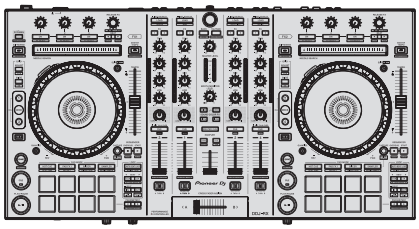
Pioneer DJ

Service Manual



DDJ-RX

ORDER NO.
RRV4641

DJ controller

DDJ-RX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
DDJ-RX	FJLPXEG	AC 100 V to 240 V	
DDJ-RX	SVYXEG	AC 100 V to 240 V	
DDJ-RX	UXEGCB	AC 100 V to 240 V	
DDJ-RX	AXEG	AC 100 V to 240 V	

THIS SERVICE MANUAL SHOULD BE USED TOGETHER WITH THE FOLLOWING MANUAL(S).

Model	Order No.	Remarks
DDJ-RX	RRV4642	SCHEMATIC DIAGRAM, PCB CONNECTION DIAGRAM, PCB PARTS LIST

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SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

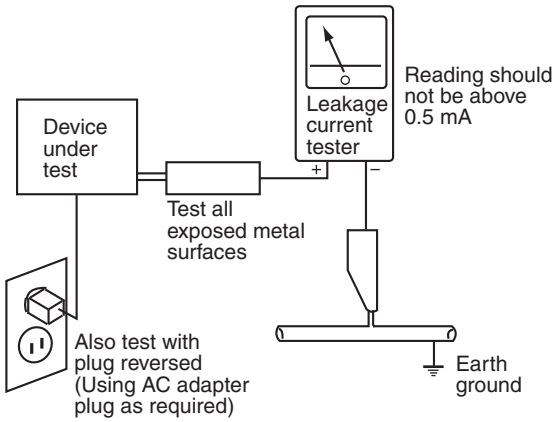
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120 V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

CONTENTS

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

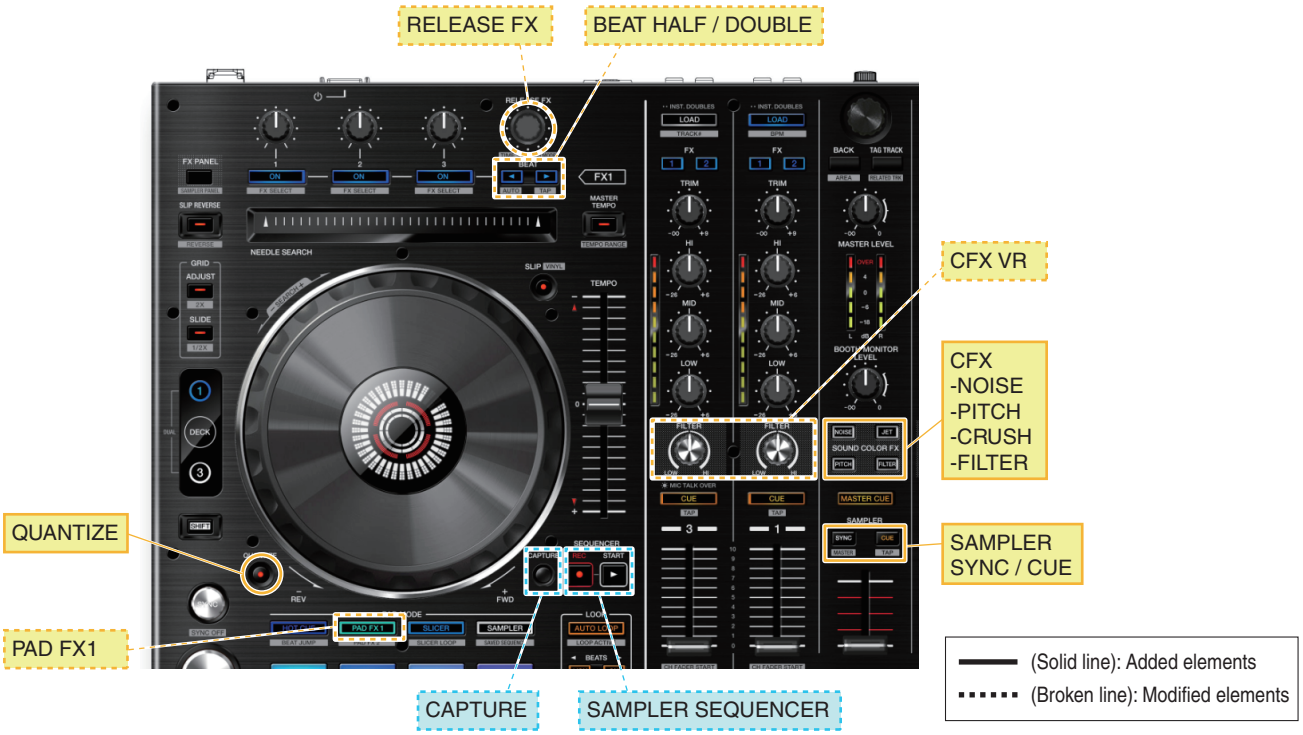
- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
  Do NOT use a soldering iron whose tip temperature cannot be controlled.

1.2 DIFFERENCES BETWEEN THE DDJ-RX and DDJ-SX2

This product is based on the DDJ-SX2, and some operation buttons are added to provide optimal operations as a dedicated control unit for "rekordbox dj," an application having DJ play functions.
The differences in the operating elements of the DDJ-RX from those of the DDJ-SX2 are as follows:

- The operating elements of the DDJ-RX are laid out, taking compatibility with "rekordbox dj" application software into full consideration.

- The DDJ-RX supports the sequencer function, which enables restructuring and arrangement of audio sources assigned to Sampler.



2. SPECIFICATIONS

AC adapter

Power.....AC 100 V to 240 V, 50 Hz/60 Hz
Rated current.....800 mA
Rated output.....DC 5 V, 3 A

General – Main Unit

Main unit weight..... 5.8 kg (12.8 lb)
Max. dimensions..... 664 mm (W) × 70.4 mm (H) × 353.4 mm (D)
(26.1 in. (W) × 2.8 in. (H) × 13.9 in. (D))
Tolerable operating temperature.....+5 °C to +35 °C (+41 °F to +95 °F)
Tolerable operating humidity..... 5 % to 85 % (no condensation)

Audio Section

Sampling rate ..... 44.1 kHz
A/D, D/A converter.....24 bits
Frequency characteristic
USB, CD/LINE, MIC1, MIC2.....20 Hz to 20 kHz
S/N ratio (rated output, A-WEIGHTED)
USB.....107 dB
CD/LINE .....96 dB
PHONO .....87 dB
MIC.....80 dB
Total harmonic distortion (20 Hz — 20 kHzBW)
USB..... 0.003 %
CD/LINE ..... 0.005 %
Standard input level / Input impedance
CD/LINE ..... –12 dBu/47 kΩ
PHONO ..... –52 dBu/47 kΩ
MIC..... –57 dBu/3 kΩ
Standard output level / Load impedance / Output impedance
MASTER OUT 1..... +6 dBu/10 kΩ/330 Ω
MASTER OUT 2.....+2 dBu/10 kΩ/1 kΩ
BOOTH OUT..... +6 dBu/10 kΩ/330 Ω
PHONE..... +4 dBu/32 Ω/32 Ω
Rated output level / Load impedance
MASTER OUT 1..... 24 dBu/10 kΩ
MASTER OUT 2..... 20 dBu/10 kΩ
BOOTH OUT..... 24 dBu/10 kΩ
Crosstalk
CD/LINE .....82 dB
Channel equalizer characteristic
HI.....–26 dB to +6 dB (13 kHz)
MID.....–26 dB to +6 dB (1 kHz)
LOW .....–26 dB to +6 dB (70 Hz)
Input / Output terminals
CD input terminal
RCA pin jack.....2 sets
PHONO/LINE input terminals
RCA pin jack.....2 sets
MIC1 terminal
XLR connector/phone jack (Ø 6.3 mm) .....1 set
MIC2 terminal
Phone jack (Ø 6.3 mm).....1 set
MASTER OUT 1 output terminal
XLR connector.....1 set
MASTER OUT 2 output terminal
RCA pin jacks.....1 set
BOOTH OUT output terminal
Phone jack (Ø 6.3 mm).....1 set
PHONES output terminal
Stereo phone jack (Ø 6.3 mm) .....1 set
Stereo mini phone jack (Ø 3.5 mm).....1 set
USB terminal
B type .....1 set

• The specifications and appearance of this unit and the software are subject to change for improvement without notice.

Accessories

• AC adapter
(411-SXMK3-957)

• Power plug
(FJLPXEG: 420-DJM250-407A, 420-DJM250-362-HA, 420-DJM250-363-HA, 420-DJM250-364A, 420-DJM250-409A)
(SVYXEG: 420-DJM250-362-HA, 420-DJM250-407A)
(UXEGCB: 420-DJM250-361)
(AXEG: 420-DJM250-408)

• USB cable
(408-SUB-132)

• Operating Instructions (Quick Start Guide)
(FJLPXEG: 502-SXMK3F-3548)
(SVYXEG: 502-SXMK3B-3546)
(UXEGCB: 502-SXMK3A-3545)
(AXEG: 502-SXMK3D-3547)

• rekordbox dj license key
(The license key cannot be reissued. Be careful not to lose it.)

3. BASIC ITEMS FOR SERVICE
3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing

To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedures	Check points
1	Check the firmware version.	The firmware version must be the latest one. If it is not the latest one, be sure to update it.
2	Confirm that the customer complaint has been resolved. If the problem pointed out by the customer occurs with a specific source (music file, input channel) or specific operation then perform that operation for checking.	The symptoms in question must not be reproduced. There must be no abnormality in audio signals or operations.
3	Check operations of the each operating elements and LEDs.	There must be no errors in operations of each button, the Jog dial, Performance pads, needle search pads, VOL, fader control, rotary encoder and LEDs in service mode.
4	Check the analog audio output. Connect this unit with a PC with the DJ application (rekordbox later version 4.0.1) installed, via USB, then operate DJ application.	There must be no errors, such as noise, in audio signals and operations of the MASTER/HEADPHONES outputs.
5	Check the analog audio input. Input an audio signal via each channel (MIC/LINE/PHONO).	There must be no abnormality in audio signals or operations.
6	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding audio.

Item to be checked regarding audio	
Distortion	Volume too high
Noise	Volume fluctuating
Volume too low	Sound interrupted

3.2 JIGS LIST

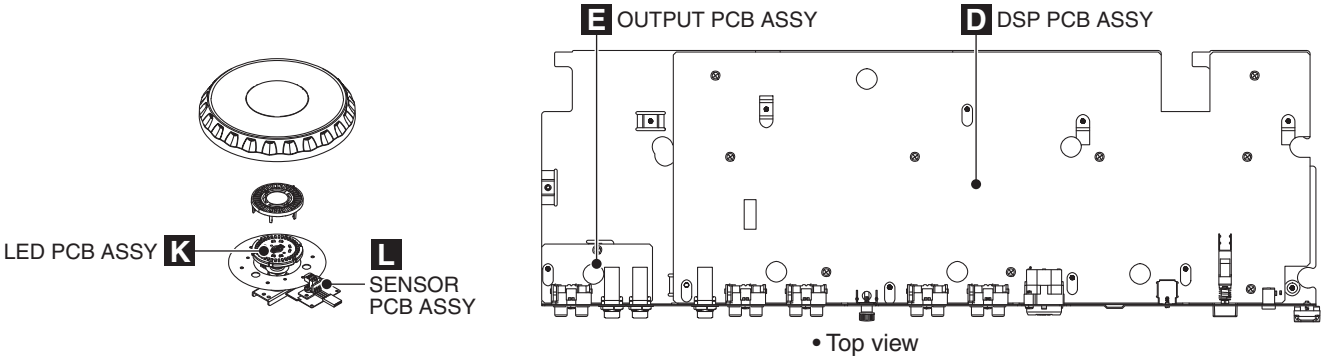
■ Jigs List

Jig Name	Part No.	Purpose of use / Remarks
USB cable	GGP1193	for PC connection
AC adapter	411-SXMK3-957	Accessory (Note: The power plug part is different.)
Extension FFC for diagnosis	GGP1246	37-pin FFC (Part No.: 406-S1-1234-HA) (Two FFCs required for diagnosis

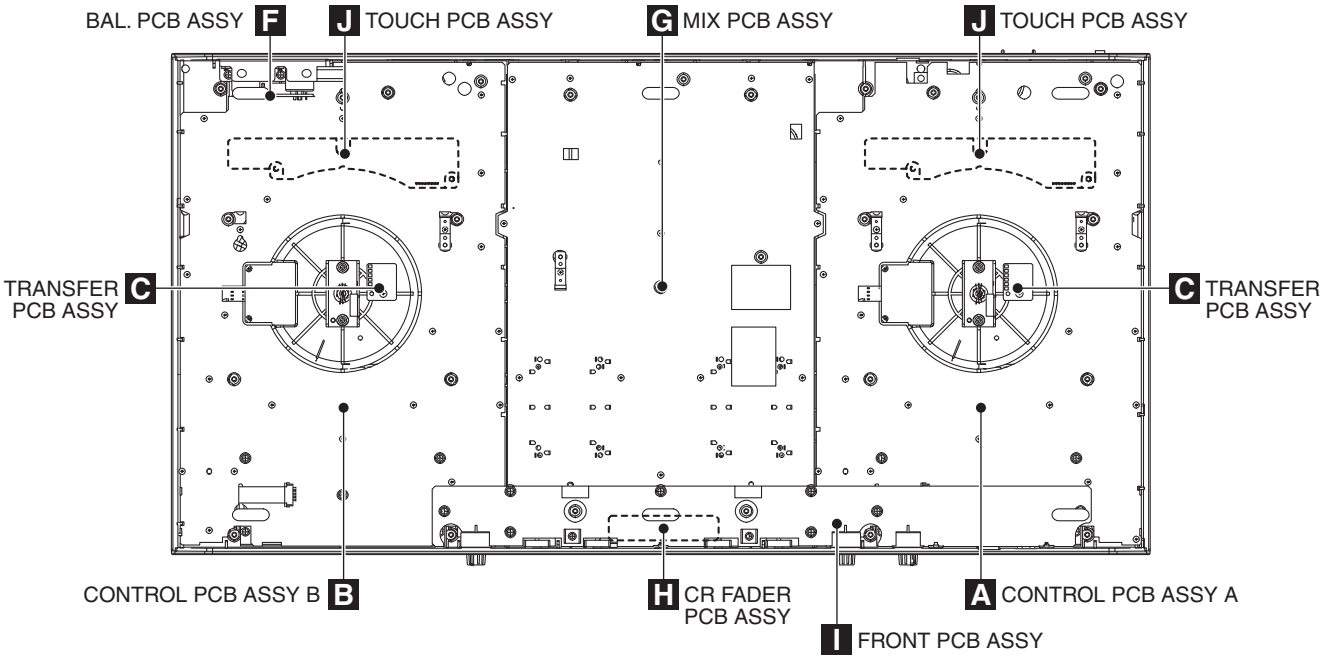
■ Lubricants and Glues List

Name	Part No.	Remarks
Adhesive	GYL1001	Refer to “7. DISASSEMBLY”.
Adhesive	GYL1005	Refer to “7. DISASSEMBLY”.
Grease	GEM1096	Refer to “7. DISASSEMBLY”.

3.3 PCB LOCATIONS



• Top view



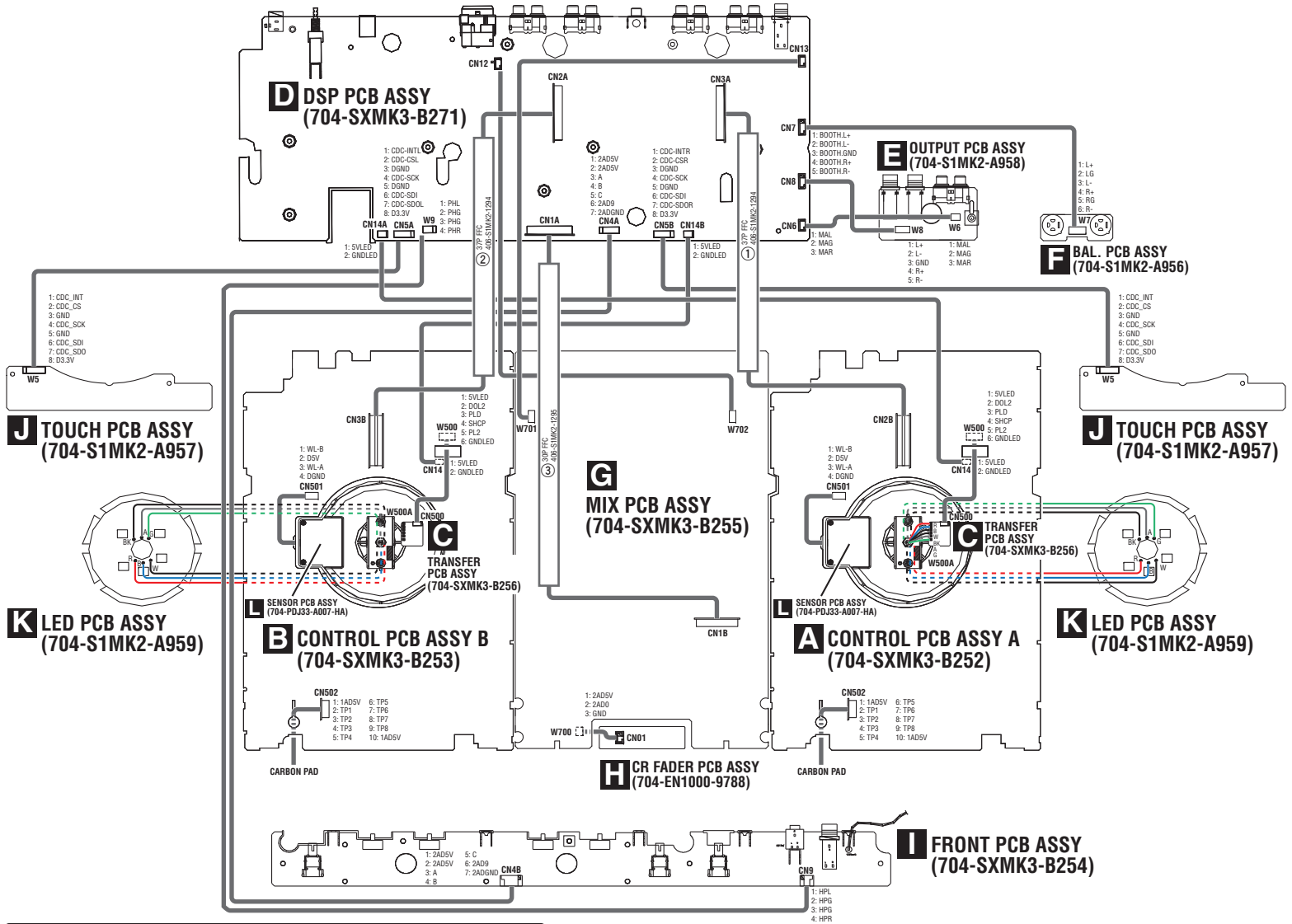
• Bottom view

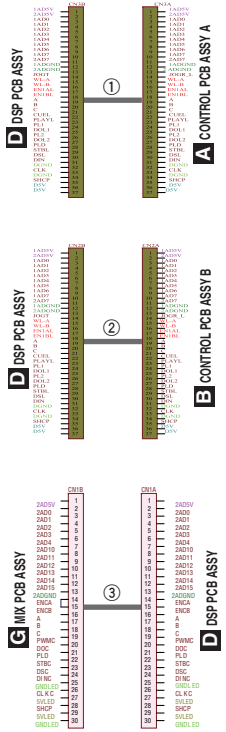
NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	..CR FADER PCB ASSY	704-EN1000-9788
	1	..SENSOR PCB ASSY	704-PDJ33-A007-HA
	1	..MIX PCB ASSY	704-SXMK3-B255
	1	..CONTROL PCB ASSY A	704-SXMK3-B252
	1	..CONTROL PCB ASSY B	704-SXMK3-B253
	1	..FRONT PCB ASSY	704-SXMK3-B254
	1	..TOUCH PCB ASSY	704-S1MK2-A957
	1	..TRANSFER PCB ASSY	704-SXMK3-B256
	1	..I/O & FIXED PLATE ASSY	704-SXMK3-B272
	2	..I/O PCB ASSY SERVICE	704-SXMK3-B332
	3	..DSP PCB ASSY	704-SXMK3-B271
	2	..OUTPUT PCB ASSY	704-S1MK2-A958
	1	..BAL PCB & FIXED P. ASSY	704-S1MK2-A986
	2	..BAL. PCB ASSY	704-S1MK2-A956
	1	..LED & COVER ASSY	704-S1MK2-A961
	2	..LED PCB ASSY	704-S1MK2-A959

4. BLOCK DIAGRAM

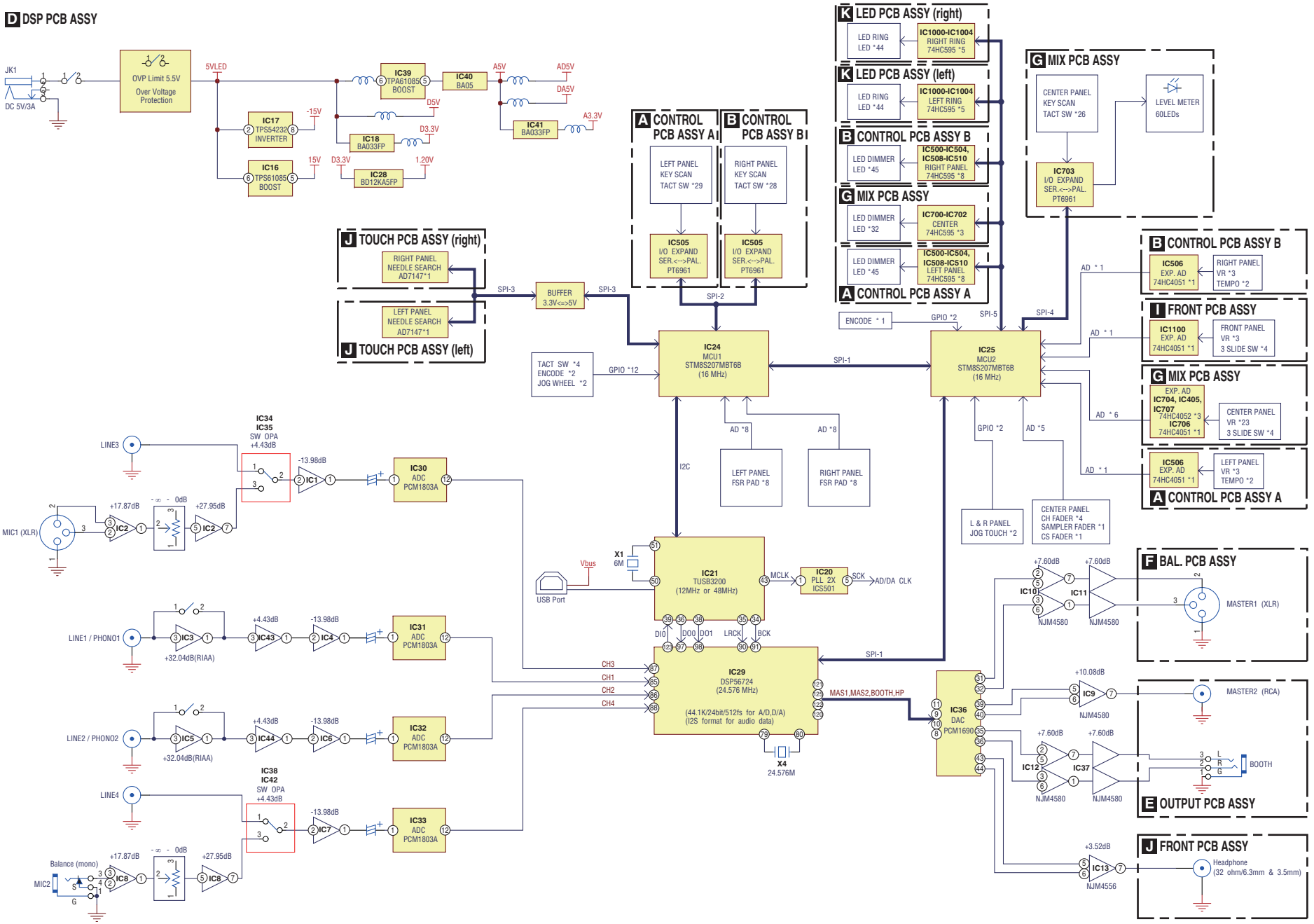




- 部品を発注する場合は、必ず「分解図と部品表」または「電気部品表」を参照してください。
- ⚠ 印の部品は、安全上重要な部品です。
  交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。

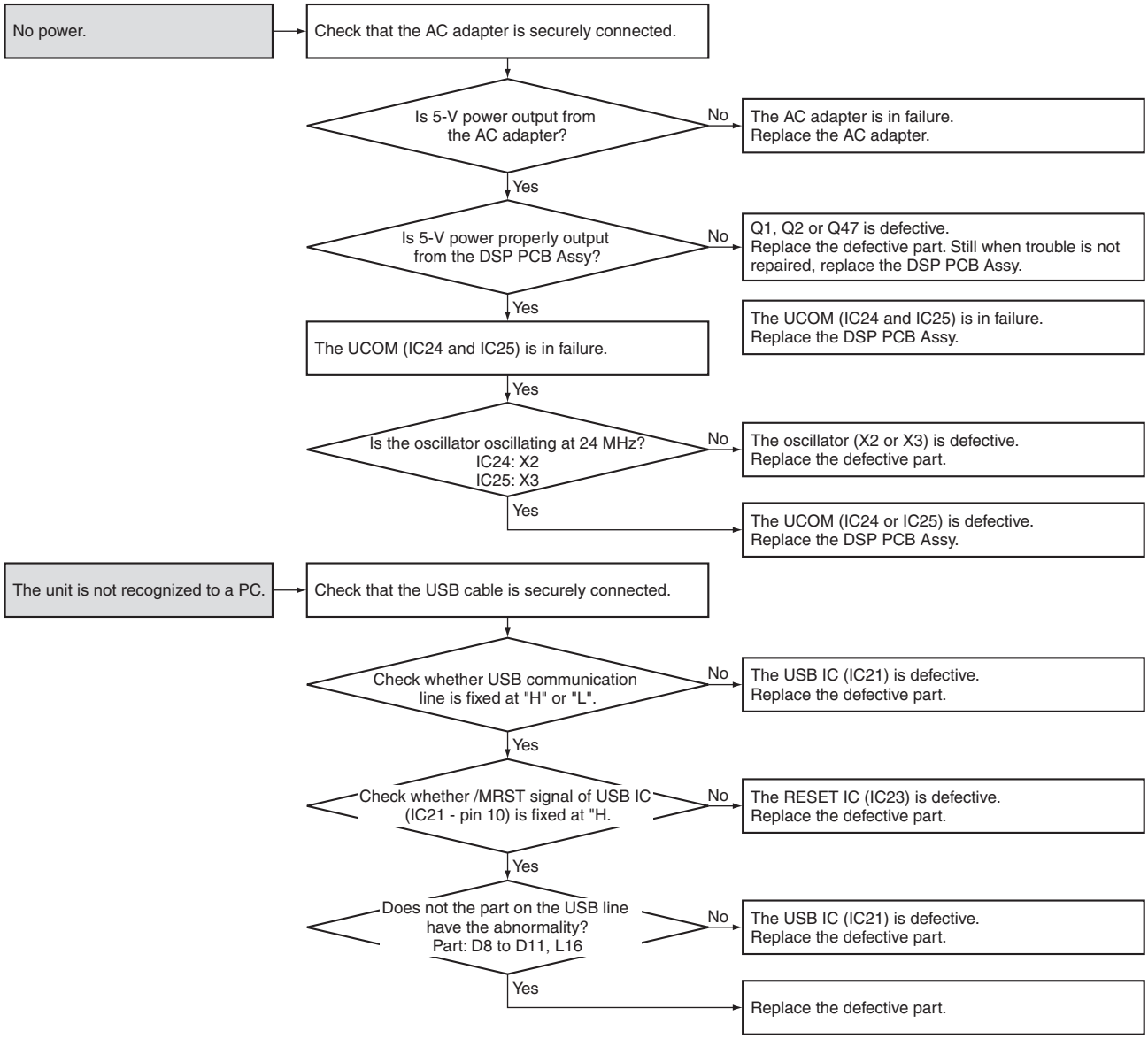
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
  Therefore, when replacing, be sure to use parts of identical designation.

4.2 OVERALL BLOCK DIAGRAM

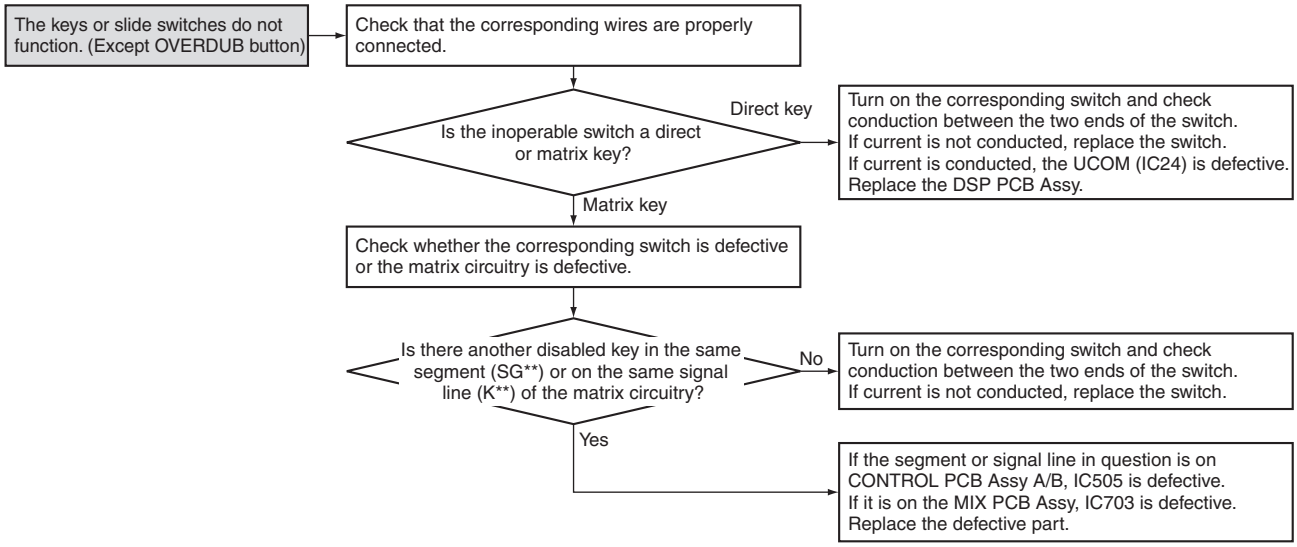


5. DIAGNOSIS
5.1 TROUBLESHOOTING

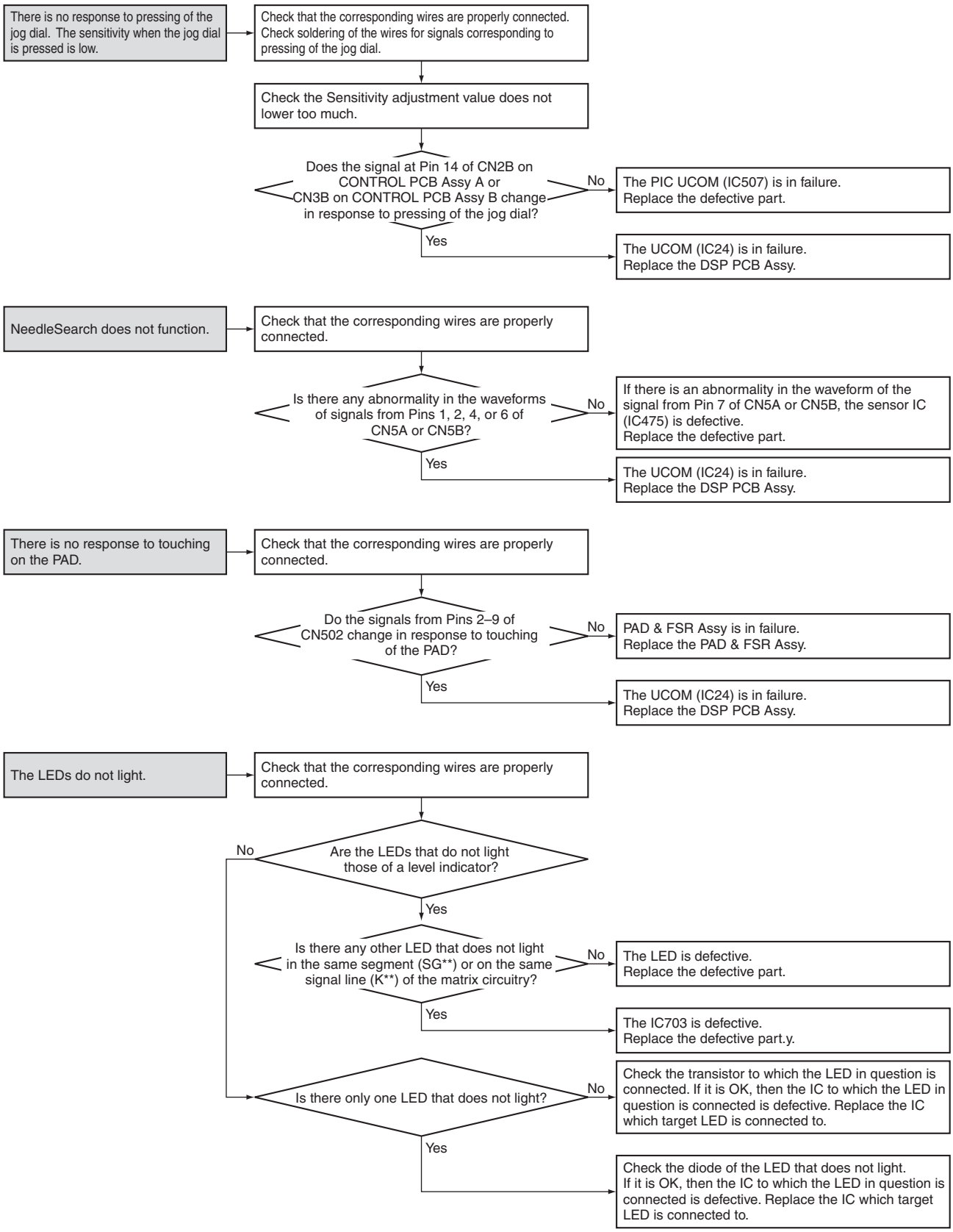
[1] Abnormality regarding startup and communications



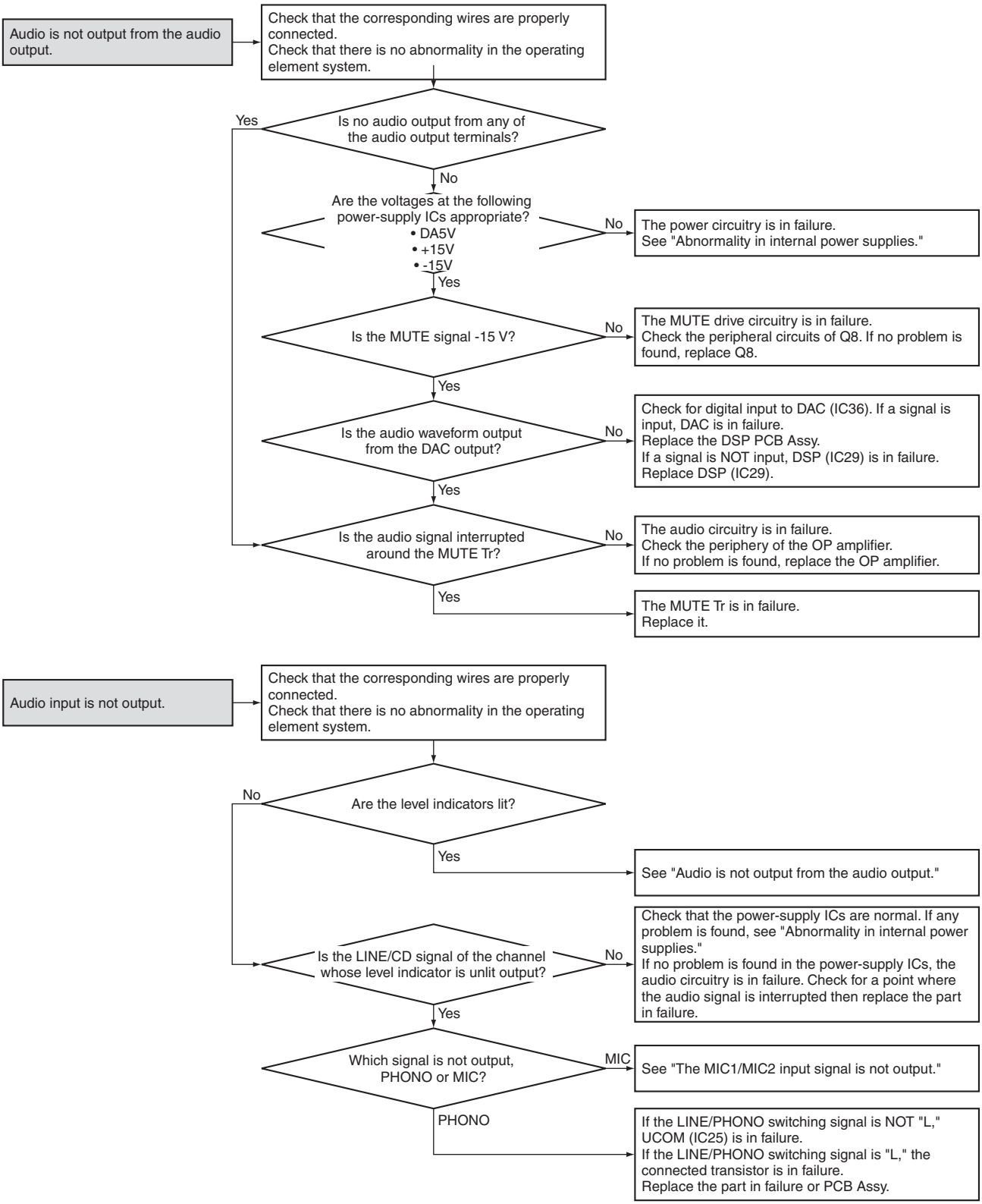
[2] Abnormality regarding the operating elements and LEDs

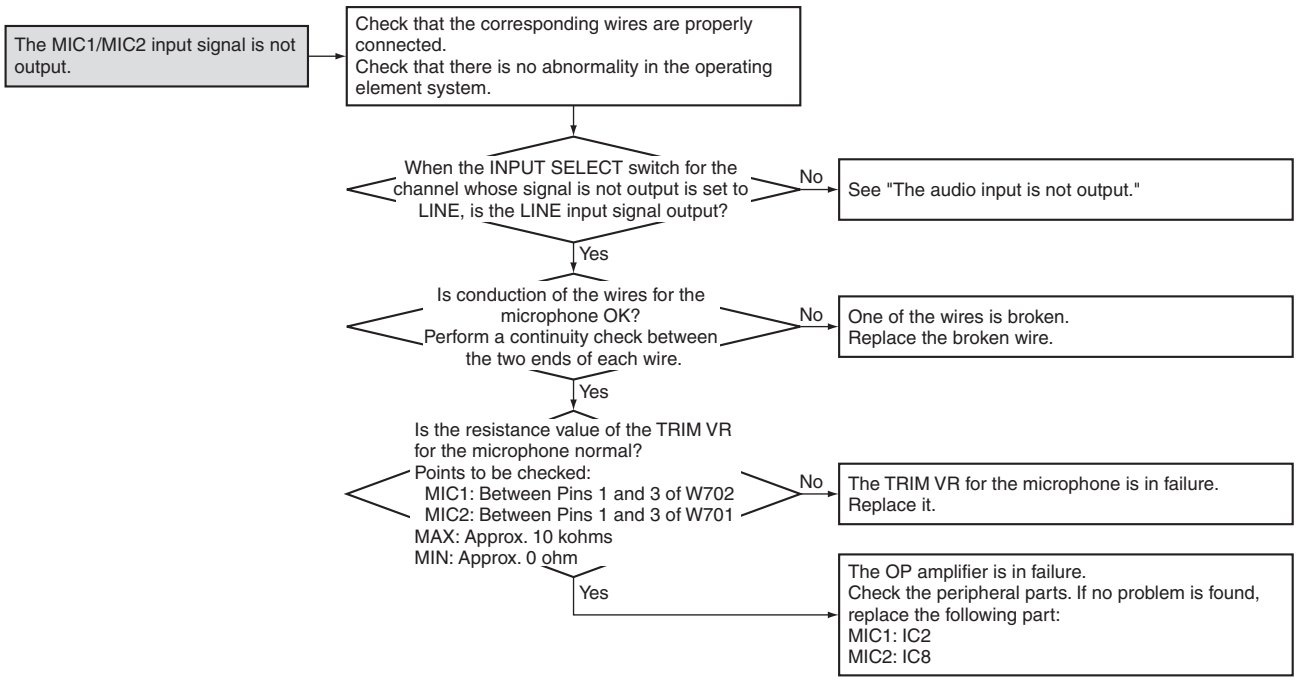



The OVERDUB button do not function.
Check that the corresponding wires are properly connected.
If the defective button is pressed, does the corresponding voltage of signal change?
No
The SW532 is defective. Replace the defective part.
Yes
Check whether input signal A, B, or C of Analog SW (IC506) is fixed at "H" or "L".
No
The Analog SW (IC506) is defective. Replace the defective part.
Yes
The UCOM (IC25) is defective. Replace the DSP PCB Assy.
The rotary VRs or slide VRs do not function.
Check that the corresponding wires are properly connected.
If the defective VR is operated, does the corresponding voltage of signal change?
No
The VR is defective. Replace the defective part.
Yes
No
Is the defective VR a CH fader or crossfader?
Yes
The UCOM (IC25) is in failure. Replace the DSP PCB Assy.
Check the analog SW IC to which the corresponding signal is connected.
Check whether input signal A, B, or C is fixed at "H" or "L".
No
The analog SW IC is defective. Replace the defective part.
Yes
The UCOM (IC25) is in failure. Replace the DSP PCB Assy.
The rotary selectors do not function.
Check that the corresponding wires are properly connected.
Which operations do not function, pushing or turning?
Pushing
See "The keys or slide switches do not function."
Turning
Check whether the signals from Pins 1 and 3 of the corresponding rotary selector are fixed at "H" when it is turned.
No
With BROWSE: The UCOM (IC25) is defective.
With RELEASE FX: The UCOM (IC24) is defective.
Replace the DSP PCB Assy.
Yes
The rotary selector is in failure. Replace the defective part.
There is no response to turning of the jog dial.
Check that the corresponding wires are properly connected.
Check whether the signals from Pins 2 and 4 of CN501 are fixed at "H" when the jog dial is turned.
No
The UCOM (IC24) is in failure. Replace the DSP PCB Assy.
Yes
The photo interrupter is defective. Replace the SENSOR PCB Assy.

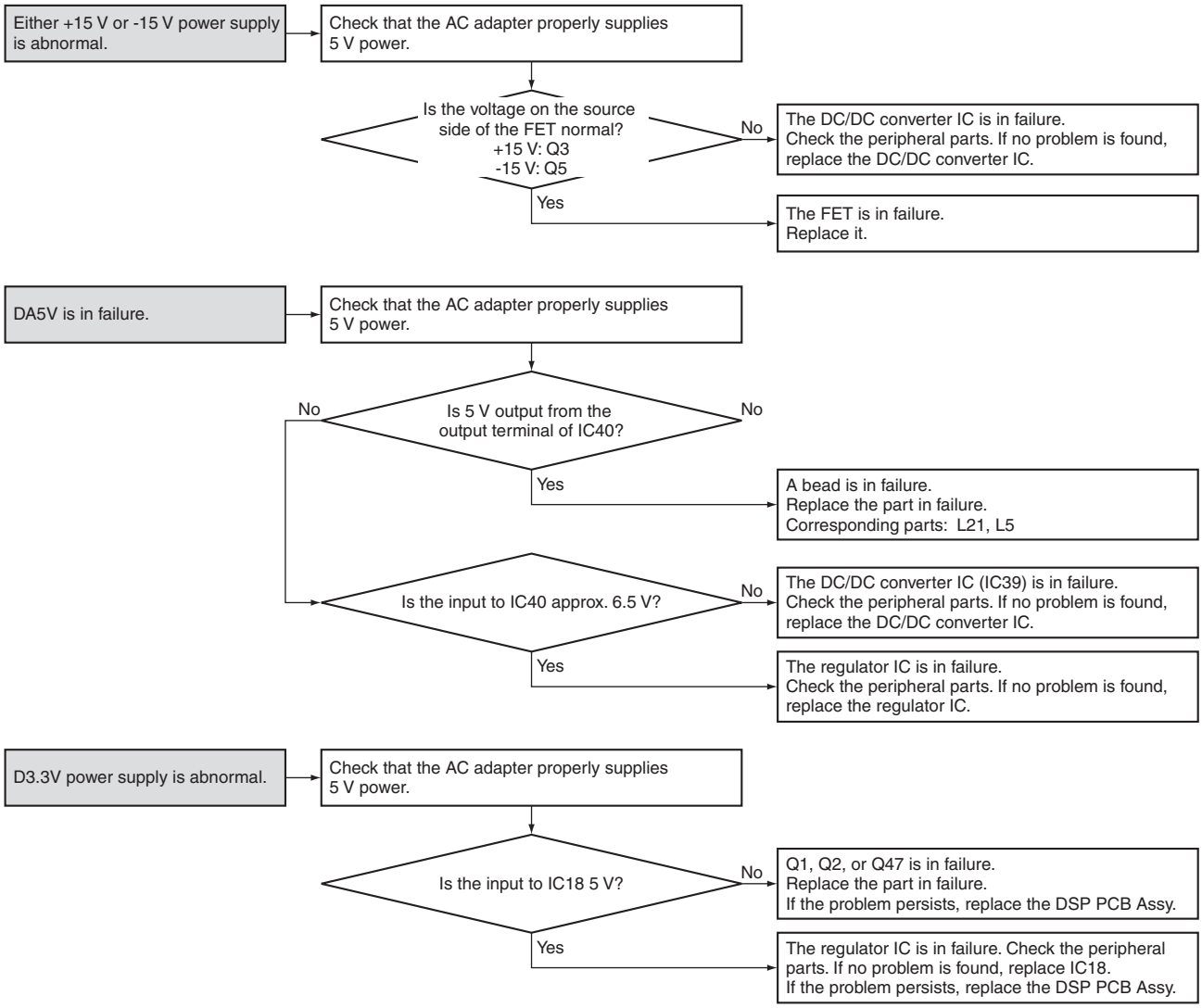

There is no response to pressing of the jog dial. The sensitivity when the jog dial is pressed is low.
Check that the corresponding wires are properly connected. Check soldering of the wires for signals corresponding to pressing of the jog dial.
Check the Sensitivity adjustment value does not lower too much.
Does the signal at Pin 14 of CN2B on CONTROL PCB Assy A or CN3B on CONTROL PCB Assy B change in response to pressing of the jog dial?
No
The PIC UCOM (IC507) is in failure. Replace the defective part.
Yes
The UCOM (IC24) is in failure. Replace the DSP PCB Assy.
NeedleSearch does not function.
Check that the corresponding wires are properly connected.
Is there any abnormality in the waveforms of signals from Pins 1, 2, 4, or 6 of CN5A or CN5B?
No
If there is an abnormality in the waveform of the signal from Pin 7 of CN5A or CN5B, the sensor IC (IC475) is defective. Replace the defective part.
Yes
The UCOM (IC24) is in failure. Replace the DSP PCB Assy.
There is no response to touching on the PAD.
Check that the corresponding wires are properly connected.
Do the signals from Pins 2–9 of CN502 change in response to touching of the PAD?
No
PAD & FSR Assy is in failure. Replace the PAD & FSR Assy.
Yes
The UCOM (IC24) is in failure. Replace the DSP PCB Assy.
The LEDs do not light.
Check that the corresponding wires are properly connected.
No
Are the LEDs that do not light those of a level indicator?
Yes
Is there any other LED that does not light in the same segment (SG**) or on the same signal line (K**) of the matrix circuitry?
No
The LED is defective. Replace the defective part.
Yes
The IC703 is defective. Replace the defective part.y.
Is there only one LED that does not light?
No
Check the transistor to which the LED in question is connected. If it is OK, then the IC to which the LED in question is connected is defective. Replace the IC which target LED is connected to.
Yes
Check the diode of the LED that does not light. If it is OK, then the IC to which the LED in question is connected is defective. Replace the IC which target LED is connected to.

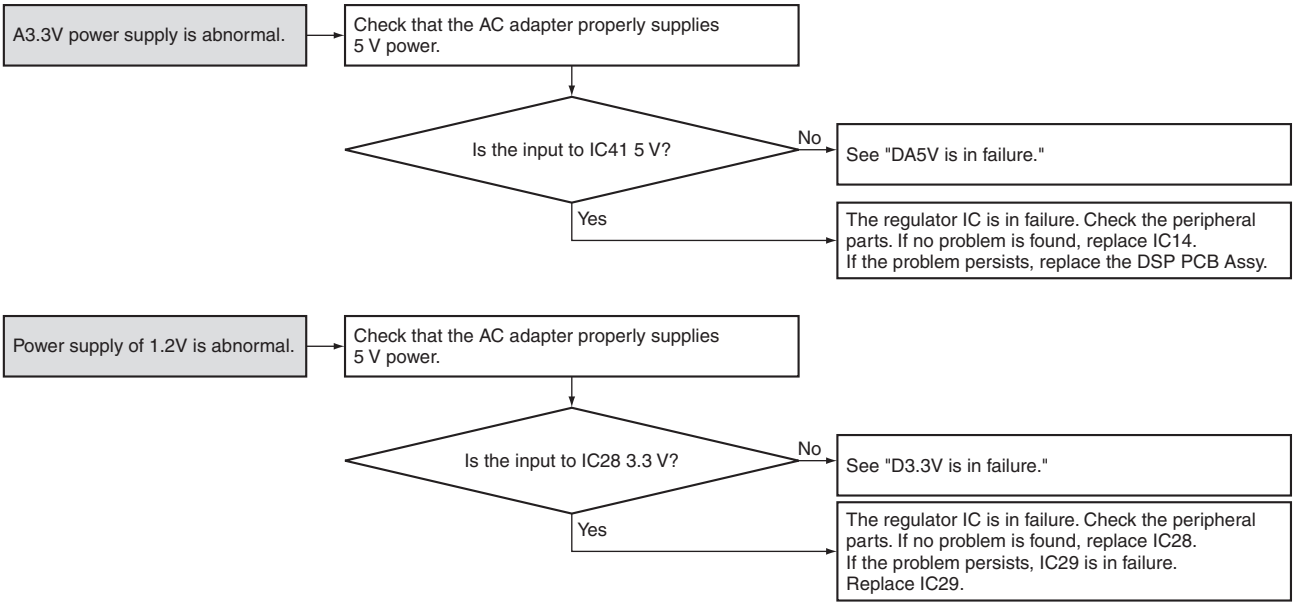
[3] Abnormality in audio input/output





[4] Abnormality in internal power supplies




A3.3V power supply is abnormal.
Check that the AC adapter properly supplies 5 V power.
Is the input to IC41 5 V?
No
See "DA5V is in failure."
Yes
The regulator IC is in failure. Check the peripheral parts. If no problem is found, replace IC14.
If the problem persists, replace the DSP PCB Assy.
Power supply of 1.2V is abnormal.
Check that the AC adapter properly supplies 5 V power.
Is the input to IC28 3.3 V?
No
See "D3.3V is in failure."
Yes
The regulator IC is in failure. Check the peripheral parts. If no problem is found, replace IC28.
If the problem persists, IC29 is in failure.
Replace IC29.

5.2 OPERATION CHECK WITH rekordbox

[Installation of rekordbox]

A brief explanation of how to install rekordbox on a PC is given below.
For details, refer to the operating instructions of the software.
If the OS of the PC to be used is Windows, install the driver software that enables audio output from the PC beforehand.
The operating environment of the PC required for installation of rekordbox is shown below.

Minimum operating environment

Supported operating systems		CPU and required memory
Mac OS X: 10.10, 10.9, 10.8 (latest update)		Intel Processor Dual Core 2.0GHz or higher
		4 GB or more of RAM
Windows: Windows 10/Windows 10 Pro (latest service pack), Windows 8, Windows 8.1, Windows 8 Pro, Windows 8.1 Pro (latest service pack), Windows 7 Home Premium, Professional, Ultimate (latest service pack)	32-bit version	Intel Processor Dual Core 2.0GHz or higher
		4 GB or more of RAM
	64-bit version	Intel Processor Dual Core 2.0GHz or higher
		4 GB or more of RAM

Others	
USB port	A USB 2.0 port is required to connect the computer with this unit.
Display resolution	Resolution of 1280 x 768 or greater
Internet connection	An Internet connection is required for registering the rekordbox user account and downloading the software.

- For the latest information on the required operating environment and compatibility as well as to acquire the latest operating system, see “Software Info” of “DDJ-RX” on the “Pioneer DJ” site and “System Requirements” of “rekordbox.com” below.
  http://pioneerdj.com/support/ http://rekordbox.com/
- Use the latest version/service pack of the operating system.

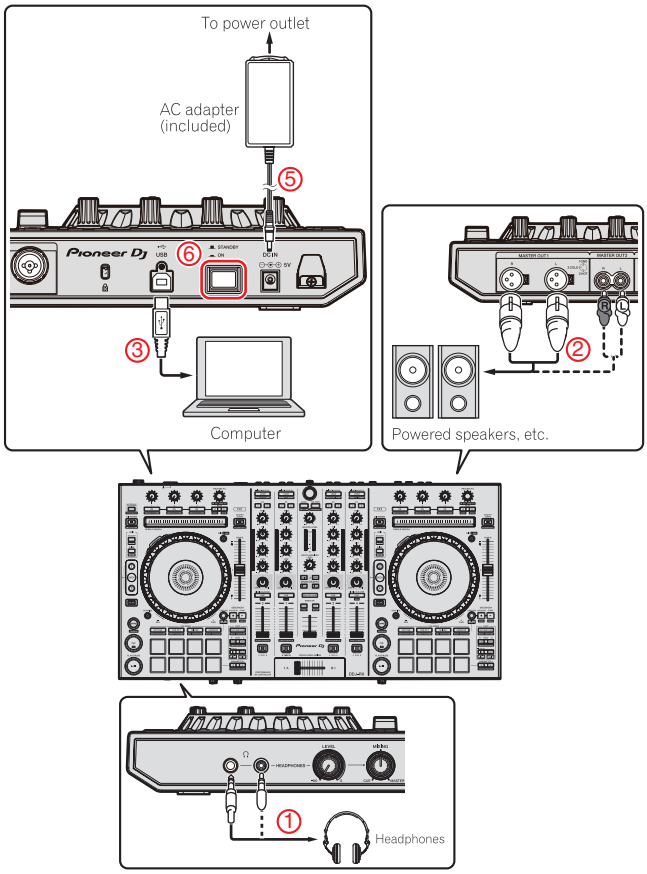
For the latest version of the rekordbox software, access rekordbox.com and download the software from there.
For downloading, registration of a user account at rekordbox is required.
Unzip the downloaded file, then double-click the unzipped file to launch the installer.
Read the terms of the license agreement carefully, and if you agree, select [Agree], then click [Next](Mac OS X: Continue).
After installation is completed, the Installation Completed screen will be displayed. Click on [Finish](Mac OS X: Close) to quit the rekordbox installer.

- Be sure to use rekordbox Version 4.0.1 or later, because the prior versions of rekordbox do not support the DDJ-RX.
- Activation using a license key is required to use PERFORMANCE mode for enabling the DJ performance function of rekordbox.

[Operating procedures]

① Connect headphone to one of the [PHONES] terminals.
② Connect powered speakers, a power amplifier, components, etc., to the [MASTER OUT 1] or [MASTER OUT 2] terminals.
③ Connect this unit to your computer via a USB cable.
④ Turn on the computer’ s power.
⑤ Connect the AC adapter.
⑥ Press the [STANDBY/ON] switch on this unit’ s rear panel to turn this unit’ s power on.
⑦ Turn on the power of the devices connected to the output terminals (powered speakers, power amplifier, components, etc.).

[Connections]



Starting the system

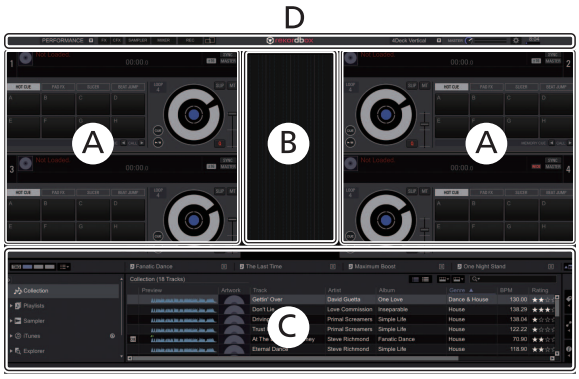
For Windows 7
From the Windows [Start] menu, click the [rekordbox] icon under [All Programs] > [Pioneer] > [rekordbox X.X.X].

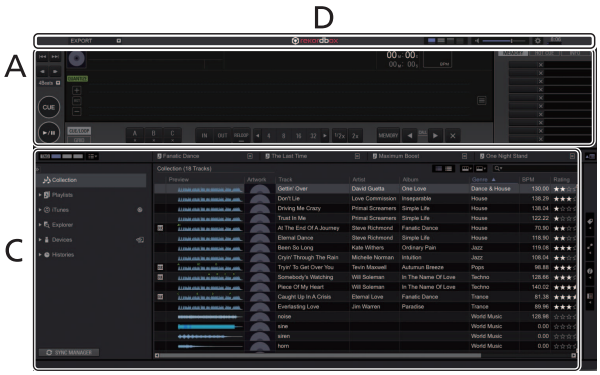
For Windows 8/Windows 8.1
From [Apps view], click the [rekordbox] icon.

For Windows 10
Click the [rekordbox] icon under [All apps] > [Pioneer] after left-clicking the Windows start button.

For Mac OS X
Open the [Applications] folder in Finder, then click the [rekordbox] icon.

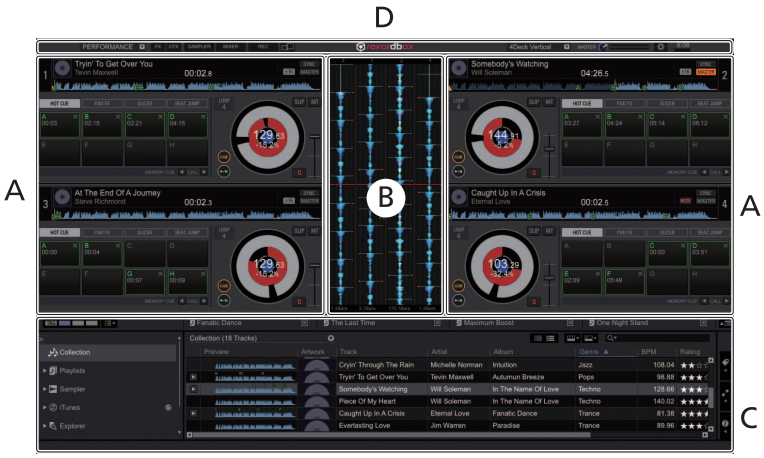
The screen displayed immediately after the rekordbox software is started on the computer (the screen on the right shows the [EXPORT] mode in which the operations equivalent to the previous rekordbox 3 are possible.)





Computer screen when a track is loaded in rekordbox dj

Select the desired layout from the pull-down menu for the layout selection at the upper right of the computer screen.



A Track deck section
The track information (the name of the loaded track, artist name, BPM, etc.), the overall waveform and other information is displayed here.

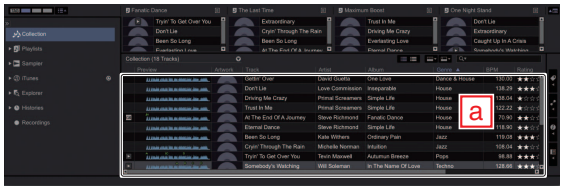
B Enlarged waveform section
The loaded track' s waveform is displayed here.

C Browse section
Displays the track list, tree view, and playlist palette.

D Global section
Displays the display status of effect panel and sampler panel, and the level of the master sound, etc.

Importing tracks

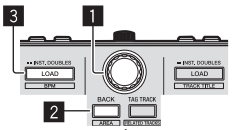
① Click [Collection] in the tree view.
② Open Finder or WindowsExplorer and drag and drop music files and/or folders, where music files are stored, to the track list.



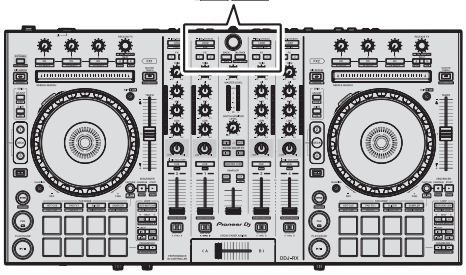
a : Track list

Loading tracks and playing them

① Press this unit' s [BACK] button, move the cursor to the tree view on the computer screen, then turn the rotary selector and select a collection or playlist, etc.
② Press the rotary selector, move the cursor to the track list on the computer screen, then turn the rotary selector and select a track.
③ Press the [LOAD] button to load the selected track onto the deck.



1 Rotary selector
2 BACK button
3 LOAD button



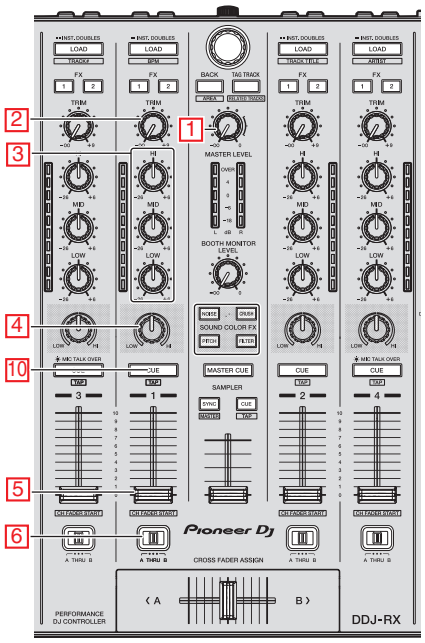
a : Track list
b : Tree View

Playing tracks and outputting the sound

① Set the positions of the controls, etc., as shown below.

Names of controls, etc.		Position
MASTER LEVEL control	1	Turned fully counterclockwise
TRIM control	2	Turned fully counterclockwise
EQ (**HI**, **MID**, **LOW**) controls	3	Center
COLOR control	4	Center
Channel fader	5	Moved forward
Crossfader Assign Switch	6	[**THRU**] position
INPUT SELECT switch	7	[**PC**] position

② Press the [▶/❚❚] button to play the track.
③ Move the channel fader (5) away from you.
④ Turn the [TRIM] control (2).
Adjust [TRIM] so that the orange indicator on the channel level indicator lights at the peak level.
⑤ Turn the [MASTER LEVEL] control (1) to adjust the audio level of the speakers.

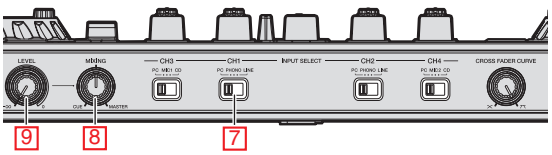


Monitoring sound with headphones

Set the positions of the controls, etc., as shown below.

Names of controls, etc.		Position
HEADPHONES MIX control	8	Center
HEADPHONES LEVEL control	9	Turned fully counterclockwise

① Press the headphones [CUE] button (10) for the channel 1.
② Turn the [HEADPHONES LEVEL] control (9).



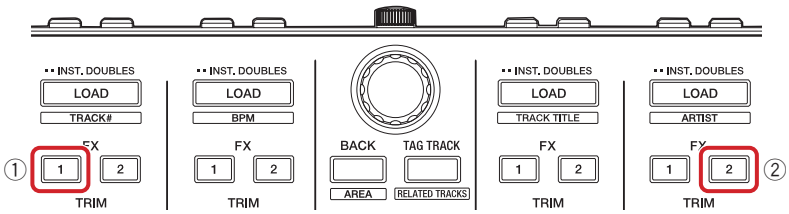
6. SERVICE MODE
6.1 SERVICE MODE

[1] Error Alarming

When the controller detects following 2 types of problem while the controller is launching or working, it should indicate using LEDs so that user notices the problem.

No.	Part where problem occurs	Symptom	Controller's behavior when detect the problem
①	Built-in FLASH ROM of MAIN UCOM	When firmware is updated, the internal data on FLASH ROM can not be erased.	LED within FX 1 assign button for Deck 3 is flashed in cycle of 1second. (*1)
		When firmware is updated, the update data can not be written to FLASH ROM correctly.	
②	USB controller	Although the controller connects with a computer via USB cable, the USB controller within the controller can not communicate with the computer.	LED within FX 2 assign button for Deck 4 is flashed in cycle of 1second.

*1: When the controller launches next, same LED is flashed.



[2] Service mode

[How to enter Service mode]

Turn on the power while pressing both left "SHIFT" button and the "DECK 1" button or while pressing both right "SHIFT" button and the "DECK 2" button.
LEDs of Channel Level Indicator (CH1), Channel Level Indicator (CH2), and Channel Level Indicator (CH4) are lit depending on the firmware version and other LEDs are unlit right after the controller launches in Service mode.

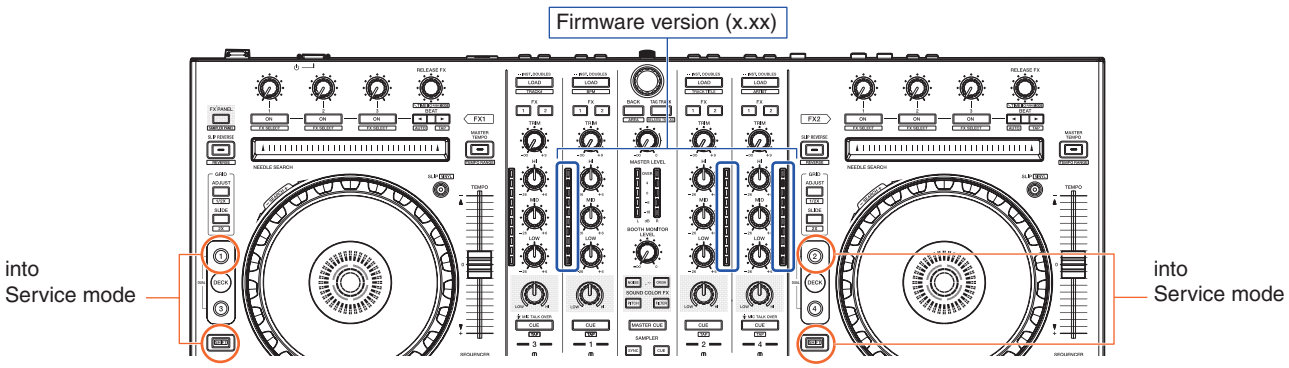
Note: Even if the controller connects with a computer via USB cable, it does not communicate with the computer during Service mode. Unused LEDs are unlit during Service mode.

[How to exit Service mode]

In order to exit Service mode, turn off the power.

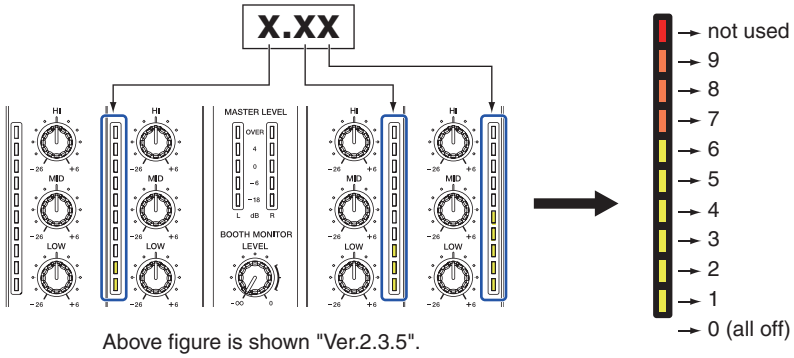
[Note]

When in this mode, the firmware version display appear first.
In this mode, it does not work to communicate with computer via USB.
In this mode, LED dimmer is not available.



1. Confirmation of firmware version

LEDs of Channel Level Indicator (CH1) indicate first digit of the firmware version. (*1)
LEDs of Channel Level Indicator (CH2) indicate second digit of the firmware version. (*1)
LEDs of Channel Level Indicator (CH4) indicate third digit of the firmware version. (*1)
The firmware version is indicated right after the controller launches in Service mode. (*2)



Above figure is shown "Ver.2.3.5".

*1: If the firmware version is "0", all segments of the Channel Level Indicator are unlit.
*2: If any Channel fader is slid, state of the Channel fader is indicated instead of firmware version.

2. Check of buttons

All buttons on this controller can be checked using LEDs in Service Mode.

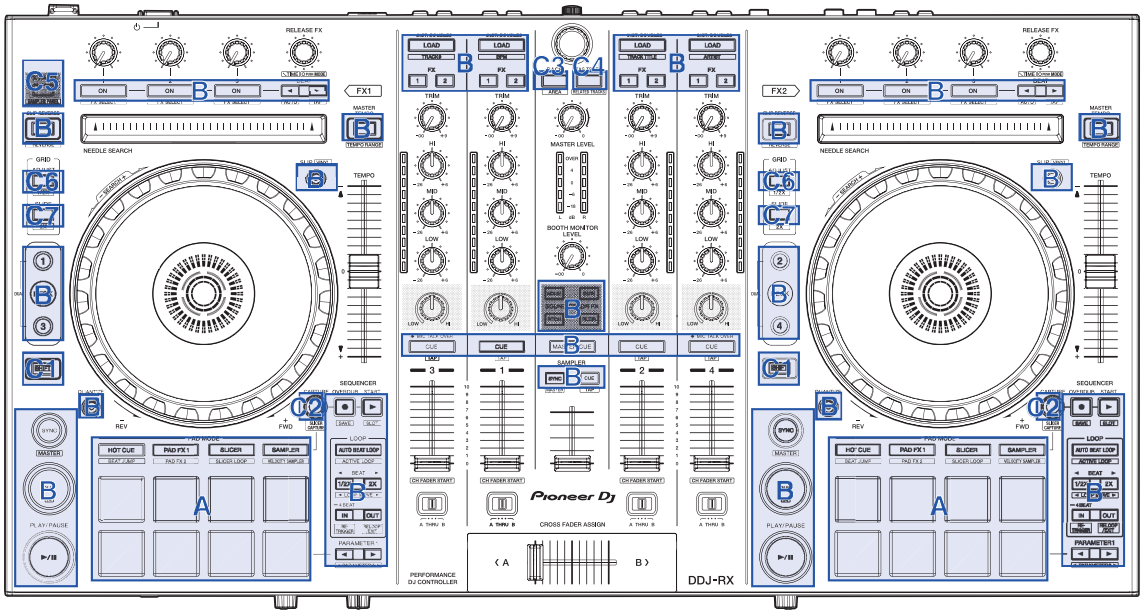


Table-1 LED behavior of when buttons are checked

Group		Trigger	Details
A		Press	LED color is changed as follows each time the button is pressed. Even if the button is released while the LED is lit, the controller holds lighting. (The LED is embedded within the button.) White → Red → Yellow → Green → Cyan → Blue → Magenta → Unlit → White → • • •
B		Press	LED is lit while the button is pressed and held. When the button is released, the LED is unlit. (The LED is embedded within the button.)
C	C1	Press	LED within HOT CUE Mode button of the same side is lit with blue color while the "C1" button is pressed and held. When the "C1" button is released, the LED is unlit. (LED within the HOT CUE Mode button is used in order to check the "C1" button.)
	C2		LED within SAMPLER Mode button of the same side is lit with blue color while the "C2" button is pressed and held. When the "C2" button is released, the LED is unlit. (LED within the SAMPLER Mode button is used in order to check the "C2" button.)
	C3		LED within the HEADPHONE CUE (CH1) button is lit while the "C3" button is pressed and held. When the "C3" button is released, the LED is unlit. (LED within the HEADPHONE CUE (CH1) button is used in order to check the "C3" button.)
	C4		LED within right SYNC button is lit while the "C4" button is pressed and held. When the "C4" button is released, the LED is unlit. (LED within right SYNC button is used in order to check the "C4" button.)
	C5		LED within left SLIP REVERSE button is lit while the "C5" button is pressed and held. When the "C5" button is released, the LED is unlit. (LED within left SLIP REVERSE button is used in order to check the "C5" button.)
	C6		LED within DECK 1 button is lit while left "C6" button is pressed and held. LED within DECK 2 button is lit while right "C6" button is pressed and held. When the "C6" button is released, the LED is unlit. (LED within DECK 1/DECK 2 button is used in order to check the "C6" button.)
	C7		LED within DECK 3 button is lit while left "C7" button is pressed and held. LED within DECK 4 button is lit while right "C7" button is pressed and held. When the "C7" button is released, the LED is unlit. (LED within DECK 3/DECK 4 button is used in order to check the "C7" button.)

3. Check of rotary knobs, sliders and NEEDLE SEARCH pads

All rotary knobs, sliders and NEEDLE SEARCH pad on this controller can be checked using LEDs in Service Mode.

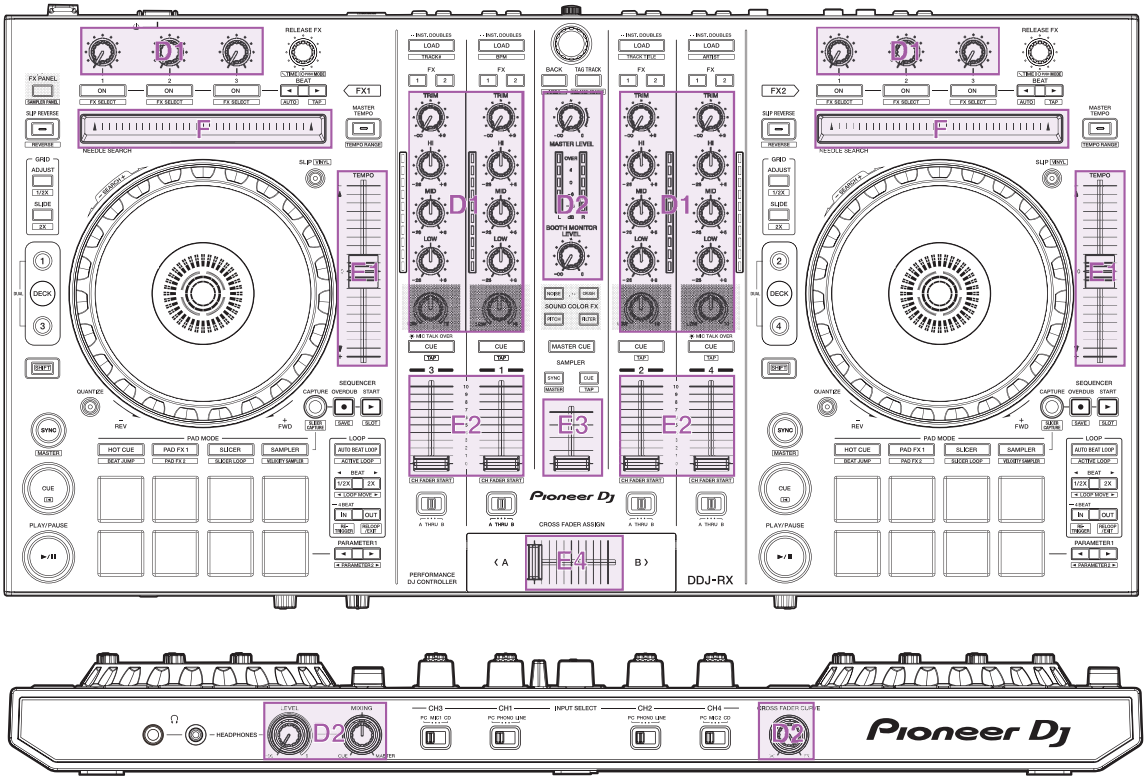


Table-2 LED behavior of when rotary knobs, sliders and NEEDLE SEARCH pads are checked

Group		Trigger	Details
D	D1	Turn	Lighting position of white LEDs of Jog dial of the same side is moved depending on the turned amount. Refer to Figure-1.
	D2		Lighting position of white LEDs of both side Jog dials are moved depending on the turned amount. Refer to Figure-1.
E	E1	Slide	Lighting position of white LEDs of Jog dial of the same side is moved depending on the slid amount. If the position after sliding is upper than center, The upper "TEMPO slider Take-over" indicator of the same side is lit. If the position after sliding is lower than center, The lower "TEMPO slider Take-over" indicator of the same side is lit. If the position after sliding is center, The upper and lower "TEMPO slider Take-over" indicators of the same side are unlit. Refer to Figure-1.
	E2		Lighting of Channel Level Indicator of the same channel is changed depending on the slid amount. Refer to Figure-2.
	E3		Lighting of Master level indicator is changed depending on the slid amount. Refer to Figure-3.
	E4		Lighting position of white LEDs of both side Jog dials are moved depending on the slid amount. Refer to Figure-1.
F		Touch and move	Lighting position of white LEDs of Jog dial of the same side is moved depending on the touching position. Refer to Figure-1.

Figure-1 LED behavior of when a rotary knob is turned, a slider is slid, or a NEEDLE SEARCH pad is touched and moved

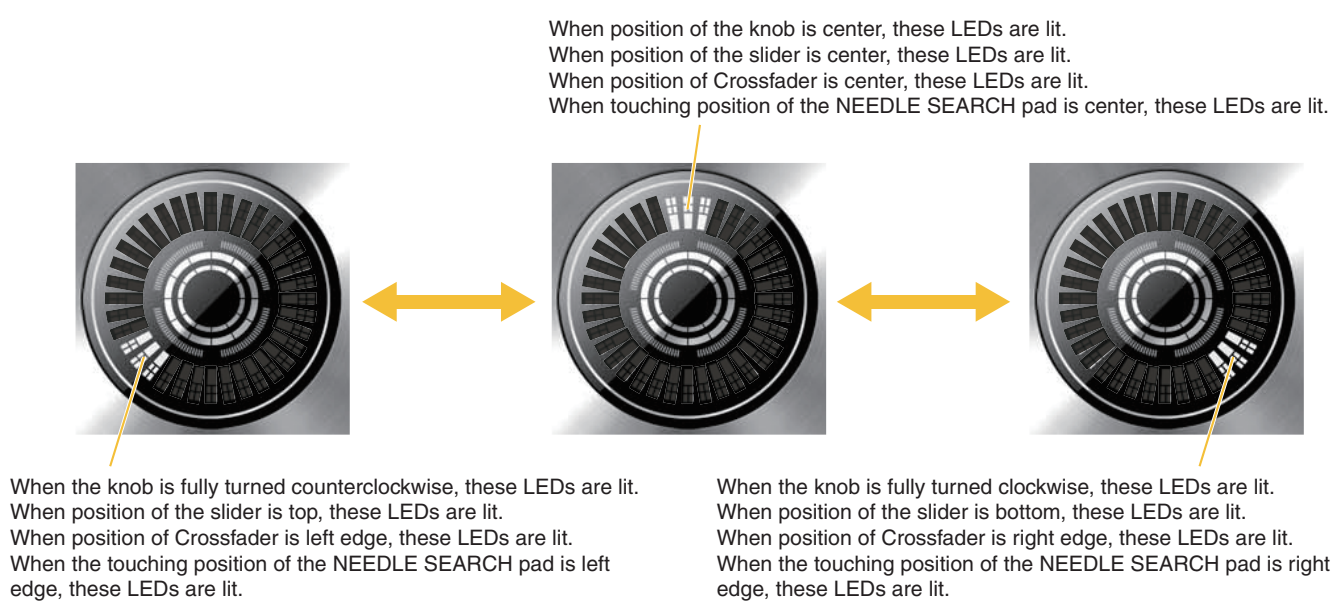


Figure-2 LED behavior of when a Channel fader is slid

This controller has Channel faders with 10 bit resolution. But, Channel Level Indicator is only 11 steps. Therefore, the controller rounds the actual position data to 11 steps.

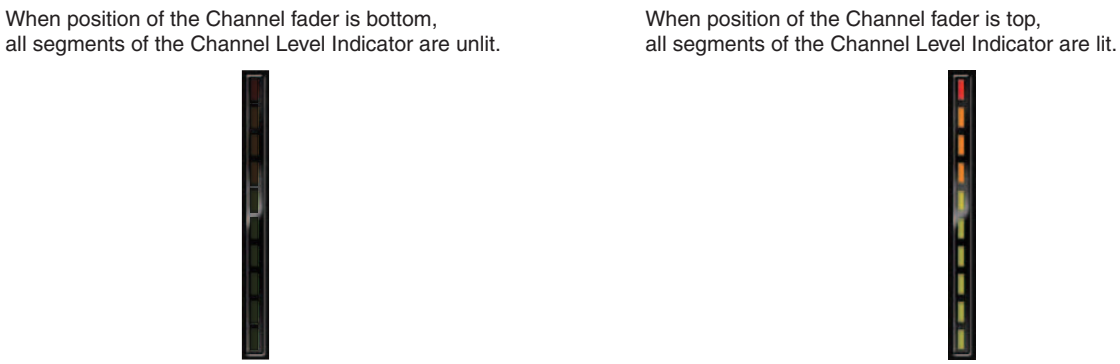
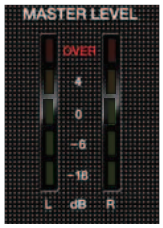


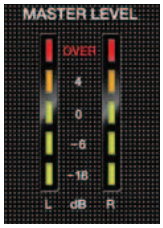
Figure-3 LED behavior of when the SAMPLER VOLUME fader is slid

This controller has the SAMPLER VOLUME fader with 10 bit resolution. But, Master level indicator is only 6 steps. Therefore, the controller rounds the actual position data to 6 steps.

When position of the SAMPLER VOLUME fader is bottom, all segments of the Master level indicator are unlit.



When position of the SAMPLER VOLUME fader is top, all segments of the Master level indicator are lit.



4. Check of rotary encoders, slide SWs, and Jog dials

All rotary encoders, slide SWs, and Jog dials on this controller can be checked using LEDs in Service Mode.

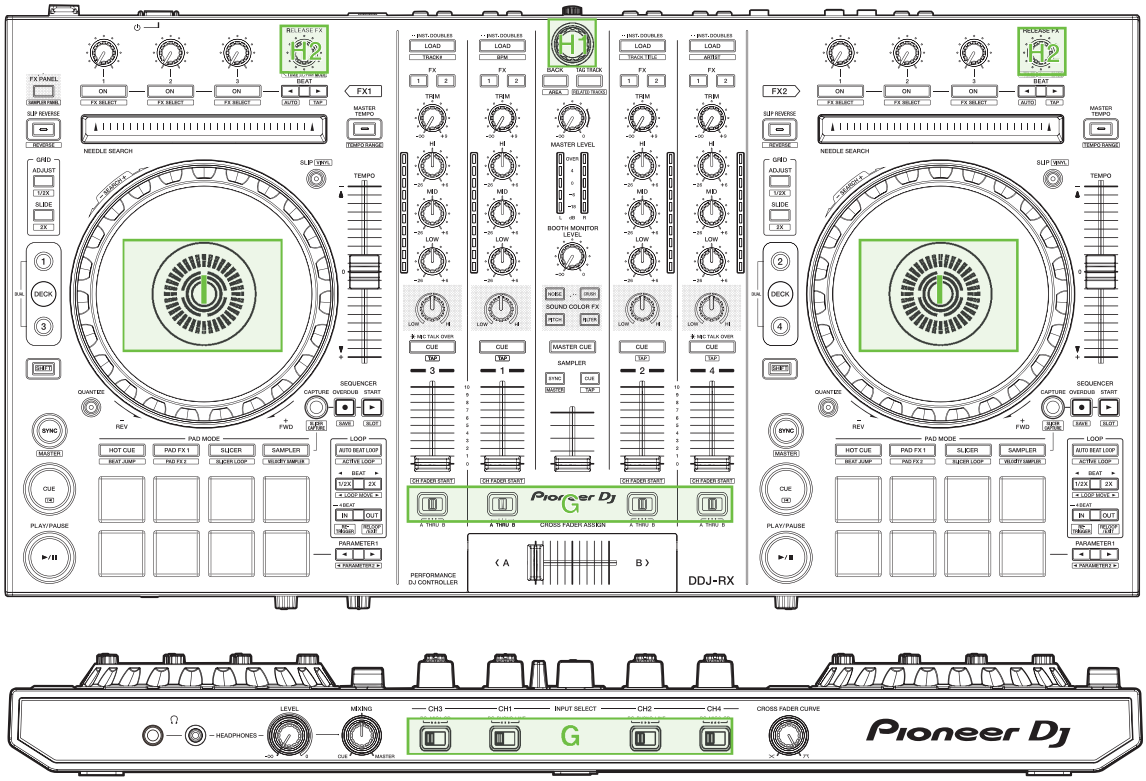
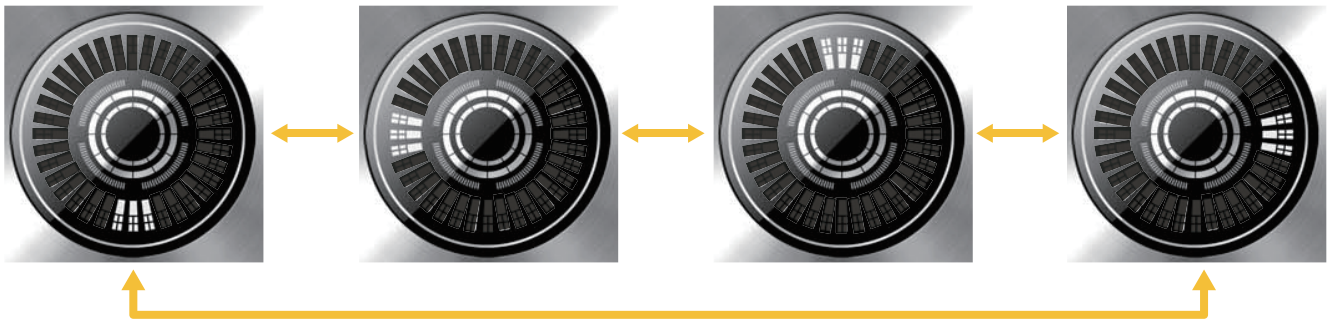


Table-3 LED behavior of when rotary encoders, slide SWs, and Jog dials are checked

Group		Trigger	Details
G		Slide	Lighting position of white LEDs of Jog dial of the same side is moved clockwise each time position of the slide SW is moved. Refer to Figure-4.
H	H1	Press	LED lighting is changed as shown in following order each time the Rotary selector is pressed. Even if the Rotary selector is released while the LEDs are lit, the controller holds lighting. All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is white.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is red.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is yellow.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is green.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is cyan.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is blue.) ⇒ All LEDs are lit with full brightness. (LED color of the Pad Mode buttons and Pads is magenta.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is white.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is red.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is yellow.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is green.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is cyan.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is blue.) ⇒ All LEDs are lit dimly. (LED color of the Pad Mode buttons and Pads is magenta.) ⇒ All LEDs are unlit.
		Turn	Lighting position of white LEDs of both side Jog dials are moved each time the Rotary selector is turned. Refer to Figure-4.
	H2	Press	LED within the BEAT ◄ button of the same side is lit while the rotary encoder is pressed and held. When the rotary encoder is released, the LED is unlit.
		Turn	Lighting position of white LEDs of Jog dial of the same side is moved each time the rotary encoder is turned. Refer to Figure-4.
I		Touch	All white and red LEDs of Jog dial are lit while top surface of the Jog dial is touched and held. When top surface of the JOG is released, the LEDs are unlit.
		Turn	Lighting position of white LEDs of Jog dial is moved when the Jog dial is turned. Refer to Figure-4.

Figure-4 LED behavior of when a slide SW is slid, a rotary encoder is turned, or a Jog dial is turned

*: Only when positon of a slide SW is moved, lighting position of white LED is moved clockwise.
*: The starting position depends on the last position.



5. Factory reset

All settings in Utilities mode and adjustment value for Jog dial touch sensitivity can be initialized in Service mode.

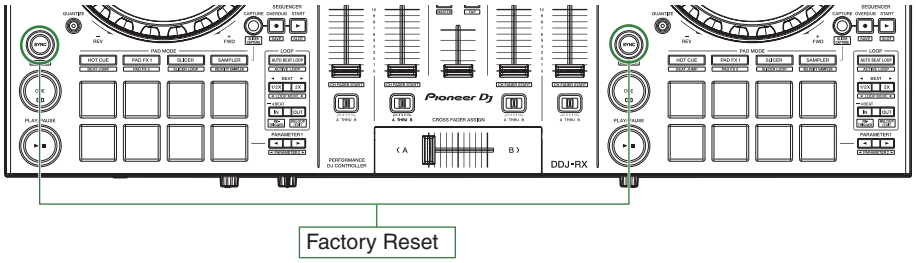
[Trigger to initialize]

In order to initialize all settings in Utilities mode, press and hold both left and right SYNC buttons for over 2 seconds during Service mode.
To perform Factory Reset, wait at least 5 seconds after Service mode is entered.

[Posterior condition]

LEDs wihin both left and right SYNC buttons are lit while the controller is initializing the settings.
When the initialization is completed, the LEDs are unlit.

*: All settings in Utilities mode are initialized.
Adjustment values for left and right Jog dial touch sensitivity are returned to center value.



6. Check of velocity

Behavior of velocity can be checked using Channel Level Indicator in Service Mode.

[Preparation to check velocity]

In order to check the velocity, press both left and right HOT CUE Mode buttons firstly during Service mode.
In order to select Pads of which check the velocity, press left Pad Mode button.
Relation between left Pad Mode button and checkable Pad is shown in Table-4.
State transition between Service mode and Velocity check mode is shown in Figure-5.

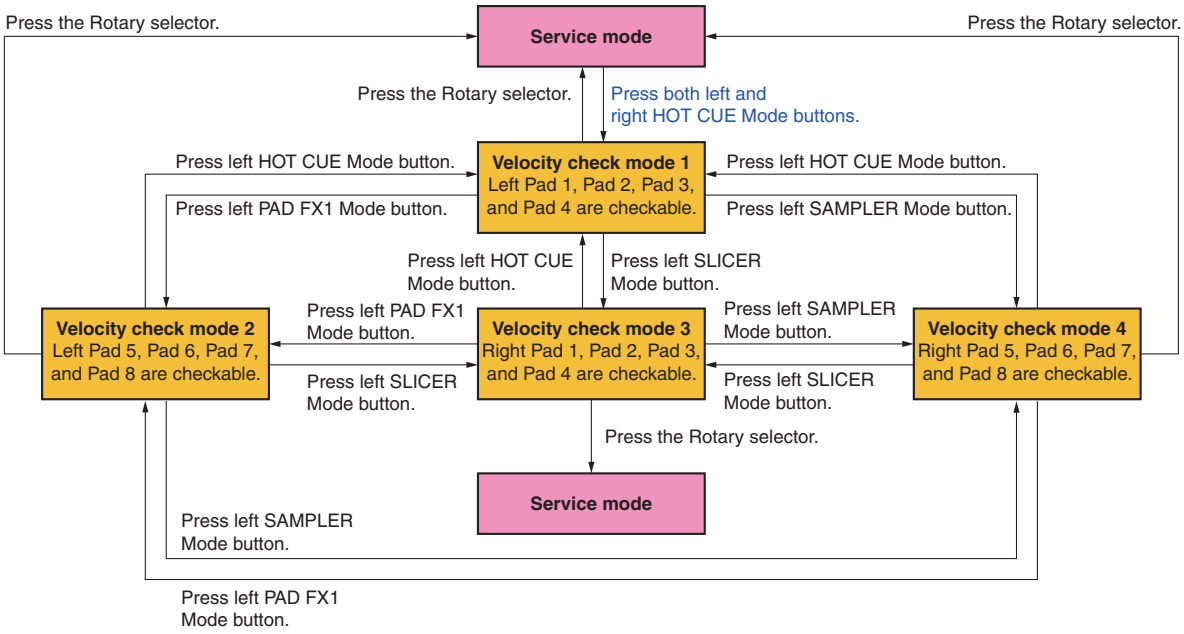
Table-4 Relation between left Pad Mode button and checkable Pads

Mode	Checkable Pads	Pad Mode button
Velocity check mode 1	Left Pad 1, Pad 2, Pad 3, and Pad 4	Left HOT CUE Mode button (*1)
Velocity check mode 2	Left Pad 5, Pad 6, Pad 7, and Pad 8	Left PAD FX1 Mode button (*1)
Velocity check mode 3	Right Pad 1, Pad 2, Pad 3, and Pad 4	Left SLICER Mode button (*1)
Velocity check mode 4	Right Pad 5, Pad 6, Pad 7, and Pad 8	Left SAMPLER Mode button (*1)

*1: LED within the pressed Pad Mode button is lit with blue color.

In order to return from Velocity check mode to Service mode, press the Rotary selector.
Then the controller returns to condition right after it launches in Service mode.

Figure-5 State transition between Service mode and Velocity check mode



[Trigger of which check velocity]

1) Press left Pad 1, Pad 2, Pad 3, or Pad 4 when LED within left HOT CUE Mode button is lit with blue color.
2) Press left Pad 5, Pad 6, Pad 7, or Pad 8 when LED within left PAD FX1 Mode button is lit with blue color.
3) Press right Pad 1, Pad 2, Pad 3, or Pad 4 when LED within left SLICER Mode button is lit with blue color.
4) Press right Pad 5, Pad 6, Pad 7, or Pad 8 when LED within left SAMPLER Mode button is lit with blue color.

[Posterior condition]

1) Lighting of Channel Level Indicator (CH3) is changed depending on pressure force of the pressing Pad (*2).
2) Lighting of Channel Level Indicator (CH1) is changed depending on pressure force of the pressing Pad (*3).
3) Lighting of Channel Level Indicator (CH2) is changed depending on pressure force of the pressing Pad (*4).
4) Lighting of Channel Level Indicator (CH4) is changed depending on pressure force of the pressing Pad (*5).

*2: When LED within left HOT CUE Mode button is lit with blue color, Channel Level Indicator (CH3) is used in order to check velocity of left Pad 1.
When LED within left PAD FX1 Mode button is lit with blue color, Channel Level Indicator (CH3) is used in order to check velocity of left Pad 5.
When LED within left SLICER Mode button is lit with blue color, Channel Level Indicator (CH3) is used in order to check velocity of right Pad 1.
When LED within left SAMPLER Mode button is lit with blue color, Channel Level Indicator (CH3) is used in order to check velocity of right Pad 5.

*3: When LED within left HOT CUE Mode button is lit with blue color, Channel Level Indicator (CH1) is used in order to check velocity of left Pad 2.
When LED within left PAD FX1 Mode button is lit with blue color, Channel Level Indicator (CH1) is used in order to check velocity of left Pad 6.
When LED within left SLICER Mode button is lit with blue color, Channel Level Indicator (CH1) is used in order to check velocity of right Pad 2.
When LED within left SAMPLER Mode button is lit with blue color, Channel Level Indicator (CH1) is used in order to check velocity of right Pad 6.

*4: When LED within left HOT CUE Mode button is lit with blue color, Channel Level Indicator (CH2) is used in order to check velocity of left Pad 3.
When LED within left PAD FX1 Mode button is lit with blue color, Channel Level Indicator (CH2) is used in order to check velocity of left Pad 7.
When LED within left SLICER Mode button is lit with blue color, Channel Level Indicator (CH2) is used in order to check velocity of right Pad 3.
When LED within left SAMPLER Mode button is lit with blue color, Channel Level Indicator (CH2) is used in order to check velocity of right Pad 7.

*5: When LED within left HOT CUE Mode button is lit with blue color, Channel Level Indicator (CH4) is used in order to check velocity of left Pad 4.
When LED within left PAD FX1 Mode button is lit with blue color, Channel Level Indicator (CH4) is used in order to check velocity of left Pad 8.
When LED within left SLICER Mode button is lit with blue color, Channel Level Indicator (CH4) is used in order to check velocity of right Pad 4.
When LED within left SAMPLER Mode button is lit with blue color, Channel Level Indicator (CH4) is used in order to check velocity of right Pad 8.

*: This controller's velocity has resolution of 128 steps. But, Channel Level Indicator is only 11 steps.
So, the controller rounds the actual velocity value to 11 steps
so that indicate behavior of velocity using Channel Level Indicator during Velocity check mode.

*: Lighting of Channel Level Indicator is applied pressure force of not only initial touch (velocity) but also after touch during Velocity check mode.

Figure-6 Relation between Pad and Channel Level Indicator during Velocity check mode
(Following example is left-side. It is the same for right-side.)

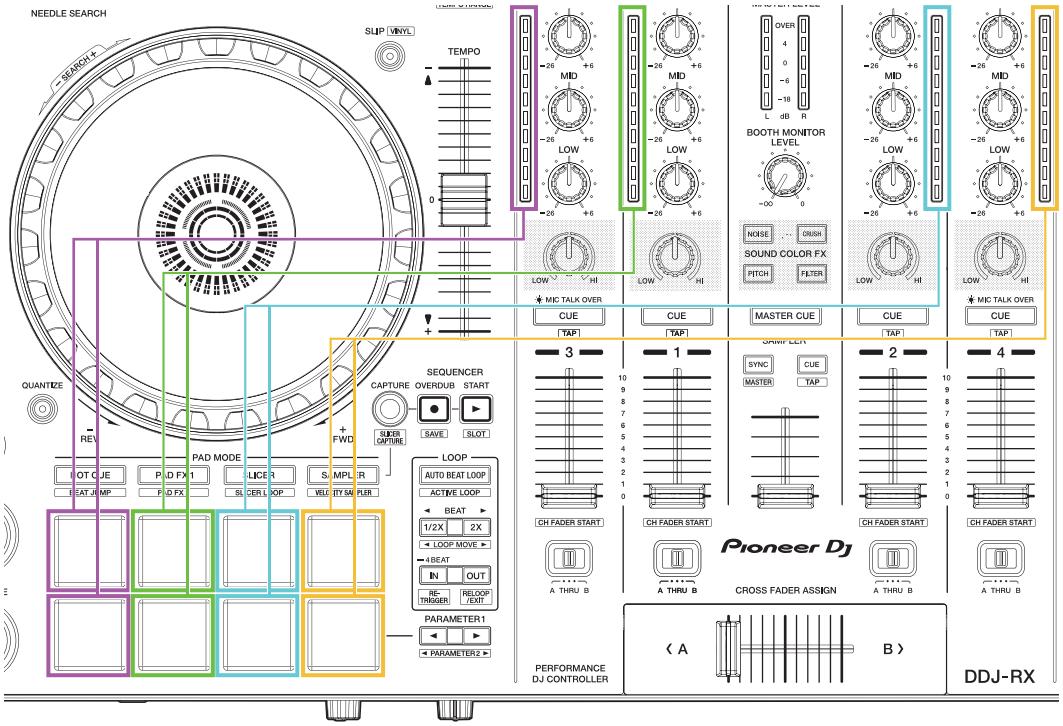
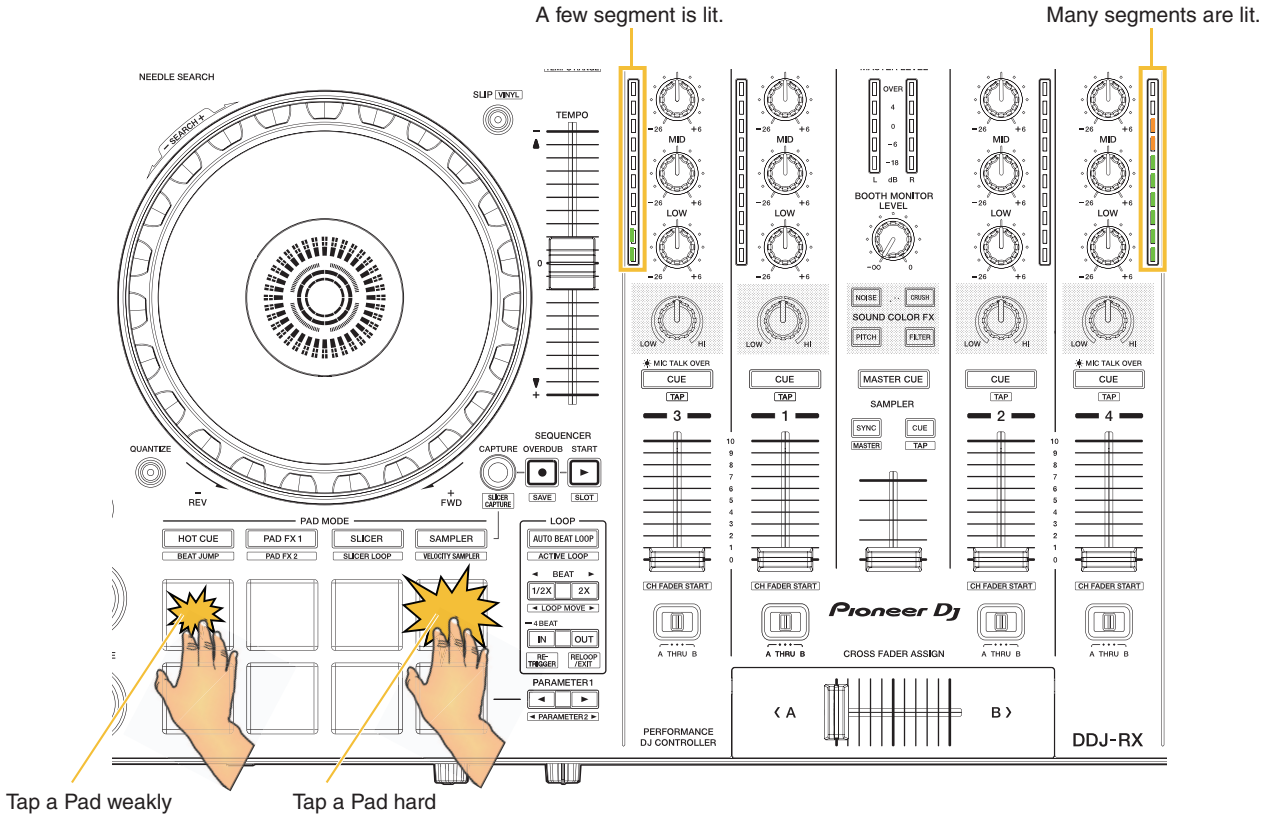


Figure-7 Relation between pressure force and lighting segment



[3] Measurement mode

This controller can measure "Jog dial rotation time" and drift of knobs and faders in Measurement mode.

[How to enter Measurement mode]

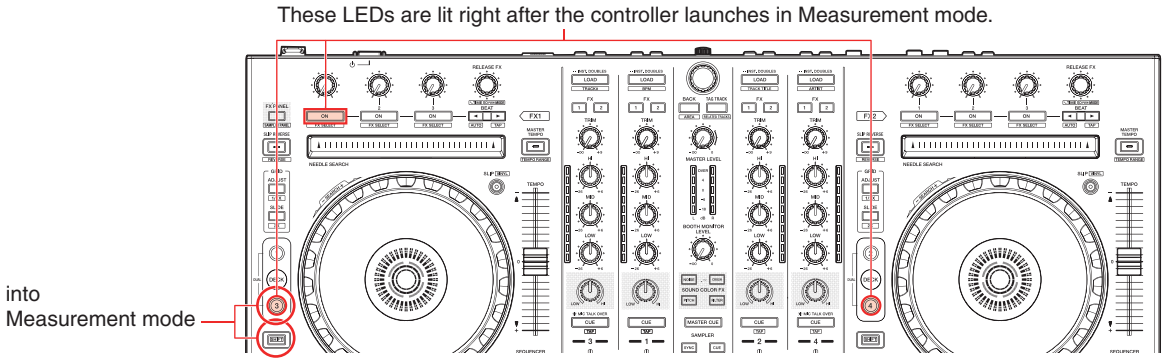
Turn on the power while pressing both left SHIFT button and the DECK 3 button.
LEDs within the DECK 3 button, DECK 4 button, and left FX 1-1 ON button are lit and other LEDs are unlit right after the controller launches in Measurement mode.

Note:

Even if the controller connects with a computer via USB cable, it does not communicate with the computer during Measurement mode.
Unused LEDs are unlit during Measurement mode.

[How to exit Measurement mode]

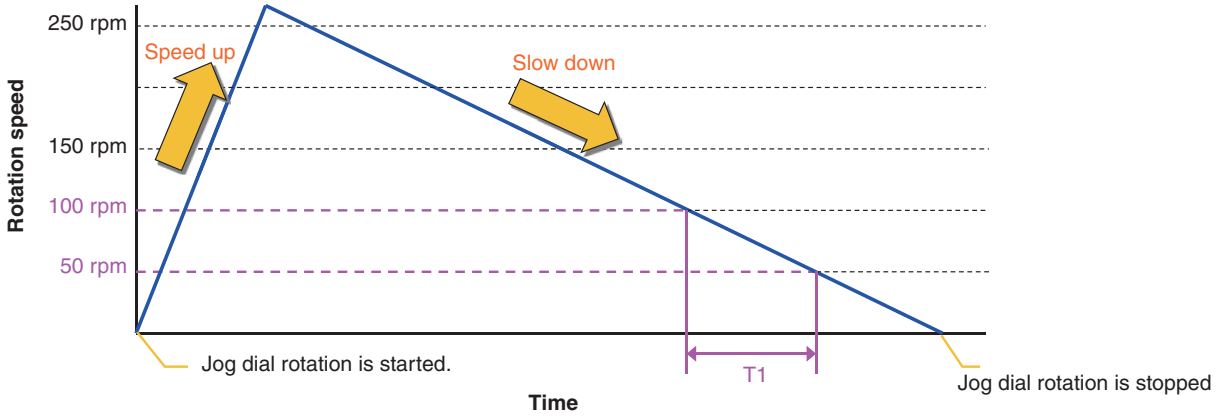
In order to exit Measurement mode, turn off the power.



1. Measurement of Jog dial rotation time

This controller measures the rotation time by rotating Jog dial during Measurement mode.
In particular, when Jog dial is turned with 233.1 rpm (33.3 X 7) or more during Measurement mode, the controller measures difference between time of when the rotation speed slows down to 99.9 rpm (33.3 X 3) and time of when it slows down to 49.95 rpm (33.3 X 1.5).
(The controller measures "T1" shown in Figure-8.)
But, when the rotation speed is less than 233.1 rpm, the controller does not measure.

Figure-8 Characteristic example of when Jog dial is turned

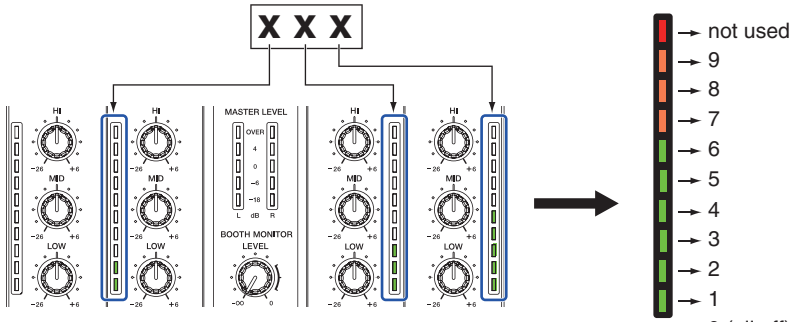


[Trigger of which measure Jog dial rotation time]

1) In order to measure the rotation time for left-side Jog dial, turn left-side Jog dial clockwise or counterclockwise during Measurement mode.
2) In order to measure the rotation time for right-side Jog dial, turn right-side Jog dial clockwise or counterclockwise during Measurement mode.

[Posterior condition]

When the rotation speed is more than 233.1 rpm, measurement value ("T1" shown in Figure-8) is indicated using Channel Level Indicator and LED within left side SLIP button is unlit (*1). Indication method by Channel Level Indicator is common to both side.
The measurement unit is "milli second".
When the rotation speed is less than 233.1 rpm, all Channel Level Indicators are unlit and LED within SLIP button of the left side is lit.
The specified range is 65 ± 35 msec.



Above figure is shown "235 msec".

*1: If a place of a measurement value is "0", all segments of the related Channel Level Indicator are unlit. Channel Level Indicator (CH3) is not used in Measurement mode.

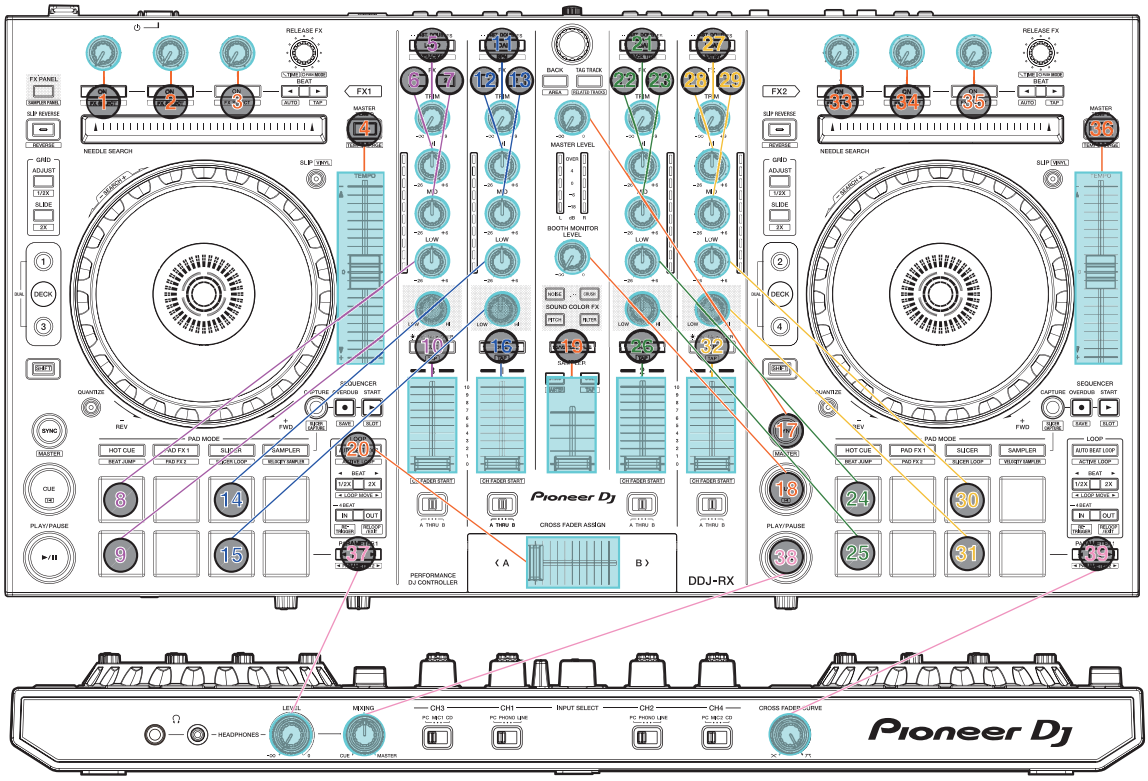
2. Check of drift of knobs and faders

Drift of all knobs and faders can be checked using Master level indicator during Measurement mode.
In order to select test subject, turn the Rotary selector clockwise or counterclockwise.
Then, lighting LED is moved each time the Rotary selector is turned.
In order to start or reset observation of drift, press the Rotary selector.

[Use of this mode during repair]

- For failure judgment of the rotary VRs
  As a guide, amplitude values higher than +4 or lower than -4 may be judged as failure.
  The VRs can be set to any position during measurement. Possible symptoms are shown below.
  • The volume changes arbitrarily.
  • Interrupted sound leakage occurs even if the volume is decreased to the minimum at the Master or Booth Monitor.
  • The MIDI signal is output even if the corresponding VR is not operated.
  • For operation check of a rotary VR after replacement

Figure-9 Relation between knob/fader and LED
Knobs and faders painted with light blue color are checkable.
Number in this figure means order of which select test subject.



[Preparation of when check drift]

Firstly, Select knob or fader of which check drift.
In order to select it, turn the Rotary selector clockwise or counterclockwise.
Each time the Rotary selector is turned, lighting LED is moved according to the order shown in Figure-9.
Knob or fader of which check drift can be identified by lighting LED.

[Trigger of which observe drift]

In order to start observation of drift, press the Rotary selector.
In order to clear measured result of drift and start new observation of drift, press the Rotary selector again.

The controller stores A/D converted value for knob/fader as "reference value" right after the Rotary selector is pressed.
The controller always calculates difference between the "reference value" and latest value during observation.
The controller indicates maximum difference value until now as drift.
If latest difference value is more than past maximum difference value, the drift value uses the latest difference value.
If not, the drift value uses not the latest difference value but past maximum difference value.

[Posterior condition]

Segments of Master level indicator are lit depending on amount of the drift.

The controller always indicates both negative and positive maximum drift value at the same time until the Rotary selector is pressed next.

Table-5 Relation between amount of drift and Master level indicator

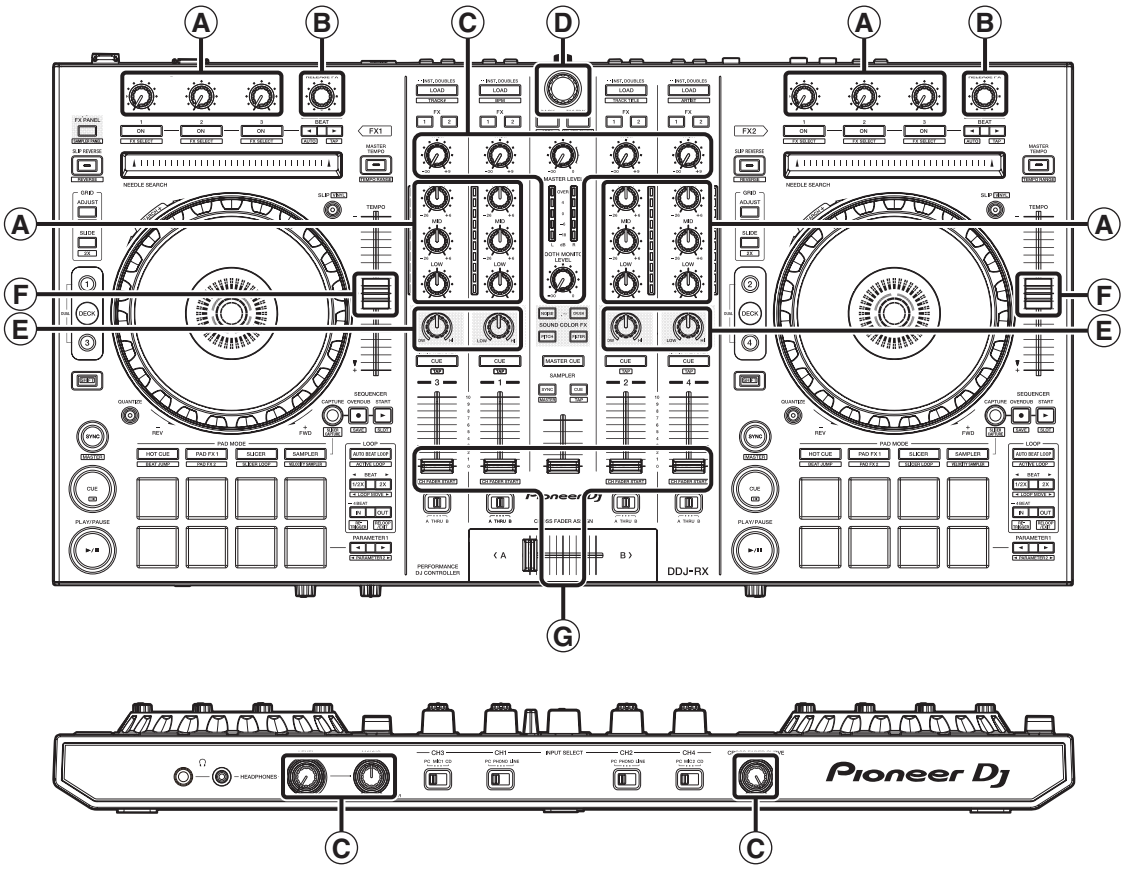
Amount of drift	Master level indicator		
	Lighting segments	Lighting pattern	Side
+1	-18 dB	Pattern 1	Right-side
+2	-18 dB and -6 dB	Pattern 2	Right-side
+3	-18 dB, -6 dB and 0 dB	Pattern 3	Right-side
+4	-18 dB, -6 dB, 0 dB and +4 dB	Pattern 4	Right-side
+5 or more	-18 dB, -6 dB, 0 dB, +4 dB and "OVER"	Pattern 5	Right-side
-1	"OVER"	Pattern 6	Left-side
-2	+4 dB and "OVER"	Pattern 7	Left-side
-3	0 dB, +4 dB and "OVER"	Pattern 8	Left-side
-4	-6 dB, 0 dB, +4 dB and "OVER"	Pattern 9	Left-side
-5 or less	-18 dB, -6 dB, 0 dB, +4 dB and "OVER"	Pattern 10	Left-side

Figure-10 Lighting pattern of Master level indicator during drift observation

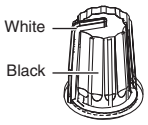
7. DISASSEMBLY

Note:
Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

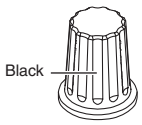
Knobs and Volumes Location



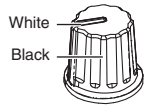
A 100-S1-3006-HA
×18



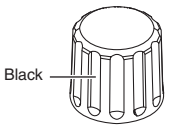
B 100-S1-3007-HA
×2



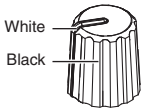
C 100-S1-3008-HA
×9



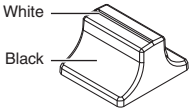
D 100-S1-3010-HA
×1



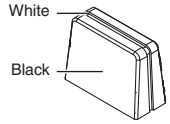
E 100-SX3-3009
×4



F 100-S1-3005-HA
×2



G 100-SXMK2-3157
×6



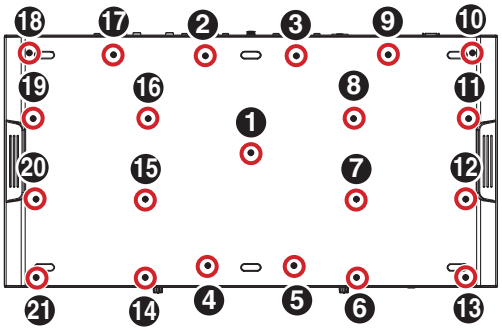
Disassembly

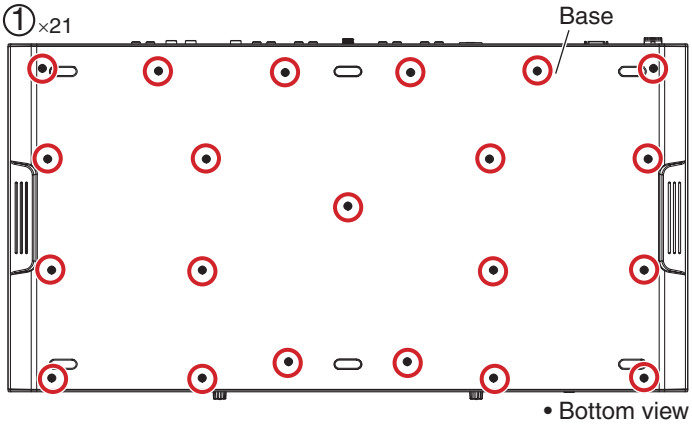
[1] DSP and OUTPUT PCB Assemblies

• Base

(1) Remove the Base by removing the 21 screws.
(602-PTP3012-571-HA)

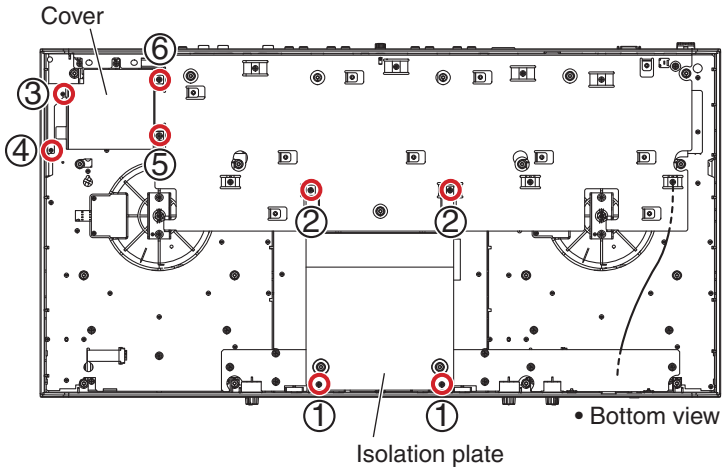
Screw tightening order





• Shield

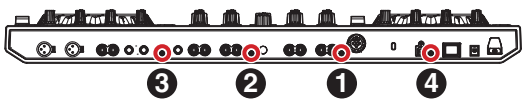
(1) Remove the 2 screws.
(602-MP3-324-HA)
(2) Remove the Isolation plate by removing the 2 screws.
(602-B600-072-HA)
(3) Remove the 1 screw.
(602-CDN88-563)
(4) Remove the 1 screw.
(602-SL24F-099-HA)
(5) Remove the 1 screw.
(602-QMX2BPM-322-HA)
(6) Remove the Cover by removing the 1 screw.
(602-B600-072-HA)

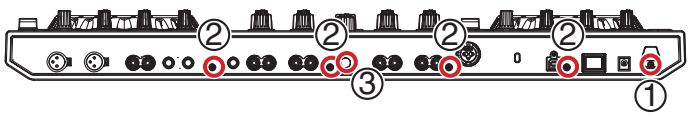


• DSP and OUTPUT PCB Assemblies

(1) Remove the Strain relief bush by removing the 1 screw.
(602-BTB3012-446B-HA)
(2) Remove the 4 screws.
(602-MP3-324-HA)
(3) Remove the Ground terminal and washer.

Screw tightening order

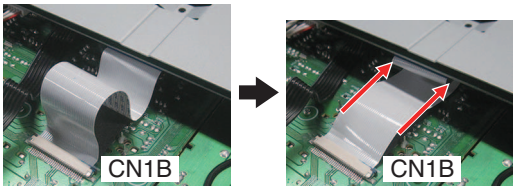




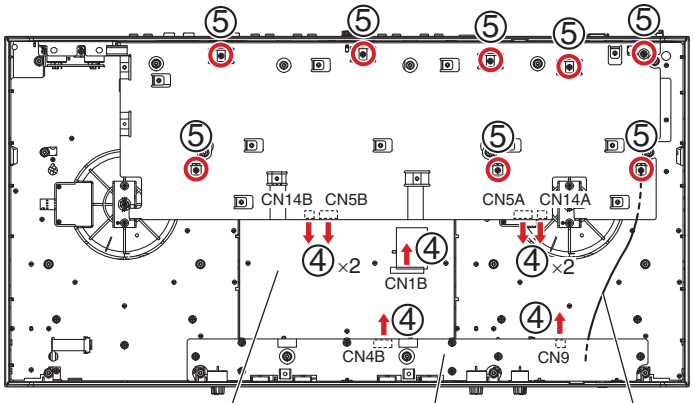
• Rear view

(4) Disconnect the 1 flexible cable and 6 connectors.
(CN1B, 4B, 5A, 5B, 9, 14A, 14B)
(5) Remove the Output board with PCB Assemblies by removing the 8 screws.
(602-B600-072-HA)

• Note on connection of the flexible cable (CN1B)



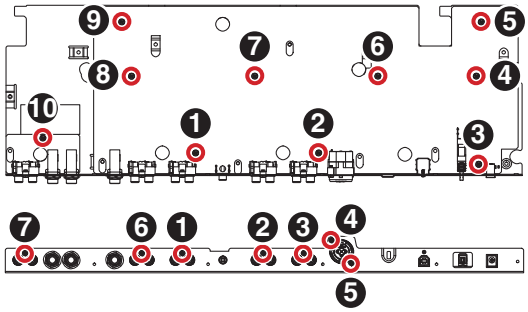
Tuck the flexible cable between the PC boards.

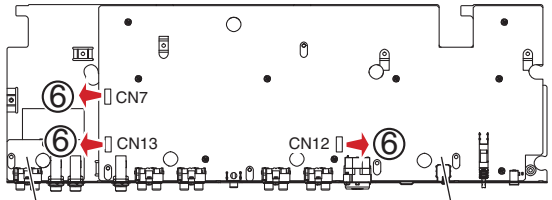


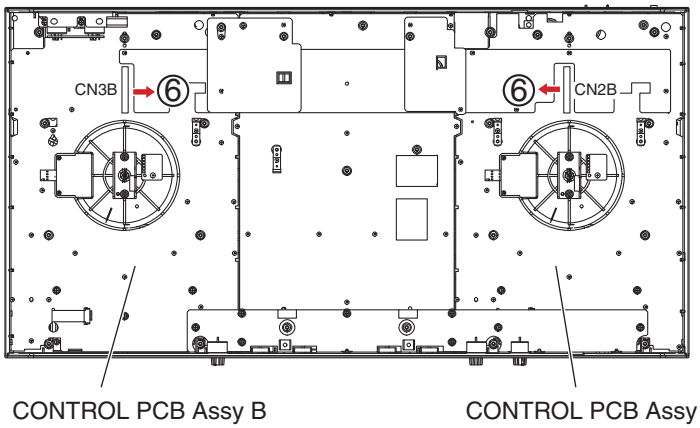
• Bottom view

(6) Disconnect the 2 flexible cables and 3 connectors.
(CN2B, 3B, 7, 12, 13)

Screw tightening order (reference information)



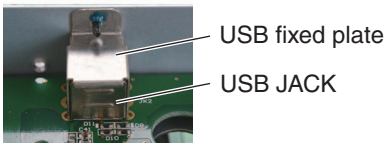




• Bottom view

• When replacing the USB JACK

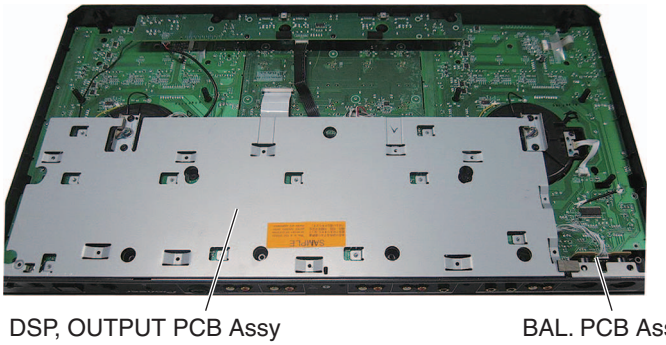
When the USB JACK in the DSP PCB Assy is to be replaced, the USB fixing bracket (USB fixed plate) must be detached together with it. To detach them, remove the solder from the JACK and USB fixed plate.



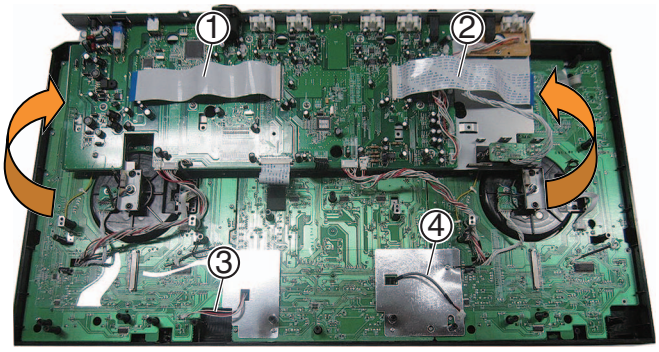
■ Diagnosis of DSP PCB Assy

When you diagnose DSP PCB Assy in an electricity state, perform it in the following procedures.
Extension FFCs to be used: GGP1246 (2 pcs)

Step 1:
Perform the disassembly steps up to Step (5) described in [1] DSP, OUTPUT PCB Assy in "DISASSEMBLY."
Remove the BAL. PCB Assy.

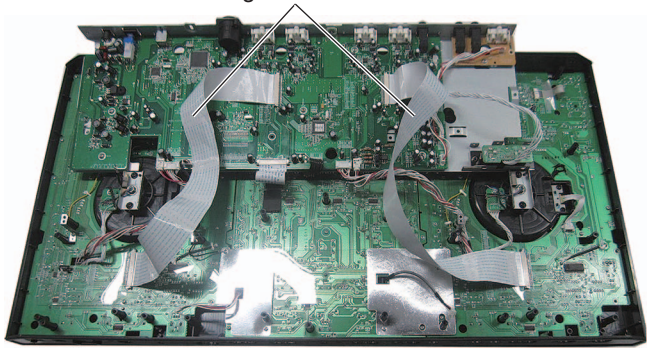


Step 2:
Disconnect the FFCs ① and ② and the wires ③ and ④ then turn over the DSP PCB Assy toward the front side.



Step 3:
Replace the FFCs ① and ② with the ones for diagnosis.

Extension FFC (GGP1246) for diagnoses



Step 4:
Connect the adapter and cables.

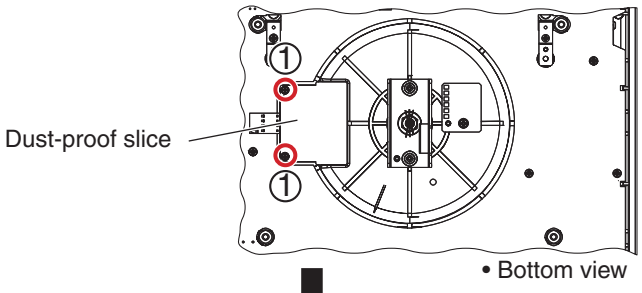
Diagnosis

[2] Jog dial section

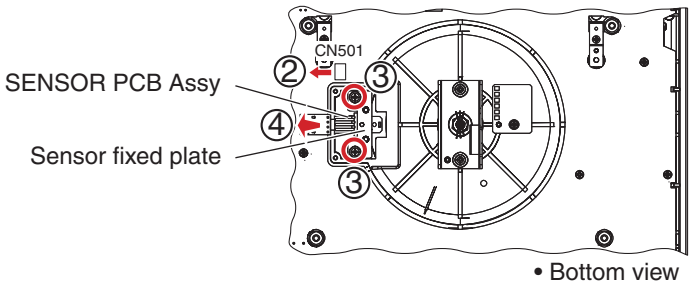
Note:
A figure is only left DECK side, but the right side is similar, too.

• SENSOR PCB Assy

(1) Remove the Dust-proof slice by removing the 2 screws.
(602-PROS2-363-HA)

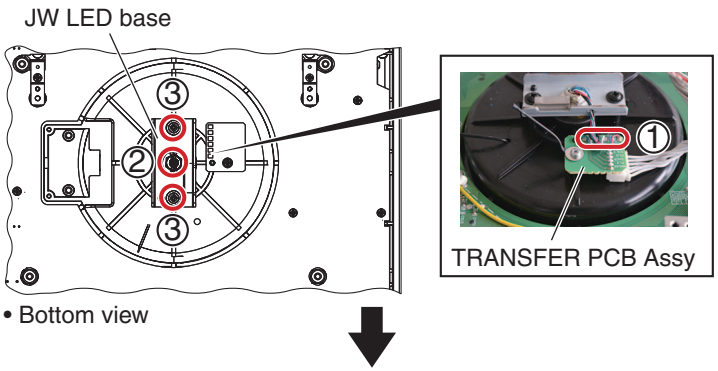


(2) Disconnect the 1 connector.
(CN501)
(3) Remove the Sensor fixed plate by removing the 2 screws.
(602-DJ5500-452-HA)
(4) Remove the SENSOR PCB Assy.

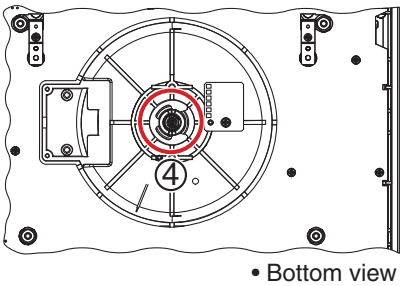


• Jog dial section

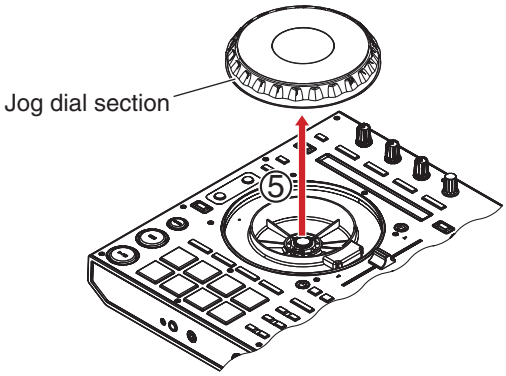
(1) Remove the 6 solders.
(2) Remove the 1 nut and 1 washer.
(3) Remove the JW LED base by removing the 2 screws.
(602-3113-122-HA)



(4) Remove the 1 E ring.

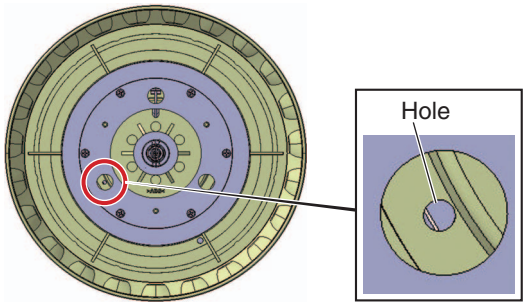


(5) Remove the jog dial section.

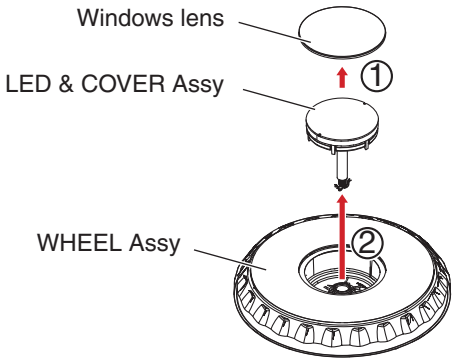


• LED PCB Assy

(1) Remove the Windows lens.
Insert a slim rod in the hole for disassembly in the jog dial section bottom side, and remove it.

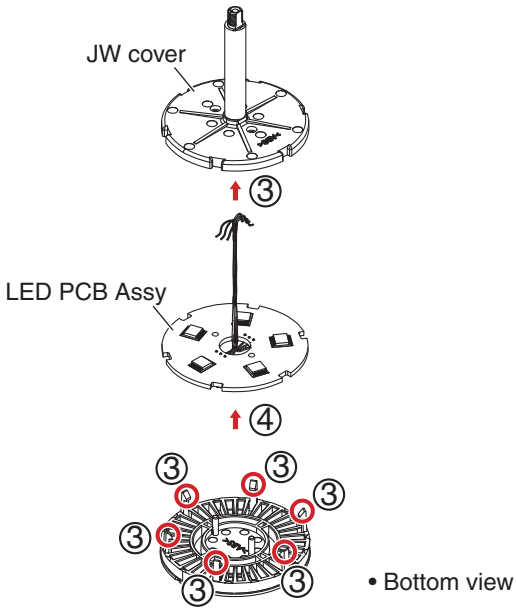


• Bottom view



(2) Remove the LED & COVER Assy.

(3) Remove the JW cover by unhooking the 6 hooks.
(4) Remove the LED PCB Assy.



• Bottom view

• When replacing the LED & COVER Assy or WHEEL Assy

When replacement of the LED & COVER Assy is required, the Windows Lens must be detached, because the Windows Lens is attached to the WHEEL Assy with double-back tape, which is attached around the outer periphery of the Windows Lens as a tube, and the LED & COVER Assy is placed in between them. Once the Windows Lens is detached, the double-back tape cannot be reused. The Windows Lens may not be reused either, because it may be scratched, depending on the manner in which it was detached.
When replacement of the WHEEL Assy is required, the Windows Lens must also be detached and may not be reused. Note that when replacement of the following Assys are required, replace them together with the parts mentioned below.
Double-back tape is supplied with the WHEEL Assy.

· When the LED & COVER Assy is to be replaced:
Double-back tape (TWIN ADHESIVE) (must),
Windows Lens (if necessary)

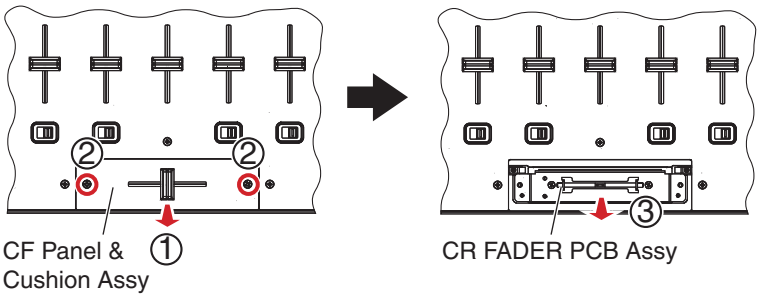
· When the WHEEL Assy is to be replaced:
Windows Lens (if necessary)

[3] Each PCB Assemblies

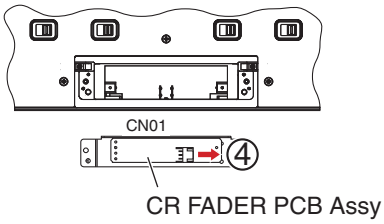
Note:
When you remove each PCB Assemblies, it is not necessary to remove a jog dial section.

• CR FADER PCB Assy

(1) Remove the Push button.
(2) Remove the CF Panel & Cushion Assy by removing the 2 screws.
(602-CTF3010-698B-HA)
(3) Remove the CR FADER PCB Assy.

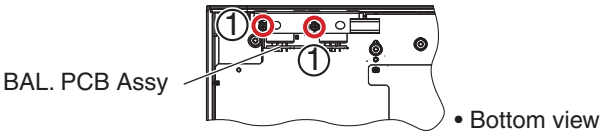


(4) Disconnect the 1 connector.
(CN01)



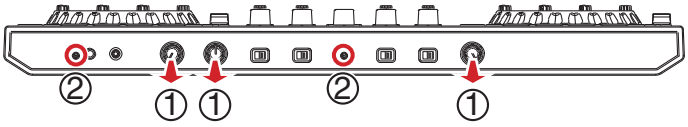
• BAL. PCB Assy

(1) Remove the BAL. PCB Assy by removing the 2 screws.
(602-DJ5500-452-HA)



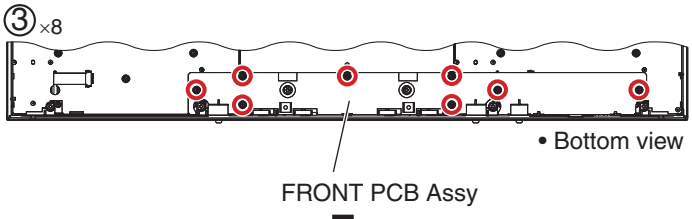
• FRONT PCB Assy

(1) Remove the 3 Gain rotate knobs.
(2) Remove the 2 screws.
(602-MP3-324-HA)



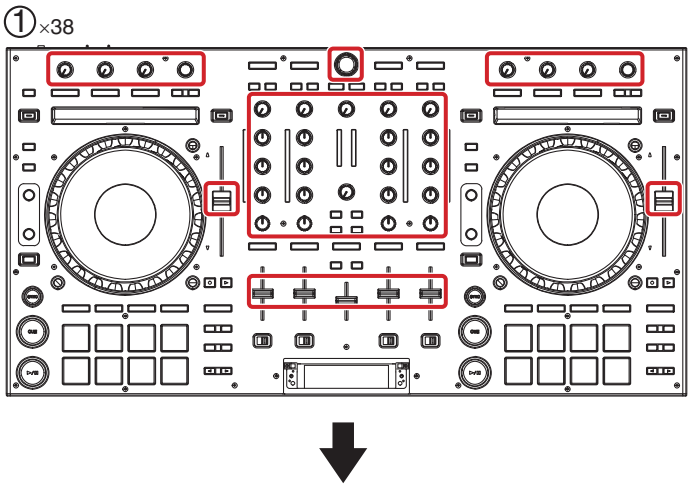
Screw tightening order

(3) Remove the FRONT PCB Assy by removing the 8 screws.
(602-DJ5500-452-HA)

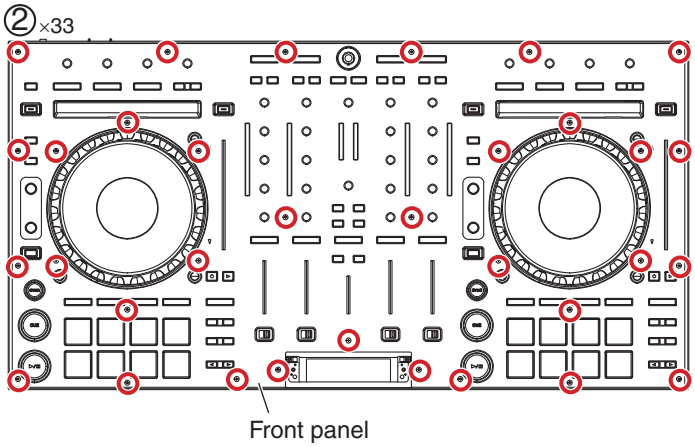


• CONTROL and MIX PCB Assemblies

(1) Remove the all knobs.



(2) Remove the Front panel by removing the 33 screws.
(602-HP1010K-182-HA)



Detachment/Reattachment of the front panel

For replacement of the CONTROL A/B PCB Assy or MIX PCB Assy, the front panel must be detached.
The front panel is secured to the Chassis Assy with double-back tape at 4 locations for prevention of lifting. Be fully careful not to deform the front panel when detaching it.

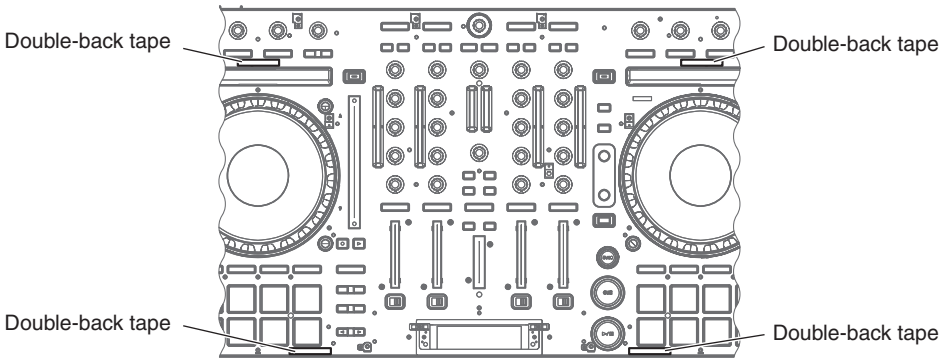
• About the double-back tape that is used for securing the front panel and the Chassis Assy

When detaching the front panel

The front panel and the Chassis Assy are secured with 4 pieces of double-back tape at the locations shown in the photo below.
Slowly peel off the tape, taking care that you will not deform the front panel.

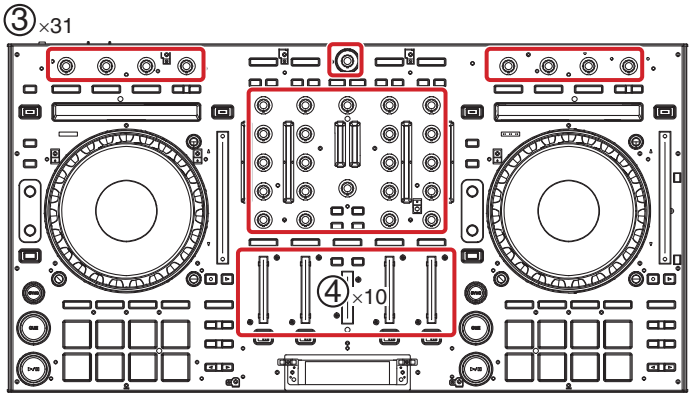
When reattaching the front panel

① Neatly remove any residue of double-back tape from the back of the front panel and the Chassis Assy.
② Stick 4 pieces (5 mm × 40 mm) of NITTO No. 500 double-back tape to the locations shown in the photo below then remove the paper liner.
Note: Even if double-back tape was not used in the initial state, be sure to attach double-back tape when reattaching the front panel.

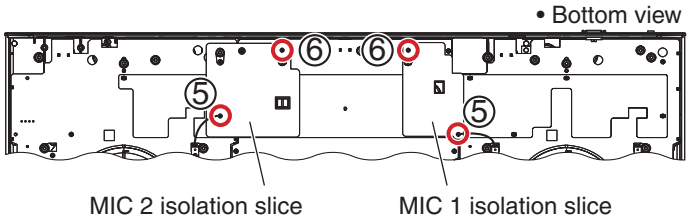


Double-back tape: NITTO No. 500
(5 mm × 40 mm)

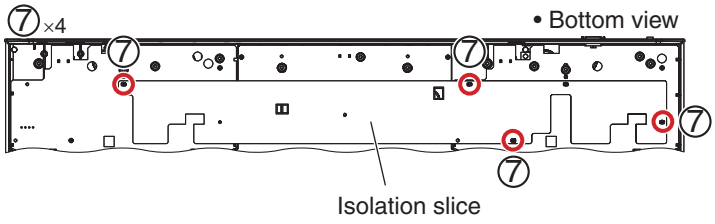
(3) Remove the 31 nuts and 31 washers.
(4) Remove the 10 screws.
(602-2002-077-HA)



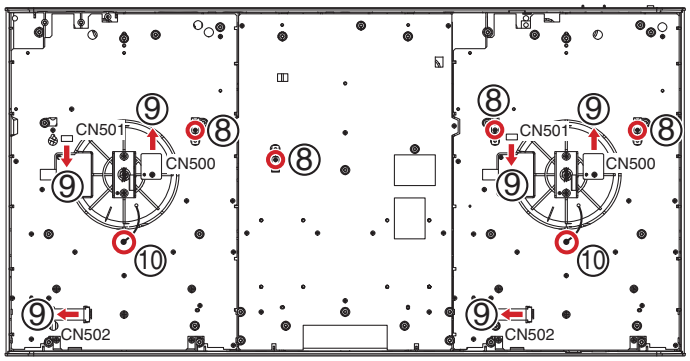
(5) Remove the 2 screws
(602-CDN88-563)
(6) Remove the MIC1 and 2 isolation slices by removing the 2 screws.
(602-SL24F-099-HA)



(7) Remove the Isolation slice by removing the 4 screws.
(602-SL24F-099-HA)



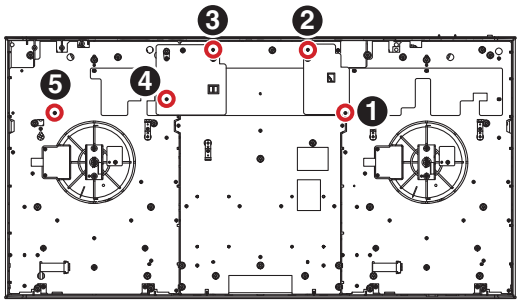
(8) Remove the Ground plate by removing the 4 screws.
(602-SL24F-099-HA)
(9) Disconnect the 2 flexible cables and 4 connectors.
(CN500 x2, CN501 x2, CN502 x2)
(10) Remove the 2 solders.

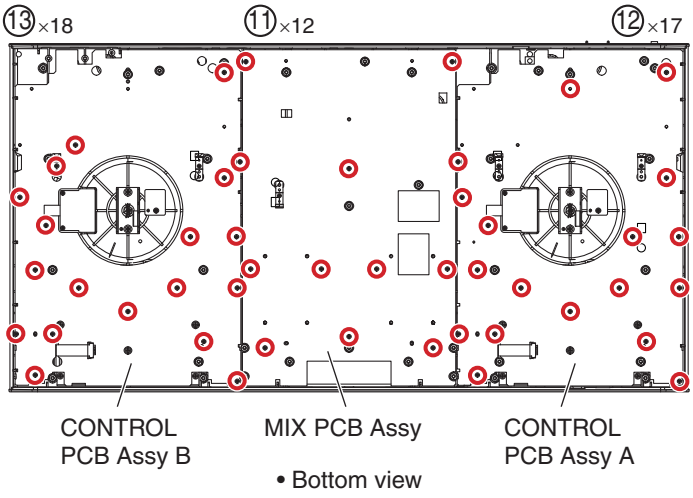


(11) Remove the MIX PCB Assy by removing the 12 screws.
(602-SL24F-099-HA)
(12) Remove the CONTROL PCB Assy A by removing the 17 screws.
(602-SL24F-099-HA)
(13) Remove the CONTROL PCB Assy B by removing the 18 screws.
(602-SL24F-099-HA)

Screw tightening order

The other screws are random order.

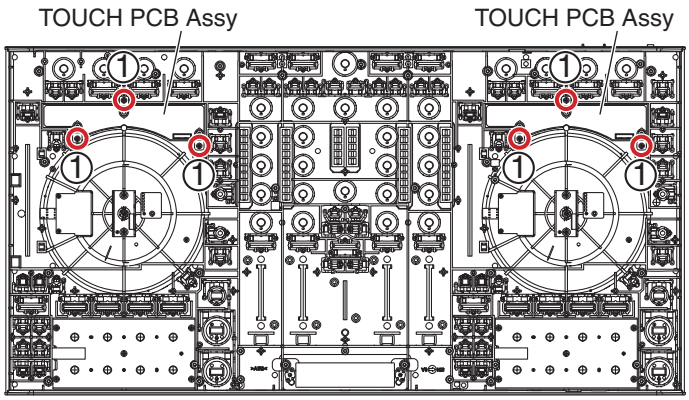




• Bottom view

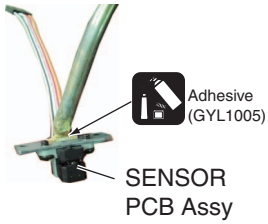
• TOUCH PCB Assy

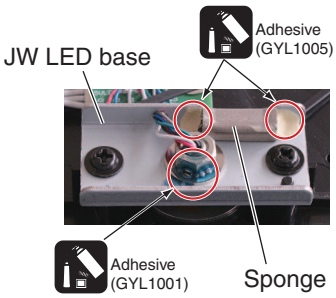
(1) Remove the 2 TOUCH PCB Assemblies by removing the 6 screws.
(602-B600-057-HA)

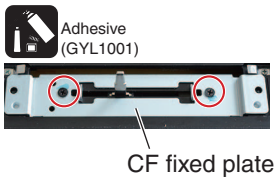


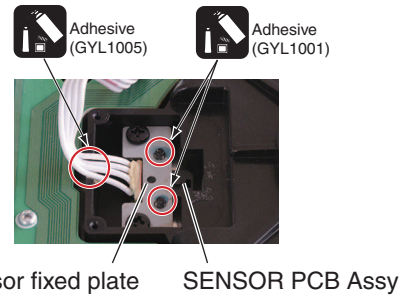
• Bottom view

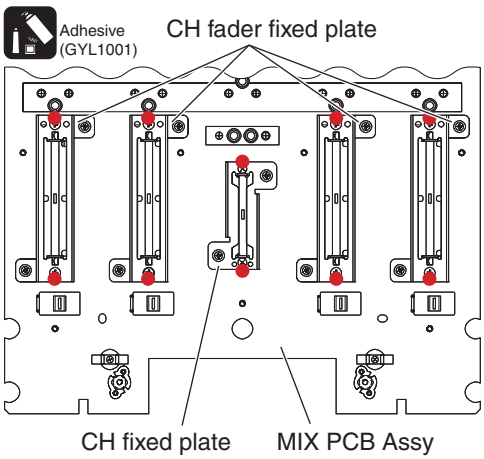
The Application Position of Adhesive and Grease

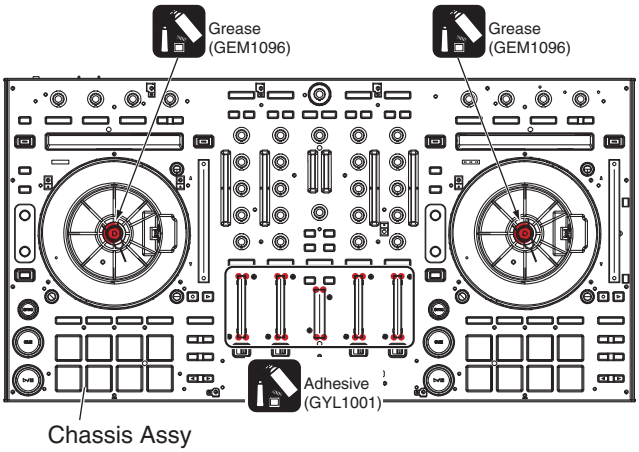


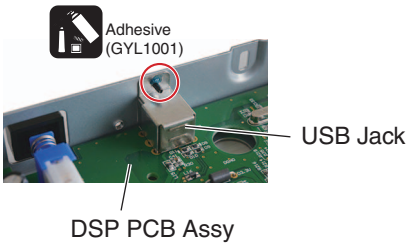


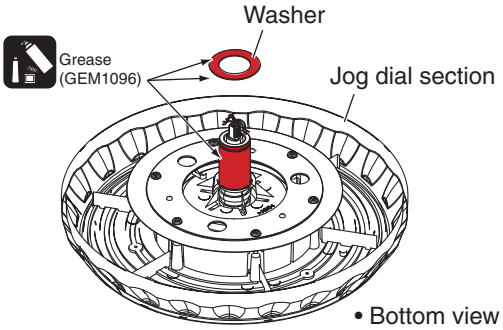












8. EACH SETTING AND ADJUSTMENT

8.1 NECESSARY ITEMS TO BE NOTED

After repairing, be sure to check the version of the firmware, and if it is not the latest one, update to the latest version.
Perform the each item when the following parts are replaced.

- IC and PCB Assy storing firmware and utlity settings
  IC24, IC25, DSP PCB Assy ⇒
  - Confirmation of the version of the firmware
  - Updating to the latest version of the firmware
  - Factory reset
- When replaced WHEEL Assy ⇒
  - Confirmation of the specified value by the mode which measures Jog dial rotation time

8.2 UPDATING OF THE FIRMWARE

Note: If firmware with a version later than the one installed in this unit has been released on the Pioneer DJ site, that information will be indicated on the screen for rekordbox. (The PC must be connected to the Internet.)

■ What you need for updating

- Update file for DDJ-RX
  * When the downloaded zip file is double-clicked, the update file is unzipped.
    Example) DDJ-RX_UpdaterApp_v1.01.jar

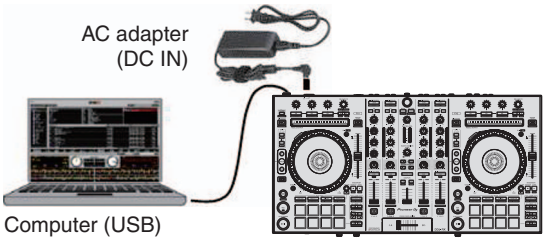
DDJ-RX_UpdaterApp_v1.01.jar

- A computer where Java has been installed.
  * If Java has not been installed, please download the Java Runtime Environment (JRE) at: https://java.com and install it on your computer.

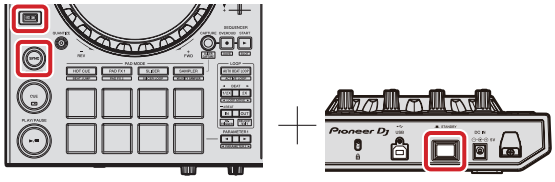
Note: If you attempt to download Java via an Edge browser in Windows 10, even if "In Windows 10, the Edge browser does not support plug-ins and therefore will not run Java. Switch to a different browser" messages are shown, Ignore the message and click on "Agree and Start Free Download" displayed below the message to start downloading.

■ Updating procedures

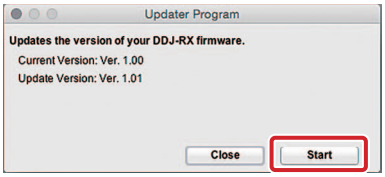
① Connect the above prepared computer to DDJ-RX via the USB cable included with the product.



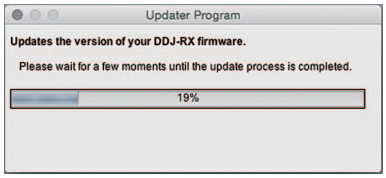
② Turn on the power of DDJ-RX while pressing the [SHIFT] button and the [SYNC] button on the LEFT deck ensure the Level meter LEDs flash before releasing your finger from the these buttons.



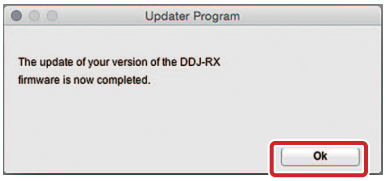
③ When the update file for DDJ-RX (DDJ-RX_UpdaterApp_vx.xx.jar) is activated, the following dialogue is displayed. Click the [Start] button.



④ The update of the firmware starts.



⑤ When the firmware update process is complete, click the [OK] button.



Please note that if you fail to update, turn on the power of DDJ-RX again and start from Step ③ of the above Updating Procedures.

How to check the firmware version

For Windows 7

ASIO driver exclusively for DDJ-RX is required to be installed.
From the [Start menu], click [All the programs] → [Pioneer] → [DDJ_RX] → [DDJ_RX Version Display Utility] icon
You can also display the firmware version, by selecting the Start menu's Run command then entering C:\Program Files\Pioneer\DDJ_RX ASIO\DDJ_RX_Version.exe in the Open box.

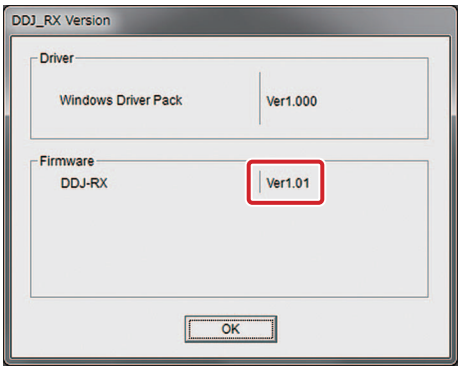
For Windows 8/Windows 8.1

From [Apps view], click [Pioneer] → [DDJ_RX Version Display Utility] icon.

For Windows 10

Click [All apps] → [Pioneer] → [DDJ_RX Version Display Utility] icon after left-clicking the Windows start button.

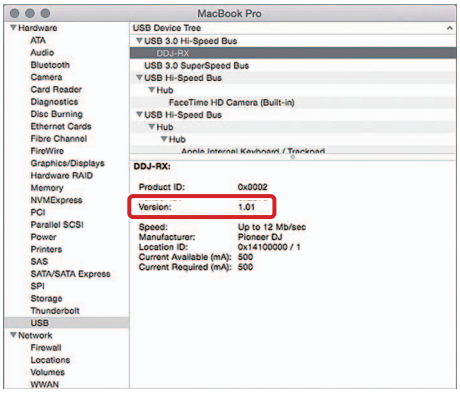
DDJ_RX_Version.exe



For Mac

Open the Apple menu while pressing the option key, then select “System Profiler.”

Select the [USB] from the [Hardware] to display the name of the controller. Select the controller to display the firmware version.



8.3 ITEMS FOR WHICH USER SETTINGS ARE AVAILABLE

This unit is provided with user settable items, as shown below.
Although no serious operational problems occur even if data for such user settable items are cleared during repair, it is recommended that you take note of those settings before starting repair.
Use the Check Sheet, to which you can transcribe the settings.
If the corresponding part or board Assy is replaced for repair, change the user resettable settings to those noted on the Check Sheet before starting repair. If resetting is not possible, when returning the repaired product, be sure to tell the customer that the Utility settings have been cleared and will have to be reset, as required.

Item for Which User's Setting is Available			Setting Value (The factory default settings are indicated in bold.) Indication method	Part Name	Content to be Stored
Utility mode	MIDI controller setting		**Automatically switching modes, according to whether or not rekordbox is running** / Forced operations to be generally expected from the MIDI controller, regardless of running or not running of rekordbox Right Deck HOT CUE mode button lit / PAD FX1 mode button lit	IC24 (DSP PCB Assy)	Utility mode setting value
	Channel fader start setting		**function abled** / function disabled Left Deck Effect parameter: 1 button lit / 2 button lit		
	Crossfader start setting		**function abled** / function disabled Right Deck Effect parameter: 1 button lit / 2 button lit		
	Attenuator level setting for the Master output		**0 dB** (without attenuation) / –3 dB / –6 dB Left Deck HOT CUE mode button lit / PAD FX1 mode button lit / SLICER mode button lit		
	Flashing setting in Slip mode		**Flashing enable** / Flashing disenable Left Deck SLIP button lit / SLIP button unlit		
	Light/flash setting of the SLIP button		The SLIP button to start flashing when Slip mode is entered / **The SLIP button to light when Slip mode is entered and flash while normal playback is being performed in the background** Right Deck SLIP button lit / SLIP button unlit		
	Demo mode setting		Time required for start of Demo mode: One minute /5 minutes / **10 minutes of no operation** / Demo mode disabled Right Deck LOOP 2X button lit / LOOP IN button lit / LOOP OUT button lit / LOOP 1/2X button lit		
	SAMPLER VELOCITY mode	Velocity curve setting	Curve 1 / Curve 2 / **Curve 3** / Curve 4 Left Deck LOOP 1/2X button lit / LOOP 2X button lit / LOOP IN button lit / LOOP OUT button lit		
	Cut lag setting for crossfader		0 (0.5 mm) / 1 (0.6 mm) to **5 (1 mm)** to 51 (5.6 mm) / 52 (5.7 mm) The number of lit segments of the [CH3] channel level indicator denotes a value in tens, and the number of lit segments of the [CH1] channel level indicator denotes a value in units.		
	Microphone output setting to Booth monitor		**Microphone sound to be output from the [BOOTH OUT] connector** / Microphone sound NOT to be output from the [BOOTH OUT] connector Right Deck SAMPLER mode button lit / SAMPLER mode button unlit		
	Illuminations mode setting for jog dial	White illuminations	Decks 1 and 2: Pattern 1 / **Pattern 2** / Pattern 3 / Pattern 4 / Pattern 5, Decks 3 and 4: Pattern 1 / Pattern 2 / Pattern 3 / **Pattern 4** / Pattern 5 Left Deck Performance pad: 1 lit / 2 lit / 3 lit / 4 lit / 5 lit, Right Deck Performance pad: 1 lit / 2 lit / 3 lit / 4 lit / 5 lit		
		Red illuminations	**The indicator lights when the sound of the deck being operated can be output as the master sound. (On Air display)** / the red illuminations to light or flash in the same way as the SLIP button Left Deck Performance pad: 6 lit / 7 lit		
	Setting for backspin length		Backspin length: Short / **Normal** / Long Right Deck Performance pad: 6 lit / 7 lit / 8 lit		
	High-pass filter operation setting for microphone sound		**Enable** / disable the high-pass filter for the microphone sound Left and Right Deck BEAT ◄ button lit / BEAT ◄ button unlit		
	MIDI message operation setting for crossfader		**Enable** / disable optimization of MIDI messages for the crossfader Left Deck MASTER TEMPO button lit / MASTER TEMPO button unlit		
Jog dial touch sensor sensitivity adjustment			–17 / –16 . . . **0** . . . +16 / +17 (35 steps) The LEDs at the center of the jog dial: All unlit (–17) to half lit (0) to all lit (+17)		Jog dial touch sensor sensitivity adjustment

Each of the above items can be set in Utility mode or Jog Dial Touch Sensor Sensitivity Adjustment mode.
To enter Utility mode, disconnect the USB cable from the PC then press the STANDBY/ON switch on the rear panel of this unit to set it to Standby. Then while holding the SHIFT and PLAY/PAUSE buttons on the left deck pressed, press the STANDBY/ON switch to set it to ON.
To start this unit in Jog Dial Touch Sensor Sensitivity Adjustment mode, connect the PC and this unit, using the supplied USB cable, then while holding the SHIFT button pressed, press the DECK1 or DECK3 button for the left jog dial or press the DECK2 or DECK4 button for the right jog dial.
(For details, refer to the operating instructions of the unit.)

Sheet for confirmation of the user setting

MIDI controller setting		Channel fader start setting		Crossfader start setting	
Auto	Compulsion	Enable	Disenable	Enable	Disenable

Attenuator level setting for the Master output			Flashing setting in Slip mode		Light/flash setting of the SLIP button		Demo mode setting			
0 dB	-3 dB	-6 dB	Enable	Disenable	Flashing	Lit	1 min	5 min	10 min	Disenable

Velocity curve setting				Cut lag setting for crossfader			Microphone output setting to Booth monitor	
Curve 1	Curve 2	Curve 3	Curve 4	0	1 to 5 to 51	52	Output	Non output

Illuminations mode setting for jog dial											
White illuminations (Deck 1 and 2)					White illuminations (Deck 3 and 4)					Red illuminations	
Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	On air display	SLIP state

Setting for backspin length			High-pass filter operation setting for microphone 1 input sound		High-pass filter operation setting for microphone 2 input sound	
Short	Normal	Long	Enable	Disenable	Enable	Disenable

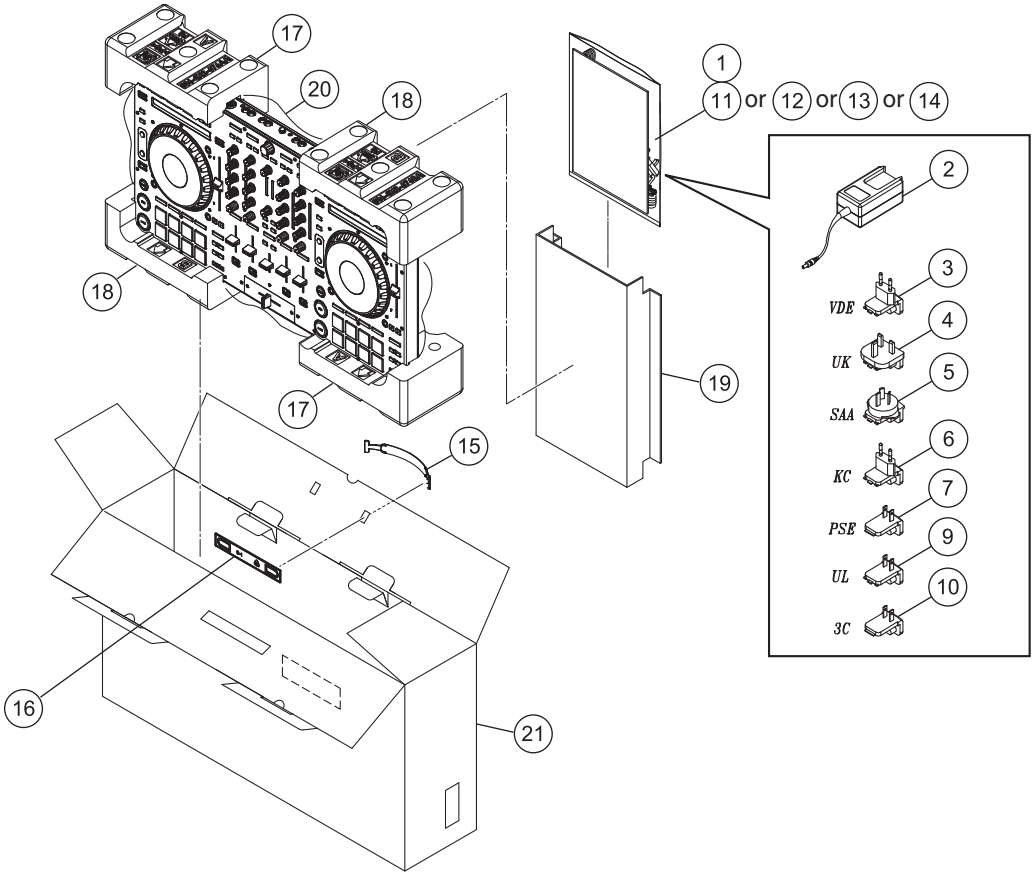
MIDI message operation setting for crossfader	
Enable	Disenable

Jog dial touch sensor sensitivity adjustment																																		
-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+10	+11	+12	+13	+14	+15	+16	+17

9. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on product are used for disassembly.*
● *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

9.1 PACKINGSECTION



(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	USB Cable (L = 1500 mm)	408-SUB-132
⚠	2	AC Adapter	411-SXMK3-957
⚠	3	Power Plug	See Contrast table (2)
⚠	4	Power Plug	See Contrast table (2)
⚠	5	Power Plug	See Contrast table (2)
⚠	6	Power Plug	See Contrast table (2)
⚠	7	Power Plug	See Contrast table (2)
	8	•••••	
⚠	9	Power Plug	See Contrast table (2)
⚠	10	Power Plug	See Contrast table (2)
	11	Operating Instructions (Quick Start Guide)	See Contrast table (2)
	12	Operating Instructions (Quick Start Guide)	See Contrast table (2)
	13	Operating Instructions (Quick Start Guide)	See Contrast table (2)
	14	Operating Instructions (Quick Start Guide)	See Contrast table (2)
	15	Handle	100-SX-3017
	16	Handle Base	100-SX-3018
	17	Polyfoam A	506-SX2-676AA
	18	Polyfoam B	506-SX2-676BA
	19	Pasterboard	507-S1-3372-HA
	20	Soft Bag	509-DDJSX-320-HA
	21	Gift Box	See Contrast table (2)

(2) CONTRAST TABLE

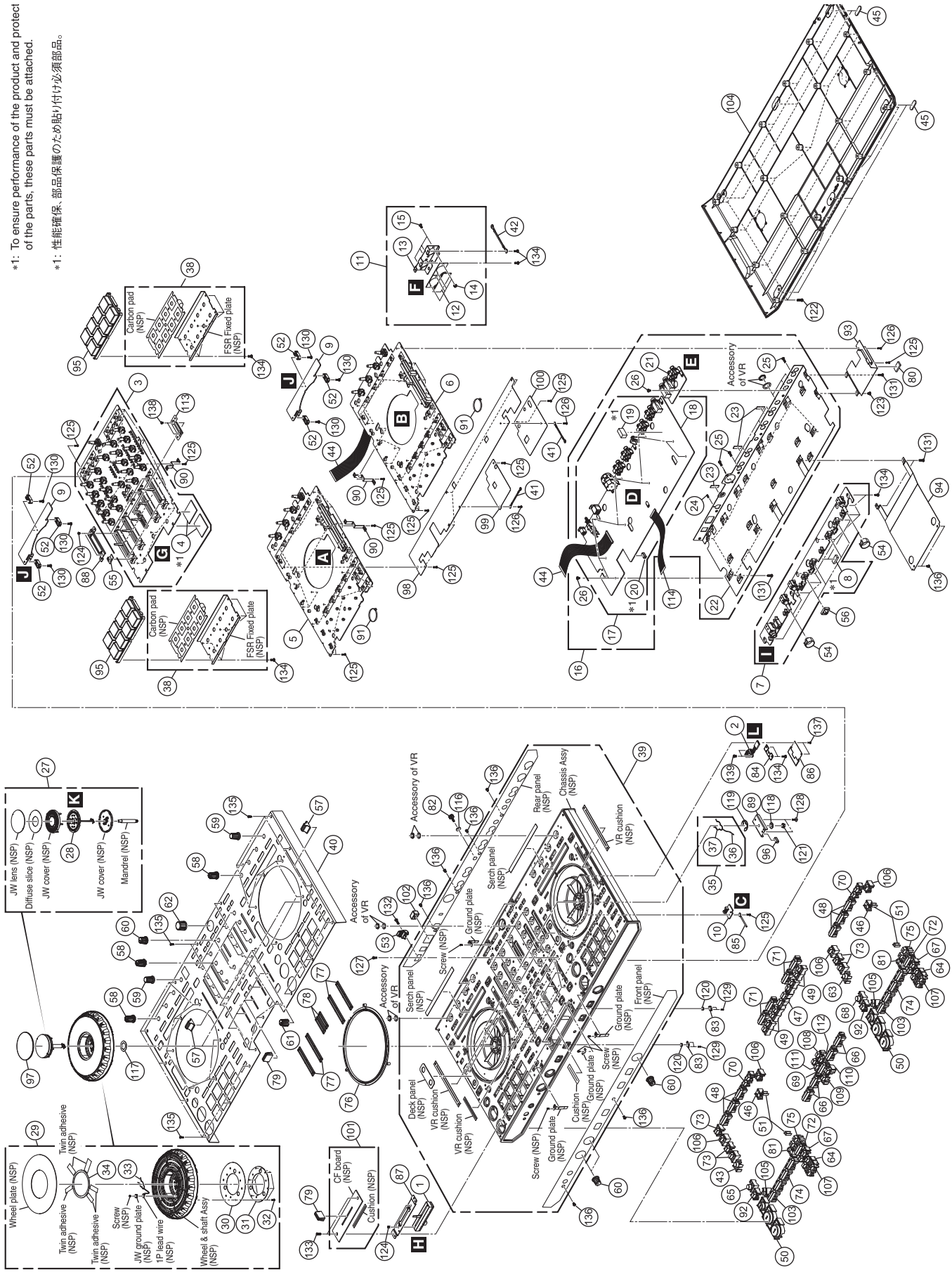
DDJ-RX/FJLPXEG, SVYXEG, UXEGCB and AXEG are constructed the same except for the following:

Mark	No.	Symbol and Description	DDJ-RX/FJLPXEG	DDJ-RX/SVYXEG	DDJ-RX/UXEGCB	DDJ-RX/AXEG
⚠	3	Power Plug	420-DJM250-407A	420-DJM250-407A	Not used	Not used
⚠	4	Power Plug	420-DJM250-362-HA	420-DJM250-362-HA	Not used	Not used
⚠	5	Power Plug	420-DJM250-363-HA	Not used	Not used	Not used
⚠	6	Power Plug	420-DJM250-364A	Not used	Not used	Not used
	7	Power Plug	420-DJM250-409A	Not used	Not used	Not used
	9	Power Plug	Not used	Not used	420-DJM250-361	Not used
	10	Power Plug	Not used	Not used	Not used	420-DJM250-408
	11	Operating Instructions (Quick Start Guide)(En, Es, Jp)	502-SXMK3F-3548	Not used	Not used	Not used
	12	Operating Instructions (Quick Start Guide) (En, De, Fr, It, Nl, Es, Ru, Pt)	Not used	502-SXMK3B-3546	Not used	Not used
	13	Operating Instructions (Quick Start Guide)(En, Fr)	Not used	Not used	502-SXMK3A-3545	Not used
	14	Operating Instructions (Quick Start Guide)(Zhcn)	Not used	Not used	Not used	502-SXMK3D-3547
	21	Gift Box	507-RXF-3370	507-RXB-3370	507-RXA-3370	507-RXD-3370

9.2 EXTERIOR SECTION

*1: To ensure performance of the product and protect of the parts, these parts must be attached.

*1: 性能確保、部品保護のため貼り付け必須部品。



EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CR FADER PCB Assy	704-EN1000-9788
	2	SENSOR PCB Assy	704-PDJ33-A007-HA
	3	1..MIX PCB Assy	704-SXMK3-B255
	4	2..Spacer	612-SX2-450
	5	CONTROL PCB Assy A	704-SXMK3-B252
	6	CONTROL PCB Assy B	704-SXMK3-B253
	7	1..FRONT PCB Assy	704-SXMK3-B254
	8	2..Spacer	612-SX2-459
	9	TOUCH PCB Assy	704-S1MK2-A957
	10	TRANSFER PCB Assy	704-SXMK3-B256
	11	1..BAL PCB & FIXED P. Assy	704-S1MK2-A986
	12	2..BAL. PCB Assy	704-S1MK2-A956
	13	2..XLR Fixed Plate	300-S1-2048-HA
	14	2..Nut + Gear Washer	601-R2150-033-HA
	15	2..Screw	602-HMD510B-198-HA
	16	1..I/O PCB & FIXED PLATE Assy	704-SXMK3-B272
	17	2..I/O PCB Assy Service	704-SXMK3-B332
	18	3..DSP PCB Assy	704-SXMK3-B271
	19	3..Cushion	612-SX2-362
	20	3..Sponge	612-DJFA-373-HA
	21	2..OUTPUT PCB Assy	704-S1MK2-A958
	22	2..Output Board	300-S1-2044A
	23	2..Sponge	612-F300-358-HA
	24	2..Screw	602-HP1010K-181-HA
	25	2..Screw	602-MK7-131-HA
	26	2..Screw	602-SA12-378
	27	1..LED & COVER Assy	704-S1MK2-A961
	28	2..LED PCB Assy	704-S1MK2-A959
	29	1..Wheel Assy	703-SX3-1383
	30	2..Encoder Plate	300-PROS2-848-HA
	31	2..Encoder Fixed Plate	300-PROS2-851-HA
	32	2..Screw	602-PROS2-363-HA
	33	2..Clip	603-S1-395-HA
	34	2..Twin Adhesive	501-S1-2526-HA
	35	1..Clip & Lead Wire Assy	704-S1-A586
	36	2..1P Lead Wire	406-S1-1231-HA
	37	2..Clip (1 mm)	603-S1-394-HA
	38	PAD & FSR Assy	704-S1MK2-A962
	39	Chassis Assy	705-SXMK3-1630
	40	Top Panel	300-SX3-2043B
	41	1P Lead Wire (L = 55 mm)	406-S1MK2-1301
	42	1P Ground Wire (L = 40 mm)	406-8001-833
	43	DECK 1 Button	100-S1-2990-HA
	44	37P 1.0 FFC Cable (L = 190 mm)	406-S1MK2-1294
	45	Foot Mat	612-S1-445-HA

Mark	No.	Description	Part No.
	46	Little Round Button	100-S1-2991-HA
	47	2 Key Button	100-S1-2992S-HA
	48	ON Button	100-S1-2993-HA
	49	1, 2 Button	100-S1-2994-HA
	50	PLAY SYNC Button	100-S1-2995-HA
	51	TEMPO Lens	100-S1-2998-HA
	52	Fixed Plate	100-S1-2999-HA
	53	Strain Relief Bush	100-S1-3000-HA
	54	VR Cover	100-S1-3002-HA
	55	CF Button	100-S1-3003-HA
	56	Button	100-S1-3004-HA
	57	Speed Push Button	100-S1-3005-HA
	58	FX Rotate Knob	100-S1-3006-HA
	59	BEAT Rotate Knob	100-S1-3007-HA
	60	GAIN Rotate Knob	100-S1-3008-HA
	61	FILTER Rotate Knob	100-SX3-3009
	62	BROWSER Rotate Knob	100-S1-3010-HA
	63	DECK 2 Button	100-S1A-2990-HA
	64	IN/OUT Button	100-S1A-2994-HA
	65	DECK 3 Button	100-S1B-2990-HA
	66	CUE Button	100-S1B-2993-HA
	67	2X Button	100-S1B-2994-HA
	68	DECK 4 Button	100-S1C-2990-HA
	69	MASTER CUE Button	100-SX3-2993
	70	Button	100-S1C-2994-HA
	71	LOAD Button	100-S1D-2993-HA
	72	AUTO BEAT LOOP Button	100-SX3A-2993
	73	Rectangular Button	100-SX-2989S-HA
	74	HOT CUE/ROLL Button	100-SX2-3156
	75	1, 2 Button	100-SX3-3256
	76	JW Ring	100-S1-3001-HA
	77	LM Lens	100-SXMK2-3154
	78	MASTER Lens	100-SXMK2-3155
	79	Push Button 1	100-SXMK2-3157
	80	Sponge	612-S1-461-HA
	81	Round Knob	100-SXMK2-3160A
	82	Ground Terminal	200-S1-665-HA
	83	Fixed Cover	300-33-1918-HA
	84	Sensor Fixed Plate	300-HDJ9800-981-HA
	85	Winding Fixture	300-HM510B-224-HA
	86	Dust-Proof Slice	501-HDJ9800-1648-HA
	87	CF Fixed Plate	300-S1-2045-HA
	88	CH Fader Fixed Plate	300-S1-2046-HA
	89	JW LED Base	300-S1-2049A-HA
	90	Ground Plate	300-S1-2051-HA

Mark	No.	Description	Part No.
	91	Cable Tie	504-S100-004-HA
	92	SHIFT Button	100-S1-2989-HA
	93	Cover	300-S1-2059-HA
	94	Isolation Plate	300-S1-2060-HA
	95	Velocity Soft Knob	604-SXMK2-651
	96	Sponge	612-DJFA-373-HA
	97	Windows Lens	100-SX3-2985
	98	Isolation Slice	501-S1-2542A
	99	MIC1 Isolation Slice	501-SX2-2645
	100	MIC2 Isolation Slice	501-SX2-2646
	101	CF Panel & Cushion Assy	703-SX3-1396
	102	Power Knob	100-HDJ2000-1641-HA
	103	HOT CUE/PAD FX1 Button	100-SX3-3156
	104	Base	100-SX3-3158
	105	Round Knob	100-SX3-3160A
	106	Button	100-SX3-3254
	107	LITTLE Button	100-SX3-3255
	108	CFX Button	100-SX3-3257
	109	SYNC Button	100-SX3-3258
	110	CUE Button	100-SX3-3259
	111	PITCH Button	100-SX3A-3258
	112	FILER Button	100-SX3A-3259
	113	CH Fixed Plate	300-SX3-2251
	114	30P 1.0 FFC Cable (L = 120 mm)	406-S1MK2-1295
	115	•••••	
	116	Washer	606-S1-007-HA
	117	Washer	606-S1-261-HA
	118	Washer	606-DDJLE-260-HA
	119	E Type Wsher	606-S1-262-HA
	120	Nut	601-A100-004-HA
	121	Nut	601-MM1000-029-HA
	122	Screw	602-PTP3012-571-HA
	123	Screw	602-QMX2BPM-322-HA
	124	Screw	602-SA12-414-HA
	125	Screw	602-SL24F-099-HA
	126	Screw	602-CDN88-563
	127	Screw	602-2002-077-HA
	128	Screw	602-3113-122-HA
	129	Screw	602-A700-494-HA
	130	Screw	602-B600-057-HA
	131	Screw	602-B600-072-HA
	132	Screw	602-BTB3012-446B-HA
	133	Screw	602-CTF3010-698B-HA
	134	Screw	602-DJ5500-452-HA
	135	Screw	602-HP1010K-182-HA
	136	Screw	602-MP3-324-HA
	137	Screw	602-PROS2-363-HA
	138	Screw	602-MK9-505
	139	Screw	602-CTP3050-774B