AlphaTheta

Service Manual

DJM-A9

ORDER NO.
RRV4733

DJ MIXER

DJM-A9

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

Model	Type	Power Requirement	Remarks
DJM-A9	CUXJ	AC 110 V to 240 V	
DJM-A9	PYXJ	AC 110 V to 240 V	
DJM-A9	SXJ	AC 110 V to 240 V	
DJM-A9	XJ	AC 110 V to 240 V	
DJM-A9	XJCN	AC 220 V	

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

Model	Order No.	Remarks
DJM-A9	RRV4734	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 safety 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 safety, you should not risk trying to do so and refer the repair to a qualified service technician.

Caution
Since the fuse may be neutral of the mains supply, disconnect the mains to de-energize the phase conductors.

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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 NOTES ON REPLACING

The part listed below is difficult or impossible to replace as a discrete component part.
When the part listed in the table is defective, replace whole Assy.

Assy Name	Parts that is difficult to replace			
	Ref No.	Part No.	Function	Remarks
MAIN Assy	IC211	BD9E302EFJ@V	12 V → 3.3 V DC/DC converter	IC with heat-pad
	IC210, IC216	UA78M33IKVUG3	5 V → 3.3 V Regulator	IC with heat-pad
	IC209	UA78M33IKVUG3	12 V → 3.3 V Regulator	IC with heat-pad
	IC402	MIMXRT1062DVJ6B@V (NSP)	ERP UCOM	BGA
	IC601	MFI343S00176@V (NSP)	MFi authentication IC	WLCSP (= BGA)
	IC801	TPS65911AA2NMA@V (NSP)	PMIC	BGA
	IC901	66AK2G12ABYA100 (NSP)	MAIN CPU/DSP	BGA
	IC1301	LP2996AMR	1.35 V → 0.675 V VTT Regulator	IC with heat-pad
	IC1302, IC1303	W631GU6NB-11@V (NSP)	DDR3L SDRAM	BGA
	IC1402	DYW※※※※ (NSP)	FLASH ROM (64Mb)	∗1
	IC1903	SI5351C-B03300GM	Clock generator	IC with heat-pad
	IC2801	MIMXRT1062DVJ6B@V (NSP)	WLAN UCOM	BGA
	IC3104	RTL8304E-CG (NSP)	LAN HUB & PHY	IC with heat-pad
	U2901	SX-SDMAC2832S+@V (NSP)	Module for WLAN & Bluetooth	IC with heat-pad
	Q801	CSD87330Q3D	FET	Transistor with heat-pad
	JA3601, JA3602	DKN1694	USB Type-C terminal	Through hole reflow terminal
USBBC Assy	IC3607, IC3608	TUSB213RGY	USB ReDriver IC	IC with heat-pad
USBP Assy	IC5951	MM3543BH	12 V → 5.2 V DC/DC Converter	IC with heat-pad
	IC5952	TPS2557DRB	USB High Side SW	IC with heat-pad
HPPW Assy	IC5701	BD9851EFV	12 V → ±7 V DC/DC Converter	IC with heat-pad
AINB SERVICE Assy	IC4501	ES9842QPRO@V (NSP)	CH1-2 ADC	IC with heat-pad
	IC4502	ES9842QPRO@V (NSP)	CH3-4 ADC	IC with heat-pad
AOUT Assy	IC5303, IC5304	MUSES8920KX7@ (NSP)	OP Amp	IC with heat-pad
CDCB Assy	IC6701	AD7147ACPZ500RL7 (NSP)	CDC IC	IC with heat-pad

Note on DYW※※※※
The "※※※※" part of the part number changes each time the firmware is updated.

∗1: See "1.3 SERVICE NOTICE_■Confirmation of user-setting".

■ About AINB SERVICE Assy

In order to comply with safety standards and to protect the electric circuit and prevent contact, the AINB Assy has a Guard affixed to the board surface and terminals. When replacing the AINB Assy, it is necessary to attach a Guard to comply with safety standards, but it is difficult to reuse the Guard. Therefore, the AINB Assy with Guard attached is supplied as a service part.
If you need to replace the AINB Assy, please use AINB SERVICE Assy: DEA1147.

1.3 SERVICE NOTICE

■ About Voltage monitoring

This unit always monitors for power failure and will shut itself off immediately after an error is detected.
If a power is defect, [QUANTIZE/UTILITY (WAKE UP)] LED is flashing in a cycle of 500 ms (light on 250 ms and light off 250 ms).
Other LEDs light off, and SW and VR become not working.
Repair the unit according to the diagnostic procedures described in "5.4 POWER DIAGNOSTICS."

■ Confirmation of user-setting

This product has [UTILITY] and [MY SETTINGS] settings that can be set by the user.
[MY SETTINGS] is a setting for DJ and can be saved to a USB device etc..
[UTILITY] and [MY SETTINGS] settings can be saved in the Main unit as [OWNER SETTING] setting and can be loaded at any time.
Check and save each setting before repairing.
Use the Check Sheet in "8.4 USER SETABLE ITEMS" to which you can transcribe the [UTILITY] settings (Startup: [OWNER SETTING]), as required.
The settings are stored in FLASH ROM (64Mb) (IC1402) on the MAIN Assy.
For details, refer to "Changing the settings" in the Instruction Manual.

■ About Flash ROM in the MAIN Assy

Replacement of the FLASH ROM (IC1402) on the MAIN Assy are not possible during service, because writing of the MAC address on the production line is required. If the IC is defective, replace the whole MAIN Assy.
This FLASH ROM contains data that can only be written in at the factory.
An IEEE 802.3-based MAC address specific to this unit has been written.
After replacing the MAIN Assy, writing of the serial number of the unit is required.
For details on how to write the serial number, see "8.3 WRITING THE SERIAL NUMBER OF THE UNIT."

■ About MAIN Assy replacement

Perform the following correspondence surely if you change the MAIN Assy.

- Execution of the writing the serial number of the Unit
  For details on how to write the serial number, see "8.3 WRITING THE SERIAL NUMBER OF THE UNIT."
- Execution of the Crossfader calibration
  See "6.2 CROSSFADER CALIBRATION."

■ About Cross Fader Service Assy replacement

Noncontact faders are adopted for the cross faders with this product. Compared with conventional contact-type cross faders, noncontact faders offer dozens of times the durability.
Because high accuracy is required for assembly of the fader section, the service part of this section will be supplied as a whole Assy. Use the Crossfader Service Assy (DEA1096) for replacement.
After replacement, be sure to perform Crossfader calibration.
See "6.2 CROSSFADER CALIBRATION."
If you don't, the unit may not start up properly.
Even when replacing MAIN Assy, it is necessary to do calibration.

■ About LED replacement on the Control panel

If you replace LED on the Control panel alone, be sure to confirm if there are any major differences in color and brightness from the surrounding LEDs of the same color. If there is a difference, replace the other LEDs at the same time.

■ About WLAN module, Connection cable between WLAN module and WLAN antenna, WLAN antenna replacement

Perform the following correspondence surely if you change the MAIN Assy with WLAN module mounted.

- Execution of the writing the serial number of the Unit
  By writing the serial number, it will be set to the Wi-Fi specifications specified for each destination.
  For details on how to write the serial number, see "8.3 WRITING THE SERIAL NUMBER OF THE UNIT."
- Wi-Fi and Bluetooth operation check
  For details on how to check the operation, see "5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth".

Perform the following correspondence surely if you change the WLAN module, Connection cable, or WLAN antenna.

- Wi-Fi and Bluetooth operation check
  For details on how to check the operation, see "5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth".

2. SPECIFICATIONS

General

Power requirements ..... AC 110 V – 240 V, 50 Hz / 60 Hz
Power consumption..... 61 W
Main unit weight ..... 10.2 kg / 22.5 lbs.
Max. external dimensions
.....(W × D × H) 407.4 × 458.3 × 107.9 mm / 16.4" x 18.4" x 4.25"
Max. external dimensions (when the wireless antenna stands upright)
..... (W × D × H) 407.4 × 458.3 × 140.7 mm / 16.4" × 18.4" × 5.54"
Tolerable operating temperature ..... +5 °C – +35 °C (+41 °F – +95 °F)
Tolerable operating humidity..... 5 % – 85 % (no condensation)

Audio section

Sampling rate ..... 96 kHz
MASTER, BOOTH, REC, SEND D/A converter..... 32bit
CH input A/D converter.....32bit
Other A/D and D/A converters 24bit
Frequency characteristic
LINE..... 20 Hz – 40 kHz
S/N ratio (rated output, A-WEIGHTED)
USB, DIGITAL IN ..... 114 dB
PHONO..... 88 dB
LINE..... 105 dB
MIC 1, MIC 2 ..... 79 dB
Total harmonic distortion (LINE – MASTER 1, 20 Hz – 40 kHz BW)..... 0.005 %
Standard input level / Input impedance
PHONO..... -52 dBu / 47 kΩ
LINE..... -12 dBu / 47 kΩ
MIC 1, MIC 2 ..... -57 dBu / 3.5 kΩ
RETURN ..... -12 dBu / 47 kΩ
Max. input level
PHONO.....-17.8 dBu
LINE..... +15 dBu
MIC 1, MIC 2 .....+2 dBu
RETURN ..... +12 dBu
Standard output level / Load impedance / Output impedance
MASTER 1 ..... +6 dBu / 10 kΩ / 360 Ω
MASTER 2 ..... +2 dBu / 10 kΩ / 700 Ω
REC OUT..... -8 dBu / 10 kΩ / 700 Ω
BOOTH..... +6 dBu / 10 kΩ / 360 Ω
SEND..... -6 dBu / 10 kΩ / 700 Ω
PHONES..... +8 dBu / 32 Ω / 1 Ω or lower
Rated output level / Load impedance
MASTER 1 ..... +25 dBu / 10 kΩ
MASTER 2 ..... +21 dBu / 10 kΩ
BOOTH..... +25 dBu / 10 kΩ
Crosstalk
LINE..... 82 dB
Channel equalizer characteristic
HI..... -26 dB – +6 dB (20 kHz)
MID..... -26 dB – +6 dB (1 kHz)
LOW..... -26 dB – +6 dB (20 Hz)
Microphone equalizer characteristic
HI..... -12 dB – +12 dB (10 kHz)
LOW..... -12 dB – +12 dB (100 Hz)
BOOTH MONITOR equalizer feature
HI..... -12 dB – +6 dB (10 kHz)
LOW..... -12 dB – +6 dB (100 Hz)

Input / Output terminals

PHONO input terminal
RCA pin jacks..... 4 sets
LINE input terminal
RCA pin jacks..... 4 sets
MIC1 input terminal (XLR / TRS)
XLR connector & 1/4" TRS jack..... 1 set
Power supply..... 48 V / 10 mA or less
MIC2 input terminal (TRS)
1/4" TRS jack..... 1 set
RETURN input terminals (TS)
1/4" TS jack ..... 1 set
DIGITAL IN coaxial input terminal
RCA pin jacks..... 4 sets
MASTER output terminal
XLR connector..... 1 set
RCA pin jacks..... 1 set
BOOTH output terminal (TRS)
1/4" TRS jack..... 1 set
REC OUT output terminal
RCA pin jacks..... 1 set
SEND output terminal (TS)
1/4" TS jack ..... 1 set
DIGITAL MASTER OUT coaxial output terminal
RCA pin jacks..... 1 set
PHONES output terminal
1/4" stereo jack..... 2 sets
3.5 mm stereo mini-jack ..... 2 sets
USB terminal
USB Type-A ..... 1 set
Power supply..... 5 V / 2.1 A or less
USB Type-B / USB Type-C ..... 2 sets
LINK terminal
LAN terminal (100BASE-TX)..... 1 set

Wireless LAN section

Supported standards ..... IEEE 802.11 a/b/g/n/ac
Frequency band used ..... 2.4 GHz / 5 GHz

Bluetooth section

Wireless system..... Bluetooth Ver.5.0
Maximum transmission distance
..... Approximately 10 m* in unobstructed circumstances
Frequency band used ..... 2.4 GHz
Modulation method..... FH-SS (Frequency Hopping Spread Spectrum)
Compatible Codecs ..... SBC, AAC

* Transmission distances are a guideline. Transmission distance may change depending on the surrounding environment.

- The specifications and design of this product are subject to change without notice.

■ Accessories

- Power cord
  (CUXJ: DDG1123)
  (PYXJ, SXJ, XJ: DDG1124)
  (XJCN: DDG1125)
- Quick Start Guide
  (CUXJ, PYXJ, SXJ, XJ: DRH1701)
  (XJCN: DRH1702)
- Precautions for use (Warranty)
  (CUXJ, PYXJ, SXJ, XJ: DRH1699)
  (XJCN: DRH1700)
- Warranty (for some regions)*1

*1 Only products in Europe.
Products in North America and Japan include warranty information in the "Precautions for Use".

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.	Procedure	Check points
1	Confirm the firmware version in Test mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complaint has been solved. If the customer complain occurs with the specific source, such as Mic, each Input, Fader, Equalizer, and Trim, input that specific source for checking.	The customer complain must not be reappeared. Audio and operations must be normal.
3	Check the analog audio input (each channel, MIC1, MIC2 and RETURN). (Make the analog connections with CDJ player, analog player and MIC.)	Audio and operations must be normal.
4	Check the analog audio output (MASTER1, MASTER2, BOOTH and SEND). (Make the analog connections with CDJ player.)	Audio and operations must be normal.
5	Check the digital audio input. (Make the digital connections with CDJ player.)	Audio for each channel and operations must be normal.
6	Check the digital audio output. (Make the connections with CDJ player.)	Audio and operations must be normal.
7	Check the headphones output. (1/4” stereo phone plugs and 3.5 mm stereo mini plugs)	There must be no errors, such as noise, in the audio output.
8	Check playback, using the fader function. (Select the fader function then check operations of each channel with audio signals via the DSP.)	There must be no errors in audio output and operations of each channel.
9	Check the connection of each interface.	
	MULTI I/O terminal (USB-A terminal)	Plug in a USB memory device and check that the USB connection indicator light on.
	PCA, PCB (USB-B terminal, USB-C terminal)	The device must be properly recognized by the PC.
	LINK	The Main unit being connected to LAN normally in Test mode.
	V+48 (MIC1 PHANTOM)	+48V is output when V+48V is ON and MIC is ON. Refer to "5.5 PHANTOM POWER DIAGNOSTICS" for how to check.
	Wi-Fi	The Main unit can successfully connect with the wireless router. Make sure the connection between the Main unit and the wireless router is good. Refer to "5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth" for how to check.
	Bluetooth	Make sure that the Main unit and the Bluetooth device can be connected normally. Audio must be normal from Bluetooth device. Refer to "5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth" for how to check.
10	Check the buttons and controls.	Make sure that all buttons and controls on the Main unit function properly.
11	Check the LCD display.	Check that there is no dirt or dust trapped inside the LCD display.
12	Check the X-PAD operation.	Check the operation in Test mode and confirm that there is no abnormality.
13	Check the LEDs.	Check that all the LEDs light on in Test mode.
14	Confirm user setting contents.	Being repaired to the contents before repairing.
15	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

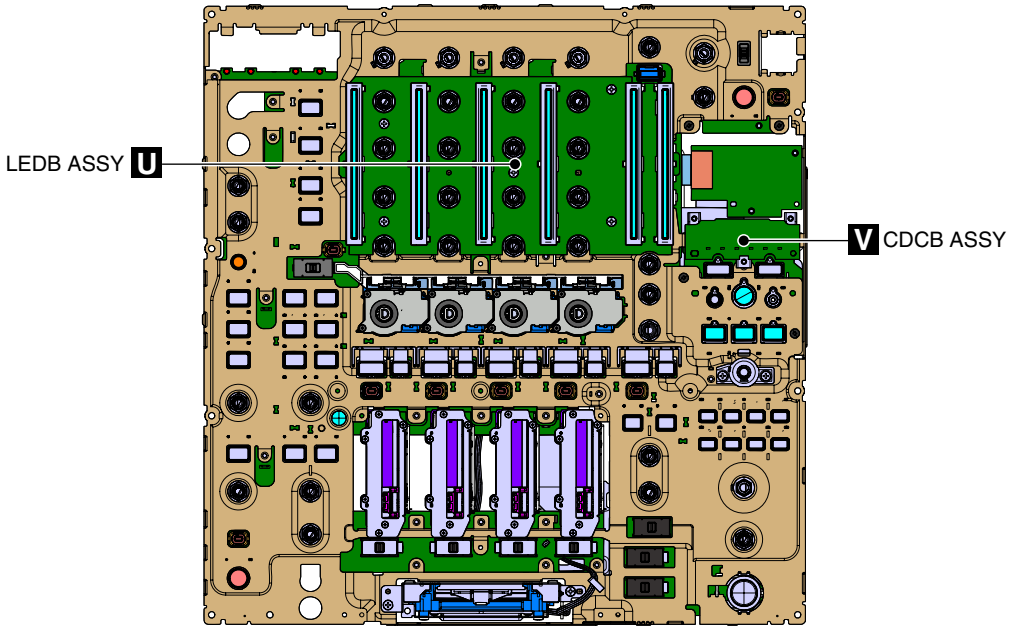
Jig Name	Part No.	Purpose of use / Remarks
Crossfader calibration position setting jig	GGF1731	Jig for position settings of Crossfader calibration
USB cable (DDE1157)	GGP2001	For PC connection (USB Type-C to C Cable)
Software for writing the serial number of Main unit	DJM-A9_SNW	For writing the serial number of the unit to the MAIN Assy after replacement. The file is uploaded to WCS. Refer to "8.3 WRITING THE SERIAL NUMBER OF THE UNIT."

Lubricants and Glues List

Name	Part No.	Remarks
Lubricating oil (FLOIL G-424Z)	GEM1107	Used for CH fader Section. Refer to "7. DISASSEMBLY".
Ethanol (70% concentration)	Marketed product	Used for CFX unit. CFX unit-related disassembly/assembly procedures and precautions. Refer to "7. DISASSEMBLY".

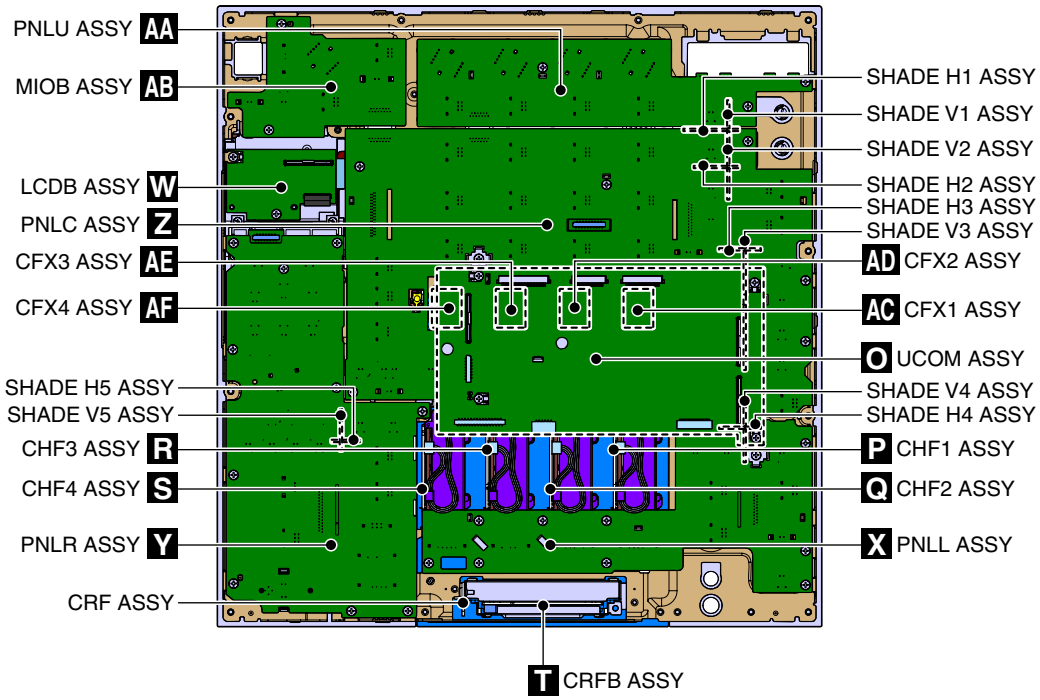
3.3 PCB LOCATIONS

• Control Panel Section (Top)



• Top view

• Control Panel Section (Bottom)

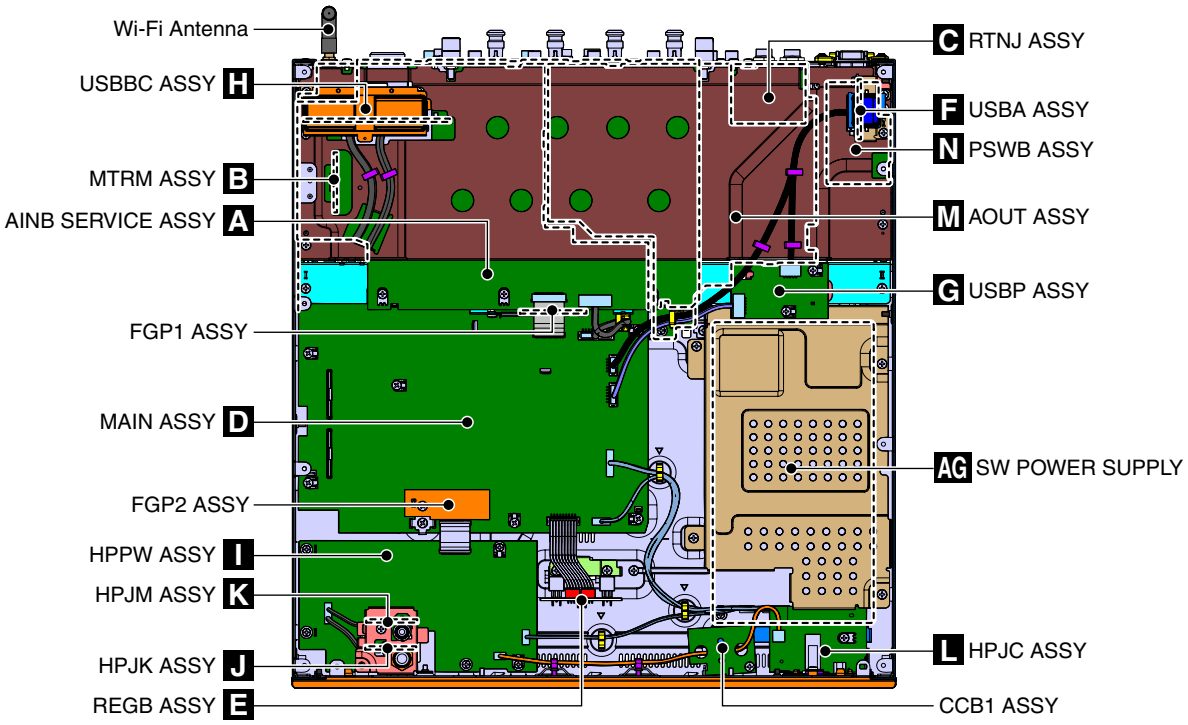


• Bottom view

Note:
The 1 to 4 Assys of CHF Assys have the same circuitry, parts, and board shapes.
Only printed information is different, because their part numbers and wiring numbers are different.
They are handled similarly in their production management.
Therefore, either 1, 2, 3 or 4 Assy of the respective Assys is assembled in the respective place.

Note:
The 1 to 4 Assys of CFX Assys have the same circuitry, parts, and board shapes.
Only printed information is different, because their part numbers and wiring numbers are different.
They are handled similarly in their production management.
Therefore, either 1, 2, 3 or 4 Assy of the respective Assys is assembled in the respective place.

• Chassis Section



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.*

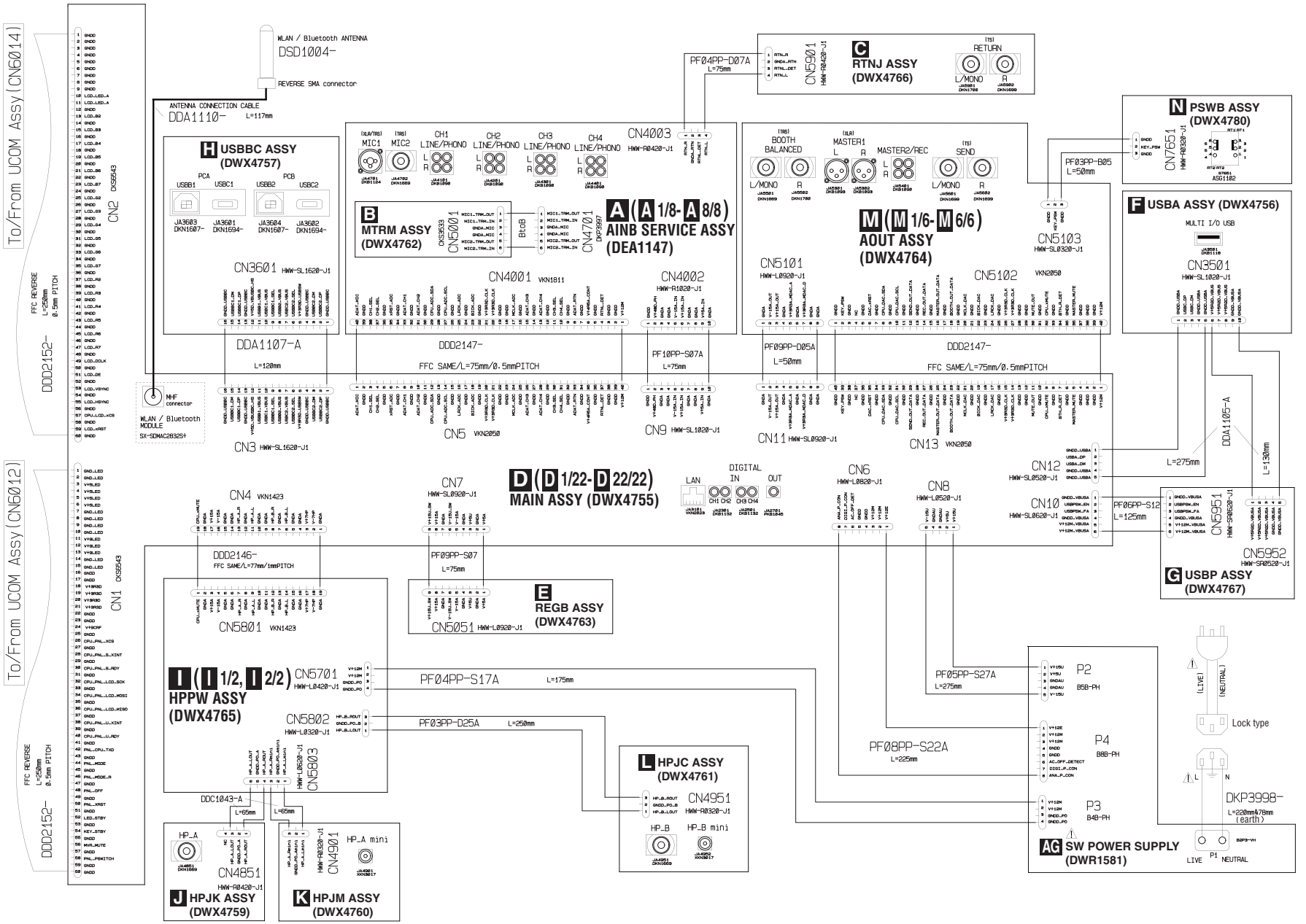
LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	..MOTHER ASSY	DWM2844
	2	..MAIN ASSY	DWX4755
	2	..USBA ASSY	DWX4756
	2	..USBBC ASSY	DWX4757
	1	..CDCB ASSY	DWX4771
NSP	1	..AINB ASSY	DWM2845
	2	..AINB SERVICE ASSY	DEA1147
	2	..HPJK ASSY	DWX4759
	2	..HPJM ASSY	DWX4760
	2	..HPJC ASSY	DWX4761
	2	..MTRM ASSY	DWX4762
	2	..REGB ASSY	DWX4763
NSP	1	..AOUTB ASSY	DWM2846
	2	..AOUT ASSY	DWX4764
	2	..HPPW ASSY	DWX4765
	2	..RTNJ ASSY	DWX4766
NSP	1	..SUB ASSY	DWM2847
	2	..UCOM ASSY	DWX4768
	2	..LEDB ASSY	DWX4769
	2	..LCDB ASSY	DWX4770
	2	..USBP ASSY	DWX4767
NSP	2	..CRFB ASSY	DWX4772
	2	..CFX1 ASSY	DWX4773
	2	..CFX2 ASSY	DWX4774
	2	..CFX3 ASSY	DWX4775
	2	..CFX4 ASSY	DWX4776
	2	..CCB1 ASSY	DWX4803
	1	..PNLC ASSY	DWX4777
NSP	1	..PNL2 ASSY	DWM2848
	2	..PNLU ASSY	DWX4778
	2	..MIOB ASSY	DWX4779
	2	..PSWB ASSY	DWX4780
	2	..CRF ASSY	DWX4790
	2	..SHADE V3 ASSY	DWX4793
NSP	1	..PNL3 ASSY	DWM2849
	2	..PNLL ASSY	DWX4781
	2	..PNLR ASSY	DWX4782
	2	..CHF1 ASSY	DWX4783
	2	..CHF2 ASSY	DWX4784
	2	..CHF3 ASSY	DWX4785
	2	..CHF4 ASSY	DWX4786
	2	..SHADE V1 ASSY	DWX4791
	2	..SHADE V2 ASSY	DWX4792
	2	..SHADE V4 ASSY	DWX4794
	2	..SHADE V5 ASSY	DWX4795
	2	..SHADE H1 ASSY	DWX4796
	2	..SHADE H2 ASSY	DWX4797
	2	..SHADE H3 ASSY	DWX4798
	2	..SHADE H4 ASSY	DWX4799
	2	..SHADE H5 ASSY	DWX4800
	2	..FGP1 ASSY	DWX4801
	2	..FGP2 ASSY	DWX4802
⚠	1	..SW POWER SUPPLY	DWR1581

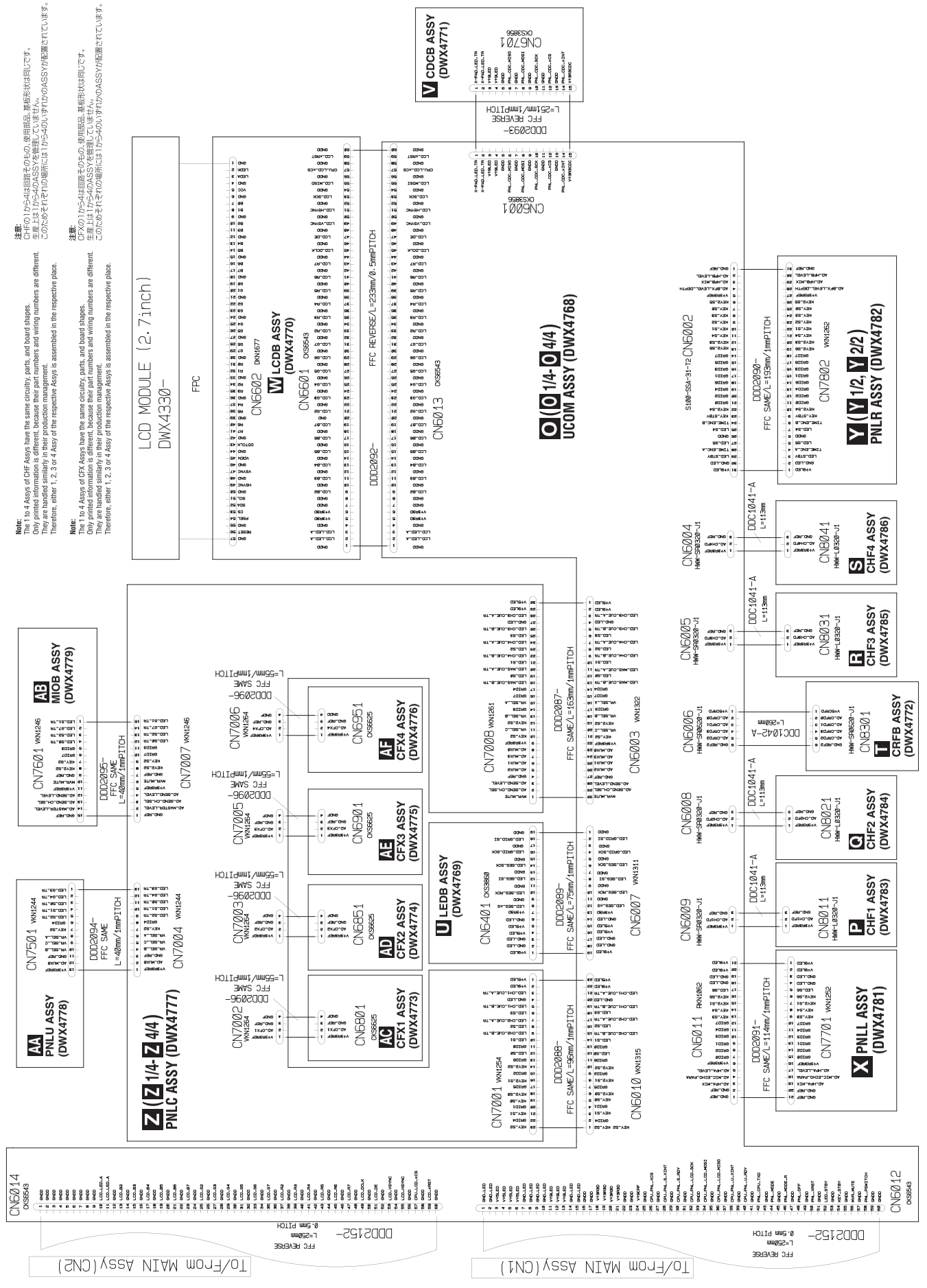
4. BLOCK DIAGRAM

- 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.

- 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。



4.2 OVERALL WIRING DIAGRAM (2/2)



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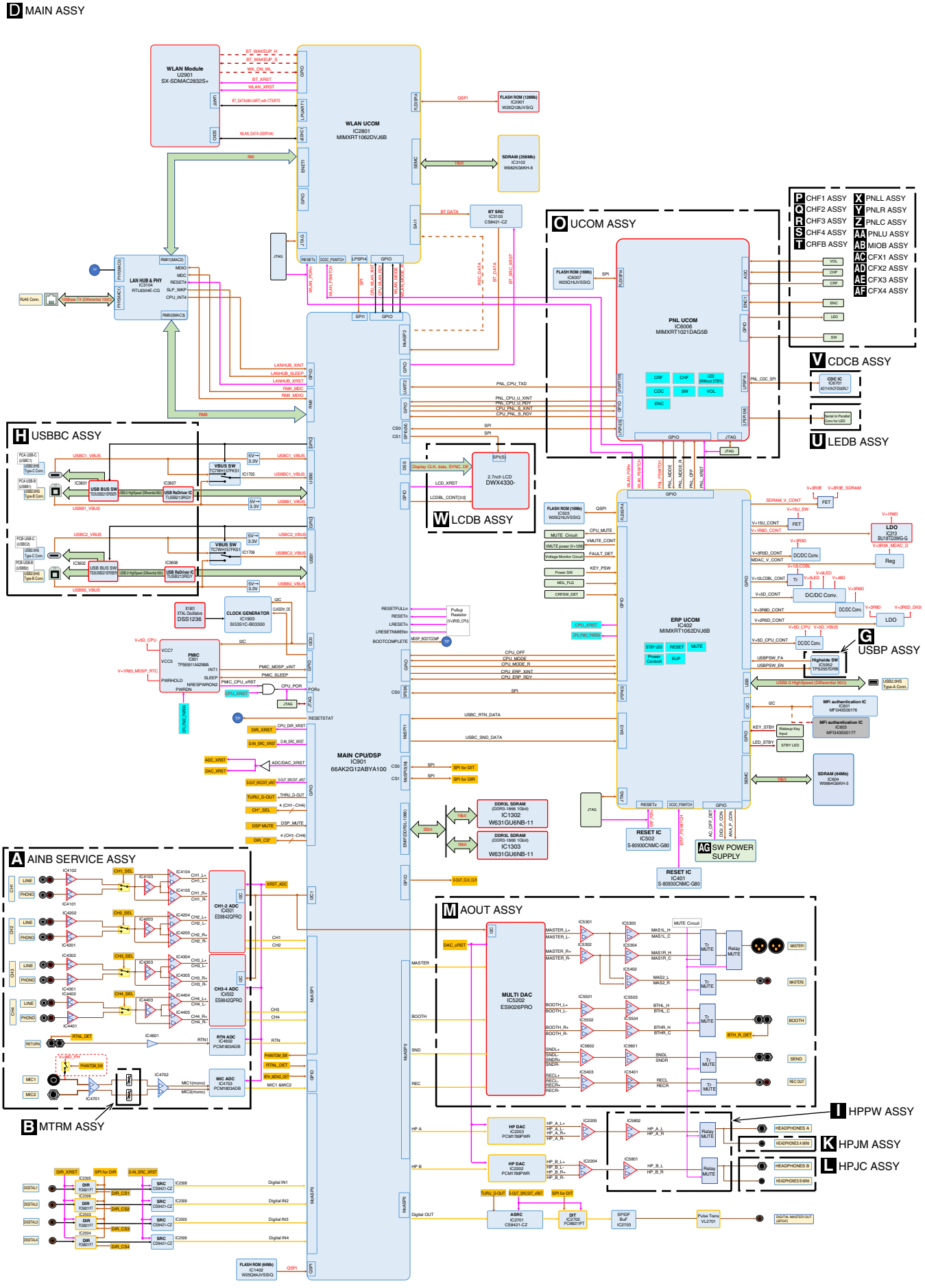
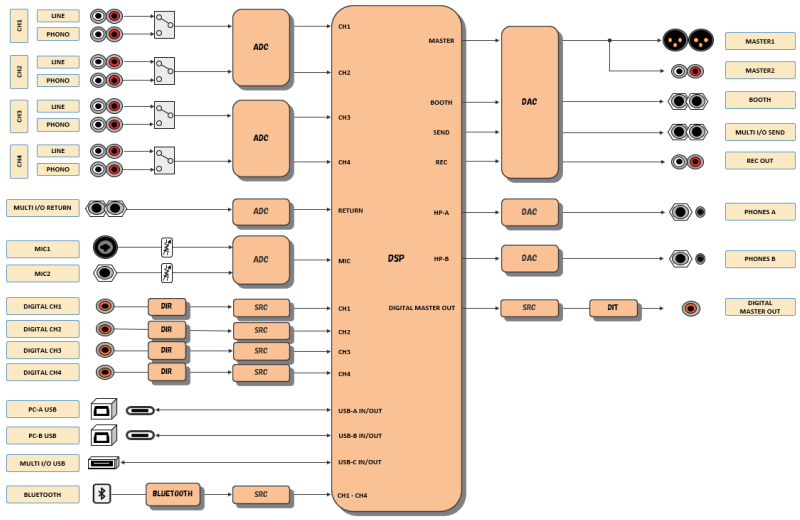
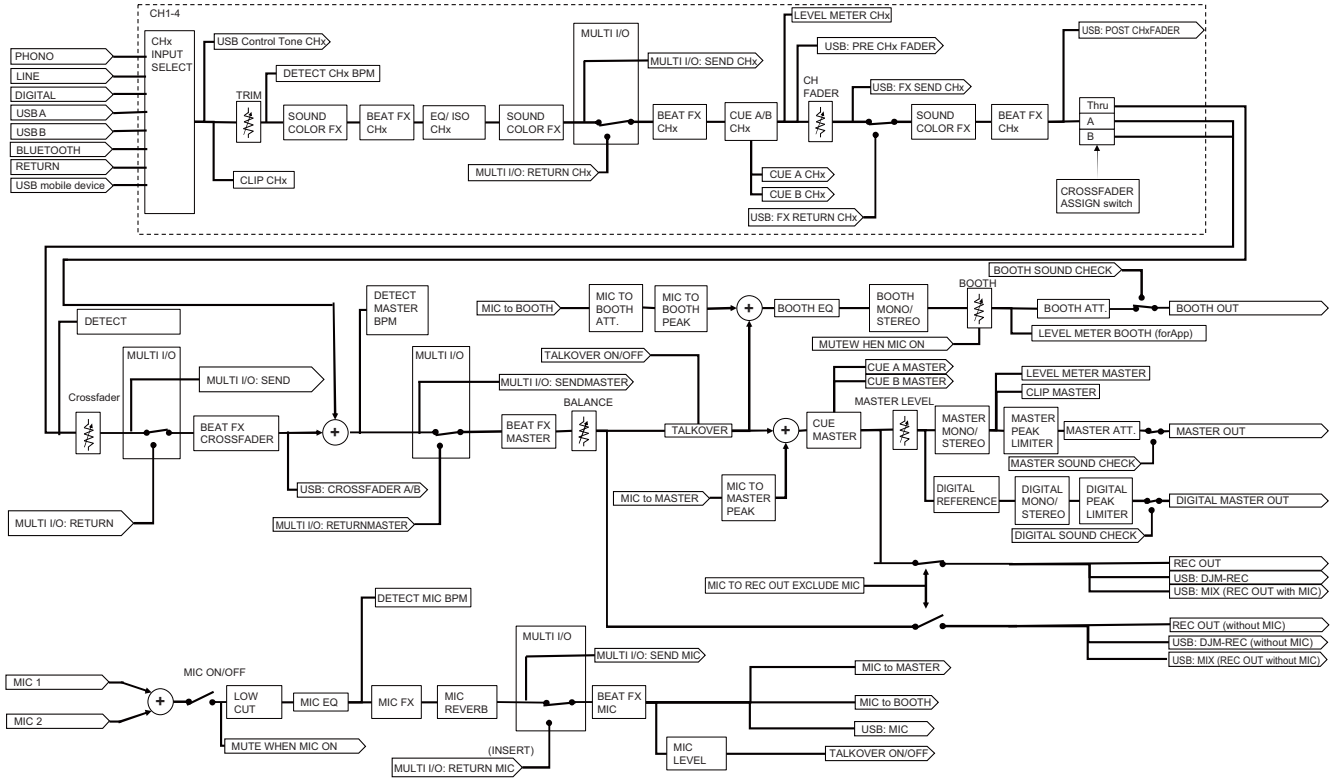
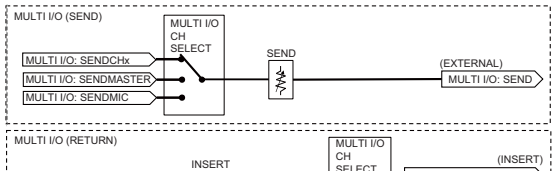
4.3 OVERALL BLOCK DIAGRAM

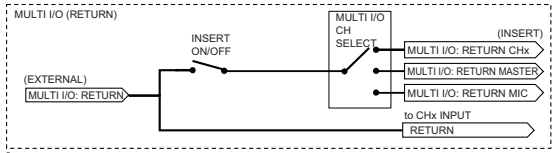


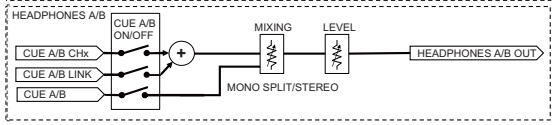
4.4 DSP BLOCK DIAGRAM

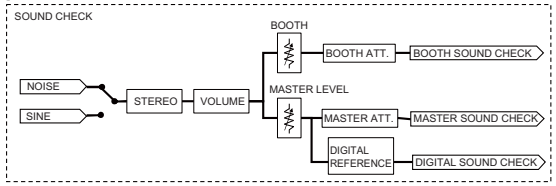


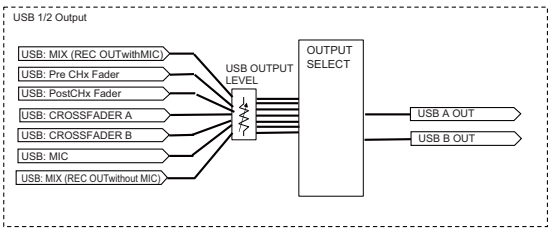


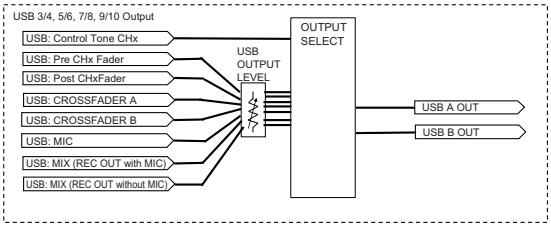


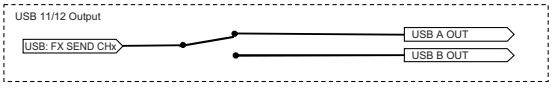




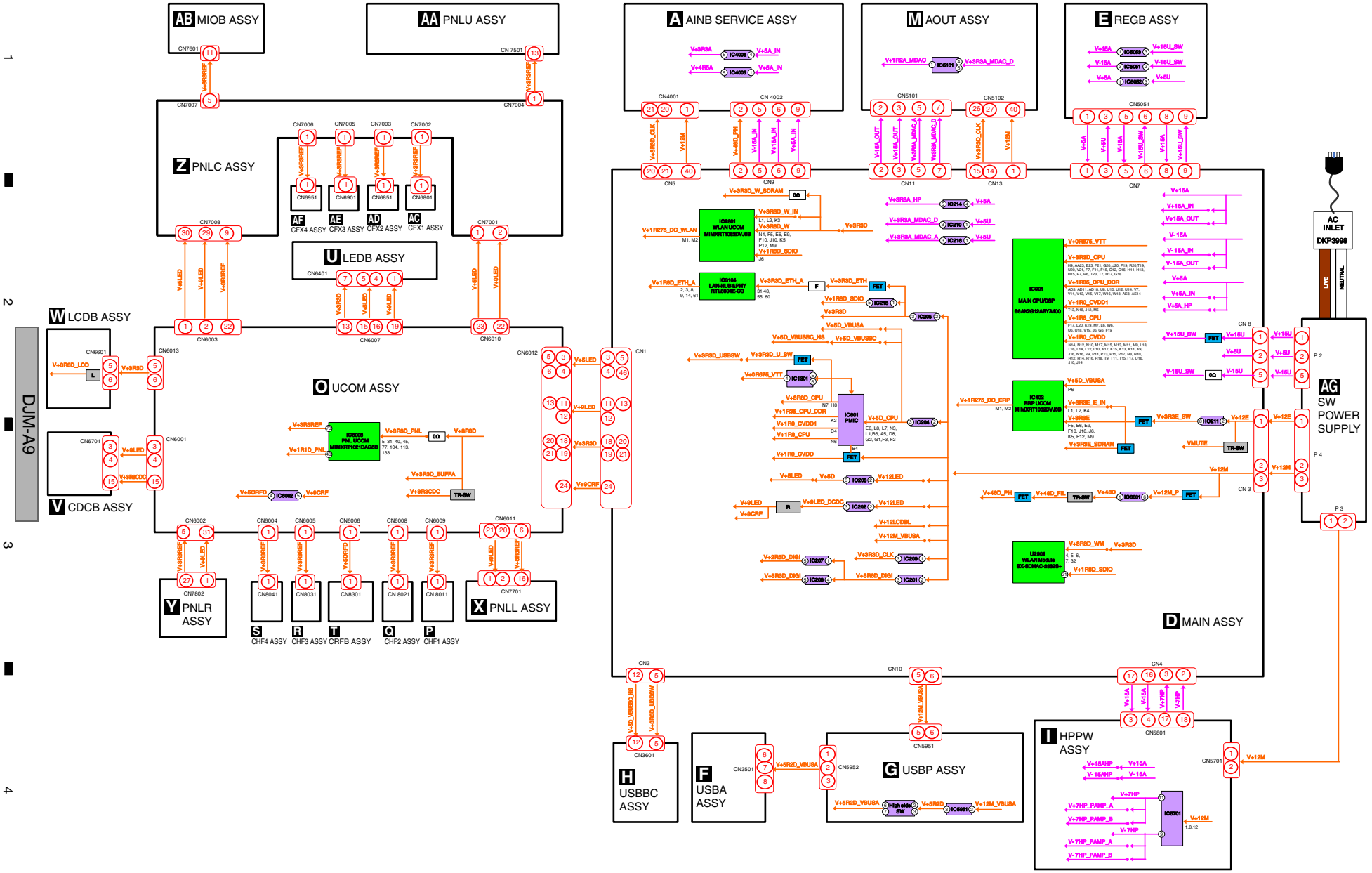




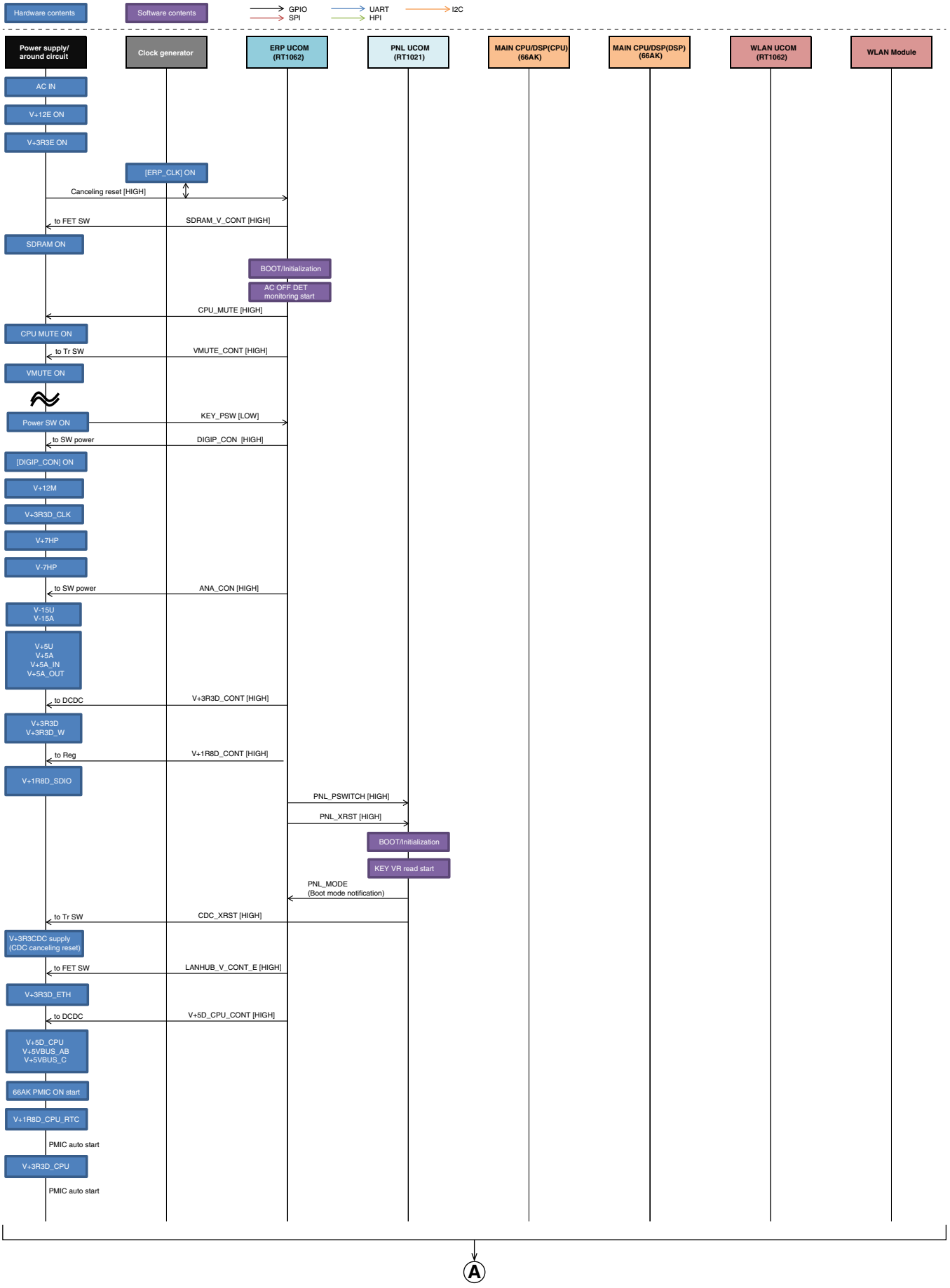


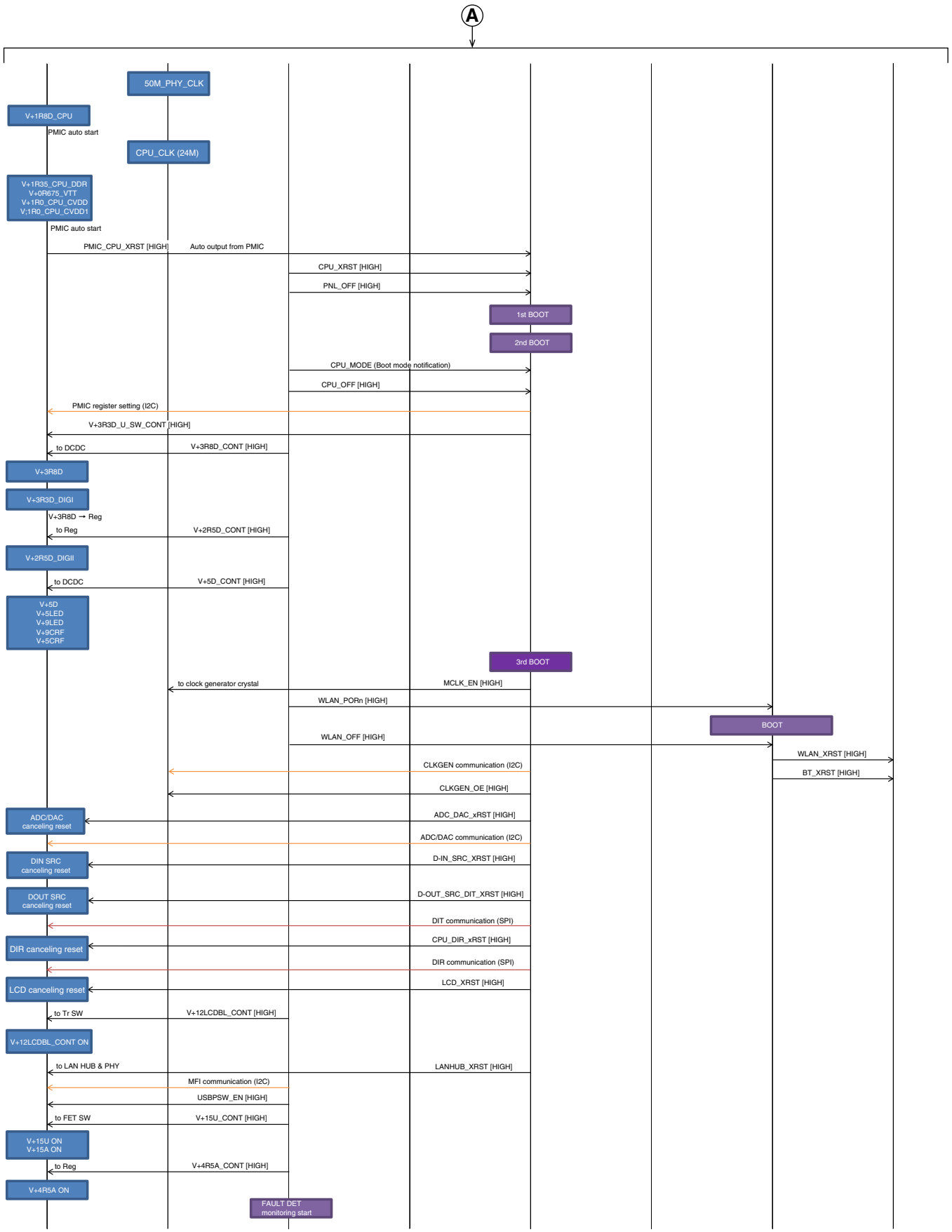


4.5 POWER BLOCK DIAGRAM



5. DIAGNOSIS
5.1 POWER ON SEQUENCE




A
50M_PHY_CLK
V+1R8D_CPU
PMIC auto start
CPU_CLK (24M)
V+1R35_CPU_DDR
V+0R675_VTT
V+1R0_CPU_CVDD
V;1R0_CPU_CVDD1
PMIC auto start
PMIC_CPU_XRST [HIGH]
Auto output from PMIC
CPU_XRST [HIGH]
PNL_OFF [HIGH]
1st BOOT
2nd BOOT
CPU_MODE (Boot mode notification)
CPU_OFF [HIGH]
PMIC register setting (I2C)
V+3R3D_U_SW_CONT [HIGH]
to DCDC
V+3R8D_CONT [HIGH]
V+3R8D
V+3R3D_DIGI
V+3R8D → Reg
to Reg
V+2R5D_CONT [HIGH]
V+2R5D_DIGII
to DCDC
V+5D_CONT [HIGH]
V+5D
V+5LED
V+9LED
V+9CRF
V+5CRF
3rd BOOT
to clock generator crystal
MCLK_EN [HIGH]
WLAN_PORn [HIGH]
BOOT
WLAN_OFF [HIGH]
WLAN_XRST [HIGH]
CLKGEN communication (I2C)
BT_XRST [HIGH]
CLKGEN_OE [HIGH]
ADC/DAC canceling reset
ADC_DAC_xRST [HIGH]
ADC/DAC communication (I2C)
DIN SRC canceling reset
D-IN_SRC_XRST [HIGH]
DOUT SRC canceling reset
D-OUT_SRC_DIT_XRST [HIGH]
DIT communication (SPI)
DIR canceling reset
CPU_DIR_xRST [HIGH]
DIR communication (SPI)
LCD canceling reset
LCD_XRST [HIGH]
to Tr SW
V+12LCDBL_CONT [HIGH]
V+12LCDBL_CONT ON
to LAN HUB & PHY
LANHUB_XRST [HIGH]
MFI communication (I2C)
USBPSW_EN [HIGH]
to FET SW
V+15U_CONT [HIGH]
V+15U ON
V+15A ON
to Reg
V+4R5A_CONT [HIGH]
V+4R5A ON
FAULT DET monitoring start

5.2 MATRIX INFORMATION

SW/VR (KEY/AD)

■ KEY MATRIX

Control UCOM : PNL UCOM

		GRID0	GRID1	GRID2	GRID3	GRID4	GRID5	GRID6	GRID7
KEY_SEG0	Function Name	CH1_CUE A	CH2_CUE A	CH3_CUE A	CH4_CUE A	MAS_CUE A	BLUETOOTH	CHF_CURVE1	BFX_SEL1
	Assy Name	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLR	PNLR
KEY_SEG1	Function Name	CH1_CUE B	CH2_CUE B	CH3_CUE B	CH4_CUE B	MAS_CUE B	MIDI_ON/OFF	CHF_CURVE3	BFX_SEL2
	Assy Name	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLR	PNLR
KEY_SEG2	Function Name	TALKOVER	CENTER LOCK	-	INSERT SOUCE	+48V (PHANTOM)	MIDI_START/STOP	CRF_CURVE1	BFX_SEL3
	Assy Name	PNLC	PNLC	-	MIOB	PNLU	PNLC	PNLR	PNLR
KEY_SEG3	Function Name	HPA_LINK_CUE	CRF_CH1_A	CRF_CH2_A	CRF_CH3_A	CRF_CH4_A	HPB_LINK_CUE	CRF_CURVE3	BFX_SEL4
	Assy Name	PNLL	PNLL	PNLL	PNLL	PNLL	PNLR	PNLR	PNLR
KEY_SEG4	Function Name	HPA_MONO	CRF_CH1_B	CRF_CH2_B	CRF_CH3_B	CRF_CH4_B	HPB_MONO	EQ_CURVE_ISO	AUTO/TAP
	Assy Name	PNLL	PNLL	PNLL	PNLL	PNLL	PNLR	PNLR	PNLR
KEY2_SEG0	Function Name	ECHO	SPACE	DUB ECHO	-	ECHO	SPACE	DUB ECHO	-
	Assy Name	PNLC	PNLC	PNLC	-	PNLC	PNLC	PNLC	-
KEY2_SEG1	Function Name	PITCH	JET	SWEEP	MIC ON/OFF	PITCH	JET	SWEEP	MIC ON/OFF
	Assy Name	PNLC	PNLC	PNLC	PNLL	PNLC	PNLC	PNLC	PNLL
KEY2_SEG2	Function Name	MEGA-PHONE	CRUSH	FILTER	INSERT	MEGA-PHONE	CRUSH	FILTER	INSERT
	Assy Name	PNLC	PNLC	PNLC	MIOB	PNLC	PNLC	PNLC	MIOB
KEY2_SEG3	Function Name	BFX_SEL_CH1	BFX_SEL_CH2	BFX_SEL_CH3	BFX_SEL_CH4	BFX_SEL_CH1	BFX_SEL_CH2	BFX_SEL_CH3	BFX_SEL_CH4
	Assy Name	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR
KEY2_SEG4	Function Name	BFX_SEL_MIC	BFX_SEL_A	BFX_SEL_B	BFX_SEL_MAS	BFX_SEL_MIC	BFX_SEL_A	BFX_SEL_B	BFX_SEL_MAS
	Assy Name	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR
KEY2_SEG5	Function Name	BEAT_DOWN	BEAT_UP	TAP	BFX_ON/OFF	BEAT_DOWN	BEAT_UP	TAP	BFX_ON/OFF
	Assy Name	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR
KEY2_SEG6	Function Name	FREQ_LOW	FREQ_MID	FREQ_HI	MIC REVERB	FREQ_LOW	FREQ_MID	FREQ_HI	MIC REVERB
	Assy Name	PNLR	PNLR	PNLR	PNLL	PNLR	PNLR	PNLR	PNLL

■ DIRECT KEY

Control UCOM : PNL UCOM

Function Name	TIME ENC_A	TIME ENC_B
Assy Name	PNLR	PNLR

Control UCOM : MAIN

Function Name	QUANTIZE
Assy Name	PNLR

■ MULTIPLEXER AD

Control UCOM : PNL UCOM

		VR Select								
	IC Port No	0	1	2	3	4	5	6	7	
Multiplexer SW Signal	VR_SEL_C	0	0	0	0	1	1	1	1	
	VR_SEL_B	0	0	1	1	0	0	1	1	
	VR_SEL_A	0	1	0	1	0	1	0	1	Assy Name
Multiplexer AD OUTPUT Signal	AD_MUX0	AD_CH3_TRIM	AD_CH2_TRIM	AD_CH1_TRIM	AD_CH4_TRIM	AD_CH1_INPUT_SEL	AD_CH4_INPUT_SEL	AD_CH2_INPUT_SEL	AD_CH3_INPUT_SEL	PNLU
	AD_MUX1	AD_CFX_PARAMETER	AD_CH1_CFX	AD_MIC_FX_PARA	AD_CH1_LOW	AD_MIC_LOW	AD_CH1_MID	AD_MIC_HI	AD_CH1_HI	PNLC
	AD_MUX2	AD_CH2_CFX	AD_CH3_CFX	AD_CH2_LOW	AD_CH3_LOW	AD_CH2_MID	AD_CH3_MID	AD_CH2_HI	AD_CH3_HI	PNLC
	AD_MUX3	AD_CH4_CFX	AD_BOOTH_LEVEL	AD_CH4_LOW	AD_BOOTH_LOW	AD_CH4_MID	AD_BOOTH_HI	AD_CH4_HI	AD_MASTER_LEVEL	PNLC
	AD_MUX4	AD_MIC_REVERB_PARA	AD_HPA_MIX	AD_HPA_LEVEL	-	-	AD_BFX_LEVEL_DEPTH	AD_HPB_LEVEL	AD_HPB_MIX	UCOM

■ DIRECT AD

Control UCOM : PNL UCOM

Function Name	Assy Name
AD_SEND_CH_SEL	MIOB
AD_SEND_LEVEL	MIOB

Control UCOM : PNL UCOM

Function Name	Assy Name
CH1 FD	CHF1
CH2 FD	CHF2
CH3 FD	CHF3
CH4 FD	CHF4

Control UCOM : PNL UCOM

Function Name	Assy Name
CROSS FD3	CRFB
CROSS FD1	CRFB
CROSS FD2	CRFB
CROSS FD0	CRFB

LED

■ LED MATRIX

• Level indicator LED

Control UCOM : PNL UCOM

		74VHC164FT					
		SR_GRID0	SR_GRID1	SR_GRID2	SR_GRID3	SR_GRID4	SR_GRID5
SR_SEG0	74VHC595FT	CH1 Level 12	CH2 Level 12	CH3 Level 12	CH4 Level 12	MASL Level 6	MASR Level 6
SR_SEG1		CH1 Level 9	CH2 Level 9	CH3 Level 9	CH4 Level 9	MASL Level 3	MASL Level 3
SR_SEG2		CH1 Level 6	CH2 Level 6	CH3 Level 6	CH4 Level 6	MASL Level 0	MASL Level 0
SR_SEG3		CH1 Level 3	CH2 Level 3	CH3 Level 3	CH4 Level 3	MASL Level -3	MASL Level -3
SR_SEG4		CH1 Level 0	CH2 Level 0	CH3 Level 0	CH4 Level 0	MASL Level -6	MASL Level -6
SR_SEG5		CH1 Level -3	CH2 Level -3	CH3 Level -3	CH4 Level -3	MASL Level -9	MASR Level -9
SR_SEG6		CH1 Level -6	CH2 Level -6	CH3 Level -6	CH4 Level -6	MASL Level -12	MASR Level -12
SR_SEG7		CH1 Level -9	CH2 Level -9	CH3 Level -9	CH4 Level -9	MASL Level -15	MASR Level -15
SR_SEG8	74VHC595FT	CH1 Level -12	CH2 Level -12	CH3 Level -12	CH4Level -12	MASL Level -18	MASR Level -18
SR_SEG9		CH1 Level -15	CH2 Level -15	CH3 Level -15	CH4 Level -15	MASL Level -21	MASR Level -21
SR_SEG10		CH1 Level -18	CH2 Level -18	CH3 Level -18	CH4 Level -18	MASL Level -24	MASR Level -24
SR_SEG11		CH1 Level -21	CH2 Level -21	CH3 Level -21	CH4 Level -21	MASL Level -27	MASR Level -27
SR_SEG12		CH1 Level -24	CH2 Level -24	CH3 Level -24	CH4 Level -24	MASL Level -30	MASR Level -30
SR_SEG13		CH1 Level -27	CH2 Level -27	CH3 Level -27	CH4 Level -27	MASL Level -33	MASR Level -33
SR_SEG14		CH1 Level -30	CH2 Level -30	CH3 Level -30	CH4 Level -30	MASL Level 9	MASR Level 9

• Other LED

Control UCOM : PNL UCOM

		LED_GRID0	LED_GRID1	LED_GRID2	LED_GRID3	LED_GRID4	LED_GRID5	LED_GRID6	LED_GRID7
LED_SEG0	Function Name	ECHO	SPACE	DUB ECHO	USB_PC A (B)	USB_PC A (C)	BLUETOOTH	-	MAS CLIP
	Assy Name	PNLC	PNLC	PNLC	PNLU	PNLU	PNLC	-	MIOB
LED_SEG1	Function Name	PITCH	JET	SWEEP	USB_PC B (B)	USB_PC B (C)	MIDI ON/OFF	-	INSERT
	Assy Name	PNLC	PNLC	PNLC	PNLU	PNLU	PNLC	-	MIOB
LED_SEG2	Function Name	MEGA-PHONE	CRUSH	FILTER	-	+48V	MIDI START/STOP	-	MULTI I/O
	Assy Name	PNLC	PNLC	PNLC	-	PNLC	PNLC	-	MIOB
LED_SEG3	Function Name	TALKOVER	BEAT FX_CH1	BEAT FX_CH2	BEAT FX_CH3	BEAT FX_CH4	CENTER LOCK	-	BEAT FX_MAS
	Assy Name	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	-	PNLC
LED_SEG4	Function Name	BFX_SEL_CH1	BFX_SEL_CH2	BFX_SEL_CH3	BFX_SEL_CH4	FREQ_LOW	HPB_MONO	FREQ_MID	BFX_ON/OFF
	Assy Name	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR
LED_SEG5	Function Name	BFX_SEL_MIC	BFX_SEL_A	BFX_SEL_B	BFX_SEL_MAS	FREQ_HI	HPB_LINK_CUE	TAP	-
	Assy Name	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	PNLR	-
LED_SEG6	Function Name	HPA_LINK_CUE	HPA_MONO	MIC REVERB	MIC ON/OFF	MIC BEAT FX	-	-	-
	Assy Name	PNLL	PNLL	PNLL	PNLL	PNLL	-	-	-

■ LED DIRECT

Control UCOM : PNL UCOM

Function Name	CH1_CUE_A	CH2_CUE_A	CH3_CUE_A	CH4_CUE_A	MASTER_CUE_A	CH1_CUE_B	CH2_CUE_B	CH3_CUE_B	CH4_CUE_B	MASTER_CUE_B
Assy Name	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC	PNLC

Control UCOM : MAIN

Function Name	QUANTIZE
Assy Name	PNLR

5.3 TROUBLESHOOTING

Contents

[0] Prior confirmation
- [0-1] Confirmation of internal wires
- [0-2] Prior confirmation of power
- [0-3] Confirmation of element and LED

[1] Failure in startup
- [1-1] The unit does not turn on, and the [QUANTIZE/UTILITY (WAKE UP)] LED does not flash
- [1-2] The unit does not turn on, and the [QUANTIZE/UTILITY (WAKE UP)] LED flashes

[2] Error indications
- [2-1] Error indications on the unit GUI
  - [2-1-1] "E-0001" is displayed
  - [2-1-2] "E-0002" is displayed
  - [2-1-3] "E-0004" is displayed
  - [2-1-4] "E-1001" is displayed
  - [2-1-5] "E-1002" is displayed
  - [2-1-6] "E-1004" is displayed
  - [2-1-7] "E-0010" is displayed
  - [2-1-8] "E-0020" is displayed
  - [2-1-9] "E-0040" is displayed
  - [2-1-10] "E-0080" is displayed
  - [2-1-11] "E-2000" is displayed
- [2-2] Error indications of the debug LED
  - [2-2-1] The debug LED (D601) for ERP UCOM is flashing at a cycle of 100 ms
  - [2-2-2] The debug LED (D601) for ERP UCOM is flashing at a cycle of 400 ms
  - [2-2-3] The debug LED (D1401) for MAIN CPU/DSP (DSP) keep lighting on
  - [2-2-4] The debug LED (D1401) for MAIN CPU/DSP (DSP) is flashing a little faster. (cycle of about 300 ms)
  - [2-2-5] The debug LED (D1801) for MAIN CPU/DSP (ARM) repeat the operation of twice flashing and one second off
  - [2-2-6] The debug LED (D2901) for WLAN UCOM is flashing at a cycle of 100 ms
  - [2-2-7] The debug LED (D2901) for WLAN UCOM is flashing at a cycle of 400 ms
  - [2-2-8] The debug LED on the MAIN Assy remains off
  - [2-2-9] The debug LED (D6002) for PNL UCOM lighting on or off
- [2-3] Error indications of [QUANTIZE/UTILITY (WAKE UP)] LED on the unit
  - [2-3-1] [QUANTIZE/UTILITY (WAKE UP)] LED on the unit flashing (cycle of 500 ms)

[3] AUDIO INPUT
- [3-1] No signal is input to the LINE, PHONO
- [3-2] No signal is input to the DIGITAL
- [3-3] No signal is input to the MIC1/MIC2
- [3-4] No signal is input to the RETURN

[4] AUDIO OUTPUT
- [4-1] No signal is output from the MASTER1 / MASTER2 / BOOTH / REC / SEND
- [4-2] No signal is output from the PHONES (PHONES A / PHONES B)
- [4-3] No signal is output from the DIGITAL MASTER OUT

[5] LCD
- [5-1] If the LCD display is not normal

[6] X-PAD
- [6-1] No work of the X-PAD
- [6-2] X-PAD LED not light on

[7] LAN
- [7-1] No LAN communication

[8] Crossfader
- [8-1] Abnormal function of the Crossfader
- [8-2] No work of the Crossfader

[9] PCA (USB-B/USB-C) / PCB (USB-B/USB-C)
- [9-1] USB-B terminal does not recognize
- [9-2] USB-C terminal does not recognize

[10] MULTI I/O (USB-A)
- [10-1] A connected device does not recognize

[11] Wi-Fi / Bluetooth
- [11-1] No work of the Wi-Fi
- [11-2] No sound over Bluetooth

[12] Firmware update
- [12-1] Firmware cannot be updated

∗ Point to be checked – Assys are classified with prefix.

[1-**] SW POWER SUPPLY, MAIN Assy, UCOM Assy
[2-**] MAIN Assy, UCOM Assy, AINB SERVICE Assy, AOUT Assy
[3-**] AINB SERVICE Assy, MAIN Assy
[4-**] AOUT Assy, MAIN Assy, HPPW Assy
[5-**] LCDB Assy, UCOM Assy, MAIN Assy

[6-**] CDCB Assy, UCOM Assy
[7-**] MAIN Assy
[8-**] CRFB Assy, UCOM Assy
[9-**] MAIN Assy, USBBC Assy
[10-**] MAIN Assy, USBA Assy, USBP Assy

[11-**] MAIN Assy
[12-**] MAIN Assy, USBA Assy, USBP Assy, UCOM Assy

■ Measurement Condition

IN or OUT	Measure CH	IN CH	IN LEVEL	IN FREQUENCY	RL	Other Settings	Other Settings
IN	LINE	CH1/2/3/4	0 dBV	1 kHz	—	CH TRIM VR Max	—
IN	PHONO	CH1/2/3/4	-40 dBV	1 kHz	—	CH TRIM VR Max	—
IN	DIGITAL	CH1/2/3/4	0 dBFS	1 kHz	—	CH TRIM VR Center	—
IN	MIC	MIC1/2	-40 dBV	1 kHz	—	MIC LEVEL VR Max	—
IN	RETURN	CH1/2/3/4	0 dBV	1 kHz	—	CH TRIM VR Center	—
IN	USB	CH1/2/3/4	0 dBFS	1 kHz	—	CH TRIM VR Center	—
IN	BLUETOOTH	CH1/2/3/4	0 dBFS	1 kHz	—	CH TRIM VR Center	—
IN	LAN	LINK	—	—	—	Connect with CDJ-3000	—
OUT	MASTER1/2	CH1 LINE	0 dBV	1 kHz	10 kΩ	MASTER LEVEL VR Center	All EQ Center / FADER Max
OUT	BOOTH	CH1 LINE	0 dBV	1 kHz	10 kΩ	BOOTH LEVEL VR Center	All EQ Center / FADER Max
OUT	REC	CH1 LINE	0 dBV	1 kHz	10 kΩ	—	All EQ Center / FADER Max
OUT	SEND	CH1 LINE	0 dBV	1 kHz	10 kΩ	SEND LEVEL VR Center	All EQ Center / FADER Max
OUT	PHONES A/B	CH1 LINE	0 dBV	1 kHz	32 Ω	HP LEVEL Center	All EQ Center / FADER Max
OUT	DIGITAL OUT	CH1 LINE	0 dBV	1 kHz	75 Ω	—	All EQ Center / FADER Max

Measure the output diagnosis at the CH1 LINE input.

Switches Setting

MIC SW	:OFF
CROSS FADER ASSIGN	:THRU
SEND CH	:MASTER
INSERT ON/OFF SW	:OFF
HP MIXING	:CENTER
CH CUE	:OFF
MASTER CUE	:ON

UTILITY settings

When starting diagnosis, perform the factory reset to return it to the factory default.

[0] Prior confirmation

[0-1] Confirmation of internal wires

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Not inserted, breakage, or loose connection of internal wires	Related part	Check that all the wires are securely connected. And check that there is no breakage in the wires.	Securely connect the wires. If a wire is broken, replace it.	4.1, 4.2 OVERALL WIRING DIAGRAM

[0-2] Prior confirmation of power

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defect in the power source corresponding to the defective location	Applicable power IC	Check if there is a problem in power supplied to the location to be diagnosed.	If there is any problem, check the power source, referring to the "POWER BLOCK DIAGRAM" then repair.	4.5 POWER BLOCK DIAGRAM 5.4 POWER SUPPLY DIAGNOSTICS

[0-3] Confirmation of element and LED

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Element defect, LED defect	Applicable element, LED	Check if there are any problems with the elements and LEDs used at the location to be diagnosed.	Check the operation of the elements and LEDs by referring to the Test mode. If there is any abnormality, replace it.	6.1 TEST MODE 5.2 MATRIX INFORMATION

[1] Failure in startup

[1-1] The unit does not turn on, and the [QUANTIZE/UTILITY (WAKE UP)] LED does not flash

※ If [QUANTIZE/UTILITY (WAKE UP)] LED flashes, see "5.4 POWER SUPPLY DIAGNOSTICS".
EV power system (V+12E, V+3R3E) failure, or ERP UCOM (IC402) startup error may be suspected.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	SW POWER SUPPLY defect, Wire defect	SW POWER SUPPLY P4-1Pin 1-1	[EV12V power supply from SW POWER SUPPLY] V+12E (12 V) of SW POWER SUPPLY	Set SW POWER SUPPLY P4 connector to OPEN. And check SW POWER SUPPLY for V+12E. • If the V+12E power can be checked, replace the wire. After replacement ➡ Step 2 • If there is no V+12E, SW POWER SUPPLY may be defective. Replace it.	—
2	Power defect of ERP UCOM	MAIN Assy TP V+3R3E 1-2 TP V+3R3E_SDRAM IC401-1Pin (DCDC_PSWITCH) ※ No printing on silk TP V+1R275_DC_ERP	[Power supply to ERP UCOM] V+3R3E (3.3V) V+3R3E_SDRAM (3.3 V) DCDC_PSWITCH (3.3 V) V+1R275_DC_ERP (1.27 V/0.97 V) ※ Depending on the time after starting ERP UCOM, the voltage value will be either.	• if there are voltages ➡ Step 3 • if there is no voltage either There is a possibility of GND short of V+12E line, mounting of IC211, and parts defect. If there are no problems with mounting ➡ Step 7 If there is a problem with mounting, replace the corresponding part. If there is still no improvement ➡ Step 7	4.5 POWER BLOCK DIAGRAM
3	CLK/RESET defect of ERP UCOM	MAIN Assy TP505 (ERP_24M) ※ No printing on silk 1-3-1 TP ERP_PORn 1-3-2	[CLK, RESET supply to ERP UCOM] 24 MHz ERP_PORn: 3.3 V	• If both signals are output, check FFC connection between MAIN Assy (CN1/CN2) to UCOM Assy (CN6012/CN6014). ➡ Step 4 • If any signal is not output There is a possibility that the IC401, IC502, X502 is mounted or the parts are defective. If there are no problems with mounting ➡ Step 7 If there is a problem with mounting, replace the corresponding part. If there is still no improvement ➡ Step 7	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
4	Communication error between ERP UCOM and FLASH ROM (16Mb)	Connection route between ERP UCOM (IC402) and LASH ROM (16Mb) (IC503) 1-4	[Component mountability between ERP UCOM and FLASH ROM (16Mb)]	• When the part mounting of the route is normal ➡ Step 5 • If there is a problem with component mounting Replace the corresponding part. If there is still no improvement ➡ Step 7	—
5	PNL UCOM defect	UCOM ASSY TP V+3R3D TP PNL_PSWITCH TP V+1R1D_PNL IC6006-67Pin (PNL_24M) ※ No printing on silk R6195 (PNL_XRST) ※ No printing on silk 1-5	[Power supply to PNL UCOM and CLK, RESET supply] V+3R3D (3.3 V) PNL_PSWITCH (3.3 V) V+1R1D_PNL (1.1 V) PNL_24M (1.1 V 24 MHz) PNL_XRST (3.3 V)	Check if all voltage and frequency are output. • If all are output ➡ Step 6 • If either is not output Check the soldering condition of circuit parts that are not output. If there are no problems with mounting, crosscheck with MAIN Assy and replace the problematic Assy.	4.5 POWER BLOCK DIAGRAM
6	Communication error between PNL UCOM and FLASH ROM (16Mb)	Connection route between PNL UCOM (IC6006) and FLASH ROM (16Mb) (IC6007) 1-6	[Component mountability between PNL UCOM and FLASH ROM (16M)]	• When component mounting on the route is normal Crosscheck with MAIN Assy and replace the problematic Assy. • If there is a problem with component mounting Replace the corresponding part. If there is still no improvement, crosscheck with MAIN Assy and replace the problematic Assy.	—
7	Other defects	—	—	Replace MAIN Assy.	—

[1-2] The unit does not turn on, and the [QUANTIZE/UTILITY (WAKE UP)] LED flashes

Check "5.4 POWER SUPPLY DIAGNOSTICS".

[2] Error indications

[2-1] Error indications on the unit GUI

[2-1-1] "E-0001" is displayed

Communication error between MAIN CPU/DSP and PNL UCOM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	MAIN Assy defect or UCOM Assy defect	MAIN Assy UCOM Assy	Crosscheck of Assy	• If there is a problem with MAIN Assy Replace MAIN Assy. • If there is a problem with UCOM Assy Check the contents of ""[1] Failure in startup_No.5 and No.6"". If there is still no improvement, replace UCOM Assy.	[1] Failure in Startup

[2-1-2] "E-0002" is displayed

MAIN CPU/DSP startup error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	PMIC (IC801) defect	MAIN Assy TP V+5D_CPU TP V+3R3D_CPU TP V+1R8D_CPU TP V+1R0_CVDD TP V+1R0_CVDD1 TP V+1R35_CPU_DDR TP DDR3L_VREF 2-1-2-1	[Power supply to MAIN CPU/DSP] V+5D_CPU (5 V) V+3R3D_CPU (3.3 V) V+1R8D_CPU (1.8 V) V+1R0_CVDD (1.0 V) V+1R0_CVDD1 (1.0 V) V+1R35_CPU_DDR (1.35 V) DDR3L_VREF (0.675V)	• If the voltages are output normally • If output is not normal There is a possibility of parts defect or mounting defect in the signal route between IC801 and IC901. For IC801, IC901 ➡ Step 4 If it is other than IC801 or IC901, replace the corresponding parts. If there is still no improvement ➡ Step 4	4.5 POWER BLOCK DIAGRAM
2	CLK/RESET defect of MAIN CPU/DSP	MAIN Assy TP CPU_PORn IC1403-4Pin (CPU_24M) ※ No printing on silk 2-1-2-2	[CLK, RESET supply to MAIN CPU/DSP] CPU_PORn (3.3 V) CPU_24M (1.8 V 24 MHz)	• If the signals are output normally ➡ Step 3 • If output is not normal There is a possibility that the signal route is poorly mounted or the parts are defective. For IC402, IC801 ➡ Step 4 If it is other than IC402 or IC801, replace the corresponding parts. If there is still no improvement ➡ Step 4	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
3	Communication error between MAIN CPU/DSP and LASH ROM (64Mb)	Connection route between MAIN CPU/DSP (IC901) and FLASH ROM (64Mb) (IC1402) 2-1-2-3	[Component mountability between MAIN CPU/DSP and FLASH ROM (64Mb)]	• When the part mounting of the route is normal ➡ Step 4 ※ IC901 and IC1402 are not supplied. • If there is a problem with component mounting Replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[2-1-3] "E-0004" is displayed

Clock generator setting error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of CLOCK GENERATOR (IC1903)	MAIN Assy TP V+3R3D_CLK 2-1-3-1	[Power supply to CLOCK GENERATOR] V+3R3D_CLK (3.3 V)	• When V+3R3D_CLK is 3.3 V ➡ Step 2 • If V+3R3D_CLK is not 3.3 V There is a possibility of parts defect or mounting defect in the signal route of IC209. Replace the corresponding part. If there is still no improvement ➡ Step 4	4.5 POWER BLOCK DIAGRAM
2	MCLK defect of CLOCK GENERATOR (IC1903)	MAIN Assy IC1903-6Pin (CLKIN) ※ No printing on silk 2-1-3-2	[MCLK input to CLOCK GENERATOR] CLKIN (3.3 V 24 MHz)	• When IC1903-6Pin has CLK ➡ Step 3 • Without CLK There is a possibility of parts defect or mounting defect in the signal route between X1901 to IC1901 to IC1903. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	I2C communication error between MAIN CPU/DSP (IC901) and CLOCK GENERATOR (IC1903)	MAIN Assy IC1903-4Pin (CPU_CLKGEN_SCL) ※ No printing on silk IC1903-5Pin (CPU_CLKGEN_SDA) ※ No printing on silk 2-1-3-3	[Communication between MAIN CPU/DSP and CLOCK GENERATOR] CPU_CLKGEN_SCL (3.3 V amplitude) CPU_CLKGEN_SDA (3.3 V amplitude)	• When there are signals on IC1903-4Pin, 5Pin Replace MAIN Assy. • No signal There is a possibility of parts defect or mounting defect in the signal route between IC901 and IC1903. For IC901, IC1903 ➡ Step 4 If it is other than IC901 or IC1903, replace the corresponding parts. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[2-1-4] "E-1001" is displayed

DAC setting error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of MULTI DAC (IC5202)	AOUT Assy TP V+3R3A_MDAC_A TP V+3R3A_MDAC_D TP V+1R2A_MDAC 2-1-4-1	[Power supply to MULTI DAC] V+3R3A_MDAC_A (3.3 V) V+3R3A_MDAC_D (3.3 V) V+1R2A_MDAC (1.2 V)	• When voltages are output from all of V+3R3A_MDAC_A, V+3R3A_MDAC_D, V+1R2A_MDAC ➡ Step 2 • If either is not output There is a possibility of parts defect or mounting defect in the signal route of IC210, IC216, IC5101, IC5202. Replace the corresponding part.	4.5 POWER BLOCK DIAGRAM
2	CLK/RESET defect of MULTI DAC (IC5202)	AOUT Assy TP MCLK TP xRST 2-1-4-2	[CLK/RESET supply to MULTI DAC] MCLK (3.3 V 24.576 MHz) xRST (3.3 V)	• When voltage and frequency are output to CLK and RESET ➡ Step 3 • If either is not output There is a possibility of parts defect or mounting defect in the signal route between MAIN Assy IC901 and AOUT Assy IC5202. For IC901, replace MAIN Assy. If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
3	I2C communication error of MULTI DAC (IC5202)	AOUT Assy TP SCL TP SDA 2-1-4-3	[Communication between MASTER/BOOTH/REC/SEND DAC] SCL (3.3 V amplitude) SDA (3.3 V amplitude)	• When SCL and SDA have 3.3 V amplitude signals Replace MAIN Assy. • Without 3.3 V amplitude signal There is a possibility of parts defect or mounting defect in the signal route between MAIN Assy IC901 and AOUT Assy IC5202. For IC901, replace MAIN Assy. If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace AOUT Assy.	—

[2-1-5] "E-1002" is displayed

CH1-2 ADC setting error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of CH1-2 ADC (IC4501)	AINB SERVICE Assy TP V+3R3A TP V+4R5A 2-1-5-1	[Power supply to CH1-2 ADC] V+3R3A (3.3 V) V+4R5A (4.5 V)	• If the voltages are output normally ➡ Step 2 • If output is not normal There is a possibility of parts defect or mounting defect in the peripheral circuit of IC4006 (V+3R3A), IC4005 (V+4R5A), IC4501. Replace the corresponding part. If there is still no improvement ➡ Step 3	4.5 POWER BLOCK DIAGRAM
2	CLK/RESET defect of CH1-2 ADC (IC4501)	AINB SERVICE Assy R4512 (MCLK) TP XRST 2-1-5-2	[CLK/RESET supply to CH1-2 ADC] MCLK (3.3 V 24.576 MHz) XRST (3.3 V)	• When MCLK and XRST are input normally Replace MAIN Assy. • if either is not normal There is a possibility of parts defect or mounting defect in the peripheral circuit between MAIN Assy IC901 and AINB SERVICE Assy IC4501. For IC901, replace MAIN Assy. If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Other defects	—	—	Replace AINB SERVICE Assy.	—

[2-1-6] "E-1004" is displayed

CH3-4 ADC setting error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of CH1-2 ADC (IC4502)	AINB SERVICE Assy TP V+3R3A TP V+4R5A 2-1-6-1	[Power supply to CH3-4 ADC] V+3R3A (3.3 V) V+4R5A (4.5 V)	• If the voltage is output normally ➡ Step 2 • If output is not normal There is a possibility of parts defect or mounting defect in the peripheral circuit of IC4006 (V+3R3A), IC4005 (V+4R5A), IC4502. Replace the corresponding part. If there is still no improvement ➡ Step 3	4.5 POWER BLOCK DIAGRAM
2	CLK/RESET defect of CH1-2 ADC (IC4502)	AINB SERVICE Assy R4524 (MCLK) TP XRST 2-1-6-2	[CLK/RESET supply to CH3-4 ADC] MCLK (3.3 V 24.576 MHz) XRST (3.3 V)	• When MCLK and XRST are input normally Replace MAIN Assy. • If input is not normal There is a possibility of parts defect or mounting defect in the peripheral circuit between MAIN Assy IC901 and AINB SERVICE Assy IC4502. For IC901, replace MAIN Assy. If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Other defects	—	—	Replace AINB SERVICE Assy.	—

[2-1-7] "E-1010" is displayed

DIR setting error

※ Since the circuits of DIR1 to DIR4 are the same, DIR1 is described as an example. For DIR2 to DIR4, please replace the IC names.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of DIR IC (IC2305)	MAIN Assy TP V+3R3D_DIGI 2-1-7-1	[Power supply to DIR IC] V+3R3D_DIGI (3.3 V)	• If V+3R3D_DIGI is output normally ➡ Step 2 • If output is not normal There is a possibility of a parts defect or mounting defect in the signal route of IC201 and IC208. Replace the corresponding part. If there is still no improvement ➡ Step 4	4.5 POWER BLOCK DIAGRAM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	CLK/RESET defect of DIR IC (IC2305)	MAIN Assy IC2305-39Pin (CH1_DIR_MCLK) ※ No printing on silk IC2305-34Pin (CPU_DIR_XRST) ※ No printing on silk 2-1-7-2	[CLK/RESET supply DIR IC] CH*_DIR_MCLK (3.3 V 24.576 MHz) *= 1 to 4 CPU_DIR_xRST (3.3 V)	• When the voltage and frequency are normally output to CLK and RESET ➡ Step 3 • If either is not output normally There is a possibility of parts defect or mounting defect in the signal route between IC901 and IC2305, between IC1903 and IC2305. For IC901 ➡ Step 4 If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Communication error between MAIN CPU/DSP (IC901) and DIR IC (IC2305)	MAIN Assy IC2305-25Pin (CPU_DIR1_SCK) ※ No printing on silk IC2305-23Pin (CPU_DIR1_MISO) ※ No printing on silk IC2305-24Pin (CPU_DIR1_MOSI) ※ No printing on silk IC2305-26Pin (CPU_DIR1_xCS) ※ No printing on silk 2-1-7-3	[Communication between MAIN CPU/DSP and DIR IC] CPU_DIR*_SCK (3.3 V amplitude) CPU_DIR*_MISO (3.3 V amplitude) CPU_DIR*_MOSI (3.3 V amplitude) CPU_DIR*_xCS (0 V) *= 1 to 4	• If there are signals Replace MAIN Assy. • No signal There is a possibility of parts defect or mounting defect in the signal route between IC901 to IC1405 to IC2305, or between IC901 to IC1406 to IC2305. For IC901 ➡ Step 4 If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[2-1-8] "E-0020" is displayed

DIT setting error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of DIT IC (IC2702)	MAIN Assy TP V+3R3D_DIGI 2-1-8-1	[Power supply to DIT IC] V+3R3D_DIGI (3.3 V)	• If V+3R3D_DIGI is output normally ➡ Step 2 • If output is not normal There is a possibility of parts defect and mounting defect of the signal route of IC201 and IC208. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
2	CLK/RESET defect of DIT IC (IC2702)	MAIN Assy IC2702-7Pin (DIT_MCLK) IC2702-34Pin (D-OUT_SRC_DIT_XRST) 2-1-8-2	[CLK/RESET supply to DIT IC] DIT_MCLK (3.3 V amplitude) ※ Variable CLK so frequency depends on user setting. Check if you can see the 3.3 V amplitude waveform. D-OUT_SRC_DIT_XRST (3.3 V)	• When CLK/RESET are both normal voltages ➡ Step 3 • If either is not normal voltage There is a possibility of parts defect and mounting defect of the signal route between IC901 to IC2701 to IC2702. For IC901 ➡ Step 4 If it is other than IC901, replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Communication error between MAIN CPU/DSP (IC901) and DIT IC (IC2702)	MAIN Assy IC2702-25Pin (CPU_DIT_SCK) ※ No printing on silk IC2702-23Pin (CPU_DIT_MISO) ※ No printing on silk IC2702-24Pin (CPU_DIT_MOSI) ※ No printing on silk IC2702-26Pin (DIT_XCS) ※ No printing on silk 2-1-8-3	[Communication between MAIN CPU/DSP and DIT IC] CPU_DIT_SCK (3.3 V amplitude) CPU_DIT_MISO (3.3 V amplitude) CPU_DIT_MOSI (3.3 V amplitude) DIT_XCS (0 V)	• if there are signals ➡ Step 4 • No signal There is a possibility of parts defect and mounting defect of the signal route between IC901 and IC2702. For IC901, IC2702 ➡ Step 4 If it is other than IC901 or IC2702, replace the corresponding parts. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[2-1-9] "E-0040" is displayed

Communication error between MAIN CPU/DSP and ERP UCOM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Communication error between MAIN CPU/DSP (IC901) and ERP UCOM (IC402)	MAIN Assy R1515 (CPU_ERP_SCK) ※ No printing on silk R1526 (CPU_ERP_MOSI) ※ No printing on silk R546 (CPU_ERP_MISO) ※ No printing on silk R1523 (CPU_ERP_XCS) ※ No printing on silk 2-1-9-1	[Communication between MAIN CPU/DSP and ERP UCOM] CPU_ERP_SCK (3.3 V amplitude) CPU_ERP_MISO (3.3 V amplitude) CPU_ERP_MOSI (3.3 V amplitude) CPU_ERP_XCS (0 V)	• if there are signals ➡ Step 2 • No signal There is a possibility of parts defect or mounting defect in the signal route between IC901 and IC402. For IC901, IC402 ➡ Step 2 If it is other than IC901 or IC402, replace the corresponding parts. If there is still no improvement ➡ Step 2	—
2	Other defects	—	—	Replace MAIN Assy.	—

[2-1-10] "E-0080" is displayed

WLAN UCOM communication error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of WLAN UCOM	MAIN Assy TP V+3R3D TP WLAN_PSWITCH TP V+1R275_DC_WLAN TP V+1R8D_SDIO 2-1-10-1	[Power supply to WLAN UCOM] V+3R3D (3.3 V) WLAN_PSWITCH (3.3 V) V+1R275_DC_WLAN (1.2 V) V+1R8D_SDIO (1.8 V)	• if there are voltages ➡ Step 3 • if there is no voltage either There is a possibility of parts defect or mounting defect in the signal route of IC205 and IC213. If there are no problems with parts and mounting ➡ Step 4 If there is a problem, replace the corresponding part. If there is still no improvement ➡ Step 4	4.5 POWER BLOCK DIAGRAM
2	CLK/RESET defect of WLAN UCOM	MAIN Assy TP2906 (WLAN_24M) ※ No printing on silk TP WLAN_PORn 2-1-10-2	[CLK/RESET supply to WLAN UCOM] WLAN_24M (1.1 V 24 MHz) WLAN_PORn (3.3 V)	• if there are signals ➡ Step 3 • if there is no signal for either There is a possibility of parts defect or mounting defect in the signal route of circuit. If there are no problems with parts and mounting ➡ Step 4 If there is a problem, replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Communication error between WLAN UCOM and FLASH ROM (16Mb)	Connection route between WLAN UCOM (IC2801) and FLASH ROM (16Mb) (IC2901) 2-1-10-3	[Component mountability between WLAN UCOM and FLASH ROM (16Mb)]	• If there are no problems with parts and mounting ➡ Step 4 • If there is a problem Replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[2-1-11] "E-2000" is displayed

MFi authentication IC communication error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
3	Communication error between ERP UCOM and MFi authentication IC	MAIN Assy R636 (SCL) ※ No printing on silk R637 (SDA) ※ No printing on silk R631 (V+3R3D) ※ No printing on silk R632 (GNDD) ※ No printing on silk 2-1-11-1	[Communication between ERP UCOM and MFi authentication IC] SCL (3.3 V (3.3 V amplitude) SDA (3.3 V (3.3 V amplitude) V+3R3D (3.3 V) GNDD (Continuity with other GNDD)	• If the signal is output normally ➡ Step 2 • If output is not normal There is a possibility of parts defect or mounting defect in the signal route between IC402 and IC601. For IC402, IC601 ➡ Step 2 If it is other than IC402 or IC601, replace the corresponding parts. If there is still no improvement ➡ Step 2	—
2	Other defects	—	—	Replace MAIN Assy.	—

[2-2] Error indications of the debug LED

※ The debug LED (D601) for ERP UCOM during normal startup: flashing at a cycle of 2 seconds

[2-2-1] The debug LED (D601) for ERP UCOM is flashing at a cycle of 100 ms

SDRAM check error of ERP UCOM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Component mounting defect of ERP UCOM or SDRAM 2-2-1-1	—	—	Check the mounting status of parts between ERP UCOM (IC402) and SDRAM (IC604). If there is no problem with the mounting state ➡ Step 2 If there is a problem with the mounting state Repair the affected parts. If there is still no improvement ➡ Step 2	—
2	Other defects	—	—	Replace MAIN Assy.	—

[2-2-2] The debug LED (D601) for ERP UCOM is flashing at a cycle of 400 ms

ERP UCOM is in update mode

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	ERP UCOM is in update mode	—	—	If the LED flashes at this cycle even though you have not performed the update operation, please perform the diagnostic items in "[1] Failure in startup". If it still does not improve, replace the MAIN Assy.	[1] Failure in startup

※ The debug LED (D1401) for MAIN CPU/DSP (DSP) during normal startup: flashing at a cycle of 1 second (70 ms on, 970 ms off)

[2-2-3] The debug LED (D1401) for MAIN CPU/DSP (DSP) keep lighting on

MAIN CPU/DSP (DSP) initialization error

[2-2-4] The debug LED (D1401) for MAIN CPU/DSP (DSP) is flashing a little faster. (cycle of about 300 ms)

MAIN CPU/DSP (DSP) stopped due to an error

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	—	—	When [2-1-2] "E-0002" is displayed Execute the diagnostic items in [2-1-2]. If there is still no improvement ➡ Step 2 When [2-1-2] "E-0002" is not displayed ➡ Step 2	[2-1-2] "E-0002" is displayed
2	Other defects	—	—	Replace MAIN Assy.	—

※ The debug LED (D1801) for MAIN CPU/DSP (ARM) during normal startup: flashing 3 times and turns off for 500 ms repeatedly

[2-2-5] The debug LED (D1801) for MAIN CPU/DSP (ARM) repeat the operation of twice flashing and one second off

SDRAM check error of MAIN CPU/DSP

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Component mounting defect of MAIN CPU/DSP or DDR3L 2-2-5-1	—	—	Check the mounting status of parts between MAIN CPU/DSP (IC901) and DDR3L SDRAM (IC1302, IC1303). If there is a problem with component mounting state Repair the affected parts. If there is still no improvement ➡ Step 2 No problem ➡ Step 2	—
2	Other defects	—	—	Replace MAIN Assy.	—

※ The debug LED (D2901) for WLAN UCOM During normal startup: flashing at a cycle of 2 seconds

[2-2-6] The debug LED (D2901) for WLAN UCOM is flashing at a cycle of 100 ms

SDRAM check error of WLAN UCOM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Component mounting defect of WLAN UCOM or SDRAM 2-2-6-1	—	—	Check the component mounting status between WLAN UCOM (IC2801) and SDRAM (IC3102). If there is a problem with the mounting state Repair the affected parts. If there is still no improvement ➡ Step 2 No problem ➡ Step 2	—
2	Other defects	—	—	Replace MAIN Assy.	—

[2-2-7] The debug LED (D2901) for WLAN UCOM is flashing at a cycle of 400 ms

WLAN UCOM is in update mode

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	WLAN UCOM is in update mode	—	—	If the LED flashes at this cycle even though you have not performed the update operation, please perform the diagnostic items in [2-1-10] "E-0080". If it still does not improve, replace the MAIN Assy.	[2-1-10] "E-0080" is displayed

[2-2-8] The debug LED on the MAIN Assy remains off

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Startup failure of ERP UCOM (IC402) or MAIN CPU/DSP (IC901) or WLAN UCOM (IC2801)	ERP UCOM (D601) MAIN CPU/DSP - DSP part (D1401) MAIN CPU/DSP - ARM part (D1801) WLAN UCOM (D2901)	—	Check the troubleshooting items for each LSI and follow the instructions. D601: [1-1] D1401/D1801: [2-1-2] D2901: [2-1-10]	5.3 TROUBLESHOOTING

※ The debug LED (D6002) for PNL UCOM During normal startup: 500 ms on, 500 ms off repeatedly

[2-2-9] The debug LED (D6002) for PNL UCOM lighting on or off

PNL UCOM startup failure

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	UCOM Assy defect	UCOM Assy defect	—	Check the contents of "[1] Failure in startup_No.5 and No.6". If the problem still persists, replace UCOM Assy.	[1] Failure in startup - No.5 [1] Failure in startup - No.6

[2-3] Error indications of [QUANTIZE/UTILITY (WAKE UP)] LED on the unit

[2-3-1] [QUANTIZE/UTILITY (WAKE UP)] LED on the unit flashing (cycle of 500 ms)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Detects abnormal voltage	—	—	Diagnose according to "5.4 POWER SUPPLY DIAGNOSTICS".	5.4 POWER SUPPLY DIAGNOSTICS

[3] AUDIO INPUT

[3-1] No signal is input to the LINE, PHONO

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Prior confirmation	• BLUETOOTH, A, B, DIGITAL, LINE, PHONO, RETURN, USB/TRIM • CH level indicator	• Check in Test mode that the operation is enabled. • Check that it is in the correct position. • Check if the CH level indicator lights on when the audio signal is input.	• When the Channel level indicator lights on "OUTPUT" may be defective. ➡ [4] AUDIO OUTPUT • If it doesn't light on ➡ Step 1	Instruction Manual 6.1 TEST MODE
1	Parts defect	AINB SERVICE Assy L*OUT_L/R, P*OUT_L/R Representative CH1 3-1-1	[Check of the analog input before the differential conversion circuit] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 2 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part.	—
2	Parts defect	AINB SERVICE Assy CH*OUT_L+/L-/R+/R- Representative CH1 3-1-2	[Check of the analog output after the differential conversion circuit] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 3 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part.	—
3	Parts defect	AINB SERVICE Assy CH*_L+/L-/R+/R- Representative CH1 3-1-3	[Analog input check before ADC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 4 • No signal The analog circuit may be defective. Check the soldering condition and replace the part.	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
4	Parts defect / Connection defect	AINB SERVICE Assy IC4501 (CH1-2 ADC) IC4502 (CH3-4 ADC) ADAT_CH* Representative CH1 3-1-4	[Digital output check after ADC] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 5 • No signal CH*_ADC and peripheral circuits may be defective. Check solder condition of IC4501, IC4502 and peripheral circuits (V+4R5A_AVCC_**, V+3R3A_AVDD_**, xRST_ADC, MCLK_CH*, BICK_CH*, LRCK_CH*). Check the connection status of 40P FFC and 10P wires that connect between AINB SERVICE Assy and MAIN Assy. If the audio signal is still not output, replace the AINB SERVICE Assy.	—
5	Parts defect / Connection defect	MAIN Assy IC901(MAIN CPU/DSP) CH*_ANA_DATA Representative CH1 3-1-5	[Input check to MAIN CPU/DSP] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal The IC901 and peripheral circuits may be defective. Replace MAIN Assy. • No signal Poor connection of 40P FFC connecting between AINB SERVICE Assy and MAIN Assy may be considered. There is a possibility of solder defect or parts defect in the route to IC901. Check the connection status, check the soldering status, and replace the parts.	—

[3-2] No signal is input to the DIGITAL

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Prior confirmation	• BLUETOOTH, A, B, DIGITAL, LINE, PHONO, RETURN, USB/TRIM • CH level indicator	• Check in Test mode that the operation is enabled. • Check that it is in the correct position. • Check if the CH level indicator lights on when the audio signal is input.	• When the Channel level indicator lights on "OUTPUT" may be defective. ➡ [4] AUDIO OUTPUT • If it doesn't light on ➡ Step 1	Instruction Manual 6.1 TEST MODE [4] AUDIO OUTPUT
1	Parts defect	MAIN Assy CH1 DIR (IC2305-37Pin) CH2 DIR (IC2306-37Pin) CH3 DIR (IC2503-37Pin) CH4 DIR (IC2504-37Pin) Representative CH1 3-2-1	[Check of the digital input] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 2 • No signal A peripheral circuit may be defective. Check the soldering condition and replace the part.	—
2	Parts defect	MAIN Assy R2348 (CH1 SRC SDIN) R2355 (CH2 SRC SDIN) R2539 (CH3 SRC SDIN) R2546 (CH4 SRC SDIN) Representative CH1 3-2-2	[Check of the digital input] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 3 • No signal IC2305 (CH1), IC2306 (CH2), IC2503 (CH3), IC2504 (CH4) and peripheral circuit may be defective. Check the soldering condition and replace the part.	—
3	Parts defect	MAIN Assy MAIN CPU/DSP (IC901) CH*_DIGI_DATA input terminal Representative CH1 3-2-3	[Input check to MAIN CPU/DSP] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal IC901 and peripheral circuit may be defective. Replace MAIN Assy. • No signal IC2308 (CH1), IC2309 (CH2), IC2505 (CH3), IC2506 (CH4) may be defective. Check the soldering condition and replace the part.	—

[3-3] No signal is input to the MIC1/MIC2

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Prior confirmation	• MIC button • MIC1/2 LEVEL • MASTER LEVEL knob • MASTER level indicator	• Check that it is in the correct position. • Check if the MASTER level indicator lights on when the audio signal is input.	• When the MASTER level indicator lights on ➡ Step 1 • If it doesn't light on ➡ Step 2	Instruction Manual
1	Parts defect / Connection defect	AINB SERVICE Assy V+48D_PH 3-3-1	MIC1 PHANTOM ON/OFF button: ON Check if +48 V is output from V+48D_PH.	• When +48 V is output "OUTPUT" may be defective. ➡ [4] AUDIO OUTPUT • if not output Check the connection status of the 10P wire. If there is still no output, Q3305 on MAIN Assy and peripheral circuits may be defective. Check the soldering condition and replace the part.	[4] AUDIO OUTPUT

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	Parts defect	AINB SERVICE Assy MIC*_TRM_IN Representative MIC1 3-3-2	[Analog input check before MIC1/2 LEVEL] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 3 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part.	—
3	Parts defect / Connection defect	AINB SERVICE Assy MIC*_IN Representative MIC1 3-3-3	[Analog output check before MIC ADC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 4 • No signal The before TRIM circuit and analog circuit may be defective. Check the connection status of MTRM Assy. Check the soldering condition and replace the part.	—
4	Parts defect / Connection defect	AINB SERVICE Assy MIC ADC (IC4703) ADAT_MIC 3-3-4	[Digital output check after MIC ADC] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 5 • No signal MIC ADC and peripheral circuits may be defective. Check soldering condition of MIC ADC (IC4703) and peripheral circuits (V+5A_MIC, V+3R3A_MIC, xRST_ADC, MCLK_MIC, BICK_MIC, LRCK_MIC). Check the connection status of 40P FFC and 10P wires that connect between AINB SERVICE Assy and MAIN Assy. If the audio signal is still not output, replace the IC4703.	—
5	Parts defect / Connection defect	MAIN Assy MAIN CPU/DSP (IC901) MIC1_2_DATA 3-3-5	[Input check to MAIN CPU/DSP] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal The IC901 and peripheral circuits may be defective. Replace MAIN Assy. • No signal The 40P FFC connecting between the AINB SERVICE Assy and MAIN Assy may be defective. There is a possibility of solder defect or parts defect in the route to IC901. Check connection status, soldering condition and replace the part.	—

[3-4] No signal is input to the RETURN

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Prior confirmation	• BLUETOOTH, A, B, DIGITAL, LINE, PHONO, RETURN, USB/TRIM • INSERT SOURCE select switch • INSERT button • CH level indicator	• Check in Test mode that the operation is enabled. • Check that it is in the correct position. • Check if the CH level indicator lights on when the audio signal is input. ※ During RETURN INSERT, even if an audio signal is input only to Rch, it will not be input. When diagnosing Rch, be sure to input an audio signal to Lch as well.	• When the Channel level indicator lights on "OUTPUT" may be defective. ➡ [4] AUDIO OUTPUT • If it doesn't light on ➡ Step 1	Instruction Manual 6.1 TEST MODE [4] AUDIO OUTPUT
1	Parts defect / Connection defect	AINB SERVICE Assy RTN1_LIN/RIN 3-4-1	[Analog input check before RTN ADC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 2 • No signal There is a possibility that the wire connecting between the RTNJ Assy and the AINB SERVICE Assy is defective. And the analog circuit in the previous stage may be defective. Check connection status, soldering condition and replace the part.	—
2	Parts defect	AINB SERVICE Assy RTN ADC (IC4602) ADAT_RTN 3-4-2	[Digital output check after RTN ADC] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 3 • No signal RTN ADC and peripheral circuits may be defective. Check solder condition of RTN ADC (IC4602) and peripheral circuits (V+5A_RTN, V+3R3A_RTN, xRST_ADC, MCLK_RTN, BICK_RTN, LRCK_RTN). Check the connection status of 40P FFC and 10P wires that connect between AINB SERVICE Assy and MAIN Assy. If the audio signal is still not output, replace the IC4602.	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
3	Parts defect / Connection defect	MAIN Assy MAIN CPU/DSP (IC901) RTN_DATA 3-4-3	[Input check to MAIN CPU/DSP] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal The IC901 and peripheral circuits may be defective. Replace MAIN Assy. • No signal The 40P FFC connecting between the AINB SERVICE Assy and MAIN Assy may be defective. And there is a possibility of solder defect or parts defect in the route to IC901. Check connection status, soldering condition and replace the part.	—

[4] AUDIO OUTPUT

[4-1] No signal is output from the MASTER1 / MASTER2 / BOOTH / REC / SEND

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Output check	MASTER1 / MASTER2 / BOOTH / REC / SEND	Check the terminal that does not output.	• When all are not output ➡ Step 2 • When only MASTER1 is not output ➡ Step 5 • When only MASTER2 is not output ➡ Step 6 • When only BOOTH is not output ➡ Step 7 • When only REC is not output ➡ Step 8 • When only SEND is not output ➡ Step 9	—
2	Parts defect	AOUT Assy DAC_xRST TP5225 4-1-2	[RESET signal input check to DAC] Check that the DAC_xRST signal is HI.	• When HI ➡ Step 3 • When LOW There is a possibility of solder defect on the DAC_xRST signal route. Check the soldering condition and replace the part.	—
3	Parts defect	AOUT Assy TP5202 (MASTER) TP5201 (BOOTH) TP5203 (REC) TP5204 (SEND) IC5202-45Pin, 46Pin, 19Pin 4-1-3	[Digital input check to DAC] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 4 • No signal MAIN CPU/DSP (IC901) or AUDIO_CLK (IC1903) may be defective. Replace MAIN Assy.	—
4	Parts defect	AOUT Assy TP5301, TP5302 (MAS_L-/MAS L+) TP5303, TP5304 (MAS_R-/MAS_R+) TP5501, TP5502 (BTH_L-/BTH_L+) TP5503, TP5504 (BTH_R-/BTH_R+) TP5416, TP5415 (RECL-/RECL+) TP5418, TP5417 (RECR-/RECR+) TP5609, TP5601 (SNDL-/SNDL+) TP5611, TP5610 (SNDR-/SNDR+) 4-1-4	[Analog output check from DAC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 5 • No signal The MULTI DAC (IC5202) and peripheral circuits may be defective. Check the soldering condition and replace the part.	—
5	Parts defect	AOUT Assy IC5303-1Pin, 7Pin IC5304-1Pin, 7Pin 4-1-5	[MASTER1 analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal RY5301, RY5302, Q5302, Q5303, Q5304, Q5305 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The before analog circuit may be defective. Check the soldering condition of IC5303, IC5304 and peripheral circuits. If there is still no signal, replace the AINB SERVICE Assy.	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
6	Parts defect	AOUT Assy IC5402-1Pin, 7Pin 4-1-6	[MASTER2 analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal Q5403, Q5404 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5402 and peripheral circuits.	—
7	Parts defect	AOUT Assy IC5503-1Pin, 7Pin IC5504-1Pin, 7Pin 4-1-7	[BOOTH analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal Q5501, Q5502, Q5503, Q5504 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5503, IC5504 and peripheral circuits.	—
8	Parts defect	AOUT Assy IC5401-1Pin, 7Pin 4-1-8	[REC analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal Q5401, Q5402 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5401 and peripheral circuits.	—
9	Parts defect	AOUT Assy IC5601-1Pin, 7Pin 4-1-9	[SEND analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal Q5601, Q5602 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5601 and peripheral circuits.	—

[4-2] No signal is output from the PHONES (PHONES A / PHONES B)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Output check	PHONES A PHONES B	Check the PHONES system that is not output.	• When both are not output ➡ Step 2 • When only PHONES A is not output ➡ Step 3 • When only PHONES B is not output ➡ Step 8	—
2	Parts defect	MAIN Assy HP DAC (IC2202-1Pin, 2Pin, 3Pin, 5Pin) HP DAC (IC2203-1Pin, 2Pin, 3Pin, 5Pin) 4-2-2	[Digital input check to DAC] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 3 • No signal MAIN CPU/DSP (IC901) or AUDIO_CLK (IC1903) may be defective. Replace MAIN Assy.	—
3	Parts defect	MAIN Assy DAC_xRST IC2203-4Pin 4-2-3	[RESET signal input check to DAC] Check that the DAC_RESET signal is HI.	• When HI ➡ Step 4 • When LOW There is a possibility of solder defect on the DAC_xRST signal route. Check the soldering condition and replace the part.	—
4	Parts defect	MAIN Assy TP2203, TP2207, TP2208, TP2204 4-2-4	[Analog output check from DAC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 5 • No signal The IC2203 and peripheral circuits may be defective. Check the soldering condition and replace the part.	—
5	Parts defect	MAIN Assy TP2211(HP_A_L) TP2212 (HP_A_R) 4-2-5	[PHONES A analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 6 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC2205 and peripheral circuits.	—
6	Parts defect	HPPW Assy IC5802-1Pin, 7Pin 4-2-6	[PHONES A analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 7 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5802 and peripheral circuits.	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
7	Parts defect / Connection defect	HPPW Assy TP5818 (HP_A_LOUT) TP5819 (HP_A_ROUT) 4-2-7	[PHONES A analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal 6Pin HPJK/HPJM wire may have poor connection. Replace it. • No signal The RELAY circuit may be defective. Check the soldering condition and replace the part of RY5802 and peripheral circuits.	—
8	Parts defect	MAIN Assy DAC_xRST IC2202-4Pin 4-2-8	[RESET signal input check to DAC] Check that the DAC_RESET signal is HI.	• When HI ➡ Step 9 • When LOW There is a possibility of solder defect on the DAC_xRST signal route. Check the soldering condition and replace the part.	—
9	Parts defect	MAIN Assy TP2201, TP2205, TP2206, TP2202 4-2-9	[Analog output check from DAC] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 10 • No signal The IC2202 and peripheral circuits may be defective. Check the soldering condition and replace the part.	—
10	Parts defect	MAIN Assy TP2209 (HP_B_L) TP2210 (HP_B_R) 4-2-10	[PHONES B analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 11 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC2204 and peripheral circuits.	—
11	Parts defect	HPPW Assy IC5801-1Pin, 7Pin 4-2-11	[PHONES B analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal ➡ Step 12 • No signal The before analog circuit may be defective. Check the soldering condition and replace the part of IC5801 and peripheral circuits.	—
12	Parts defect / Connection defect	HPPW Assy TP5820 (HP_B_LOUT) TP5821 (HP_B_ROUT) 4-2-12	[PHONES B analog output check] Check audio signal (sine wave) in appropriate route.	• With audio signal 3Pin HPJC wire may have poor connection. Replace it. • No signal The RELAY circuit may be defective. Check the soldering condition and replace the part of RY5801 and peripheral circuits.	—

[4-3] No signal is output from the DIGITAL MASTER OUT

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Parts defect	MAIN Assy DOUT_SRC_DIT_xRST 4-3-1	[RESET signal check] Check that the DOUT_SRC_DIT_xRST signal is HI.	• When HI ➡ Step 2 • When LOW There is a possibility of solder defect on the DOUT_SRC_DIT_xRST signal route. Check the soldering condition and replace the part.	—
2	Parts defect	MAIN Assy IC2701-2Pin, 7Pin, 8Pin, 9Pin 4-3-2	[Digital input check to SRC] Check the audio signal and CLK (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 3 • No signal MAIN CPU/DSP (IC901) or AUDIO_CLK GENERATOR (IC1903) may be defective. Replace MAIN Assy.	—
3	Parts defect	MAIN Assy DIT (IC2702-7Pin, 8Pin, 9Pin, 10Pin) 4-3-3	[Digital input check to DIT] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 4 • No signal The IC1903, IC2701 and peripheral circuits may be defective. Check the soldering condition and replace the part.	—
4	Parts defect	MAIN Assy DIT (IC2702-16Pin) 4-3-4	[DIT digital output check] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal ➡ Step 5 • No signal The IC2702 and peripheral circuits may be defective. Check the soldering condition and replace the part.	—
5	Parts defect	MAIN Assy IC2703-4Pin, 6Pin, 8Pin, 10Pin, 12Pin 4-3-5	[Driver IC digital output check] Check the audio signal (except for fixed of LOW or HI) in appropriate route.	• With audio signal VL2701 and peripheral circuits may be defective. Check the soldering condition and replace the part. • No signal The IC2703 and peripheral circuits may be defective. Check the soldering condition and replace the part.	—

[5] LCD

※ LCD is controlled by MAIN CPU/DSP (IC901).

[5-1] If the LCD display is not normal

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Confirmation of the inner wiring connection	—	Check if there is any connection defect from LCD Module to LCDB Assy to UCOM Assy to MAIN Assy.	—	—
1	Backlight power defect	LCD_LED_A LCDB Assy: L6602 [NM] UCOM Assy: TP LCD_LED_A V+12LCDB MAIN Assy: R23 5-1-1	Check the voltage on the backlight power supply route.	• If there is voltage in the route ➡ Step 2 • No voltage Check the wire condition. If there is a problem with the connection state, repair it. • When there is no voltage on MAIN Assy The LCD BACKLIGHT circuit may be defective. Check the soldering condition and replace the part around Q1101 to Q1106.	—
2	RESET signal defect	LCD_xRST LCDB Assy: TP LCD_xRST UCOM Assy: R6015 MAIN Assy: R41 5-1-2	[RESET signal check] Check that the LCD_xRST signal is "H".	• When "H" ➡ Step 3 • When "L" There is a possibility of defective solder of LCD_xRST signal route. Check the soldering condition and replace the part.	—
3	Signal defect	LCD_DCLK LCDB Assy: R6609 UCOM Assy: TP LCD_DCLK MAIN Assy: R2 LCD_HSYNC LCDB Assy: R6604 UCOM Assy: TP LCD_HSYNC MAIN Assy: R1 LCD_VSYNC LCDB Assy: R6611 UCOM Assy: TP LCD_VSNYC MAIN Assy: R3 5-1-3	Check if LCD_DCLK, LCD_HSYNC, LCD_VSYNC square waves are working.	• Normal ➡ Step 4 • Abnormal There is a possibility of defective solder of the signal route. Check the soldering condition and replace the part.	—
4	Signal defect	LCD_CS LCDB Assy: R6606 UCOM Assy: R6014 LCD_xMOSI LCDB Assy: R6607 UCOM Assy: R6016 LCD_xSCK LCDB Assy: R6608 UCOM Assy: R6017 5-1-4	Check if the square wave of the following signal is working when the unit is started (when the power is turned on). LCD_CS LCD_xMOSI LCD_xSCK	• If the square wave works, the LCD module may be defective. Replace the LCD module. • If the square wave does not work, there may be a solder defect in the signal route. Check the soldering condition and replace the part.	—

[6] X-PAD

※ X-PAD signal are input/output by PNL UCOM (IC6006).

[6-1] No work of the X-PAD

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Connection defect	UCOM Assy CDCB Assy	Check for connection defects on the power supply and signal lines from PNL UCOM (IC6006) to CDC IC (IC6701).	• Normal ➡ Step 2 • Abnormal If there is a problem with the connection status of the power supply and signal lines, repair it.	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	Signal defect	UCOM Assy CN7004-6Pin, 8Pin, 10Pin, 12Pin, 14Pin, 15Pin 6-1-2	Check the power supply voltage and input/output signals of the touch sensor IC communication line in the PNLA Assy when the power is turned on. • PNL_CDC_MISO • PNL_CDC_MOSI • PNLCDC_SCK • PNL_CDC_XCS • PNL_CDC_XINT • V+3R3CDC (Power) (Check CN6001-6, 8, 10, 12, 14, 15Pin.) (A signal is output when the power is turned on and when the X-PAD is touched.)	Check the mounting status of PNL UCOM (IC6006), if there is no signal at power up or X-PAD touch. If there is no problem, the port may be broken. Replace CDCB Assy. If there is still no signal, replace UCOM Assy.	—

[6-2] X-PAD LED not light on

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Connection defect	UCOM Assy CN6001-3Pin, 4Pin 6-2-1	Check the power supply voltage V+9LED for driving the LED.	If there is a problem with the connection status of the power line, repair it.	—
2	Connection defect	UCOM Assy Q6026-Base CN6001-1Pin 6-2-2	Check if the drive waveform is output to the UCOM Assy (Q6026-Base). If the signal is output, check if the drive signal is output from the UCOM Assy (CN6001-1Pin).	If the drive waveform is not output to the UCOM Assy (Q6026-Base), replace the PNL UCOM (IC6006). If there is a signal in Q6026 and the drive signal is not output from UCOM Assy (CN6001-1Pin), replace Q6026.	—
3	LED parts defect	CDCB Assy CN6701-1Pin, 2Pin 6-2-3	Check if the drive waveforms are output to the CDCB Assy (CN6701-1Pin, 2Pin).	If the drive waveform is output, replace the CDCB Assy. If there is a signal in Q6026 and the drive signal is not output from UCOM Assy (CN6001-1Pin), replace Q6026.	—

[7] LAN

[7-1] No LAN communication

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Prior confirmation	—	※ Diagnose while connected to a PC. Check if LAN, MACAd, IPAdd, and Subn display normal status by executing device test in Test mode.	• Normal ➡ Step 3 • LAN NG ➡ Step 4 • When MACAd, IPAdd, Subn are abnormal The data stored in the FLASH ROM (64Mb) IC1402 may be corrupted. ➡ Step 5 ※ IC1402 not supplied.	6.1 TEST MODE
1	Power defect of LAN HUB & PHY (IC3104)	MAIN Assy Q3101-Base (LANHUB_V_CONT_E) ※ No printing on silk TP V+3R3D_ETH TP V+1R8D_ETH_A 7-1-1	[Power supply to LAN HUB & PHY] LANHUB_V_CONT_E (3.3 V) V+3R3D_ETH (3.3 V) V+1R8D_ETH_A (1.8 V)	• When there is power control and power supply to LAN HUB & PHY ➡ Step 2 • Either power control, if there is no power supply There is a possibility that the solder of the signal route of the corresponding part is defective. • If there are no solder defects ➡ Step 5 • If there is a solder defect Replace the corresponding part. If there is still no improvement ➡ Step 5	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	CLK and RESET defect of LAN HUB &PHY (IC3104) or MAIN CPU/DSP (IC901)	MAIN Assy R1736 (XTAL_CPU_50M) ※ No printing on silk IC3104-43Pin (XTAL_LANHUB1_50M) ※ No printing on silk IC3104-28Pin (XTAL_LANHUB2_50M) ※ No printing on silk TP2920 (XTAL_WLAN_50M) ※ No printing on silk TP LANHUB_XRST 7-1-2	[CLK, RESET supply to LAN HUB & PHY] XTAL_CPU_50M (3.3 V 50 MHz) XTAL_LANHUB1_50M (3.3 V 50 MHz) XTAL_LANHUB2_50M (3.3 V 50 MHz) XTAL_WLAN_50M (3.3 V 50 MHz) LANHUB_XRST (3.3 V)	• When all signals are supplied ➡ Step 3 • Either power control, if there is no power supply There is a possibility that the solder of the signal route of the corresponding part is defective. • If there are no solder defects ➡ Step 5 • If there is a solder defect Replace the corresponding part. If there is still no improvement ➡ Step 5	—
3	Communication error between MAIN CPU/DSP (IC901) and LAN HUB &PHY (IC3104)	MAIN Assy IC3104-35Pin (RMII_RXD0) ※ No printing on silk IC9104-38Pin (RMII_RXD1) ※ No printing on silk IC3104-45Pin (RMII_TXD0) ※ No printing on silk IC3104-46Pin (RMII_TXD1) ※ No printing on silk 7-1-3	[Communication check between MAIN CPU/DSP and LAN HUB & PHY] Check that the appropriate signal route is working (except for fixed of LOW or HI). RMII_RXD0 (3.3 V amplitude) RMII_RXD1 (3.3 V amplitude) RMII_TXD0 (3.3 V amplitude) RMII_TXD1 (3.3 V amplitude)	• If both signals are normal ➡ Step 4 • If any signal is abnormal There is a possibility of parts defect of signal route. Check the soldering condition of the route. • If there are no solder defects ➡ Step 5 • If there is a solder defect Replace the corresponding part. If there is still no improvement ➡ Step 5	—
4	Parts defect of pulse transformer (T3101, T3102) or common mode filter (F3103, F3104)	F3103 F3104 7-1-4	[Component mountability of pulse transformer, common mode filter] Check that the appropriate signal route is working (except for fixed of LOW or HI).	• If there are no problems with mounting ➡ Step 5 • If there is a problem with mounting There is a possibility of parts defect of signal route. Check the soldering condition of the route. • If there are no solder defects ➡ Step 5 • If there is a solder defect Replace the corresponding part. If there is still no improvement ➡ Step 5	—
5	Other defects	—	—	Replace MAIN Assy.	—

[8] Crossfader

[8-1] Abnormal function of the Crossfader

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Not calibrated	[CUE CH1 A LED] [CUE CH2 A LED] [CUE CH3 A LED] [CUE CH4 A LED]	If [CUE A CH1], [CUE A CH2], [CUE A CH3], [CUE A CH4] are flashing immediately after starting the main unit, crossfader calibration has not been performed. ※ **Crossfader calibration is required when the MAIN Assy is replaced.**	Perform the calibration.	6.2 CROSSFADER CALIBRATION
2	Can not calibrate	—	Perform Test mode calibration and check if the status is normal.	If calibration cannot be performed or is NG ➡ [8-2]	6.2 CROSSFADER CALIBRATION

[8-2] No work of the Crossfader

※ Crossfader signals are input to PNL UCOM (IC6006).

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Connection defect	UCOM Assy CRFB Assy	Check that the wires between the CRFB Assy and UCOM Assy are securely inserted into the connector.	• If there is a connection problem, fix it. • If no problem ➡ Step 2	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	Connection defect / Signal defect	[Power] V+5CRFD CRFB Assy CN8301-Pin 1 UCOM Assy IC6006-Pin1 [CROSS_FADER signal] CRFB Assy CN8301-Pin 2 to 6 UCOM Assy AD_CRFD CN6006-Pin 2 to 6 8-2-2	[Power] Check that the power supply is 5.0 V. [CROSS_FADER signal] Check that the voltage at the diagnostic point changes while sliding the crossfader left and right.	[Power] • Abnormal IC6002 may be broken. Replace it. [CROSS_FADER signal] • When the voltage of the CROSS_FADER signal does not change even when the crossfader is operated IC8302 and IC8305 may be broken. Replace them.	—

[9] PCA (USB-B/USB-C) / PCB (USB-B/USB-C)

[9-1] USB-B terminal does not recognize

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of USBBC Assy	MAIN Assy (CN3) USBBC Assy (CN3601) 5Pin (V+3R3D_USBSW) 12Pin (V+5D_VBUSBC_HS) 9-1-1	[Power supply to USBBC Assy] V+3R3D_USBSW (3.3 V) V+5D_VBUSBC_HS (5 V)	• If there are voltages ➡ Step 2 • No voltage There is a possibility that the wire is defective, or the component defect or mounting defect in the route between MAIN Assy and USBBC Assy. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
2	Component mounting defect between MAIN CPU/DSP (IC901) and USBBC Assy [VBUS related]	MAIN Assy (CN3) USBBC Assy (CN3601) [VBUS power] 8Pin (USBB2_VBUS) 11Pin (USBB1_VBUS) [USB control line] 6Pin (USBBC2_SEL) 9Pin (USBBC1_SEL) 9-1-2	※ Check with the corresponding terminal connected to the PC. [VBUS power] USBB1_VBUS / USBB2_VBUS (5 V) [USB control line] USBBC2_SEL / USBBC1_SEL (3.3 V)	• If there are voltages ➡ Step 3 • No voltage or signal There is a possibility that the wire is defective, or the peripheral circuit parts in the MAIN Assy or USBBC Assy are defective, or the mounting is defective. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Component mounting defect between MAIN CPU/DSP (IC901) and USBBC Assy [Data related]	MAIN Assy (CN3) USBBC Assy (CN3601) [Data line] 2Pin, 3Pin (USBBC2_DP/USBBC2_DM) 14Pin, 15Pin (USBBC1_DP/USBBC1_DM) 9-1-3	※ Check with the corresponding terminal connected to the PC. [Data line] USBBC1_DP, USBBC1_DM, USBBC2_DP, USBBC2_DM (Not fixed of 0 V)	• If there are voltages ➡ Step 4 • No voltage or signal There is a possibility that the wire is defective, or the peripheral circuit parts in the MAIN Assy or USBBC Assy are defective, or the mounting is defective. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Crosscheck the MAIN Assy and USBBC Assy, and replace the problematic Assy.	—

[9-2] USB-C terminal does not recognize

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of USBBC Assy	MAIN Assy (CN3) USBBC Assy (CN3601) 5Pin (V+3R3D_USBSW) 12Pin (V+5D_VBUSBC_HS) 9-2-1	[Power supply to USBBC Assy] V+3R3D_USBSW (3.3 V) V+5D_VBUSBC_HS (5 V)	• If there are voltages ➡ Step 2 • No voltage There is a possibility that the wiring is defective, or the component defect or mounting defect in the route between MAIN Assy and USBBC Assy. Replace the corresponding part. If there is still no improvement ➡ Step 4	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
2	Component mounting defect between MAIN CPU/DSP (IC901) and USBBC Assy [VBUS/CC line related]	MAIN Assy CN3 / USBBC Assy CN3601 [VBUS power] 7Pin USBC2_VBUS 10Pin USBC1_VBUS [USB control line] 6Pin USBBC2_SEL 9Pin USBBC1_SEL 9-2-2	※ Check with the corresponding terminal connected to the PC. [VBUS power] USBC1_VBUS / USBC2_VBUS (5V) [USB control line] USBBC2_SEL / USBBC1_SEL (3.3 V)	• Normal ➡ Step 3 • Abnormal There is a possibility that the wire is defective, or the CC1, CC2 lines of the USBBC Assy JA3601, JA3602, or the peripheral circuit parts of the MAIN Assy, or the VBUS / SEL line of the USBBC Assy is defective, or the mounting is defective. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
3	Component mounting defect between MAIN CPU/DSP (IC901) and USBBC Assy [Data line]	MAIN Assy CN3 / USBBC Assy CN3601 [Data line] 2Pin, 3Pin (USBBC2_DP/USBBC2_DM) 14Pin, 15Pin (USBBC1_DP/USBBC1_DM) 9-2-3	※ Check with the corresponding terminal connected to the PC. [Data line] USBBC1_DP, USBBC1_DM, USBBC2_DP, USBBC2_DM (Not fixed of 0 V)	• Normal ➡ Step 4 • Abnormal There is a possibility that the wire is defective, or the peripheral circuit parts in the MAIN Assy or USBBC Assy are defective, or the mounting is defective. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Crosscheck the MAIN Assy and USBBC Assy, and replace the problematic Assy.	—

[10] MULTI I/O (USB-A)

[10-1] A connected device does not recognize

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of MULTI I/O line	USBA Assy JA3501-1Pin (V+5R2D_VBUS) USBP Assy CN5951-4Pin, 5Pin (V+12M_VBUSA) 10-1-1	[Power supply to MULTI I/O line] V+5R2D_VBUS (5.2 V) V+12M_VBUSA (12 V)	• If there are voltages ➡ Step 2 • No voltage The USBP Assy IC5951, IC5952 peripheral circuit parts may be defective or the mounting may be defective. Replace the corresponding part. If there is still no improvement ➡ Step 4	—
2	Power supply control of MULTI I/O line	USBP Assy IC5952-8Pin (USBPSW_FA) IC5952-4Pin (USBPSW_EN) 10-1-2	[Power supply control to MULTI I/O line] USBPSW_FA (3.3 V) USBPSW_EN (3.3 V)	• If both voltages are 3.3 V ➡ Step 3 • if either is not 3.3 V There is a possibility that the solder of the USBPSW_FA/USBPSW_EN route. Check the soldering condition and replace the part. If there is still no improvement ➡ Step 4	—
3	Signal defect of MULTI I/O line	USBA Assy JA3501-2Pin, 3Pin (USBC_DP/USBC_DM) MAIN Assy L3-1Pin, 4Pin (USBC_DP/USBC_DM) 10-1-3	[Signal line of MULTI I/O line] USBC_DP/USBC_DM (Not fixed of 0 V)	• Normal Crosscheck the MAIN Assy and USBA Assy, and replace the problematic Assy. • Abnormal There is a possibility of parts defect or mounting defect in the peripheral circuit between MAIN Assy IC402 and CN12 or between USBA Assy CN3501 and JA3501. For IC402 ➡ Step 4 If it is other than IC402, replace the corresponding part. If there is still no improvement ➡ Step 4	—
4	Other defects	—	—	Replace MAIN Assy.	—

[11] Wi-Fi / Bluetooth

[11-1] No work of the Wi-Fi

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of WLAN module (U2901)	MAIN Assy U2901-7Pin (V+3R3D_WM) TP V+1R8D_SDIO 11-1-1	[Power supply to WLAN module] V+3R3D_WM (3.3 V) V+1R8D_SDIO (1.8 V)	• If there are voltages ➡ Step 2 • No voltage There is a possibility of parts defect or mounting defect in the peripheral circuit of IC205 and IC213. Replace the corresponding part. If there is still no improvement ➡ Step 5	—
2	SDIO CLK defect of WLAN module (U2901)	MAIN Assy U2901-18Pin to R2946 (SDIO_CLK) 11-1-2	[SDIO CLK supply to WLAN module] SDIO_CLK (1.8 V 198 MHz) (Check for anything except for fixed of LOW or HI.)	• Normal ➡ Step 2 • Abnormal There is a possibility of parts defect of SDIO_CLK signal route. Check the soldering condition. If there is still no improvement ➡ Step 5	—
3	WLAN RST defect of WLAN module (U2901)	MAIN Assy U2901-3Pin (WLAN_XRST) 11-1-3	[RESET supply to WLAN module] WLAN_XRST (3.3 V)	• When WLAN_XRST is 3.3 V ➡ Step 4 • IF WLAN_XRST is 0 V There is a possibility that the solder of WLAN_XRST signal route. Check the soldering condition of the peripheral circuit. If there is still no improvement ➡ Step 5	—
4	Communication error between WLAN module (U2901) and WLAN UCOM (IC2801)	MAIN Assy U2901-16Pin (SDIO_CMD) U2901-15Pin (SDIO_D0) U2901-14Pin (SDIO_D1) U2901-13Pin (SDIO_D2) U2901-12Pin (SDIO_D3) 11-1-4	[Communication signal between WLAN module and WLAN UCOM] Check that the appropriate signal route is working (except for fixed of LOW or HI). SDIO_CMD/D0/D1/D2/D3 (1.8 V amplitude)	• Normal ➡ Step 5 • Abnormal There is a possibility of parts defect of signal route. Check the soldering condition. If there is still no improvement ➡ Step 5	—
5	Other defects	—	—	Replace MAIN Assy.	—

[11-2] No sound over Bluetooth

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power defect of WLAN module (U2901)	MAIN Assy U2901-7Pin (V+3R3D_WM) TP V+1R8D_SDIO 11-2-1	[Power supply to WLAN module] V+3R3D_WM (3.3 V) V+1R8D_SDIO (1.8 V)	• If there are voltages ➡ Step 2 • No voltage There is a possibility of parts defect or mounting defect in the peripheral circuit of IC205 and IC213. Replace the corresponding part. If there is still no improvement ➡ Step 9	—
2	Bluetooth RST defect of WLAN module (U2901)	MAIN Assy U2901-43Pin to R2904 (BT_XRST) 11-2-2	[RESET supply to Bluetooth block of WLAN module] BT_XRST (3.3 V)	• When BT_XRST is 3.3 V ➡ Step 3 • If BT_XRST is 0 V There is a possibility that the solder of BT_XRST signal route. Check the soldering condition of the peripheral circuit. If there is still no improvement ➡ Step 9	—
3	Communication error between WLAN module (U2901) and WLAN UCOM (IC2801)	MAIN Assy U2901-24Pin to TP W_BL_U TX (BT_UART_TX) U2901-25Pin to R3103 (BT_UART_RTS) U2901-26Pin to TP W_BL_U RX (BT_UART_RX) U2901-27Pin to R2945 (BT_UART_CTS) 11-2-3	[Communication signal between WLAN module and WLAN UCOM] Check that the appropriate signal path is working (except for fixed of LOW or HI at 1.8 V). BT_UART_TX/RX, BT_UART_RTS/CTS (1.8 V amplitude)	• Normal ➡ Step 4 • Abnormal There is a possibility of parts defect of signal route. Check the soldering condition. If there is still no improvement ➡ Step 9	—

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
4	Power defect of BT SRC (IC3103)	MAIN Assy IC3103-17Pin (V+3R3D_DIGI) IC3103-3Pin (V+2R5D_DIGI) 11-2-4	[Power supply to BT SRC] V+3R3D_DIGI (3.3 V) V+2R5D_DIGI (2.5 V)	• If there are voltages ➡ Step 5 • No voltage There is a possibility of parts defect or mounting defect in the peripheral circuit of IC201, IC208, and IC207. Replace the corresponding part. If there is still no improvement ➡ Step 9	—
5	MCLK defect of BT SRC (IC3103)	MAIN Assy IC3103-2Pin to R3142 (BT_SRC_MCLK) 11-2-5	[MCLK supply to BT SRC] BT_SRC_MCLK (3.3 V 24.576 MHz)	• Normal ➡ Step 6 • Abnormal There is a possibility of parts defect of BT_SRC_MCLK signal route. Check the soldering condition. If there is still no improvement ➡ Step 9	—
6	RST defect of BT SRC (IC3103)	MAIN Assy IC3103-5Pin to C3110 (BT_SRC_XRST) 11-2-6	[RESET supply to BT SRC] BT_SRC_XRST (3.3 V)	• When BT_SRC_XRST is 3.3 V ➡ Step 7 • If BT_SRC_XRST is 0 V There is a possibility that the solder of BT_SRC_XRST signal route. Check the soldering condition of the peripheral circuit. If there is still no improvement ➡ Step 9	—
7	CLK communication error between BT SRC (IC3103) and WLAN UCOM (IC2801)	MAIN Assy IC3103-7Pin (BT_LRCLK_SRCI) IC3103-8Pin (BT_BCLK_SRCI) IC3103-13Pin (DSP_BCLK6) IC3103-14Pin (DSP_LRCLK6) 11-2-7	[CLK supply to between BT SRC and WLAN UCOM] Check that the appropriate signal route is working (except for fixed of LOW or HI at 3.3 V).	• Normal ➡ Step 8 • Abnormal There is a possibility of parts defect of B signal route. Check the soldering condition. If there is still no improvement ➡ Step 9	—
8	Data communication error between BT SRC (IC3103) and WLAN UCOM (IC2801)	MAIN Assy IC3103-9Pin (BT_DATA) IC3103-12Pin (BT_DATA2) 11-2-8	[Communication between BT SRC and WLAN UCOM] Check that the appropriate signal route is working (except for fixed of LOW or HI at 3.3 V).	• Normal ➡ Step 9 • Abnormal There is a possibility of parts defect of signal route. Check the soldering condition. If there is still no improvement ➡ Step 9	—
9	Other defects	—	—	Replace MAIN Assy.	—

[12] Firmware update

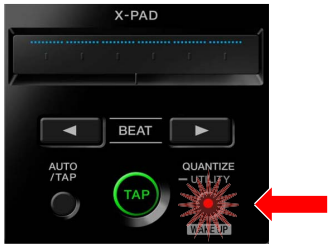
[12-1] Firmware cannot be updated

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	USB-A terminal is not recognized	—	—	[10] Run the diagnostics item for MULTI I/O (USB-A) and refer to the instructions in the item if any problems are found. If the MULTI I/O lines are normal ➡ Step 2	[10] MULTI I/O (USB-A)
2	MAIN Assy defect or UCOM Assy defect	MAIN Assy UCOM Assy	※ **Enter the software update mode and check while updating the firmware via USB memory.**	Perform a crosscheck of MAIN Assy and UCOM Assy, and replace the defective Assy.	—

5.4 POWER SUPPLY DIAGNOSTICS

■ Power monitoring circuit

The ERP UCOM (IC402) of this unit always monitors various power voltages and will shut the secondary power source off immediately once an error is detected.
In such a case, the [QUANTIZE/UTILITY (WAKE UP)] LED flashes.



■ Monitored power voltages

The name of a power source denotes its voltage. (Example: V+3R3A, denoting 3.3 V)

Upper limit monitoring

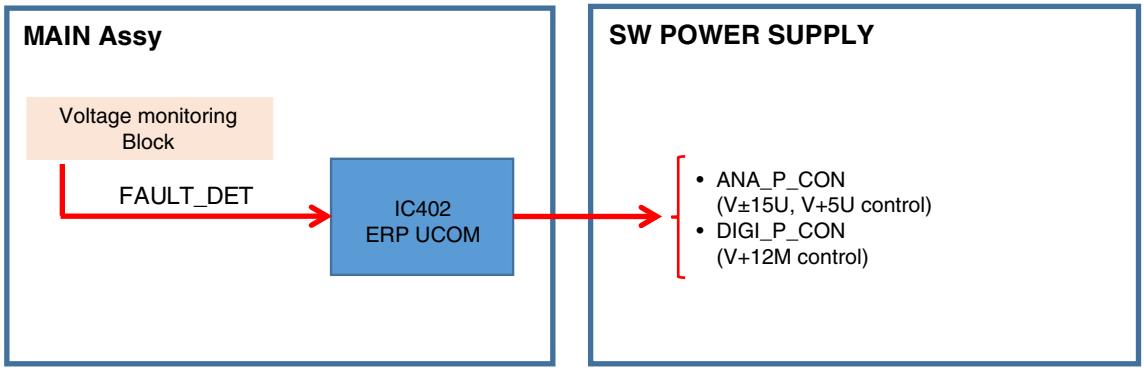
V+3R3D	V+3R3D_CPU	V+3R3D_CLK	V+3R3A_MDAC_A	V+3R3A_MDAC_D
V+3R8D_DIGI	V+5D	V+5D_CPU	V+1R0_CVDD	V+1R0_CVDD1
V+1R35_CPU_DDR	V+1R8D_CPU	V+9LED	V+48D	V-15A
V+5A	V-7HP			

Lower limit monitoring

V+3R3D	V+5D	V+9LED	V+48D	V+15A
V+5A				

■ Outline of the detection system

- An error-alert signal (FAULT_DET) is issued by the voltage-monitoring block.
  The FAULT_DET signal is High level (+3.3 V) in normal state, or it is Low level (0 V) in abnormal state.
  The ERP UCOM detects the state.
- The ERP UCOM issues a signal for interrupting SW POWER SUPPLY (ANA_P_CON, DIGI_P_CON) if an error is detected.

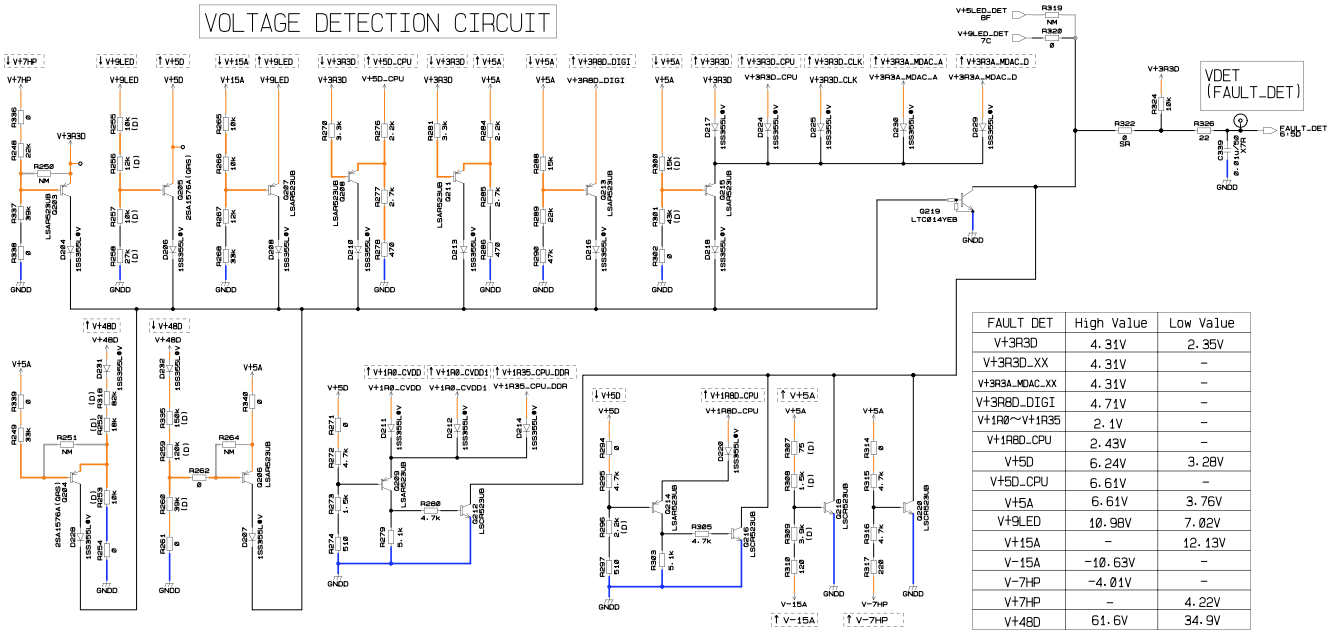


■ Diagnostic procedure

Caution: Each time before turning the unit ON, make sure that each power-supply IC is not short-circuited to GND.

If any voltage is abnormal, that error will be detected by the voltage-monitoring program after it is started after a usual startup of the unit. Then the V+12M, V+15U, V-15U, V+5U power from SW POWER SUPPLY will be stopped.
Identify which power-supply IC is defective, by duplicate drawing and inserting of the power cord while monitoring each voltage with an oscilloscope. Check the value of each voltage immediately before stopping power supply.

■ Voltage-Monitoring Circuit diagram



FAULT DET	High Value	Low Value
V+3R3D	4.31V	2.35V
V+3R3D_XX	4.31V	–
V+3R3A_MDAC_XX	4.31V	–
V+3R8D_DIGI	4.71V	–
V+1R0~V+1R35	2.1V	–
V+1R8D_CPU	2.43V	–
V+5D	6.24V	3.28V
V+5D_CPU	6.61V	–
V+5A	6.61V	3.76V
V+9LED	10.98V	7.02V
V+15A	–	12.13V
V-15A	-10.63V	–
V-7HP	-4.01V	–
V+7HP	–	4.22V
V+48D	61.6V	34.9V

5.5 PHANTOM POWER DIAGNOSTICS

Turn on phantom power

Press and hold the [MIC 1 PHANTOM ON/OFF] button to turn phantom power on/off.
The [MIC 1 PHANTOM ON/OFF] button lights when the mode is on, and +48 V DC phantom power is supplied to the [MIC 1] XLR plug.
If the button does not light on, the phantom power function is locked. Cancel from the UTILITY setting.

Cancellation method in UTILITY setting

In the UTILITY settings, select [MIXER SETTINGS] → [MIC] → [MIC PHANTOM LOCK] and set to "UNLOCK".

Check that +48 V is output from MIC1 using a tester

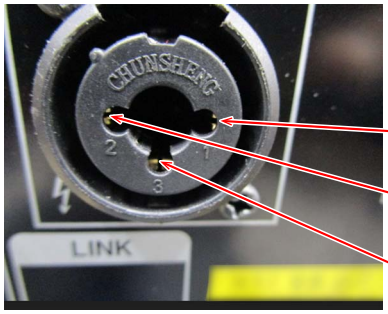
Procedure

① Connect the "COM" side of the tester to "SIGNAL GND".
② Contact the opposite terminal of the tester to "Pin 1" and check that "0V" is displayed.
③ Contact the opposite terminal of the tester to "Pin 2" and check that "48V" is displayed.
④ Contact the opposite terminal of the tester to "Pin 3" and check that "48V" is displayed.

SIGNAL GND

① Connect the "COM" side of the tester to "SIGNAL GND".

[MIC 1] XLR plug



② Contact the opposite terminal of the tester to "Pin 1".
③ Contact the opposite terminal of the tester to "Pin 2".
④ Contact the opposite terminal of the tester to "Pin 3".

5.6 PNLL and PNLC ASSYS DIAGNOSIS METHOD

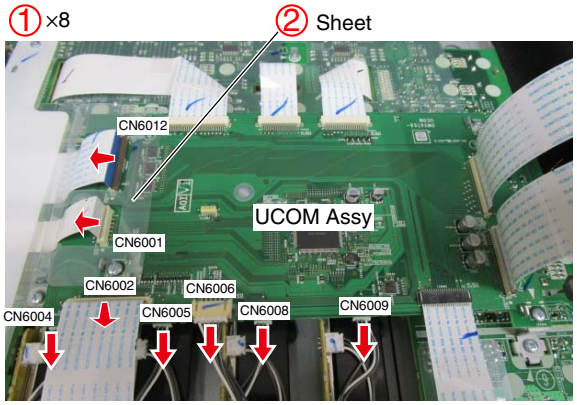
When diagnosing the following Assy, it is necessary to remove the UCOM Assy.

- PNLL Assy ➡ Procedure [1]
- PNLC Assy, CFX1 to 4 Assy ➡ Procedure [2]

■ Preparations

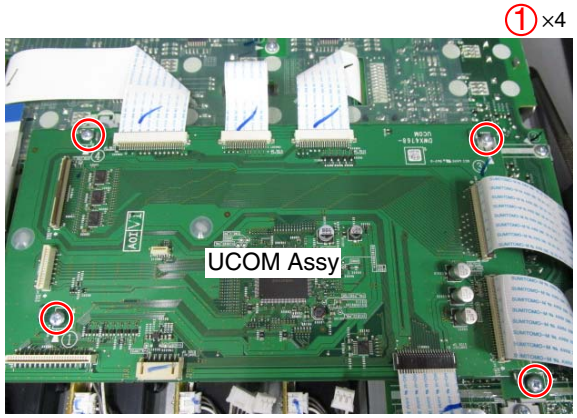
① Remove the Jumper wires which is unnecessary for diagnosis.
Disconnect the 3 FFCs and 5 connectors of lower side of UCOM Assy.
(CN6001, 6002, 6004, 6005, 6006, 6008, 6009, 6012)

② Remove the Sheet from left side of UCOM Assy.

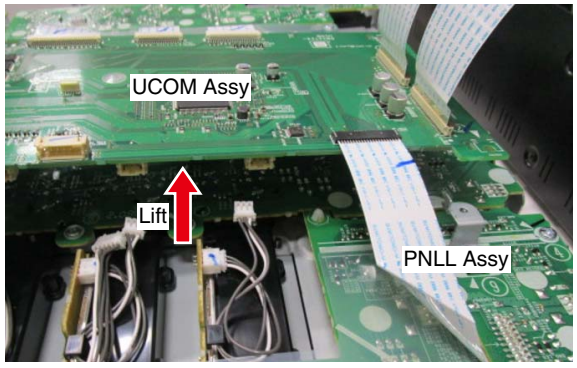


Procedure [1] Diagnosis of PNLL Assy

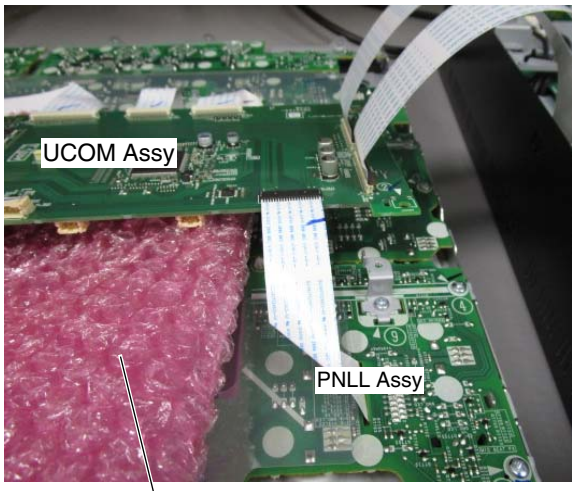
① Remove the 4 screws.
(BBZ30P060FTC)



② Lift the UCOM Assy vertically.



③ Insert the insulating material between the Assy.

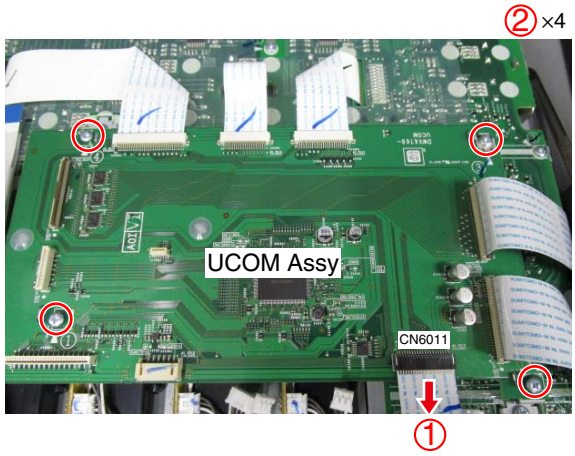


③ Insulating material

➡ **Diagnosis**

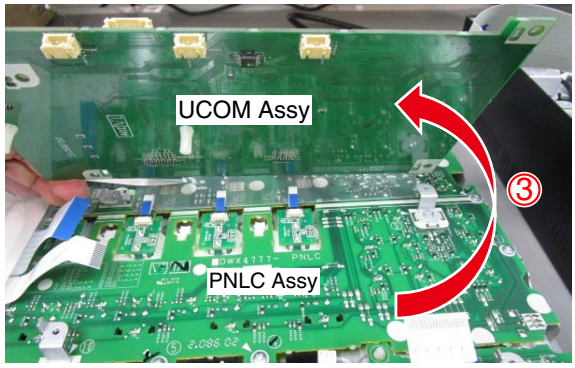
Procedure [2] Diagnosis of PNLC Assy

① Disconnect the one FFC.
(CN6011)
② Remove the 4 screws.
(BBZ30P060FTC)



③ Lift the UCOM Assy as shown.

Caution: Do not let the Assy touch each other.



Diagnosis

5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth

Wi-Fi

■ Check that the wireless router and the unit can be connected normally

- Specifications of the wireless router to be used (recommended)
  Standard : IEEE802.11ac
  Security (encryption method) : WPA2-PSK (AES)

Connecting the unit to a wireless network

You can connect the unit to a wireless network via the following methods:

- Connecting with WPS
- Searching for an access point

Connecting with WPS

You can connect using the PBC method.

❖ PBC method

Connect the unit to the wireless router (access point) by pressing the WPS button on the router.

- Use a wireless router that supports WPS (PBC method).

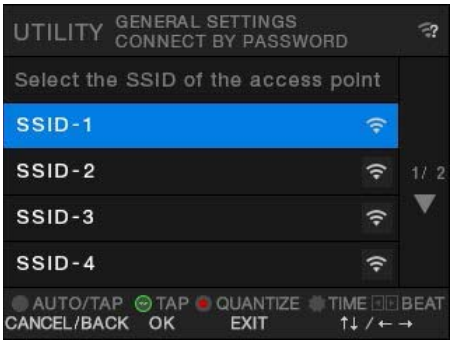
1 Press and hold the [QUANTIZE/UTILITY (WAKE UP)] button.
The Utility menu appears.
2 Turn the [TIME] knob in the Beat FX section or press the [BEAT ◄] or [BEAT ►] button to select [GENERAL SETTINGS], and press the [TAP] button.
The setting items under [GENERAL SETTINGS] appear.
3 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [Wi-Fi], and press the [TAP] button.
4 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [CONNECT BY WPS], and press the [TAP] button.
5 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [PBC], and press the [TAP] button.
The [CONNECT BY WPS (PBC)] screen appears.

6 Press the [TAP] button.
[Connecting...] is displayed.
- Perform the next step within 120 seconds of pressing the [TAP] button.

7 Press the WPS button on the wireless router.
If the connection succeeds, [Success] is displayed.
- Refer to the instruction manual of your wireless router and press the WPS button on the wireless router.
- If [Failure] is displayed, perform the procedure from step 1 again, or try other connection methods.

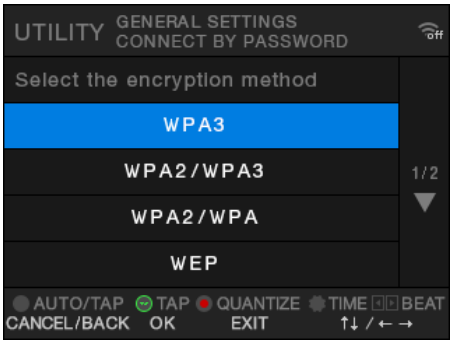
Searching for an access point

1 Press and hold the [QUANTIZE/UTILITY (WAKE UP)] button.
The Utility menu appears.
2 Turn the [TIME] knob in the Beat FX section or press the [BEAT ◄] or [BEAT ►] button to select [GENERAL SETTINGS], and press the [TAP] button.
The setting items under [GENERAL SETTINGS] appear.
3 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [Wi-Fi], and press the [TAP] button.
4 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [CONNECT BY PASSWORD], and press the [TAP] button.
5 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [SELECT SSID], and press the [TAP] button.
The access points list is displayed.

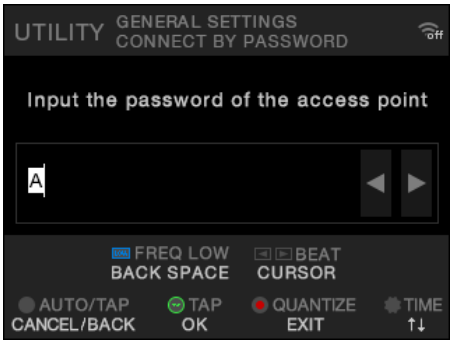


- SSIDs may not be detected depending on the signal strength. In that case, press the [AUTO/TAP] button to return to the previous screen, then navigate to the access points list again.

6 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select an access point, and press the [TAP] button.
The encryption method selection screen appears.



7 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select an encryption method (used in the access point), and press the [TAP] button.
The password (security key) input screen appears.



- If you don't know the encryption method, select [AUTO].

8 Enter a password (security key), and press the [TAP] button.
[Connecting...] is displayed.
If the connection succeeds, [Success] is displayed.
- Use the [TIME] knob and [BEAT ◄], [BEAT ►] and [FX FREQUENCY (LOW)] buttons to enter a password (security key).
- If [Failure] is displayed, perform the procedure from step 1 again, or try other connection methods.

■ Check that the connection between the wireless router and the machine is good

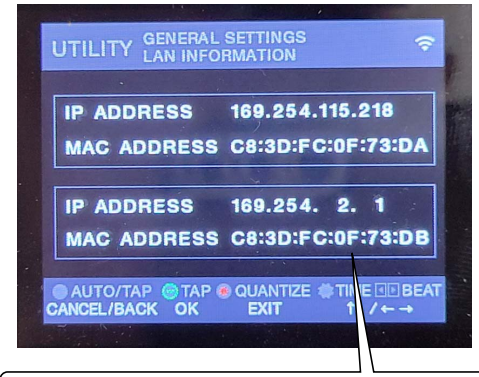
Check wireless LAN (Wi-Fi) signal strength

After connecting the wireless router and unit, check that the wireless LAN signal strength (Signal Level) is normal using the following method.

Connect the PC and unit with a wired LAN

1 Connect the PC and unit with a LAN cable.
- If you connect the PC and the unit directly with a LAN cable, there is no DHCP server in the network, so change the network settings of the PC to match the IP address of the wired LAN of the unit.
- You can check the IP address of the wired LAN of unit by referring to "Viewing the wired LAN information" described later.

Wired LAN information of unit (display example)



Change the network settings of the PC according to the IP address displayed at the bottom

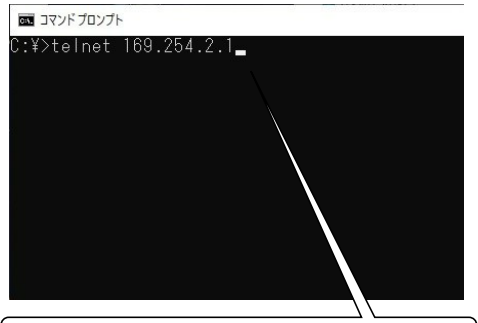
Viewing the wired LAN information

1 Press and hold the [QUANTIZE/UTILITY (WAKE UP)] button.
The Utility menu appears.
2 Turn the [TIME] knob in the Beat FX section or press the [BEAT ◄] or [BEAT ►] button to select [GENERAL SETTINGS], and press the [TAP] button.
The setting items under [GENERAL SETTINGS] appear.
3 Turn the [TIME] knob or press the [BEAT ◄] or [BEAT ►] button to select [LAN], and press the [TAP] button.
4 Press the [TAP] button.
The IP address and MAC address of the wired LAN are displayed.
- If there is a DHCP server in your network, the DHCP server will give an IP address. If a DHCP server doesn't exist, this unit gives an IP address. It takes time for the unit to give an IP address.
- If a LAN cable isn't connected, the IP address won't be displayed.

Telnet connection

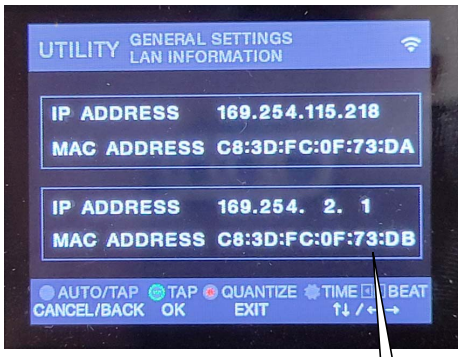
1 Launch a command prompt on your PC. Enter the Telnet command "telnet + IP address of the wired LAN of unit".
- You can check the IP address of the wired LAN of unit by referring to "Viewing the wired LAN information" above.
The IP address used for Telnet connection is the IP address displayed at the bottom when the wired LAN information is displayed.

Command prompt of PC



Enter "telnet + wired LAN IP address of unit"

Wired LAN information of unit (display example)



Use the IP address displayed at the bottom for Telnet connection.

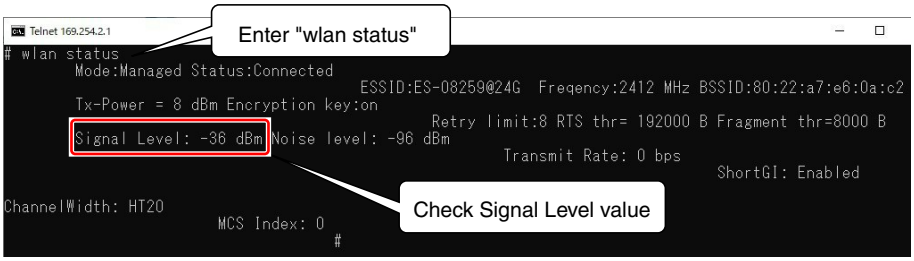
2 Enter your "login name" and "password".
- The "login name" and "password" will be provided separately in the service information.
- When entering a "password", the entered characters are not displayed.

Telnet login

Enter "login name" and "password"

Check signal strength

1 Enter the Wlan Status command “wlan status” and check the value of signal strength (Signal Level).
- A Signal Level of -30 to -50 dBm is normal.
- If the Signal Level is -50 dBm or less, check the following.
  - Is the distance between the wireless router and the unit about 50 cm?
  - Are there any obstacles between the wireless router and the unit?
  - Is the antenna of unit attached correctly?
  - Are the WLAN module inside the unit and the antenna connection cable properly connected?
  - Is the antenna connection cable inside the unit broken?



Bluetooth

■ Check that the Bluetooth device and this unit can be connected normally

- Specifications of the Bluetooth device to be used
  Standard: Bluetooth ver 4.2 or later

Pairing with a Bluetooth device

Connect with a Bluetooth device using the following method.

1 Press and hold the [BLUETOOTH PAIRING] button for approximately 2 seconds.
The unit enters pairing state.
- The Bluetooth indicator blinks while the unit is in pairing state (for approximately 2 minutes).

2 Perform the pairing procedure on a Bluetooth device.
The Bluetooth indicator on the unit stops blinking and lights up when the connection is established.
- Perform the pairing procedure on a Bluetooth device while the unit is in paring state. If the unit can not pair with a Bluetooth device within 2 minutes, the Bluetooth indicator turns off.
- For details on the pairing procedure for the Bluetooth device, refer to the device's instruction manual.
- If you use a Bluetooth device registered to the unit, you can connect the unit with the device by pressing the [BLUETOOTH PAIRING] button briefly.
- You can only connect the unit to 1 Bluetooth device at a time. If the unit pairs with a second device, the registration of the first device will be lost. To register the first device again, perform pairing with the device.

■ Check that there is no problem with the audio input from the Bluetooth device

Inputting audio from a Bluetooth device

Check the audio input from the Bluetooth device using the following method.

1 Connect a Bluetooth device with the unit.
2 Set the input selector switch for the channel to which Bluetooth audio is input to [ᛒ].
3 Play sound on the Bluetooth device.
4 Turn the [TRIM] knob for the channel to which Bluetooth audio is input to adjust the volume.

5.8 CONNECTION CHECK WITH EACH INTERFACE

■ USB

[1. USB B/C terminal]

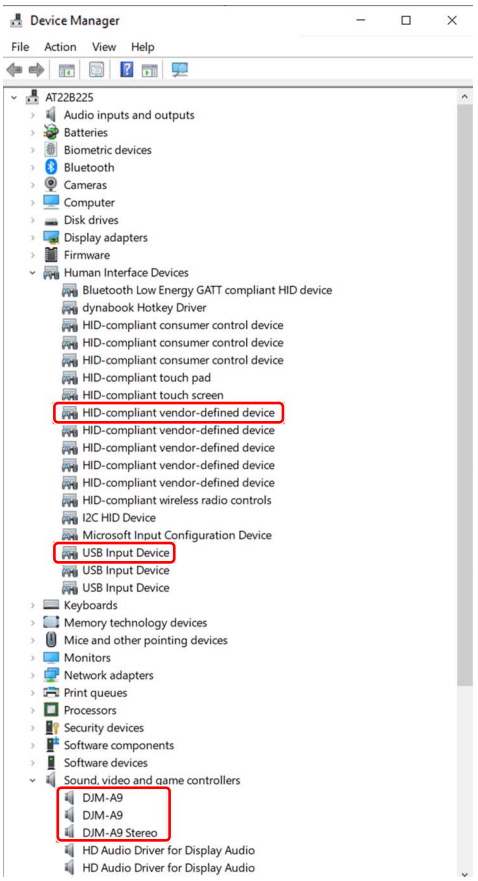
You can check on the PC that the USB communication between the PCs connected to the USB B/C port of main unit is normal.
※ The driver software must be installed beforehand.

• For checking, use the USB connection indicator of the main unit.

Light off : Terminals to which the USB cable is not connected on the same PC are turned off.
Periodic flashing : Periodic flashing when the driver is recognized after connecting to the PC (light on: 200 ms / light off: 800 ms)
Periodic flashing : Periodic flashing when the driver is not recognized after connecting to the PC (light on: 500 ms / light off: 500 ms)

• Use Device Manager for checking.

If the PC and main unit are properly connected, the components of this unit are added in Device Manager (under Hardware) as devices.
If all components are properly displayed, the PC and main unit are properly communicating via the USB terminal.



In a case of Windows 10:
Input with "Device Manager" in the search box of the task bar.
Devices to be added:

- Universal Serial Bus controllers
  USB Composite Device
- Under “Sound, video and game controllers”
  DJM-A9
  DJM-A9
  DJM-A9 Stereo
- Human Interface Device
  HID-compliant vender-defined device
  USB Input Device

A communication check may be easily performed if connection is made with Device Manager displayed on the PC screen.

[2. USB A terminal]

Check that communication between main unit and the external device connected via the USB A terminal is properly performed.
※ A USB memory device is required for checking.

• For checking, use the USB connection indicator of the unit.

Light on : The USB memory device was properly recognized.
Flashing : The unit is in the process of recognizing the connected USB memory device.
(Flashing intervals: 500 ms [light on: 250 ms, light off: 250 ms])
Light off : No USB memory device is plugged in.

■ LAN

[3. LINK]

You can check from main unit if the mixer can properly communicate via LAN.
※ Use a Category 5 cable or a cable with higher specifications for connection.
Either a straight or cross LAN cable can be used when the unit is directly connected with the PC, but when the unit is connected with the PC via a hub, be sure to use a straight cable.

• Check the LAN conditions, using Test mode of main unit

① Start the main unit in Test mode.
② Open "DEVICE" in “MODE 11: DEVICE CHECK.”
③ Press the BEAT ► button to display the second page, and you will see the IP/Subnet display.
④ Check if the LAN is properly connected.

When the LAN is properly connected:
IP: xxx . xxx . xxx . xxx
Subnet: yyy . yyy . yyy . yyy
The above x’ s and y’ s mean any numeric digits 0–9.
Four blocks of numerical string delimited by dots

When the LAN is not properly connected:
IP: EE or 0.0.0.0
Subnet: EE

5.9 STARTUP ERROR DISPLAY

Startup errors are detected by the MAIN CPU/DSP and displayed in the form of "Error E-XXXX" on the Screen display of the main unit.
It is classified into two types: detected by each CPU and displayed by each debug LED, or displayed by the lighting pattern of the LED on the main unit.
Refer to "5.3 TROUBLESHOOTING" for the equivalence method to each error.

■ GUI display

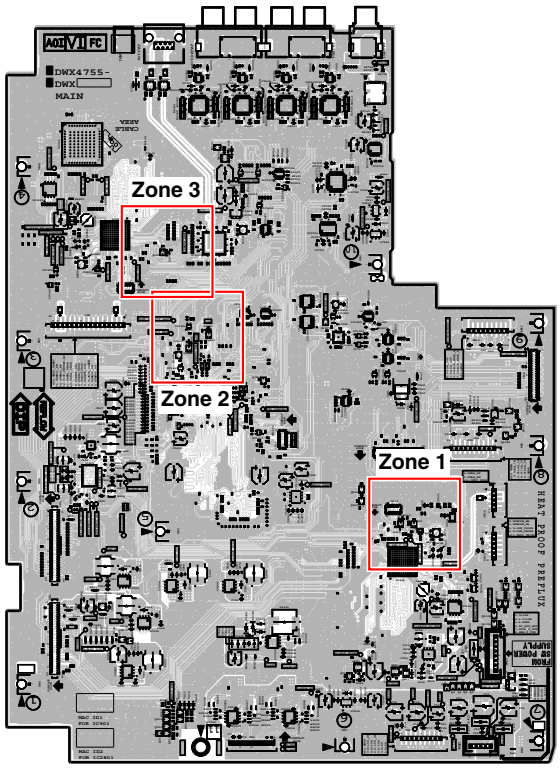
Display	Meaning
Error E-0001	Communication error between MAIN CPU/DSP and PNL UCOM
Error E-0002	MAIN CPU/DSP startup error
Error E-0004	Clock generator setting error
Error E-1001	MULTI DAC setting error
Error E-1002	CH1-2 ADC setting error
Error E-1004	CH3-4 ADC setting error
Error E-0010	DIR setting error
Error E-0020	DIT setting error
Error E-0040	Communication error between MAIN CPU/DSP and ERP UCOM
Error E-0080	WLAN UCOM communication error
Error E-2000	MFi authentication IC communication error

■ LED display

Display	LED	Meaning
The debug LED for ERP UCOM is flashing at a cycle of 100 ms	D601	SDRAM check error for ERP UCOM
The debug LED for ERP UCOM is flashing at a cycle of 400 ms	D601	ERP UCOM is in update mode
The debug LED for ERP UCOM is flashing at a cycle of 2 seconds	D601	ERP UCOM normal startup
The debug LED for MAIN CPU/DSP (DSP) keep lighting on	D1401	MAIN CPU/DSP (DSP) initialization error
The debug LED for MAIN CPU/DSP (DSP) is flashing a little faster. (cycle of 300 ms)	D1401	MAIN CPU/DSP (DSP) stopped due to an error
The debug LED for MAIN CPU/DSP (DSP) is flashing at 1 second intervals. (70 ms on, 970 ms off)	D1401	MAIN CPU/DSP (DSP) normal startup
The debug LED for MAIN CPU/DSP (ARM) is flashing twice and turns off for 1 second repeatedly.	D1801	SDRAM check error for MAIN CPU/DSP
The debug LED for WLAN UCOM is flashing at a cycle of 100 ms	D2901	SDRAM check error for WLAN UCOM
The debug LED for WLAN UCOM is flashing at a cycle of 400 ms	D2901	WLAN UCOM is in update mode
The debug LED for WLAN UCOM is flashing at a cycle of 2 seconds	D2901	WLAN UCOM normal startup
The debug LED (D6002) for PNL UCOM lighting on or off	D6002	PNL UCOM startup error
QUANTIZE/UTILITY (WAKE UP) LED on the main unit flashing (cycle of 500 ms)	LED of main unit	Voltage abnormality was detected.

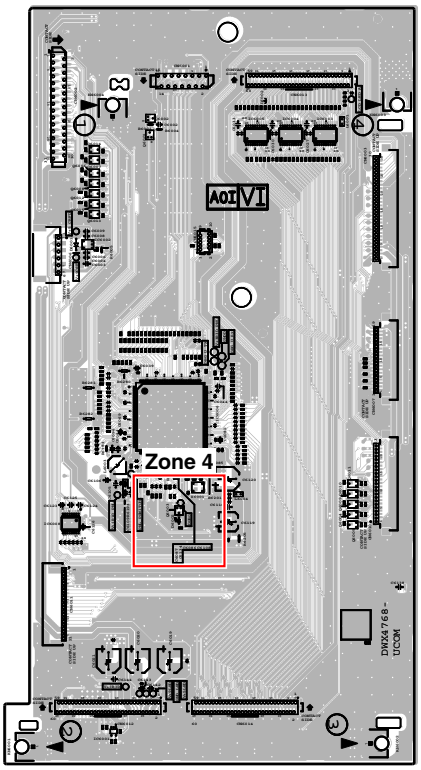
SIDE A

MAIN ASSY

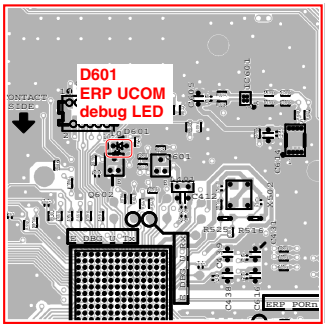


SIDE A

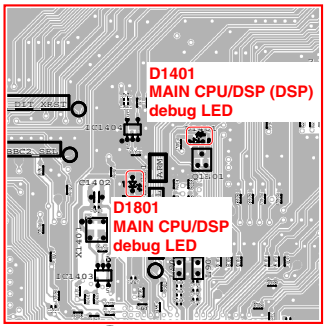
UCOM ASSY



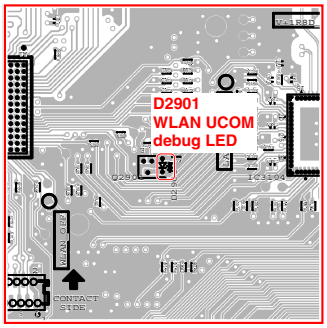
Zone 1



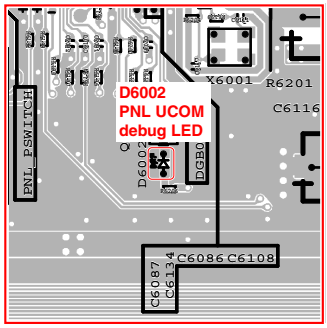
Zone 2



Zone 3



Zone 4



[QUANTIZE/UTILITY (WAKE UP)] LED

6. SERVICE MODE
6.1 TEST MODE

Description of Test Modes

The following Test modes are provided for this product:

Mode 1: Firmware version check mode
Mode 2: Crossfader setting mode
Mode 3: All-LED lights-off mode
Mode 4: All-LED lights-on mode
Mode 5: KEY check mode
Mode 6: SW check mode
Mode 7: CENTER LOCK check mode
Mode 8: VOL check mode
Mode 9: Fader check mode
Mode 10: LCD check mode
Mode 11: Device check mode
Mode 12: Level meter LED check mode
Mode 13: Wi-Fi connect check mode
Mode 14: VOL A/D value check mode
Mode 15: Fader A/D value check mode

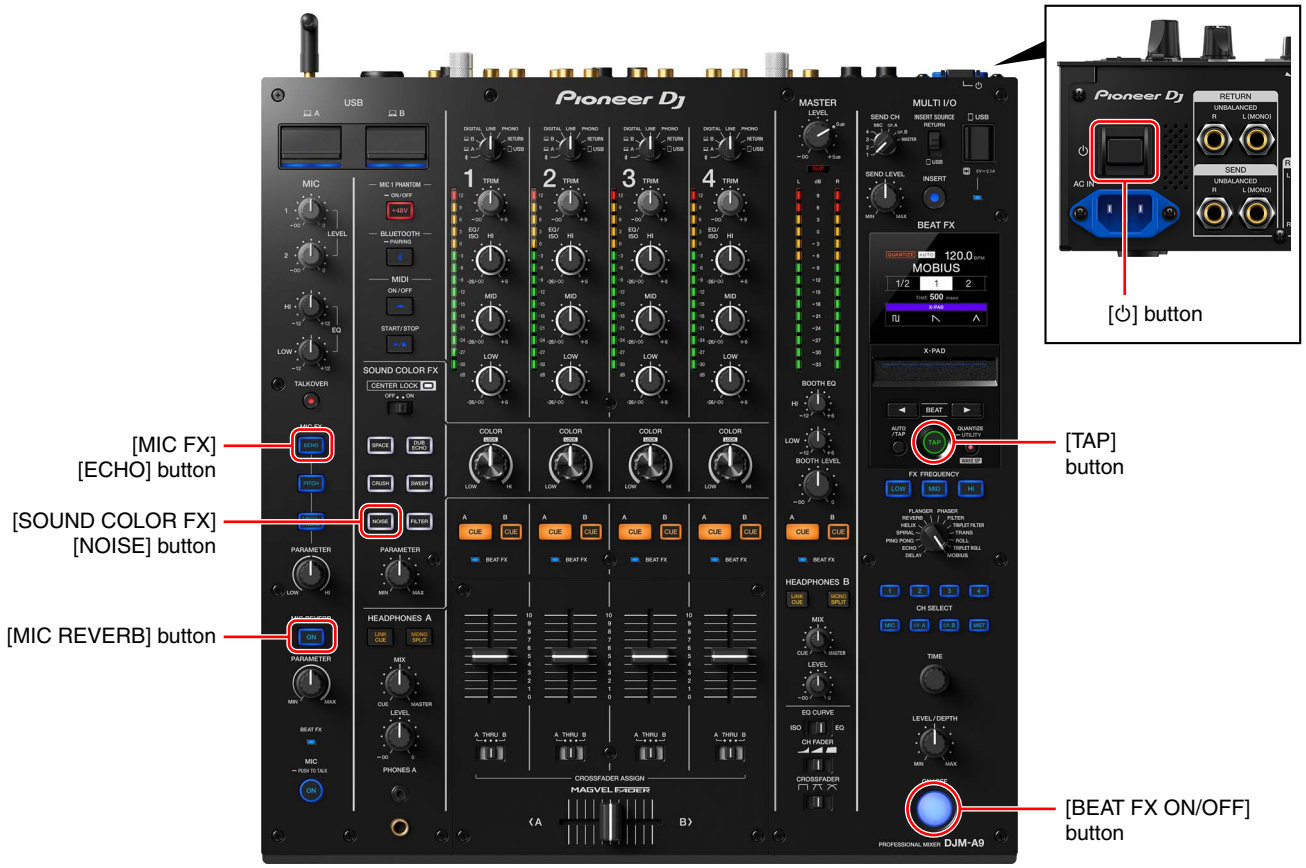
Others
- Standby check mode
- Checker mode
- Factory reset

The following items is posted under different title. Refer to the following.
Mode 2: Crossfader setting mode ➡ "6.2 CROSSFADER CALIBRATION"

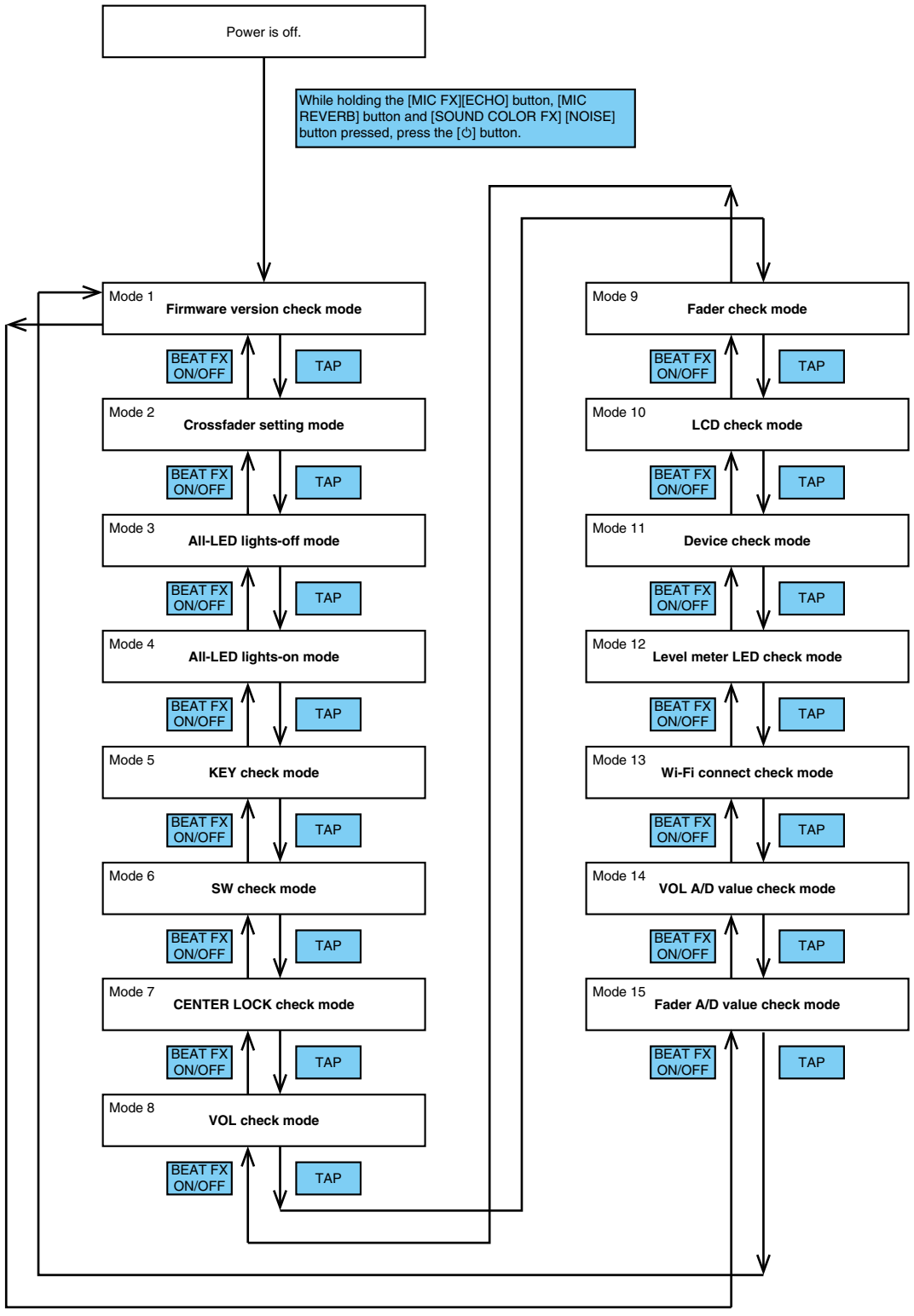
The following items are not used in the service.
Mode 13: Wi-Fi connect check mode
Mode 14: VOL A/D value check mode
Mode 15: Fader A/D value check mode

■ How to enter/exit Test mode

While holding the [MIC FX][ECHO] button, [MIC REVERB] button and [SOUND COLOR FX] [NOISE] button pressed, press the [⏻] button to turn the unit on.
(Be sure to hold the u button pressed until the unit starts up.)
Start up the unit in Mode 1 of Test mode.
To exit from Test mode; press the [⏻] button to turn the unit off.



Mode transition



Details of each mode

Mode 1: Firmware version check mode

[Functional overview]

It is a mode checking of the firmware version of each microcomputer.

[Mode title]

VERSION

[Element]

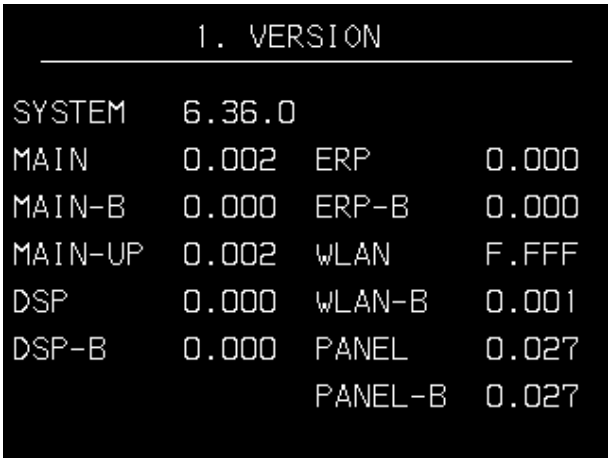
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Correspondence table]

Software name	Display indication
SYSTEM	SYSTEM
MAIN	MAIN
MAIN-BOOT	MAIN-B
MAIN-UPDATE	MAIN-UP
DSP	DSP
DSP-BOOT	DSP-B
ERP	ERP
ERP-BOOT	ERP-B
WLAN	WLAN
WLAN-BOOT	WLAN-B
PANEL	PANEL
PANEL-BOOT	PANEL-B

[Display]

Screen display



[Notes]

Non

Mode 3: All-LED lights-off mode

[Functional overview]

It is the mode that all LED and Screen display light off.

[Mode title]

LED/LCD All OFF
※ This is shown for about 1 second from the start of the mode.

[Element]

[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Notes]

Non

Mode 4: All-LED lights-on mode

[Functional overview]

It is the mode that all LED and Screen display light ON.

[Mode title]

LED/LCD All ON

※ This is shown for about 1 second from the start of the mode.

[Element]

[TAP] button (Lighting)	: Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting)	: Mode change (to previous mode)

[Notes]

LCD brightness is maximum.

Lighting parts:

Mode 5: KEY check mode

[Functional overview]

In this mode, you can press the button to check LED lighting and Screen display.
Turn the [TIME] knob and check that the LED lighting and Screen display.

[Mode title]

KEY TEST

[Element]

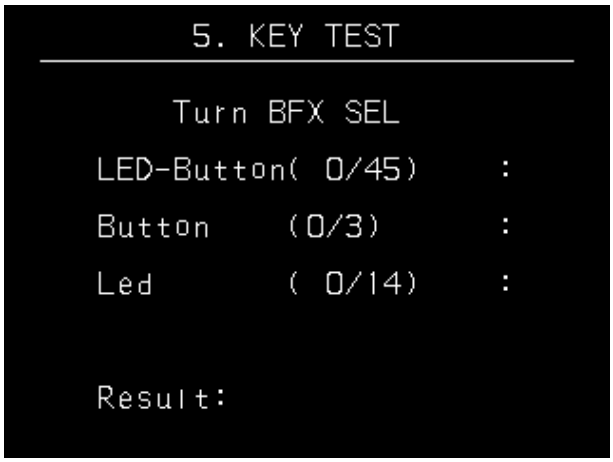
Button to check (See table below)

[BEAT FX selector] switch	: Test start/Test end
[TIME] knob	
[TAP] button (Lighting)	: Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting)	: Mode change (to previous mode)

- Start test when turning [BEAT FX selector] switch.
- Mode can not be changed during test.
- Even when testing, turning the [BEAT FX selector] switch ends the test.

[Display]

Screen display



Number of keys operated / Number of all keys

- This is the mode to check all buttons.
- The Self-lighting button other than [TAP] button is off as default.
- When the [BEAT FX selector] switch is turned, the test starts and all The Self-lighting button is turned on.
- The Self-lighting button is turned off when it is pressed.
- The status of the button you pressed is displayed at ****** in the upper left on the display.
- When pressing of all buttons is completed, [OK] will be displayed on the right side of RESULT.
- LEDs without buttons are turned off in sequence by turning [TIME] knob.

[Correspondence table]

Operating button	Lighting LED	Display indication
MIC1 PHANTOM ON/OFF	MIC1 PHANTOM ON/OFF LED	PHANTOM ON
BLUETOOTH PAIRING	BLUETOOTH PAIRING LED	PAIRING ON
MIDI ON/OFF	MIDI ON/OFF LED	MIDI ON
MIDI START/STOP	MIDI START/STOP LED	MIDI START
SOUND COLOR FX SPACE	SOUND COLOR FX SPACE	CFX 1
SOUND COLOR FX DUB ECHO	SOUND COLOR FX DUB ECHO	CFX 2
SOUND COLOR FX CRUSH	SOUND COLOR FX CRUSH	CFX 3
SOUND COLOR FX SWEEP	SOUND COLOR FX SWEEP	CFX 4
SOUND COLOR FX NOISE	SOUND COLOR FX NOISE	CFX 5
SOUND COLOR FX FILTER	SOUND COLOR FX FILTER	CFX 6
TALKOVER	TALKOVER	TALKOVER
MIC FX ECHO	MIC FX ECHO	MIC FX1
MIC FX PITCH	MIC FX PITCH	MIC FX2
MIC FX MEGAPHONE	MIC FX MEGAPHONE	MIC FX3
MIC REVERB	MIC REVERB	MIC REVERB
MIC ON/OFF	MIC ON/OFF	MIC ON
INSERT	INSERT	MULTI I/O ON
CUE CH1 A	CUE CH1 A LED	CUE 1 A
CUE CH1 B	CUE CH1 B LED	CUE 1 B
CUE CH2 A	CUE CH2 A LED	CUE 2 A
CUE CH2 B	CUE CH2 B LED	CUE 2 B
CUE CH3 A	CUE CH3 A LED	CUE 3 A
CUE CH3 B	CUE CH3 B LED	CUE 3 B
CUE CH4 A	CUE CH4 A LED	CUE 4 A
CUE CH4 B	CUE CH4 B LED	CUE 4 B
CUE MASTER A	CUE MASTER A LED	CUE M A
CUE MASTER B	CUE MASTER B LED	CUE M B
CUE LINK A	CUE LINK A LED	CUE L A
CUE LINK B	CUE LINK B LED	CUE L B
MONO SPLIT A	MONO SPLIT A LED	MONO SP A
MONO SPLIT B	MONO SPLIT B LED	MONO SP B
BEAT ◄	Non	BEAT <
BEAT ►	Non	BEAT >
AUTO/TAP	Non	AUTO/TAP
QUANTIZE	QUANTIZE LED	QTZ
FREQUENCY LOW	FREQUENCY LOW LED	FREQ L
FREQUENCY MID	FREQUENCY MID LED	FREQ M
FREQUENCY HI	FREQUENCY HI LED	FREQ H
CH SELECT 1	CH SELECT 1	CH SEL 1
CH SELECT 2	CH SELECT 2	CH SEL 2
CH SELECT 3	CH SELECT 3	CH SEL 3
CH SELECT 4	CH SELECT 4	CH SEL 4
CH SELECT MIC	CH SELECT MIC	CH SEL MIC
CH CF A	CH CF A	CH SEL A
CH CF B	CH CF B	CH SEL B
CH SELECT MST	CH SELECT MST	CH SEL MST
EFFECT ON/OFF	EFFECT ON/OFF LED	EFX ON
TAP	TAP	TAP

[Notes]

Non

Mode 6: SW check mode

[Functional overview]

It is the mode which LED turns on corresponding to chosen switch.
The change of the [TIME] knob is shown on the Screen display.

[Mode title]

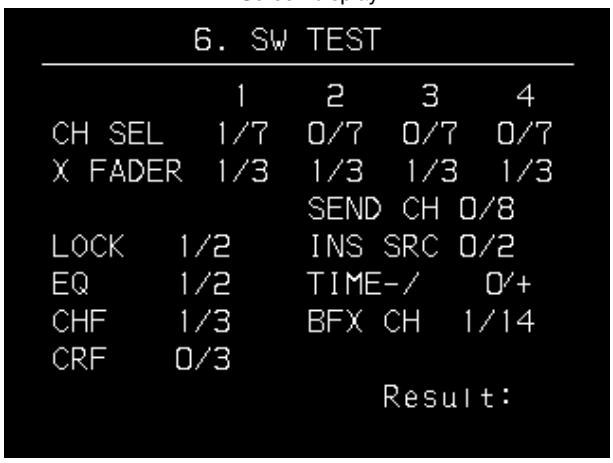
SW TEST

[Element]

Each switch to check
[TIME] knob
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Display]

Screen display



- This is the mode to check all switches.
- The status of the operated switch is displayed.
- The number of selected switch / the number of selected total is displayed.
  When all are selected, the check process is completed.
- Check the [TIME] knob of the rotary encoder at the same time.
  If -100 to +100 is displayed, the check is completed and - or + is highlighted in red.
- When all the checks are completed, [OK] is displayed on the right side of RESULT.

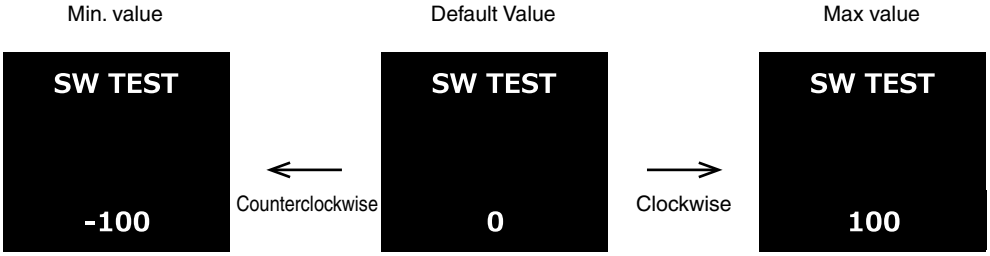
[Correspondence table]

Operating switch		Lighting LED	
Input selector switch CH1	: (Bluetooth)	Channel level indicator CH1	12dB
	: A (USB A)		9dB
	: B (USB B)		6dB
	: DIGITAL		3dB
	: LINE		0dB
	: PHONO		-3dB
	: RETURN		-6dB
	: USB (USB C)		-9dB
Input selector switch CH2	: (Bluetooth)	Channel level indicator CH2	12dB
	: A (USB A)		9dB
	: B (USB B)		6dB
	: DIGITAL		3dB
	: LINE		0dB
	: PHONO		-3dB
	: RETURN		-6dB
	: USB (USB C)		-9dB

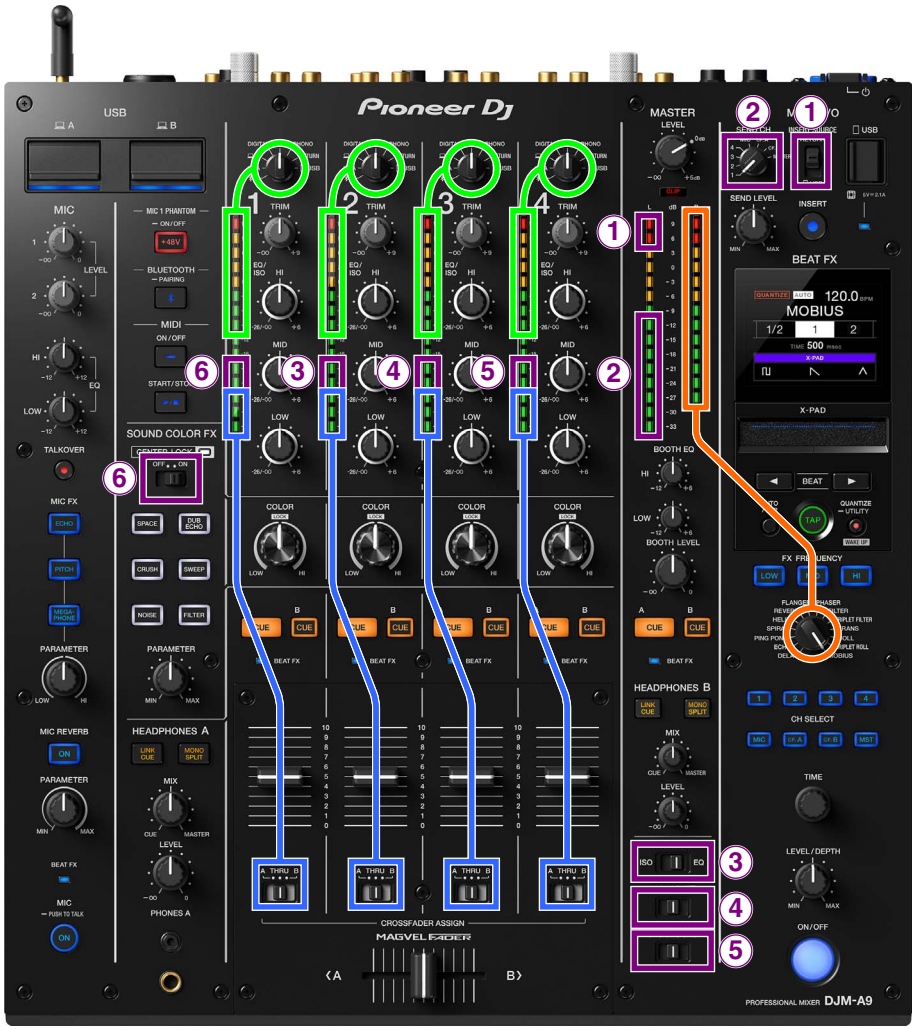
Operating switch		Lighting LED	
Input selector switch CH3	: (Bluetooth)	Channel level indicator CH3	12dB
	: A (USB A)		9dB
	: B (USB B)		6dB
	: DIGITAL		3dB
	: LINE		0dB
	: PHONO		-3dB
	: RETURN		-6dB
	: USB (USB C)		-9dB
Input selector switch CH4	: (Bluetooth)	Channel level indicator CH4	12dB
	: A (USB A)		9dB
	: B (USB B)		6dB
	: DIGITAL		3dB
	: LINE		0dB
	: PHONO		-3dB
	: RETURN		-6dB
	: USB (USB C)		-9dB
CROSSFADER ASSIGN (A, THRU, B) selector switch CH1	: A	Channel level indicator CH1	-30dB
	: THRU		-27dB
	: B		-24dB
CROSSFADER ASSIGN (A, THRU, B) selector switch CH2	: A	Channel level indicator CH2	-30dB
	: THRU		-27dB
	: B		-24dB
CROSSFADER ASSIGN (A, THRU, B) selector switch CH3	: A	Channel level indicator CH3	-30dB
	: THRU		-27dB
	: B		-24dB
CROSSFADER ASSIGN (A, THRU, B) selector switch CH4	: A	Channel level indicator CH4	-30dB
	: THRU		-27dB
	: B		-24dB
CENTER LOCK switch	: OFF	Channel level indicator	-18dB
	: ON		-21dB
INSERT SOURCE selector switch	: RETURN	Master level indicator L CH	9dB
	: USB		6dB
EQ CURVE switch	: ISOLATOR	Channel level indicator CH2	-18dB
	: EQ		-21dB
CH FADER switch	: (Left)	Channel level indicator CH3	-15dB
	: (MID)		-18dB
	: (Right)		-21dB
CROSS FADER CURVE	: (Left)	Channel level indicator CH4	-15dB
	: (MID)		-18dB
	: (Right)		-21dB
SEND CH selector switch	: 1	Master level indicator L CH	-12dB
	: 2		-15dB
	: 3		-18dB
	: 4		-21dB
	: MIC		-24dB
	: CF.A		-27dB
	: CF.B		-30dB
	: MST		-33dB
BEAT FX selector switch	: DELAY	Master level indicator R CH	9dB
	: ECHO		6dB
	: PING PONG		3dB
	: SPIRAL		0dB
	: HELIX		-3dB
	: REVERB		-6dB
	: FLANGER		-9dB
	: PHASER		-12dB
	: FILTER		-15dB
	: TRIPLET FILTER		-18dB
	: TRANS		-21dB
	: ROLL		-24dB
	: TRIPLET ROLL		-27dB
	: MOBIUS		CLIP

[TIME] knob

Operation range
- Default Value: 0
- Max value: 100
- Min. value: -100



[Figure of correspondence]



[Notes]

Non

Mode 7: CENTER LOCK check mode

[Functional overview]

This mode check that the center lock mechanism of the SOUND COLOR FX [COLOR] knob operates normally.

[Mode title]

Center Lock

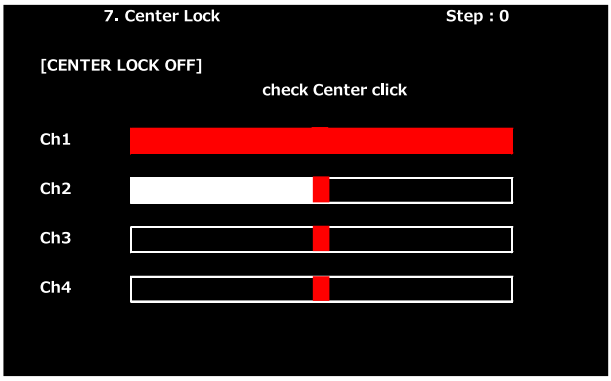
[Element]

[CENTER LOCK] switch	: Center lock mechanism ON/OFF
[COLOR] knob (CH1 to CH4)	: Rotation speed measurement
[BEAT ►] button	: Mode switch (CENTER LOCK OFF/CENTER LOCK ON (clockwise)/ CENTER LOCK ON (counterclockwise))
[BEAT FX selector] switch	: Rotation speed judgment range switch
[CH SELECT] button	: Measurement value reset
[TAP] button (Lighting)	: Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting)	: Mode change (to previous mode)

[Details]

A. Confirmation when [CENTER LOCK] is off

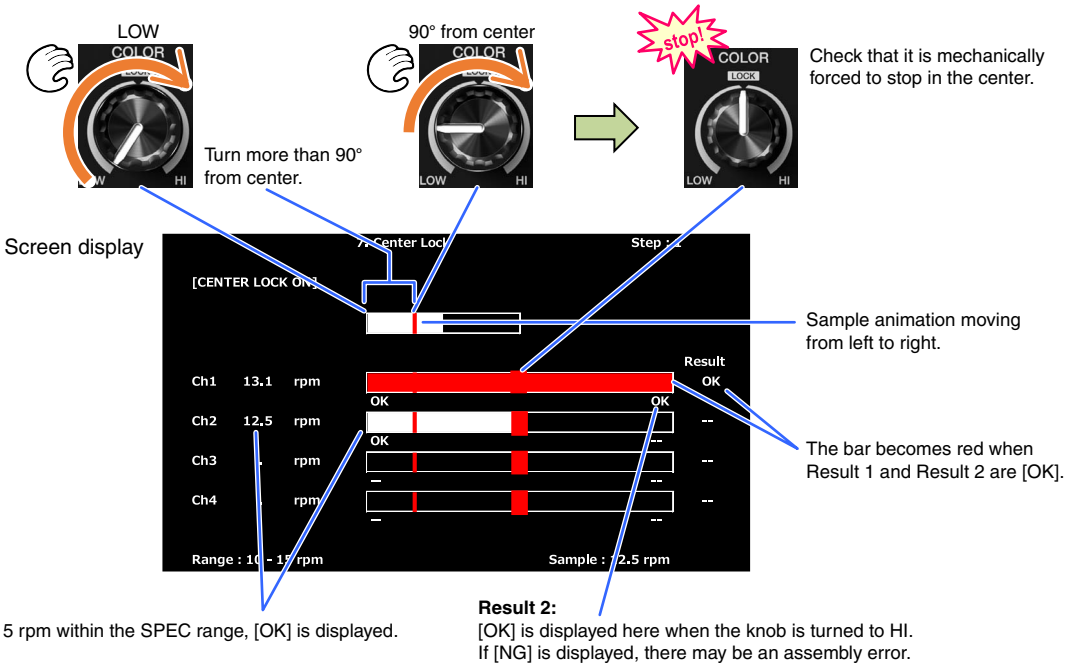
Screen display



① Turn off the [CENTER LOCK] switch.
② Turn the CH1 [COLOR] knob toward LOW.
③ Turn the CH1 [COLOR] knob toward HI.
④ Check that the color of the displayed bar changes from white to red.
Check that there is a click at the CENTER position.
⑤ Repeat Steps ② to ④ for the CH2 to CH4 [COLOR] knobs as well.

B. Confirmation when [CENTER LOCK] is on

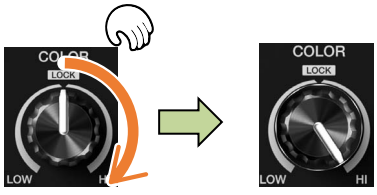
① Press the [BEAT ►] button.
Set the [BEAT FX selector] switch to [DELAY].
② Turn on the [CENTER LOCK] switch.
③ Turn the CH1 [COLOR] knob toward LOW.
④ Press the [CH SELECT] button for CH1.
Measurement of the speed of turning the knob is started.
⑤ Turn the [COLOR] knob from the center by 90° or more to the center.
Check that it is mechanically forced to stop in the center.
Match the turning speed with the sample animation.
[OK] is displayed when the speed of turning the knob is 10 to 15 rpm within the SPEC range. If it is out of the SPEC range, [NG] is displayed.
Make sure it stops at the center when [OK] is displayed. If it does not stop at the center when [OK] is displayed, the assembly may have failed.
If it does not stop at the center when [NG] is displayed, it is not abnormal.



Result 1:
If the rpm is 10 to 15 rpm within the SPEC range, [OK] is displayed.

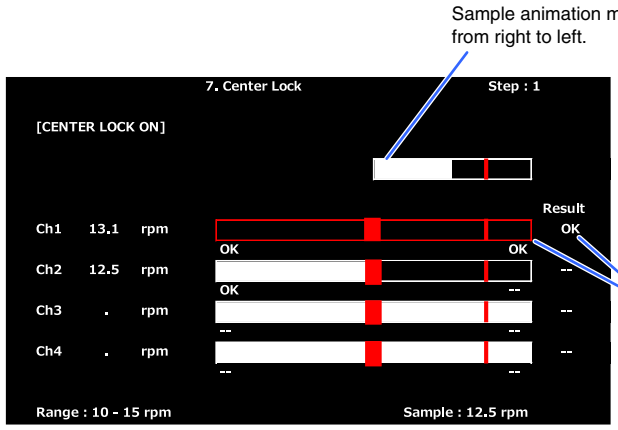
Result 2:
[OK] is displayed here when the knob is turned to HI.
If [NG] is displayed, there may be an assembly error.

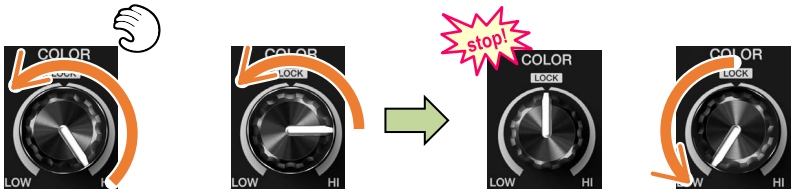
⑥ Release the knob once it locks in the center.
⑦ Then turn the knob to HI.



⑧ Check that [OK] is displayed in Result.
Check that the color of the displayed bar changes from white to red.
If [NG] is displayed, repeat Steps ③ to ⑦.
⑨ Repeat Steps ③ to ⑧ for the CH2 to CH4 [COLOR] knobs as well.
⑩ Press the [BEAT ►] button.
⑪ For Steps ③ to ⑨, check for counterclockwise direction.

Screen display





[Notes]
Non

Mode 8: VOL check mode

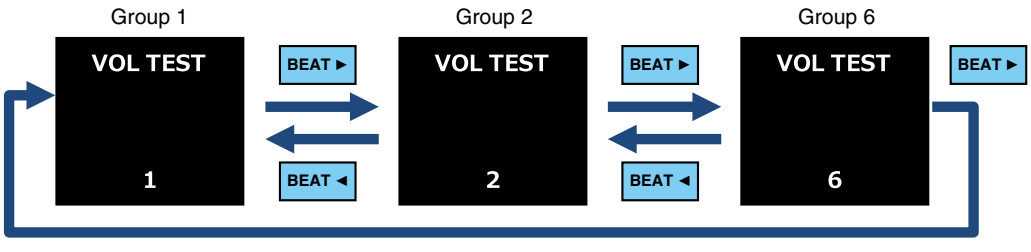
[Functional overview]
It is a mode confirming an A/D conversion level of the rotary volume by level indicator and Screen display lighting.

[Mode title]
VOL TEST

[Element]
Each volume to check
[BEAT ►], [BEAT ◄] button : Group switch
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

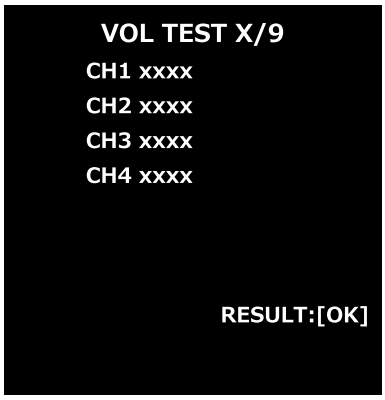
[Display]
Group switch

Separate each rotary volume into six groups and switch with [BEAT ►], [BEAT ◄] buttons.
- When the selected rotary volume is turned from MIN to MAX, the check is completed and the item name turns red.
- When all the checks are completed for each group, [OK] is displayed on the right side of RESULT.



Value display

Display the item name of each rotary volume.



※ X: Group number
※ xxxx: Operation volume

[Correspondence table]

Group 1

Operating volume	Lighting LED	Lighting range
TRIM knob CH1	Channel level indicator CH1	"-∞" : Lights off "+9" : Full Illuminate
TRIM knob CH2	Channel level indicator CH2	"-∞" : Lights off "+9" : Full Illuminate
TRIM knob CH3	Channel level indicator CH3	"-∞" : Lights off "+9" : Full Illuminate
TRIM knob CH4	Channel level indicator CH4	"-∞" : Lights off "+9" : Full Illuminate
HEADPHONES A MIX knob	Master level indicator L CH	"CUE" : Lights off "MASTER" : Full Illuminate
HEADPHONES A LEVEL knob	Master level indicator R CH	"-∞" : Lights off "0" : Full Illuminate

Group 2

Operating volume	Lighting LED	Lighting range
EQ/ISO (HI) knob CH1	Channel level indicator CH1	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (HI) knob CH2	Channel level indicator CH2	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (HI) knob CH3	Channel level indicator CH3	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (HI) knob CH4	Channel level indicator CH4	"-26/-∞" : Lights off "+6" : Full Illuminate
HEADPHONES B MIX knob	Master level indicator L CH	"CUE" : Lights off "MASTER" : Full Illuminate
HEADPHONES B LEVEL knob	Master level indicator R CH	"-∞" : Lights off "0" : Full Illuminate

Group 3

Operating volume	Lighting LED	Lighting range
EQ/ISO (MID) knob CH1	Channel level indicator CH1	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (MID) knob CH2	Channel level indicator CH2	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (MID) knob CH3	Channel level indicator CH3	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (MID) knob CH4	Channel level indicator CH4	"-26/-∞" : Lights off "+6" : Full Illuminate
MASTER LEVEL knob	Master level indicator L CH	"-∞" : Lights off "+5" : Full Illuminate
BOOTH LEVEL knob	Master level indicator R CH	"-∞" : Lights off "0" : Full Illuminate

Group 4

Operating volume	Lighting LED	Lighting range
EQ/ISO (LOW) knob CH1	Channel level indicator CH1	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (LOW) knob CH2	Channel level indicator CH2	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (LOW) knob CH3	Channel level indicator CH3	"-26/-∞" : Lights off "+6" : Full Illuminate
EQ/ISO (LOW) knob CH4	Channel level indicator CH4	"-26/-∞" : Lights off "+6" : Full Illuminate
BOOTH EQ (HI) knob	Master level indicator L CH	"-12" : Lights off "+6" : Full Illuminate
BOOTH EQ (LOW) knob	Master level indicator R CH	"-12" : Lights off "+6" : Full Illuminate

Group 5

Operating volume	Lighting LED	Lighting range
MIC EQ (HI) knob	Channel level indicator CH1	"-∞" : Lights off "0" : Full Illuminate
MIC EQ (LOW) knob	Channel level indicator CH2	"-∞" : Lights off "0" : Full Illuminate
MIC FX PARAMETER knob	Channel level indicator CH3	"-12" : Lights off "+12" : Full Illuminate
MIC REVERB PARAMETER knob	Channel level indicator CH4	"-12" : Lights off "+12" : Full Illuminate
LEVEL/DEPTH knob	Master level indicator L CH	"LOW" : Lights off "HI" : Full Illuminate
SOUND COLOR FX PARAMETER knob	Master level indicator R CH	"MIN" : Lights off "MAX" : Full Illuminate

Group 6

Operating volume	Lighting LED	Lighting range
SEND LEVEL knob	Master level indicator L CH	"MIN" : Lights off "MAX" : Full Illuminate

[Figure of correspondence]

: Group 1
: Group 2
: Group 3
: Group 4
: Group 5
: Group 6

[Notes]

Non

Mode 9: Fader check mode

[Functional overview]

It is a mode checking a value of CH1 to CH4 fader, Crossfader and X-PAD with level indicator.

[Mode title]

FADER TEST

[Element]

Each fader to check
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Correspondence table]

Operating fader	Lighting LED	Lighting range
Channel level indicator CH1	Channel level indicator CH1	"0" : Lights off "10" : Full Illuminate
Channel level indicator CH2	Channel level indicator CH2	"0" : Lights off "10" : Full Illuminate
Channel level indicator CH3	Channel level indicator CH3	"0" : Lights off "10" : Full Illuminate
Channel level indicator CH4	Channel level indicator CH4	"0" : Lights off "10" : Full Illuminate
Crossfader	Master level indicator L CH	"A" : Lights off "B" : Full Illuminate
X-PAD	Master level indicator L CH	"Left" : Lights off "Right" : Full Illuminate

[Notes]

For Crossfader, reflect the A/D value on the both ends saved in "6.2 CROSSFADER CALIBRATION" to the LED.
If it is not saved, use the A/D value of the leftmost sensor.

Mode 10: LCD check mode

[Functional overview]

It is a mode checking on a monochrome pattern, color pattern, black, white, red, green, blue, backlight brightness of the Screen display.

[Mode title]

LCD CHECK
※ At the mode start or Group switch, this title will be displayed about 1 second.

[Element]

[BEAT ►], [BEAT ◄] button : Group switch
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Default]

All LED light off, and Screen display shows Group 1.

[Procedure]

Press [BEAT ►], [BEAT ◄] buttons to select Group.
Screen display indication will change.

[Group switch]

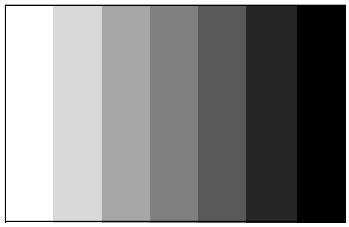
Separate into 13 Groups and switch with [BEAT ►], [BEAT ◄] button.

[Figure of correspondence]

Group 1

LCD
1 MONO

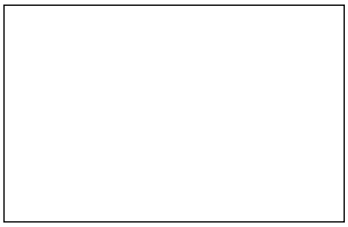
Monochrome 7 color bar
(Left edge is white, Right edge is black)



Group 4

LCD
4 WHITE

White



Group 7

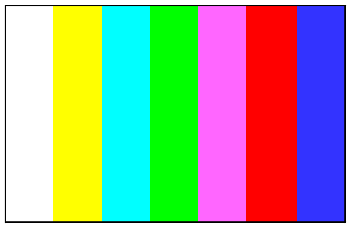
LCD
7 BRIGHT 2

Brightness: 2

Group 2

LCD
2 COLOR

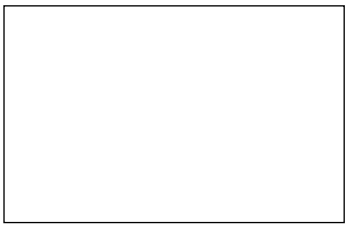
Color 7 color bar
(White, Yellow, Light blue, Green, Pink, Red, Blue)



Group 5

LCD
5 BRIGHT 4

Brightness: 4



Group 8

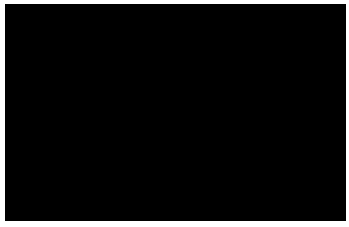
LCD
8 BRIGHT 1

Brightness: 1

Group 3

LCD
3 BLACK

Black



Group 6

LCD
6 BRIGHT 3

Brightness: 3

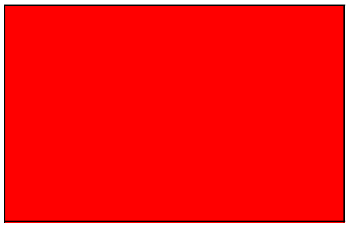
Group 9

LCD
9 BRIGHT 0

Brightness: 0 (Screen saver)

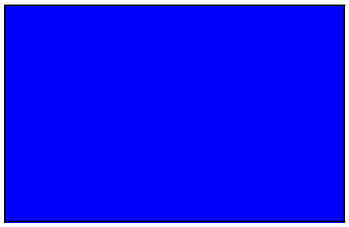
Group 10

Red



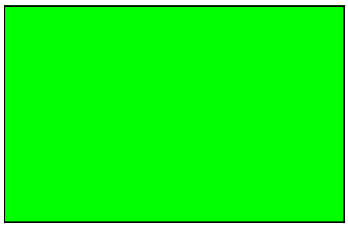
Group 12

Blue



Group 11

Green



Group 13

Checks

Mode 11: Device check mode

[Functional overview]

This mode checks the status of SDRAM, LAN, MAC address, IP address, and subnet mask.

[Mode title]

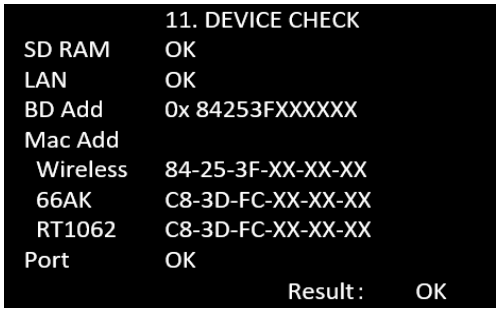
DEVICE CHECK

[Element]

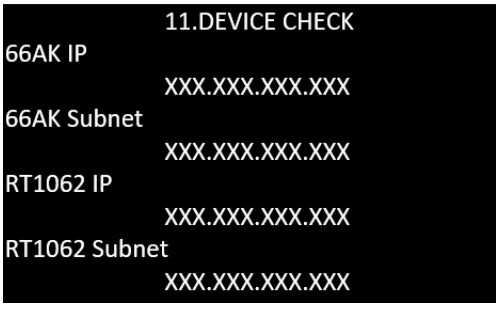
[BEAT ►], [BEAT ◄] button	: Page switch
[AUTO/TAP] button, [QUANTIZE/UTILITY (WAKE UP)] button	: Address switch
[TAP] button (Lighting)	: Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting)	: Mode change (to previous mode)

[Display]

Screen display



Screen display



If all items are OK, [OK] is displayed in Result.
If there is a problem with any item, [NG] will be displayed for that item, and [NG] is displayed in Result.
If the LAN is working properly, the screen display will show the IP and Subnet.

[Correspondence table]

Device/Address	Display indication			
	Title	Result		
DSP SDRAM	SDRAM	CHK	Result	
		OK	Normal	
		NG	Abnormal	
LAN	LAN	OK	Normal	
		NG	Abnormal	
Bluetooth Device Address	BD Add	xxxxxxxx	Address	※1
		--------	Not set	
Wireless MAC Address	Mac Add Wireless	xx-xx-xx-xx-xx-xx	Address	※1
		EE-EE-EE-EE-EE-EE	Not set	
66AK MAC Address	Mac Add 66AK	xx-xx-xx-xx-xx-xx	Address	※1
		EE-EE-EE-EE-EE-E0	Not set	
RT1062 Wired MAC Address	Mac Add RT1062	xx-xx-xx-xx-xx-xx	Address	※1
		EE-EE-EE-EE-EE-E1	Not set	
66AK IP Address	IP Add 66AK	xxx. xxx. xxx. xxx	Address	※1
		EE	Abnormal	※2
66AK Subnet Mask	Subnet 66AK	xxx. xxx. xxx. xxx	Address	
		EE	Abnormal	
RT1062 IP Address	IP Add RT	xxx. xxx. xxx. xxx	Address	※1
		0.0.0.0	Abnormal	※2
RT1062 Subnet Mask	Subnet RT	xxx. xxx. xxx. xxx	Address	
		EE	Abnormal	
PORT	Port	OK	Normal	
		NG	Abnormal	

※1: "x" contains alphanumeric characters of the address value.
※2: "EE" is displayed even during IP Address acquisition. If "EE" is displayed for more than 30 seconds, it is abnormal.
※3: "EE" indication even when Subnet Mask is not finalized.

[Notes]

In order to acquire the IP Address and Subnet Mask, it is necessary to connect to the computer with a LAN cable.

Mode 12: Level meter LED check mode

[Functional overview]

It is a mode checking lighting of the level indicator.

[Mode title]

LEVEL METER TEST

[Element]

[CUE A] CH1, [CUE A] CH2, [CUE A] CH3, [CUE A] CH4 button (Lighting) : level indicator light on
[CUE A] MASTER, [CUE B] MASTER button (Lighting) : level indicator light on
[TAP] button (Lighting) : Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting) : Mode change (to previous mode)

[Details]

When each [CUE] button is pressed, the corresponding level indicator light on one by one from the bottom. (Including CLIP indicator)
The default value is all light off.
If each [CUE] button is pressed after it is pressed 15 times (the top of the level indicator is light on), all light on.
When it is pressed one more time, all light off again.

[Correspondence table]

Operating button	Lighting level indicator
CUE A button CH1	Channel level indicator CH1
CUE A button CH2	Channel level indicator CH2
CUE A button CH3	Channel level indicator CH3
CUE A button CH4	Channel level indicator CH4
CUE A button MASTER	Master level indicator L CH
CUE B button MASTER	Master level indicator R CH

[Notes]

Non

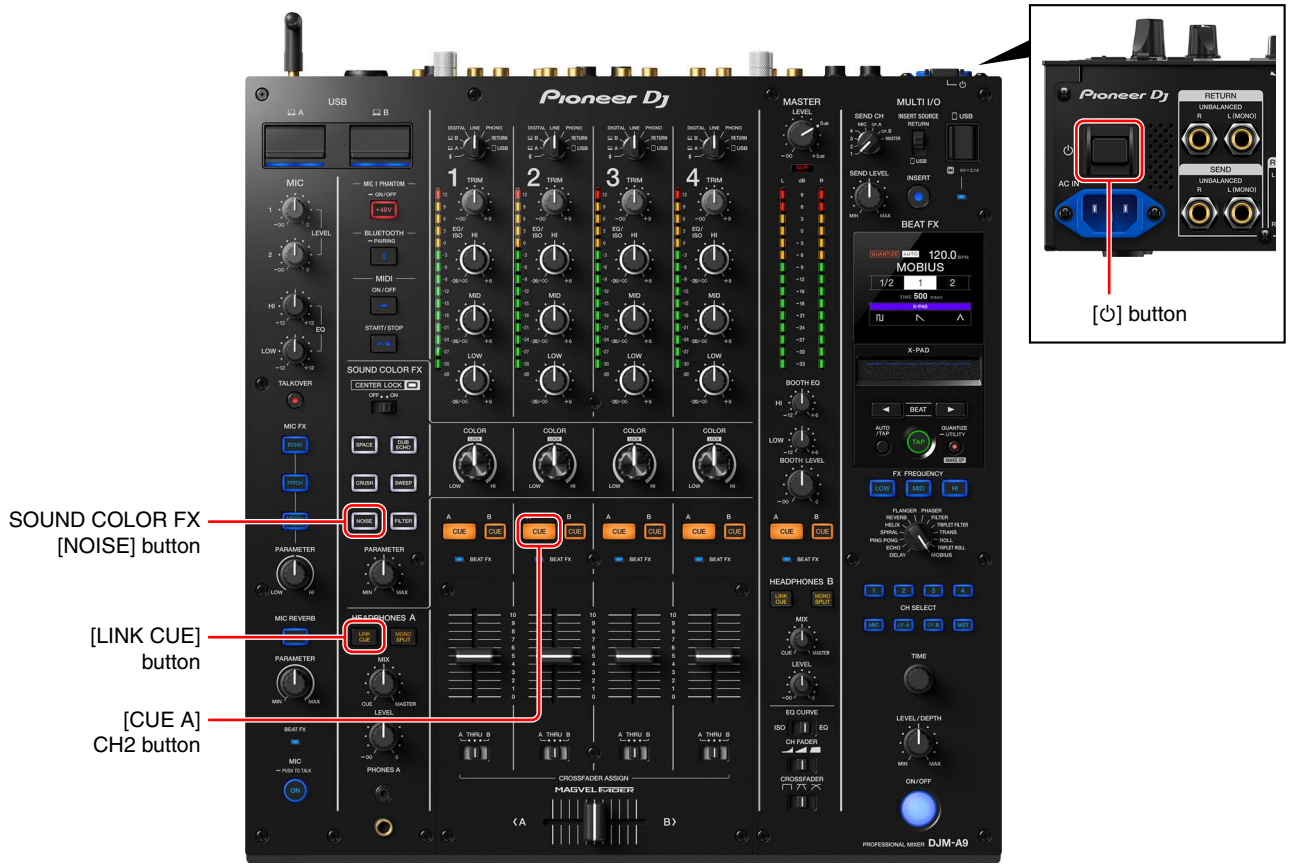
Others: Standby check mode

[Functional overview]

It is a mode checking a standby state. The unit enters standby mode 1 minutes after standby checking mode starts.

[Operation]

While holding the [LINK CUE] button, [CUE A] CH2 button, SOUND COLOR FX [NOISE] button pressed, press the [⏻] button to turn the unit on. Check the unit goes into standby state after 1 minute.
Press the [⏻] button to exit.



Others: Checker mode

[Functional overview]

In this mode, the unit is connected to a PC with a USB cable and device-specific information is written from the PC.
This mode is used only when performing "write the main unit serial number" for service.

[Operation]

While holding the [LINK CUE] button, [CUE A] CH1 button, SOUND COLOR FX [FILTER] button pressed, press the [⏻] button to turn the unit on.
Press the [⏻] button to exit.

[Display]

Screen display

Checker Mode

Mac Add
66AK C8-3D-FC-XX-XX-XX
(mac1)
RT1062 C8-3D-FC-XX-XX-XX
(mac2)
S/N XXXXXXXXXX

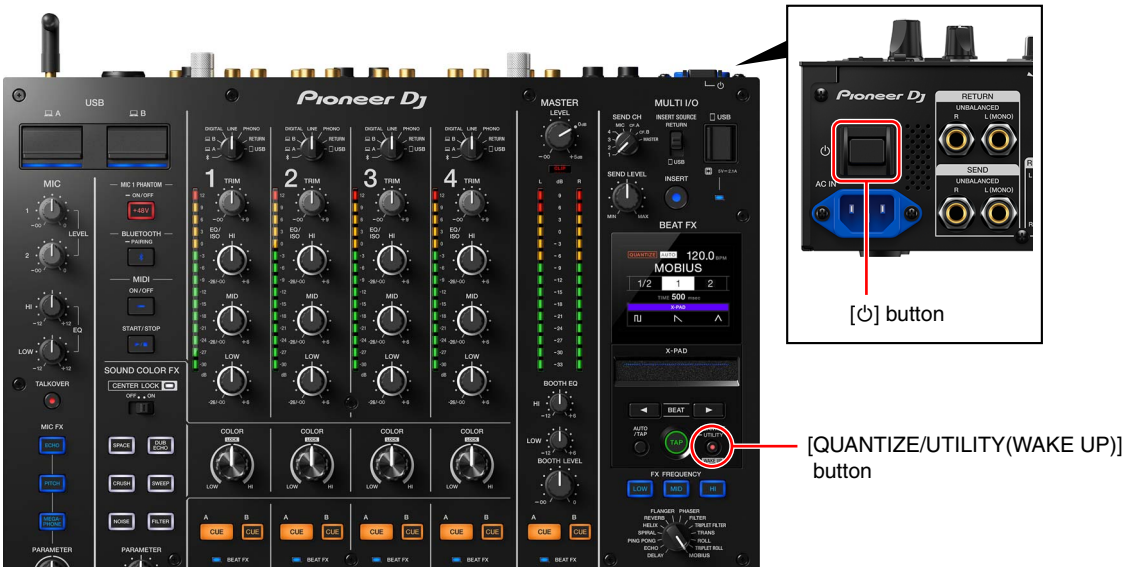
Others: Factory reset

[Functional overview]

Restore settings to factory default.

[Operation]

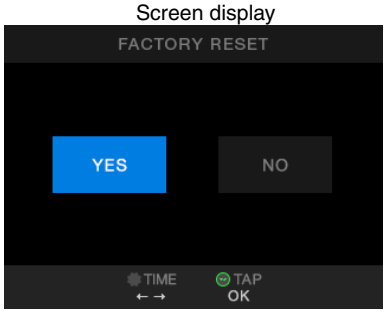
While holding the [QUANTIZE/UTILITY(WAKE UP)] button pressed, press the [⏻] button to turn the unit on.



[Details]

① Choose [YES] and click [OK].
② It is indicated with [PLEASE POWER OFF], and factory setting returns to a factory shipment state. Please turn off the power.

Screen display



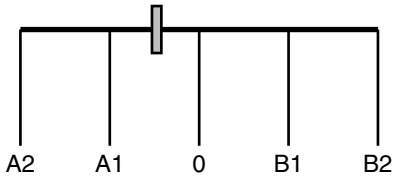
Screen display

6.2 CROSSFADER CALIBRATION

While holding the [LINK CUE] button, [CUE A] CH1 button, SOUND COLOR FX [SPACE] button pressed, press the u button to turn the unit on.
(Be sure to hold the [⏻] button pressed until the unit starts up.)
Then press [TAP] button once to switch to "Crossfader setting mode".
(Refer to "6.1 TEST MODE" for the details.)

[Functional overview]

This mode is for calibrating the crossfader.
Record the information (AD values output from each of the four sensors) of the five positions shown in the figure below.



※ "Crossfader calibration position setting jig (GGF1731)" is required to get the position information of A1, 0 and B1.

[Mode title]

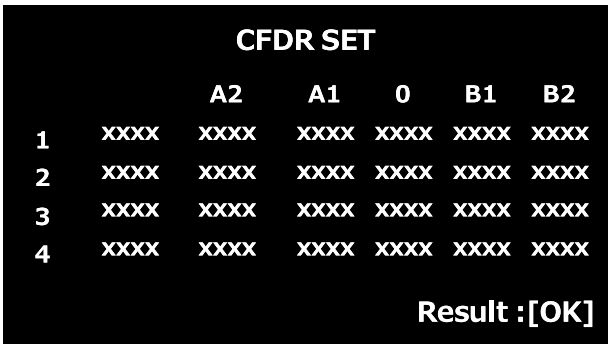
CROSSFADER SET

[Controls]

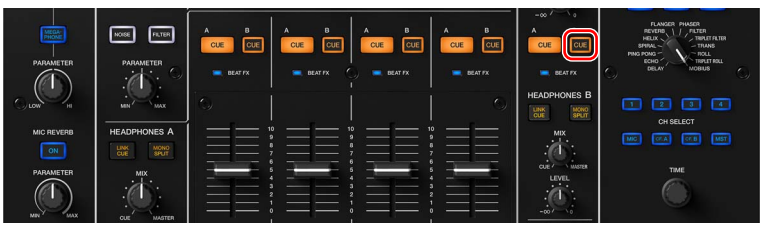
[CUE B] MASTER button (Lighting)	: Set the A/D value / Save the setting value
[CUE A] CH1 button (Lighting) [CUE B] CH1 button (Lighting) [CUE A] CH2 button (Lighting) [CUE B] CH2 button (Lighting) [CUE A] CH3 button (Lighting)	: Start the setting
[TAP] button (Lighting)	: Mode change (to next mode)
[BEAT FX ON/OFF] button (Lighting)	: Mode change (to previous mode)

[Display]

Screen display



- "xxxx" is the A/D value
- The most left column displays the current A/D value, and the other columns display the A/D values stored in flash memory. If there is no stored A/D value, "0000" is displayed.



- [CUE B] MASTER LED lights on in the initial state.

[Details of Operation]

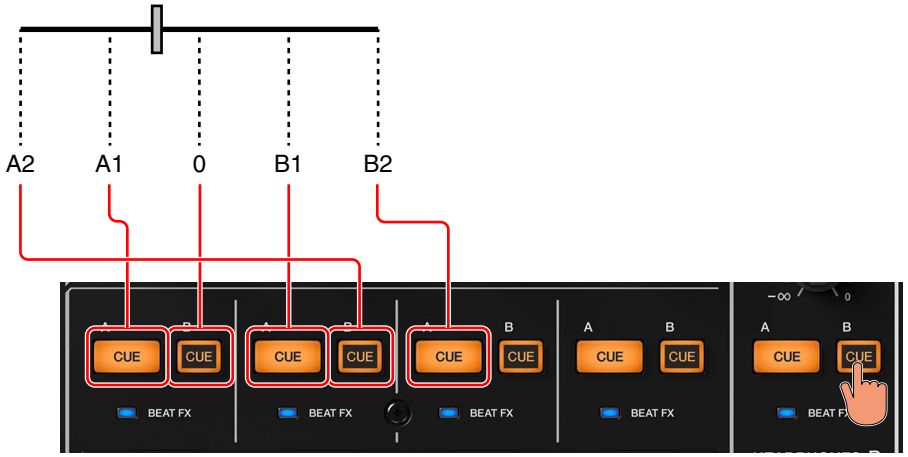
(1) Start the settings

Press [CUE B] MASTER button.

[CUE B] MASTER LED lights off, and [CUE A] CH1, [CUE B] CH1, [CUE A] CH2, [CUE B] CH2 and [CUE A] CH3 LEDs light on.

All A/D values are displayed as "–".

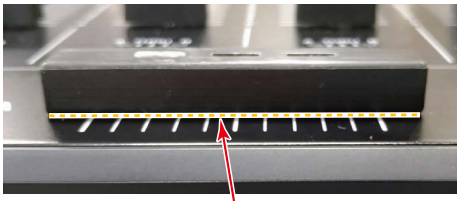
The following Steps (2) to (6) do not need to be performed in order.



Caution:

For positioning, be sure to use "Crossfader calibration position setting jig (GGF1731)" in Steps (2), (3) and (4).

Please confirm that Jig is grounded to the panel surface as shown below. Otherwise, it cannot be accurately calibration.



Check that Jig comes in contact with a panel surface.

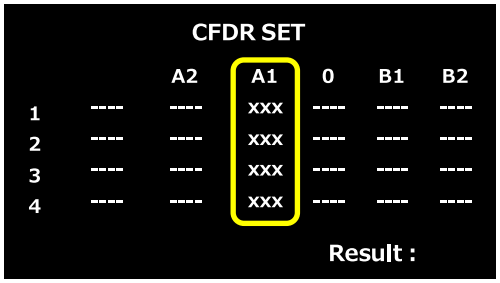
(2) The setting of A1

Move Crossfader to A1 and press [CUE A] CH1 button.

When A/D value is confirmed, it is displayed in the A1 column.

[CUE A] CH1 LED light off.

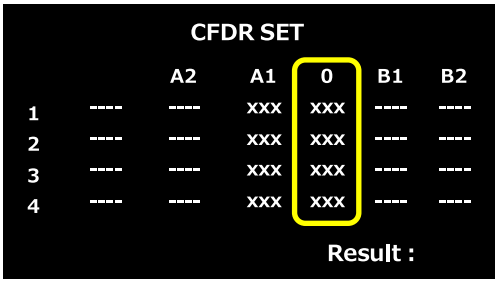
Screen display



(3) The setting of 0

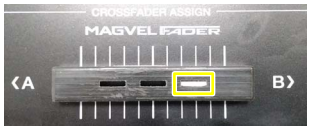
Move Crossfader to 0 (Center), and press [CUE B] CH1 button.
When A/D value is confirmed, it is displayed in 0 column.
[CUE B] CH1 LED light off.

Screen display

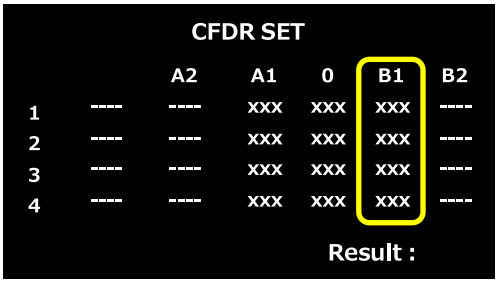


(4) The setting of B1

Move Crossfader to B1, and press [CUE A] CH2 button.
When A/D value is confirmed, it is displayed in B1 column.
[CUE A] CH2 LED light off.

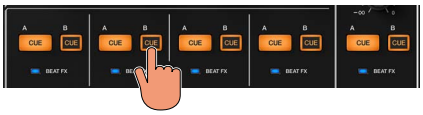


Screen display

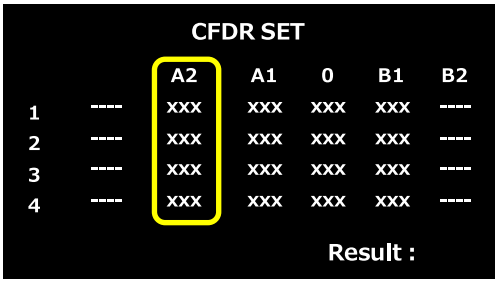


(5) The setting of A2

Move Crossfader to A2, and press [CUE B] CH2 button. At that time, take your hands slowly so that the fader does not move. Otherwise, the position will change due to the cushion at the end of the fader.
When A/D value is confirmed, it is displayed in A2 column.
[CUE B] CH2 LED light off.



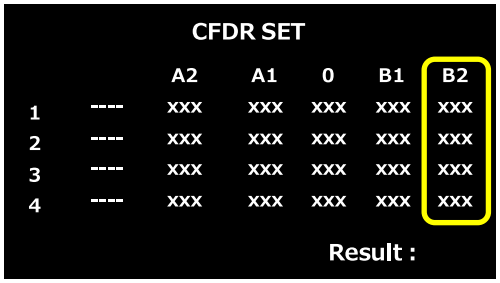
Screen display



(6) The setting of B2

Move Crossfader to B2, and press [CUE A] CH3 button. At that time, take your hands slowly so that the fader does not move. Otherwise, the position will change due to the cushion at the end of the fader.
When AD value is confirmed, it is displayed in B2 column.
[CUE A] CH3 LED light off, and [CUE B] MASTER LED light on.

Screen display



(7) Save the setting value

Press [CUE B] MASTER button.
Confirm that the status shown on Screen display is [OK].
When the calibration is completed successfully, [CUE A] CH1, [CUE B] CH1, [CUE A] CH2, [CUE B] CH2, [CUE A] CH3 LEDs and [CUE B] MASTER light on.
※ If an error occurs, the [CUE B] MASTER LED lights on, waiting for the initial settings to start.

Screen display

[Status display]

It is explanation of status indicated by Screen display.

Display	Explanation
OK	Save completion
NG	Invalid value

[Notes]

- If Crossfader A/D values are not saved, [CUE A] CH1, [CUE B] CH1, [CUE A] CH2, [CUE B] CH2, [CUE A] CH3 and [CUE B] MASTER LEDs flash at startup.
- If the amplitude becomes large due to noise or incorrect operation when acquiring A/D value, that time is treated as a failure, and you can retry up to three times. If all three times fail, the result is [NG].
- The A/D value set in this mode becomes effective immediately after saving.
- If it becomes [NG], the setting can be started again without changing the mode.

6.3 ABOUT THE DEVICE

Device Name	Function	Part No.	Ref. No.	Assy
ERP UCOM	Power and USB-A control	MIMXRT1062DVJ6B@V (NSP)	IC402 (NSP)	MAIN Assy
FLASH ROM (16Mb)	ROM for ERP UCOM firmware	DYW※※※※	IC503	MAIN Assy
SDRAM (64Mb)	RAM for ERP UCOM (USB-A)	W9864G6KH-5	IC604	MAIN Assy
MAIN CPU/DSP	System control (DAC, ADC, DIR, DIT, LCD, LAN) and DSP	66AK2G12ABYA100 (NSP)	IC901 (NSP)	MAIN Assy
DDR3L SDRAM	RAM for MAIN CPU/DSP	W631GU6NB-11@V (NSP)	IC1302, IC1303 (NSP)	MAIN Assy
FLASH ROM (64Mb)	ROM for MAIN CPU/DSP firmware and MAC address	DYW※※※※ (NSP)	IC1402 (NSP)	MAIN Assy
PMIC	Power Management IC for MAIN CPU/DSP	TPS65911AA2NMA@V (NSP)	IC801 (NSP)	MAIN Assy
LAN HUB & PHY	LAN HUB and PHY for signal switching from LINK terminal or WLAN UCON	RTL8304E-CG (NSP)	IC3104 (NSP)	MAIN Assy
MULTI DAC	DAC for MASTER, BOOTH, REC OUT and SEND OUT	ES9026PRO@V	IC5202	AOUT Assy
HP DAC	DAC for HP OUT	PCM1789PWR@V	IC2202, IC2203	MAIN Assy
DIT	Digital Audio Transmitter/Receiver	PCM9211PT@V	IC2702	MAIN Assy
DIR	Digital Audio Transmitter/Receiver	PCM9211PT@V	IC2305, IC2306, IC2503, IC2504	MAIN Assy
MFi authentication IC	MFi authentication IC	MFI343S00176@V (NSP)	IC601 (NSP)	MAIN Assy
WLAN UCOM	WLAN & Bluetooth control	MIMXRT1062DVJ6B@V (NSP)	IC2801 (NSP)	MAIN Assy
FLASH ROM (128Mb)	ROM for WLAN UCOM firmware	DYW※※※※	IC2901	MAIN Assy
SDRAM (256Mb)	RAM for WLAN UCOM	W9825G6KH-6@V	IC3102	MAIN Assy
WLAN Module	Module for WLAN & Bluetooth	SX-SDMAC2832S+@V (NSP)	U2901 (NSP)	MAIN Assy
CH1-2 ADC	ADC for Analog CH1 and 2	ES9842QPRO@V (NSP)	IC4501 (NSP)	AINB SERVICE Assy
CH3-4 ADC	ADC for Analog CH3 and 4	ES9842QPRO@V (NSP)	IC4502 (NSP)	AINB SERVICE Assy
RTN ADC	ADC for RETURN	PCM1803ADB	IC4602	AINB SERVICE Assy
MIC ADC	ADC for MIC1 and 2	PCM1803ADB	IC4703	AINB SERVICE Assy
PNL UCOM	LED, KEY, VR, X-PAD control	MIMXRT1021DAG5B@V	IC6006	UCOM Assy
FLASH ROM (16Mb)	ROM for PNL UCOM firmware	DYW※※※※	IC6007	UCOM Assy
CDC IC	IC for X-PAD control	AD7147ACPZ500RL7 (NSP)	IC6701 (NSP)	CDCB Assy
2.7 inch TFT LCD	Display device	DWX4330	—	Main unit

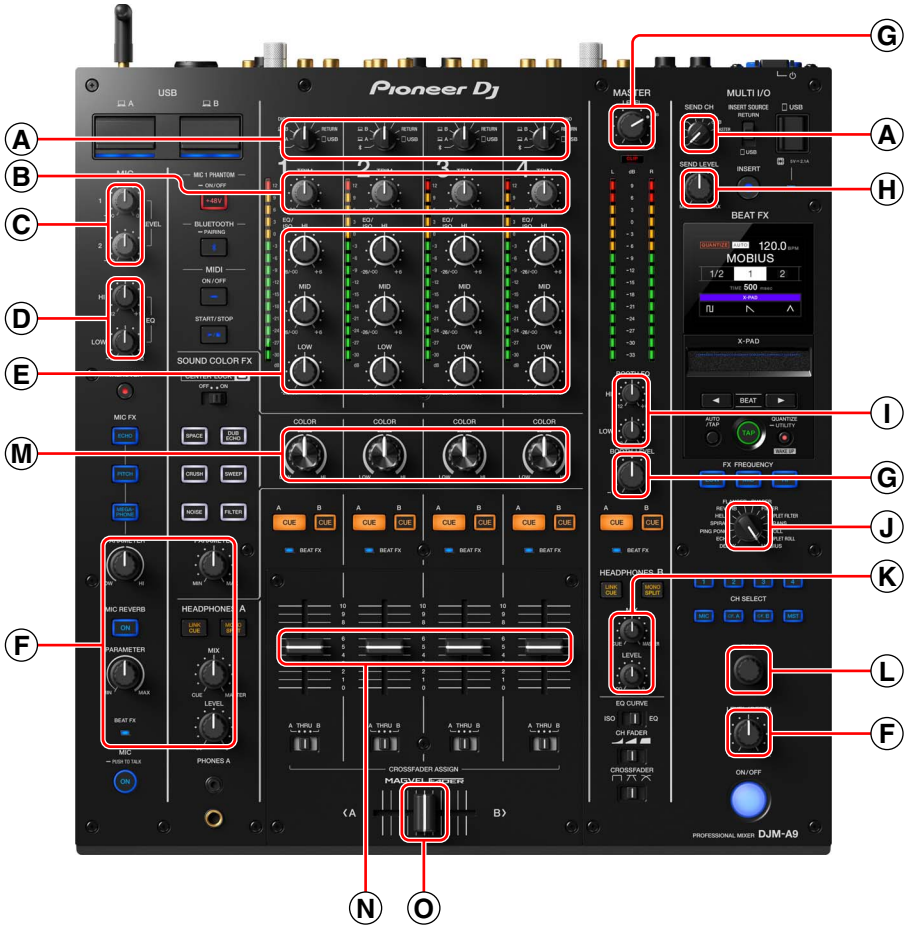
Two or more FLASH and SDRAM are mounted in this unit. Please judge the device which you should diagnose in reference to this list.

Note on DYW※※※※
The "※※※※" part of the part number changes each time the firmware is updated.

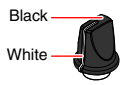
7. DISASSEMBLY

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.

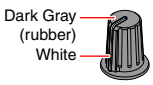
Knobs and Volumes Location



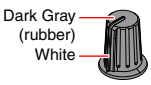
A DAA1415 ×5



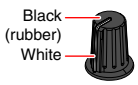
B DAA1417 ×4



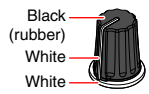
C DAA1470 ×2



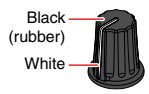
D DAA1471 ×2



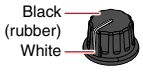
E DAA1430 ×12



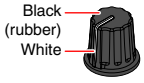
F DAA1434 ×6



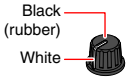
G DAA1265 ×2



H DAA1435 ×1

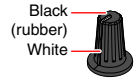


I DAA1420 ×2

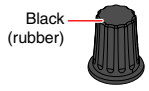


J DAA1205 ×1

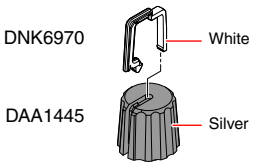
K DAA1307 ×2



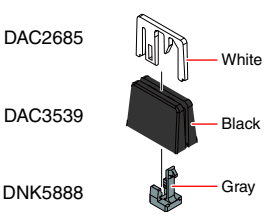
L DAA1180 ×1



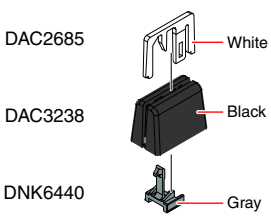
M DAA1445 ×4 + DNK6970 ×4



N DAC2685 ×4 + DAC3539 ×4 + DNK5888 ×4



O DAC2685 ×1 + DAC3238 ×1 + DNK6440 ×1

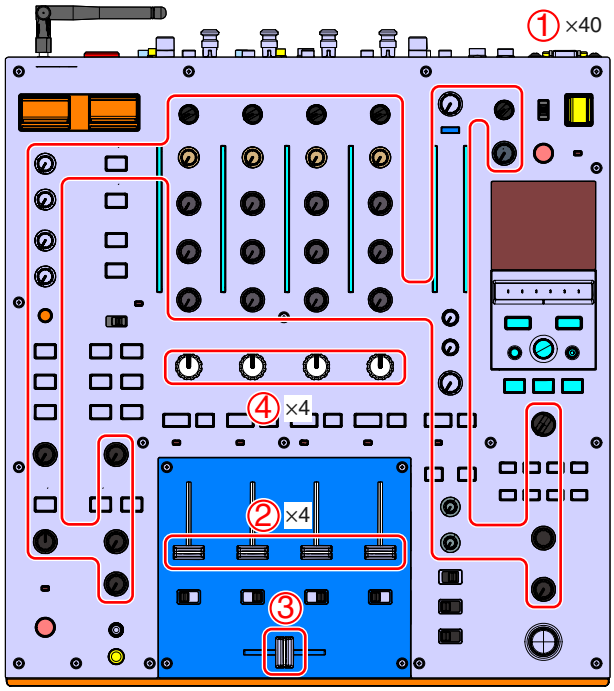


Disassembly

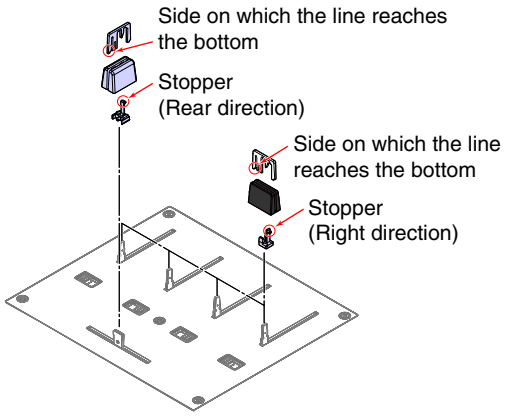
[1] Control panel Section

[1-1] Knobs

① Remove the 40 knobs.
② Remove the 4 Slider knobs 2, 4 Knobs, 4 Slider Knob Stoppers. (See below.)
③ Remove the Slider knob 2, Knob, Stopper. (See below.)
④ Remove the 4 COLOR knobs. (See next page.)



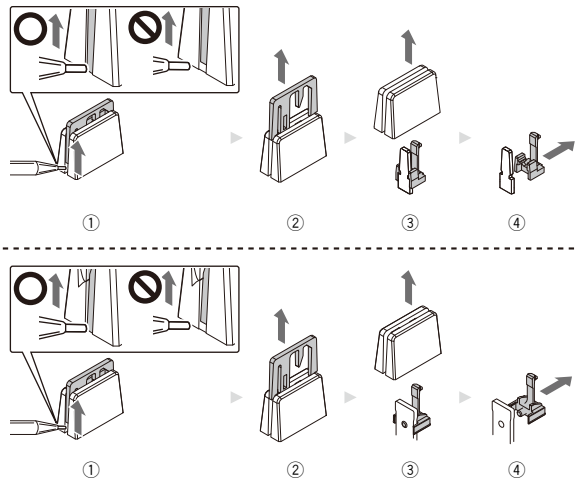
■ The reference of the direction



■ Assembly / Reassembly of the Slider Knob 2, Knob and Slider Knob Stopper (Stopper)

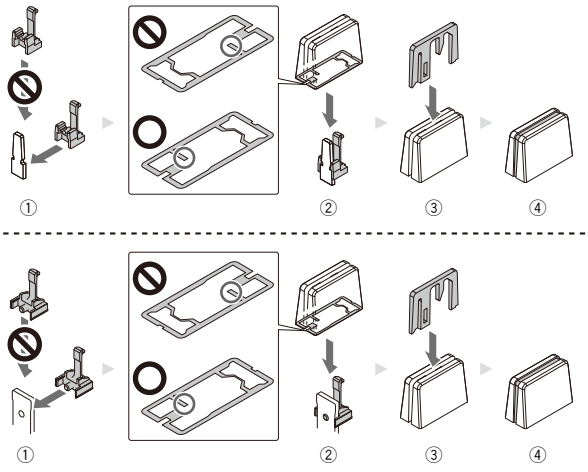
-Disassembly-

① Lift the lower end of the Slider knob 2, using a pointed tool.
② Pull the Slider knob 2 out upward.
③ Pull the Knob out upward.
④ Pull the Slider Knob Stopper (Stopper) out horizontally.



-Reassembly-

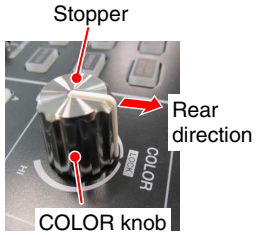
① Insert the Slider Knob Stopper (Stopper) horizontally.
② Insert the Knob, paying attention to its orientation.
③ Insert the Slider knob 2, paying attention to its orientation.



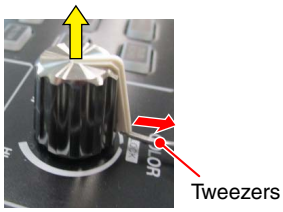
■ Disassembly of the COLOR knob

The panel must be removed to replace the CFX.
Remove all COLOR knobs even if only one CFX unit is being replaced.

① Turn the COLOR knob and turn the stopper toward the rear side of the product.

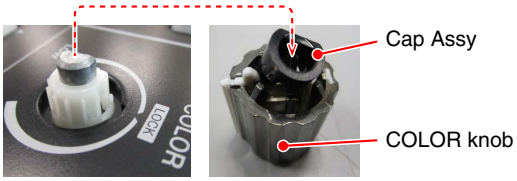


② Insert the tweezers into the gap between the stopper and the panel.
While pulling the stopper in the direction of the red arrow, pull out the knob (including stopper) in the direction of the yellow arrow.

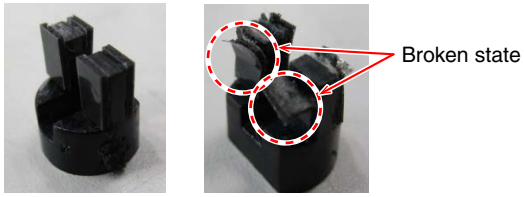


③ With the COLOR knob removed.

Note 1:
When removing the COLOR knob, if the stopper is pulled too little (red arrow direction), the entire cap assembly will come off.
In that case, remove the cap Assy from the COLOR knob.



Note 2:
If the contact rubber attached to the cap assembly is damaged (partial peeling or peeling state) when the COLOR knob is removed, replace the contact rubber.



[1-2] Panel and HPJC Assy

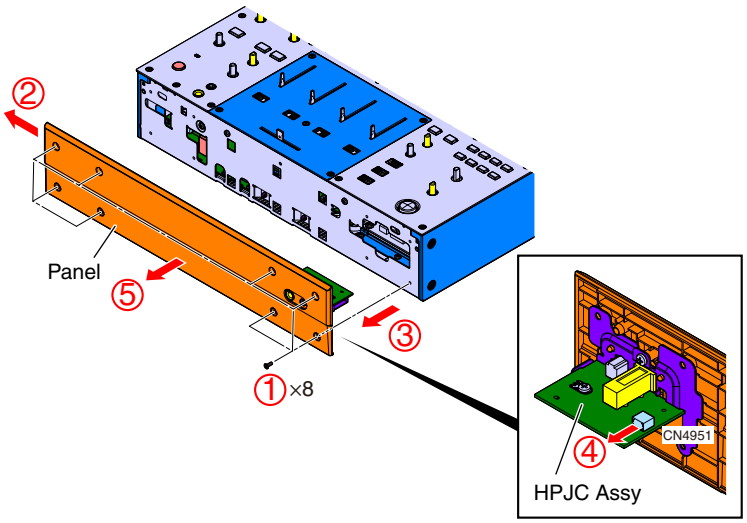
① Remove the 8 screws.
(DBA1290)

Caution:
Be sure to use the following screw at the reassembling!

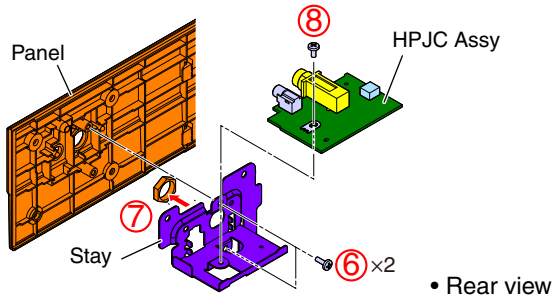

DBA1290

② Slide the Panel around the 5 to 7 mm.
③ Pull out it until you can see the connector of HPJC Assy.
④ Disconnect the one connector.
(CN4951)
⑤ Remove the Panel.

Note:
Remove the Panel after disconnecting the connector earlier.
The connector in the main unit disconnects when you pull the jumper wire at assembling too much.



⑥ Remove the 2 screws and then remove the HPJC Assy with stay.
(BPZ30P080FNI)
⑦ Remove the one nut.
(DBN1018)
⑧ Remove the one screw and then remove the HPJC Assy.
(BBZ30P060FTC)



• Rear view

■ Notes on assembling

At the panel assembling, tighten the screws while pressing the panel like the figure below in the direction of the arrow.

■ Reference information

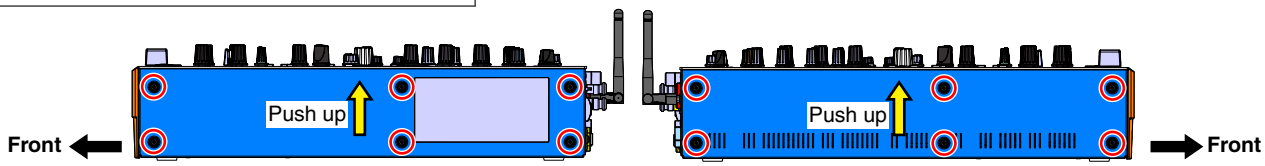
About Side panel

When repairing the substrate, it is not necessary to remove the Side panel.
If removed, reassemble while paying attention to the following points.

1. When repairing the substrate, it is not necessary to remove the Side panel.
   If removed, reassemble while paying attention to the following points.
2. The Side panel is fixed after fixing the Front panel with screws.
   When fixing the Side panel, perform it while pushing it up in the direction of ⇨.
   And be sure to use the specified screws.

Caution:
Be sure to use the following screw at the reassembling!

DBA1290

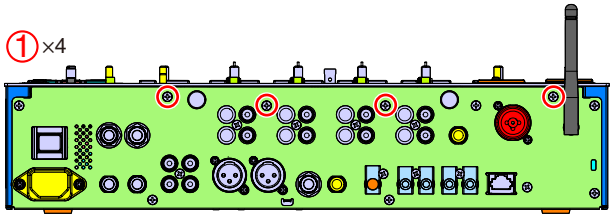


[1-3] Control panel and Panel

① Remove the 4 screws.
(BBZ30P060FTB)

Caution:
Be sure to use the following screw at the reassembling!

BBZ30P060FTB

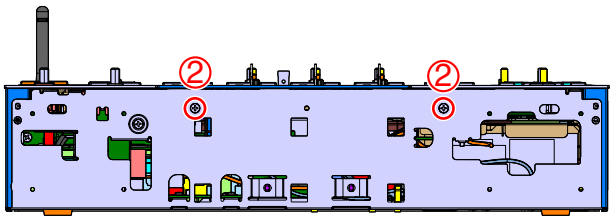


• Rear view

② Remove the 2 screws.
(BBZ30P060FTC)

Caution:
Be sure to use the following screw at the reassembling!

BBZ30P060FTC

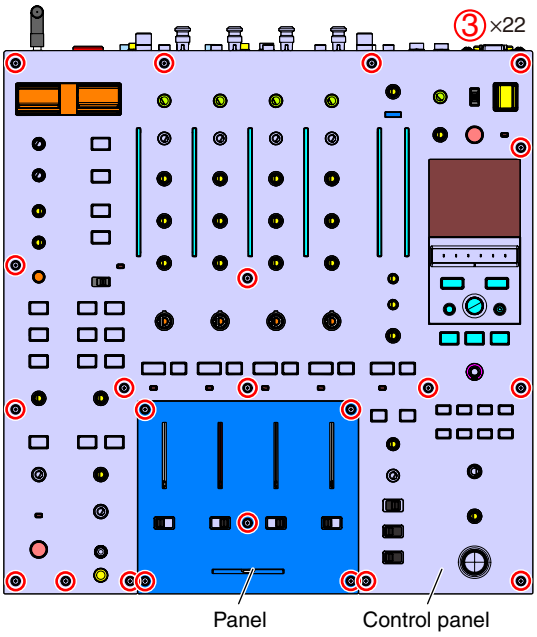


• Front view

③ Remove the 22 screws and then remove the Control panel and Panels.
(DBA1451)

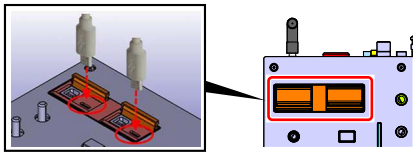
Caution:
Be sure to use the following screw at the reassembling!

DBA1451



■ Notes on assembling

Insert the connector of the USB Type-C cable into the USB Type-C terminal and align it before assembling.
Do not forget to remove it after work.

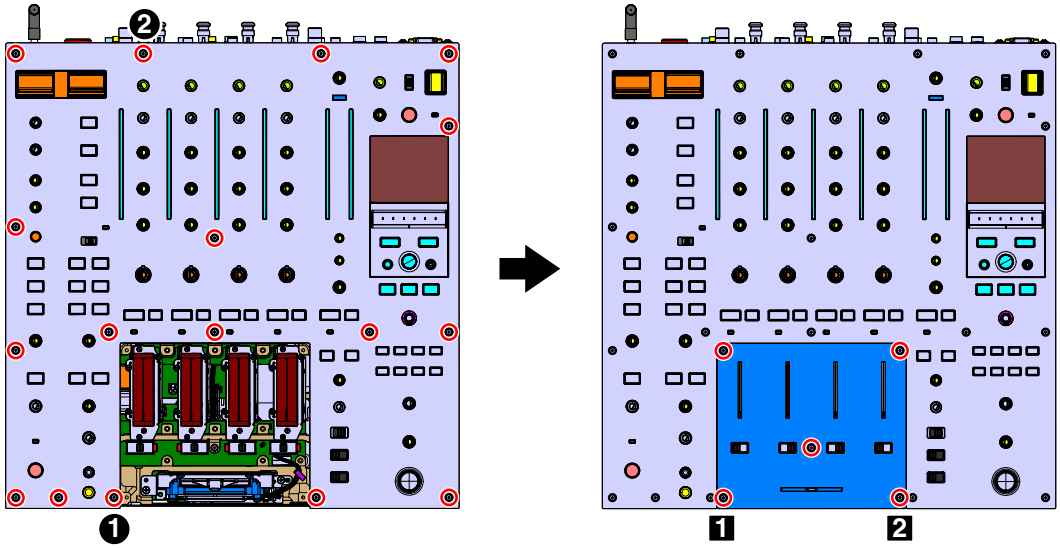


Screw tightening order

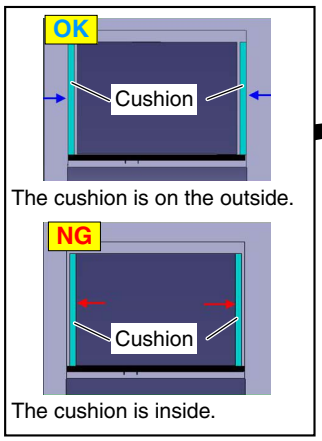
The other screws are random order.

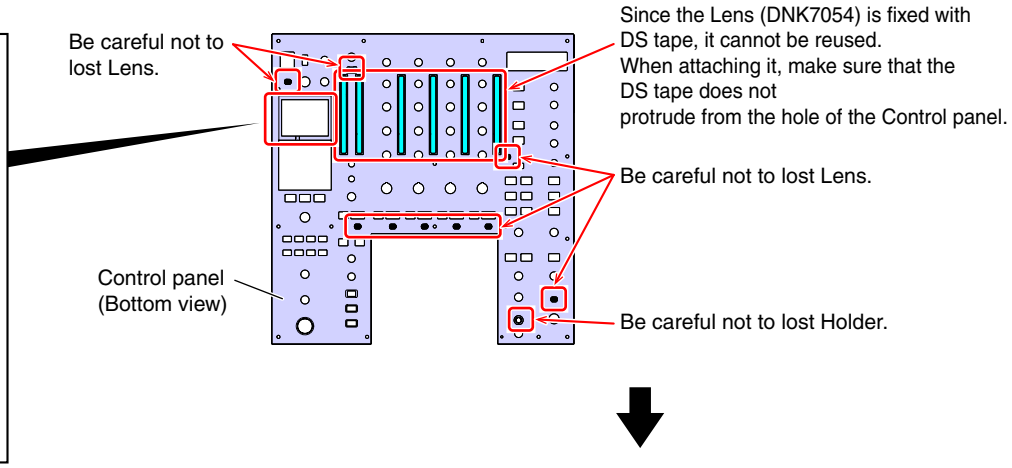
Note:

When you remove Control Panel and Panel, assemble it from Control Panel surely.



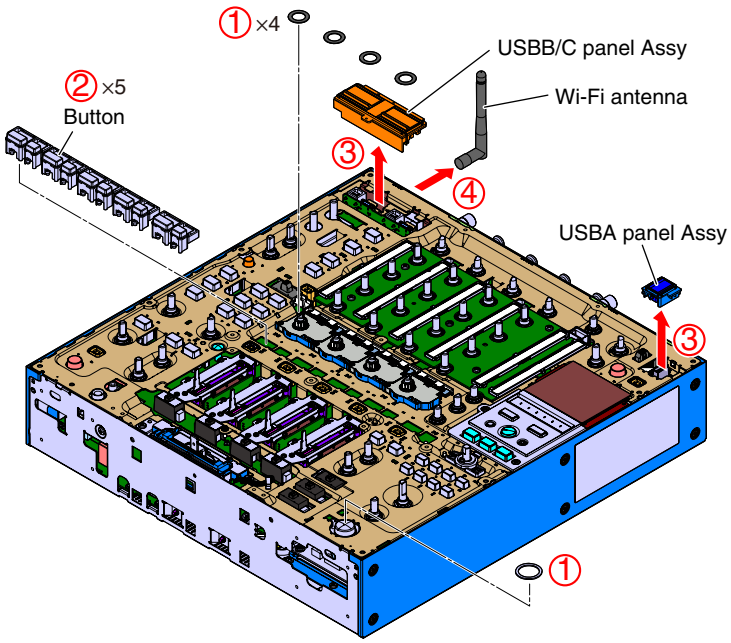
■ Notes on assembling / disassembling





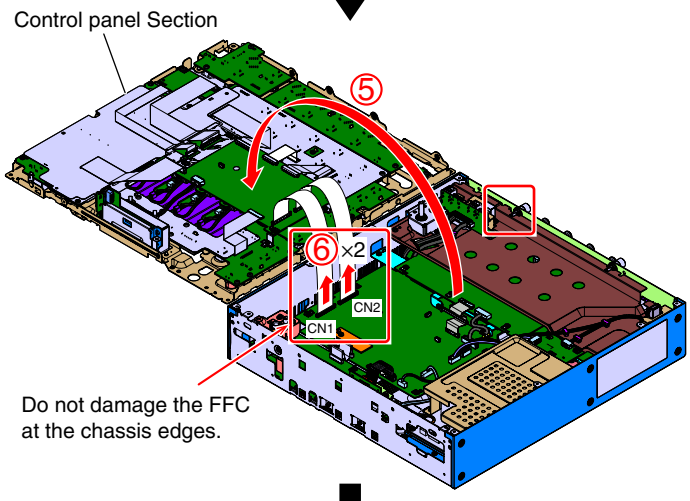
[1-4] Control panel Section

① Remove the 5 Sheets.
② Remove the 5 buttons.
③ Remove the USBA panel Assy and USBB/C panel Assys.
④ Remove the Wi-Fi antenna.



⑤ Open the Control panel Section in the direction of the arrow and remove it.
⑥ Disconnect the 2 FFCs. (CN1, 2)

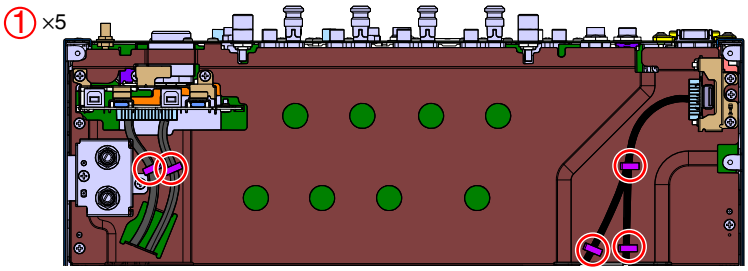
Caution:
The locking function of the connectors of CN1 and 2 are fragile. Please work with care.



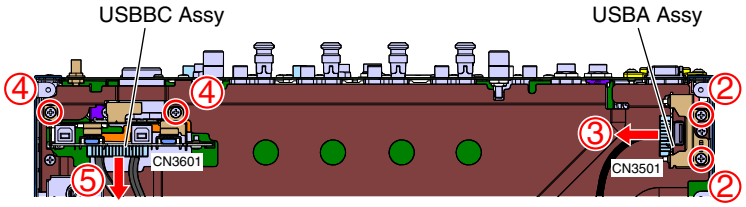
[2] Chassis Section (Top part)

[2-1] USBA and USBBC Assys

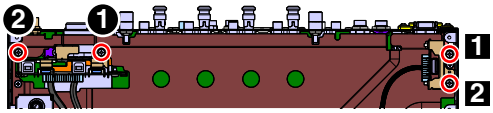
① Release the 5 points of jumper wires.



② Remove the 2 screws and then remove the USBA Assy with stay.
(BBZ30P060FTC)
③ Disconnect the one connector.
(CN3501)
④ Remove the 2 screws and then remove the USBBC Assy with stay.
(BBZ30P060FTC)
⑤ Disconnect the one connector.
(CN3601)



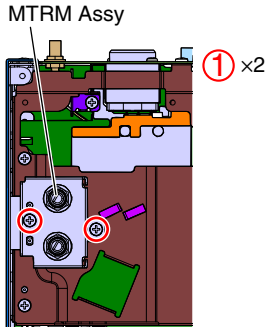
Screw tightening order

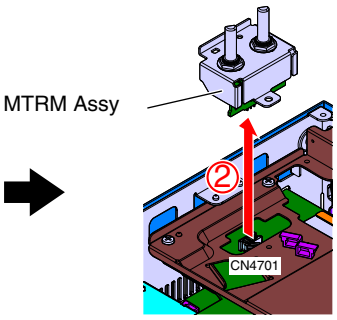


[2-2] MTRM Assy

① Remove the 2 screws.
(BBZ30P060FTC)
② Disconnect the BtoB connector and then remove the MTRM Assy with stay.
(CN4701)

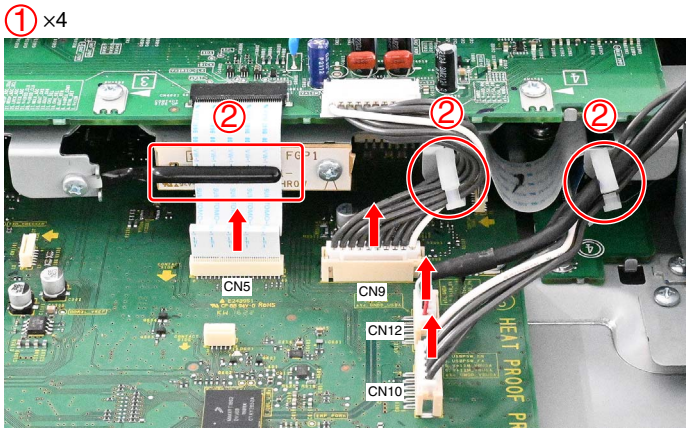
Screw tightening order



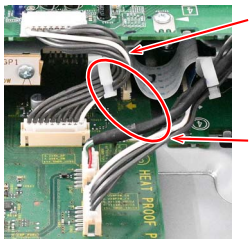


[2-3] Jumper wires

① Disconnect the one FFC and 3 connectors. (CN5, 9, 10, 12)
② Release the 3 points of FFC and jumper wires.



■ Jumper wires styling

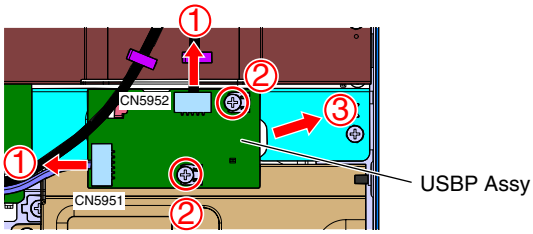


Connects after turning it half a turn counterclockwise while looking at the product from the front.

Styling should be done so that the wires from the USBP and USBA Assy do not come into contact with the wires between the MAIN Assy and the AINB Assy.

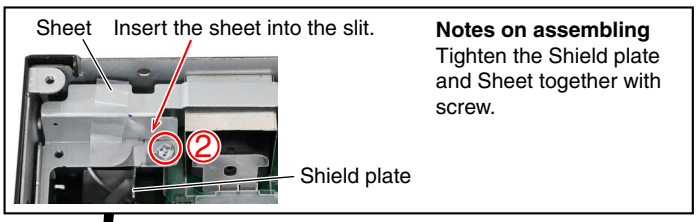
[2-4] USBP Assy

① Disconnect the 2 connectors. (CN5951, 5952)
② Remove the 2 screws. (BBZ30P060FTC)
③ Remove the USBP Assy while sliding it in the direction of the arrow.

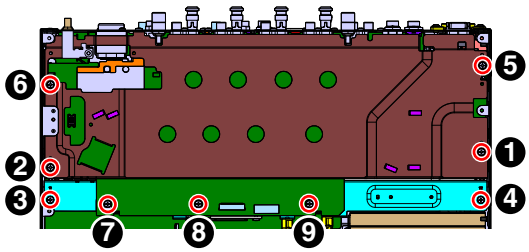


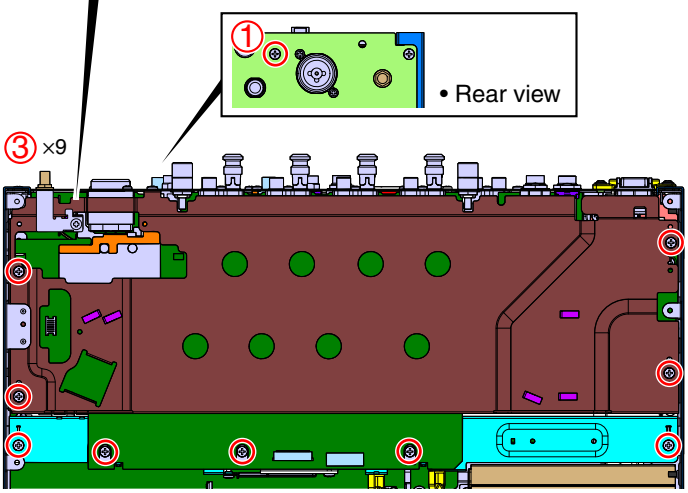
[2-5] Shield plate and AINB Service Assys

① Remove the one screw. (BBZ30P060FTB)
② Remove the one screw and then remove the Shield plate. (BBZ30P060FTC)
③ Remove the 9 screws. (BBZ30P060FTC)

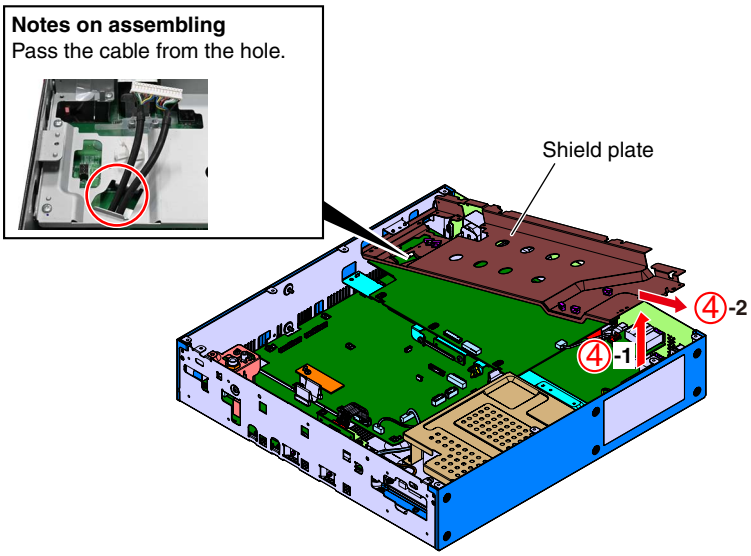


Screw tightening order

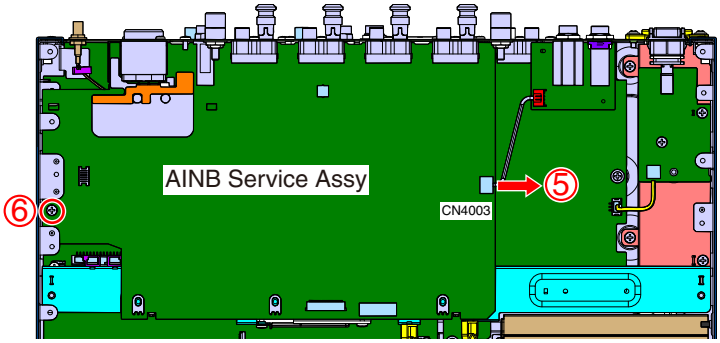




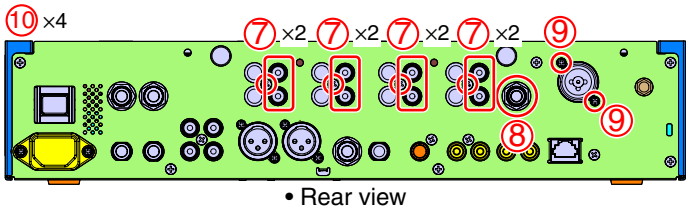
④ Lift the right side of Shield plate and then remove it in the direction of the arrow.



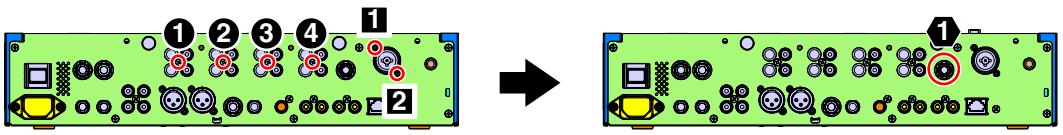
⑤ Disconnect the one connector. (CN4003)
⑥ Remove the one screw. (BBZ30P060FTC)



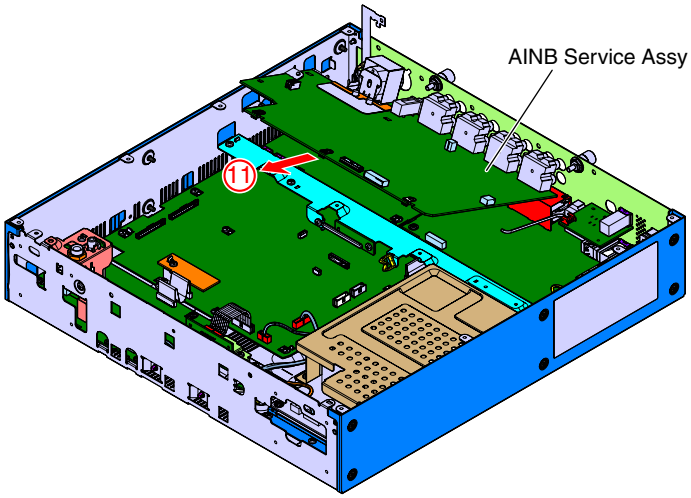
⑦ Remove the 8 Plug/PINs.
⑧ Remove the one washer and one nut. (DEC2920, NKX2FNI)
⑨ Remove the 2 screws. (PPZ30P080FTB)
⑩ Remove the 4 screws. (BPZ30P080FTB)



Screw, Washer and Nut tightening order

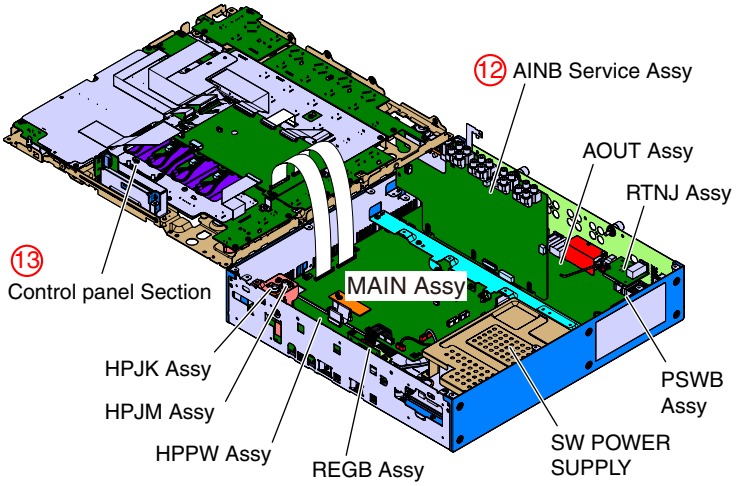


⑪ Pull out the AINB Service Assy to front direction and then remove it.



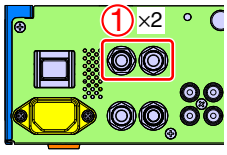
⑫ Stand the AINB Service Assy in the fig.
⑬ Reconnect the Control panel Section etc..

Diagnosis

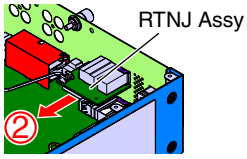


[2-6] RTNJ Assy

① Remove the 2 washers and 2 nuts. (DEC2920, NKX2FNI)
② Remove the RTNJ Assy.



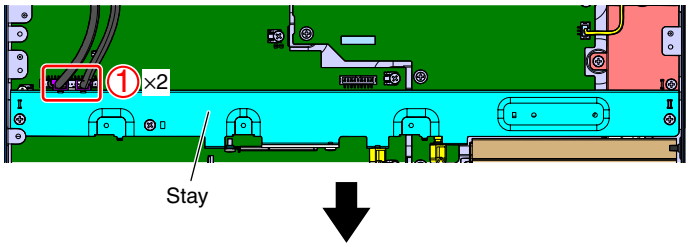
• Rear view



[3] Chassis Section (Bottom part)

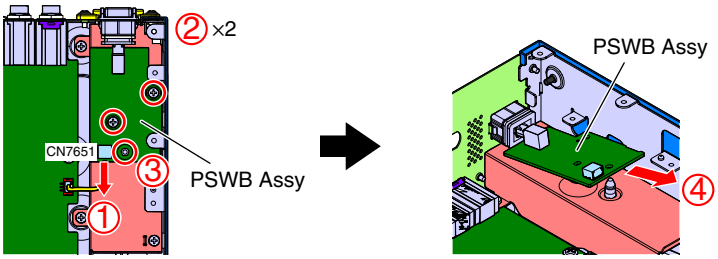
[3-1] Stay

① Release the 2 points of jumper wires and then remove the Stay.

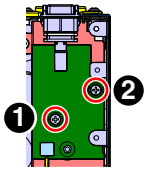


[3-2] PSWB Assy

① Disconnect the one connector. (CN7651)
② Remove the 2 screws. (BBZ30P060FTC)
③ Unlock the one PCB holder.
④ Pull out the PSWB Assy to front direction and then remove it.

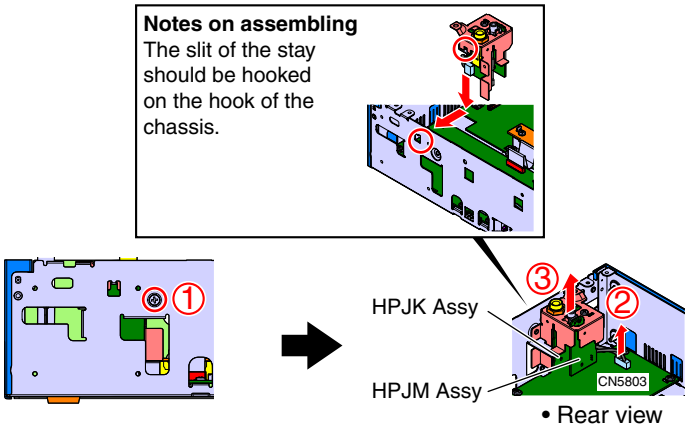


Screw tightening order

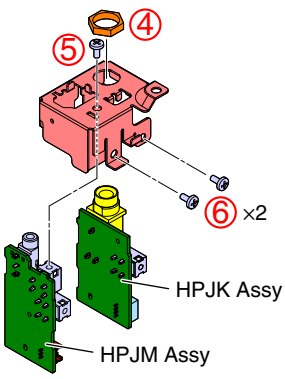


[3-3] HPJK and HPJM Assys

① Remove the one screw. (BBZ30P060FTC)
② Disconnect the one connector. (CN7651)
③ Remove the HPJK and HPJM Assy with Stay.



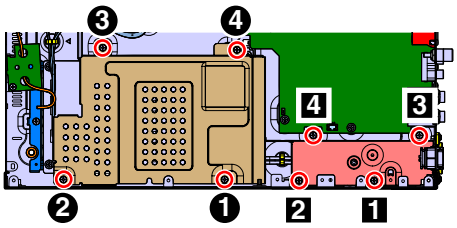
④ Remove the one nut. (DBN1018)
⑤ Remove the one screw. (BBZ30P060FTC)
⑥ Remove the 2 screws and the remove the HPJK and HPJM Assys. (BBZ30P060FTC)

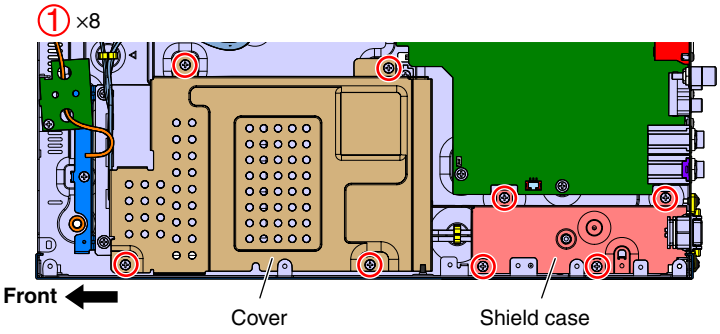


[3-4] SW POWER SUPPLY

① Remove the 8 screws and then remove the Cover and Shield cases. (BBZ30P060FTC)

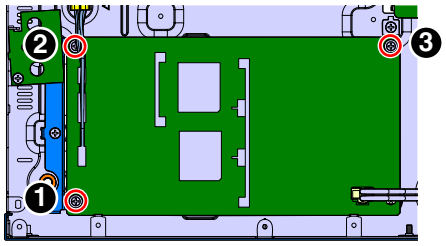
Screw tightening order

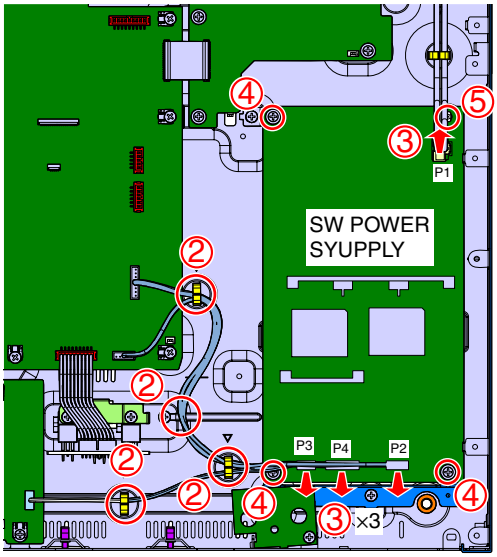




② Release the 4 points of jumper wires.
③ Disconnect the 4 connectors. (P1, 2, 3, 4)
④ Remove the 3 screws. (ABZ30P060FTC)
⑤ Unlock the one Spacer and then remove the SW POWER SUPPLY.

Screw tightening order

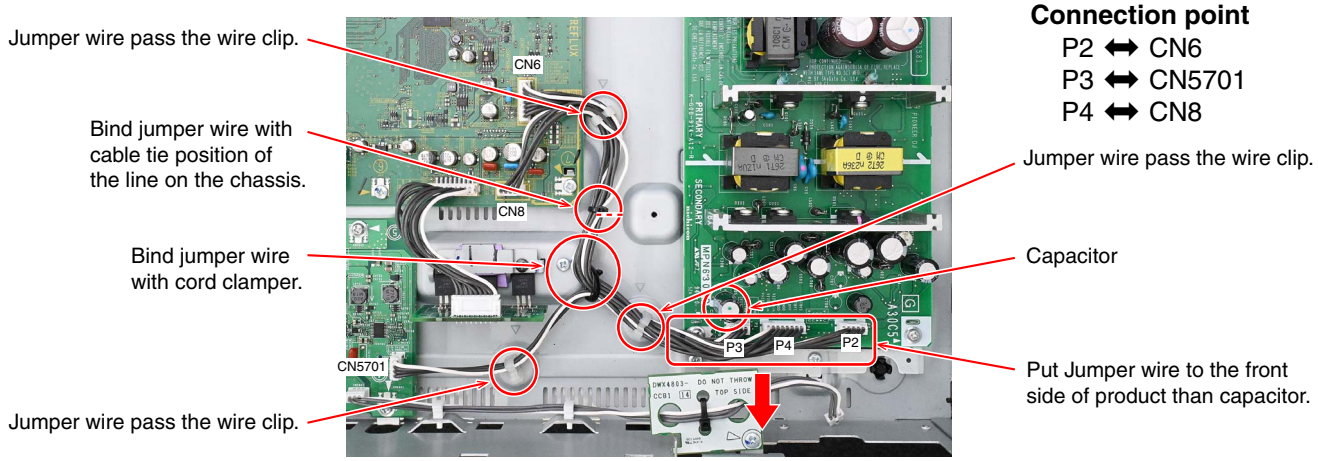




■ Jumper wires styling

Jumper wires styling of this part must be attached according to the following instructions.

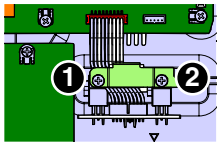
※ You should comply with product performance and safety standards of each country.

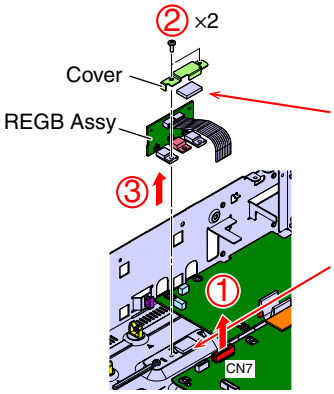


[3-5] REGB Assy

① Disconnect the one connector.
(CN7)
② Remove the 2 screws and then remove the Cover.
(BBZ30P080FTC)
③ Remove the REGB Assy.

Screw tightening order



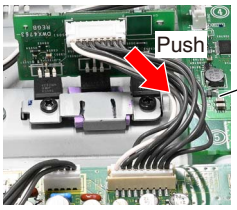


• Rear view

Caution:
Before attaching Cover, you must attach a thermal sheet to Cover.
Otherwise, the regulator in the center will be damaged and the product will break down.

Caution:
Before attaching Chassis, you must attach a thermal sheet to Cover.
Otherwise, the regulator in the center will be damaged and the product will break down.

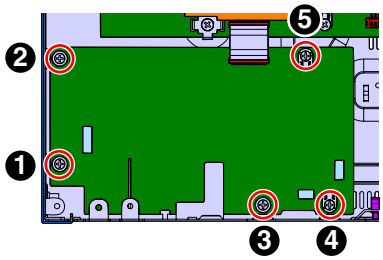
■ Jumper wires styling

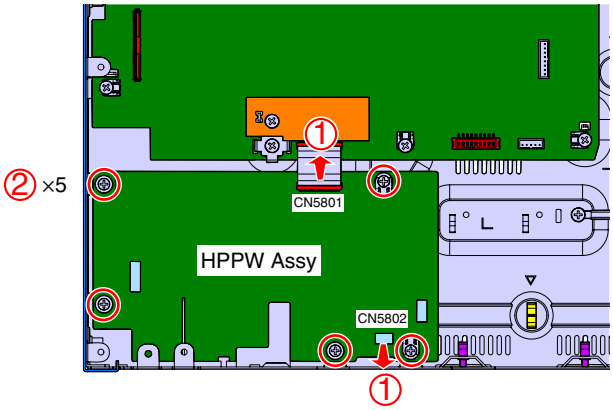


[3-6] HPPW Assy

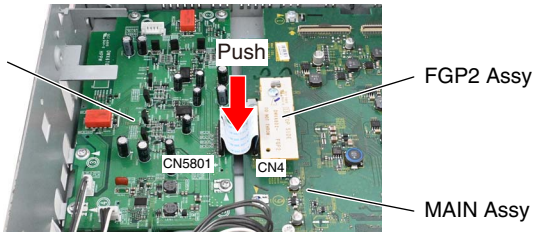
① Disconnect the one FFC and one connector.
(CN5801, 5802)
② Remove the 5 screws and then remove the HPPW Assy.
(ABZ30P060FTC)

Screw tightening order



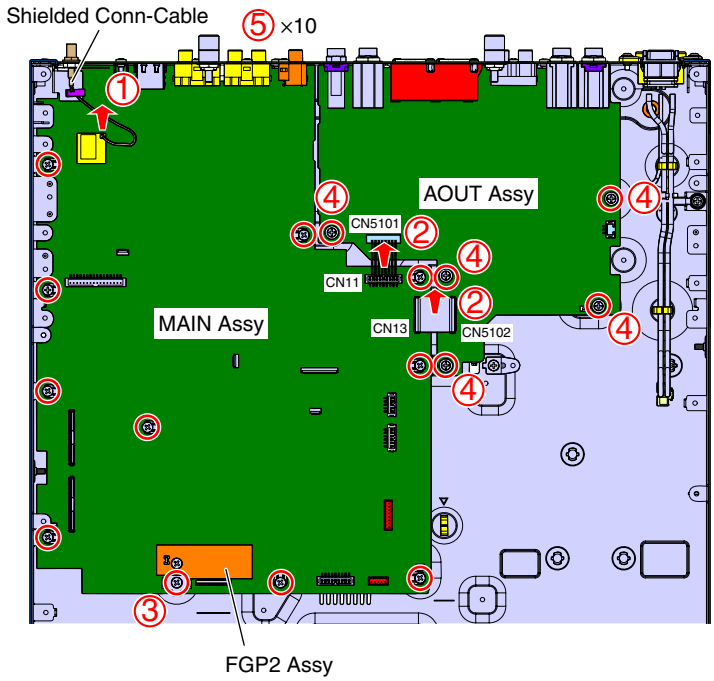


■ Jumper wires styling

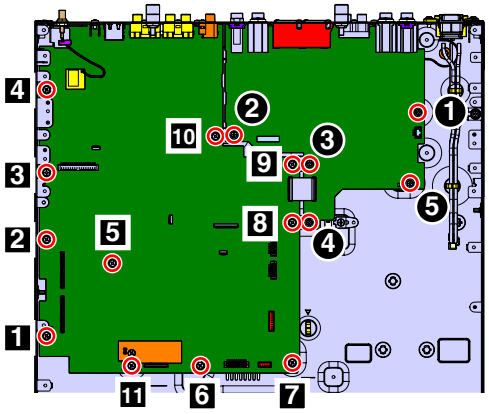


[3-7] MAIN and AOUT Assys

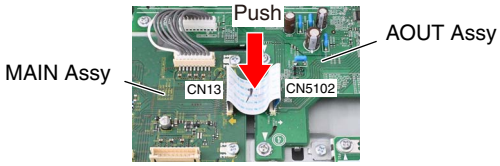
① Disconnect the connector of Wi-Fi antenna.
② Disconnect the one FFC and one connector. (CN11, 13, 5101, 5102)
③ Remove the one screw and then remove the Stay with FGP2 Assy. (BBZ30P060FTC)
④ Remove the 5 screws. (ABZ30P060FTC)
⑤ Remove the 10 screws. (BBZ30P060FTC)

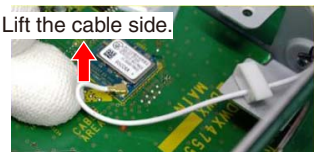


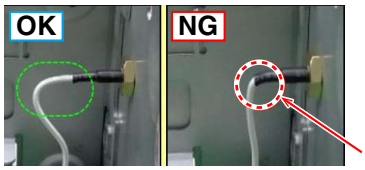
Screw tightening order

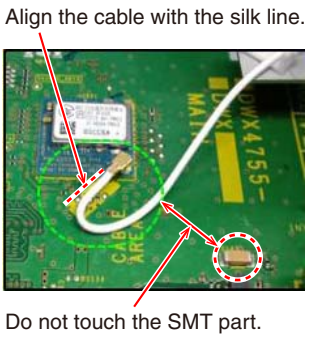


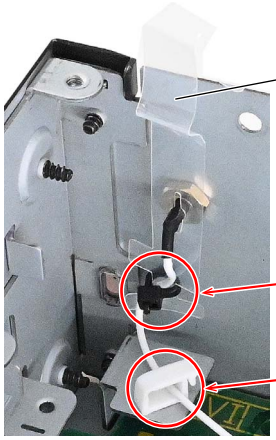
■ Jumper wires styling



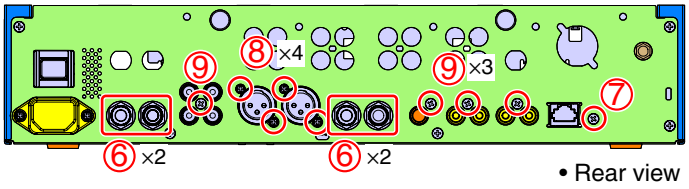






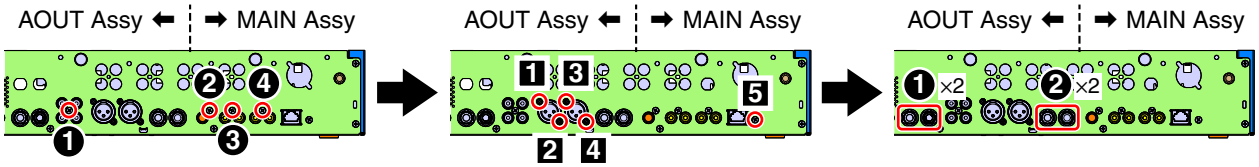


⑥ Remove the 4 washers and 4 nuts.
(DEC2920, NKX2FNI)
⑦ Remove the one screw.
(BBZ30P060FTB)
⑧ Remove the 4 screws.
(PPZ30P080FTB)
⑨ Remove the 4 screws.
(BPZ30P080FTB)

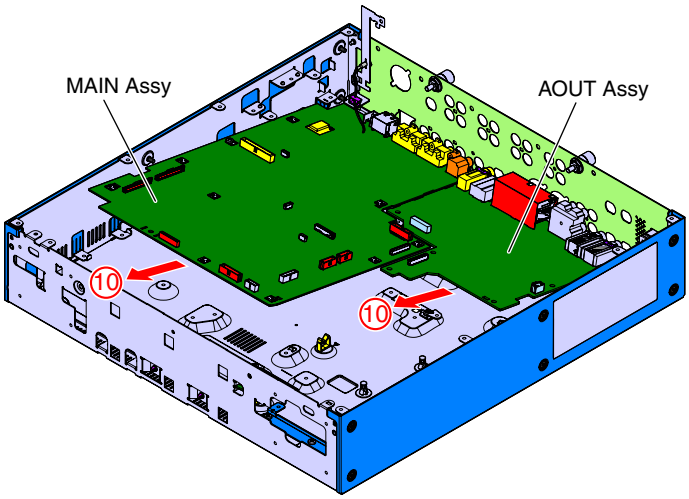


• Rear view

Screw, Washer and Nut tightening order



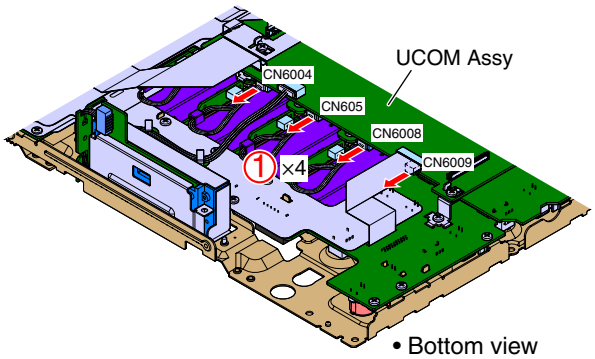
⑩ Pull out the MAIN and AOUT Assys to front direction and then remove it.



[4] Control panel Section

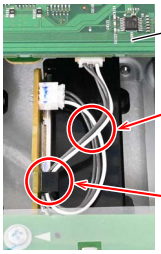
[4-1] Channel fader Section

① Disconnect the 4 connectors.
(CN6004, 6005, 6008, 6009)

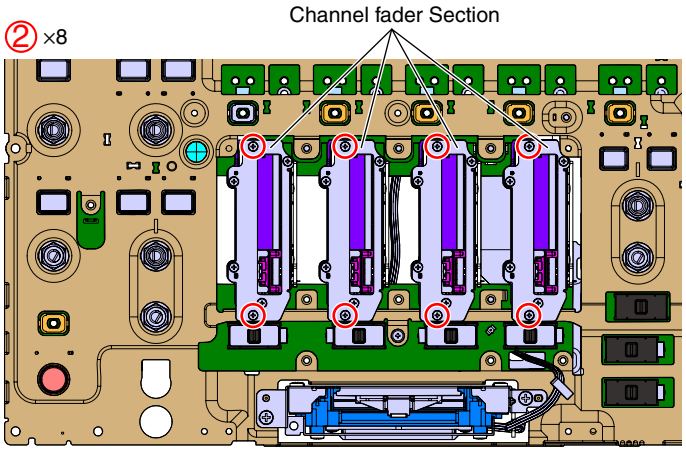


• Bottom view

■ Jumper wires styling

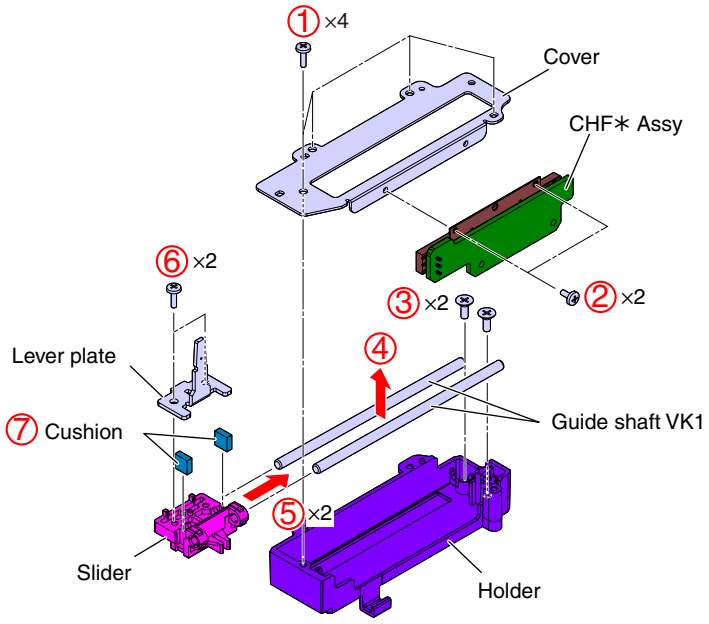


② Remove the 8 screws and then remove the 4 Channel fader Sections.
(BSZ20P040FTB)



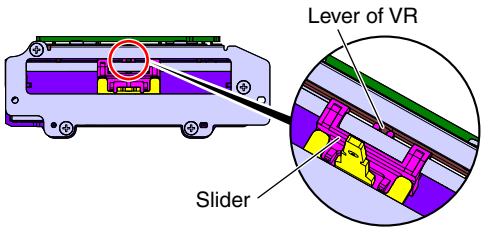
[4-2] CHF1 to 4 Assys

① Remove the 4 screws and then remove the Cover with PC board.
(BPZ20P060FTC)
② Remove the 2 screws and then remove the CHF* Assy.
(BSZ20P040FTB)
③ Remove the 2 screws.
(CPZ26P080FTC)
④ Remove the Slider Section.
⑤ Remove the 2 Guide shafts VK1.
⑥ Remove the 2 screws and then remove the Lever plate.
(BPZ20P060FTC)
⑦ Remove the 2 Cushions.



■ Notes on assembling

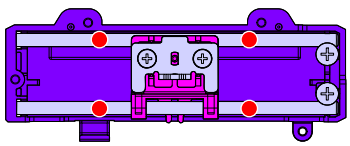
Confirm that a lever of VR is inserted in a slit of the Slider.



■ Locations of grease application

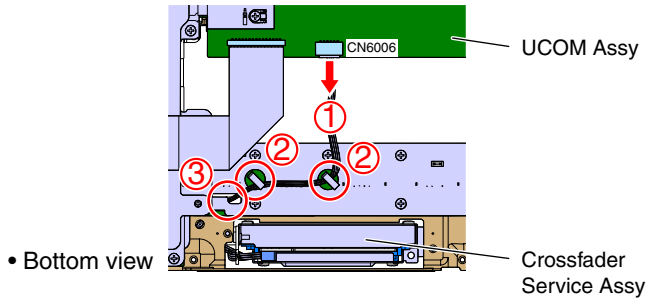
Lubricating oil (GEM1107)

Note:
Greasing must be performed at a total of 4 points, 2 points each for the upper and bottom places of each shaft.
(0.01 to 0.02 g per point × 4 points)
After applying grease, move the slider base back and forth from one end to the other for approximately 30 strokes, in order to fully spread the grease.

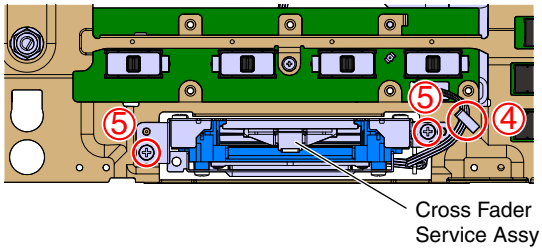


[4-3] Crossfader Service Assy

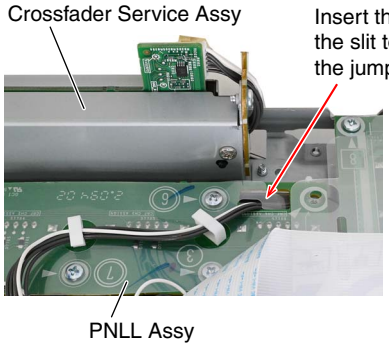
① Disconnect the one connector.
(CN6006)
② Release the 2 points of the jumper wires.
③ Pass the wire upward and pull it out.

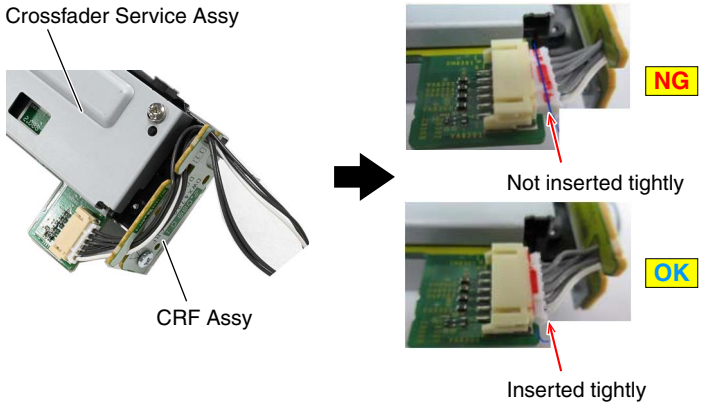


④ Release the one point of the jumper wires.
⑤ Remove the 2 screws and then remove the Crossfader Service Assy.
(BBZ30P060FTC)



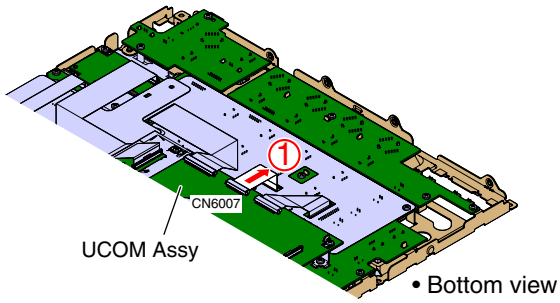
■ Jumper wires styling



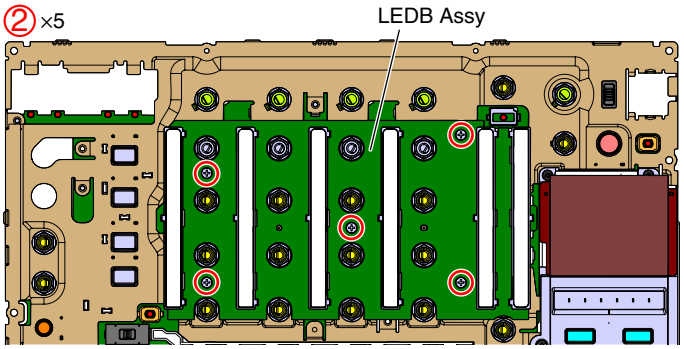


[4-4] LEDB Assy

① Disconnect the one FFC.
(CN6007)

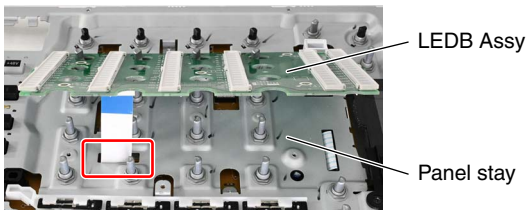


② Remove the 5 screws and then remove the LEDB Assy.
(BBZ30P060FTC)



■ Notes on assembling

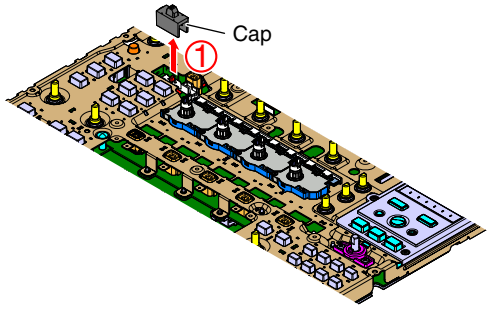
Attach LEDB Assy to a Panel stay while inserting FFC in the slit of the Panel stay.



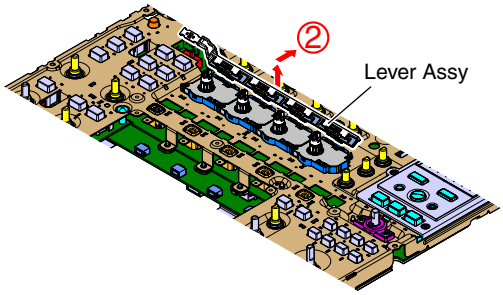
[4-5] CFX Section

- **CFX Unit**

① Remove the Cap.
※ Do not install a similar cap (DAC3136) used elsewhere.



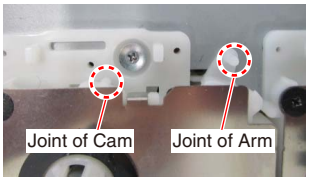
② While lifting the rear side of the lever Assy upward, pull the lever Assy toward the rear to remove it.



■ Notes on assembling

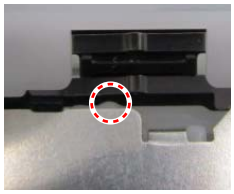
Reassembly can be done by reversing the disassembly procedure. However, please note the following.

1: When installing the Lever Assy to the main unit (each CFX), install by fitting the specified parts of each CFX Cam and Arm with the slits and holes of the Lever Assy.



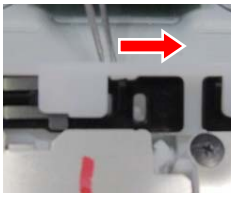
2: Follow the steps below to install the Lever Assy.

Fit the fitting part of the Cam and the fitting part of the Lever Assy.



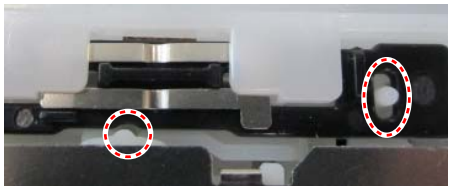
※ Align the CFX of CH1-CH4.

Using tweezers, move the fitting part (convex pin part) of the Arm to the position of the fitting hole of the Lever Assy.



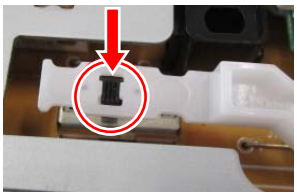
※ Execute it for CFX of CH1-CH4.

Check that the Cam and Arm are engaged with the Lever Assy.

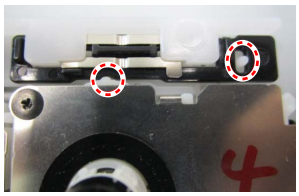


※ Check CFX of CH1-CH4.

Insert the fitting hole of the Lever Assy into the Select SW convex part.



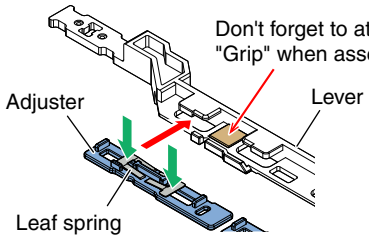
Install the Cap. Check that all 4CH Cams and Arms move when the Lever Assy is moved.

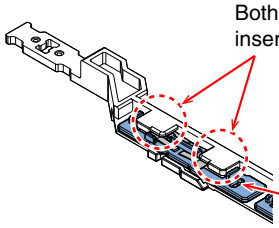


■ Notes on assembling of Lever Assy

It is unlikely that the Lever Assy itself will be damaged or subject to service replacement. Below are notes on assembly.

When inserting the Adjuster into the Lever, push both ends of the Leaf spring in the direction of the green arrows and insert it in the direction of the red arrows while keeping it in close contact with the Adjuster.

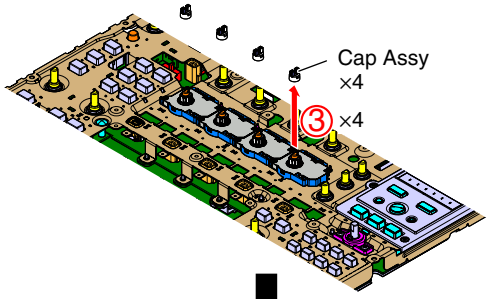




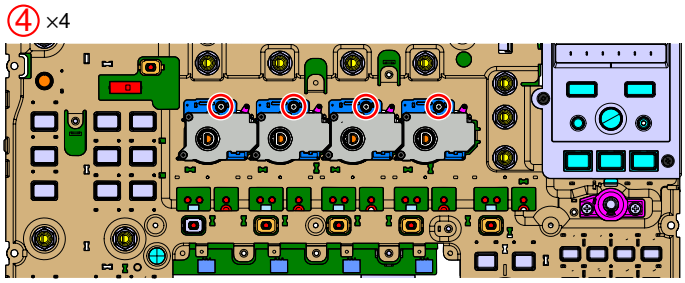
Both ends of the Leaf spring should be inserted between the Lever and the Adjuster.

Check that the slot on the Adjuster and the hole on the Lever are on the same position.

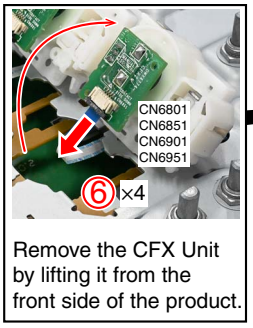
③ Remove the 4 Cap Assys.



④ Remove the 4 screws.
(DBA1456)

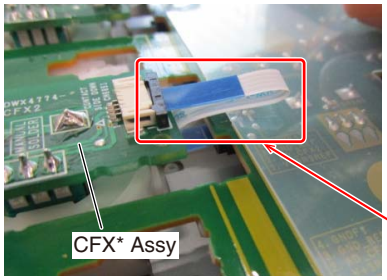


⑤ Remove the 4 CFX Units.
⑥ Disconnect the 4 FFCs.
(CN6801, 6851, 6901, 6951)



Remove the CFX Unit by lifting it from the front side of the product.

■ FFC styling

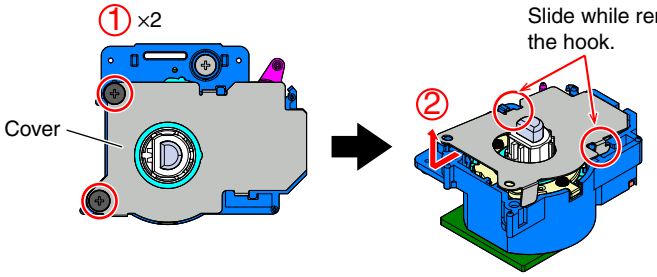


Style the FFC to have a "Z shape" when viewed from the side.

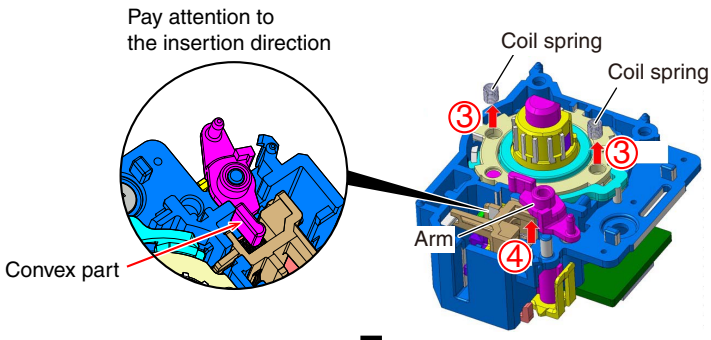
• **CFX Unit Disassembly/Assembly**

① Remove the 2 screws.
(DBA1455)
② Slide the Cover in the direction of the arrow and lift it off.

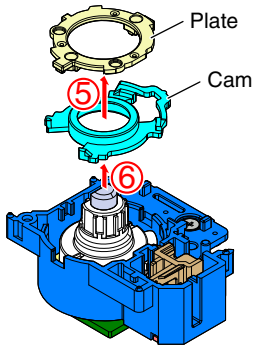
∗Be careful not to lose the Coil spring when removing the Cover.



③ Remove the 2 Coil springs.
④ Remove the Arm.

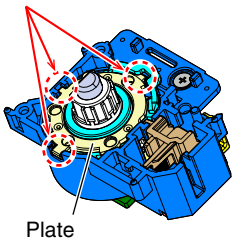


⑤ Remove the Plate.
⑥ Remove the Cam.
Note:
When disassembling/assembling, use bamboo tweezers to avoid damaging the parts.

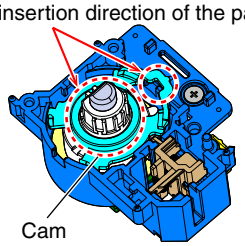


■ Notes on assembling

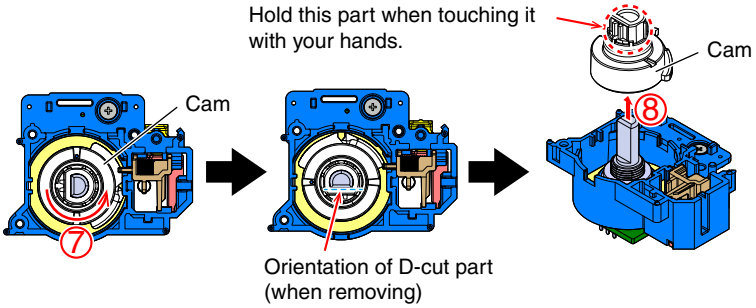
The protrusion of the Plate must be inserted into the slit of the Base.



Pay attention to the orientation and insertion direction of the parts.



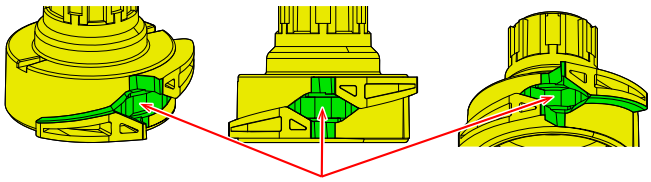
⑦ Rotate the Cam.
⑧ Remove the Cam.
Note:
When disassembling/assembling, use bamboo tweezers to avoid damaging the parts.



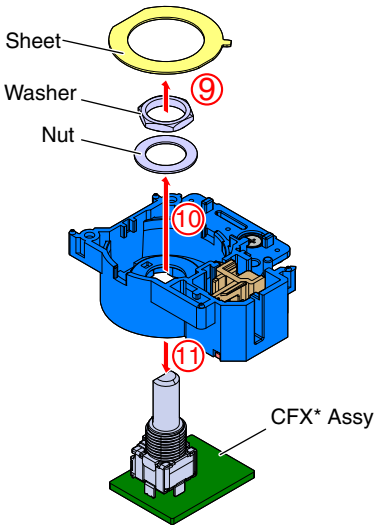
■ Locations of ethanol application

Before assembling, be sure to remove oil from the green part with ethanol (concentration 70%)*1 using a cotton swab.
Never touch with bare hands after cleaning.
*1: Do not use absolute ethanol.

Ethanol (70% concentration)
(Marketed product)



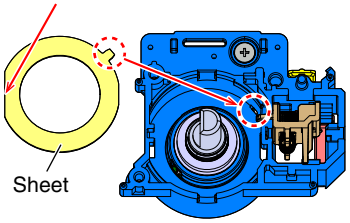
⑨ Remove the Sheet.
⑩ Remove the washer and nuts.
⑪ Remove the CFX* Assy.



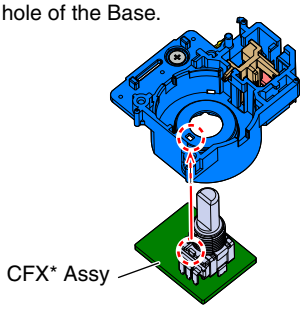
■ Notes on assembling

Insert the convex part of the Sheet into the slit of the Base.

The D-cut part should be on the left side.

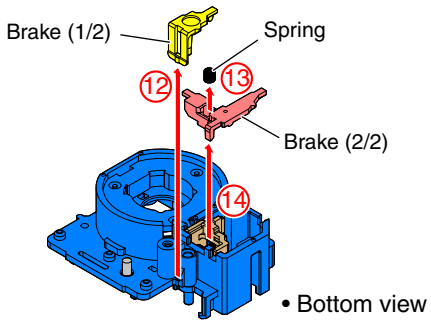


Insert the protruding part of the CFX* Assy into the positioning hole of the Base.



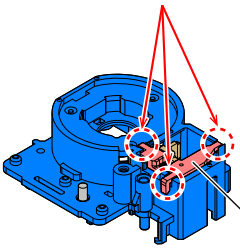
⑫ Remove the Brake (1/2).
⑬ Remove the Spring.
⑭ Remove the Brake (2/2).

Note:
Remove the Brake (1/2) slowly. If you remove it forcefully, the Spring may fly out.

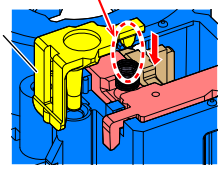


■ Notes on assembling

The rib of the Brake (2/2) must be inserted into the slit of Base.



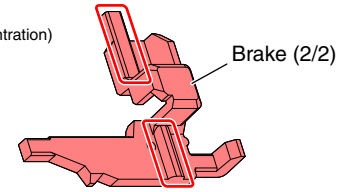
The protruding part of the Brake (1/2) must be inserted into the hole of the Base with the Spring in between.



■ Locations of ethanol application

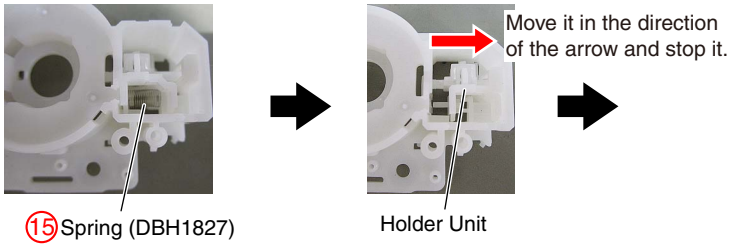
When removing, be sure to remove conspicuous dirt from the red frame area with ethanol (concentration 70%)*1 using a cotton swab.
Never touch with bare hands after cleaning.
*1: Do not use absolute ethanol.

Ethanol (70% concentration) (Marketed product)

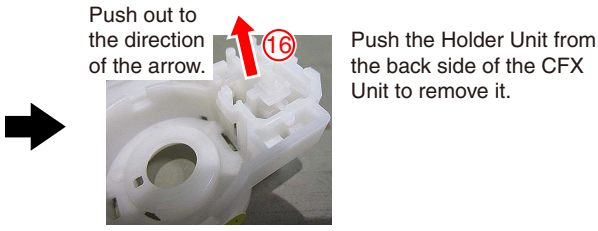


⑮ Remove the Spring. (DBH1827)
※ Use metal tweezers to attach the spring.
⑯ Remove the Holder Unit.

Note:
When disassembling/assembling, use bamboo tweezers to avoid damaging the parts.



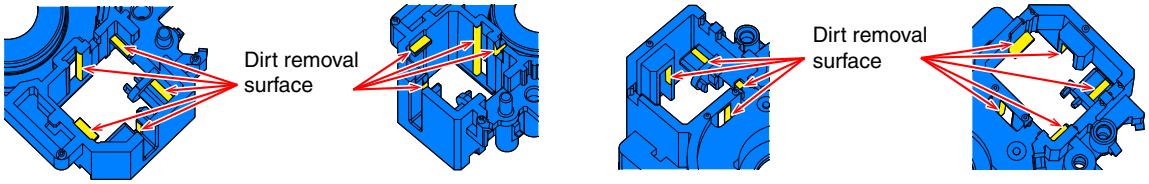
Caution:
The spring (DBH1826) and the spring (DBH1827) cannot be visually distinguished, so never place them in the same place. If you cannot tell the difference, be sure to use a new spring.
(Replacing and installing them may cause malfunction.)
Do not deform springs or use springs that have already been deformed.
A deformed spring may degrade the performance of the CFX or cause it to malfunction.



■ Locations of ethanol application

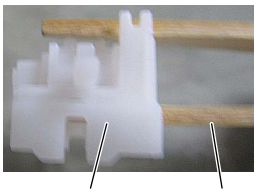
Before assembling, be sure to remove oil from the yellow part with ethanol (concentration 70%)*1 using a cotton swab.
Never touch with bare hands after cleaning.
*1: Do not use absolute ethanol.

Ethanol (70% concentration) (Marketed product)



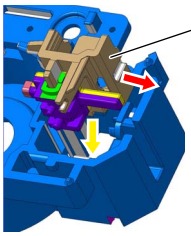
■ Notes on assembling

When attaching the Holder Unit to the Base, do not use your hands and attach it as follows. (Be sure to wear gloves when handling with your hands.)



Holder Unit

Bamboo tweezers (or resin tweezers)



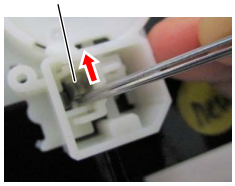
Holder Unit

While holding the Holder Unit with bamboo tweezers, pull it in the direction of the red arrow and insert it in the direction of the yellow arrow to attach it to the Base. (Beware of orientation)
Do not touch with bare hands when inserting.

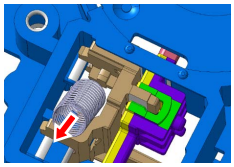
■ Notes when assembling/disassembling the spring (DBH1827) to/from the CFX Unit

1. Notes on disassembling

Spring (DBH1827)



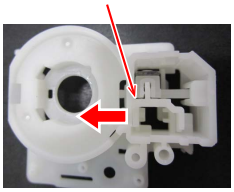
Pinch the end of the Spring with fine-tipped tweezers, compress the spring, and move it in the direction of the arrow.



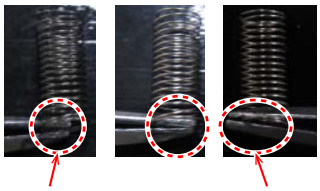
While pinching the Spring with tweezers, tilt the Spring and remove it from the CFX Unit in the direction of the red arrow.

2. Notes on assembling

Move the Holder Unit in the direction of the arrow until it hits.



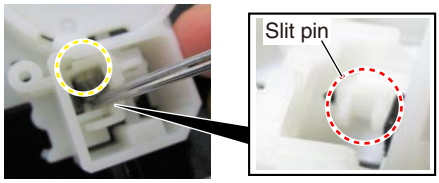
It is easier to insert by pinching both ends of the Spring with tweezers.
If the tip of the tweezers protrudes too far from the Spring, it will be difficult to insert.



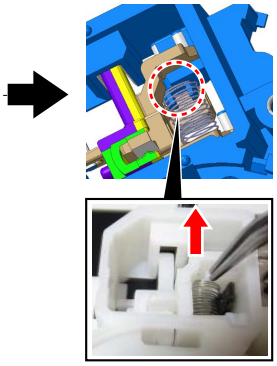
Only pinch one end of the Spring.

The tip of the tweezers protrudes too far from the end of the Spring.

First, use tweezers to insert the Spring into the spring holder (yellow area) on the Stopper Unit side.
Next, move the tweezers to the center of the slit pin on the Base while compressing the Spring in the spring holding portion (red area) on the Base Unit side.



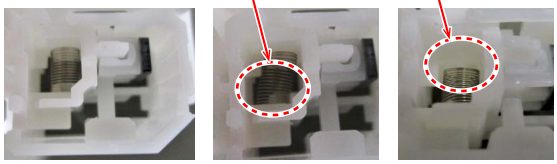
Check that the Spring is properly inserted into the slit pin (red area).
After that, remove the tweezers by moving them in the direction of the arrow. Check that the Spring is inserted into the two pins.



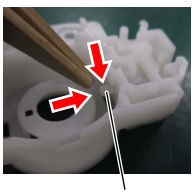
Check the following to make sure there are no problems with assembly.

OK NG NG

It is half out of position. Not attached properly.



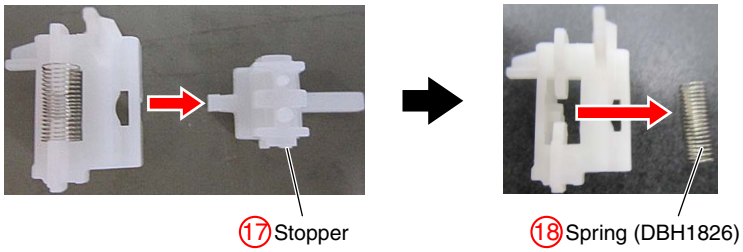
Ensure that the Spring (DBH1826) does not protrude from the Holder.



Check that when the Stopper is pushed in the directions of the arrows (two directions) with bamboo tweezers, it returns to its original position using the restoring force of the Spring.

Stopper

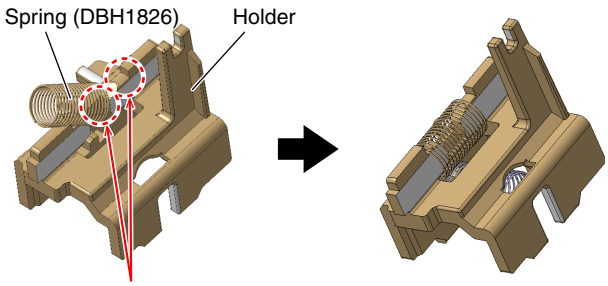
⑰ Remove the Stopper.
⑱ Remove the Spring.
(DBH1826)



Caution:
The spring (DBH1826) and the spring (DBH1827) cannot be visually distinguished, so never place them in the same place. If you cannot tell the difference, be sure to use a new spring.
(Replacing and installing them may cause malfunction.)
Do not deform springs or use springs that have already been deformed.
A deformed spring may degrade the performance of the CFX or cause it to malfunction.

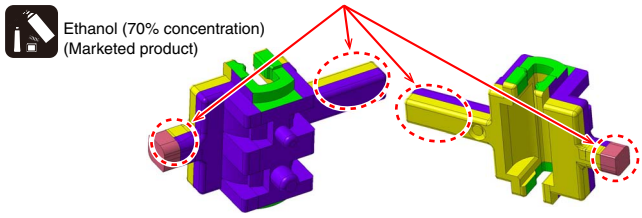
■ Notes on assembling

Follow the steps below to attach the Spring (DBH1826) to the Holder.
(It cannot be attached from the opposite direction.)

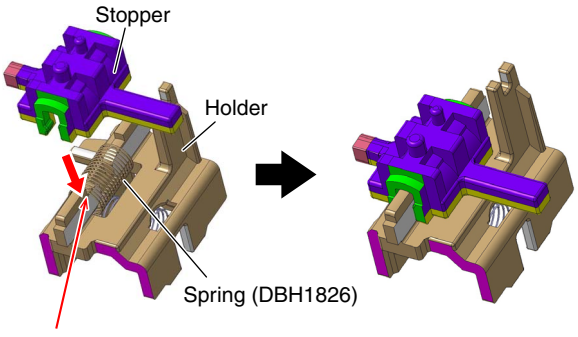


Secure the Spring (DBH1826) by fitting it into the two protrusions on the Holder.

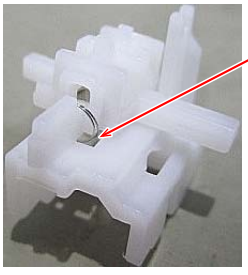
Before assembling, be sure to remove oil or dirt from the red frame area with ethanol (concentration 70%)*1 using a cotton swab.
Never touch with bare hands after cleaning.
*1: Do not use absolute ethanol.



Assemble as shown below.



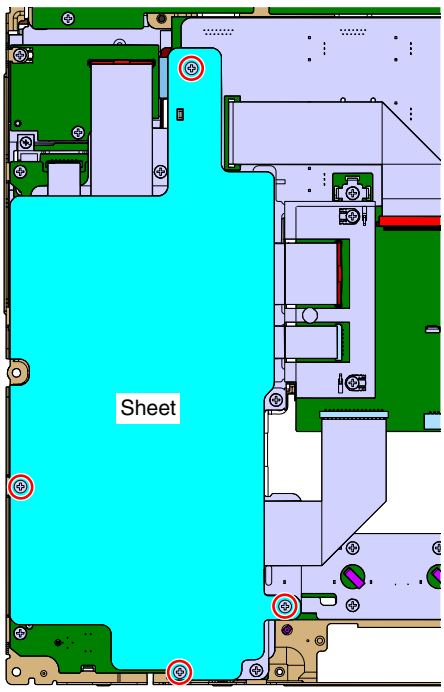
Install the Spring (DBH1826) so that it fits in the retainer of the Stopper.



Check that the Spring (DBH1826) does not protrude from the Holder during assembly.
(Check the other side as well)
(If it protrudes, reattach it so that it fits.)

[4-6] UCOM Assy

① Remove the 4 screws and then remove the Sheet.
(BBZ30P060FTC)

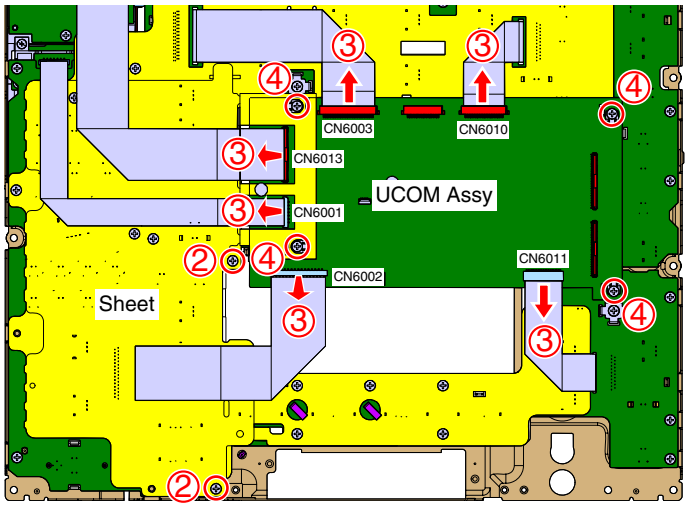


• Bottom view

② Remove the 2 screws.
(BBZ30P060FTC)
③ Disconnect the 6 FFCs.
(CN6001-6003, 6010, 6011, 6013)

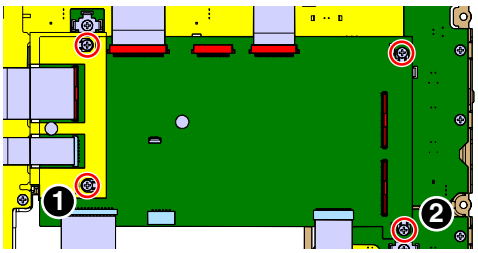
Caution:
The locking function of the connectors of CN6013 is fragile. Please work with care.

④ Remove the 4 screws and then remove the UCOM Assy.
(BBZ30P060FTC)

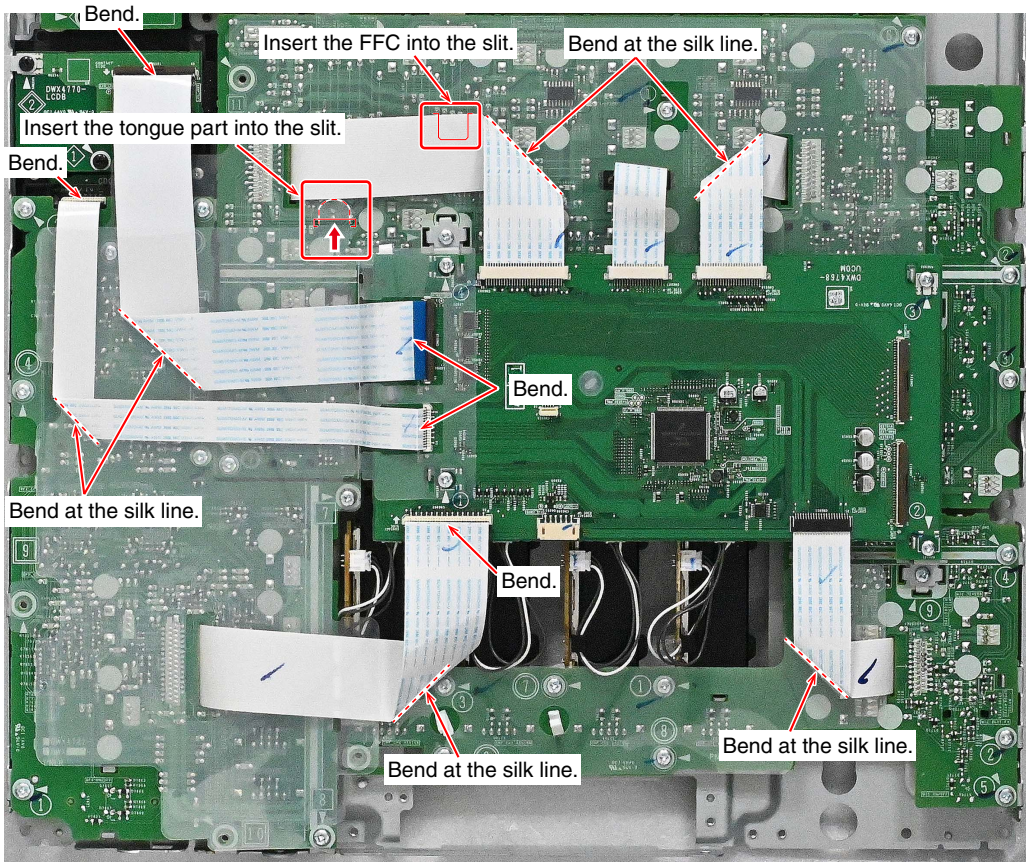


• Bottom view

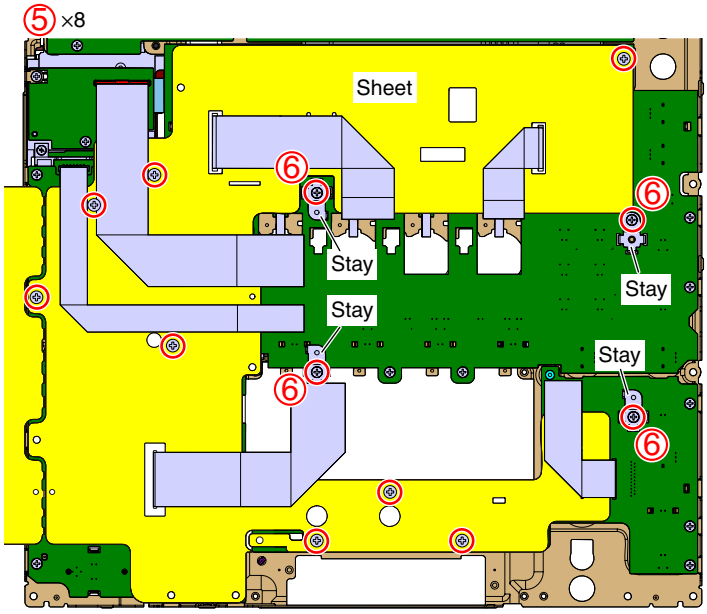
Screw tightening order
The other screws are random order.



■ FFCs styling



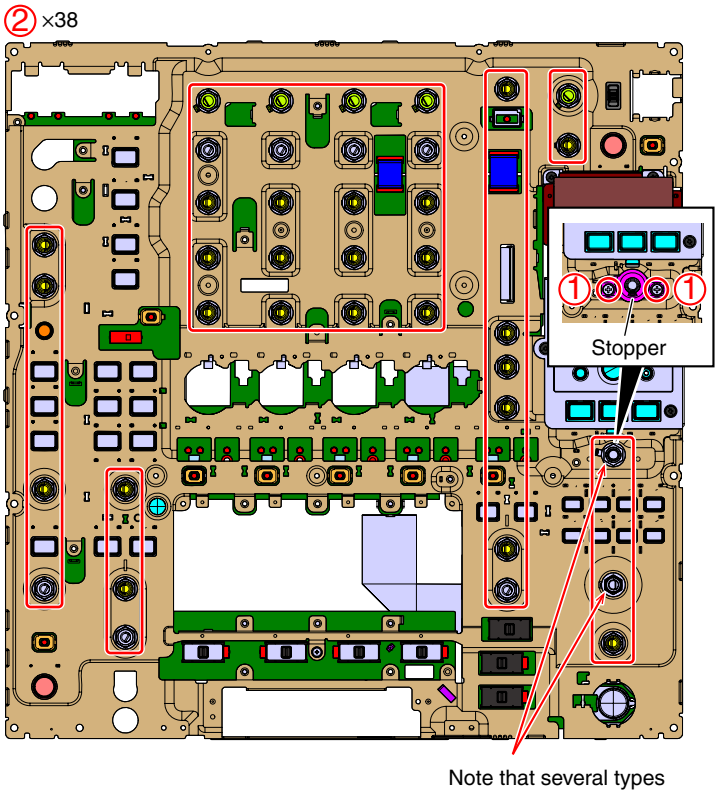
⑤ Remove the 8 screws and then remove the Sheet.
(BBZ30P060FTC)
⑥ Remove the 4 screws and then remove the 4 Stays.
(BBZ30P060FTC)



• Bottom view

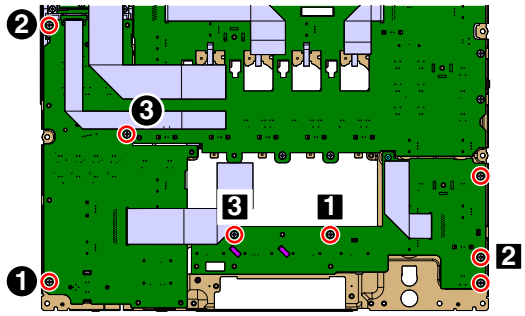
[4-7] PNLR and PNLL Assys

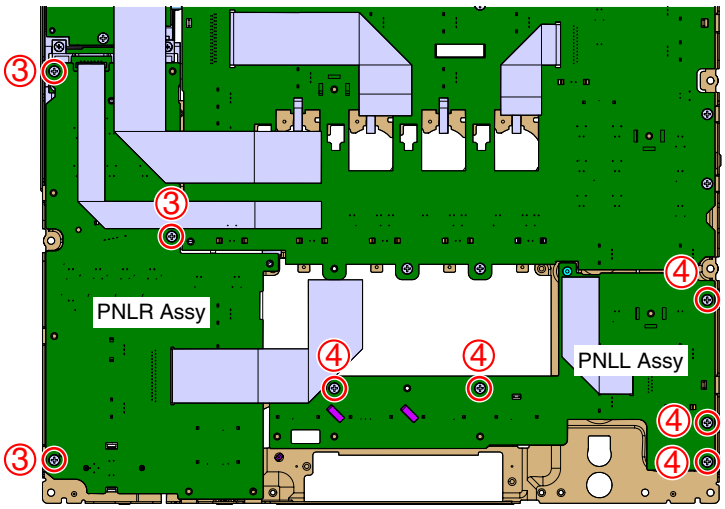
① Remove the 2 screws and then remove the Stopper.
(BBZ30P060FTC)
② Remove the 38 set of nuts and washers.



③ Remove the 3 screws and then remove the PNLR Assy.
(BBZ30P060FTC)
④ Remove the 5 screws and then remove the PNLL Assy.
(BBZ30P060FTC)

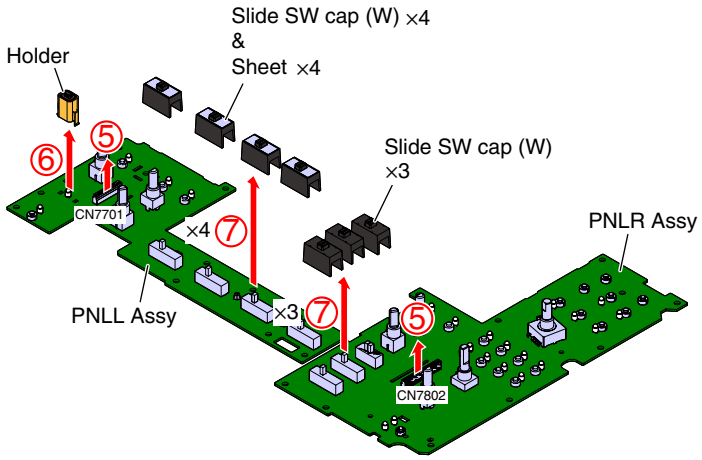
Screw tightening order
The other screws are random order.





• Bottom view

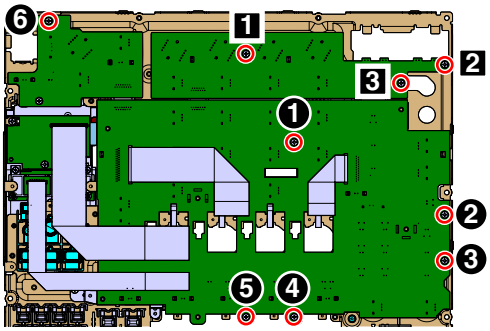
⑤ Disconnect the 2 FFCs.
(CN7701, 7802)
⑥ Remove the one Holder.
⑦ Remove the 7 Slide SW cap (W)s.

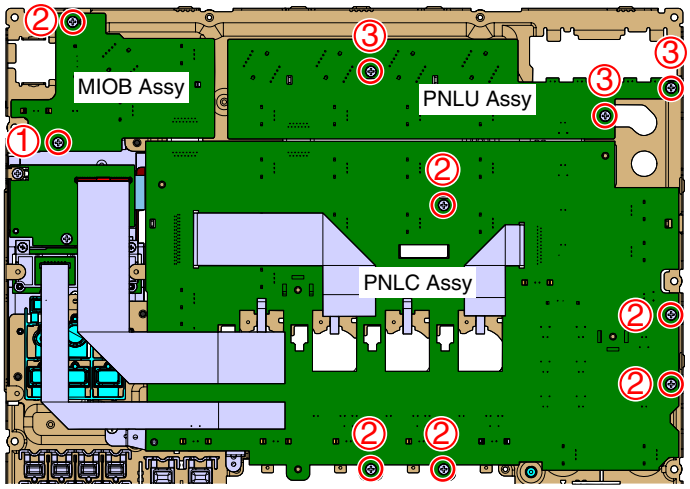


[4-8] MIOB, PNLC and PNLU Assys

① Remove the one screw.
(BPZ30P080FTB)
② Remove the 6 screws and then remove the MIOB and PNLC Assys.
(BBZ30P060FTC)
③ Remove the 3 screws and then remove the PNLU Assy.
(BBZ30P060FTC)

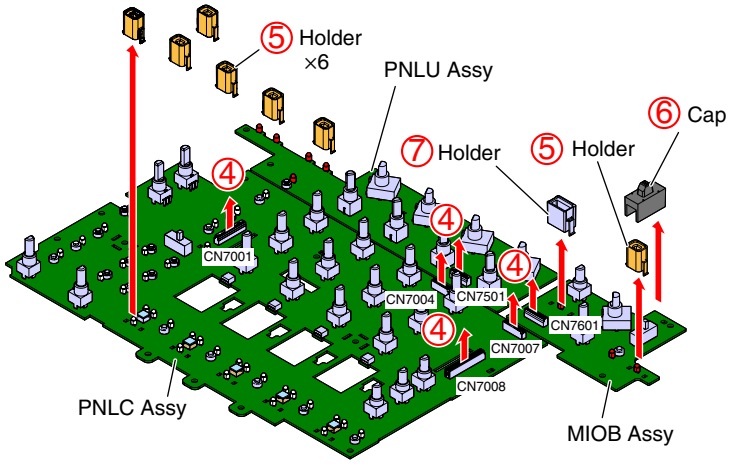
Screw tightening order





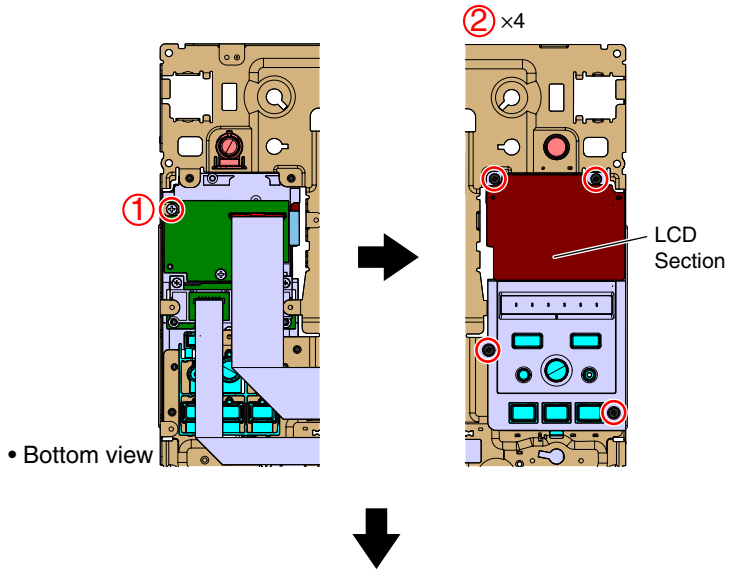
• Bottom view

④ Disconnect the 4 FFCs.
(CN7001, 7004, 7007, 7008, 7501, 7601)
⑤ Remove the 7 Holders.
⑥ Remove the one Cap.
※ When installing, do not confuse it with the Cap used in the CFX section.
⑦ Remove the one Holder.

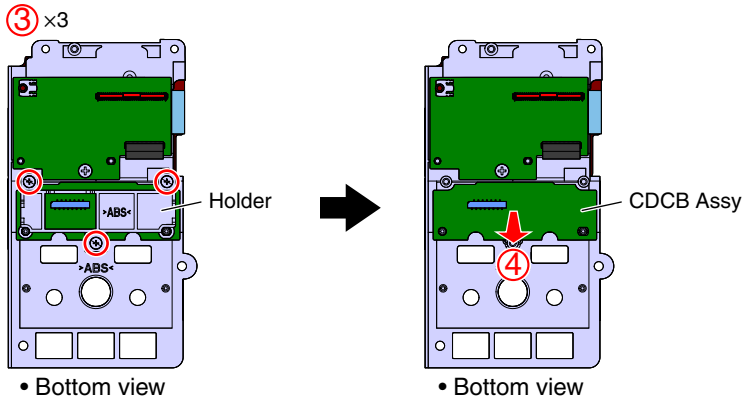


[4-9] LCD Section

① Remove the one screw.
(BPZ30P080FTB)
② Remove the 4 screws and then remove the LCD Section.
(DBA1290)



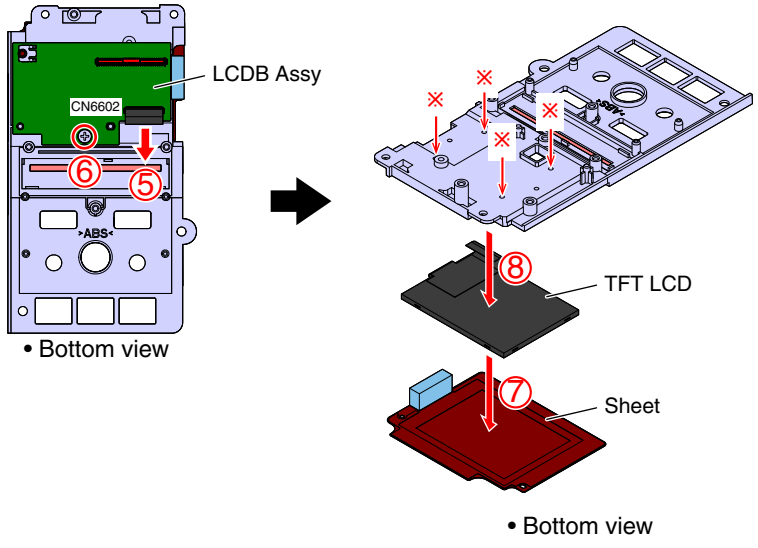
③ Remove the 3 screws and then remove the Holder.
(BPZ26P080FTC)
④ Remove the CDCB Assy.



⑤ Disconnect the one FPC.
(CN6602)
Caution:
The locking function of the connectors of CN6602 is fragile. Please work with care.

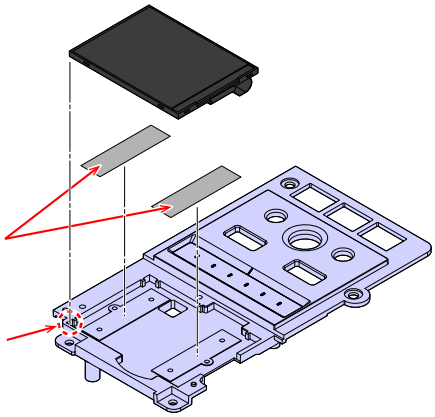
⑥ Remove the one screw and then remove the LCDB Assy.
(BPZ30P080FTB)
⑦ Remove the Sheet.
(Cannot be reused)
⑧ Remove the TFT LCD.

※ When it removes the TFT LCD, insert a pin about 1.5 mm in diameter from the four holes on the back side, push out and remove it.

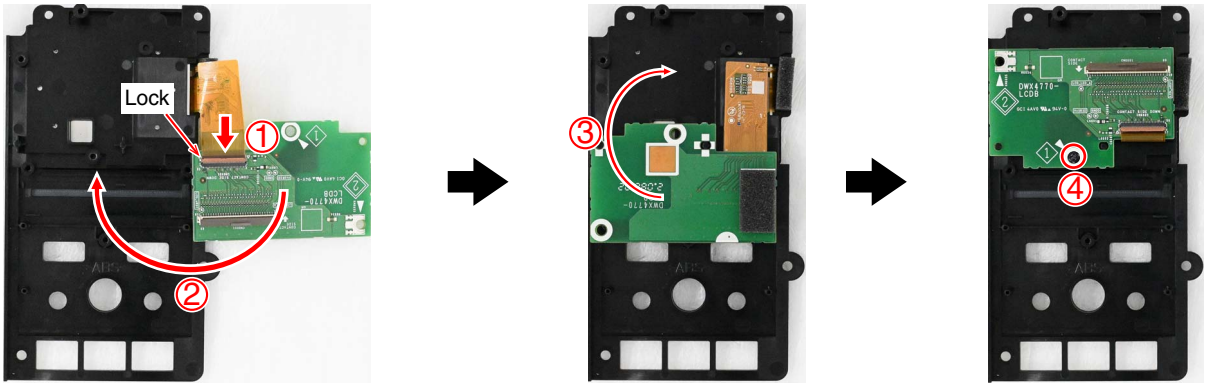


■ Notes on pasting TFT LCD

If the double side tape that is used to fix TFT LCD is damaged, remove it clearly.
And stick the new double side tape ((NITTO No. 500) 10 mm × 40 mm) at the position shown in the figure.



■ Assembly procedure for TFT LCD and LCDB Assy



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.

• MAIN Assy
  • IC1402 (NSP)
  (This IC stores MAIN CPU/DSP firmware, MAC address.)
  • U2901 (NSP)
  (Wi-Fi MODULE)
	• Confirmation of the version of the firmware
	• Updating to the latest version of the firmware
	  (8.2 UPDATING OF THE FIRMWARE)
	• Crossfader calibration
	  (6.2 CROSSFADER CALIBRATION)
	• Writing the serial number of the unit
	  (8.3 WRITING THE SERIAL NUMBER OF THE UNIT)
	• Wi-Fi, Bluetooth connection confirmation
	  (5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth)
	  ※ Be sure to perform the above after completing writing the serial number.
	• Factory reset
	  (Be changed user setting to condition before the repair when be possible)

• IC503
  (This IC stores ERP UCOM firmware.)
	• Confirmation of the version of the firmware
	• Updating to the latest version of the firmware
	  (8.2 UPDATING OF THE FIRMWARE)

• IC2901
  (This IC stores WLAN UCOM firmware.)
	• Confirmation of the version of the firmware
	• Updating to the latest version of the firmware
	  (8.2 UPDATING OF THE FIRMWARE)

• UCOM Assy
  • IC6007
  (This IC stores PNL UCOM firmware.)
	• Confirmation of the version of the firmware
	• Updating to the latest version of the firmware
	  (8.2 UPDATING OF THE FIRMWARE)

• Crossfader Service Assy	• Crossfader calibration (6.2 CROSSFADER CALIBRATION)
• Wi-Fi antenna, Connection cable between Wi-Fi MODULE and Wi-Fi antenna	• Wi-Fi, Bluetooth connection confirmation (5.7 CONNECTION CHECK WITH Wi-Fi/Bluetooth)

• When disassembling CFX unit related parts
  (With or without parts replacement)
  ∗ Except when only the knob (including the Cap Assy) is removed
 
[CFX unit]
	• CENTER LOCK operation check
	  (6.1 TEST MODE_Mode 7: CENTER LOCK check mode)
	• Clean the affected area with ethanol
	  (CFX unit-related disassembly/assembly procedures and precautions)
	  ∗ Clean the CFX unit after confirming that there is dust or foreign matter attached to it.

8.2 UPDATING OF THE FIRMWARE

■ Downloading and Unzipping the Updater File

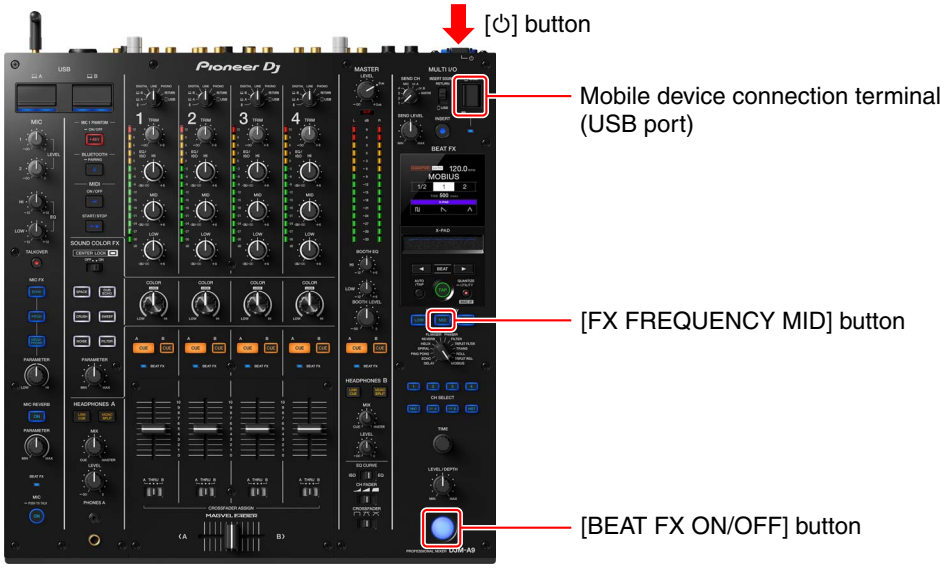
① Download the zipped firmware file for the latest firmware.
② Unzip the DJM-A9_xxx.zip file to get the updater file.
DJM-A9_xxx.upd

※ The above xxx denotes the version of new firmware.
※ The extension (.upd) may not be displayed, depending on the setting of the computer.

■ Preparation for Updating

Save the firmware file [DJM-VA9_xxx.upd] to the root directory of USB memory.
※ DO NOT rename the file name.
※ DO NOT save the multiple firmware files in the USB memory.

■ How to Update



① Enter Update mode.
While holding the [BEAT FX ON/OFF] and [FX FREQUENCY MID] buttons pressed, press the ⏻ button (to set it to ON).

② Check the current version of the firmware.
Check the version indicated on the display.
If the current version is the same as the downloaded firmware version (xxx), the current firmware version is the latest and there is no need for updating.

③ Plug a USB memory device to use for updating into the USB port.
Updating starts.
The progress of updating is indicated with the bar and percentage indications on the display.
※ NEVER unplug the USB memory device nor turn the unit OFF during updating.
※ Updating takes about 10 minutes.

④ After "COMPLETE" is indicated, turn the unit OFF then unplug the USB memory device used for updating.

Updating is completed.
If updating does not start, restart from downloading of an updater. If updating cannot be started even after the above retry, the USB memory device may be faulty. Retry updating, using another USB memory device.

8.3 WRITING THE SERIAL NUMBER OF THE UNIT

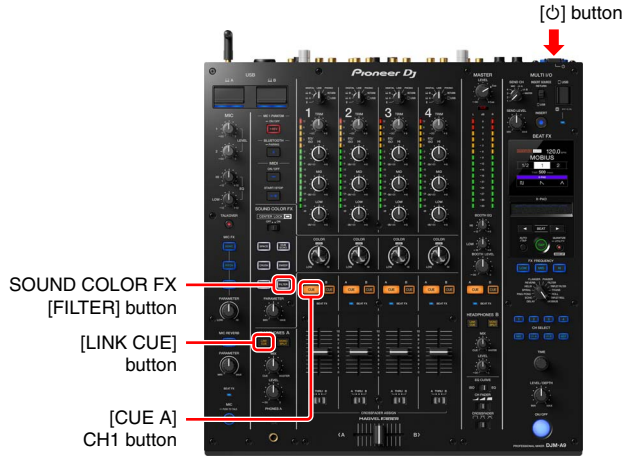
Preparations

① Download the software: DJM-A9_SNW for writing the serial number from WCS.
② The compressed files decompress and save to PC.
The generated folder is below.

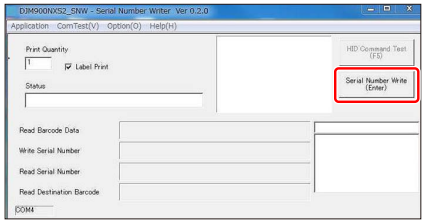
- Inifolder
- Logfolder
- hidcom.dll
- DJM_A9.exe
- device.ini
- UsbMidi.dll

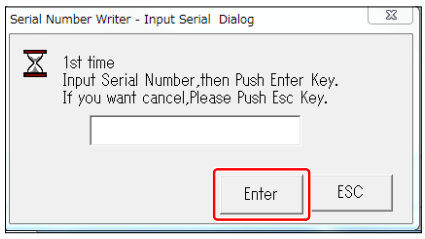
Procedure

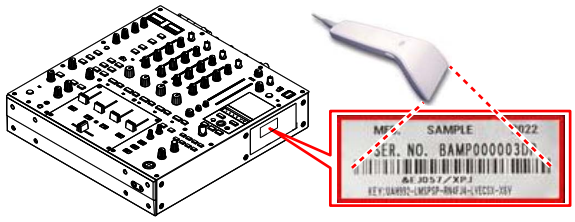
① Connect the unit with a PC via a USB B cable.
② To start the unit in Checker mode.
While holding the SOUND COLOR FX [FILTER] button, [LINK CUE] button and [CUE A] CH1button pressed, press the ⏻ button to turn the unit on.



③ Turn on PC, and click software “DJM_A9.exe”.
④ Click [Serial Number Write] button, display serial input dialog (first time).
Enter serial number by handwork or barcode reader, and click “Enter”.
If enter by handwork, enter “ ' ” before serial number.
(If forgot, displayed error)
If enter by barcode reader, need to connect for PC in advance.

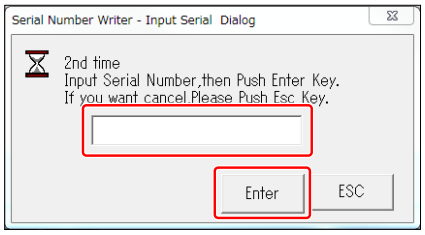






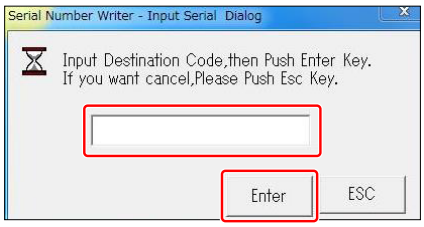
* Reference screen

⑤ Again display serial input dialog (second time), enter serial number by handwork or barcode reader, and click “Enter” like Step ④.

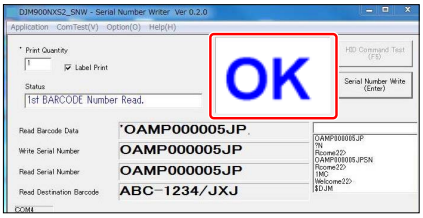


⑥ Dialog is displayed for the input of Destination Code, you need to enter in accordance with following table.

Model Name	Input Destination Code	Serial number last digits
DJM-A9/CUXJ	DJM-A9/CUXJ	CC
DJM-A9/PYXJ	DJM-A9/PYXJ	EH
DJM-A9/SXJ	DJM-A9/SXJ	NN
DJM-A9/XJ	DJM-A9/XJ	EV
DJM-A9/XJCN	DJM-A9/XJCN	CN

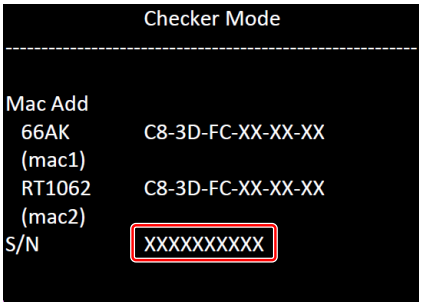


⑦ Completed successfully, PC software (DJM_A9.exe) is displayed “OK”.



⑧ Confirm that the written serial number is displayed in Checker Mode on the Display of the unit.

- Make sure the last two digits match the list table in ⑥.



⑨ Turn off the unit, and remove the connection to the PC.

8.4 USER SETABLE ITEMS

Item for user's Setting		Setting Value (The factory default settings are indicated in red letters.)	Part Name	Content to be Stored
MIXER SETTINGS			IC1402 (NSP) (MAIN Assy)	Utility settings
BALANCE		L128 to 0 to R127		
MASTER OUT	PEAK LIMITER	OFF, 21dB, 18dB, 15dB, 12dB		
	ATT.	−12dB, −9dB, −6dB, −3dB, 0dB		
	MONO/STEREO	MONO, STEREO		
DIGITAL MASTER OUT	REFERENCE LEVEL	−30dBFS, −27dBFS, −24dBFS, −21dBFS, −18dBFS, −15dBFS, −12dBFS, −9dBFS, −6dBFS		
	SAMPLING RATE	44.1kHz, 48kHz, 88.2kHz, 96kHz		
	PEAK LIMITER	OFF, ON		
	MONO/STEREO	MONO, STEREO		
BOOTH OUT	ATT.	−12dB, −9dB, −6dB, −3dB, 0dB		
	MONO/STEREO	MONO, STEREO		
	MUTE WHEN MIC ON	OFF, ON		
MIC	MIC TO MASTER PEAK LIMITER	0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, OFF		
	MIC TO BOOTH ATT.	−∞, −18dB, −15dB, −12dB, −9dB, −6dB, −3dB, 0dB		
	MIC TO BOOTH PEAK LIMITER	0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, OFF		
	MIC TO REC OUT EXCLUDE MIC	OFF, ON		
	MIC PHANTOM LOCK	LOCKED, UNLOCKED		
AUTO STANDBY		OFF, ON		
LOCK		LOCKED, UNLOCKED		
MY SETTINGS				
HEADPHONES A	MONO SPLIT	STEREO, MONO SPLIT, NONE		
HEADPHONES B	MONO SPLIT	STEREO, MONO SPLIT, NONE		
BEAT FX QUANTIZE		OFF, ON		
MIC LOW CUT		OFF, ON (for MC)		
MIC ECHO BEATS		1/8, 1/4, 1/2, 3/4, 1, 2, 4, 8		
TALK OVER	MODE	ADVANCED, NORMAL		
	LEVEL	−∞, −24dB, −18dB, −12dB, −6dB		
MIDI	CH	1 to 16		
	BUTTON TYPE	TOGGLE, TRIGGER		
BRIGHTNESS	DISPLAY	1 to 5, WHITE		
	INDICATOR	1 to 3		
DELAY, ECHO, PING PONG, SPIRAL	BEAT	1/16, 1/8, 1/4, 1/3, 1/2, 2/3, 3/4, 1, 2, 4, 8, 16		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
HELIX, TRANS, ROLL	BEAT	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 8, 16		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
REVERB	BEAT	1, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
FLANGER, PHASER, FILTER	BEAT	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 8, 16, 32, 64		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
TRIPLET FILTER	BEAT	1/12, 1/6, 1/3, 2/3, 4/3, 8/3, 12/3		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
TRIPLET ROLL	BEAT	1/12, 1/6, 1/3, 2/3, 4/3, 8/3, 12/3		
	FX FREQUENCY HI, MID, LOW	OFF, ON		
MOBIUS	BEAT	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 8, 16, 32, 64, −64, −32, −16, −8, −4, −2, −1, −1/2, −1/4, −1/8, −1/16		
	FX FREQUENCY HI, MID, LOW	OFF, ON		

■ Procedure for checking, saving, and restoring settings

Procedure of [Check and save settings] and [Restore settings] are as follows.

[Check and save settings]

① Save [MY SETTINGS] to the storage device.
② Record [MIXER SETTINGS] in the check sheet.
③ Load [OWNER SETTING] (load setting).
④ Record [MIXER SETTINGS] in the check sheet.

[Restore settings]

⑤ In [MY SETTINGS], load the settings from the storage device used in step ①.
⑥ Reset [MIXER SETTINGS] to the values recorded in step ④.
⑦ Save these settings as [OWNER SETTING].
⑧ Reset [MIXER SETTINGS] to the values recorded in step ②.

■ Sheet for confirmation of the user setting

[MIXER SETTINGS]

BALANCE	MASTER OUT											
	PEAK LIMITER					ATT.					MONO/STEREO	
	OFF	21dB	18dB	15dB	12dB	−12dB	−9dB	−6dB	−3dB	0dB	MONO	STEREO

DIGITAL MASTER OUT																
REFERENCE LEVEL									SAMPLING RATE				PEAK LIMITER		MONO/STEREO	
−30dBFS	−27dBFS	−24dBFS	−21dBFS	−18dBFS	−15dBFS	−12dBFS	−9dBFS	−6dBFS	44.1kHz	48kHz	88.2kHz	96kHz	OFF	ON	MONO	STEREO

BOOTH OUT									AUTO STANDBY		LOCK	
ATT.					MONO/STEREO		MUTE WHEN MIC ON					
−12dB	−9dB	−6dB	−3dB	0dB	MONO	STEREO	OFF	ON	OFF	ON	LOCKED	UNLOCKED

MIC																
MIC TO MASTER PEAK LIMITER									MIC TO BOOTH ATT.							
0dB	3dB	6dB	9dB	12dB	15dB	18dB	21dB	OFF	−∞	−18dB	−15dB	−12dB	−9dB	−6dB	−3dB	0dB
MIC TO BOOTH PEAK LIMITER									MIC TO REC OUT EXCLUDE MIC		MIC PHANTOM LOCK	
0dB	3dB	6dB	9dB	12dB	15dB	18dB	21dB	OFF	OFF	ON	LOCKED	UNLOCKED				

[MY SETTINGS]

HEADPHONES A			HEADPHONES B			BEAT FX QUANTIZE		MIC LOW CUT		MIDI			BRIGHTNESS	
MONO SPLIT			MONO SPLIT							CH	BUTTON TYPE		DISPLAY	INDICATOR
STEREO	MONO SPLIT	NONE	STEREO	MONO SPLIT	NONE	OFF	ON	OFF	ON (for MC)		TOGGLE	TRIGGER		

MIC ECHO BEATS								TALKOVER						
								MODE		LEVEL				
1/8	1/4	1/2	3/4	1	2	4	8	ADVANCED	NORMAL	−∞	−24dB	−18dB	−12dB	−6dB

DELAY, ECHO, PING PONG, SPIRAL													
BEAT												FX FREQUENCY HI, MID, LOW	
1/16	1/8	1/4	1/3	1/2	2/3	3/4	1	2	4	8	16	OFF	ON

HELIX, TRANS, ROLL										
BEAT									FX FREQUENCY HI, MID, LOW	
1/16	1/8	1/4	1/2	1	2	4	8	16	OFF	ON

REVERB												
BEAT											FX FREQUENCY HI, MID, LOW	
1	10	20	30	40	50	60	70	80	90	100	OFF	ON

FLANGER, PHASER, FILTER												
BEAT											FX FREQUENCY HI, MID, LOW	
1/16	1/8	1/4	1/2	1	2	4	8	16	32	64	OFF	ON

TRIPLET FILTER									TRIPLET ROLL								
BEAT							FX FREQUENCY HI, MID, LOW		BEAT							FX FREQUENCY HI, MID, LOW	
1/12	1/6	1/3	2/3	4/3	8/3	12/3	OFF	ON	1/12	1/6	1/3	2/3	4/3	8/3	12/3	OFF	ON

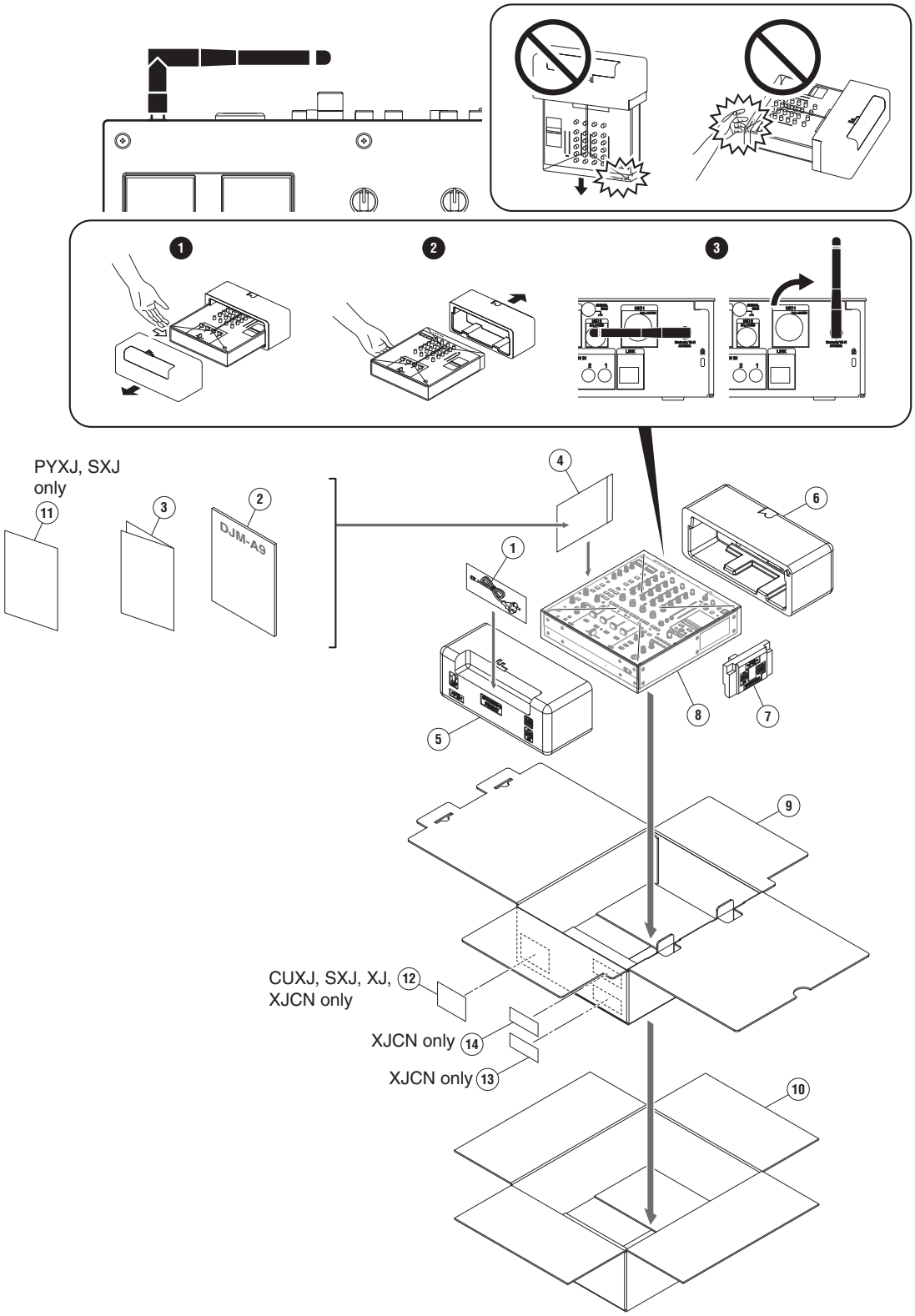
MOBIUS																					
BEAT																					
1/16	1/8	1/4	1/2	1	2	4	8	16	32	64	−64	−32	−16	−8	−4	−2	−1	−1/2	−1/4	−1/8	−1/16

FX FREQUENCY HI, MID, LOW	
OFF	ON

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 PACKING SECTION



(1) PACKING SECTION PARTS LIST

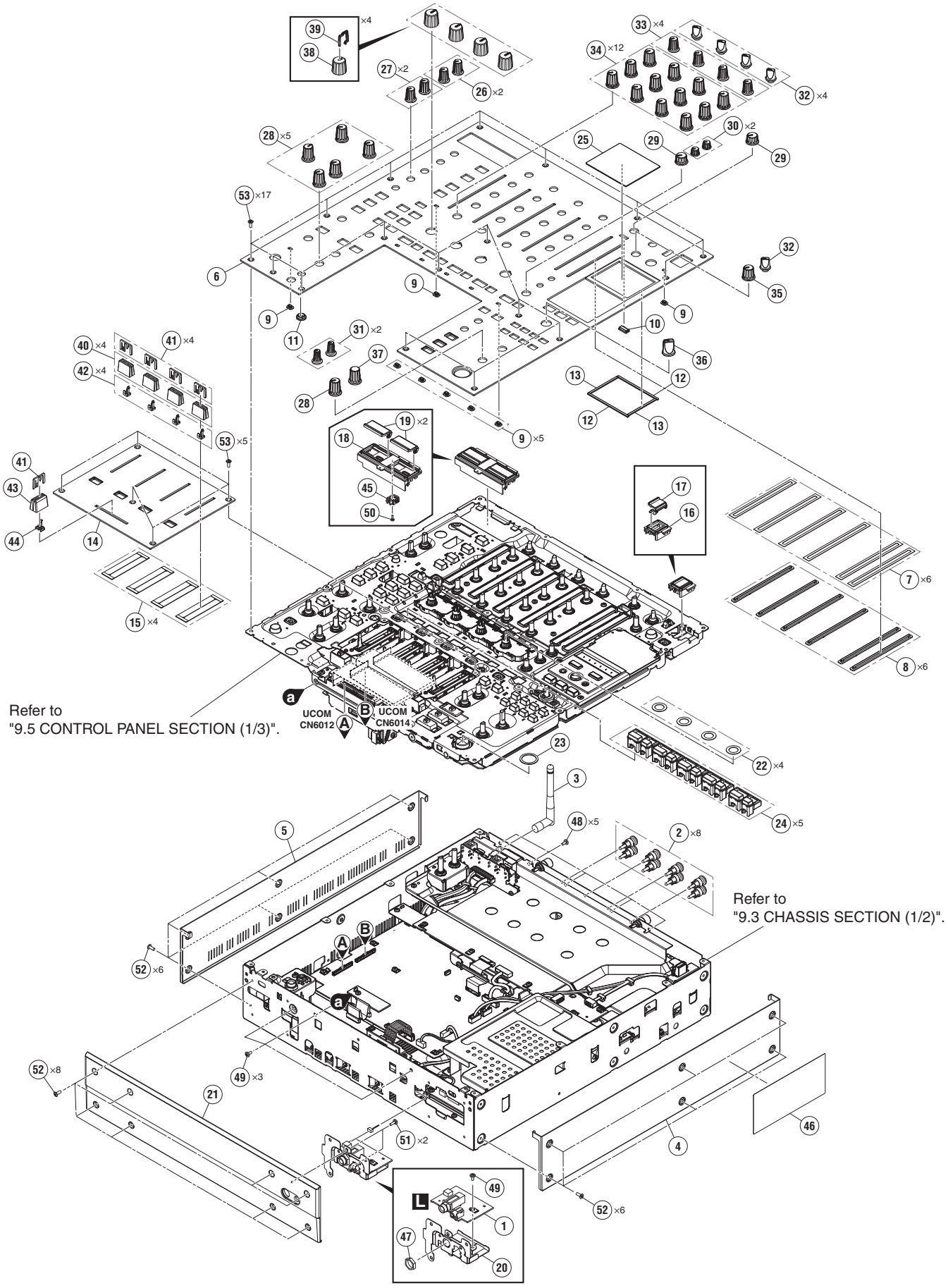
Mark	No.	Description	Part No.
⚠	1	Power cord	See Contrast table (2)
	2	Quick Start Guide	See Contrast table (2)
	3	Precautions for Use	See Contrast table (2)
NSP	4	Polyethylene Bag	AHG7117
	5	Packing Pad	DHA2020
	6	Packing Pad	DHA2021
	7	Packing Pad	DHA2035
	8	Mirror Mat (1200*1000)	DHL1169
	9	Packing Case	DHG3843
	10	Master Carton	See Contrast table (2)
NSP	11	Warranty	See Contrast table (2)
NSP	12	Label	See Contrast table (2)
NSP	13	Label	See Contrast table (2)
NSP	14	Label	See Contrast table (2)

(2) CONTRAST TABLE

DJM-A9/CUXJ, PYXJ, SXJ, XJ and XJCN are constructed the same except for the following:

Mark	No.	Symbol and Description	DJM-A9/CUXJ	DJM-A9/PYXJ	DJM-A9/SXJ	DJM-A9/XJ	DJM-A9/XJCN
⚠	1	Power cord	DDG1123	DDG1124	DDG1124	DDG1124	DDG1125
	2	Quick Start Guide	DRH1701	DRH1701	DRH1701	DRH1701	DRH1702
	3	Precautions for Use	DRH1699	DRH1699	DRH1699	DRH1699	DRH1700
	10	Master Carton	DHG3847	DHG3844	DHG3845	DHG3846	DHG3849
NSP	11	Warranty	Not used	DRY1274	DRY1274	Not used	Not used
NSP	12	Label	DRW3037	Not used	DRW3035	DRW3036	DRW3039
NSP	13	Label	Not used	Not used	Not used	Not used	DRW3040
NSP	14	Label	Not used	Not used	Not used	Not used	DRW2842

9.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

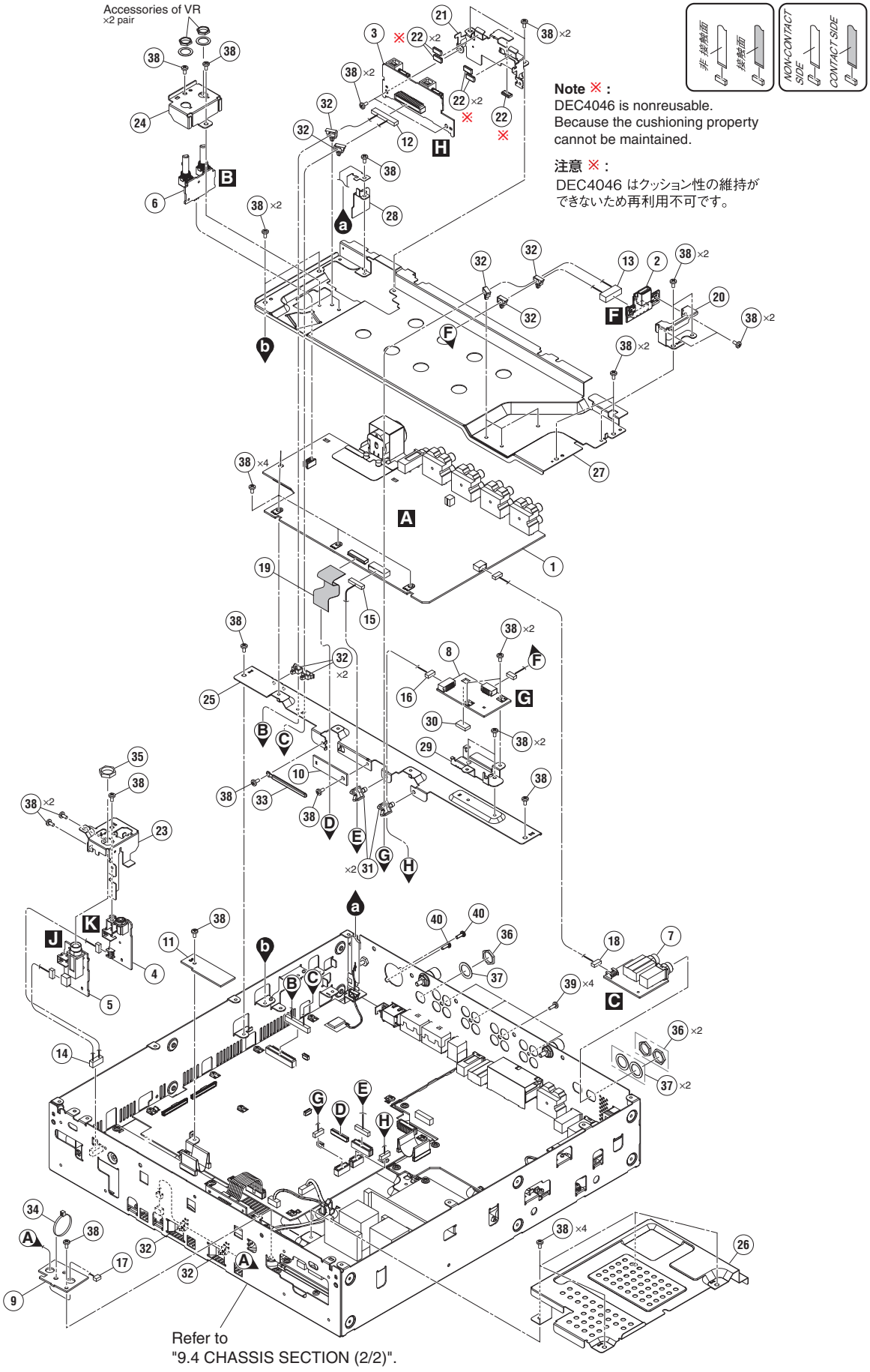
Mark	No.	Description	Part No.
	1	HPJC Assy	DWX4761
	2	RCA Plug	DKM1026
	3	Wi-Fi Antenna	DSD1004
	4	Panel	DAH3382
	5	Panel	DAH3383
	6	Control Panel	DNB1288
	7	DS Tape	DEH1126
	8	Lens	DNK7054
	9	Lens	DNK7053
	10	Lens	DNK6516
	11	Holder	DNK6552
	12	Cushion	DEC4042
	13	Cushion	DEC4043
	14	Panel	DAH3386
	15	Packing	DEC4028
	16	Panel	DNK7049
	17	Lid	DNK7050
	18	Panel	DNK7047
	19	Lid	DNK7048
	20	Stay	DNG1153
⚠	21	Panel	DNK7051
	22	Cushion	DEC3969
	23	SW Packing (EF)	DEC2929
	24	Button	DAC3632
	25	Window	DAH3385
	26	Knob	DAA1470
	27	Knob	DAA1471
	28	Knob	DAA1434
	29	Rotary Knob Low (BN)	DAA1265
	30	Knob	DAA1420
	31	Knob/RSW	DAA1307
	32	Knob	DAA1415
	33	Knob	DAA1417
	34	Knob	DAA1430
	35	Knob	DAA1435
	36	Select Knob	DAA1205
	37	Rotary SW Knob (C)	DAA1180
	38	Knob	DAA1445
	39	Stopper	DNK6970
	40	Knob	DAC3539
	41	Slider Knob 2	DAC2685
	42	Slider Knob Stopper	DNK5888
	43	Knob	DAC3238
	44	Stopper	DNK6440
	45	Holder	DNK6549
NSP	46	Name Label	See Contrast table (2)
	47	Nut M12	DBN1018
	48	Screw	BBZ30P060FTB
	49	Screw	BBZ30P060FTC
	50	Screw	BPZ20P060FTC
	51	Screw	BPZ30P080FNI
	52	Screw (FE)	DBA1290
	53	Screw	DBA1451

(2) CONTRAST TABLE

DJM-A9/CUXJ, PYXJ, SXJ, XJ and XJCN are constructed the same except for the following:

Mark	No.	Symbol and Description	DJM-A9/CUXJ	DJM-A9/PYXJ	DJM-A9/SXJ	DJM-A9/XJ	DJM-A9/XJCN
NSP	46	Name Label	DAL1386	DAL1383	DAL1384	DAL1385	DAL1388

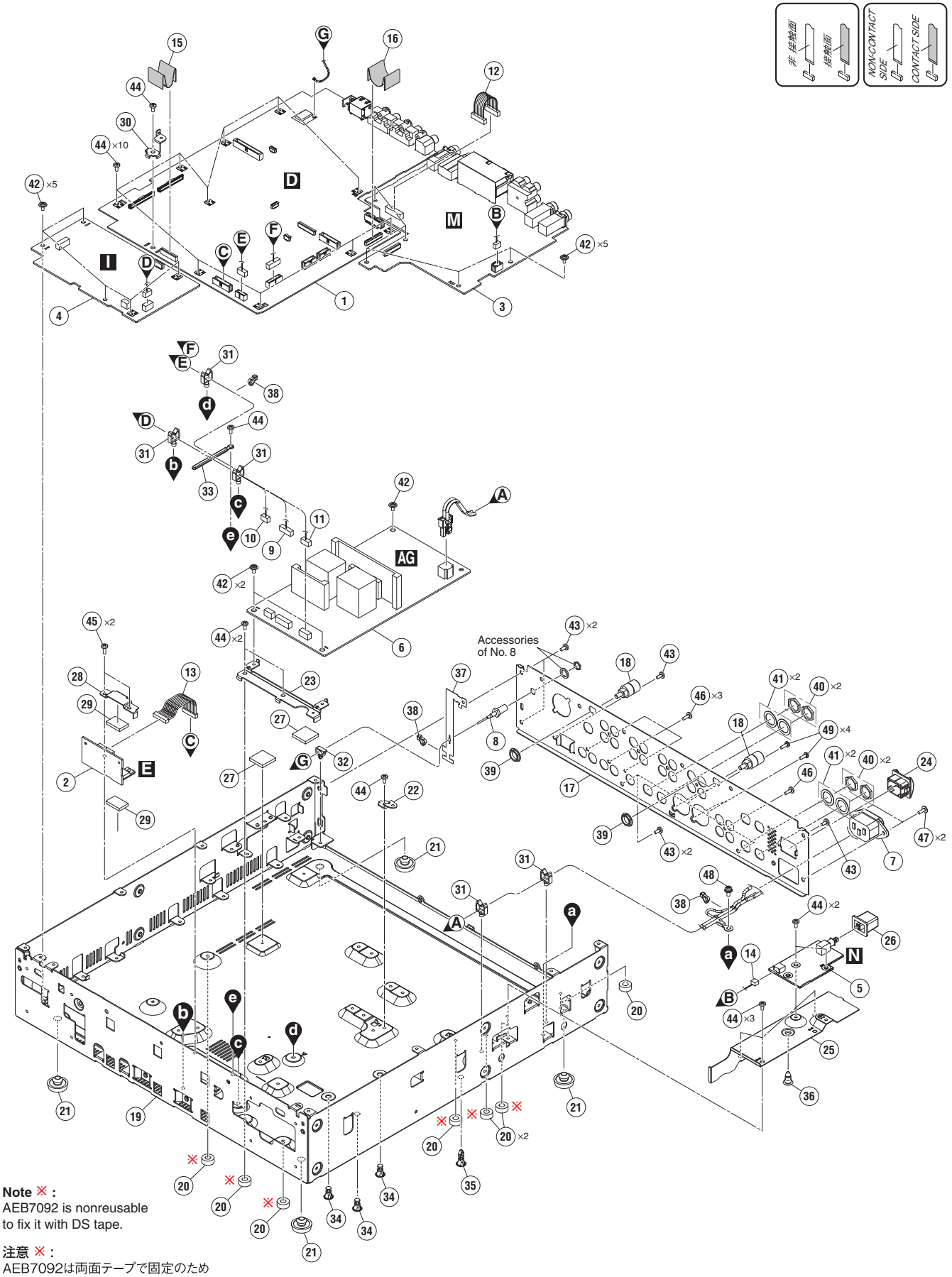
9.3 CHASSIS SECTION (1/2)



CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
	1	AINB Service Assy	DEA1147
	2	USBA Assy	DWX4756
	3	USBBC Assy	DWX4757
	4	HPJK Assy	DWX4759
	5	HPJM Assy	DWX4760
	6	MTRM Assy	DWX4762
	7	RTNJ Assy	DWX4766
	8	USBP Assy	DWX4767
	9	CCB1 Assy	DWX4803
	10	FGP1 Assy	DWX4801
	11	FGP2 Assy	DWX4802
	12	Shielded Conn-Cable	DDA1107
	13	Shielded Conn-Cable	DDA1105
	14	Crimp Connector	DDC1043
	15	Parallel Jumper	PF10PP-S07A
	16	Connector Assy	PF06PP-S12
	17	Parallel Jumper	PF03PP-D25A
	18	Parallel Jumper	PF04PP-D07A
	19	FFC	DDD2147
	20	Stay	DNG1148
	21	Stay	DNG1154
	22	Gasket	DEC4046
	23	Stay	DNG1151
	24	Stay	DNG1157
	25	Stay	DNG1150
	26	Cover	DNF2066
	27	Shield Plate	DNG1149
	28	Shield Plate	DNG1156
	29	Stay	DNF1951
	30	Sheet	DEC3621
	31	Holder	VEC1355
	32	Locking Mini Clamp	DEC2439
	33	Cord Clamper	DEX1025
	34	Cable Tie (SKB-90BK)	ZCA-SKB90BK
	35	Nut M12	DBN1018
	36	Nut M12	NKX2FNI
	37	Washer	DEC2920
	38	Screw	BBZ30P060FTC
	39	Screw	BPZ30P080FTB
	40	Screw	PPZ30P080FTB

9.4 CHASSIS SECTION (2/2)



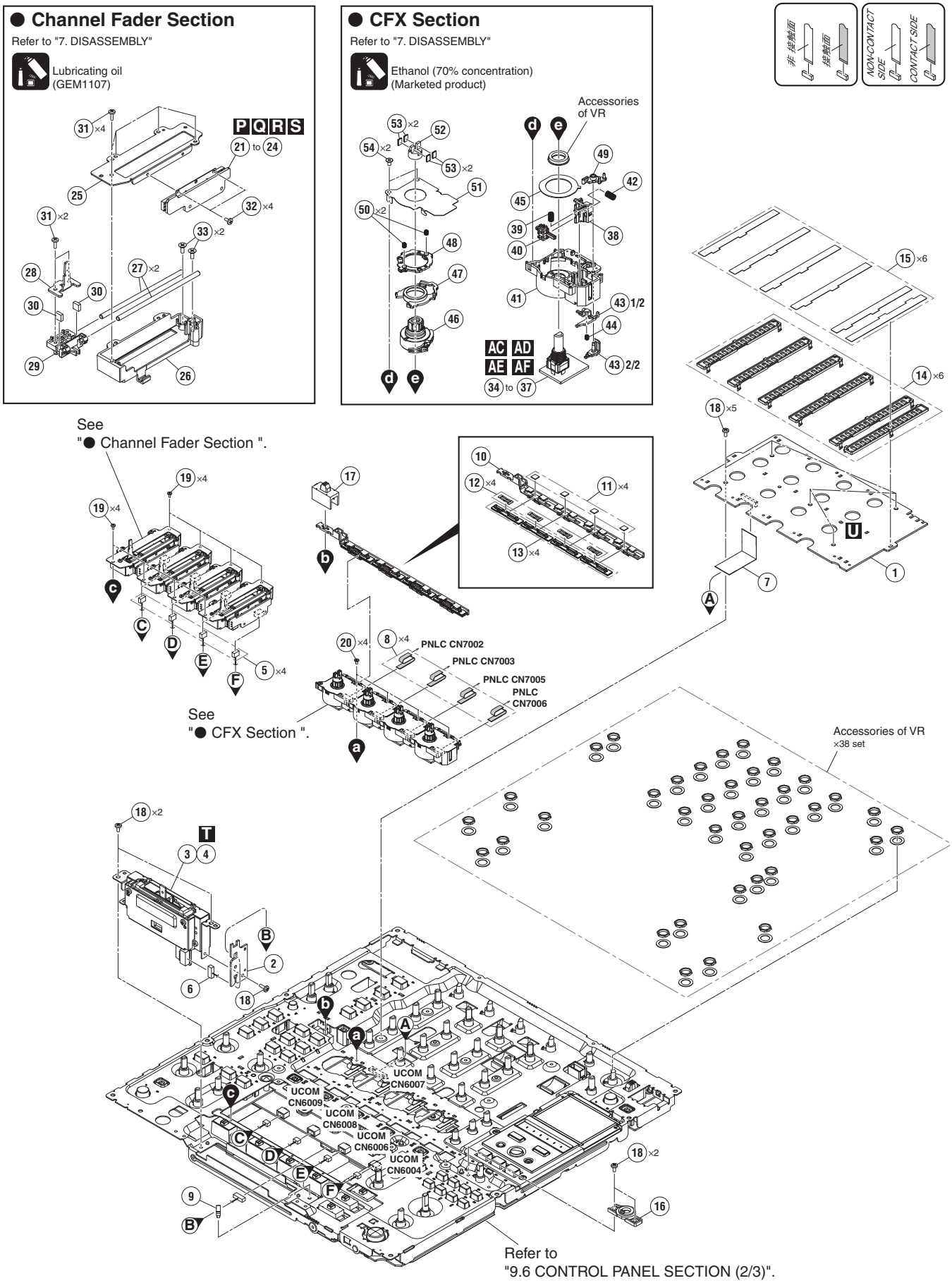
Note ※ :
AEB7092 is nonreusable to fix it with DS tape.

注意 ※ :
AEB7092は両面テープで固定のため再利用不可です。

CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN Assy	DWX4755
	2	REGB Assy	DWX4763
	3	AOUT Assy	DWX4764
	4	HPPW Assy	DWX4765
	5	PSWB Assy	DWX4780
⚠	6	SW POWER SUPPLY	DWR1581
⚠	7	AC Inlet	DKP3998
	8	Shielded Conn-Cable	DDA1110
	9	Parallel Jumper	PF08PP-S22A
	10	Parallel Jumper	PF04PP-S17A
	11	Parallel Jumper	PF05PP-S27A
	12	Parallel Jumper	PF09PP-D05A
	13	Crimp Connector	PF09PP-S07
	14	Connector Assy	PF03PP-B05
	15	FFC	DDD2146
	16	FFC	DDD2147
	17	Rear Panel	DNC2142
	18	Earth Terminal	DKE1019
	19	Chassis	DNA1485
NSP	20	Spacer	AEB7092
	21	Foot (Rubber)	REC-434
NSP	22	PCB Stay (FE)	VNE2489
	23	Stay	DNG1129
	24	Power Knob Guard	DNK4534
	25	Shield Case	DNG1152
	26	Power Knob	DAC2306
	27	Sheet	DEC3618
	28	Cover	DNG1138
	29	Sheet	DEC3901
	30	Stay	DND1313
	31	Holder	VEC1355
	32	Locking Mini Clamp	DEC2439
	33	Cord Clamper	DEX1025
⚠	34	Spacer	DEC3878
⚠	35	Spacer	DEC3850
NSP	36	PCB Holder	PNW1706
	37	Sheet	DEC4079
	38	Cable Tie (SKB-90BK)	ZCA-SKB90BK
	39	Flange Nut M9	DBN1008
	40	Nut M12	NKX2FNI
	41	Washer	DEC2920
	42	Screw	ABZ30P060FTC
	43	Screw	BBZ30P060FTB
	44	Screw	BBZ30P060FTC
	45	Screw	BBZ30P080FTC
	46	Screw	BPZ30P080FTB
	47	Screw	IBZ30P080FTB
	48	Screw	PMH40P080FTC
	49	Screw	PPZ30P080FTB

9.5 CONTROL PANEL SECTION (1/3)



CONTROL PANEL SECTION (1/3) PARTS LIST

Mark	No.	Description	Part No.
	1	LEDB Assy	DWX4769
	2	CRF Assy	DWX4790
	3	1..Crossfader Service Assy	DEA1096
NSP	4	2..CRFB Assy	DWX4772
	5	Crimp Connector	DDC1041
	6	Crimp Connector	DDC1042
	7	FFC	DDD2089
	8	FFC	DDD2096
	9	Locking Mini Clamp	DEC2439
	10	Lever	DNK6906
	11	Grip	DED1192
	12	Leaf Spring	DBK1402
	13	Adjuster	DNK6974
	14	Holder	DNK6878
	15	Sheet	DEC3885
	16	Stopper	DNK7069
	17	Cap	DAC3520
	18	Screw	BBZ30P060FTC
	19	Screw	BSZ20P040FTB
	20	Screw	DBA1456

Channel Fader Section

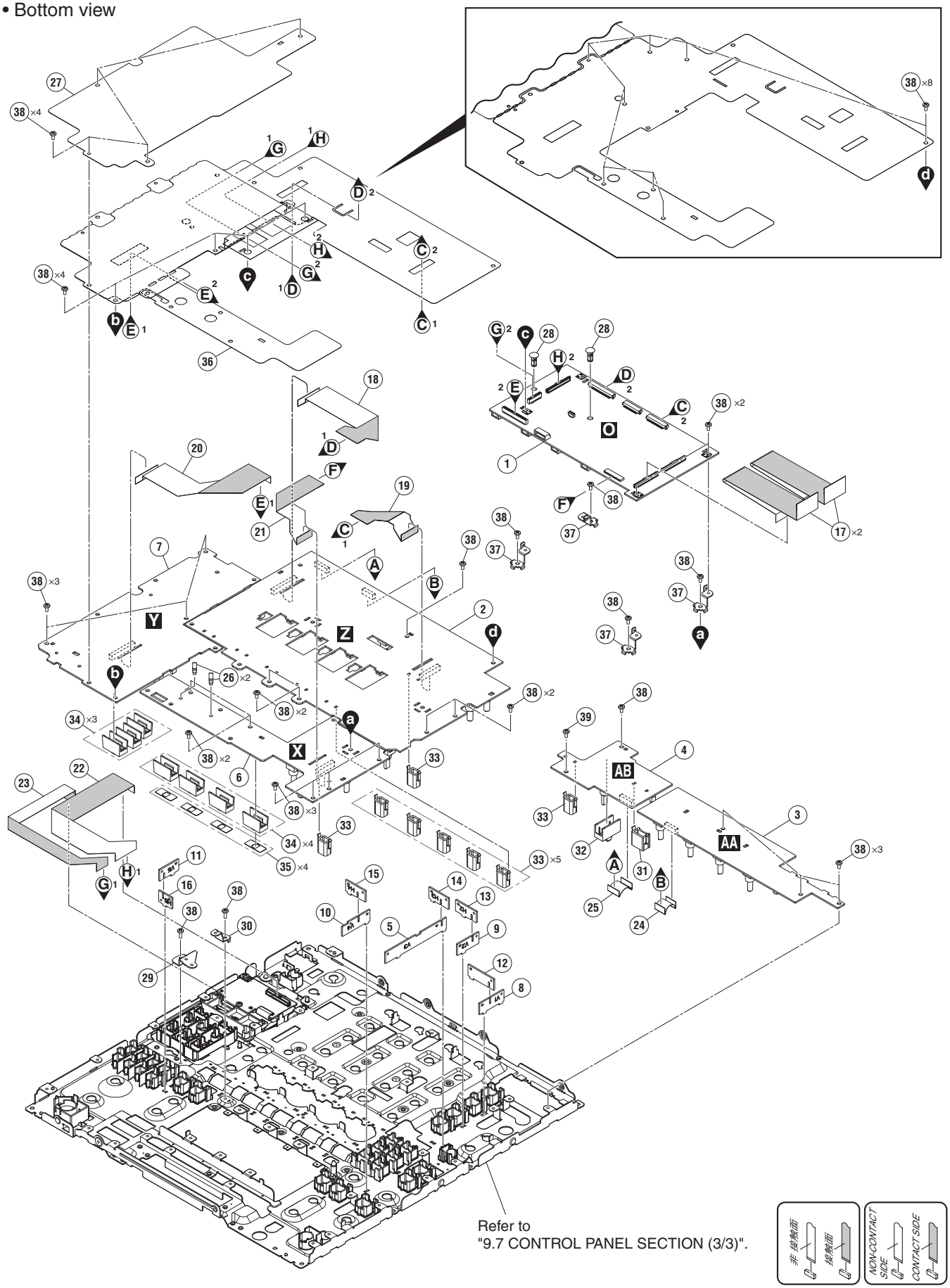
	21	CHF1 Assy	DWX4783
	22	CHF2 Assy	DWX4784
	23	CHF3 Assy	DWX4785
	24	CHF4 Assy	DWX4786
	25	Cover	DNG1131
	26	Holder	DNK6884
	27	Guide Shaft VK1	DLA1978
	28	Lever Plate	DNH2954
	29	Slider	DNK6889
	30	Cushion	DEC3640
	31	Screw	BPZ20P060FTC
	32	Screw	BSZ20P040FTB
	33	Screw	CPZ26P080FTC

CFX Section

	34	CFX1 Assy	DWX4773
	35	CFX2 Assy	DWX4774
	36	CFX3 Assy	DWX4775
	37	CFX4 Assy	DWX4776
	38	Holder	DNK6903
	39	Spring	DBH1826
	40	Stopper	DNK6902
	41	Base	DNK6900
	42	Spring	DBH1827
	43	Brake	DNK7061
	44	Spring	DBH1843
	45	Sheet	DEC3971
	46	Cam	DNK6901
	47	Cam	DNK6969
	48	Plate	DNK6929
	49	Arm	DNK6905
	50	Coil Spring	DBH1851
	51	Cover	DNH3454
	52	Cap	DNK6904
	53	Contact Rubber	DEC3972
	54	Screw	DBA1455

9.6 CONTROL PANEL SECTION (2/3)

• Bottom view



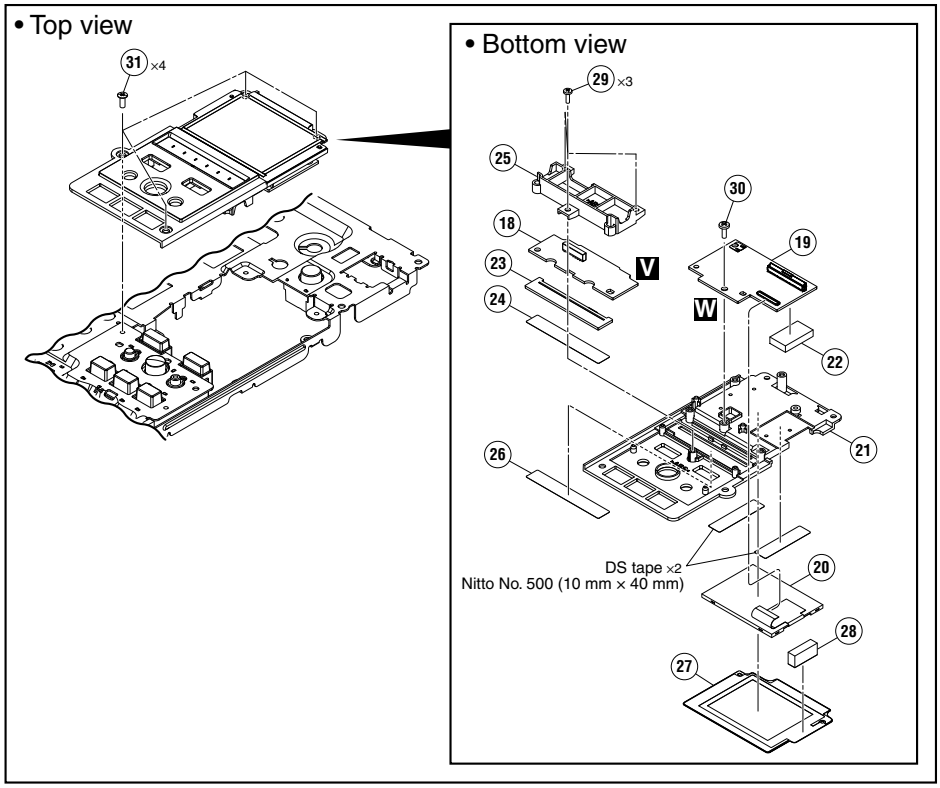
CONTROL PANEL SECTION (2/3) PARTS LIST

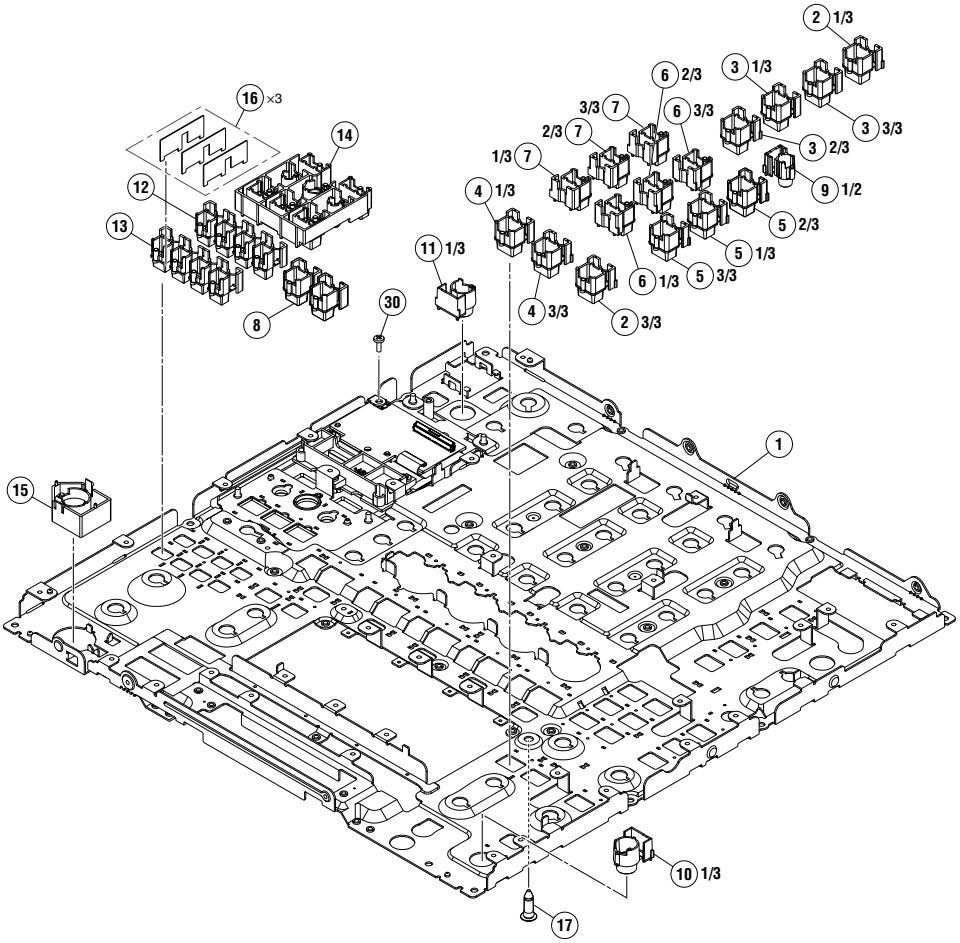
Mark	No.	Description	Part No.
	1	UCOM Assy	DWX4768
	2	PNLC Assy	DWX4777
	3	PNLU Assy	DWX4778
	4	MIOB Assy	DWX4779
	5	SHADE V3 Assy	DWX4793
	6	PNLL Assy	DWX4781
	7	PNLR Assy	DWX4782
	8	SHADE V1 Assy	DWX4791
	9	SHADE V2 Assy	DWX4792
	10	SHADE V4 Assy	DWX4794
	11	SHADE V5 Assy	DWX4795
	12	SHADE H1 Assy	DWX4796
	13	SHADE H2 Assy	DWX4797
	14	SHADE H3 Assy	DWX4798
	15	SHADE H4 Assy	DWX4799
	16	SHADE H5 Assy	DWX4800
	17	FFC	DDD2152
	18	FFC	DDD2087
	19	FFC	DDD2088
	20	FFC	DDD2090
	21	FFC	DDD2091
	22	FFC	DDD2092
	23	FFC	DDD2093
	24	FFC	DDD2094
	25	FFC	DDD2095
	26	Locking Mini Clamp	DEC2439
⚠	27	Sheet	DEC4058
	28	Spacer	DEC3880
	29	Stay	DND1321
	30	Stay	DND1322
	31	Holder	DNK6511
	32	Cap	DAC3136
	33	Holder	DNK7066
	34	Slide SW Cap (W)	DAC2401
	35	Sheet	DEC3902
	36	Sheet	DEC4050
	37	Stay	DND1313
	38	Screw	BBZ30P060FTC
	39	Screw	BPZ30P080FTB

9.7 CONTROL PANEL SECTION (3/3)

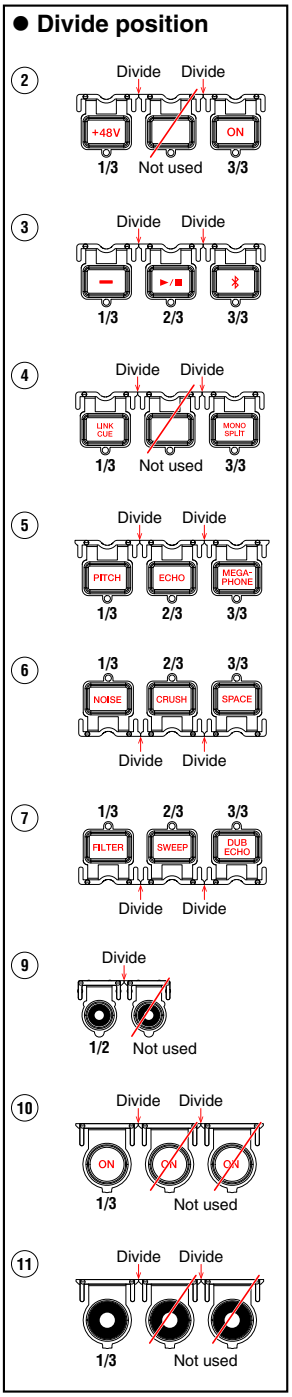
• Bottom view

● LCD Section





● Divide position



CONTROL PANEL SECTION (3/3) PARTS LIST

Mark	No.	Description	Part No.
	1	Stay	DND1320
	2	Button	DAC3637
	3	Button	DAC3635
	4	Button	DAC3636
	5	Button	DAC3639
	6	Button	DAC3640
	7	Button	DAC3641
	8	Button	DAC3631
	9	Button	DAC3491
	10	Button	DAC3628
	11	Button	DAC3630
	12	Button	DAC3633
	13	Button	DAC3634
	14	Button	DAC3142
	15	Button	DAC3141
	16	Sheet	DEC4041
	17	PCB Holder	PNW2029

LCD Section

	18	CDCB Assy	DWX4771
	19	LCDB Assy	DWX4770
	20	TFT LCD	DWX4330
	21	Panel	DNK7067
	22	Cushion	DEC4030
	23	Lens	DNK7052
	24	DS Tape	DEH1125
	25	Holder	DNK7068
	26	Panel	DNK7136
	27	Sheet	DEC4032
	28	Cushion	DEC4031
	29	Screw	BPZ26P080FTC
	30	Screw	BPZ30P080FTB
	31	Screw (FE)	DBA1290