

GW-7

Workstation

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SERVICE NOTES

Issued by RJA

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The specification of the destination and the product

There are different point between China version and other version.

We marks it in this service note as follows.

- "FOR CHINA"China version.
- "EXCEPT FOR CHINA"other version.

The different specification is as follows.

- Internal sound, Internal style, Demo song
- Silk screen printing of Panel Sheet R, please refer to followings.
FOR CHINA:[PIANO] , ... , [SYNTH] , [ASIA] , [WORLD]
EXCEPT FOR CHINA:[PIANO] , ... , [SYNTH] , [WORLD1] , [WORLD2]
- Printing of packing case



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CAUTIONARY NOTES

User data status

User data status after each of the following processes is described below. Whenever carrying out procedures that involve deleting or erasing user data, always be sure to back up the user data to some form of external media (refer to Saving and Loading Data).

Process	The system, User tone data and User performance settings	User Style and User song
Checking Version number	Preserved	Preserved
Factory Reset	Deleted	Preserved
System Update	Preserved	Preserved
Test Mode	Preserved	Preserved
Init Drv	Preserved	Deleted

* Executing Test Mode during Factory Reset deletes the user data.

PARTS LIST

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

CIRCUIT BOARD

NIU meant that "NOT IN USE " there don't set any contents in the Circuit Diagram.

There has silk-screen only in the Circuit Board.

CAUTION AS TO ORDER THE SPARE PARTS

Please confirm your region when you order the following parts.

The others is common spare parts.(Except AC ADAPTOR).

- OWNER'S MANUAL:
03902456 EXCEPT FOR CHINA (English)
03899523 FOR CHINA (Chinese)
- PANEL SHEET R
- * *Silk screen printing is different.*
03903212 EXCEPT FOR CHINA
03897467 FOR CHINA
- MAINBOARD ASSY FOR SERVICE
- * *Please refer to Page 7 "Methods of identifying the region"*
03903234 EXCEPT FOR CHINA
03891745 FOR CHINA
- PACKING CASE
- * *Printing is different*
03902423 EXCEPT FOR CHINA
03897478 FOR CHINA
- UPDATE DATA FOR SERVICE CD-ROM
***** EXCEPT FOR CHINA
***** FOR CHINA
- The following parts only for China region
03897423 TEMPLATE SHEET CHINESE PANEL L
03897434 TEMPLATE SHEET CHINESE PANEL R
***** WARRANTY CARD FOR CHINA
- The following part only for US region
***** RUS REGISTRATION CARD (RAM3059) FOR US

SPECIFICATIONS

GW-7 Workstation

Keyboard

61 keys (with velocity)

[Sound Generator]

Maximum Polyphony

64 voices

Parts

16 parts + Keyboard part

Wave Memory

32 M bytes (16-bit linear equivalent)

Preset Memory

Preset Memory is different between China version and others.

- Except for CHINA:
Tones: 606 + 256 (GM2)
Drum Sets: 51 + 9 (GM2)
Performances: 110
- For CHINA:
Tones: 576 + 256 (GM2)
Drum Sets: 30 + 9 (GM2)
Performances: 101

User Memory

Tones: 128
Drum Sets: 16
Performances: 32

Effects

Multi-FX: 47 types
Reverb: 8 types
Chorus: 8 types
Transpose

- -12 to +12

[Backing Track]

Tempo

20 to 250

Tracks

16
16-track

Recorder Mode

4 easy modes (ALL, Keyboard, Single, Punch In/Out)

Preset Memory

Preset Memory is different between China version and others.

- Except for CHINA:
Styles: 110
User Memory
Styles: 99
Songs: 99
- For CHINA:
Styles: 101
User Memory
Styles: 99

Songs: 99

Band Type

3 levels: Drum & Bass, Combo, Full Band

[Others]

USB (Data transfer)

Operating System
Windows: Windows 2000/Me/XP
Macintosh: Mac OS 9.0.4 or later, Mac OS X 10.0 or later

Controllers

D Beam Controller: 1
Pitch Bend/Modulation Lever: 1
Control Knobs: 2

Display

Large backlit custom LCD

Connectors

Output Jacks (L/MONO, R)
Headphones Jack
MIDI Connectors (IN, OUT)
Hold Pedal Jack
Control Pedal Jack
USB Connector

Power Supply

DC 9 V (AC Adaptor)
Current Draw
1,000 mA

Dimensions

1,045 (W) x 320 (D) x 86 (H) mm
41-3/16 (W) x 12-5/8 (D) x 3-7/16 (H) inches

Weight

5.0 kg / 11 lbs 1 oz (excluding AC adaptor)

Accessories

Owner's Manual English(#03902456)EXCEPT FOR CHINA
Chinese(#03899523)FOR CHINA

AC Adaptor

ACI-120C (#00905767)
ACI-230C (#01018312)
PSB-1U (#03017356)

AC CORD

220V 2P-2P 2.5M (#03453012)
230V 1.0M FOR PSB (#01903356)
240V 1.0M SC-078-NA05 (#03785590)

EURO CONVERTER PLUG

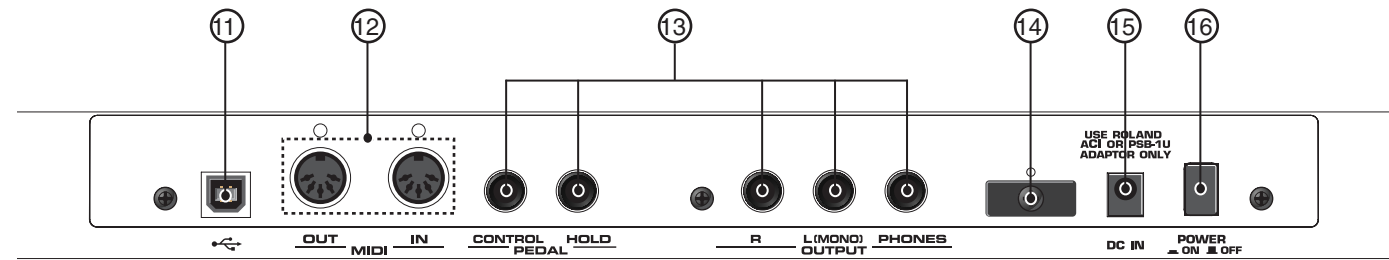
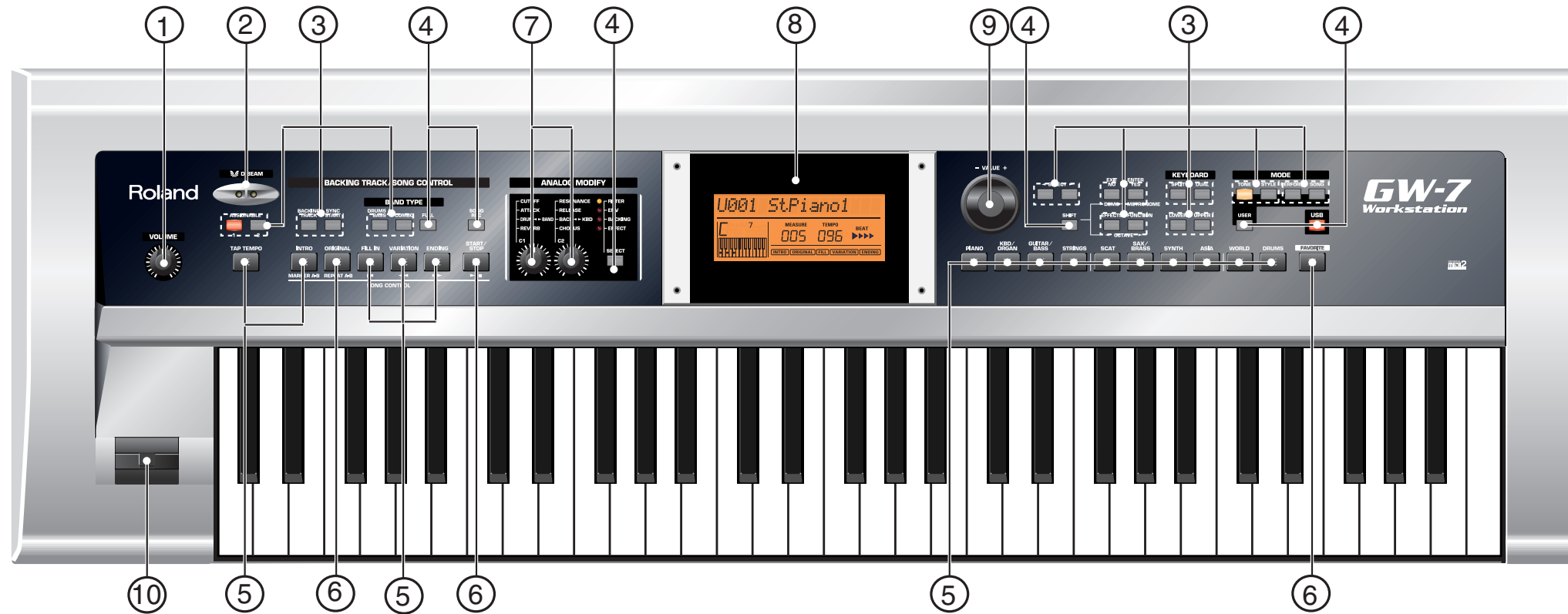
ECP01-5A (#00905234)

Options

Keyboard Stand: KS-12
Pedal Switch: DP series
Foot Switch: BOSS FS-5U
Expression Pedal: EV-5
MIDI IMPLEMENTATION English(#17041571)

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

LOCATION OF CONTROLS

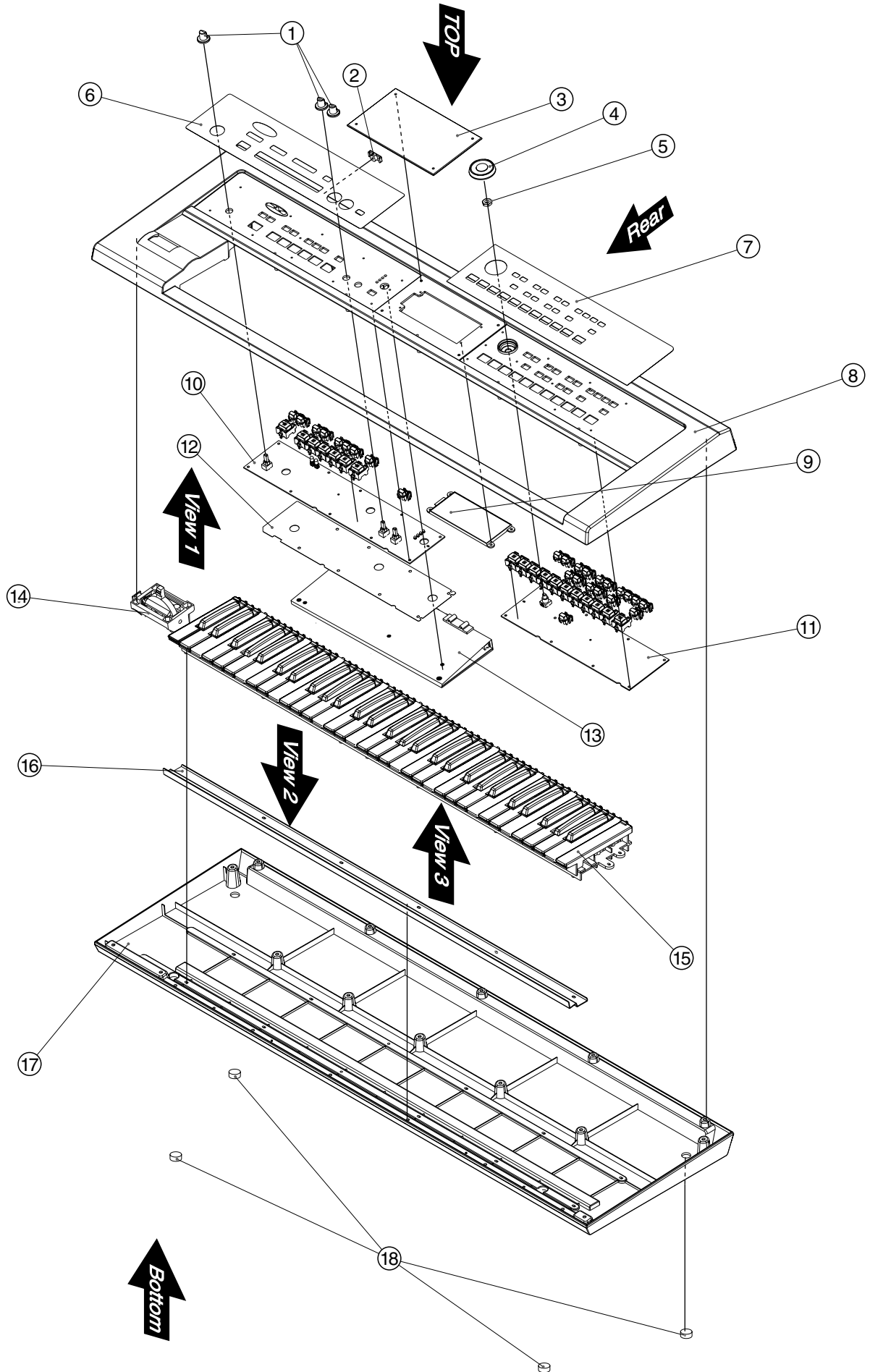


LOCATION OF CONTROLS PARTS LIST

NO	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	03787089	KNOB,BUTTON	R-KNOB	SF BY MOONPO	1
	02455234	POTENTIOMETER	12M/M ROTARY POTENTIOMETER	EVJY15F02B14	1
2	02230578	MISCELLANEOUS	LED SPACER	LDS-50R	1
	12169368	MISCELLANEOUS	LED SPACER	LDS-40B	1
*3,4	03671756	KNOB,BUTTON	D S-KEYTOP	SX2H-B GRS BY MOONPO	13
5	03671767	KNOB,BUTTON	NS-KEY TOP	MX1H BY MOONPO	15
6	01783923	KNOB,BUTTON	N S-KEYTOP	MD1H	3
7	03787089	KNOB,BUTTON	R-KNOB	SF BY MOONPO	2
	02455223	POTENTIOMETER	9M/M ROTARY POTENTIOMETER	EVUF2KFK4B14	2
8	03897445	CASING	DISPLAY COVER		1
	03902867	DISPLAY UNIT	LCD UNIT	UCZ24080	1
	40569678	SCREW	HEXSOCKET 3X8	B TIGHT NI	4
9	03787090	KNOB,BUTTON	R-KNOB	LF BY MOONPO	1
	03122134	ENCODER	ROTARY ENCODER	EC12E2420802	1
10	03234723	BENDER UNIT	BENDER	PB-H0204	1
11	02781189	JACK,EXT TERMINAL	USB CONNECTOR	YKF45-0021	1
12	02568867	JACK,EXT TERMINAL	MIDI JACK	DIN HDC-052A-12	1
13	00569278	JACK,EXT TERMINAL	6.5MM JACK	LGR4609-7100	5
14	22365714	MISCELLANEOUS	CORD HOOK	236-714	1
15	13449720	JACK,EXT TERMINAL	DC JACK	HEC2305-01-250	1
16	12499175	KNOB,BUTTON	BUTTON	JSPUE001A	1
	01676512	SWITCH	PUSH SWITCH	SDKLA10200	1
3,4,5,6	02891789	SWITCH	TACT SWITCH	SKRGADD010 H=5.0	44

* 03671756 DS-KEYTOP SX2H-B GRS BY MOONPO is for double type.
When you change the keytop of No.4 for repair, please cut this keytop.

EXPLODED VIEW 1

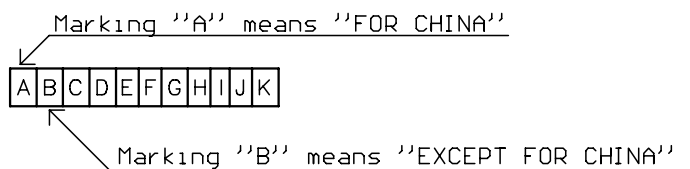


EXPLODED VIEW PARTS LIST 1

NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	03787089	R-KNOB	SF BY MOONPO	3
2	22365714	CORD HOOK	236-714	1
3	03897445	DISPLAY COVER		1
4	03787090	R-KNOB	LF BY MOONPO	1
5	*****	NUT+WASHER	Attached to the ROTARY ENCODER	1
6	03897456	PANEL SHEET L		1
*7	03903212	PANEL SHEET R	EXCEPT FOR CHINA	1
*7	03897467	PANEL SHEET R	FOR CHINA	1
8	03786656	TOP CASE		1
9	03902867	LCD UNIT	UCZ24080	1
10	03891756	PANEL L BOARD ASSY	FOR SERVICE	1
11	03891767	PANEL R BOARD ASSY	FOR SERVICE	1
12	03892012	INSULATING SHEET	FOR PANEL-L BOARD	1
*13	03903234	MAINBOARD ASSY	FOR SERVICE EXCEPT FOR CHINA	1
*13	03891745	MAINBOARD ASSY	FOR SERVICE FOR CHINA	1
14	03234723	BENDER	PB-H0204	1
15	03903223	KEYBOARD ASSY	FOR SERVICE	1
16	03894945	REINFORCE BAR		1
17	03786667	BOTTOM CASE		1
18	12359137	RUBBER FOOT	SJ-5012 BLK	4

* There are two version (FOR CHINA and EXCEPT FOR CHINA)

Method of identifying the region.



NOTE

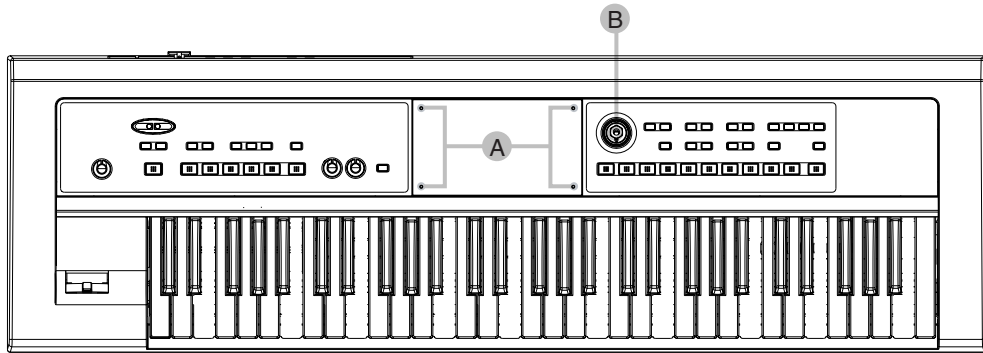
There are two version (FOR CHINA and EXCEPT FOR CHINA) of MAIN BOARD ASSY FOR SERVICE.

Please confirm the above mark for discrimination between China version and the other.

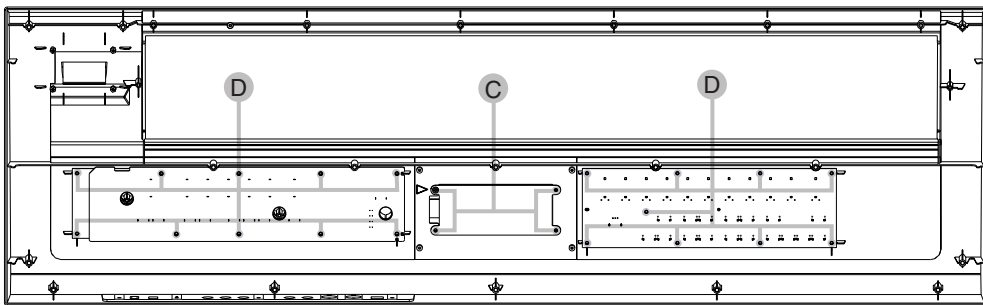
- "A" 03891745 MAINBOARD ASSY FOR SERVICE FOR CHINA
- "B" 03903234 MAINBOARD ASSY FOR SERVICE EXCEPT FOR CHINA

EXPLODED VIEW 2

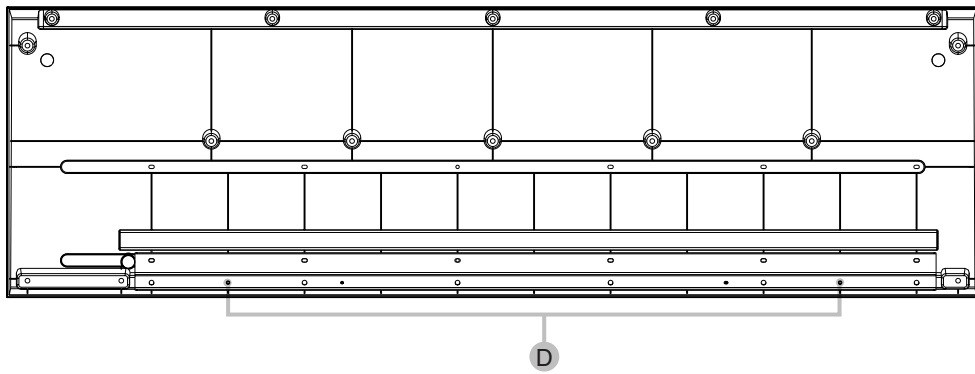
TOP



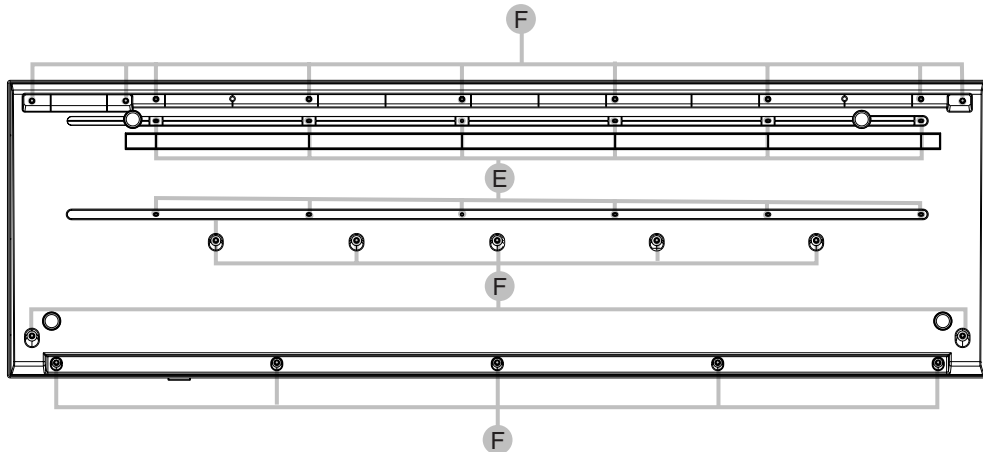
View 1



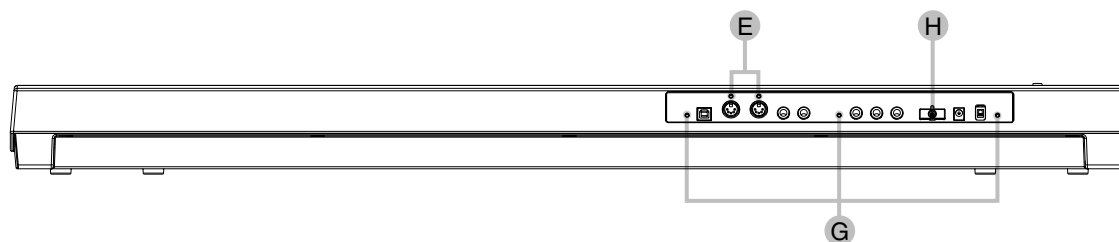
View 2



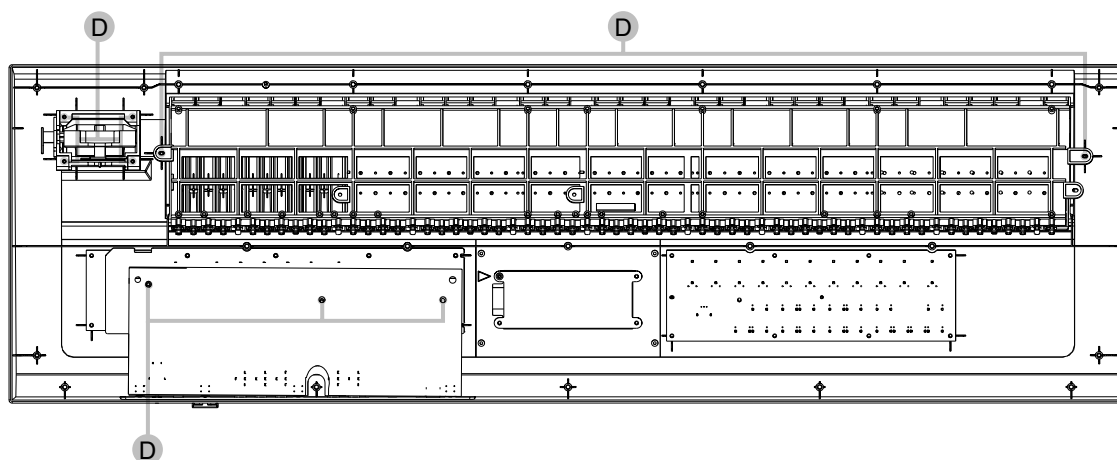
Bottom



Rear



View 3



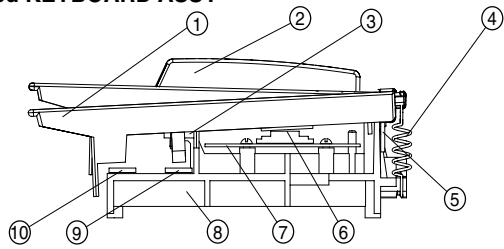
EXPLODED VIEW PARTS LIST 2

[Screw]

NO	PART CODE	PART NAME	DESCRIPTION	QTY
A	40569678	HEXSOCKET 3X8	B TIGHT NI	4
B	*****	"NUT + WASHER"	"Attached to the ROTARY ENCODER "	1
C	40011301	SCREW 3X6	BINDING TAPTITE P BZC	4
D	40011312	SCREW 3X8	BINDING TAPTITE P BZC	30
E	40011334	SCREW 3X12	BINDING TAPTITE-P FE BZC	14
F	40012490	SCREW 4X10	BINDING TAPTITE P BZC	21
G	40012956	SCREW M3X8	PAN MACHINE W /SW+PW FE BZC	3
H	40011512	SCREW M3X12	PAN MACHINE W /SW BZC	1

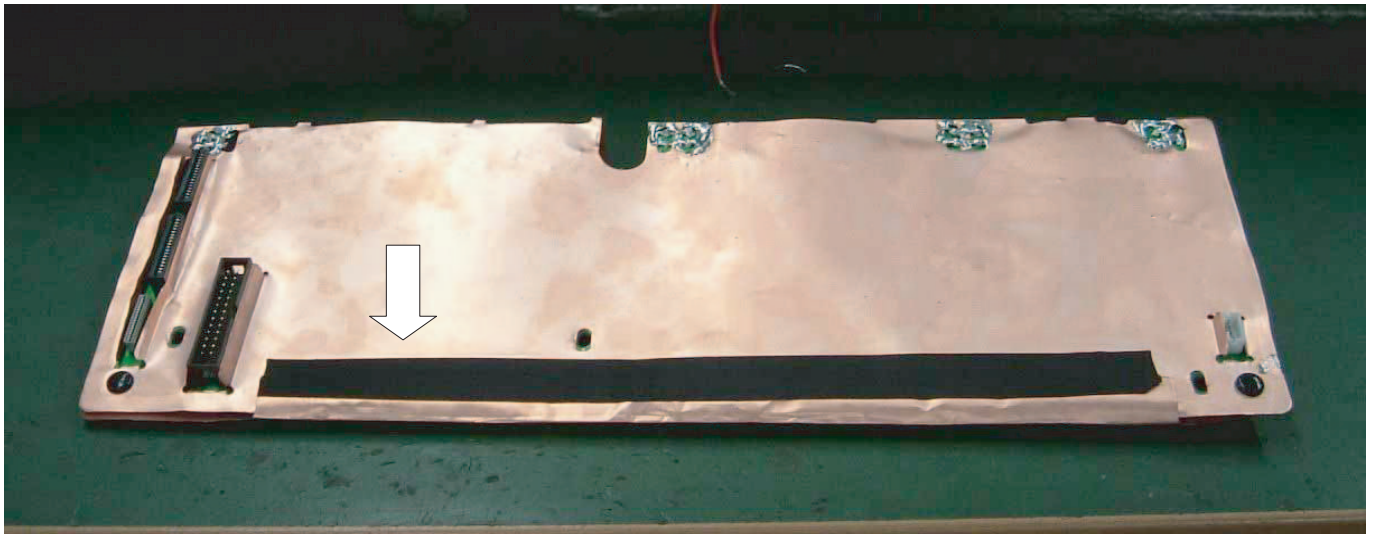
KEYBOARD PARTS LIST

A detailed KEYBOARD ASSY

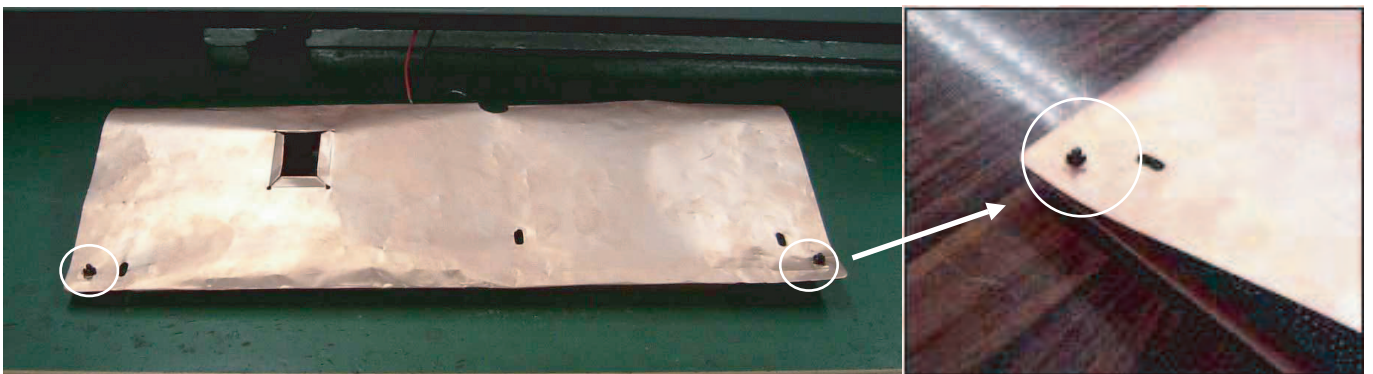


No	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	03786378	NATURAL KEY C	FOR MSK-2	5
1	03786389	NATURAL KEY D	FOR MSK-2	5
1	03786390	NATURAL KEY E	FOR MSK-2	5
1	03786401	NATURAL KEY F	FOR MSK-2	5
1	03786412	NATURAL KEY G	FOR MSK-2	5
1	03786423	NATURAL KEY A	FOR MSK-2	5
1	03786434	NATURAL KEY B	FOR MSK-2	5
1	03786445	NATURAL KEY C'	FOR MSK-2	1
2	03786456	SHARP KEY	FOR MSK-2	25
3	03786312	KEY FELT	MSK-2 HOOK T2.0MM L828XW5.5	1
4	03456967	COILED SPRING	MSK-1 NATURAL KEY	36
4	03456978	COILED SPRING	MSK-1 SHARP KEY	25
5	03786301	KEY FELT	MSK-2 BACK T4.0MM L840XW6.0	1
6	03456856	RUBBER SW KEYBOARD 12P	FOR MSK-1	4
6	03456867	RUBBER SW KEYBOARD 13P	FOR MSK-1	1
7	03786345	PWB KEYBOARD LO ASSY	FOR MSK-2	1
7	03786356	PWB KEYBOARD HI ASSY	FOR MSK-2	1
8	*****	CHASSIS KEYBOARD	FOR MSK-2	1
9	03786334	KEY FELT	MSK-2 BOTTOM M T2.0MM L840XW10	1
10	03786323	KEY FELT	MSK-2 BOTTOM L T2.0MM L840XW15	1

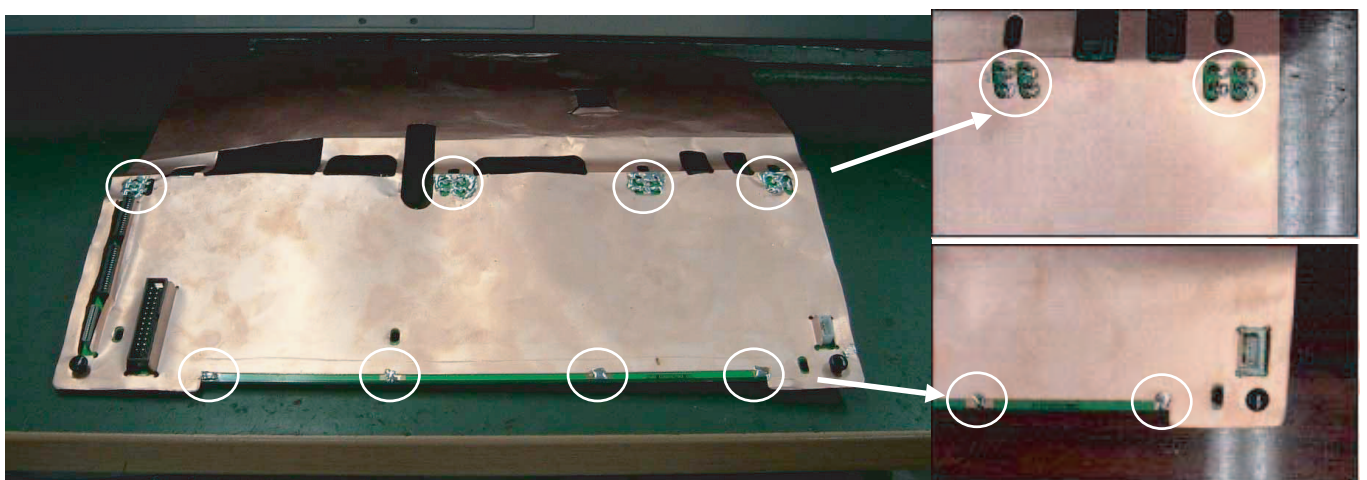
DISASSEMBLY PROCEDURE



1. Peel off the Acetate tape of Shield sheet.



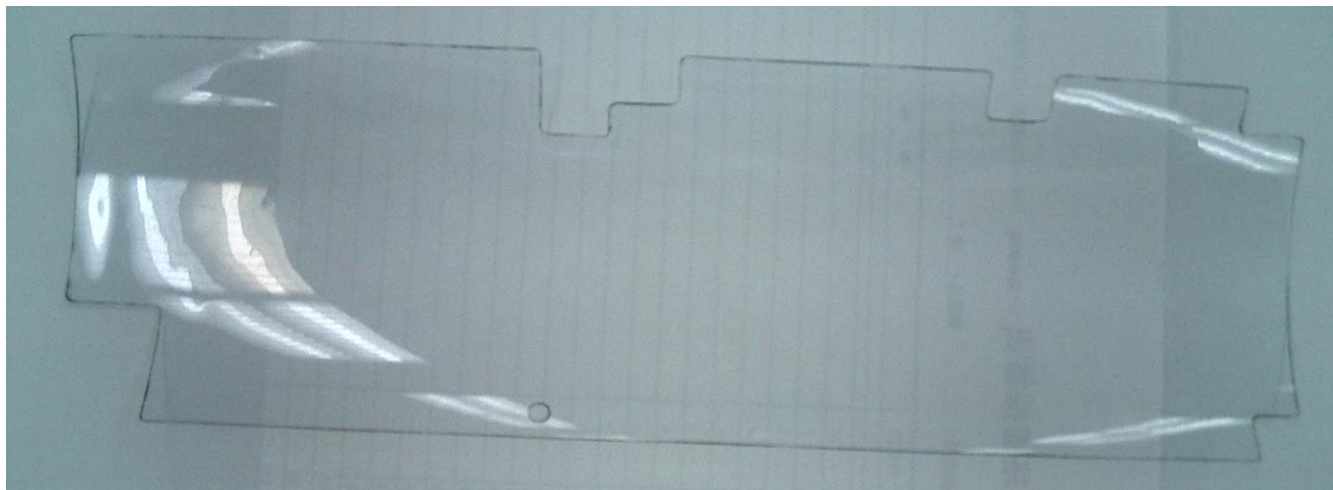
2. Undo the Snap Rivet



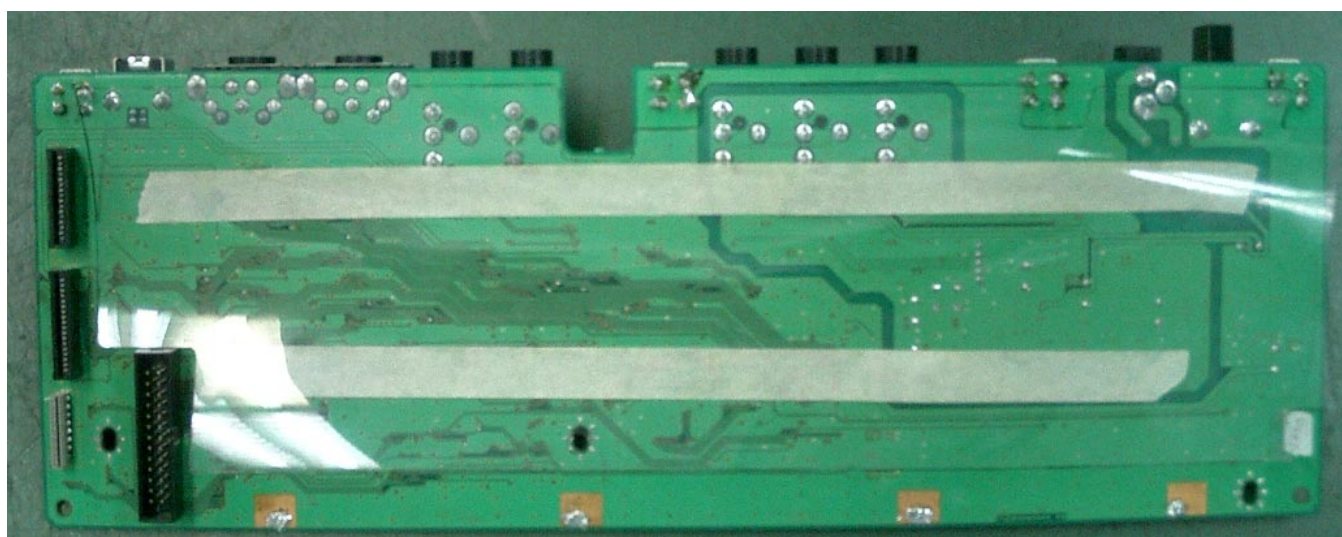
3. Removal solder of the Shield sheet and Main board solder section.
When attach the Shield sheet in the Main board, please following up with above reverse procedure.
After certainly to attach the Shield sheet then set Main board into the GW-7 body. Grease spreading position.

Attaching the “INSULATING SHEET FOR MAIN BOARD” (03902467)

- This part might not exist according to the manufactured period.



1. Please verify that the direction of the “INSULATING SHEET FOR MAIN BOARD” is correct.



2. Attache the “INSULATING SHEET FOR MAIN BOARD” to the Main Board by the adhesive tape .

GREASING SPREADING POSITION.



Grease spreading in the marking section of figure.

PARTS LIST

SAFETY PRECAUTIONS:
The parts marked \triangle 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

#	03786667	BOTTOM CASE			1
#	03897445	DISPLAY COVER			1
#	03897456	PANEL SHEET L			1
#	*03897467	PANEL SHEET R		FOR CHINA	1
#	*03903212	PANEL SHEET R		EXCEPT FOR CHINA	1
#	03786656	TOP CASE			1

* PANEL SHEET R is different between China version and others.

KNOB,BUTTON

#	03787089	R-KNOB	SF BY MOONPO		3
#	03787090	R-KNOB	LF BY MOONPO		1
	12499175	BUTTON	JSPUE001A		1

SWITCH

	02891789	TACT SWITCH	SKRGADD010 H=5.0	SW1,SW2,SW7,SW8,SW13,SW14,SW19,SW20,SW24,SW25,SW29,SW30,SW34,SW35,SW39,SW40 on PANEL L BOARD, SW3,SW4,SW5,SW6,SW9,SW10,SW11,SW12,SW15,SW16,SW17,SW18,SW21,SW22,SW23,SW26,SW27,SW28,SW31,SW32,SW33,SW36,SW37,SW38,SW41,SW42,SW43,SW44 on PANEL R BOARD	44
	01676512	PUSH SWITCH	SDKLA10200	SW2 on MAIN BOARD	1

JACK,EXT TERMINAL

	02781189	USB CONNECTOR	YKF45-0021	JK4 on MAIN BOARD	1
	00569278	6.5MM JACK	LGR4609-7100	JK2,JK3,JK5,JK6,JK8 on MAIN BOARD	5
	13449720	DC JACK	HEC2305-01-250	JK7 on MAIN BOARD	1
	02568867	MIDI JACK	DIN HDC-052A-12	JK1 on MAIN BOARD	1

DISPLAY UNIT

#	03902867	UCZ24080	LCD UNIT		1
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NOTE: Replacement UCZ24080 should be made on a unit base.

BENDER UNIT

	03234723	PB-H0204	BENDER BY MOONPO		1
--	----------	----------	------------------	--	---

NOTE: Replacement PB-H0204 should be made on a unit base.

KEYBOARD ASSY

#	03903223	FOR SERVICE	KEYBOARD ASSY		1
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NOTE: See 'KEYBOARD PARTS LIST' for details.

PWB ASSY

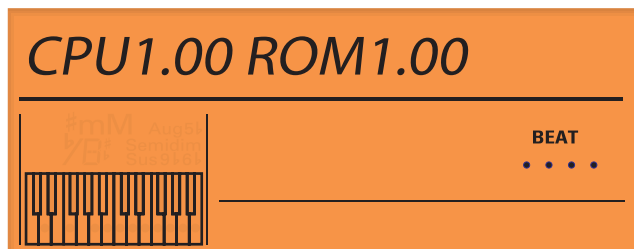
#	*03891745	MAINBOARD ASSY	FOR SERVICE	FOR CHINA	1
#	*03903234	MAINBOARD ASSY	FOR SERVICE	EXCEPT FOR CHINA	1
	NOTE: 'MAINBOARD ASSY' includes the following parts.				
	12199584	GROUNDING TERMINAL	M1698	TER1,TER2,TER3,TER4 on MAIN BOARD	4
#	03891756	PANEL L BOARD ASSY	FOR SERVICE		1
	NOTE: 'PANEL L BOARD ASSY' includes the following parts.				
	03671756	DS-KEY TOP	SX2H-B GRS BY MOONPO		3+
					3/2
	03671767	NS-KEY TOP	MX1H BY MOONPO		5
	01783923	N S-KEYTOP	MD1H		2
	02230578	LED SPACER	LDS-50R		1
	12169368	LED SPACER	LDS-40B		1
#	03891767	PANEL R BOARD ASSY	FOR SERVICE		1

NOTE: 'PANEL R BOARD ASSY' includes the following parts.

PWB ASSY				
	03671756	DS-KEY TOP	SX2H-B GRS BY MOONPO	7+
	03671767	NS-KEY TOP	MX1H BY MOONPO	3/2
	01783923	N S-KEYTOP	MD1H	10
		* MAINBOARD ASSY FOR SERVICE is different between China version and others.		1
POTENTIOMETER				
	02455223	EVUF2KFK4B14	9M/M ROTARY POTENTIOMETER	VR1,VR2 on PANEL L BOARD
	02455234	EVJY15F02B14	12M/M ROTARY POTENTIOMETER	VR3 on PANEL L BOARD
				2
				1
ENCODER				
	03122134	EC12E2420802	ROTARY ENCODER	EN1 on PANEL R BOARD
				1
WIRING, CABLE				
#	03892969	BAN CARD	BNCD-P=1.25-K-18-160	1
	02010690	BAN CARD	BNCD-P=1.25-K-16-260	1
#	03903178	WIRING	5X130-P2.0-PHR-PHR-F	1
#	03892945	WIRING	4X180-P2.0-PHR-PHR-F	1
SCREWS				
	40012956	SCREW M3X8	PAN MACHINE W/SW+PW FE BZC	3
	40011512	SCREW M3X12	PAN MACHINE W/SW BZC	1
	40011334	SCREW 3X12	BINDING TAPTITE-P FE BZC	14
	40011312	SCREW 3X8	BINDING TAPTITE P BZC	30
	40012490	SCREW 4X10	BINDING TAPTITE P BZC	21
	40011301	SCREW 3X6	BINDING TAPTITE P BZC	4
#	40569678	HEXSOCKET 3X8	B TIGHT NI	4
PACKING				
#	*03902423	PACKING CASE		EXCEPT FOR CHINA
#	*03897478	PACKING CASE		FOR CHINA
#	03901434	PACKING PAD ADAPTOR		1
#	03901423	PACKING PAD CENTER		1
#	03901401	PACKING PAD SIDE L		1
#	03901412	PACKING PAD SIDE R		1
	* PACKING CASE is different between China version and others.			
MISCELLANEOUS				
	40016534	INSULOK TIE 204M/M	T-18L	1
	12359137	RUBBER FOOT	SJ-5012 BLK	4
	40122812	ACETATE TAPE	NITTO NO.5 BLK W15MM 30M (CM)	100
	22365714	CORD HOOK	236-714	1
#	03902467	INSULATING SHEET	FOR MAIN BOARD	1
#	03892012	INSULATING SHEET	FOR PANEL L BOARD	1
#	40340790	NYLON RIVET NRP-450		2
#	03894945	REINFORCE BAR		1
#	03892045	SHIELD SHEET		1
ACCESSORIES (Standard)				
	△ 03785590	AC CORD SET	240V SC-078-NA05	1
	△ 03017356	AC ADAPTOR WITHOUT AC CORD	PSB-1U(R) UNIVERSAL	1
#	03902456	OWNER'S MANUAL	ENGLISH	EXCEPT FOR CHINA
	△ 00905234	EURO CONVERTER PLUG	ECP01-5A	1
#	*03897434	TEMPLATE SHEET	CHINESE PANEL R	FOR CHINA
#	*03897423	TEMPLATE SHEET	CHINESE PANEL L	FOR CHINA
#	03899523	OWNER'S MANUAL	CHINESE	FOR CHINA
	△ 03453012	AC CORD SET	CCC CERT 220V 2P-2P 2.5M BLAC	1
	△ 01018312	AC ADAPTOR	ACI-230C	1
	△ 00905767	AC ADAPTOR	ACI-120C	1
	△ 01903356	AC CORD SET	230V 1.0M FOR PSB	1
#	*****	WARRANTY CARD	FOR CHINA	1
	*****	RUS REGLST RATION CARD	FOR US	1
	* TEMPLATE SHEET CHINESE PANEL L, TEMPLATE SHEET CHINESE PANEL R is only for China.			

CHECKING THE VERSION NUMBER

1. Press the [WORLD1] + [TONE] + [SONG] button, as it is to turn on unit's power. (For China mainland model: Press the [ASIA] + [TONE] + [SONG] button.)
Continue holding down the button until the following screen appears.
2. The CPU and ROM version numbers will be displayed.
3. Please turn off the power, if the version of CPU and ROM is checked.



* Except for China mainland model: "INT" (internal) will be displayed.

USERS DATA SAVE AND LOAD

Required items

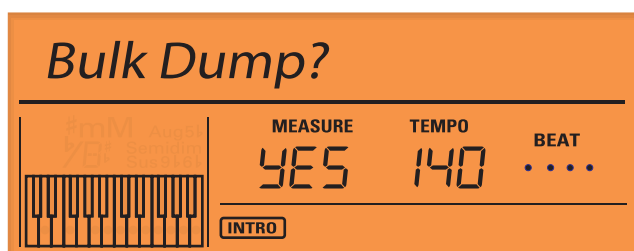
- A sequencer that can record and play back SMF (e.g., MC-80)
- A computer (Operating System: Windows 2000/Me/XP, Macintosh Mac OS 9.0.4 or later, Mac OS X 10.0 or later)
- MIDI cable
- USB cable

USERS DATA SAVE (The System, User Tone, and User Performance settings)

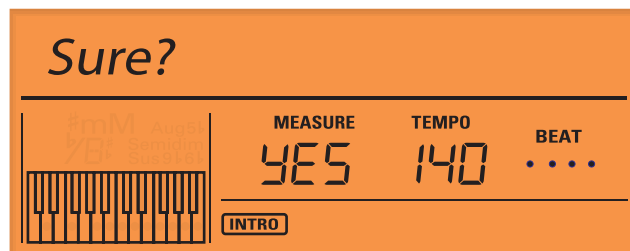
Here's how to back up (save) the System, User Tone, and User Performance setting of the GW-7 on an external MIDI sequencer.

Procedure

1. Use a MIDI cable to connect the GW-7's MIDI OUT to the MIDI IN of your sequencer.
2. Press the [FUNCTION] button.
3. Use the SELECT [<] / [>] buttons to select "Utility?" and press the [ENTER] button.
4. Use the SELECT [<] / [>] buttons to select "Bulk Dump?".



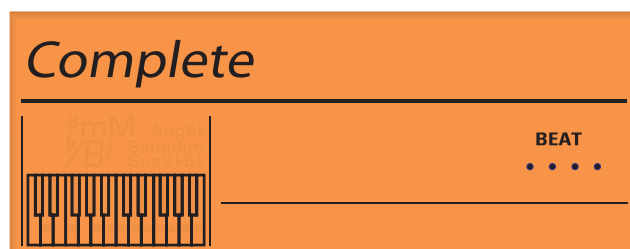
5. Press the [ENTER] button to indicate "Sure?".



6. Start recording on your sequencer.
7. Press the [ENTER] button.



8. When "COMPLETED" appears, the process is complete. Stop recording on your sequencer.



USERS DATA SAVE (User Song and User Style)

Here's how to back up (save) the User Song and User Style of the GW-7 on an external computer.

You must not perform the following actions while the GW-7's [USB] button is lit or while files are being sent or received. If you perform these actions, your computer may freeze, or the files in the GW-7's memory may be damaged.

- Connect or disconnect the USB cable
- Restart, shut down, or enter or exit Suspend (Standby) or Hibernation mode on your computer
- Switch off power to the GW-7

If you are using Windows 2000/XP, you must log onto Windows as one of the following users in order to complete the USB connection correctly.

- A user name belonging to the Administrators group, such as Administrator
- A user name whose account type is a computer administrator

Do not connect two or more GW-7 units to one computer via USB. The system will not operate correctly with such connections.

Procedure

1. Turn on the power of your computer.
2. Turn on the power of the GW-7.
3. Use a separately available USB cable to connect the GW-7 to your computer.
4. On the GW-7, press [USB] so the button is lit.
When a USB connection has been established with your computer, the GW-7's screen will indicate "USB Connecting."
Then, the GW-7 will appear on your computer screen as an external drive ("GW-7_DRV" or as "Removable Disk").
The drive letter will depend on the number of drives that Windows has detected. (This is not relevant for Mac OS.)

ConnectUSB [ENT]



5. Open the GW-7 external drive on your computer screen, and open the "Style" or "Song" folder.
6. You can perform the following file operations to save the User Song and User Style of the GW-7 on the computer.
 - Drag and drop music style files to copy them from the "Style" folder to the hard disk of your computer
 - Drag and drop song files to copy them from the "Song" folder to the hard disk of your computer
7. Depending on the computer you're using, perform the action below.
 - Macintosh: Drag the "GW-7_DRV" or "Removable Disk" icon into the trash.
 - Windows XP: In My Computer, right-click the "GW-7_DRV" or "Removable Disk" icon, and execute "Eject."
 - Windows 2000/Me:
 1. Click in the task tray, and click the message that indicates "Stop drive."
 2. In the "Remove Hardware" dialog box, click [OK].
8. Terminate the USB connection as described in procedure 7, and then press [USB] or [EXIT] on the GW-7.
9. Disconnect the USB cable from the GW-7 and your computer.

USERS DATA LOAD (The System, User Tone, and User Performance settings)

Here's how to return the backed-up data from your sequencer into the GW-7.

Procedure

1. Turn on the power of the GW-7.
2. Use a MIDI cable to connect the GW-7's MIDI IN to your sequencer's MIDI OUT.
3. Transmit the bulk dump from your external sequencer to the GW-7. Do not operate the GW-7 while it is receiving the data.
4. When the file has finished playing back, loading has been completed.

USERS DATA LOAD (User Song and User Style)

Here's how to return the backed-up data from your computer into the GW-7.

Procedure

1. Turn on the power of your computer.
2. Turn on the power of the GW-7.
3. Use a separately available USB cable to connect the GW-7 to your computer.
4. On the GW-7, press [USB] so the button is lit. When a USB connection has been established with your computer, the GW-7's screen will indicate "USB Connecting." Then, the GW-7 will appear on your computer screen as an external drive ("GW-7_DRV" or as "Removable Disk"). The drive letter will depend on the number of drives that Windows has detected. (This is not relevant for Mac OS.)

ConnectUSB [ENT]



5. Open the GW-7 external drive on your computer screen, and open the "Style" or "Song" folder.
6. You can perform the following file operations to return the User Song and User Style from your computer into the GW-7.
 - Drag and drop music style files to copy them from the hard disk of your computer to the "Style" folder
 - Drag and drop song files to copy them from the hard disk of your computer to the "Song" folder
7. Depending on the computer you're using, perform the action below.
 - Macintosh: Drag the "GW-7_DRV" or "Removable Disk" icon into the trash.
 - Windows XP: In My Computer, right-click the "GW-7_DRV" or "Removable Disk" icon, and execute "Eject."
 - Windows 2000/Me:
 1. Click in the task tray, and click the message that indicates "Stop drive."
 2. In the "Remove Hardware" dialog box, click [OK].
8. Terminate the USB connection as described in procedure 7, and then press [USB] or [EXIT] on the GW-7.
9. Disconnect the USB cable from the GW-7 and your computer.

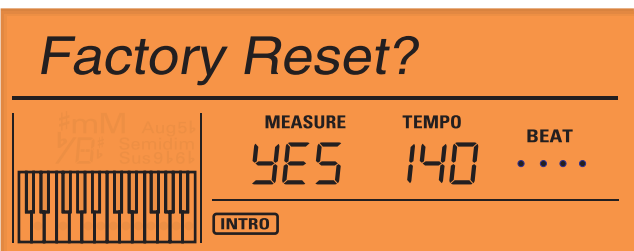
FACTORY RESET INSTRUCTIONS

Here's how to restore the System, User Tone, and User Performance settings of GW-7 to Its Factory Settings.

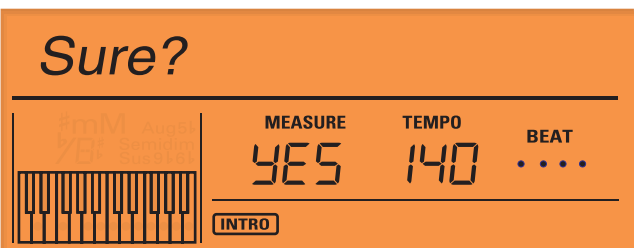
After you update the system, you will need to perform the Factory Reset.

Procedure

1. Press [FUNCTION].
2. Use SELECT [<] [>] to get the screen to indicate "Utility?", and then press [ENTER].
3. Use SELECT [<] [>] to get the screen to indicate "Factory Reset?"



4. Press [ENTER]. The screen will prompt "Sure?"



5. Press [ENTER] to initialize the GW-7. If you press [EXIT] instead, you're returned to the previous

screen and no initialization takes place.

Once the initialization is complete, the previous screen will reappear.

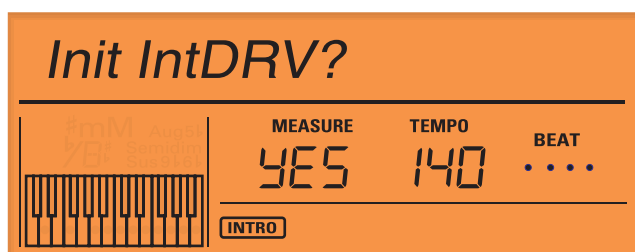
Restoring the factory settings will initialize the System, User Tone, and User Performance settings.

Initializing the User Style and User Song Memory (Init DRV)

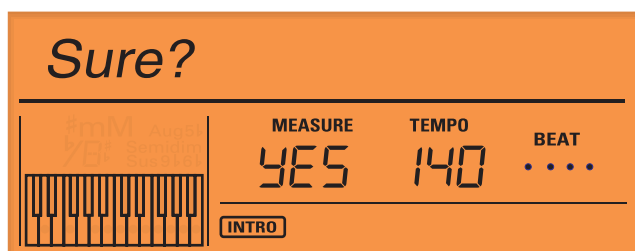
Here's how to restore the User Style and User Song Memory to Its Factory Settings.

Procedure

1. Press [FUNCTION].
2. Use SELECT [<] [>] to get the screen to indicate "Utility?", and then press [ENTER].
3. Use SELECT [<] [>] to get the screen to indicate "Init IntDRV?"



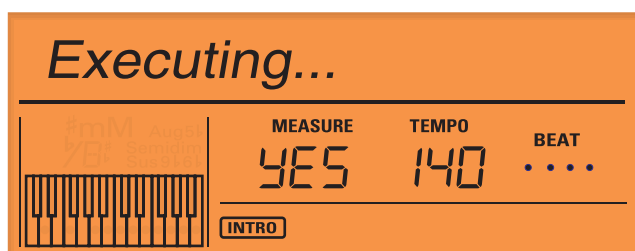
4. Press [ENTER]. The screen will prompt "Sure?"



5. Press [ENTER] to initialize the settings.

If you press [EXIT] instead, you're returned to the previous screen and no initialization takes place.

Be sure not to turn off the power while "Executing..." appears.



Once the initialization is complete, the previous screen will reappear.

SYSTEM SOFTWARE UPDATING INSTRUCTIONS

The GW-7 uses flash memory to store its program Rom. The flash memory updater (control program) is stored in the updater block of the flash memory. The data for the update is normally provided as SMF data (p000*.mid) or Binary data (GW7*.BIN).

Connect a sequencer that is able to play back SMF data (e.g., the MC-80) to the

GW-7, and load the data into the GW-7 to update its program or connect a computer to GW-7 via a USB, and load the data into the GW-7 to update its program.

After you update the system, you will need to perform the Factory Reset.

Once this will also reset the user data, you must back up the user data beforehand. (Refer to "Saving and loading data")

Turn around time of updating about 40 minutes (by MIDI connecting) or 15 minutes (USB connecting).

UPDATE BY MIDI CONNECTING

Items Required

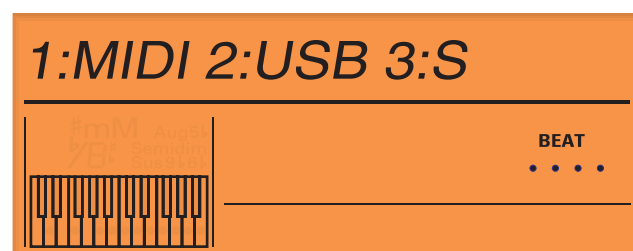
- Sequencer that is able to play back SMF data (e.g., MC-80; a sequencer that has Chain Play capability is ideal)
- MIDI cable
- UPDATE DATA FOR SERVICE CD-ROM (#17041619) EXCEPT FOR CHINA
- UPDATE DATA FOR SERVICE CD-ROM (#17041620) FOR CHINA

The procedure of system software update

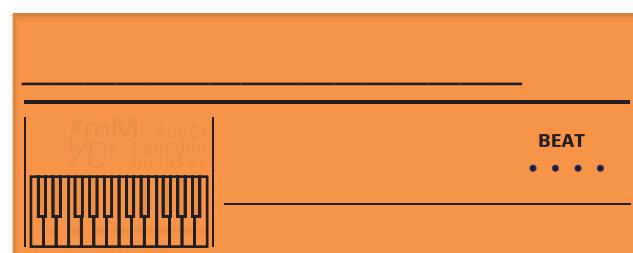
1. Connect the MIDI from your external sequencer's MIDI OUT to the GW-7's MIDI IN.

If you are using a sequencer with Chain Play capability, make settings so that you can chain-play the SMF files.

2. While holding down the [USER] button and [SONG] button, turn on the power. (Continue holding down the buttons until the following screen appears.)



3. Press the [PIANO] (1:MIDI) button. The display will indicate to wait to receive MIDI data.



4. When the GW-7 indicates that it is waiting to receive MIDI data, play back all of the ".mid" files from the GW-7 UPDATE DATA FOR SERVICE in numerical order.

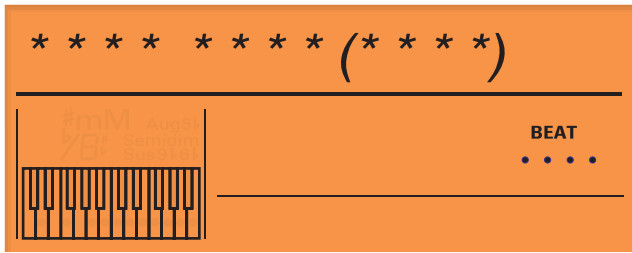
NOTE

While the GW-7 is receiving MIDI data, the "Waiting" indication will change to "Receiving." When the data of one file has been received, the indication will change to "Waiting"; you can then play back the next file.

MEMO

The update process will be easier if you use a sequencer that has Chain Play capability, such as the MC-80.

5. When the update is completed, the following screen will appear and the (SPLIT) and (DUAL) LED will blink.



- Verify that "****" matches the checksum of the version to which you updated.
- Turn off the power of the GW-7. Then turn the power on again and perform the Factory Reset operation.

Measures against system update failure

If the update failed, perform it once again from step 1.

Update by USB connection.

Items Required

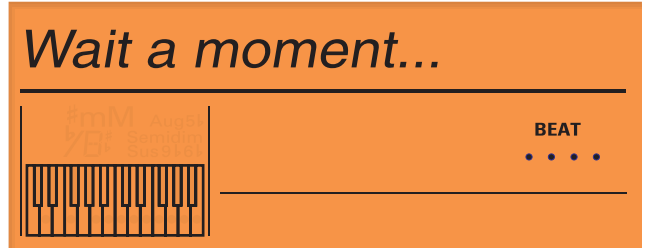
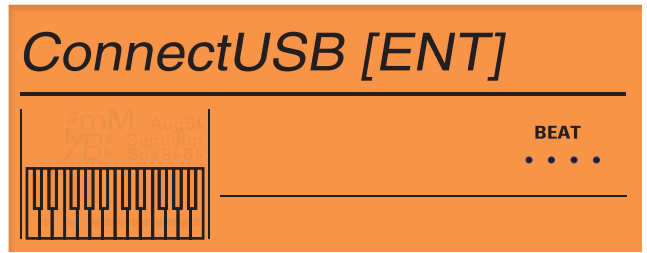
- The computer that It's able to connect with USB.
(OS: Windows Me/2000/XP after. Mac OS 9.0.4 over. Mac OS X 10.0 over)
- MIDI cable.
- UPDATE DATA FOR SERVICE CD-ROM (#17041619) EXCEPT FOR CHINA
- UPDATE DATA FOR SERVICE CD-ROM (#17041620) FOR CHINA

The procedure of system software update

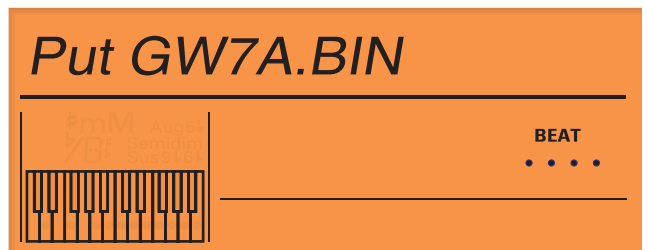
1. Turn on computer power.
Confirm GW7A.bin, GW7B.bin, GW7C.bin, GW7D.bin data in the UPDATE DATA FOR SERVICE CD-ROM
* Update by USB connection, duplicate GW7A.bin, GW7B.bin, GW7C.bin, GW7D.bin data from computer. The binary data that can be copied from the computer onto GW-7 by connecting one degree is only one. As it is the following operating procedures. When one binary data is copied onto GW-7, please release, and do the connection with the computer over again every time.
2. Using an optional USB cable connects GW-7 and the computer.
3. While holding down the [USER] button and [SONG] button, turn on the power. (Continue holding down the buttons until the following screen appears.)



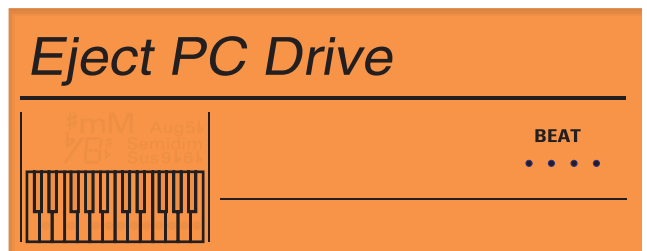
4. Press the [KBD / ORGAN] (2:USB) button.
5. Press the ENTER button if the following screen is displayed. When "Wait a moment ..." displayed in LCD of GW-7, the Computer connection with USB begins.



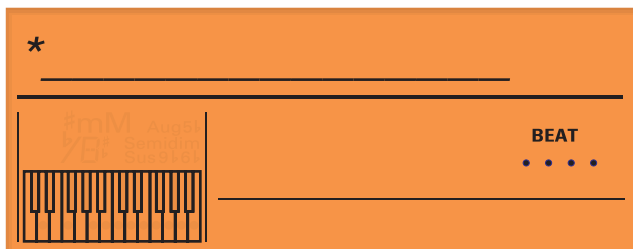
6. When the USB connection with the computer succeeds, "Put GW7*.BIN" displayed in LCD of GW-7, GW-7 awakes the display as an external drive ("GW-7_DRV" or "Removable disk") on the screen of the computer. Please open an external drive of GW-7 on the screen of the computer, copy the binary data that displayed in LCD by drops & drug. When "Receiving.." displayed in LCD of GW-7, the transmission of data is begun. Please do not copy other file except which it displayed in LCD.



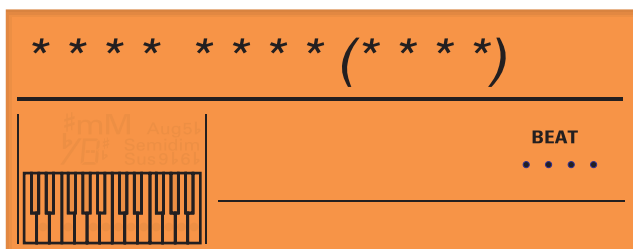
7. Please operate according to the computer that connects it as follows, and release the USB connection with the computer if the following screen is displayed in LCD of GW-7.
 - Macintosh "GW-7_DRV" or "Removable disk" icon is put in the garbage box.
 - Windows XP: It right-clicks in "GW-7_DRV" of the microcomputer pewter or "Removable disk" icon, and "Take out" is executed.
 - (1) Click Task tray, and click "Drive stop" message that it appeared.
 - (2) "Take out Hardware" in dialogue and click the [OK] button.



8. After it is displayed in LCD of GW-7, "Busy..", The binary data is read when the USB connection with the computer is released.



9. It returns to procedure 6 when reading the binary data ends. The name of the binary data copied onto LCD of GW-7 as follows is displayed in procedure 7. Procedure 6-9 of all the binary data is repeated.
10. When reading all the binary data ends, the following screen will appear, and LED of the [SPLIT] and [DUAL] will blink.



11. Verify that "*****" matches the checksum of the version to which you updated.
12. Turn off the power of GW-7. Then turn the power on again and perform the Factory Reset operation.

Measures against system update failure

If the update failed, perform it once again from step 1.

TEST MODE

Required items

- Noise meter.
- Headphones.
- Monitor speaker (MA-10 etc.) x2pcs.
- The computer that it's able to connect with USB.
(OS: Windows Me/2000/XP after. Mac OS 9.0.4 over. Mac OS X 10.0 over)
- Expression pedal.
- Hold pedal.
- Audio cable x2 pcs
- MIDI cable x1pc
- USB cable x1 pc

Test item.

The GW-7 have the following tests. For details on each test, refer to the corresponding item.

0. Test Mode Top page

1. Shock TEST
2. Memory TEST
3. MIDI TEST
4. USB TEST
5. SOUND TEST (OUT1,2 HEADPHONE)
6. LCD TEST
7. A/D TEST1 (Bender & Modulation)
8. A/D TEST2 (Control Knob)
9. A/D TEST3 (Hold Pedal, Expression Pedal)
10. D-Beam Adjustment
11. D-Beam TEST
12. Switch & LED TEST
13. KEYBOARD TEST
14. Noise TEST
15. Factory Reset

Caution before you begin the test.

Even when you enter Test mode, the user data will not be erased until you execute "15.Factory Reset."

You will need to store the user data to an external sequencer beforehand only if you only want to execute "15.Factory Reset." (See "Saving and loading data")

- Some of the test items will produce a test tone.
Connect headphones with monitor speakers before you start.
- "4.USB Test" is confirmed whether USB can be correctly connected with the computer.
Please start the computer before it enters the test mode, and connect GW-7 with USB cable.

Entering Test Mode.

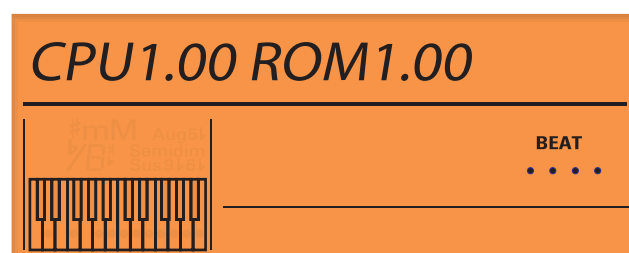
While holding down the three buttons [WORLD1] + [TONE] + [SONG], turn on the power of GW-7. The top page of Test mode will appear. Continue holding down the buttons until the top page of Test mode appears. (For China mainland model: Press [ASIA] + [TONE] + [SONG] button.)

Skipping Test Mode.

Use the [SHIFT] button + SELECT [<] button to move to the preceding test, or the [SHIFT] button + SELECT [>] button to move to the next test.

Test mode details.

0.Test Mode Top page (GW-7 PD Test)



1. Here you can check the CPU and Program ROM versions.
If the version is inappropriate, please perform the update. (Refer to "Updating the system")
2. Verify that the LCD backlight is lit evenly.
If it is not lit correctly, check the following locations.

- Press the [ENTER] button to begin Test mode.

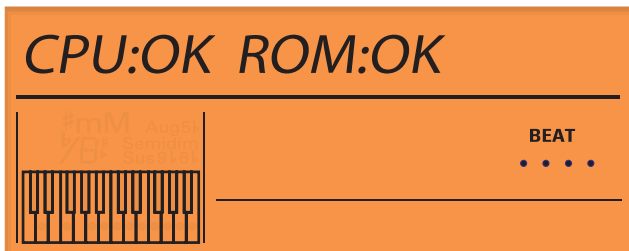
1.SHOCK Test



- DEMO SONG will play.
Verify that the VOLUME control produces no static etc.
- Verify that the audio output is muted while you hold down the [TAP TEMPO] button.
- Press the [ENTER] button to the preceding test.

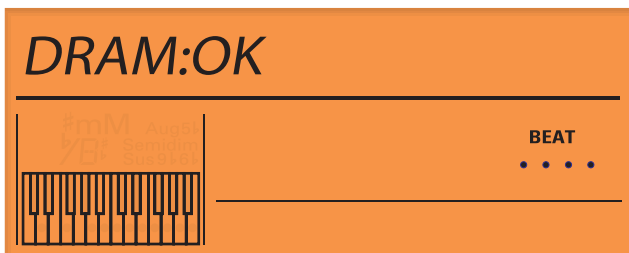
2.MEMORY Test

(MEMORY Test 1)



- This test checks the CPU and FLASH ROM (program memory).
- If no problems are found, the display will indicate OK, and you will automatically proceed to MEMORY Test 2.
If the result is "NG", check the following locations.
CPU NG: MAIN BOARD IC3,IC11,IC12,X1,
ROM NG: MAIN BOARD IC5,IC36
Press the [SHIFT] button + SELECT [>] button to move to the preceding test.

(MEMORY Test 2)



- This test checks the DRAM.
- If no problems are found, the display will indicate OK, and you will automatically proceed to MEMORY Test 3.
If the result is "NG", check the following locations.
DRAM NG: MAIN BOARD IC8
Press the [SHIFT] button + SELECT [>] button to move to the preceding Memory test3.

(MEMORY Test 3)



- This test checks WAVE ROM, DSP.
- If no problems are found, the display will indicate OK, and you will automatically proceed to MEMORY Test 3.
If the result is "NG", check the following locations.
WAVE NG: MAIN BOARD IC22
DSP NG: MAIN BOARD IC21,X2,IC29

Press the [SHIFT] button + SELECT [>] button to move to the preceding test.

If all Memory Tests no problems are found, you will automatically move to the preceding Test.

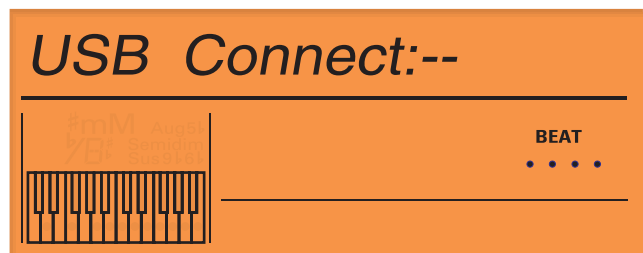
3.MIDI Test



Use a MIDI cable to connect MIDI IN with MIDI OUT.

If it is correctly connected, you will automatically proceed to the next test.

4.USB Test

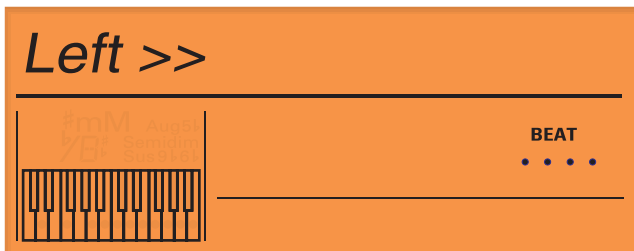


- When connected the USB with the computer correctly, " OK " will be displayed in LCD of GW-7, GW-7 awakes the display as an external drive ("GW-7_DRV" or "Removable disk") on the screen of the computer.
Before it enters the test mode, please start the computer and connect GW-7 with USB cable.
- According to the computer, it operates as follows,
 - Macintosh:Put "GW-7_DRV" or "Removable disk" icon into the garbage box.
 - Windows XP:It right-clicks in "GW-7_DRV" of the microcomputer pewter or "Removable disk" icon and "Take out" is executed.
 - Windows 2000/Me:
 - Click Task tray, and click "Drive stop" message that it appeared.
 - "Take out Hardware" in dialogue and click the [OK] button.
- When connecting the USB of GW-7 with the computer is correctly to be released, you will automatically to the preceding test.

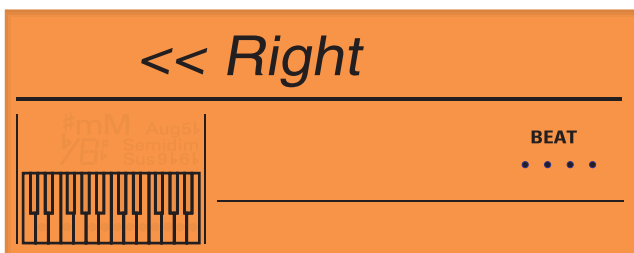
5.SOUND Test

(L-ch Test)

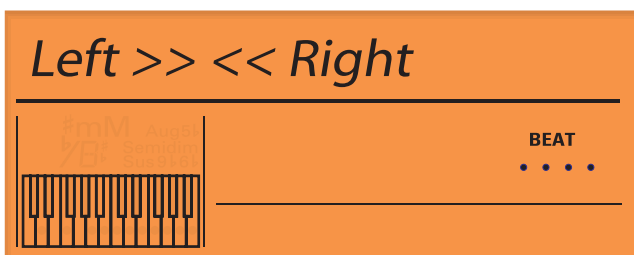
6.LCD Test



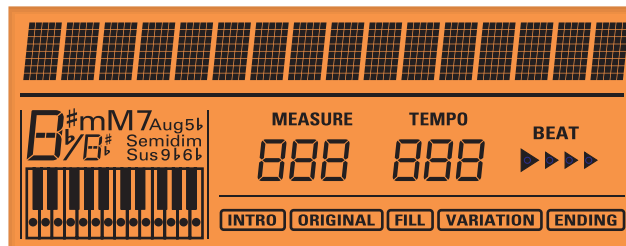
1. Please verify that Output-L and Headphones from left side sign wave output.
 2. Press the [ENTER] button to proceed to the R-ch test.
- * According to the setting of the computer, when automatically advancing from "4. USB Test" it is likely not to sound out. For this case, please press the [SHIFT] button.
- (R-ch Test)**



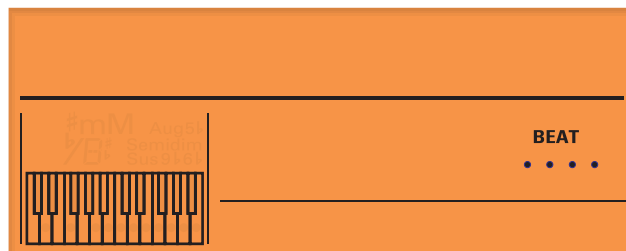
3. Please verify that Output-R and Headphones from right side triangle wave output.
 4. Press the [ENTER] button to proceed to the L/R-ch test.
- (L/R-ch Test)**



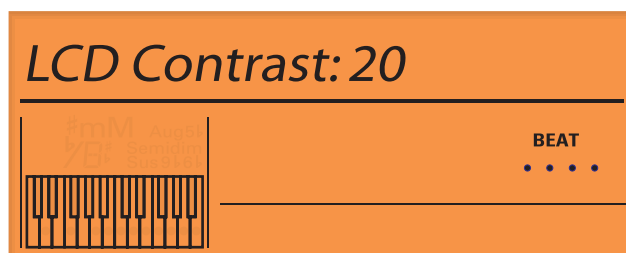
5. Please verify that Output-L and Headphones from left side sign wave output and Output-R and Headphones from right side triangle wave output.
6. Press the [ENTER] button to proceed to the L/R-ch test.



1. Verify that all pixels of the LCD lit.
2. Press the [ENTER] button to proceed to the All LCD Pixels Unlit test.



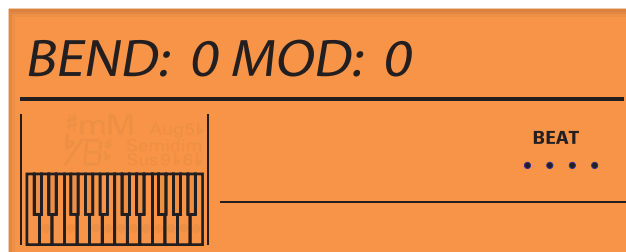
3. Verify that all pixels of the LCD are unlit.
4. Press the [ENTER] button to proceed to the LCD Contrast Test. (LCD Contrast Test)



5. Verify that you can adjust the contrast by moving the "VALUE" encoder. The contrast value (from 1 to 40) will be displayed in the LCD.
6. Press the [ENTER] button to proceed to the next test.
7. A/D Test 1 (Bender, Modulation)

NOTE

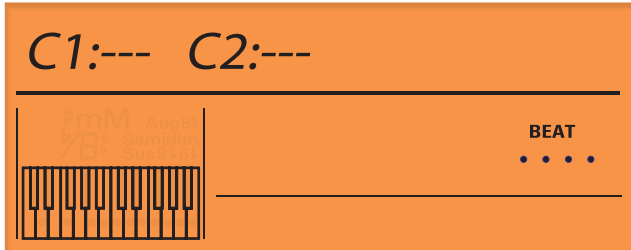
Verify that bender and modulation operate correctly. Make sure that the bender is not being touched when you enter this test. (The A/D value at the moment you enter the test is read as the center voltage.)



1. Move the bender all the way to the left; if a value of "-128" is reached, a click will sound.
2. Move the bender all the way to the right; if a value of "127" is reached, a click will sound.
3. When left and right movements are completed, the display will indicate "OK".
4. Move the modulation lever fully away from yourself; if a value of "127" is reached, a click will sound.

- Return the modulation lever toward yourself; if a value of "0" is reached, a click will sound, the display will indicate "OK", and you will proceed to the next test.
(The "OK" indication will not appear unless you perform the tests in the order of Bender Left, Bender Right, and Modulation.)

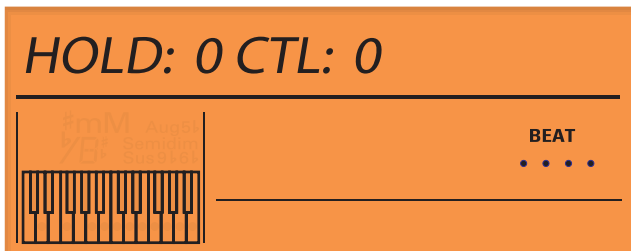
8.A/D Test 2 (Control Knob)



Perform this test in the order of C1, C2.

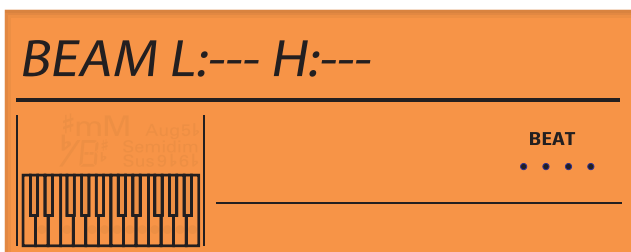
- Turn the knob all the way toward the left; if "0" is reached, a click will sound.
- Turn the knob all the way toward the right; if "127" is reached, a click will sound
- Turn the knob to the center; if "63/64" is reached, a click will sound and the display will indicate "OK."
If all knobs are "OK", you will automatically proceed to the next test.

9.A/D Test 3 (Hold Pedal, Expression Pedal)



- Connect a hold pedal to the rear panel HOLD jack, and an expression pedal to the rear panel CONTROL jack.
- Press the hold pedal; a click will sound when the display indicates "127."
- Release the hold pedal; a click will sound when the display indicates "0", and "OK" will appear.
- Advance the expression pedal; a click will sound when the display indicates "127."
- Return the expression pedal; a click will sound when the display indicates "0", and "OK" will appear.
- If both HOLD and CTL are "OK", you will automatically proceed to the next test.

10.D BEAM ADJUSTMENT



D BEAM ADJUSTMENT



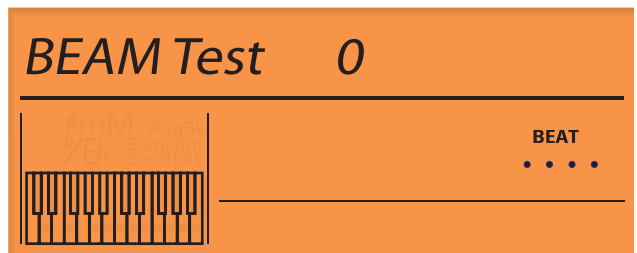
Here you will make D BEAM settings. Before you begin this test, verify that there are no objects within 50 cm of the GW-7. (If any such objects are within this range, the settings cannot be made correctly.)



Do not perform this test in direct sunlight.

- Place your hand 5 cm above the D BEAM and press the [ENTER] button. If the setting was made correctly, the display will indicate "OK."
- Place your hand 45 cm above the D BEAM and press the [ENTER] button. If the setting was made correctly, the display will indicate OK and you will automatically proceed to the next test.

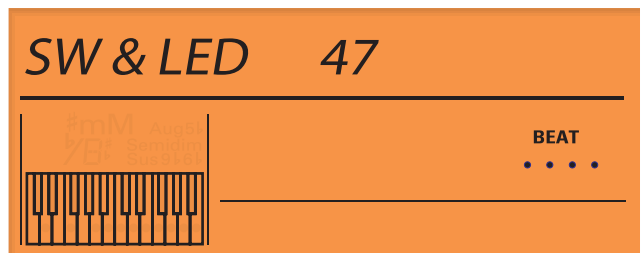
11.D BEAM Test



This checks the operation of the D BEAM.

- Move your hand in a range from 5 to 45 cm above the D BEAM, and verify that the value increases and decreases.
- Place your hand 5 cm above the D BEAM and verify that a value of "127" is displayed.
- Place your hand 45 cm above the D BEAM and verify that a value of "0" is displayed.
- Place your hand 30 cm above the D BEAM and verify that a value greater than "1" is displayed.
- Press [ENTER] to proceed to the next test.

12.SWITCH & LED Test

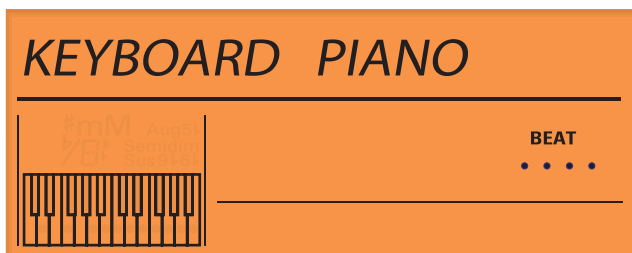


This checks switches and LED.

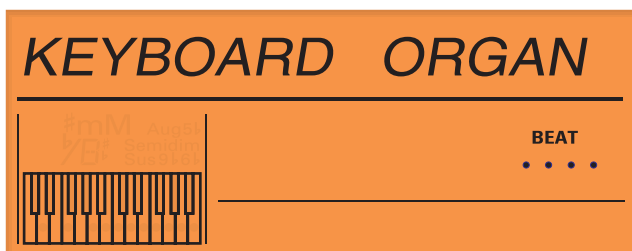
When you enter this test, all LED will light.

- When you press a switch that has an LED, the LED will go dark.
The number of switches you have not yet pressed is shown in the upper right of the screen.
The lower line of the LCD shows the name of the switch you pressed.
If more than one LED corresponds to one switch (button), press that switch the corresponding number of times.
<FILTER>, <ENV>, <BACKING>, <EFFECT>LED = [SELECT] switch (button)
- When all switches have been pressed, you will automatically proceed to the next test.
If you press more than one switch at once, the bottom line of the LCD will indicate "WARNING!!"
If this occurs, use the [SHIFT] button + SELECT [<], SELECT [>] buttons to re-select the SWITCH & LED Test item, and perform the test again.

13.KEYBOARD Test

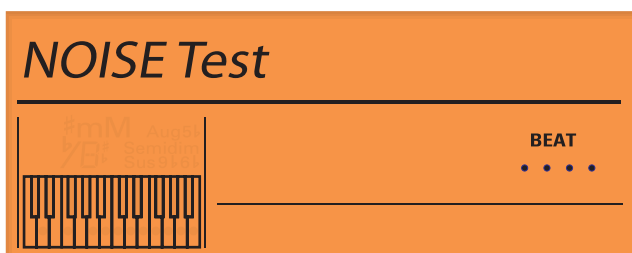


1. Press each key and verify that sound is produced. Also verify that the volume changes depending on the strength with which you press the key.
2. Press the [ENTER] button to change the sound from PIANO to ORGAN.



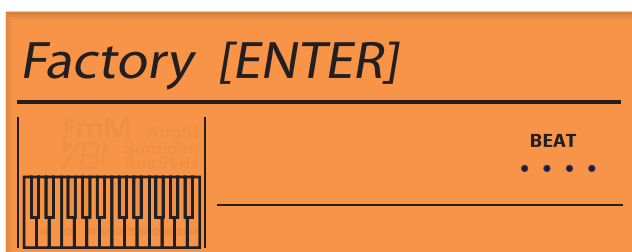
3. Press each key and verify that sound is produced.
4. Press the [ENTER] button to proceed to the next test.

14.NOISE Test



1. Use a noise meter to measure the residual noise. Use a noise meter to measure the residual noise of OUTPUT-L ,OUTPUT-R When use a noise meter to measure the residual noise of OUTPUT-L, please insert dummy plug into OUTPUT-R.
2. Turn the [VOLUME] knob of the GW-7 all the way toward the right.
3. Set the input filter of your noise meter to "DIN- AUDIO."
4. Verify that the measured value is "- 83.0 dBm" or less.
5. Press the [ENTER] button to proceed to the next test.

15.Factory Reset



1. Press the [ENTER] button to execute Factory Reset. (Do not turn off the power while the screen indicates "KEEP POWER ON!") Factory Reset will be completed within 30 seconds.
2. Press the [EXIT] button, you will return to "14.NOISE Test."

3. Press the [SHIFT] + [EXIT] button, you will return to "0.Test Mode" Top Page.



4. When this screen appears, the procedure has been completed. Turn off the power.

BLOCK DIAGRAM

(a) #03892945 WIRING 4X180-P2.0-PHR-PHR-F

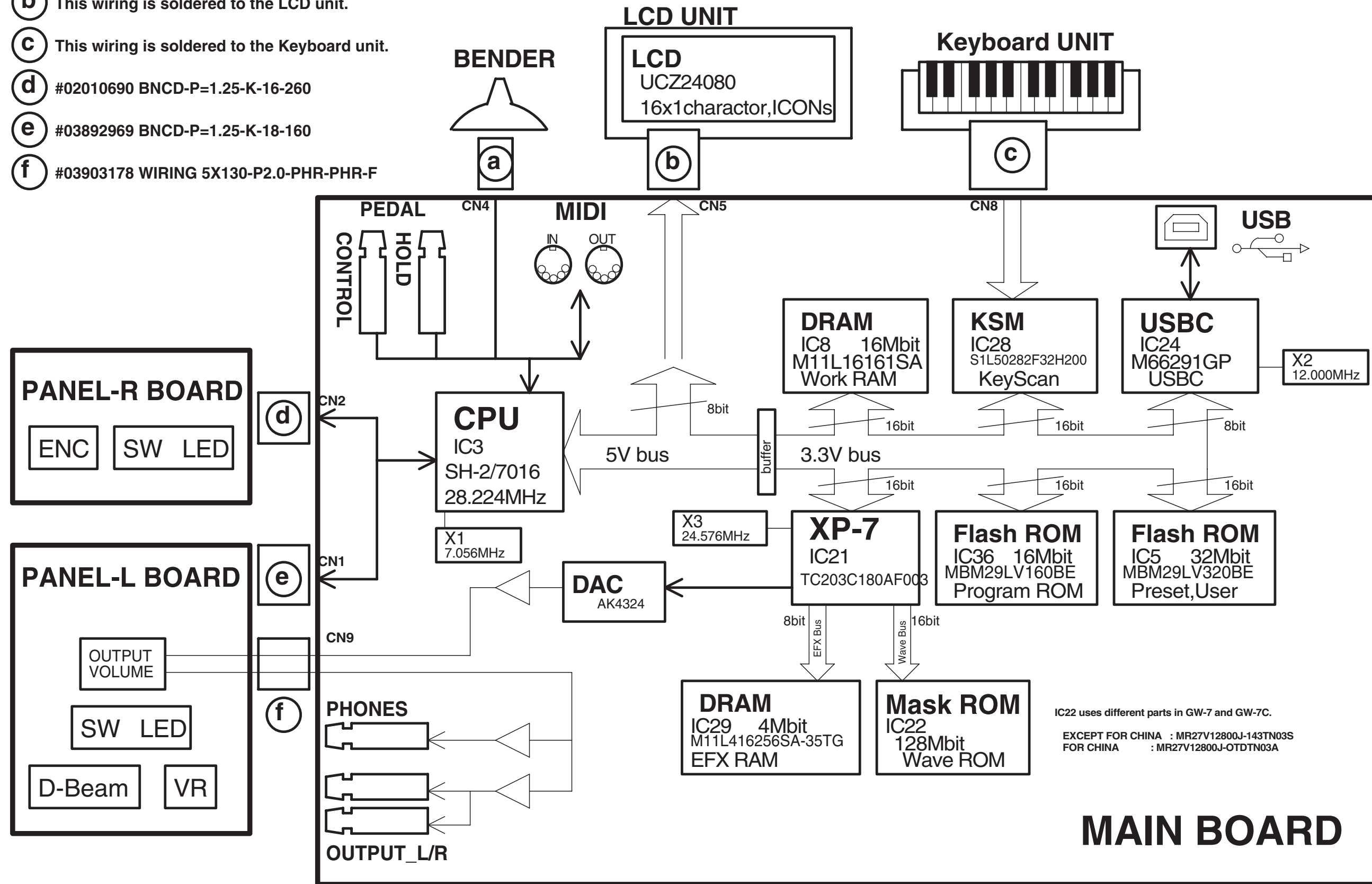
(b) This wiring is soldered to the LCD unit.

(c) This wiring is soldered to the Keyboard unit.

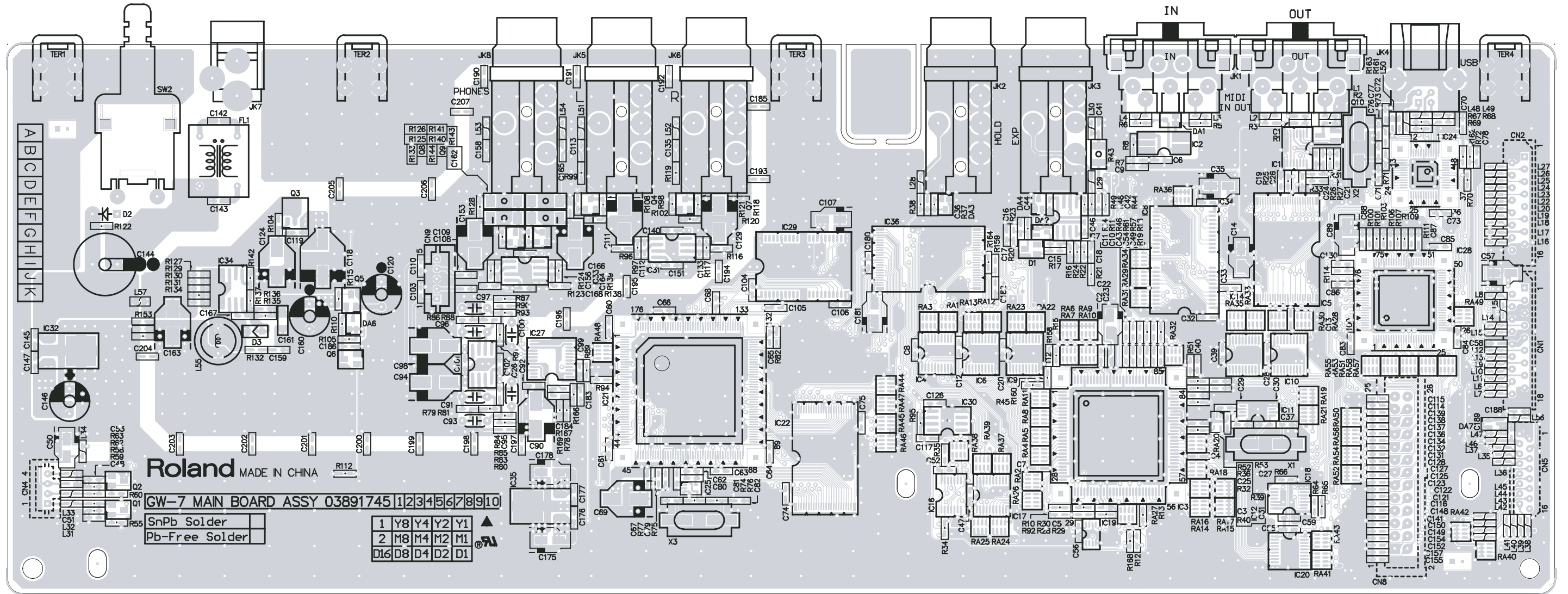
(d) #02010690 BNCD-P=1.25-K-16-260

(e) #03892969 BNCD-P=1.25-K-18-160

(f) #03903178 WIRING 5X130-P2.0-PHR-PHR-F

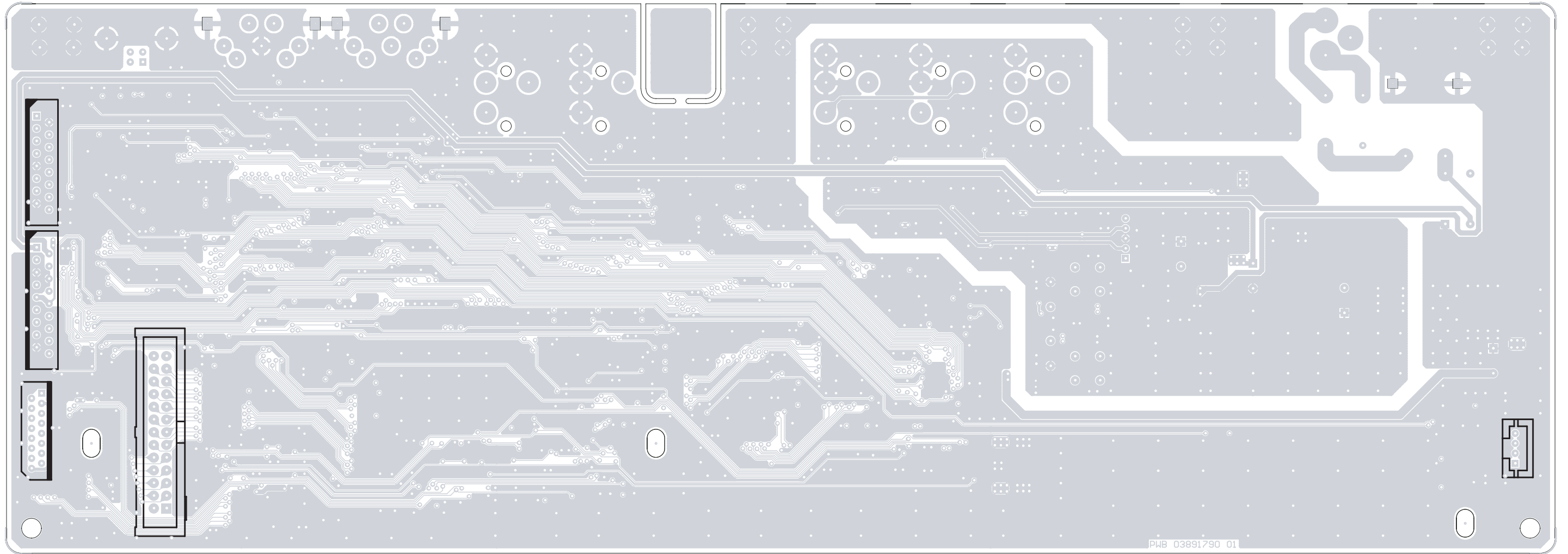


CIRCUIT BOARD (MAIN)



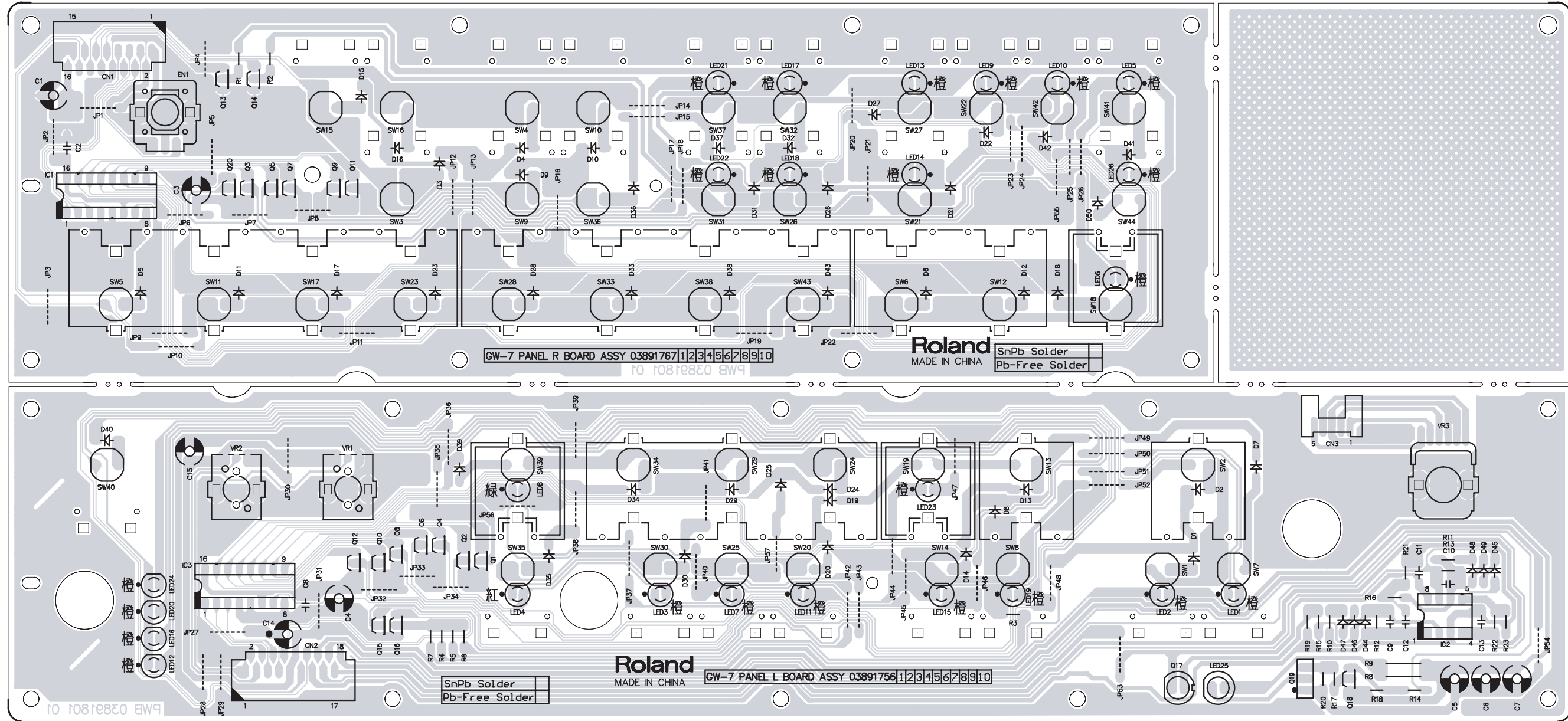
View from component side
"scale=0.95"

CIRCUIT BOARD (MAIN)



View from foil side
"scale=0.95"

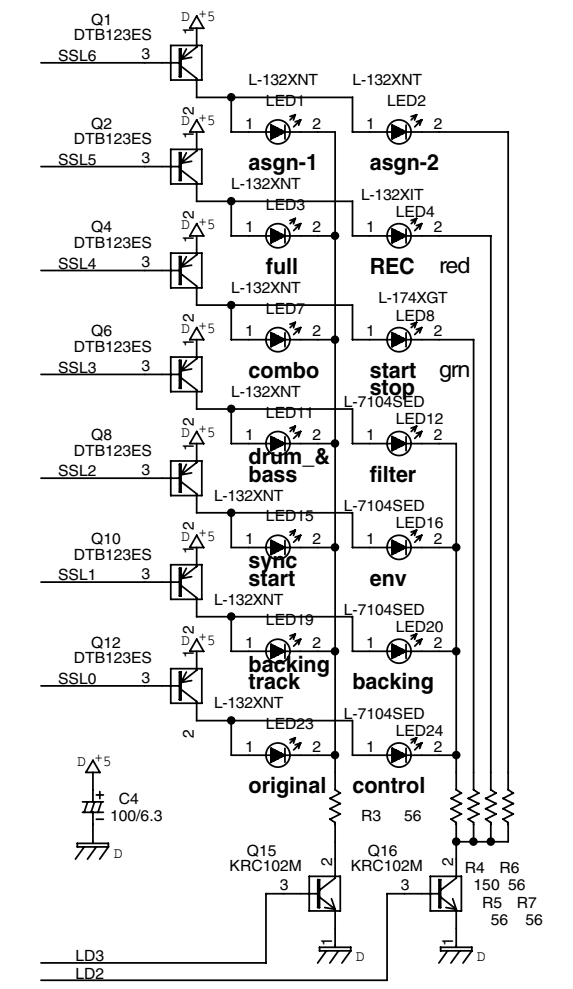
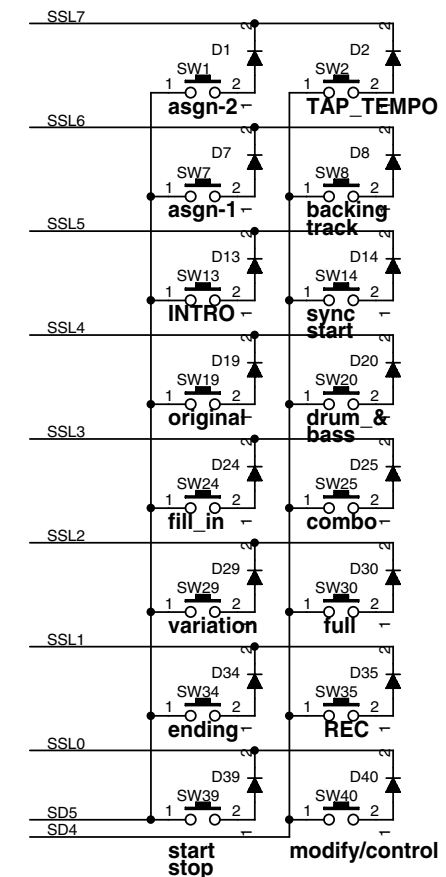
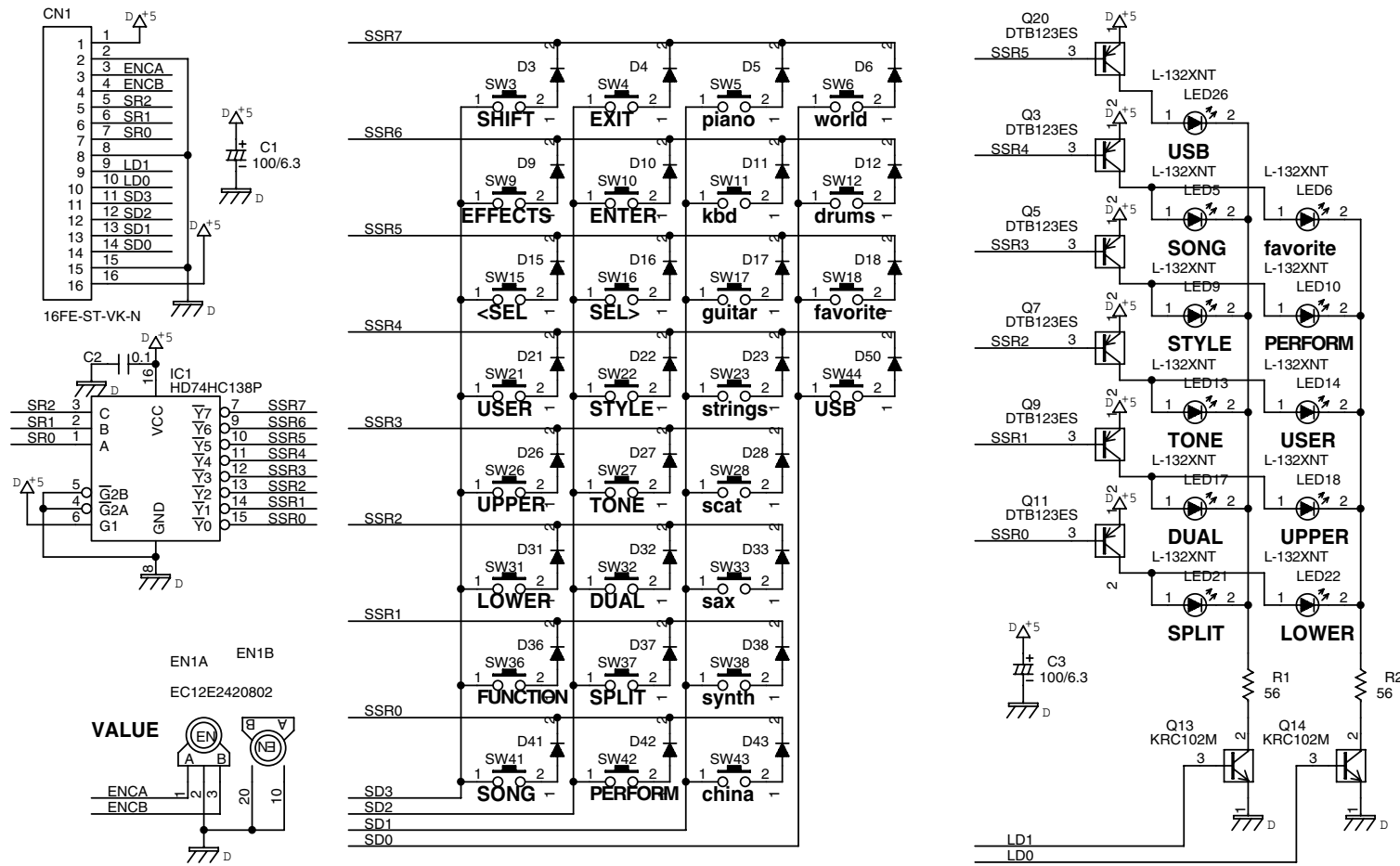
CIRCUIT BOARD (PANEL L BOARD / PANEL R BOARD)



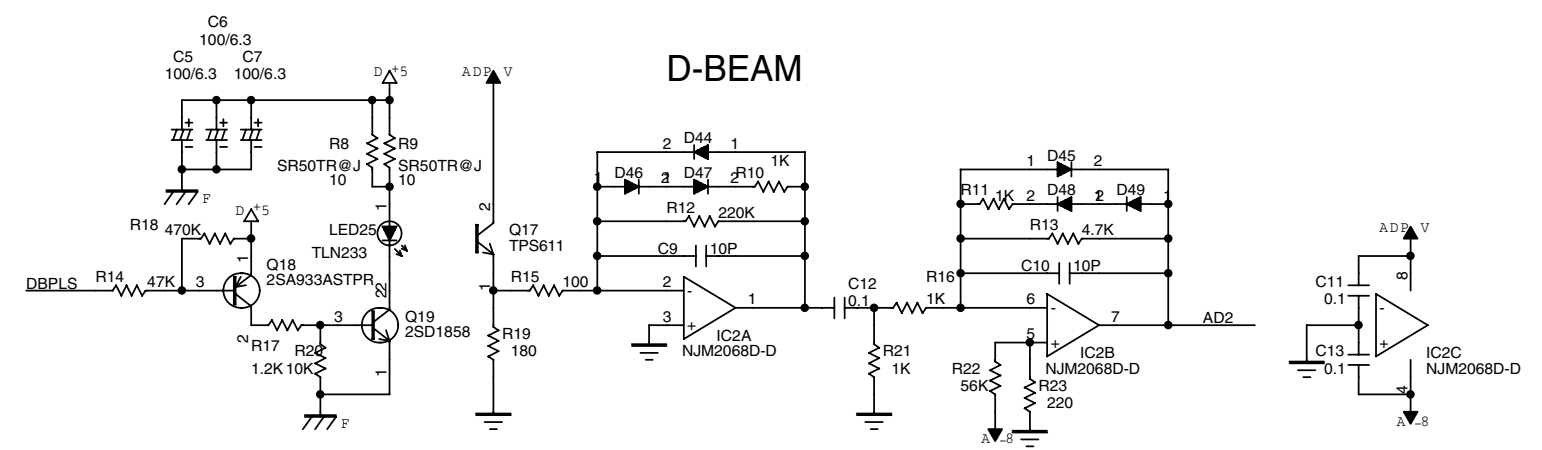
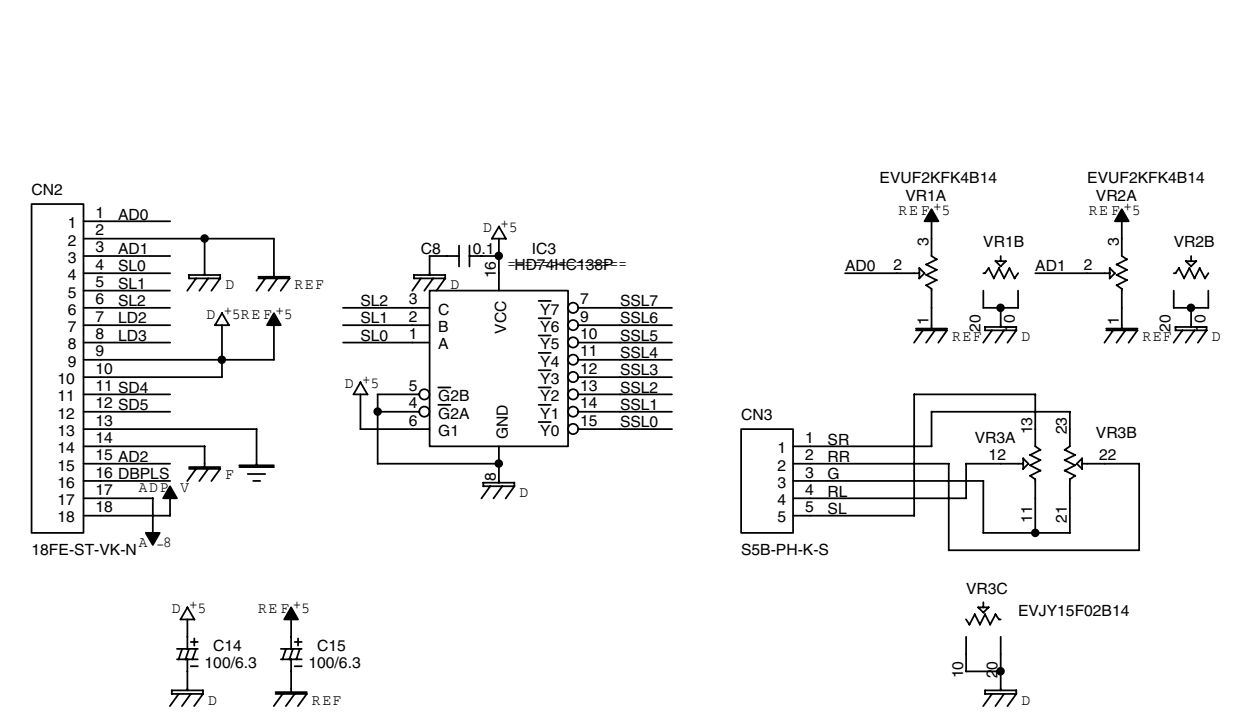
View from component side

CIRCUIT DIAGRAM (PANEL L BOARD / PANEL R BOARD)

PANEL-R-BOARD



PANEL-L-BOARD



ERROR MESSAGES

MIDI Buffer Full

Cause: The amount of the received MIDI message was too much, it can not correctly process.

Correspondence: Please decrease the amount of the transmitted MIDI message.

MIDI Off Line

Cause: There is a problem in the connection of MIDI cable.

Correspondence: Verify that MIDI cable must be neither omission nor a disconnection.

MIDI Error

Cause: It cannot receive MIDI message correctly.

Correspondence: There is a problem in the content of the MIDI message when the same message is displayed many times.