

PIONEER CDJ-2000 SERVICE MANUAL



Quick Links

[Troubleshooting](#)

Table of Contents

SAFETY INFORMATION

Table of Contents

NOTES ON SOLDERING

NOTES ON FLASH ROM

NOTES ON PANEL CPU

NOTES ON LINK CONNECTOR

NOTES ON LCD DISPLAY PANEL

DISCS / FILES PLAYABLE

PANEL FACILITIES

CHECK POINTS AFTER SERVICING

PCB LOCATIONS

JIGS LIST

OVERALL WIRING DIAGRAM

SIGNAL BLOCK DIAGRAM

POWER SUPPLY BLOCK DIAGRAM

POWER ON SEQUENCE

FAILURE JUDGEMENT OF THE PICKUP ASSY

TROUBLESHOOTING

CONTENTS 5

OPERATIONAL WAVEFORMS

SETUP SEQUENCE

CONNECTION CONFIRMATION WITH THE PC

OUTLINE OF THE SERVICE MODE

ABOUT THE DEVICE OF CDJ-2000

DETAILS OF THE SERVICE MODE

Error display list

Recovery when failing

jog dial section

JOG DIAL ROTATION LOAD ADJUSTMENT

TEMPO ZERO POINT ADJUSTMENT

ITEMS FOR WHITCH USERS SETTING IS AVAILABLE

FIRMWARE UPDATE / RECOVERY

PACKING SECTION

EXTERIOR SECTION

CONTROL PANEL SECTION

JOG DIAL SECTION

DISPLAY SECTION

SLOTIN MECHA SECTION

TM ASSY-S

SRVA ASSY (1/2)

SRVA (2/2), SPCN, INSW and SLMB ASSYS

MAIN ASSY (1/3)

MAIN ASSY (2/3)

MAIN ASSY (3/3)

JACB ASSY

SDCB ASSY

USBA ASSY

TFTB ASSY (1/2)

TFTB ASSY (2/2)

PNLB ASSY

JFLB ASSY

CDCB and SDSW ASSYS

SLDB and EUPB ASSYS

CNCT and KSWB ASSYS

JOGB and INDB ASSYS

POWER SUPPLY and ACIN ASSYS

WAVEFORMS

tftb assy

SRVA ASSY

SPCN, INSW and SLMB ASSYS

MAIN ASSY

JACB, SDCB and USBA ASSYS

TFTB ASSY

PNLB ASSY

JFLB, CDCB and SDSW ASSYS

SLDB, EUPB and CNCT ASSYS

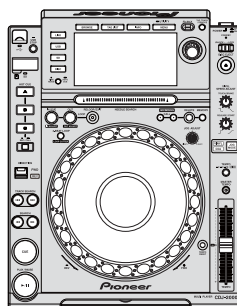
KSWB, JOGB and INDB ASSYS

POWER SUPPLY and ACIN ASSYS

Other ManualsLib Projects

Pioneer

Service Manual



CDJ-2000

ORDER NO.
RRV3999

MULTI PLAYER

CDJ-2000

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

Model	Type	Power Requirement	Remarks
CDJ-2000	CUXJ	AC 120 V	
CDJ-2000	SYXJ8	AC 220 V to 240 V	
CDJ-2000	FLXJ	AC 110 V to 240 V	
CDJ-2000	KXJ5	AC 220 V to 240 V	
CDJ-2000	AXJ5	AC 220 V	



For details, refer to "Important Check Points for good servicing".

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K-IZE OCT. 2009 Printed in Japan

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

This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

The backlighting lamp of LCD in this equipment contains mercury. Disposal of this material may be regulated due to environmental considerations according to Local, State or Federal Laws. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org

IMPORTANT

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1. SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

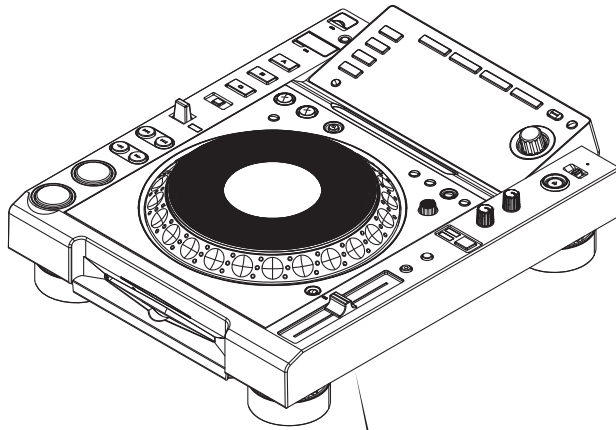
Laser Pickup specifications and Laser characteristics

For DVD	Wave length (typ) : 655 nm Operation output : 3 mW CW, Class 1 Maximum output : Class 1 (Under fault condition)
For CD	Wave length (typ) : 790 nm Operation output : 4.5 mW CW, Class 1 Maximum output : Class 1 (Under fault condition)

Additional Laser Caution

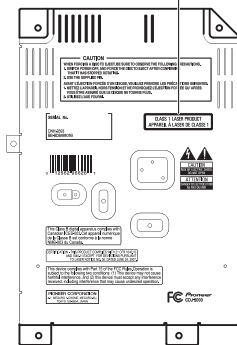
- Laser Interlock Mechanism**
The position of the switch (S9002) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch is not in LPS1 terminal side (when the mechanism is not clamped and LPS1 signal is high level.)
Thus, the interlock will no longer function if the switch is deliberately set to LPS1 terminal side.
(if LPS1 signal is low level).
In the test mode * the interlock mechanism will not function.
Laser diode oscillation will continue, if pin 5 (pin 3) of AN22022A (IC7002) on the SRVA Assy is connected to GND, or else the terminals of Q7002 (Q7001) are shorted to each other (fault condition).
- When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

LABEL CHECK



(Printed on the bottom plate)

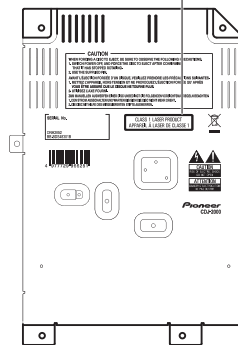
CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1



CUXJ

(Printed on the bottom plate)

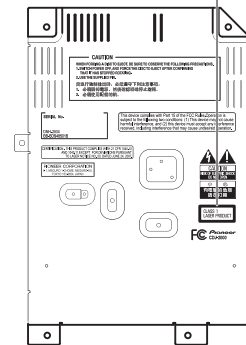
CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1



SYXJ8

(Printed on the bottom plate)

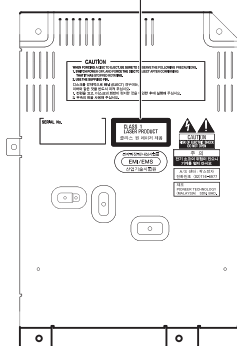
CLASS 1
LASER PRODUCT



FLXJ

(Printed on the bottom plate)

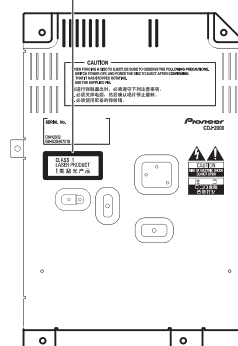
CLASS 1
LASER PRODUCT
클래스 1 레이저 제품



KXJ5

(Printed on the bottom plate)

CLASS 1
LASER PRODUCT
1类激光产品



AXJ5

CDJ-2000

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

SAFETY INFORMATION.....	2	
1. SERVICE PRECAUTIONS.....	7	
1.1 NOTES ON SOLDERING.....	7	A
1.2 NOTES ON FLASH ROM.....	7	
1.3 NOTES ON PANEL CPU.....	7	
1.4 NOTES ON LINK CONNECTOR.....	8	
1.5 NOTES ON LCD DISPLAY PANEL.....	8	
2. SPECIFICATIONS.....	9	
2.1 SPECIFICATIONS.....	9	
2.2 DISCS / FILES PLAYABLE.....	10	
2.3 PANEL FACILITIES.....	12	
3. BASIC ITEMS FOR SERVICE.....	15	
3.1 CHECK POINTS AFTER SERVICING.....	15	
3.2 PCB LOCATIONS.....	16	
3.3 JIGS LIST.....	18	B
4. BLOCK DIAGRAM.....	20	
4.1 OVERALL WIRING DIAGRAM.....	20	
4.2 SIGNAL BLOCK DIAGRAM.....	22	
4.3 POWER SUPPLY BLOCK DIAGRAM.....	24	
5. DIAGNOSIS.....	26	
5.1 POWER ON SEQUENCE.....	26	
5.2 FAILURE JUDGEMENT OF THE PICKUP ASSY.....	27	
5.3 TROUBLESHOOTING.....	28	
5.4 OPERATIONAL WAVEFORMS.....	41	
5.5 SETUP SEQUENCE.....	42	
5.6 CONNECTION CONFIRMATION WITH THE PC.....	43	
6. SERVICE MODE.....	44	C
6.1 OUTLINE OF THE SERVICE MODE.....	44	
6.2 ABOUT THE DEVICE OF CDJ-2000.....	44	
6.3 DETAILS OF THE SERVICE MODE.....	45	
7. DISASSEMBLY.....	58	
8. EACH SETTING AND ADJUSTMENT.....	70	
8.1 JOG DIAL ROTATION LOAD ADJUSTMENT.....	70	
8.2 TEMPO ZERO POINT ADJUSTMENT.....	71	
8.3 ITEMS FOR WHICH USERS SETTING IS AVAILABLE.....	72	
8.4 FIRMWARE UPDATE / RECOVERY.....	72	
9. EXPLODED VIEWS AND PARTS LIST.....	74	
9.1 PACKING SECTION.....	74	D
9.2 EXTERIOR SECTION.....	76	
9.3 CONTROL PANEL SECTION.....	78	
9.4 JOG DIAL SECTION.....	80	
9.5 DISPLAY SECTION.....	82	
9.6 SLOTIN MECHA SECTION.....	84	
9.7 TM ASSY-S.....	86	
10. SCHEMATIC DIAGRAM.....	88	
10.1 SRVA ASSY (1/2).....	88	
10.2 SRVA (2/2), SPCN, INSW and SLMB ASSYS.....	90	
10.3 MAIN ASSY (1/3).....	92	
10.4 MAIN ASSY (2/3).....	98	
10.5 MAIN ASSY (3/3).....	104	E
10.6 JACB ASSY.....	106	
10.7 SDCB ASSY.....	108	
10.8 USBA ASSY.....	109	
10.9 TFTB ASSY (1/2).....	110	
10.10 TFTB ASSY (2/2).....	116	
10.11 PNLB ASSY.....	118	
10.12 JFLB ASSY.....	120	
10.13 CDCB and SDSW ASSYS.....	122	
10.14 SLDB and EUPB ASSYS.....	123	
10.15 CNCT and KSWB ASSYS.....	124	
10.16 JOGB and INDB ASSYS.....	125	
10.17 POWER SUPPLY and ACIN ASSYS.....	126	F
10.18 WAVEFORMS.....	128	

A

11. PCB CONNECTION DIAGRAM130

11.1 SRVA ASSY130

11.2 SPCN, INSW and SLMB ASSYS134

11.3 MAIN ASSY136

11.4 JACB, SDCB and USBA ASSYS140

11.5 TFTB ASSY142

11.6 PNLB ASSY146

11.7 JFLB, CDCB and SDSW ASSYS150

11.8 SLDB, EUPB and CNCT ASSYS154

11.9 KSWB, JOGB and INDB ASSYS156

11.10 POWER SUPPLY and ACIN ASSYS.....158

12. PCB PARTS LIST160

B

C

D

E

F

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 °C. Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C 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 FLASH ROM

NEVER replace the FLASH ROM (IC114) on the MAIN Assy during servicing.
If the FLASH ROM is assumed to be defective, replace the whole MAIN Assy.
This FLASH ROM contains data that can only be written in at the factory.
An IEEE 802.3-based MAC address specific to this unit has been written.

1.3 NOTES ON PANEL CPU

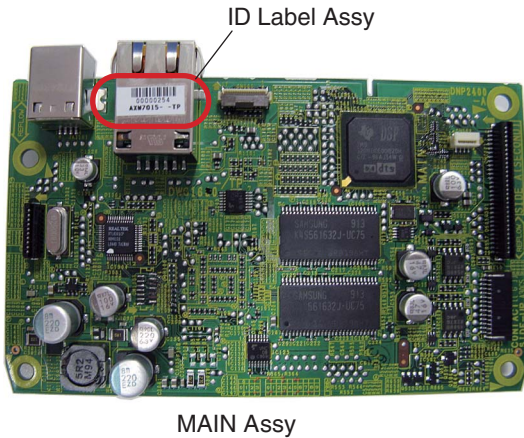
After the PANEL CPU (IC8003) is replaced, update its program.
The built-in PANEL CPU contains a FLASH ROM and will not operate without a program.
For updating, proceed as follows:

1. Insert the USB flash memory device that contains the program.
2. While holding the USB STOP key pressed, turn on the unit.
Hold the USB STOP key pressed until the "Pioneer" logo disappears.
3. Updating starts.

1.4 NOTES ON LINK CONNECTOR

If the LINK connector (JA1301) is replaced during a repair of the MAIN Assy, detach the label from the old connector then attach it to the new connector.

As an IEEE 802.3-based MAC address specific to this unit has been printed on the ID Label Assy (AXW7015-T-J) be sure to attach it.



1.5 NOTES ON LCD DISPLAY PANEL

As the panel for the LCD display is of transparent type, any dirt inside the panel is highly visible. Be careful not to trap dirt or dust inside when reassembling the LCD display, and check that there is no dirt or dust trapped inside after reassembling.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

Power requirements..... AC 120 V, 60 Hz (CUXJ)
AC 220 V to 240 V, 50 Hz/60 Hz (SYXJ8, AXJ5)
AC 110 V to 240 V, 50 Hz/60 Hz (FLXJ)
AC 220 V, 60 Hz (KXJ5)

Power consumption.....28 W
Power consumption (standby).....0.4 W
Main unit weight..... 4.6 kg
External dimensions...320 mm (W) x 106.4 mm (H) x 405.7 mm (D)
Tolerable operating temperature.....+5 °C to +35 °C
Tolerable operating humidity..... 5 % to 85 % (no condensation)

Analog audio output (AUDIO OUT L/ R)

Output terminal.....RCA terminal
Output Level..... 2.0 Vrms (1 kHz)
Frequency response.....4 Hz to 20 kHz
S/ N ratio.....115 dB
Total harmonic distortion..... 0.0018 %

Digital audio output (DIGITAL OUT)

Output terminal.....RCA terminal
Output type..... Coaxial digital (S/ PDIF)
Output level..... 0.5 Vp-p (75 Ω)
Output format.....44.1 kHz, 24 bit/ 16 bit

USB downstream section (USB)

Port..... Type A
Power supply..... 5V/ 500 mA or less

USB upstream section (USB)

Port..... Type B

LAN (PRO DJ LINK)

Rating.....100Base-TX

Control output (CONTROL)

Port..... Mini-jack

SD memory card section

File system.....Conforming to "SD Specifications Part 2
File System Specification Version 2.00"
Max. memory capacity..... 32 GB

Main display

Display type.....Active matrix TFT liquid crystal display (LCD)
Screen size..... 6.1-inch, wide
Supported languages..... 18 languages

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

2.2 DISCS / FILES PLAYABLE

A

Playable discs

Discs including the following marks on the disc label, package or jacket can be played.

Types of discs that can be played and marks

		
CD	CD-TEXT	CD-R

		
CD-RW	DVD-R	DVD-RW

DVD is a trademark of DVD Format/Logo Licensing Corporation.
Discs playable on this player are as shown below.

- CD-R/-RW discs recorded in music CD (CD-DA) format
- CD-R/-RW, DVD-R/-RW, DVD+R/+RW, DVD-R DL (dual layer) and DVD+R DL (dual layer) discs on which music files (MP3/AAC/WAV/AIFF) are recorded

❖ Discs that cannot be played

- DTS-CD
- Photo CDs
- Video CDs
- CD Graphics (CD-G) discs
- Unfinalized CDs
- DVD-Video discs
- DVD-Audio discs
- DVD-RAM discs
- Unfinalized DVDs
- DualDisc

❖ Playback of discs created on a computer or DVD recorder

Depending on the application's settings and the computer's environment settings, it may not be possible to play discs created on a computer. Record discs in a format playable on the CDJ-2000. For details, contact your application's selling agent.

It may not be possible to play discs created on a computer or DVD recorder due to the disc's properties, scratches or dirt, or poor recording quality (dirt on the recording lens, etc.).

❖ Creating backup discs

When CD-R/-RW, DVD-R/-RW, DVD+R/+RW, DVD-R DL (dual layer) and DVD+R DL (dual layer) discs are paused or left in the pause mode at cue points for long periods of time, it may become difficult to play the disc that point, due to the properties of the disc. When a specific point is looped repeatedly an extremely large number of times, it may become difficult to play that point.

When playing valuable discs, we recommend making backup discs.

❖ Regarding copy protected CDs

This player is designed to conform to the specifications of the audio CD format. This player does not support the playback or function of discs that do not conform to these specifications.

❖ About 8 cm single CDs

8 cm single CDs cannot be played on the CDJ-2000. Do not mount 8 cm adapters on CDs and play them on the CDJ-2000. The adapter could fall off as the disc spins, damaging the disc or the player.

❖ About CD-Text

The CDJ-2000 supports CD-Text. Titles, album names and artist names recorded in CD-Text are displayed. When multiple text data is recorded, the first text data is displayed. The supported character codes are shown below.

- ASCII
- ISO-8859
- MS-JIS
- Mandarin Chinese character code

About CD playback

Music files (MP3/AAC/WAV/AIFF) recorded on CD-R/-RW, DVD-R/-RW, DVD+R/+RW, DVD-R DL (dual layer) and DVD+R DL (dual layer) discs can be played.

Folder layers	Max. 8 levels (files in folders beyond the 8th level cannot be played)
Max. number of folders	2 000 folders per disc (folders beyond the 2 000th folder cannot be displayed)
Max. number of files	• 999 files for each file format • 3 000 files per disc (files beyond the 3 000th folder cannot be displayed)

When there are many folders or files, some time may be required for loading.

About SD memory cards

Music files (MP3/AAC/WAV/AIFF) recorded on SD and SDHC memory cards conforming to SD standards can be played.
Such data as disc identification information, cue points, loop points and hot cues can be recorded on SD memory cards.

Folder layers	Max. 8 levels (files in folders beyond the 8th level cannot be played)
Max. number of folders	Unlimited (folders beyond the 10 000th folder within a single folder cannot be displayed)
Max. number of files	Unlimited (files beyond the 10 000th file within a single folder cannot be displayed)
Supported cards ^[1]	• SD memory cards: 8 MB – 2 GB • SDHC memory cards: 4 GB – 32 GB
Compatible formats	• SD memory cards: FAT12 and FAT16 (conforming to SD standards) • SDHC memory cards: FAT32 (conforming to SD standards)

[1] CPRM is not supported.

- SDHC memory cards can be used with devices supporting SDHC memory cards. They cannot be used with devices that only support SD memory cards.
- When using SD memory cards with a capacity of 4 GB or greater, use SD memory cards on which the SDHC logo is indicated.
- SD memory cards are shipped from the manufacturer in the standard format indicated above. If a non-formatted SD memory card is loaded, **[FORMAT SD]** is displayed and the card cannot be used.
- It may not be possible to use card formatted on a computer, digital camera, etc.
- Pioneer does not guarantee that all SD memory cards will operate on the CDJ-2000.

❖ Cautions on using SD memory cards

- SD memory cards are precision electronic devices. Handle them with care. Bending, dropping or subjecting SD memory cards to strong forces or shocks could break them. Also, do not use or store SD memory cards in environments where static electricity or electric noise tends to be produced. We recommend periodically making copies of valuable data.
- Please note that Pioneer will accept no responsibility whatsoever for loss of data recorded by the customer on SD memory cards or other direct or indirect problems resulting from connection to the CDJ-2000.
- After ejecting SD memory cards, store them in their dedicated case, etc.
- Depending on the SD memory card you are using, the desired performance may not be achieved.

About USB devices

Music files (MP3/AAC/WAV/AIFF) recorded on USB devices can be played. Such data as disc identification information, cue points, loop points and hot cues can be recorded on USB devices.

Folder layers	Max. 8 levels (files in folders beyond the 8th level cannot be played)
Max. number of folders	Unlimited (folders beyond the 10 000th folder within a single folder cannot be displayed)
Max. number of files	Unlimited (files beyond the 10 000th file within a single folder cannot be displayed)
Supported file systems	FAT, FAT32 and HFS+

- The CDJ-2000 supports such USB mass storage class USB devices as external hard discs, portable flash memory drives and digital audio players. External DVD/CD drives and other optical disc devices cannot be used.
- When there are many folders or files, some time may be required for loading.
- If multiple partitions are set for the USB device, the device may not be recognized.

❖ Cautions on using USB devices

- Some USB devices may not operate properly. Please note that Pioneer will accept no responsibility whatsoever for loss of data recorded on USB devices.
- USB hubs cannot be used.
- USB devices equipped with flash card readers may not operate.
- If a current above the allowable level is detected in the CDJ-2000's USB port, it could happen that a warning message is displayed, the power to the USB device is cut off and signal transfer is stopped. To restore normal operation, remove USB devices connected to the player, then press **USB STOP**. Avoid reusing the USB device for which the excess current was detected. If normal operation is not restored after performing the above operation (if signals are not transferred), try turning off the player's power then turning it back on.
- Depending on the USB device you are using, the desired performance may not be achieved.

About MP3 files

MP3 files can have a constant bit rate (CBR) or a variable bit rate (VBR). Both types of files can be played on the CDJ-2000, but the search and super fast search functions are slower with VBR files. If your priority is operability, we recommend recording MP3 files in CBR.

The CDJ-2000 supports MP3 files in the formats shown below.

Compatible formats	MPEG-1	Audio Layer-3 sampling frequencies of 32 kHz, 44.1 kHz and 48 kHz, and bit rates of 32 kbps – 320 kbps are supported.
	MPEG-2	Audio Layer-3 sampling frequencies of 16 kHz, 22.05 kHz and 24 kHz, and bit rates of 16 kbps – 160 kbps are supported.
Track information		ID3 tag versions 1.0, 1.1, 2.2, 2.3 and 2.4 are supported. Titles, album names, artist names, etc., are displayed here. ^[1] JPEG images embedded in ID3 tags are displayed as the jacket photo. ^[2]
File extension		.mp3

^[1] To display characters written in a local code other than Unicode, change the [LANGUAGE] setting at [UTILITY].

^[2] Files larger than 800 x 800 dots cannot be displayed.

About AAC files

- AAC is the abbreviation of "Advanced Audio Coding", a basic format of audio compression technology used for MPEG-2 and MPEG-4.
- The file format and extension of AAC data depends on the application used to create the data.
- In addition to AAC files encoded with iTunes® and with the extension ".m4a", files with the extensions ".aac" and ".mp4" can also be played on the CDJ-2000. However, copyright protected AAC files purchased for example at the iTunes Music Store cannot be played. Also, some files may not be playable, depending on the iTunes version used to encode them.
- The CDJ-2000 supports AAC files in the formats shown below.

Compatible formats	MPEG-4 AAC LC	Sampling frequencies of 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz and 48 kHz, and bit rates of 16 kbps – 320 kbps are supported.
Track information	aac	ID3 tag versions 1.0, 1.1, 2.2, 2.3 and 2.4 are supported. Titles, album names, artist names, etc., are displayed here. ^[1] JPEG images embedded in ID3 tags are displayed as the jacket photo. ^[2]
	Extensions other than aac	Meta tags (embedded tags) are supported. Titles, album names, artist names, etc., are displayed here. ^[1] JPEG images embedded in tags are displayed as the jacket photo. ^[2]
File extension		.m4a, .aac and .mp4

^[1] To display characters written in a local code other than Unicode, change the [LANGUAGE] setting at [UTILITY].

^[2] Files larger than 800 x 800 dots cannot be displayed.

About WAV files

The CDJ-2000 supports WAV files in the formats shown below.

Compatible formats	The 16-/24-bit non-compressed PCM format and sampling frequencies of 44.1 kHz and 48 kHz are supported.
Track information	LST chunk Titles, album names, artist names, etc., are displayed here. ^[1]
File extension	.wav

^[1] To display characters written in a local code other than Unicode, change the [LANGUAGE] setting at [UTILITY].

About AIFF files

The CDJ-2000 supports AIFF files in the formats shown below.

Compatible formats	The 16-/24-bit non-compressed PCM format and sampling frequencies of 44.1 kHz and 48 kHz are supported. Titles, album names, artist names, etc., are displayed here. ^[1]
File extension	.aif, .aiff

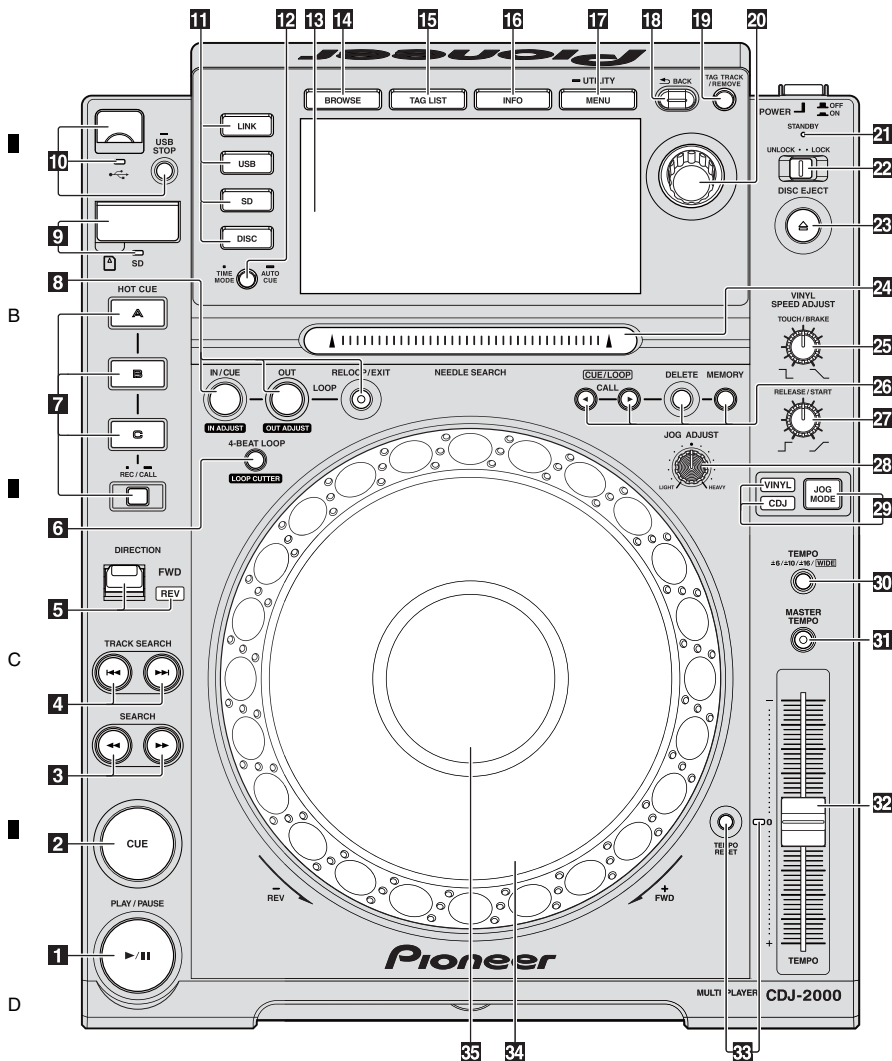
^[1] To display characters written in a local code other than Unicode, change the [LANGUAGE] setting at [UTILITY].

About rekordbox

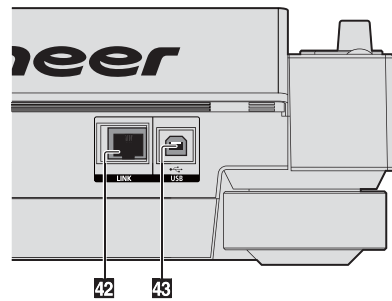
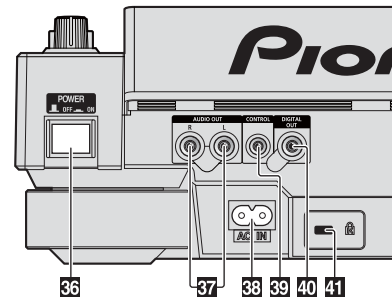
- rekordbox is an application for managing music files which are used for DJ play with a Pioneer DJ Player (i.e. CDJ-2000, CDJ-900). Data that has been detected and measured, as well as any points which have been set and stored using rekordbox, can be used in combination with a Pioneer DJ Player (i.e. CDJ-2000, CDJ-900) to achieve outstanding DJ performance.
- Install rekordbox from the included CD-ROM onto a computer.

2.3 PANEL FACILITIES

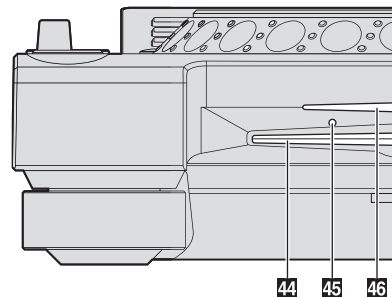
A Control Panel



Rear Panel



Front Panel



Control Panel

1 PLAY/PAUSE▶/II and PLAY/PAUSE▶/II indicator

This lights when playing tracks and flashes when in the pause mode.

2 CUE and CUE indicator

This lights when a cue point is set (except during track searching), and flashes when a new cue point can be set in the pause mode.

3 SEARCH◀/▶

4 TRACK SEARCH◀/▶

5 DIRECTION FWD REV and REV indicator

6 4-BEAT LOOP/LOOP CUTTER

7 HOT CUE (A, B, C, REC/CALL)

8 LOOP IN/CUE (IN ADJUST), LOOP OUT (OUT ADJUST), RELOOP/EXIT

9 SD memory card door, insertion slot and SD memory card indicator

10 USB device insertion slot, USB indicator and USB STOP

11 LINK, USB, SD, DISC

12 TIME MODE/AUTO CUE

13 Main unit display

14 BROWSE

15 TAG LIST

16 INFO

17 MENU/UTILITY

18 BACK

19 TAG TRACK/REMOVE

20 Rotary selector and indicator

When selecting tracks or setting items, the cursor moves when the rotary selector is turned. Press the rotary selector to enter.

21 STANDBY indicator

This lights when in the standby mode.

22 UNLOCK, LOCK

23 DISC EJECT▲ and DISC EJECT indicator

24 NEEDLE SEARCH pad

25 VINYL SPEED ADJUST TOUCH/BRAKE

26 CUE/LOOP CALL◀/▶, DELETE, MEMORY

27 VINYL SPEED ADJUST RELEASE/START

28 JOG ADJUST

29 JOG MODE, VINYL mode indicator and CDJ mode indicator

The mode switches between VINYL and CDJ each time this is pressed. The indicator for the selected mode lights.

30 TEMPO ±6/±10/±16/WIDE

31 MASTER TEMPO

32 TEMPO

33 TEMPO RESET and TEMPO RESET indicator

Regardless of the position of the TEMPO dial, tracks are played at the original playing speed recorded on the disc, etc. The indicator lights when TEMPO RESET is turned on.

34 Jog dial (REV/+ FWD) and JOG RING ILLUMINATION

35 Jog dial display section

Rear Panel

36 POWER ON OFF

Press to turn the power on and off.

37 AUDIO OUT L/R

38 AC IN

39 CONTROL

40 DIGITAL OUT

41 Kensington security slot

42 LINK

43 USB

Front Panel

44 Disc insertion slot

45 Disc force eject pin insertion hole

46 Disc insertion slot indicator

About ejecting discs by force

- If the disc cannot be ejected by pressing [DISC EJECT▲], the disc can be ejected forcibly by inserting the disc force eject pin all the way into the disc force eject pin insertion hole on the main unit's front panel.
- When forcibly ejecting a disc, be sure to do so following the procedure below.

1 Press [POWER] and wait at least 1 minute after the set's power has turned off.

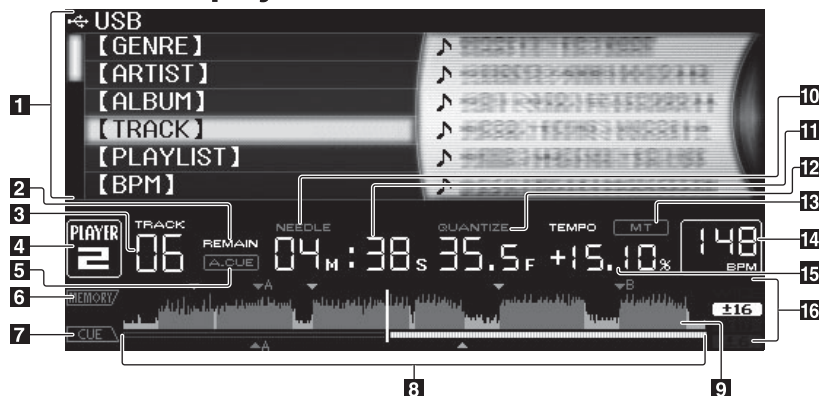
Never forcibly eject a disc directly after turning off the set's power. Doing so is dangerous for the reasons described below.
The disc will still be spinning when ejected and could hit your fingers, etc., causing injury.
Also, the disc clamp will rotate in an unstable way, and the disc could get scratched.

2 Use the included disc force eject pin. (Do not use anything else.)

The included disc force eject pin is mounted on the CDJ-2000's bottom panel. When the pin is inserted all the way into the insertion hole, the disc is ejected 5 to 10 mm out of the disc insertion slot. Grasp the disc with your fingers and pull it out.

A

Main unit display



1 Information display section

2 REMAIN

This lights when the time display is set to the remaining time.

3 TRACK

This indicates the track number (01 – 99).

4 PLAYER

This indicates the player number (1 – 4) assigned to this CDJ-2000.

5 A.CUE

This lights when auto cue is set.

6 MEMORY

Cue points, loop points and hot cues recorded on SD memory cards and USB devices are displayed as marks.

7 CUE

The positions of cue points, loop points and hot cues are displayed as marks.

8 Playing address display

The track is displayed as a bar graph. The current playback position is displayed as a white vertical line. When the elapsed time is displayed, the left edge of the graph lights. When the remaining time is displayed, the display turns off from the left side. The entire graph flashes slowly when there are less than 30 seconds remaining in the track, then begins flashing rapidly when less than 15 seconds remain.

9 WAVE display

This displays the WAVE display, guidance, etc.

10 NEEDLE

This lights when needle searching is possible.

11 Time display (minutes, seconds and frames)

There are 75 frames to a second.

12 QUANTIZE

This lights red when [QUANTIZE] is turned on.

When [QUANTIZE] is turned on, the loop points and hot cue are automatically set to the beat nearest the position at which [LOOP IN/CUE (IN ADJUST)], [LOOP OUT (OUT ADJUST)], [4-BEAT LOOP] or [HOT CUE] (A, B or C) was pressed.

The quantize function does not work in the following situations ([QUANTIZE] is displayed in gray):

- When playing tracks recorded on discs
- When playing music files that have not been analyzed with rekordbox
- In the pause mode

13 MT (page)

This lights when the master tempo is set .

14 BPM

Displays BPM (Beats Per Minute) of the track currently being played.

15 Playing speed display

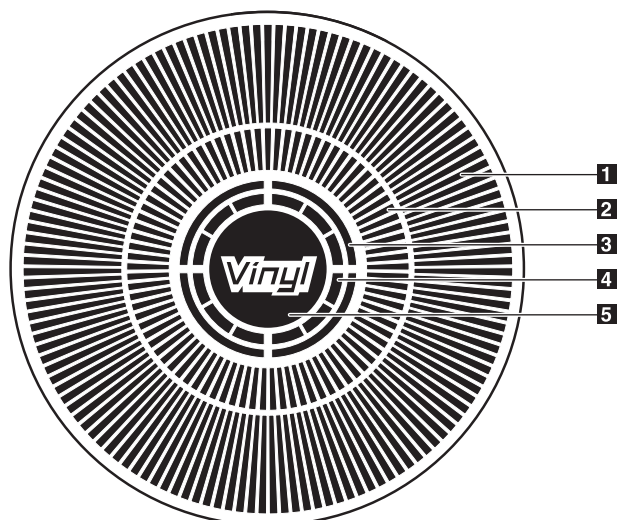
The number changes according to the position of [TEMPO].

16 Playing speed adjustment range display

This indicates the range in which the playing speed can be adjusted with respect to the original playing speed recorded on the medium.

D

Jog dial display section



1 Operation display

This indicates the playing position, with one revolution equal to 135 frames. It turns during playback and stops in the pause mode.

2 Cue point display

3 Audio memory status display

This flashes when the audio memory is being written. It stops flashing, remaining lit, when writing is completed.

The operations below may not be possible while the audio memory is being written.

- Setting Cue Point during playback (Real Time Cue)
- Setting Hot Cue

The display also flashes when there is not enough memory due to scratch play.

4 Jog touch detection display

When the jog mode is set to VINYL, the top of the jog dial lights when pressed.

5 VINYL

This lights when the jog mode is set to VINYL .

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing / CDJ

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

No.	Procedures	Check points
1	Confirm the firmware version on Test Mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complain has been solved. If the customer complain occurs with the specific disc, use it for the operation check.	The customer complain must not be reappeared. Audio and operations must be normal.
3	Play back a disc. (track search)	Audio, Search and operations must be normal.
4	Check the connection of each interface.	
	Play back data contained in the device connected to USB A.	Audio, Search and operations must be normal.
	USB B	The PC must be linked.
	Play back data contained in an SD card.	Audio, Search and operations must be normal.
	LINK	The PC must be linked.
5	Check output signals while the JOG dial or TEMPO slider is being operated.	Audio and operations must be normal.
6	Check the keys on the unit.	Check whether a product can be operated properly by buttons on the product.
7	Check the LCD display.	Check that there is no dirt or dust trapped inside the LCD display.
8	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

Specific Items to be Checked

No.	Procedures	Check points
1	Confirm playback error rates at the innermost and outermost tracks by using the following disc. DVD test disc (GGV1025)	The error rates must be less than 5.0e-4. (This procedure can determine if the drive is degraded.)

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

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

Cleaning



Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools.

Position to be cleaned	Name	Part No.	Remarks
Pickup lenses	Cleaning liquid	GEM1004	Refer to "9.7 TM ASSY-S".
	Cleaning paper	GED-008	

1 2 3 4

3.2 PCB LOCATIONS

A

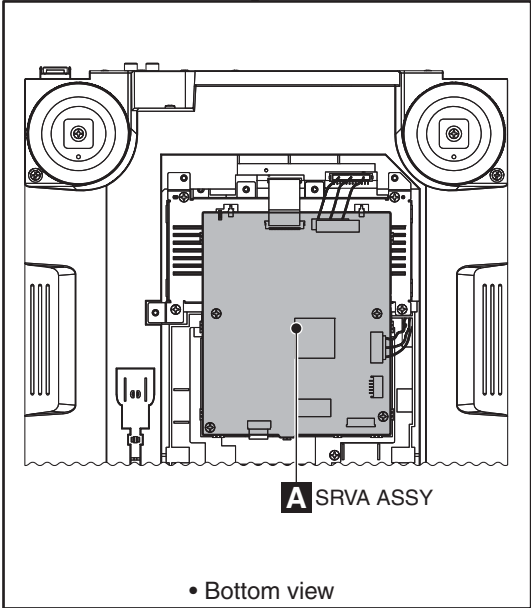
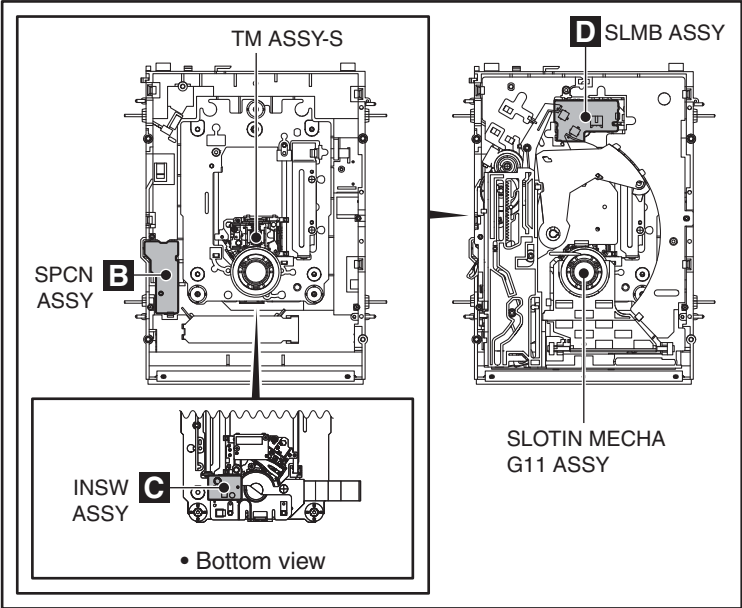
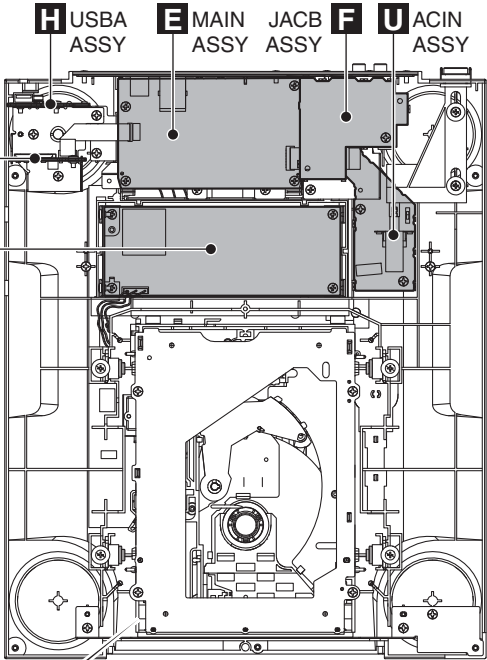
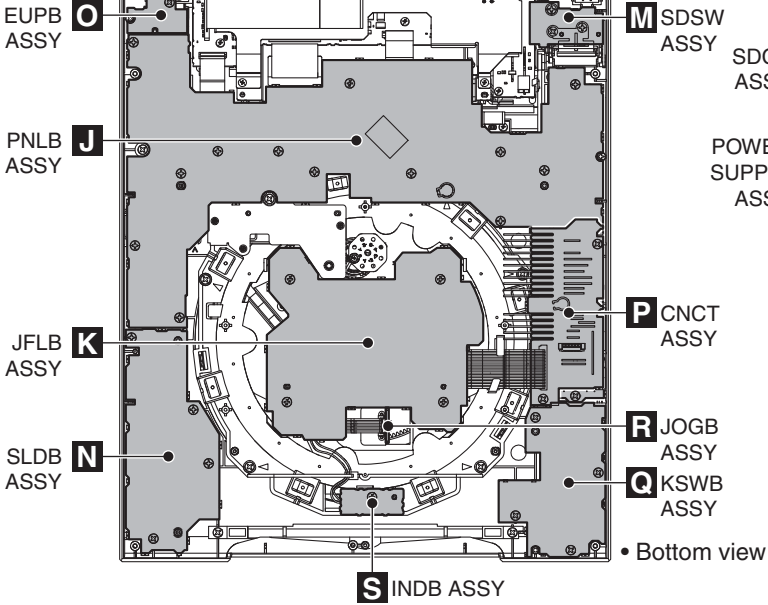
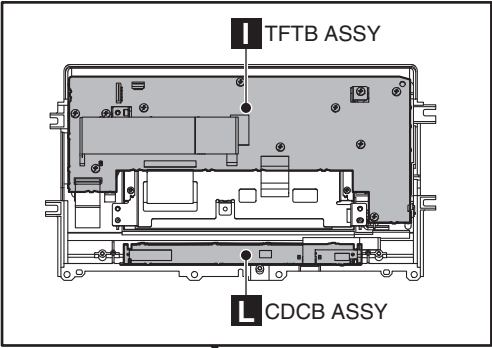
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D

E

F



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

LIST OF ASSEMBLIES

Mark	Symbol and Description	CDJ-2000 /CUXJ	CDJ-2000 /SYXJ8	CDJ-2000 /FLXJ	CDJ-2000 /KXJ5	CDJ-2000 /AXJ5
	1..MAIN ASSY	DWG1660	DWG1660	DWG1660	DWG1660	DWG1660
NSP	1..PNLA ASSY	DWM2346	DWM2346	DWM2346	DWM2346	DWM2346
	2..PNLB ASSY	DWG1665	DWG1665	DWG1665	DWG1665	DWG1665
	2..KSWB ASSY	DWS1409	DWS1409	DWS1409	DWS1409	DWS1409
	2..SDSW ASSY	DWS1420	DWS1420	DWS1420	DWS1420	DWS1420
	2..SLDB ASSY	DWX2983	DWX2983	DWX2983	DWX2983	DWX2983
	2..CNCT ASSY	DWX3009	DWX3009	DWX3009	DWX3009	DWX3009
	2..EUPB ASSY	DWX3042	DWX3042	DWX3042	DWX3042	DWX3042
NSP	1..TFTA ASSY	DWM2355	DWM2355	DWM2355	DWM2355	DWM2355
	2..TFTB ASSY	DWX2882	DWX2882	DWX2882	DWX2882	DWX2882
	2..SDCB ASSY	DWX2980	DWX2980	DWX2980	DWX2980	DWX2980
	2..CDCB ASSY	DWX2987	DWX2987	DWX2987	DWX2987	DWX2987
NSP	1..SUBA ASSY	DWM2364	DWM2364	DWM2364	DWM2364	DWM2364
	2..INSW ASSY	DWS1407	DWS1407	DWS1407	DWS1407	DWS1407
	2..SPCN ASSY	DWX2979	DWX2979	DWX2979	DWX2979	DWX2979
	2..INDB ASSY	DWX2986	DWX2986	DWX2986	DWX2986	DWX2986
	2..USBA ASSY	DWX3043	DWX3043	DWX3043	DWX3043	DWX3043
NSP	1..JFLA ASSY	DWM2369	DWM2347	DWM2347	DWM2347	DWM2347
	2..ACIN ASSY	DWR1475	DWR1453	DWR1453	DWR1453	DWR1453
	2..SLMB ASSY	DWS1408	DWS1408	DWS1408	DWS1408	DWS1408
	2..JFLB ASSY	DWX2984	DWX2984	DWX2984	DWX2984	DWX2984
	2..JOGB ASSY	DWX2985	DWX2985	DWX2985	DWX2985	DWX2985
	2..JACB ASSY	DWX2988	DWX2988	DWX2988	DWX2988	DWX2988
	1..SRVA ASSY	DWX2948	DWX2948	DWX2948	DWX2948	DWX2948
⚠	1..POWER SUPPLY ASSY	DWR1463	DWR1463	DWR1463	DWR1463	DWR1463
NSP	1..SLOTIN MECHA G11 ASSY	DXA2163	DXA2163	DXA2163	DXA2163	DXA2163
	1..TM ASSY-S	DXX2595	DXX2595	DXX2595	DXX2595	DXX2595

3.3 JIGS LIST

A ■ Lubricants and Glues List

Name	Part No.	Remarks
Lubricating oil	GYA1001	Refer to “9.3 CONTROL PANEL SECTION”, “9.4 JOG DIAL SECTION”, “9.6 SLOTIN MECHA SECTION”, “9.7 TM ASSY-S”.
Lubricating oil	ZLB-HFD1600	Refer to “9.4 JOG DIAL SECTION”.
Dyfree	GEM1036	Refer to “9.6 SLOTIN MECHA SECTION”.
Adhesive	ZBA-8008	Refer to “9.3 CONTROL PANEL SECTION”.

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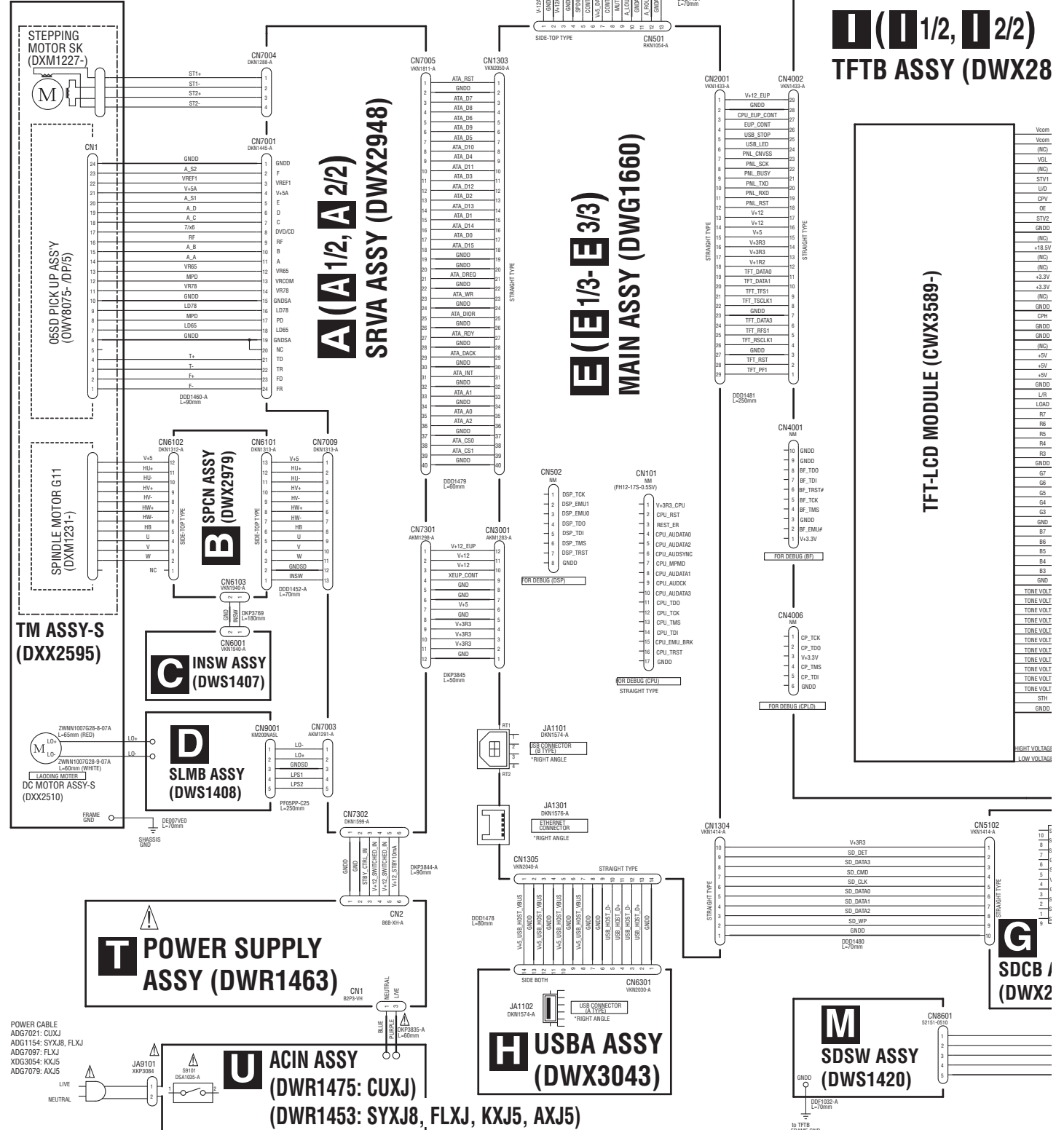
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■

4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM

SLOTIN MECHA G11 ASSY (DXA2163)

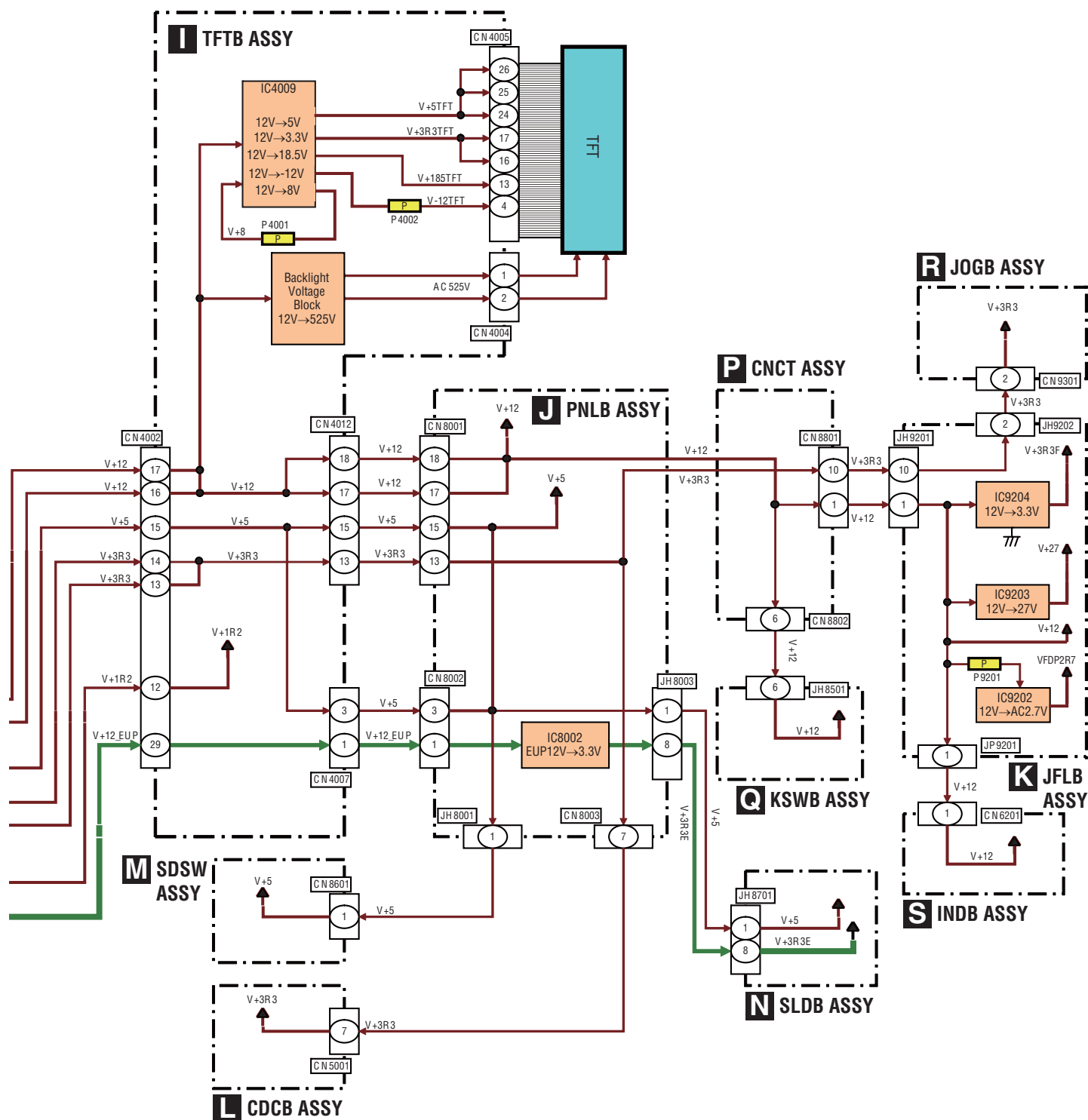


△









4

A



5.2 FAILURE JUDGEMENT OF THE PICKUP ASSY

- LD power after passing through the objective lens [mW]

SPEC: DVD 0.180 ± 0.03

CD 0.210 ± 0.03

Check method: Measure the LD power, using an optical power meter.

Failure judgment: A value out of the range of the specifications is judged as failure.

- LD current [mA]

SPEC: DVD TYP50 MAX70

CD TYP65 MAX75

Check method

Measure the LD current at the probe pad on the SRVA Assy, using a tester.

[Detailed check method]

1. For details on how to emit light from the LD, see the "[5] Confirmation of movement of the drive unit" in 6. SERVICE MODE.
2. With the LD OFF, apply the probes of a tester to the reference probe pad and 78CHK (65CHK). (CD: 78CHK/DVD: 65CHK)

Note: Be careful not to apply the probes to the pads with LD ON. If you do so, the LD may be damaged.

3. With the probes applied to the above-mentioned pads, turn the LD ON to measure the voltage between them.
4. After measurement, turn the LD OFF (ALL OFF) then pull the probes away.
5. Calculate the current value by dividing the measured voltage value by the resistance value.
(Resistance values to be used: CD: R7008 = 22 ohms, DVD: R7007 = 12 ohms)

Failure judgment: If the calculated current value exceeds the maximum value, the LD has been degraded

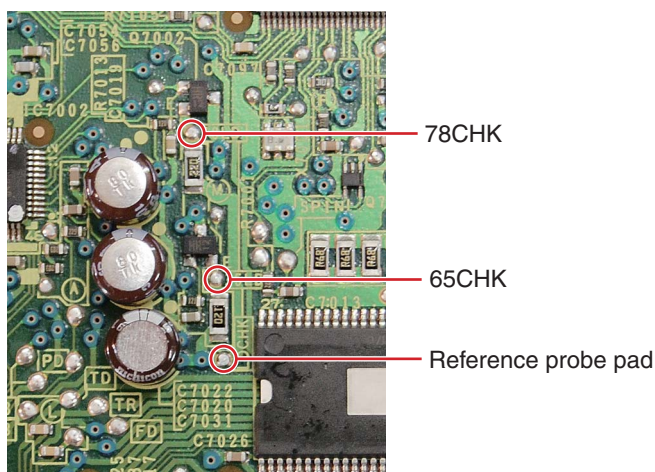


Fig.1 SRVA Assy

- Actuator resistance value [ohms]

Specifications on the focus side: 3.7 ± 0.55

Specifications on the tracking side: 4.3 ± 0.65

Check method: Disconnect* the FFC connected to the CN7001 on the focus side then measure the resistance value between FFC pins 23 and 24.

Disconnect* the FFC connected to the CN7001 on the tracking side then measure the resistance value between FFC pins 21 and 22.

*Short-circuit the LD short-circuit pad. (Refer to the "TM Assy-S" in 7. DISASSEMBLY.)

Failure judgment: A value out of the range of the specifications is judged as failure.

5.3 TROUBLESHOOTING

- A
- 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 performing a status check and referring to the error code.
- For the relationship of each power-supply and signal system, see “4. BLOCK DIAGRAM,” and “10. SCHEMATIC 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 [7] Firmware update of “6.2 DETAILS OF THE SERVICE MODE.”

Contents

- [0] Prior Confirmation
- [1] Failure in Startup
- B [2] Display (JOG FL/LED)
- [3] Operations (SW/Volume/JOG/CDC/Rotary Encoder)
- [4] USB (Type A/Type B), SD Card
- [5] LAN
- [6] ATAPI DRIVE
- [7] AUDIO OUT
- [8] CONTROL
- [9] DRIVE Assy
- [10] EUP Mode
- [11] SERVICE MODE
- [12] Error Codes

C

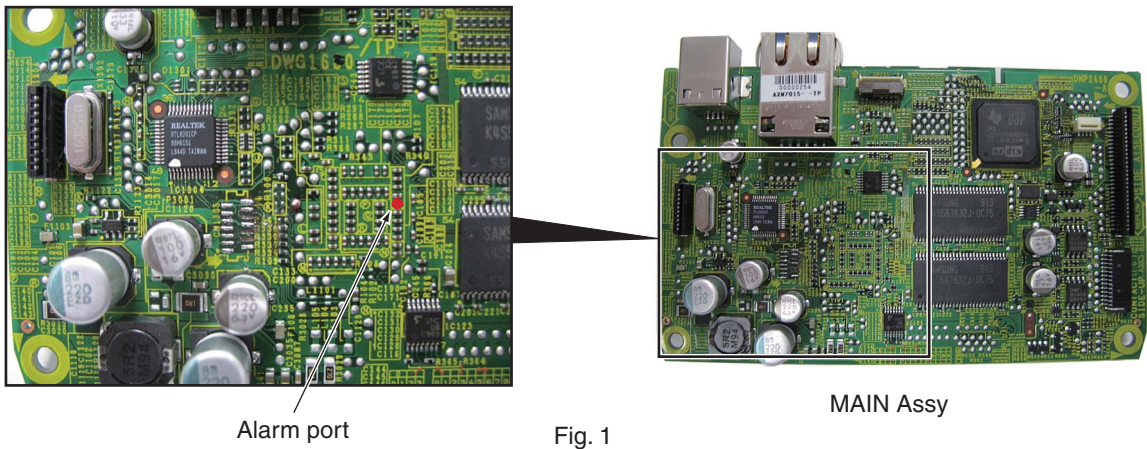
[0] Prior Confirmation

[0-1] Checking in Service Mode

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1			Check for the location of a defect in Service mode.	See the section describing locations of defects in this manual.	6.SERVICE MODE

[0-2] Checking the Alarm Port

If “[0-1] Checking in Service Mode” is performed, this check is not required.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		Alarm port on the MAIN Assy (Fig. 1)	Check the output waveforms from the alarm port.	If an output waveform is judged to be improper, see the section describing locations of defects in this manual.	Outputs of the Alarm Port in 6. SERVICE MODE



[0-3] Checking Cables

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Disconnection, breakage, or loose connection of cables	Cables	Check that all the cables are securely connected. Check that there is no breakage in the cables.	Securely connect the cables. If a cable is broken, replace it.	4. BLOCK DIAGRAM 4.1 OVERALL CONNECTION DIAGRAM 10. SCHEMATIC DIAGRAM

[1] Failure in Startup

[1-1] No power

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	The SW power-supply does not function properly.	SRVA Assy	Check V+12_EUP.	If V+12_EUP (CN7301 pin_1) is not output, the SW power-supply is defective. Replace it.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
2	The power-supply does not function properly.	Related point	Check V+3R3_PNL.	The regulator IC (IC7010) may be loosely connected with its peripheral devices or a part may be defective. Correct loose connection. If the symptom persists, replace the defective part.	10.1 SRVA ASSY(1/2)
3	The EUP control unit does not function properly.	SRVA Assy	Check the EUP_CONT signal.	If the signal is L, check the output of the SW power-supply IC. If V+12(CN7301 pin_2) is not output, the SW power-supply IC is defective. Replace it. If the signal is H, see [10] EUP Mode.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
4	Various power-supply ICs do not function properly.	SRVA Assy, MAIN Assy	Check each power-supply IC.	The regulator IC and its peripheral devices for each power supply may be loosely connected or a part may be defective. Correct loose connection. If the symptom persists, replace the defective part.	

[1-2] Indications on the LCD

Check the indications on the LCD.

Nothing is displayed on the LCD. (Black screen)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power supply for the backlight is not input properly.	TFTB Assy	Check the connection on the V+12_T line and check the mounting status of the peripheral parts of the backlight power circuit.	The V+12_T line may be loosely connected or the backlight power circuit may be defective. Correct loose connection. If the symptom persists, replace the defective part.	10.9, 10.10 TFTB ASSY

Indications on the LCD are in white screen.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	The TFT_CPU does not function properly.	TFTB Assy	Check the power supply and signals around the TFT_CPU. • V+3R3T_BF, V+1R2_BF • RESET_TFT • BUSCLK (Approx. 98 MHz)	Diagnose the TFT_CPU and its peripherals, referring to [12-5] E-7023: GUI CPU ERROR.	10.9 TFTB ASSY(1/2)

Startup stops with the "Pioneer" logo displayed.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Communication between the MAIN CPU and TFT CPU could not be established.	TFTB Assy, MAIN Assy	Check the serial communication cable connection between the MAIN CPU and TFT CPU.	Diagnose the TFT_CPU and its peripherals, referring to [12-5] E-7023: GUI CPU ERROR.	

[2] Display (JOG FL/LED)

The JOG FL and the LEDs are controlled by the PANEL CPU (IC8005).

[2-1] The JOG FL does not light.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power is not supplied properly.	JFLB Assy	Check the power-supply voltages (V+3R3, VFDP2R7_F1, VFDP2R7_F2, and V+27) of the FL.	Each power-supply may be loosely connected or may be defective. Correct loose connection. If the symptom persists, replace the defective part.	10.12 JFLB ASSY
2	Defective control signal	JFLB Assy	Check that the FL control line is properly connected in the JFLB ASSY. • J_SCLK • J_BK • J_LAT • J_DSO	Check the connection and correct loose connection. As the JOG FL is controlled by the PANEL CPU, if no signal is output, check the PANEL CPU.	10.12 JFLB ASSY
3	Defective JOG FL		If the symptom persists after the above corrections,	Replace the JOG FL.	

A [2-2] An LED does not light.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective LEDs	LED in question	Check that soldering at the LED in question is properly made. If it is OK, check that the forward voltage (2.2 - 2.7 V) is present at both ends of the LED.	Correct any defective soldering. If the forward voltage is present, then the LED itself is defective. Replace it.	
2	Defective drive circuit	Transistor in question	Check that the control signal for the LED in question is output from the PANEL CPU (IC8003).	If the LED does not light even if the control signal is output properly, then the transistor is defective. Replace it.	10.11 PNLB ASSY
3	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection between the PANEL CPU (IC8003) and the LED in question. If the connection is OK, the port may be damaged. Replace it.	

B

[3] Operations (Keys/variable controls/JOG)

As operations of all keys, variable controls, and JOG dial can be checked in Service mode, it is recommended to check operations of those controls in Service mode before proceeding to the subsequent checks. (For details, refer to 6. SERVICE MODE.)

C [3-1] No key functions.

The PLAY, CUE, AUTO BEAT LOOP, BEAT SELECT, REV, LOOP IN, LOOP OUT, or RELOOP key does not function (direct input).					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC8003) up to the SW.	If there is no loose connection and if the signal does not become L when the SW is pressed, that SW is defective. Replace it.	
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	
Other keys (except for the USB STOP key) do not function. (Because of A/D input, multiple SWs are connected to the same port on the PANEL CPU.)					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC8003) up to the SW.	If other SWs connected to the same port on the PANEL CPU (IC8003) function properly and if connection is properly made, replace the SW.	
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	
The USB STOP key does not function. (The signal from the USB STOP key is input to the MAIN CPU.)					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	SDSW Assy, MAIN Assy	Check if there is loose connection on the signal line from the MAIN CPU (IC101) up to the SW.	If there is no loose connection and if the signal does not become L when the SW is pressed, that SW is defective. Replace it.	
2	Defective MAIN CPU	MAIN Assy	If the symptom persists after the above corrections,	The MAIN CPU (IC101) is defective. Replace it.	

D

[3-2] Variable controls not controllable

Tempo slider not controllable					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective Tempo slider	SLDB Assy, Related point	Check the waveform of signals on the signal line (ADCT, ADIN).	If the voltage on the signal line (ADIN) fluctuates within the range of 0–3.3 V, with 1.65 V at the center, go to Step 2. If it does not, the Tempo slider (VR8701) is defective. Replace it.	10.14 SLDB and EUPB ASSYS
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	
TOUCH/BRAKE and RELEASE/START not controllable					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective VOL	Related point	Check the connections of and waveforms of signals on the signal lines (TCH/BRK) and (RELS/ST).	If the voltage on the signal line (TCH/BRK and RELS/ST) fluctuates within the range of 0–3.3 V, go to Step 3. If it does not, the TOUCH/BRAKE (VR8001) and RELEASE/START (VR8002) are loosely connected or defective. Connect them properly or replace them.	10.11 PNLB ASSY
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

E

F

[3-3] The NEEDLE SEARCH does not work.

No response when the NEEDLE SEARCH is touched					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the communication line	CDCB Assy	Check the connections of the peripheral circuits of the CDC (IC5001).	The communication line may be loosely connected. Correct it if it is.	10.13 CDCB and SDSW ASSYS
2	Defective CDC	Related point	Check that the signal from Pin 5 of CN8003 changes when the NEEDLE SEARCH pad is touched. (When the pad detects touching by a finger, this signal is first output from CDC to the PANEL CPU.)	The CDC (IC5001) may be defective. Replace it.	10.11 PNLB ASSY
3	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

[3-4] The rotary encoder does not work.

No response when the rotary encoder is operated					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the signal line or defective SW	TFTB Assy, PNLB Assy	Check the connections of the signal lines for ENC_SW, ENC1, and ENC2. When the SW is pressed, the ENC_SW signal must become L, and when it is turned, the waveforms of the signal lines for ENC1 and ENC2 must change.	The PANEL CPU(IC8003) and SW may be loosely connected or they may be defective. Reconnect them securely. If the symptom persists, replace them.	
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

[3-5] Abnormalities regarding the JOG dial

Turning of the JOG dial is not detected					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective photo interrupter or PANEL CPU	JOGB Assy, JFLB Assy, CNCT Assy, PNLB Assy	Check the waveforms of the signal lines (JOG1/JOG2).	If no waveform can be confirmed, the photo interrupter (PC9301) may be defective. Replace it. If a waveform can be confirmed, the signal line may be loosely connected or the PANEL CPU (IC8003) may be defective. Reconnect the signal line. If the symptom persists, replace it.	10.18 WAVEFORMS No. 38, 39
2	Defective encoder plate	JOG Assy	Check if the encoder plate has come off GEAR A or is dirty.	If it has come off, adhere it at its original position. If it is dirty, replace it with a new one.	
Pressing on the JOG dial cannot be detected.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective photo interrupter or PANEL CPU	JOGB Assy, JFLB Assy, CNCT Assy, PNLB Assy	Check the waveform of the signal on the signal line (JOG_SW) when the JOG dial is pressed.	If the signal on the signal line (JOG_SW) is not set to L when the JOG dial is pressed, the SHEET SW (DSX1078-A) may be defective. Replace it. If the signal line is set to L, the signal line may be loosely connected or the PANEL CPU (IC8003) may be defective. Reconnect the signal line. If the symptom persists, replace it.	
2	Defective SW RING and JOG HOLDER	JOG Assy	Check if there is any foreign object between the SW RING and JOG HOLDER.	Remove any foreign object, if present.	
			Check if the cushions that are adhered to the JOG HOLDER and SW RING have worn out.	Replace the SW cushion (DEC2538-A) with a new one.	
Noise is heard when the JOG dial is turned.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective JFLB Assy or gears	JOG Assy	Check if the JOG FL of the JFLB has been shifted upward from the holder.	The JOG FL may interfere with JOG A. Replace the JFLB Assy.	
			There may be any scratches on the 3 gears or some foreign object between the gears.	If there are any scratches, replace the scratched gear with a new one. If there is any foreign object, remove it then replace the gears with new ones. After that, check that the JOG adjustment value is within the reference range, referring to “8.1 JOG Dial Rotation Load Adjustment.”	

A

The JOG dial turns too freely. (The load value for the JOG dial is outside the specified range.)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Improper adjustment or assembly of the JOG dial	JOG Assy	Check that the load value for the JOG dial is within the specified range, referring to "Measuring method" in "8.1 JOG Dial Rotation Load Adjustment."	If it is outside the specified range, adjust the position of the Adjust Plate to change the load value for the JOG dial, referring to "How to Adjust" in "8.1 JOG Dial Rotation Load Adjustment." During the above adjustment, if the upper-limit adjustment position of the Adjust Plate is reached, oil may have been spattered on the Adjust Plate. Replace the washer, gear, and cam plate with new ones, then reassemble. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial.	

B

Resistance to turning the JOG dial is too strong. (The load value for the JOG dial is outside the specified range.)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Improper adjustment of the JOG dial or defective washer, gear, or cam plate	JOG Assy	Check that the load value for the JOG dial is within the specified range, referring to "Measuring method" in "8.1 JOG Dial Rotation Load Adjustment."	If it is outside the specified range, adjust the position of the Adjust Plate to change the load value for the JOG dial, referring to "How to Adjust" in "8.1 JOG Dial Rotation Load Adjustment." During the above adjustment, if the lower-limit adjustment position of the Adjust Plate is reached, shavings from the worn-out washer may have increased the friction. Replace the washer, gear, and cam plate with new ones, then reassemble. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial.	

C

The ADJ KNOB does not work or does not stop at the intended position.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Improper adjustment or assembly of the JOG dial	JOG Assy	Check if the plate spring of the JOG HOLDER is worn out or deformed. Check if there is any foreign object in the link section (gears).	Replace the JOG HOLDER. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial. Remove the foreign object. During reassembly, pay attention to the position of the cam plate. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial.	

[4] USB (Type A/Type B), SD Card

[4-1] No communication via the USB connector (Type A)

Check the following, with a USB device connected to the USB A connector.

D

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the communication line.	Between USB A Assy and MAIN Assy	Check the connection of the USB communication line.	If connection is improper, resolder it. If connection is proper, go to 2.	
2	V+5_USB_HOST_VBUS is defective.	MAIN Assy	Check V+5_USB_HOST_VBUS of the USB power supply.	If V+5_USB_HOST_VBUS cannot be confirmed, go to 3. If V+5_USB_HOST_VBUS can be confirmed, go to 4.	10.5 MAIN ASSY (3/3)
3	The USB PAWED IC or its control signal is defective.	MAIN Assy	Check the CPU_USB_HSTPWREN and CPU_USB_HSTPWRFL signals from the USB POWER IC (IC1102).	If the CPU_USB_HSTPWREN signal does not become H, check the connection. If the connection is OK, then the MAIN CPU (IC101) is defective. Replace it. If the CPU_USB_HSTPWRFL signal does not become H, the USB POWER IC (IC1102) is in a state of shutdown caused by abnormally high temperature. Check the connection. If the connection is OK, then the port may be damaged. Replace it.	10.5 MAIN ASSY (3/3)
4	Defective MAIN CPU	MAIN Assy	If the symptom persists after the above corrections,	The MAIN CPU (IC101) is defective. Replace it.	

E

[4-2] No communication via the USB connector (Type B)

Check the following, with a USB device connected to the USB B connector.

F

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the communication line.	MAIN Assy	Check the connections from the MAIN CPU and USB CONTROLLER.	If connection is improper, resolder it. If connection is proper, go to 2.	
2	Defective MAIN CPU	MAIN Assy	Check the signal from the MAIN CPU and USB CONTROLLER.	If the signal is not output from the MAIN CPU(IC101), it may be defective. Replace it.	
3	Loose connections in the USB signal.	MAIN Assy	Check the connections of the communication line (USB_D+, USB_D-).	The communication line may be loosely connected. Correct it if it is.	
4	Defective USB CONTROLLER	MAIN Assy	If the symptom persists after the above corrections,	The USB CONTROLLER (IC1101) is defective. Replace it.	

[4-3] The SD card cannot be recognized.

Check the following, with an SD card inserted in the SD connector.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the communication line.	SDCB Assy, MAIN Assy	Check the connection of the SD serial communication line.	If connection is improper, resolder it.	
2	Defective MAIN CPU	MAIN Assy	If the symptom persists after the above corrections,	The MAIN CPU (IC101) is defective. Replace it.	

[5] LAN

[5-1] No LAN communication

Check the following, with a peripheral device connected to the Ethernet connector.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the communication line.	MAIN Assy	Check the connection of the periphery circuit of ETHER (IC1304).	If connection is improper, resolder it.	10.5 MAIN ASSY (3/3)
2	Defective ETHER PHY device or MAIN CPU	MAIN Assy	If the symptom persists after the above corrections,	The ETHER PHY device (IC1304) may be defective. Replace it. If the symptom persists, the MAIN CPU (IC101) may be defective. Replace it.	

[6] ATAPI DRIVE

[6-1] No disc playback (Although loading and disc rotation can be performed properly, no track data are output.)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Improper RESET signal	SRVA Assy, MAIN Assy	Check the ATA_RESET signal (CN7005).	Communication will not start while the ATA_RESET signal is L. Check the connection between the MAIN CPU (IC101) and SODC (IC7006). If the connection is not properly made, correct it. If no problem is found, see "[9] DRIVE ASSY." If the signal does not become H after those corrections, go to Step 2.	10.1 SRVA ASSY (1/2) 10.5 MAIN ASSY (3/3)
2	Loose connections in the communication line.	SRVA Assy, MAIN Assy	Check the connection of the ATAPI lines	Check the connection between the MAIN CPU (IC101) and SODC (IC7006). If no problem is found, see "[9] DRIVE ASSY." If the symptom persists after those corrections, go to Step 3.	
3	Defective MAIN CPU	MAIN Assy	Check the periphery circuit of the MAIN CPU.	Check the periphery of the MAIN CPU (IC101). If no problem is found, the MAIN CPU may be defective. Replace it.	

[7] AUDIO OUT

[7-1] No sound

The analog audio signal is not output.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power is not supplied properly.	MAIN Assy, JACB Assy	Check the power voltages (V+12A, V-12A, V+5_DAC) for audio.	Each power-supply may be loosely connected or may be defective. Correct loose connection. If the symptom persists, replace the defective part.	
2	Defective MUTE signal	MAIN Assy	Check the signal from Pin 9 of CN501 (MUTE). Playback is muted when the signal is at +12 V.	The connection, transistor, or DSP may be defective. Correct loose connection. If the symptom persists, replace the defective part.	10.4 MAIN ASSY (2/3)
3	Loose connections in the signal line.	MAIN Assy, JACB Assy	Check the connection of the audio signal lines (ROUT, LOUT).	If connection is improper, resolder it. If connection is proper, go to 4.	
4	Power is not supplied properly, or the DAC or DSP is defective.	MAIN Assy, JACB Assy	Check the voltages (V+5, V+5_DAC) of the DAC (IC504).	Each power-supply may be loosely connected or may be defective. Correct loose connection. If the symptom persists, replace the defective part.	10.4 MAIN ASSY (2/3)
The digital audio signal is not output.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the signal line.	MAIN Assy, JACB Assy	Check the digital audio signal (SPDIF) and its connection.	If connection is improper, resolder it. If the SPDIF signal cannot be recognized, go to Step 3.	10.4 MAIN ASSY (2/3)
2	Defective transistor	MAIN Assy	Check the digital audio signal (SPDIF_OUT) and its connection.	If the SPDIF_OUT signal can be recognized, then the transistor (Q505) may be defective. Check the connection. If no problem is found, replace the transistor. If the SPDIF_OUT signal cannot be recognized, check the connection. If soldering is improper, resolder it.	10.4 MAIN ASSY (2/3)
3	Defective MAIN DSP	MAIN Assy	If the symptom persists after the above corrections,	Replace the MAIN DSP.	

A [8] CONTROL

[8-1] Improper fader operation after fader start

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections in the signal line.	JACB Assy	Check the waveforms of the control signals (CONT1, CONT2) from the CN9401 on the JACB Assy.	If the signal cannot be recognized, the JACB Assy may be defective. Check the soldering at the JACB Assy then resolder it, if necessary. If the signal can be recognized, go to Step 2.	10.6 JACB ASSY
2	Defective MAIN CPU	MAIN Assy	Check the waveforms of the control signals (CONT01, CONT02) from the MAIN Assy.	If the input signal can be recognized, then the MAIN CPU (IC101) may be defective. Replace it. If the input signal cannot be recognized, the communication line or the peripheral devices may be loosely connected. Resolder the terminals.	10.4 MAIN ASSY (2/3)

B

[9] DRIVE ASSY

[9-1] Improper operation of the loading mechanism

No loading					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Missing or defective part	Loading mechanism	Check that there is no part missing or defective.	If there is, install the missing part or replace the defective part.	
2	Loose connections in the signal line.	Loading mechanism	Check that the LP switch has been mounted.	If soldering is improper, resolder it.	
3	Improper assembling	Loading mechanism	Check that the lever is engaged with the LP switch.	Engage the lever with the LP switch.	
4	Improper soldering	Loading mechanism	Check that the wires from the loading motor have been properly soldered.	If they are not soldered, solder them.	
5	Power supply error	SRVA Assy	Check the power voltages (12 V, 5 V, 3.3 V, and 1.5 V).	Check the connection of the parts at the periphery of the power-supply IC that does not output the voltage. If the symptom persists after a corrective action, the power supply block is defective. Replace it.	
6	LPS1 and LPS2 signal errors	SRVA Assy	Check the waveforms of the LPS1 and LPS2 signal lines. (The LPS1 and LPS2 signals becomes L when the SW is set to ON.)	The loading detection SWs (S8901 and S8902) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace them.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
7	MUTE1 and MUTE2 signal errors	SRVA Assy	Check the waveforms of the MUTE1 and MUTE2 signals. (During loading, the MUTE1 signal is L and the MUTE2 signal is H.)	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2)
8	LOAD signal error	SRVA Assy	Check the LOAD signal.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
9	Defective SRVA Assy	-	If the symptom persists after the above corrections,	Replace the SRVA Assy.	

D

[9-2] The stepper does not work.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	The main unit is positioned inclined.	Main unit	Check if the main unit is positioned inclined.	Place it on a level surface.	
2	Improper assembling	Traverse mechanism	Check if there is a missing or defective part at the section where the main axis and stepper contact.	If there is, install the missing part or replace the defective part.	
3	Improper assembling	Traverse mechanism	Check the inside switch.	Assemble the INSW Assy properly.	
4	Power supply error	SRVA Assy	Check the power voltages (12 V, 5 V, 3.3 V, 1.5 V, VREF1, VREF2 and VHALF).	Check the connection of the parts at the periphery of the power-supply IC that does not output the voltage. If the symptom persists after a corrective action, the power supply block is defective. Replace it.	
5	INSW signal error	SRVA Assy	Check the INSW signal. (The INSW becomes L when the INSW is set to ON.)	The FFC cables that connect the traverse mechanism, SPCN, and SRVA are loosely connected, or the INSW is defective. Reconnect them securely. If the symptom persists, replace the INSW.	10.1 SRVA ASSY (1/2)
6	MU1 signal error	SRVA Assy	Check that the MU1 signal becomes H after loading is completed.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2)
7	Improper assembling	Cables	Check that the FPC cable that connects the traverse mechanism and the SRVA Assy is securely connected.	If it does not, securely connect it. If it is broken, replace the traverse mechanism.	

E

F

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
8	Signal error	SRVA Assy	Check that a sine-wave signal is input to Pins 29 and 30 of IC7001.	The IC7001 may be loosely connected or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
9	Defective traverse mechanism	-	If the symptom persists after the above corrections,	Replace the parts in the order of (1) DRIVER IC (IC7001), (2) SRVA Assy, then (3) traverse mechanism.	

[9-3] No playback

Neither a CD nor a DVD can be played back.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Short-circuit pad	Traverse mechanism	Check if the LD short-circuit pad is short-circuited.	If it is, open it.	
2	LD current	SRVA Assy	Check that the LD current is within the specified range.	If there is any error, replace the traverse mechanism.	5.2 Failure Judgment of the Pickup ASSY
3	Power supply error	SRVA Assy	Check the power voltages (12 V, 5 V, 3.3 V, 1.5 V, VREF1, VREF2 and VHALF).	Check the connection of the parts at the periphery of the power-supply IC that does not output the voltage. If the symptom persists after a corrective action, the power supply block is defective. Replace it.	
4	INSW signal error	SRVA Assy	Check the INSW signal. (L at ON.)	If the signal waveform is not proper, replace the INSW Assy.	10.1 SRVA ASSY (1/2)
5	MU1 signal error	SRVA Assy	Check that the MU1 signal becomes H after loading is completed.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2)
6	Improper assembling	Traverse mechanism	Check if the objective lens is dirty.	Clean the lens.	
7	A-F signal error	SRVA Assy	Check the A-F signals (CN7001).	Check that the signals fluctuate with 2.2 V at the center. If a DC signal is not output, check the VREF1. If a DC signal is not output from it, replace the FEP (IC7002). If an AC signal is not output, check the soldering at the CN7001-IC7002 of the pickup. If soldering is improper, resolder it. If soldering is OK, replace the parts in the order of (1) FEP (IC7002), (2) DRIVER IC (IC7001), (3) SODC (IC7006), (4) SRVA ASSY, then (5) traverse mechanism.	10.1 SRVA ASSY (1/2)
8	RF signal error	SRVA Assy	Check the RF signal (CN7001).	Compare the waveform with the operational waveform to check if its quality is low. Check if the disc is dirty or scratched. Check the polarity of the 7/x6 signal. When it is normal, Check the connections between pickup and CN7001 and IC7002. If soldering is improper, resolder it. If soldering is OK, replace the parts in the order of (1) FEP (IC7002), (2) DRIVER IC (IC7001), (3) SODC (IC7006), (4) SRVA Assy, then (5) traverse mechanism.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
9		-	If the symptom persists after the above corrections,	Replace the parts in the order of (1) DRIVER IC (IC7001), (2) FEP (IC7002), (3) SODC (IC7006), (4) SRVA Assy, then (5) traverse mechanism.	

Only a CD cannot be played back

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	LD current	SRVA Assy	Check that the LD current is within the specified range.	If there is any error, replace the traverse mechanism.	5.2 Failure Judgment of the Pickup ASSY
2	7/x6 signal error	-	Check that the 7/x6 signal is H during CD playback.	Check the connections between IC7006 and CN7001. If soldering is improper, resolder it.	10.1 SRVA ASSY (1/2)
3	E,F signal error	SRVA Assy	Check the E, F signals (CN7001).	Check that the signals fluctuate with 2.2 V at the center. If a DC signal is not output, check the VREF1. If a DC signal is not output from it, replace the FEP (IC7002). If an AC signal is not output, check the soldering at the CN7001-IC7002 of the pickup. If soldering is improper, resolder it. If soldering is OK, replace the parts in the order of (1) FEP (IC7002), (2) DRIVER IC (IC7001), (3) SODC (IC7006), (4) SRVA Assy, then (5) traverse mechanism.	10.1 SRVA ASSY (1/2)
4	RF signal error	SRVA Assy	Check the RF signal (CN7001).	Compare the waveform with the operational waveform to check if its quality is low. Check if the disc is dirty or scratched. Check the polarity of the 7/x6 signal. When it is normal, Check the connections between pickup and CN7001 and IC7002. If soldering is improper, resolder it. If soldering is OK, replace the parts in the order of (1) FEP (IC7002), (2) DRIVER IC (IC7001), (3) SODC (IC7006), (4) SRVA Assy, then (5) traverse mechanism.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms

A

Only a DVD cannot be played back

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	LD current	SRVA Assy	Check that the LD current is within the specified range.	If there is any error, replace the traverse mechanism.	5.2 Failure Judgment of the Pickup ASSY
2	7/x6 signal error	-	Check that the 7/x6 signal is H during DVD playback.	Check the connections between IC7006 and CN7001. If soldering is improper, resolder it.	10.1 SRVA ASSY (1/2)
3	RF signal error	SRVA Assy	Check the RF signal (CN7001).	Compare the waveform with the operational waveform to check if its quality is low. Check if the disc is dirty or scratched. Check the polarity of the 7/x6 signal. When it is normal, Check the connections between pickup and CN7001 and IC7002. If soldering is improper, resolder it. If soldering is OK, replace the parts in the order of (1) FEP (IC7002), (2) DRIVER IC (IC7001), (3) SODC (IC7006), (4) SRVA Assy, then (5) traverse mechanism.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms

B

[10] EUP Mode

Shifting to EUP mode is not possible.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective PANEL CPU	Related point	Check that the signal from Pin 29 of the PANEL CPU (IC8003) changes from H to L during mode shift.	The PANEL CPU (IC8003) may be defective. Check the soldering of the PANEL CPU and its periphery. If the soldering is OK, then replace it.	10.11 PNLB ASSY
2	Disconnection, breakage, or loose connection of cables	SRVA Assy	Check that the signal from Pin 3 of the CN7302 changes from L to H during mode shift.	The signal line cable may be defective. If it is loosely connected, securely connect it. If it is broken, replace it.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
3	Defective SW power supply			The SW power-supply is defective. Replace it.	

C

EUP mode cannot be exited.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective key or loose connection of the signal line	Related point and its periphery	Check the connection of the nonresponding key.	Check the connection of the signal line for the nonresponding key. If the connection is proper, replace the connected SW.	
2	Defective PANEL CPU	Related point	Check that the signal from Pin 29 of the PANEL CPU (IC8003) changes from L to H during mode shift.	The PANEL CPU (IC8003) may be defective. Check the soldering of the PANEL CPU and its periphery. If the soldering is OK, then replace it.	10.11 PNLB ASSY
3	Disconnection, breakage, or loose connection of cables	SRVA Assy	Check that the signal from Pin 3 of the CN7302 changes from H to L during mode shift.	The signal line cable may be defective. If it is loosely connected, securely connect it. If it is broken, replace it.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
4	Defective SW power supply			The SW power-supply is defective. Replace it.	

D

Reference: Signal logic during EUP mode

	Normal mode	EUP mode
EUP_CONT	L	H or open
PANEL CPU(IC8003) pin29	H	L
CPU_EUP_CONT	X	L

X : Not Concerned

E

F

[11] SERVICE MODE

[11-1] The drive does not work during Test Operation mode.

The LD does not emit light.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Short-circuit pad	Traverse mechanism	Check if the LD short-circuit pad is short-circuited.	If it is, open it.	-
2	LD current	SRVA Assy	Check that the LD current is within the specified range.	If there is any error, replace the traverse mechanism.	5.2 Failure Judgment of the Pickup ASSY
The spindle motor does not rotate.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Missing or defective part	Loading mechanism	Check that there is no part missing or defective.	If there is, install the missing part or replace the defective part.	
2	Power supply error	SRVA Assy	Check the power voltages (12 V, 5 V, 3.3 V, 1.5 V, VREF1, VREF2 and VHALF).	Check the connection of the parts at the periphery of the power-supply IC that does not output the voltage. If the symptom persists after a corrective action, the power supply block is defective. Replace it.	
3	MU1 signal error	SRVA Assy	Check that the MU1 signal becomes H after loading is completed.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2)
4	SPDLEC signal error	SRVA Assy	Check that the SPDLEC signal is a PWM signal with 1.65 V at the center.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
5	SPIN1 signal error	SRVA Assy	Check that the SPIN1 signal to Pin 29 of IC7002 is 3.3 V when disc rotation is at full speed.	If the signal is not input, check the soldering. If the soldering is improper, resolder it.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
6		-	If the symptom persists after the above corrections,	Replace the parts in the order of (1) DRIVER IC (IC7001), (2) SODC (IC7006), (3) SRVA Assy, then (4) traverse mechanism.	-
In-focus not possible					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Short-circuit pad	Traverse mechanism	Check if the LD short-circuit pad is short-circuited.	If it is, open it.	
2	LD current	SRVA Assy	Check that the LD current is within the specified range.	If there is any error, replace the traverse mechanism.	5.2 Failure Judgment of the Pickup ASSY
3	Power supply error	SRVA Assy	Check the power voltages (12 V, 5 V, 3.3 V, 1.5 V, VREF1, VREF2 and VHALF).	Check the connection of the parts at the periphery of the power-supply IC that does not output the voltage. If the symptom persists after a corrective action, the power supply block is defective. Replace it.	
4	MU1 signal error	SRVA Assy	Check that the MU1 signal becomes H after loading is completed.	DRIVER IC (IC7001) and SODC (IC7006) may be improperly soldered or defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006).	10.1 SRVA ASSY (1/2)
5	SPDLFG signal error	SRVA Assy	Check the SPDLFG signal.	SPDLFG signal may be improperly soldered and SODC (IC7006) may be defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006). If the symptom persists, replace DRIVER IC (IC7001).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
6	FEDRV signal error	SRVA Assy	Check that the FEDRV signal fluctuates with 1.65 V at the center.	FEDRV signal may be improperly soldered and SODC (IC7006) may be defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006). If the symptom persists, replace FEP (IC7002).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
7	FE signal error	SRVA Assy	Check that an S-shaped signal is output when a waveform of the FE (FEDRV) signal is rising after it drops down from 1.65 V.	FE signal may be improperly soldered and SODC (IC7006) may be defective. Resolder them, if necessary. If the symptom persists, replace SODC (IC7006). If the symptom persists, replace FEP (IC7002).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
8		-	If the symptom persists after the above corrections,	Replace the parts in the order of (1) FEP (IC7002), (2) SODC (IC7006), (3) DRIVER IC (IC7001), (4) SRVA Assy, then (5) traverse mechanism.	

A

No tracking close					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		Traverse mechanism	Check that focusing is in. (If focusing is out, tracking close is not possible.)	See "In-focus not possible" above.	
2	Signal error	SRVA Assy	With a CD, check that the E and F signals fluctuate with 2.2 V at the center. With a DVD, check the A, B, C, and D signals.	Check that the signals fluctuate with 2.2 V at the center. If a DC signal is not output, check the VREF1. If a DC signal is not output from it, replace the FEP (IC7002). If an AC signal is not output, check the soldering at the CN7001-IC7002 of the pickup. If soldering is improper, resolder it. If soldering is OK, replace the traverse mechanism.	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
3	TE signal error	SRVA Assy	Check that the TE signal fluctuates with 1.65 V at the center.	Check the connection of the parts at the periphery of the FEP (IC7002). If soldering is improper, resolder it. If soldering is OK, replace the FEP (IC7002).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
4	TEDRV signal error	SRVA Assy	Check that the TEDRV signal fluctuates with 1.65 V at the center, and that a pulse-like signal is output during tracking close.	If the output signal waveform is not proper, the connection of the SODC (IC7006) and its periphery may be loose or the parts may be defective. If the connection is loose, reconnect securely. If the connection is OK, replace the SODC (IC7006).	10.1 SRVA ASSY (1/2) 5.4 Operational Waveforms
5		-	If the symptom persists after the above corrections,	Replace the parts in the order of (1) FEP (IC7002), (2) SODC (IC7006), (3) DRIVER IC (IC7001), (4) SRVA Assy, then (5) traverse mechanism.	

[12] Error Codes

C

How to respond when an error code is displayed on the CONTROLLER DISPLAY (LCD) is described below.

[12-1] E-7001: DISC DRIVE ERROR

The ATAPI drive does not work properly.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-	Check the AUDIO DSP (IC501,) using automatic device diagnostics and the status LEDs.	If it is judged as NG, the ATAPI drive does not work properly. If the track data are not output although loading and rotating are properly performed, see [6] ATAPI DRIVE. In other cases, see [9] DRIVE ASSY.	[3] Indication of various information in 6.3 DETAILS OF THE SERVICE MODE

[12-2] E-7010: DSP DEVICE ERROR

D

The MAIN DSP (IC501) does not work properly. Downloading of programs is not possible.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the MAIN DSP (IC501) does not work properly or communication between the MAIN CPU (IC101) and MAIN DSP is not established. Proceed as follows:	
2	Power is not supplied properly.	MAIN Assy	Check the power voltages (V+3R3_DSP and V+1R2_DSP).	The MAIN DSP requires two power supply systems. Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	The clock is not properly input.	MAIN Assy	Check that the frequency at Pin 38 (DSP_CLK) of SD_RAM (IC505) is approx. 90 MHz.	Check the connection of the logic IC (IC507). If soldering is improper, resolder it.	10.4 MAIN ASSY (2/3)
4	The RESET signal is not properly input.	MAIN Assy	Check that the signals of the DSP710_RST and CPU_DSP710_RST lines are H.	Check the connection of the logic IC (IC123). If soldering is improper, resolder it. If the signal of the CPU_DSP710_RST line is L, the port on the MAIN CPU may be damaged. If the signal of the DSP710_RST line is L, check the connection of the logic IC (IC123) and its periphery.	10.3 MAIN ASSY (1/3) 10.4 MAIN ASSY (2/3)
5	Loose connection between the MAIN CPU and MAIN DSP	MAIN Assy	Check the connection between the MAIN CPU and MAIN DSP.	Check the connections between MAIN CPU (IC101) and MAIN DSP (IC501). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3) 10.4 MAIN ASSY (2/3)
6	Loose connection between the MAIN DSP and SD_RAM	MAIN Assy	Check the connection between the MAIN DSP and SD_RAM.	Check the connections between MAIN DSP (IC501) and SD_RAM (IC505). If soldering is improper, resolder it.	10.4 MAIN ASSY (2/3)
7		-	If the symptom persists after the above corrections,	Replace the MAIN CPU.	

F

[12-3] E-7020: USB-B DEVICE ERROR

The USB-B controller (IC1101) does not work properly.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the USB-B controller (IC1101) does not work properly or communication between the MAIN CPU (IC101) and USB-B controller is not established. Proceed as follows: See also "[4-2] No communication via the USB connector (Type B)."	
2	Power is not supplied properly.	MAIN Assy	Check the power voltage of V+3R3_USB_IO) line.	Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	The clock is not properly input.	MAIN Assy	Check that the frequency at Pin 14 (USB_CLK) of USB-B controller (IC1101) is 48 MHz.	Check the connection of the logic IC (IC115). If soldering is improper, resolder it.	10.5 MAIN ASSY (3/3) 10.3 MAIN ASSY (1/3)
4	The RESET signal is not properly input.	MAIN Assy	Check that the signals of the USB_RST and CPU_USB_RST lines are H.	Check the connection of the logic IC (IC123). If soldering is improper, resolder it. If the signal of the CPU_USB_RST line is L, the port on the MAIN CPU may be damaged. If the signal of the USB_RST line is L, check the connection of the logic IC (IC123) and its periphery.	10.5 MAIN ASSY (3/3) 10.3 MAIN ASSY (1/3)
5	Loose connection between the MAIN CPU and MAIN DSP	MAIN Assy	Check the connection between the MAIN CPU and USB-B controller.	Check the connections between MAIN CPU (IC101) and USB-B controller (IC1101). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3) 10.5 MAIN ASSY (3/3)
6		-	If the symptom persists after the above corrections,	Replace the USB-B controller.	

[12-4] E-7021: PHY CHIP ERROR

The PHY CHIP (IC1304) does not work properly.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the PHY CHIP (IC1304) does not work properly or communication between the MAIN CPU (IC101) and PHY CHIP is not established. Proceed as follows: See also "[5-1] No LAN communication."	
2	Power is not supplied properly.	MAIN Assy	Check the power voltages of V+3R3_ETH and V+3R3A_ETH) lines.	Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	The clock is not properly input.	MAIN Assy	Check that the frequency at Pin 47 (X2) of PHY CHIP (IC1304) is 25 MHz.	Check the connections between X1302 and PHY CHIP. If soldering is improper, resolder it.	10.5 MAIN ASSY (3/3)
4	The RESET signal is not properly input.	MAIN Assy	Check that the signals of the ETHER_RST and CPU_ETHER_RST lines are H.	Check the connection of the logic IC (IC123). If soldering is improper, resolder it. If the signal of the CPU_ETHER_RST line is L, the port on the MAIN CPU may be damaged. If the signal of the ETHER_RST line is L, check the connection of the logic IC (IC123) and its periphery.	10.5 MAIN ASSY (3/3) 10.3 MAIN ASSY (1/3)
5	Loose connection between the MAIN CPU and MAIN DSP	MAIN Assy	Check the connection between the MAIN CPU and PHY CHIP controller.	Check the connections between MAIN CPU (IC101) and PHY CHIP (IC1304). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3) 10.5 MAIN ASSY (3/3)
6		-	If the symptom persists after the above corrections,	Replace the PHY CHIP (IC1304).	

A [12-5] E-7023: GUI CPU ERROR

The TFT CPU (IC4001) does not work properly.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the TFT CPU (IC4001), FLASH (IC4004) or SD_RAM (IC4005) does not work properly or communication between the MAIN CPU (IC101) and TFT CPU (IC4001) is not established. Proceed as follows: See also "[4-2] No communication via the USB connector (Type B)."	
2	Power is not supplied properly.	TFTB Assy	Check the power voltages of V+3R3T_BF and V+1R2BF lines.	The TFT CPU requires two power supply systems. Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	The clock is not properly input.	TFTB Assy	Check that the frequency at Pin 38 (BUSCLK) of SD_RAM (IC4005) is approx. 98 MHz.	Check the connection of the Oscillator (X4002) and its periphery. If soldering is improper, resolder it.	10.9 TFTB ASSY (1/2)
4	The RESET signal is not properly input.	TFTB Assy MAIN Assy	Check that the signals of the TFT_RST line is H.	Check the connection of the logic IC (IC122). If soldering is improper, resolder it. If the signal of the TFT_RST line is L, check the connection of the logic IC (IC122) and its periphery.	10.9 TFTB ASSY (1/2) 10.3 MAIN ASSY (1/3)
5	Loose connection between the TFT CPU and FLASH	TFTB Assy	Check the connection between the TFT CPU and FLASH.	Check the connections between TFT CPU (IC4001) and FLASH (IC4004). If soldering is improper, resolder it.	10.9 TFTB ASSY (1/2)
6	Loose connection between the TFT CPU and SD_RAM	TFTB Assy	Check the connection between the TFT CPU and SD_RAM.	Check the connections between TFT CPU (IC4001) and SD_RAM (IC4005). If soldering is improper, resolder it.	10.9 TFTB ASSY (1/2)
7		-	If the symptom persists after the above corrections,	Replace the TFT CPU (IC4001).	

[12-6] E-7025: CDC DEVICE ERROR

The CDC device (IC5001) for the needle search pad does not work properly.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the CDC (IC5001) does not work properly or communication between the PANEL CPU (IC8003) and CDC (IC5001) is not established. Proceed as follows:	
2	Loose connections in the communication line.	Related point CDCB Assy	Check the connections of communication line between the PANEL CPU (IC8003) and CDC (IC5001).	If soldering is improper, resolder it.	10.11 PNLB ASSY 10.13 CDCB and SDSW ASSYS
3	Defective CDCB Assy	CDCB Assy	If the symptom persists after the above corrections,	Replace the IC5001. If the symptom persists, replace the CDCB Assy.	

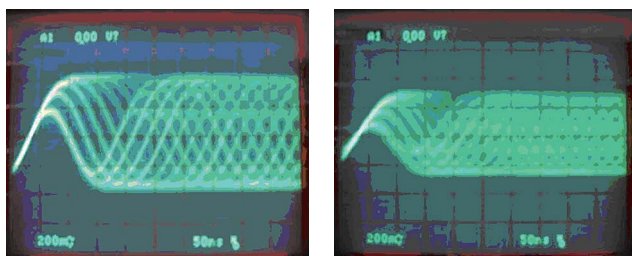
[12-7] E-8709: COMMUNICATION ERROR

Communication between the TFT CPU (IC4001) and MAIN CPU (IC101) is not possible.

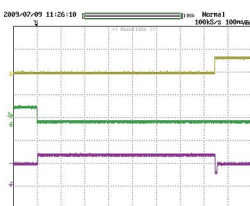
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		-		If it is judged as NG, the MAIN CPU (IC101) or SD_RAM (IC108 and IC109) does not work properly or communication between the MAIN CPU (IC101) and TFT CPU (IC4001) is not established. Proceed as follows:	
2	Power is not supplied properly.	MAIN Assy	Check the power voltages of V+3R3_CPU and V+1R2_CPU lines.	The MAIN CPU requires two power supply systems. Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	Loose connection between the MAIN CPU and SD_RAM	MAIN Assy	Check the connection between the MAIN CPU and SD_RAM.	Check the connections between MAIN CPU (IC101) and SD_RAM (IC108 and IC109). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3)
4	Loose connections in the communication line.	MAIN Assy TFTB Assy	Check the connections of communication line between the MAIN CPU (IC101) and TFT CPU (IC4001).	If soldering is improper, resolder it.	10.9 TFTB ASSY (1/2) 10.3 MAIN ASSY (1/3)
5	The clock is not properly input.	MAIN Assy	Check that the frequency at Pin 38 (CPU_CLKOUT) of SD_RAM (IC108 and IC109) are approx. 107.9 MHz.	Check the connection of the logic IC (IC101). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3)
6	Loose connection between the MAIN CPU and SD_RAM	MAIN Assy	Check the connection between the MAIN CPU and SD_RAM.	Check the connections between MAIN CPU (IC101) and SD_RAM (IC108 and IC109). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3)
7		-	If the symptom persists after the above corrections,	Replace the MAIN Assy.	

5.4 OPERATIONAL WAVEFORMS

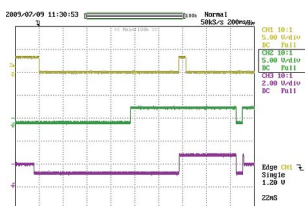
RF (CD: STD-905/DVD: Z-1)



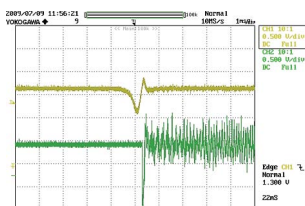
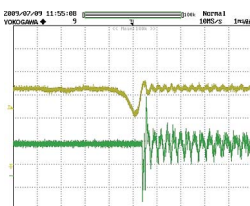
Loading in (1-ch LPS1, 2-ch LPS2, 3-ch LOAD)



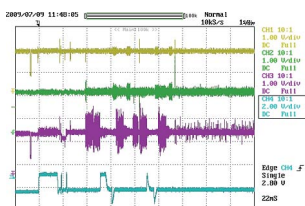
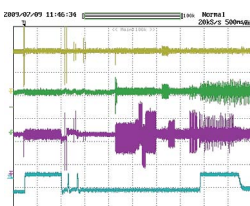
Loading out (1-ch LPS1, 2-ch LPS2, 3-ch LOAD)



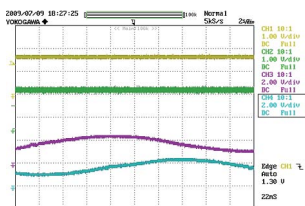
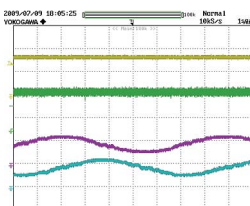
In-focus (CD/DVD) 1-ch FE, 2-ch FEDRV



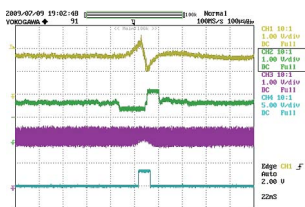
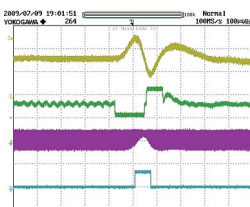
Setup (CD/DVD) 1-ch FE, 2-ch FEDRV, 3-ch TE, 4-ch SPIN



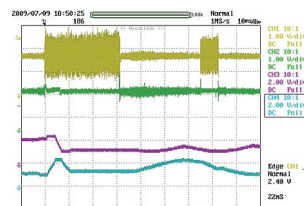
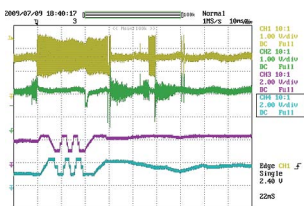
Playback (CD/DVD) 1-ch FE, 2-ch TE, 3-ch SLIN1, 4-ch SLIN2



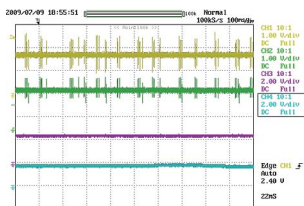
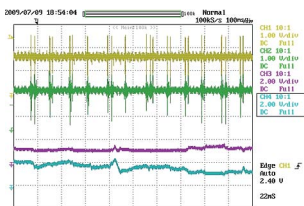
Pause (CD/DVD) 1-ch TE, 2-ch TEDRV, 3-ch RF, 4-ch OFTR



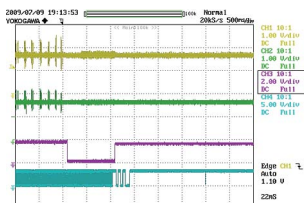
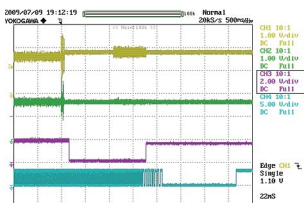
Track search (CD/DVD) 1-ch TE, 2-ch TEDRV, 3-ch SLIN1, 4-ch SLIN2



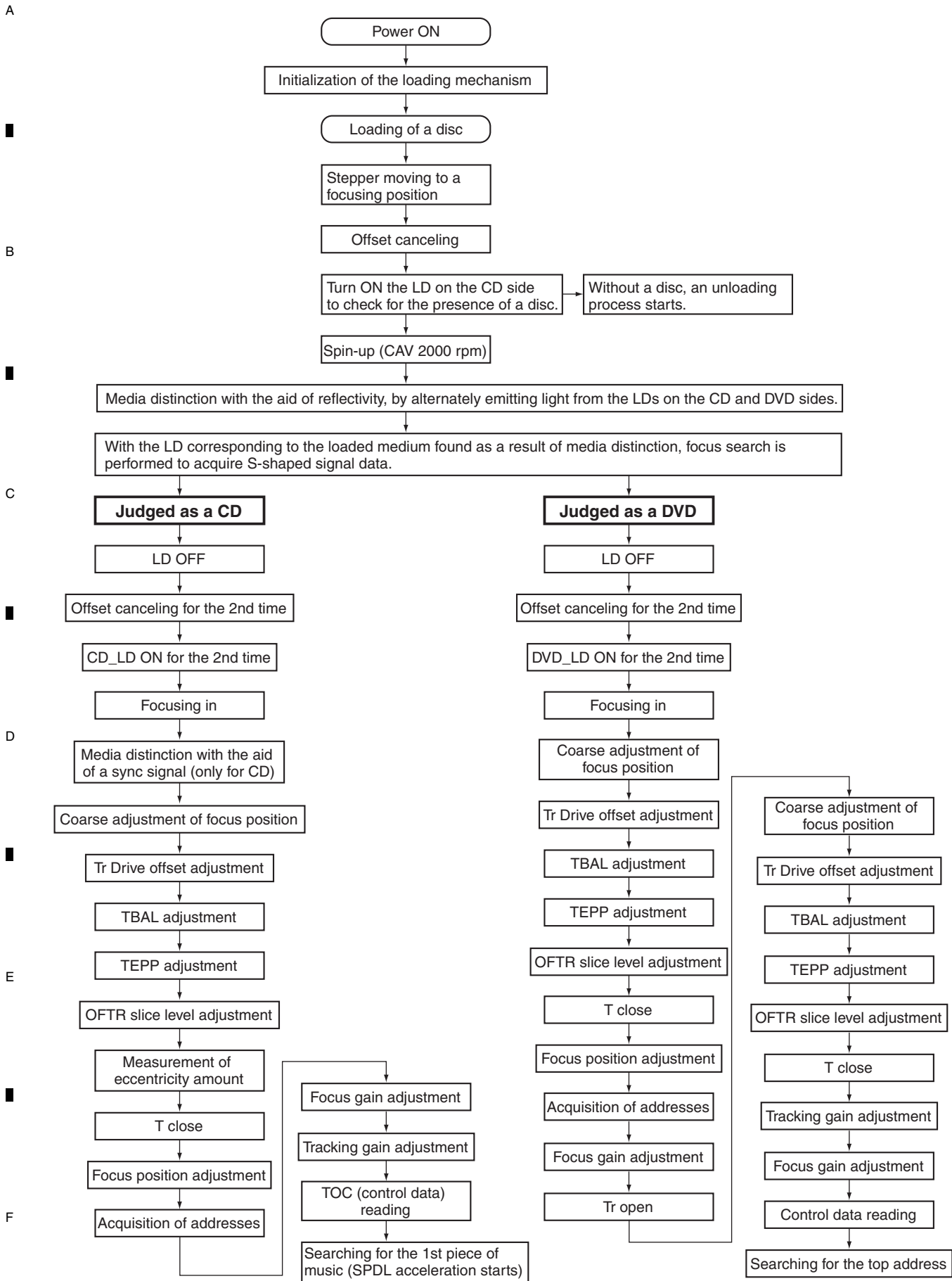
Search (CD-DA/DVD-MP3) 1-ch TE, 2-ch TEDRV, 3-ch SLIN1, 4-ch SLIN2



Stop (CD/DVD) 1-ch FE, 2-ch FEDRV, 3-ch SPIN, 4-ch SPDLFG



5.5 SETUP SEQUENCE



[1. USB B connector]

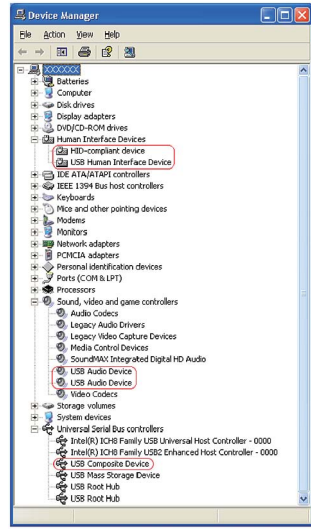
Whether communication between the PC connected via the USB B connector and this unit is properly performed or not can be confirmed on the PC.

Note: Installation of the driver software is not necessary.

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

- In a case of Windows XP:
- Start, Control Panel, System, Hardware, then Device Manager
- Devices to be added:
- Universal Serial Bus controllers
- USB Composite Device
- Under “Sound, video and game controllers”
- USB Audio Device
- Human Interface Devices
- HID-compliant device
- USB Human Interface Device

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



[2. LINK]

Whether communication between the PC connected via the LINK connector and this unit is properly performed or not can be confirmed on this unit.

Note: Use a Category 5 cable or a cable with higher specifications for connection.
Either a straight or cross LAN cable can be used when the unit is directly connected with the PC, but when the unit is connected with the PC via a hub, be sure to use a straight cable.

- Use the MENU/UTILITY key of this unit to check linkage.
- The linkage between the PC and this unit can be confirmed with LINK STATUS under [MENU/UTILITY].

- How to display LINK STATUS
1. Hold the MENU/UTILITY key pressed for at least 1 sec.
- The [UTILITY] screen will be displayed.
2. Select LINK STATUS, using the rotary selector.
3. With LINK STATUS selected, connect the PC and this unit, using the LINK cable.
4. Check the LINK STATUS display.

	① Not connected	② While connection is being made	③ When connected properly
Indication	NOT CONNECT	CONNECTING	CONNECTED

If the indication changes from ① to ② then ③, the link is properly established.
If the cable is disconnected, the indication returns to ①.

5. After checking is completed, press the MENU/UTILITY key.
- The screen displayed before the MENU/UTILITY key was pressed will be restored

6. SERVICE MODE

6.1 OUTLINE OF THE SERVICE MODE

- A The following service modes are prepared for this unit.
- ① Confirmation of the button input and an indication function.
It is the mode which checks each input and display function of a button, a JOG dial, the slider volume, a encoder and a needle pad.
 - ② Check mode of the load of JOG dial.
It is the mode which measures the load when rotating JOG dial.
 - ③ Indication of various information
It is a mode displaying information such as a version and an error history, a device normal / abnormality judgment.
 - ④ Error display list
An error code and the contents are shown.
 - ⑤ Confirmation of movement of the drive unit
It is the mode which checks operation of a mechanism and servo of drive unit.
 - ⑥ Output of the alarm port
Explanation of the meaning of output of status terminal on a PC Board Assy.
 - ⑦ Firmware update.
Explanation of the method of firmware update.

C

6.2 ABOUT THE DEVICE OF CDJ-2000

D

Device Name	Function	Part No.	Ref No.	Assy
MAIN CPU	Main control	R5S77641N300BG	IC101	MAIN Assy
FLASH	Memory for MAIN CPU (Firmware)	DYW1779	IC114	MAIN Assy
SDRAM	Memory for MAIN CPU (Work)	K4S561632J-UC75	IC108, IC109	MAIN Assy
DSP	Audio DSP	D710E001BZDHA275	IC501	MAIN Assy
SDRAM	Memory for DSP (Work)	K4S561632J-UC75	IC505	MAIN Assy
USB_B CONTROLLER	CONTROLLER for USB-B (function)	M66291GP	IC1101	MAIN Assy
ETHER PHY	PHY for LINK	RTL8201CP-LF	IC1304	MAIN Assy
GUI CPU	LCD display control	ADSP-BF531SBSTZ400	IC4001	TFTA Assy
FLASH	Memory for GUI CPU (Firmware)	DYW1781	IC4004	TFTA Assy
SDRAM	Memory for GUI CPU (Work)	K4S561632J-UC75	IC4005	TFTA Assy
PANEL CPU	Button input, LED & JOG FL control	M3030RFCPPFP	IC8003	PNLB Assy
SODC	Disc drive control	MN103S71F	IC7006	SRVA Assy
FLASH	Memory for DRIVE CONTROLLER	DYW1771	IC7004	SRVA Assy
CDC	Contact position detection of a needle pad	AD7147ACPZ500RL7	IC5001	CDCB Assy

E

F

- Two or more FLASH and SDRAM are mounted in the main body.
Please diagnose it after confirming whether it is a device that agrees with purpose again.

6.3 DETAILS OF THE SERVICE MODE

[1] Confirmation of the button input and an indication function

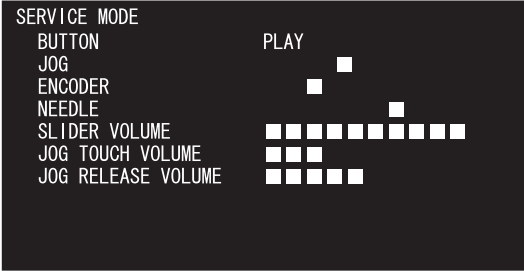
When it spends a power supply while pushing a TEMPO button and a MEMORY button simultaneously, It is displayed in the LCD display part, "CDJ-2000 SERVICE MODE", and enters into this mode. (Please continue pushing until "Pioneer LOGO" screen disappears.)

When it enters this mode, the TAG-TRACK button is pushed, and the screen is sent as follows, the following status displays are done.

In this mode, the input of each button, JOG, volume, etc. is normal, and it can check that a display can also be performed normally.

In addition, indication turns on while you push a button.

Caution: In this status display, if a TOUCH/BRAKE knob is turned to the limit of the right, it will shift to "the load measurement mode of JOG."(Refer to the following clause.)



- BUTTON : The pushed button name is displayed.
- JOG : The point moves according to the direction that JOG turned.
- ENCODER : The point moves according to the direction that ENCODER switch turned.
- NEEDLE : The point moves according to the direction to which touched the needle pad and it was made to move.
- SLIDER VOLUME : If a TEMPO slider knob is moved to the - side, a bar display will increase.
- JOG TOUCH VOLUME : If a TOUCH/BRAKE knob is turned to the right, a bar display will increase.
- JOG RELEASE VOLUME : If a RELEASE/START knob is turned to the right, the Bar display will increase.

A

Button, Switch	Light up LED	Status Display (BUTTON)	Other Displays
PLAY/PAUSE	PLAY/PAUSE	PLAY	
CUE	CUE	CUE	
IN/CUE/IN ADJUST	IN/CUE/IN ADJUST	IN	
OUT/OUT ADJUST	OUT/OUT ADJUST	OUT	
RELOOP/EXIT	RELOOP/EXIT	RELOOP	
TRACK REV (◀◀)		PREVIOUS ◀◀	
TRACK FWD (▶▶)		NEXT ▶▶	① (Refer to the display pattern of JOG FL)
SEARCH REV (◀◀)		REV ◀◀	② (Refer to the display pattern of JOG FL)
SEARCH FWD (▶▶)		FWD ▶▶	⑤ (Refer to the display pattern of JOG FL)
HOT CUE (A)	HOT CUE(A), (B), (C) RED	HOT CUE A	
HOT CUE (B)	HOT CUE(A), (B), (C) GREEN	HOT CUE B	
HOT CUE (C)	HOT CUE(A), (B), (C) UMBER	HOT CUE C	
REC MODE		REC MODE	
JOG MODE	VINYL	JOG MODE	④ (Refer to the display pattern of JOG FL)
TEMPO RANGE	CDJ	TEMPO RANGE	
MASTER TEMPO	MASTER TEMPO	MASTER TEMPO	
TEMPO RESET	TEMPO RESET	TEMPO RESET	
TIME MODE/AUTO CUE		TIME/ACUE	
DELETE	All LED lights up *1	DELETE	All JOG-FL lights up
MEMORY		MEMORY	
EJECT	EJECT	EJECT	
CUE/LOOP CALL ◀		◀ CALL	
CUE/LOOP CALL ▶		CALL ▶	
JOG TOUCH	JOG TOUCH	JOG TOUCH SW	③ (Refer to the display pattern of JOG FL)
4-BEAT LOOP		4-BEAT LOOP	
TEMPO		SLIDER VOLUME ■ MARK Increase and decrease (10 points)	
JOG (FWD ROTATE)	JOG illuminations white	JOG ■ MARK Right movement (10 points by one rotation)	
JOG (REV ROTATE)	JOG illuminations red	JOG ■ MARK Left movement (10 points by one rotation)	
TOUCH/BREAK (VOLUME)		JOG TOUCH VOLUME ■ MARK Increase and decrease (10 points)	
RELEASE/START (VOLUME)		JOG RELEASE VOLUME ■ MARK Increase and decrease (10 points)	
EJECT LOCK SW (LOCK)	SLEEP	STANDBY	
DIRECTION LEVER (REV)	REV	REV	
SD DOOR (OPEN)	SD Access	SD OPEN	
USB STOP	USB Access	USB STOP	
LINK	LINK	LINK	
USB	USB	USB	
SD	SD	SD	
DISC	DISC	DISC	
BROWSE	BROWSE	BROWSE	
TAG LIST	TAG LIST	TAG LIST	
INFO	INFO	INFORMATION	
MENU	MENU	MENU	
BACK			Color pattern-changes. (Refer to the color pattern display of LCD)
TAG TRACK			Color pattern-changes. (Refer to the color pattern display of LCD)
ROTARY SELECTOR (SW)	ROTARY SELECTOR INDICATOR	ENCODER PUSH	
ROTARY SELECTOR (FWD ROTATE)		ENCODER ■ MARK Right movement (Max 10 points)	
ROTARY SELECTOR (REV ROTATE)		ENCODER ■ MARK Left movement (Max 10 points)	
NEEDLE SEARCH (Right-and-left movement)		NEEDLE ■ MARK Right-and-left movement (10 points)	

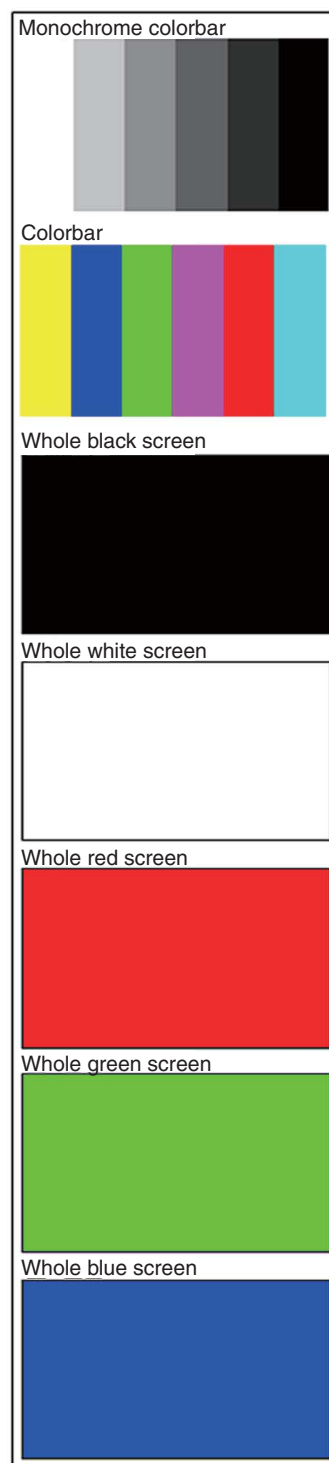
*1 About the LED of the HOT CUE button, red turns on HOT CUE(A), green turns on HOT CUE(B), and LED of the umber turns on HOT CUE(C).

Display pattern of JOG FL



Color pattern display of LCD

When pressing the TAG-TRACK button from above status indication more and send a screen, display the six kinds of color patterns to LCD as follows.
If the BACK button is pushed, a display will return a previous page.



A [2] Check mode of the load of JOG dial

Measurement

It is the mode which judges the load (light/heavy) when rotating JOG dial numerically objective.

It goes into "[1] Confirmation of the button input and a indication function", and it will become this mode if a TOUCH/BRAKE switch is turned to the limit of the right.

It goes into this mode, and a number will be displayed if JOG dial is turned with sufficient vigor.

The rotation direction -- right-handed rotation and left-handed rotation -- either is O.K.

The meaning of the numerical value displayed is as follows.

TOP SPEED: Top speed (let the time of turning one rotation in 1.8 second be 1 speed)

TIME: Time taken for rotation to fall to 1.5 speed from 3 speed

B 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 in the display " 00M:00S 00.0F " to be flashing a warning.

In addition, when it carries out continuously several times, about time, 2nd henceforth takes and displays an average of a maximum of 99 times.

Measurement which absorbed variation by this can be performed.

SERVICE	MODE	JOG LOAD
	TOP SPEED	TIME (msec)
1.	8.96	150
2.	9.57	153
3.	---	---
4.	---	---
5.	---	---
AVR.	9.26	151 OK

2

00M:00S 00.0F

Input data twice.

←The numerical value written to the right end shows the number of times of an input.

SERVICE	MODE	JOG LOAD
	TOP SPEED	TIME (msec)
1.	8.96	150
2.	9.57	153
3.	9.57	156
4.	9.57	147
5.	9.92	150
AVR.	9.51	151 OK

5

00M:00S 00.0F

Input data 5 times.

SERVICE	MODE	JOG LOAD
	TOP SPEED	TIME (msec)
6.	8.68	153
7.	9.57	156
8.	7.12	153
9.	10.28	147
10.	9.57	156
AVR.	9.28	152 OK

10

00M:00S 00.0F

Input data 10 times.

Measurement to 99 times and calculation of average value can be performed by the highest.

Judgment result

If time is in a certain uniformity range, I display it with "OK" in the line of title, but display "NG" if I do not enter.

This judgment value is 170 ± 20 msec.

Record of a judgement

If USB memory is inserted and MASTER TEMPO button is pushed, a measurement result can write out as a CSV file of the name "JOGLOAD_2K.CSV."

In addition, data is added whenever it pushes MASTER TEMPO button.

Moreover, the MAC address is filled in as solid identification.

● MAC_ADDR:00-E0-36-00-84-40		
NO.	TOP SPEED	TIME(msec)
1	7.71	138
2	8.17	138
3	7.61	138
4	9.25	141
5	8.81	135
6	8.41	138
7	8.68	141
8	7.12	141
9	8.17	138
10	8.68	135
11	8.17	138
12	8.54	132
13	7.82	135
AVR	8.24	137(NG)
(judge : 150ms <= Time <= 190ms)		

[3] Indication of various information

If a power supply is switched on, pushing "TEMPO" "CUE/LOOP CALL ◀" button simultaneously with a button, it will be displayed on LCD display part as "CDJ-2000 SERVICE MODE", and will go into this mode.

(Please continue pushing until "Pioneer LOGO" screen disappears.)

It goes into this mode, and if a TAG-TRACK button is pushed and a screen is sent, the contents of a display will change as follows. Moreover, it can return with BACK button.

① Version information

SERVICE MODE			
VERSION INFORMATION			
MAIN	Ver1.02	DRIVE	Ver1.00
GUI	Ver1.01		
PANEL	Ver1.00	MAC ADDRESS	
DSP	Ver1.00	00-E0-36-00-D2-2C	

The version number of CPU/microcomputer carried in this machine is displayed.
The MAC Address of Ethernet simultaneously built in this machine is also displayed.

MAIN : The CPU which controls a main
GUI : The CPU which controls a LCD display
PANEL : The microcomputer which controls a button input.
DSP : Audio DSP
DRIVE : The controller which controls a disc drive.

② Error history

SERVICE MODE			
ERROR HISTORY (1/2)			
1. E-8301 CD	5. E-8308 SD		
2. E-8302 DVD	6. E-8303 CD		
3. E-8307 USB	7. E-8307 USB		
4. E-8308 SD	8. E-8302 DVD		

SERVICE MODE			
ERROR HISTORY (2/2)			
9. E-8302 CD	13. E-8308 SD		
10. E-8303 DVD	14. E-8302 CD		
11. E-8307 USB	15. E-8307 USB		
12. E-8308 SD	16. E-8301 DVD		

16 pieces are divided into two screens and the error history generated in the past is displayed. "1" becomes the newest error code. The 16 newest pieces are displayed.

The screen is selected with the BACK button or TAG TRACK button.

Moreover, the item which follows an error code expresses a media. (The error which is not related to media is blank.)

USB : USB device (MEMORY/HDD)

SD : SD card

CD : DRIVE - CD media (CDDA/CD-ROM)

DVD : DRIVE - DVD media (DVD-ROM)

About contents of an error code, please refer to "[4] Error display list".

③ Auto device diagnosis

SERVICE MODE			
AUTO DEVICE CHECK			
GUI	OK	USB CONTROLLER	OK
PANEL	OK	PHY CHIP	OK
DSP	OK	CDC	OK
DRIVE	OK		

The result which judged normal/abnormalities of each device is displayed at the time of power supply ON and initialization.

GUI : The CPU which controls LCD indication.
PANEL : The microcomputer which controls a button input.
DSP : Audio DSP
DRIVE : The controller which controls a disc drive.
USB CONTROLLER : USB DEVICE (Type B) controller
PHY CHIP : The controller which controls the physical layer of Ethernet.
CDC : The tip which outputs the signal of a needle pad.

Please refer to "[6] Output of the alarm port" for details.

A

④ Factory reset

SERVICE MODE
FACTORY RESET
Push TIME-MODE button.

It is used to return the contents set up by UTILITY to a factory-shipments state, or clear an error history.
If TIME MODE button is pushed on this screen, it will return to the following states.

<<UTILITY>>
 • PLAYER NO = AUTO
 • ON AIR DISPLAY = ON (*)
 • LCD BRIGHTNESS = 3
 • SCREEN SAVER = ON
 • AUTO CUE LEVEL = -60 dB
 • AUTO STANDBY = ON
 • LIBRARY CREATOR = LIBRARY
 • HISTORY NAME = "HISTORY"
 • ART WORK = ON
 • MIDI Ch = 1
 • LANGUAGE = <Shipment setting>
 • QUANTIZE = OFF
 • DIGITAL OUT = 24 bit

<<The state of a key>>
 • TIME MODE = REMAIN
 • AUTO CUE = OFF
 • JOG MODE = CDJ

<<Error history>>
 • ALL CLEAR

(*) This function is not mounted by the initial version.

Switching on a power supply can also perform, pushing a USB-STOP button and EJECT button simultaneously, in order to perform Factory reset. However, an error history is not cleared at this time.

B

SERVICE MODE
FACTORY RESET
Complete.

C

D

SERVICE MODE
DRIVE OPERATION
STATUS PLAY
ERROR RATE 1.23E-4
03 27_M:46_S 58 0_F

The state of the drive at the time of servo test operation and the measurement result of an error rate are displayed.
Refer to "[5] Confirmation of movement of a drive unit" for the details of operation.

E

⑥ A check of auto standby

SERVICE MODE
AUTO STANDBY TEST
Push TEMPO button for going into
AUTO STANDBY MODE.
Push some button for returning.

Usually, there are no media to reproduce, and when prolonged operation is not performed, it shifts to the auto standby mode.
However, in this mode, it can shift to the auto standby mode immediately.

If operation excluding the following from the state of being in the auto standby mode is performed,

- Push the USB STOP button
- JOG rotation (except for touching the Table top)
- Turn the TOUCH/BRAKE and RELEASE/START volumes
- Move the TEMPO slider
- Touch the needle search ribbon
- Switch the DIRECTION lever

It will return from the auto standby mode.

Since a return is the same processing as power supply ON, the service mode is ended.

F

[4] Error display list

WAVE display shows "E-XXXX: DISC DRIVE ERROR".

Note: An alarm port is a function which outputs a pulse from the test port of Main CPU and tells an unusual part by the number of pulses.

Error Code	Display Word	Contents	Remarks	Alarm port correspondence
E-7001	DISC DRIVE ERROR	The ATAPI drive doesn't function normally.		○
E-7010	DSP DEVICE ERROR	The DSP doesn't function normally. The program isn't available for download.		○
E-7020	USB-B DEVICE ERROR	The USB-B controller doesn't function normally.	*	○
E-7021	PHY CHIP ERROR	The PHY CHIP doesn't function normally.	*	○
E-7022	PANEL CPU ERROR	The panel microcomputer doesn't function normally.	* It becomes this error when communication with PANEL is not materialized in the abnormalities in wire connection etc. It becomes this error when update of PANEL goes wrong. MAIN detects and an error code is transmitted to GUI.	○
E-7023	GUI CPU ERROR	The GUI CPU doesn't function normally.	* It becomes this error when update of GUI goes wrong. GUI displays an error code spontaneously in emergency mode. * If GUI breaks truly, a display will not come out at all.	○
E-7024	MAIN CPU ERROR	The main CPU doesn't function normally.	* It becomes this error when update of MAIN goes wrong. MAIN transmits an error code to GUI by emergency mode.	
E-7025	CDC DEVICE ERROR	CDC for needle pads does not operate normally.	* CDC=Capacity Digital Converter	○
E-7101	INTERRUPT EXCEPTION	The abnormalities which are not expected on a main CPU occurred.		
E-7201	TOC READ ERROR	TOC Data can't be read.		
E-8301	PLAYER ERROR	Abnormalities occurred during starting.		
E-8302	PLAYER ERROR	Abnormalities occurred during playback.		
E-8303	PLAYER ERROR	Other abnormalities occurred.		
E-8304	DECODE ERROR	It is the file which cannot be performed normally.		
E-8305	DATA FORMAT ERROR	It is the file which cannot be performed normally.		
E-8306	NO FILE	The registered file does not exist.		
E-8709	COMMUNICATION ERROR	GUI CPU and MAIN CPU cannot be communicated.	* When the communication with MAIN is not materialized by the abnormalities of connection, GUI displays an error code spontaneously. When MAIN does not operate completely, it will be in this mode.	
E-9101	MECHANICAL TIMEOUT	Mechanism operation was not completed within regulation time.		

* New

A [5] Confirmation of movement of the drive unit

It is within "[3] Indication of Various Information" mode, and the following control becomes possible when the screen of "⑤ the drive operation/error rate measurement" is chosen.

This mode consists of "player operation mode" and "test operation mode."

<Player operation mode>

Basic operation of Servo, such as setup, play, pause, and track search, is carried out.

Moreover, measurement of an error rate can also be performed.

<Test operation mode>

Servo operation is finely controllable gradually.

* It becomes player operation mode and shifts to test operation mode by the key input in the beginning.

* The command treated here is for mainly testing a mechanism and a servo system, and is not for DJ functions, such as scan and tempo.

Function	Main unit button
<Player operation mode>	
Servo All Off (Stop)	TIME
Play(Trace) / Pause	PLAY/PAUSE
Track Search Fwd/Rev	TRACK SEARCH FWD/REV
Error Rate Count	CUE
Eject	EJECT
Mode Change (-> Test operation mode)	MASTER TEMPO
<Test operation mode>	
Servo All Off	TIME
CD Select	MEMORY
DVD Select	DELETE
Focus Jump Up	LOOP IN
Focus Jump Down	LOOP OUT
Slider Move Fwd	SEARCH FWD
Slider Move Rev	SEARCH REV
Step command	CUE/LOOP CALL NEXT(▶)
Mode Change (-> Player operation mode)	MASTER TEMPO

■ Player operation mode command

D Play(Trace) / Pause

If it is in a stop state, it will set up and play. Moreover, if it is in a play state, whenever it will push a button, a pause and a play are carried out by turns.

It is displayed on a drive state display part as "PLAY or PAUSE."

In the case of CD, the track number and time under present trace are displayed.

In the case of DVD, the layer number under present trace is displayed on the place of TRACK, and it displays a physical address on the place of MSF.

Note: In this mode, even if it inserts a disk, an automatic setup is not carried out.

Moreover, a play is not carrying out audio reproduction, but is tracing the signal side of a disk.

Track Search F/R

Search a track displayed by a FWD / REV course and, in the case of a CD, do pause.

It is indicated with [SEARCH] in the drive condition indication part.

Note: A track search is not possible in CD-ROM (MP3/AAC/WAV/AIFF).

Whenever a FWD / REV direction is pushed, search it with the following turn and, in the case of DVD, do a pause.

When a FWD direction was pushed with DUAL LAYER DISC.

→ L0 inside → L0 middle → L0 outside → L1 inside → L1 middle → L1 outside →

When a REV direction was pushed with DUAL LAYER DISC.

← L0 inside ← L0 middle ← L0 outside ← L1 inside ← L1 middle ← L1 outside ←

When a FWD direction was pushed with SINGLE LAYER DISC.

→ L0 inside → L0 middle → L0 outside →

When a REV direction was pushed with SINGLE LAYER DISC.

← L0 inside ← L0 middle ← L0 outside ←

It is indicated in the indication part as follows.

[SEARCH L0 IN]	Layer 0 inside	[SEARCH L1 IN]	Layer 1 inside
[SEARCH L0 MID]	Layer 0 middle	[SEARCH L1 MID]	Layer 1 middle
[SEARCH L0 OUT]	Layer 0 outside	[SEARCH L1 OUT]	Layer 1 outside

Note: A search address is different in inside/middle/outside at total capacity of a Disc in a relative address.
Outside searches about 20000 sector I than a Disc most circumference address.

Error Rate Count

Measure an error rate of 10000 blocks in the case of DVD in the case of a CD from a present position doing a play/pause for about 20 seconds and display a measurement result in FL.

Usually, a track to measure is made to search and this button is inputted from a pause state.

For example, it is displayed as "3.56E-4 O.K." etc.

If an error rate is less than 3.00E-3, it will be displayed as O.K. If an error rate is larger than 3.00E-3, it will be displayed as NG. Measurement with the managed disk at the time of factory shipments is a premise.

The product does not judge whether they are inferior goods at the time of service.

Eject

A disk is ejected. It is indicated with [EJECT] in the indication part.

Mode Change (It shifts to the Test operation mode.)

If the MASTER TEMPO button is pushed into player operation mode, MASTER TEMPO LED will light up, and it will shift to the below-mentioned "test operation mode." It is indicated with [TEST MODE] in the indication part.

■ Test operation mode command

Servo operation is finely controllable gradually.

Keep in mind a test operation mode command that it may give a damage to a player as mistaking the usage.

Please operate this mode after making a disc a set completion state.

Note: Operate it after you take a state of loading in.

Servo All Off

When servo is ON, all servo will be turned off if the TIME button is pushed.

It is indicated with [ALL OFF] in the indication part.

CD Select

When you start a CD, push a MEMORY button and choose a CD.

It is indicated with [CD SELECT] in the indication part.

DVD Select

When you start a DVD, push a CALL button and choose a DVD.

It is indicated with [DVD SELECT] in the indication part.

Focus Jump Up

In DVD choice, a focus jumps in L1.

It is indicated with [FOCUS JUMP UP] in the indication part.

Focus Jump Down

In DVD choice, a focus jumps in L0.

It is indicated with [FOCUS JUMP DOWN] in the indication part.

Slider Move Fwd

You send about 1.8 mm sliders to a circumference direction whenever you push a SEARCH FWD button.

It is indicated with [SLIDER FWD] in the indication part.

Slider Move Rev

You send about 1.8 mm sliders to an internal circumference direction whenever you push a SEARCH REV button.

It is indicated with [SLIDER REV] in the indication part.

A Step command

Perform the serial movement of the setup by a step.

If a CUE/LOOP CALL NEXT (▶) button is pushed, it will step up (even if it pushes PREV (◀) button, the stripes of the step down are not carried out). Operation and a display of each step are as follows.

Step	Action	Indication Part
STEP0 :	Servo All Off	ALL OFF
STEP1 :	Laser diode on	LD ON
STEP2 :	Disc presence judgment	DISC SEARCH
STEP3 :	Spindle on (2000 rpm)	SPINDLE ON
STEP4 :	Disc sense	DISC SENSE
STEP5 :	Focus serve on	FOCUS ON
STEP6 :	Tracking servo on	TRACKING ON
STEP7 :	Focus position coarse adjustment	FOCUS POSITION
STEP8 :	Focus gain adjustment	FOCUS GAIN
STEP9 :	Tracking gain adjustment	TRACKING GAIN
STEP10 :	Address lead start	ADDRESS READ

CUE/LOOP CALL NEXT (▶) button : step up

Mode Change (The end of the test movement mode)

If the MASTER TEMPO button is pushed into "test operation mode", MASTER TEMPO LED will light out, and it will shift to the above-mentioned "player operation mode." It is indicated with [PLAYER MODE] in the indication part.

[6] Output of the alarm port

Although "Normal/abnormalities of each device at the time of power supply ON and initialization" can be judged by Auto device diagnosis of a "[3] Indication of various information", the test port output on a main board can also be checked.

When a defect is detected by the device by power supply ON, an alarm port performs the following pulse outputs.

		Alarm Port		Output Pattern	Service Mode/Auto Device Diagnostic Display		Normal Error Display
		Detection	Remarks		Display	Remarks	
Main CPU							
	Flash (for Main CPU)	×	If Flash is NG, the boot program itself does not operate.		×	←	
	SDRAM (for Main CPU)	○		(0.5sHI->0.5sLOW) x once ->2sLOW->Afterward, repetition	×	If SDRAM is NG, the service program itself does not operate.	
Peripheral with built-in Main CPU							
	IDE (DRIVE)	○		(0.5sHI->0.5sLOW) x 7 times ->2sLOW->Afterward, repetition	○		E-7001
	USB-A	—	Since it is built-in Main CPU, it is hard to consider that peripheral one of these becomes out of condition at pinpoint. It cannot judge whether all have fault in the course to a connector.		—		
	SD	—			—	←	
	LAN	—			—		
External peripheral							
	USB-B (USB CONTROLLER)	○		(0.5sHI->0.5sLOW) x 4 times ->2sLOW->Afterward, repetition	○		E-7020
	PHY chip (PHY CHIP)	○		(0.5sHI->0.5sLOW) x 3 times ->2sLOW->Afterward, repetition	○		E-7021
Device communicated with Main CPU							
	PANEL microcomputer (PANEL)	○		(0.5sHI->0.5sLOW) x 5 times ->2sLOW->Afterward, repetition	△	Although detection is possible in communication failure, since it does not put into the service mode, a check is correctly impossible.	E-7022
	DSP (DSP)	○		(0.5sHI->0.5sLOW) x twice ->2sLOW->Afterward, repetition	○		E-7010
	SDRAM (for DSP)	×	If SDRAM is NG, it cannot communicate with Main CPU.		×	←	
	GUI CPU (GUI)	○		(0.5sHI->0.5sLOW) x 6 times ->2sLOW->Afterward, repetition	△	Although detection is possible in communication failure, since it cannot display on LCD, a check is correctly impossible.	
	Flash (for GUI CPU)	×	If Flash is NG, the boot program itself does not operate.		×	←	
	SDRAM (for GUI CPU)	×	If SDRAM is NG, it cannot communicate with Main CPU.		×	←	
External peripheral communicated with PANEL microcomputer							
	CDC	○		(0.5sHI->0.5sLOW) x 8 times ->2sLOW->Afterward, repetition	○		E-7025
Altogether normal							
				After 2sHI as LOW			

A [7] Firmware update

The device and updater file name for update is the following.

Device	File Name	Remarks
Main CPU (MAIN)	C2KMAIN.UPD	Motorola formal text
GUI CPU (GUI)	C2KGUI.UPD	Binary text
Panel microcomputer (PANEL)	C2KPANL.UPD	Motorola formal text
Drive controller (DRIVE)	C2KDRIV.UPD	Motorola formal text

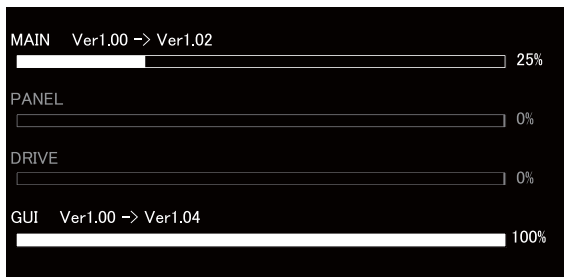
A version is not contained in a file name.

Since the character sequence containing a version etc. is added to the head of each file, it can check by the editor, viewer, etc.

■ When USB memory is used

Please use USB memory formatted by FAT/FAT32. It does not correspond to HFS+.

- ① A file to update is copied to USB memory.
(One files will be copied if it is one pieces. Two files will be copied if it is two pieces.)
- ② Please turn on a power supply, pushing both the buttons of MEDIA SELECT/USB and RELOOP.
(Please continue pushing until "Pioneer LOGO"screen disappears.)
It is displayed the message of "Connect a USB storage device to the USB port.", USB memory is inserted in USB port of the front or the back. (If USB memory is put and it goes into the mode, a message will not be displayed but update will start immediately.)
- ③ Update is automatically performed in the order of "GUI -> drive -> main -> panel".
The status is displayed with the bar graph and % as follows during update. Moreover, an old version and a new version are also displayed.



- ④ When there is no file, gray out of the display of the device is carried out, and update is not performed.
And, %-display is a standard and is not exact.
- ⑤ Since the message of "Firmware update is completed.Turn the power off before using." will be displayed if update is completed, please return on a power supply.

■ When CD-R/RW is used

- ① A file to update is copied to CD-R/RW.
(One files will be copied if it is one pieces. Two files will be copied if it is two pieces.)
- ② Please turn on a power supply, pushing both the buttons of MEDIA SELECT/DISC and RELOOP.
(Please continue pushing until "Pioneer LOGO"screen disappears.)
Insert CD-ROM, if the message "Insert CD-ROM disc" is displayed.
- ③ The rest is the same as that of the case where USB memory is used.

■ Recovery when failing

When update of each CPU goes wrong and the power supply has been turned off on the way, subsequent normal operation becomes impossible. In this case, the recovery (emergency) mode which only updates operates.
In addition, please carry out by USB memory in recovery. CD-ROM cannot be used.

① Failure of a MAIN

When the message of "MAIN firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7024: MAIN CPU ERROR" will be displayed.

In this case, update will be possible if it usually carries out again using a passage MEDIA SELECT/USB button and RELOOP button.

In addition, only MAIN is updated even if files other than MAIN are in USB memory.

If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the whole MAIN Assy.

(This is because provision of a FLASH ROM in which a specific MAC address has been written is not possible.

For details, see section "1.2 NOTES ON FLASH ROM").

② Failure of a GUI

When the message of "GUI firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7023: GUI CPU ERROR" will be displayed.

In this case, update will be possible if it usually carries out again using a passage MEDIA SELECT/USB button and RELOOP button.

In addition, if files other than GUI are contained in USB memory, it will usually pass and all they will be updated.

If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the IC4004 (FLASH ROM).

③ Failure of a PANEL

When the message of "PANEL firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7022: PANEL CPU ERROR" will be displayed.

In this case, how to the update mode to enter differs from usual.

Please continue pushing a button 10 seconds or more until it turns on a power supply and the message of "Connect a USB storage device to the USB port." is displayed, pushing only a USB-STOP button.

In addition, if files other than PANEL are contained in USB memory, it will usually pass and all they will be updated.

If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the IC8003 (PANEL CPU).

④ Failure of a DRIVE

When the message of "DRIVE firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7001: DISC DRIVE ERROR" will be displayed.

In such a case, the unit cannot be recovered by a retrial of downloading. Replacement of IC7004 (FLASH ROM) is required.

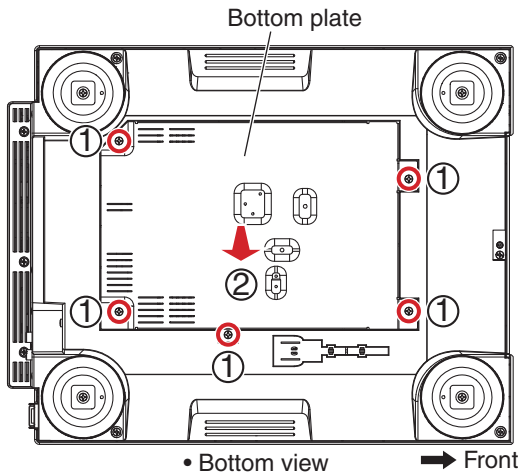
1 ■ 2 ■ 3 ■ 4 ■

7. DISASSEMBLY

A **Note:**
(1) Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
(2) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

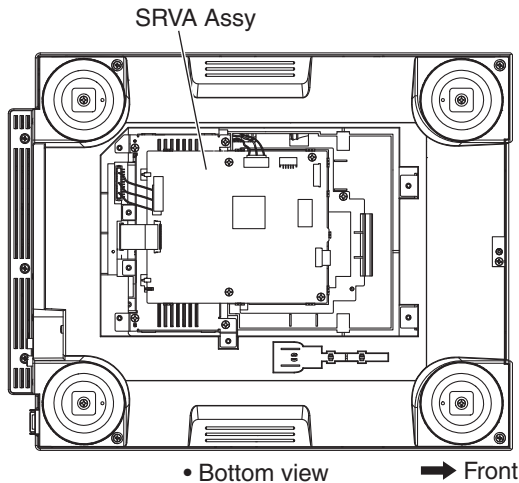
■ **Diagnosis of SRVA Assy**

- B
- (1) Remove the five screws. (BPZ30P080FNI)
 - (2) Remove the bottom plate.



↓

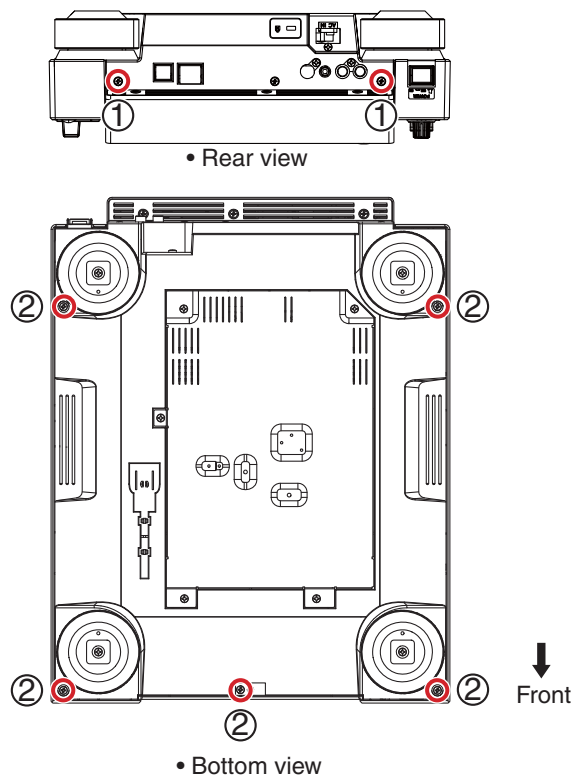
Diagnosis



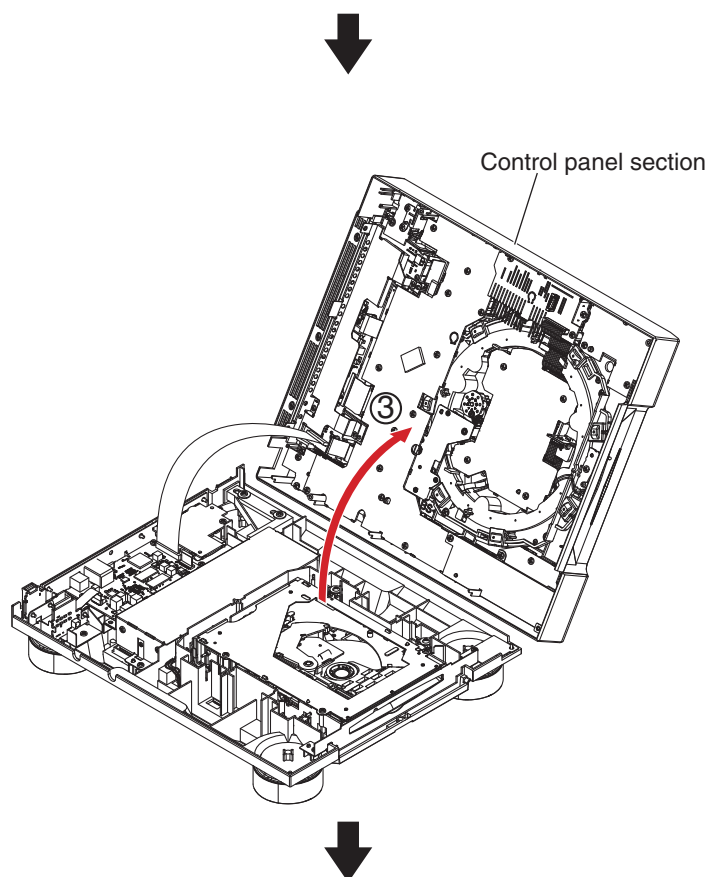
Diagnosis of MAIN Assy

[1] Control Panel Section

- (1) Remove the two screws. (BBZ30P060FTB)
- (2) Remove the five screws. (BpZ30P080FTB)

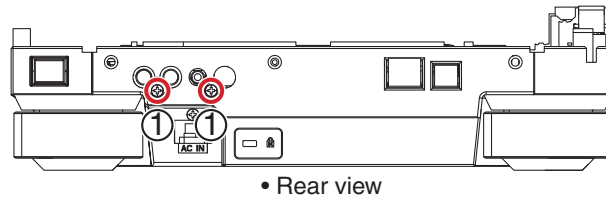


- (3) Remove the control panel section.



A [2] MAIN and JACB Assemblies

(1) Remove the two screws. (BPZ30P080FTB)

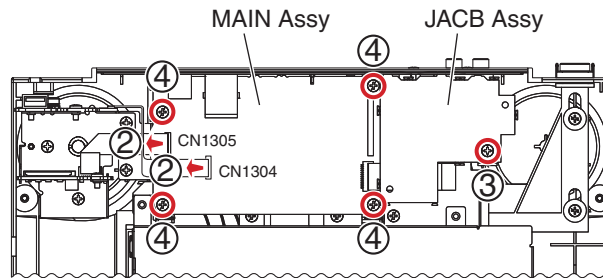


B



- (2) Disconnect the two flexible cables.
 (3) Remove the one screw. (BPZ30P080FNI)
 (4) Remove the four screws. (BBZ30P060FTB)

C

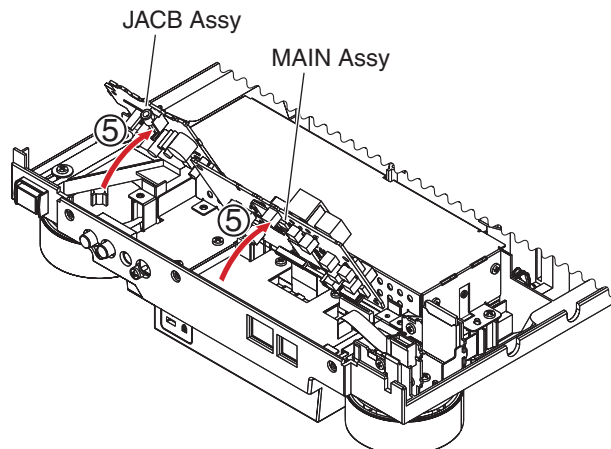


D



(5) Stand the MAIN and JACB Assemblies.

E

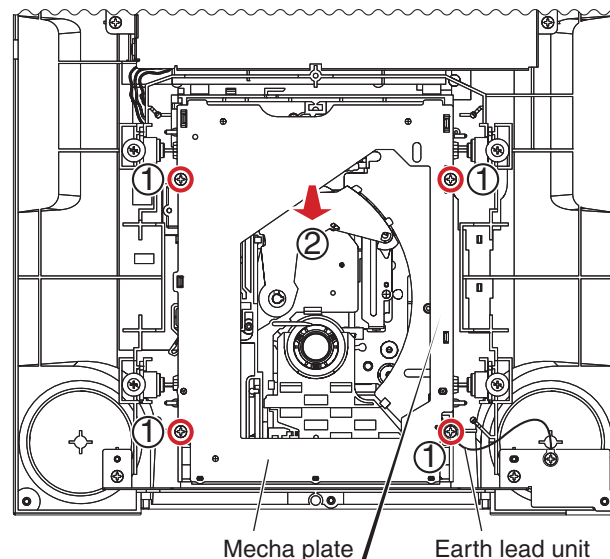


F

Slotin Mechanism Section

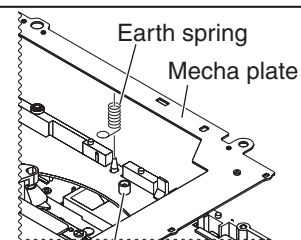
[1] Mecha Plate

- (1) Remove the four screws. (BPZ30P080FNI)
- (2) Remove the mecha plate.



Note of earth spring

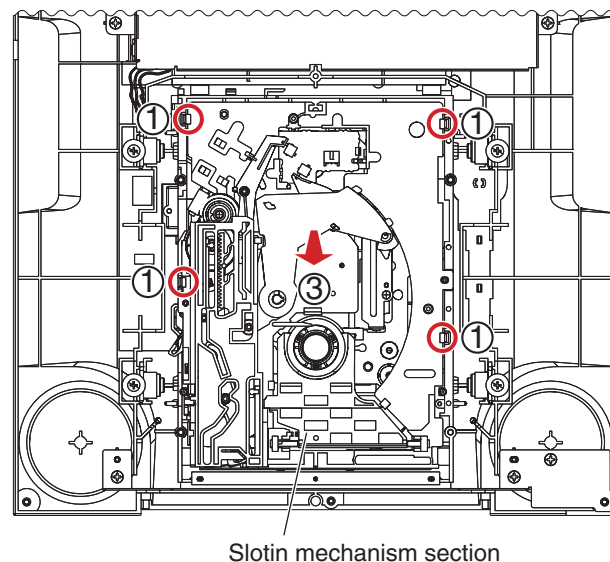
- Be sure not to lose it.
- Be careful to the installation places.
- Confirm it by viewing.



This boss is not installation position.

[2] Slotin Mechanism Section

- (1) Unhook the four hooks.
- (2) Release the jumper wires, as required.
- (3) Remove the slotin mechanism section.



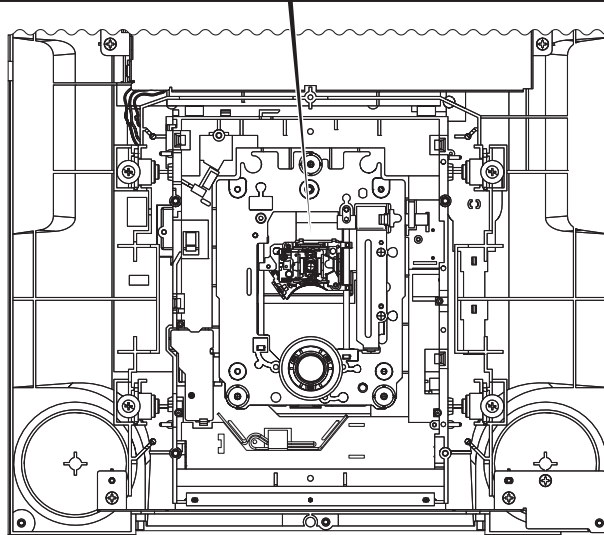
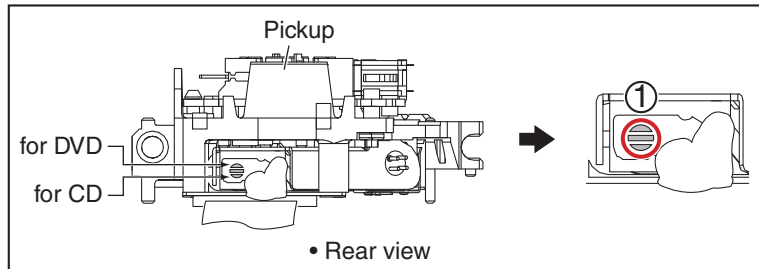
A TM Assy-S

[1] Float Base Section

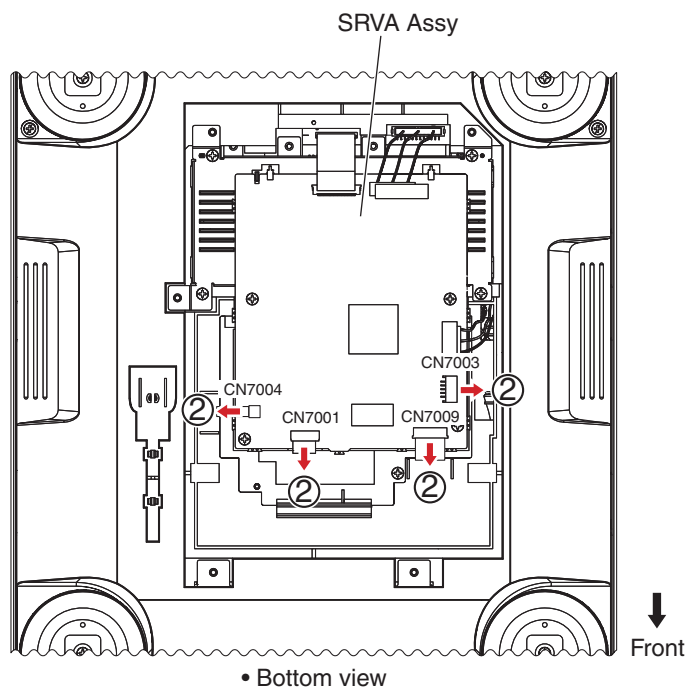
(1) solder the short-circuit point. (short)

Note:

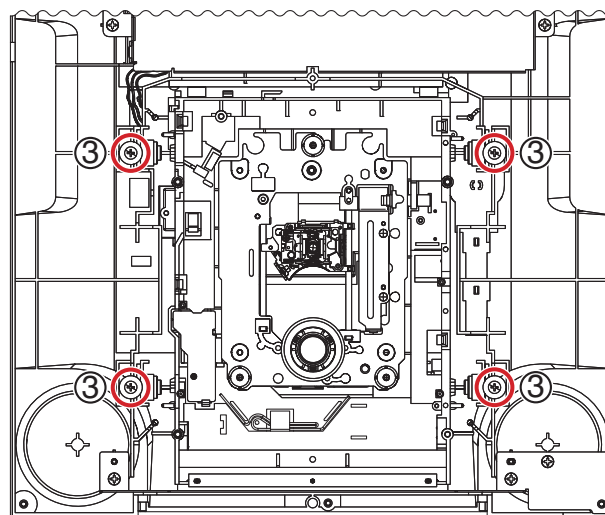
After working, connect the flexible cable, then remove the soldered joint (open).



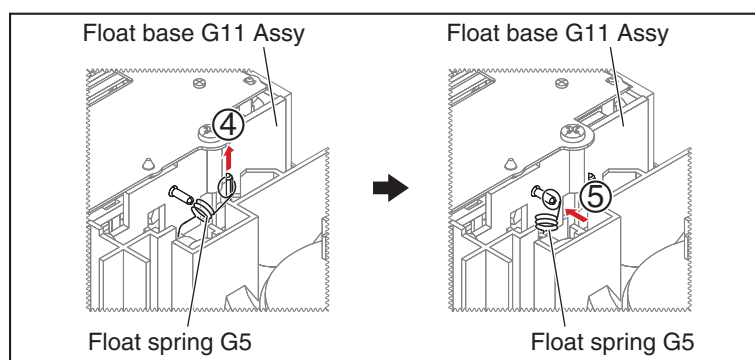
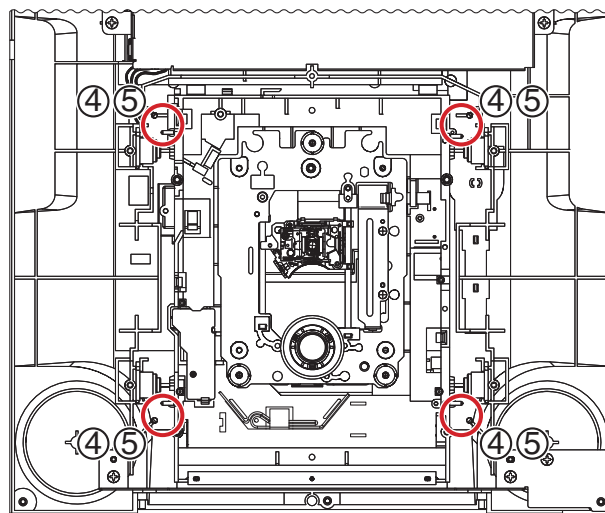
(2) Disconnect the one connector and three flexible cables.



(3) Remove the four DM screws. (DBA1260)



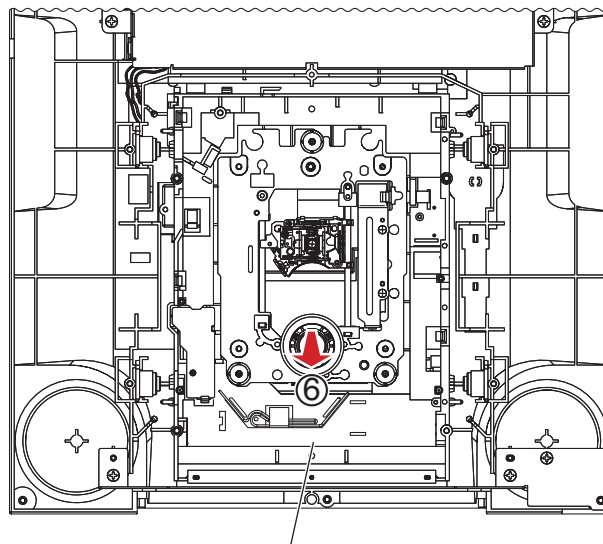
- (4) Remove the four float springs (G5).
 (5) Hook the four float springs G5 to the four hooks of the float base G11 Assy.



A

(6) Remove the float base section.

B

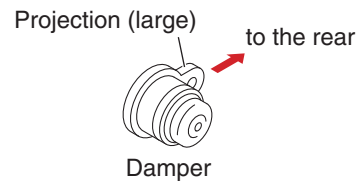


Float base section

C

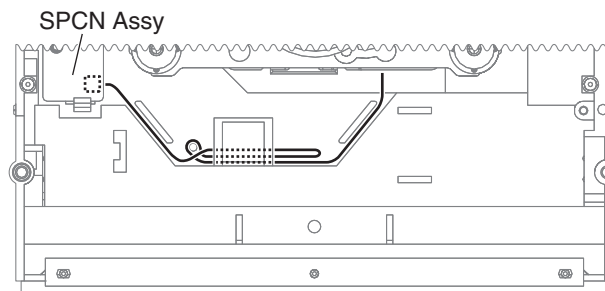
Direction of the dampers when attaching them

When attaching the dampers, place them so that their projections (large) face rear.

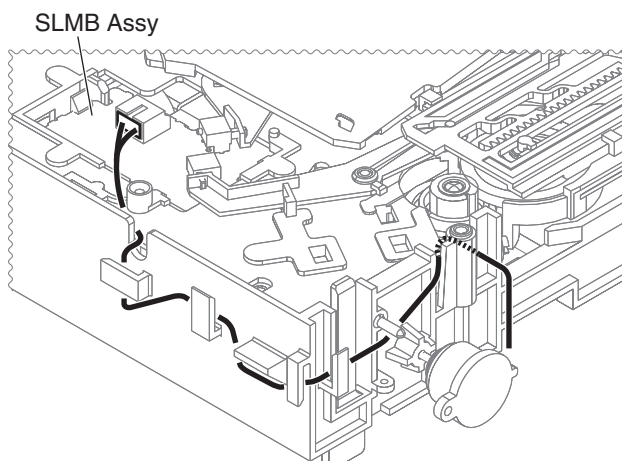


D

Arrangement of the jumper wires



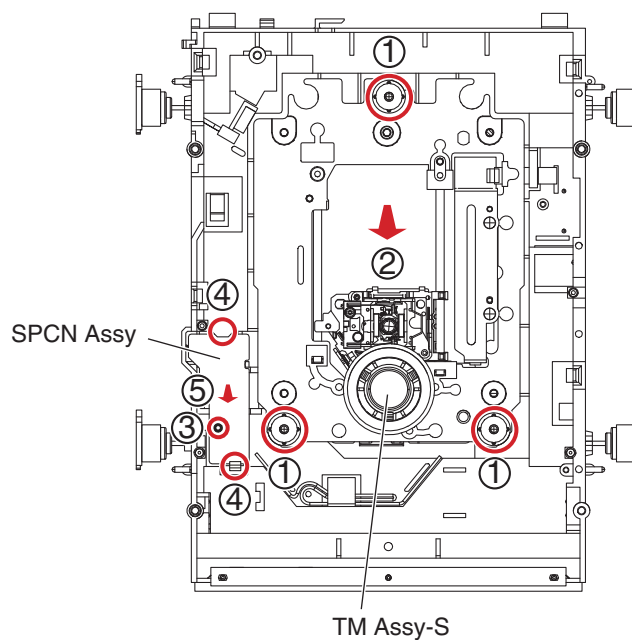
E



F

[2] TM Assy-S

- (1) Remove the three float screws. (DBA1286)
- (2) Remove the TM Assy-S.
- (3) Remove the one screw. (IPZ20P060FTC)
- (4) Unhook the two hooks.
- (5) Remove the SPCN Assy.



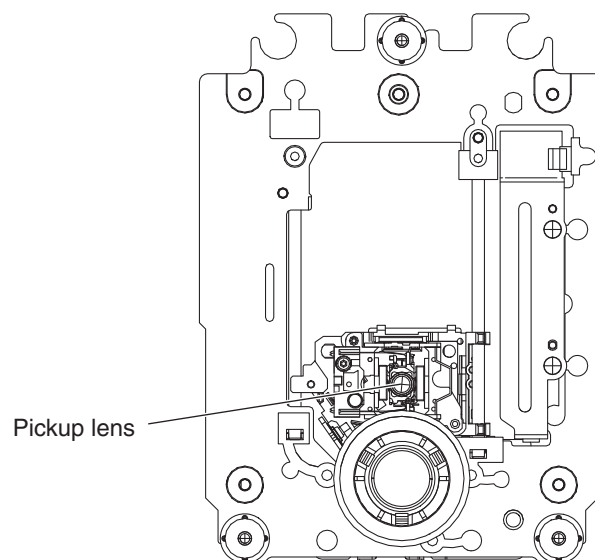
Cleaning the pickup lens



Before shipment, be sure to clean the pickup lens, using the following cleaning materials:

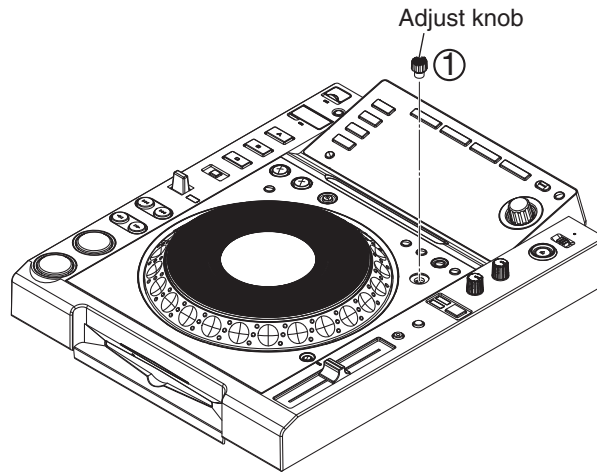
Cleaning liquid : GEM1004

Cleaning paper: GED-008



A JOG Dial Section

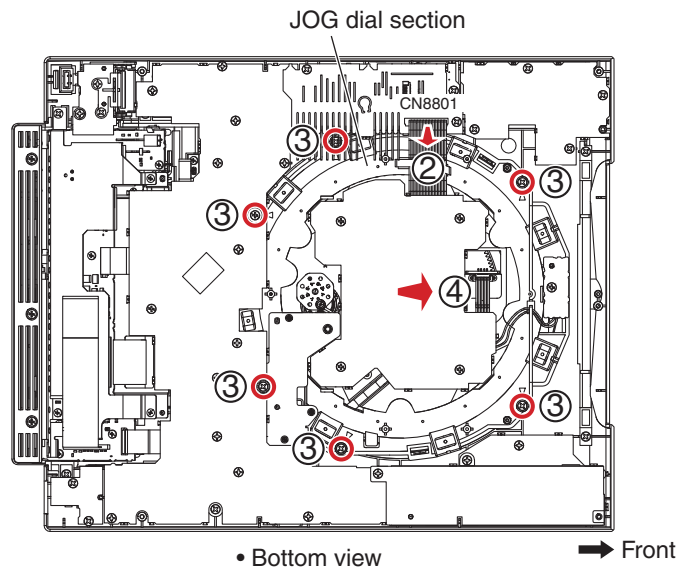
(1) Remove the adjust knob.



B

C

- (2) Disconnect the connector.
- (3) Remove the six screws. (BPZ30P080FNI)
- (4) Remove it while pulling JOG dial section in front side.

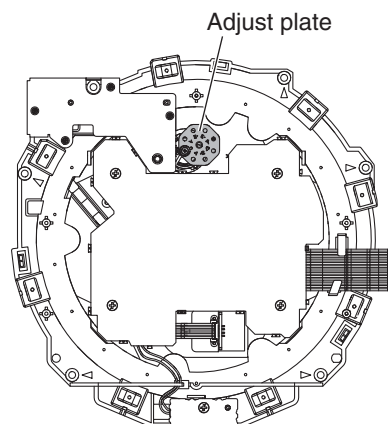


D

E

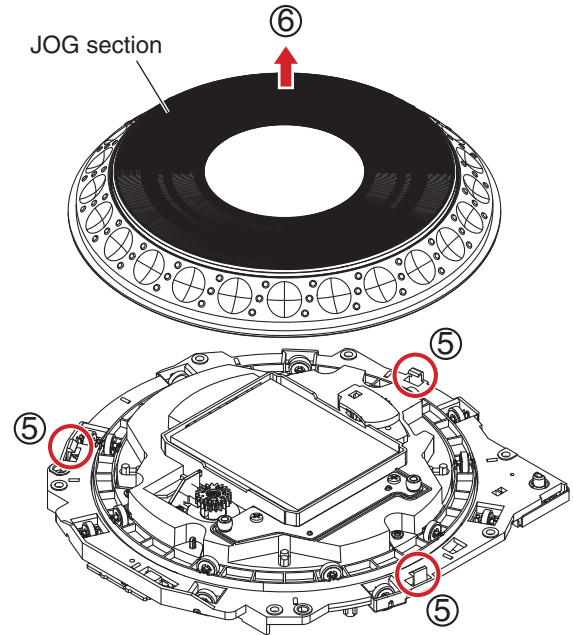
Position of the Adjust plate

About details of Adjustment etc., refer to the "8.1 JOG DIAL ROTATION LOAD ADJUSTMENT".



F

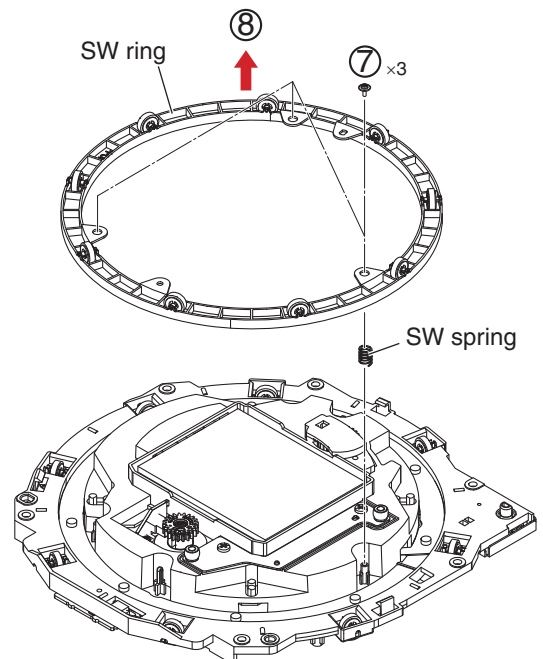
- (5) Unhook the three hooks.
 (6) Remove the JOG section.



- (7) Remove the three screws. (DBA1265)
 (8) Remove the SW ring.

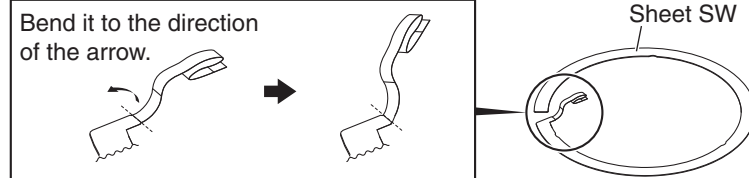
Note:

Be careful not to lost SW spring.



A Notes on replacing the Sheet SW

Styling of the Sheet SW

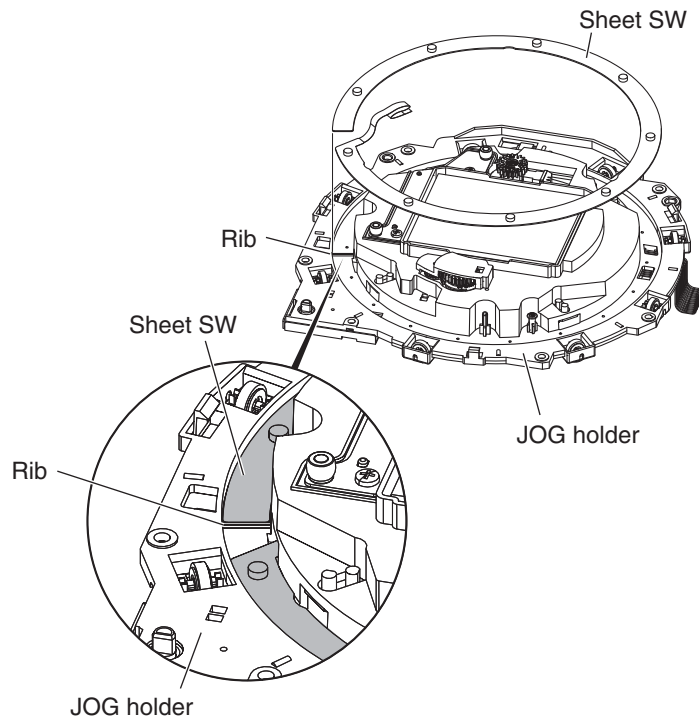


B Notes on replacing the Sheet SW

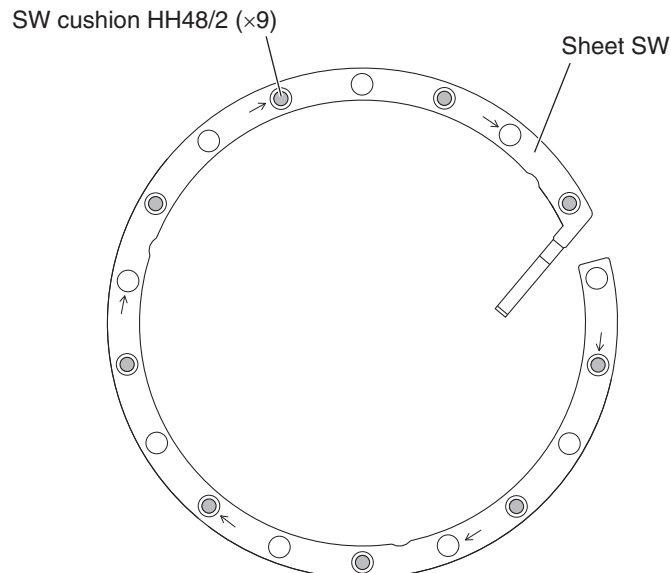
Pasting position of the Sheet SW

Notes:

1. Be careful not to warp the sheet SW.
2. Remove any dirt on the JOG holder to which the sheet SW is to be adhered. If some adhesive for the old sheet SW remains on the JOG holder, completely remove it with a cloth moistened with alcohol.
3. Do NOT place the sheet SW so that it is mounted on the rib of JOG holder.
4. When adhering the sheet SW, be careful not to trap air bubbles in it. If air bubbles are formed, remove the sheet SW and adhere a new sheet SW. Do NOT reuse the removed sheet SW.
5. When making a connection, be sure to first release the lock of the connector then securely relock the connector after making the connection.

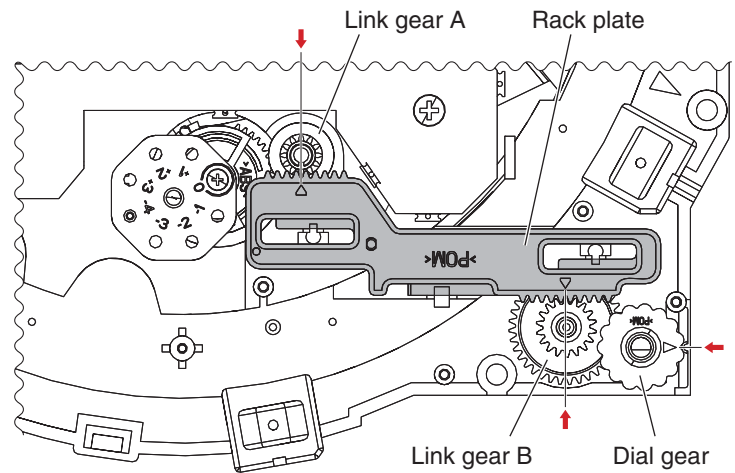


Pasting position of the SW cushion HH48/2



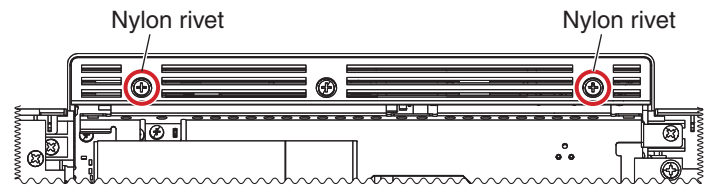
Alignment of the Rack Plate

Place the rack plate so that its teeth are engaged with those of the gears and its triangular marks are positioned as shown in the figure.



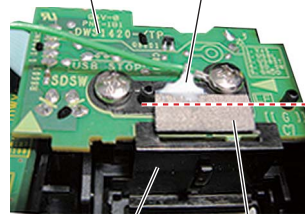
Notes on Disassembly and Reassembly

When removing the nylon rivets, be careful not to damage the finish around them.



Note on sealing with adhesive

SDSW Assy Sealing with adhesive

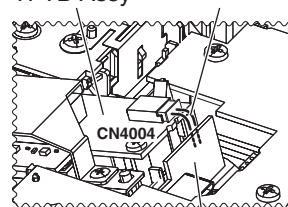


Be careful that adhesive will not run off beyond this line (about the upper one third of the gasket).

Card spring Gasket

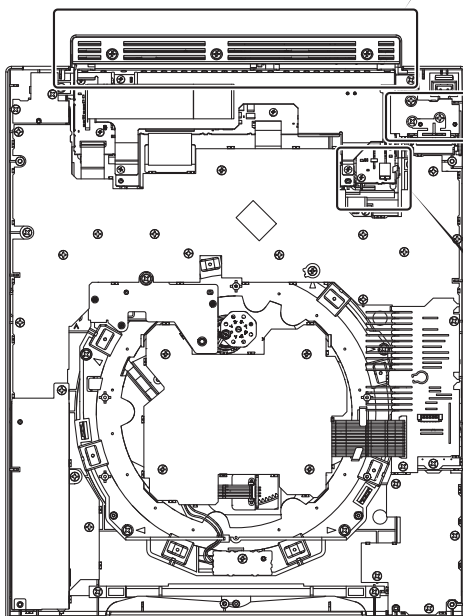
Cable dressing

Put the excess length of the TFTB Assy LCD wires inside the slit.



Slit

Example of bad cable dressing

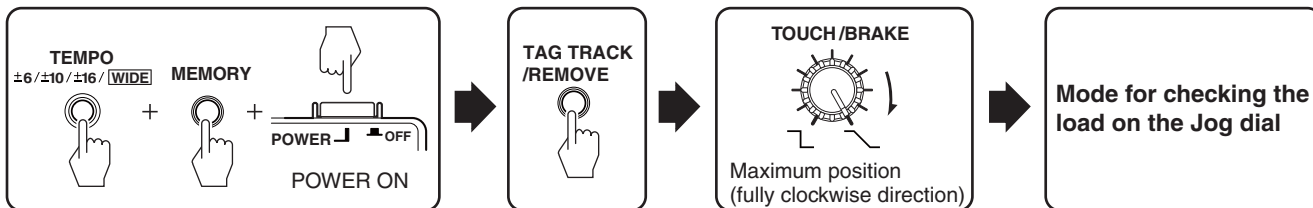


8. EACH SETTING AND ADJUSTMENT

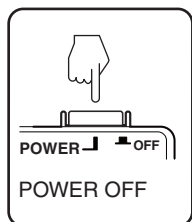
8.1 JOG DIAL ROTATION LOAD ADJUSTMENT

JOG Check Mode : ON

- It is the mode which judges the load (light/-- heavy) numerically when rotating the JOG dial.



JOG Check Mode : CANCEL



[Measuring method]

- The adjustment value of adjust plate is adjusted to "0" (Refer to Fig. 2).
- Enters the mode for checking the load on the Jog dial.
- The jog dial is mightly rotated. Moreover, the direction of the rotation is clockwise.
- The rotation speed and time are displayed in LCD display (Refer to Fig. 1).
The time required so that the rotation may decrease from 3 X speed to 1.5 X speed when maximum speed is only 7 X speed or more is displayed.
The average of the rotation decrease time of 5 times in all is confirmed in spec or less.
Spec: 170 ± 20 msec.
- When the rotation decrease time is coming off from spec, the adjustment value of adjust plate is changed, and it does from 2 of above-mentioned to 4.

SERVICE MODE		JOG LOAD	
	TOP SPEED		TIME(msec)
1.	9.25		171
2.	7.21		177
3.	_____		_____
4.	_____		_____
5.	_____		_____
AVR	8.23		174 OK
00 _M : 00 _S : 00.0 _F		002	

Fig. 1 Example of displaying LCD

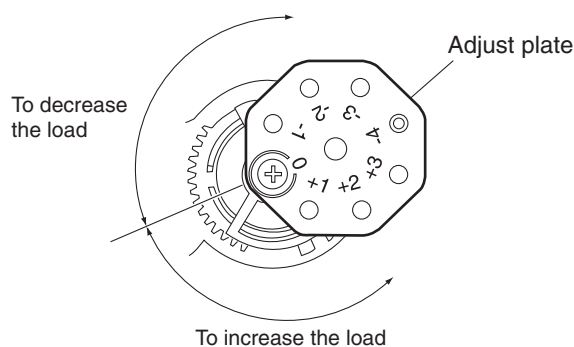


Fig. 2 Adjust plate

[Load adjustment method]

Remove the screw fixing the adjust plate, then screw it into the hole corresponding to the value (-1, -2, -3, -4, +1, +2 or +3) for a load to be added:

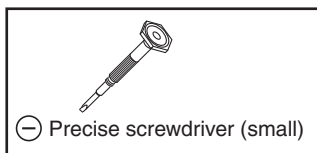
- 1, -2, -3, -4 : To decrease the load
- +1, +2, +3 : To increase the load

5 6 7 8

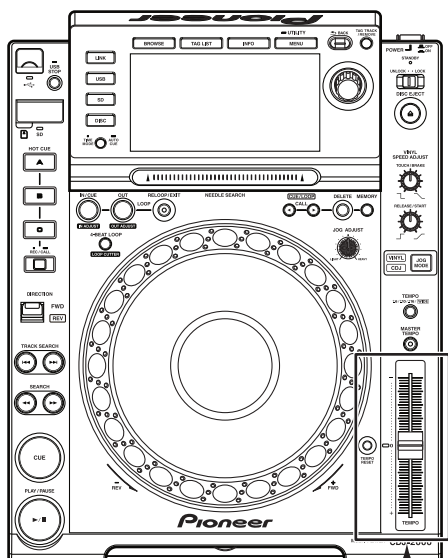
8.2 TEMPO ZERO POINT ADJUSTMENT



Jig

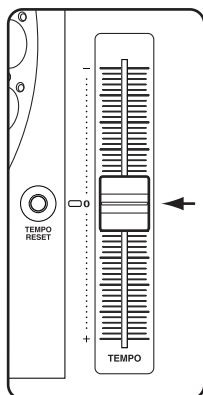


Adjustment and Check Points

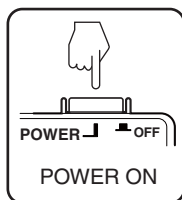


TEMPO knob
(SLDB Assy)

Zero Point ADJ.



Set the TEMPO knob to the center "0" point.



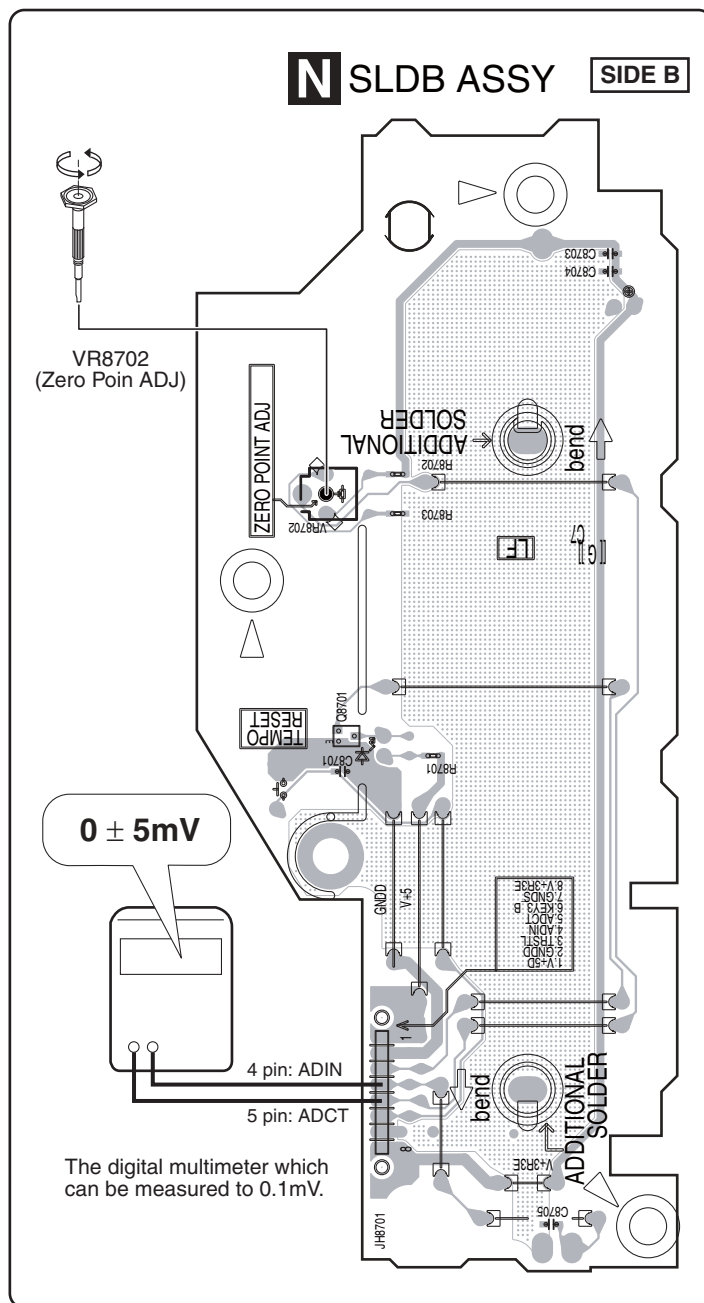
Necessary Adjustment Points

When

Exchange the SLIDER VR

Adjustment points

VR8702
(Zero Point ADJ.)



8.3 ITEMS FOR WHITCH USERS SETTING IS AVAILABLE

The following data have been set in each IC.

Item for Which User's Setting is Available	Setting Value (The factory default settings are indicated in bold.)	Part No.	Part Name	Ref No.	Assy	Content to be Stored
QUANTIZE	ON/OFF	DYW1779	Flash ROM	IC114	MAIN	UTILITY setting
PLAYER NO	AUTO , 1–4					
ON AIR DISPLAY (*)	ON /OFF					
LCD BRIGHTNESS	1– 3 –5	DYW1781	Flash ROM	IC4004	TFTA	
SCREEN SAVE	ON /OFF	DYW1779	Flash ROM	IC114	MAIN	
AUTO CUE LEVEL	-36dB/-42dB/-48dB/ -54dB/ -60dB /-66dB/ -72dB/-78dB					
AUTO STANDBY	ON /OFF					
LIBRARY CREATOR	LIBRARY /FOLDER					
HISTORY NAME	–					
DIGITAL OUT	16 bit/ 24 bit					
ART WORK	ON /OFF					
MIDI CHANNEL	1 –16					
LANGUAGE	Destination	DYW1779	Flash ROM	IC114	MAIN	
TIME MODE	TIME/ REMAIN					
AUTO CUE	ON/ OFF					
JOG MODE	CDJ /VINYL					

(*) This function is not supported in the initial version.

8.4 FIRMWARE UPDATE / RECOVERY

For details on updating of firmware and recovery of the main unit, see [7] UPDATING OF FIRMWARE in “6.3 DETAILS ON SERVICE MODE.”

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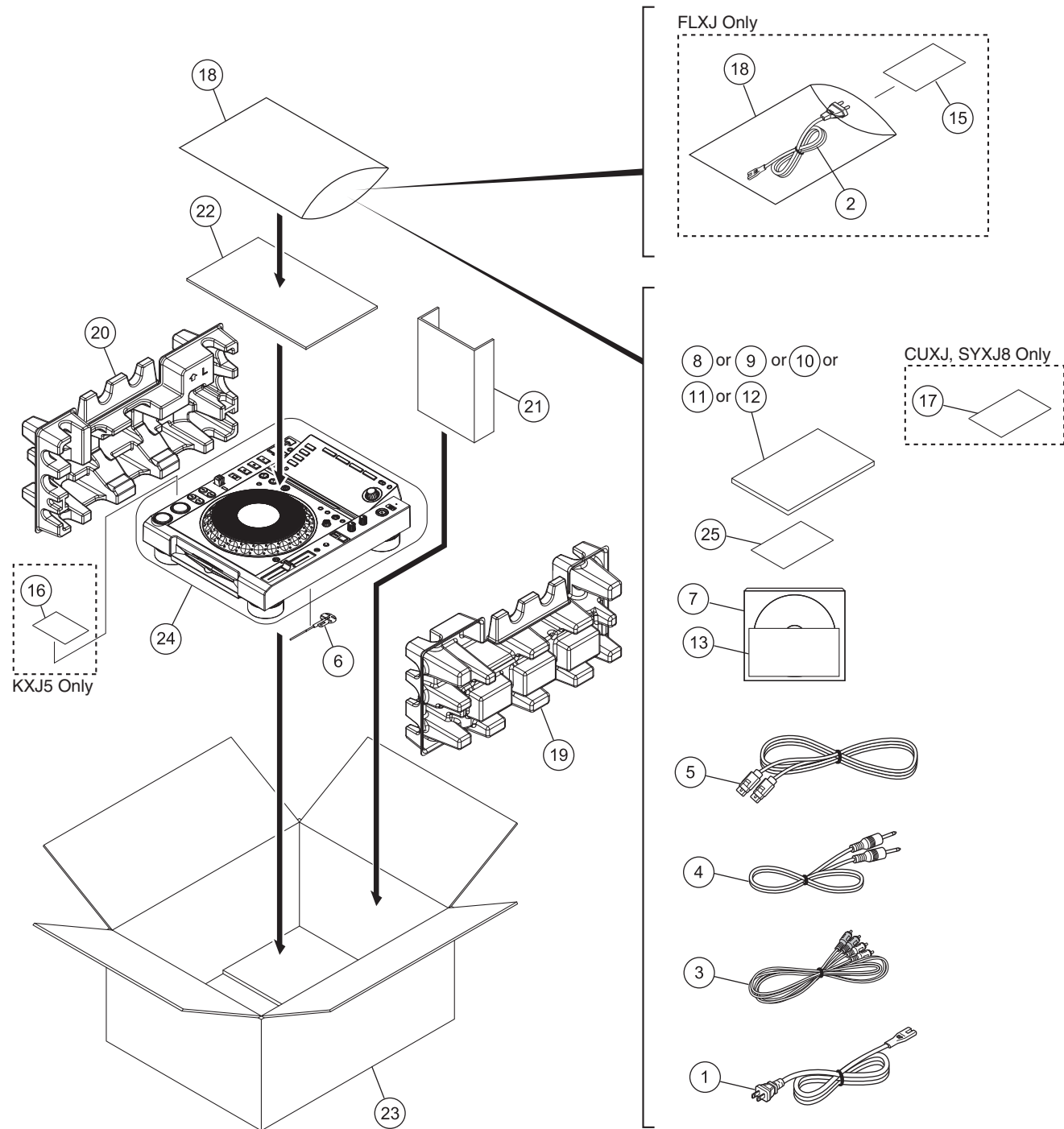
8

■

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 $\triangle$ 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.	Mark	No.	Description	Part No.
⚠	1	Power Cable	See Contrast table (2)	NSP	16	Recycle Label M	See Contrast table (2)
⚠	2	Power Cable	See Contrast table (2)	NSP	17	Warranty Card	See Contrast table (2)
	3	Audio Cable (L = 1.5 m)	XDE3045	NSP	18	Polyethylene Bag (0.06 x 230 x 340)	AHG7117
	4	Control Cord (L = 1 m)	XDE3063		19	Pad (R)	DHA1788
	5	LAN Cable (1M UTP)	DDE1130		20	Pad (L)	DHA1789
	6	Disc Force Eject Pin	DEX1013		21	Spacer	DHA1802
	7	CD-ROM (rekordbox)	DXX2598		22	Accessory Pad	DHA1803
	8	Operating Instructions	See Contrast table (2)		23	Packing Case	See Contrast table (2)
	9	Operating Instructions	See Contrast table (2)		24	Packing Sheet	RHC1023
	10	Operating Instructions	See Contrast table (2)		25	Information Sheet	DRM1338
	11	Operating Instructions	See Contrast table (2)				
	12	Operating Instructions	See Contrast table (2)				
NSP	13	License Key Label	DRW2402				
	14	•••••					
NSP	15	Caution Card SB	See Contrast table (2)				

(2) CONTRAST TABLE

CDJ-2000/CUXJ, SYXJ8, FLXJ, KXJ5 and AXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000 /CUXJ	CDJ-2000 /SYXJ8	CDJ-2000 /FLXJ	CDJ-2000 /KXJ5	CDJ-2000 /AXJ5
⚠	1	Power Cable	ADG7021	ADG1154	ADG1154	XDG3054	ADG7079
⚠	2	Power Cable	Not used	Not used	ADG7097	Not used	Not used
	8	Operating Instructions (En, Fr)	DRB1474	Not used	Not used	Not used	Not used
	9	Operating Instructions (En, Fr, De, It, Ni, Es, Ru)	Not used	DRB1475	Not used	Not used	Not used
	10	Operating Instructions (En, Es, Zhtw)	Not used	Not used	DRB1476	Not used	Not used
	11	Operating Instructions (Ko)	Not used	Not used	Not used	DRB1478	Not used
	12	Operating Instructions (ZHcn, En)	Not used	Not used	Not used	Not used	DRB1477
NSP	15	Caution Card SB	Not used	Not used	ARM7064	Not used	Not used
NSP	16	Recycle Label M	Not used	Not used	Not used	DRW2307	Not used
NSP	17	Warranty Card	ARY7043	ARY7107	Not used	Not used	Not used
	23	Packing Case	DHG2800	DHG2799	DHG2801	DHG2804	DHG2803

9.2 EXTERIOR SECTION

A

B

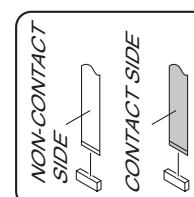
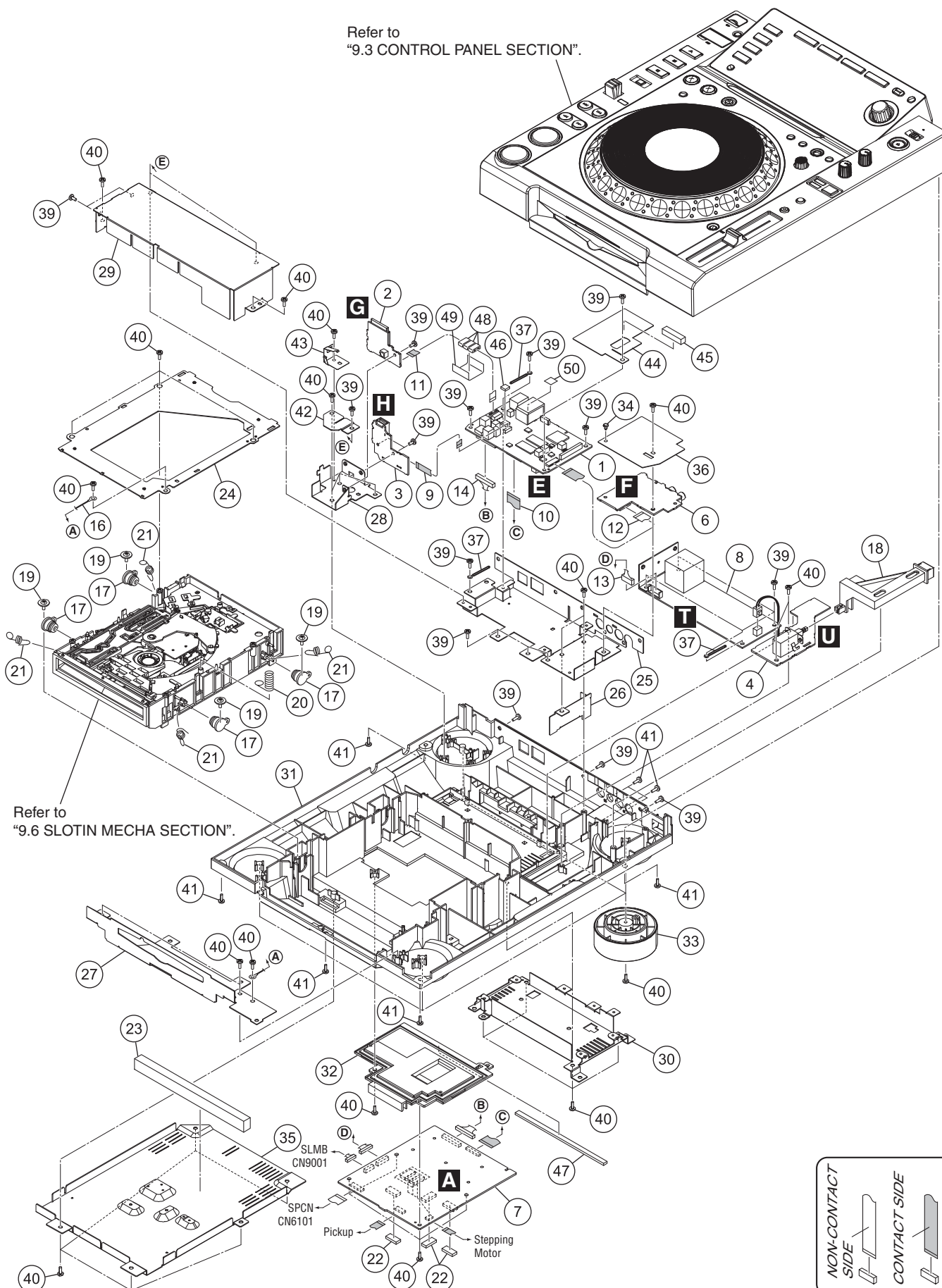
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Refer to
"9.3 CONTROL PANEL SECTION".



(1) EXTERIOR SECTION PARTS LIST

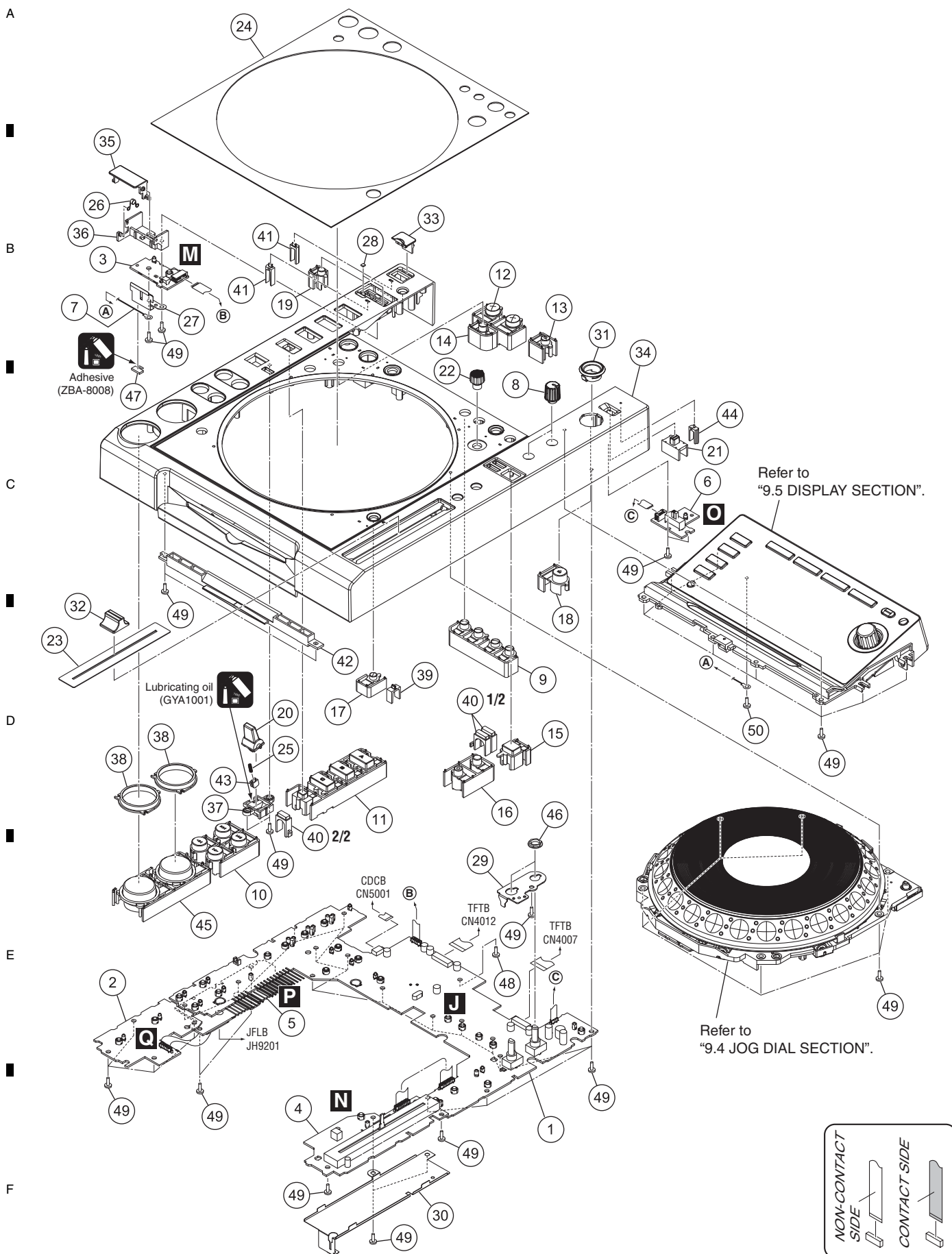
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	MAIN Assy	DWG1660	26	Inlet Shield	DNH2856
2	SDCB Assy	DWX2980	27	Front Plate	DNH2857
3	USBA Assy	DWX3043	28	SD Stay	DNH2858
4	ACIN Assy	See Contrast table (2)	29	Shield Case	DNH2859
5	•••••		30	SWPS Stay	DNH2890
6	JACB Assy	DWX2988	31	Chassis	See Contrast table (2)
7	SRVA Assy	DWX2948	32	Servo Cover	DNK5492
8	POWER SUPPLY Assy	DWR1463	33	Insulator Assy	DXB2057
9	14P FFC	DDD1478	34	Rivet (3 x 4.5)	RBM-003
10	40P FFC	DDD1479	35	Bottom Plate	See Contrast table (2)
11	10P FFC	DDD1480	36	Jack Cover	DEC3205
12	13P FFC	DDD1484	37	Cord Clamper (Steel)	RNH-184
13	Connector Assy	DKP3844	38	•••••	
14	Connector Assy 12P	DKP3845	39	Screw	BBZ30P060FTB
15	•••••		40	Screw	BPZ30P080FNI
16	Cord with Plug	DE007VE0	41	Screw	BPZ30P080FTB
17	Damper	CNV6011	42	SD Earth Plate	DNH2925
18	Power Knob	DAC2484	43	SD Earth Spring	DBK1357
19	DM Screw (FTC)	DBA1260	44	Main Cover	DEC3258
20	Earth Spring	DBH1398	45	FFC Cushion	DEC3248
21	Float Spring (G5)	DBH1494	46	EMC Sheet	DEC3259
22	Silicon Rubber D5 L	DEB1456	47	Vessel Cushion A	DEC2852
23	Bottom Packing	DEC3209	48	Ferrite Core	BTX1037
24	Mecha Plate	DNH2339	49	Cushion (FC)	DEC3249
25	MAIN PCB Stay	DNH2854	50	Tape	DEC3053

(2) CONTRAST TABLE

CDJ-2000/CUXJ, SYXJ8, FLXJ, KXJ5 and AXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-2000 /CUXJ	CDJ-2000 /SYXJ8	CDJ-2000 /FLXJ	CDJ-2000 /KXJ5	CDJ-2000 /AXJ5
	4	ACIN Assy	DWR1475	DWR1453	DWR1453	DWR1453	DWR1453
	31	Chassis	DNK5444	DNK5324	DNK5445	DNK5448	DNK5447
	35	Bottom Plate	DNH2893	DNH2852	DNH2904	DNH2903	DNH2902

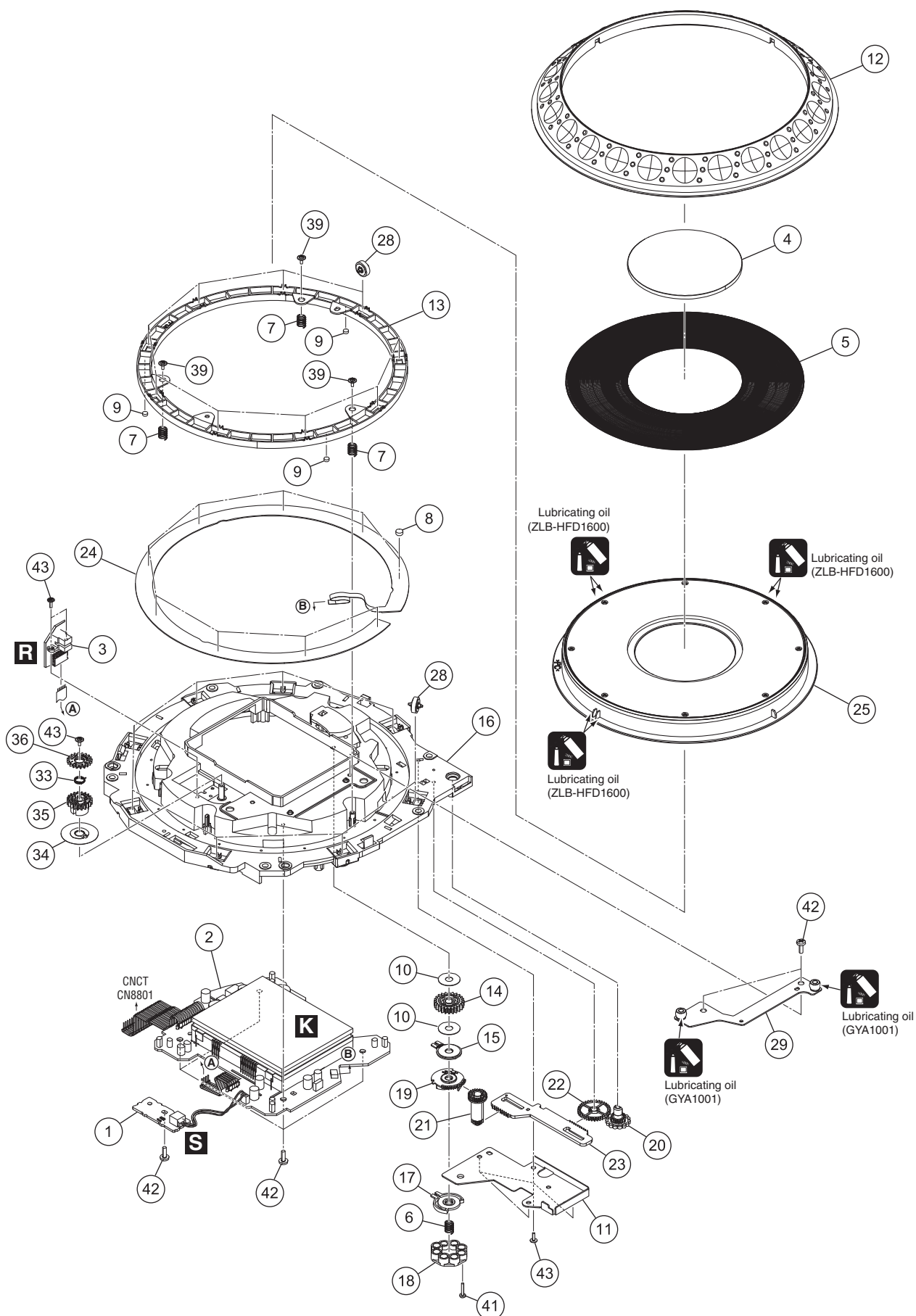
9.3 CONTROL PANEL SECTION



CONTROL PANEL SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	PNLB Assy	DWG1665	46	Flange Nut M9	DBN1008	
2	KSWB Assy	DWS1409	47	Gasket (7 x 15 x 1)	DEC3259	A
3	SDSW Assy	DWS1420	48	Screw	BBZ30P060FTB	
4	SLDB Assy	DWX2983	49	Screw	BPZ30P080FNI	
5	CNCT Assy	DWX3009	50	Screw	BBZ26P060FTB	
6	EUPB Assy	DWX3042				
7	Earth Lead Unit / 300V	DDF1032				
8	Rotary Knob C	DAA1194				
9	Button (CALL)	DAC2466				
10	Button (SERCH)	DAC2468				
11	Button (HOT CUE)	DAC2469				B
12	Button (LOOP)	DAC2470				
13	Button (RELOOP)	DAC2471				
14	Button (4-BEAT LOOP)	DAC2472				
15	Button (JOG MODE)	DAC2473				
16	Button (TEMPO)	DAC2474				
17	Button (TEMPO REST)	DAC2475				
18	Button (EJECT)	DAC2476				
19	Button (USB STOP)	DAC2477				
20	Lever	DAC2478				C
21	Slide SW Knob	DAC2479				
22	Adjust Knob Black	DAC2528				
23	Slide Sheet 1C	DAH2404				
24	Top Panel	DAH2703				
25	Lever Spring	DBH1702				
26	Spring	DBH1717				
27	Card Spring	DBK1340				
28	Door Cushion	DEB1780				
29	VR Stay	DNF1663				D
30	Earth Plate	DNH2849				
31	Eject Guard	DNK3958				
32	Slide Knob	DNK4498				
33	USB Cover	DNK4999				
34	Control Panel	DNK5306				
35	SD Card Door	DNK5308				
36	SD Door Holder	DNK5309				
37	Lever Plate	DNK5312				
38	Ring Lens (PLAY)	DNK5315				E
39	TEMPO Lens	DNK5316				
40	MODE Lens	DNK5317				
41	DEVICE Lens	DNK5318				
42	Front Lens	DNK5328				
43	Lever Cap	DNK5344				
44	EUP Lens	DNK5408				
45	PLAY Button Assy	DXB2069				F

9.4 JOG DIAL SECTION



JOG DIAL SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	INDB Assy	DWX2986	
2	JFLB Assy	DWX2984	A
3	JOGB Assy	DWX2985	
4	JOG Panel	DAH2609	
5	JOG Plate	DAH2679	
6	Load Spring	DBH1680	
7	SW Spring	DBH1681	■
8	SW Cushion HH48/2	DEC2538	
9	Ring Cushion L24/2.0	DEC2958	
10	Washer	DEC3137	
11	Link Plate	DNH2848	B
12	JOG B	DNK4068	
13	SW Ring	DNK5233	
14	Load Gear	DNK5236	
15	Smoother	DNK5237	
16	JOG Holder	DNK5240	■
17	Comp Plate	DNK5243	
18	Adjust Plate	DNK5300	
19	Cam Plate	DNK5301	
20	Dial Gear	DNK5302	C
21	Link Gear A	DNK5303	
22	Link Gear B	DNK5304	
23	Rack Plate	DNK5305	
24	Sheet SW	DSX1078	
25	JOG Dial A Assy	DXA2159	■
26	.....		
27	.....		
28	Roller A Assy	DXB2010	
29	JOG Stay Assy	DXB2015	D
30	.....		
31	.....		
32	.....		
33	Encoder Spring	DBH1710	
34	Encoder Plate	DEC2889	■
35	Gear A	DNK5241	
36	Gear B	DNK5242	
37	.....		
38	.....		E
39	Screw (FE)	DBA1265	
40	.....		
41	Screw	BPZ20P100FTC	
42	Screw	BPZ30P080FNI	■
43	Screw	IPZ20P060FTC	

F

9.5 DISPLAY SECTION

A

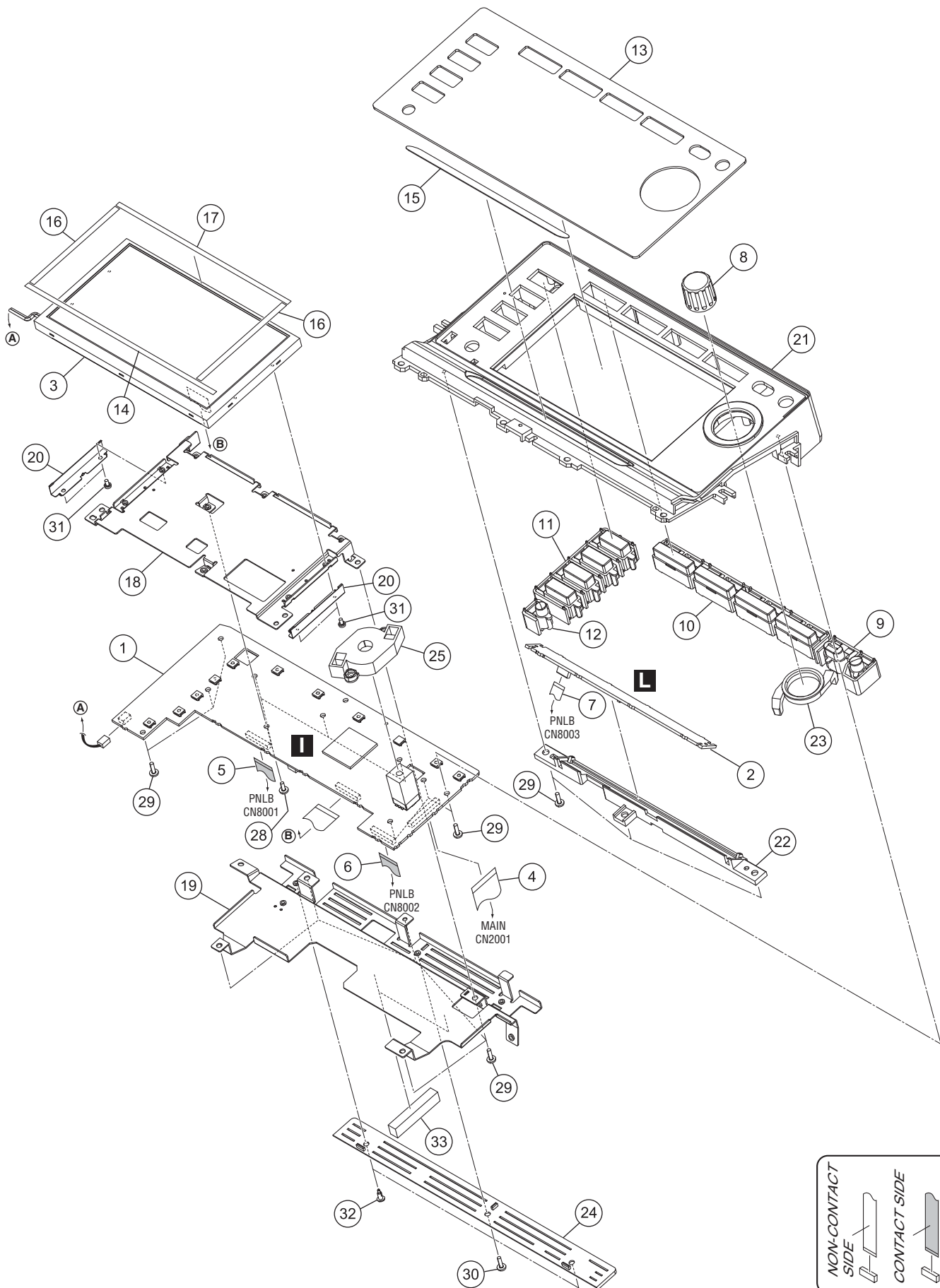
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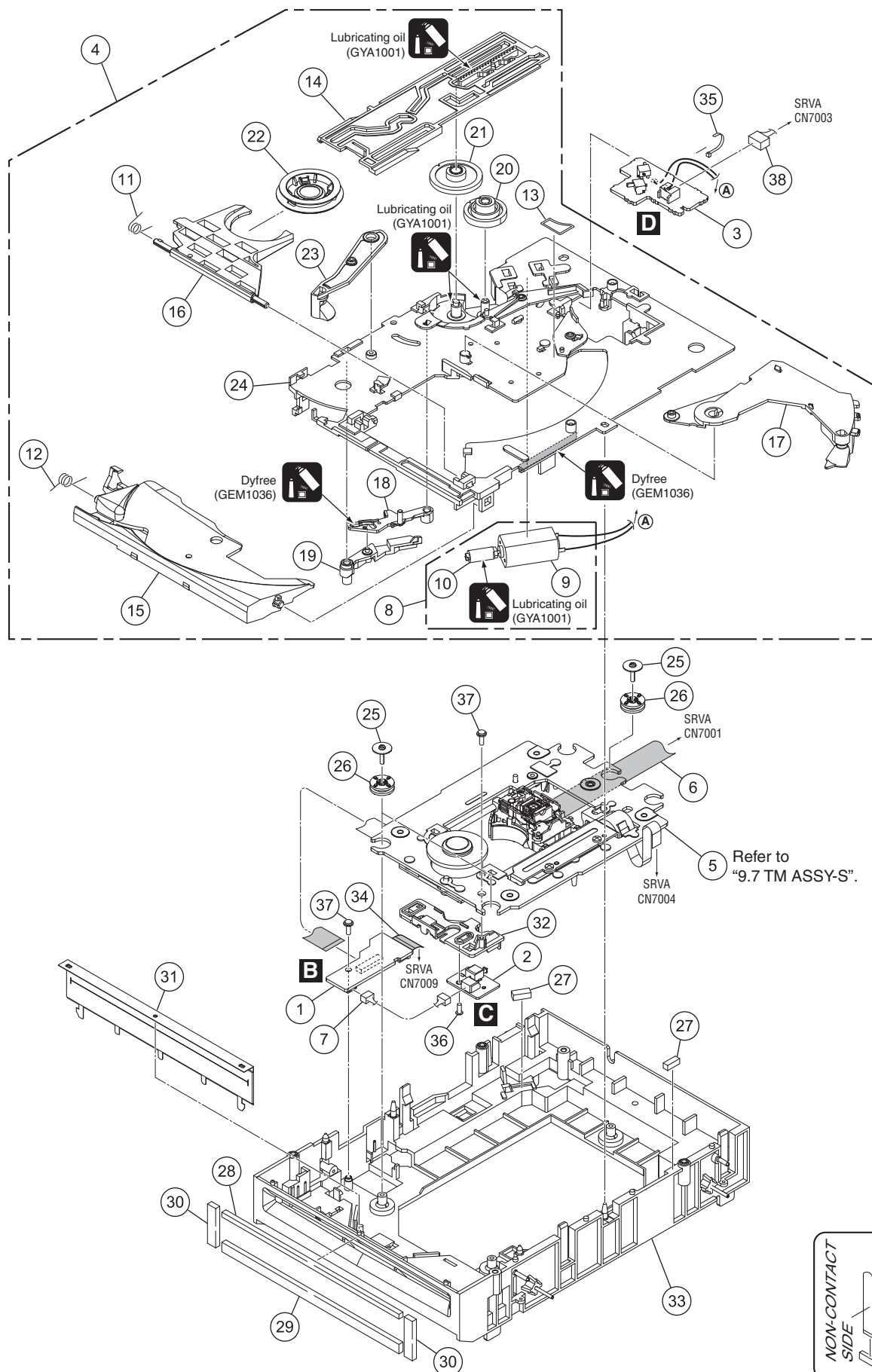
DISPLAY SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	TFTB Assy	DWX2882	
2	CDCB Assy	DWX2987	A
3	LCD	DWX3126	
4	29P FFC	DDD1481	
5	18P FFC	DDD1482	
6	16P FFC	DDD1483	
7	7P FFC	DDD1485	■
8	Dial Knob	DAA1246	
9	Button (MENU)	DAC2480	
10	Button (MODE SELECT)	DAC2481	
11	Button (DEVICE SELECT)	DAC2482	B
12	Button (TIME)	DAC2483	
13	Display Window	DAH2680	
14	LCD Packing (Bottom)	DEC3184	
15	CDC Sheet	DEC3187	
16	LCD Packing (Side)	DEC3192	■
17	LCD Packing (Top)	DEC3193	
18	LCD Stay	DND1263	
19	Rear Bracket	DND1264	
20	LCD Holder	DNH2850	C
21	LCD Panel	DNK5319	
22	CDC Stay	DNK5320	
23	Ring Lens (BROWSE)	DNK5322	
24	LCD Bottom Plate	DNK5323	
25	Reflector	DNK5405	■
26	.....		
27	.....		
28	Screw	BBZ26P060FTB	
29	Screw	BPZ26P080FTC	D
30	Screw	BBZ30P060FTB	
31	Screw	BSZ20P040FTB	
32	Rivet (Plastic)	RBM-003	
33	FFC Cushion	DEC3248	■

E

F

9.6 SLOTIN MECHA SECTION



SLOTIN MECHA SECTION PARTS LIST

Mark No.	Description	Part No.	
	1 SPCN Assy	DWX2979	
	2 INSW Assy	DWS1407	A
	3 SLMB Assy	DWS1408	
NSP	4 SLOTIN MECHA G11Assy	DXA2163	
	5 TM Assy-S	DXX2595	
	6 24P FFC	DDD1460	
	7 Connector Assy 2P	DKP3769	
	8 DC MOTOR Assy-S	DXX2510	
NSP	9 DC Motor S	DXM1230	
NSP	10 Worm Gear	DNK3910	
	11 Clamp Spring	DBH1374	B
	12 Guide Spring	DBH1375	
	13 SW Lever Spacer	DEC2420	
	14 Main Cam	DNK3407	
	15 Disc Guide	DNK3478	
	16 Clamp Arm	DNK3576	
	17 Eject Lever	DNK3684	
	18 Lever AP	DNK3835	
	19 Lever BP	DNK3836	
	20 Loading Gear	DNK3911	C
	21 Drive Gear	DNK3912	
	22 Clamper Assy	DXA2043	
	23 Loading Lever Assy	DXB1880	
	24 Loading Base Assy-S	DEA1022	
	25 Float Screw	DBA1286	
	26 Float Rubber D3	DEB1404	
	27 Spacer POR (T3)	DEB1566	
	28 Vessel Cushion A	DEC2852	
	29 Vessel Cushion B	DEC2853	D
	30 Vessel Cushion C	DEC2854	
	31 Front Sheet	DED1132	
	32 Inside SW Base	DNK4236	
	33 Float Base G11 Assy	DXB1793	
	34 13P FFC	DDD1452	
	35 Binder (SKB-90BK)	ZCA-SKB90BK	
	36 Screw (2 x 5)	VBA1062	
	37 Screw	IPZ20P060FTC	
	38 Connector Assy	PF05PP-C25	E

1 2 3 4

9.7 TM ASSY-S

A

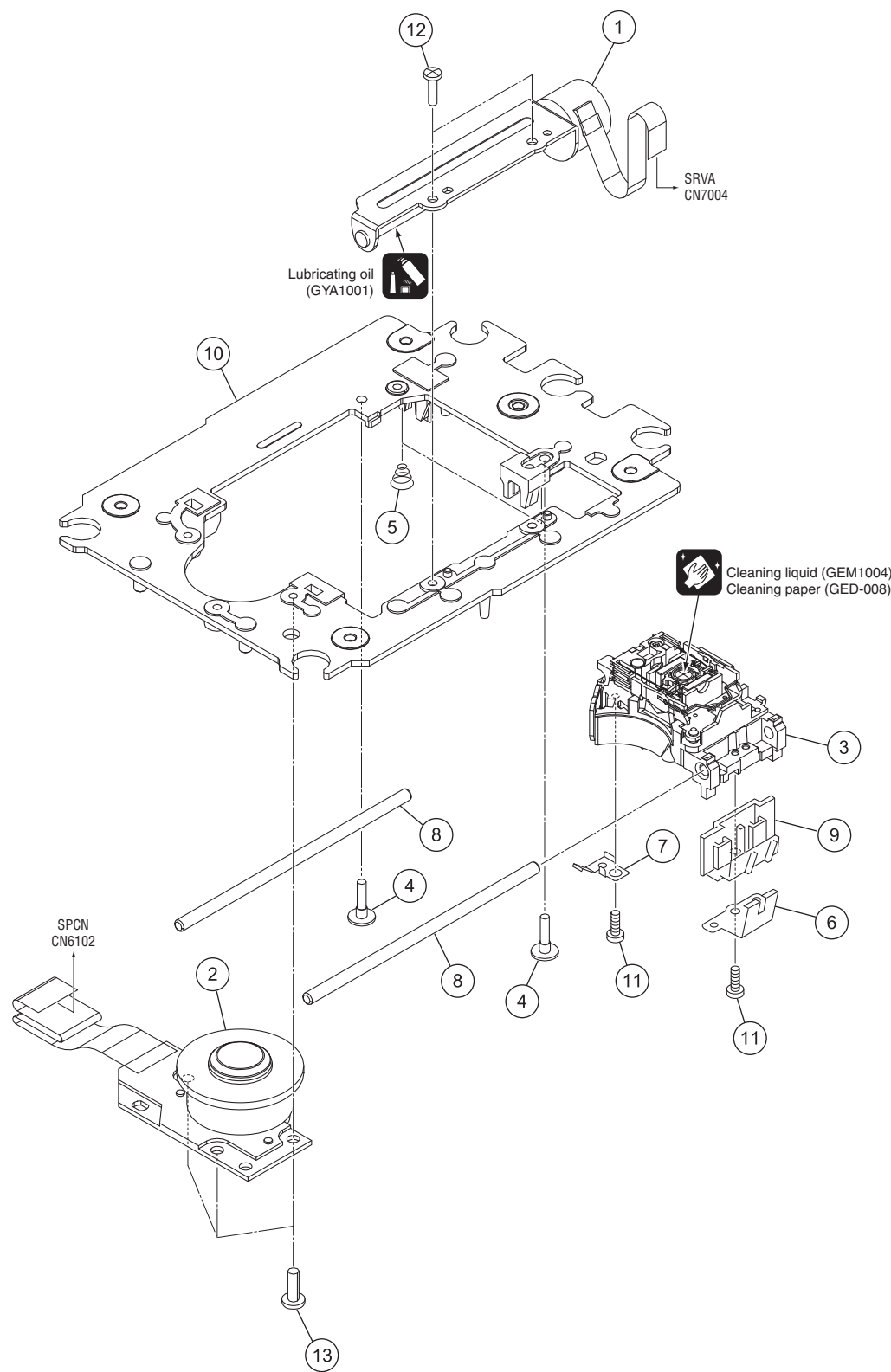
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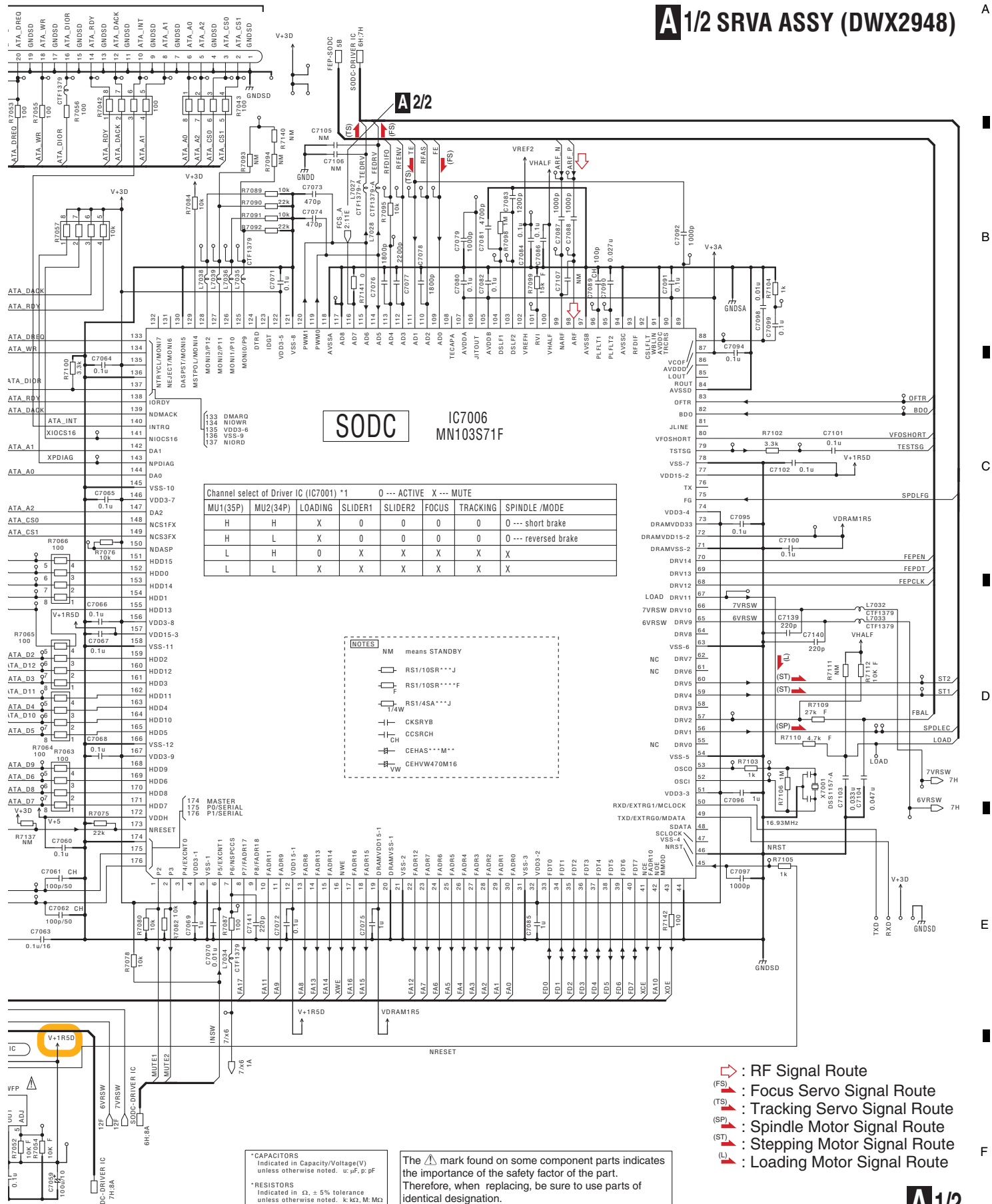
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A 1/2 SRVA ASSY (DWX2948)



△

A



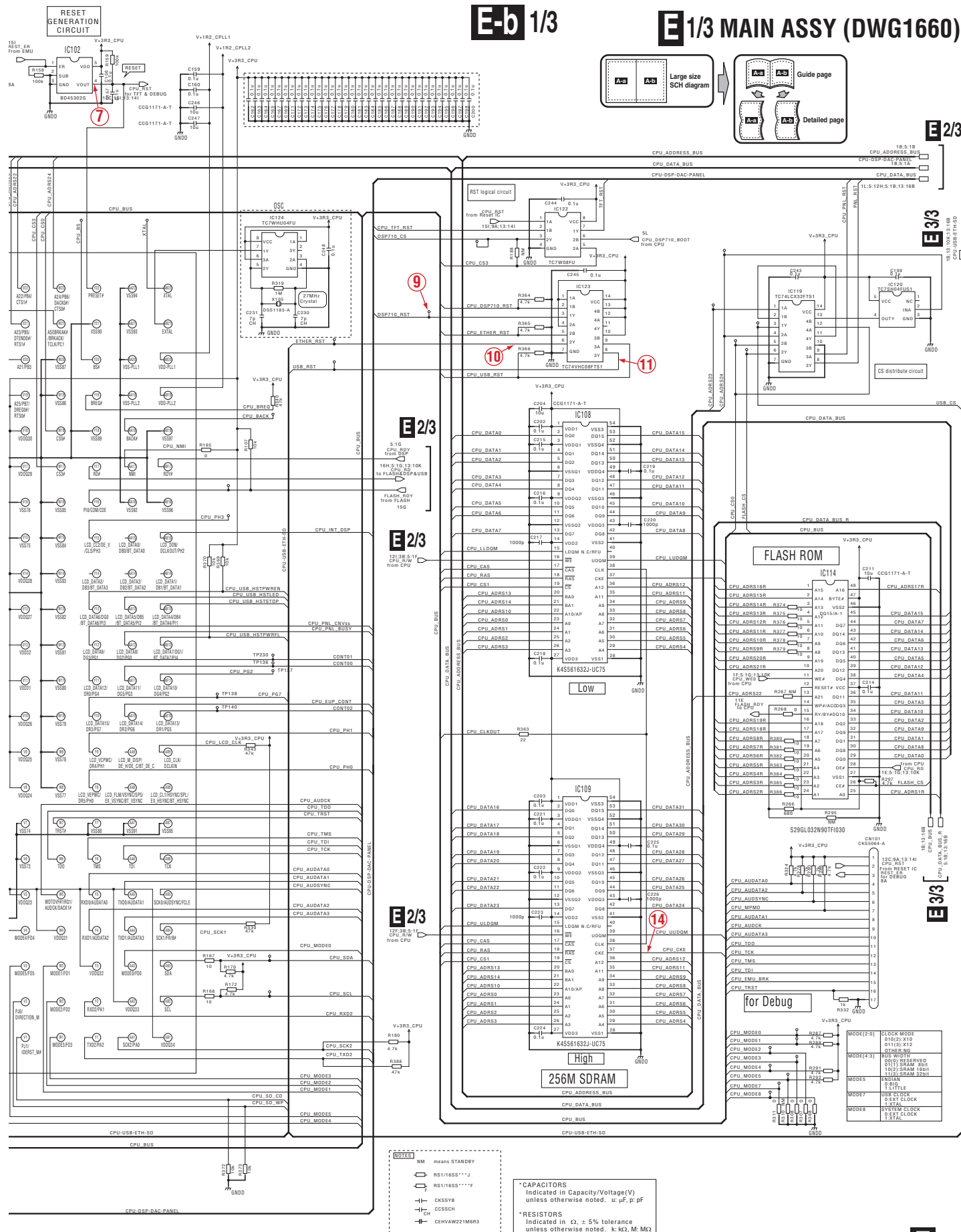
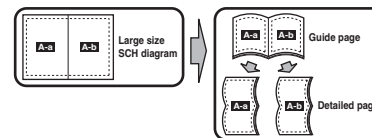
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The  may indicate the importance of the information. Therefore, identical de-

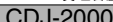
E-b 1/3

E 1/3 MAIN ASSY (DWG1660)



A-a A-b

94





A-a A-b

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

*RESISTORS
Indicated in Ω , $\pm$ 5% tolerance
unless otherwise noted. k: k Ω , M: M Ω

NOTES	NM	means	STANDBY
		RS1/16SS***J	
		RS1/16SS***F	
		CKSSYB	
		CCSSCH	
		CEHVAW221M6R3	

E-b 1/3
95



E-a 2/3



A



D

E

F

1

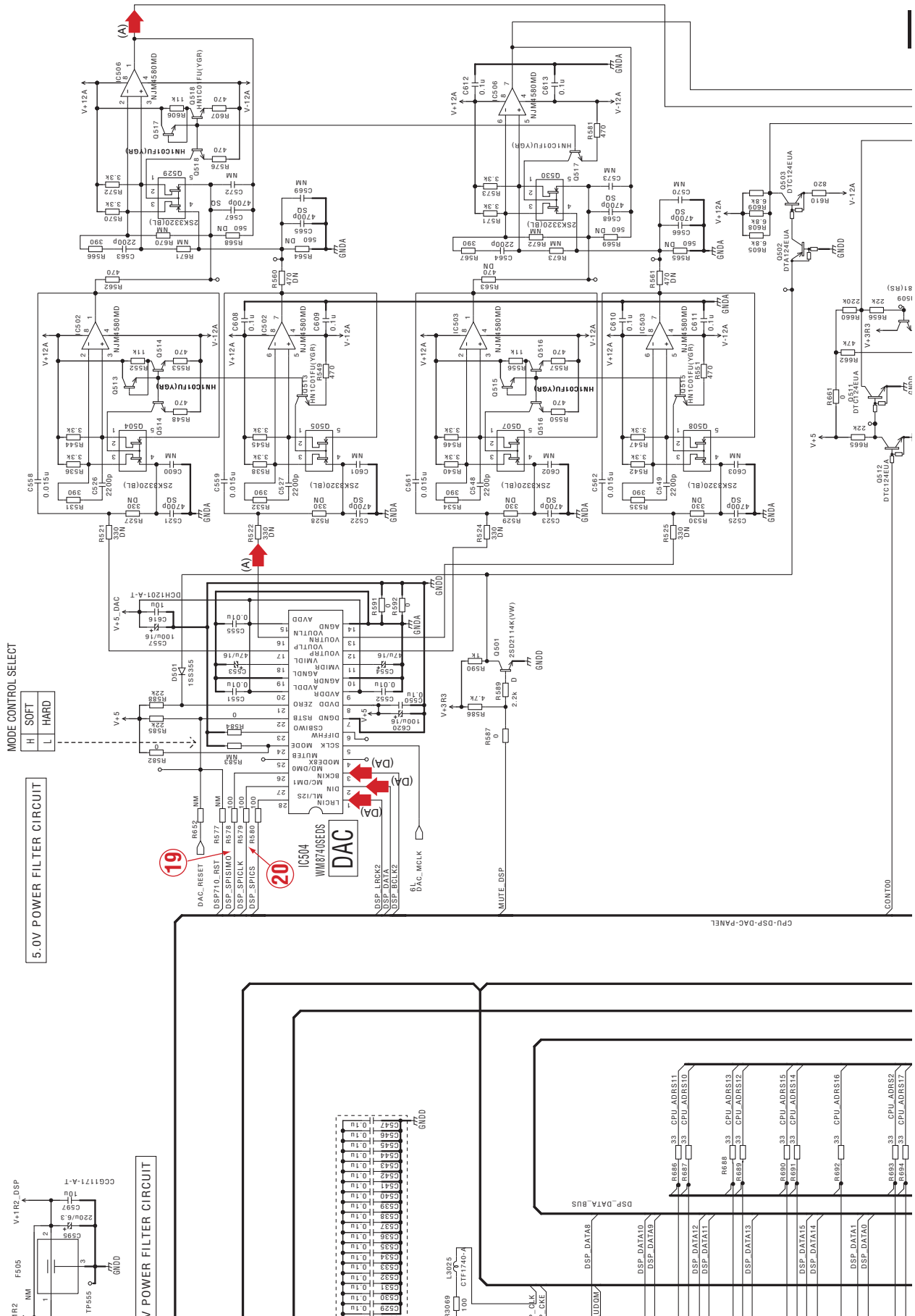
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E2/3 MAIN ASSY (DWG1660)

A-a A-b



CDJ-2000

E-b 2/3

100

1

2

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E 2/3 MAIN ASSY (DWG1660)

A-a A-b

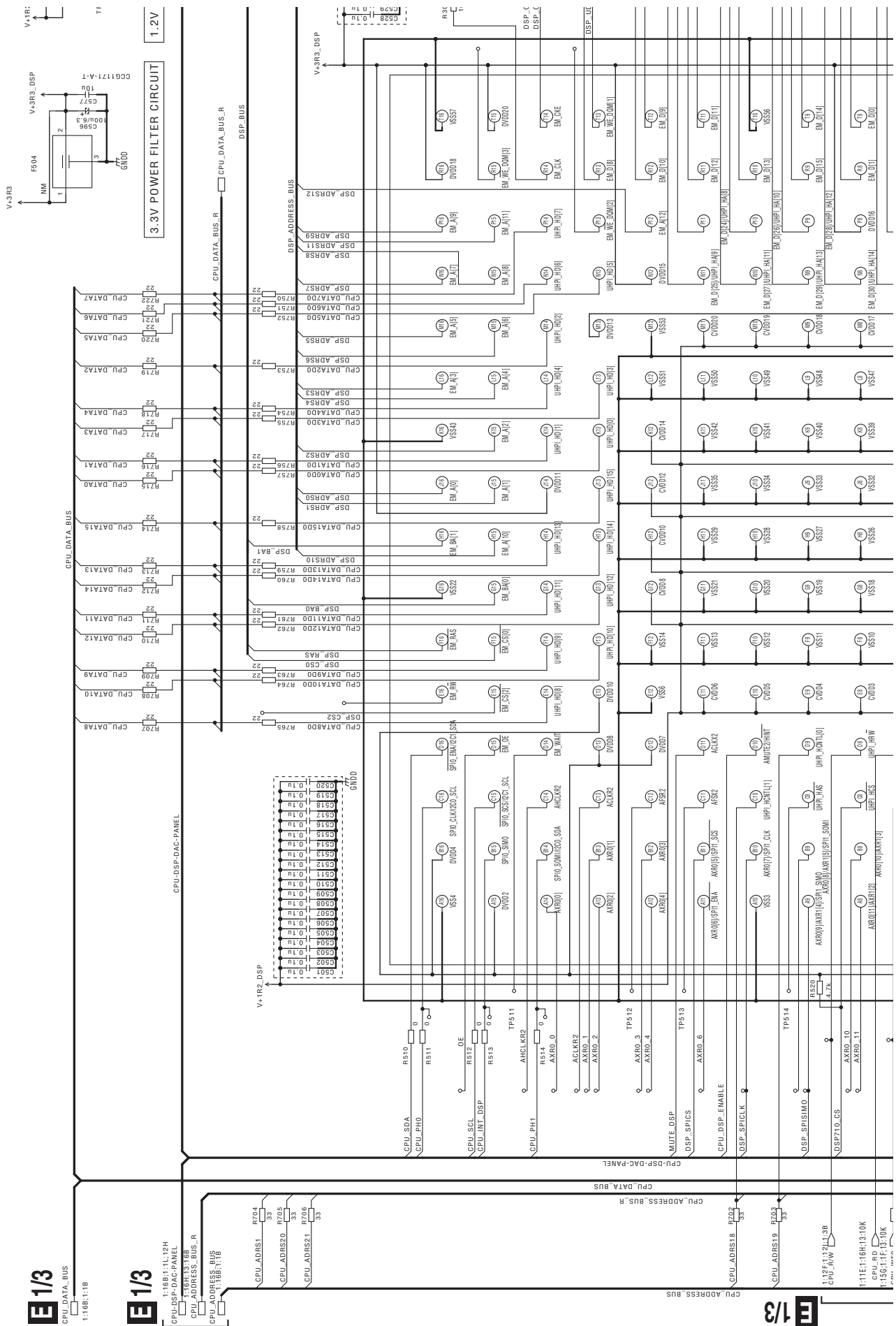
E-a 2/3

102

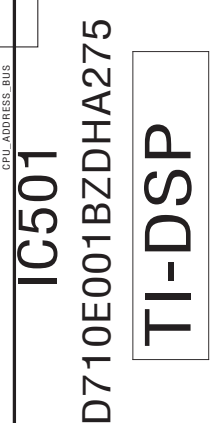
E 1/3

E 1/3

E 1/3



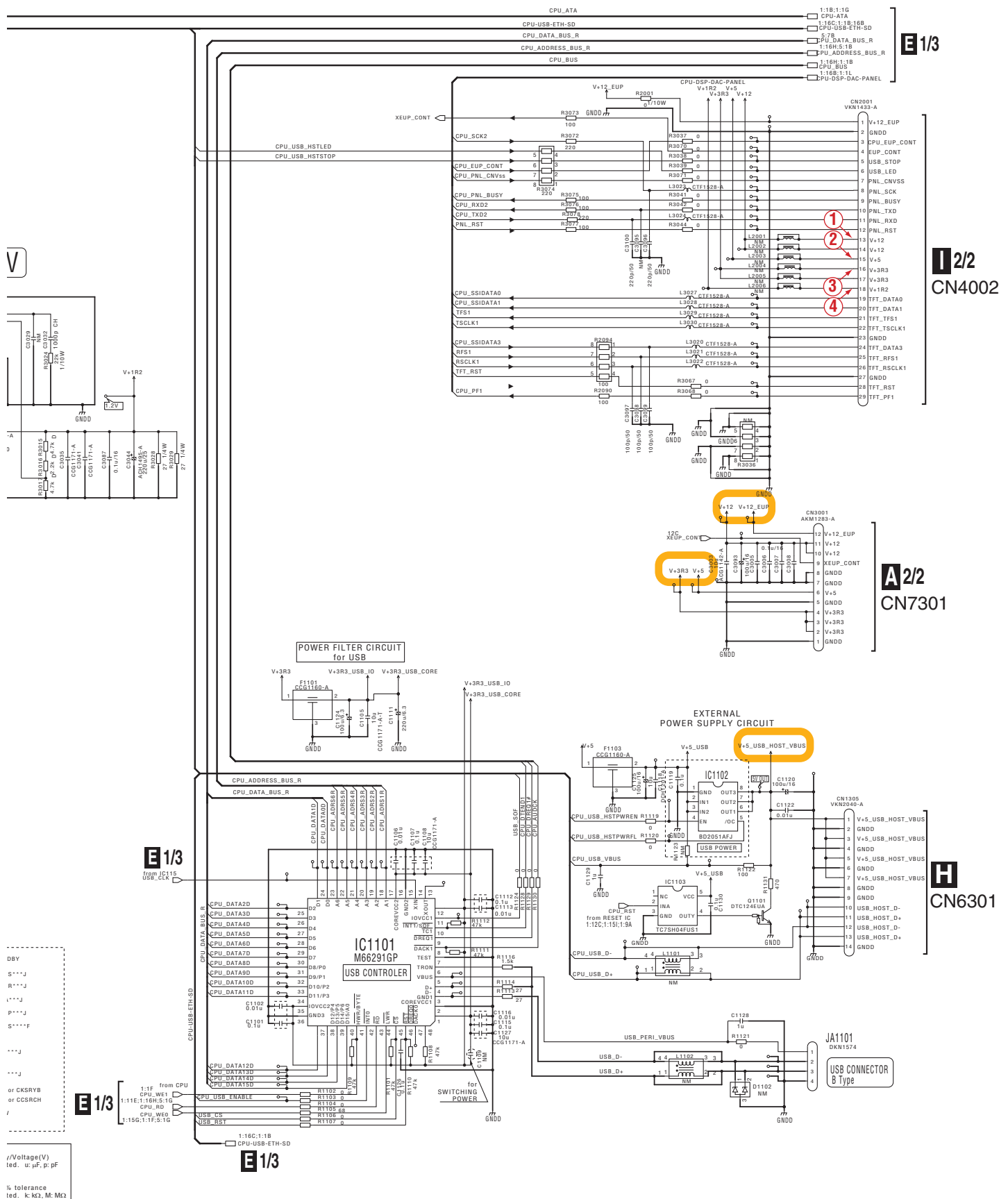
CDJ-2000



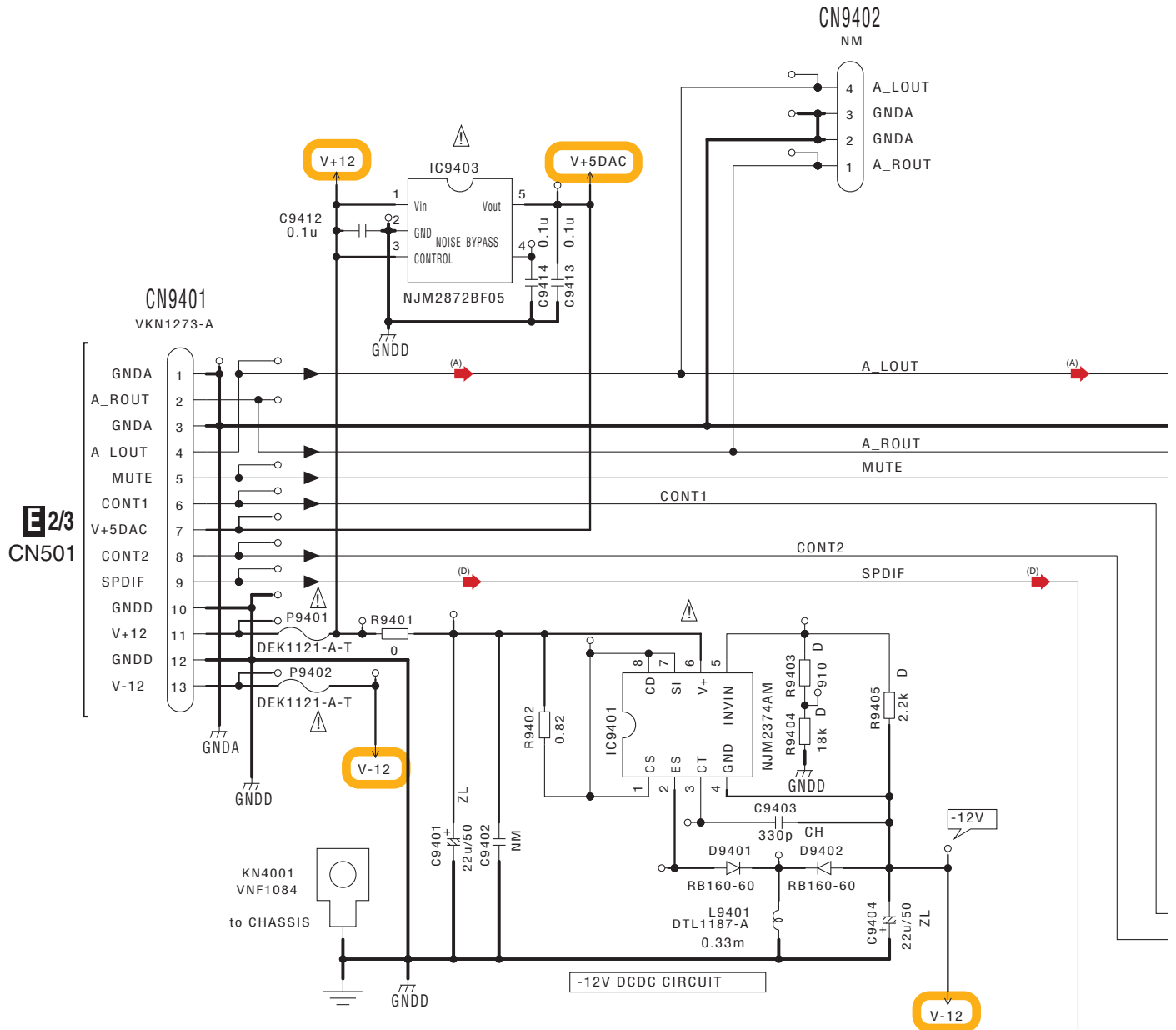
4

4

E 3/3 MAIN ASSY (DWG1660)



10.6 JACB ASSY



NOTES

- NM means STANDBY
- RS1/10SR***J
- D RN1/16SE****D
- VM RD1/2VM***J
- SA RS1/4SA***J
- CKSRYB or CKSYB
- MA CQMAQ
- CH CCSRCH
- CEHAT
- CEHAZL

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.

*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

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 0437.750 MFD, BY
LITTELFUSE INC. FOR P9402.

F JACB ASSY (DWX2988)

A

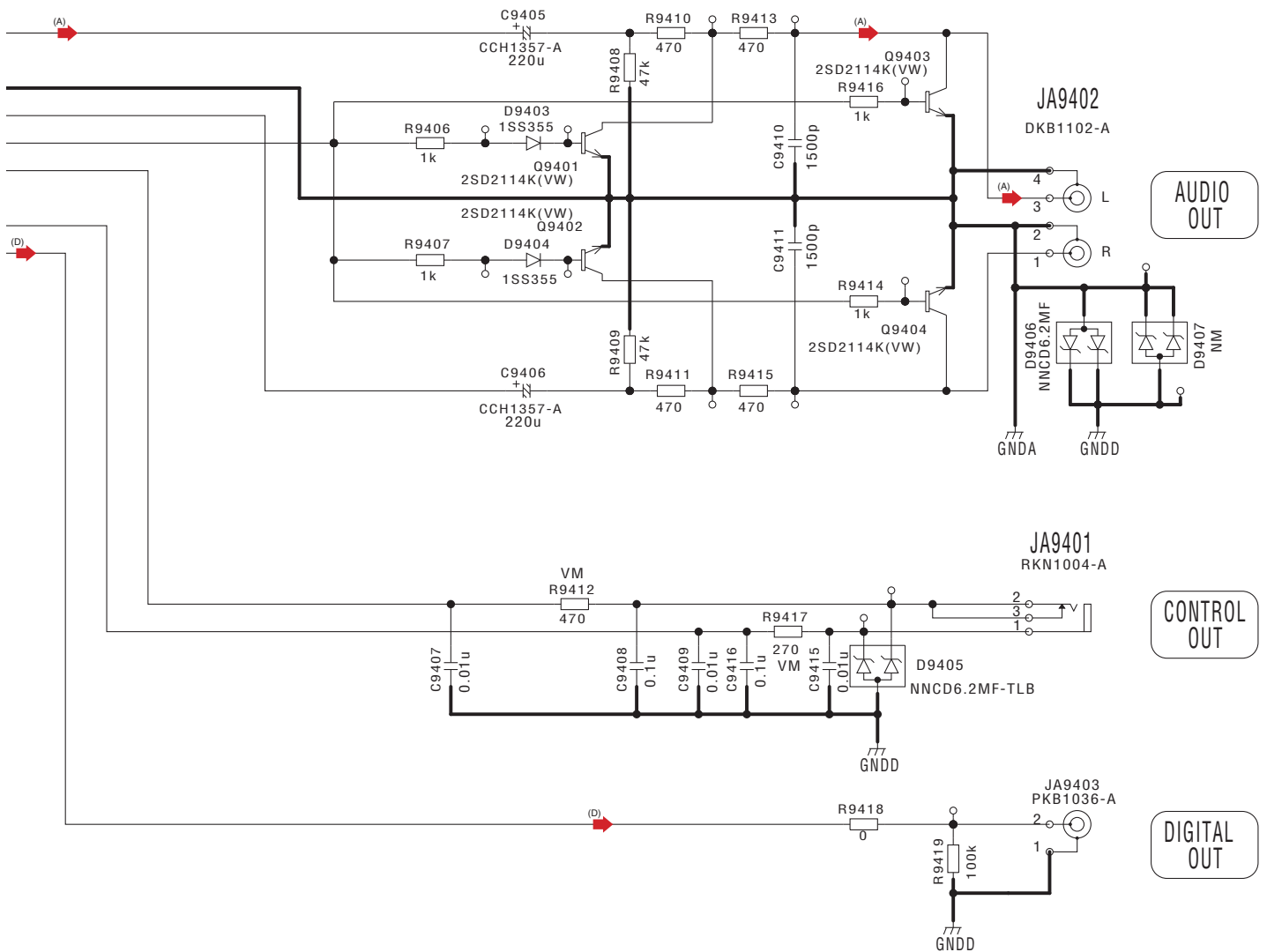
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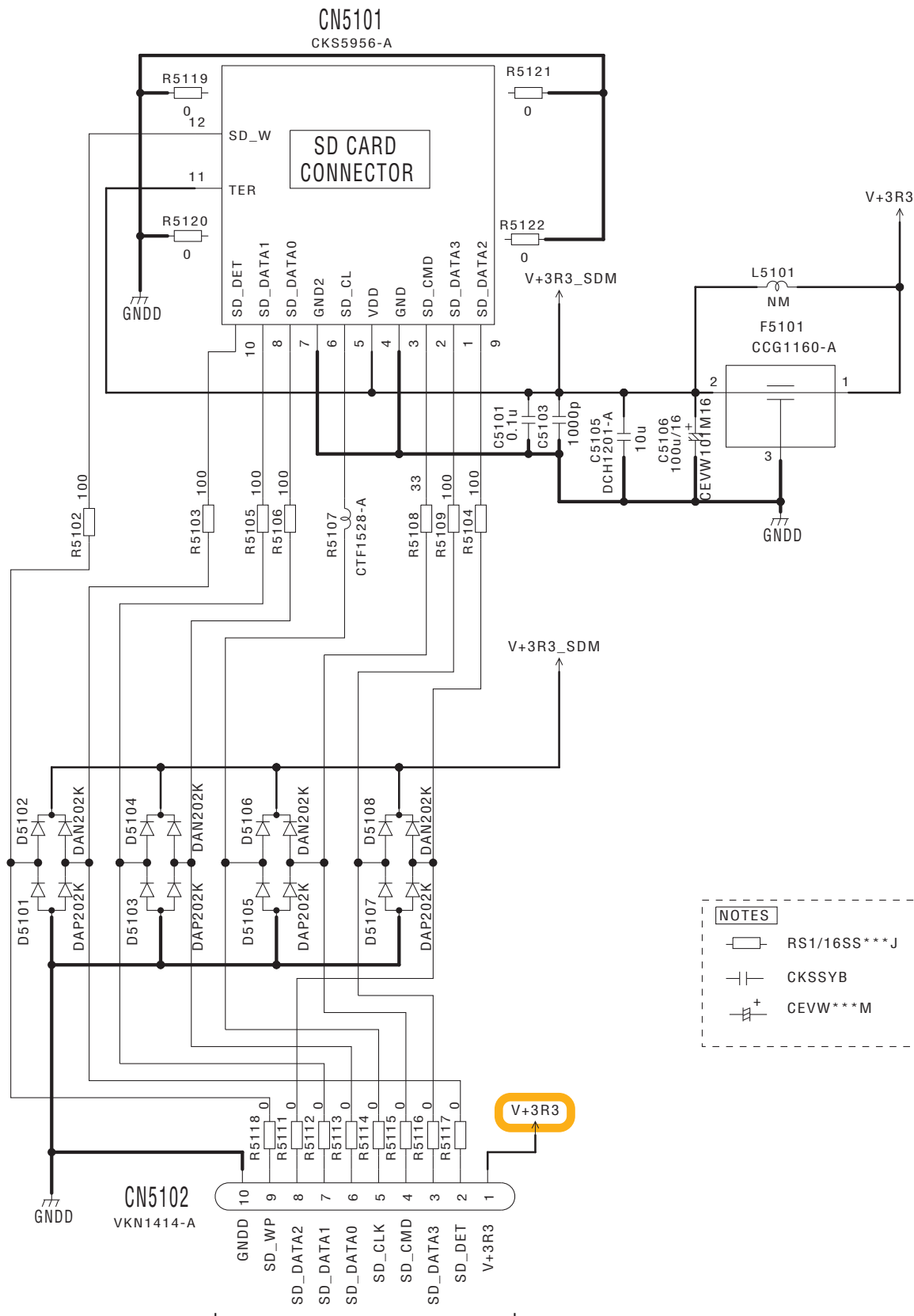
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(A) : Analog Audio Signal Route
 (B) : Digital Data Signal Route

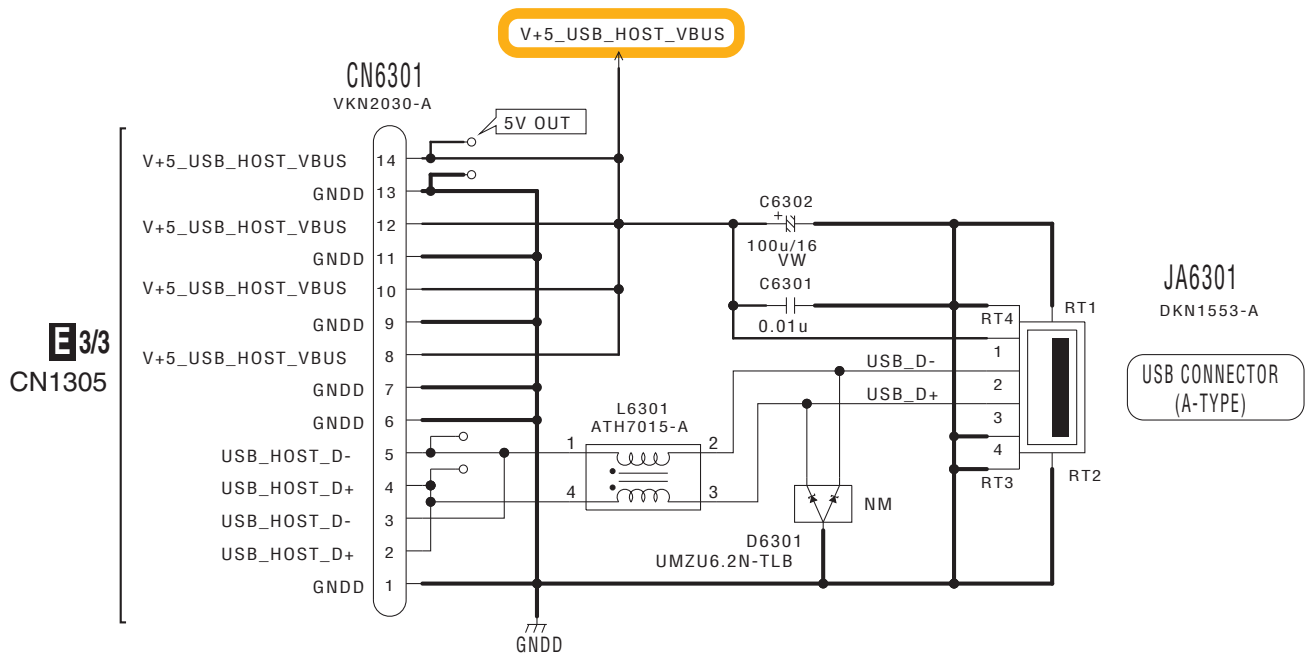
10.7 SDCB ASSY

SDCB ASSY (DWX2980)



3/3 CN1304





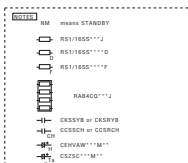
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u: µF, p: pF

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

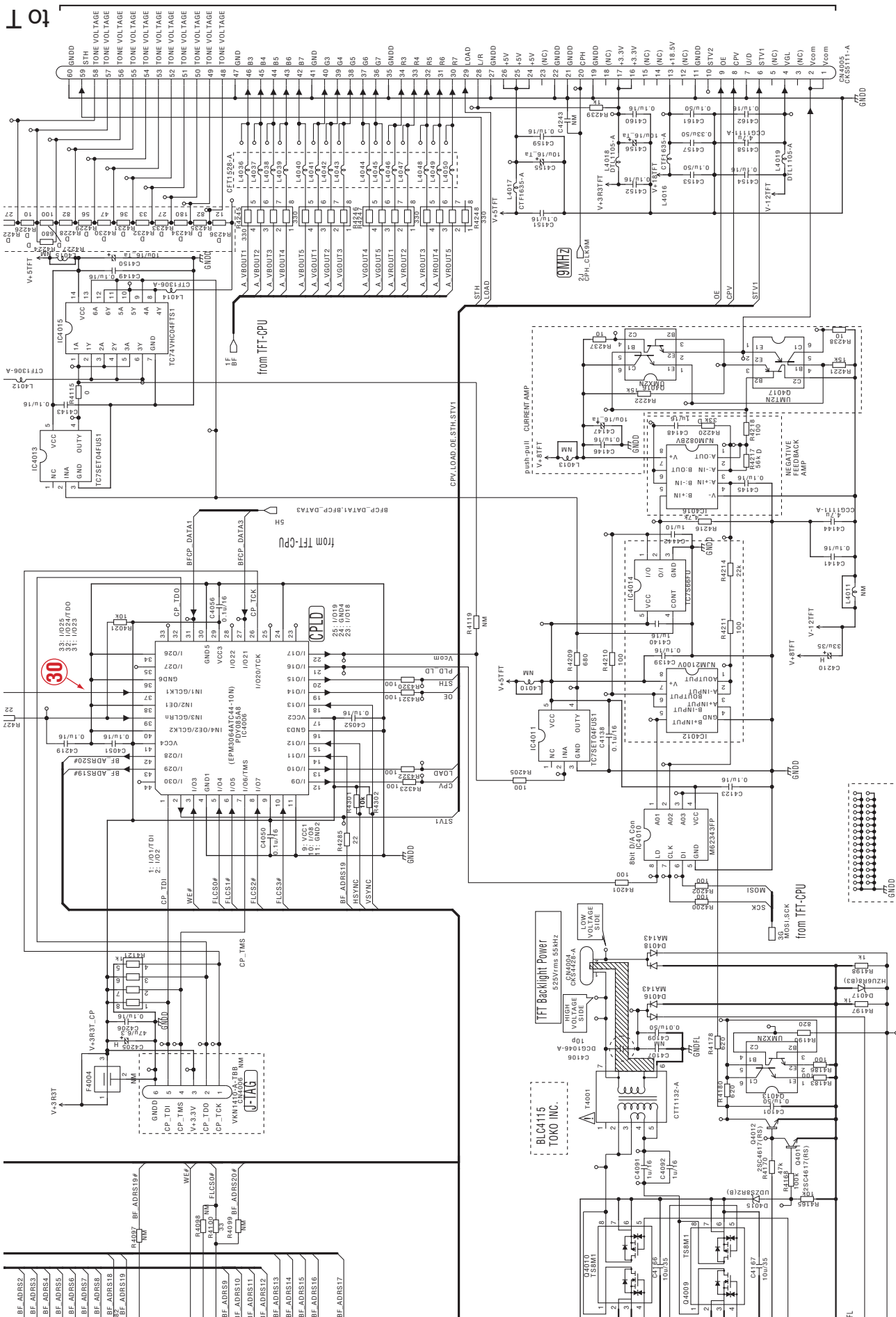
NOTES

CEVW***

CKSRYB***K

I-a 1/2





CDJ-2000

I-b 1/2

113



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 0437.750 and
0437.375 MFD, BY LITTELFUSE INC. FOR P4001 and P4002.

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

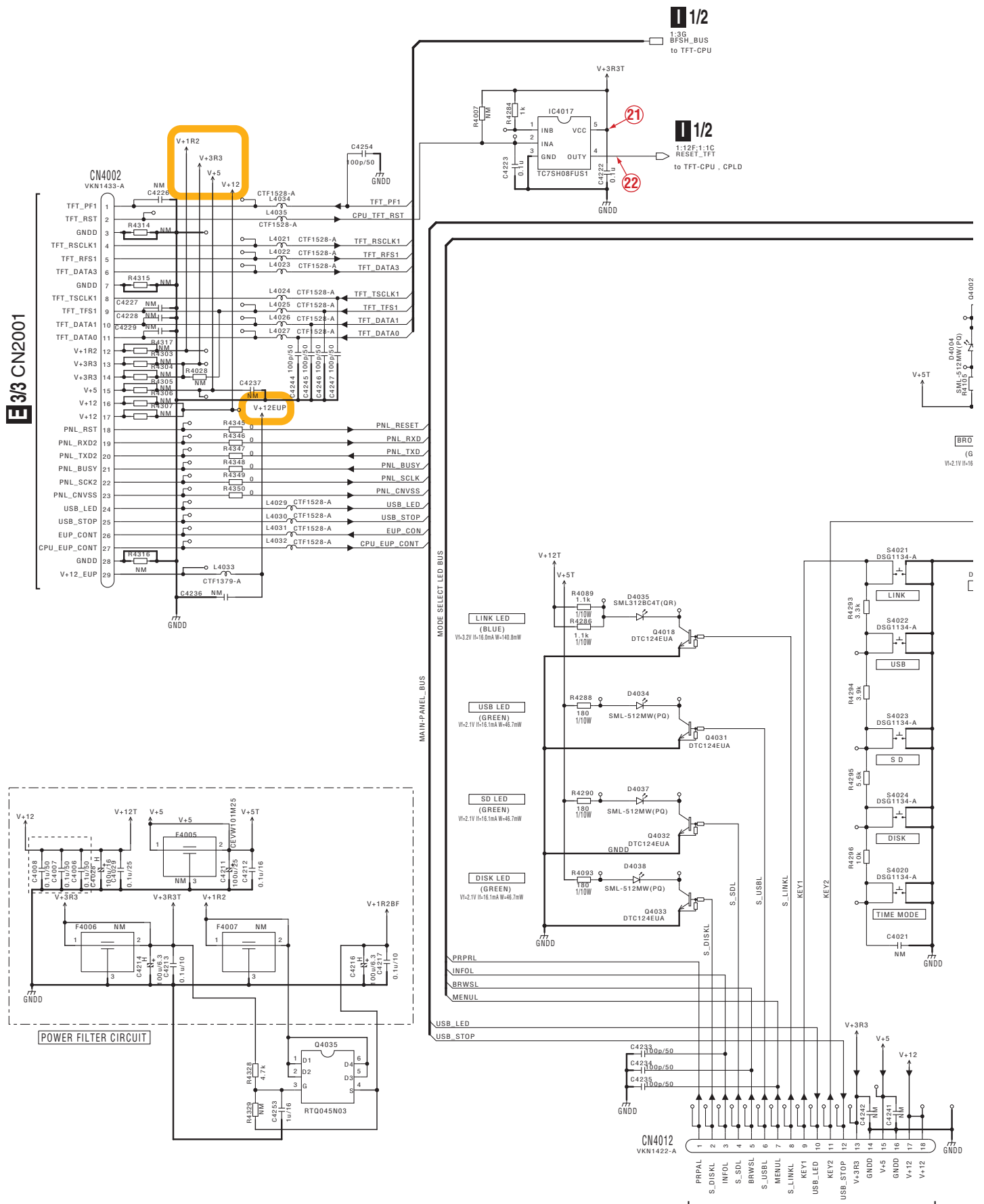
*RESISTORS
Indicated in Ω , $\pm$ 5% tolerance
unless otherwise noted. k: k Ω , M: M Ω

1 ■

10.10 TFTB ASSY (2/2)

△

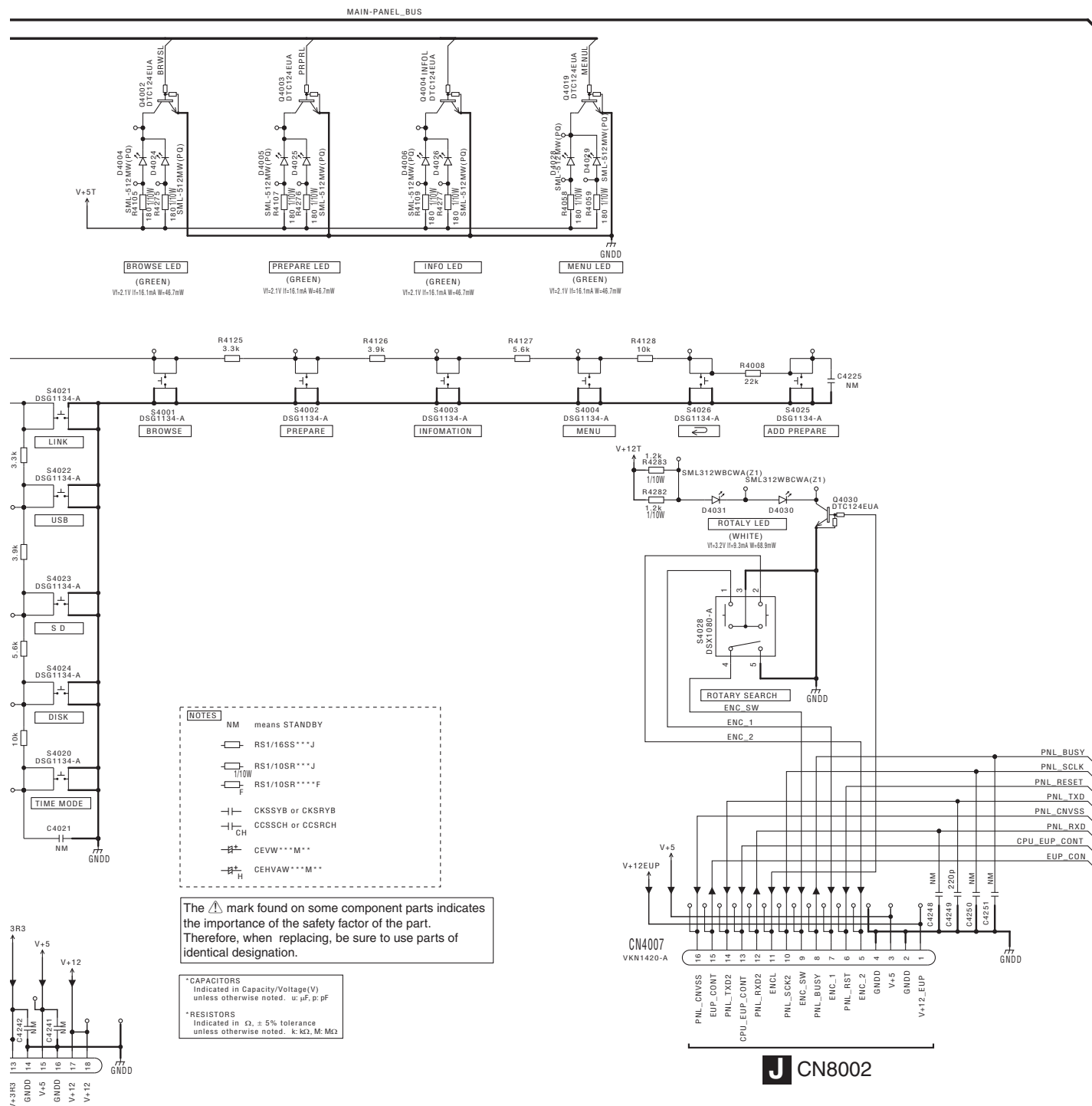
F



I 2/2

J CN8001

2/2 TFTB ASSY (DWX2882)

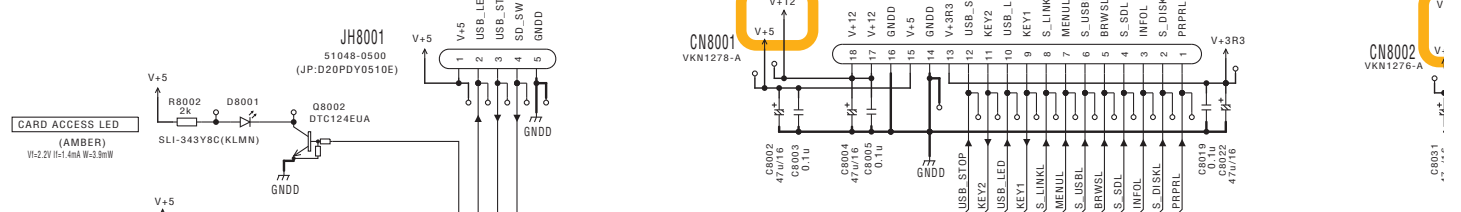


10.11 PNLB ASSY

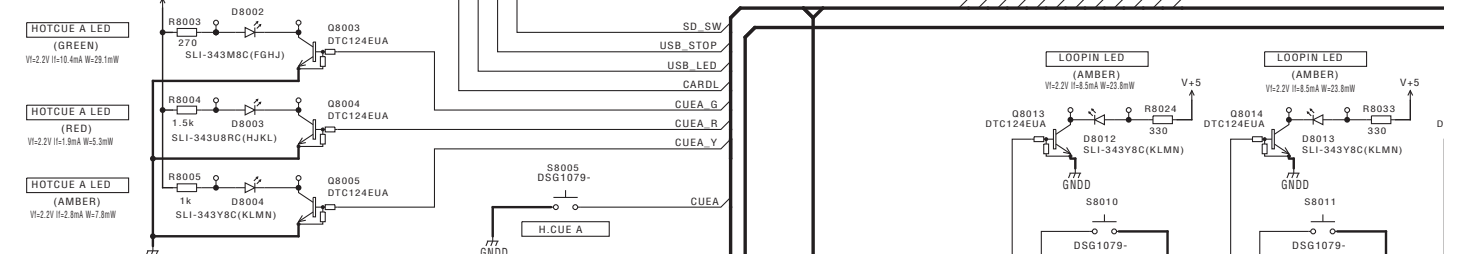
M CN8601

L 2/2 CN4012

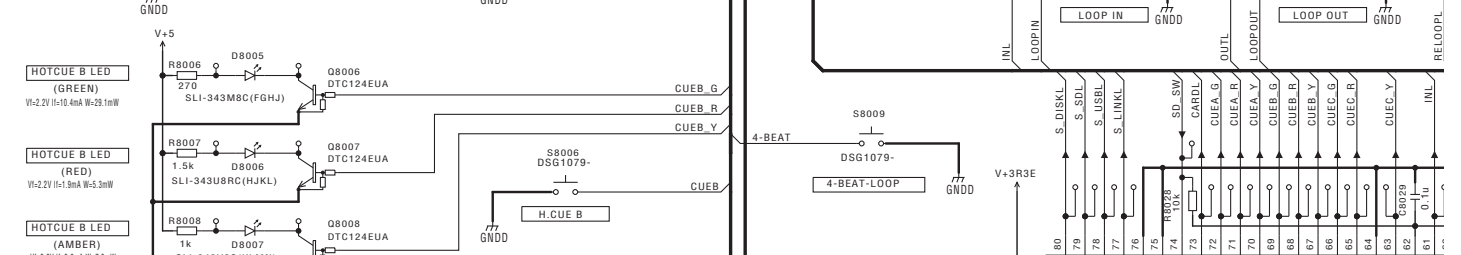
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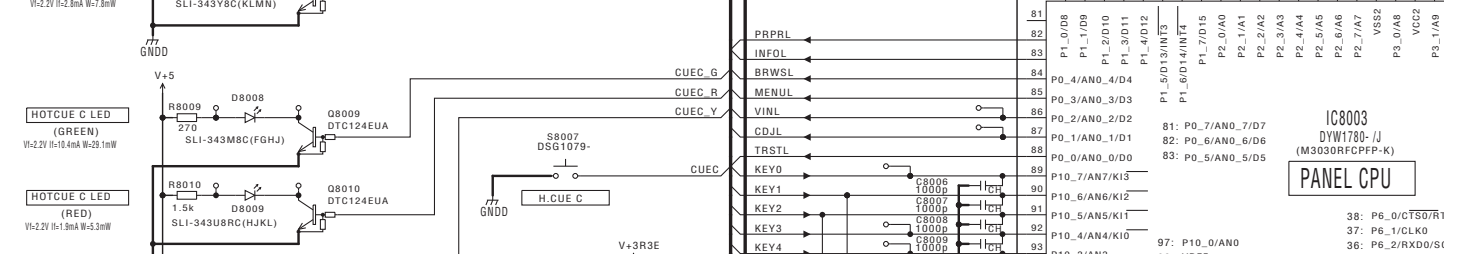
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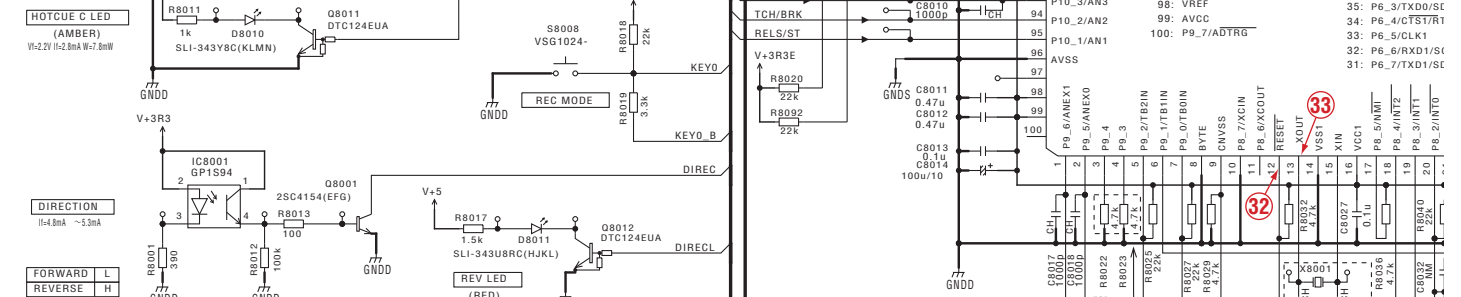
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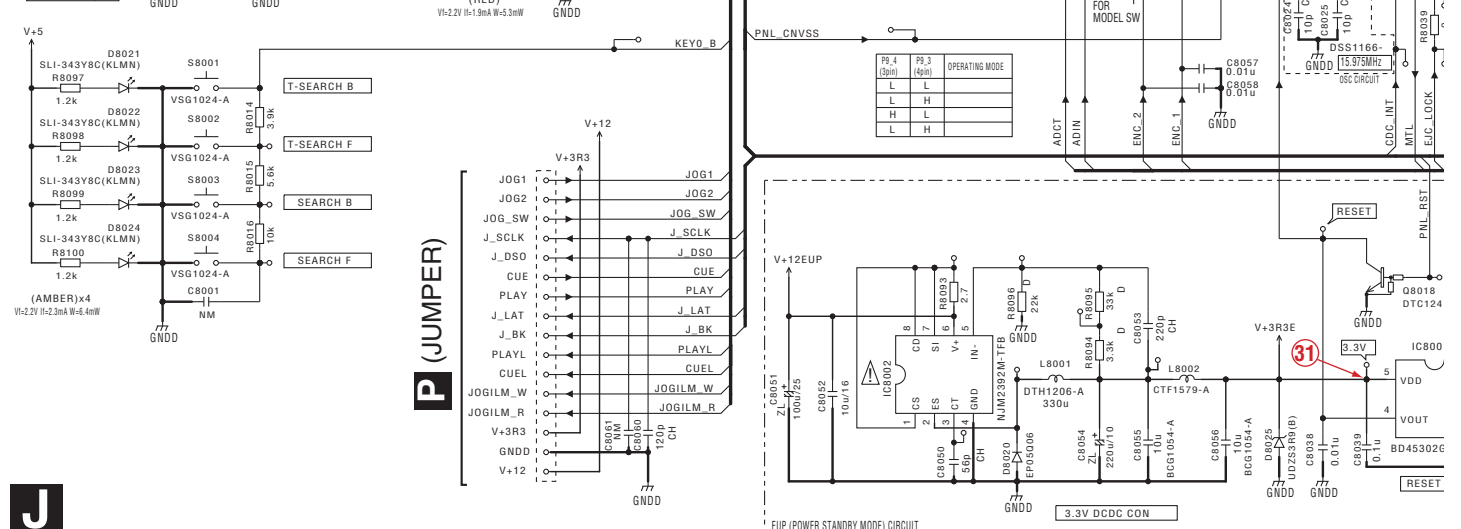
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E



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A



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C

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10.12 JFLB ASSY

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B

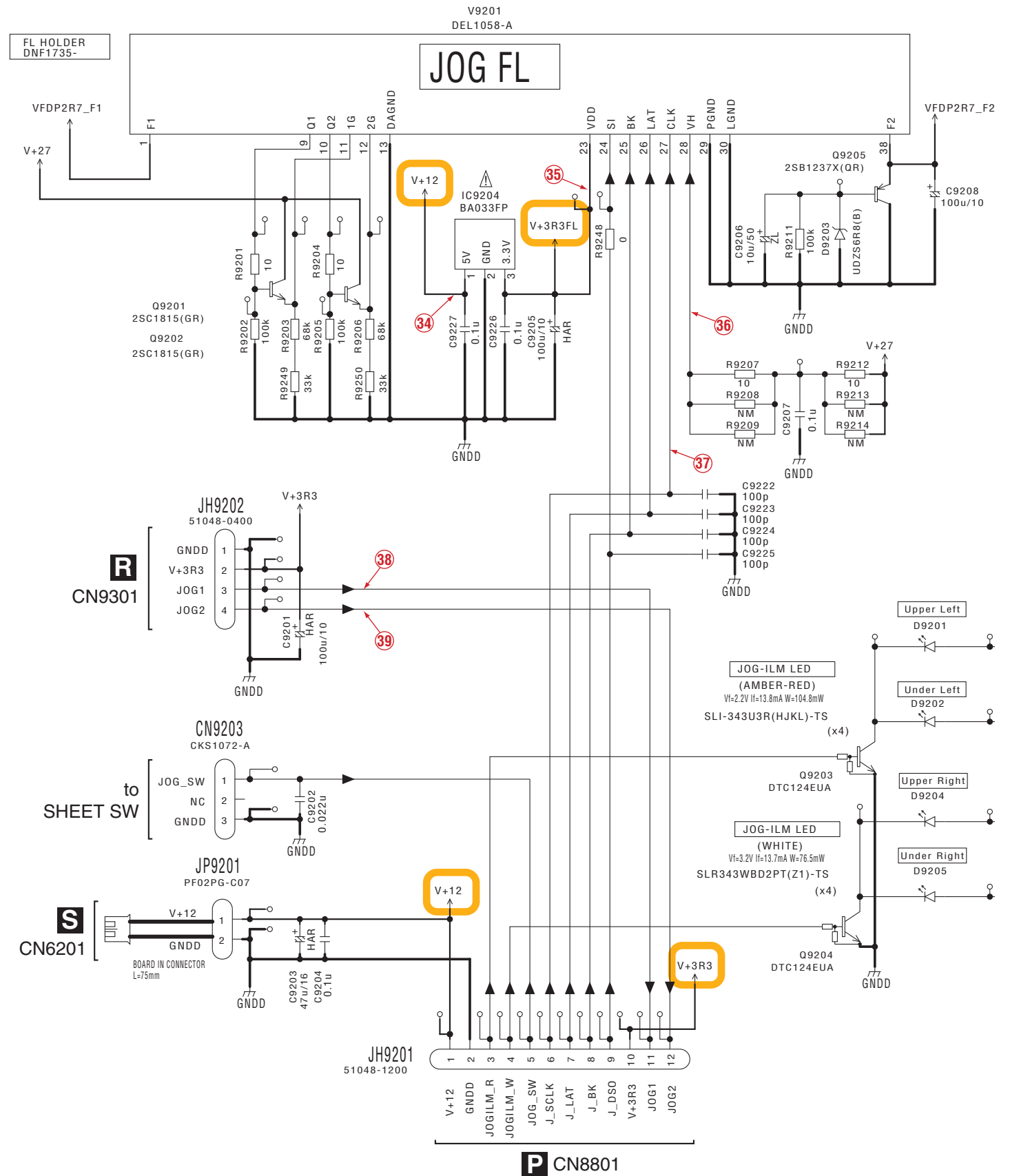
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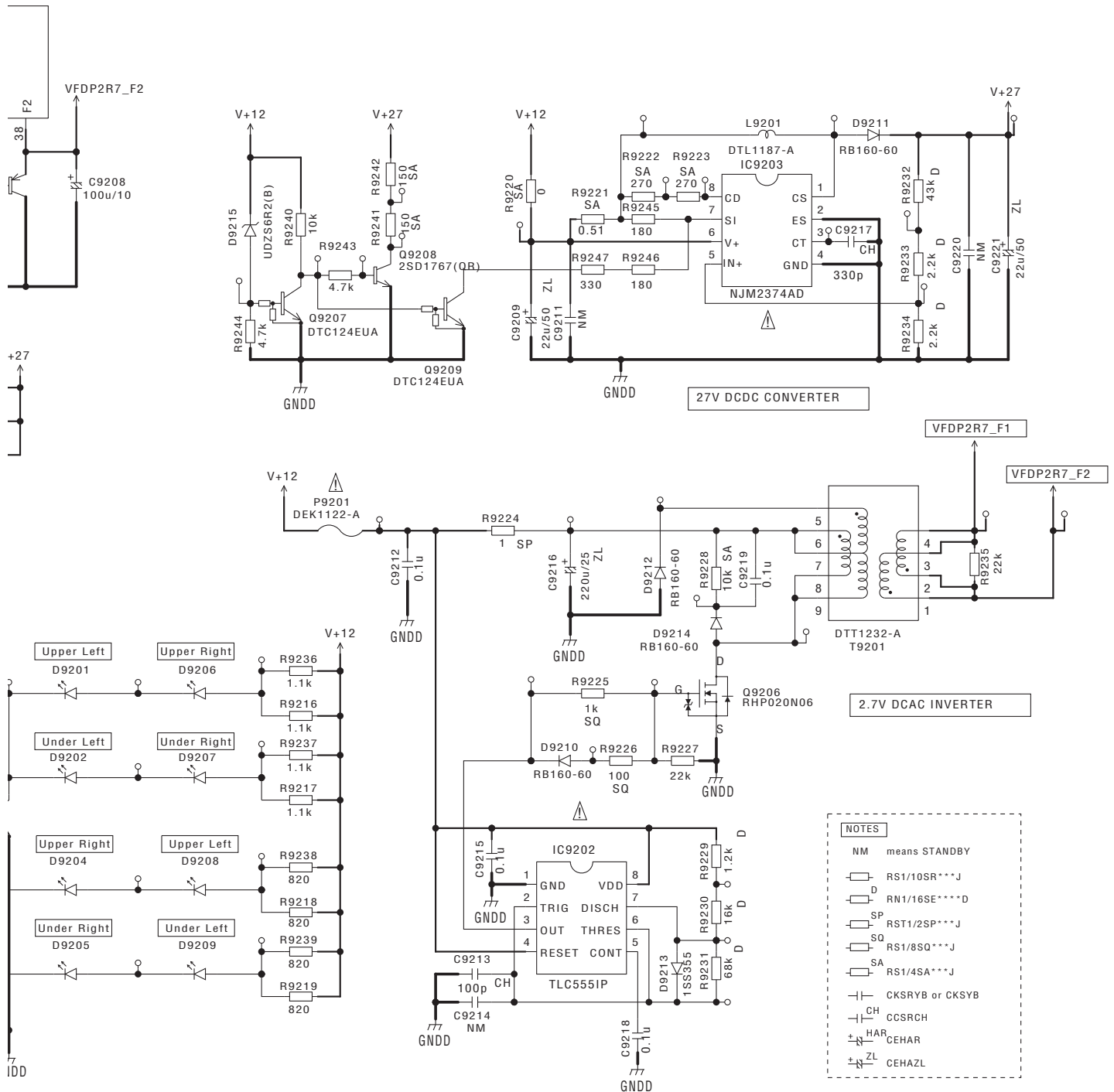
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120





The Δ 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.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 0437001. MFD, BY LITTELFUSE INC. FOR P9201.

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

*RESISTORS
Indicated in Ω , $\pm$ 5% tolerance
unless otherwise noted. k: k Ω , M: M Ω

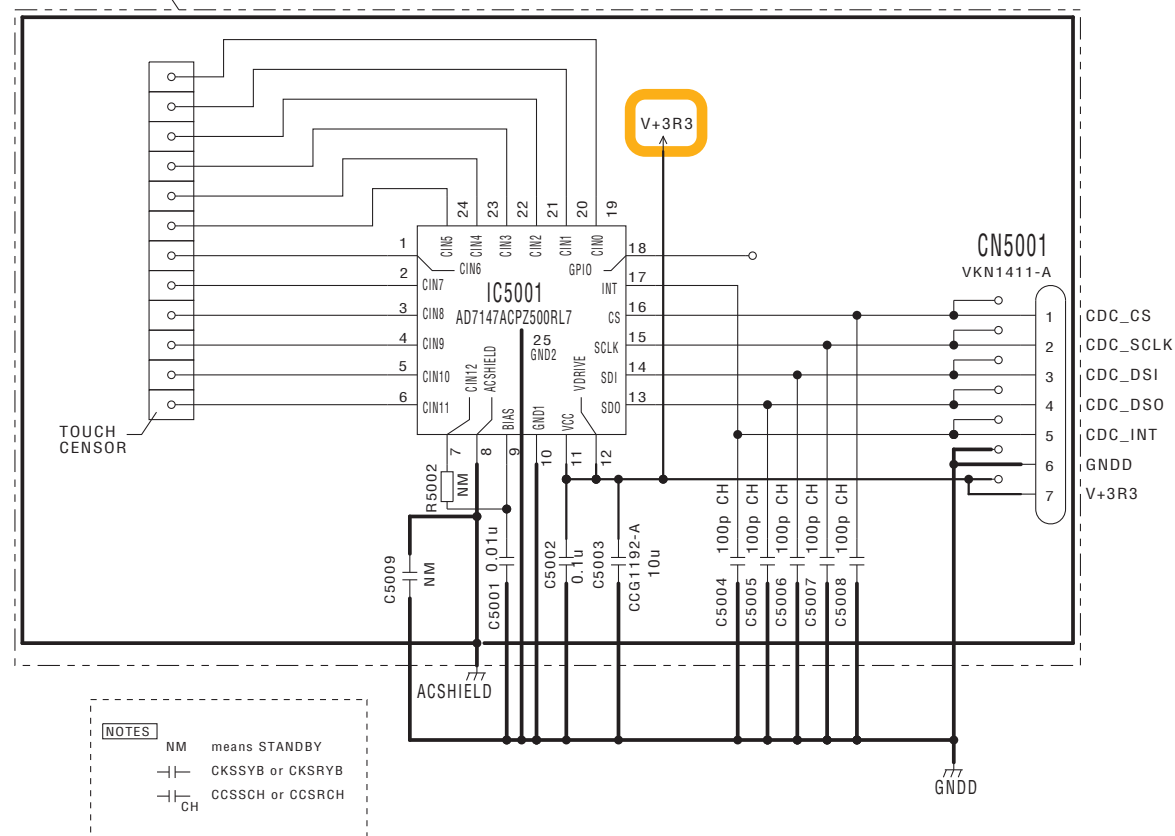
NOTES

- NM means STANDBY
- RS1/10SR***J
- RN1/16SE****D
- SP RST1/2SP***J
- SQ RS1/8SQ***J
- SA RS1/4SA***J
- CKSRYB or CKSYB
- CCSRCH
- HAR CEHAR
- ZL CEHAZL

10.13 CDCB and SDSW ASSYS

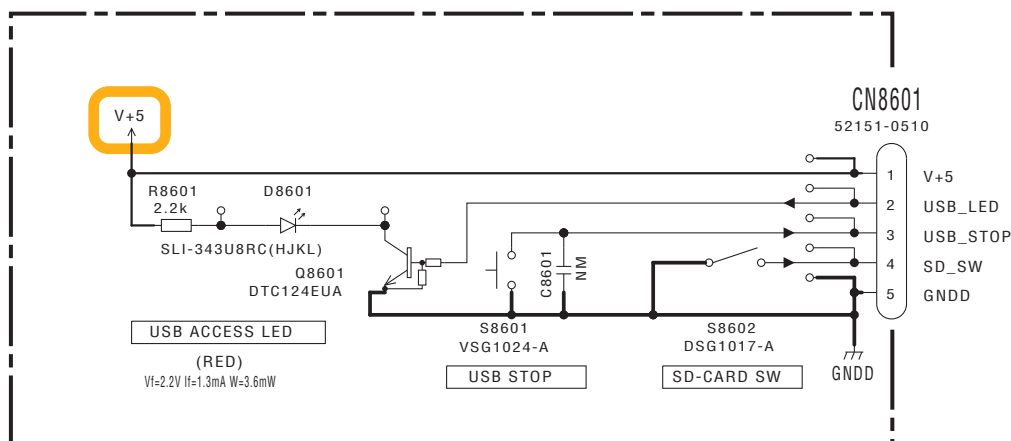
L CDCB ASSY (DWX2987)

ACSHIELD AREA



J
CN8003

M SDSW ASSY (DWS1420)



J
JH8001

NOTES

- NM means STANDBY
- RS1/10SR***J

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

*RESISTORS
Indicated in Ω , $\pm$ 5% tolerance
unless otherwise noted. k: k Ω , M: M Ω

D



10.15 CNCT and KSWB ASSYS

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B

C

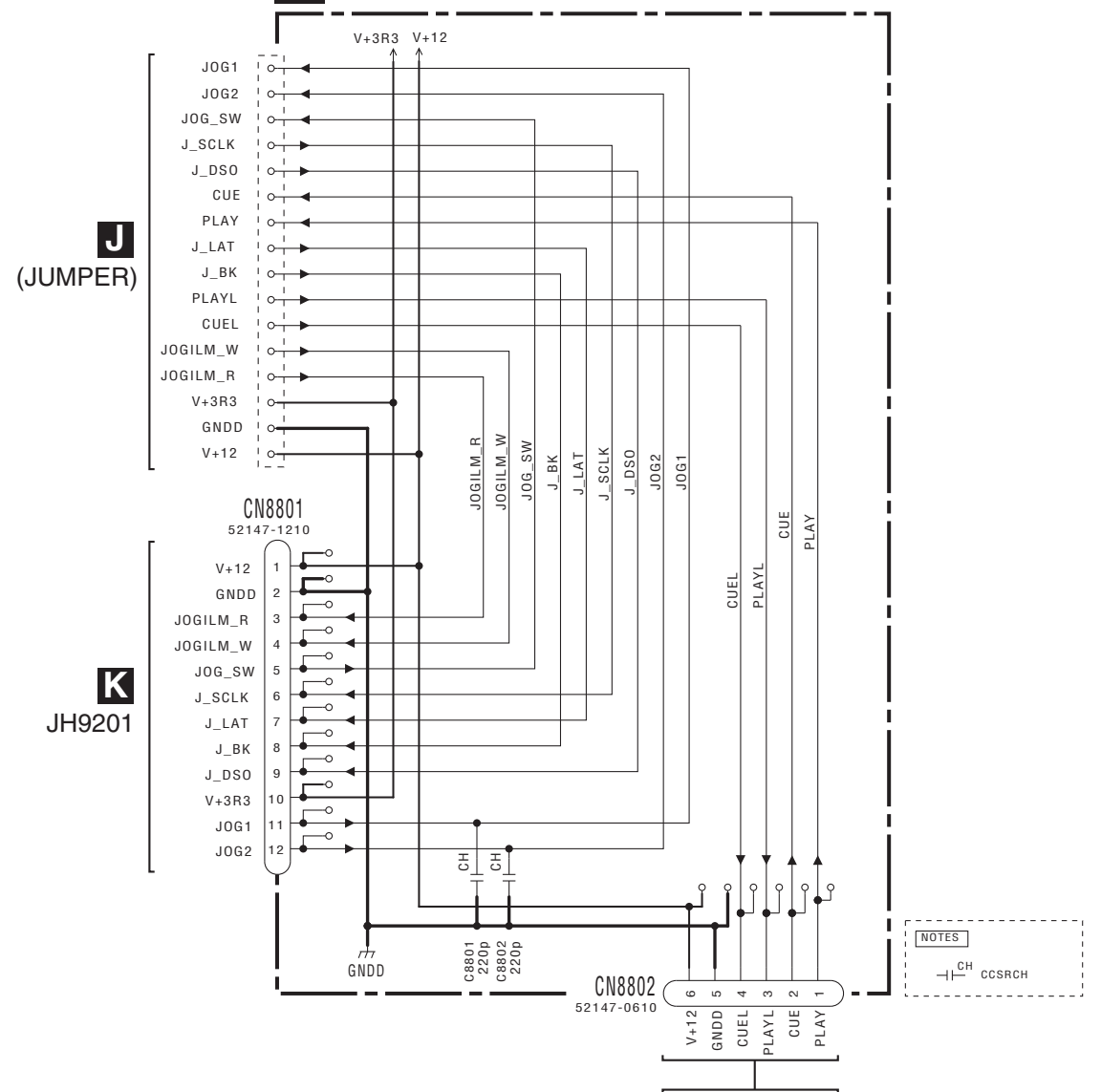
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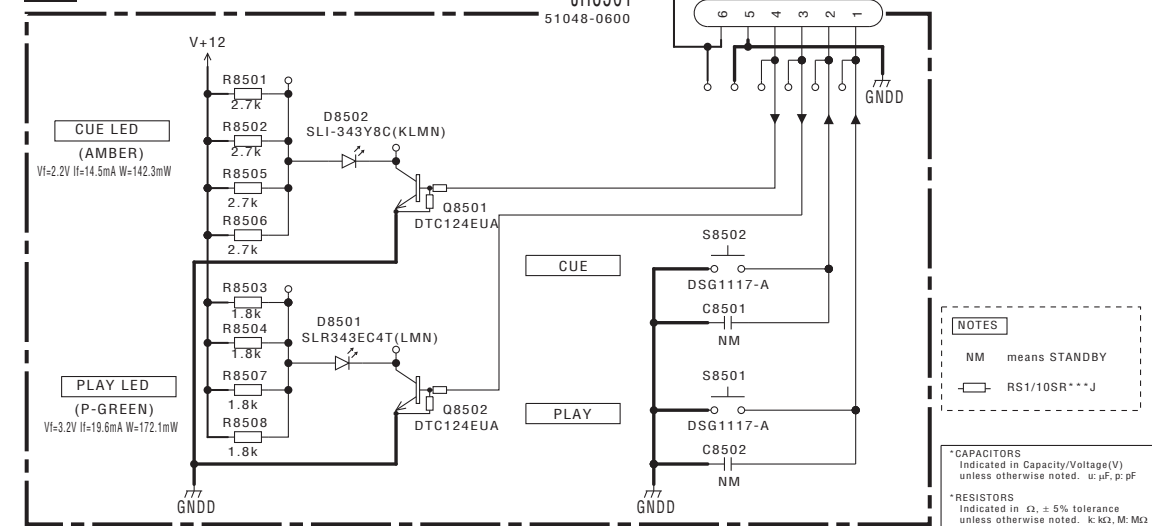
F

P Q

P CNCT ASSY (DWX3009)



Q KSWB ASSY (DWS1409)



A

B

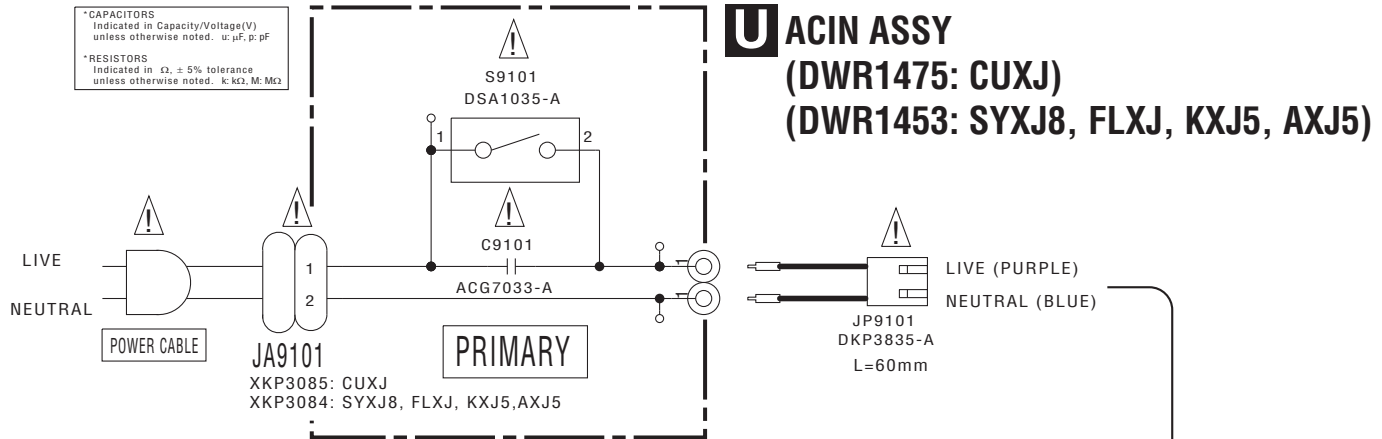


D



10.17 POWER SUPPLY and ACIN ASSYS

A



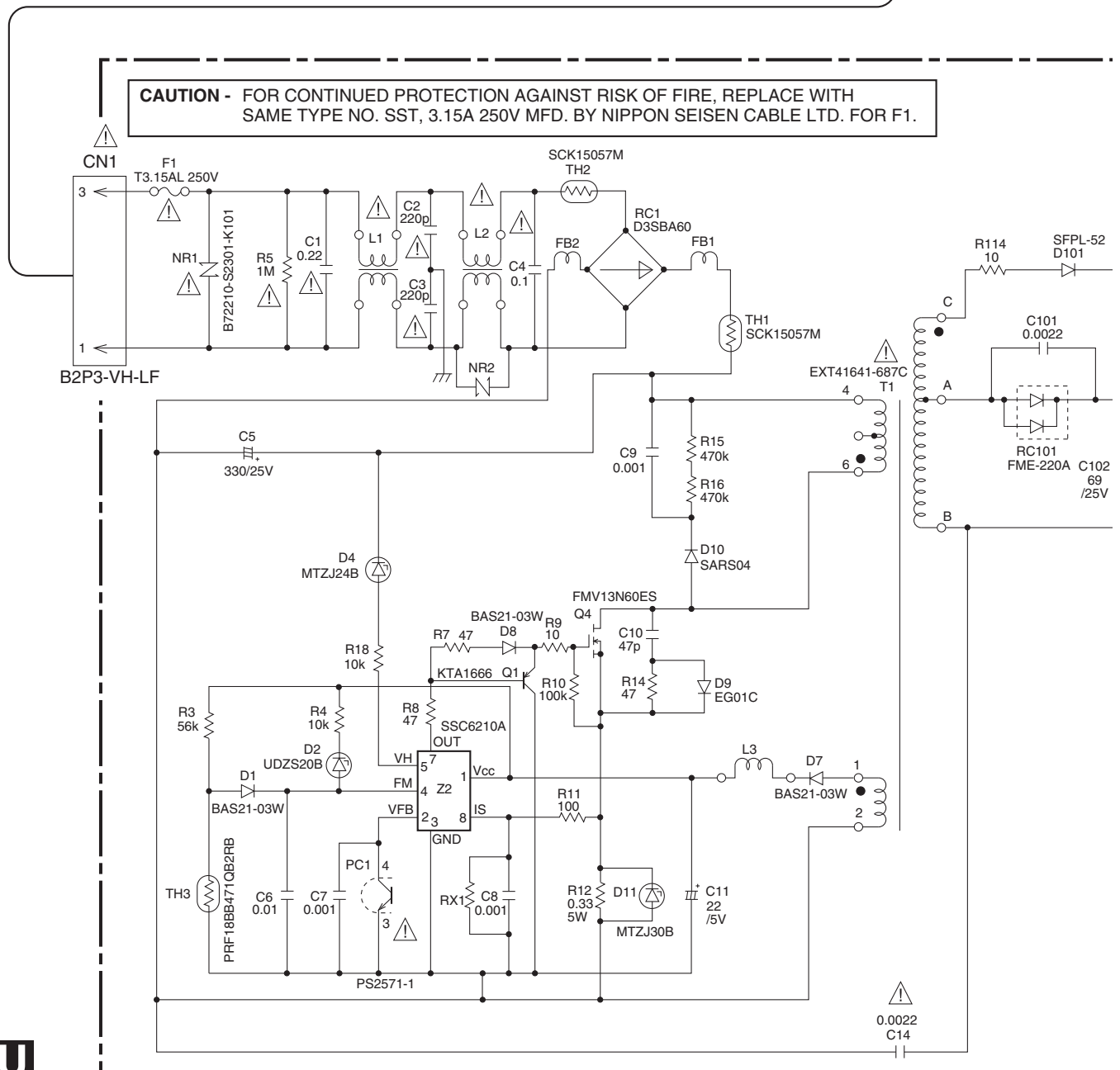
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E

F

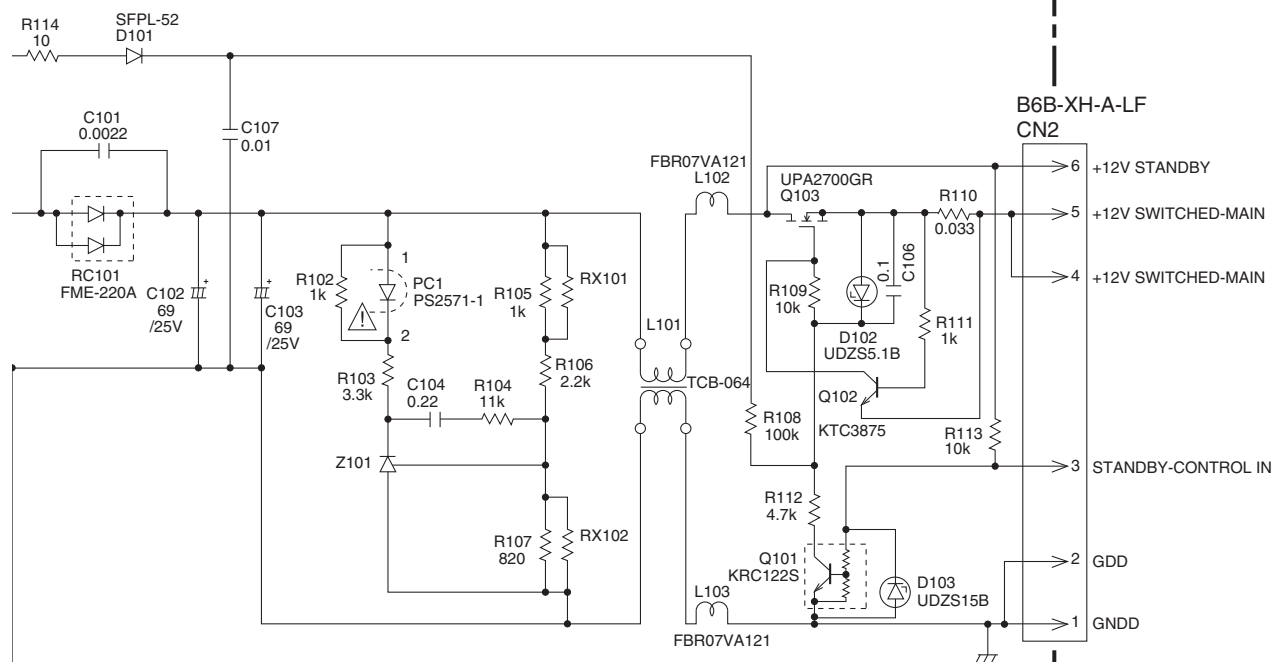


T U

, AXJ5)

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.

T POWER SUPPLY ASSY (DWR1463)

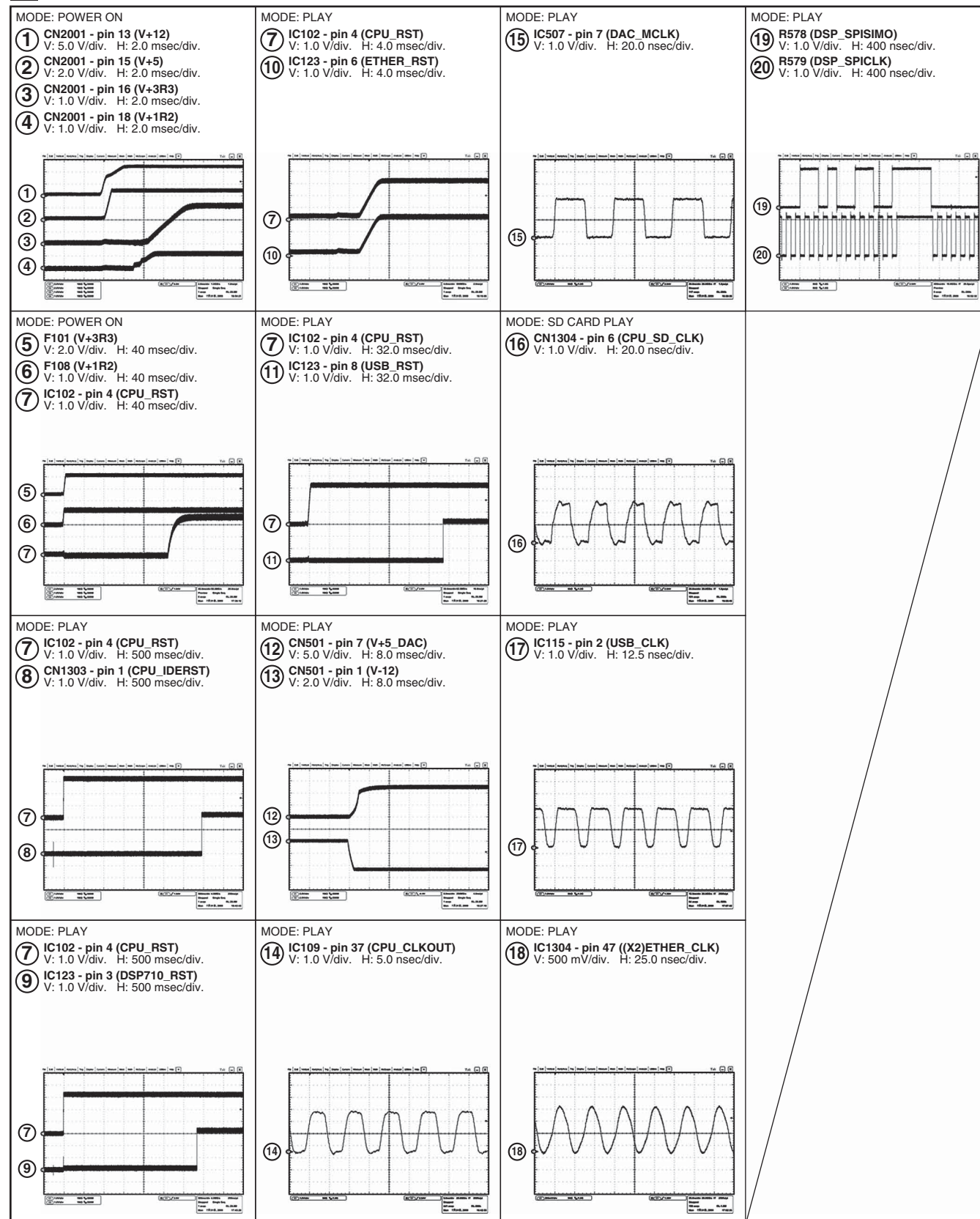


A2/2
CN7302

10.18 WAVEFORMS

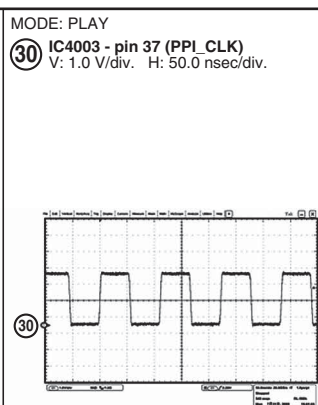
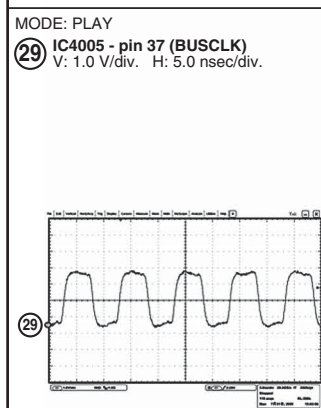
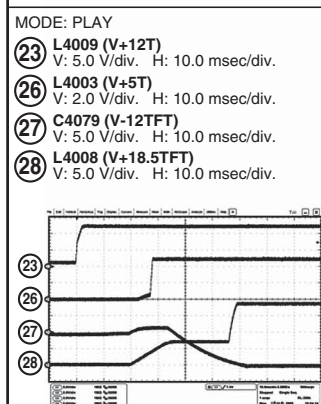
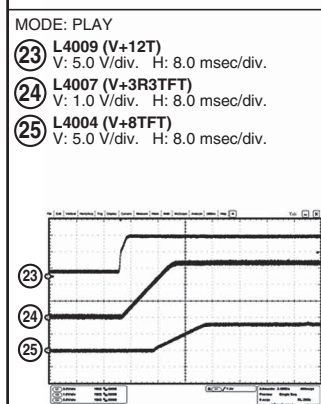
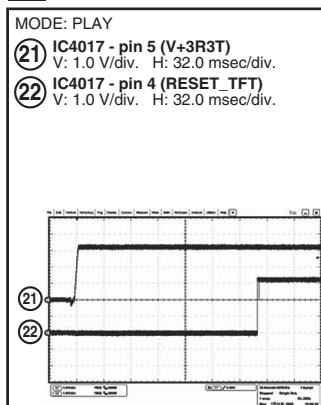
NOTE: The encircled numbers denote measuring point in the schematic diagram and PCB diagram.

MAIN ASSY

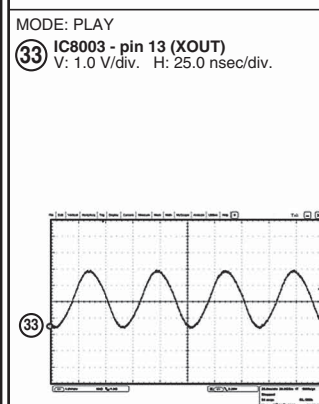
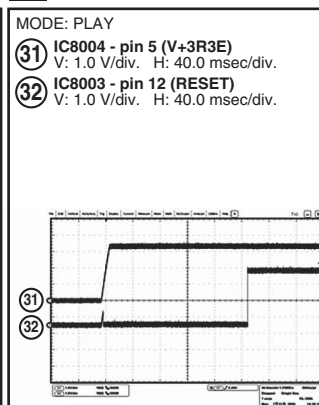


NOTE: The encircled numbers denote measuring point in the schematic diagram and PCB diagram.

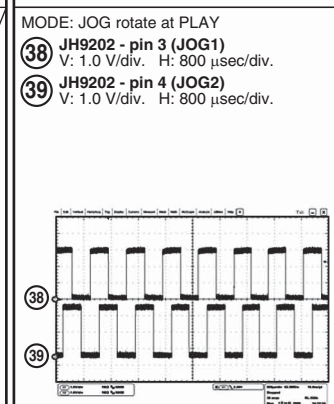
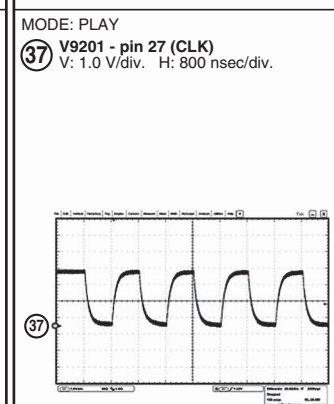
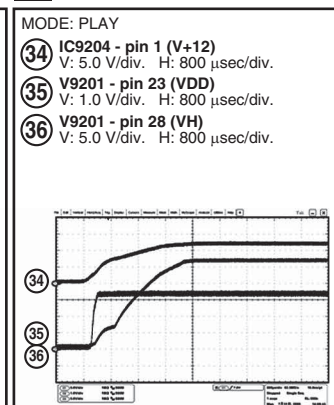
I TFTB ASSY



J PNLB ASSY



K JFLB ASSY



11. PCB CONNECTION DIAGRAM

11.1 SRVA ASSY

A **SIDE A**

STEPPING MOTOR

A **SRVA ASSY**

IC7304

IC7003

IC7303

Q7004

Q7003

IC7002

IC7004

Q7001

Q7002

Q7005

IC7006

IC7001

IC7302

IC7305

PICKUP ASSY

B **CN6101**

D **CN9001**

T **CN2**

A

130

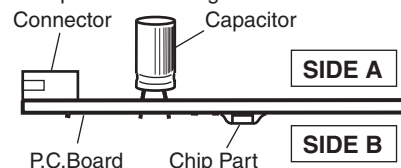
CDJ-2000

A



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.

- Connector  Capacitor



E CN1303

E CN3001

DWY2948-41
SRVA ASSY
CN7301

SIDE B

A

A SRVA ASSY

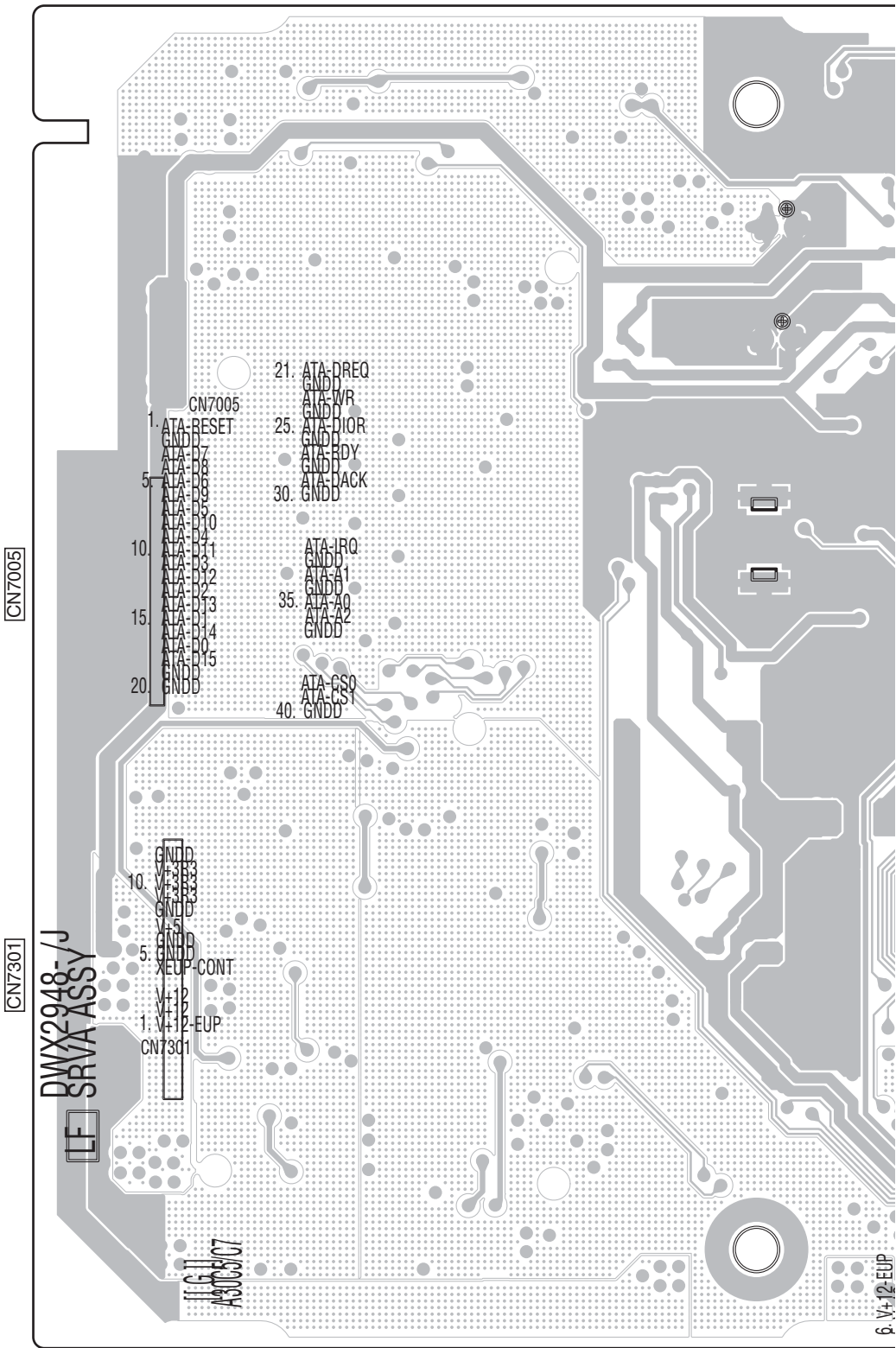
B

C

D

E

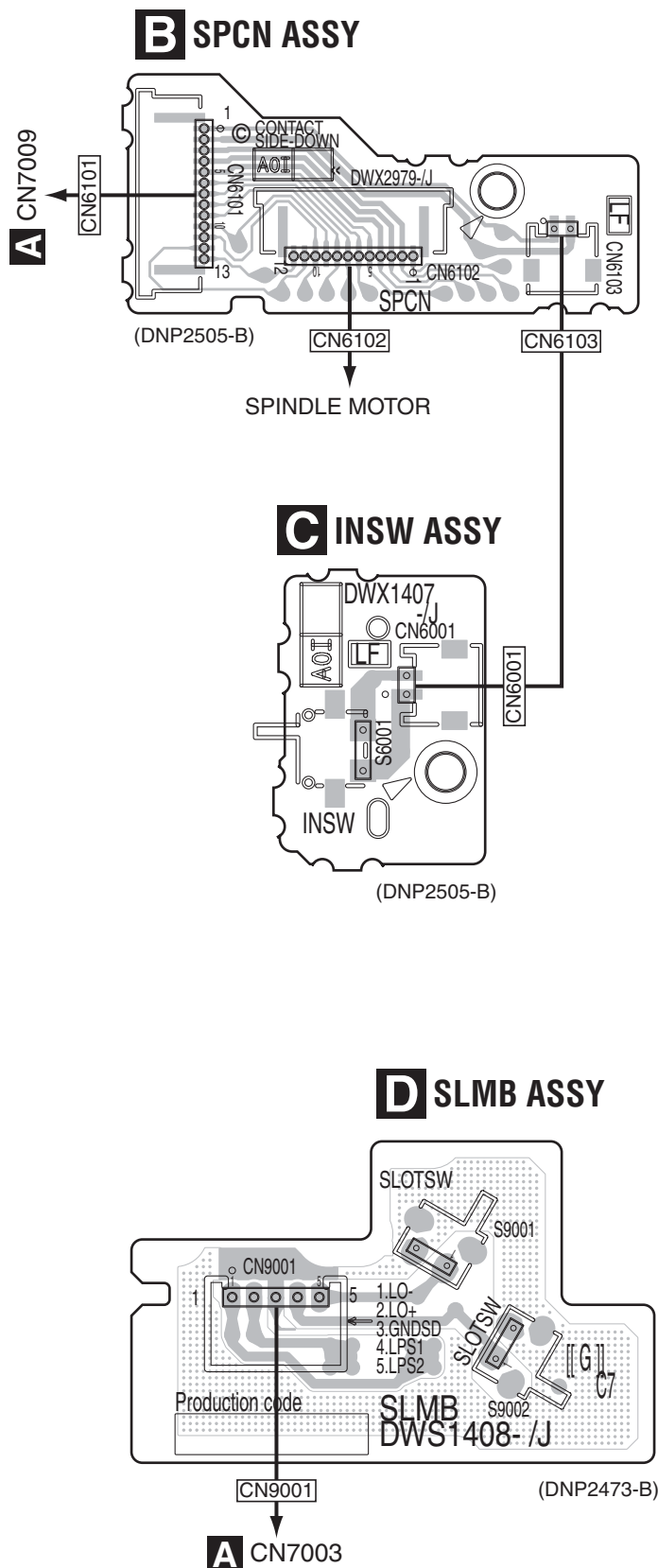
F



A

11.2 SPCN, INSW and SLMB ASSYS

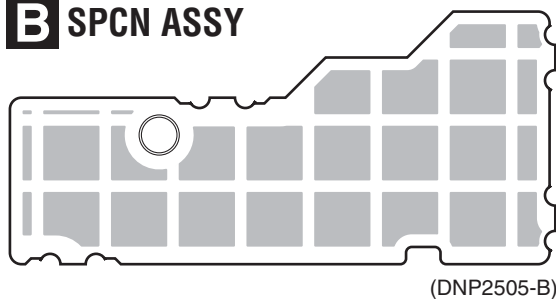
SIDE A



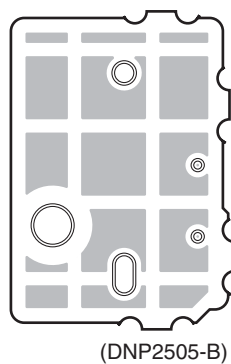
B C D

SIDE B

A

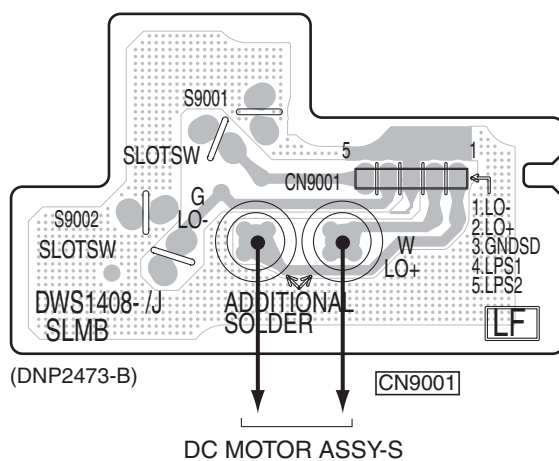
B SPCN ASSY

B

C INSW ASSY

C

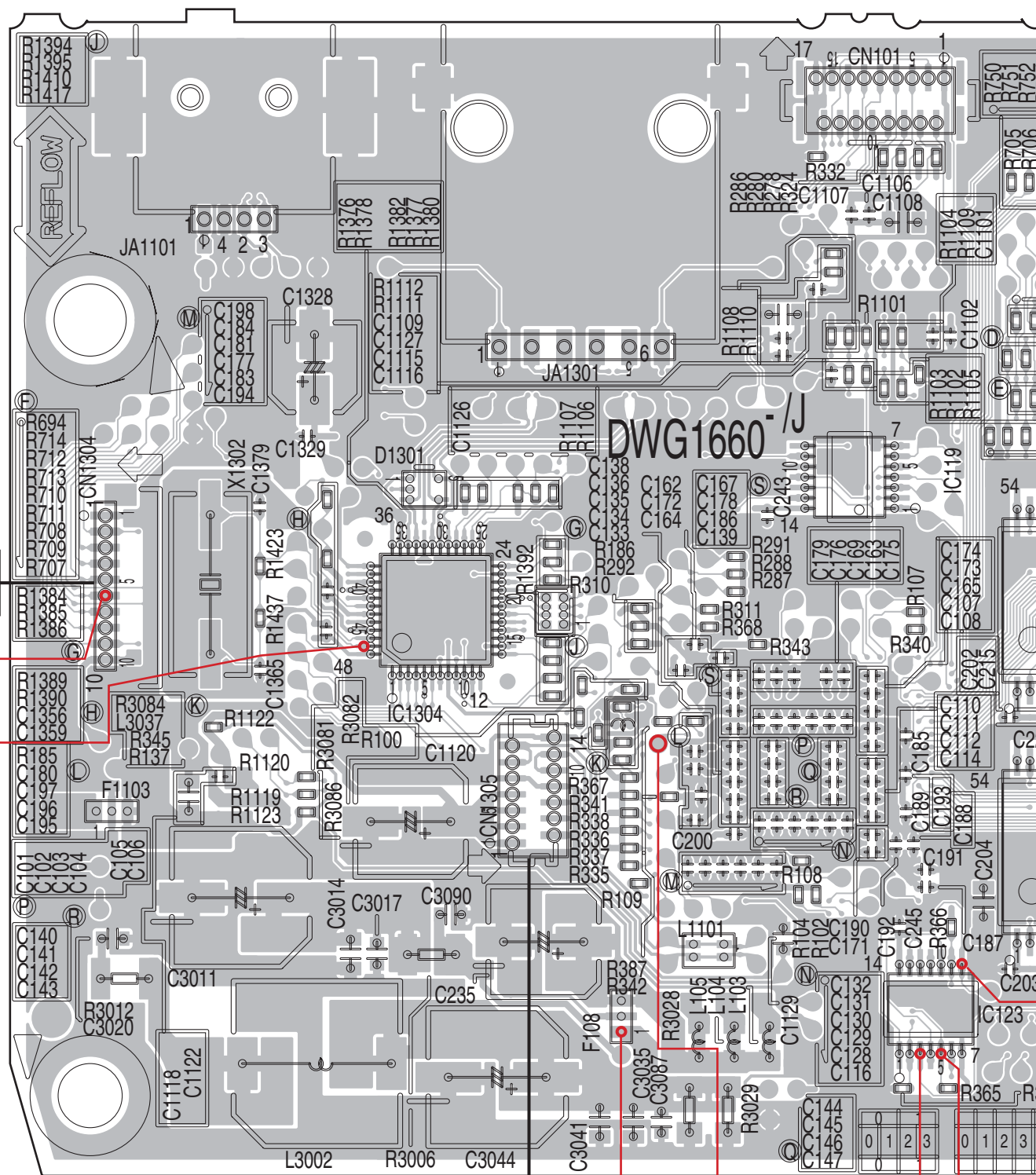
D

D SLMB ASSY

E

F

B C D

SIDE A**E MAIN ASSY**

**ALARM
PORT**

H CN6301

IC1304

IC119

IC123

E

136

CDJ-2000

A

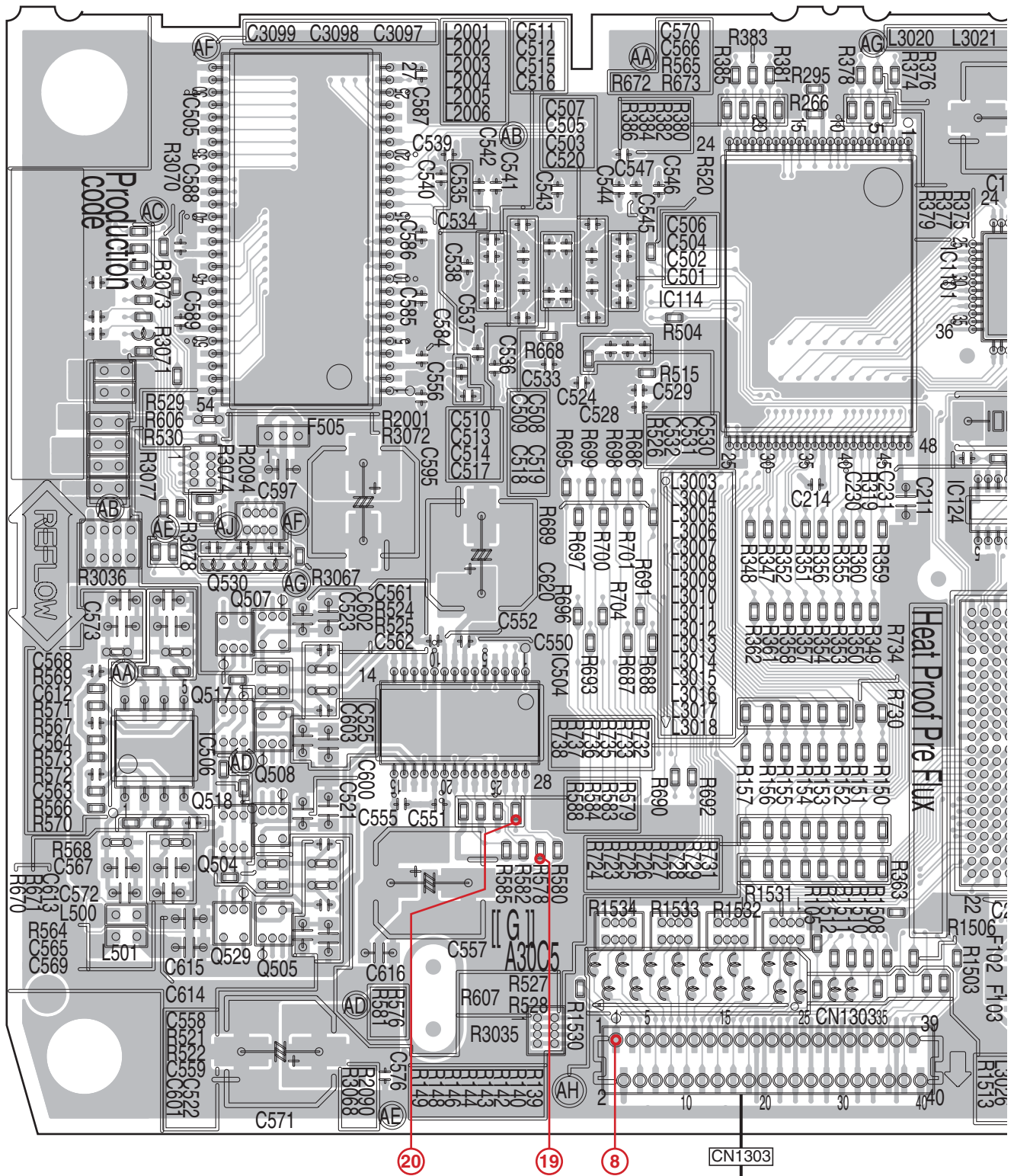


F

137

SIDE B

E MAIN ASSY



IC505
Q530 Q507
Q517 Q508
Q518 Q504
Q529 Q505

IC504

IC114

IC124

E

138

CDJ-2000

NOTE: The encircled numbers denote measuring point.

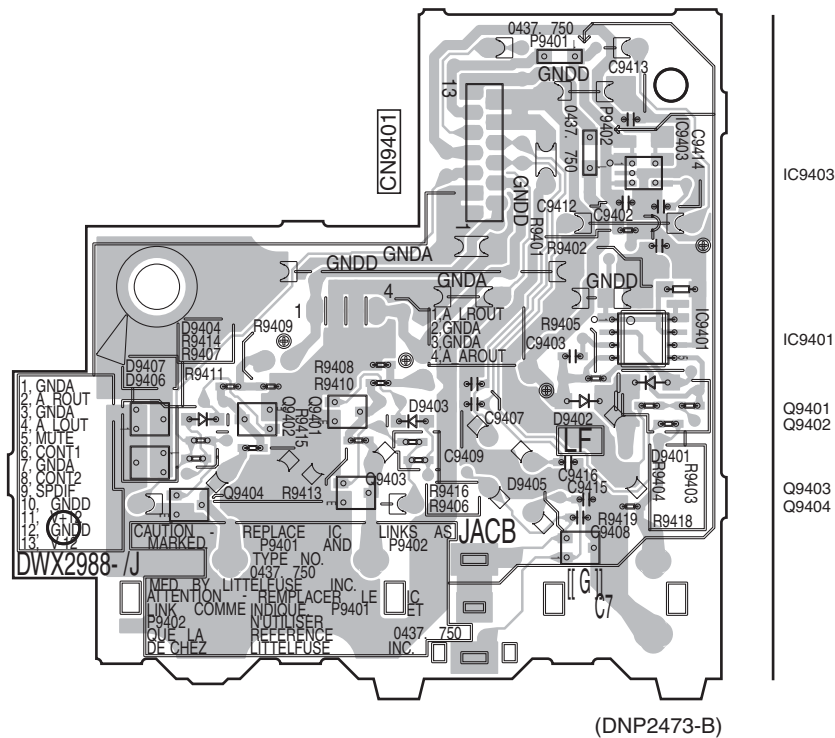


CN3001

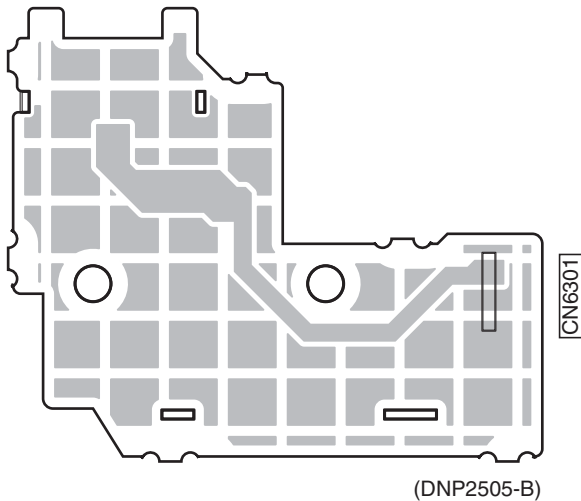
CDJ-2000

SIDE B

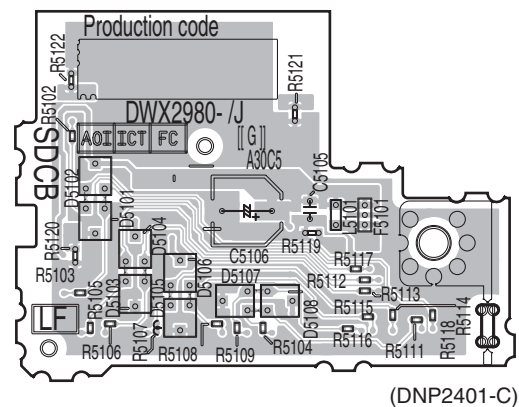
F JACB ASSY



H USBA ASSY



G SDCB ASSY



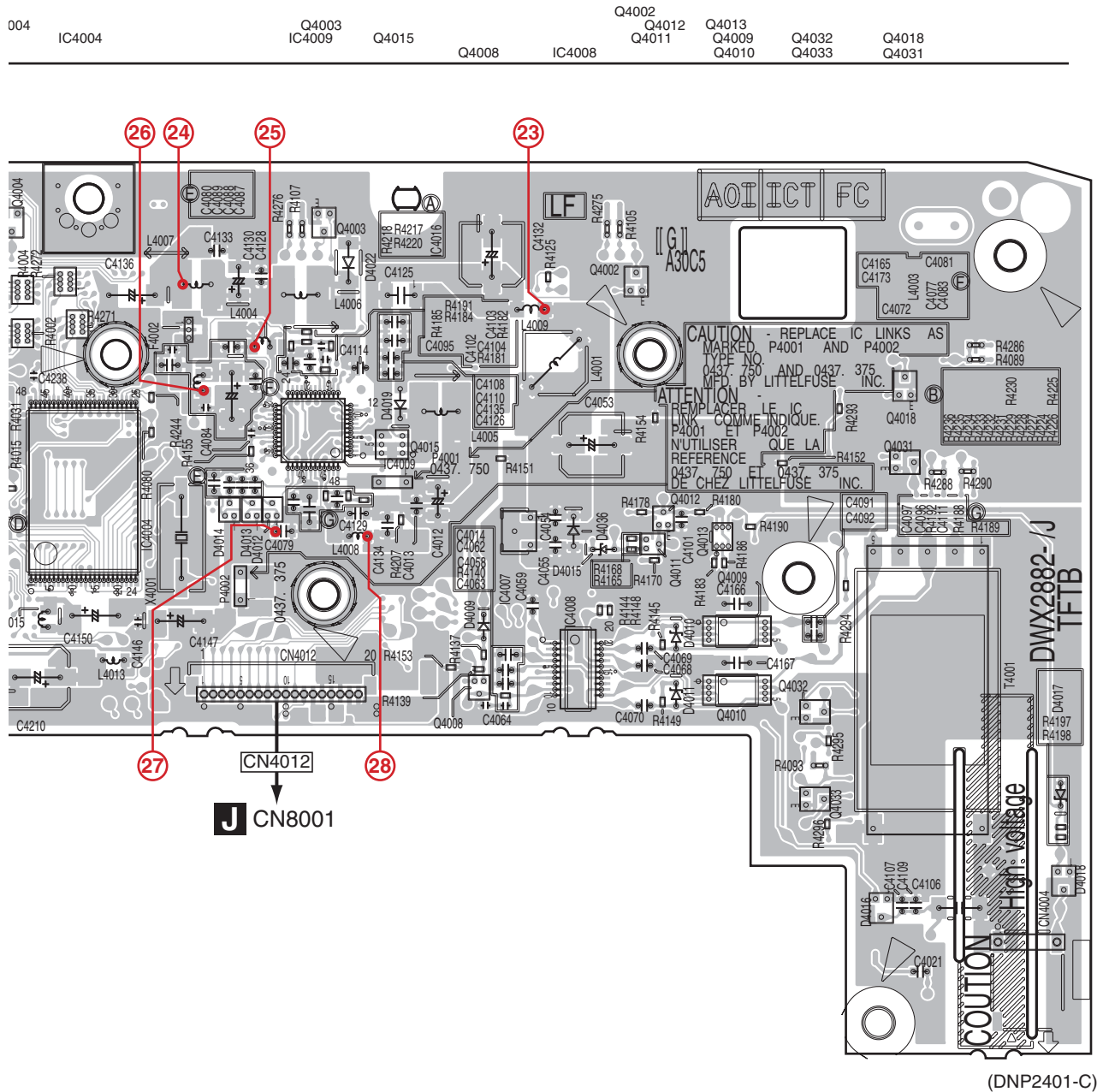
SIDE A

E CN2001

J CN8002

TFT-LCD MODULE

NOTE: The encircled numbers denote measuring point.



SIDE B

A

B

C

D

E

F

Q4006
Q4007

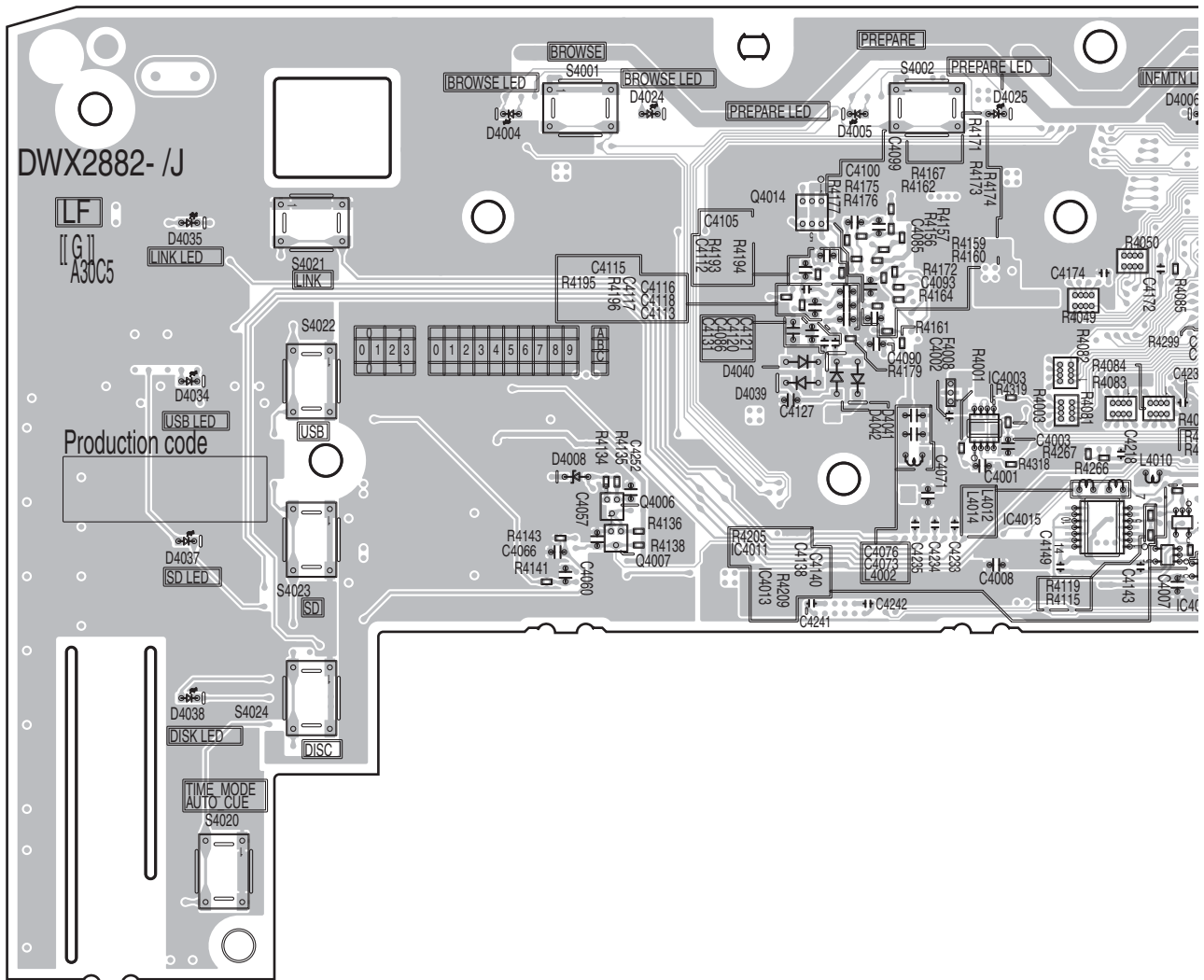
Q4014

IC4003

IC4015

IC401
IC4013 I

TFTB ASSY



A

B

C

D

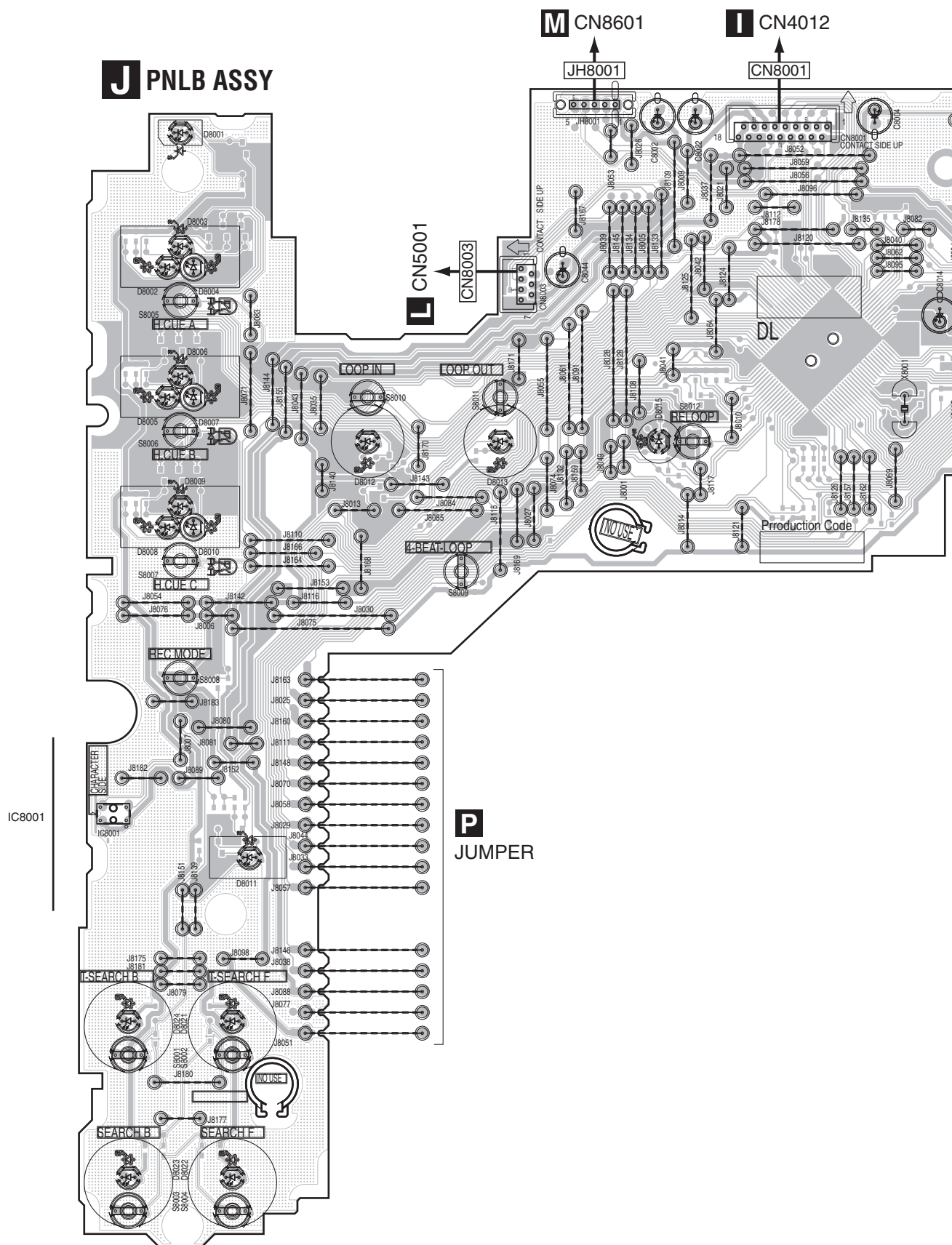
E

F

J

146

CDJ-2000



SIDE A

A

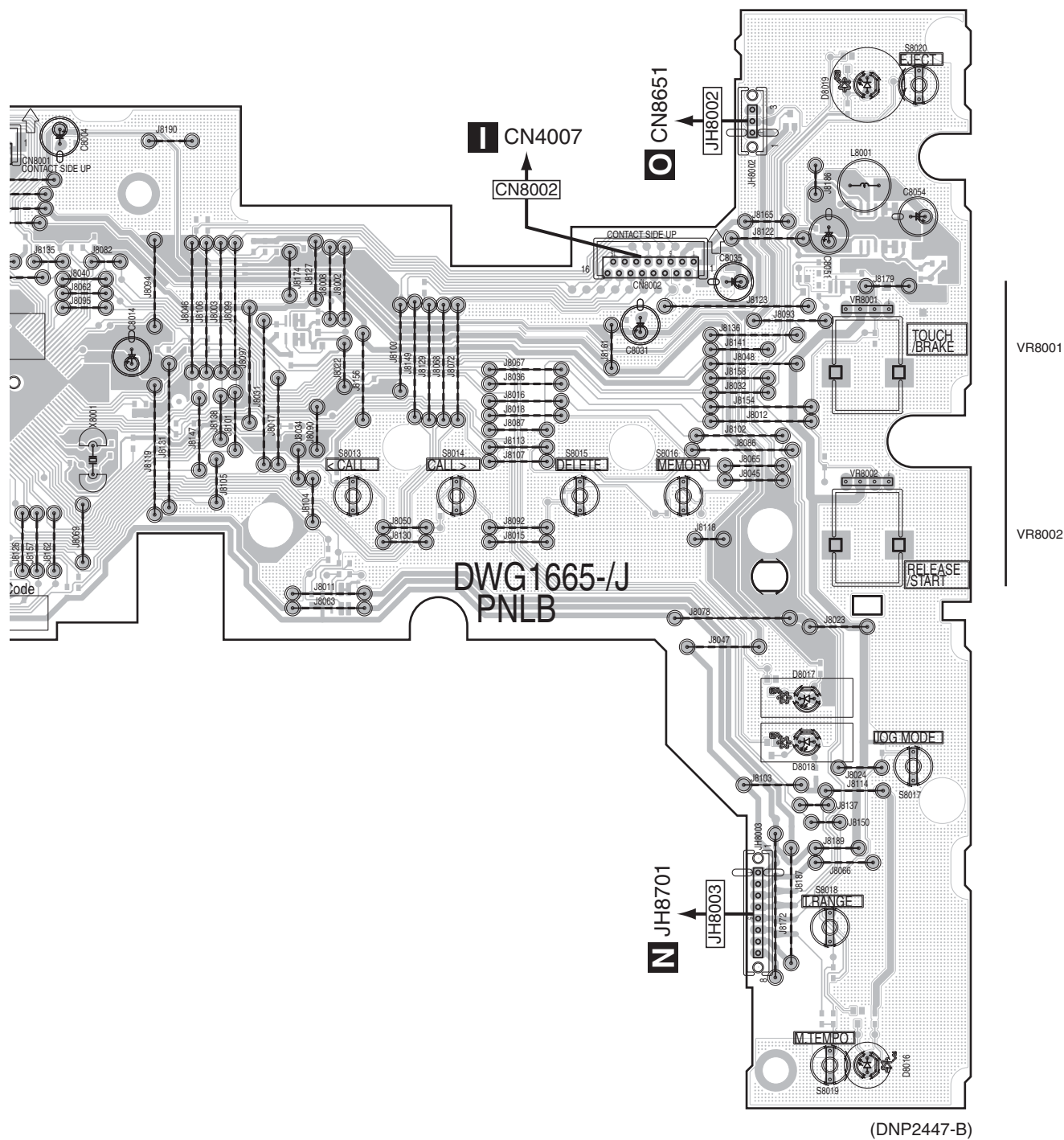
B

C

D

E

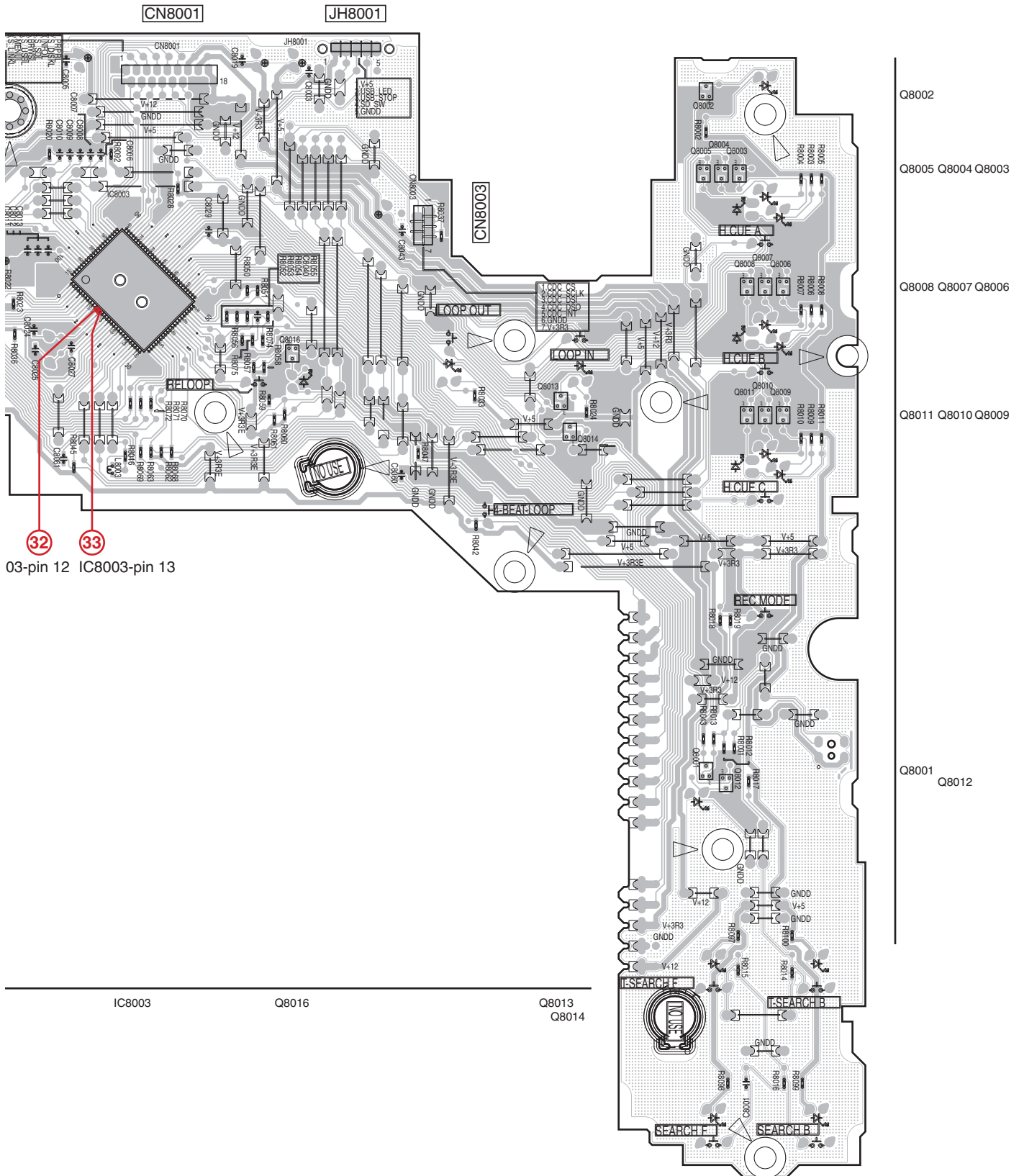
F



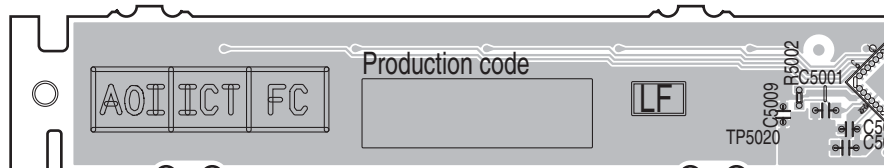
F

IC8

NOTE: The encircled numbers denote measuring point.

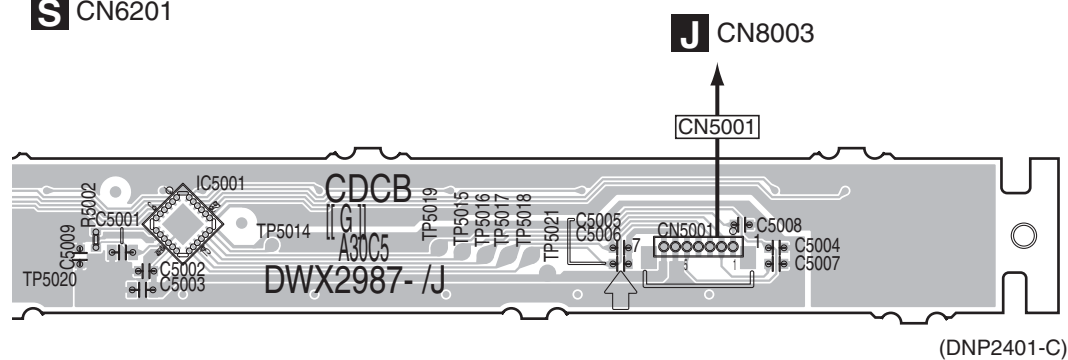
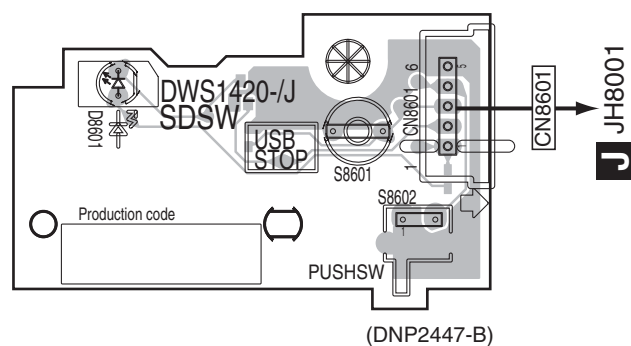
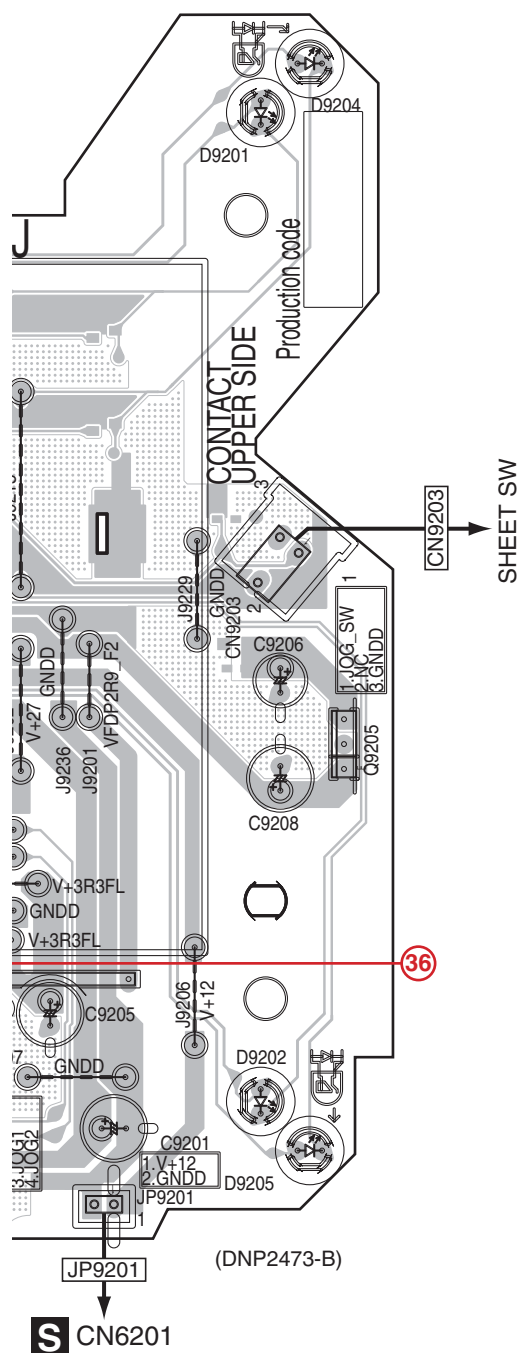


SIDE A

K JFLB ASSY

SIDE A

NOTE: The encircled numbers denote measuring point.



SIDE B

A

B

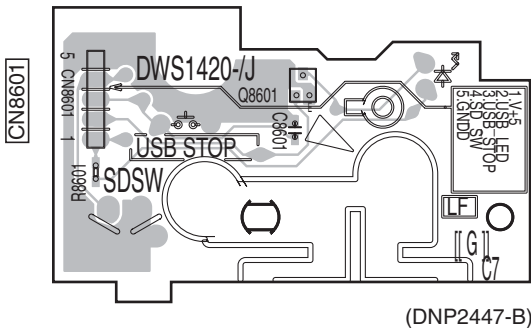
C

D

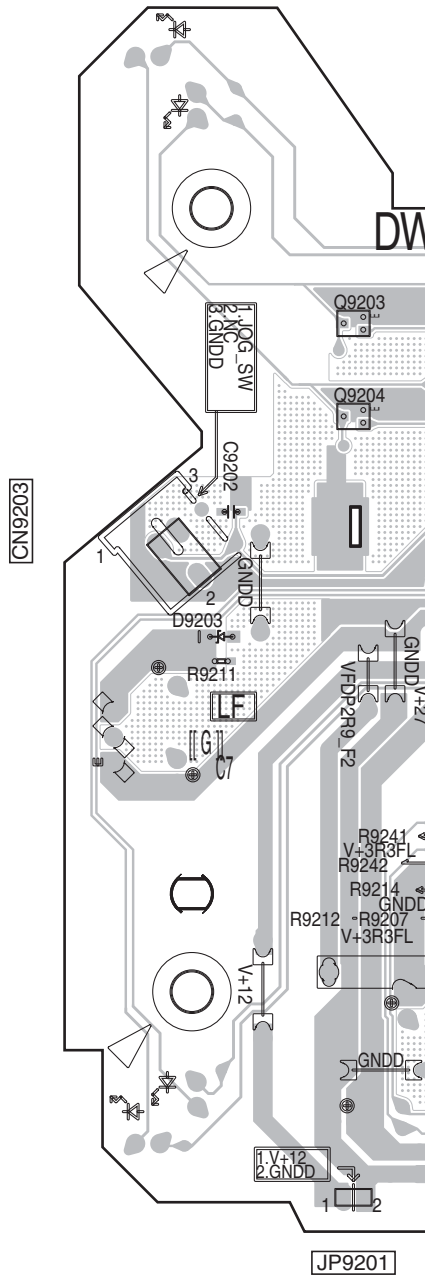
E

F

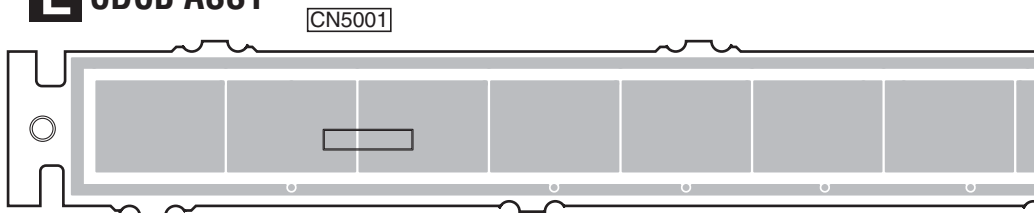
M SDSW ASSY



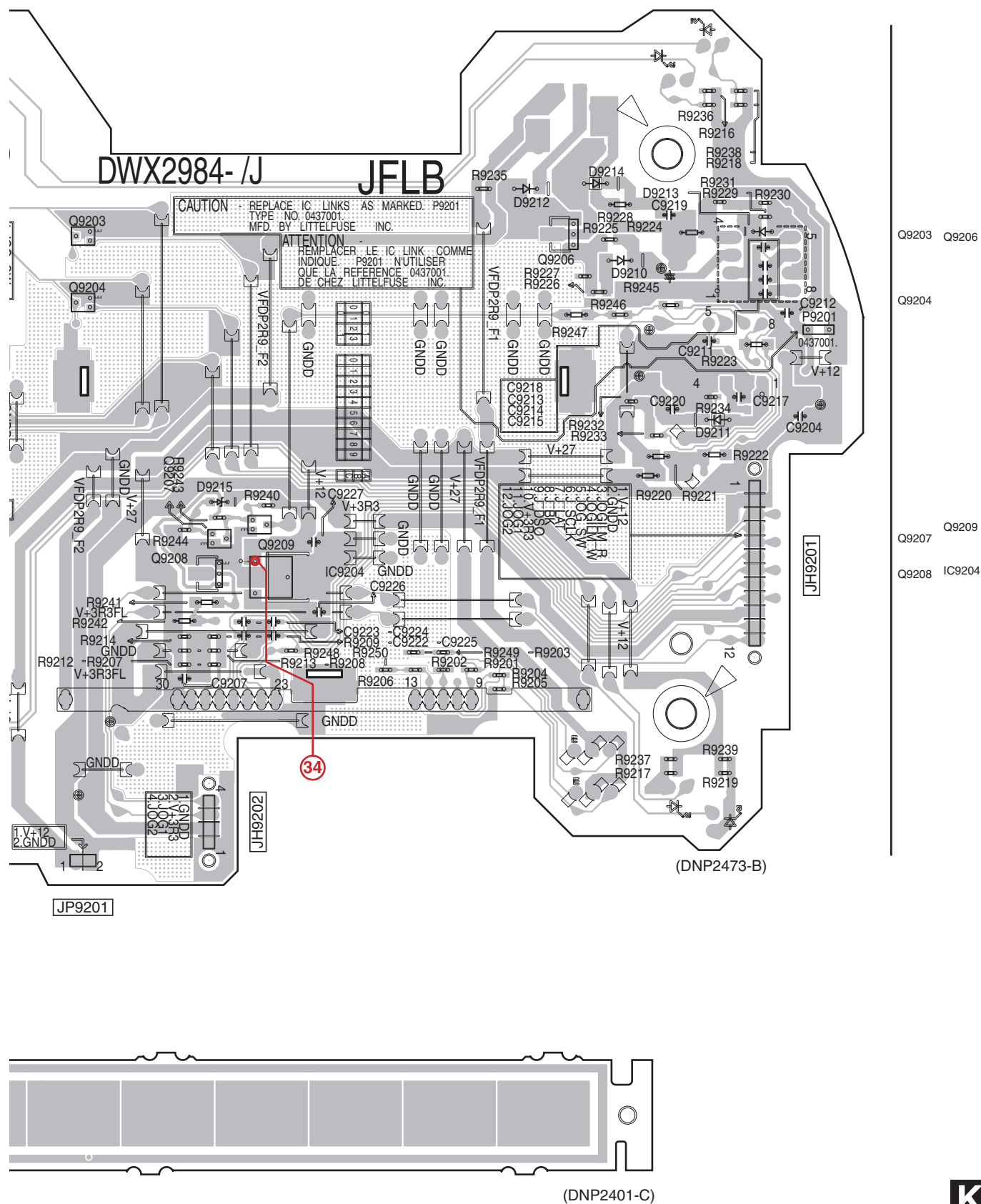
K JFLB ASSY



L CDCB ASSY



K L M

SIDE B**NOTE:** The encircled numbers denote measuring point.**3 ASSY**

A

B

C

D

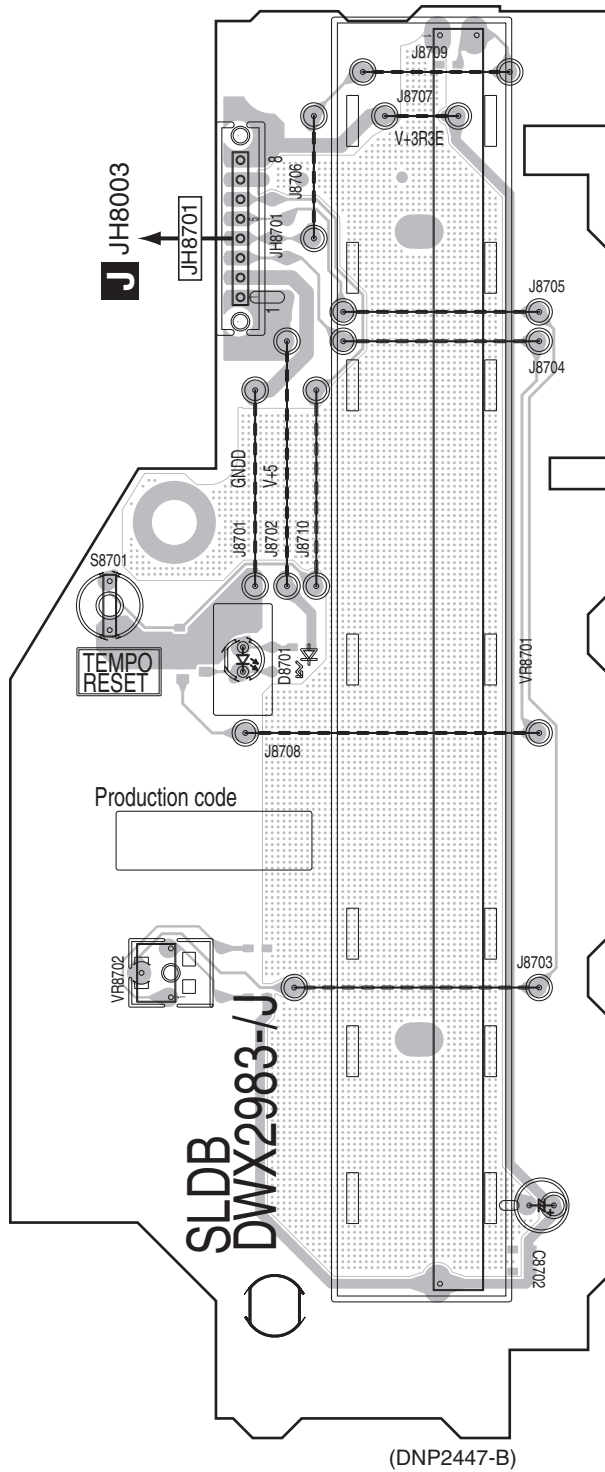
E

F

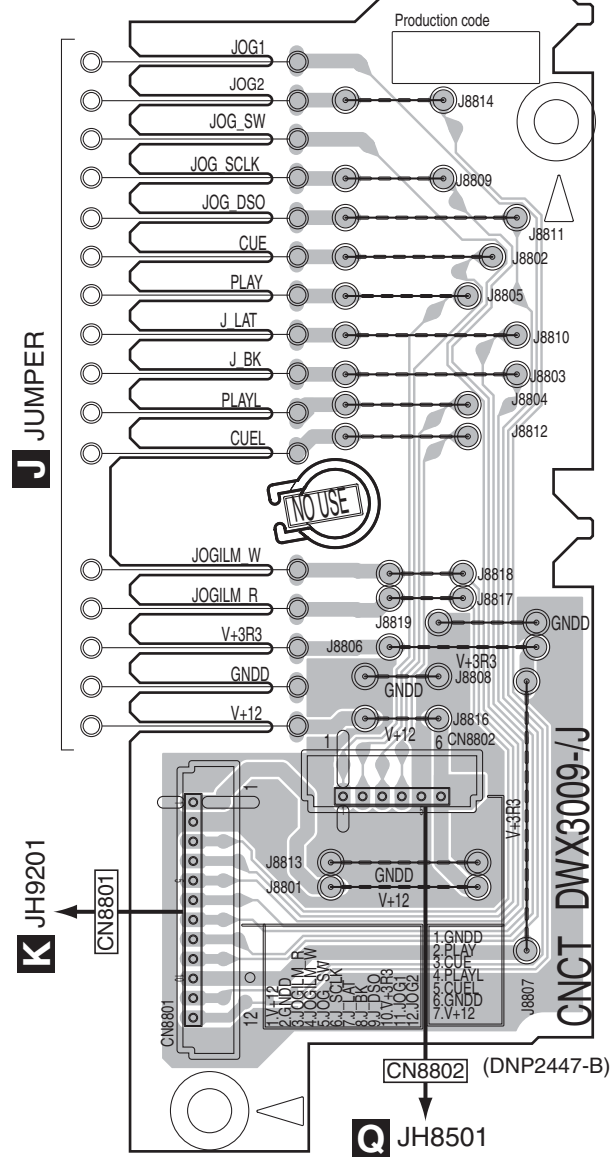
11.8 SLDB, EUPB and CNCT ASSYS

SIDE A

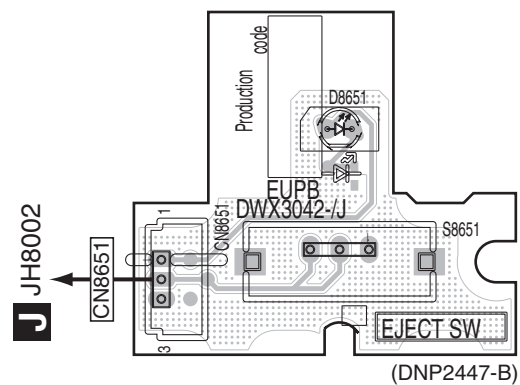
N SLDB ASSY



P CNCT ASSY



O EUPB ASSY



N O P

SIDE B

A

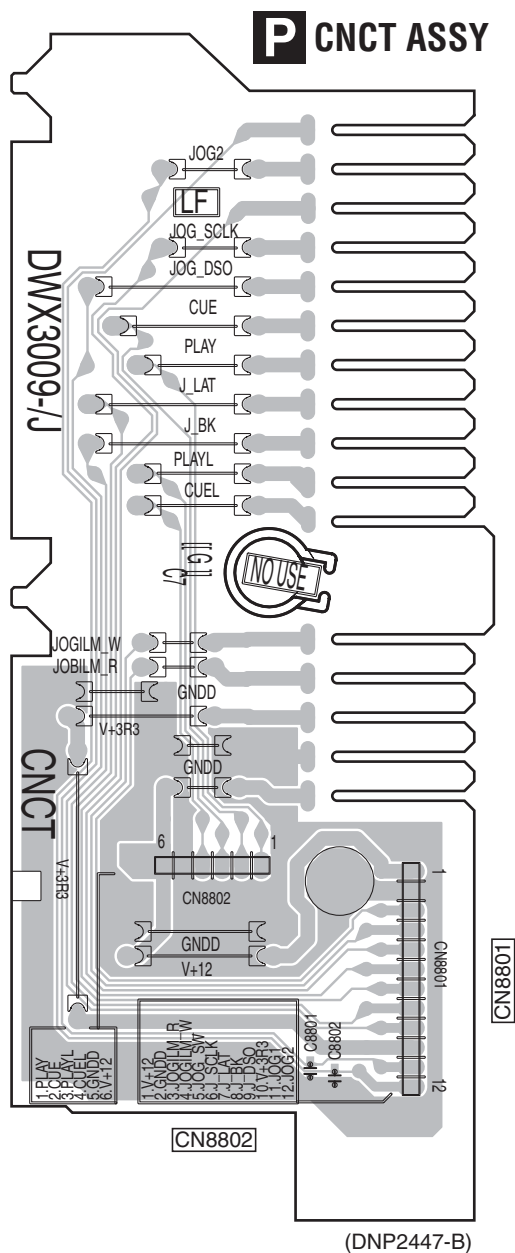
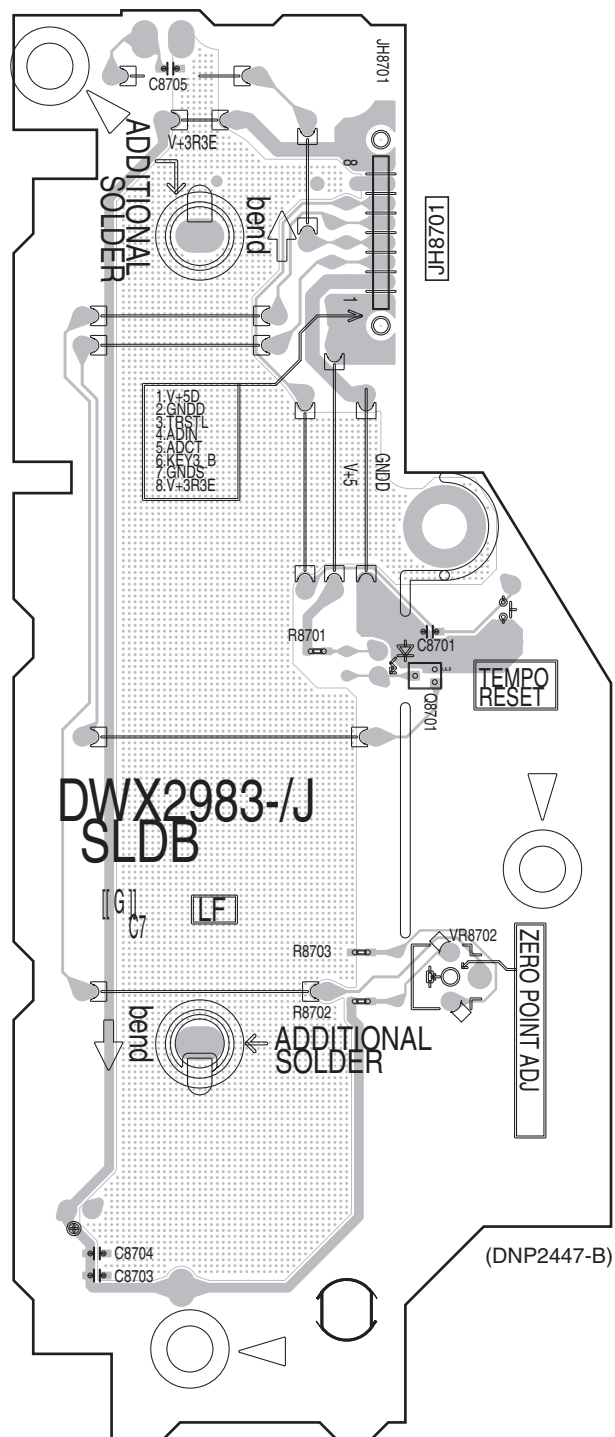
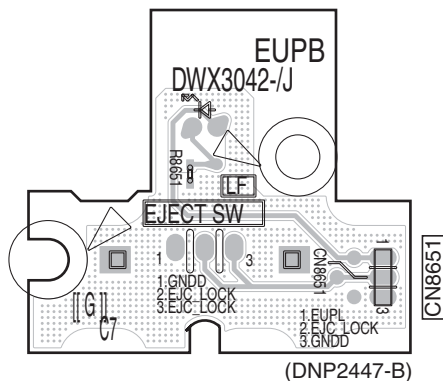
B

C

D

E

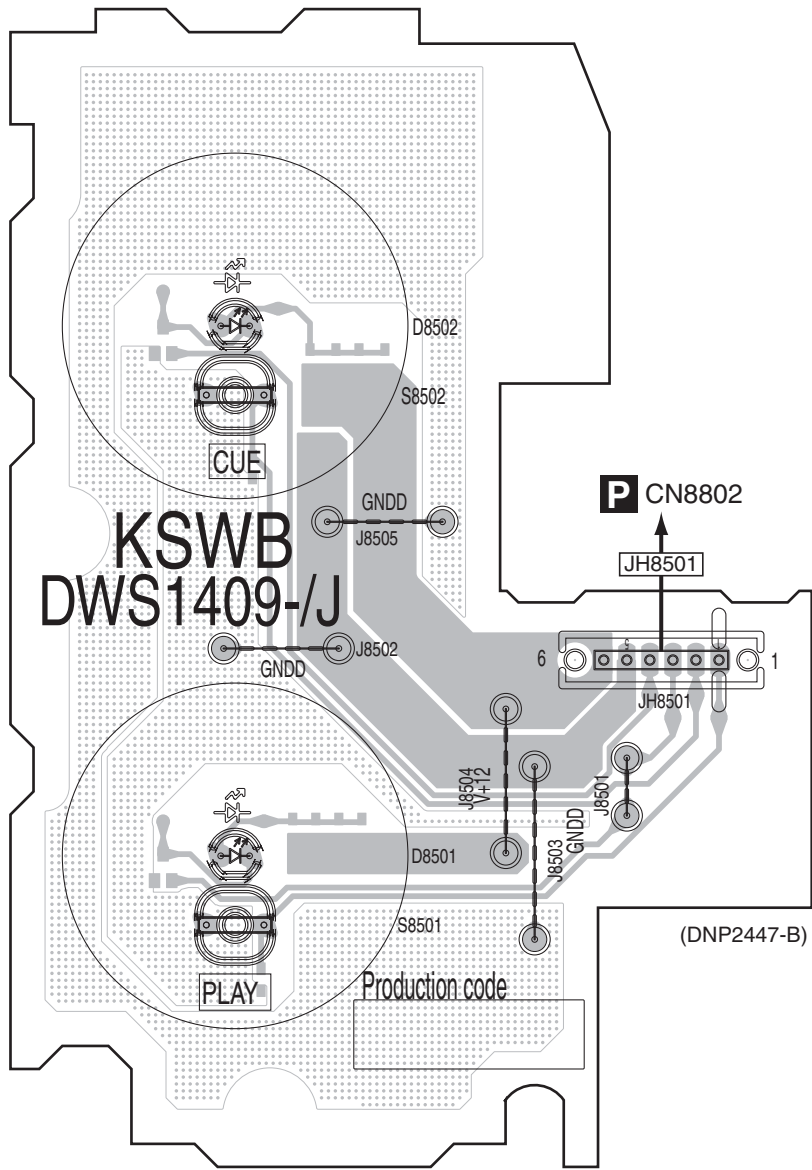
F

**N SLDB ASSY****O EUPB ASSY**

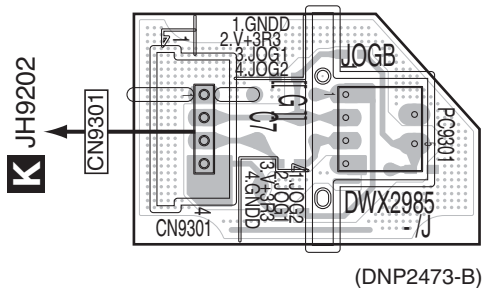
11.9 KSWB, JOGB and INDB ASSYS

SIDE A

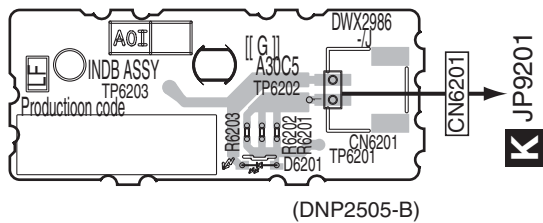
Q KSWB ASSY



R JOGB ASSY



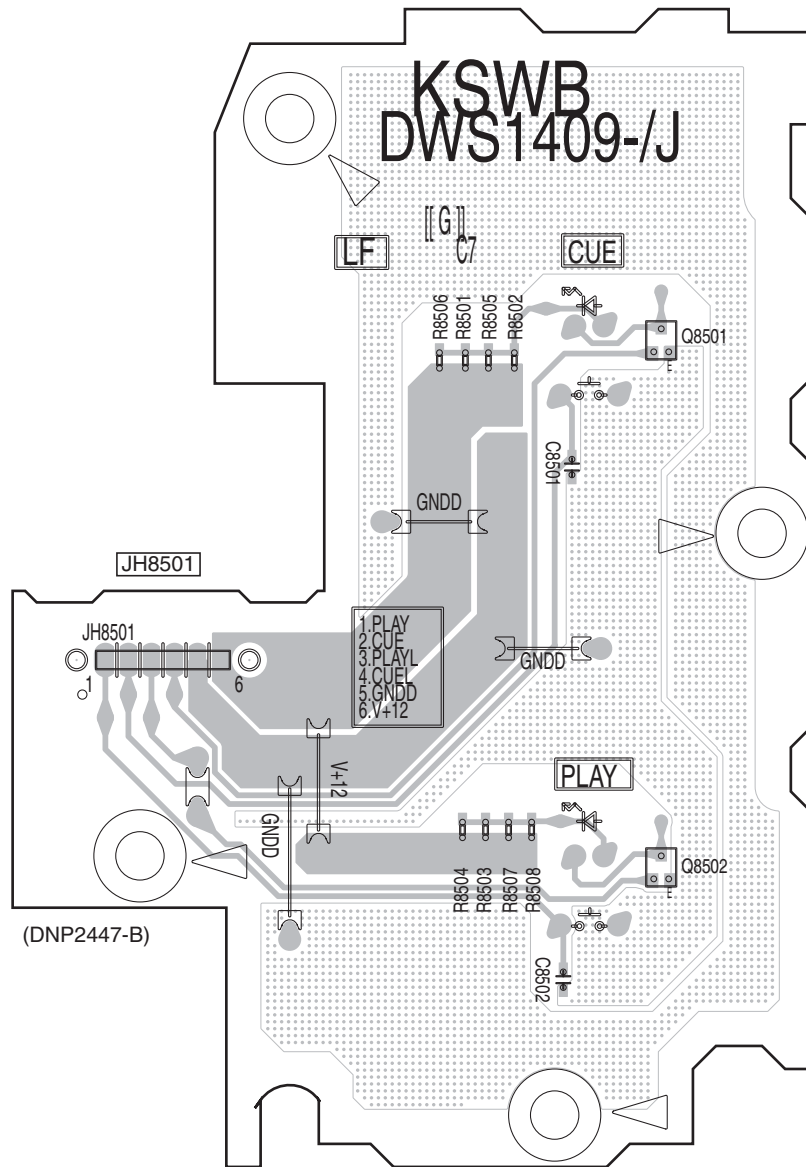
S INDB ASSY



Q R S

SIDE B

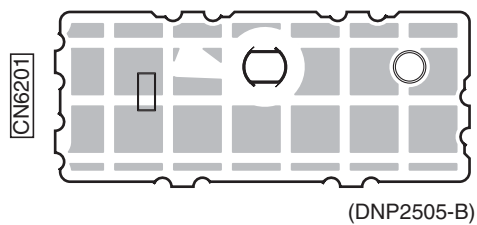
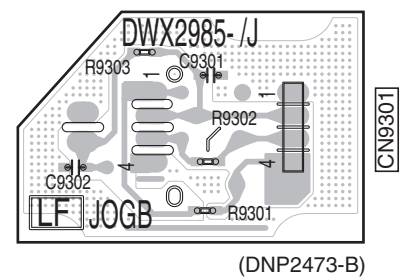
A

Q KSWB ASSY

B

C

D

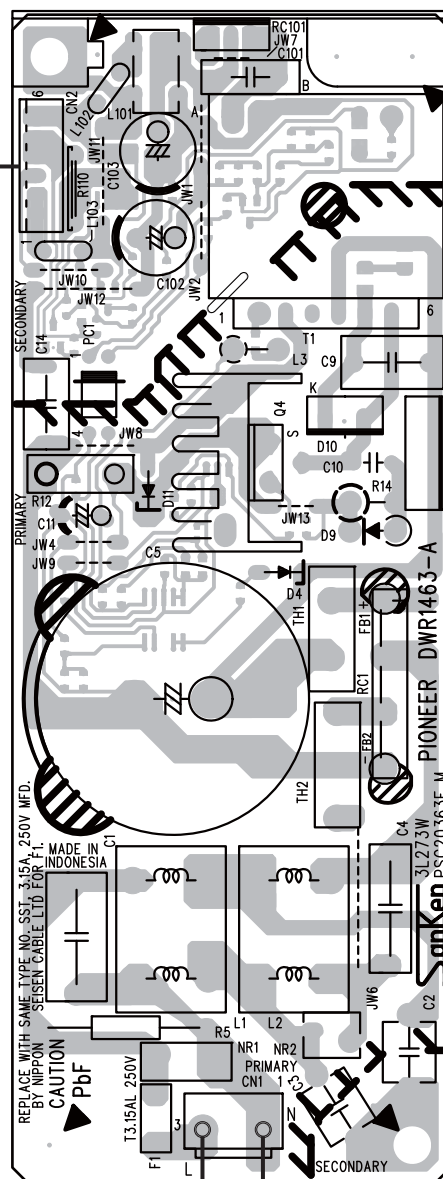
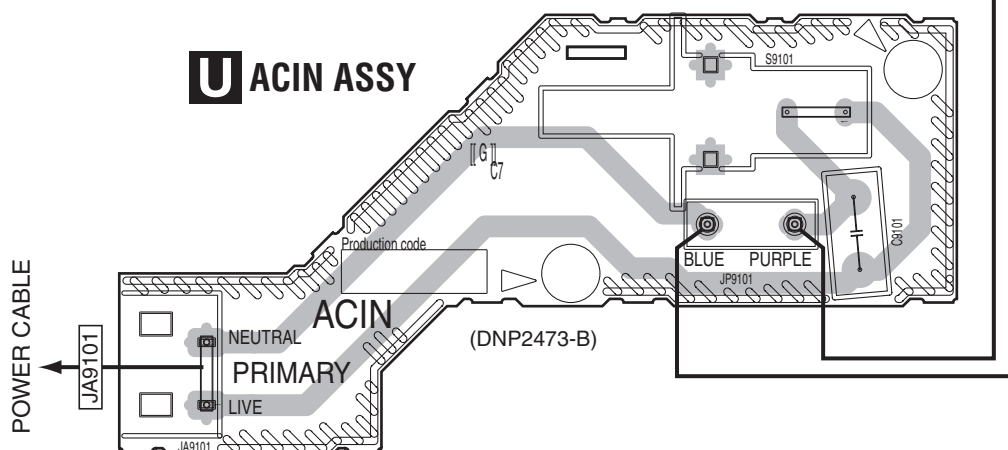
S INDB ASSY**R JOGB ASSY**

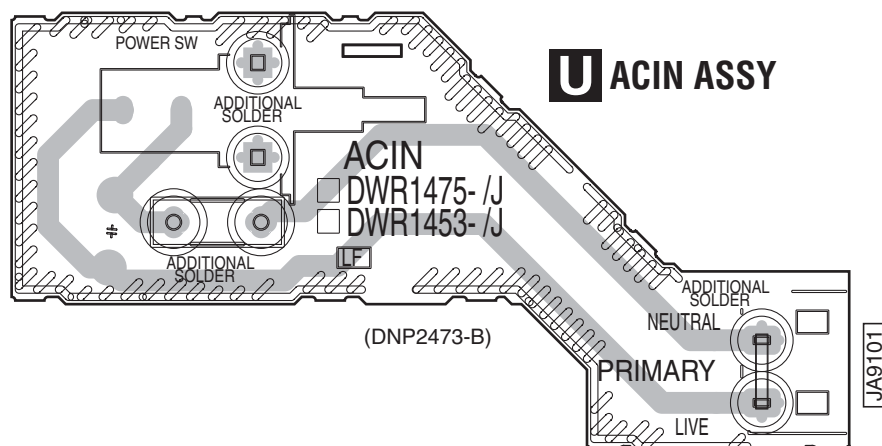
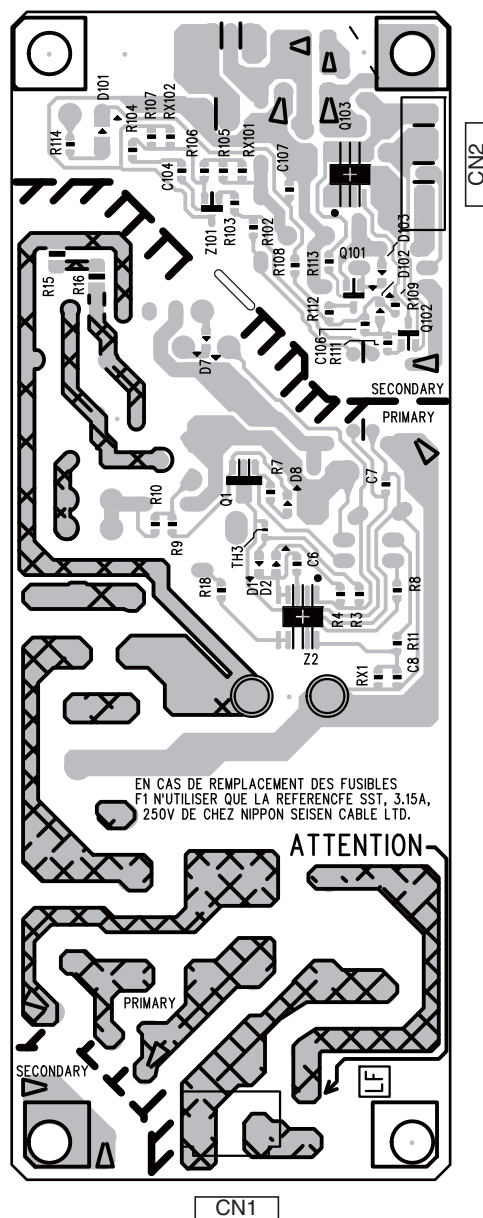
E

F

Q R S

A CN7302

**UACIN ASSY**

SIDE B**T POWER SUPPLY ASSY****TU**

CDJ-2000

12. PCB PARTS LIST

NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.

- The $\triangle$ 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 $\rightarrow$ 56×10^1 $\rightarrow$ 561.....RD1/4PU $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ 7 \end{bmatrix} J$

47 k Ω $\rightarrow$ 47×10^3 $\rightarrow$ 473.....RD1/4PU $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ 3 \end{bmatrix} J$

0.5 Ω $\rightarrow$ R50.....RN2H $\begin{bmatrix} R \\ 5 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$

1 Ω $\rightarrow$ 1R0.....RSIP $\begin{bmatrix} 1 \\ 7 \end{bmatrix} \begin{bmatrix} R \\ 0 \end{bmatrix} K$

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

5.62 k Ω $\rightarrow$ 562×10^1 $\rightarrow$ 5621.....RN1/4PC $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix} F$

- Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

Mark	No.	Description	Part No.
------	-----	-------------	----------

LIST OF ASSEMBLIES

	1..MAIN ASSY	DWG1660
--	--------------	---------

NSP	1..PNLA ASSY	DWM2346
	2..PNLB ASSY	DWG1665
	2..KSWB ASSY	DWS1409
	2..SDSW ASSY	DWS1420
C	2..SLDB ASSY	DWX2983

	2..CNCT ASSY	DWX3009
	2..EUPB ASSY	DWX3042

NSP	1..TFTA ASSY	DWM2355
	2..TFTB ASSY	DWX2882
	2..SDCB ASSY	DWX2980
	2..CDCB ASSY	DWX2987

NSP	1..SUBA ASSY	DWM2364
	2..INSW ASSY	DWS1407
	2..SPCN ASSY	DWX2979
D	2..INDB ASSY	DWX2986
	2..USBA ASSY	DWX3043

NSP	1..JFLA ASSY (CUXJ)	DWM2369
NSP	1..JFLA ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWM2347
	2..ACIN ASSY (CUXJ)	DWR1475
	2..ACIN ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWR1453
	2..SLMB ASSY	DWS1408

	2..JFLB ASSY	DWX2984
	2..J0GB ASSY	DWX2985
	2..JACB ASSY	DWX2988

E	1..SRVA ASSY	DWX2948
---	--------------	---------

$\triangle$	1..POWER SUPPLY ASSY	DWR1463
-------------	----------------------	---------

Mark	No.	Description	Part No.
------	-----	-------------	----------

A SRVA ASSY

SEMICONDUCTORS

	IC 7001	BD7956FS
	IC 7002	AN22022A
$\triangle$	IC 7003	MM1478DFBE
	IC 7004	DYW1771

Mark	No.	Description	Part No.
------	-----	-------------	----------

$\triangle$	IC 7005	BD00KA5WFP
-------------	---------	------------

	IC 7006	MN103S71F
$\triangle$	IC 7010	BA50BC0FP
	IC 7302,7305	SI-8005Q
	Q 7001,7002	2SA1036K (PQR)
	Q 7003,7004	RT1N144M

	Q 7005	UM5K1N
	D 7001,7002	1SR154-400
	D 7304,7307	CMS03

MISCELLANEOUS

L	7011-7028 INDUCTOR	CTF1379
L	7031-7038 INDUCTOR	CTF1379
L	7302,7303 INDUCTOR	CTH1253
X	7001 CERAMIC RESONATOR	DSS1157
CN	7001 24P FFC CONNECTOR	DKN1445

CN	7003 CONNECTOR	AKM1291
CN	7004 4P CONNECTOR	DKN1288
CN	7005 40P CONNECTOR	VKN1818
CN	7009 CONNECTOR	DKN1313
CN	7301 CONNECTOR	AKM1298

CN	7302 XH CONNECTOR (6P)	DKN1599
0	EARTH SPRING (SERVO)	DBK1352
$\triangle$	P 7001 PROTECTOR (2.000 A)	DEK1126
$\triangle$	P 7003 PROTECTOR (0.750 A)	DEK1121
$\triangle$	P 7302 PROTECTOR (1.250 A)	DEK1123

RESISTORS

R	7001,7110	RS1/10SR4701F
R	7003,7006,7009	DCN1143
R	7007	RS1/4SA120J
R	7008	RS1/4SA220J
R	7014,7015	RS1/4SA2R0J

R	7017,7109	RS1/10SR2702F
R	7018,7024,7025,7099	RS1/10SR1502F
R	7020,7117,7118	RS1/10SR1202F
R	7021	RS1/10SR3302F
R	7042,7043	RAB4CQ101J

R	7052,7054,7112	RS1/10SR1002F
R	7057	RAB4CQ103J
R	7063-7066	RAB4CQ101J
R	7088,7096,7302,7329	RS1/4SA0R0J
R	7306,7331	RST1/2SP120J

Mark	No.	Description	Part No.
A	F 1302,1303	EMI FILTER	DTL1106
	F 1305	EMI FILTER	CCG1160
	JA 1101	USB CONNECTOR B	DKN1574
	JA 1301	RJ45 MODULAR JACK	DKN1576
	X 104	RESONATOR	CSS1753
	X 105	CRYSTAL (26.965 MHz)	DSS1185
	X 503	RESONATOR	CSS1620
	X 1302	CRYSTAL (25 MHz)	VSS1215
	CN101	CONNECTOR	CKS5064
	CN501	13P CONNECTOR	RKN1054
B	CN502	CONNECTOR	VKN2037
	CN1303	CONNECTOR	VKN2050
	CN1304	10P CONNECTOR	VKN1414
	CN1305	CONNECTOR	VKN2040
	CN2001	29P CONNECTOR	VKN1433
NSP	CN3001	CONNECTOR	AKM1283
	0	ID LABEL ASSY	AXW7015

RESISTORS

C	R 108	RS1/16SS4701F
	R 521,522,524,525	RN1/16SE3300D
	R 527-530	RN1/16SE3300D
	R 560-563	RN1/16SE4700D
	R 564,565,568,569	RN1/16SE5600D
D	R 589,3016	RS1/16SS2201D
	R 610	RS1/10SR821J
	R 739-742,1392,3074	RAB4CQ221J
	R 1350-1353	RS1/16SS49R9F
	R 1376,1378	RS1/16SS1001F
E	R 1531-1534,2094	RAB4CQ101J
	R 2001	RS1/10SR0R0J
	R 3006	RST1/2SP1R0J
	R 3009	RS1/10SR104J
	R 3012	RST1/2SP120J
F	R 3015,3017	RS1/16SS4701D
	R 3024	RS1/10SR223J
	R 3027	RS1/10SR683J
	R 3028,3029	RS1/4SA270J
	Other Resistors	RS1/16SS###J

CAPACITORS

E	C 101-108,110-112	CKSSYB104K10
	C 109,137,148,204	CCG1171
	C 114,116,117,119	CKSSYB104K10
	C 118,120,122,124	CKSSYB102K50
	C 121,123,125	CKSSYB104K10
F	C 126,217,220,223	CKSSYB102K50
	C 128-136,138-147	CKSSYB104K10
	C 156,157,159,160	CKSSYB104K10
	C 162-165,167,169	CKSSYB104K10
	C 171-181,183-200	CKSSYB104K10
G	C 202,203,214-216	CKSSYB104K10
	C 211,233,234,246	CCG1171
	C 218,219,221,222	CKSSYB104K10
	C 224,225,242-245	CKSSYB104K10
	C 226,1345,1356,1359	CKSSYB102K50
H	C 228-231	CCSSCH7R0C50
	C 232,235,595,1111	CEHVAW221M6R3
	C 247,577,578,597	CCG1171
	C 248,501-520,524	CKSSYB104K10
	C 521-523,525	CFHXSQ472J16

Mark	No.	Description	Part No.
I	C 526,527,548,549		CKSSYB222K50
	C 528-547,550,556		CKSSYB104K10
	C 551,552,555,1102		CKSSYB103K16
	C 553,554,571		CEHVAW470M16
	C 557,620,1120,1125		CEHVAW101M16
	C 558,559,561,562		CKSSYB153K16
	C 563,564		CKSSYB222K50
	C 565-568		CFHXSQ472J16
	C 576,580,584-589		CKSSYB104K10
	C 596,1124,1387		CEHVAW101M6R3
J	C 608-613,619,1101		CKSSYB104K10
	C 614,615,3003		ACG1142
	C 616,1118		DCH1201
	C 617,618		CCSSCJ3R0C50
	C 1105,1108,1127,1385		CCG1171
	C 1106,1113,1116,1122		CKSSYB103K16
	C 1107,1112,1115,1119		CKSSYB104K10
	C 1126,1130,1319,1322		CKSSYB104K10
	C 1128,1129,1358		CKSRYB105K10
	C 1323,1325,1329,1364		CKSSYB104K10

C 1328	CEHVAW330M10
C 1342,1363	CEHVAW221M6R3
C 1362	CKSSYB102K50
C 1365,1379	CCSSCH8R0D50
C 3005-3008,3038,3087	CKSRYB104K16

C 3011,3044	ACH1495
C 3017,3032	CCSRCH102J50
C 3020	CKSRYB331K50
C 3023	CKSRYB103K50
C 3026	CKSRYB223K50

C 3035,3041	CCG1171
C 3090	CKSRYB104K16
C 3093	CEHVAW101M16
C 3096,3100	CCSSCH221J50
C 3097-3099	CCSSCH101J50

F JACB ASSY

SEMICONDUCTORS

⚠ IC 9401	NJM2374AM
⚠ IC 9403	NJM2872BF05
Q 9401-9404	2SD2114K
D 9401,9402	RB160M-60
D 9403,9404	1SS355
D 9405,9406	NNCD6.2MF

MISCELLANEOUS

L 9401	POWER INDUCTOR	DTL1187
JA 9401	JACK	RKN1004
JA 9402	2P PIN JACK	DKB1102
JA 9403	1P PIN JACK	PKB1036
KN 4001	WRAPPING TERMINAL	VNF1084
CN 9401	13P CONNECTOR	VKN1273
⚠ P 9401,9402	PROTECTOR (0.750 A)	DEK1121

RESISTORS

R 9402	RS1/4SAR82J
R 9403	RN1/16SE9100D
R 9404	RN1/16SE1802D
R 9405	RN1/16SE2201D
R 9412	RD1/2VM471J

5	6	7	8
Mark No. Description	Part No.	Mark No. Description	Part No.
R 9417 Other Resistors	RD1/2VM271J RS1/10SR###J	IC 4016 IC 4017	NJM082BV TC7SH08FUS1
CAPACITORS		Q 4001 Q 4002-4004,4018,4019 Q 4006,4007,4011,4012 Q 4008 Q 4009,4010	RT1N241M DTC124EUA 2SC4617 2SA1774 TS8M1
C 9401,9404 C 9403 C 9405,9406 C 9407,9409,9415 C 9408,9412-9414,9416	CEHAZL220M50 CCSRCH331J50 CCH1357 CKSRYB103K50 CKSRYB104K50	Q 4013,4016 Q 4014,4015 Q 4017 Q 4030-4033 Q 4035	UMX2N RSQ035P03 UMT2N DTC124EUA RTQ045N03
C 9410,9411	DCE1017		
G SDCB ASSY SEMICONDUCTORS		D 4004-4006,4024-4026 D 4008 D 4009 D 4010,4011 D 4012-4014	SML-512MW(PQ) UDZS6R2(B) 1SS355 HZU6R2(B3) RB548W
D 5101,5103,5105,5107 D 5102,5104,5106,5108	DAP202K DAN202K		
MISCELLANEOUS		D 4015 D 4016,4018 D 4017 D 4019,4039-4042 D 4022	UDZS8R2(B) MA143 HZU6R8(B3) RB160M-30 CMS06
F 5101 EMI FILTER CN5101 CONNECTOR CN5102 10P CONNECTOR	CCG1160 CKS5956 VKN1414		
RESISTORS		D 4028,4029,4034,4037 D 4030,4031 D 4035 D 4038	SML-512MW(PQ) SML312WBCWA(Z1) SML312BC4T(QR) SML-512MW(PQ)
R 5107 R 5119-5122 Other Resistors	CTF1528 RS1/10SR0R0J RS1/16SS###J		
CAPACITORS		MISCELLANEOUS	
C 5101 C 5103 C 5105 C 5106	CKSSYB104K16 CKSSYB102K50 DCH1201 CEVW101M16	L 4002-4004,4016,4017 INDUCTOR L 4005 CHOKE COIL L 4006 CHOKE COIL L 4007 CHOKE COIL L 4008,4018 CHIP INDUCTOR (10 u)	CTF1635 CTH1318 CTH1250 CTH1249 DTL1105
H USB ASSY MISCELLANEOUS		L 4009 INDUCTOR L 4012,4014 INDUCTOR L 4019 CHIP INDUCTOR (10 u) L 4021-4027 FERRITE BEAD L 4028 INDUCTOR	CTF1488 CTF1306 DTL1105 CTF1528 CTF1740
L 6301 COIL JA 6301 USB CONNECTOR A CN6301 CONNECTOR	ATH7015 DKN1553 VKN2030		
CAPACITORS		L 4029-4032 FERRITE BEAD L 4033 INDUCTOR L 4034-4050 FERRITE BEAD L 4051,4052 CHIP BEEDS FILTER S 4001-4004,4020-4026 TACT SWITCH	CTF1528 CTF1379 CTF1528 BTX1042 DSG1134
C 6301 C 6302	CKSRYB103K50 CEVW101M16		
I TFTB ASSY SEMICONDUCTORS		S 4028 ENCODER SW T 4001 TRANSFORMER X 4001 CRYSTAL RESONATOR X 4002 CRYSTAL RESONATOR CN 4002 29P CONNECTOR	DSX1080 CTT1132 DSS1164 XSS3003 VKN1433
IC 4001 IC 4003 IC 4004 IC 4005 IC 4006	ADSP-BF531SBSTZ400 TC7WHU04FU DYW1781 K4S561632J-UC75 PDY085A8	CN 4004 CONNECTOR CN 4005 CONNECTOR CN 4007 16P CONNECTOR CN 4012 18P CONNECTOR P 4001 PROTECTOR (0.750 A)	CKS4428 CKS5111 VKN1420 VKN1422 DEK1121
IC 4007 IC 4008 IC 4009 IC 4010 IC 4011,4013	TA78L05F OZ961ISN BD6171KV M62343FP TC7SET04FUS1	P 4002 PROTECTOR (0.375 A)	DEK1119
IC 4012 IC 4014 IC 4015	NJM2100V TC7S66FU TC74VHC04FTS1	RESISTORS	
		R 4002,4004,4053,4054 R 4022,4026 R 4024,4027 R 4033 R 4049,4050	RAB4CQ470J RAB4CQ471J RAB4CQ101J RAB4CQ104J RAB4CQ680J

Mark No. Description**Part No.****Mark No. Description****Part No.**

A

R 4058,4059,4093,4105
R 4081-4084
R 4089,4286
R 4107,4109,4275-4277
R 4121

RS1/10SR181J
RAB4CQ560J
RS1/10SR112J
RS1/10SR181J
RAB4CQ102J

C 4085,4095,4102
C 4087-4090,4101,4112
C 4096
C 4103
C 4104,4233-4235

CKSRYB393K50
CKSRYB104K50
CKSYB475K16
CKSSYB331K50
CCSSCH101J50

■

R 4144
R 4148
R 4161
R 4162
R 4164,4188

RS1/16SS3901D
RS1/16SS5102D
RS1/16SS2202D
RS1/16SS2001F
RS1/16SS1802D

C 4105,4109,4113,4114
C 4106
C 4108,4110
C 4116,4118,4133,4140
C 4117,4127,4128,4153

CKSRYB103K50
DCG1046
CCG1203
CKSRYB105K16
CKSRYB104K50

B

R 4167
R 4171
R 4172
R 4174,4191
R 4179

RS1/16SS5100D
RS1/16SS6801D
RS1/16SS1002D
RS1/16SS1001D
RS1/16SS6202D

C 4120,4121
C 4125
C 4126
C 4130
C 4134

CKSSYB472K50
CCG1223
CKSRYB103K50
CCH1440
BCG1060

■

R 4184
R 4185
R 4189
R 4192
R 4217

RS1/16SS1600D
RS1/16SS2700D
RS1/16SS4300D
RS1/16SS3303D
RS1/16SS5602D

C 4135
C 4138,4139,4141,4143
C 4142
C 4144,4158
C 4145,4146,4149,4151

CKSRYF224Z16
CKSSYB104K16
CKSRYB105K10
CCG1111
CKSSYB104K16

C

R 4220
R 4224
R 4225,4233
R 4226
R 4227

RS1/16SS3302D
RS1/16SS6800D
RS1/16SS27R0D
RS1/16SS10R0D
RS1/16SS1000D

C 4148,4252,4253
C 4152,4154,4159,4160
C 4155,4156
C 4157
C 4161

CKSRYB105K16
CKSSYB104K16
CSZSC100M16
CKSQYB334K50
CKSRYB104K50

■

R 4228,4235
R 4229
R 4230
R 4231
R 4232

RS1/16SS82R0D
RS1/16SS56R0D
RS1/16SS47R0D
RS1/16SS36R0D
RS1/16SS33R0D

C 4162,4165,4168-4172
C 4166,4167
C 4173,4190,4200,4201
C 4174-4181,4183-4189
C 4191-4196,4199,4202

CKSSYB104K16
CCG1236
CCG1192
CKSSYB104K16
CKSSYB104K16

D

R 4234
R 4236
R 4245-4248
R 4271,4272
R 4273

RS1/16SS1800D
RS1/16SS12R0D
RAB4CQ331J
RAB4CQ470J
RAB4CQ220J

C 4203
C 4204,4206,4212
C 4205
C 4210
C 4211

CCG1192
CKSSYB104K16
CEHVVW470M6R3
CEHVAW330M35
CEVW101M25

R 4282,4283
R 4288,4290
Other Resistors

RS1/10SR122J
RS1/10SR181J
RS1/16SS###J

C 4214,4216
C 4218-4220,4222,4223
C 4244-4247,4254
C 4249

CEHVAW101M6R3
CKSSYB104K16
CCSSCH101J50
CCSSCH221J50

CAPACITORS

C 4001,4003,4011,4016
C 4002,4024,4044-4046
C 4006-4008,4013,4054
C 4012
C 4014,4073,4076

CCSRCH100D50
CKSSYB104K16
CKSRYB104K50
CCH1586
CKSQYB225K16

E

C 4028,4053,4132
C 4029
C 4050-4052,4056,4123
C 4055,4059,4062,4071
C 4057,4058,4083

CEHVAW101M16
CKSRYF104Z25
CKSSYB104K16
CKSRYB105K16
CKSRYB104K50

■

C 4060,4066,4097,4100
C 4063
C 4064
C 4068
C 4069,4070,4099

CKSRYB103K50
CKSSYB332K50
CKSSYB152K50
CCG1260
CKSRYB473K50

F

C 4072,4213,4217
C 4077,4136,4147,4150
C 4079,4080,4129,4131
C 4081,4086,4091-4093
C 4084,4115

CKSSYB104K10
CSZSC100M16
CKSQYB105K25
CKSRYB105K16
CKSSYB102K50

J PNLB ASSY SEMICONDUCTORS



IC 8001
IC 8002
IC 8003
IC 8004
IC 8005,8006

GP1S94
NJM2392M
M3030RFPFP
BD45302G
TC7SH32FUS1

Q 8001
Q 8002-8014,8016-8022
Q 8023
D 8001,8004,8007,8010
D 8002,8005,8008,8018

2SC4154
DTC124EUA
LTA124EUB
SLI-343Y8C(KLMN)
SLI-343M8C(FGHJ)

D 8003,8006,8009,8011
D 8012,8013,8015
D 8016
D 8017
D 8019

SLI-343U8RC(HJKL)
SLI-343Y8C(KLMN)
SLI-343U8RC(HJKL)
SLR343BC4T(JKLM)
SLI-343M8C(FGHJ)

Mark	No.	Description	Part No.
	D	8020	EP05Q06
	D	8021-8024	SLI-343Y8C(KLMN)
	D	8025	UDZS3R9(B)
MISCELLANEOUS			
	L	8001 RADIAL LEAD INDUCTOR	DTH1206
	L	8002 INDUCTOR	CTF1579
	L	8003 INDUCTOR	CTF1379
	VR	8001,8002 VARIABLE RESISTOR	DCS1045
	S	8001-8004,8008 SWITCH	VSG1024
	S	8005-8007,8009-8012 TACT SWITCH	DSG1079
	S	8013-8020 SWITCH	VSG1024
	X	8001 CRYSTAL RESONATOR	DSS1166
	CN	8001 18P CONNECTOR	VKN1278
	CN	8002 16P CONNECTOR	VKN1276
	CN	8003 7P CONNECTOR	VKN1267
	JH	8001 5P CABLE HOLDER	51048-0500
	JH	8002 3P CABLE HOLDER	51048-0300
	JH	8003 8P CABLE HOLDER	51048-0800
	JP	8001 JUMPER WIRE	D20PDY0510E
	JP	8002 JUMPER WIRE	D20PDY0305E
	JP	8003 8P JUMPER WIRE	D20PDD0810E
RESISTORS			
	R	8094	RS1/10SR3301D
	R	8095	RS1/10SR3302D
	R	8096	RS1/10SR2202D
		Other Resistors	RS1/10SR###J
CAPACITORS			
	C	8002,8004,8022,8031	CEHAS470M16
	C	8003,8005,8013,8019	CKSRYB104K16
	C	8006-8010,8017,8018	CCSRCH102J50
	C	8011,8012	CKSRYB474K10
	C	8014	CEHAS101M10
	C	8024,8025	CCSRCH100D50
	C	8027,8029,8033,8036	CKSRYB104K16
	C	8035,8044	CEHAS470M16
	C	8038,8045-8048,8057	CKSRYB103K50
	C	8039-8043	CKSRYB104K16
	C	8050	CCSRCH560J50
	C	8051	CEHAZL101M25
	C	8052	CKSYB106K16
	C	8053	CCSRCH221J50
	C	8054	CEHAZL221M10
	C	8055,8056	BCG1054
	C	8058	CKSRYB103K50
	C	8060	CCSRCH121J50
K JFLB ASSY			
SEMICONDUCTORS			
⚠	IC	9202	TLC555IP
⚠	IC	9203	NJM2374AD
⚠	IC	9204	BA033FP
	Q	9201,9202	2SC1815
	Q	9203,9204,9207,9209	DTC124EUA
	Q	9205	2SB1237X
	Q	9206	RHP020N06
	Q	9208	2SD1767
	D	9201,9202,9206,9207	SLI-343U3R(HJKL)
	D	9203	UDZS6R8(B)

K JFLB ASSY
SEMICONDUCTORS

⚠	IC 9202	TLC555IP
⚠	IC 9203	NJM2374AD
⚠	IC 9204	BA033FP
	Q 9201,9202	2SC1815
	Q 9203,9204,9207,9209	DTC124EUA
	Q 9205	2SB1237X
	Q 9206	RHP020N06
	Q 9208	2SD1767
	D 9201,9202,9206,9207	SLI-343U3R(HJKL)
	D 9203	UDZS6R8(B)

Mark	No.	Description	Part No.
	D	9204,9205,9208,9209	SLR343WBD2PT(Z1)
	D	9210-9212,9214	RB160M-60
	D	9213	1SS355
	D	9215	UDZS6R2(B)
MISCELLANEOUS			
	L	9201 POWER INDUCTOR	DTL1187
	V	9201 FL INDICATOR TUBE	DEL1058
	T	9201 POWER TRANSFORMER	DTT1232
	CN	9203 CONNECTOR	CKS1072
	O	FL HOLDER	DNF1735
	JH	9201 12P CABLE HOLDER	51048-1200
	JH	9202 4P CABLE HOLDER	51048-0400
	JP	9202 JUMPER WIRE	D20PYY0405E
	JP	9203 JUMPER WIRE	D20PDY1210E
⚠	P	9201 PROTECTOR (1.000 A)	DEK1122
RESISTORS			
	R	9220	RS1/4SA0R0J
	R	9221	RS1/4SAR51J
	R	9222,9223	RS1/4SA271J
	R	9224	RST1/2SP1R0J
	R	9225	RS1/8SQ102J
	R	9226	RS1/8SQ101J
	R	9228	RS1/4SA103J
	R	9229	RN1/16SE1201D
	R	9230	RN1/16SE1602D
	R	9231	RN1/16SE6802D
	R	9232	RN1/16SE4302D
	R	9233,9234	RN1/16SE2201D
	R	9235	RS1/8SQ223J
	R	9241,9242	RS1/4SA151J
	R	9245,9246	RS1/8SQ181J
	R	9247	RS1/4SA331J
	Other Resistors		RS1/10SR##J
CAPACITORS			
	C	9201,9205,9208	CEHAR101M10
	C	9202	CKSRYB223K16
	C	9203	CEHAR470M16
	C	9204,9226,9227	CKSRYB104K16
	C	9206	CEHAZL100M50
	C	9207,9212,9215,9218	CKSRYB104K50
	C	9209,9221	CEHAZL220M50
	C	9213,9222-9225	CCSRCH101J50
	C	9216	CEHAZL221M25-P35
	C	9217	CCSRCH331J50
	C	9219	CKSRYB104K50
L CDCB ASSY			
SEMICONDUCTORS			
	IC	5001	AD7147ACPZ500RL7
MISCELLANEOUS			
	CN	5001 7P CONNECTOR	VKN1411
CAPACITORS			
	C	5001	CKSQYB103K50
	C	5002	CKSRYB104K16
	C	5003	CCG1192
	C	5004-5008	CCSRCH101J50

L CDCB ASSY
SEMICONDUCTORS

IC 5001	AD7147ACPZ500RL7
<u>MISCELLANEOUS</u>	
CN5001 7P CONNECTOR	VKN1411
<u>CAPACITORS</u>	
C 5001	CKSQYB103K50
C 5002	CKSRYB104K16
C 5003	CCG1192
C 5004-5008	CCSRCH101J50

Mark No. Description Part No.

M SDSW ASSY

SEMICONDUCTORS

Q 8601 DTC124EUA
D 8601 SLI-343U8RC(HJKL)

MISCELLANEOUS

S 8601 SWITCH VSG1024
S 8602 PUSH SWITCH DSG1017

RESISTORS

All Resistors RS1/10SR###J

N SLDB ASSY

SEMICONDUCTORS

Q 8701 DTC124EUA
D 8701 SLI-343M8C(FGHJ)

MISCELLANEOUS

VR 8701 VARIABLE RESISTOR DCV1013
VR 8702 CERMET TRIMMER (1 K) DCP1105
S 8701 SWITCH VSG1024

RESISTORS

All Resistors RS1/10SR###J

MISCELLANEOUS

JH 8701 8P CABLE HOLDER 51048-0800

CAPACITORS

C 8702 CEJQ470M16
C 8703 CKSRYB104K16

O EUPB ASSY

SEMICONDUCTORS

D 8651 SLI-343U8RC(HJKL)

MISCELLANEOUS

S 8651 SLIDE SWITCH DSH1066
CN 8651 3P JUMPER CONNECTOR 52147-0310

RESISTORS

All Resistors RS1/10SR###J

P CNCT ASSY

MISCELLANEOUS

CN 8801 12PJUMPER CONNECTOR 52147-1210
CN 8802 6P JUMPER CONNECTOR 52147-0610

CAPACITORS

C 8801,8802 CCSRCH221J50

Q KSWB ASSY

SEMICONDUCTORS

Q 8501,8502 DTC124EUA
D 8501 SLR343EC4T(LMN)
D 8502 SLI-343Y8C(KLMN)

MISCELLANEOUS

S 8501,8502 TACT SWITCH DSG1117

RESISTORS

166

Mark No. Description Part No.

All Resistors RS1/10SR###J

MISCELLANEOUS

JH 8501 6P CABLE HOLDER 51048-0600
JP 8501 JUMPER WIRE D20PDY0615E

R JOGB ASSY

MISCELLANEOUS

CN 9301 4PJUMPER CONNECTOR 52151-0410

RESISTORS

All Resistors RS1/10SR###J

MISCELLANEOUS

PC 9301 PHOTO INTERRUPTER SEDS-7573

CAPACITORS

C 9301,9302 CKSRYB103K50

S INDB ASSY

SEMICONDUCTORS

D 6201 SMLC14WBEPW(Z1)

MISCELLANEOUS

CN 6201 CONNECTOR AKM1288

RESISTORS

All Resistors RS1/10SR###J

T POWER SUPPLY ASSY

There is no service parts.

U ACIN ASSY (DWR1475)

MISCELLANEOUS

⚠ JA 9101 AC INLET 1P XKP3085
⚠ S 9101 SWITCH DSA1035
⚠ JP 9101 CONNECTOR ASSY 2P DKP3835

CAPACITORS

⚠ C 9101 ACG7033

U ACIN ASSY (DWR1453)

MISCELLANEOUS

⚠ JA 9101 AC INLET 1P XKP3084
⚠ S 9101 SWITCH DSA1035
⚠ JP 9101 CONNECTOR ASSY 2P DKP3835

CAPACITORS

⚠ C 9101 ACG7033

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