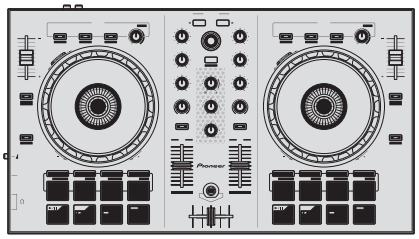
Pioneer

Service Manual



DDJ-SB

ORDER NO.
RRV4503

DJ Controller

DDJ-SB

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

Model	Type	Power Requirement	Remarks
DDJ-SB	SXJ5	DC 5 V (USB-bus power only)	
DDJ-SB	KXJ5	DC 5 V (USB-bus power only)	
DDJ-SB	XJCN5	DC 5 V (USB-bus power only)	

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SAFETY INFORMATION

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

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

Health & Safety Code Section 25249.6 - Proposition 65

CONTENTS

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 ºC.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 ºC in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 NOTES ON PARTS REPLACEMENT

Lubrication during Reassembly of the Jog Dial

When reassembling the Jog dial after replacing the Jog dial or control panel, be sure to apply grease to the shaft and shaft bearing of the Jog dial.
For details on how to lubricate, see "Procedure for applying grease during reassembly of the Jog dial" in "7. DISASSEMBLY."
Be sure to use the specified grease.

Notes on Replacement of the PNL1 Assy, PNL2 Assy, and Button/PADs

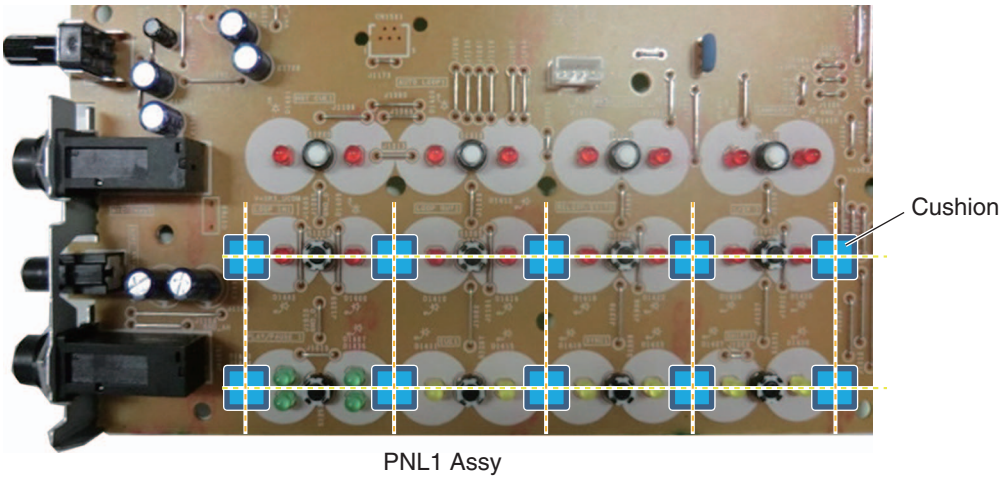
Cushions were added to the PNL1 Assy and PNL2 Assy of the first-lot products to solve the problem that a PAD may remain at the pressed position although it is pressed to return to its original position. This problem was revealed during production.
The Button/PADs have already been revamped and this problem has been solved. The Button/PAD for service to be supplied is a revamped one.
However, some measures may be required, depending on which part is to be replaced, as described below.

(1) For replacement of the PNL1 Assy or PNL2 Assy
① When the old Assy has cushions attached on it
The cushions (Part No. DEC3552) must be attached to the specified places (see the figures below) on the new Assy after replacement.
Be sure to order the cushions together with the PNL1 Assy or PNL2 Assy.
② When the old Assy does not have cushions attached on it
Replace the PNL1 Assy or PNL2 Assy with a new one. Attaching of cushions is NOT required. (For details on work after replacement, see "8.1 NECESSARY ITEMS TO BE NOTED.")

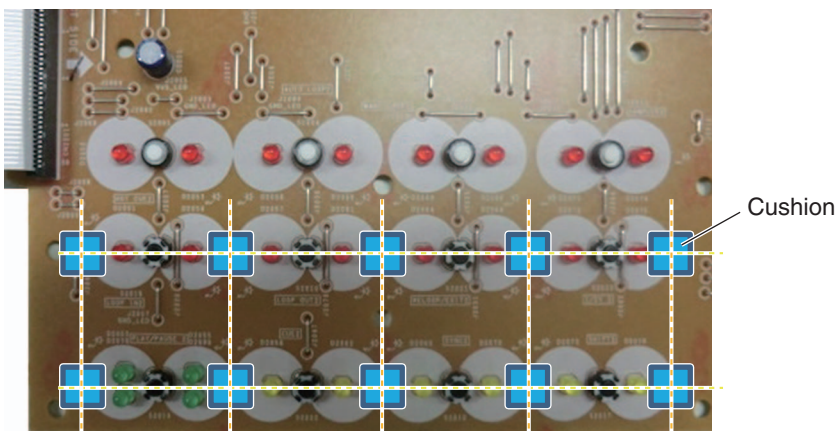
(2) For replacement of a Button/PAD
① When the PNL1 Assy or PNL2 Assy has cushions attached on it
Peel off the cushions attached to the PNL1 Assy or PNL2 Assy whose Button/PAD is to be replaced.
② When the PNL1 Assy or PNL2 Assy does not have cushions attached on it
Replace the Button/PAD with a new one.

[Places where the cushions are to be attached]

Allowance of displacement: Within 1 mm in all directions



PNL1 Assy



PNL2 Assy

Parts that require simultaneous replacement

Two photointerrupters are provided with each unit of the PNL1 Assy and PNL2 Assy for detection of Jog dial rotations.
When replacement of photointerrupters is required because of abnormalities in detected waveforms, etc., be sure to replace both photointerrupters at the same time.

Corresponding Part No.: RPI-579N1

Parts that require simultaneous replacement: PC1551 and PC1552 (PNL1 Assy), PC2251 and PC2252 (PNL2 Assy)

After replacement, be sure to perform the procedure described in "4 Judging the quality of mounting and connection of the photointerrupter" in "6. SERVICE MODE."

Jog touch sensor IC

The part numbers of the following parts will change in mid-course of mass production (MP):

Corresponding Part No.: DYW1842 (in-house writing) to PE0005A8 (writing by the manufacturer of the corresponding IC)

Parts whose part numbers are to be changed: IC1501 (PNL1 Assy), IC2201 (PNL2 Assy)

After the part No. is changed to PE0005A8, be careful not to order DYW1842 as a service part.

Writing to the EEPROM after replacement of microcomputer/Assy

After replacement of any of the following microcomputers/Assys, be sure to write the appropriate program file to the EEPROM, following "8.3 WRITING TO THE EEPROM FOR THE USB CONTROLLER":

IFPW Assy, IC202 (EEPROM: BR24T64F-W), IC201 (USB controller: TUSB3200ACPAH)

Without writing to the EEPROM, the unit will not operate properly.

PNL1 Assy, IC1002 (MAIN UCOM: DYW1841)

After writing to the EEPROM, it will be updated to the latest state.

1.3 SERVICE NOTICE

Voltage Monitoring

This unit always monitors for power failure and will shut itself off immediately after an error is detected.
All LEDs are unlit after an error is generated.
After the unit shuts itself off because of an error, disconnect the USB cable and wait at least 30 seconds before turning the unit back on.
Repair the unit according to the diagnostic procedures described in “5.3 VOLTAGE MONITORING.”

Demo Mode

This unit will automatically enter Demo mode if it is left unoperated for 10 minutes in Normal Operation mode.
To cancel this mode, operate any control or button of this unit.
To disable Demo mode, change the setting in the settings of Utilities mode. (For details, refer to the operating instructions.)

2. SPECIFICATIONS

General – Main Unit

Power supply ..... DC 5 V
Rated current ..... 500 mA
Main unit weight ..... 2.1 kg (4.6 lb)
Max. dimensions ..... 487 mm (W) × 58.5 mm (H) × 271.2 mm (D)
(19.2 in. (W) × 2.3 in. (H) × 10.7 in. (D))
Tolerable operating temperature ..... +5 °C to +35 °C
Tolerable operating humidity ..... 5 % to 85 % (no condensation)

Audio Section

Sampling rate ..... 44.1 kHz
D/A converter ..... 24 bits
Rated output level
MASTER OUT ..... 2.1 Vrms
Frequency characteristic
USB, MIC ..... 20 Hz to 20 kHz
S/N ratio (rated output, A-WEIGHTED)
USB ..... 78 dB
MIC ..... 78 dB
Total harmonic distortion
USB ..... 0.005 %
Input impedance
MIC ..... 11 kΩ
Output impedance
MASTER OUT ..... 1 kΩ or less
PHONES ..... 10 Ω

Input / Output terminals

MIC terminal
Phone jack (Ø 6.3 mm) ..... 1 set
MASTER OUT output terminal
RCA pin jack (Ø 6.3 mm) ..... 1 set
HEADPHONES output terminal
Stereo phone jack (Ø 6.3 mm) ..... 1 set
Stereo mini phone jack (Ø 3.5 mm) ..... 1 set
USB terminal
B type ..... 1 set

Accessories

- CD-ROM (Installation Disc)
  (DXX2742)

- USB cable
  (DDE1128)

- Read Before Use (Important)/Quick Start Guide (this document)
  (SXJ5: DRH1239, DRH1240)
  (KXJ5: DRH1242)
  (XJCN5: DRH1241)

- Warranty (for some regions)
  The included warranty is for the European region.
  — For the North American region, the corresponding information is provided on the last page of both the English and French versionsof the “Read Before Use (Important)/Quick Start Guide”.
  — For the Japanese region, the corresponding information is provided on the last page of the Japanese version of the “Read Before Use (Important)/Quick Start Guide”.

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing

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

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

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

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

3.2 JIGS LIST

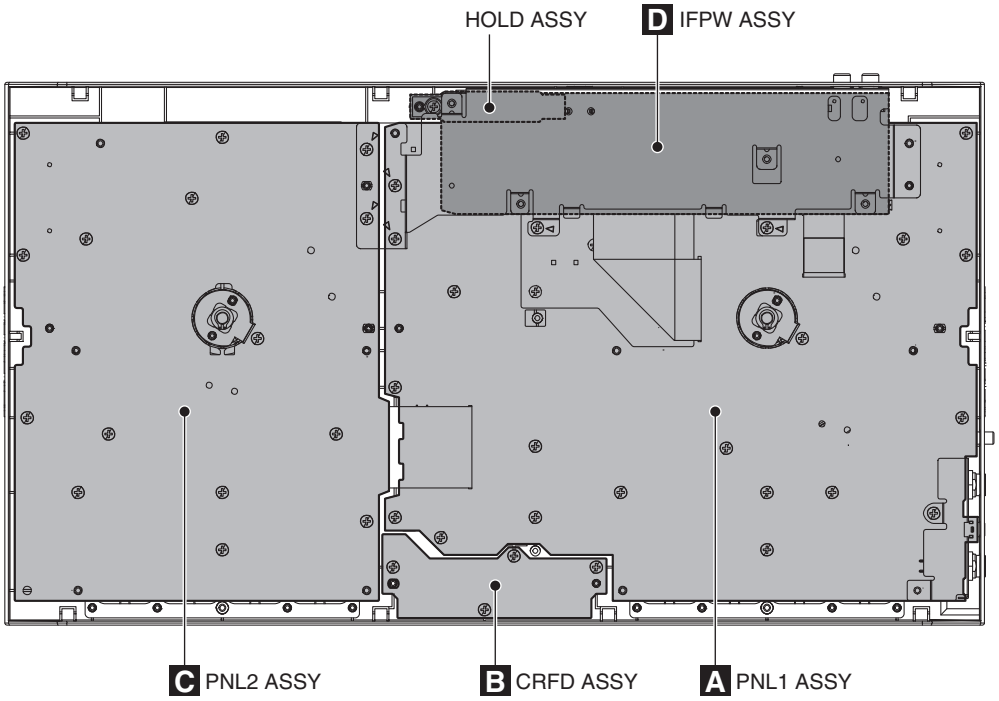
Jigs List

Jig Name	Part No.	Purpose of use / Remarks
USB cable	GGP1193	for PC connection

Lubricants and Glues List

Name	Part No.	Remarks
Grease	GEM1100	See "7. DISASSEMBLY." GEM1100 will be available at the beginning of February 2014. **Note:** If grease is needed before GEM1100 becomes available, use GEM1098. With use of GEM1098, 100 manual running-in rotations are required (instead of 50 rotations with the GEM1100) after the grease is applied.

3.3 PCB LOCATIONS



• Bottom view

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

Mark No. Description Part No.

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	PNL1 ASSY	DWX3570
NSP	1	PNL2 ASSY	DWM2526
	2	PNL2 ASSY	DWX3571
	2	CRFD ASSY	DWX3573
	2	HOLD ASSY	DWX3575
	1	IFPW ASSY	DWX3569

A

B

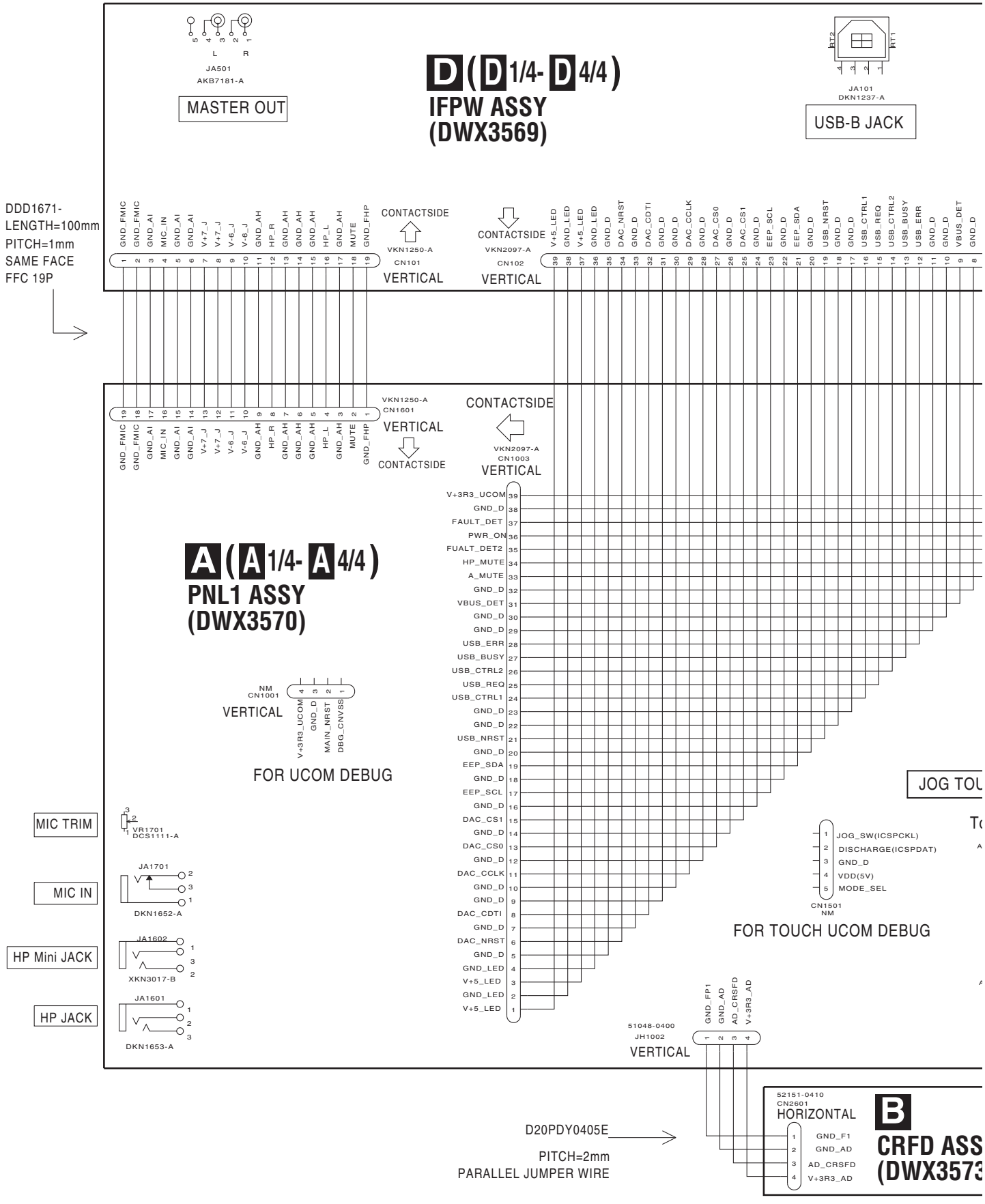
C

D

E

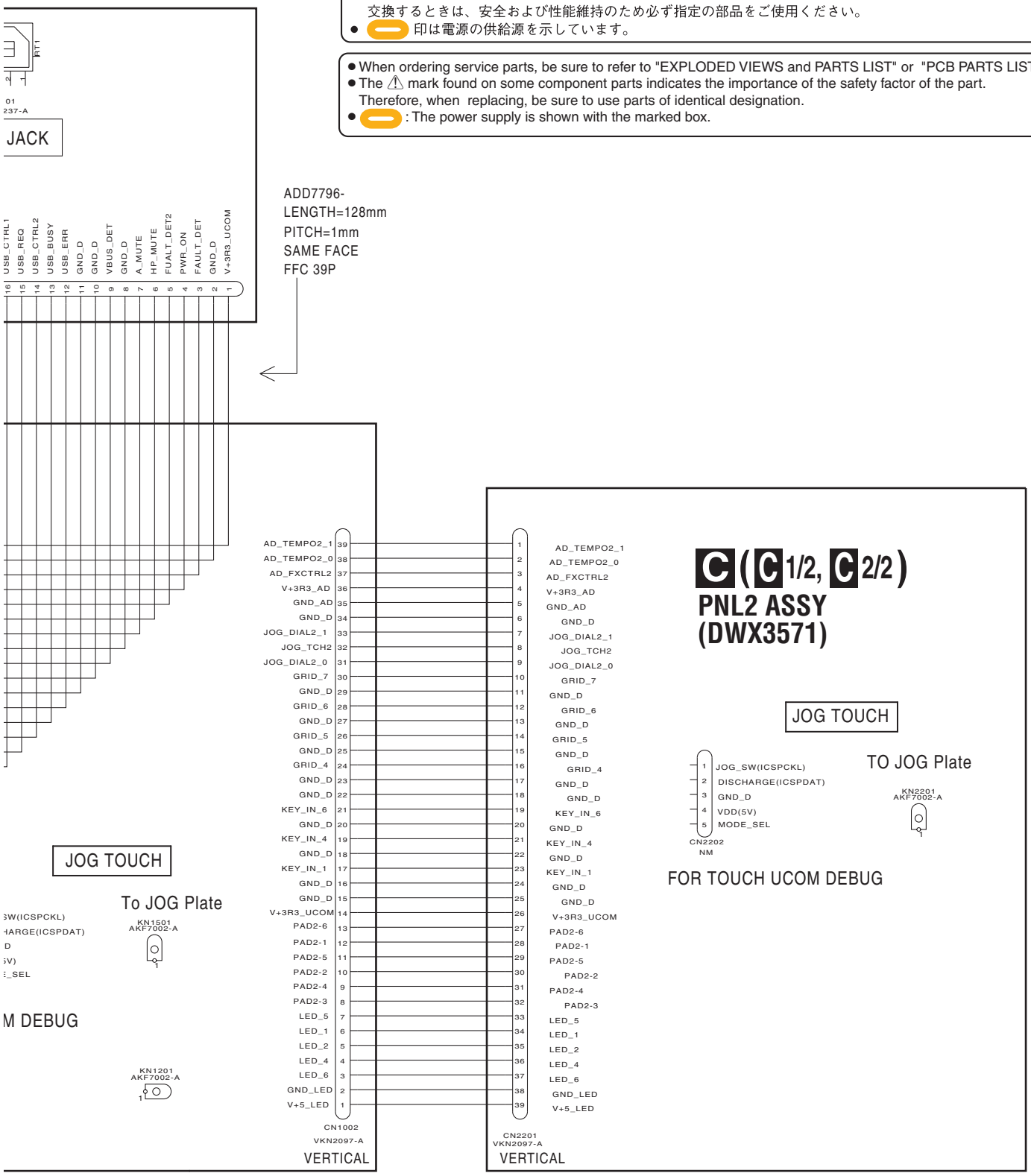
F

4. BLOCK DIAGRAM
4.1 OVERALL CONNECTION DIAGRAM

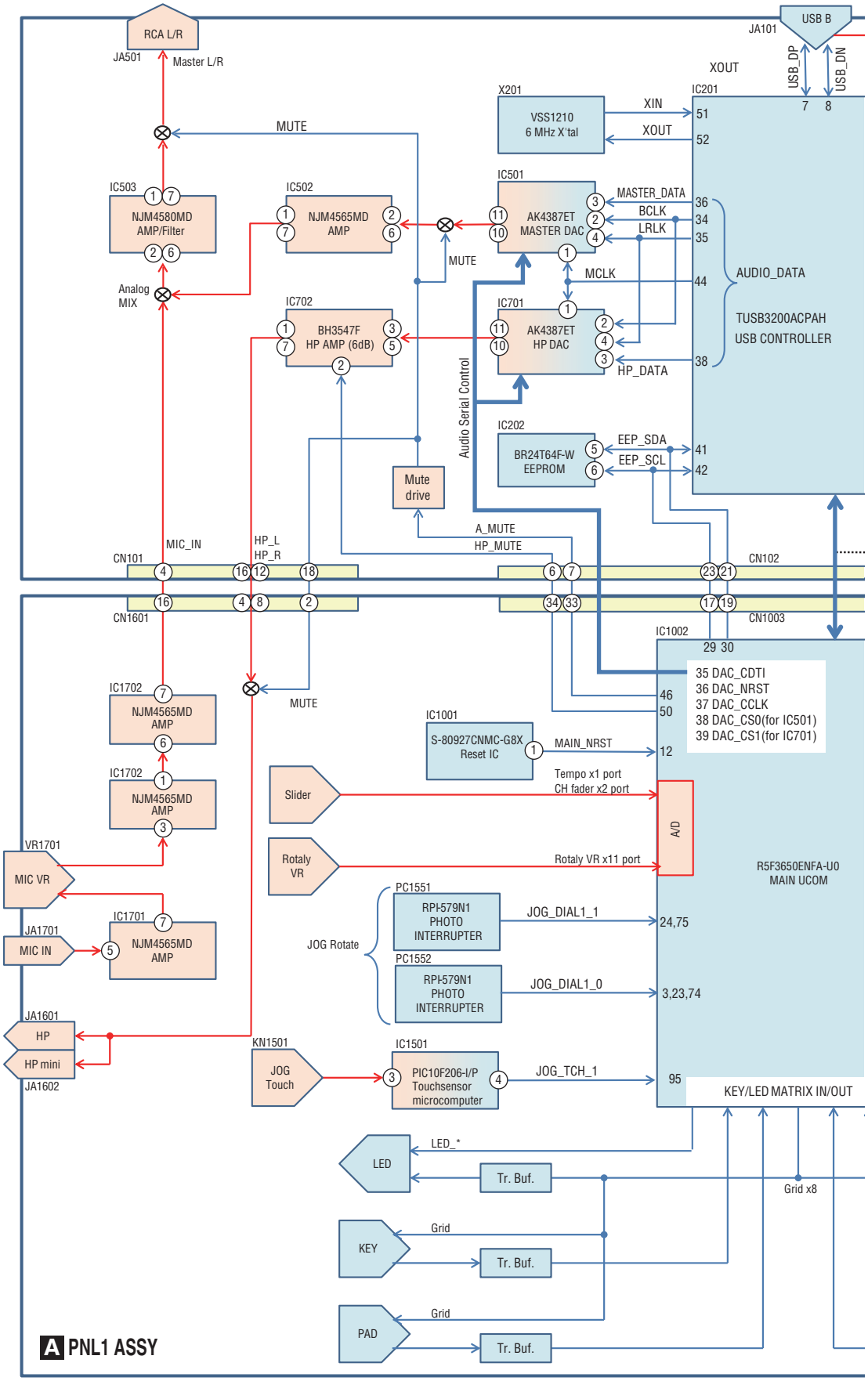


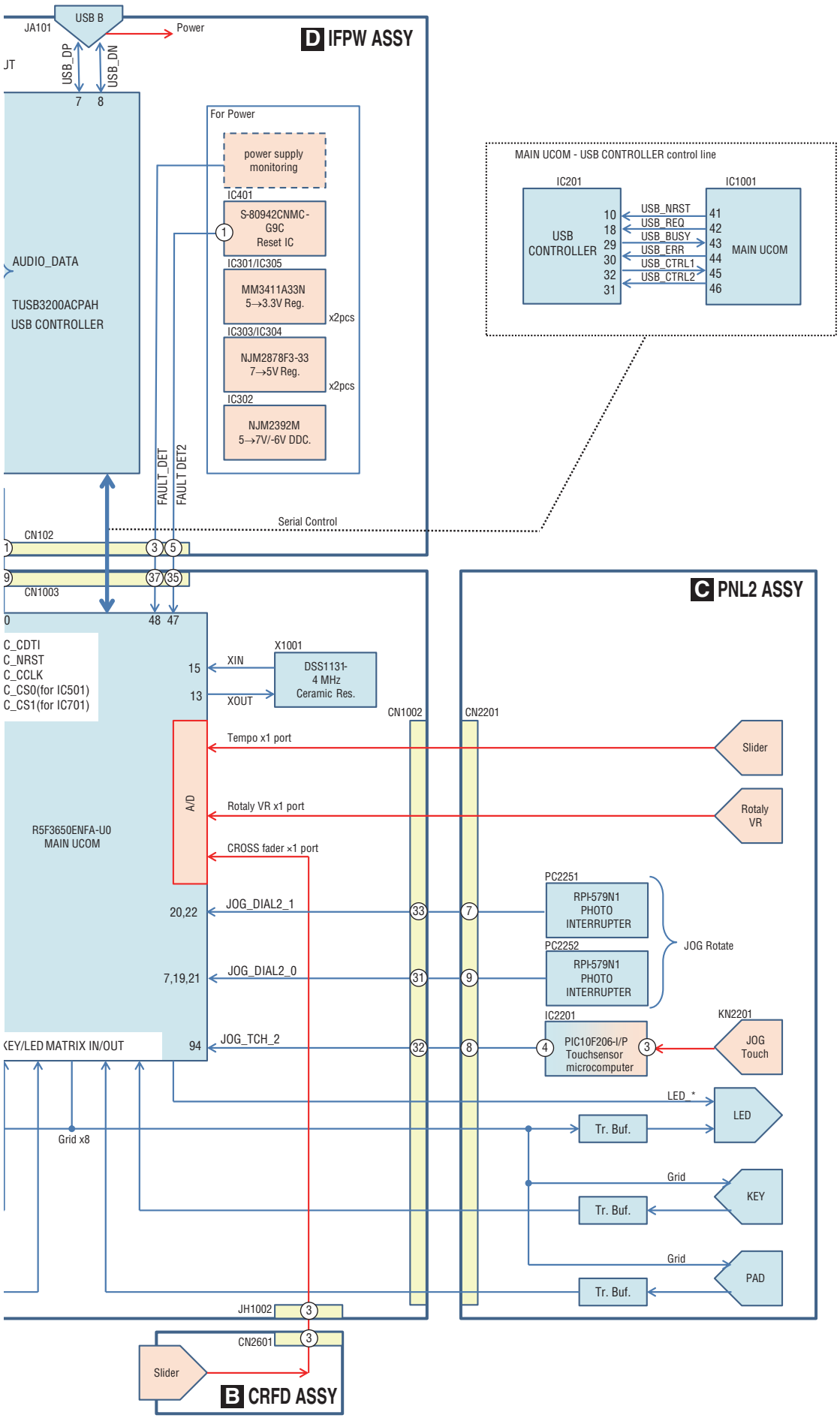
- 部品を発注する場合は、必ず「分解図と部品表」または「電気部品表」を参照してください。
- ⚠ 印の部品は、安全上重要な部品です。
  交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
- 印は電源の供給源を示しています。

- 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.
- : The power supply is shown with the marked box.

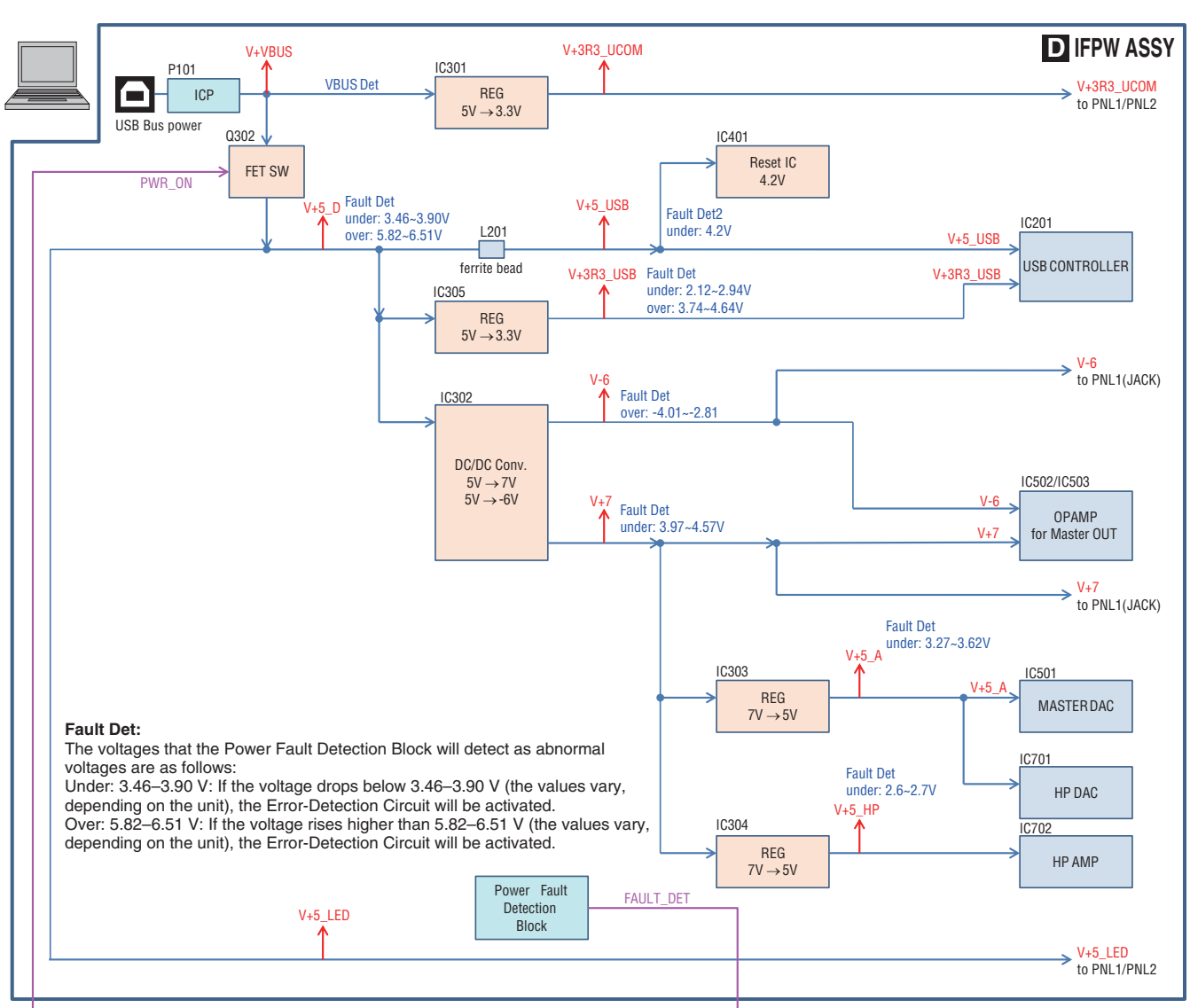


4.2 OVERALL BLOCK DIAGRAM

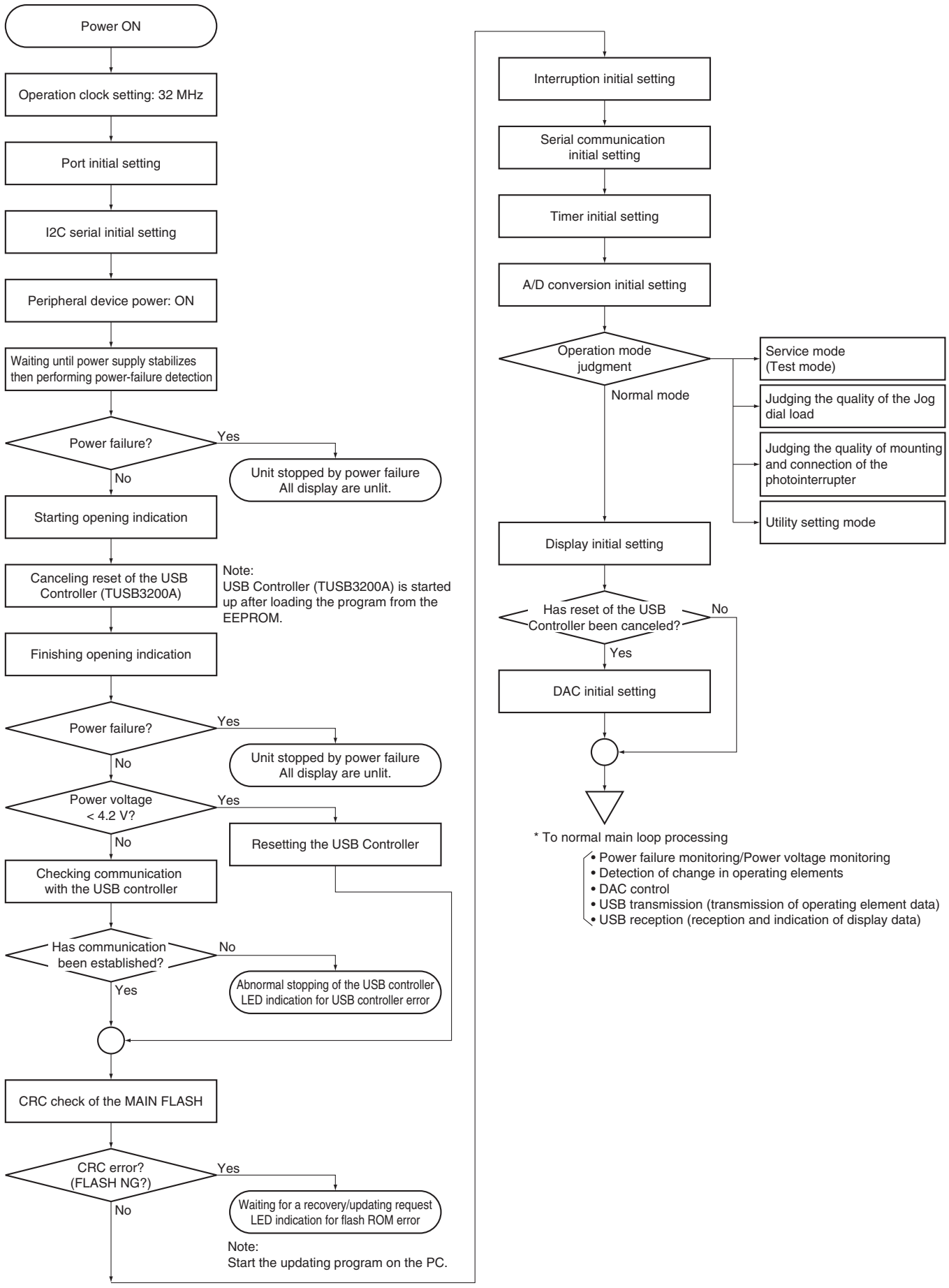



D IFPW ASSY
JA101
USB B
Power
JT
USB_DP
USB_DN
7
8
AUDIO_DATA
TUSB3200ACPAH
USB CONTROLLER
For Power
power supply monitoring
IC401
S-80942CNMC-G9C
Reset IC
IC301/IC305
MM3411A33N
5→3.3V Reg.
x2pcs
IC303/IC304
NJM2878F3-33
7→5V Reg.
x2pcs
IC302
NJM2392M
5→7V/-6V DDC.
FAULT_DET
FAULT DET2
Serial Control
CN102
CN1003
MAIN UCOM - USB CONTROLLER control line
IC201
USB CONTROLLER
IC1001
MAIN UCOM
USB_NRST
USB_REQ
USB_BUSY
USB_ERR
USB_CTRL1
USB_CTRL2
C PNL2 ASSY
C_CDTI
C_NRST
C_CCLK
C_CS0(for IC501)
C_CS1(for IC701)
X1001
DSS1131-
4 MHz
Ceramic Res.
XIN
XOUT
CN1002
CN2201
A/D
R5F3650ENFA-U0
MAIN UCOM
Tempo x1 port
Rotaly VR x1 port
CROSS fader x1 port
JOG_DIAL2_1
JOG_DIAL2_0
JOG_TCH_2
KEY/LED MATRIX IN/OUT
Slider
Rotaly VR
PC2251
RPI-579N1
PHOTO INTERRUPTER
PC2252
RPI-579N1
PHOTO INTERRUPTER
JOG Rotate
IC2201
PIC10F206-I/P
Touchsensor microcomputer
KN2201
JOG Touch
LED_*
LED
Tr. Buf.
Grid x8
Grid
KEY
PAD
JH1002
CN2601
Slider
B CRFD ASSY

4.3 POWER BLOCK DIAGRAM



5. DIAGNOSIS
5.1 POWER ON SEQUENCE



5.2 TROUBLESHOOTING

In this section, causes of failure, diagnostics points, and corrective measures can be searched for according to symptoms.
Before disassembling this unit, it is recommended to infer a failure point by checking the lighting status of the LEDs, referring to "5.6 ERROR DISPLAY."
For the relationship of each power-supply and signal system, see “4.3 POWER BLOCK DIAGRAM.”
If software of the product is updated before performing diagnostics, check that software updating has been performed properly before proceeding to diagnostics.
If software updating has not been performed properly, update the software, following the instructions in “8.2 UPDATING OF THE FIRMWARE.”

Contents

The waveform numbers and voltage confirmation-point numbers described in this section correspond to the numbers on the circuit diagrams and PCB diagrams.
Be sure to check the failure points, as well as check for failure in their peripheral circuits.

[0] Prior Confirmation

[0-1] Checking in Service Mode

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	———	Service mode	Identify a failure point.	After a failure point is identified, see the section referenced in this manual.	6. SERVICE MODE

[0-2] Checking Internal Cables

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Disconnection, breakage, or loose connection of internal cables	Cables	Check that all the cables are securely connected. Check that there is no breakage in the cables.	Securely connect a cable if it is not connected. If a cable is broken, replace it. **Note:** If an FFC cable is disconnected, be careful of the orientation of the contacts when reconnecting it, referring to the printed guide on the board.	4.1 OVERALL WIRING DIAGRAM

[1] Failure in Startup (Failure in power-on)

[1-1] Failure in the power system

In a case where the unit is not started after the USB cable is connected and the unit is turned ON (all LED are not lit)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Failure in the power system (1)	IFPW Assy	Check that the voltage of the 5VIN power line is in the range of 4.75–5.25 V.	If the voltage is outside the range of 4.75–5.25 V, failure in the USB-bus power, USB cable and USB jack (JA101).	4.3 POWER BLOCK DIAGRAM 5.3 VOLTAGE MONITORING
2	Failure in USB-bus power	IFPW Assy	Check that the VBUS voltage is lower than that of 5VIN by approximately 0.1 to 0.2 V.	If the voltage is 0 V, the wire for the IC protector (P101) may be broken.	4.3 POWER BLOCK DIAGRAM
3	Power failure in the MAIN UCOM on the IFPW Assy	IFPW Assy	If V+3R3_UCOM is abnormal (2.7 V or less) Disconnect the cables from each Assy in order to confirm which Assy’s power is abnormal.	Disconnect the two FFCs connecting between the IFPW Assy and PNL1 Assy. If the normal voltage of V+3R3_UCOM is restored, the disconnected FFCs or a part on the PNL1/PNL2 Assy may be defective. If the normal voltage of V+3R3_UCOM is not restored, IC301 or a part that is connected to V+3R3_UCOM on the IFPW Assy may be defective, or connection may be poor.	4.3 POWER BLOCK DIAGRAM
4	Power failure in the MAIN UCOM	PNL1 Assy, PNL2 Assy	If the V+3R3_UCOM voltage is normal, check that Q302 (USB 5V SW) is functioning properly.	If the PWR_ON signal is "L," V+5D will not be output, because Q302 is not turned ON. The error-detection circuit may have been activated. Go to [5]. If the PWR_ON signal (between Pin 49 of IC1002 and the base of Q301) is "H," the error-detection circuit is not activated. Check the voltages of all power ICs. If they are normal, see "[1-2] Failure in the microcomputer system."	4.3 POWER BLOCK DIAGRAM

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
5	Power failure in the MAIN UCOM	PNL1 Assy, PNL2 Assy	Check if the error-detection circuit has been activated.	If the FAULT_DET signal (between R420 and Pin 48 of IC1002) is "L," the error-detection circuit has been activated. Go to [6]. If the FAULT_DET signal is "H," the error-detection circuit is not activated. Check the voltages of all power ICs. If they are normal, see "[1-2] Failure in the microcomputer system."	4.3 POWER BLOCK DIAGRAM
6	Power failure (2) Identification of defective power system	FAULT_DET IFPW Assy	Deactivate the voltage monitoring circuit then check the section with improper voltage.	The voltage monitoring circuit can be deactivated by removing R420 (0 Ω) on the FAULT_DET. See the notes in “5.3 VOLTAGE MONITORING” before proceeding to further diagnostics. To identify the section with improper voltage, check the voltage at each point on the IFPW Assy.	4.3 POWER BLOCK DIAGRAM 5.3 VOLTAGE MONITORING

[1-2] Failure in the microcomputer system

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power failure in the MAIN UCOM	PNL1 Assy	Check the power terminal of the MAIN UCOM (IC1002).	Check the power and voltage are normal. Check the power line and the parts, such as coils (beads), resistors, and capacitors. If no problem was found with the parts, power line, and conduction between the power supply and GND, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS ㊶㊷㊸
2	MAIN UCOM Reset circuit error	PNL1 Assy	Check the Reset terminal (pin 12) of the MAIN UCOM (IC1002).	In normal operation the voltage of the Reset terminal (Pin 12) is high. If it is low, check if the voltage at V+3R3_UCOM is 2.7 V or less. Check the reset line, resistors, capacitors, and the Reset IC (IC1001).	10.11 WAVEFORMS ㊶㊷㊸
3	MAIN UCOM X'tal error	PNL1 Assy	Check the oscillation waveforms of the X'tal (X1001).	If the oscillation waveforms are abnormal, check the resistor on the oscillation-signal line, the capacitor, and X'tal (X1001). If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS ㊶㊷㊸
4	MAIN UCOM startup error	PNL1 Assy	After startup, check the lighting statuses of the LEDs. (For example, although some of the LEDs light properly, the unit is not started up properly.)	Refer to “5.6 ERRROR DISPLAY”. If there is no corresponding error indication, reload the program via USB. (8.2 UPDATING OF THE FIRMWARE) If the normal status is not recovered after all above steps are performed, the MAIN UCOM (IC1002) may be defective.	5.6 ERROR DISPLAY 8.2 UPDATING OF THE FIRMWARE
5	Power failure in the USB Controller	IFPW Assy	Check if a voltage error was detected. Check the power terminal of the USB Controller (IC201).	If the detected voltage error is confirmed, check conduction between the power supply and GND. Check the power line and the parts, such as coils (beads), resistors, and capacitors. If no problem was found with the parts, power line, and conduction between the power supply and GND, the USB Controller (IC201) may be defective.	5.3 VOLTAGE MONITORING 10.11 WAVEFORMS ①②③
6	USB Controller Reset circuit error	IFPW Assy	Check the voltage of Reset terminal (pin 10) of the USB Controller (IC201).	In normal operation, the voltage of the Reset terminal (pin 10) is high. If the voltage of the Reset terminal is low, check the reset line, resistors, capacitors. If no problem is found, the USB Controller (IC201) or MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS ①②③
7	USB Controller X'tal error	IFPW Assy	Check the oscillation waveforms of the X'tal (X101).	If the oscillation waveforms are abnormal, check the resistor on the oscillation-signal line, the capacitor, and X'tal (X101). If nothing is wrong with these parts, the USB CONTROLLER (IC201) may be defective.	10.11 WAVEFORMS ④⑤⑥⑦
8	I2C communication error of USB Controller start up	IFPW Assy	Check the I2C communication waveforms of the EEPROM (IC202) immediately after startup.	Data of the EEPROM (IC202) are loaded only during startup. If an error is generated, check the power supply to the EEPROM, resistors, capacitors. If no problem is found, the EEPROM (IC202) or USB Controller (IC201) may be defective.	10.11 WAVEFORMS ⑥⑧⑨
9	EEPROM error	IFPW Assy	Reload the program via USB.	If no problem is found with the communication waveform in "8.3 WRITING TO THE EEPROM FOR THE USB CONTROLLER" above, reload the program via USB. If reloading is successfully performed, the USB Controller (IC201) may be defective. If reloading fails, the EEPROM (IC202) may be defective.	8.3 WRITING TO THE EEPROM FOR THE USB CONTROLLER

[2] Display (LED indicators)

[2-1] Any one of the LEDs does not light.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective LED, Defective LED signal line	Periphery of the abnormal LED	Check the difference in electrical potentials between the positive and negative electrodes of the LED that does not light (normally, it must be within approx. 3.2 V: blue, 2.2 V: others).	If the difference is outside the normal range, the signal lines at the periphery of the corresponding LED, resistors, or the LED itself may be defective.	10.11 WAVEFORMS ⑭⑬⑭⑮

[2-2] Several LEDs do not light or abnormal light

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective LED signal line, Defective MAIN UCOM	PNL1 Assy, PNL2 Assy	Check the output signal of MAIN UCOM (IC1002).	If the output signal is abnormal, the MAIN UCOM (IC1002) and LED signal line may be defective.	10.11 WAVEFORMS ⑭⑬⑭⑮
2	Defective LED	Periphery of the abnormal LED	Check the connections of the LED then check the forward voltage (approx. 3.2 V: blue, 2.2 V: others) between both ends of the LED.	If the signal waveform is abnormal, the LED may be defective.	10.11 WAVEFORMS ⑭⑬⑭⑮
3	Defective transistor for LED drive	PNL1 Assy, PNL2 Assy	Check the transistors for LED drive.	If the signal waveform is abnormal, the transistor may be defective.	10.11 WAVEFORMS ⑭⑬⑭⑮

[3] Operations (Buttons / Volumes / Faders / Sliders / Jog dial)

Operation of all operating elements can be confirmed in Service mode.

[3-1] The performance pads (8 large square pads on each of Decks 1 and 2) do not function.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /defective parts	PNL1 Assy PNL2 Assy Periphery of the abnormal button	Check that the port logic of the MAIN UCOM (IC1002) that is connected to a performance pad changes when the pad is operated.	Normally, the logic is Low (approx. 0 V) when a performance pad is ON, and High (approx. 3.3 V) when it is OFF. If it is not, the performance pad, signal line, FFC, or connector may be in failure.	———
2	Defective MAIN UCOM (IC1002)	PNL1 Assy	If the symptom persists after the above corrections.	The MAIN UCOM (IC1002) may be defective.	[7] Basic Operation Check of the MAIN UCOM

[3-2] The buttons are disabled except performance pads

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /defective parts	PNL1 Assy PNL2 Assy Periphery of the abnormal button	Check that the signal line from the corresponding switch to the transistor at the switching-detection section up to the MAIN UCOM (IC1002) is all right.	If other switches that are connected to the same signal line operate normally, the corresponding switch or the diode on the signal line for the corresponding switch may be defective. If other switches do not operate either, a transistor in the switching-detection section or its peripheral circuits may be defective.	10.11 WAVEFORM ⑭⑱⑲S
2	Defective MAIN UCOM (IC1002)	PNL1 Assy	If the symptom persists after the above corrections.	The MAIN UCOM (IC1002) may be defective.	[7] Basic Operation Check of the MAIN UCOM

[3-3] Rotary selector not controllable

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective BROWSE	PNL1 Assy	Check that the signal lines (ENC_BRWS_0/1) are normal during rotation of the rotary selector.	If the signals are not normal, signal line, resistor, the rotary selector may be defective.	10.11 WAVEFORMS ⑯⑰
2	Defective MAIN UCOM (IC1002)	PNL1 Assy	If the symptom persists after the above corrections.	The MAIN UCOM (IC1002) may be defective.	[7] Basic Operation Check of the MAIN UCOM

[3-4] Volumes, Faders or sliders not controllable

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /defective parts	PNL1 Assy, PNL2 Assy, CRFD Assy	Check that the signal lines (AD_****) between the VRs/faders/sliders and MAIN UCOM (IC1002) are all right.	If the signals are not normal, signal line, resistor, capacitor may be defective.	———
2	Loose connection /defective parts	PNL1 Assy, PNL2 Assy, CRFD Assy	Check the voltage at each signal line when the corresponding VR is turned or the corresponding fader/slider is moved.	If the voltage of the signal line does not change between 3.3 V and 0 V when the VRs, faders, or sliders are operated, the corresponding operating element, signal line, FFC, connector, resistance, or capacitor may be defective. If the voltage of the AD_TEMPO1/2_1 signal line is not 1.65 V, or if the voltage of the AD_TEMPO1/2_0 signal line does not change between 3.3 V and 0 V when the tempo slider is moved, the tempo slider, signal line, FFC, connector, or capacitor may be in failure.	10.11 WAVEFORMS ⑥⓪⑥①⑥②⑥③⑥④⑥⑤
3	Defective MAIN UCOM (IC1002)	PNL1 Assy	If the symptom persists after the above corrections.	The MAIN UCOM (IC1002) may be defective.	[7] Basic Operation Check of the MAIN UCOM

[3-5] Abnormalities regarding the Jog dial

After the Jog dial Assy is disassembled then reassembled, be sure to check that the load value for the Jog dial is within the specified range. Refer to the "6.1 SERVICE MODE_③ Judging the quality of the Jog dial load".

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
Turning of the Jog dial is not detected.					
1	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check the JOG_DIAL1/2_0 and JOG_DIAL1/2_1 waveforms while the Jog dial is rotated.	If either waveform is abnormal, the photo interrupters (PC1551, PC1552, PC2251 and PC2252) may be defective.	10.11 WAVEFORM ⑤①⑦①⑦②S
2	Defective JOG1/2 photo interrupter	PNL1 Assy, PNL2 Assy	Check that the phases of the JOG_DIAL1/2_0 and JOG_DIAL1/2_1 waveforms are identical to those described in "④ Quality judging of attachment of the photointerrupters" in "6.1 SERVICE MODE" when the jog dial is turned.	If the waveforms are normal but the phases are not correct, the photointerrupters (PC1551, PC1552, PC2251, PC2252) may be mounted improperly.	10.11 WAVEFORMS ⑤①⑦①⑦②
3	Defective MAIN UCOM (IC1002)	PNL1 Assy	If the symptom persists after the above corrections.	The MAIN UCOM (IC1002) may be defective.	[7] Basic Operation Check of the MAIN UCOM
Touching of the jog dial is not detected, or touching is detected although the jog dial is not touched.					
4	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check the signal level of Pin 4 of IC1501/IC2201.	The signal is "H" while the jog dial is not touched and becomes "L" when it is touched. If it is not, go to [5]. If it is, go to [8].	10.11 WAVEFORMS ⑤①⑥⑧
5	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check the signal of Pin 3 of IC1501/IC2201 (Test land "Freq").	The signal produces a pulse waveform in the frequency range of 900 to 1300 kHz while the jog dial is not touched and a pulse waveform in the frequency range of 400 to 700 kHz while it is touched. If so, IC1501/IC2201 may be defective. If the signal produces a pulse waveform in the frequency range of 900 to 1300 kHz regardless of the jog dial's being touched or not, go to [6]. For other abnormalities, go to [7].	10.11 WAVEFORMS ⑥⑧⑥⑨
6	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check the connection between plate/jog (DAH2981) and IC1501/IC2201. As the surface of the plate/jog is coated, a conduction check must be performed on the plate surface facing the jog dial (DNK6277) through their gap.	Possible causes are poor connection between the aluminum plate of the jog dial and the KN1501/KN2201 metal fittings for grounding, or poor connection or a defective part in the circuits between the KN1501/KN2201 and IC1501/IC2201.	———
7	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check connections between KN1501/ KN2201 and IC1501/IC2201.	Poor connection or a defective part in the circuits between the KN1501/KN2201 and IC1501/IC2201.	———
8	Loose connection /defective parts	PNL1 Assy, PNL2 Assy	Check connections between IC1501/ IC2201 and IC1002.	If the connection is properly made, the MAIN UCOM (IC1002) may be defective.	———
The Jog dial turns too freely. (The load value for the Jog dial is outside the specified range.)					
9	Improper assembly of the Jog dial	Jog dial Assy	Check that the load value for the Jog dial is within the specified range, referring to "Measuring method" in "6.1 SERVICE MODE_③ Judging the quality of the Jog dial load."	If the load value is outside the specified range, detach the jog dial then reapply grease. See "Procedure for applying grease during reassembly of the jog dial" in "7. DISASSEMBLY."	6.1 SERVICE MODE 7. DISASSEMBLY

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
Resistance to turning the Jog dial is too strong. (The load value for the Jog dial is outside the specified range.					
10	Improper assembly of the Jog dial	Jog dial Assy	Check that the load value for the Jog dial is within the specified range, referring to “Measuring method” in “6.1 SERVICE MODE_③ Judging the quality of the Jog dial load.”	If the load value is outside the specified range, perform manual running-in rotations of the Jog dial. See "Procedure for applying grease during reassembly of the jog dial" in "7. DISASSEMBLY."	6.1 SERVICE MODE 7. DISASSEMBLY

[4] USB connection

[4-1] The unit cannot be recognized by the PC when connected to the PC via USB connection.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Wrong input setting of the application installed on the PC	Input setting of the application installed on the PC	Check that the input setting of the application installed on the PC is appropriate.	The PC will not recognize the unit if the input setting of the application installed on the PC is inappropriate.	Operating instructions
1	Failure in startup	IFPW Assy PNL1 Assy	Check the lighting statuses of the LEDs during startup.	If no LED lights, see [1] Failure in Startup.	[1] Failure in Startup
2	Defective USB Controller	IFPW Assy	Check the communication waveforms of the USB_DP/DN lines.	If the unit is connected to a PC via the USB cable, communication will be performed through the USB DP/DN lines. If communication cannot be performed, check the USB cable, connectors, internal cables, resistors, capacitors, and filters. If nothing is wrong with them, USB Controller is defective. Check the items listed in “[1-2] Failure in the microcomputer system”.	[1-2] Failure in the microcomputer system 10.11 WAVEFORMS ⑱⑲

[5] AUDIO OUT

[5-1] MASTER OUT is not output.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Wrong input setting of the application installed on the PC	Input setting of the application installed on the PC	Check that the input setting of the application installed on the PC is appropriate.	The PC will not recognize the unit if the input setting of the application installed on the PC is inappropriate.	Operating instructions
1	———	IFPW Assy	Check that an audio signal is output from DAC (IC501 pin 10, 11) for MASTER OUT.	If MASTER connector outputs, go to [2], [3]. If MASTER connector does not output, go to [4].	10.11 WAVEFORMS ㉙㉜㉝
2	Mute signal Loose connection /defective parts	IFPW Assy PNL1 Assy	Check the level of the MUTE audio muting signal.	Normally, the MUTE signal must be low (Approx. 0 V, muting canceled). When it is high (Approx. 3 V), muting is activated and no sound is output. The MUTE signal becomes high, possibly because connection of the corresponding signal line is loose or the Muting circuit (Q501) or Muting Drive circuit (Q502 to Q504, etc.) is defective. As the MUTE signal is output to the PNL1 Assy via CN101, if MASTER OUT is output after the FFC that is connected to CN101 is disconnected, the circuitry on the PNL1 Assy is in failure. Check the circuitry and parts on the PNL1 Assy.	———
3	Mute signal Loose connection /defective parts	IFPW Assy PNL1 Assy	Check the level of the A_MUTE audio muting signal.	Normally, the A_MUTE signal must be low (Approx. 0 V, muting canceled). When it is high (Approx. 3 V), muting is activated and no sound is output. The A_MUTE signal becomes high, possibly because connection of the signal line is loose or the transistor (Q501) or MAIN UCOM (IC1002) is defective.	———
4	Loose connection /defective parts	IFPW Assy	Check the digital input signals to DAC (IC501) for MASTER OUT. • MCLK: pin 1 • BCLK: pin 2 • MASTER_DATA: pin 3 • LRCK: pin 4 • DAC_NRST: pin 5	If any of those signals is abnormal, connection of the corresponding signal line may be loose or the resistor, capacitor, USB Controller (IC201), or MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS ㉙㉚㉛㉜㉝
5	Mute signal Loose connection /defective parts	IFPW Assy	Identify the point where the audio signal is interrupted on the line from pins 10 and 11 of IC501 (DAC for MASTER OUT) to the jacks (JA501).	The audio signal may be interrupted by a loose connection of the signal line or by a defective resistor, capacitor, transistor, operational amps (IC502, IC503,) or jacks.	10.11 WAVEFORMS ㉞㉟

[5-2] The HEAD PHONE signal is not output.

Before checking through the table below, check if the settings of the PC application are correct.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
0	Wrong input setting of the application installed on the PC	Input setting of the application installed on the PC	Check that the input setting of the application installed on the PC is appropriate.	The PC will not recognize the unit if the input setting of the application installed on the PC is inappropriate.	Operating instructions
1	Loose connection /defective parts	IFPW Assy	Check the audio signal (HP_L/R), using pins 16 and 12 of the CN101 on the IFPW Assy.	If no audio signal is output, the IFPW Assy may be defective. Go to [2]. If an audio signal is output, connection between the IFPW and PNL1 Assys may be loose, connections inside the PNL1 Assy may be loose, or these Assys may be defective. Go to [6].	10.11 WAVEFORMS ㊱㊲
2	———	IFPW Assy	Check the audio output signal, using pins 10 and 11 of the HP DAC (IC502).	If an audio signal is output, go to [3]. If an audio signal is not output, go to [5].	———
3	Loose connection /defective parts	IFPW Assy	Check the audio input signal, using pins 3 and 5 of the HP AMP (IC504). Check the audio output signal, using pins 1 and 7 of the HP AMP (IC504).	If the output signal is normal, connection of the audio signal between HP AMP IC504 and CN101 may be loose. If the input signal is abnormal, connection of the audio input signal line may be loose or the resistor or capacitor may be defective. If the input signal is normal but the output signal is abnormal, go to [4].	———
4	Mute signal Loose connection /defective parts	IFPW Assy	Check the level of the muting signal (IC702 pin 2) for HP AMP.	Normally, the muting signal must be high (Approx. 3.3 V, muting canceled). When it is low (Approx. 0 V), muting is activated and no sound is output. The signal line may be defective. If the muting signal is high and normal, possibly HP AMP is defective.	———
5	Loose connection /defective parts	IFPW Assy	Check the digital input signals to DAC (IC701) for HP. • MCLK: pin 1 • BCLK: pin 2 • MASTER_DATA: pin 3 • LRCK: pin 4 • DAC_XRST: pin 5	If any of those signals is abnormal, connection of the corresponding signal line may be loose or the resistor, capacitor, USB Controller (IC201), or MAIN UCOM (IC1002) may be defective. If all signals are normal, the DAC (IC502) and its peripheral circuitry do not function properly.	10.11 WAVEFORMS ㉙㉚㉛㉜㉝
6	Loose connection /defective parts	PNL1 Assy	Identify the point where the audio signal is interrupted on the line from CN101 to the jacks (JA1601/JA1602).	The audio signal may be interrupted by a loose connection of the signal line or by a defective resistor, capacitor, or jack.	———

[6] AUDIO IN

[6-1] The MIC INPUT signal is not output

All MIC INPUT circuits are analog. A MIC INPUT signal will be mixed with a DA-converted MASTER signal then output as a MASTER OUT signal.
Therefore, check if the MASTER OUT signal is normal, then if it is, check through this article.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /defective parts	PNL1 Assy	Check the audio signal (MIC_IN), using pin 16 of CN1601 on PNL1 Assy.	If an audio signal is input, CN1601, FFC or IFPW Assy may be defective. Go to [2]. If an audio signal is not output, inside the PNL1 Assy may be defective. Go to [3].	———
2	Loose connection /defective parts	IFPW Assy	Check the audio signal (MIC_IN), using pin 4 of CN101 on IFPW Assy.	If no audio signal is output, CN1601, FFC or IFPW Assy may be defective. If an audio signal is output, connection between signal line and IC503 (OPAMP for MASTER OUT) may be loose, or these parts may be defective.	———
3	Loose connection /defective parts	PNL1 Assy	Identify the point where the audio signal is interrupted on the line from CN1601 to the jack (JA1701).	The audio signal may be interrupted by a loose connection of the signal line or by a defective resistor, capacitor, or jack.	———

[7] Basic Operation Check of the MAIN UCOM

Note: First, check if the voltage at each section is OK.
Operation checking of all operating elements and LEDs can be performed in Service mode. With regard to operation checking of LED lighting, besides lighting of each LED, check that all LEDs can be simultaneously lit or unlit.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Failure in LED lighting	PNL1 Assy PNL2 Assy	In each mode where the abnormal LED should be lit, check the GRID signals (GRID_0 to GRID_7) relating to the abnormal LED between the MAIN UCOM and the transistor for driving the corresponding LED.	If the waveform is abnormal, connection of the GRID signal line may be loose or the resistor, capacitor, or transistor may be defective. If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 54 55 56 57
2		PNL1 Assy PNL2 Assy	In each mode where the abnormal LED should be lit, check the LED-driving signal between the transistor for driving the corresponding LED and the abnormal LED.	If the waveform is abnormal, connection of the LED-driving signal line may be loose or the resistor, transistor, or diode may be defective.	10.11 WAVEFORMS 54 73 74 75
3		PNL1 Assy PNL2 Assy	In each mode where the abnormal LED should be lit, check the LED-control signal (LED_0 to LED_6) corresponding to the abnormal LED between the transistor for driving the corresponding LED and the MAIN UCOM.	If the waveform is abnormal, connection of the LED-control signal line may be loose or the resistor, capacitor, or transistor may be defective. If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 54 73 74 75
4	Failure in button operation	PNL1 Assy PNL2 Assy	When pressing the abnormal button, check the GRID signal (GRID_0 to GRID_7) corresponding to the abnormal key between the MAIN UCOM and the switch for the corresponding key (S****).	If the waveform is abnormal, connection of the KEY-detection signal line may be loose or the resistor, capacitor, or transistor may be defective. If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 54 55 56 57
5		PNL1 Assy PNL2 Assy	When pressing the abnormal button, check the KEY detection signal between the abnormal key and the transistor for key detection.	If the waveform is abnormal, connection of the KEY-detection signal line may be loose or the switch, transistor, or diode may be defective.	10.11 WAVEFORMS 54 58 59
6		PNL1 Assy PNL2 Assy	When pressing the abnormal button, check the KEY-detection signal (KEY_IN_0 to KEY_IN_6) corresponding to the abnormal key between the transistor for key detection and the MAIN UCOM.	If the waveform is abnormal, connection of the KEY-detection signal line may be loose or the resistor, capacitor, or transistor may be defective. If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 54 58 59
7	Failure in operation of the performance pad, volume, tempo slider, fader, rotary selector, or Jog dial (touching and rotating)	PNL1 Assy PNL2 Assy	Check the waveform of each input signal to the MAIN UCOM when you operate the abnormal operating element.	If the waveform is abnormal, connection of the corresponding signal line may be loose or the resistor, capacitor, or transistor may be defective. If nothing is wrong with these parts, the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 51 60 61 62 63 64 65 66 67 68 71 72
8	After lighting of the LEDs at startup is finished, key operation is disabled or LED lighting is not interlocked with the application.	PNL1 Assy IFPW Assy	Check the communication waveform between the USB Controller (IC201) and MAIN UCOM (IC1002). USB_XRST USB_REQ USB_BUSY USB_ERR USB_CTRL1 USB_CTRL2 EEP_SCL EEP_SDA	Normally, the USB Controller (IC201) and MAIN UCOM (IC1002) communicate periodically. Check that each communication-signal line is all right, referring to “10.11 WAVEFORMS.” If any waveform is abnormal, connection of that signal line may be loose or the resistor or the capacitor may be defective. If nothing is wrong with these parts, the USB Controller (IC201) or MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 6 8 9 20 21 22 23 24
9	Failure in operation of the volume for MASTER VOL or HP VOL, or abnormal ooutput level.	PNL1 Assy IFPW Assy	Check the waveforms of the control signals of DAC for the MASTER OUT (IC501) and for HP (IC502).	Communication between the MAIN UCOM and DAC is performed only upon startup or while the MASTER_VOL or HP_VOL is operated. If the communication control waveform is abnormal, connection of that signal line may be loose or the resistor or transistor may be defective. If nothing is wrong with these parts, the DAC for MASTER OUT (IC501) or for HP (IC502) or the MAIN UCOM (IC1002) may be defective.	10.11 WAVEFORMS 38 39 40 41

5.3 VOLTAGE MONITORING

The MAIN UCOM of this unit always monitors for power and voltage failure of the unit and will shut the unit off immediately after an error is detected.

• Content to be monitored

Power supply voltage drop and power supply voltage rise generated by short-circuiting between any power-supply IC and GND or excess current inside the IFPW Assy
Power to be monitored: V+5_D, V+5_A, V+5_HP, V+7, V-6, V+3R3_USB

• MAIN UCOM Detection terminal and its terminal voltage

FAULT_DET signal TP terminal on IFPW Assy or IC1002 (MAIN UCOM) pin 48 FAULT_DET on PNL1 Assy.
Normal: Approximately 3.3 V
Abnormal: 0 V

• Timing of monitoring start

1.25 sec after the unit is turned ON

• Timing upon judgment as a failure

50 msec after an error is detected

• LED indication when an error is generated

All LEDs are unlit.

• Restoration method

If the unit shuts itself down because of failure, perform diagnosis, disconnect the USB cable, then after about 30 seconds turn the unit back on again.

• Diagnostic procedure

① Disconnect the USB cable.
② Remove R420 from the IFPW Assy. Note: This step will disable power monitoring.
③ Reconnect the USB cable.
④ As the unit is turned on in a normal way, check each voltage in this state.
Note: Because power will be forcibly supplied even if any voltage is abnormal, if abnormal voltage continues, the defective point may produce heat, which may be dangerous. Therefore, during diagnosis, be sure to disconnect the USB cable several seconds after they are connected so that forcible powering will not continue.
⑤ If the voltage of any power IC is abnormal, the circuit that uses that power or the power IC itself may be defective.
⑥ Repair the defective part then check that the power and voltage of the repaired part becomes normal.
⑦ Return R420 to its original position on the IFPW Assy.
Note: This step will enable power monitoring.

5.4 ABOUT POWER-SAVING MODE

This product always monitors voltage drop of the VBUS power (power to be supplied via a USB cable), which may be caused by connection of a peripheral device that is not covered under warranty or an erroneous operation. If an abnormality is detected, the product will limit the maximum output level of the headphone so that it can operate in a lower power-consumption mode.
If an abnormality is generated, check the connected headphones and PC.

• Content to be monitored

Drop in power voltage in the IFPW Assy to be supplied via a USB cable
Power voltages to be monitored: V+VBUS, V+5_USB

• Microcomputer Detection terminal and its terminal voltage

VBUS_DET signal TP terminal on IFPW Assy or IC1002 (MAIN_UCOM) pin 65 VBUS_DET input terminal on PNL1 Assy.
Normal: 2.3 V to 2.6 V
Abnormal: 2.3V or less
FAULT_DET2 signal TP terminal on IFPW Assy or IC1002 (MAIN_UCOM) pin 47 FAULT_DET2 input terminal on PNL1 Assy.
Normal: Approximately 3.3 V
Abnormal: 0 V

• Timing of monitoring start

1.25 sec after the unit is turned ON

• Timing upon judgment as a failure

50 msec after an error is detected

• LED indication when an error is generated

V+VBUS (V+5_USB): 4.2–4.5 V
The maximum output level of the headphone is suppressed to approximately 15%, and the CUE button (performance pad 6) of both decks flash at intervals of 1 sec.
If normal power voltage is recovered, the suppressed maximum output level of the headphone will return to its original level.
V+VBUS (V+5_USB): 4.2 V or less
The product will be restarted, with the maximum output level of the headphone suppressed to approximately 3%. If power voltage has been recovered after startup, the CUE button (performance pad 6) of both decks flash at intervals of 0.5 sec. The unit can be operated in the normal way. If power voltage has not been recovered after restart, only the CUE button (performance pad 6) of both decks flash at intervals of 0.2 sec, with all other LEDs unlit. The unit cannot be operated in the normal way.

• Items to be checked

① Check if two sets of headphones are simultaneously connected.
② Check if headphones with impedance outside the range of the guaranteed specifications (impedance 32 ohms or less) are connected.
③ Check if a monaural plug is connected to the Headphones connector.
④ The connected PC may not be able to supply enough USB power (may not meet USB standards).

5.5 BASIC OPERATION CHECK USING SERATO DJ INTRO

[Installation of Serato DJ Intro]

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

Minimum operating environment

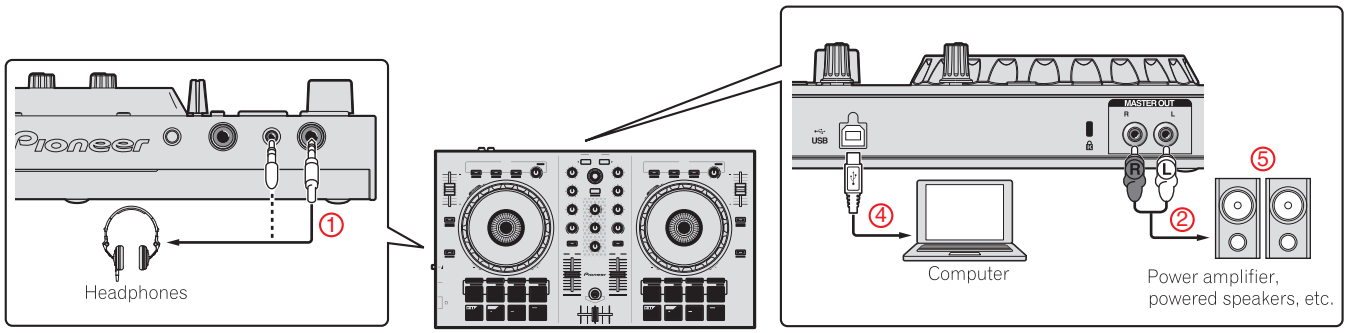
Supported operating systems	CPU and required memory
Mac OS X: 10.8, 10.7 and 10.6	Intel® processor, Core™ Duo 1.6 GHz or better
	1 GB or more of RAM
Windows: Windows 7 (SP1) and Windows Vista (SP1)	Intel® processor, Core™ 2 Duo 2.0 GHz or better
	1 GB or more of RAM

Others	
Optical drive	Optical disc drive on which the CD-ROM can be read
USB port	A USB 2.0 port is required to connect the computer with this unit.
Display resolution	Resolution of 1 024 x 768 or greater
Internet connection	An Internet connection is required for registering the “Serato.com” user account and downloading the software.

- For the latest information on the required operating environment and compatibility as well as to acquire the latest operating system, refer to “Software Info” under “DDJ-SB” on the Pioneer DJ support site below.
  http://pioneerdj.com/support/
- Operating System support assumes you are using the latest point release for that version.

For the latest version of the Serato DJ Intro software, access Serato.com and download the software from there.
For downloading, registration of a user account at "Serato.com" is required.
Unzip the downloaded file, then double-click the unzipped file to launch the installer.
Read the terms of the license agreement carefully, and if you agree, select [I agree to the license terms and conditions], then click [Install].
After installation is completed, the Installation Completed screen will be displayed. Click on [Close] to terminate the Serato DJ Intro installer.

[Connections]



[Operating procedures]

① Connect headphones to one of the [HEADPHONES] terminals.
② Connect such devices as a power amplifier, powered speakers, etc., to the [MASTER OUT] terminals.
③ Turn on the computer’ s power.
④ Connect this unit to your computer via a USB cable.
⑤ Turn on the power of the devices connected to the output terminals (power amplifier, powered speakers, etc.).

Starting the system

Launching Serato DJ

For Windows

From the Windows [Start] menu, click the [Serato DJ Intro] icon under [All Programs] → [Serato] → [DJ Intro].

For Mac OS X

In Finder, open the [Applications] folder, then click the [Serato DJ Intro] icon.

Computer screen directly after the Serato DJ Intro software is launched

A: Deck section
C: Browser section

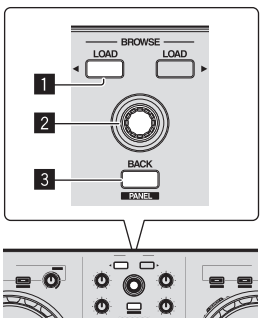
Importing tracks

① Click the [Files] key on the Serato DJ Intro software screen to open the [Files] panel.
② Click the folder on the [Files] panel containing the tracks you want to add to the library to select it.
③ On the Serato DJ Intro software screen, drag and drop the selected folder to the crates panel.

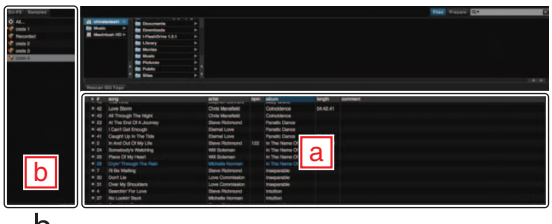
a : [Files] panel
b : Crates panel

Loading tracks and playing them

① Press this unit' s [BACK (PANEL)] button, move the cursor to the crates panel on the computer' s screen, then turn the rotary selector to select the crate, etc.
② Press the rotary selector, move the cursor to the library on the computer' s screen, then turn the rotary selector and select the track.
③ Press the [LOAD] button to load the selected track onto the deck.



1 LOAD button
2 Rotary selector
3 BACK (PANEL) button



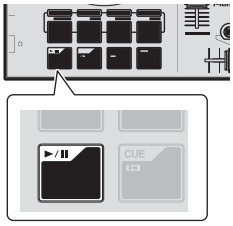
a : Library
b : Crates panel

Playing tracks and outputting the sound

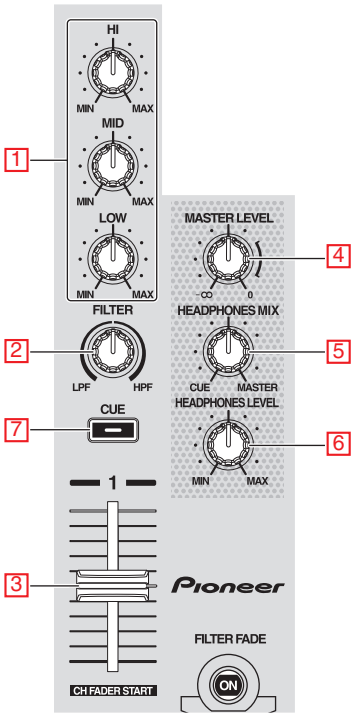
① Set the positions of the controls, etc., as shown below.

Names of controls, etc.		Position
EQ (**HI**, **MID**, **LOW**) controls	1	Center
FILTER control	2	Center
Channel fader	3	Moved forward
MASTER LEVEL control	4	Turned fully counterclockwise

② Press the [▶/❚❚] button to play the track.



③ Move the channel fader (3) away from you.
④ Turn the [MASTER LEVEL] control (4) to adjust the audio level of the speakers.



Monitoring sound with headphones

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

Names of controls, etc.		Position
HEADPHONES MIX control	5	Center
HEADPHONES LEVEL control	6	Turned fully counterclockwise

① Press the headphones [CUE] button (7) for the channel 1.
② Turn the [HEADPHONES LEVEL] control (6) .

5.6 ERROR DISPLAY

When abnormalities are detected during the time of carrying out power supply ON, or operation, it displays by LED.

No.	Abnormalities	LED / Display	Notes
1	Abnormalities of a power supply	All LED put out the light.	When abnormalities are detected by the state of DC power supply and USB bus power supply, it will be in this state. Opening display is not performed, either, when abnormalities are detected at the time of starting.
2	Abnormalities in FLASH-ROM of MAIN UCOM	Left deck / LOOP-IN Lighting	When update goes wrong and FLASH-ROM is not written correctly, it will be in this state. Even in this case, update can be performed succeedingly. However, "3" is displayed while it can be communicating neither with the case where USB cable is not connected, nor USB controller, correctly also at this time.
3	Aabnormalities of USB controller	Left deck / LOOP-OUT Blinks in a cycle of 0.5 seconds.	When the time when it cannot communicate with USB controller correctly although USB cable is connected at the time of starting, and controllers are abnormalities, it will be in this state.

6. SERVICE MODE
6.1 SERVICE MODE

The outline in the Service mode

The following service modes are prepared for this unit.

① Check of operator input and a display function
It is the mode which checks each input and display function of buttons, volumes, jog dials, and encoders.

② Version display
It is the mode which checks the version of a firmware.

③ Judging the quality of the Jog dial load
It is the mode which judges the quality of the load when rotating jog dial.

④ Judging the quality of mounting and connection of the photointerrupter
It is the mode which judges the quality of attachment of photointerrupter which detects rotation of jog dial.

⑤ Factory reset
User settings is reset and it returns to a default.

① Check of operator input and a display function (1)

When it spends a power supply while pushing a LOOP IN and a LOOP OUT buttons of right deck simultaneously, enters into this mode. (Please continue pushing until an opening display is completed.)

In this mode, the input of each buttons, volumes, jog dials, and encoders are correct, and it can check that a display can also be performed correctly. In addition, display of a button is turned on only while pushing the button.
Refer to the following next clause for volume, jog dial and encoder.

Part		Operator	Type	LED Display
Deck (The thing same on the right and the left is omitted.)				
	1	►/II button	Performance pads (Tact SW)	►/II
	2	CUE (I◄) button	Performance pads (Tact SW)	CUE (I◄)
	3	SYNC (OFF) button	Performance pads (Tact SW)	SYNC (OFF)
	4	SHIFT button	Performance pads (Tact SW)	SHIFT
	5	Performance pads 1	Performance pads (Tact SW)	Performance pads 1
	6	Performance pads 2	Performance pads (Tact SW)	Performance pads 2
	7	Performance pads 3	Performance pads (Tact SW)	Performance pads 3
	8	Performance pads 4	Performance pads (Tact SW)	Performance pads 4
	9	HOT CUE mode button	Tact SW	HOT CUE mode
	10	AUTO LOOP mode button	Tact SW	AUTO LOOP mode
	11	MANUAL LOOP mode button	Tact SW	MANUAL LOOP mode
	12	SAMPLER mode button	Tact SW	SAMPLER mode
	13	VINYL (SLIP) button	Tact SW	VINYL (SLIP)
	14	KEY LOCK (TEMPO RANGE) button	Tact SW	KEY LOCK (TEMPO RANGE)
	15	TEMPO slider	Slide VR (with center click)	* Refer to next clause.
	16	Effect 1 button	Tact SW	Effect 1
	17	Effect 2 button	Tact SW	Effect 2
	18	Effect 3 button	Tact SW	Effect 3
	19	Effect level controls	Rotary VR (without center click)	* Refer to next clause.
	20	Jog dial	Jog	* Refer to next clause.
Mixer (21, 27 to 32 is the same at right and left)				
	21	LOAD button	Tact SW	All LED
	22	Rotary selector (Rotate)	Rotary encoder (with push)	* Refer to next clause.
	22	Rotary selector (Push)	Rotary encoder (with push)	All LED lit → Dark → Unlit (Cyclic)
	23	BACK (PANEL) button	Tact SW	
	24	MASTER LEVEL control	Rotary VR (without center click)	* Refer to next clause.
	25	HEADPHONES MIX control	Rotary VR (with center click)	* Refer to next clause.
	26	HEADPHONES LEVEL control	Rotary VR (without center click)	* Refer to next clause.
	27	EQ (HI) control	Rotary VR (with center click)	* Refer to next clause.
	28	EQ (MID) control	Rotary VR (with center click)	* Refer to next clause.
	29	EQ (LOW) control	Rotary VR (with center click)	* Refer to next clause.
	30	FILTER control	Rotary VR (with center click)	* Refer to next clause.
	31	Headphones CUE button	Tact SW	Headphones CUE
	32	Channel fader	Slide VR (without center click)	* Refer to next clause.
	33	Crossfader	Slide VR (without center click)	* Refer to next clause.
	34	FILTER FADE button	Tact SW	FILTER FADE
	35	MIC LEVEL control	Rotary VR (without center click)	* Firmware is not concerned.

① Check of operator input and a display function (2)

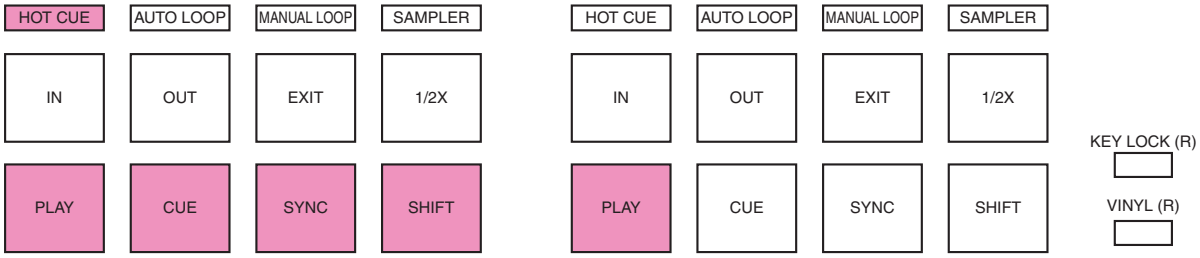
The bar display of the volume is carried out using the sequence of the following LED.
If the value of volume decreases, the number of lightings of LED becomes fewer, and if it increases, it will increase.
LED turned on whenever it pushes BACK (PANEL) button can move, and volume can be chosen. (mode[1] to [5])
And LED is used in the shape of a ring, and jog dial and a rotary encoder carry out a rotation display.
in addition, if jog touch is ON LOOP-OUT and RELOOP are turned on.

LED	[mode0] FX ALL OFF	[mode1] FX1-1 ON	[mode2] FX1-2 ON
①	Test of button	TEMPO slider (L)	EQ (HI) control (L)
②	Test of button	Effect level controls (L)	EQ (MID) control (L)
③	Test of button	FILTER control (L)	EQ (LOW) control (L)
④	Test of button	TEMPO slider (R)	EQ (HI) control (R)
⑤	Test of button	Effect level controls (R)	EQ (MID) control (R)
⑥	Test of button	FILTER control (R)	EQ (LOW) control (R)
LED	**[mode3] FX1-3 ON**	**[mode4] FX2-1 ON**	**[mode5] FX2-2 ON**
①	MASTER LEVEL control	Jog dial (rotate) (L)	Rotary selector (rotate)
②	HEADPHONES MIX control	Jog dial (rotate) (L)	Rotary selector (rotate)
③	HEADPHONES LEVEL control	Jog dial (rotate) (L)	Rotary selector (rotate)
④	Channel fader (L)	Jog dial (rotate) (R)	Rotary selector (rotate)
⑤	Channel fader (R)	Jog dial (rotate) (R)	Rotary selector (rotate)
⑥	Crossfader	Jog dial (rotate) (R)	Rotary selector (rotate)

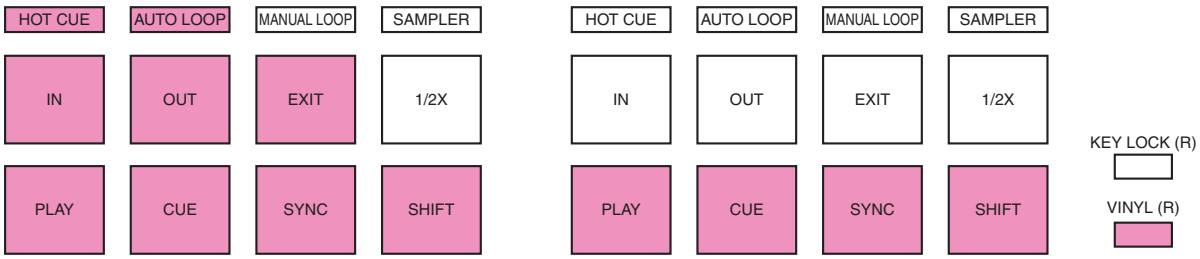
② Version display

In "① Check of operator input and a display function (2)", if FILTER FADE button is pushed in the state where push BACK (PANEL) button and FX2-3 is on (mode6), while pushing, a version is displayed on the sequence of LED.

• In case of Ver 1.05



• In case of Ver 2.39



③ Judging the quality of the Jog dial load

When it spends a power supply while pushing LOOP IN and ►/II buttons of right deck simultaneously, HOT-CUE / AUTO-LOOP / MANUAL LOOP / SAMPLER LEDs are turned on and enters into this mode.
(Please continue pushing until an opening display is completed.)
It is the mode which judges the load (light/heavy) when rotating Jog dial.

* In "① Check of operator input and a display function (2)", if right side KEY LOCK (TEMPO RANGE) button is pushed in the state of "[mode1] FX1-1 ON", it goes into this mode directly.
  If measurement is completed and right side Headphones CUE button will be pushed, it will return to the original mode.

It goes into this mode, when Jog dial was turned with sufficient vigor, the following top speed and rotation fall time are measured and top speed becomes more than 7 times, rotation fall time is evaluated, and it judges whether it goes into the range of regular, and a result is displayed on LED.
The rotation direction, right rotation and left rotation, either is OK.

TOP SPEED	: Top speed (Let the time of turning one rotation in 1.8 second be 1 time speed)
ROTATION FALL TIME	: Time taken for rotation to fall to 1.5 times speed from 3 times speed

It is necessary to make it rotate top speed to 7.0 or more times to measure the rotation fall time required.
Not more than 7.0 times faster, it is made to blink 3 times and warns of Performance pads illuminations.

3 times displays the number of times of measurement on LED.

The 1st end	: FX - 1 lighting
The 2nd end	: FX - 2 lighting
The 3rd end	: FX - 3 lighting

After measurement finishes 3 times, an average is taken, and rotation fall time judges whether it goes into the range of regular, and displays a result on LED.

OK	: Headphones CUE lighting
NG (Light)	: KEY LOCK (TEMPO RANGE) lighting
NG (Heavy)	: VINYL (SLIP) lighting

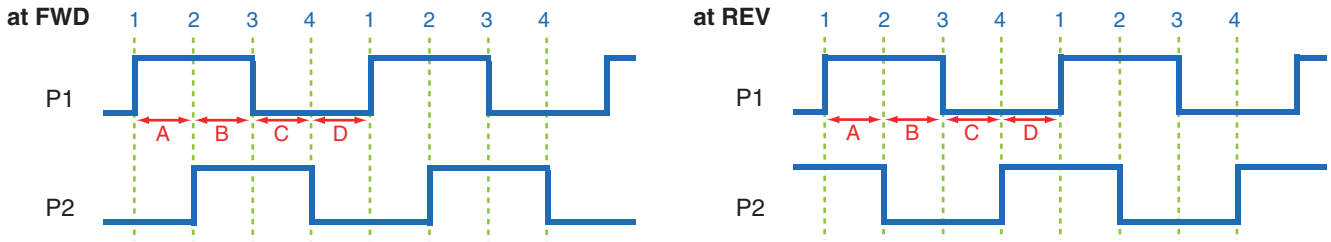
Measurement is performed although the number of times is not displayed 3rd henceforth.
Each time, an average is taken and a result is displayed on LED.

④ Judging the quality of mounting and connection of the photointerrupter

When it spends a power supply while pushing LOOP IN and CUE (I◄) buttons of right deck simultaneously, ►/II / CUE / SYNC / SHIFT LEDs of both decks are turned on and enters into this mode.
(Please continue pushing until an opening display is completed.)
It is the mode which judges the state of the pulse which photointerrupter when rotating Jog dial outputs.

* In "① Check of operator input and a display function (2)", if right side VINYL (SLIP) button is pushed in the state of "[mode1] FX1-1 ON", it goes into this mode directly.
  If measurement is completed and right side Headphones CUE button will be pushed, it will return to the original mode.

It goes into this mode, if JOG dial is turned with sufficient vigor, the time of A-D shown in a figure will be measured, and it judges whether a phase relation is normal, and a result is displayed on LED. It is necessary to make it rotate top speed to 10 or more times to measure time. The rotation direction, right rotation and left rotation, either is OK.



The memory of the time A-D in each range of x21 to x19 / x16 to x14 / x11 to x9 and x6 to x4 is carried out.
If measurement finishes, a result will be displayed on LED.

OK (KEY LOCK (TEMPO RANGE) lighting)	: A phase relation is normal and all the minimum values of A to D are 10 μsec or more. and time D is 200 μsec or more at x11 to x9 speed
NG (VINYL (SLIP) lighting)	: Abnormalities are in a phase relation or all the minimum values of A to D are 10usecs or less. or time D is 200 μsec or less at x11 to x9 speed
Under measurement (Headphones CUE lighting)	

⑤ Factory reset

The memory of the following user setup can be carried out in this unit.
(1) Channel fader start setting
(2) Demo mode setting
(3) Jog dial MIDI message sending interval setting

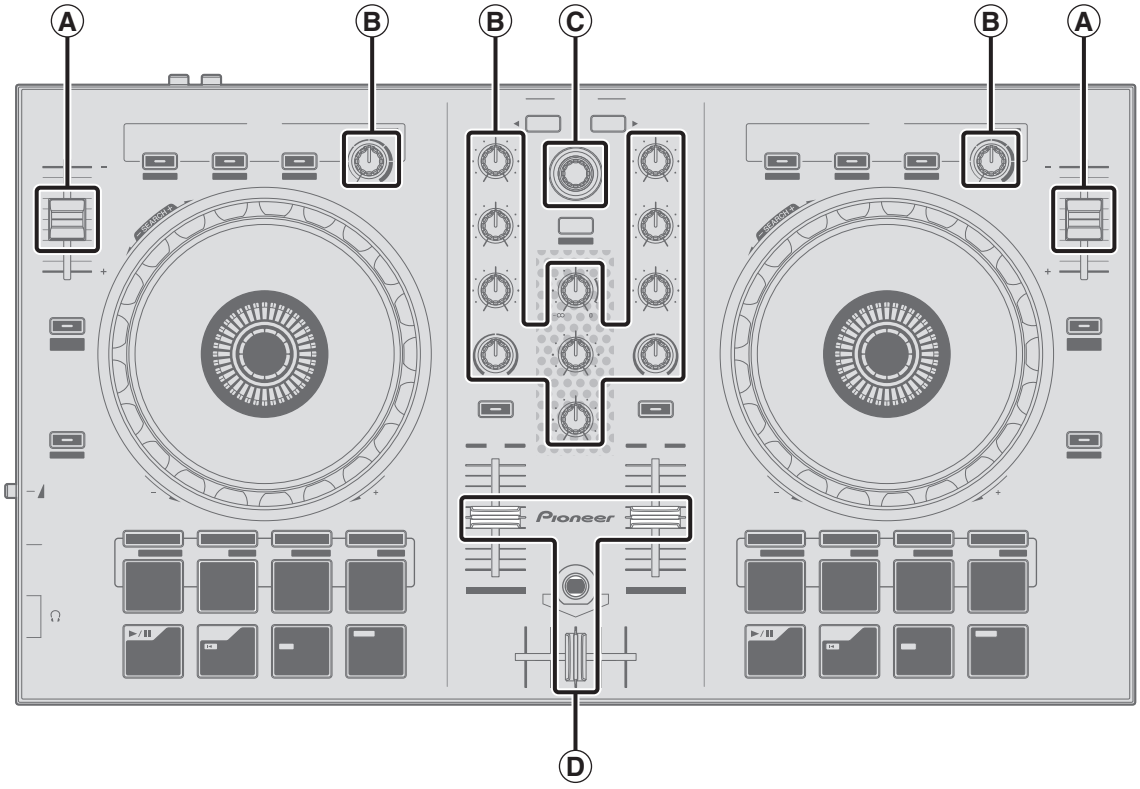
In factory reset, these setup can be eliminated and it can return to a default.

In "1 Check of operator input and a display function (2)", If LOOP IN and 1 / 2X buttons of the right deck is simultaneously pushed in the state (mode6) where push BACK (PANEL) button and FX 2-3 is on, all LED of
HOT CUE / AUTO LOOP / MANUAL LOOP/SAMPLER
IN / OUT / RELOOP / 1/2X
►/II / CUE / SYNC / SHIFT
of the right deck can light up and reset.

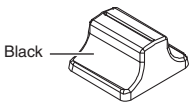
7. DISASSEMBLY

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.

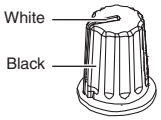
Knobs and Volumes Location



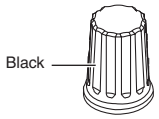
Ⓐ DNK6283
×2



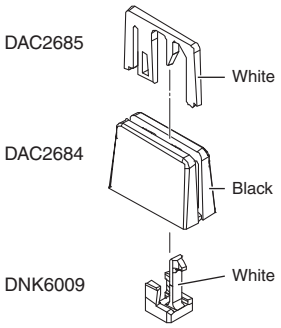
Ⓑ DAA1324
×13



Ⓒ DAA1273
×1



Ⓓ DAC2684 ×3 + DAC2685 ×3 + DNK6009 ×3

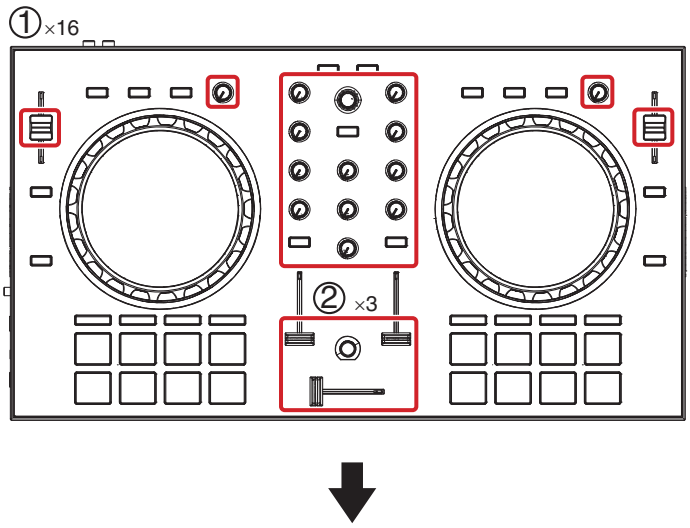


Disassembly

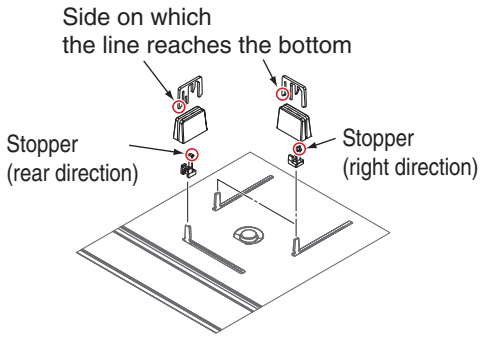
[1] Each PCB Assemblies

• Exterior Section

(1) Remove the all knobs.
(2) Remove the three Silider knobs 2, three Slider knobs 1, three Stoppers/SLD. (See below.)



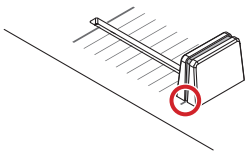
The reference of the direction



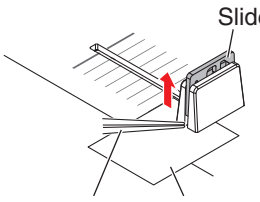
• Disassembly of the slider knob

The new slider knob adopted by this product is designed so that it is not pulled out easily.
Therefore, the method for removing the slider knob is different from the conventional method; it can only be pulled out after Slider knob 2 is removed.

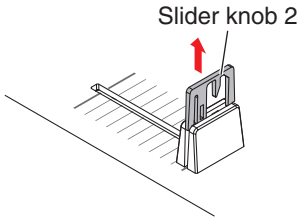
① Find the side on which the line reaches the bottom.



② Insert a pair of tweezers etc. beneath the line then push the Slider knob 2 upward. To protect the panel from being scratched, use protective material.

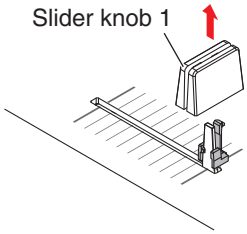


③ Remove the Slider knob 2.

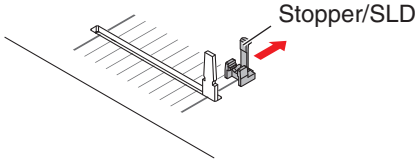


*: During reassembly, fully push down Slider knob 2 until it is dented into Slider knob 1.

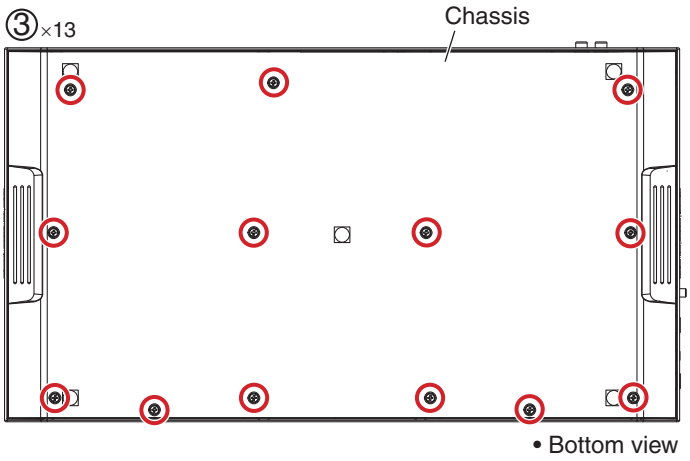
④ Remove the Slider knob 1.



⑤ Remove the Stopper/SLD.

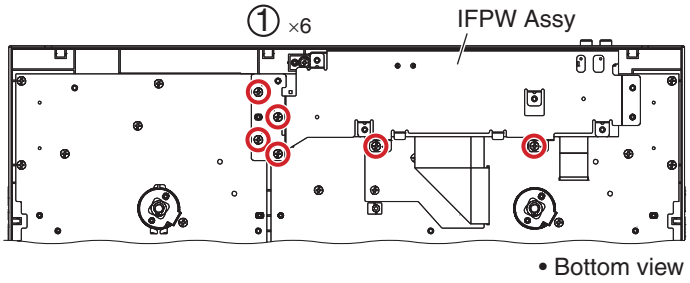


(3) Remove the Chassis by removing the 13 screws.
(BPZ30P100FTB)

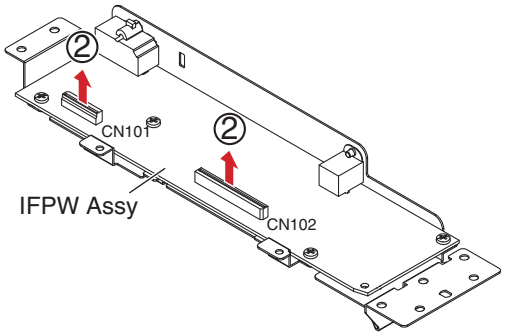


• IFPW Assy

(1) Remove the IFPW Assy with Stay by removing the six screws.
(BPZ30P080FNI)

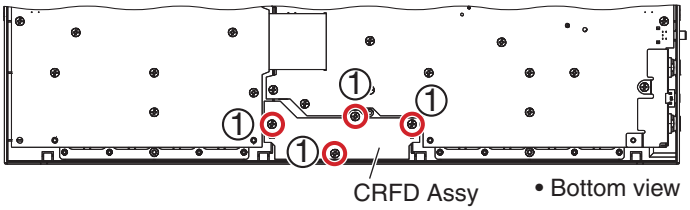


(2) Disconnect the two flexible cables.
(CN101, 102)



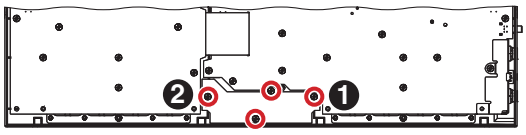
• CRFD Assy

(1) Remove the CRFD Assy by removing the four screws.
(BPZ30P080FNI)

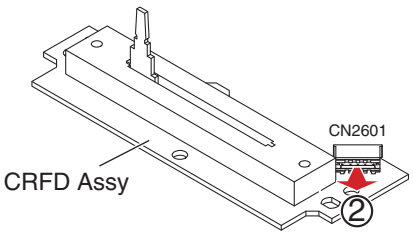


Screw tightening order

The other screws are random order.



(2) Disconnect the one connector.
(CN2601)

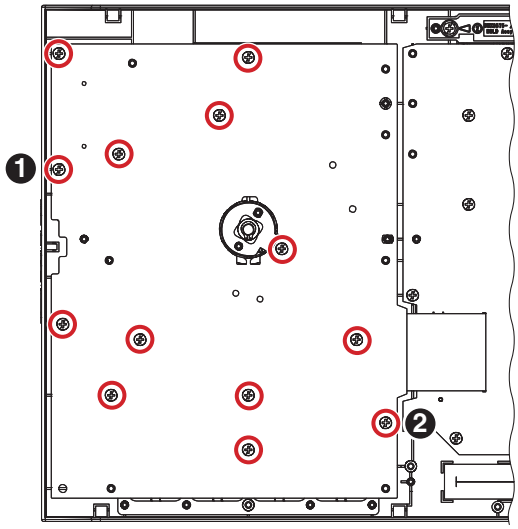


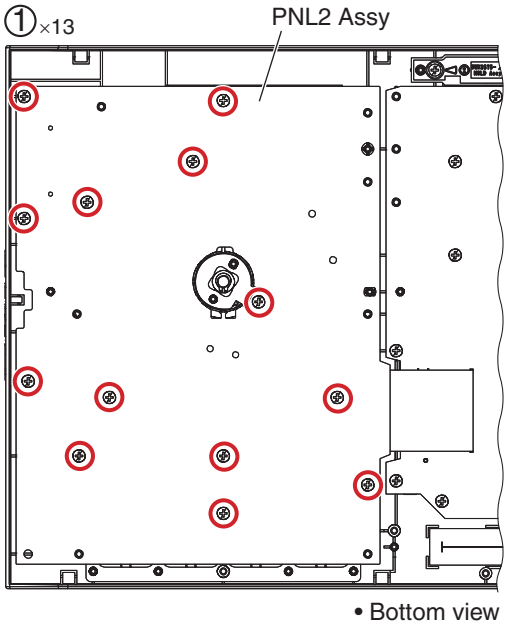
• PNL2 Assy

(1) Remove the PNL2 Assy by removing the 13 screws.
(BPZ30P080FNI)

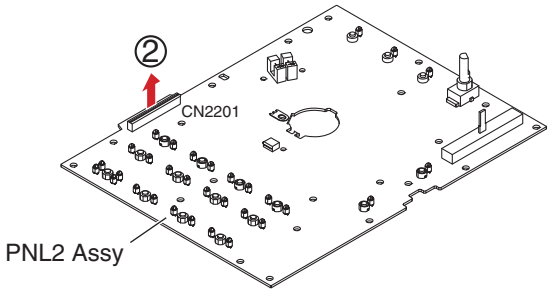
Screw tightening order

The other screws are random order.



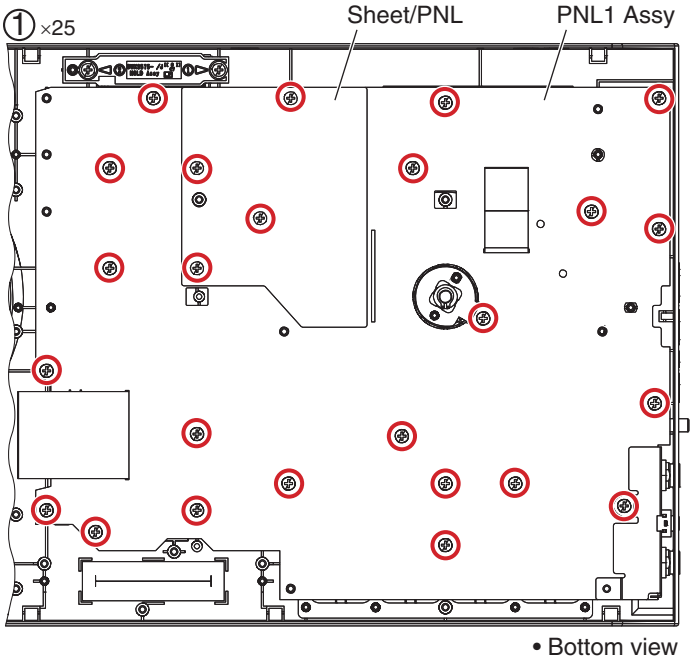


(2) Disconnect the one connector.
(CN2201)



• **PNL1 Assy**

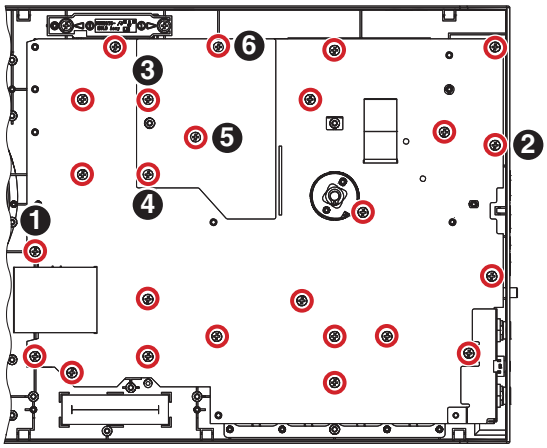
(1) Remove the Sheet/PNL and PNL1 Assy by removing the 25 screws. (BPZ30P080FNI)



• Bottom view

Screw tightening order

The other screws are random order.



[2] Jog dial Section

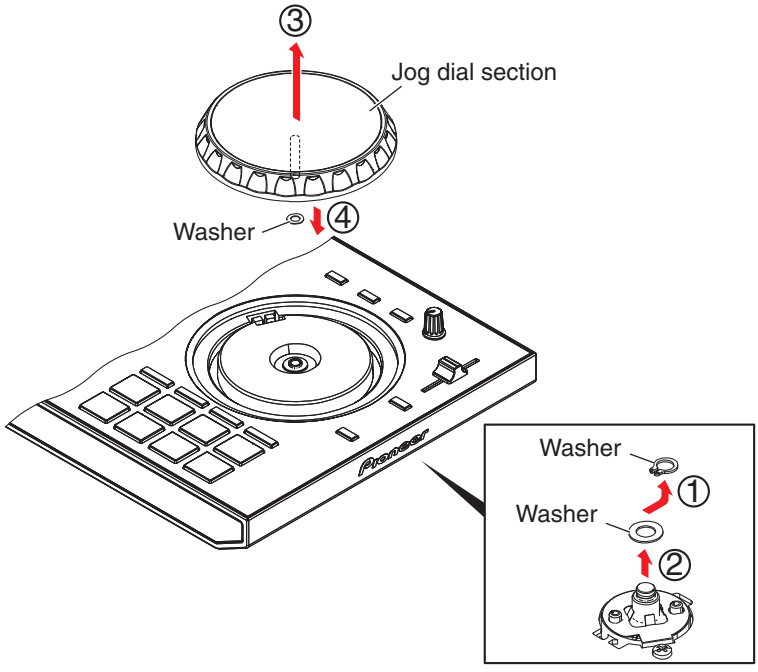
Note:

When you remove the Jog dial section, it is not necessary to remove the each PCB Assemblies.
A figure is only Right DECK side, but the left DECK side is similar, too.

Remove the chassis by removing the 13 screws. (BPZ30P100FTB)

(1) Remove the one washer. (YC60FAC)
(2) Remove the one washer. (WA62D095D050)
(3) Remove the Jog dial section.
(4) Remove the one washer. (WA62D095D050)

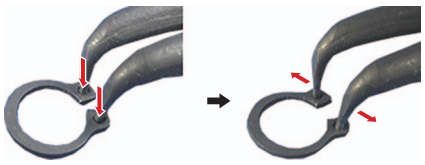
* When you reassemble the Jog dial section, work on grease application according to "Procedure for applying grease during reassembly of the Jog dial" of the next clause.



For Disassembly/Assembly of Washer (①: YC60FAC)

Please use the jig. (Recommend Snap ring pryor.)

Insert the jig in the hole. Open the jig.

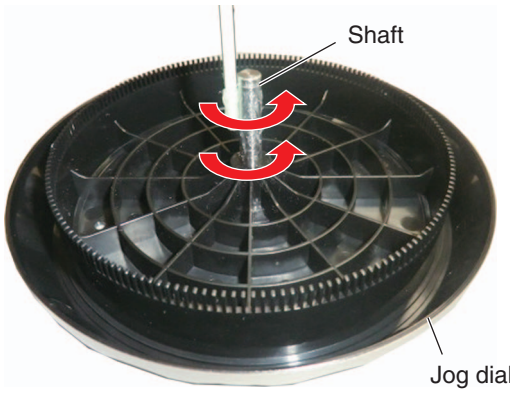


Procedure for applying grease during reassembly of the Jog dial

[Cases where the Jog dial is required to be detached]
- When the Jog dial is to be replaced
- When the control panel is to be detached for replacement

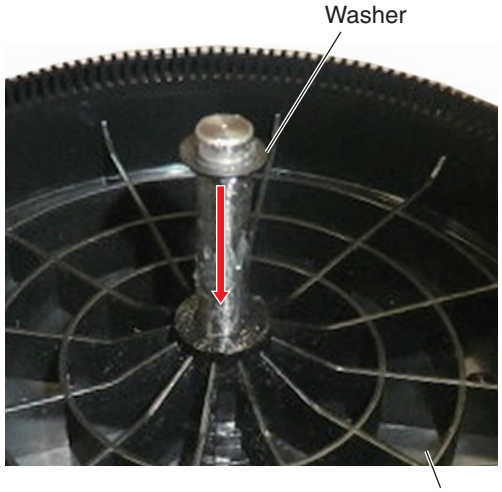
After the control panel is detached, carefully wipe off the grease from the Jog dial, as well as from the shaft bearing, then apply new grease, in the following manner:
Grease to be used: GEM1100

(1) Apply grease to the tip and base of the shaft of the Jog dial, one round each.



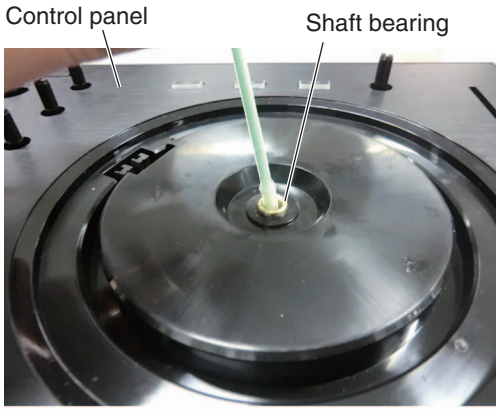
• Bottom view

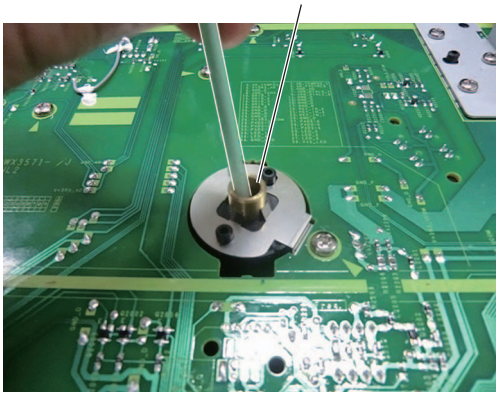
(2) Put a washer (WA62D095D050) on the shaft and place it at the base of the shaft.



• Bottom view

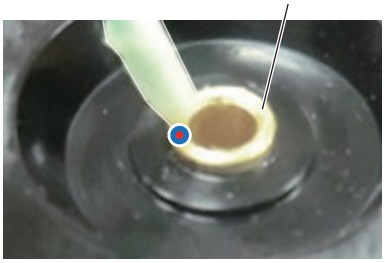
(3) Apply grease lightly to the shaft bearing of the control panel up to a depth of approximately 10 mm from the upper-panel side. Then turn the control panel over and apply grease from the opposite side in the same manner.





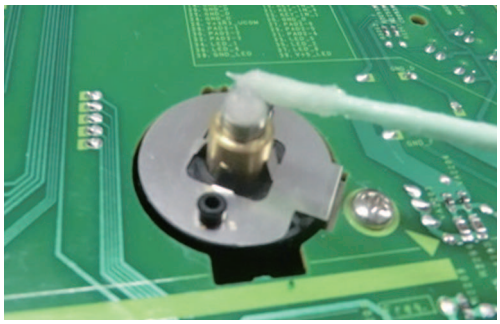
• Bottom view

(4) Turn the control panel over again then apply a small amount of grease to one point of the shaft bearing on the upper-panel side.



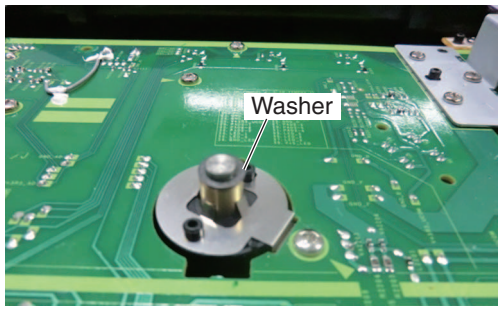
(5) Insert the Jog dial in the shaft bearing while turning it.

(6) Turn the control panel over then wipe off the excess grease.



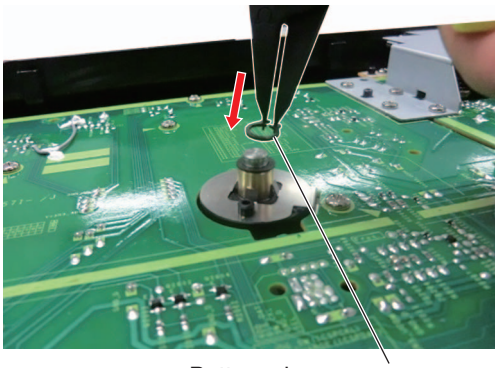
• Bottom view

(7) Put the washer (WA62D095D050) on the shaft.



• Bottom view

(8) Put the washer (YC60FAC) on the groove of the shaft.



• Bottom view

The washer must be properly fit with the groove.

• Bottom view

(9) Turn the control panel over then check that the Jog dial rotates properly.

(10) Perform manual running-in rotations of the Jog dial, as indicated below.

① Turn the Jog dial manually 50 rotations.

② Perform failure judgment of the Jog dial.
For details on the measurement method, see "③ Judging the quality of the Jog dial load" in "6. SERVICE MODE."

③-1 In a case of failure because of excessive load, repeat the following procedure until a good result is obtained in failure judgment.
Manually turn the Jog dial 50 rotations then perform failure judgment of the Jog dial again.

③-2 In a case of failure because of insufficient load, apply grease again.
(Repeat the above procedures from Step (1).)

Note:
After disassembly, be sure to wipe off any externally accessible grease.

8. EACH SETTING AND ADJUSTMENT

8.1 NECESSARY ITEMS TO BE NOTED

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

• IC and PCB Assy storing firmware / user settings MAIN UCOM (IC1002: PNL1 Assy) USB controller (IC201: IFPW Assy) EEPROM (IC202: IFPW Assy) IFPW Assy, PNL1 Assy	⇒ • Confirmation of the version of the firmware • Updating to the latest version of the firmware • Writing to EEPROM for USB controller • Factory reset • Be changed user setting to condition before the repair (when be possible)
• Jog dial	⇒ • Judging the quality of the Jog dial load * at the "NG" judgment execute habituation of the grease again.
• PC1551, PC1552 (PNL1 Assy) PC2251, PC2252 (PNL2 Assy)	⇒ • Judging the quality of mounting and connection of the photointerrupter

8.2 UPDATING OF THE FIRMWARE

The devices which update a firmware are MAIN UCOM and USB controller.
USB connection of the controller is made at PC/MAC, and it updates by performing the update program of exclusive use.

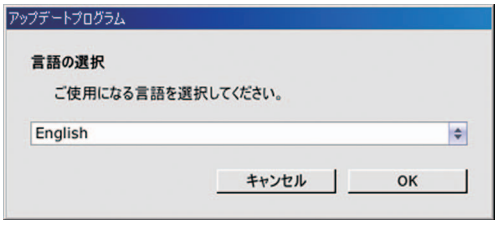
Filename

Windows: DDJSB_xxx.exe * xxx is version number. If it is Ver1.00, it is DDJSB_100.exe/DDJSB_100.dmg.
Mac: DDJSB_xxx.dmg
* In the case of Mac, since an icon will appear if dmg file is double-clicked, it is performed.

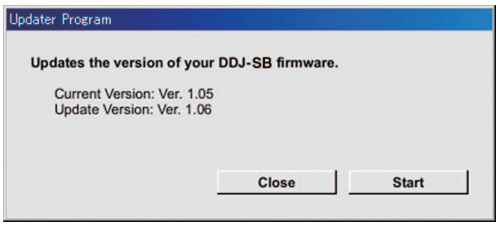
CAUTION: When you update, please terminate all DJ applications, such as Serato DJ.

Example (Windows)

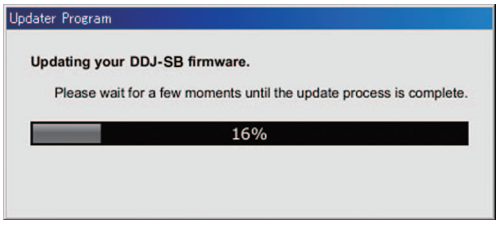
① Starting/Selection of a language
(English is chosen.)



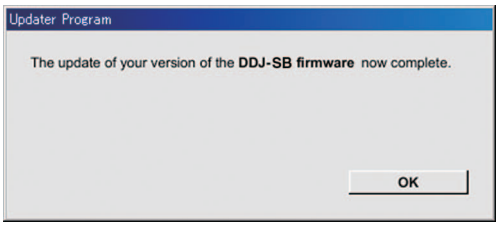
② Check of a version



③ Progress display



④ End.
Controller is re-started automatically.



Recovery when failing

When update goes wrong, USB cable is extracted on the way or the power supply has been turned off, usual DJ operation becomes impossible after that.
In this case, the recovery mode which only updates operates (State of 2 or 3 in "5.6 ERROR DISPLAY").
Update program can be used like usual also at this time.

8.3 WRITING TO THE EEPROM FOR THE USB CONTROLLER

Although MAIN UCOM and USB controller operate by the program, the place where these programs are stored is as follows.

MAIN UCOM (R5F3651ENFC / IC1002)	⇒	Built-in FLASH ROM
USB controller (TUSB3200ACPAH / IC201)	⇒	EEPROM (S-24CS64A0I / IC202)

As parts for service, although MAIN UCOM is supplied by the program write-in settled one, EEPROM is supplied in the raw state where nothing is written. Therefore, when EEPROMs are exchanged, it is necessary to write in a program.

Copy procedures

① A power supply is turned on, pushing simultaneously LOOP-IN button and a RELOOP button of the right deck.
② It is a normal end, if KEY LOCK-LED of the left deck lights up and the light is put out in about 3 seconds.
(When it is not able to write in normally by a certain cause, LED blinks.)
If you end, please return on a power supply.

Since the version of MAIN UCOM supplied with service parts may not be the newest, please update along with "8.2 UPDATING OF THE FIRMWARE" in that case.

8.4 ITEMS FOR WHICH USER SETTINGS ARE AVAILABLE

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

Item for Which User's Setting is Available		Setting Value (The factory default settings are indicated in bold.) / Indication method	Part Name	Content to be Stored
Utilities modes	Channel fader start setting	with the sync mode set / **without the sync mode set** / function disabled	IC1002 (PNL1 Assy)	Utility setting
		(Left deck) Effect 1 button lit / Effect 2 button lit / Effect 3 button lit		
	Demo mode setting	**Settings enabled** / Settings disabled		
		(Left deck) [VINYL (SLIP)] button lit / off		
	Jog dial MIDI message sending interval setting	**3 ms** / 4 ms / 5 ms / 6 ms / 7 ms / 9 ms / 11 ms / 13 ms		
		performance pads lighting LED number: 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8		

Each of the above items can be set in Utilities modes.
To enter Utilities mode 1,
while pressing both performance pad 1 and performance pad 4 on the left deck, connect the USB cable to the main unit (main unit is turned on).
Then, can set each item when you press either Effect button, [VINYL (SLIP)] button, [SAMPLER] mode button of the left deck.
(For details, refer to the operating instructions of the unit.)

Sheet for confirmation of the user setting

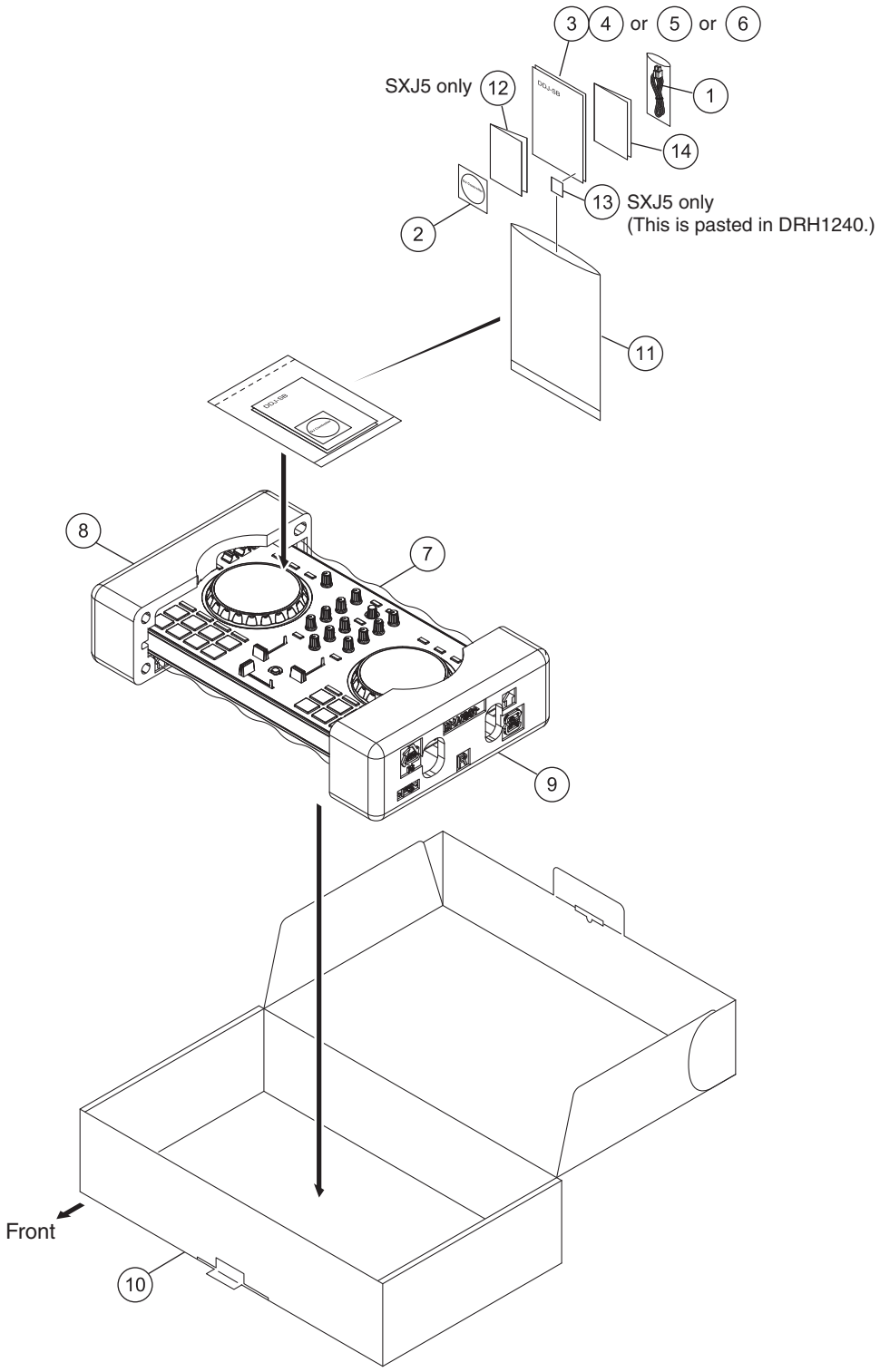
Channel fader start setting			Demo mode setting	
With the sync mode set	Without the sync mode set	Function disabled	enabled	disabled

Jog dial MIDI message sending interval setting							
3 ms	4 ms	5 ms	6 ms	7 ms	9 ms	11 ms	13 ms

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

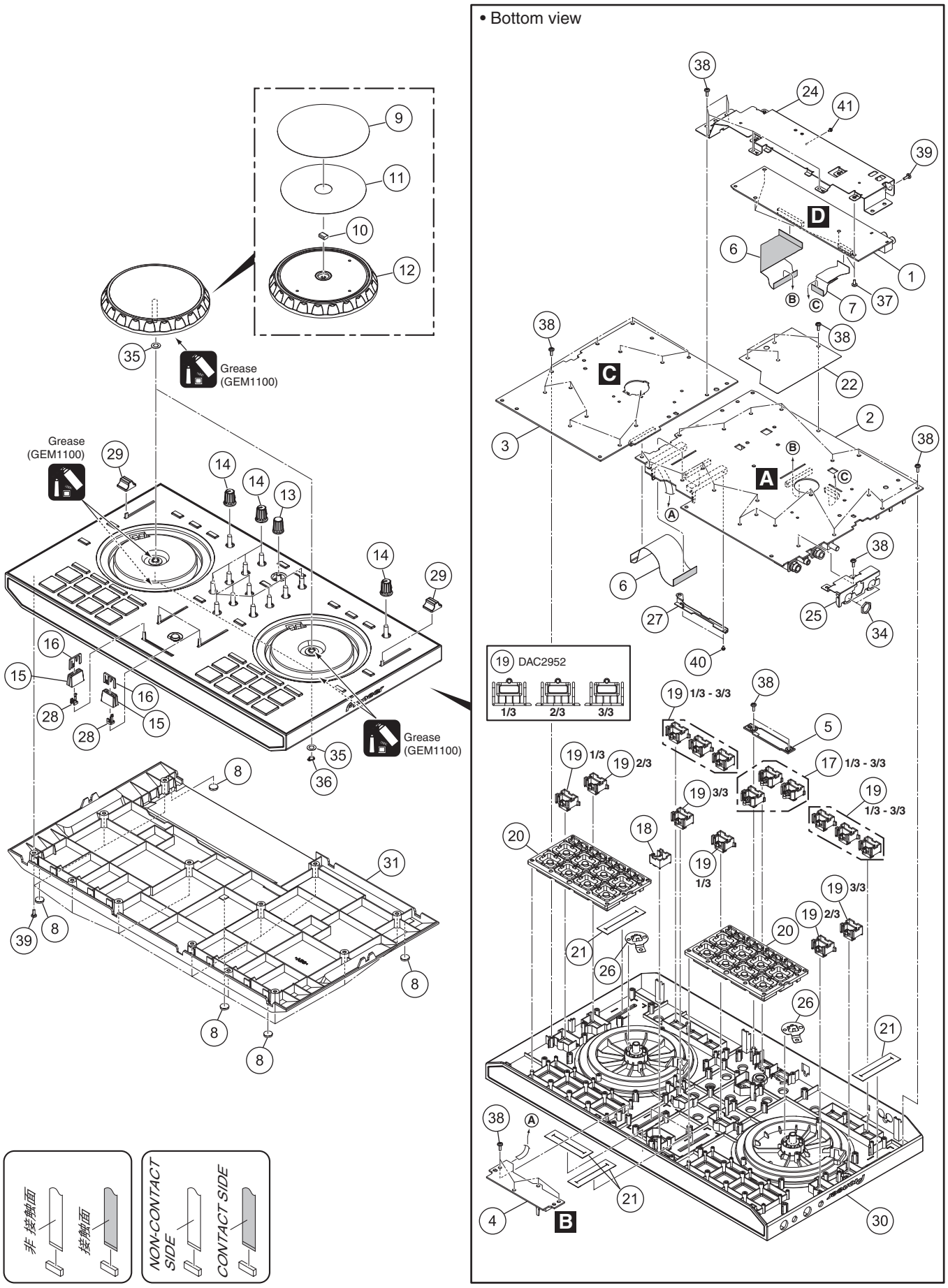
Mark	No.	Description	Part No.
	1	USB Cable	DDE1128
	2	CD-ROM (Installation Disc)	DXX2742
	3	Read Before Use (Important) /Quick Start Guide	See Contrast table (2)
	4	Read Before Use (Important) /Quick Start Guide	See Contrast table (2)
	5	Read Before Use (Important) /Quick Start Guide	See Contrast table (2)
	6	Read Before Use (Important) /Quick Start Guide	See Contrast table (2)
	7	Packing Sheet	AHG7053
	8	Pad/L	DHA1900
	9	Pad/R	DHA1901
	10	Packing Case	See Contrast table (2)
NSP	11	Polyethylene Bag	AHG7117
NSP	12	Warranty	See Contrast table (2)
	13	Label/IM1	See Contrast table (2)
NSP	14	Label/K	See Contrast table (2)

(2) CONTRAST TABLE

DDJ-SB/SXJ5, KXJ5 and XJCN5 are constructed the same except for the following:

Mark	No.	Symbol and Description	DDJ-SB /SXJ5	DDJ-SB /KXJ5	DDJ-SB /XJCN5
	3	Read Before Use (Important)/Quick Start Guide (En, Fr, De, It, Nl)	DRH1239	Not used	Not used
	4	Read Before Use (Important)/Quick Start Guide (Es, Po, Ru, Ja)	DRH1240	Not used	Not used
	5	Read Before Use (Important)/Quick Start Guide (Ko)	Not used	DRH1242	Not used
	6	Read Before Use (Important)/Quick Start Guide (Zhcn)	Not used	Not used	DRH1241
	10	Packing Case	DHG3289	DHG3300	DHG3299
NSP	12	Warranty	ARY7158	Not used	Not used
	13	Label/IM1	DRW2534	Not used	Not used
NSP	14	Label/K	Not used	DRW2600	Not used

9.2 EXTERIOR SECTION

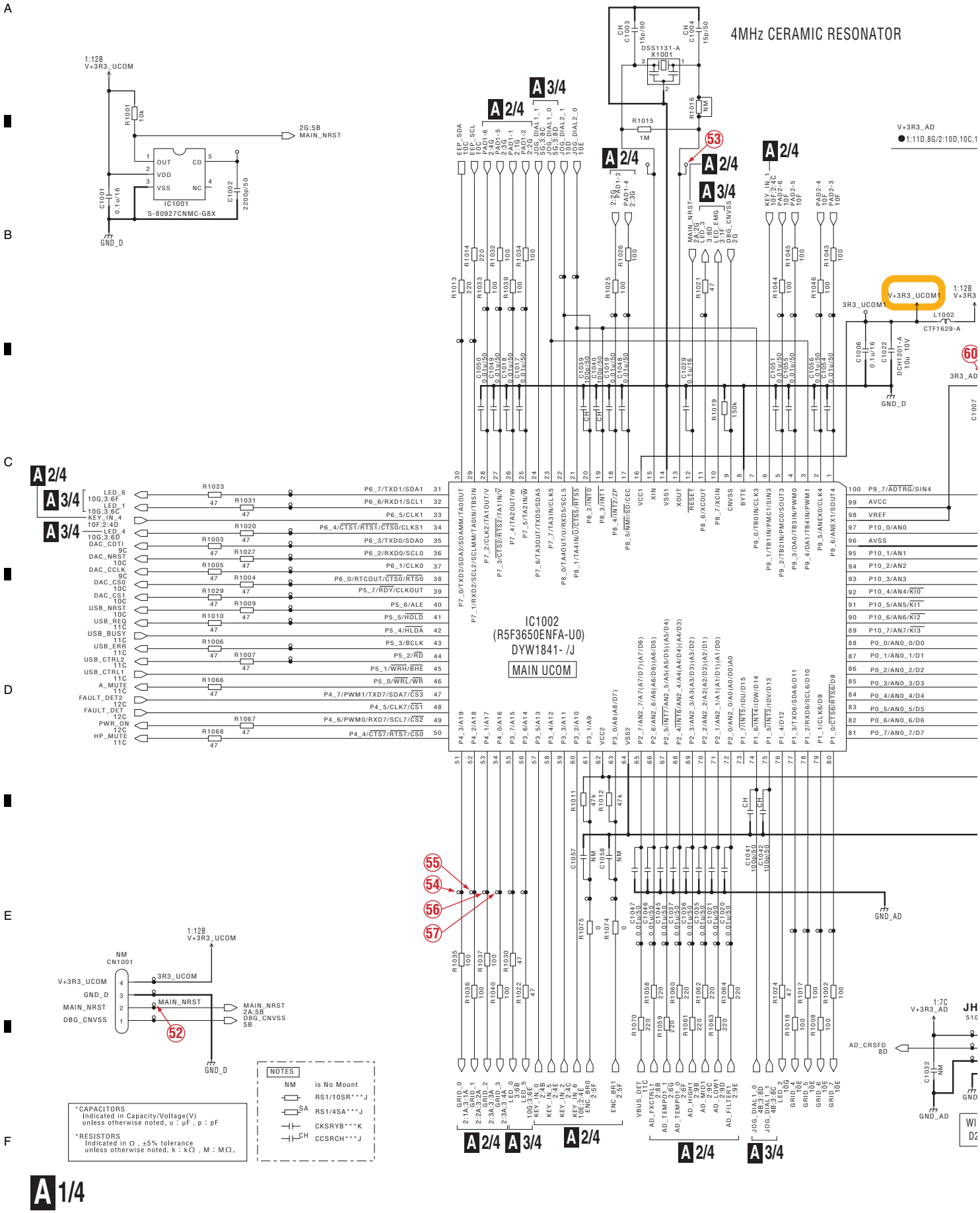


EXTERIOR SECTION PARTS LIST

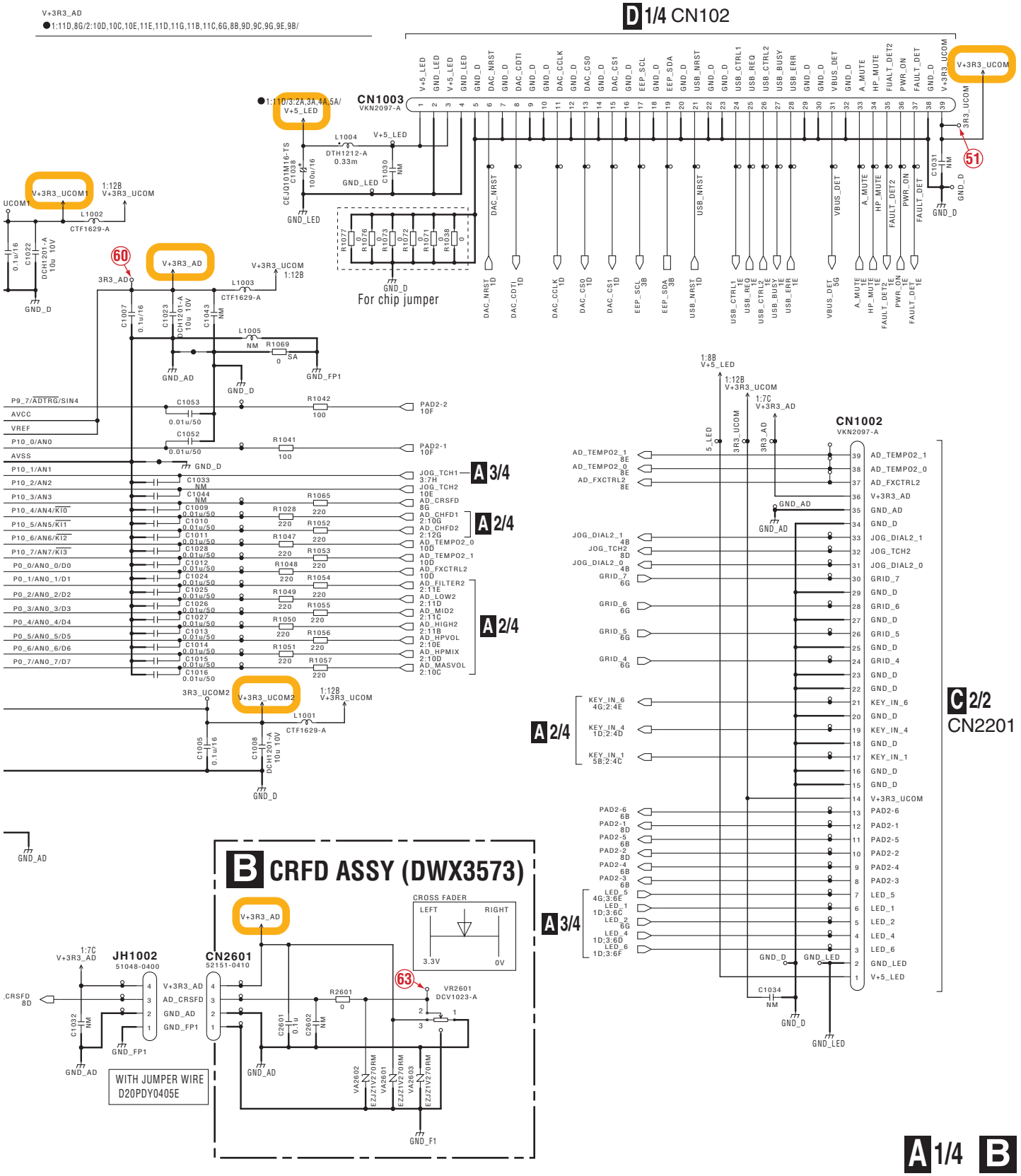
Mark	No.	Description	Part No.
	1	IFPW Assy	DWX3569
	2	PNL1 Assy	DWX3570
	3	PNL2 Assy	DWX3571
	4	CRFD Assy	DWX3573
	5	HOLD Assy	DWX3575
	6	FFC	ADD7796
	7	FFC/19P	DDD1671
	8	Leg/RBR	AEB1511
	9	Plate/JOG	DAH2981
	10	Gasket/JOG	DEC3539
	11	DS Tape/JOG	DEH1042
	12	Jog Dial	DNK6277
	13	Dial Knob S (B)	DAA1273
	14	Knob/PLS	DAA1324
	15	Slider Knob 1	DAC2684
	16	Slider Knob 2	DAC2685
	17	Button/BLK	DAC2950
	18	Button/MIX	DAC2951
	19	Button/OPL	DAC2952
	20	Button/PAD	DEB2009
	21	Fader Packing	DEC3355
	22	Sheet/PNL	DEC3543
	23	•••••	
	24	Stay/PCB	DNH3135
	25	Stay/FRT	DNH3136
	26	Plate/CND	DNH3137
	27	Plate/CHF	DNH3146
	28	Stopper/SLD	DNK6009
	29	Knob/SLD	DNK6283
	30	Control Panel	DNK6280
	31	Chassis	DNK6282
	32	•••••	
	33	•••••	
	34	Nut (M12)	NKX2FNI
	35	Washer	WA62D095D050
	36	Washer	YC60FAC
	37	Screw	BBZ30P060FTC
	38	Screw	BPZ30P080FNI
	39	Screw	BPZ30P100FTB
	40	Screw (M3*5)	DBA1340
	41	Screw	PMH20P040FTC

10. SCHEMATIC DIAGRAM

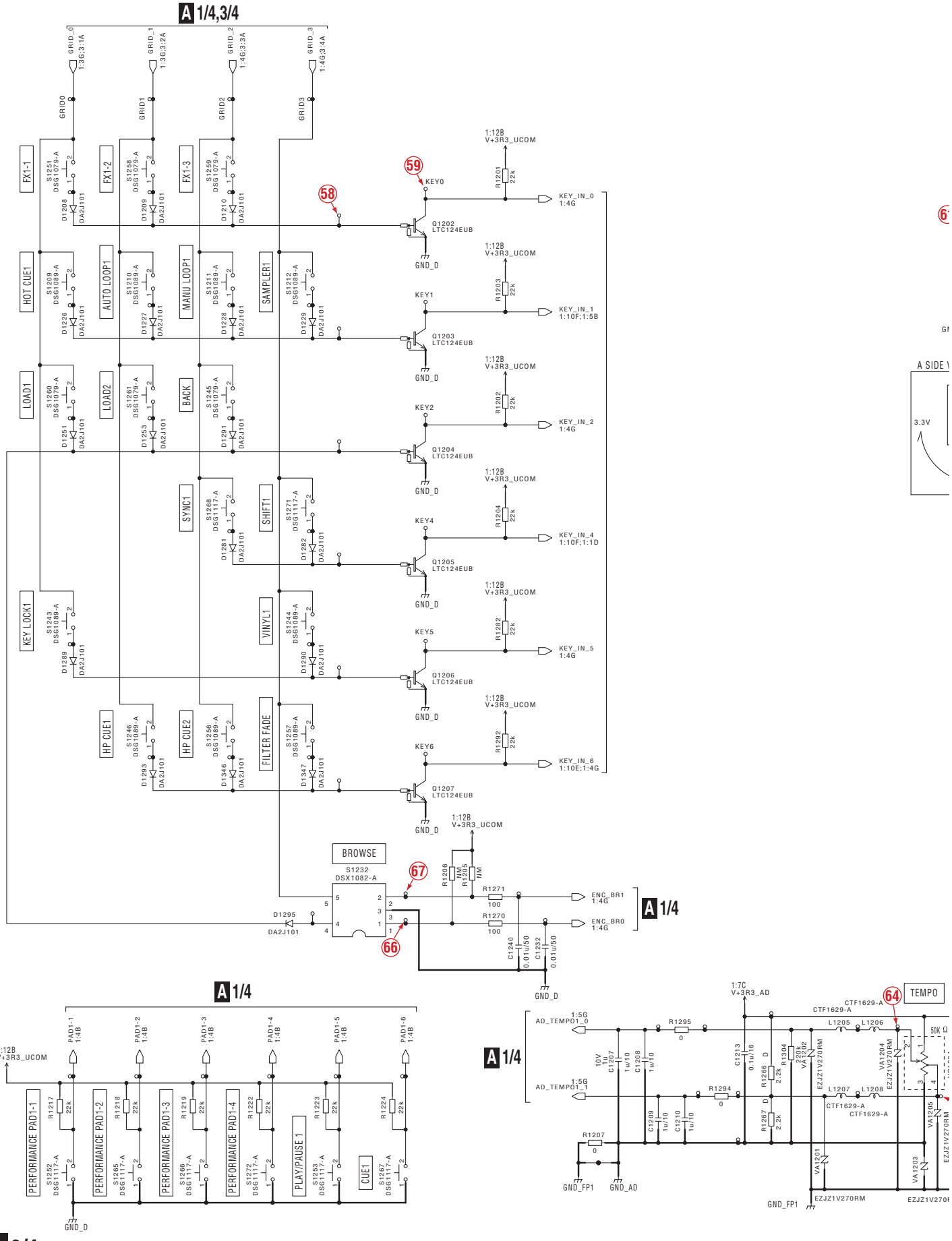
10.1 PNL1 ASSY (1/4) and CRFD ASSY



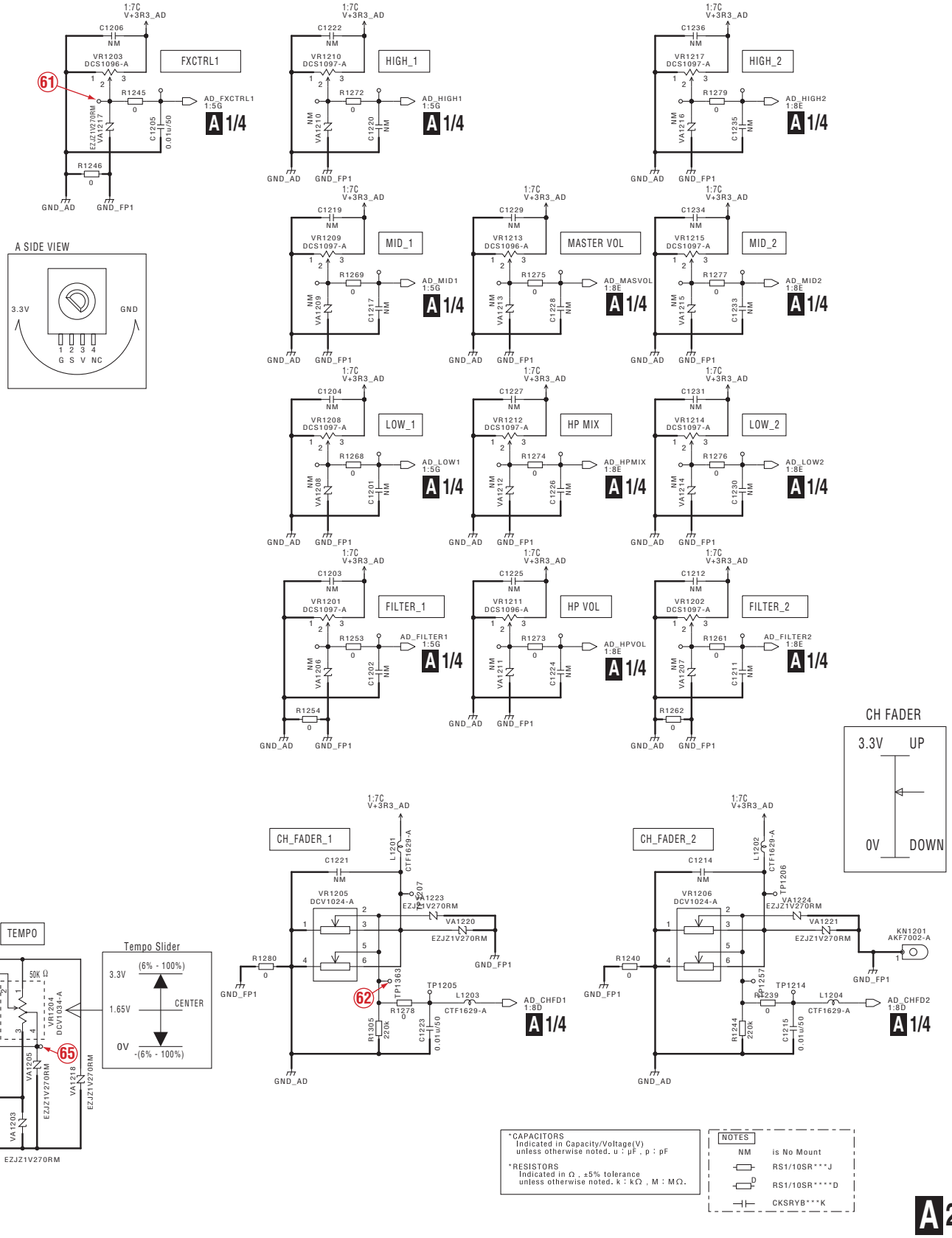
A 1/4 PNL1 ASSY (DWX3570)



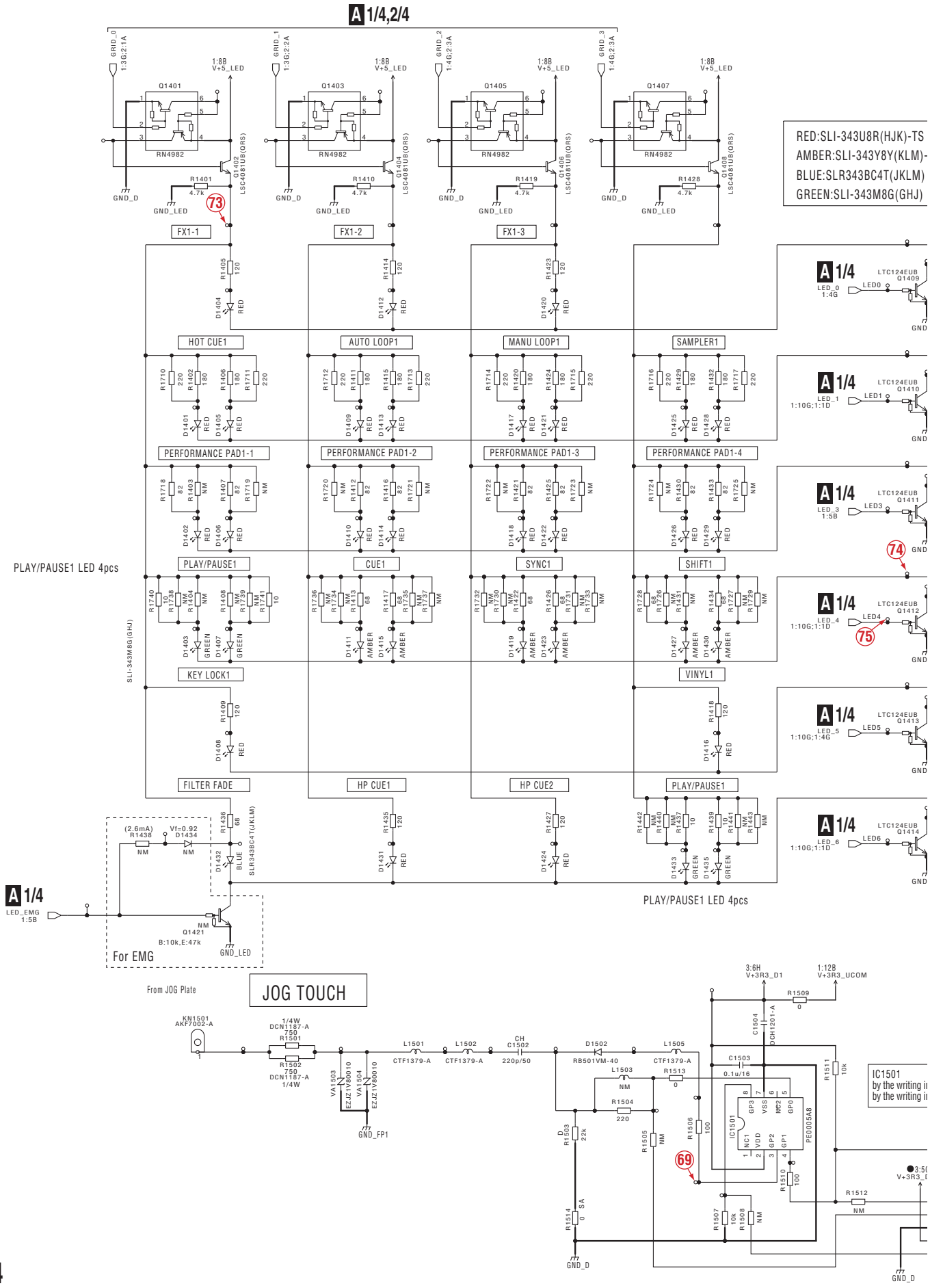
10.2 PNL1 ASSY (2/4)



A 2/4 PNL1 ASSY (DWX3570)

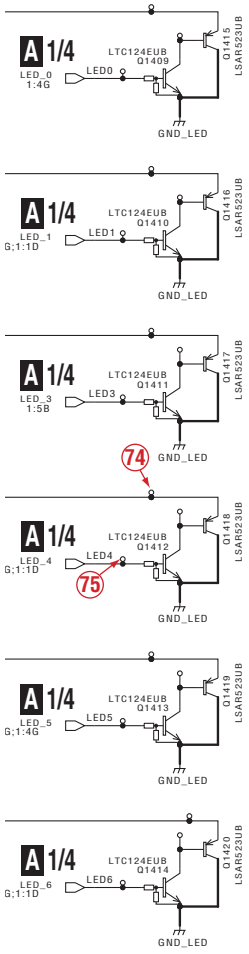


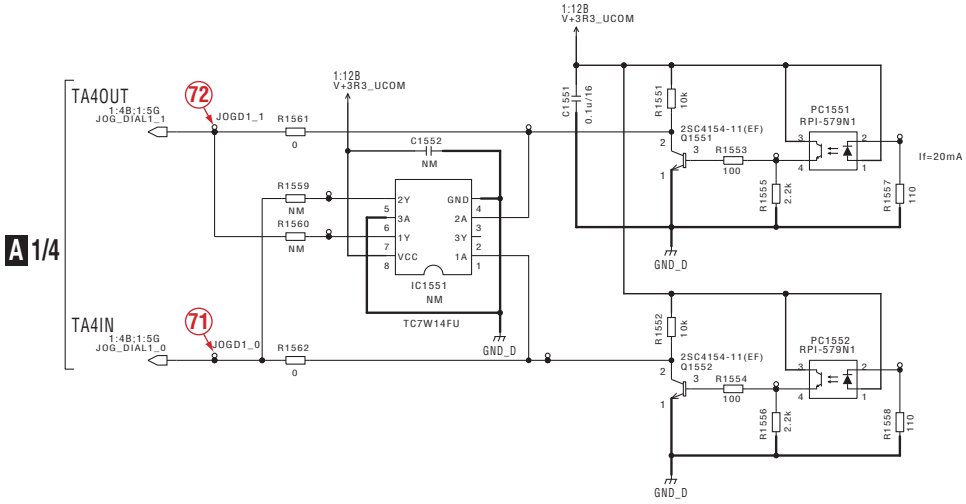
10.3 PNL1 ASSY (3/4)

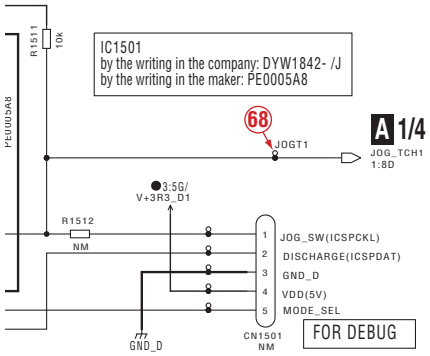


A 3/4 PNL1 ASSY (DWX3570)

:D:SLI-343U8R(HJK)-TS
/IBER:SLI-343Y8Y(KLM)-TS
.UE:SLR343BC4T(JKLM)
REEN:SLI-343M8G(GHJ)







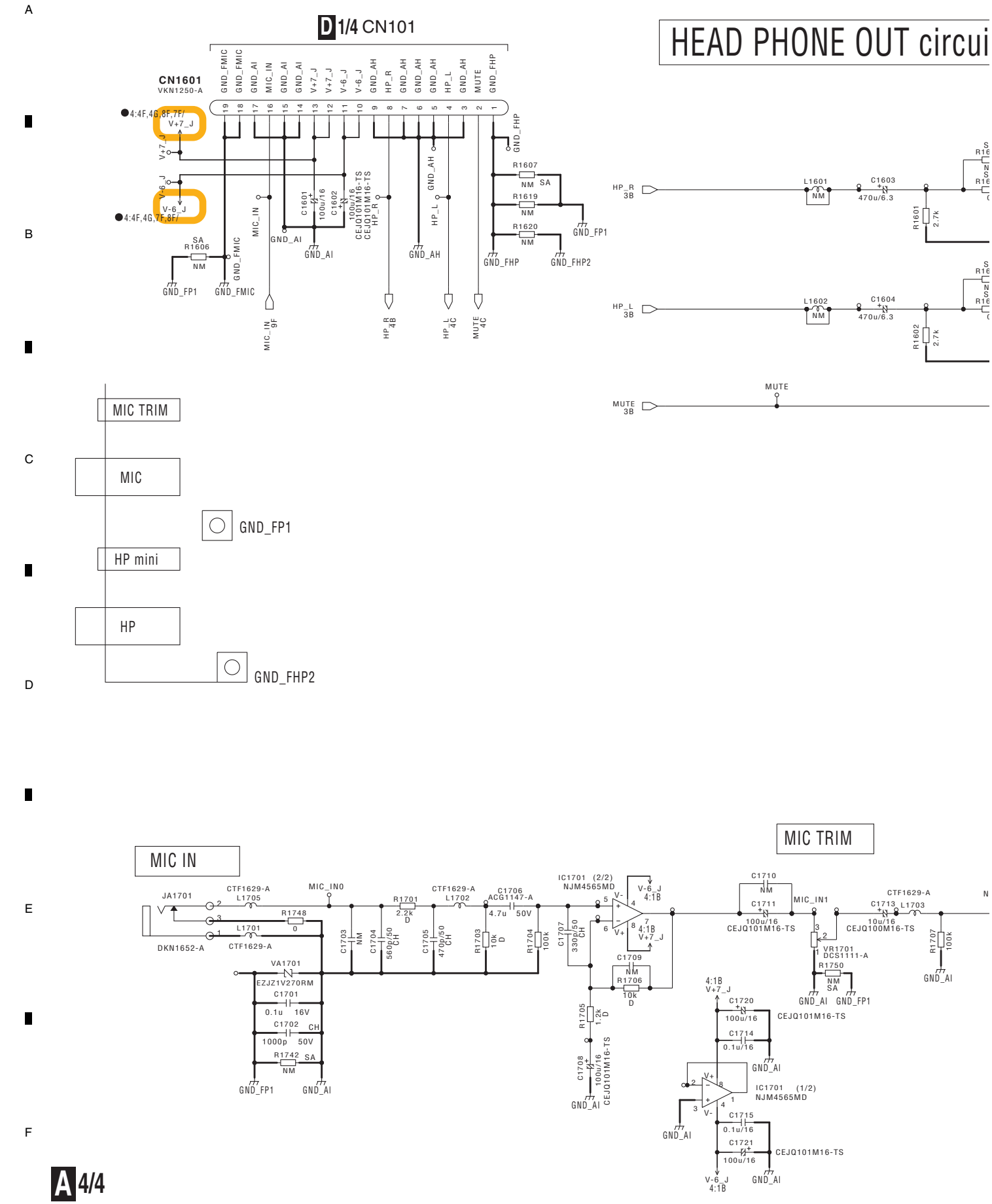
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : µF , p : pF

*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.

NOTES
NM is No Mount
RS1/10SR***J
D RS1/10SR****D
SA RS1/4SA***J
CKSRYB***K
CH CCSRCH***J

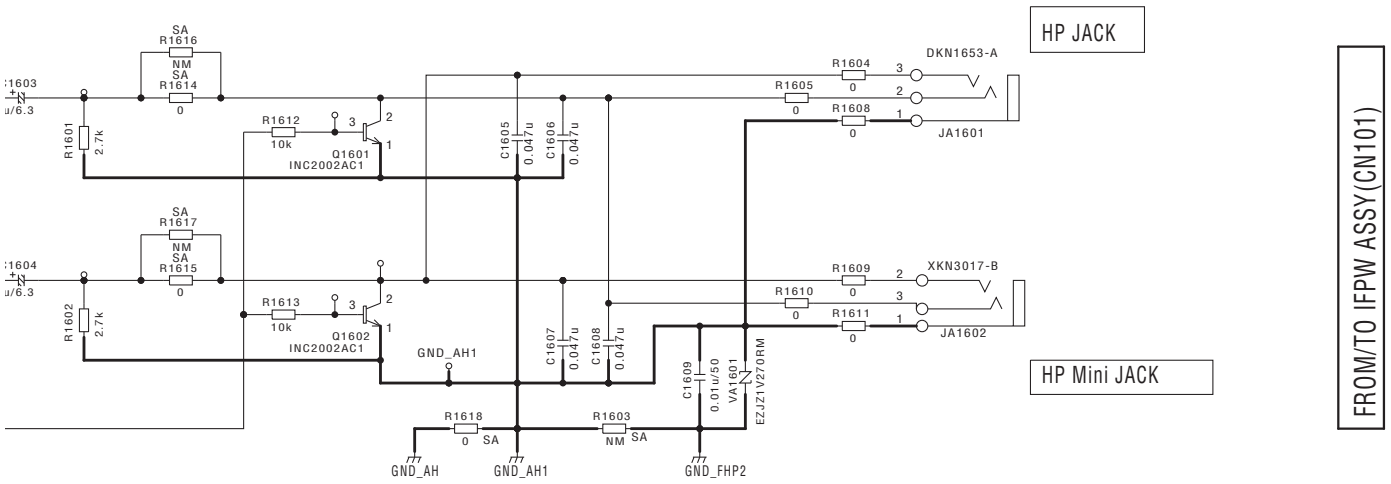
A 3/4

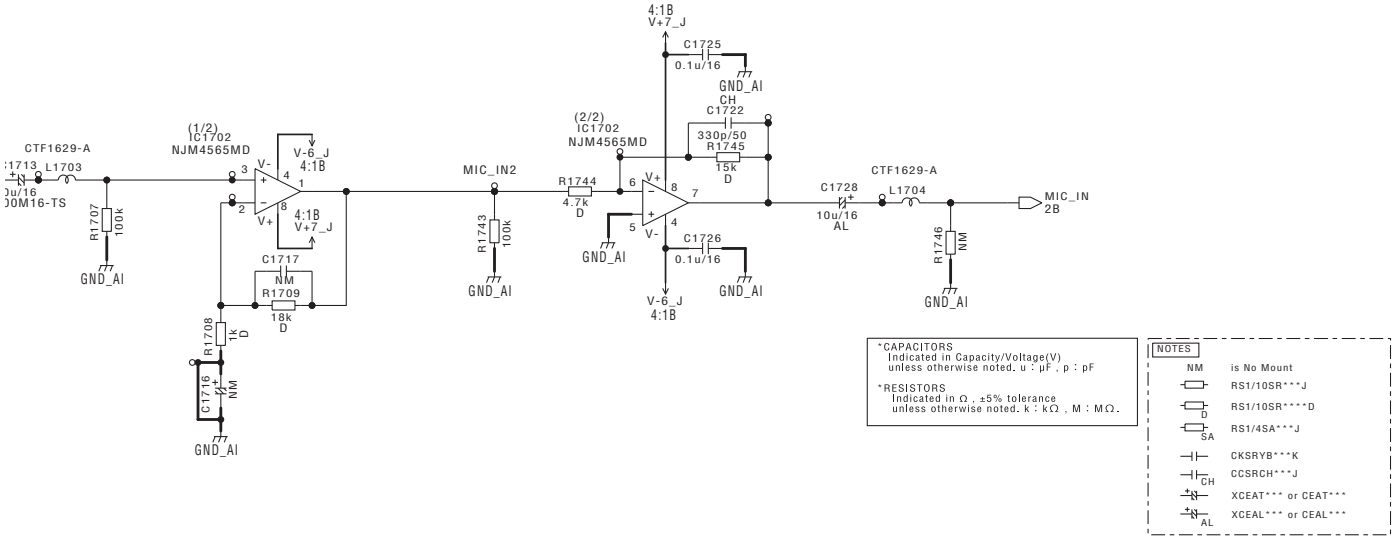
10.4 PNL1 ASSY (4/4)



A 4/4

UT circuit





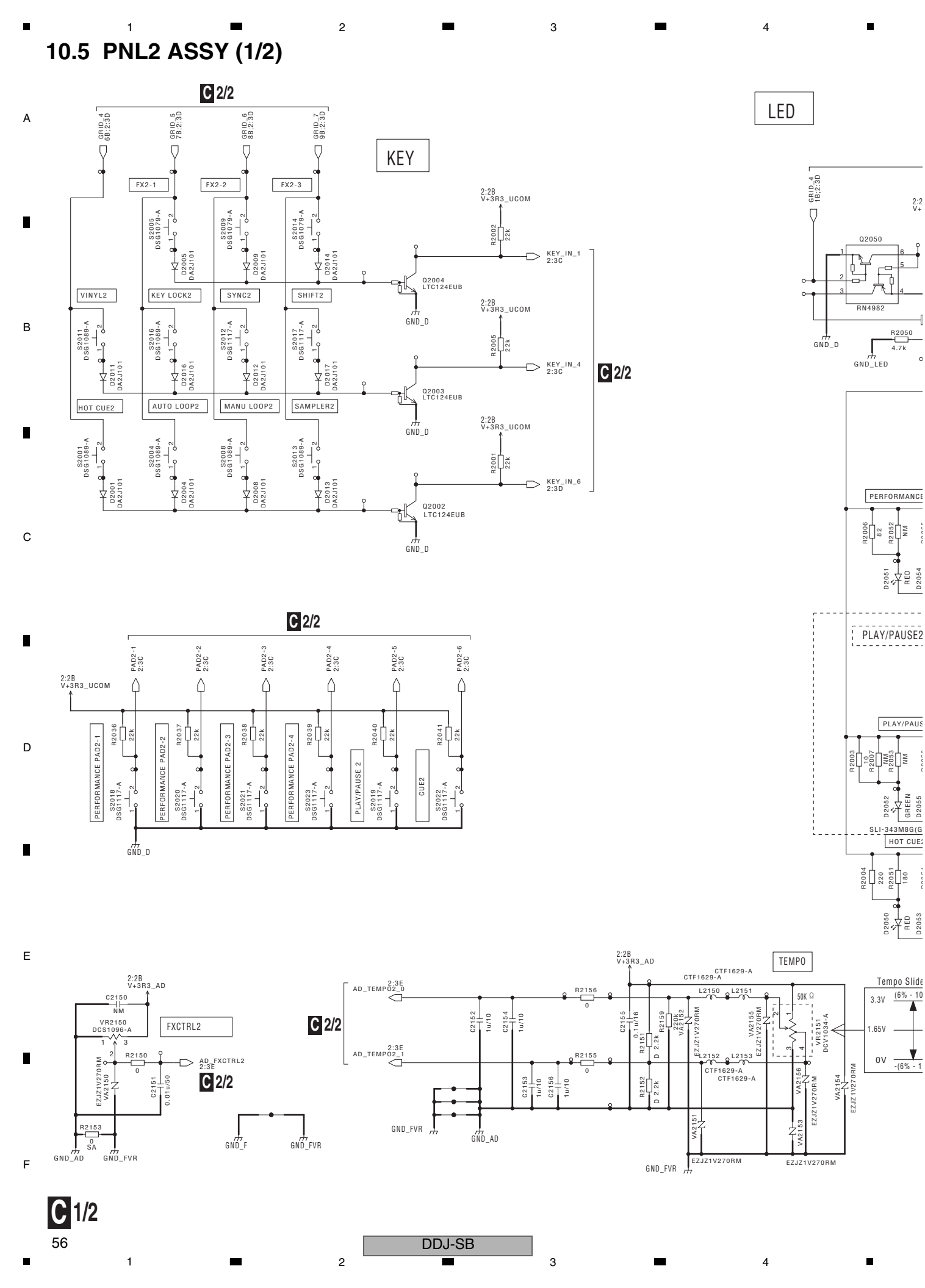
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : µF , p : pF

*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.

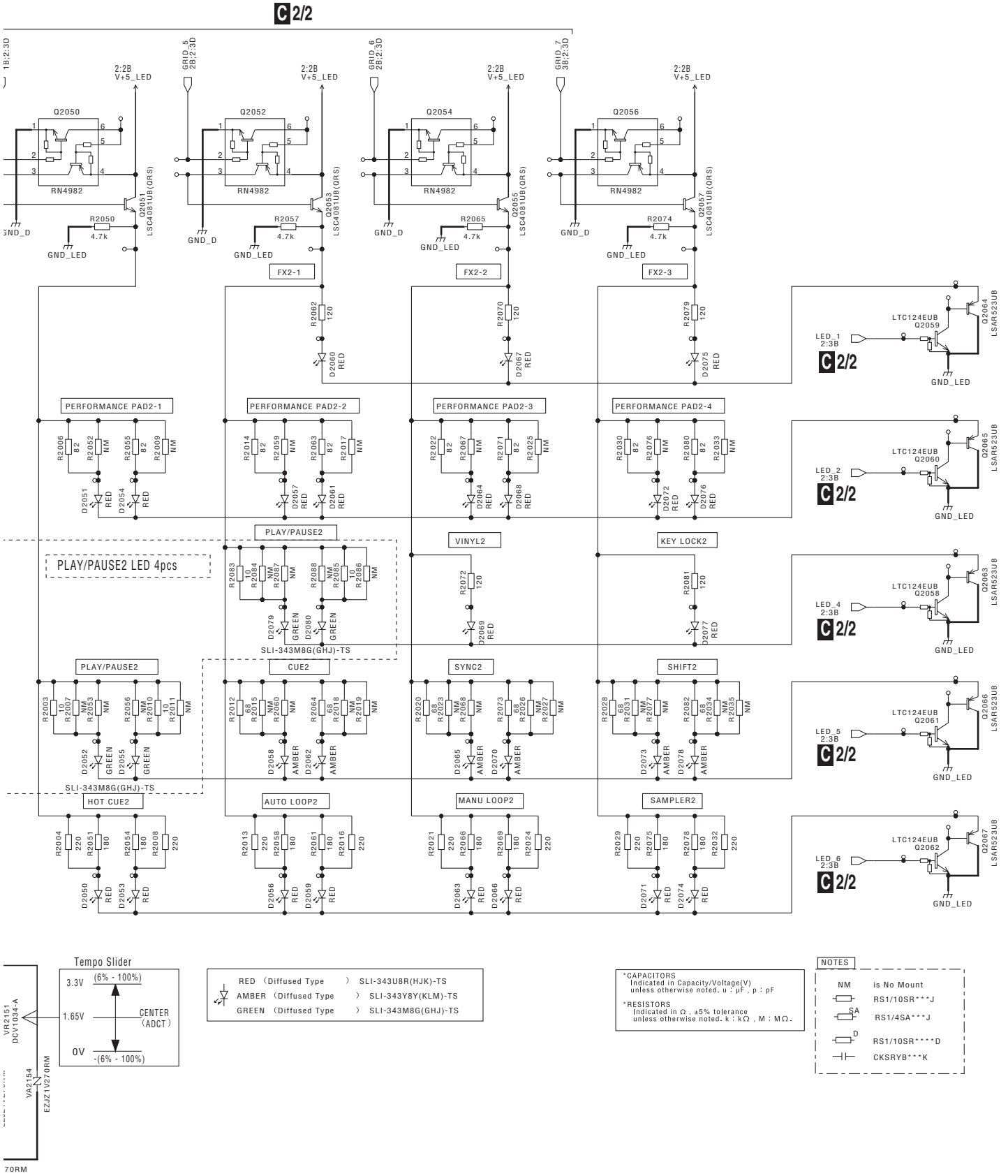
NOTES

NM	is No Mount
	RS1/10SR***J
D	RS1/10SR****D
SA	RS1/4SA***J
	CKSRYB***K
CH	CCSRCH***J
	XCEAT*** or CEAT***
AL	XCEAL*** or CEAL***

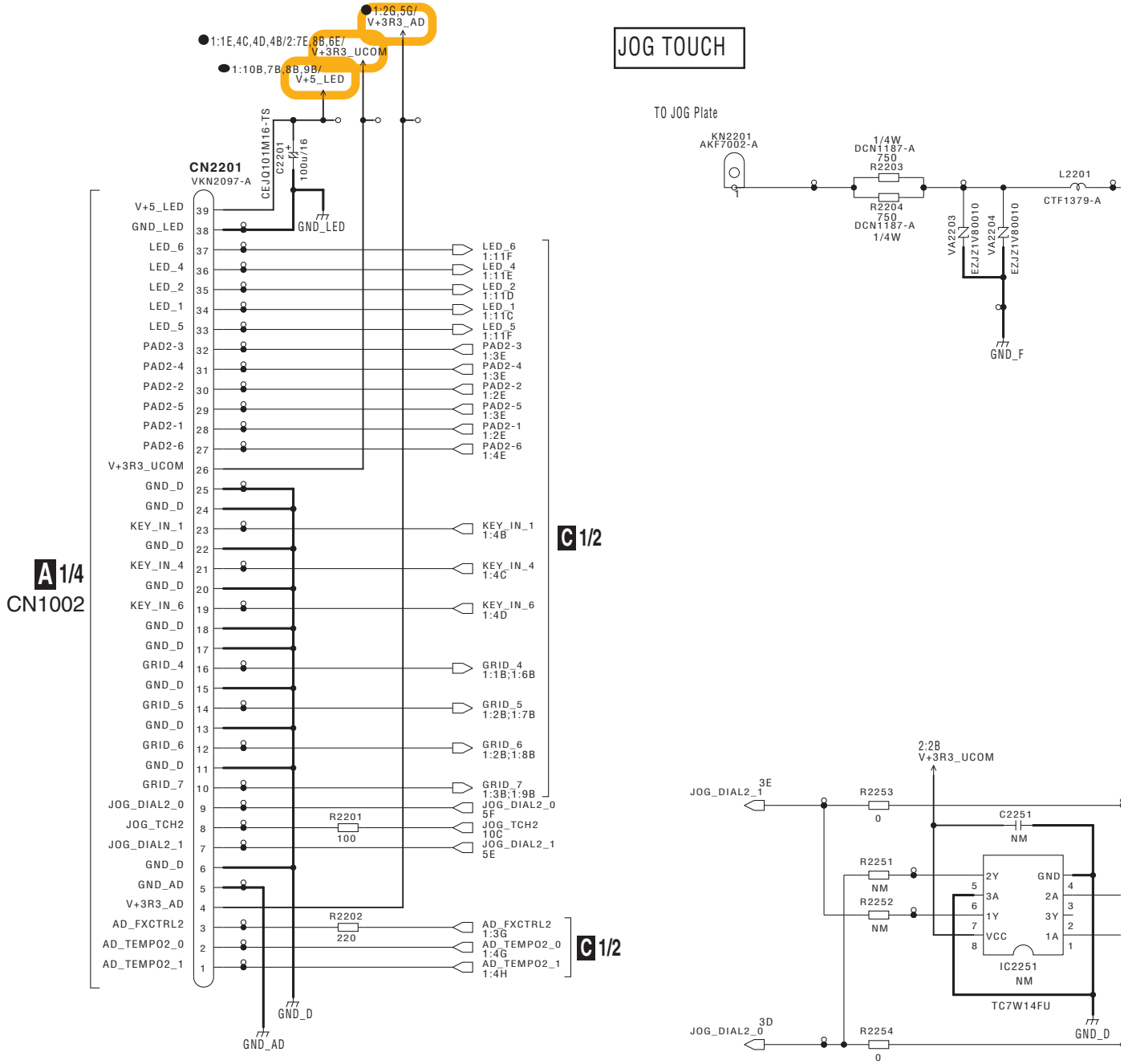
10.5 PNL2 ASSY (1/2)



C 1/2 PNL2 ASSY (DWX3571)

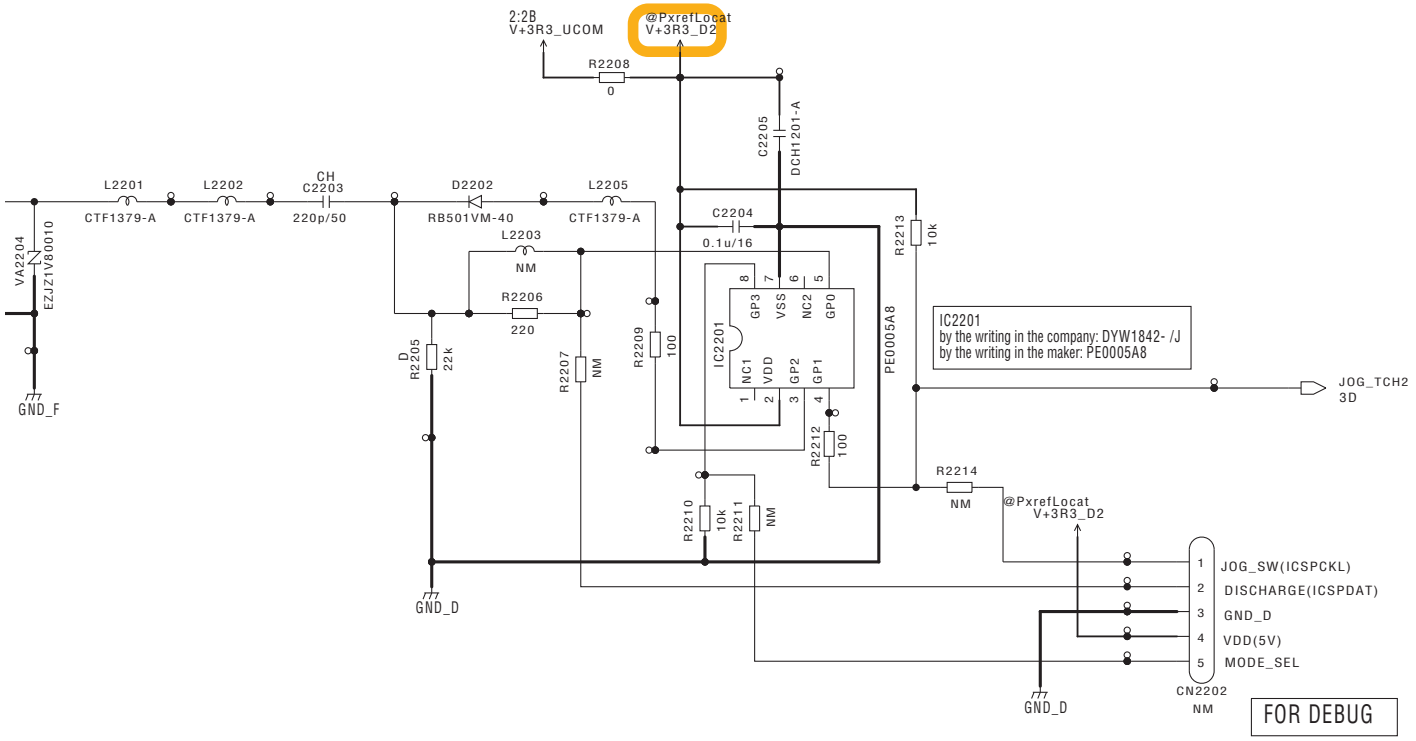


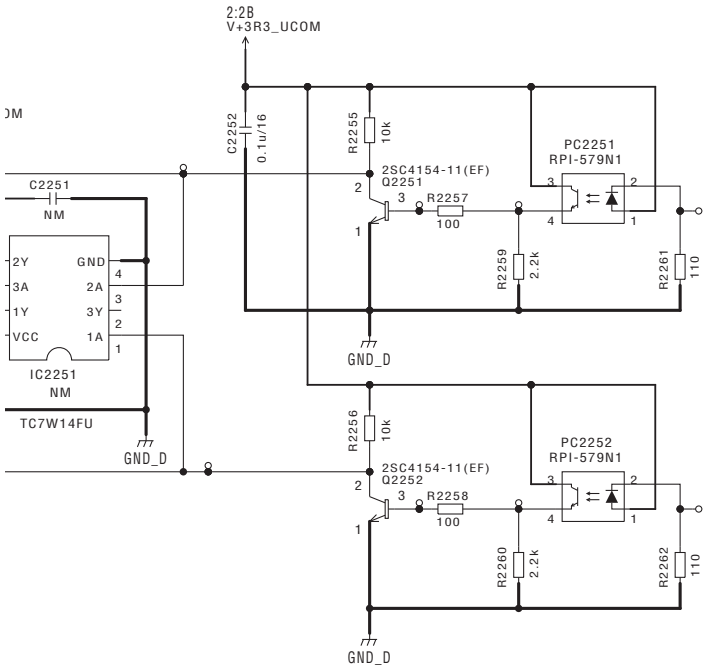
10.6 PNL2 ASSY (2/2)



C 2/2

C 2/2 PNL2 ASSY (DWX3571)





*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : µF , p : pF

*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.

NOTES

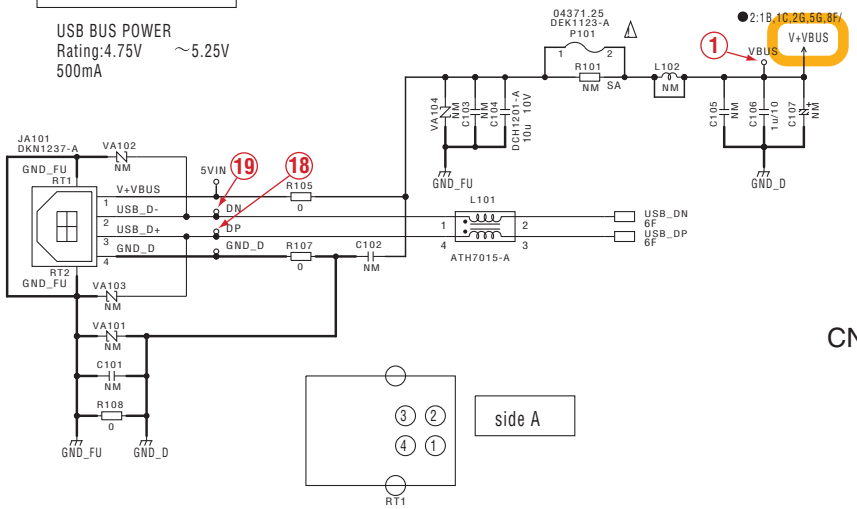
NM	is No Mount
	RS1/10SR***J
D	RS1/10SR****D
	CKSRYB***K
CH	CCSRCH***J

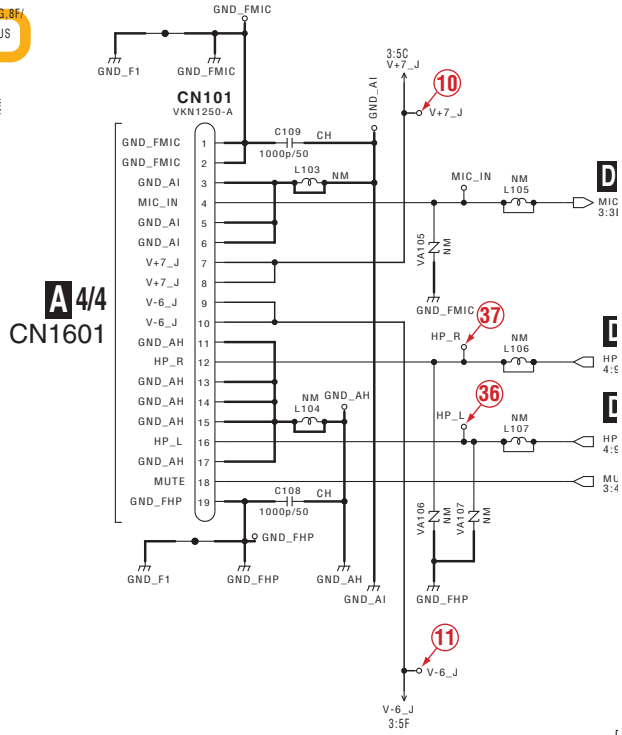
10.7 IFPW ASSY (1/4)

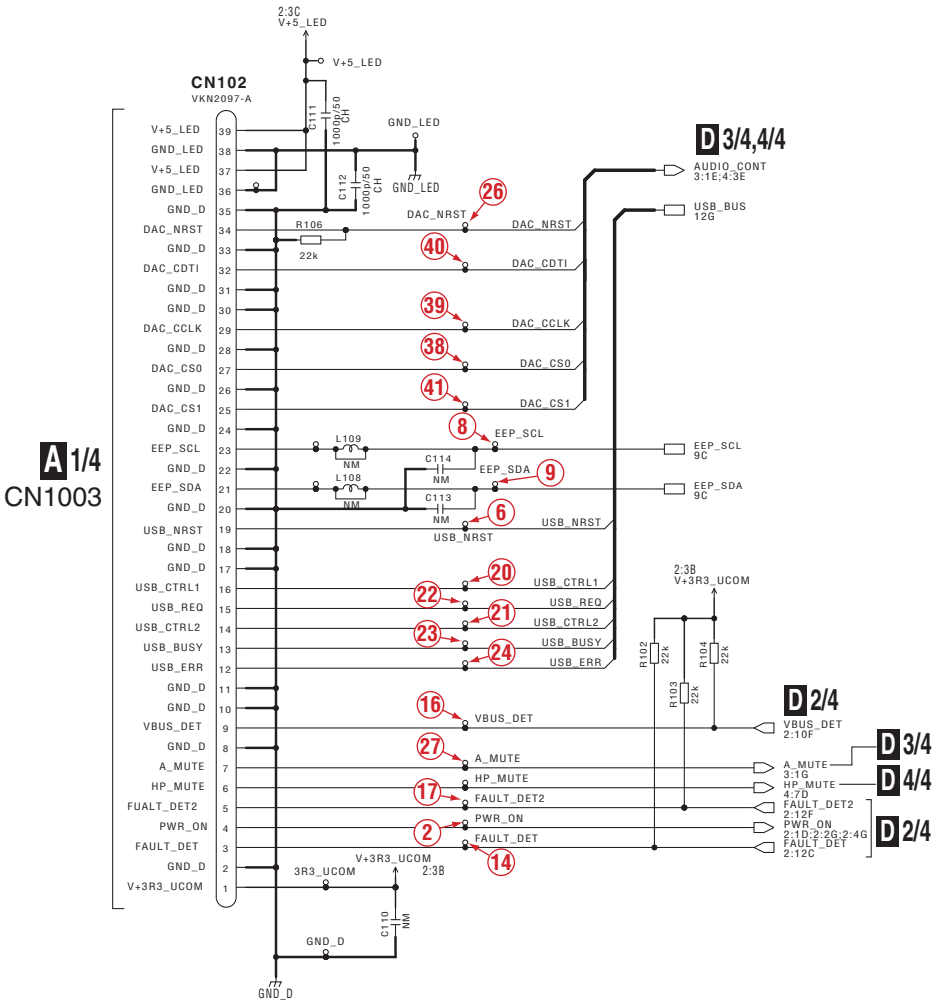
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 04371.25 MFD. BY LITTELFUSE INC. FOR P101.

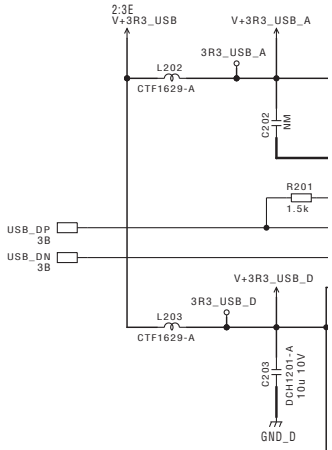
USB-B JACK

USB BUS POWER
Rating:4.75V ~5.25V
500mA









D 1/4

D 1/4 IFPW ASSY (DWX3569)

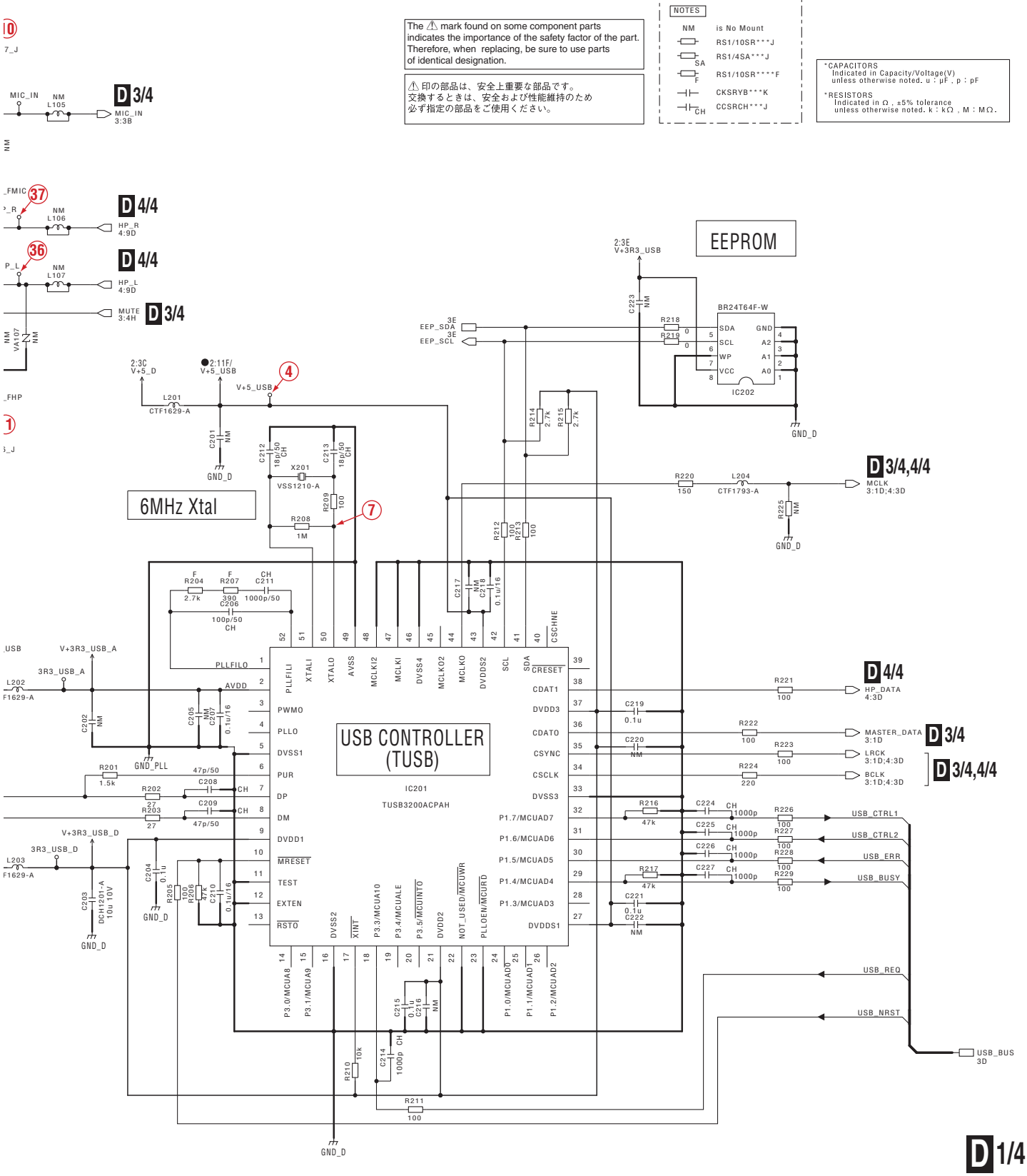
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

⚠ 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。

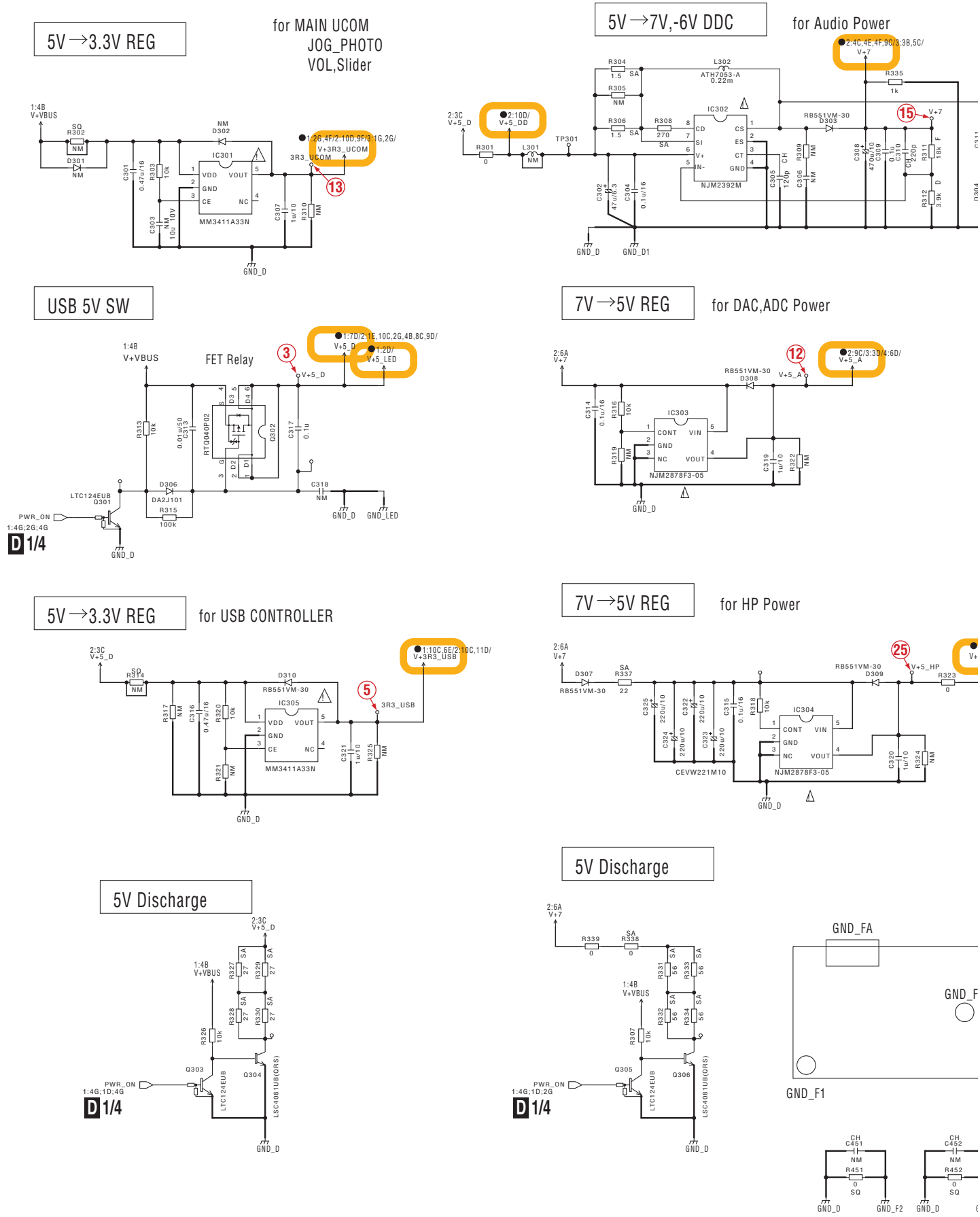
NOTES
NM is No Mount
RS1/10SR***J
RS1/4SA***J
RS1/10SR****F
CKSRYB***K
CCSRCH***J

*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : μF , p : pF

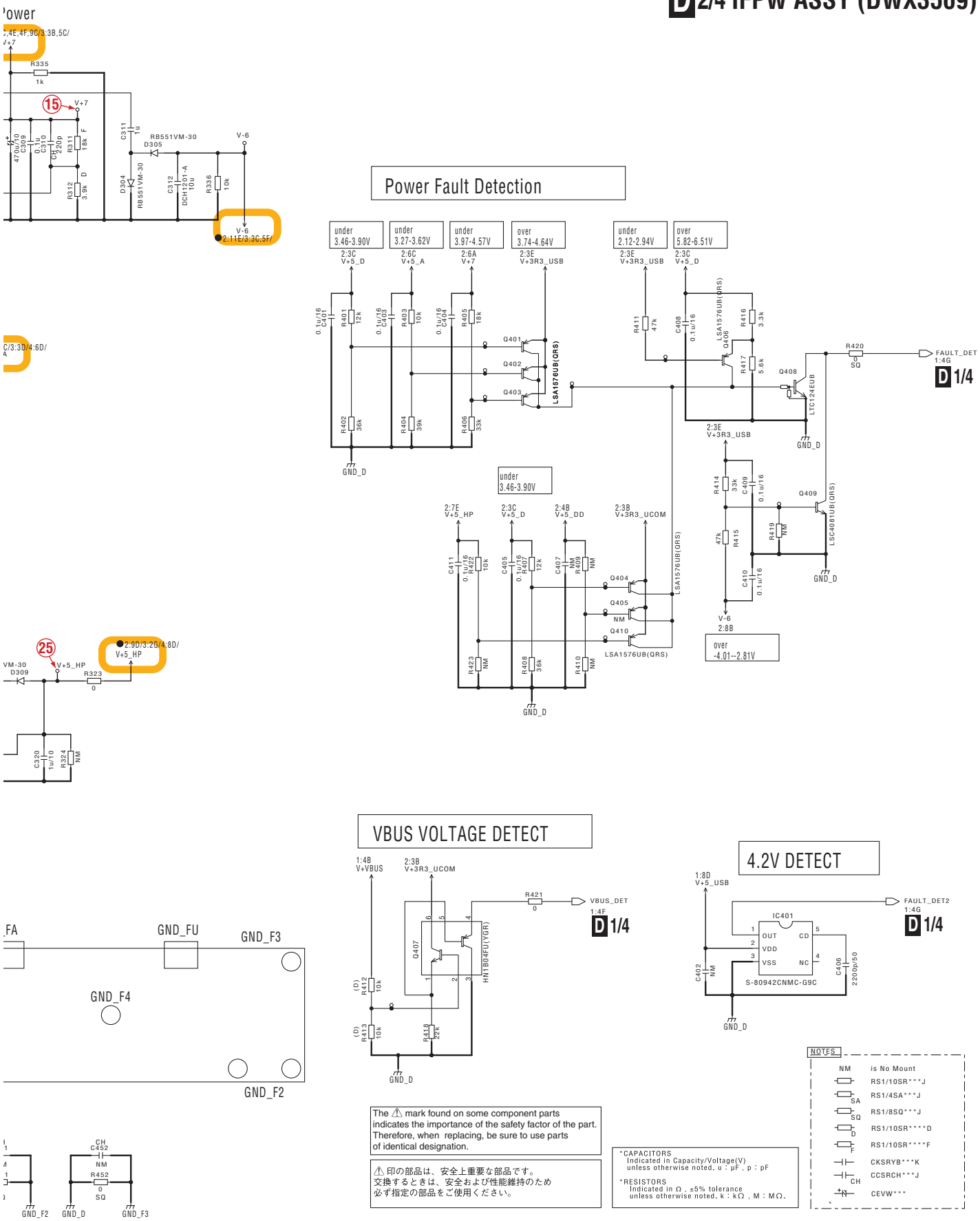
*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.



10.8 IFPW ASSY (2/4)



D 2/4 IFPW ASSY (DWX3569)



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.

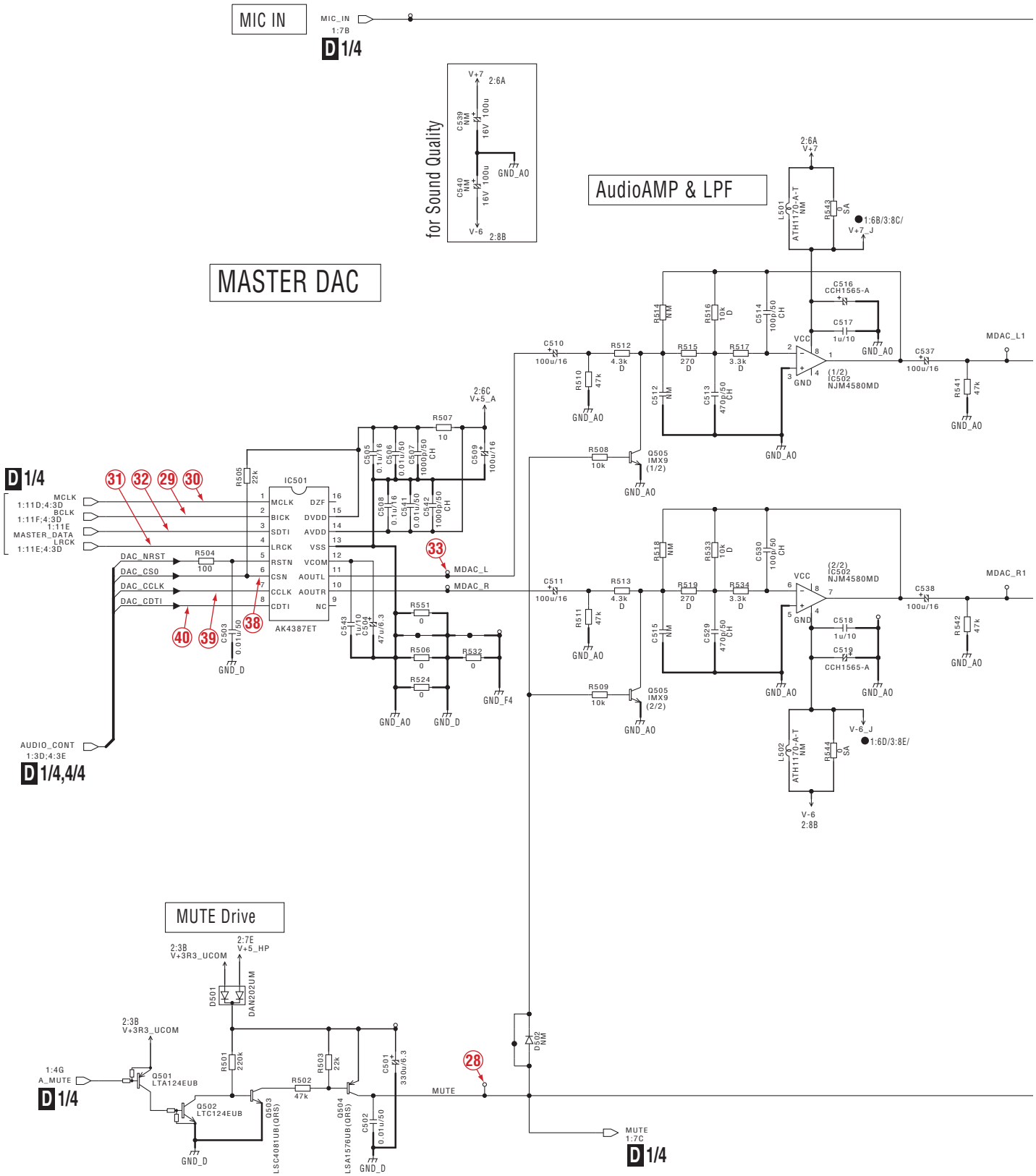
⚠ 印の部品は、安全上重要な部品です。
交換するときは、安全および性能維持のため
必ず指定の部品をご使用ください。

*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : μF , p : pF

*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.

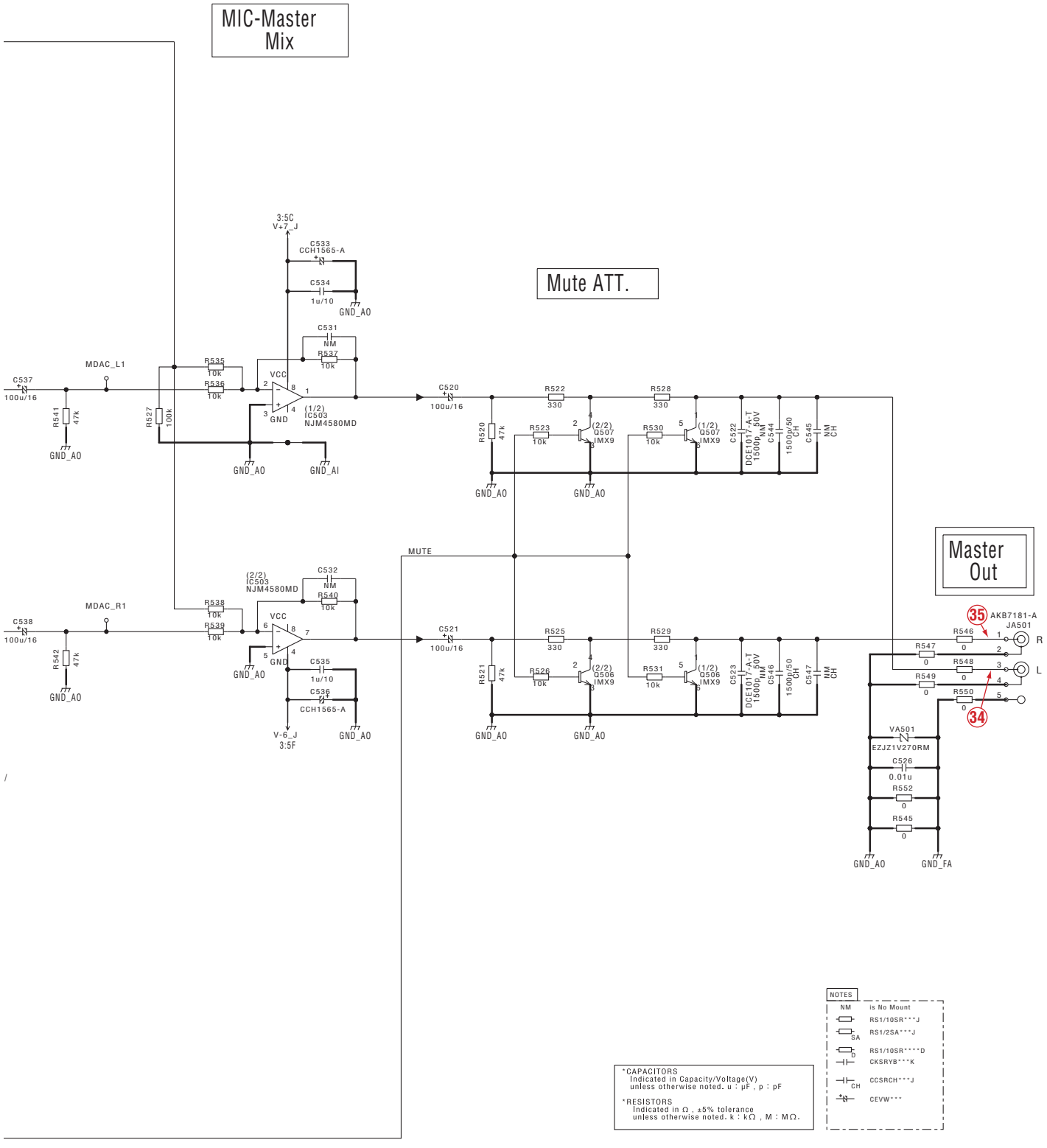
D 2/4

10.9 IFPW ASSY (3/4)



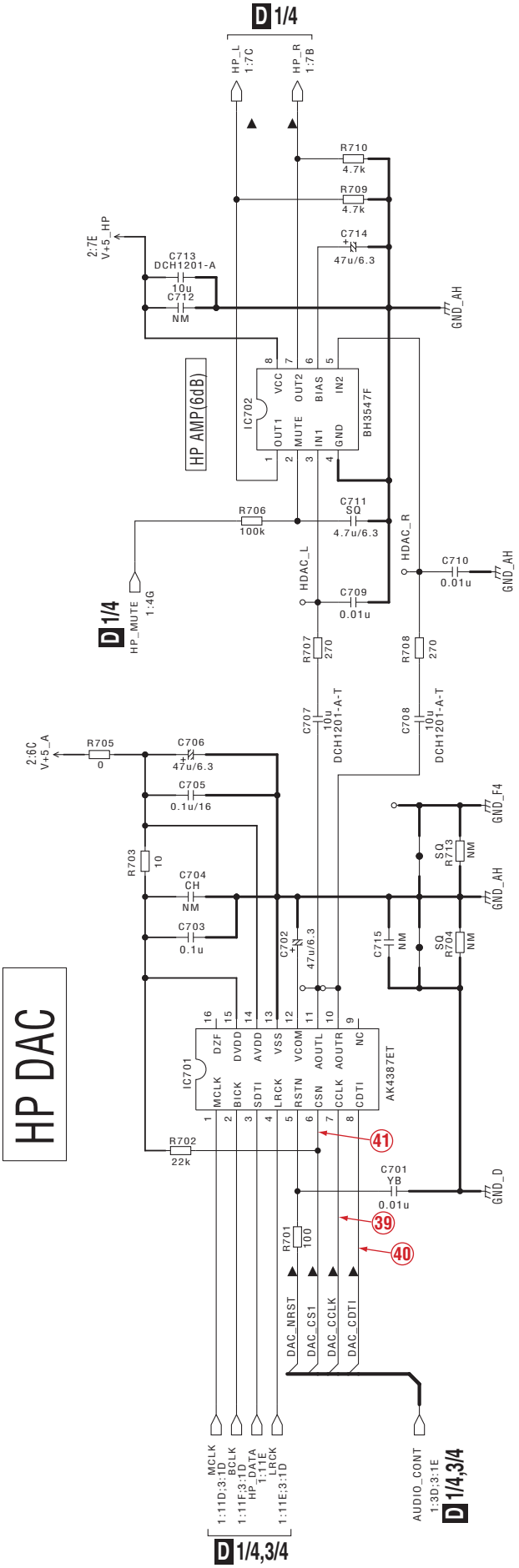
D 3/4

D 3/4 IFPW ASSY (DWX3569)



10.10 IFPW ASSY (4/4)

D 4/4 IFPW ASSY (DWX3569)



NOTES

NM	is No Mount
	RS1/10SR***J
SQ	RS1/8SQ***J
	CKSRYB***K
CH	CCSRCH***J
SQ	CKSQYB***K
	CEVW***

*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : μF , p : pF

*RESISTORS
Indicated in Ω , ±5% tolerance
unless otherwise noted. k : kΩ , M : MΩ.

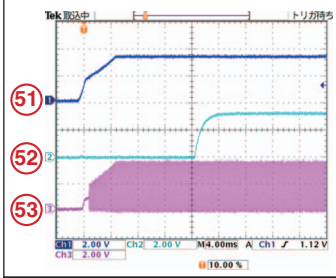
10.11 WAVEFORMS

Note:
The indicated voltage values of the oscilloscope in this section are reference values and may vary, depending on the settings of the oscilloscopes and probes.
The numerics circled with a frame denote numbers for the measurement points indicated in the Schematic diagrams and PCB diagrams.

A PNL1 ASSY

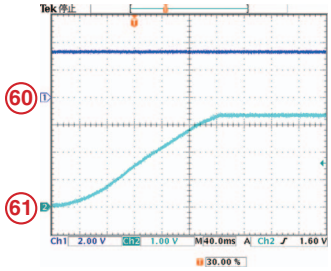
MAIN UCOM start up
Mode: Power ON

(51) **TP (V+3R3_UCOM)**
V: 2.0 V/div. H: 4.0 mS/div.
(52) **IC1001-pin 2 (MAIN_NRST)**
V: 2.0 V/div. H: 4.0 mS/div.
(53) **IC1002 pin 13 (XOUT)**
V: 2.0 V/div. H: 4.0 mS/div.



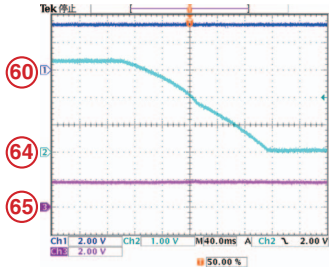
Volume operation 1 (Player1 FX1 control)
Mode: in Player1 VOL operation (MIN → MAX)

(60) **TP/IC1002 - pins 98, 99 (V+3R3_AD)**
V: 2.0 V/div. H: 40 mS/div.
(61) **TP/VR1203 - pins 2 (AD_FXCTRL1)**
V: 1.0 V/div. H: 40 mS/div.



TEMPO Slider operation (Player1)
Mode: in Player1 TEMPO Slider operation (UP → DOWN)

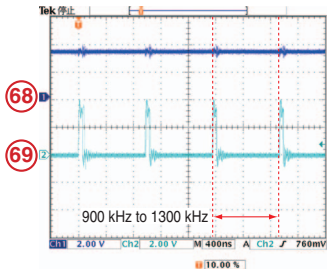
(60) **TP/IC1002 - pins 98, 99 (V+3R3_AD)**
V: 2.0 V/div. H: 40 mS/div.
(64) **TP/VR1204 - pin 2 (AD_TEMPO1_0)**
V: 1.0 V/div. H: 40 mS/div.
(65) **TP/VR1204 - pin 4 (AD_TEMPO1_1)**
V: 2.0 V/div. H: 40 mS/div.



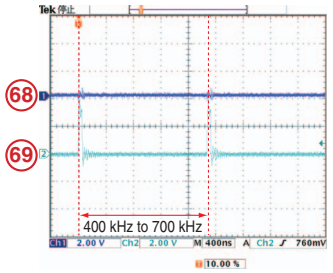
Jog Touch operation
Mode: in Jog Touch operation (RELEASE / TOUCH)

(68) **TP (JOG_TCH1)**
V: 2.0 V/div. H: 400 nS/div.
(69) **TP (Freq.)**
V: 1.0 V/div. H: 40 mS/div.

When not touching the Jog

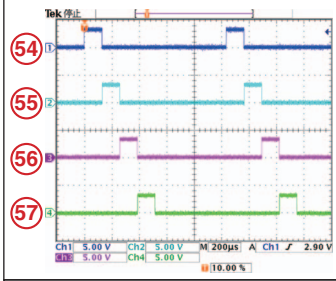


When touching the Jog



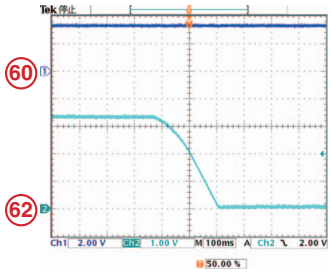
GRID control
Mode:

(54) **TP/IC1002 - pin 51 (GRID_0)**
V: 5.0 V/div. H: 200 µS/div.
(55) **TP/IC1002 - pin 52 (GRID_1)**
V: 5.0 V/div. H: 200 µS/div.
(56) **TP/IC1002 - pin 53 (GRID_2)**
V: 5.0 V/div. H: 200 µS/div.
(57) **TP/IC1002 - pin 54 (GRID_3)**
V: 5.0 V/div. H: 200 µS/div.



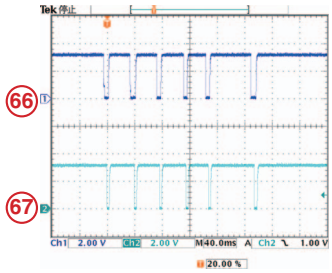
CH Fader operation (CH A)
Mode: in Mixer CH A Fader operation (UP → DOWN)

(60) **TP/IC1002 - pins 98, 99 (V+3R3_AD)**
V: 2.0 V/div. H: 100 mS/div.
(62) **TP/VR1205 - pins 2, 5 (AD_CHFD1)**
V: 1.0 V/div. H: 100 mS/div.



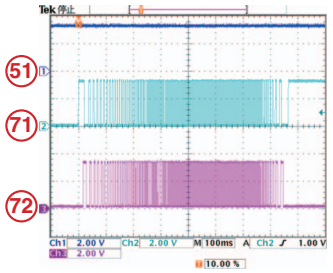
Rotary Selector operation (Player1)
Mode: in Player1 AUTOLOOP operation

(66) **TP/S1232 - pin 1 (ENC_BR0)**
V: 2.0 V/div. H: 40 mS/div.
(67) **TP/S1232 - pin 2 (ENC_BR1)**
V: 2.0 V/div. H: 40 mS/div.

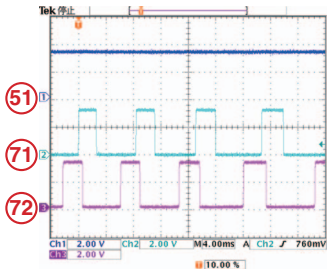


Jog Dial operation
Mode: STOP → DIAL → STOP

(51) **TP (V+3R3_UCOM)**
V: 2.0 V/div. H: 100 mS/div.
(71) **TP (JOG_DIAL1_0)**
V: 2.0 V/div. H: 100 mS/div.
(72) **TP (JOG_DIAL1_1)**
V: 2.0 V/div. H: 100 mS/div.

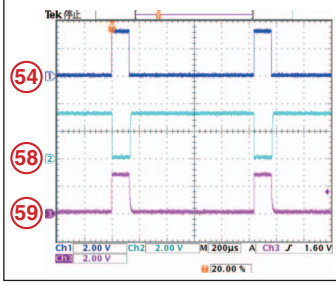


(51) **TP (V+3R3_UCOM)**
V: 2.0 V/div. H: 4 mS/div.
(71) **TP (JOG_DIAL1_0)**
V: 1.0 V/div. H: 4 mS/div.
(72) **TP (JOG_DIAL1_1)**
V: 1.0 V/div. H: 100 mS/div.



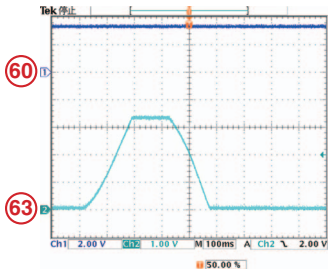
KEY operation (Player1 Play)
Mode: FX1 Key

(54) **TP/IC1002 - pin 51 (GRID_0)**
V: 2.0 V/div. H: 200 µS/div.
(58) **TP/Q1202 - B (KEY_0)**
V: 2.0 V/div. H: 200 µS/div.
(59) **TP/Q1202 - C (KEY_IN_0)**
V: 2.0 V/div. H: 200 µS/div.



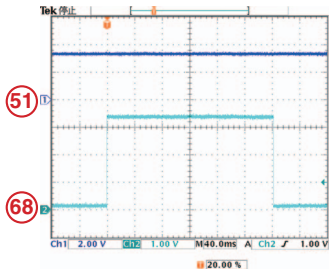
Cross Fader operation
Mode: in Mixer Cross Fader operation (RIGHT → LEFT → RIGHT)

(60) **TP/IC1002 - pins 98, 99 (V+3R3_AD)**
V: 2.0 V/div. H: 40 mS/div.
(63) **TP/VR2601 - pin 2 (AD_CRSFD)**
V: 1.0 V/div. H: 40 mS/div.



Jog Touch operation
Mode: in Jog Touch operation (RELEASE → TOUCH → RELEASE)

(51) **TP (V+3R3_UCOM)**
V: 2.0 V/div. H: 40 mS/div.
(68) **TP (JOG_TCH1)**
V: 1.0 V/div. H: 40 mS/div.



A PNL1 ASSY

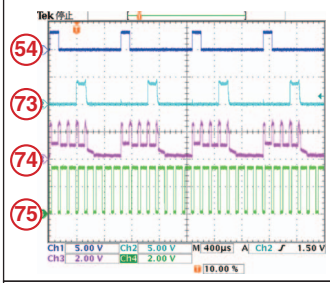
LED drive (1)
Mode: All LED light

(54) **TP/IC1002 pin 51 (GRID_0)**
V: 5.0 V/div. H: 400 µS/div.

(73) **Q1402 - E (V+5LED_GRID0)**
V: 5.0 V/div. H: 400 µS/div.

(74) **Q1418 - E (GND_LED4)**
V: 2.0 V/div. H: 400 µS/div.

(75) **Q1412 - B (LED_4)**
V: 2.0 V/div. H: 400 µS/div.



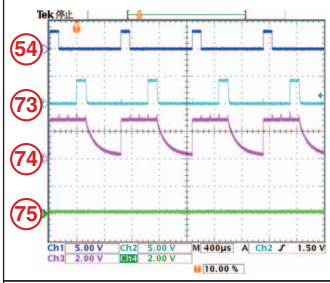
LED drive (2)
Mode: All LED lit off

(54) **TP/IC1002 pin 51 (GRID_0)**
V: 5.0 V/div. H: 400 µS/div.

(73) **Q1402 - E (V+5LED_GRID0)**
V: 5.0 V/div. H: 400 µS/div.

(74) **Q1418 - E (GND_LED4)**
V: 2.0 V/div. H: 400 µS/div.

(75) **Q1412 - B (LED_4)**
V: 2.0 V/div. H: 400 µS/div.



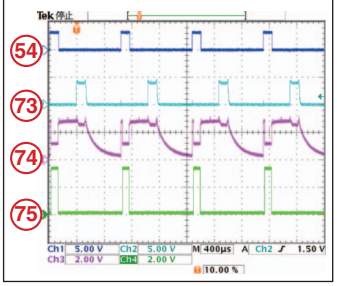
LED drive (3)
Mode: at PLAY button of Player1 light

(54) **TP/IC1002 pin 51 (GRID_0)**
V: 5.0 V/div. H: 400 µS/div.

(73) **Q1402 - E (V+5LED_GRID0)**
V: 5.0 V/div. H: 400 µS/div.

(74) **Q1418 - E (GND_LED4)**
V: 2.0 V/div. H: 400 µS/div.

(75) **Q1412 - B (LED_4)**
V: 2.0 V/div. H: 400 µS/div.



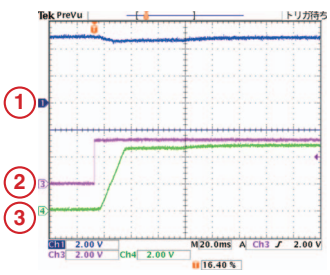
D IFPW ASSY

Power control
Mode: Power ON

(1) **TP (VBUS)**
V: 2.0 V/div. H: 20 mS/div.

(2) **TP/CN102 - pin 4 (PWR_ON)**
V: 2.0 V/div. H: 20 mS/div.

(3) **TP/Q302 - pin 5, 6 (V+5_D)**
V: 2.0 V/div. H: 20 mS/div.



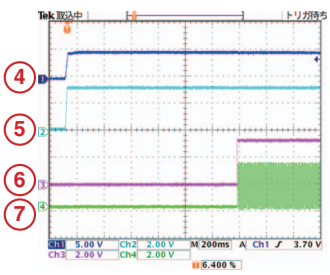
USB Controller start up
Mode: Power ON

(4) **TP/IC201 - pin 43 (V+5_USB)**
V: 5.0 V/div. H: 200 mS/div.

(5) **TP/IC305 - pin 5 (V+3R3_USB)**
V: 2.0 V/div. H: 200 mS/div.

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 200 mS/div.

(7) **IC201 - pin 50 (XTALO)**
V: 2.0 V/div. H: 200 mS/div.



USB Controller start up
Mode: Power ON

(4) **TP/IC201 - pin 43 (V+5_USB)**
V: 5.0 V/div. H: 200 mS/div.

(5) **TP/IC305 - pin 5 (V+3R3_USB)**
V: 2.0 V/div. H: 200 mS/div.

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 200 mS/div.

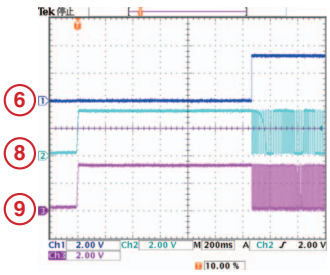
(7) **IC201 - pin 50 (XTALO)**
V: 2.0 V/div. H: 200 mS/div.

I2C USB Controller - EEPROM (1)
Mode: Power ON

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 200 mS/div.

(8) **TP/CN102 - pin 23 (EEP_SCL)**
V: 2.0 V/div. H: 200 mS/div.

(9) **TP/CN102 - pin 21 (EEP_SDA)**
V: 2.0 V/div. H: 200 mS/div.

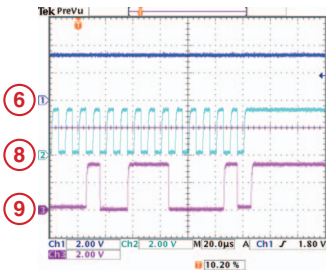


I2C USB Controller - EEPROM (2)
Mode: Power ON

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 20 µS/div.

(8) **TP/CN102 - pin 23 (EEP_SCL)**
V: 2.0 V/div. H: 20 µS/div.

(9) **TP/CN102 - pin 21 (EEP_SDA)**
V: 2.0 V/div. H: 20 µS/div.

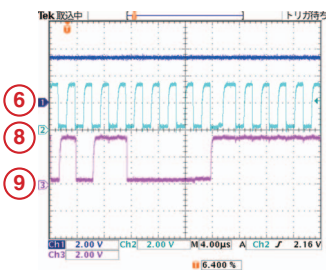


I2C USB Controller - MAIN UCOM
Mode: Play (1 k, 0 dB)

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 4.0 µS/div.

(8) **TP/CN102 - pin 23 (EEP_SCL)**
V: 2.0 V/div. H: 4.0 µS/div.

(9) **TP/CN102 - pin 21 (EEP_SDA)**
V: 2.0 V/div. H: 4.0 µS/div.



I2C USB Controller - MAIN UCOM
Mode: Play (1 k, 0 dB)

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 4.0 µS/div.

(8) **TP/CN102 - pin 23 (EEP_SCL)**
V: 2.0 V/div. H: 4.0 µS/div.

(9) **TP/CN102 - pin 21 (EEP_SDA)**
V: 2.0 V/div. H: 4.0 µS/div.

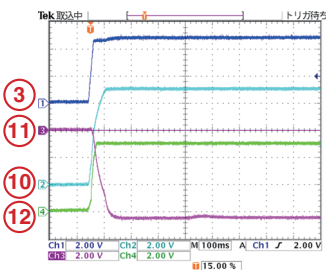
AUDIO power supply
Mode: Power ON

(3) **TP/Q302 - pin 5, 6 (V+5_D)**
V: 2.0 V/div. H: 100 mS/div.

(10) **TP/CN101 - pin 7 (V+7_J)**
V: 2.0 V/div. H: 100 mS/div.

(11) **TP/CN101 - pin 9, 10 (V-6_J)**
V: 2.0 V/div. H: 100 mS/div.

(12) **TP/IC303 - pin 4 (V+5_A)**
V: 2.0 V/div. H: 100 mS/div.



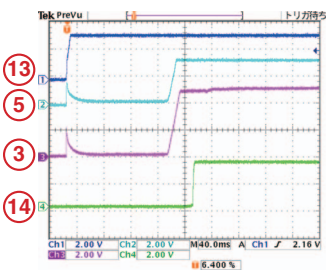
Abnormal voltage detection (1)
Mode: Power ON

(13) **TP/IC301 - pin 5 (3R3_UCOM)**
V: 2.0 V/div. H: 40 mS/div.

(5) **TP/IC305 - pin 5 (V+3R3_USB)**
V: 2.0 V/div. H: 40 mS/div.

(3) **TP/Q302 - pin 5, 6 (V+5_D)**
V: 2.0 V/div. H: 40 mS/div.

(14) **TP/R420 (FAULT_DET)**
V: 2.0 V/div. H: 40 mS/div.

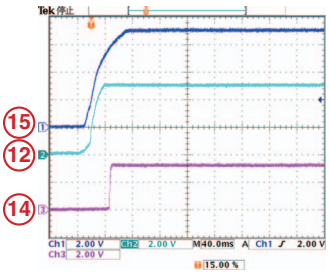


Abnormal voltage detection (2)
Mode: Power ON

(15) **TP (V+7)**
V: 2.0 V/div. H: 40 mS/div.

(12) **TP/IC303 - pin 4 (V+5_A)**
V: 2.0 V/div. H: 40 mS/div.

(14) **TP/R420 (FAULT_DET)**
V: 2.0 V/div. H: 40 mS/div.



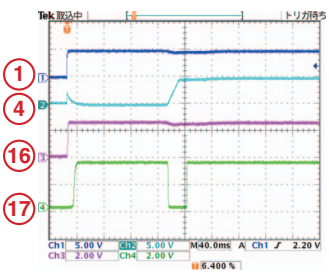
Voltage detection
Mode: Power ON

(1) **TP (VBUS)**
V: 5.0 V/div. H: 40 mS/div.

(4) **TP/IC201 - pin 43 (V+5_USB)**
V: 5.0 V/div. H: 40 mS/div.

(16) **TP/CN102 - pin 9 (VBUS_DET)**
V: 2.0 V/div. H: 40 mS/div.

(17) **TP/CN102 - pin 5 (FAULT_DET2)**
V: 2.0 V/div. H: 40 mS/div.

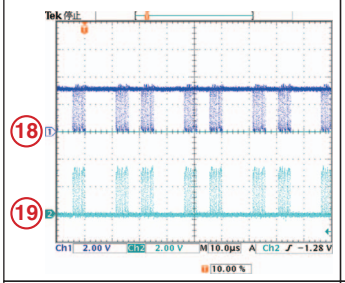


D IFPW ASSY

USB DP/DN (1)
Mode:

(18) **TP/JA101 - pin 3 (USB_DP)**
V: 2.0 V/div. H: 10 µS/div.

(19) **TP/JA101 - pin 2 (USB_DN)**
V: 2.0 V/div. H: 10 µS/div.



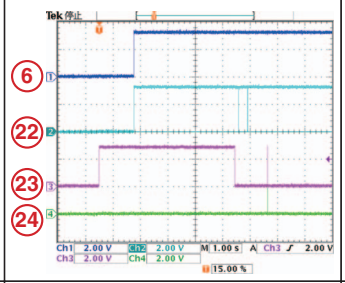
USB control (2)
Mode: Power ON

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 1.0 S/div.

(22) **TP/CN102 - pin 15 (USB_REQ)**
V: 2.0 V/div. H: 1.0 S/div.

(23) **TP/CN102 - pin 13 (USB_BUSY)**
V: 2.0 V/div. H: 1.0 S/div.

(24) **TP/CN102 - pin 12 (USB_ERR)**
V: 2.0 V/div. H: 1.0 S/div.



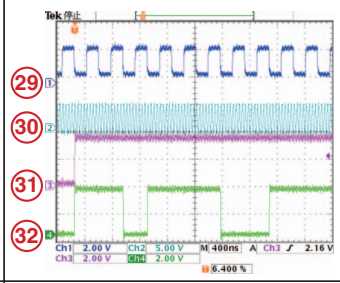
DAC I2S (1)
Mode: 1 kHz Playback, MASTER output

(29) **TP/IC501 - pin 2 (BCLK)**
V: 2.0 V/div. H: 400 nS/div.

(30) **TP/IC501 - pin 1 (MCLK)**
V: 5.0 V/div. H: 400 nS/div.

(31) **TP/IC501 - pin 4 (LRCK)**
V: 2.0 V/div. H: 400 nS/div.

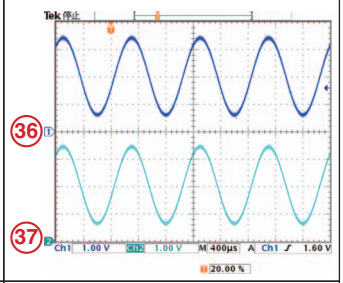
(32) **TP/IC501 - pin 3 (MASTER_DATA)**
V: 5.0 V/div. H: 400 nS/div.



HEADPHONE OUT
Mode: 1 kHz Playback, HEADPHONE output, arround VOL MAX

(36) **TP/CN101 - pin 16 (HP_L)**
V: 1.0 V/div. H: 400 µS/div.

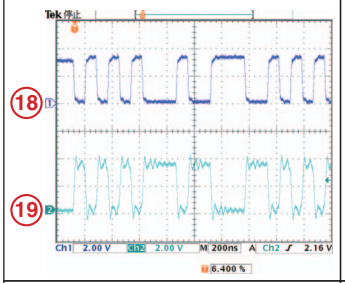
(37) **TP/CN101 - pin 12 (HP_R)**
V: 1.0 V/div. H: 400 µS/div.



USB DP/DN (2)
Mode:

(18) **TP/JA101 - pin 3 (USB_DP)**
V: 2.0 V/div. H: 200 nS/div.

(19) **TP/JA101 - pin 2 (USB_DN)**
V: 2.0 V/div. H: 200 nS/div.



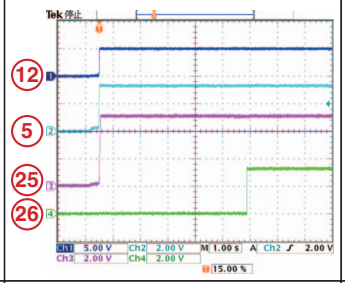
DAC reset cancel
Mode: Power ON

(12) **TP/IC303 - pin 4 (V+5_A)**
V: 5.0 V/div. H: 1.0 S/div.

(5) **TP/IC305 - pin 5 (3R3_USB)**
V: 2.0 V/div. H: 1.0 S/div.

(25) **TP/IC304 - pin 4 (V+5_HP)**
V: 2.0 V/div. H: 1.0 S/div.

(26) **TP/CN102 - pin 34 (DAC_NRST)**
V: 2.0 V/div. H: 1.0 S/div.

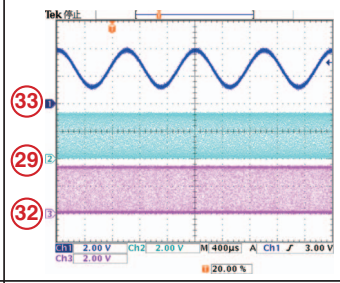


DAC I2S (2)
Mode: 1 kHz Playback, MASTER output

(33) **TP/IC501 - pin 11 (MDAC_L)**
V: 2.0 V/div. H: 400 µS/div.

(29) **TP/IC501 - pin 2 (BCLK)**
V: 2.0 V/div. H: 400 µS/div.

(32) **TP/IC501 - pin 3 (MASTER_DATA)**
V: 2.0 V/div. H: 400 µS/div.

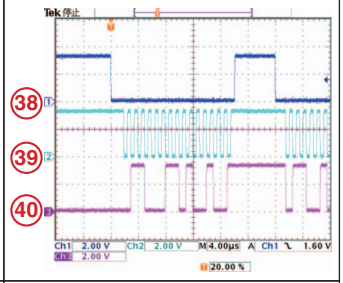


DAC control (1)
Mode: at MASTER VOL change

(38) **TP/IC501 - pin 6 (DAC_CS0)**
V: 2.0 V/div. H: 4.0 µS/div.

(39) **TP/IC501 - pin 7 (DAC_CCLK)**
V: 2.0 V/div. H: 4.0 µS/div.

(40) **TP/IC501 - pin 8 (DAC_CDTI)**
V: 2.0 V/div. H: 4.0 µS/div.

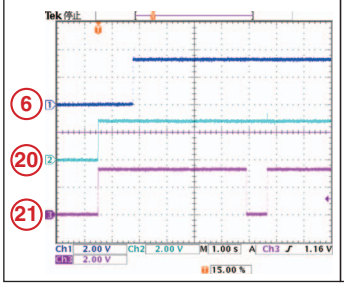


USB control (1)
Mode: Power ON

(6) **TP/CN102 - pin 19 (USB_NRST)**
V: 2.0 V/div. H: 1.0 S/div.

(20) **TP/CN102 - pin 16 (USB_CTRL1)**
V: 2.0 V/div. H: 1.0 S/div.

(21) **TP/CN102 - pin 14 (USB_CTRL2)**
V: 2.0 V/div. H: 1.0 S/div.



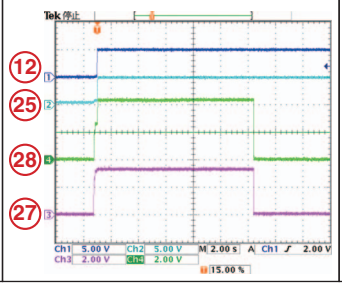
Output MUTE cancel
Mode: Power ON

(12) **TP/IC303 - pin 4 (V+5_A)**
V: 5.0 V/div. H: 2.0 S/div.

(25) **TP/IC304 - pin 4 (V+5_HP)**
V: 5.0 V/div. H: 2.0 S/div.

(27) **TP/CN102 - pin 7 (A_MUTE)**
V: 2.0 V/div. H: 2.0 S/div.

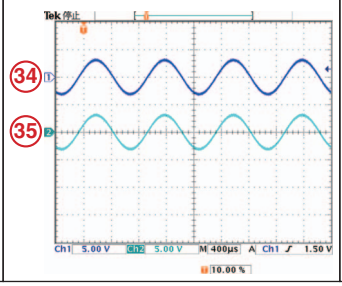
(28) **TP/CN101 - pin 18 (MUTE)**
V: 2.0 V/div. H: 2.0 S/div.



MASTER OUT
Mode: 1 kHz Playback, MASTER output VOL MAX

(34) **R548 (MASTER_L)**
V: 5.0 V/div. H: 400 µS/div.

(35) **R546 (MASTER_R)**
V: 5.0 V/div. H: 400 µS/div.

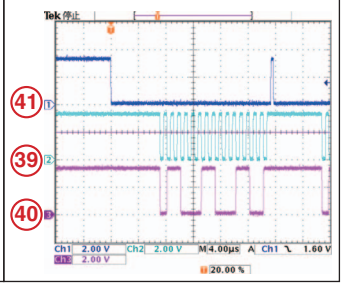


DAC control (2)
Mode: at HP VOL change

(41) **TP/IC701 - pin 6 (DAC_CS1)**
V: 2.0 V/div. H: 4.0 µS/div.

(39) **TP/IC701 - pin 7 (DAC_CCLK)**
V: 2.0 V/div. H: 4.0 µS/div.

(40) **TP/IC701 - pin 8 (DAC_CDTI)**
V: 2.0 V/div. H: 4.0 µS/div.

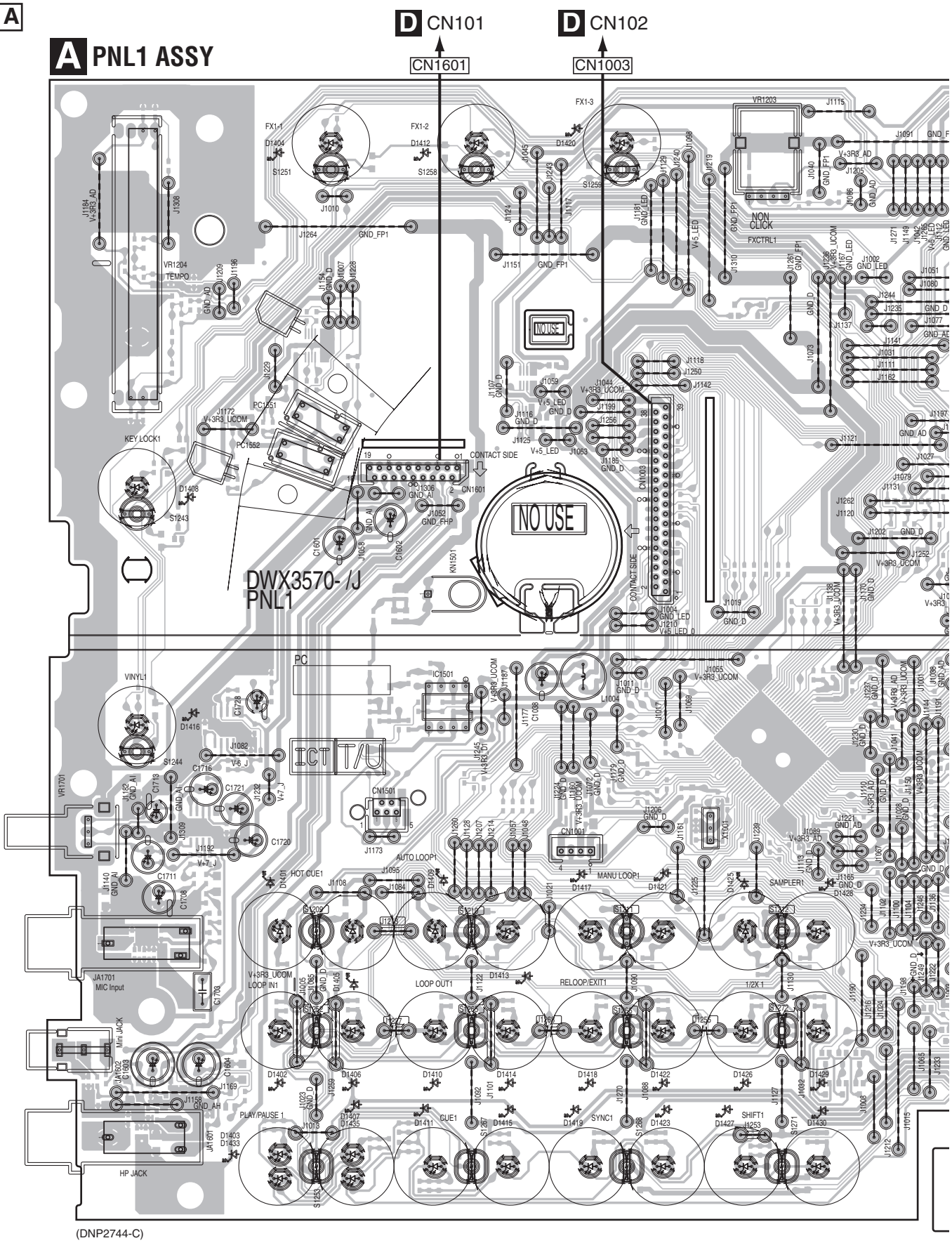


11. PCB CONNECTION DIAGRAM

11.1 PNL1 and CRFD ASSYS

SIDE A

A PNL1 ASSY

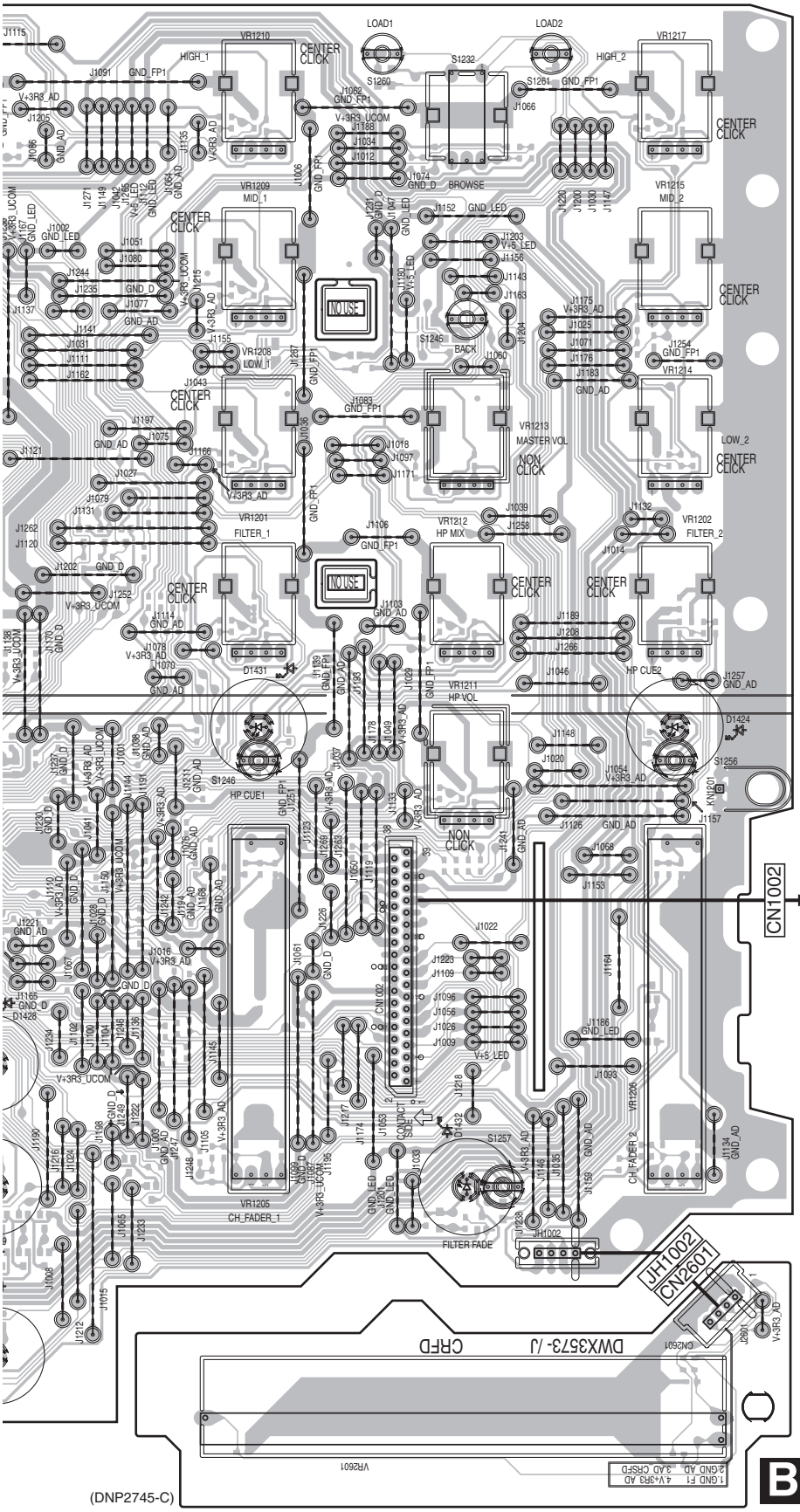


(DNP2744-C)

A

(DNP2745

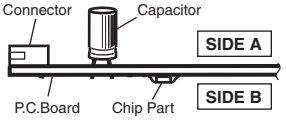
SIDE A



NOTE FOR PCB DIAGRAMS :

1. The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

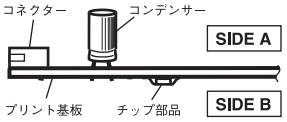
2. View point of PCB diagrams.



PCB 図に対する注意

1. この PCB 図にマウントしている部品は複数の仕向地の部品を含んでいます。各仕向地の情報は、回路図で確認するようにしてください。

2. PCB 図の見かた。



SIDE B

A

B

Q1409 Q1415

Q1405 Q1406 Q1404 Q1403 Q1402 IC1551

Q1401

Q1551

Q1408 Q1407

Q1413

Q1552 Q1419

C

Q1207 Q1204 Q1202

Q1206

D

IC1702

IC1002

IC1001 IC1701

Q1420

Q1414

E

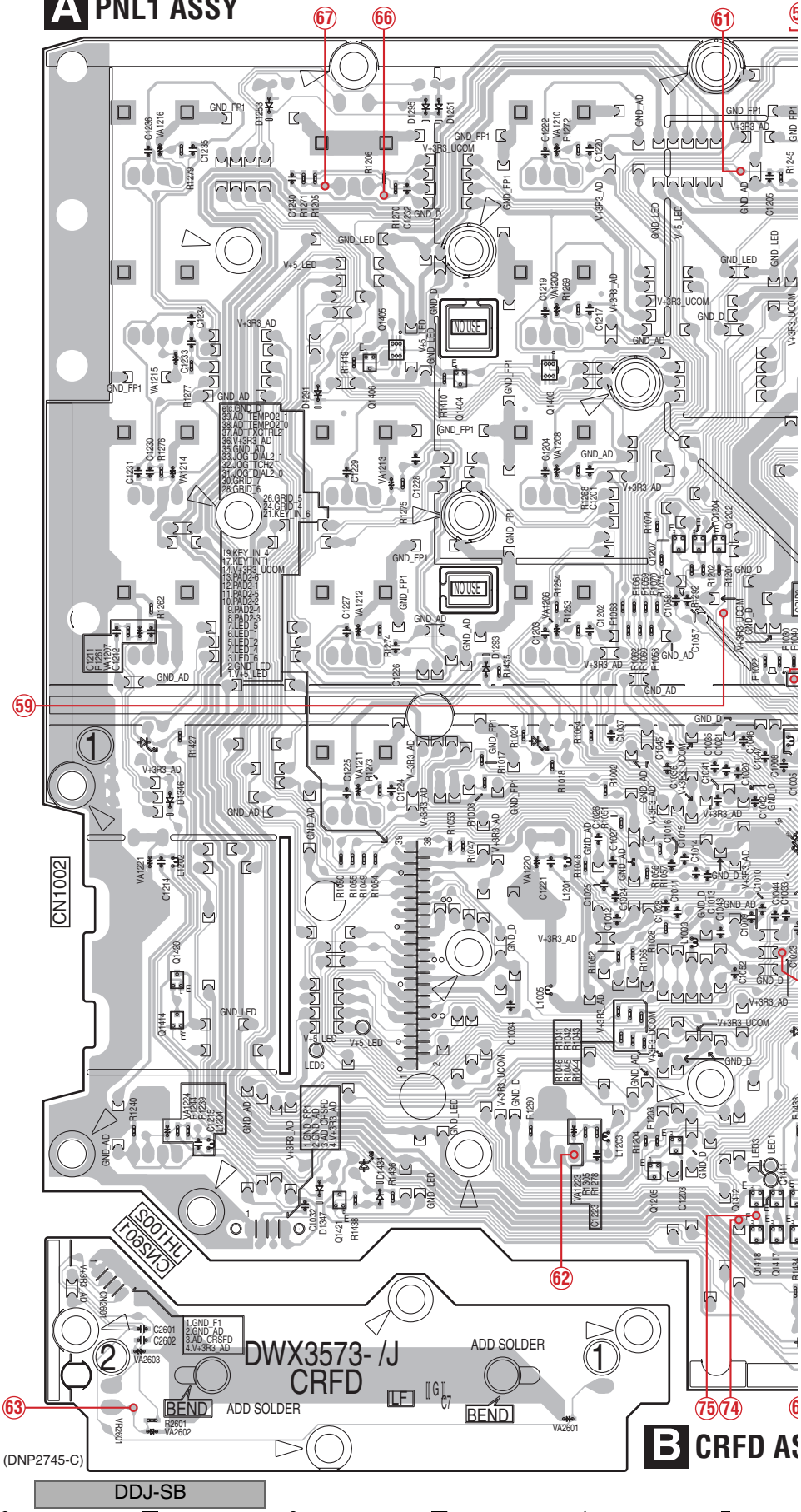
Q1203

Q1205

Q1421 Q1410-Q1412

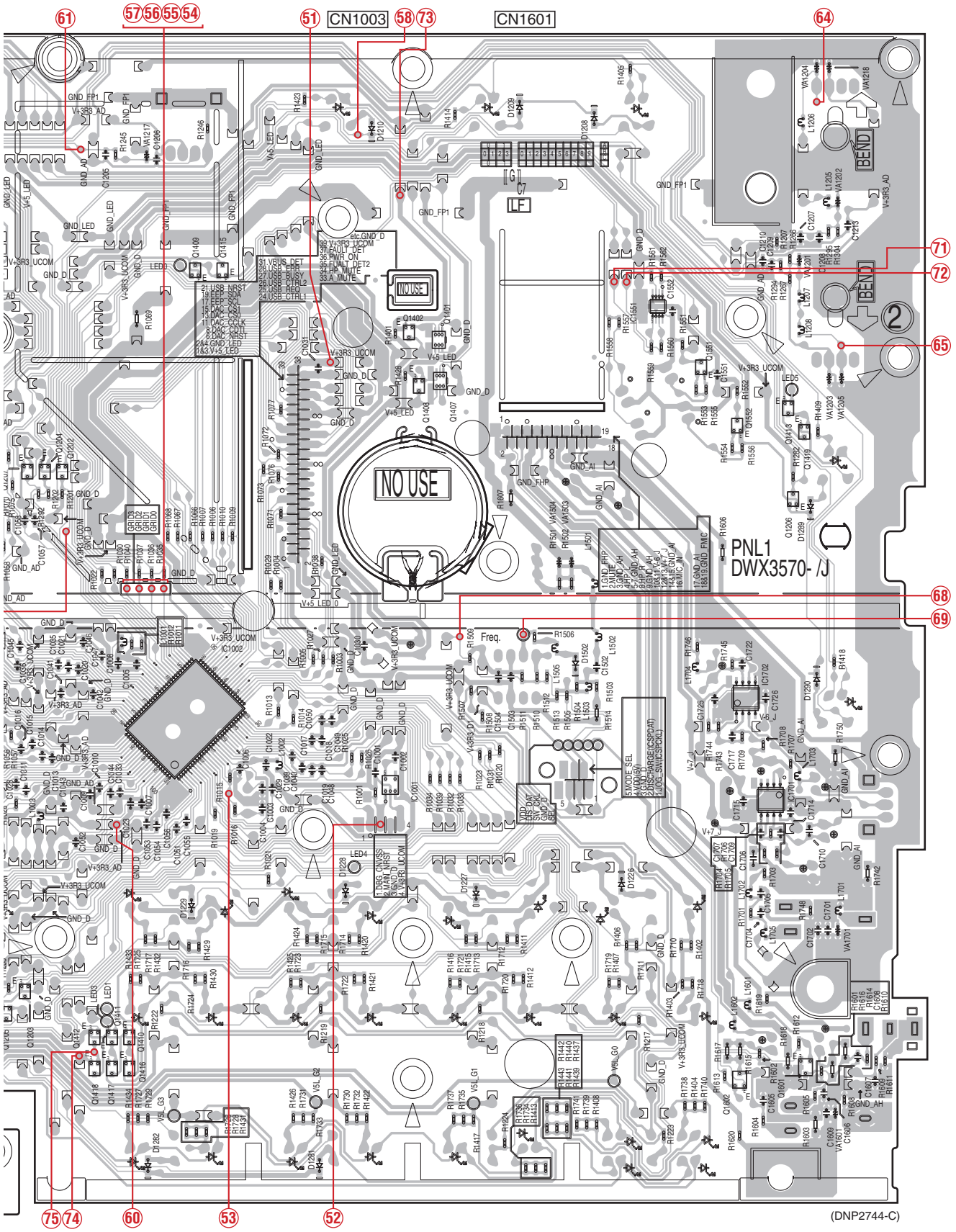
Q1416-Q1418 Q1601 Q1602

F



A B

SIDE B



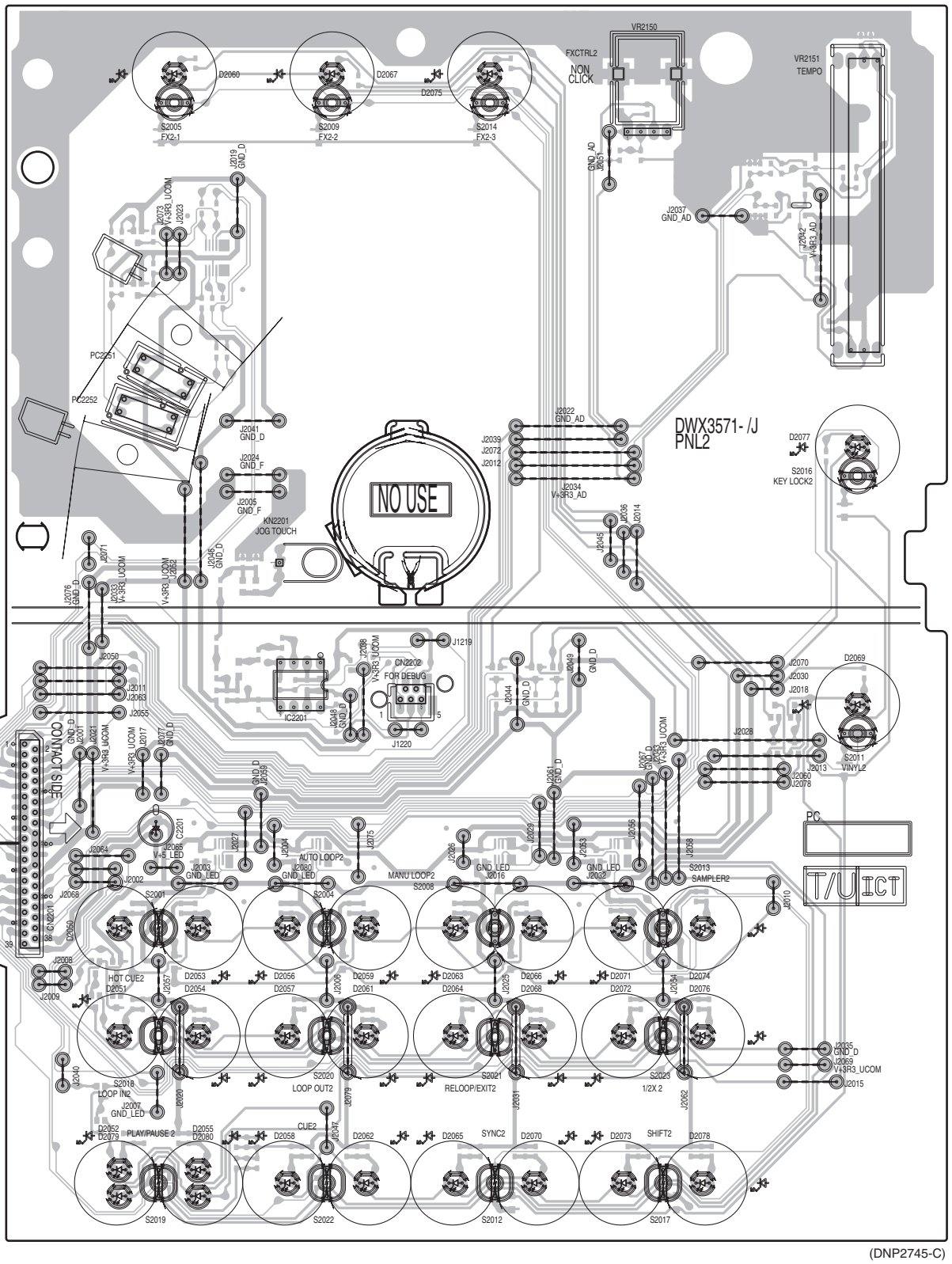
B CRFD ASSY

11.2 PNL2 ASSY

SIDE A

SIDE A

C PNL2 ASSY



(DNP2745-C)

PC2251
PC2252

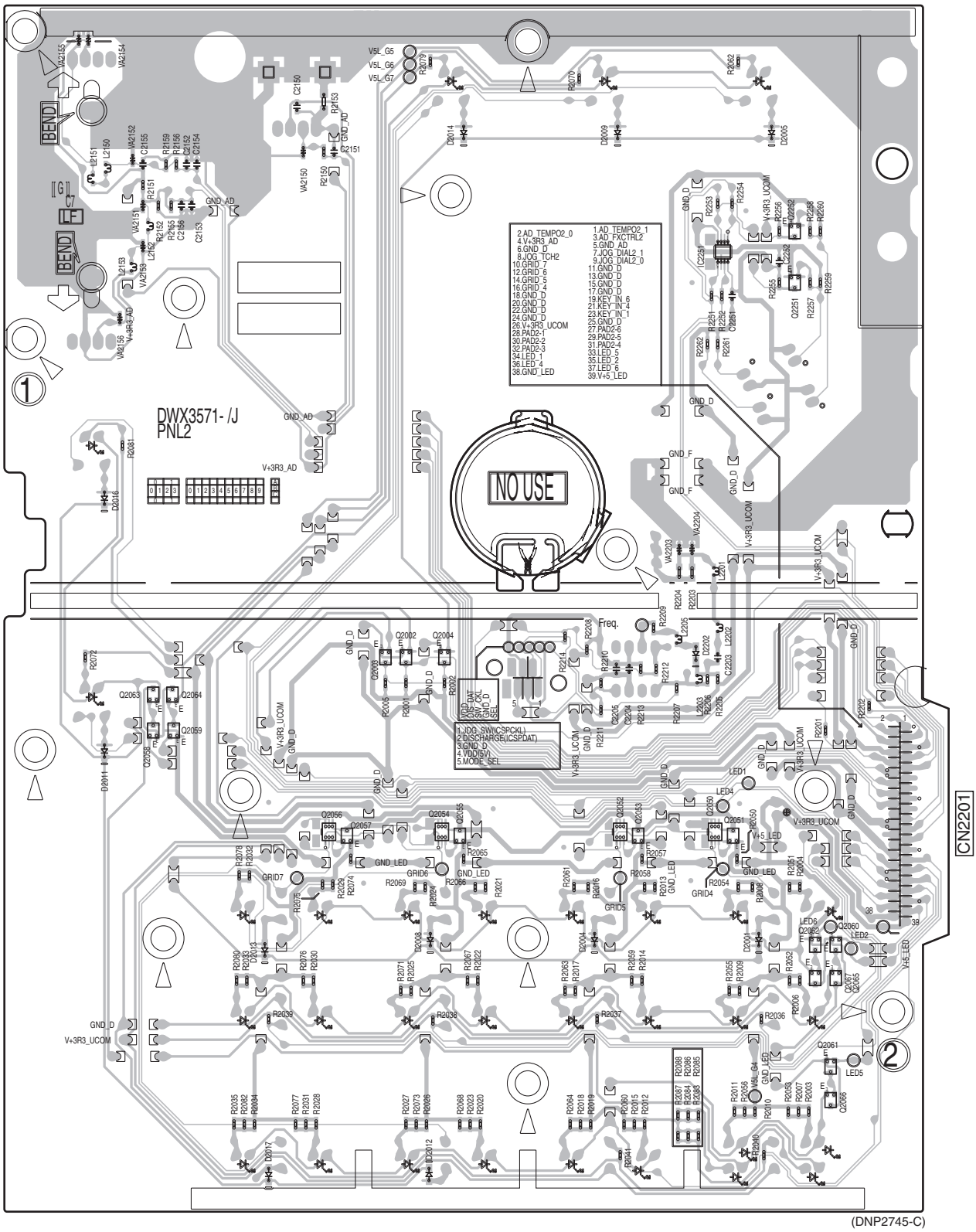
IC2201

C

SIDE B

SIDE B

C PNL2 ASSY



(DNP2745-C)

Q2002-Q2004

IC2251 Q2252

Q2251

Q2063 Q2064

Q2058 Q2059 Q2056 Q2057 Q2054 Q2055 Q2052 Q2053 Q2050 Q2051 Q2062 Q2060

Q2067 Q2065

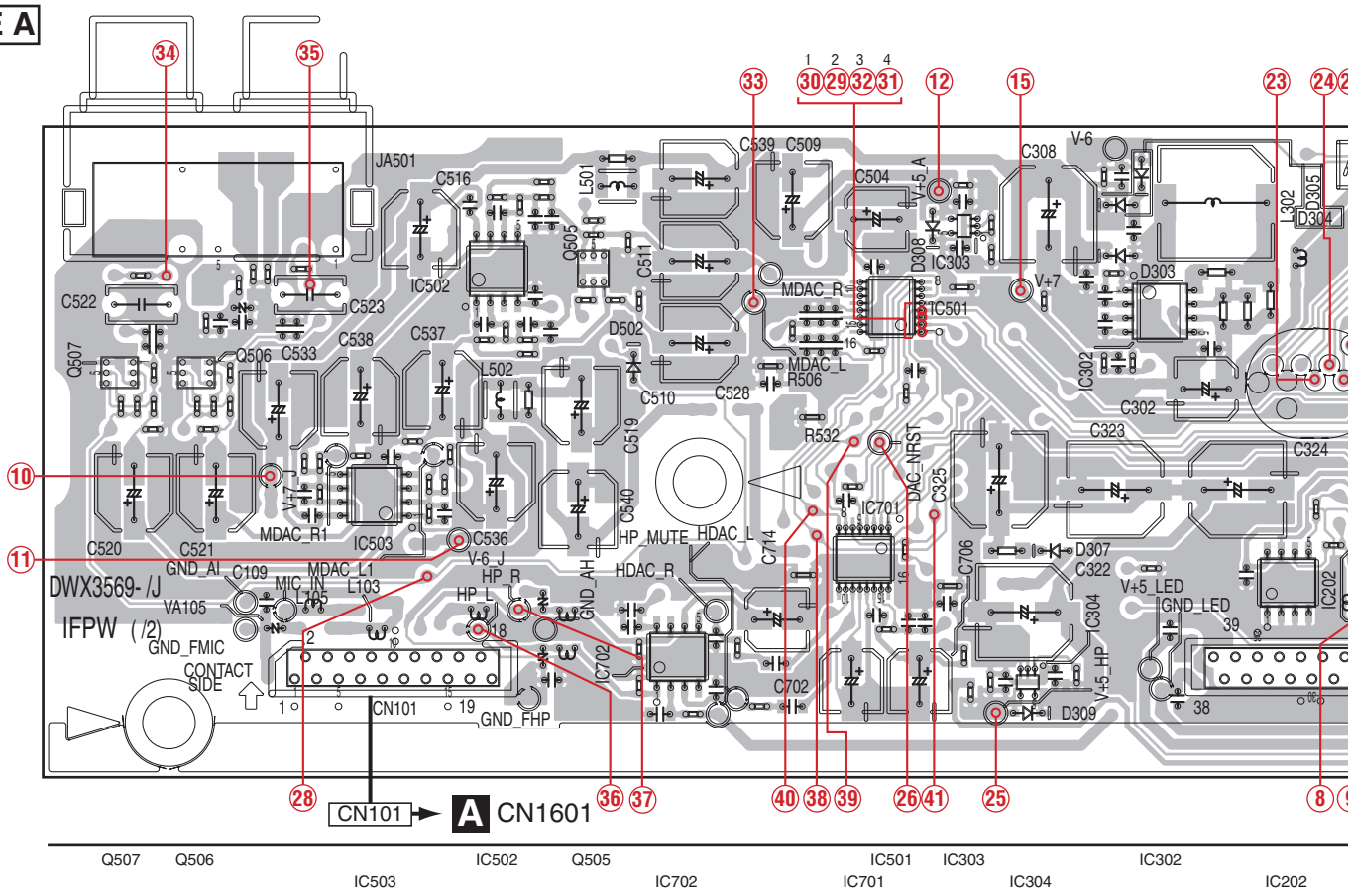
Q2061

Q2066

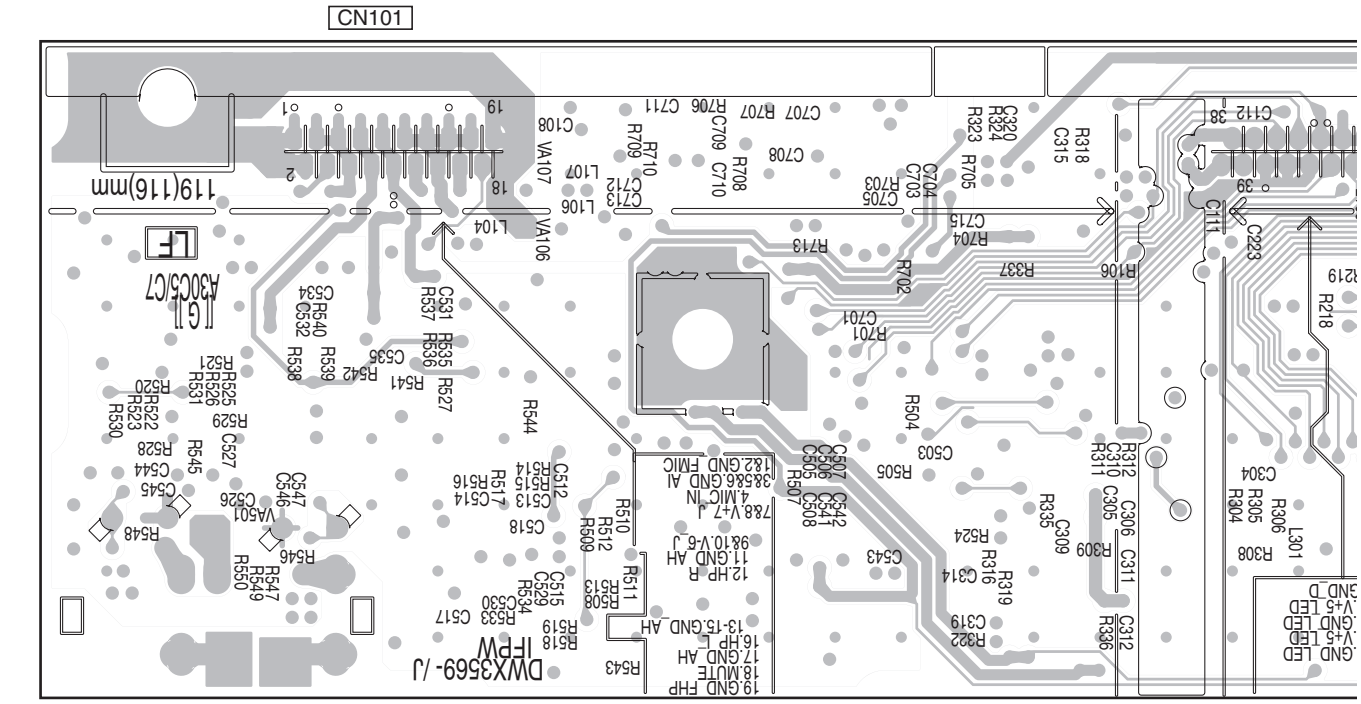
C

11.3 IFPW ASSY

SIDE A

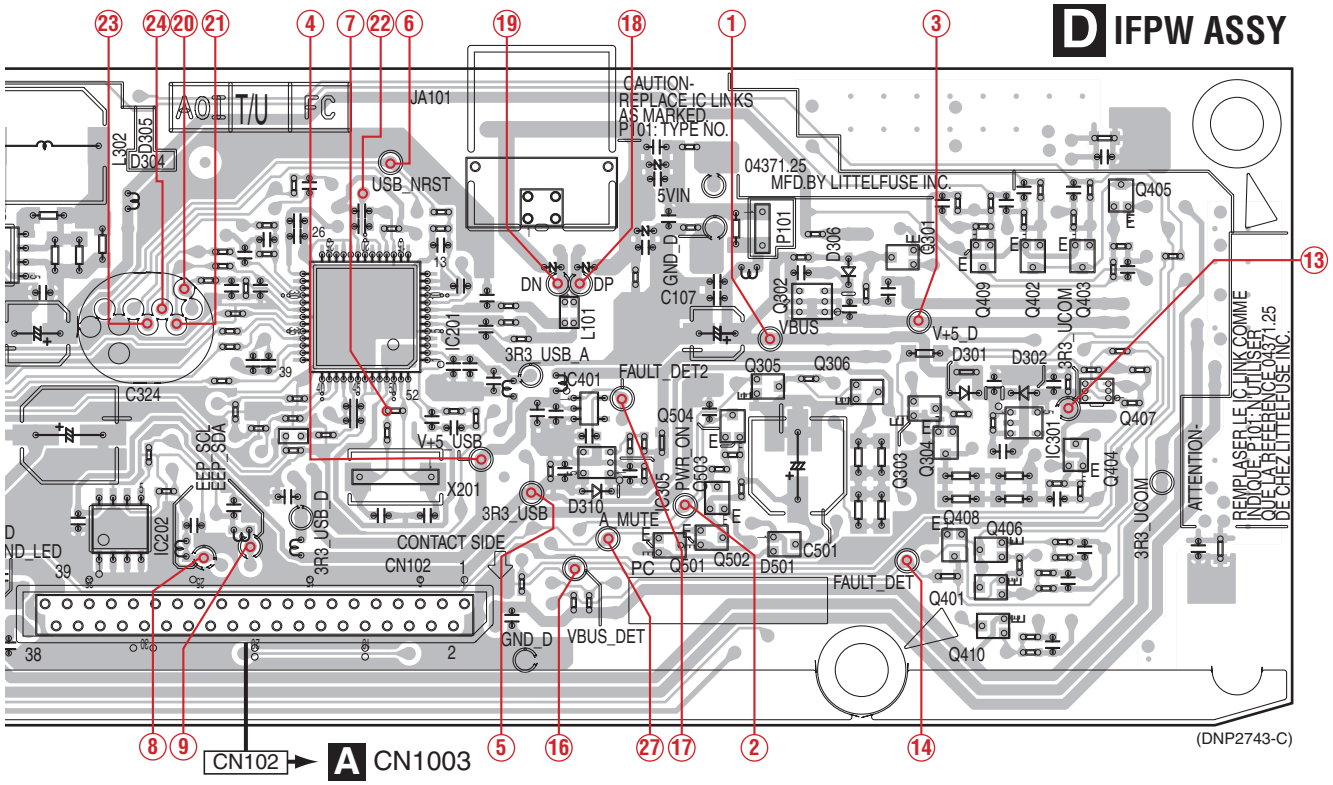


SIDE B



SIDE A

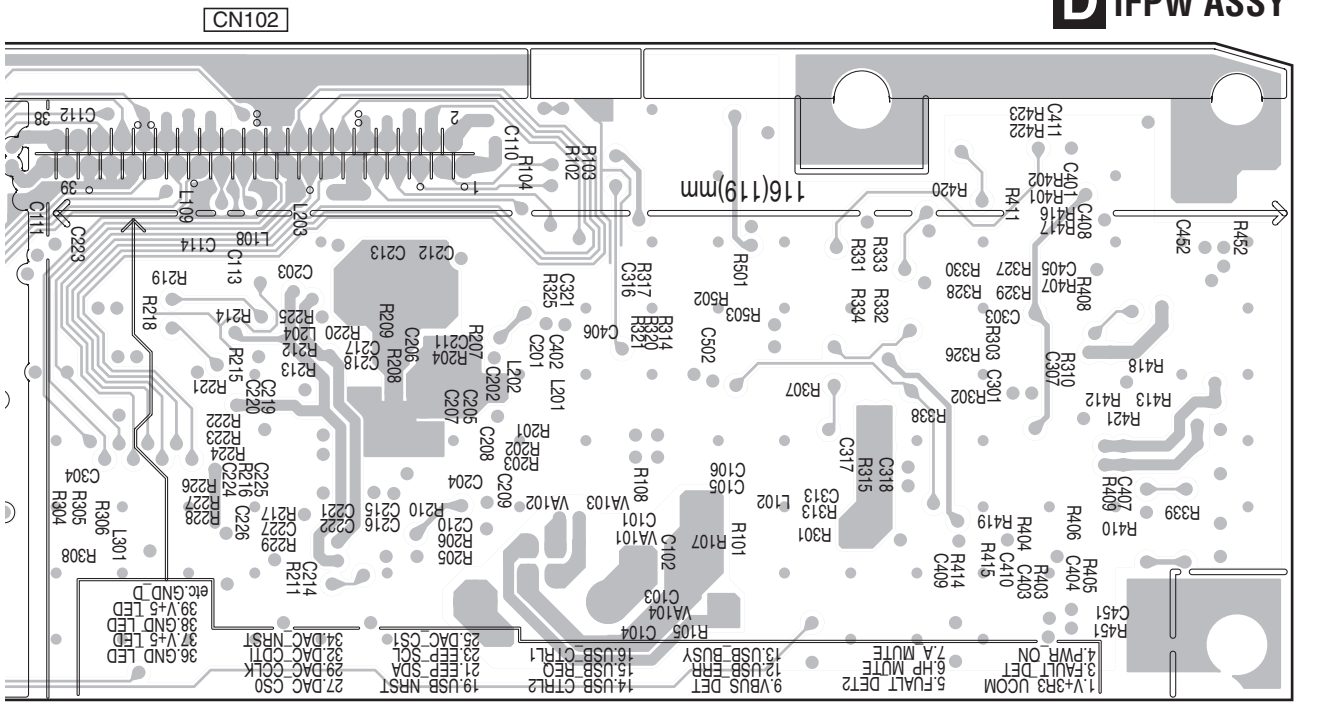
D IFPW ASSY



IC202 IC201 IC401 IC305 Q501-Q504 P101 Q305 Q302 Q306 Q301 Q303 Q304 Q408 Q406 Q410 Q409 Q402 IC301 Q401 Q403 Q405 Q407 Q404

SIDE B

D IFPW ASSY



12. PCB 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.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω	→	*56 × 10¹*	→	*561* ····· *RD1/4PU 5 6 1 J*
47 kΩ	→	*47 × 10³*	→	*473* ····· *RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*		····· *RN2H R 5 0 K*
1 Ω	→	*1R0*		····· *RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62 kΩ	→	*562 × 10¹*	→	*5621* ····· *RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	..PNL1 ASSY	DWX3570
NSP	1	..PNL2 ASSY	DWM2526
	2	..PNL2 ASSY	DWX3571
	2	..CRFD ASSY	DWX3573
	2	..HOLD ASSY	DWX3575
	1	..IFPW ASSY	DWX3569

A PNL1 ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
IC	1001		S-80927CNMC-G8X
IC	1002		DYW1841
IC	1501		DYW1842
IC	1701,1702		NJM4565MD
Q	1202-1207,1409-1414		LTC124EUB
Q	1401,1403,1405,1407		RN4982
Q	1402,1404,1406,1408		LSC4081UB
Q	1415-1420		LSAR523UB
Q	1551,1552		2SC4154-11
Q	1601,1602		INC2002AC1
D	1208-1210,1226-1229		DA2J101
D	1251,1253,1281,1282		DA2J101
D	1289-1291,1293,1295		DA2J101
D	1346,1347		DA2J101
D	1401,1402,1404-1406		SLI-343U8R(HJK)
D	1403,1407,1433,1435		SLI-343M8G(GHJ)
D	1408-1410,1412-1414		SLI-343U8R(HJK)
D	1411,1415,1419,1423		SLI-343Y8Y(KLM)
D	1416-1418,1420-1422		SLI-343U8R(HJK)
D	1424-1426,1428,1429		SLI-343U8R(HJK)
D	1427,1430		SLI-343Y8Y(KLM)
D	1431		SLI-343U8R(HJK)
D	1432		SLR343BC4T(JKLM)
D	1502		RB501VM-40

MISCELLANEOUS

Mark	No.	Description	Part No.
L	1001-1003,1201-1208	INDUCTOR	CTF1629
L	1004	RAD SPL INDUCTOR	DTH1212
L	1501,1502,1505	INDUCTOR	CTF1379
L	1701-1705	INDUCTOR	CTF1629
J	1	JUMPER WIRE	D20PDY0405E
JA	1601	6.5 DIA JACK	DKN1653
JA	1602	STEREO MINI JACK	XKN3017
JA	1701	6.5 DIA JACK	DKN1652
KN	1201,1501	EARTH TERMINAL	AKF7002
S	1209-1212,1243,1244	TACT SWITCH	DSG1089
S	1232	ENCODER	DSX1082
S	1245,1251,1258-1261	TACT SWITCH	DSG1079
S	1246,1256,1257	TACT SWITCH	DSG1089
S	1252,1253,1265-1268	TACT SWITCH	DSG1117
S	1271,1272	TACT SWITCH	DSG1117
X	1001	CERAMIC RESONATOR (4 MHz)	DSS1131
CN	1002,1003	39P CONNECTOR	VKN2097
CN	1601	19P CONNECTOR	VKN1250
JH	1002	4P CABLE HOLDER	51048-0400
PC	1551,1552	PHOTO INTERRUPTER	RPI-579N1
VA	1201-1205,1217,1218	VARISTORS	EZJZ1V270RM
VA	1220,1221,1223,1224	VARISTORS	EZJZ1V270RM
VA	1503,1504	SMD VARISTOR	EZJZ1V80010
VA	1601,1701	VARISTORS	EZJZ1V270RM

RESISTORS

Mark	No.	Description	Part No.
VR	1201,1202	POTENTIOMETER	DCS1097
VR	1203,1211,1213	POTENTIOMETER	DCS1096
VR	1204	SLIDE VR	DCV1034
VR	1205,1206	VARIABLE RESISTOR	DCV1024
VR	1208-1210,1212	POTENTIOMETER	DCS1097
VR	1214,1215,1217	POTENTIOMETER	DCS1097
VR	1701	POTENTIOMETER	DCS1111
R	1069,1514,1614,1615		RS1/4SA0R0J
R	1266,1267,1701		RS1/10SR2201D
R	1501,1502		DCN1187
R	1503		RS1/10SR2202D
R	1618		RS1/4SA0R0J
R	1703,1706		RS1/10SR1002D
R	1705		RS1/10SR1201D
R	1708		RS1/10SR1001D
R	1709		RS1/10SR1802D
R	1744		RS1/10SR4701D
R	1745		RS1/10SR1502D
		Other Resistors	RS1/10SR###J

CAPACITORS

Mark	No.	Description	Part No.
C	1001,1005-1007,1029		CKSRYB104K16
C	1002		CKSRYB222K50
C	1003,1004		CCSRCH150J50
C	1008,1022,1023,1504		DCH1201
C	1009-1021,1024-1028		CKSRYB103K50

Mark	No.	Description	Part No.
	C	1035-1037,1045-1056	CKSRYB103K50
	C	1038,1601,1602,1708	CEJQ101M16
	C	1039-1042	CCSRCH101J50
	C	1205,1215,1223,1232	CKSRYB103K50
	C	1207-1210	CKSRYB105K10
	C	1213,1503,1551,1701	CKSRYB104K16
	C	1240,1609	CKSRYB103K50
	C	1502	CCSRCH221J50
	C	1603,1604	CEAT471M6R3
	C	1605-1608	CKSRYB473K50
	C	1702	CCSRCH102J50
	C	1704	CCSRCH561J50
	C	1705	CCSRCH471J50
	C	1706	ACG1147
	C	1707,1722	CCSRCH331J50
	C	1711,1720,1721	CEJQ101M16
	C	1713	CEJQ100M16
	C	1714,1715,1725,1726	CKSRYB104K16
	C	1728	CEAL100M16

B CRFD ASSY

MISCELLANEOUS

	CN	2601 4PJUMPER CONNECTOR	52151-0410
	VA	2601-2603 VARISTORS	EZJZ1V270RM

RESISTORS

	VR	2601 VARIABLE RESISTOR	DCV1023
		Other Resistors	RS1/10SR###J

CAPACITORS

	C	2601	CKSRYB104K16

C PNL2 ASSY

SEMICONDUCTORS

	IC	2201	DYW1842
	Q	2002-2004,2058-2062	LTC124EUB
	Q	2050,2052,2054,2056	RN4982
	Q	2051,2053,2055,2057	LSC4081UB
	Q	2063-2067	LSAR523UB
	Q	2251,2252	2SC4154-11
	D	2001,2004,2005,2008	DA2J101
	D	2009,2011-2014,2016	DA2J101
	D	2017	DA2J101
	D	2050,2051,2053,2054	SLI-343U8R(HJK)
	D	2052,2055,2079,2080	SLI-343M8G(GHJ)
	D	2056,2057,2059-2061	SLI-343U8R(HJK)
	D	2058,2062,2065,2070	SLI-343Y8Y(KLM)
	D	2063,2064,2066-2069	SLI-343U8R(HJK)
	D	2071,2072,2074-2077	SLI-343U8R(HJK)
	D	2073,2078	SLI-343Y8Y(KLM)
	D	2202	RB501VM-40

MISCELLANEOUS

	L	2150-2153 INDUCTOR	CTF1629
	L	2201,2202,2205 INDUCTOR	CTF1379
	KN	2201 EARTH TERMINAL	AKF7002
	S	2001,2004,2008,2011 TACT SWITCH	DSG1089
	S	2005,2009,2014 TACT SWITCH	DSG1079
	S	2012,2017-2023 TACT SWITCH	DSG1117
	S	2013,2016 TACT SWITCH	DSG1089
	CN	2201 39P CONNECTOR	VKN2097
	PC	2251,2252 PHOTO INTERRUPTER	RPI-579N1
	VA	2150-2156 VARISTORS	EZJZ1V270RM
	VA	2203,2204 SMD VARISTOR	EZJZ1V80010

RESISTORS

	VR	2150 POTENTIOMETER	DCS1096
	VR	2151 SLIDE VR	DCV1034
	R	2151,2152	RS1/10SR2201D
	R	2153	RS1/4SA0R0J
	R	2203,2204	DCN1187
	R	2205	RS1/10SR2202D
		Other Resistors	RS1/10SR###J

CAPACITORS

	C	2151	CKSRYB103K50
	C	2152-2154,2156	CKSRYB105K10
	C	2155,2204,2252	CKSRYB104K16
	C	2201	CEJQ101M16
	C	2203	CCSRCH221J50
	C	2205	DCH1201

D IFPW ASSY

SEMICONDUCTORS

	IC	201	TUSB3200ACPAH
	IC	202	BR24T64F-W
⚠	IC	301,305	MM3411A33N
⚠	IC	302	NJM2392M
⚠	IC	303,304	NJM2878F3-05
	IC	401	S-80942CNMC-G9C
	IC	501,701	AK4387ET
	IC	502,503	NJM4580MD
	IC	702	BH3547F
	Q	301,303,305,408	LTC124EUB
	Q	302	RTQ040P02
	Q	304,306,409,503	LSC4081UB
	Q	401-404,406,410	LSA1576UB
	Q	407	HN1B04FU
	Q	501	LTA124EUB
	Q	502	LTC124EUB
	Q	504	LSA1576UB
	Q	505-507	IMX9
	D	303-305,307-310	RB551VM-30
	D	306	DA2J101
	D	501	DAN202UM

MISCELLANEOUS

	L	101 COIL	ATH7015
	L	201-203 INDUCTOR	CTF1629
	L	204 INDUCTOR	CTF1793
	L	302 POWER INDUCTOR	ATH7053
	JA	101 USB CONNECTOR	DKN1237
	JA	501 PIN JACK (2P)	AKB7181
	X	201 CRYSTAL RESONATOR (6 MHz)	VSS1210
	CN	101 19P CONNECTOR	VKN1250
	CN	102 39P CONNECTOR	VKN2097
⚠	P	101 PROTECTOR (1.250 A)	DEK1123
	VA	501 VARISTORS	EZJZ1V270RM

Mark	No.	Description	Part No.
		RESISTORS	
	R	204	RS1/10SR2701F
	R	207	RS1/10SR3900F
A	R	304,306	RS1/4SA1R5J
	R	308	RS1/4SA271J
	R	311	RS1/10SR1802F
	R	312	RS1/10SR3901D
	R	327-330	RS1/4SA270J
	R	331-334	RS1/4SA560J
	R	337	RS1/4SA220J
	R	338,543,544	RS1/4SA0R0J
	R	420,451,452,506	RS1/8SQ0R0J
	R	512,513	RS1/10SR4301D
	R	515,519	RS1/10SR2700D
B	R	412,413,516,533	RS1/10SR1002D
	R	517,534	RS1/10SR3301D
	R	524,532	RS1/8SQ0R0J
		Other Resistors	RS1/10SR###J
		CAPACITORS	
	C	104,203,312,707	DCH1201
	C	106,307,311	CKSRYB105K10
	C	108,109,111,112	CCSRCH102J50
	C	204,207,210,215	CKSRYB104K16
	C	206,514,530	CCSRCH101J50
C	C	208,209	CCSRCH470J50
	C	211,214,224-227	CCSRCH102J50
	C	212,213	CCSRCH180J50
	C	218,219,221,304	CKSRYB104K16
	C	301,316	CKSRYB474K16
	C	302,504,702,706	CEVW470M6R3
	C	305	CCSRCH121J50
	C	308	CEVW471M10
	C	309,314,315,317	CKSRYB104K16
	C	310	CCSRCH221J50
D	C	313,502,503,506	CKSRYB103K50
	C	319-321,517,518	CKSRYB105K10
	C	322-325	CEVW221M10
	C	401,403-405	CKSRYB104K16
	C	406	CKSRYB222K50
	C	408-411,505,508	CKSRYB104K16
	C	501	CEVW331M6R3
	C	507,542	CCSRCH102J50
	C	509-511,520,521	CEVW101M16
	C	513,529	CCSRCH471J50
	C	516,519,533,536	CCH1565
E	C	526,541,701,709	CKSRYB103K50
	C	534,535,543	CKSRYB105K10
	C	537,538	CEVW101M16
	C	544,546	CCSRCH152J50
	C	703,705	CKSRYB104K16
	C	708,713	DCH1201
	C	710	CKSRYB103K50
	C	711	CKSQYB475K6R3
	C	714	CEVW470M6R3

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