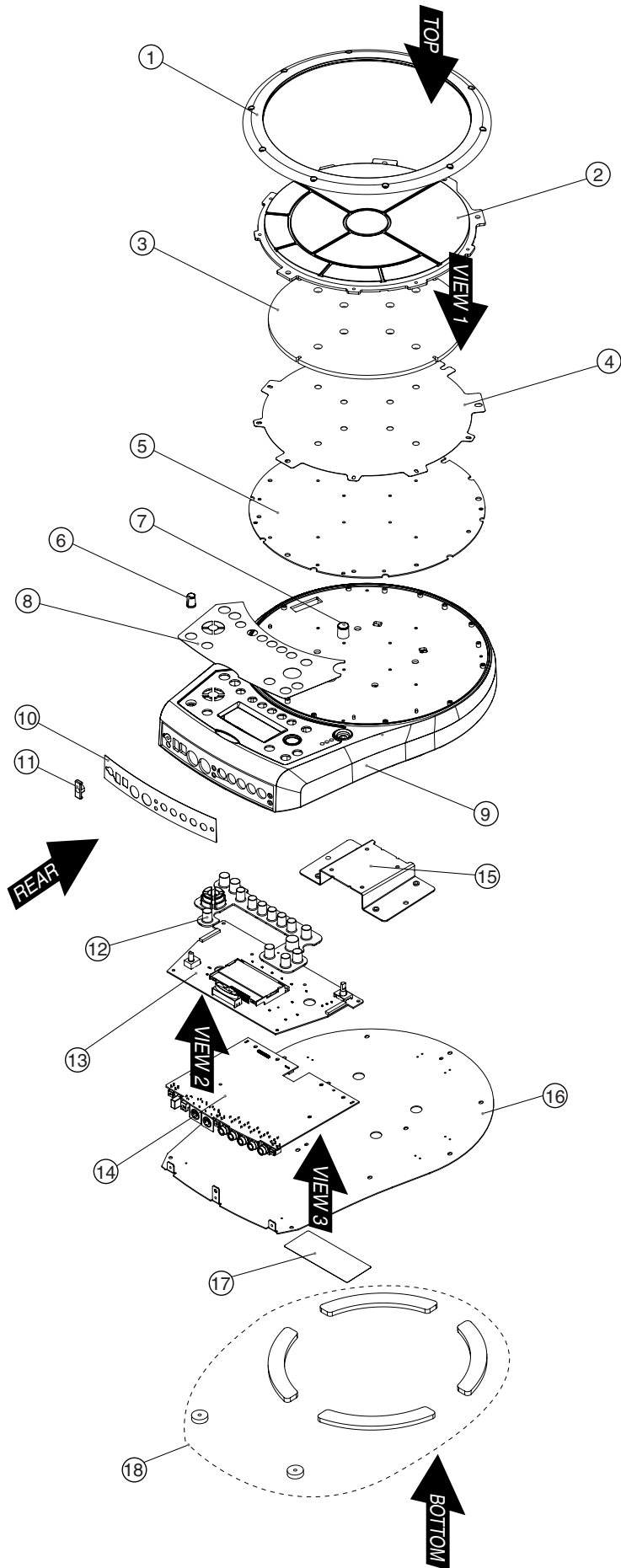
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## Location of Controls Parts List

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No		PART CODE	PART NAME	DESCRIPTION	Q'TY
1	#	04129545	TOP PANEL		1
2	#	04129589	RUBBER SW		1
3		03565789	M R-KNOB	LF-ELA BLK	1
4		03125589	M R-KNOB	MF-ELA BLK/LCG	1
5	#	73129523	PANEL BOARD ASSY	includes the LCD	1
6	#	04129445	ESCUTCHEON	D-BEAM CONTROLLER	1
7		03126134	LED(INFRARED)	TLN233(F)	1
8		01900612	DIODE	TPS611(F)	1
9	#	04124990	PLAYING PLATE		1
10	#	04129556	REAR PANEL		1
11		22365714	CORD HOOK		1
12		12499175	BUTTON	JSPUE0011A	1
13		13449711	AC ADAPTOR JACK	HEC0470-01-630	1
14		02892878	DIN(MIDI) JACK	2DJ-00600003	2
15		00569278	6.5MM JACK	LGR4609-7100F	5

# Exploded View (1)



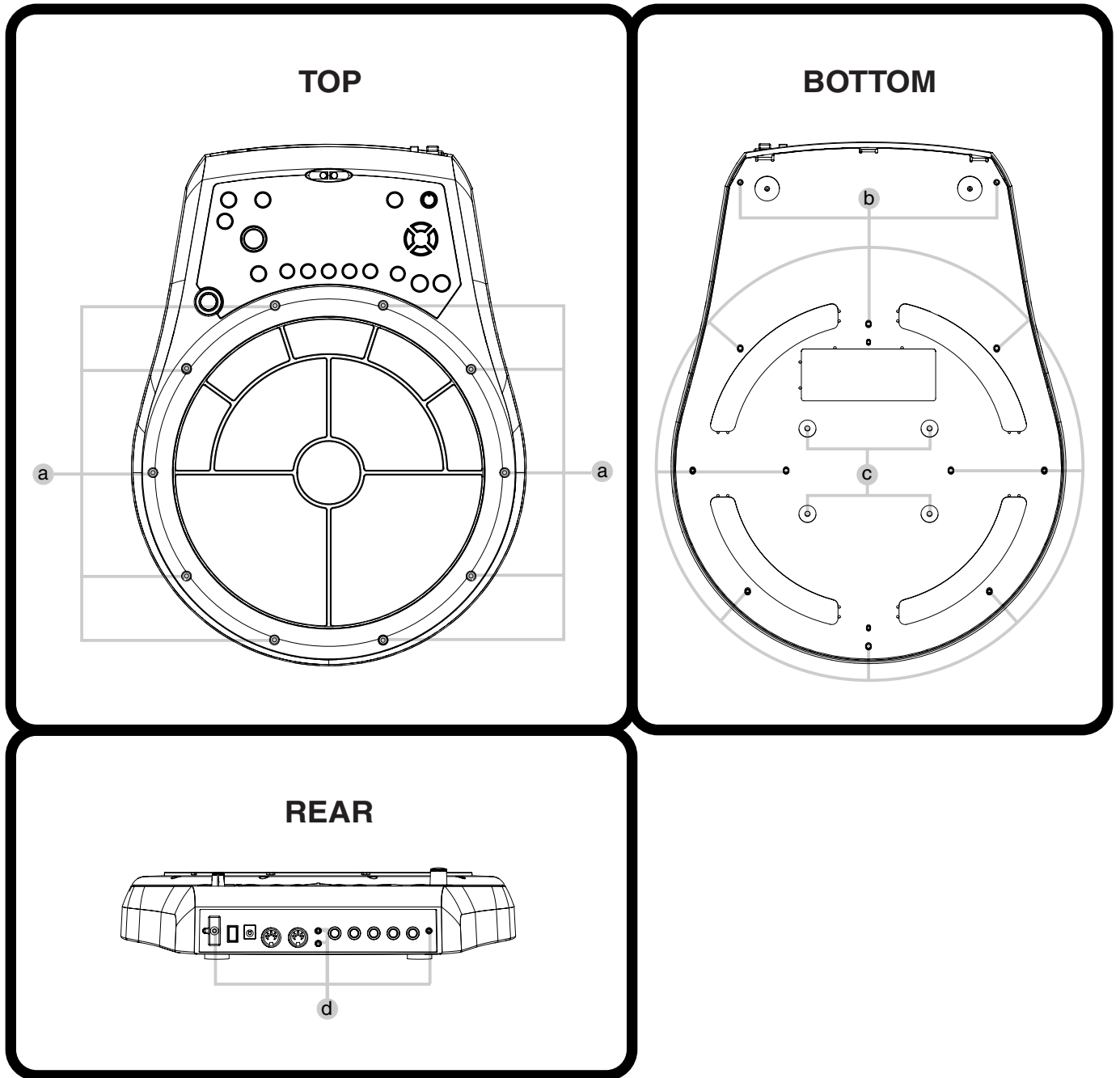
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**Exploded View (1) Parts List**

---

No		PART CODE	PART NAME	DESCRIPTION	Q'TY
1	#	04129423	PAD HOOP		1
2	#	04124990	PLAYING PLATE		1
3		01900234	CUSHION		1
4		01900245	PRESSURE SHEET SENSOR		1
5	#	73129489	SENSOR BOARD ASSY		1
6		03125589	M R-KNOB	MF-ELA BLK/LCG	1
7		03565789	M R-KNOB	LF-ELA BLK	1
8	#	04129545	TOP PANEL		1
9	#	04129412	TOP CASE		1
10	#	04129556	REAR PANEL		1
11		22365714	CORD HOOK		1
12	#	04129589	RUBBER SW		1
13	#	73129523	PANEL BOARD ASSY		1
14	#	73129501	MAIN BOARD ASSY		1
15	#	04129534	STAY HOLDER		1
16	#	04129567	BOTTOM COVER		1
17	#	40673812	CAUTION LABEL S		1
18	#	73237490	FOOT ASSY		1

# Exploded View (2)

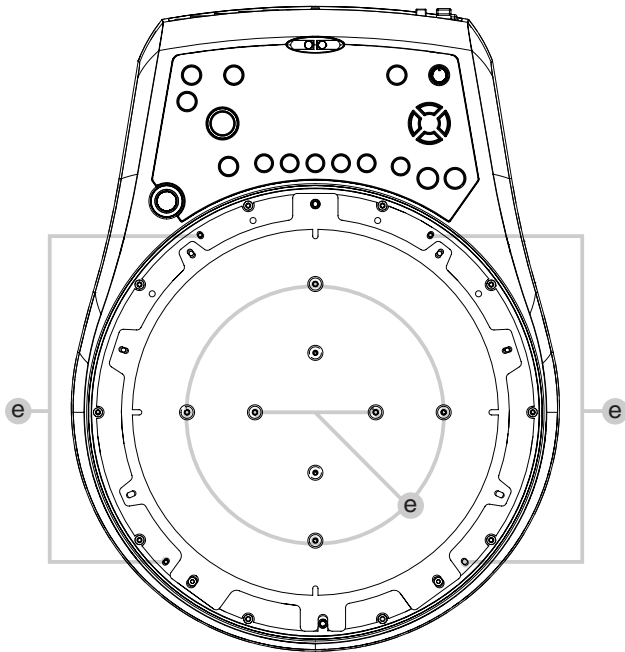


NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	02126156	SCREW M3X10	HEX SOCKET HEAD CAP TAPTITE P	10
b	40011245	SCREW 4X12	BINDING P-TITE FE NI	12
c	40238145	SCREW M5X12	TRUSS BZC	4
d	40340812	SCREW M3X10	PAN MACHINE W/SW BZC	4

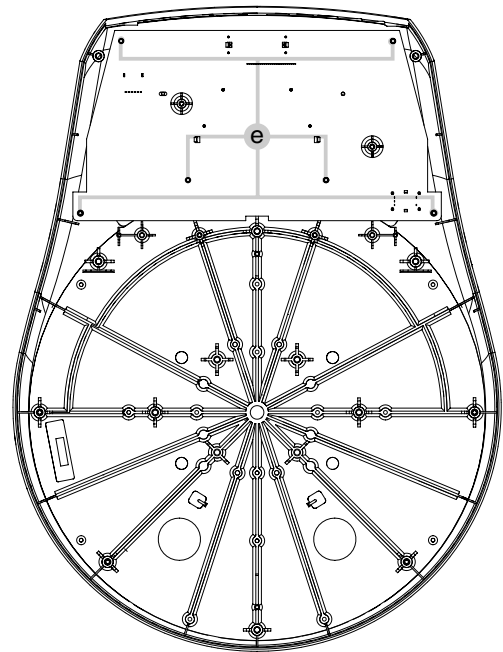


# Exploded View (3)

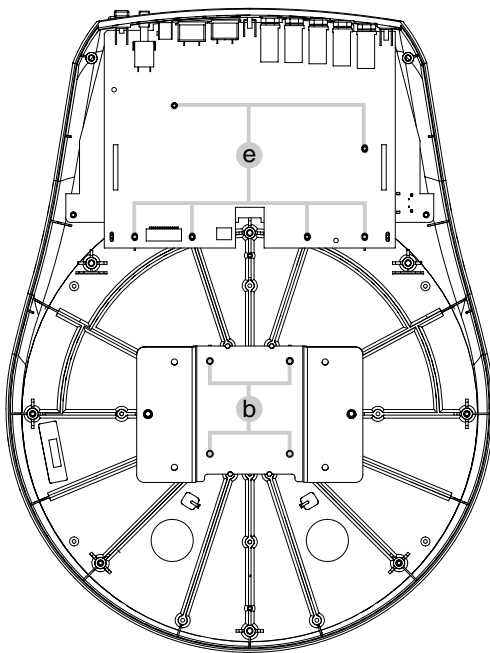
VIEW 1



VIEW 2

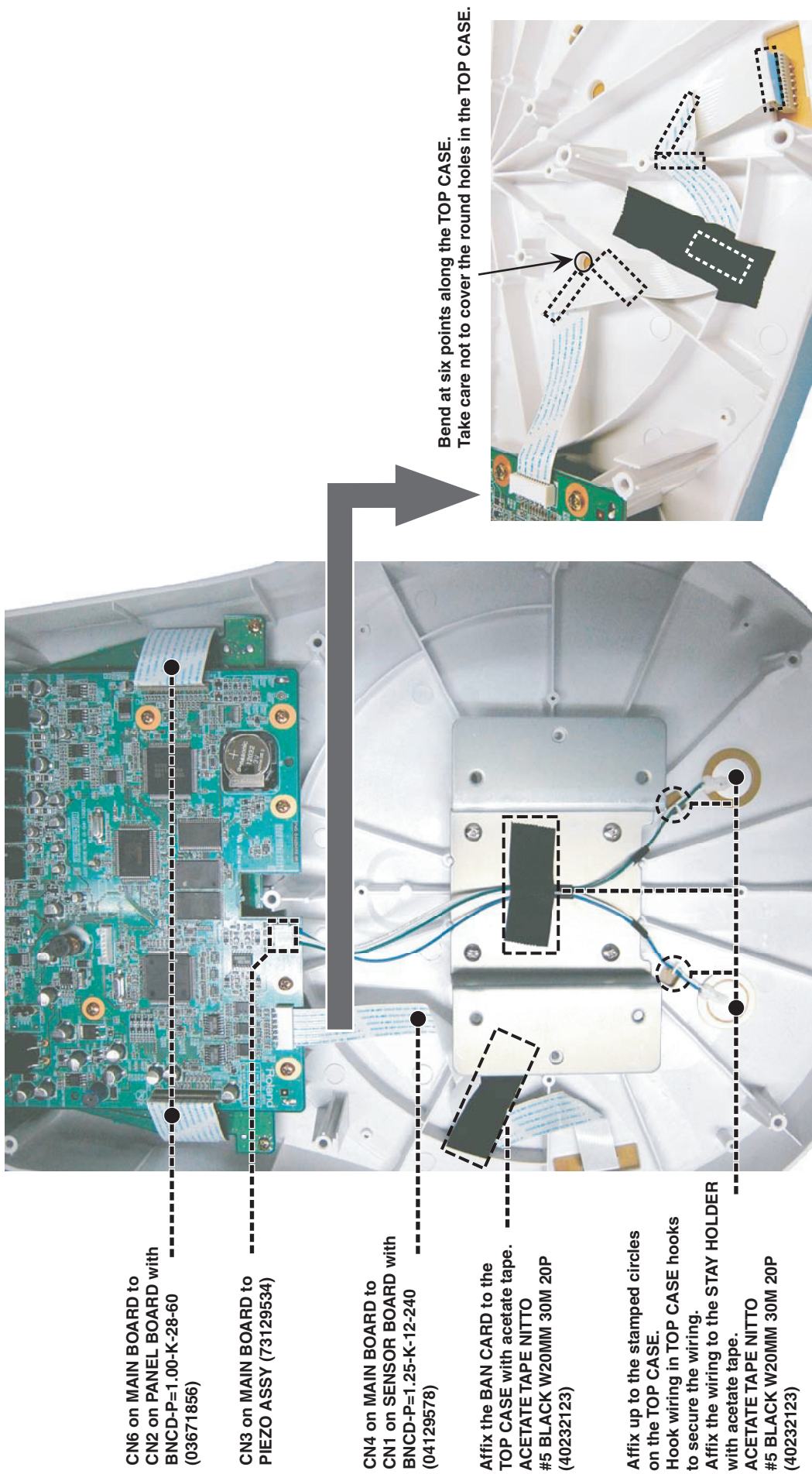


VIEW 3



NO.	PART CODE	PART NAME	DESCRIPTION	QTY
b	40011245	SCREW 4X12	BINDING P-TITE FE NI	4
e	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC	22

# Wiring Diagram



# Parts List

SAFETY PRECAUTIONS:  
The parts marked  $\Delta$  have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons, parts with parts code \*\*\*\*\* cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

NOTE: The parts marked # are new. (initial parts) The description "Q'TY" means a necessary number of the parts per one product.

CASING					
#	04129445	ESCUTCHEON	D-BEAM CONTROLLER		1
#	04129567	BOTTOM COVER			1
#	04129423	PAD HOOP			1
#	04129556	REAR PANEL			1
#	04129412	TOP CASE			1
#	04129545	TOP PANEL			1
#	04124990	PLAYING PLATE			1
CHASSIS					
#	*****	LCD HOLDER			1
		* The LCD HOLDER is included in the PANEL BOARD ASSY (#73129523). Order the PANEL BOARD ASSY.			
#	04129534	STAY HOLDER			1
KNOB, BUTTON					
	03125589	M R-KNOB	MF-ELA BLK/LCG		1
	03565789	M R-KNOB	LF-ELA BLK		1
	12499175	BUTTON	JSPUE0011A		1
#	04129589	RUBBER SW			1
SWITCH					
	01676512	PUSH SWITCH	SDKLA10200	SW1 on MAIN	1
JACK, EXT TERMINAL					
	00569278	6.5MM JACK	LGR4609-7100F	JK2, 3, 4, 7, 8 on MAIN	5
	13449711	AC ADAPTOR JACK	HEC0470-01-630	JK1 on MAIN	1
	02892878	DIN(MIDI) JACK	2DJ-00600003	JK5, 6 on MAIN	2
DISPLAY UNIT					
#	*****	LCD	LMC-SSC16104DFG		1
		* The LCD is included in the PANEL BOARD ASSY (#73129523). Order the PANEL BOARD ASSY.			
PWB ASSY					
#	73129501	MAIN BOARD ASSY			1
#	73129489	SENSOR BOARD ASSY			1
#	73129523	PANEL BOARD ASSY			1
		* The PANEL BOARD ASSY includes the following parts.			
		***** LCD			
		***** LCD HOLDER			
		04129445 ESCUTCHEON			
		12169368 LED SPACER			
TRANSISTOR					
	00897201	TRANSISTOR	2SA1706S-AN	Q3 on MAIN	1
DIODE					
	01900612	DIODE	TPS611(F)	IC2 on PANEL	1
	03126134	LED(INFRARED)	TLN233(F)	LED1 on PANEL	1
POTENTIOMETER					
	02891812	12M/M ROTARY POTENTIOMETER	RK12L12C0C08	VR1 on PANEL	1
INDUCTOR, COIL, FILTER					
	01672889	CHOKE COIL	SBC3-221-681	L5 on MAIN	1
	12449347	FERRITE-BEAD	EXC ELDR35V	L4 on MAIN	1
	02780389	CHOKE COIL	ELC10D470E	L6 on MAIN	1

<b>ENCODER</b>					
	03231912	ROTARY ENCODER W/SW	R-ENCODER EVQB1SZ1720B	EN1 on PANEL	1
<b>CONNECTOR</b>					
	13369664	CONNECTOR	S4B-PH-K-S(LF/SN)(4P)	CN3 on MAIN	1
	02012056	CONNECTOR	CONNECTOR 28FMN-BTK-A	CN5, 6 on MAIN	2
	02564678	CONNECTOR	12FE-ST-VK-N	CN4 on MAIN	1
<b>WIRING, CABLE</b>					
#	04129578	BAN CARD	BNCD-P=1.25-K-12-240		1
	03671856	BAN CARD	BNCD-P=1.00-K-28-60		2
<b>PICK UP, SENSOR</b>					
#	73129534	PIEZO ASSY			1
	01900245	PRESSURE SHEET SENSOR			1
<b>SCREWS</b>					
	40238145	SCREW M5X12	TRUSS BZC		4
	40340812	SCREW M3X10	PAN MACHINE W/SW BZC		4
	02126156	SCREW M3X10	HEX SOCKET HEAD CAP TAPTITE P		10
	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC		22
	40011245	SCREW 4X12	BINDING P-TITE FE NI		18
<b>PACKING</b>					
#	04234890	LOWER PAD			1
#	04234923	OUTER PACKING CASE			5
#	04234878	PACKING CASE			1
#	04234889	UPPER PAD			1
<b>MISCELLANEOUS</b>					
	12199584	GROUNDING TERMINAL	M1698	TER1, TER2, TER3 on MAIN	3
	12169368	LED SPACER	LDS-40B		2
!	02567234	LITHIUM BATTERY	CR2032		1
	02567267	BATRY HOLDER	BCR20H4	BH1 on MAIN	1
	22365714	CORD HOOK			1
#	04234912	ACCESSORY CASE			1
	01900234	CUSHION			1
#	73237490	FOOT ASSY			1
#	40673845	LOGO LABEL S			2
#	40673812	CAUTION LABEL S			1
<b>ACCESSORIES (Standard)</b>					
#	04129623	OWNER'S MANUAL	JAPANESE		1
#	04129645	OWNER'S MANUAL	ENGLISH		1
	40232334	WARRANTY CARD	MOCHIKOMI JAPAN ONLY		1
!	00905756	AC ADAPTOR	ACI-100C	for 100V	1
!	00905767	AC ADAPTOR	ACI-120C	for 117V U, 117V U/CS	1
!	03017356	AC ADAPTOR WITHOUT AC CORD	PSB-1U(R) UNIVERSAL	for 230V E, 240V A	1
	01903356	AC CORD SET	230V 1.0M FOR PSB	for 230V E	1
	00905234	EURO CONVERTER PLUG	ECP01-5A	for 230V E	1
!	01018312	AC ADAPTOR	ACI-230C	for 230V EU	1
	03785590	AC CORD SET	SC-078-NA05 240VA	for 240V A	1
<b>ETC</b>					
	40231345	BOND	KONISHI BOND CYEREX100 330ML		
	40236878	KONISHI CYEREX 100	120ML		
	40232123	ACETATE TAPE	NITTO #5 BLACK W20MM 30M 2P		

## Checking the Version Number

1. While holding down [EFFECT], [3 (STEELDRUM)] and [EDIT] at the same time, turn on the power switch.  
Hold down [EFFECT], [3 (STEELDRUM)] and [EDIT] until the following message appears in the LCD display.

### HPD-10 Service

2. Press [ ▲ ], and next press [ ▼ ].  
Then you've entered the test mode.



If you press the wrong switches or press them in wrong order, you cannot enter the test mode. Then return back to the first step.

3. Press [1 (CONGA)], [2 (TABLA)] and [3 (STEELDRUM)], then check the each version of CPU, FLASH and WAVE.  
After checking the version number, turn off the power.

## User Data Save and Load

### Data backup

Connect the MIDI OUT connector of HPD-10 and the MIDI IN connector of the external MIDI sequencer (saving destination) with a MIDI cable.

1. While holding down [SHIFT], press [EDIT]. After that, press [ ▼ ] repeatedly until you see **BULK DUMP** in the display.
2. Press [ ► ], then use the [+]/[-] buttons to select **All** (the type of data).  
**All** Setup, All User Kit
3. Press the [ ▼ ] cursor, then the confirming message appears.
4. Press [4 (DRUMS)] (OK) to execute, or press [2 (TABLA)] (CANCEL) to cancel the operation.

### Data restore

This restores the User Data saved with the Data backup to the HPD-10's User Area.

Connect the MIDI IN connector of HPD-10 and the MIDI OUT connector of the external MIDI sequencer (saving destination) with a MIDI cable.

1. Use an external sequencer to play back the saved Exclusive data.  
The HPD-10 automatically receives the data.  
While the data is loading, the message "bulk loading.." appears in the LCD screen; loading is finished when the original screen returns to the LCD.

## Factory Reset Instructions



This resets all parameters to the original factory version. You can not use Undo after executing this function.

1. While holding down the [SHIFT] button, press [EDIT]. After that, hold down [ ▼ ] until the message of **FACTORY RESET** appears in the LCD display.
2. Press [ ► ], then use the [+]/[-] buttons to select the type of data.  
**SETUP** Setup  
**ALL KITS** All User Kits  
**ALL** Setup, All User Kits
3. Press [ ▼ ], then the confirming message appears. Press [4 (DRUMS)] (OK) to execute, or press [2 (TABLA)] (CANCEL) to cancel the operation.
4. The confirming message will appear again, then press [4 (DRUMS)] (OK) to execute, or press [2 (TABLA)] (CANCEL) to cancel the operation.

## System Software Updating Instructions

### Items Required

- HPD-10 Update Disk Set (#17041820)
- MIDI sequencer compatible for SMF (Example)  
Hardware sequencer: XP-50/60/80, MC-80, etc.  
Software sequencer: UpdSMF.exe  
(Refer to the Service Information #102333)

### Note for User Data



Contents of the User Memory are need to be deleted after system updating. Make a backup of User Data with bulkdump function before updating.

### Creating a Update Disk

If you use XP-50/60/80 or MC-80 for MIDI sequencer, copy files in the "HPD-10 Update Disk Set" to a floppy disk by following procedure.

1. Turn on the power of the PC.
2. Insert a floppy disk into the PC and initialize it.
3. Insert the "HPD-10 Update Disk Set" UPDATE CD-ROM into the PC. And Open the "SMF" folder.
4. Copy the all files in the "SMF" folder to the floppy disk.

### Operation procedure

1. Connect the MIDI OUT connector of the MIDI sequencer and the MIDI IN connector of the HPD-10 with a MIDI cable.
2. While holding down [EFFECT], [2 (TABLA)] and [4 (DRUMS)] at the same time, turn on the power of the HPD-10.  
The message of "MIDI Update mode" appears in the LCD display. And after two seconds, "Please send SMF" message appears.
3. Play back the first SMF file in the Update Disk with the MIDI sequencer.

While receiving the SMF, the message of "Receiving: 1/8" appears.

The [KIT] LED is turned on.

Receiving progress of MIDI data are shown in the [METRONOME] LED.

When the receiving is completed, the message of "Updating: 1/8" appears and the writing of the receiving data begins.

The [KIT] LED is turned off.

The [EFFECT] LED is turned on.

After writing data for one file is completed, the message of "Updating: ok 1/8" appears.

The [EFFECT] LED is turned off.

The LED corresponding to block (file) is turned on.

[1 (CONGA)]	Block 1
[2 (TABLA)]	Block 2
[3 (STEEL DRUM)]	Block 3
[4 (DRUMS)]	Block 4
[5 (SFX)]	Block 5
[TUNING]	Block 6
[MUFLING]	Block 7
[EFFECT]	Block 8

After writing data for one file is completed, HPD-10 will be on stand-by waiting for next data and shows message "Waiting: 2/8."

- Play back the second SMF file.
- Repeat the step 3 and 4 to complete the all update procedures of eight files.

If the all data is received and checksum is right, the message of "Completed! v\*.\*\*" will appear. And the version will appear in the right side of the LCD display.

## Error messages

- LED corresponding to the block in which any errors occur on system updating blinks.
 

[1 (CONGA)]	Block 1
[2 (TABLA)]	Block 2
[3 (STEEL DRUM)]	Block 3
[4 (DRUMS)]	Block 4
[5 (SFX)]	Block 5
[TUNING]	Block 6
[MUFLING]	Block 7
[EFFECT]	Block 8
  - Block Checksum Error  
**"Error!: Blocksum"**  
 Checksum of the block into which data received is wrong.
  - Flash Memory Erase Error  
**"Error!: Erase"**  
 A mistake is made on erasing flash memory.
  - Flash Memory Write Error  
**"Error!: Write"**  
 A mistake is made on writing flash memory.
  - Total Checksum Error  
**"Error!: TotalSum"**  
 Checksums of the data in all block are wrong.
- Turn off and on the power of HPD-10, carry out the test mode procedure.

## Recovering of a mistake for system updating

Turn off the power of HPD-10, and carry out the updating procedure.

## Test Mode

### Items Required

- PD-8 x 2
- FS-5U x 2
- drum stick
- MIDI cable
- PCS-31
- stereo cable
- headphones
- monitor speaker x 2
- oscillator or audio equipment (portable CD player, etc.)



Contents of the User Memory are need to be deleted after Test Mode. Make a backup of User Data with bulkdump function before updating.

### Entering Test Mode

While holding down [EFFECT], [3 (STEELDRUM)] and [EDIT] at the same time, turn on the power switch. Hold down [EFFECT], [3 (STEELDRUM)] and [EDIT] until the following message appears in the LCD display.

#### HPD-10 Service

Press [ ▲ ], and next press [ ▼ ]. Then you've entered the test mode.

- \* If you press the wrong switches or press them in wrong order, you cannot enter the test mode. Then return back to the first step.

### Exiting Test Mode

You can exit from any section of Test Mode by turning off the power; however, you have to carry out the Factory Reset after finishing Test Mode procedure.

### Test Items

- Version [1. Version]
- Device Test [2. Device]
- MIDI Test [3. MIDI]
- Foot Switch Test [4. Foot Switch]
- Ext Trigger Test [5. Ext Trigger]
- Sound Test [6. Sound]
- Switch/LED Test [7. Switch & LED]
- Encoder/LCD Test [8. Encoder & LCD]
- Pad Pressure Test [9. Pad Pressure]
- Pad Velocity Test [10. Pad Velocity]
- D-Beam Test [11. D-Beam]
- Factory Reset [12. Factory Reset]

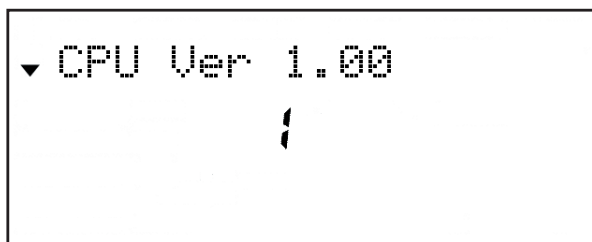
### Skipping

- Skip to the next test item: [SHIFT] + [+] or [SHIFT] + [ ▶ ]
- Skip to the previous test item: [SHIFT] + [-] or [SHIFT] + [ ◀ ]
- Re-do the current test item: [SHIFT] + [ ▲ ]
- Re-do the current NG test item: [SHIFT] + [ ▼ ]

## Details for Tests

### (1) Version [1. Version]

1. Check the version.



2. Press [1 (CONGA)], [2 (TABLA)] and [3 (STEELDRUM)] to check the each version of CPU, FLASH and WAVE.

Usually, check the program version number.

After checking the all version numbers, press [4] to go to the next section.

**CPU:** CPU version number

**FLASH:** Program version number

**WAVE:** Wave ROM version number

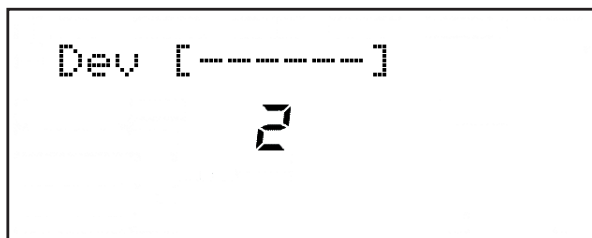
### (2) Device Test [2. Device]

The test of this section is executed automatically.

#### Test items

- **CPU:** Checking checksum
- **FLASH:** Checking checksum
- **WAVE:** Checking reading
- **SRAM:** Checking writing/reading
- **MR3:** Checking internal memory
- **BATTERY:** Checking voltage of battery

If the item passes the test, the corresponding symbol changes from “-” to “o”; if the item doesn’t pass, the following symbol is displayed. If all items pass, the test advances to the next section automatically.

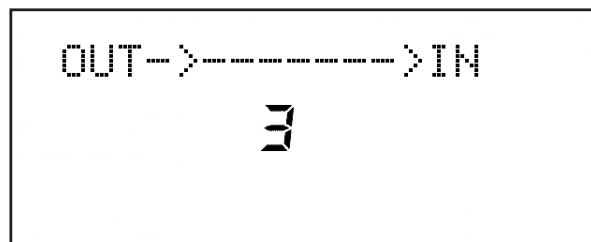
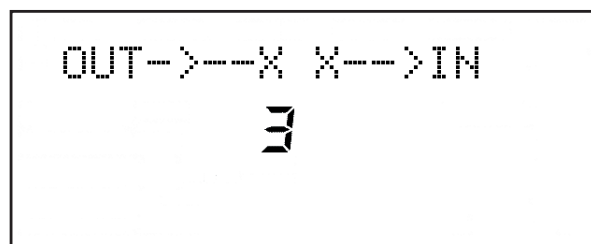


#### Display the NG items

- C:** CPU NG
- F:** FLASH NG
- W:** WAVE ROM NG
- S:** SRAM NG
- M:** MR3 NG
- B:** Battery NG

### (3) MIDI Test [3. MIDI]

1. Connect MIDI IN and MIDI OUT with a MIDI cable.  
Signal flow is detected and the following message appears in the LCD display.



2. Pull out the MIDI connector.  
Cutting off the signal flow is detected and the test advances to the next section automatically.

**(4) Foot Switch Test [4. Foot Switch]**

1. Connect the white plug and red plug of PCS-31 to two each FS-5U, and connect the black plug to the EXT TRIG/FOOT SW jack of the HPD-10.
2. Step on the two FS-5U one by one.

```
FootSw (1)(2)
      4
```



```
FootSw (o)(2)
      4
```



```
FootSw ( _ )(2)
      4
```

**NOTE**

If you step on both pedals at a time, the test result comes to NG.

```
FootSw (x)(x)NG!
      4
```

If the test passes, the test program advances to the next section automatically.

**(5) Ext Trigger Test [5. Ext Trigger]**

1. Connect the white plug and red plug of PCS-31 to two each PD-8, and connect the black plug to the EXT TRIG/FOOT SW jack of the HPD-10.
2. Hit the pads one by one with drum stick.

```
ExtTrig(1)(2)
      5
```



```
ExtTrig(o)(2)
      5
```



```
ExtTrig( _ )(2)
      5
```

**NOTE**

If you hit both pads at a time, the test result comes to NG. Wait for one second and more before hitting the second pad.

```
ExtTrig(x)(x)NG!
      5
```

If the test passes, the test program advances to the next section automatically.

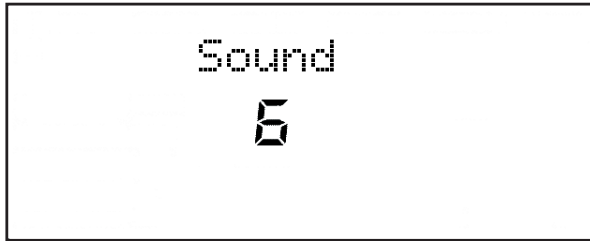


## (6) Sound Test [6. Sound]



Look out for the big sound.

1. Make sure no audio signal is coming out from the HPD-10.



2. Press [1 (CONGA)], then audio signal (sine wave) comes out from the HPD-10.



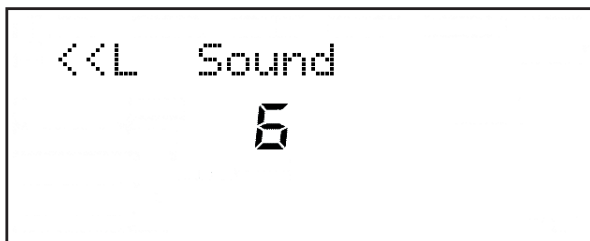
Check the audio signals from Output L/R and Phones L/R come out. And also, check the volume are changed while rotating the volume knob.

3. Press [EFFECT] to check the output signal is muted.



Sound is distorted from the [EFFECT] button is released until the mute is canceled actually; however, it's a normal action.

4. Press [2 (TABLA)] and check the only L channel sounds.



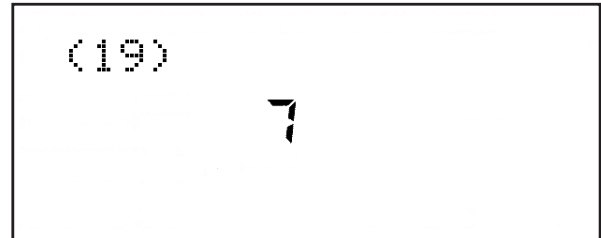
5. Press [3 (STEELDRUM)] and check the only R channel sounds.



6. Connect the oscillator or the portable CD player to the MIX IN connector with a stereo cable, and put in the audio signal. Check the input signal comes out from the OUTPUT connector without changing.
7. If the test passes, press [4 (DRUMS)] to advance to the next section.

## (7) Switch & LED Test [7. Switch & LED]

All LED turn on.



1. Press each switch one at a time; each time a switch is pressed, the switch name is indicated, and the remaining number of switches indicated in parentheses decreases one by one. Continue to press the switches with LEDs lit, and confirm that when the last LED goes out, the number of remaining switches indicated in the parentheses is (8).

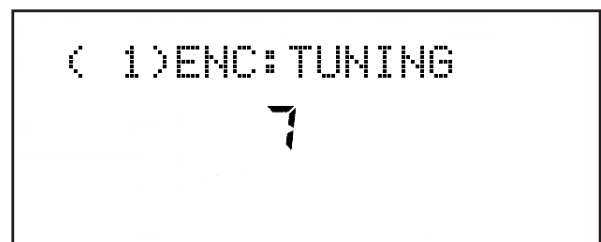
Example of the [COACH] button being pressed



If the plural switches are pressed at the same time, these switches won't pass the test.



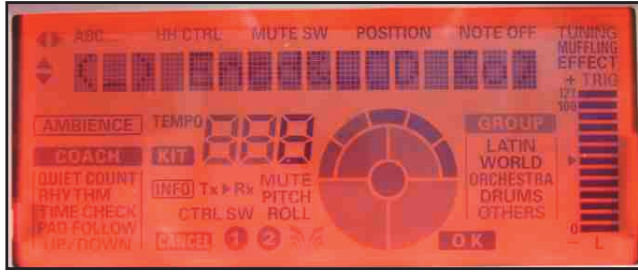
2. Press [SHIFT], [+], [-] and cursor buttons in that order; confirm that the number of remaining switches indicated in the parentheses is (1).
3. Press the [ENCODER] switch three times and confirm that the LEDs for [TUNING], [MUFFLING], and [EFFECT] go out in that sequence.



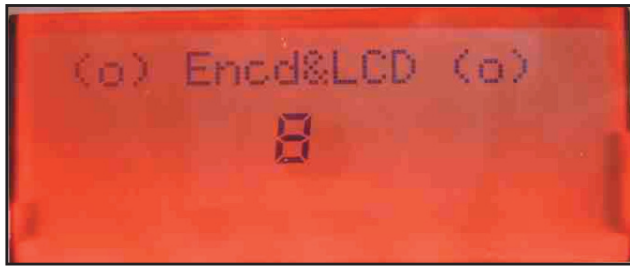
If all of the test items pass, the test advances to the next section automatically.

### (8) Encoder/LCD Test [8. Encoder & LCD]

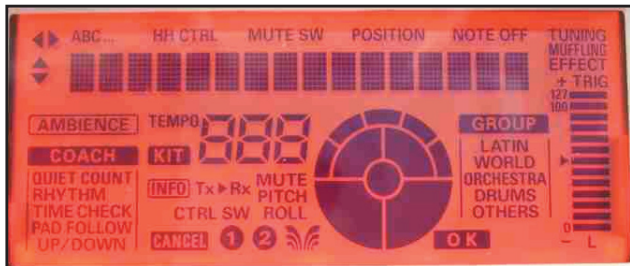
1. Gradually rotate the Encoder to the right (clockwise). Rotate the knob until the level meter is completely lit, and confirm that the LCD contrast darkens.



2. Gradually rotate the Encoder to the left (counterclockwise). Rotate the knob until the level meter is completely off, and confirm that the LCD contrast becomes lighter.



3. Press [1 (CONGA)] to check all segments in the LCD turn on.



4. Press [2 (TABLA)] to check all segments in the LCD turn off.



**NOTE**

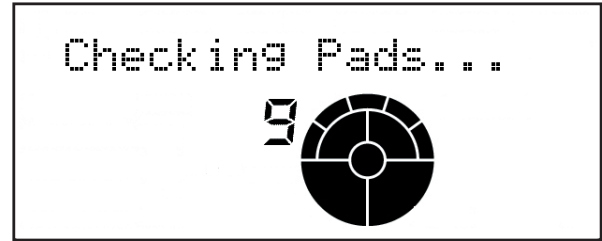
If you press [3 (STEELDRUM)], the LCD goes back to the initial condition.

5. If the test passes, press [4 (DRUMS)] to advance to the next section.

### (9) Pad Pressure Test [9. Pad Pressure]

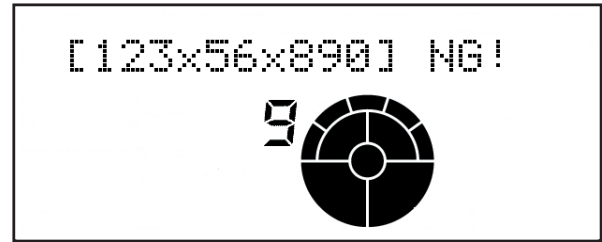
The test program automatically checks whether or not the pressure value changes.

If the test passes, the test program advances to the next section automatically.



**NOTE**

If any pad is being touched at the time the test begins, the test fails (NG) and the pad failing the test is indicated as flashing in the LCD.



1. Press each pad with gradually increasing pressure. Press value and level meter appear in the LCD display.

[FLASH Ver. 1.01 or later]

Pressure	Pressure Value	LED
Weak	3-7	[EFFECT] turns on
Middle	22-45	[KIT] turns on
Strong	60-111	[D-BEAM] turns on

When the values for the three levels are reached, the pad passes the test and the LCD for the pad goes off.

[FLASH Ver. 1.00]

Pressure	Pressure Value	LED
Weak	5-15	[EFFECT] turns on
Middle	55-65	[KIT] turns on
Strong	95-105	[D-BEAM] turns on

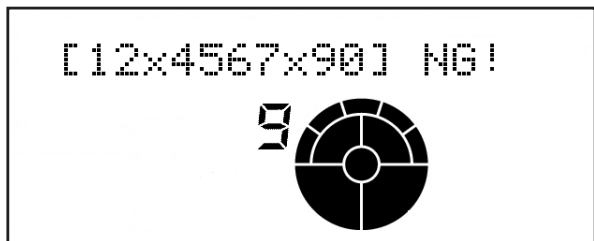


**NOTE**

The test doesn't return OK unless the value reads 0 when you release the pad.

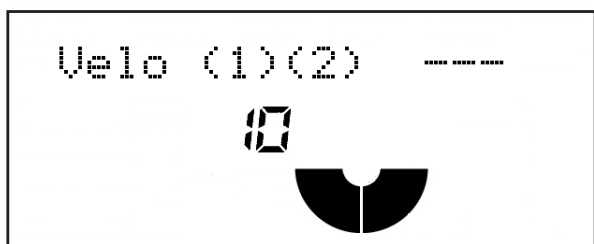
**NOTE**

The test doesn't return OK if two or more pads respond simultaneously.



2. If all pads are passed, press [4 (DRUMS)] to go to the next section.

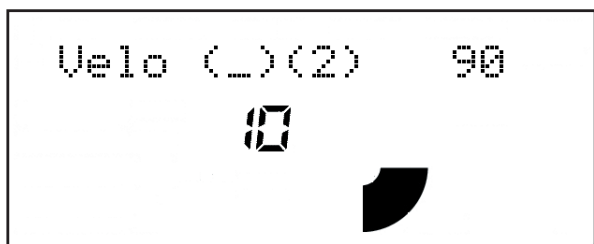
**(10) Pad Velocity Test  
[10. Pad Velocity]**



1. Strike the two large pads built-in piezo sensors (M1, M5) with weak, middle, and strong force.  
Velocity value and level meter appears in the display.

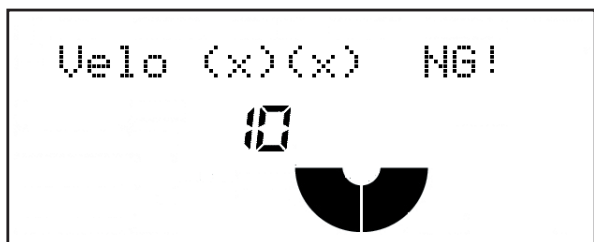
Hitting	Velocity Value	LED
Weak	0--20	[EFFECT] turn on
Middle	21--41	[KIT] turn on
Strong	42--127	[D-BEAM] turn on

When the values for the three levels are reached, the pad passes the test and the LCD for the pad goes off.



**NOTE**

The test doesn't return OK if two or more pads respond simultaneously.



If all of the test items passes, the test program advances to the next section automatically.

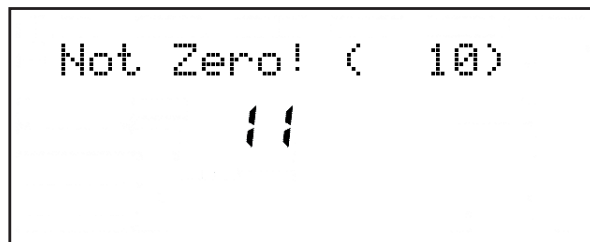
**(11) D-Beam Test [11. D-Beam]**

The test program automatically checks whether or not the D-Beam value is 0 (checks the optical receptor circuit when the emission of D-Beam light is stopped).

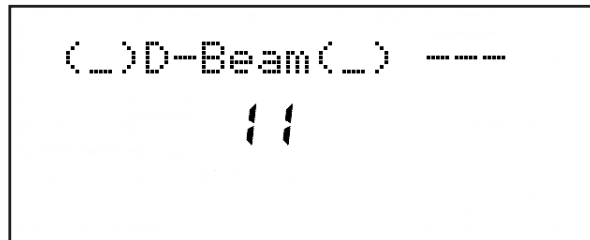


**NOTE**

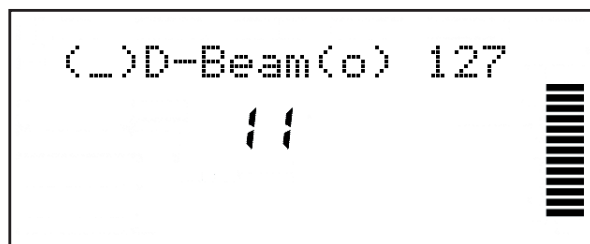
If the D-Beam value is not 0, the test fails and the D-Beam value appears.



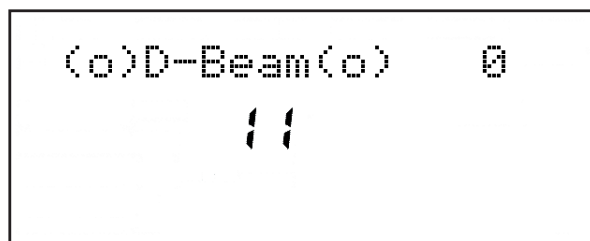
If the test passes, the following message appears in the display.



1. Hold your hand over the D-Beam; the value is displayed. Bring your hand up to the D-Beam and confirm that the value changes until it reaches 127.



2. Pull your hand away from the D-Beam and confirm that the value changes until it reaches 0.



If the test passes, the test program advances to the next section.

**(12)Factory Reset [12. Factory Reset]**

1. Press [4 (DRUMS)] to execute Factory Reset and return the settings to their factory default values.



If any test item has failed to return OK, the following message appears in the display.



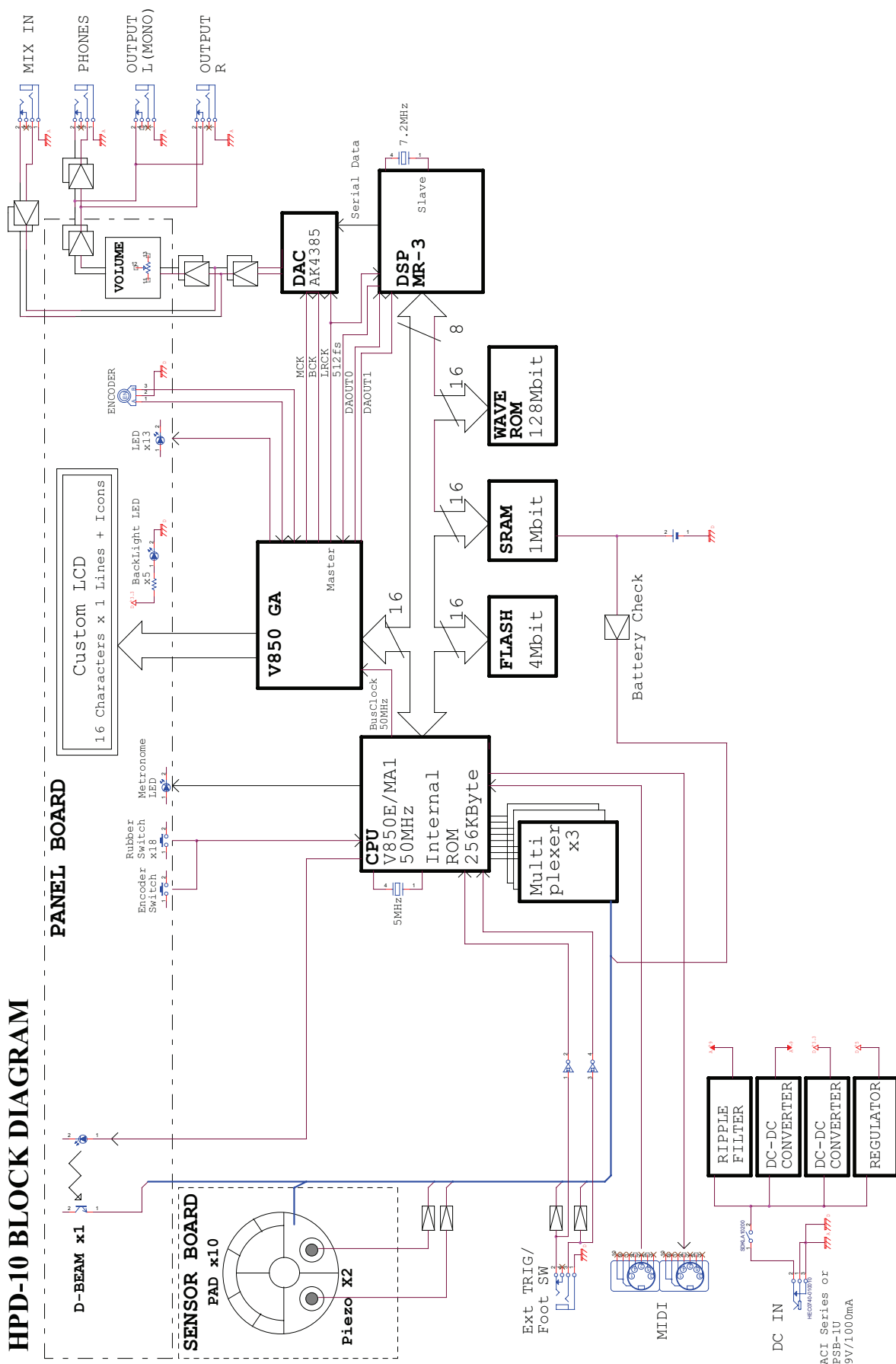
If you want to repeat any test, press [SHIFT] + [-] or [SHIFT] + [◀] to carry out the corresponding test.

If you don't want to repeat any test, confirm the display and then turn off the power to the unit as is (Factory Reset is also executed in this case).

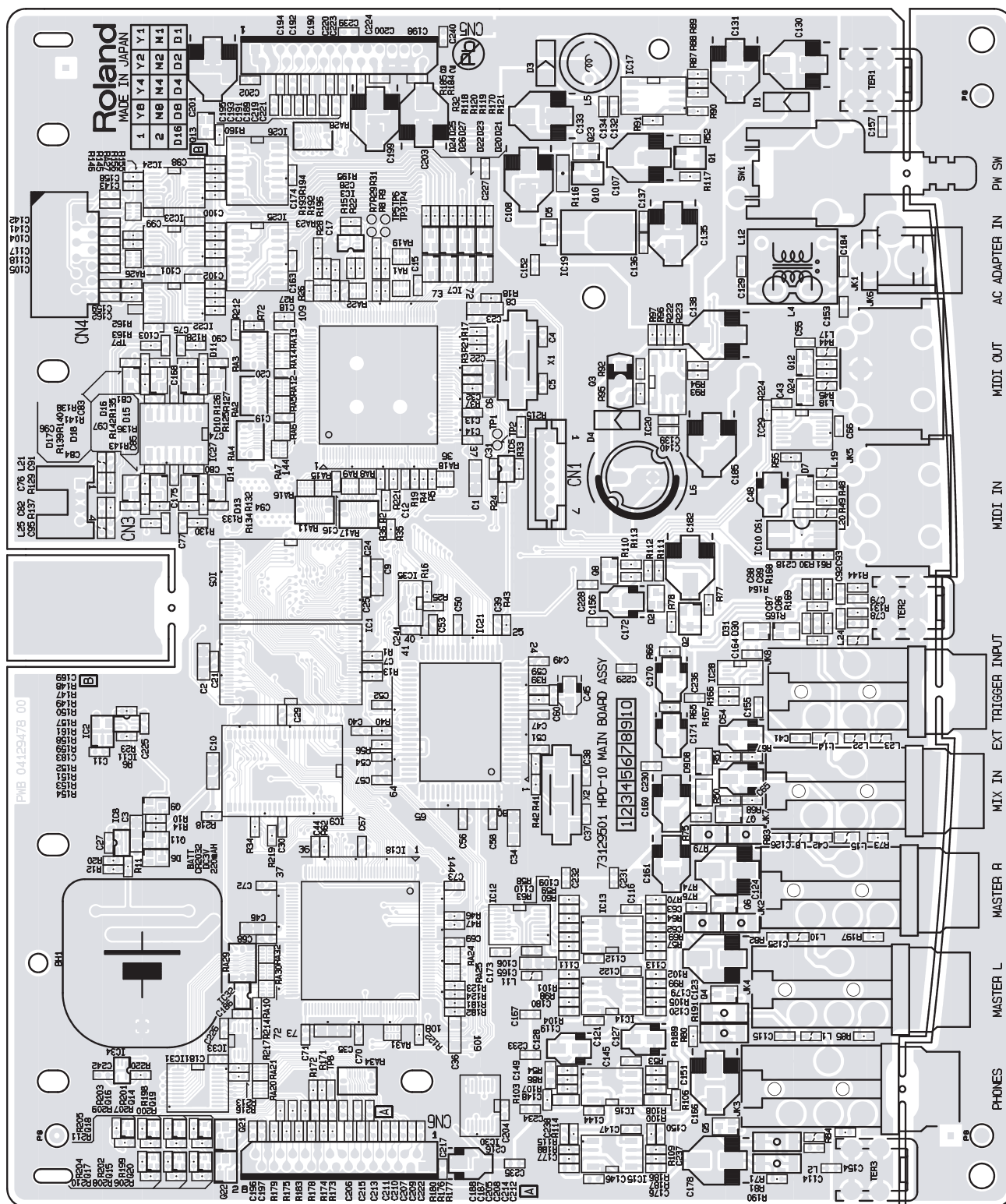
This completes the tests.

2. Turn off the power of HPD-10.

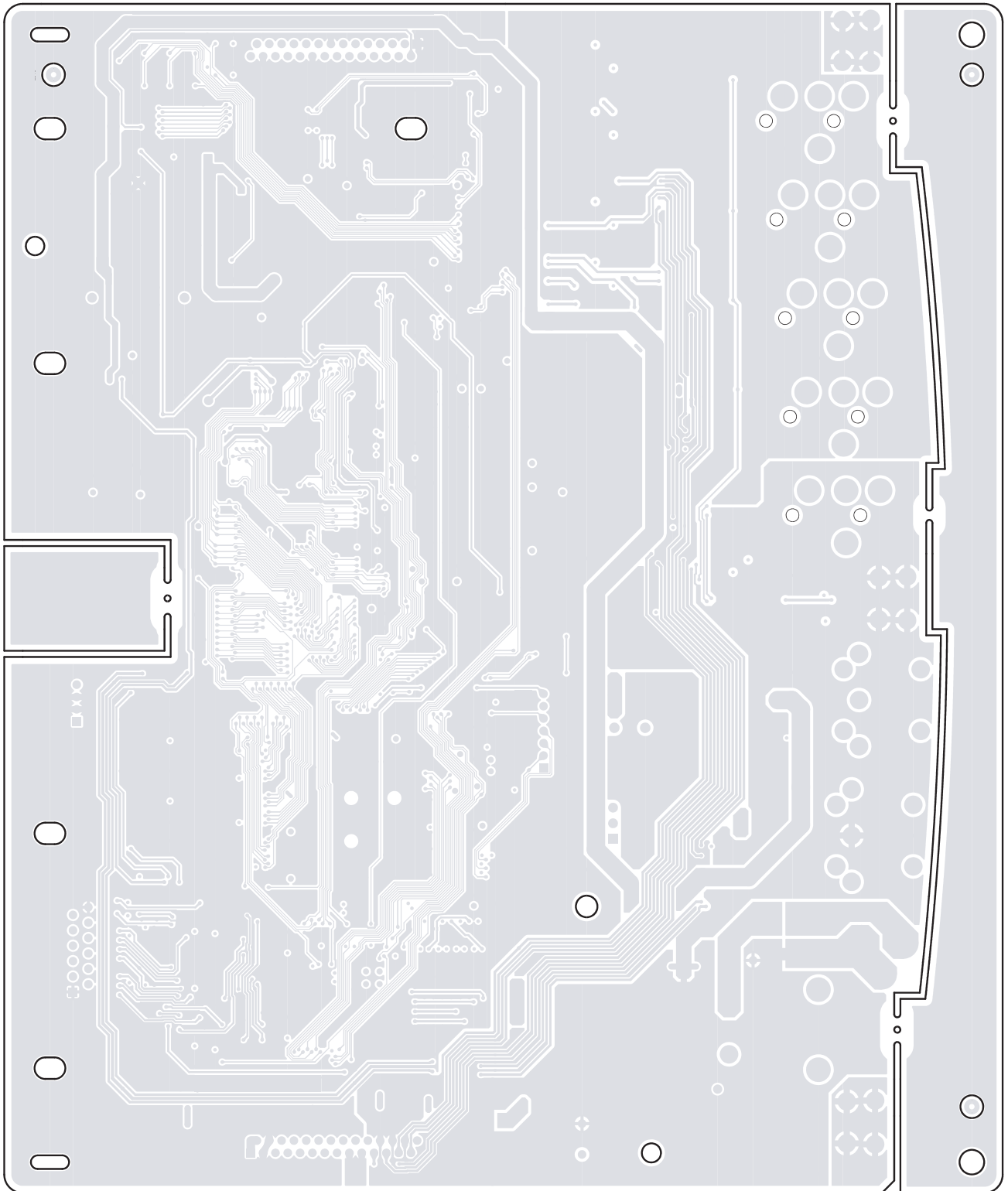
# Block Diagram



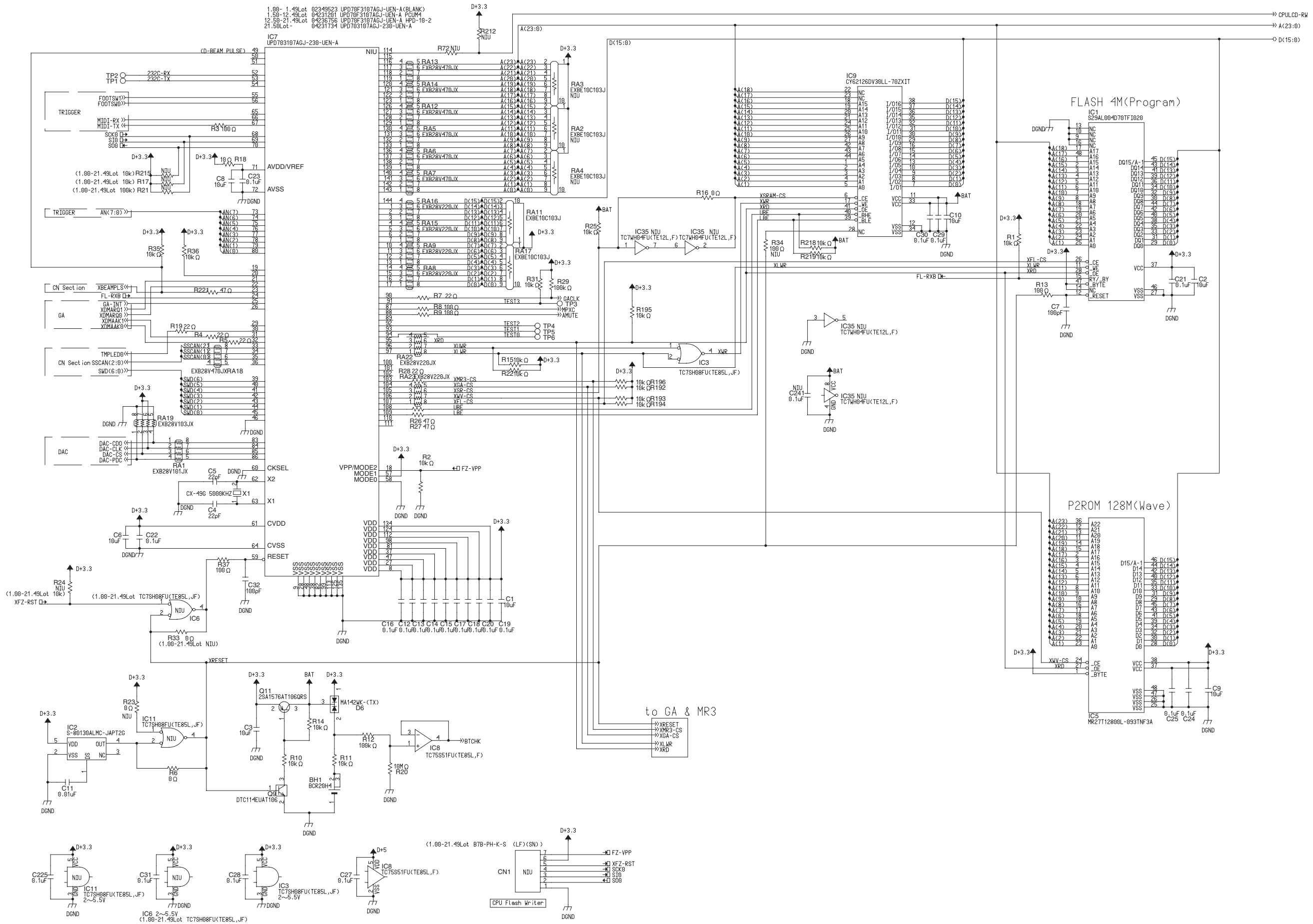
# Circuit Board (MAIN BOARD 1/2)



# Circuit Board (MAIN BOARD 2/2)

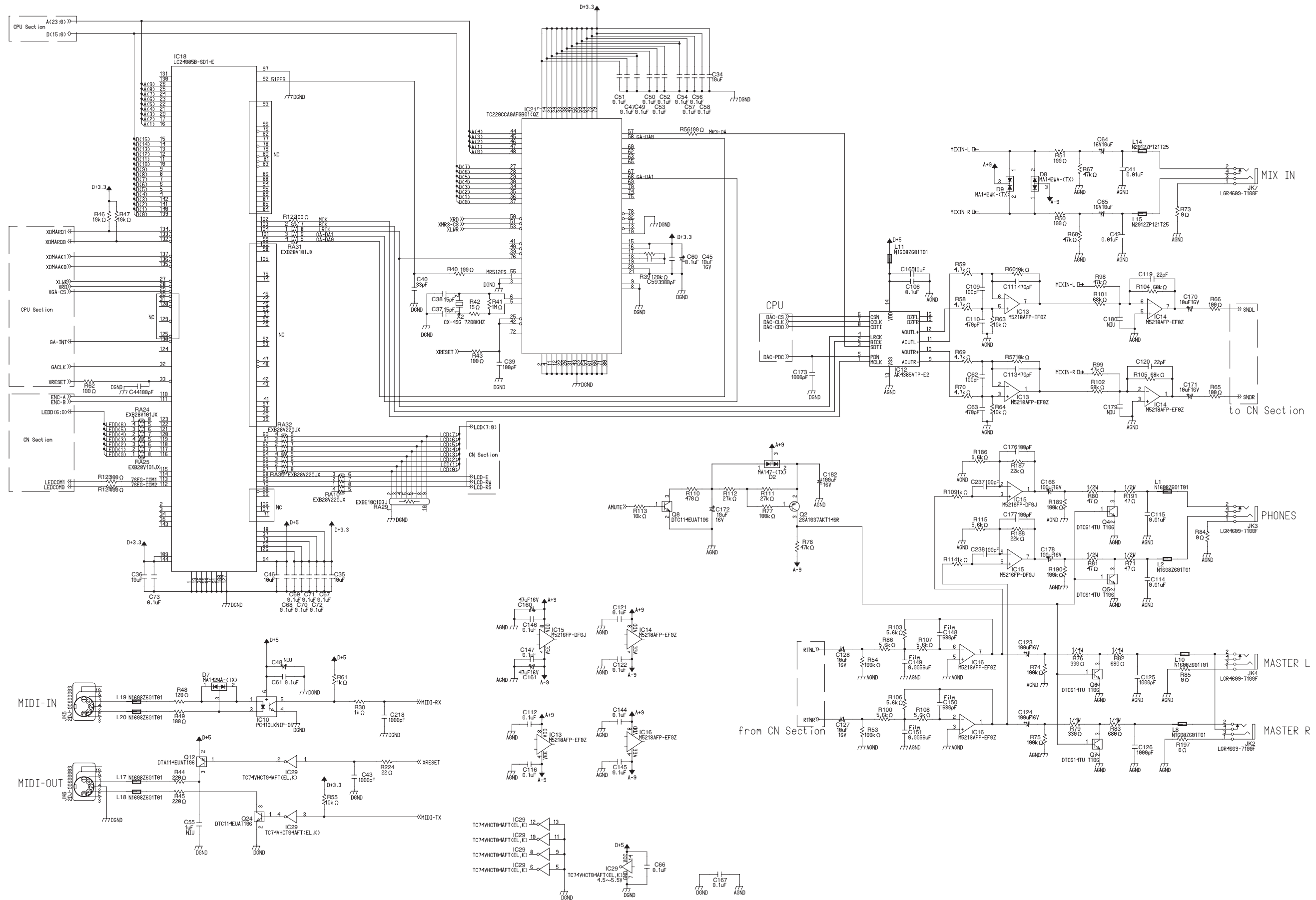


# Circuit Diagram (MAIN BOARD 1/4)

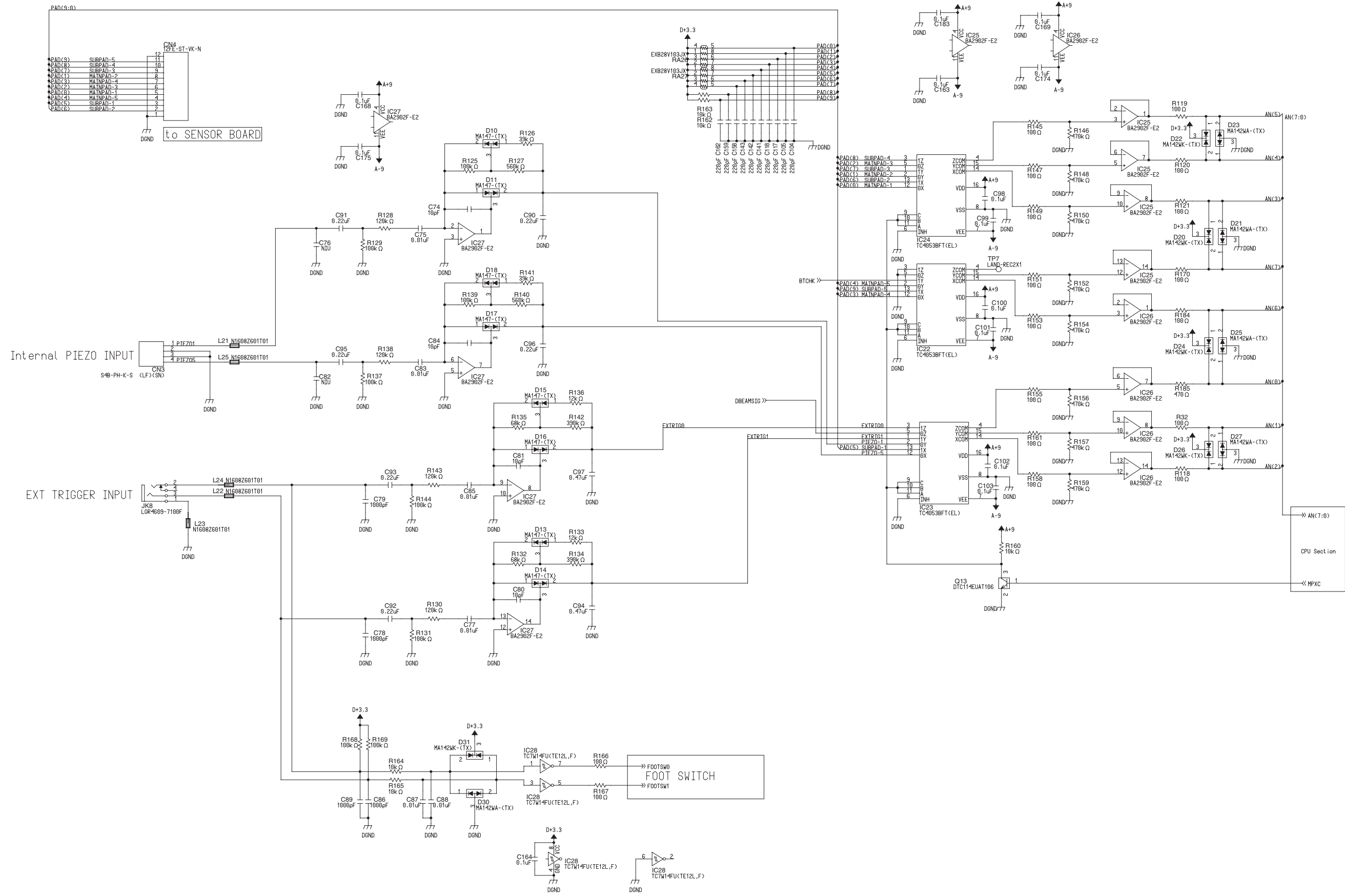




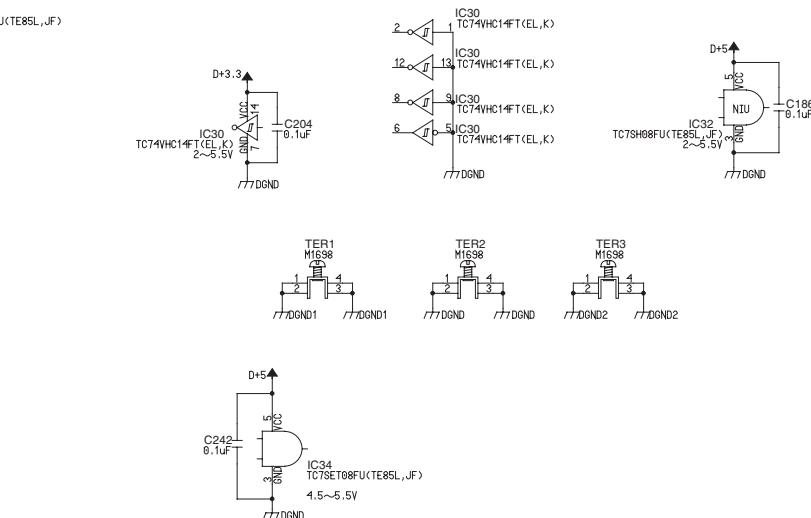
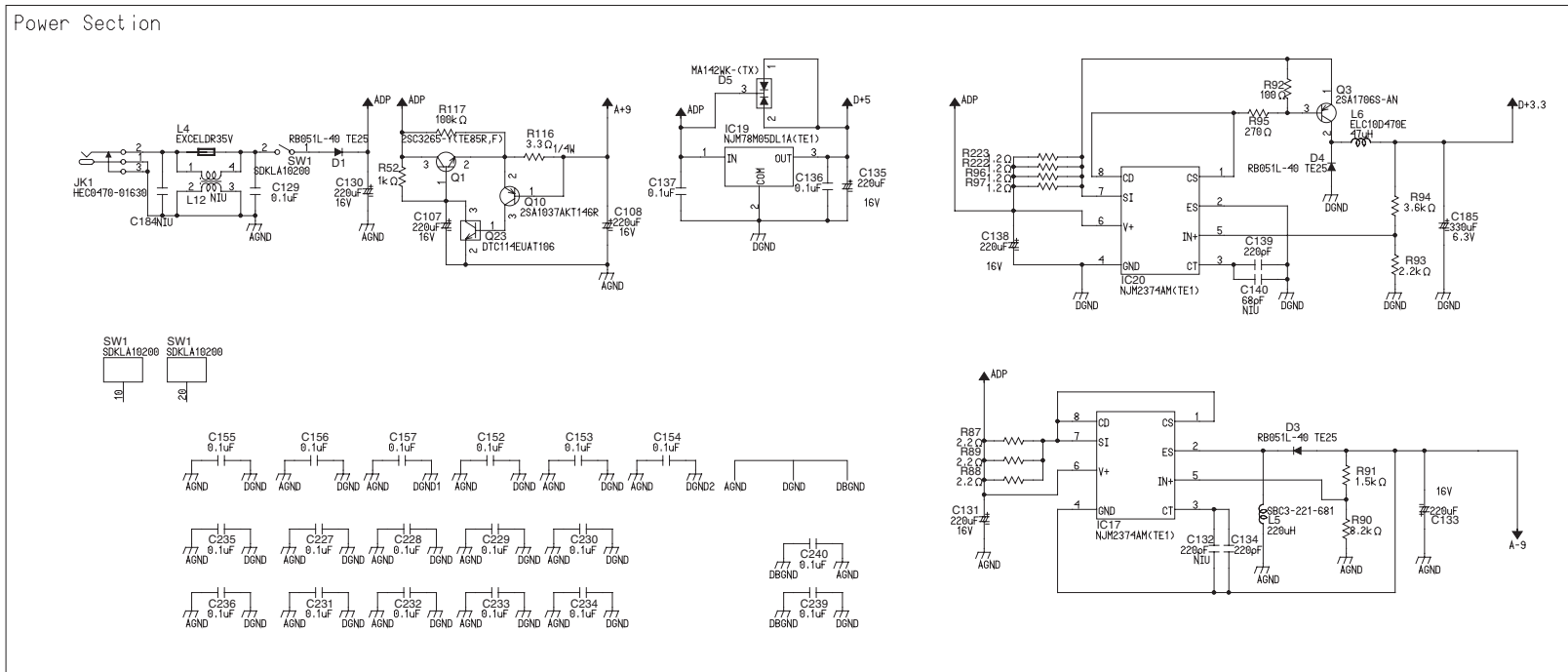
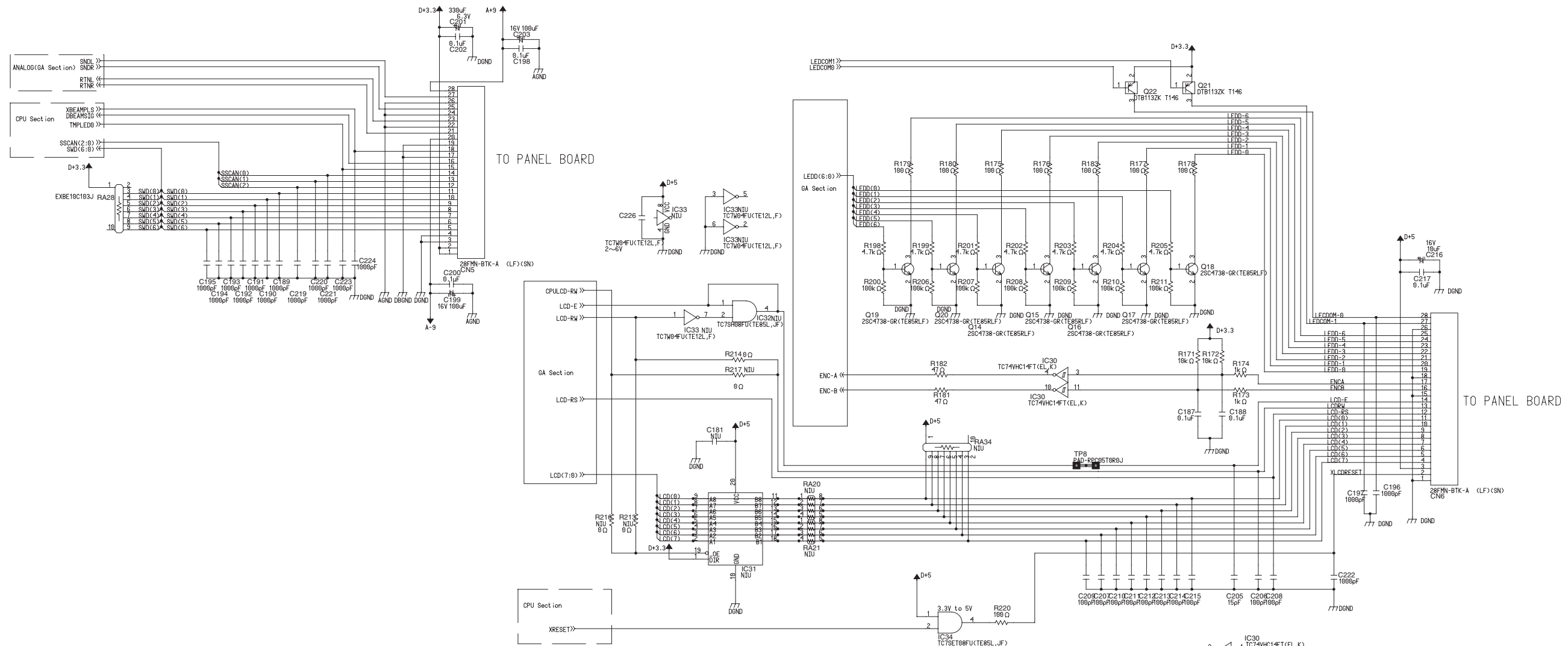
# Circuit Diagram (MAIN BOARD 2/4)



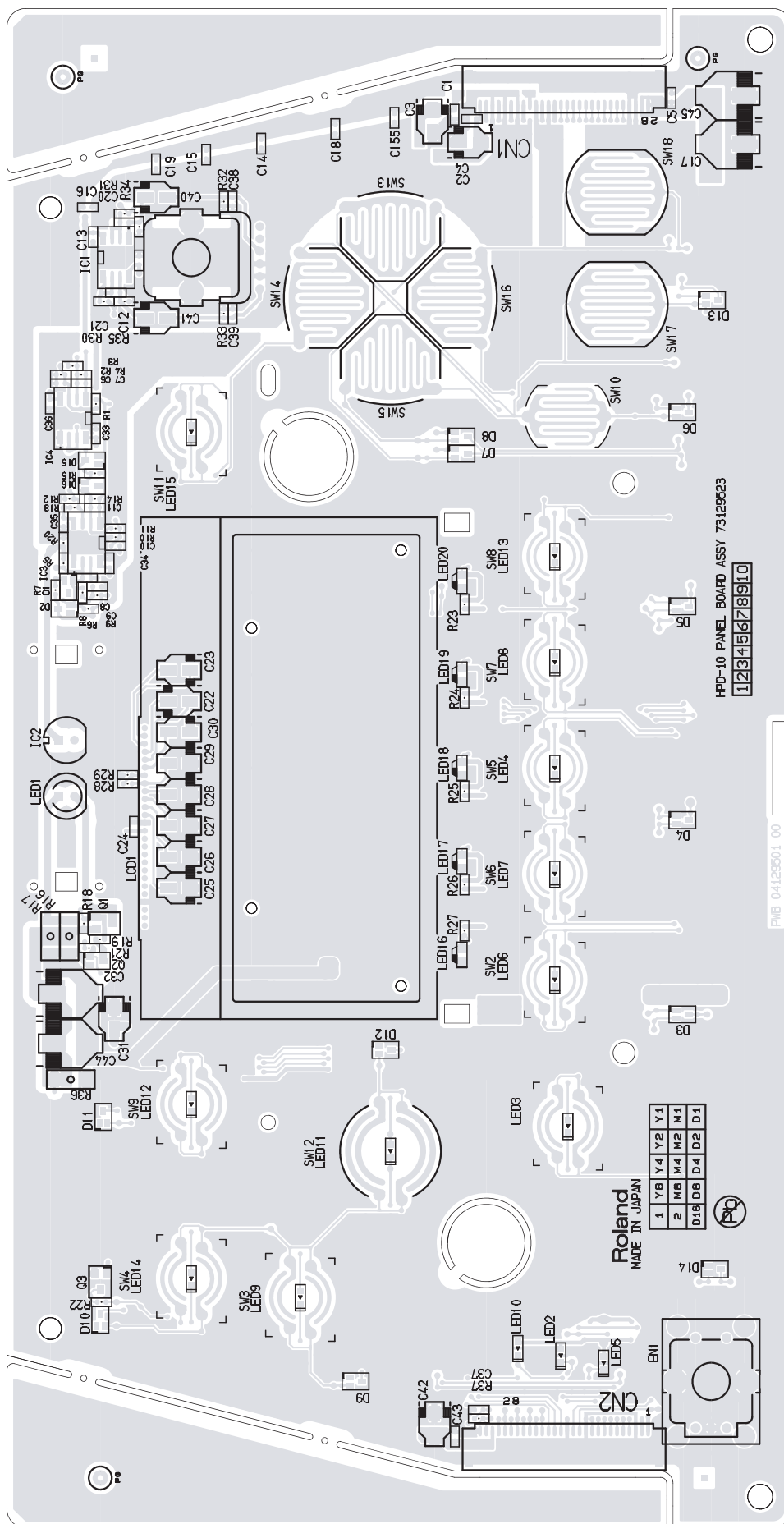
# Circuit Diagram (MAIN BOARD 3/4)



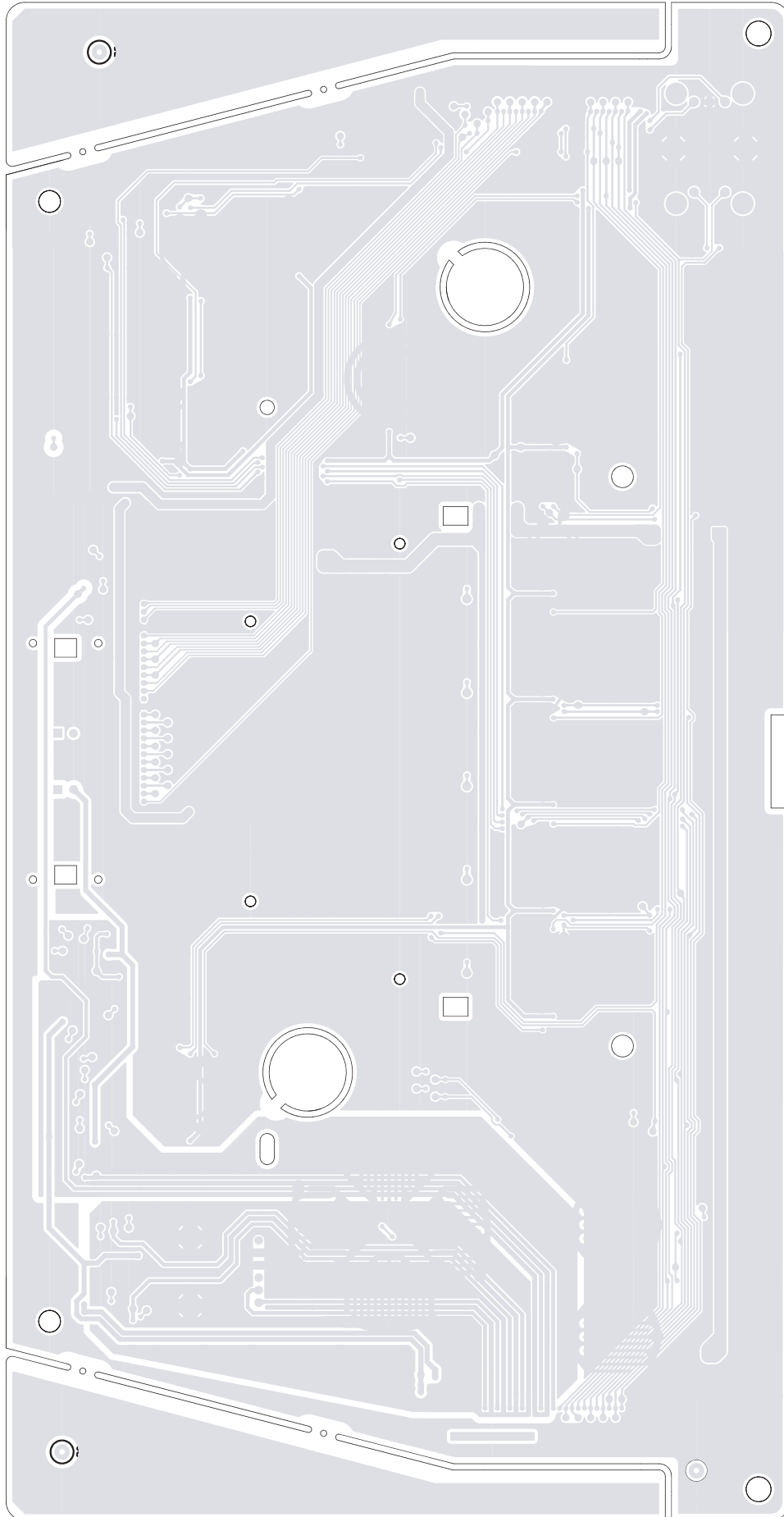
# Circuit Diagram (MAIN BOARD 4/4)



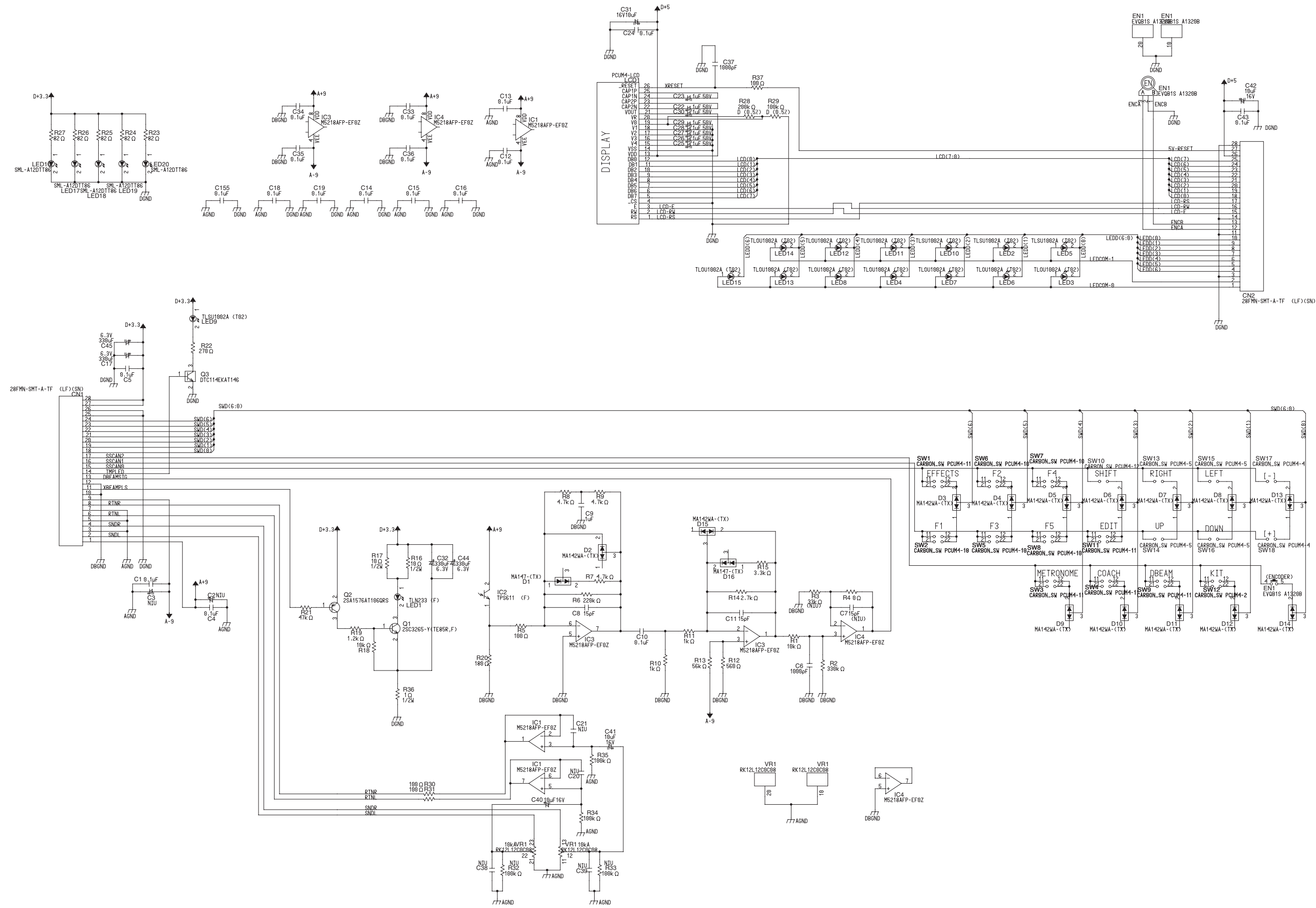
# Circuit Board (PANEL BOARD 1/2)



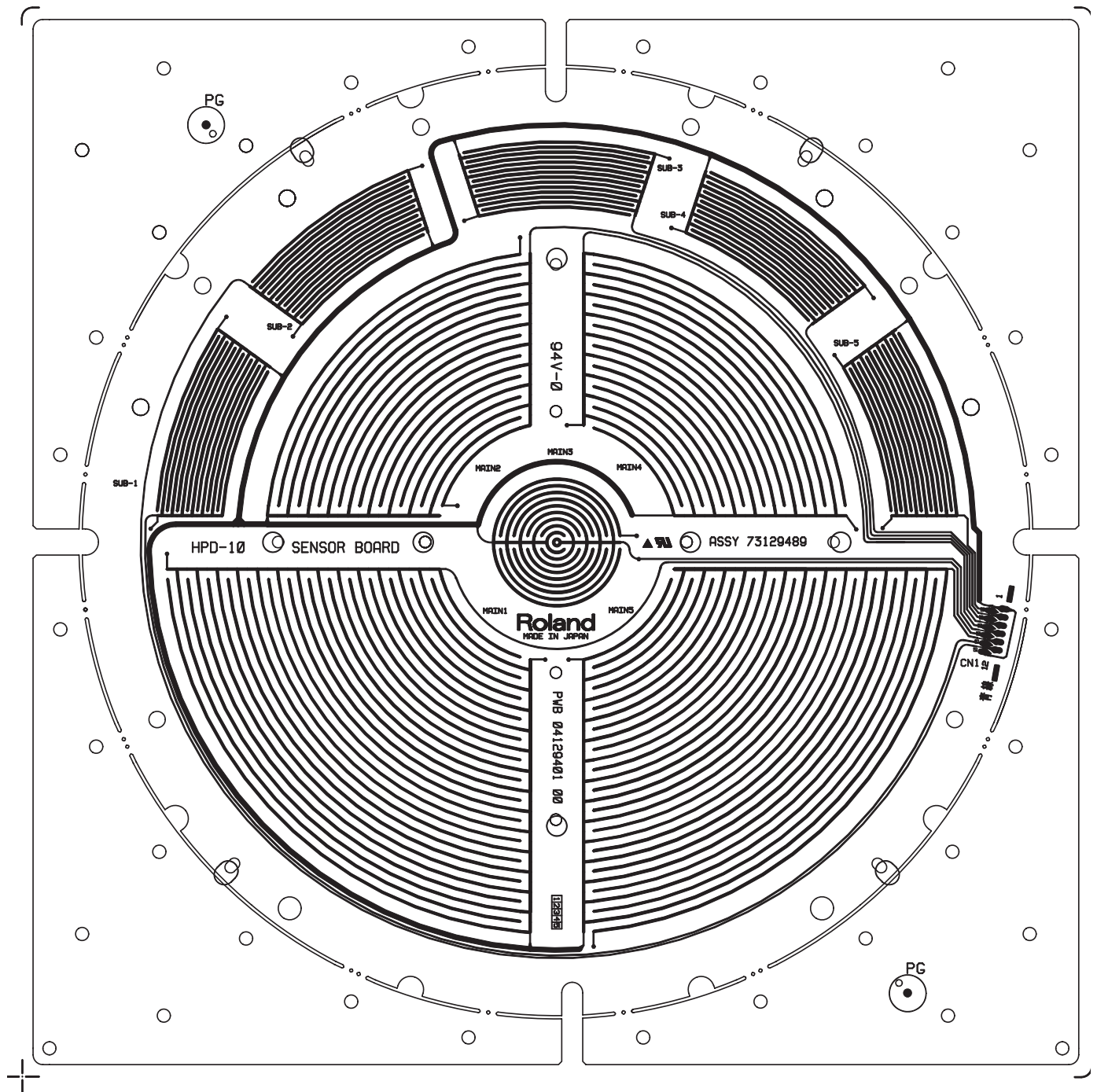
# Circuit Board (PANEL BOARD 2/2)



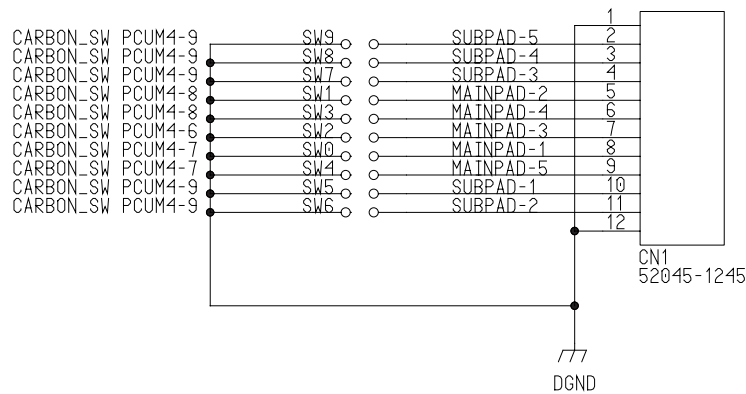
# Circuit Diagram (PANEL BOARD)



# Circuit Board (SENSOR BOARD)



## Circuit Diagram (SENSOR BOARD)



```

PCUM4-6 MAIN PAD(3)
PCUM4-7 MAIN PAD(1,5)
PCUM4-8 MAIN PAD(2,4)
PCUM4-9 SUB PAD(1-5)

```

## Error Messages

### midi offline!

MIDI Cable was disconnected, or  
Communication with external MIDI device was interrupted. Check the MIDI connections and cables.

### midi buf full!

Too much MIDI messages were received at once and could not be processed correctly. Verify connections and type of the MIDI messages you are sending.

### midi rx error!

The HPD-10 could not receive MIDI messages correctly. Transmit the messages again.

### bulk rx error!

The HPD-10 could not receive BULK MIDI data correctly. Transmit the messages again. If the problem continues, there might be some problems with the data transmitted to the HPD-10.

### bulk checksum!

Checksum values of System Exclusive messages were not correct. Correct the checksum values.

### battery low!

The internal battery, used for maintaining data in the user memory, has become weak. Replace the battery.







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# MEMO