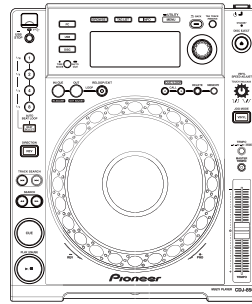


Pioneer

Service Manual



CDJ-850

ORDER NO.
RRV4128

MULTI PLAYER

CDJ-850

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

Model	Type	Power Requirement	Remarks
CDJ-850	SYXJ8	AC 220 V to 240 V	
CDJ-850	CUXJ	AC 120 V	
CDJ-850	FLXJ	AC 110 V to 240 V	
CDJ-850	KXJ5	AC 220 V	
CDJ-850	AXJ5	AC 220 V to 240 V	



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

PIONEER CORPORATION 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan

PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.

PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

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SAFETY INFORMATION

A



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

B

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

C

CAUTION

This product is a class 1 laser product classified under the Safety of laser products, IEC 60825-1:2007.

CLASS 1 LASER PRODUCT

D58-5-2-2a_A1_En

D

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 CD	Wave length (typ) : 790 nm
	Operation output : 4 mW CW, Class 1
	Maximum output : Class 1 (Under fault condition)

E

Additional Laser Caution

1. Laser Interlock Mechanism

The position of the switch (S1702) 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 Service mode the interlock mechanism will not function.

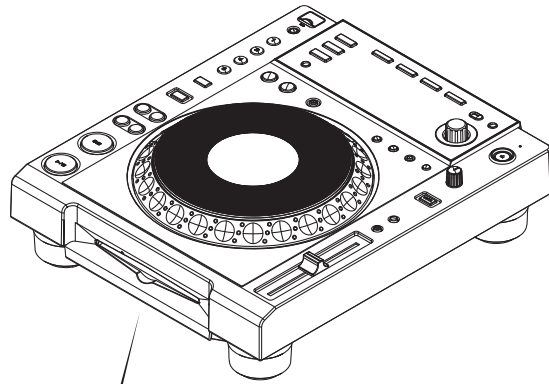
Laser diode oscillation will continue, if pin 41 of TC94A15FG (IC201) on the MAIN Assy is connected to GND, or else the terminals of Q201 are shorted to each other (fault condition).

2. 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

A

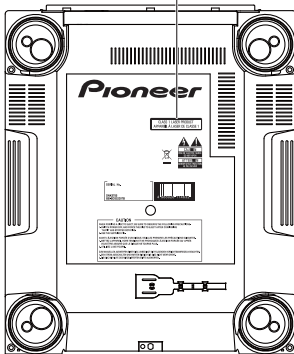
B



C

(Printed on the chassis)

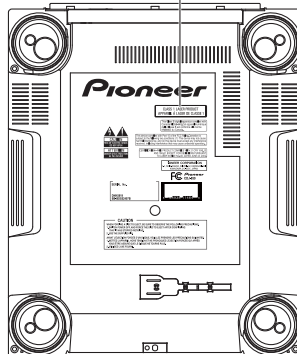
CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1



SYXJ8

(Printed on the chassis)

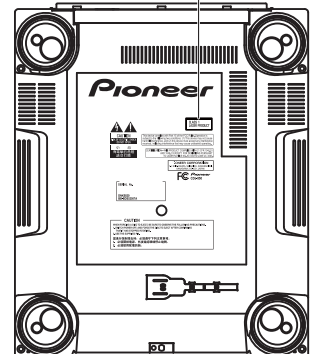
CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1



CUXJ

(Printed on the chassis)

CLASS 1
LASER PRODUCT

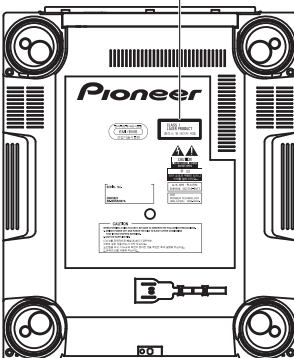


FLXJ

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(Printed on the chassis)

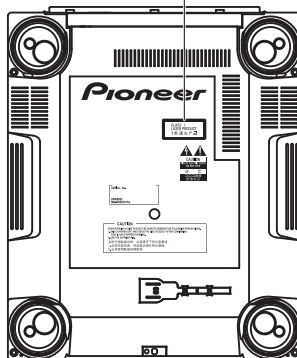
CLASS 1
LASER PRODUCT
 클래스 1 레이저 제품



KXJ5

(Printed on the chassis)

CLASS 1
LASER PRODUCT
 1类激光产品



AXJ5

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[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.

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- A
- 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.

B 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.

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1.2 ABOUT POWER SUPPLY MONITORING

This unit always monitors for power failure and will shut itself off immediately after an error is detected. If an error is generated, the STANDBY LED will flash after the unit shuts itself off. After the unit shuts itself off because of an error, unplug the AC power cord and wait 1 minute before turning the unit ON by pressing the STANDBY/ON key. Repair the unit, according to “5.5 ABOUT POWER SUPPLY MONITORING.”

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2.2 USABLE DISCS AND USB DEVICES

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A About discs

This unit can play the discs shown below.

Type	Mark ¹	Compatible formats
CD		<ul style="list-style-type: none"> • Music CD (CD-DA)
CD-R		<ul style="list-style-type: none"> • Music CD (CD-DA) • MP3 • AAC • WAV • AIFF
CD-RW		<ul style="list-style-type: none"> • Music CD (CD-DA)
CD-TEXT ²		Music CD (CD-DA)

¹ Discs on which the marks on this table are indicated on the disc label, package or jacket can be played.

² Titles, album names and artist names recorded in the CD-Text data are displayed. When multiple text data are recorded on the disc, the information for the first text data is displayed.

❖ Discs that cannot be played

- DTS-CD
- Photo CDs
- Video CDs
- CD Graphics (CD-G) discs
- Unfinalized CDs
- DVD

❖ About CD-R/-RW discs

Music files (MP3/AAC/WAV/AIFF) recorded on CD-R/-RW discs can be played.

Folder layers	Max. 8 levels (files in folders beyond the 8th level cannot be played)
Max. number of folders	1 000 folders
Max. number of files	1 000 files

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

❖ About discs created on computers

Depending on the application settings and the computer's environmental settings, it may not be possible to play certain discs. Record the disc in a format supported on this unit. For details, contact your application's retailer.

If the recording quality is poor due to the disc's properties, scratches or dirt on the disc or dirt on the recording lens, it may not be possible to play the disc.

❖ Creating backup discs

When CD-R/-RW 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 at that point, due to the properties of the disc. Also, 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.

❖ About Copy Control CDs and DualDiscs

This unit is designed to CD standards. Operation and performance of discs with standards other than CD standards is not guaranteed.

❖ About 8 cm single CDs

8 cm single CDs cannot be played on the CDJ-850. Do not mount 8 cm adapters on CDs and play them on the CDJ-850. The adapter could fall off as the disc spins, damaging the disc or the player.

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About USB devices

This unit supports USB mass storage class USB devices (external hard disks, portable flash memory devices, digital audio players, etc.).

Folder layers	Max. 8 layers
Max. number of folders	1 000 folders
Max. number of files	10 000 files (1 000 files for files not managed by rekordbox)
Supported file systems	FAT16, FAT32 and HFS+ (NTFS is not supported.)

When there are many folders or files, some time may be required for loading. Folders and files exceeding the limits cannot be displayed.

❖ USB devices that cannot be used

- Optical disk type devices such as external DVD/CD drives, etc., are not supported.
- USB hubs cannot be used.

❖ 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.
- It may happen that, when a current above the allowable level is detected in this unit's USB port, the **[USB STOP]** indicator flashes, the power supply to the USB device is cut off and communications with the USB device are interrupted. To restore normal operation, disconnect the USB device from this unit. Avoid reusing USB devices for which an excess current has been detected. If normal operation is not restored (if communications cannot be established) after the above procedure is performed, try turning off this unit's power then turning it back on.
- If multiple partitions are set for the USB device, the device may not be recognized.
- USB devices equipped with flash card readers may not operate.
- Depending on the USB device you are using, the desired performance may not be achieved.

Playable music file formats

This unit supports music files in the formats shown below.

Type	File extension	Compatible formats	Bit depth	Bit rate	Sampling frequency	Encoding method
MP3	.mp3	MPEG-1	16 bit	32 kbps to 320 kbps	32 kHz, 44.1 kHz, 48 kHz	CBR, VBR
AAC	.m4a, .aac and .mp4	MPEG-4 AAC LC	16 bit	16 kbps to 320 kbps	32 kHz, 44.1 kHz, 48 kHz	CBR, VBR
WAV	.wav	WAV	16 bit, 24 bit	—	44.1 kHz, 48 kHz	Uncompressed PCM
AIFF	.aif, .aiff	AIFF	16 bit, 24 bit	—	44.1 kHz, 48 kHz	Uncompressed PCM

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-850, 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.

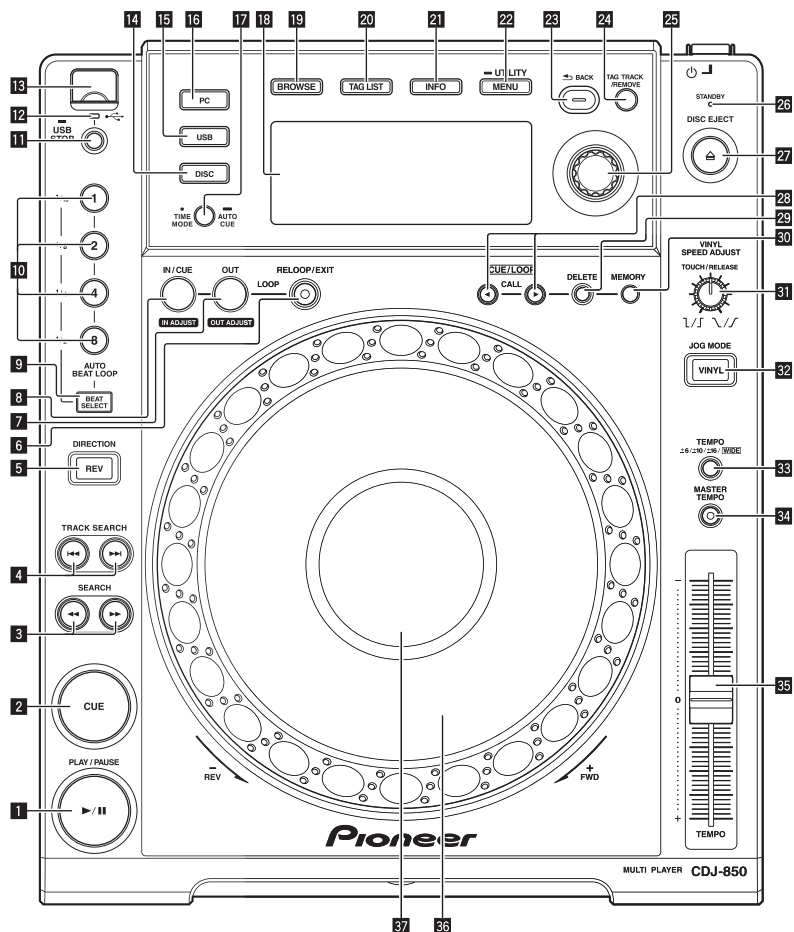
About AAC files

- 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 with the extension ".m4a" encoded with iTunes®, files with the extensions ".aac" and ".mp4" can also be played. Note, however, that 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 version of iTunes used for encoding.

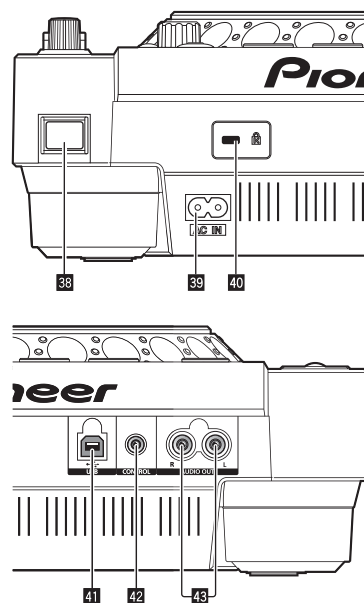
2.3 PANEL FACILITIES

A

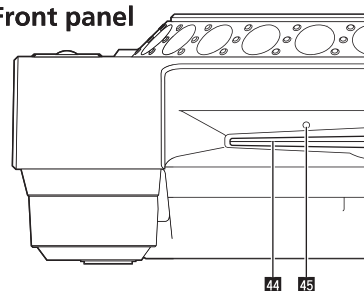
Control panel



Rear panel



Front panel



D

Control panel

1 PLAY/PAUSE ►/II

Use this to play/pause tracks.

- During playback, the indicator lights.
- When in the pause mode, the indicator flashes.

2 CUE

Use this to set and check cue points.

- When a cue point is set, the indicator lights.
- When in the pause mode, the indicator flashes.

3 SEARCH ◀◀, ▶▶

The track is forwarded/reversed while the button is held in.

4 TRACK SEARCH ◀◀◀, ▶▶▶

Use these to search for the beginnings of tracks.

5 DIRECTION REV

Use this to turn reverse playback on and off.

6 RELOOP/EXIT

Use this to return to loop playback (reloop) or cancel loop playback (loop exit).

7 LOOP OUT (OUT ADJUST)

Use this to set and fine-adjust the loop out point.

8 LOOP IN/CUE (IN ADJUST)

Use this to set and fine-adjust the loop in point.

9 BEAT SELECT

Use this to set the number of beats for auto beat loop playback.

10 AUTO BEAT LOOP (1, 2, 4, 8)

Use these to set the loop automatically according to the track's tempo (auto beat loop).

11 USB STOP

Press for at least 2 seconds before disconnecting the USB device.

12 USB indicator

This flashes when this unit is communicating with the USB device.

13 USB device insertion slot

Load the USB device here.

14 DISC

Press this to play the music files on a CD or CD-ROM.

15 USB

Press this to play the music files on a USB device.

16 PC

Press this to use DJ software.

17 TIME MODE (AUTO CUE)

- When pressed once, the main unit display's time display mode (remaining time display or elapsed time display) switches.
- When pressed for over 1 second, auto cue turns on and off.

18 Main unit display

19 BROWSE

Press this to display the [BROWSE] screen.

20 TAG LIST

Press this to display the [TAG LIST] screen.

21 INFO

Press this to display the [INFO] screen.

22 MENU (UTILITY)

- When pressed once, the menu screen is displayed.
- The [UTILITY] screen is displayed when this is pressed for over 1 second.

23 BACK

- Press this once to return to the previous screen.
- Press for over 1 second to move to the top layer.

24 TAG TRACK/REMOVE

Use these to add and remove tracks from the tag list.

25 Rotary selector

- Turn the rotary selector to select tracks or folders.
- Press the rotary selector to enter.

26 STANDBY indicator

This lights when the auto standby function is activated.

27 DISC EJECT ▲

Use this to eject discs.

28 CUE/LOOP CALL ◀▶

Use these to call out cue and loop points stored on the USB device.

29 DELETE

Use this to delete cue and loop points stored on the USB device.

30 MEMORY

Use this to store cue and loop points on the USB device.

31 VINYL SPEED ADJUST TOUCH/RELEASE

Use this to adjust the speed at which playback slows down and stops when the top of the jog dial is pressed and the speed at which normal playback resumes when the top of the jog dial is released.

32 VINYL (JOG MODE)

Use this to switch the jog dial mode.

33 TEMPO ±6, ±10, ±16, WIDE

Use this to switch the playing speed adjustment range.

34 MASTER TEMPO

Use this to turn the master tempo function on and off.

35 TEMPO

Use this to adjust the track playing speed.

36 Jog dial

This can be used for such operations as scratching, pitch bending, etc.

37 Jog dial display section

Rear panel

38 ⏻ (power switch)

This switches this unit's power between on and standby.

39 AC IN

Connect this to a power outlet.
Connect the power cord after all the connections between devices have been completed.
Be sure to use the included power cord.

40 Kensington security slot

41 USB

Connect to a computer.

42 CONTROL

Connect the control cord (included) here.

43 AUDIO OUT L/R

Connect the audio cables (included) here.

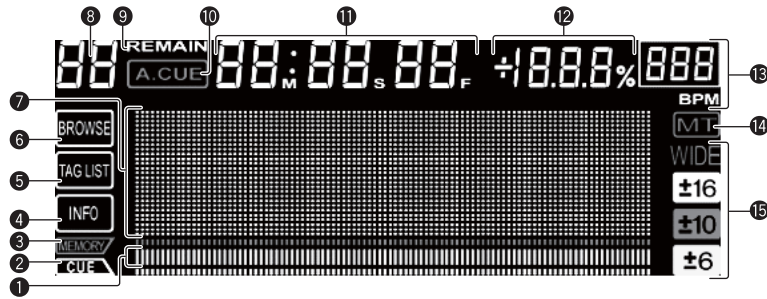
Front panel

44 Disc insertion slot

45 Disc force eject pin insertion hole

A

Main unit display



1 Playing address display

The track is displayed as a bar graph. Turns off from the left side when the remaining time is displayed. The entire graph flashes slowly when the remaining track time is under 30 seconds, then flashes quickly when the remaining track time is under 15 seconds.

2 CUE

The positions of currently set cue and loop points are displayed as marks.

3 MEMORY

Cue and loop points recorded on USB devices are displayed as marks.

4 INFO

This lights when the [INFO] screen is displayed.

5 TAG LIST

This lights when the [TAG LIST] screen is displayed.

6 BROWSE

This lights when the [BROWSE] screen is displayed.

7 Information display section

The characters that can be displayed are letters A to Z, numbers 0 to 9 and certain symbols. "?" is displayed for other characters.

8 Track number

This displays the track number. It is not possible to display more than 100 tracks.

9 REMAIN

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

10 A. CUE

This lights when auto cue is set.

11 M, S, F (time display)

"M" indicates minutes, "S" seconds, "F" frames. There are 75 frames to a second.

12 % (playing speed display)

This indicates the percentage by which the playing speed is changed.

13 BPM

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

14 MT

This lights when the master tempo is set.

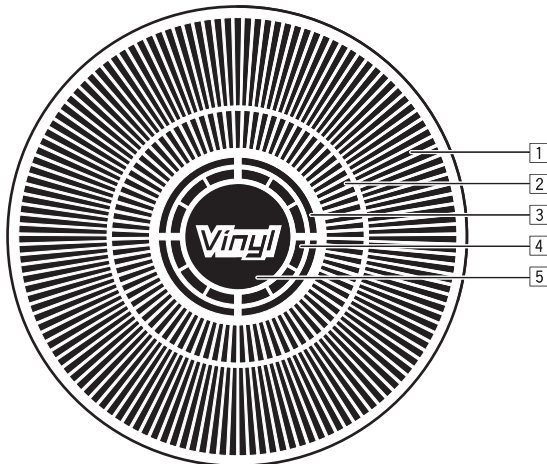
15 WIDE, ±16, ±10, ±6

This indicates the range by which the playing speed can be adjusted.

C

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. It may not be possible to perform the real time cue operation while the audio memory is being written. 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.

E

F

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 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.
2	Check output analog audio.	Audio and operations must be normal.
3	Play back a CD. (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 device must be recognized by the PC.
5	Check output signals while the JOG dial or TEMPO slider is being operated.	Audio and operations must be normal.
6	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

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

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

3.2 JIGS LIST

Jigs List

Jig Name	Part No.	Purpose of use / Remarks
CD test disc	STD-905	CD playback diagnosis

Lubricants and Glues List



Name	Part No.	Remarks
Lubricating oil	GYA1001	Refer to "9.4 JOG DIAL SECTION", "9.5 SLOTIN MECHA SECTION".
Lubricating oil	ZLB-HFD1600	Refer to "9.4 JOG DIAL SECTION".
Dyfree	GEM1036	Refer to "9.5 SLOTIN MECHA SECTION".

Cleaning



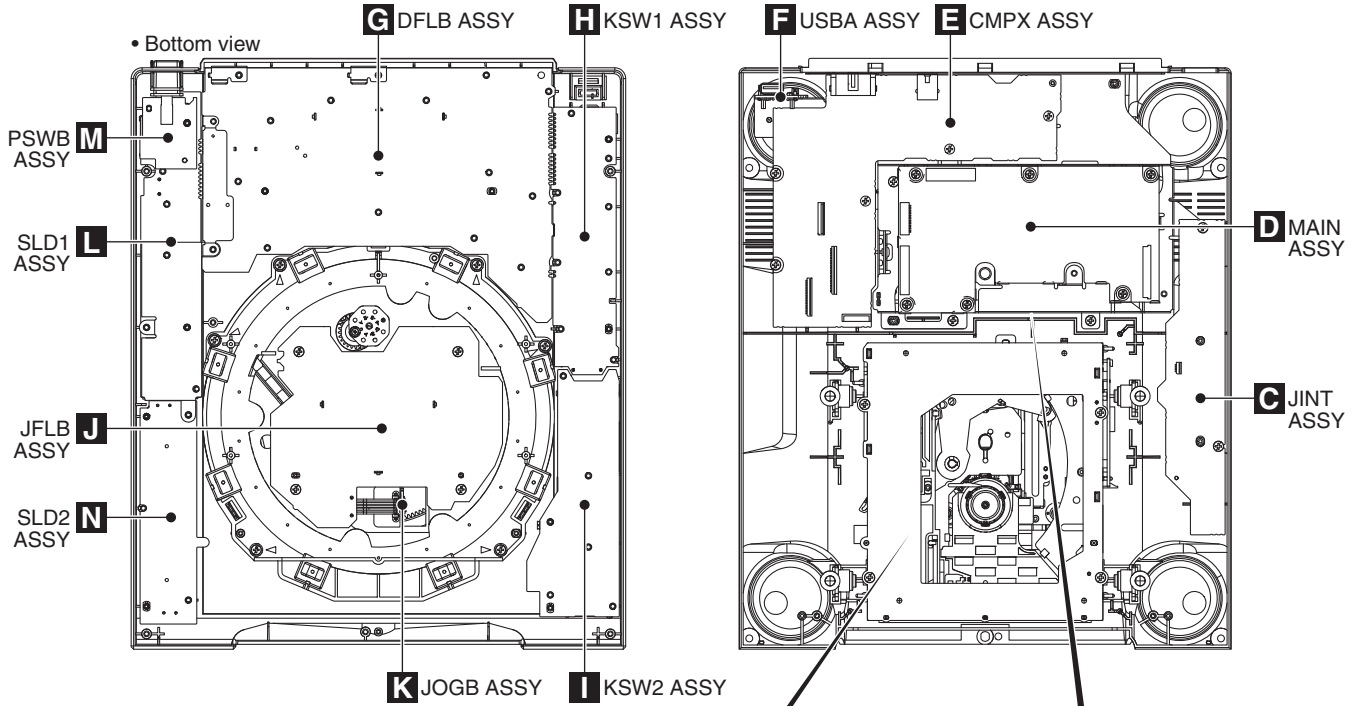
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools.

Position to be cleaned	Name	Part No.	Remarks
Pickup lenses	Cleaning liquied	GEM1004	Refer to "9.5 SLOTIN MECHA SECTION".
	Cleaning paper	GED-008	

3.3 PCB LOCATIONS

1 2 3 4

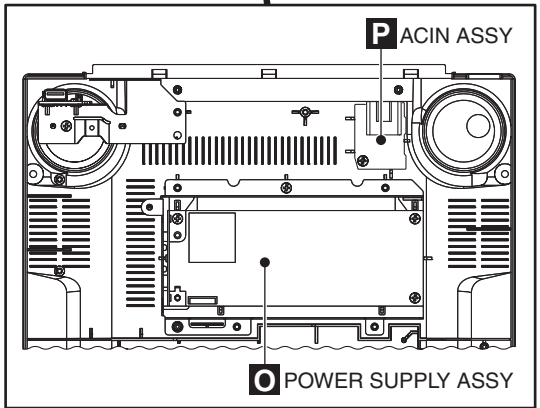
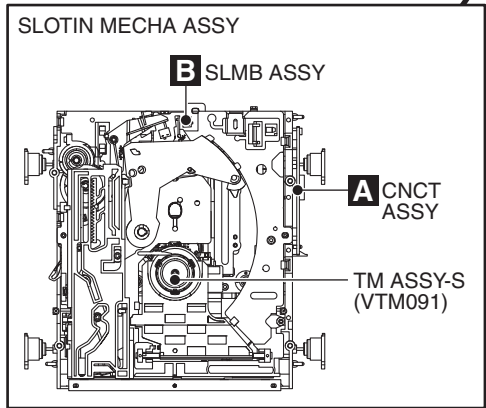
A



B

C

D



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.

Mark No.	Description	Part No.	Mark No.	Description	Part No.
LIST OF ASSEMBLIES					
	1..MAIN ASSY	DWX3174		2..JOGB ASSY	DWX3155
				2..ACIN ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWX3158
NSP	1..SUB1 ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWM2399		2..ACIN ASSY (CUXJ)	DWX3173
NSP	1..SUB1 ASSY (CUXJ)	DWM2405			
NSP	2..KSW1 ASSY	DWS1422	NSP	1..SUB2 ASSY	DWM2400
NSP	2..SLD1 ASSY	DWS1423		2..CNCT ASSY	DWX3151
	2..PSWB ASSY	DWS1424		2..CMPX ASSY	DWX3153
				2..USBA ASSY	DWX3156
	2..SLMB ASSY	DWS1425		2..JINT ASSY	DWX3157
	2..KSW2 ASSY	DWS1426			
	2..SLD2 ASSY	DWS1427	\triangle	1..POWER SUPPLY ASSY	DWR1463
	2..DFLB ASSY	DWX3152 *	NSP	1..SLOTIN MECHA ASSY	DXA2206
	2..JFLB ASSY	DWX3154			
				1..TM ASSY-S (VTM091)	DXX2616

* The service part of DFLB Assy (DWX3152) is supplied with KSW1 Assy (DWS1422) and SLD1 Assy (DWS1423).
 (These assemblies are connected with the jumper wires.)

1 2 3 4



5



6



7



8



A



B



C



D



E



F



5



6

CDJ-850




7

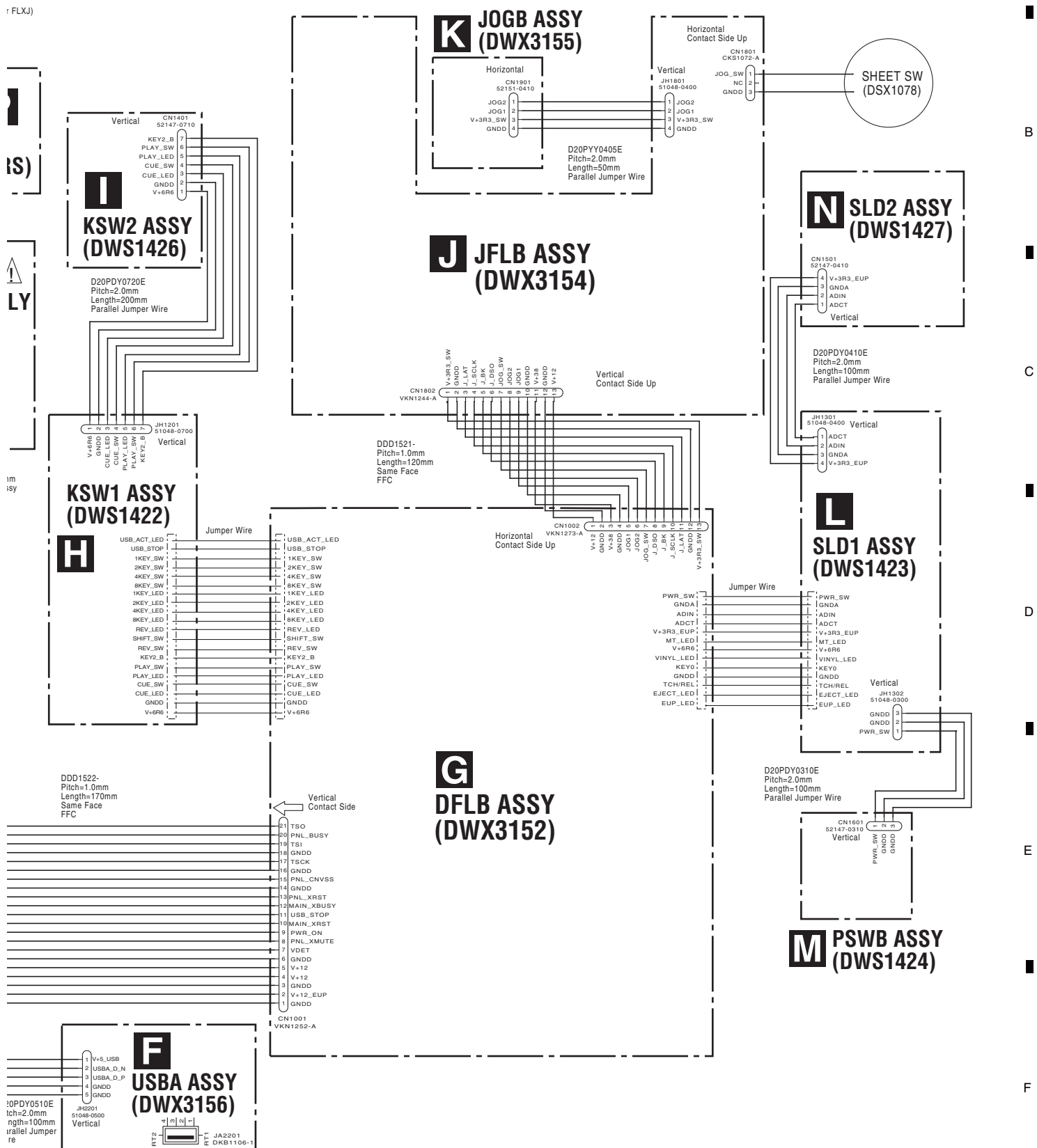


8

15

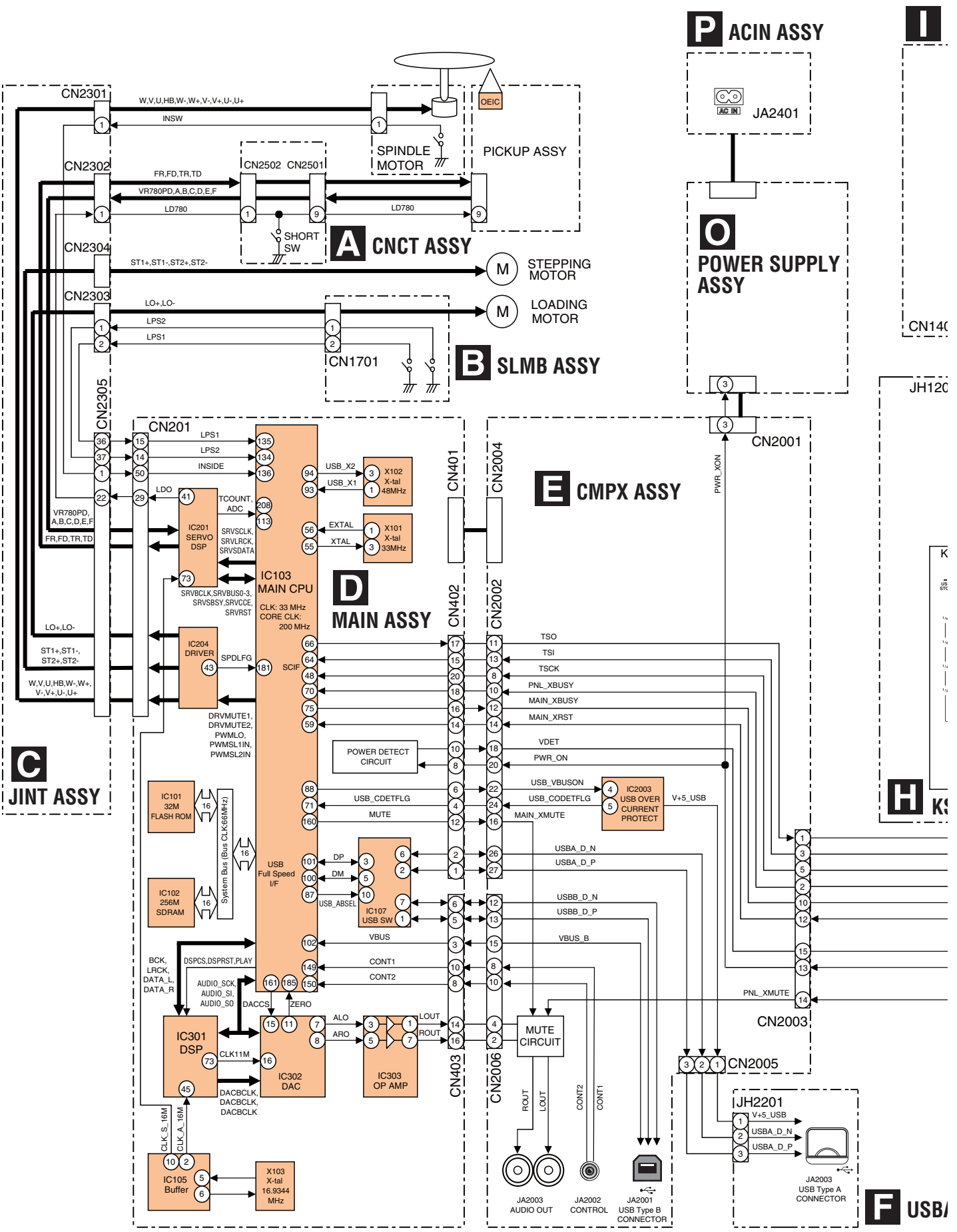


- When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
-  : The power supply is shown with the marked box.

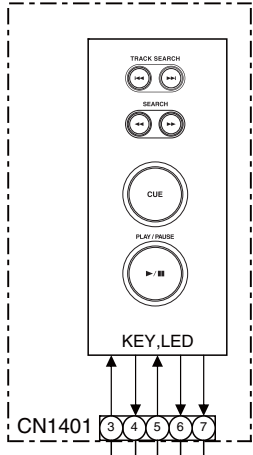


4.2 SIGNAL BLOCK DIAGRAM

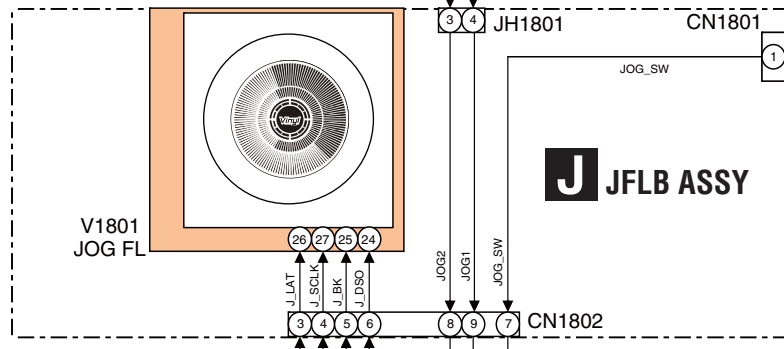
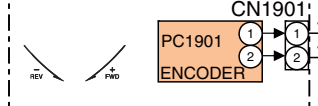
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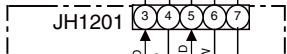
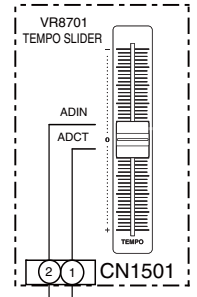
I KSW2 ASSY



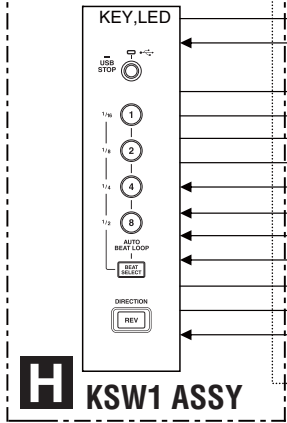
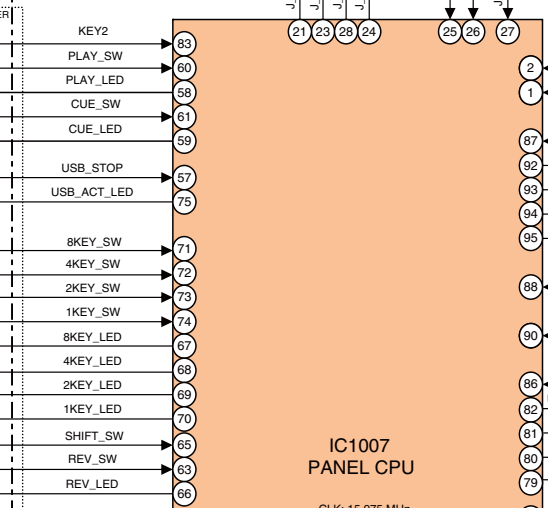
K JOGB ASSY



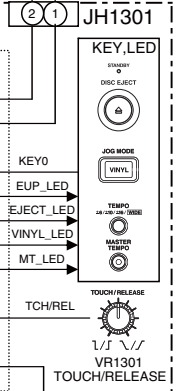
N SLD2 ASSY



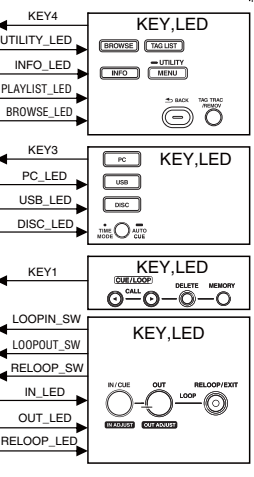
G DFLB ASSY



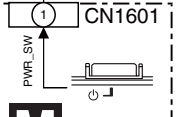
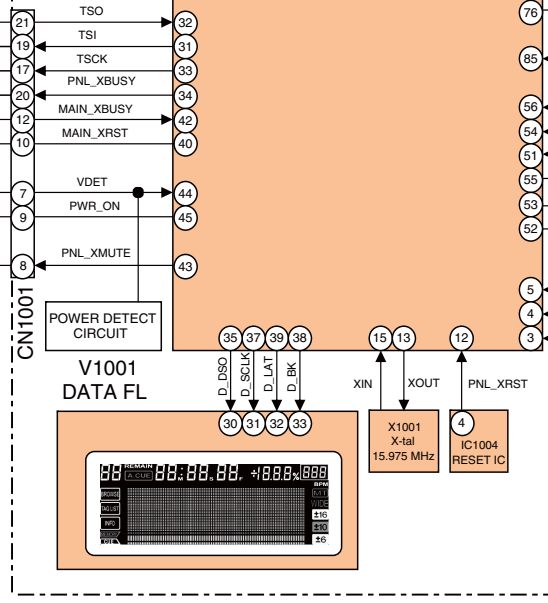
H KSW1 ASSY



L SLD1 ASSY



F USBA ASSY

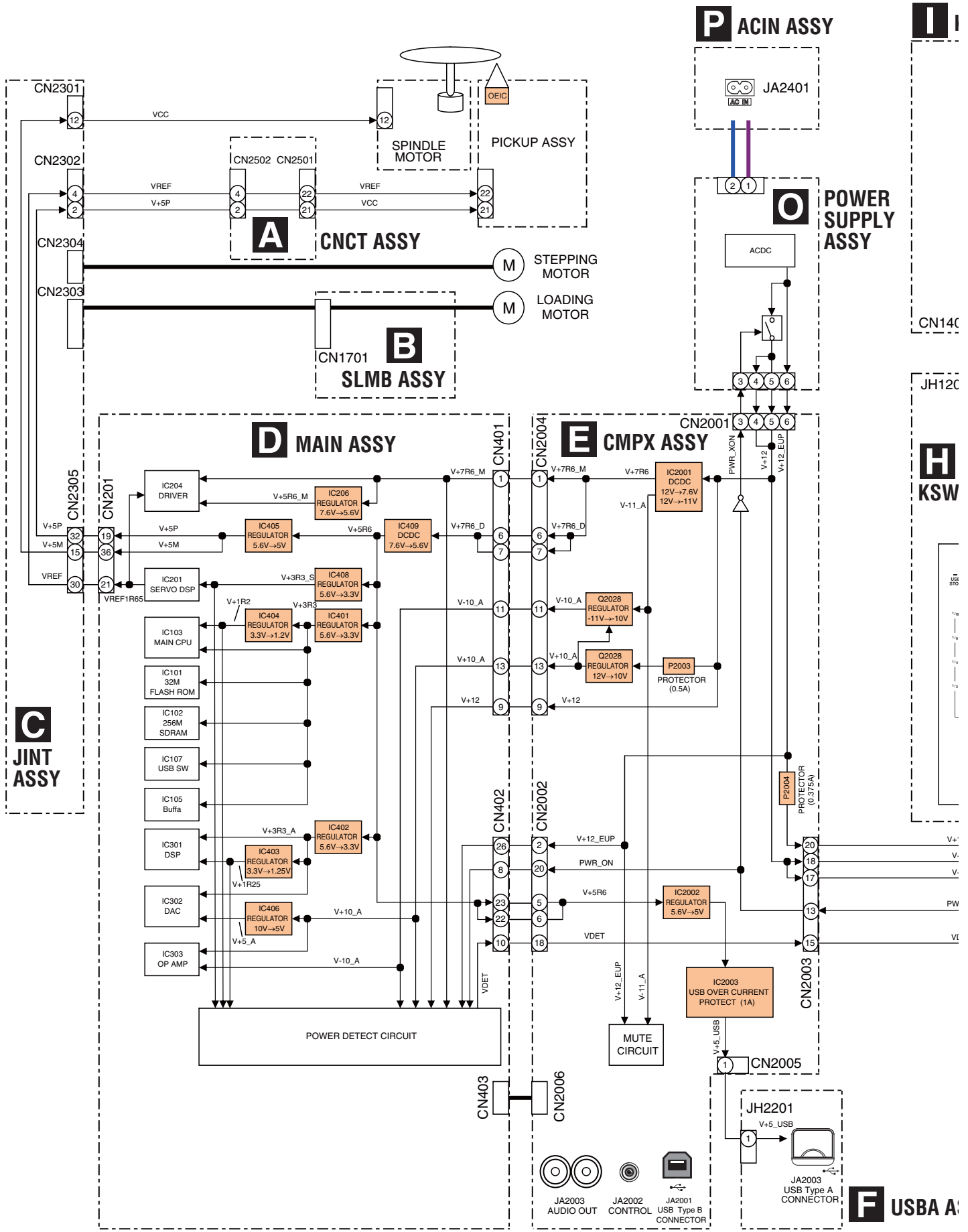


M PSWB ASSY

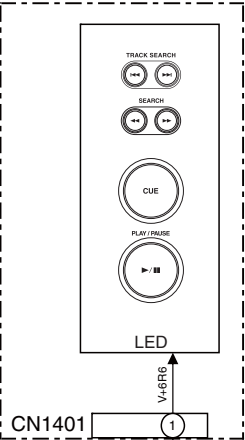


4.3 POWER SUPPLY BLOCK DIAGRAM

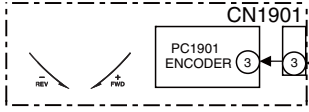
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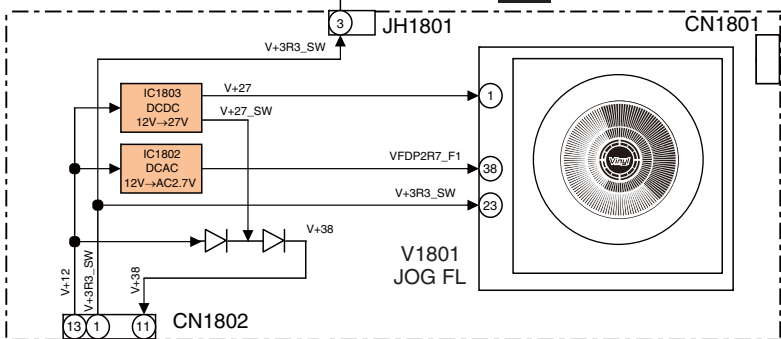
I KSW2 ASSY



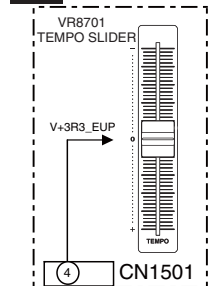
K JOGB ASSY



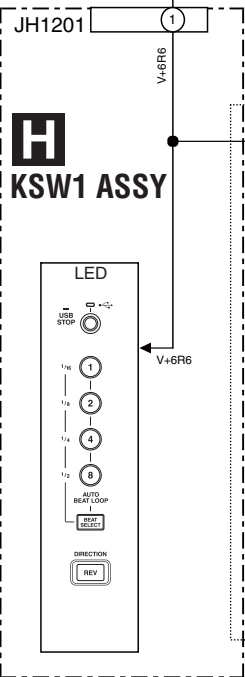
J JFLB ASSY



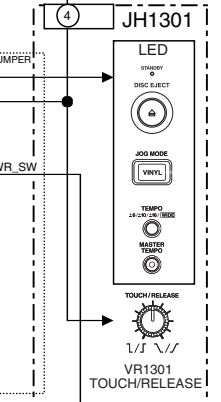
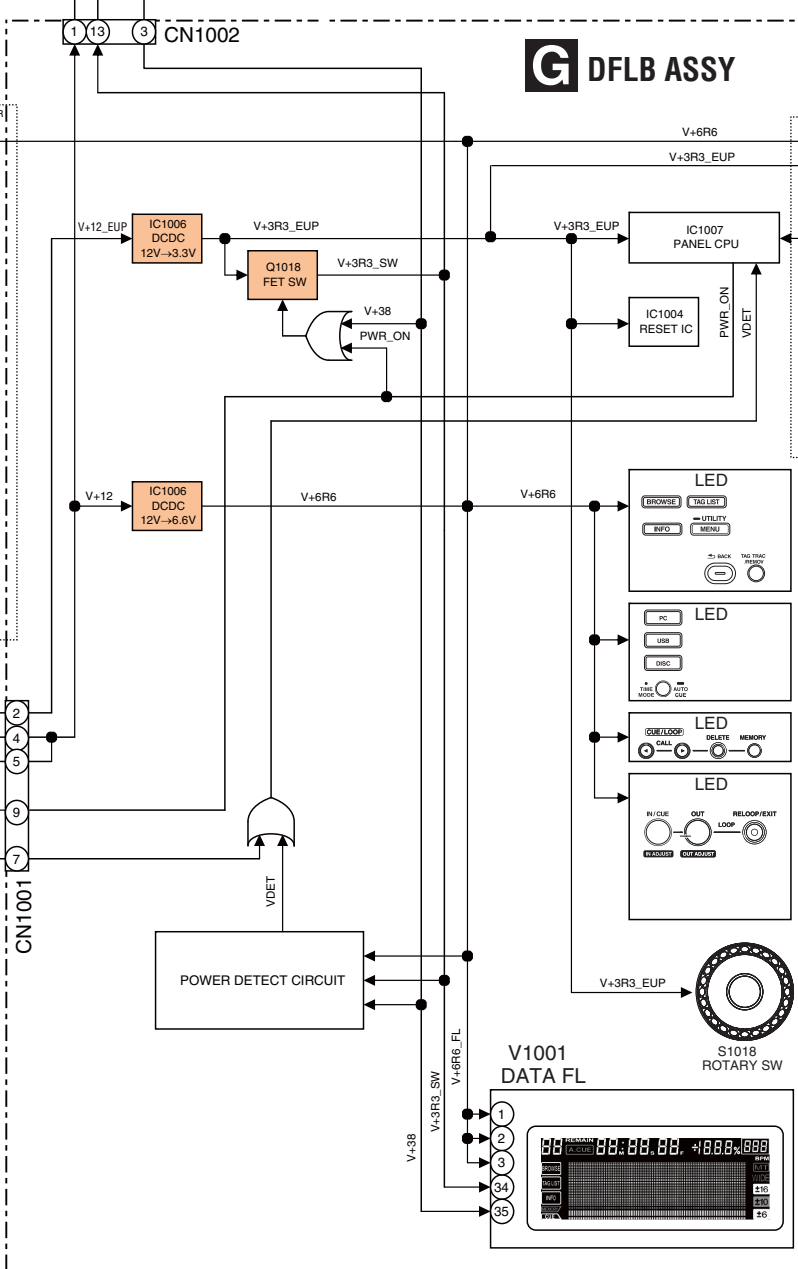
N SLD2 ASSY



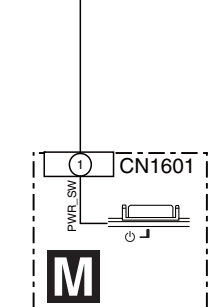
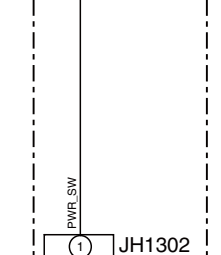
DWER JPPPLY ASSY



G DFLB ASSY



L SLD1 ASSY

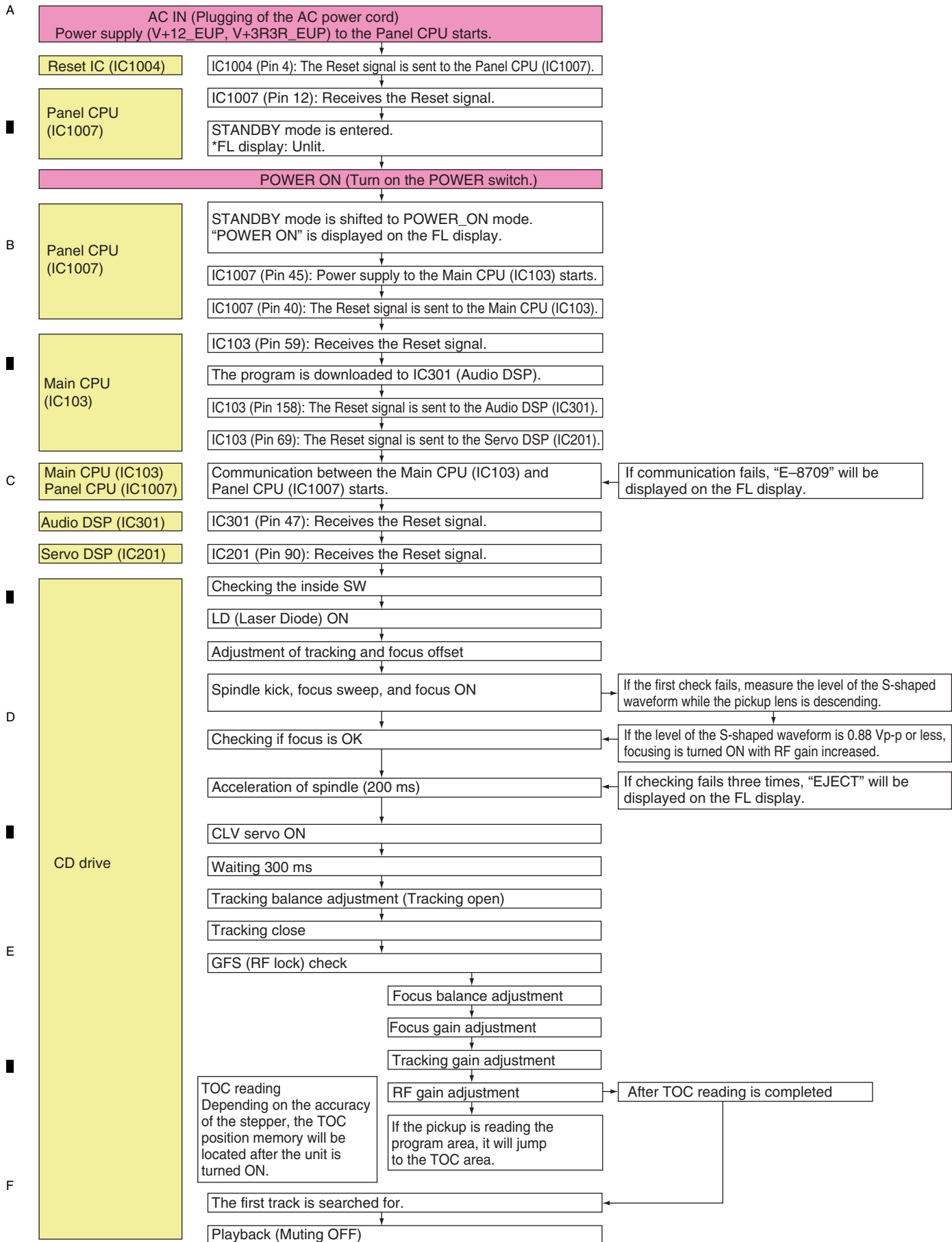


F USBA ASSY



5. DIAGNOSIS

5.1 POWER ON SEQUENCE



5.2 TROUBLESHOOTING

In this section, causes of failure, diagnostics points, and corrective measures can be searched for according to symptoms. Before disassembling this unit, it is recommended to infer a failure point by referring to the error code.

For the relationship of each power-supply and signal system, see "4.3 POWER SUPPLY BLOCK DIAGRAM."

If software of the product is updated before performing diagnostics, check that software updating has been performed properly before proceeding to diagnostics.

If software updating has not been performed properly, update the software, following the instructions in "8.3 UPDATING OF THE FIRMWARE."

Contents

- [0] Prior Confirmation
- [1] Failure in Startup
- [2] Display (DATA FL/JOG FL/LED)
- [3] Operations (SW/Volume/JOG)
- [4] USB (USB-Type A), PC (USB-Type B)
- [5] AUDIO OUT
- [6] CONTROL
- [7] DRIVE Assy
- [8] SERVICE MODE
- [9] Error Codes
- [10] Basic Operation Check of CPU/DSP

The waveform numbers described in this section correspond to the "10.14 WAVEFORMS."

[0] Prior Confirmation

[0-1] Checking in Service Mode

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







[0-2] 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.	4.1 OVERALL CONNECTION DIAGRAM

[1] Failure in Startup

[1-1] No power

Plug the AC power cord in and even if turn the power on, the product does not startup.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Standby power failure	CMPX Assy DFLB Assy POWER SUPPLY Assy	Check the voltages of V+12_EUP and V+3R3_EUP.	If the V+12_EUP voltage is not output, the POWER SUPPLY Assy may be defective. If the V+12_EUP voltage is output, the DFLB Assy may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM 10.13 VOLTAGES  
2	Path failure of the power switch	DFLB Assy SLD1 Assy PSWB Assy	Check if there is loose connection on the signal line from the Power switch (S1601) to PANEL CPU (IC1007).	If the connection up to the Power switch is properly made and if the PWR_SW signal is not set to "L" when the Power switch is pressed, the Power switch may be defective.	10.15 EACH SIGNAL LEVEL 
3	Path failure of the power on	DFLB Assy CMPX Assy	Check the level of PWR_ON (IC1007-pin 45) and PWR_XON (CN2001-pin 3) signals.	If the PWR_ON is "L", PANEL CPU(IC1007) may be defective. If the PWR_XON is "H", poor connection or Q2021 may be defective.	10.15 EACH SIGNAL LEVEL  
4	Power failure	CMPX Assy POWER SUPPLY Assy	Check the V+12 voltage of CN2001-pins 4 and 5.	If the voltage is not output, POWER SUPPLY Assy may be defective.	10.13 VOLTAGES 

A [1-2] Mode shift error in Standby mode

Shifting to the STANDBY mode cannot be performed even if turn the power off.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Path failure of the power switch	DFLB Assy SLD1 Assy PSWB Assy	Check if there is loose connection on the signal line from the Power switch (S1601) to PANEL CPU (IC1007).	If the connection up to the Power switch is properly made and if the PWR_SW signal is not set to "H" when the Power switch is turned off, the Power switch may be defective.	10.15 EACH SIGNAL LEVEL A
2	Path failure of the power on	DFLB Assy CMPX Assy	Check the level of PWR_ON (IC1007-pin 45) and PWR_XON (CN2001-pin 3) signals.	If the PWR_ON is "H", PANEL CPU(IC1007) may be defective. If the PWR_XON is "L", poor connection or Q2021 may be defective.	10.15 EACH SIGNAL LEVEL B J

B [1-3] "E-8709" is displayed on the DATA FL display after startup.

Communication between the Main CPU and Panel CPU has not been established.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Communication failure between the microcomputer	DFLB Assy MAIN Assy	Check the TSCK, TSI, PNL_BUSY, TSO and MAIN_BUSY waveforms.	If no signal is output, the possible causes are poor connection, failure in the PANEL CPU (IC1007) or MAIN CPU (IC103), and startup failure of the MAIN CPU caused by defective FLASH ROM (IC101) or SDRAM (IC102).	10.14 WAVEFORMS 8 9 7 10 4
2	Power failure	MAIN Assy	Check the V+3R3 and V+1R2 power voltages.	If power is not output, a part of the power supply section may be defective.	10.13 VOLTAGES 9 10

C [1-4] The Standby LED flashes in red.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	A voltage error was generated.	—	Check the level of the VDET signal.	If the signal level is "L", a voltage error was generated.	5.5 ABOUT POWER SUPPLY MONITORING 10.13 VOLTAGES

[2] Display (DATA FL/JOG FL/LED)

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

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power failure	DFLB Assy	Check the power-supply voltages (V+6R6,F±, V+38, V+3R3_SW) of the FL.	If the presence of power is not confirmed, check the mounting statuses of the regulator IC and its peripheral parts for each power supply. If they are properly mounted, then the parts may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM 10.13 VOLTAGES 20 21 23 19
2	Signal errors	DFLB Assy	Check the waveforms and connection of communication line of FL in the DFLB Assy. • D_SCLK • D_SO • D_LAT • D_BK	If no signal is output, the PANEL CPU (IC1007) may be defective. If output signal is no problem, DATA FL (V1001) may be defective.	10.14 WAVEFORMS 1 4 3 2

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

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power failure	JFLB Assy	Check the power-supply voltages (VFDP2R7_F1, VFDP2R7_F2, V+27, V+3R3_SW) of the FL.	If the presence of power is not confirmed, check the mounting statuses of the regulator IC and its peripheral parts for each power supply. If they are properly mounted, then the parts may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM 10.13 VOLTAGES 24 25 22 19
2	Signal errors	JFLB Assy	Check the waveforms and connection of communication line of FL in the JFLB Assy. • J_SCLK • J_SO • J_LAT • J_BK	If no signal is output, the PANEL CPU (IC1007) may be defective. If output signal is no problem, JOG FL (V1801) may be defective.	10.14 WAVEFORMS 1 4 3 2

[2-3] The LED does not light.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Signal errors	DFLB Assy	Check that the control signal for the LED is output from the PANEL CPU (IC1007).	If no signal is output, check a mounting state of PANEL CPU(IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP
2	Defective parts	DFLB Assy	Check that the voltage (2.2 V) is present at both ends of the LED.	If the voltage is abnormal, the LED, transistor or peripheral resistors may be defective.	—

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

As operations of all keys, variable controls, and JOG dial can be checked in Service mode.



[3-1] No key functions

PLAY, CUE, AUTO BEAT LOOP 1-4, BEAT SELECT, REV, LOOP IN/OUT, RELOOP, or USB STOP key does not function.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC1007) 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.	10.15 EACH SIGNAL LEVEL
2	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP
The signals from other keys are analog and connected to multiple switches.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection /Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC1007) up to the SW.	If the SWs connected to the signal line function properly and if the connections are properly made, the SWs may be defective.	—
2	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP

[3-2] Rotary selector not controllable

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective rotary selector	DFLB Assy	Check if the signals from the RENC_1, RENC_2, and RENC_SW signal lines are normal when the rotary selector is turned or pressed.	If the signals are not normal, check the connections of the signal lines. If the connections are properly made, the Rotary selector (S1018) may be defective. Replace it.	10.15 EACH SIGNAL LEVEL
2	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP

[3-3] Variable controls not controllable

Tempo slider not controllable					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection	DFLB Assy SLD1 Assy SLD2 Assy	Check if there is loose connection on the signal line from the PANEL CPU (IC1007) to the tempo slider (VR1501).	If the connections of signal line are improper, resolder it.	—
2	Defective tempo slider	DFLB Assy SLD2 Assy	Check the ADCT and ADIN signals level.	If the voltage of the ADCT signal (IC1007-pin 1) is not 1.65 V, or the voltage of the ADIN signal (IC1007-pin 2) does not change between 3.3 V and 0 V, the Tempo slider (VR1501) may be defective.	10.15 EACH SIGNAL LEVEL 
3	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP
VINYL SPEED ADJUST not controllable					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connection	DFLB Assy SLD1 Assy	Check if there is loose connection on the signal line from the PANEL CPU (IC1007) to the VINYL SPEED ADJUST VR (VR1301).	If the connections of signal line are improper, resolder it.	—
2	Defective variable controls	DFLB Assy SLD1 Assy	Check the TCH/REL signal level.	If the voltage of the TCH/REL signal line (IC1007-pin 88) does not change between 3.3 V and 0 V, the VINYL SPEED ADJUST VR (VR1301) may be defective.	10.15 EACH SIGNAL LEVEL 
3	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP

[3-4] Abnormalities regarding the JOG dial

After the JOG Assy is disassembled then reassembled, be sure to check that the load value for the JOG dial is within the specified range. (Refer to the "8.4 JOG DIAL ROTATION LOAD ADJUSTMENT".)

Turning of the JOG dial is not detected

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective part of photo interrupter	DFLB Assy JFLB Assy JOGB Assy	Check the waveforms of signal lines. JOG1_C (IC1007-pin 26) JOG2_C (IC1007-pin 25)	If no waveform can be confirmed, the photo interrupter (PC1901) may be defective.	10.14 WAVEFORMS ⑤ ⑥
2	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	[10] Basic operation check of CPU/DSP

Pressing on the JOG dial cannot be detected.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective part	DFLB Assy JFLB Assy	Check the level of JOG_SW signal (IC1007-pin 27) when the JOG dial is pressed.	If the JOG_SW signal (IC1007-pin 27) is not set to "L" when the JOG dial is pressed and it is not set to "H" when the JOG dial is not pressed, the SHEET SW(DSX1078) may be defective.	10.15 EACH SIGNAL LEVEL Ⓡ
2	Defective PANEL CPU (IC1007)	DFLB Assy	If the symptom persists after the above corrections,	Check a mounting state of PANEL CPU (IC1007). If the mounting is OK, the IC1007 may be defective.	—

Noise is heard when the JOG dial is turned.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective attachment of the JOG FL. Defective gear or JOG DIAL B.	JFLB Assy JOGB Assy	Check if the JOG FL of the JFLB Assy has been shifted upward from the holder. Also check the JOGB Assy is attached normally.	The JOG FL may interfere with JOG A.	—
			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. Gears to be replaced: Load gear, Gear A, Gear B	—

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 "8.4 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 "Load adjustment method" in "8.4 JOG Dial Rotation Load Adjustment."	8.4 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 Cam Plate. Replace the washer, load gear, and cam plate with new ones, then reassemble.	8.4 JOG Dial Rotation Load Adjustment.

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 "8.4 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 "Load adjustment method" in "8.4 JOG Dial Rotation Load Adjustment."	8.4 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, load gear, and cam plate with new ones, then reassemble.	8.4 JOG Dial Rotation Load Adjustment.

[4] USB (USB-Type A), PC (USB-Type B)








[4-1] USB (USB-Type A)

Check the following, with a USB device connected to the USB-Type A connector.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	USBA Assy CMPX Assy MAIN Assy	Check the connections of the USBA_D_P/N communication line, USB_VBUSON and USB_CODETFLG signal lines.	If connection is improper, resolder it.	—
2	USB VBUS is defective.	USBA Assy CMPX Assy	Check the voltage level of V+5_USB (JA2201-pin 1 and IC2002-pin 3) of USB power supply.	If the voltage of IC2002-pin 3 is abnormal, IC2002 may be defective. If the voltage of JA2201-pin 1 is abnormal, go to [3].	10.13 VOLTAGES 
3	Defective part	CMPX Assy	Check the signal level of USB_CODETFLG (IC2003-pin 5) and USB_VBUSON(IC504-pin 4).	<ul style="list-style-type: none"> If the USB_VBUSON(IC504-pin 4) is not "H", MAIN CPU(IC103) may be defective. If the USB_VBUSON(IC504-pin 4) and USB_CODETFLG(IC2003-pin 5) are "H", IC2003 may be defective. If the USB_VBUSON(IC504-pin 4) is "H" and USB_CODETFLG(IC2003-pin 5) is "L", USB power supply may be short-circuited in the ground or IC2003 may be defective. 	10.15 EACH SIGNAL LEVEL  

[4-2] PC (USB-Type B) does not work

Check the following, with a USB device connected to the USB-Type B connector.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	—	Check the connections of the USBB_D_P/N communication line and VBUS_B signal line.	If connection is improper, resolder it.	10.15 EACH SIGNAL LEVEL
2	Defective part	—	If the symptom persists after the above corrections,	The MAIN CPU (IC103) may be defective.	[10] Basic operation check of CPU/DSP

[5] AUDIO OUT

The analog audio signal is not output.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	MAIN Assy CMPX Assy	Check the connection of the audio signal lines (ROUT/LOUT).	If connection is improper, resolder it.	—
2	MUTE signal error	MAIN Assy DFLB Assy CMPX Assy	Check the AMUTE signal. "L" (release mute) at normal playback. Check the MAIN_XMUTE signal. "H" (release mute) at normal playback.	If the signal is abnormal, loose connection and mute circuit may be defective.	10.15 EACH SIGNAL LEVEL  
3	Power failure	MAIN Assy	Check the voltages for audio (V+10_A, V-AUDIO(V-10_A), V+5_A, V+3R3_A, V+1R25). Check also if the protector (P2003) is broken.	<ul style="list-style-type: none"> If the V+10_A voltage level is abnormal, Q2028 and its peripheral parts may be defective. If the V-AUDIO(V-10_A) voltage level is abnormal, Q2031 and its peripheral parts may be defective. If the V-5_A voltage level is abnormal, IC406 and its peripheral parts may be defective. If the V+3R3_A voltage level is abnormal, IC402 and its peripheral parts may be defective. If the V+1R25 voltage level is abnormal, IC403 and its peripheral parts may be defective. 	10.13 VOLTAGES     
4	Signal error Defective part	MAIN Assy	Check the AUDIO DSP (IC301) and AUDIO DAC (IC302).	AUDIO DSP (IC301), AUDIO DAC (IC302) and its peripheral parts may be defective.	[10] Basic operation check of CPU/DSP

[6] CONTROL

Improper fader operation after fader start.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	MAIN Assy CMPX Assy	Check the connection of the control signal lines (CONT1/CONT2).	If connection is improper, resolder it.	—
2	Signal error Defective part	MAIN Assy	Check the waveform of the control signal lines (CONT1/CONT2).	If the input signal cannot be recognized at input pin of MAIN CPU (IC101), the signal line or the peripheral devices may be defective. If the input signal can be recognized, the MAIN CPU (IC103) may be defective.	10.14 WAVEFORMS

A [7] DRIVE ASSY

[7-1] Improper operation of the loading mechanism

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	Cables MAIN Assy JINT Assy SLMB Assy	Check the connection of the motor-drive signal line LO±. Check that the wires between the loading motor (DC motor) and the SLMB Assy are securely soldered. Check also the wires are not broken.	If soldering is improper, resolder it. If the wires are broken, replace them.	—
2	Signal errors	MAIN Assy JINT Assy SLMB Assy	Check the connections and waveforms of the LPS1 and LPS2 signal lines. In the normal state, the LPS1 and LPS2 signals becomes "L" when the loading detection SWs(S1701 and S1702) are set to ON.	If the signal waveform is not proper, loose connection and the loading detection SWs (S1701 and S1702) may be improperly soldered or defective.	10.14 WAVEFORMS ⑪ ⑫
3	Power failure	MAIN Assy	Check the power voltages. V+7R6_M, V+5R6_M, VREF1R65, V+3R3_B, V+3R3, V+1R2A	For any power-supply section that does not output the voltage, check the mounting statuses of the regulator IC and its peripheral parts.	4.3 POWER SUPPLY BLOCK DIAGRAM

No loading (There is an abnormal noise.)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Improper assembling	Slotin Mecha Assy SLMB Assy	Check if the SW lever has shifted on the loading detection SWs (S1701 and S1702) on the SLMB Assy.	If assembling is improper, resolder it.	—
2	Loose connections Signal errors	MAIN Assy JINT Assy SLMB Assy	Check the waveforms on the LPS1 and LPS2 signal lines.	If the signal waveform is not proper, loose connection and the loading detection SWs (S1701 and S1702) may be improperly soldered or defective.	10.14 WAVEFORMS ⑪ ⑫

C [7-2] The stepper does not work.



No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Loose connections	MAIN Assy JINT Assy	Check the connection of the stepping-motor drive signal line ST1± and ST2±.	If connection is improper, resolder it.	—
2	Signal errors	MAIN Assy	Check the waveform of INSW (INSIDE) signal. In the normal state, The INSIDE SW of TM Assy-S (Traverse mecha) becomes "L" when the INSIDE SW is set to ON.	If the signal is not proper, check the connections. If connections are properly made, replace the TM Assy-S (traverse mecha).	10.15 EACH SIGNAL LEVEL ⑩
3	Power failure	MAIN Assy	Check the power voltages. V+7R6_M, V+5R6_M, VREF1R65, V+3R3_B, V+3R3, V+1R2A	For any power-supply section that does not output the voltage, check the mounting statuses of the regulator IC and its peripheral parts. Replace it.	4.3 POWER SUPPLY BLOCK DIAGRAM

D [7-3] No CD playback



No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Short switch	CNCT Assy	Short switch S2501 is in the off (open) state.	In the normal operation, turn the short switch to off (open).	—
2	Any foreign matter attached	TM Assy-S (Traverse mecha)	Check if any foreign matter, such as shavings, dirt, or dust, is attached to the lens of the Pickup Assy.	Clean a lens.	—
3	Defective pickup	MAIN Assy	Check the LD current value. Measure the actuator resistance value.	Refer to the "5.3 Diagnosis of the Pickup Assy."	5.3 Diagnosis of the Pickup Assy
4	—	Service mode	If the symptom persists after the above corrections, check operations of the CD drive in Service mode.	Check operations of the CD drive, referring to the procedures described in "6. SERVICE MODE." If the CD drive functions improperly, see "[8] SERVICE MODE" in this section.	6. Service mode

[8] SERVICE MODE

[8-1] The measured error rate is outside the specified range in Player Operation mode.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Scratches or dirt on the disc	DISC	Check if the recording surface of the disc is dirty.	If it is clearly dirty, replace it with a disc of good condition.	—
2	Scratches or dirt on the disc	DISC	Measure the error rate, using the same disc that produced the bad error rate but using the addresses in a different area.	If the error rate measured in a different area is OK, the disc is defective. Replace the disc with one in good condition. If no error rate measured in various areas throughout the entire surface of the CD is OK, go to [3].	—
3	Any foreign matter attached	TM Assy-S (Traverse mecha)	Check if any foreign matter, such as shavings, dirt, or dust, is attached to the lens of the Pickup Assy.	Clean the lens.	—
4	Improper assembly	TM Assy-S (Traverse mecha)	Check that the TM Assy-S (traverse mecha) has been securely installed.	If it has not, reinstall it properly.	—
5	Improper assembly	Slotin Mecha	Check that the loading mechanism Assy has been securely installed.	If it has not, reinstall it properly.	—
6	Any foreign matter attached	TM Assy-S (Traverse mecha)	Check for any foreign matter on the spindle table.	Remove any foreign matter.	—
7	Any foreign matter attached	Slotin Mecha	Check if any foreign matter is attached to the magnet portion of the clasper.	Remove any foreign matter.	—
8	Signal errors	MAIN Assy	Check that the waveforms of the RFO and AGCRF signals form clear eye patterns.	If their waveforms are not of the same quality, check the mounting status of the Servo IC (IC201). If it is correctly mounted, then it may be defective. Replace it.	10.14 WAVEFORMS  
9	Defective pickup	TM Assy-S (Traverse mecha)	If the symptom persists after the above corrections,	See "5.3 Diagnosis of the Pickup Assy" for details.	5.3 Diagnosis of the Pickup Assy

[8-2] 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	Defective pickup	—	Check the LD current and measure the resistance value of the actuator.	See "5.3 Diagnosis of the Pickup Assy" for details.	5.3 Diagnosis of the Pickup Assy
The spindle motor does not rotate.					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Signal errors	MAIN Assy	Check that the DRVMUTE1 and 2 signal becomes H after loading is completed.	If the signal is not normal, check the mounting statuses of the DRIVER IC (IC204) and MAIN CPU (IC103) terminals. If they are properly mounted, then the IC103 may be defective.	10.15 EACH SIGNAL LEVEL 
2	Signal errors	MAIN Assy	Check a SPIN signal. In the normal, 1.65 V at the center. The voltage in the start-up acceleration is around 3 V.	If the signal is not normal, check the mounting statuses of the DRIVER IC (IC204) and Servo CPU (IC201) terminals. If they are properly mounted, then the IC204 and IC201 may be defective.	10.15 EACH SIGNAL LEVEL 
3	Power failure	MAIN Assy	Check the power voltages. (V+7R6_M, V+5R6_M, VREF1R65, V+3R3_S)	Check the mounting statuses of the regulator IC of the power-supply section that produces that voltage and its peripheral parts. If they are properly mounted, then the parts may be defective. VREF1R65 is produced at the Servo IC (IC201). If this voltage is not output, check the mounting status of the IC201. If it is properly mounted, then the part may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM
4	Defective parts	—	If the symptom persists after the above corrections,	DRIVER IC(IC204) may be defective.	—
In-focus not possible					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective pickup	MAIN Assy	Check the LD current and measure the resistance value of the actuator.	Refer to the "5.3 Diagnosis of the Pickup Assy."	5.3 Diagnosis of the Pickup Assy
2	Power failure	MAIN Assy	Check the power voltages. (V+7R6_M, V+5R6_M, VREF1R65, V+3R3_S)	Check the mounting statuses of the regulator IC of the power-supply section that produces that voltage and its peripheral parts. If they are properly mounted, then the parts may be defective. VREF1R65 is produced at the Servo IC (IC201). If this voltage is not output, check the mounting status of the IC201. If it is properly mounted, then the part may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM

A

No tracking close					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective pickup	MAIN Assy	Check the LD current and measure the resistance value of the actuator.	Refer to the "5.3 Diagnosis of the Pickup Assy."	5.3 Diagnosis of the Pickup Assy
2	Power failure	MAIN Assy	Check the power voltages. (V+7R6_M, V+5R6_M, VREF1R65, V+3R3_S)	For any power-supply section that does not output the voltage, check the mounting statuses of the regulator IC and its peripheral parts. If they are properly mounted, then the parts may be defective.	4.3 POWER SUPPLY BLOCK DIAGRAM
3	—	TM Assy-S (Traverse mecha)	Check that focusing is in. (If focusing is out, tracking close is not possible.)	See "In-focus not possible" above.	—

B

[9] Error Codes

How to respond when an error code is displayed on the FL DISPLAY is described below.

[9-1] E-6002: COMMUNICATION ERROR

The MAIN CPU cannot write in a program to the AUDIO DSP at start-up.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Power failure	MAIN Assy	Check the power voltages for Audio DSP. (V+3R3_A, V+1R25)	If the voltage level is abnormal, IC402 or IC403 may be defective.	10.13 VOLTAGES [1] [2]
2	Defective part	MAIN Assy	Check if the AUDIO DSP (IC301) is operating.	If the AUDIO DSP (IC301) is not operating, AUDIO DSP (IC301) and its peripheral parts may be defective. If the AUDIO DSP (IC301) is operating, the MAIN CPU (IC103) and its peripheral parts may be defective.	[10] Basic operation check of CPU/DSP

C

[9-2] E-7201: TOC READ ERROR

TOC data cannot be read from a disc.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	TM Assy-S (Traverse mecha)	Measure the error rate in Player Operation mode of Service mode in order to distinguish whether the cause is attributable to the disc or to the player. For measurement, play back the reading point at which reading resulted in an error, by listening to the sound.	See [8] SERVICE MODE for details.	[8] SERVICE MODE

D

[9-3] E-8709: COMMUNICATION ERROR

Communication between the PANEL CPU (IC1007) and MAIN CPU (IC103) is not possible.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	DFLB Assy MAIN Assy	Check the waveforms of TSCK, TSI, PNL_BUSY, TSO, and MAIN_BUSY, check the voltages of V+3R3 and V+1R2.	See "[1-3] "E-8709" is displayed on the DATA FL display after startup" for details.	[1-3] "E-8709" is displayed on the DATA FL display after startup

E

F

[10] Confirmation of basic operations of the CPU/DSP

First, check if the voltage at each section is OK.

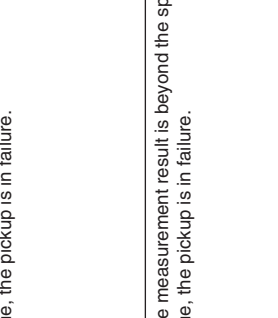
[10-1] Periphery of the MAIN CPU: IC103					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	MAIN Assy MAIN_CPU (IC103)	Check the waveforms and levels of the following signals: • MAIN_XRST: MAIN CPU releases reset with "H". • 33 MHz OSC circuit: Oscillation circuit for system clock. • 48 MHz OSC circuit: Oscillation circuit for USB clock. • SH_STATUS: Status signal of MAIN CPU. "H/L" pulse signal in the normal state. • CLK66M: 66 MHz clock signal output for FLASH ROM and SDRAM.	If both the Reset and Oscillation circuits are OK, but the SH_STATUS signal is fixed at "L" or "H" (not "H/L" pulse signal), the Main CPU is not operating. If the reset is not "H", following points may be defective. • Loose connection of the reset line • Defective part of PANEL CPU(IC1007) • Malfunction detection of the voltage. If both the Reset, Oscillation circuits and 66 MHz clock signals are OK, IC103 (MAIN CPU), IC101 (FLASH ROM) or IC102 (SDRAM) may be defective.	10.14 WAVEFORMS ④ ① 10.15 EACH SIGNAL LEVEL Ⓟ

[10-2] SERVO DSP: IC201					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	MAIN Assy SERVO DSP (IC201)	Check the waveforms and levels of the following signals (in CD PLAY mode): • SRVRST: SERVO DSP releases reset with "H". • CLK_S_16M: 16 MHz system clock signal input. • SRVCLK: Communication clock signal.	If both the Reset and System clock signals are OK, but the SRVCLK signal is not output, the SERVO DSP (IC201) may be defective.	10.14 WAVEFORMS ③ ⑥ 10.15 EACH SIGNAL LEVEL Ⓟ

[10-3] AUDIO DSP: IC301					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	MAIN Assy AUDIO DSP (IC301)	Check the waveforms and levels of the following signals (in PLAY mode): • DSPDREQ: Communication request signal • DSPRST: AUDIO DSP releases reset with "H". • CLK_A_16M: 16 MHz system clock signal input.	If both the Reset and System clock signals are OK, but the DSPDREQ signal is not output, the AUDIO DSP (IC301) may be defective.	10.14 WAVEFORMS ⑤ ② 10.15 EACH SIGNAL LEVEL Ⓟ

[10-4] PANEL CPU: IC1007					
No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	—	DFLB Assy PANEL CPU (IC1007)	Check the waveforms and levels of the following signals: • RESET(IC1007-pin 12): PANEL CPU releases reset with "H". • 16 MHz OSC circuit: Oscillation circuit for system clock. • TSCK(IC1007-pin 37): Communication clock signal output.	If both the Reset and Oscillation circuits are OK, but the TSCK signal is not output, the PANEL CPU (IC1007) may be defective.	10.14 WAVEFORMS ⑧ 10.15 EACH SIGNAL LEVEL Ⓟ

5.3 DIAGNOSIS OF THE PICKUP ASSY

Item	Specifications	Measurement Procedures	Failure Judgment	Remarks
LD (Laser Diode) current	Typ. 65 mA Max. 75 mA	<ol style="list-style-type: none"> Make sure that no CD is loaded. Enter the CD drive diagnosis mode. Connect a tester between the test lands LD3S and LDCHK on the MAIN Assy to check the voltage difference between them. Load a disc. Press the TEMPO button to turn the LD on in the Test operation mode. Measure the voltage difference (DC value) between the test lands LD3S and LDCHK on the MAIN Assy. Press the TEMPO button to turn the LD off. Confirm that the voltage difference between test lands LD3S and LDCHK becomes 0 then disconnect the tester. 	<p>The LD can be judged to have degraded if the LD current [A], which is calculated by dividing the measured voltage difference [V] by 5.5 [Ω], is 75 mA or higher.</p> <p>Note: Check the mounting status of R227, R228, R232 and R233 (22 ohms).</p>	
Focus coil resistance	3.7 ± 0.55 Ω	<ol style="list-style-type: none"> Make sure that no CD is loaded. Set the LD short-circuit switch (SZ501) to Short side. (see right figure.) Disconnect the FFC cable that connects the CNCT Assy and the JINT Assy from the CN2302 connector. Measure the conductor resistance of the terminal assembly between Pins 23 and 24 of the FFC cable. 	<p>If the measurement result is beyond the specified value, the pickup is in failure.</p>	
Tracking coil resistance	4.3 ± 0.65 Ω	<ol style="list-style-type: none"> Make sure that no CD is loaded. Set the LD short-circuit switch (SZ501) to Short side. (see right figure.) Disconnect the FFC cable that connects the CNCT Assy and the JINT Assy from the CN2302 connector. Measure the conductor resistance of the terminal assembly between Pins 21 and 22 of the FFC cable. 	<p>If the measurement result is beyond the specified value, the pickup is in failure.</p>	
S-shaped level	Reference: 1.7 Vp-p	<ol style="list-style-type: none"> Enter the CD drive diagnosis mode Load a pressed CD. (Standby) Connect and set a digital oscilloscope so that the p-p level at the test land (FE) can be measured. During Test Operation mode, press the MASTER TEMPO, then MENU buttons to send a command. Measure the p-p level (S-shaped level) at the FF. 	<p>Usually use a pressed CD, as the measurement result depends on the disc type.</p>	
TE (Tracking Error) level	Reference: 1.0 Vp-p	<ol style="list-style-type: none"> Enter the CD drive diagnosis mode Load a pressed CD. (Standby) Connect and set a digital oscilloscope so that the p-p level at the test land (TE) can be measured. During Test Operation mode, press the buttons in the following order to send a command: MASTER TEMPO, TEMPO, RELOOP, then LOOP IN twice. Measure the p-p level of waveform at the TE. 	<p>Usually use a pressed CD, as the measurement result depends on the disc type.</p>	
RFO level	Reference: 1.1 Vp-p	<ol style="list-style-type: none"> Play back a pressed CD. Measure the p-p level of RF waveform at the RFO test land on the MAIN Assy. 	<p>If the measurement result is twice or more, or 50 % or less of the reference value, the pickup or the MAIN Assy is defective.</p>	<p>Usually use a pressed CD, as the measurement result depends on the disc type.</p>
AGC (Auto Gain Control) RF level	1.2 Vp-p ± 10 %	<ol style="list-style-type: none"> Play back a CD. During playback, measure the p-p level of RF waveform at the AGCRF test land on the MAIN Assy. 	<p>If the RFO level value is twice or less, or 50 % or less of the reference value, and the AGC RF level is out of the range stipulated in the specifications, the MAIN Assy is defective.</p>	<p>You may disconnect the measuring equipment during measurement, if you wish. The measurement result does not depend on the disc type.</p>

5.4 CONNECTION CHECK WITH THE PC

[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.

■ Connect to PC

When you check the connection, connect this unit to the PC and confirm that "CONNECTED" is displayed on the display.

● How to Enter

Press the [] button.

When you press the PC button during DISC or USB use, caution is displayed.

Press the PC button according to caution again, or press the Rotary selector.

■ 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"

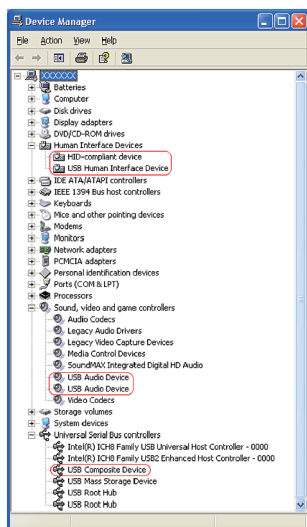
USB Audio Device

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.



5.5 ABOUT POWER SUPPLY MONITORING

The Panel CPU of this unit always monitors for power failure of the unit while power is on and will shut the unit off immediately after an error is detected and notify of the error by LED indications.

- Content to be monitored
Any power failure generated inside an Assy or Power Supply Assy, such as voltage drop and voltage rise
Power to be monitored: V+7R6_M, V+12, V+5R6, V+1R2, V+1R25, V+3R3_S, V-10_A, V+3R3_SW, V+6R6_FL, V+38
- Microcomputer Detection terminal and its terminal voltage
44-pin VDET terminal of IC1007 (PANEL CPU)
Normal: 3.3 V
During power failure: 0 V
- Timing of monitoring start
0.1 sec after the unit is turned ON
- Timing upon judgment as a failure
0.5 sec after an error is detected
- LED indication when an error is generated
If an error is generated, the STANDBY LED will flash after the unit shuts itself off.
- Restoration method
After the unit shuts itself off because of an error, after completing diagnosis, unplug the AC power cord and wait about 1 minute before turning the unit back on.
Error-detection status is retained for about 1 minute after the AC power cord is unplugged, during which time signals from the POWER switch are not accepted and the unit cannot be turned on.

Diagnostic procedure

- ① Unplug the AC power cord.
- ② Remove R1123 from the DFLB Assy.
Note: This step will disable power supply monitoring.
- ③ Plug in the AC power cord.
- ④ As the unit is turned on in a normal way, check each voltage in this state.
Note: Because power will be forcibly supplied even if any voltage is abnormal, if abnormal voltage continues, the defective point may produce heat, which may be dangerous. Therefore, during diagnosis, be sure to unplug the AC power cord several seconds after it is plugged in so that forcible powering will not continue.
- ⑤ If the voltage of any power IC is abnormal, the circuit that uses that power or the power IC itself may be defective.
- ⑥ Repair the defective part.
- ⑦ Return R1123 to its original position on the DFLB Assy.
Note: This step will enable power supply monitoring.

5.6 ABOUT THE PROTECTORS

This unit is provided with protectors (elements for protection against excess current) on the power lines to protect the unit's parts and circuits from excess current and excess voltage. If any abnormal power short-circuiting is generated, a protector will be activated to protect parts and circuits.

- Locations and functions of protectors
P2003 DEK1095-: Protection against excess current on the V+12_A and V+10_A lines
P2004 DEK1095-: Protection against excess current for V+12_EUP and against excess voltage for its subsequent circuits

Diagnostic procedure

- ① Unplug the AC power cord.
- ② Check for any error, such as short-circuiting or defective parts, in the circuits subsequent to the protector.
- ③ Repair the defective part.
- ④ Replace the protector.

6. SERVICE MODE

6.1 SERVICE MODE

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, and an encoder.
- 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 Updating firmware
Mode for firmware updating. Two modes (one for updating using a USB memory device and one for updating using a CD-ROM) are provided.
Refer to the "8.3 UPDATING OF THE FIRMWARE."

6.2 ABOUT THE DEVICE OF CDJ-850

Device Name	Function	Part No.	Ref No.	Assy
MAIN CPU	System control	R5S72630P200FP	IC103	MAIN Assy
FLASH	Memory for MAIN CPU (Firmware)	DYW1796	IC101	MAIN Assy
SDRAM	Memory for MAIN CPU (Work)	K4S561632J-UC75	IC102	MAIN Assy
AUDIO DSP	Audio DSP	DSPC56371AF180	IC301	MAIN Assy
SERVO DSP	Servo DSP	TC94A15FG	IC201	MAIN Assy
SERVO DRIVER	Disc drive control	BD7956FS	IC204	MAIN Assy
PANEL CPU	Button input, LED & FL control	PEG799A8	IC1007	DFLB Assy

6.3 DETAILS ON SERVICE MODE

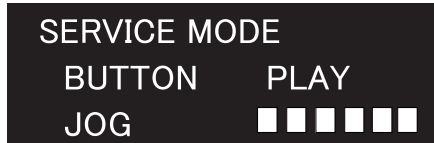
A [1] Confirmation of the button input and an indication function

When it spends a power supply while pushing a TEMPO button and a BACK button simultaneously, It is displayed in the BROWSE_FL, "SERVICE MODE", and enters into this mode.
 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 I push a button.

Caution: In this status display, if a VINYL SPEED ADJUST VOLUME is turned to the limit of the right, it will shift to "the load measurement mode of JOG." (Refer to the following clause.)

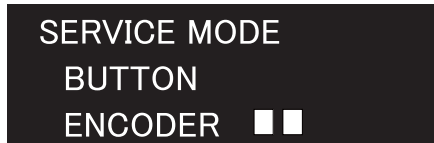
B

At the JOG rotation



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.
 JOG VOLUME (*) : If a VINYL SPEED ADJUST VOLUME is turned to the right, a bar display will increase.
 TEMPO SLIDER VOLUME : If a TEMPO slider knob is moved to the - side, a bar display will increase.

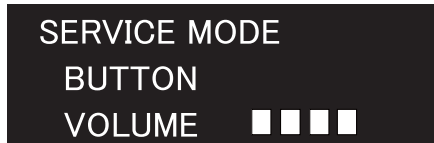
At the encoder rotation



*: JOG, ENCODER, VOLUME
 Display the data for the touched controls in the third line.

C

At the TOUCH/RELEASE VOLUME rotation



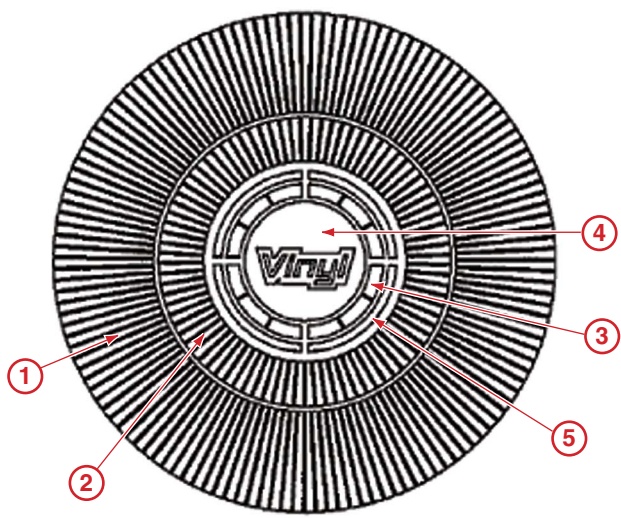
D

E

F

Button, Switch	Light up LED	Status display of BROWSE_FL(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 (I◀◀)		TRACK I◀◀	
TRACK FWD (▶▶I)		TRACK ▶▶I	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)
JOG MODE	VINYL	JOG MODE	④ (Refer to the display pattern of JOG FL)
TEMPO	STANDBY	RANGE	
MASTER TEMPO	MASTER TEMPO	MT	
TIME MODE/AUTO CUE		TIME	
DELETE	All LED lights up	DELETE	All JOG-FL lights up
MEMORY		MEMORY	
EJECT	EJECT	EJECT	
CUE/LOOP CALL ◀		◀ CALL	
CUE/LOOP CALL ▶		CALL ▶	
JOG TOUCH	JOG TOUCH	TOUCH SW	③ (Refer to the display pattern of JOG FL)
AUTO BEAT LOOP 1	AUTO BEAT LOOP 1	A LOOP 1	
AUTO BEAT LOOP 2	AUTO BEAT LOOP 2	A LOOP 2	
AUTO BEAT LOOP 4	AUTO BEAT LOOP 4	A LOOP 4	
AUTO BEAT LOOP 8	AUTO BEAT LOOP 8	A LOOP 8	
BEAT SELECT		B SELECT	
TEMPO SLIDER			Increase and decrease (■ MARK of PLAYING ADDRESS)
JOG (FWD)		JOG ■ MARK Right movement (8 points by one rotation)	
JOG (REV)		JOG ■ MARK Left movement (8 points by one rotation)	
VINYL SPEED ADJUST VOLUME		JOG VOLUME ■ MARK Increase and decrease (8 points)	*It becomes "Measurement of the JOG dial load" mode if it turns to the right completely.
DIRECTION (Reverse)	REV	REV	
USB_STOP_SW (ON)	USB Access	USB STOP	
PC	PC	LINK	
USB	USB	USB	
DISC	DISC	DISC	
BROWSE	BROWSE	BROWSE	
TAG LIST	TAG LIST	TAG LIST	
INFO	INFO	INFO	
MENU	MENU	MENU	
BACK			Display pattern changes(Refer to the display pattern of BROWSE_FL)
TAG TRACK			
ROTARY SELECTOR (SW)		ENC PUSH	
ROTARY SELECTOR (FWD ROTATE)		ENCODER ■ MARK Right movement (Max 8 points)	
ROTARY SELECTOR (REV ROTATE)		ENCODER ■ MARK Left movement (Max 8 points)	

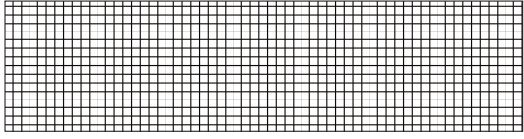
A Display pattern of JOG FL



C The display pattern of BROWSE_FL

When I push the TAG-TRACK button from above status indication more and send a screen, I display three kinds of patterns to BROWSE_FL as follows.
 If the BACK button is pushed, a display will return a previous page.
 (In DATA_FL, it becomes all putting out lights except the case of all-points light.)

Lattice pattern



All turning off



All turning on



[2] Check mode of the load of JOG dial

Refer to the "8.4 JOG DIAL ROTATION LOAD ADJUSTMENT."

[3] Display of various information

How to Enter Service Modes

- 1) Version/error history
The Version Display mode is entered after the RELOOP key is held pressed for at least 10 sec.
To change screens between Version Display and Error History, press the VINYL MODE key while the Version Display screen is displayed.
The error log screens will be changed if you press the CALL (LEFT) or CALL (RIGHT) key while the error history is displayed.
- 2) Panel diagnosis/JOG load measurement (Panel microcomputer function)
To enter this mode, set the POWER switch to ON while holding the BACK and TEMPO keys pressed.
To enter JOG Load Measurement mode, set the TOUCH/RELEASE volume to the + (MAX) position during Service mode.
- 3) CD drive diagnosis mode
To enter CD Drive Diagnosis mode, set the POWER switch to ON while pressing the TIME and CD SELECT keys pressed.
Set the POWER switch to OFF to quit this mode.
- 4) Firmware Updating (USB media/program area)
To enter this mode, set the POWER switch to ON while pressing the USB SELECT and RELOOP keys pressed.
After updating is completed, set the POWER switch to OFF to quit this mode.
- 5) Firmware Updating (CDROM media/program area)
To enter this mode, set the POWER switch to ON while pressing the CD SELECT and RELOOP keys pressed.
After updating is completed, set the POWER switch to OFF to quit this mode.
- 6) Factory reset
To enter this mode, set the POWER switch to ON while holding the BACK and USB SELECT keys pressed.
For details on items to be factory-reset, see "8.2 USER SETTABLE ITEMS."

[4] The list of error display

Time display shows "E-XXXX".

Main	Sub	Error Type	Medium	Error Content
E-6002	—	DSP PROGRAM	—	The program cannot be written in the DSP.
E-7024	—	Updating error	—	Updating failed.
E-7201	26	TOC READ ERROR	CD	TOC data cannot be read.
E-8301	22	PLAYER ERROR	CD	Focus servo cannot be closed.
	91		CD	The pickup cannot be returned to the inner track of the disc.
E-8302	12	PLAYER ERROR (Playback error)	CD	The desired address could not be searched for.
	15		CD	The address could not be read.
E-8303	99	Buffer write error	CD	Writing of music data in the buffer failed.
E-8304	—	Decoding error	CD	Although compressed music data files (MP3/AAC) are supported by this unit, a data or decoding (decompression) error was generated.
E-8305	—	Format error	CD	Although the filename extension of the music file (MP3/AAC/WAV/AIFF) is proper, the format of descriptions in the file is not supported.
E-8306	—	No music file	USB	Although the piece of music had once been registered in the library (database) or a playlist, etc., that piece had been erased from the USB storage device as of time of playback.
E-8307	—	USB writing error	USB	Writing to the USB storage device failed.
E-8709	—	COMMUNICATION ERROR	—	Communication between the panel CPU and the main CPU failed.
E-9101	90	LOADING TIMEOUT	CD	A mechanical error (timeout) was generated during loading/unloading of a disc.

A [5] Confirmation of movement of the drive unit

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 (Stop)	TIME
LD On/Off TEMPO	TEMPO
Focus On/Off RELOOP	RELOOP
Spindle Kick, Tracking On	IN/CUE (HOT LOOP)
Tracking Off	OUT (OUT ADJUST)
Slide FWD	SEARCH FWD
Slide REV	SEARCH REV
Pickup Up/Down	UTILITY
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.

Display a playing address in FL at present.

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

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

Trace a disc by a turn of four times speed in the play. The sound is not output.

Track Search F/R

Search a track displayed by a FWD / REV direction and do pause.

E Error Rate Count

I measure an error rate from a present position doing a play/pause for about 10 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 OK. If an error rate is larger than 3.00E-3, it will be displayed as NG.

Measurement with the managed disc 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 disc is ejected.

F Mode Change

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."

■ 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.

Servo All Off

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

LD On/Off

The LD can be turned on or off by pressing the TEMPO key. "LD ON" or "LD OFF" will be displayed.

Focus On

If the RELOOP key is pressed in Stop mode, the LD is turned ON and auto focusing will be performed.
"FCS ON" will be displayed.

Spindle Kick, Tracking On/Off

If the IN/REALTIME CUE (LOOP IN) key is pressed while the tracking servo is OFF, spindle kick then automatic adjustment will be performed, after which the tracking servo will be turned ON.
If the key is pressed while the tracking servo is ON, it will be turned OFF. "TRK ON" or "TRK OFF" will be displayed.

Tracking Off

If the OUT (LOOP OUT) key is pressed while the tracking servo is ON, it will be turned OFF.
"TRK ON" will be displayed.

Slide FWD

If the SEARCH (FWD) key is pressed while the tracking servo is ON, it will be turned OFF and the slider will be shifted by about 2 mm in the FWD direction. "SLD FWD" will be displayed.

Slide REV

If the SEARCH (REV) key is pressed while the tracking servo is ON, it will be turned OFF and the slider will be shifted by about 2 mm in the REV direction. "SLD REV" will be displayed.

Pickup Up/Down

If the DISPLAY/UTILITY key is pressed during Stop mode, the LD will be turned ON then the pickup will be moved up and down. Focusing will not be closed. "PU UP/DN" will be displayed.

Mode Change

If the MASTER TEMPO key is pressed in Test Operation mode, the MASTER TEMPO LED will go dark then above-mentioned Player Operation mode will be entered.

*To start up the unit in Test mode in steps, input the commands in the following order: "Servo All Off," "Focus On," then "Spindle Kick, Tracking On."

[6] Updating of the firmware

Refer to the "8.3 UPDATING OF THE FIRMWARE."

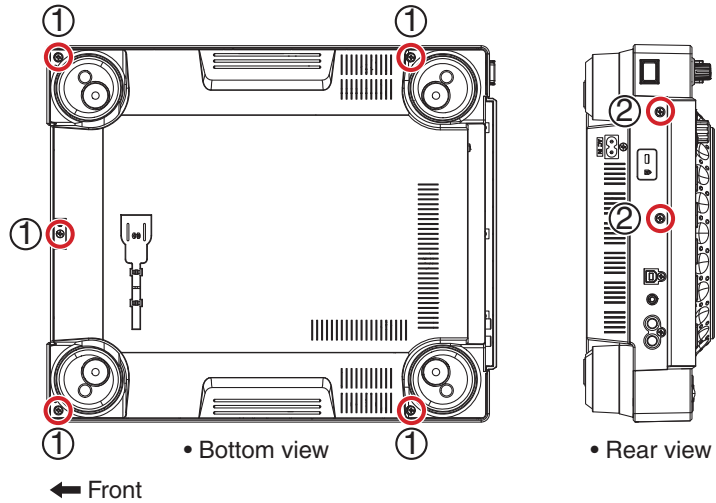
7. DISASSEMBLY

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

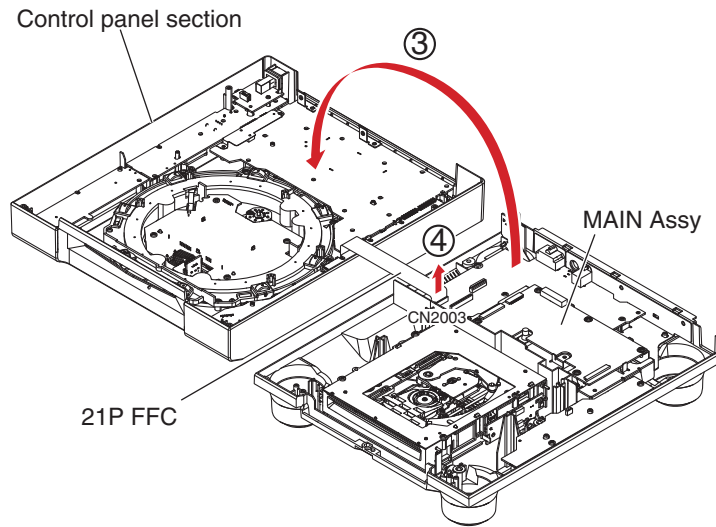
- (1) Remove the five screws. (BPZ30P080FNI)
- (2) Remove the two screws. (BBZ30P060FTB)



- (3) Remove the control panel section.

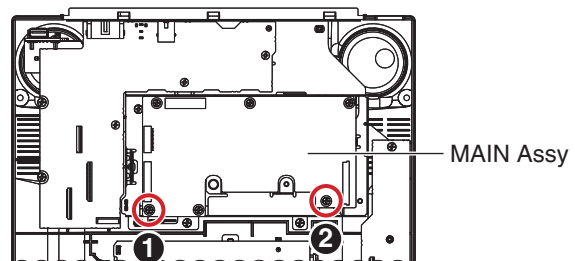
Diagnosis

- (4) Disconnect the 21P FFC from control panel section.



Screw tightening order

The other screws are random order.

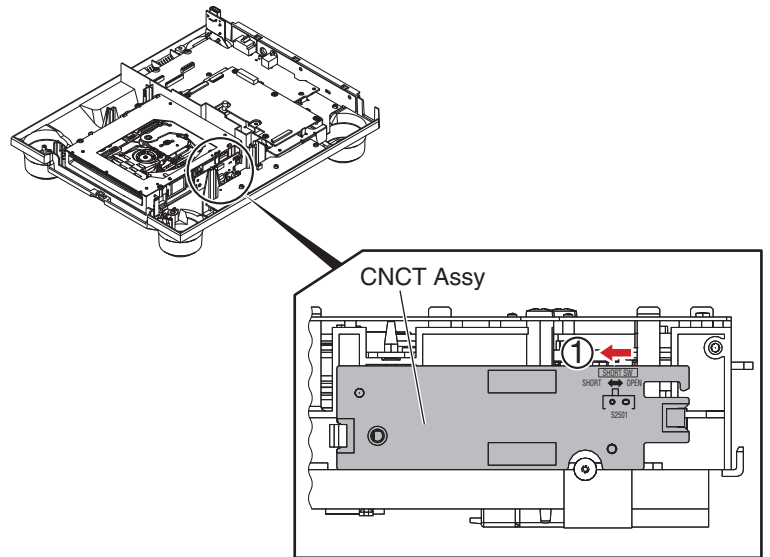


SLOTIN MECHA Section

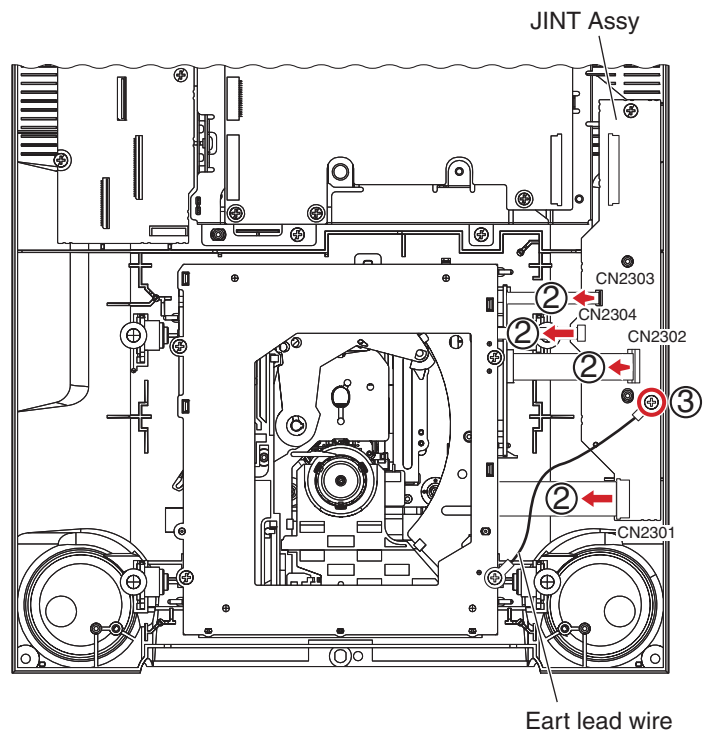
- (1) Change the position of the SHORT SW (S2501) on the CNCT Assy to "SHORT".

Note:

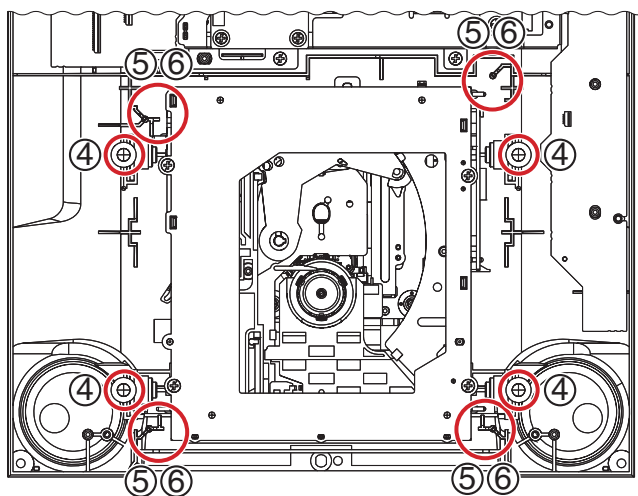
After work, connect the flexible cable on step (2), then change the position to "OPEN".



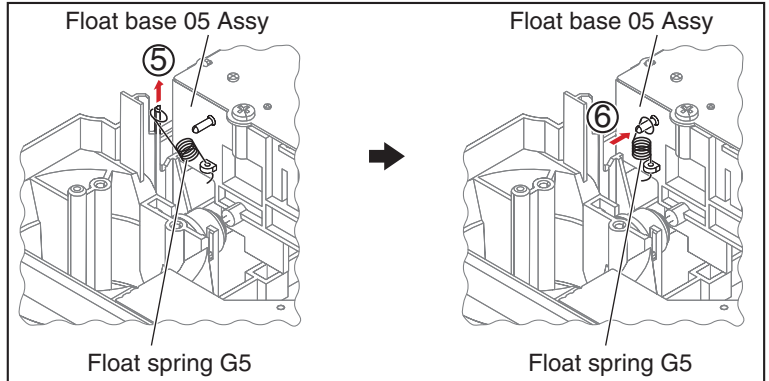
- (2) Disconnect the four flexible cables.
 (3) Remove the earth lead wire by removing the one screw. (BPZ30P080FNI)



- A (4) Remove the four DM screws. (DBA1260)
- (5) Remove the four float springs G5.
- (6) Hook the four float springs G5 to the four hooks of the float base 05 Assy.



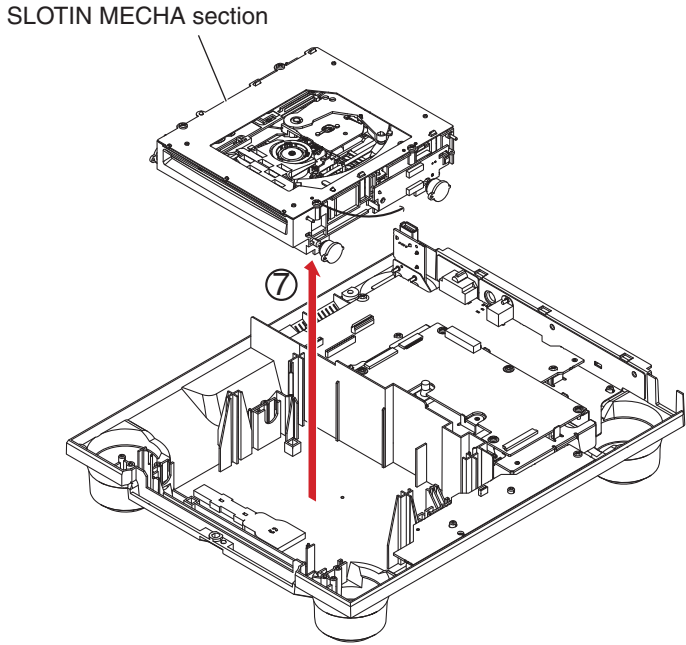
B



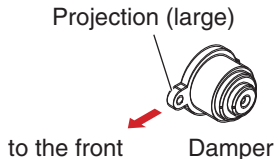
C

D

- (7) Remove the SLOTIN MECHA section.



Direction of the dampers when attaching them
 When attaching the dampers, place them so that their projections (large) face front.

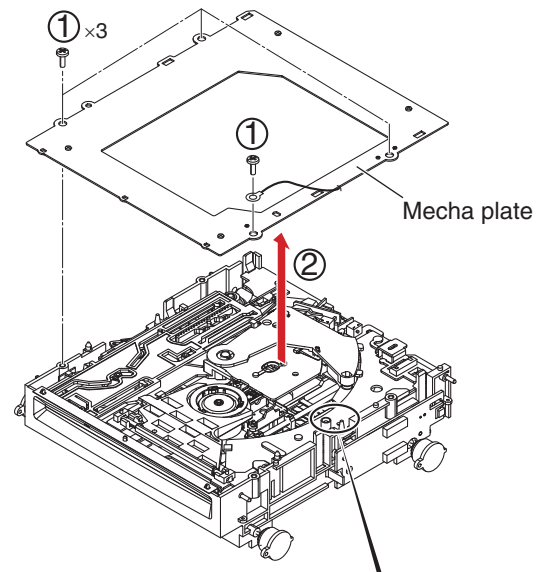


F

TM Assy-S (VTM091)

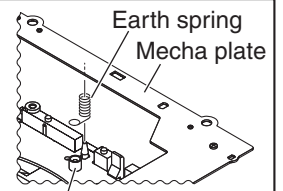
[1] Mecha Plate

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



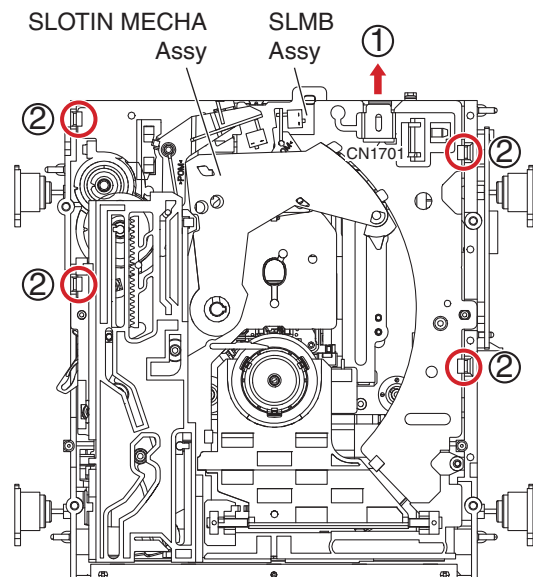
Note of earth spring

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



[2] SLOTIN MECHA Assy

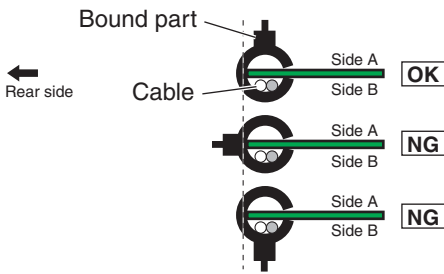
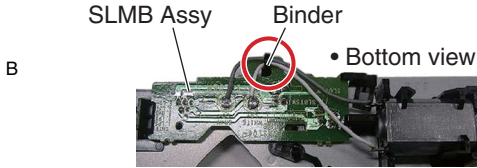
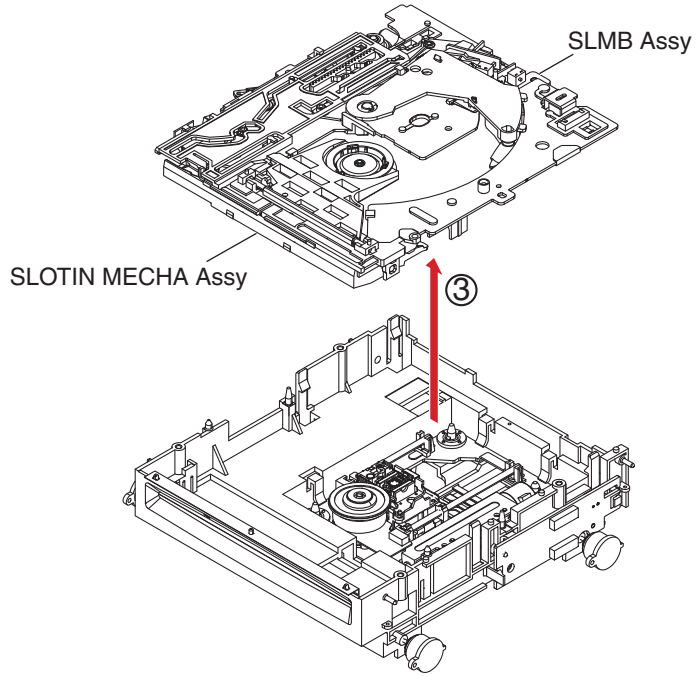
- (1) Disconnect the one flexible cable.
- (2) Unhook the four hooks.



A (3) Remove the SLOTIN MECHA Assy.

• **Note on Reassembly**

When binding the cables from the SLMB Assy, be careful that the bound part will not protrude from the edge of the board toward the rear. Bind them so that the bound part will come to the upper side of Side A.

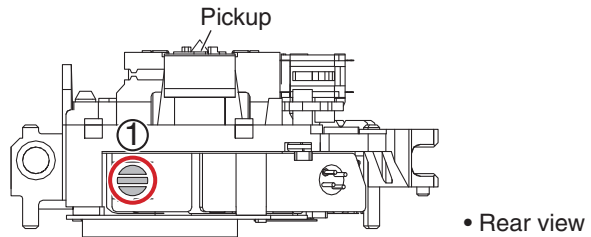


C

[3] TM Assy-S (VTM091)

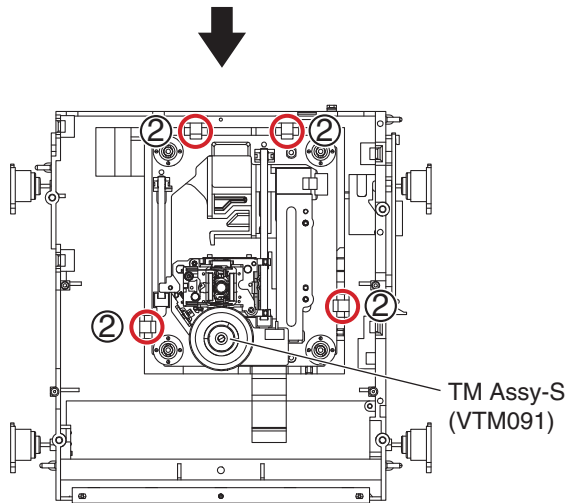
(1) Short-circuit two positions of figure soldering. (short)

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



D

(2) Unhook the four hooks.

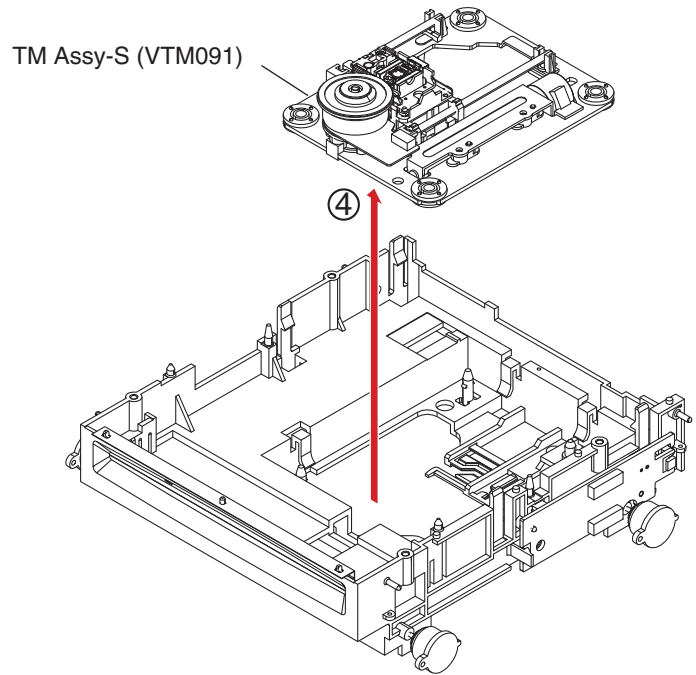
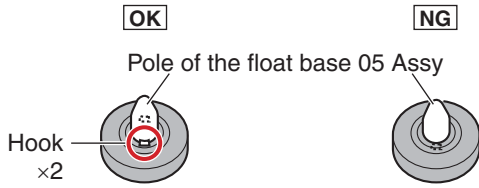


E

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- (3) Release the flexible cables, as required.
- (4) Remove the TM Assy-S (VTM091).

Note on the float rubber installation

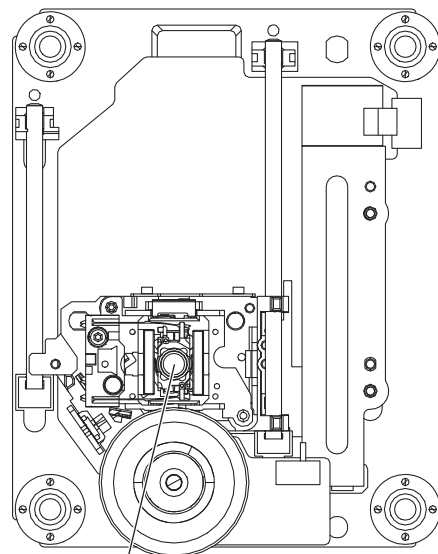


Cleaning the pickup lens



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

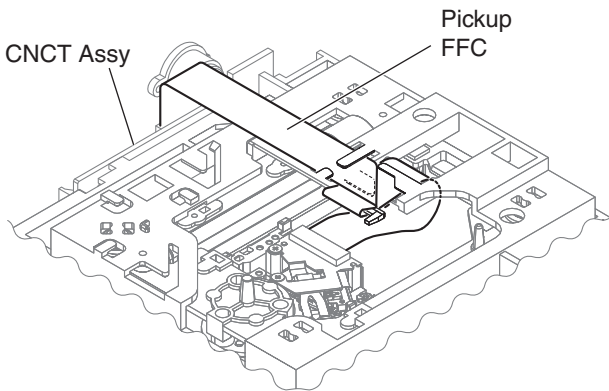
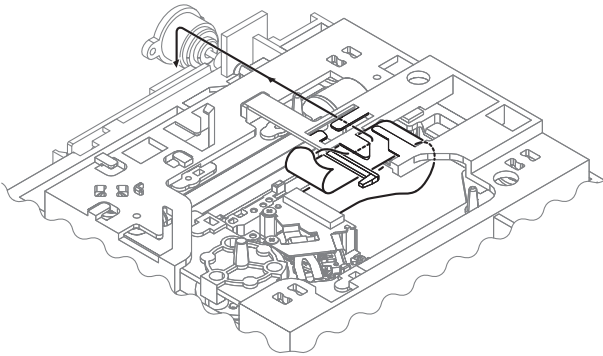
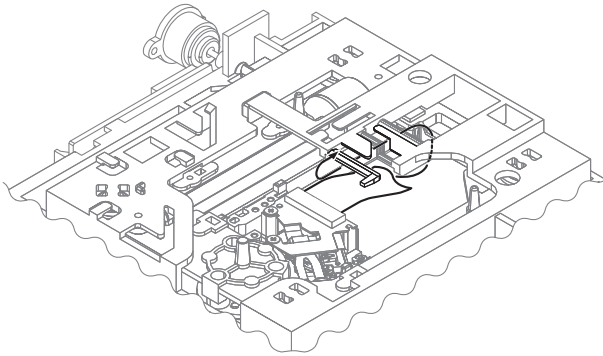
- Cleaning liquid : GEM1004
- Cleaning paper: GED-008



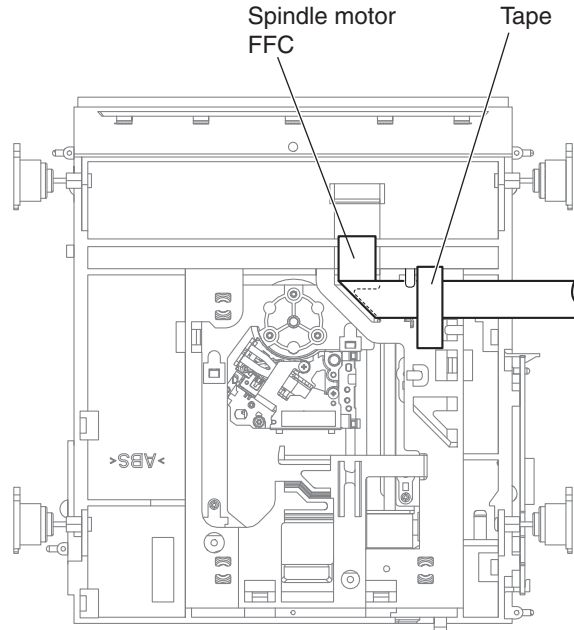
Pickup lens

A ■ Arrangement of the FFC

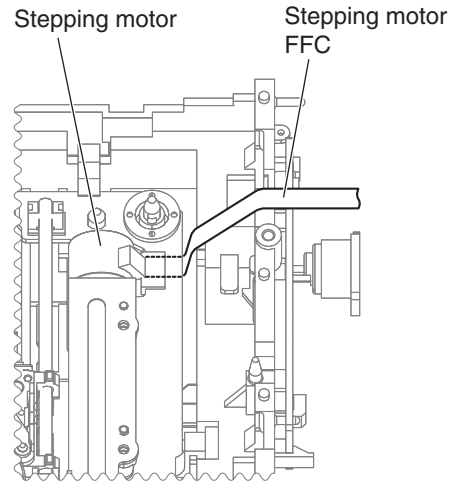
• Pickup FFC



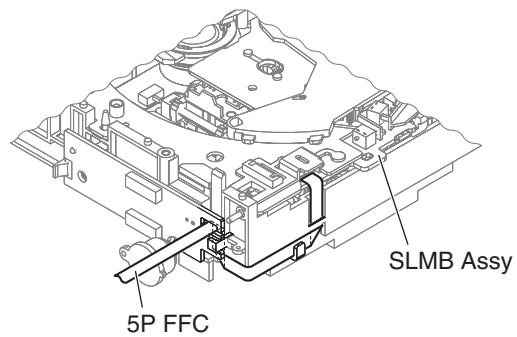
• Spindle motor FFC



• Stepping motor FFC

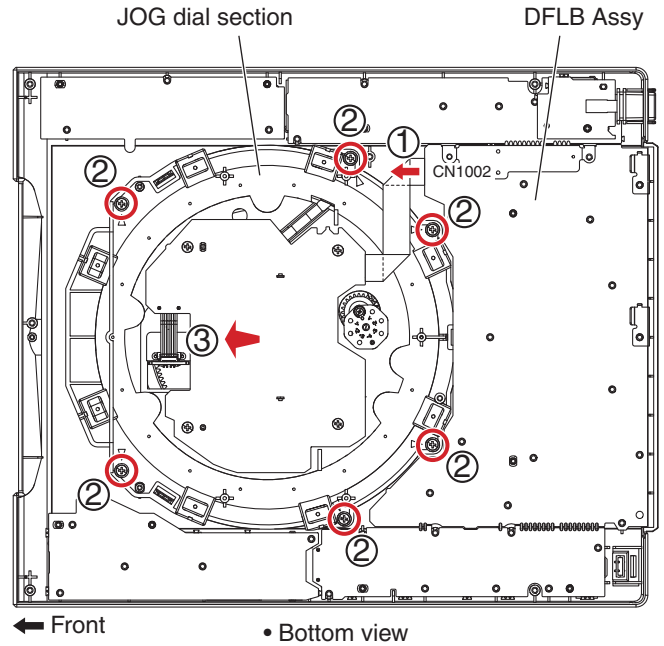


• 5P FFC



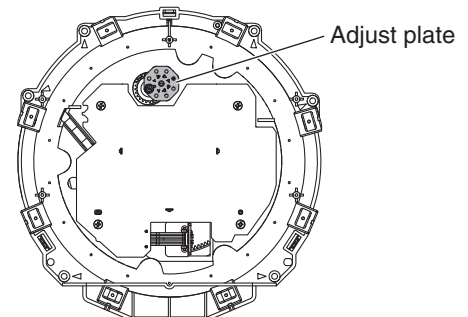
JOG Dial Section

- (1) Disconnect the one flexible cable.
- (2) Remove the six screws. (BPZ30P080FNI)
- (3) Remove it while pulling JOG dial section to front side.

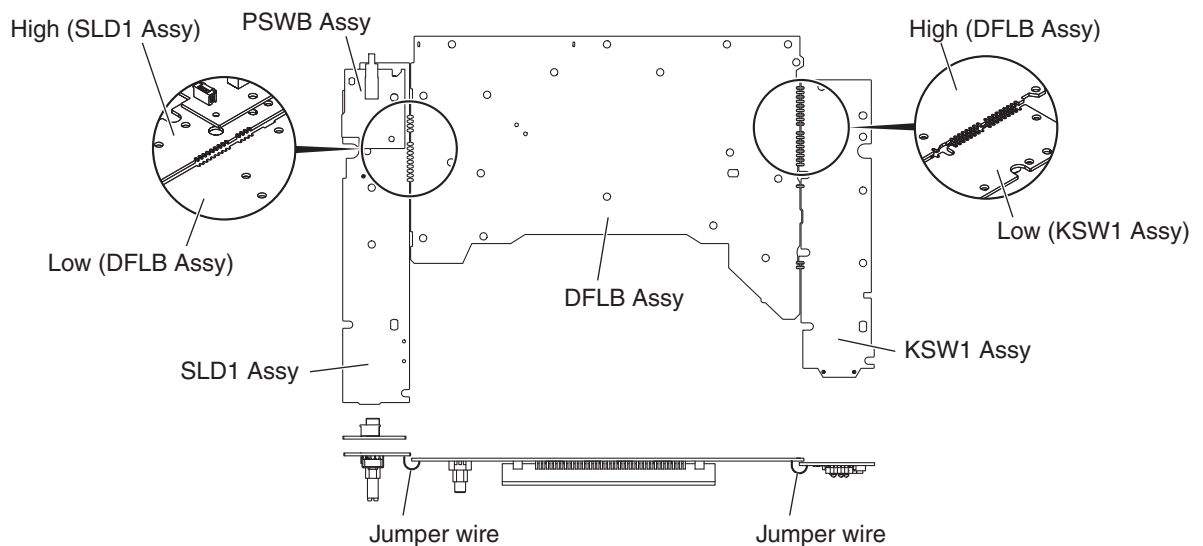


Adjust plate

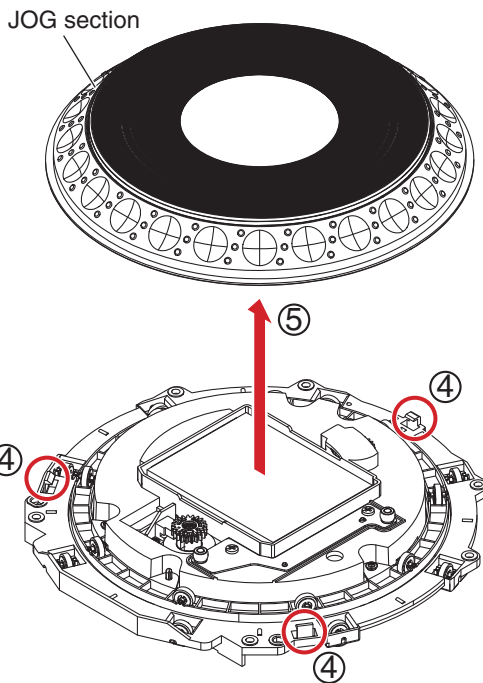
About details of Adjustment etc., refer to the "8.4 JOG DIAL ROTATION LOAD ADJUSTMENT".



PCB Assemblies Position



- A (4) Unhook the three hooks.
- (5) Remove the JOG section.

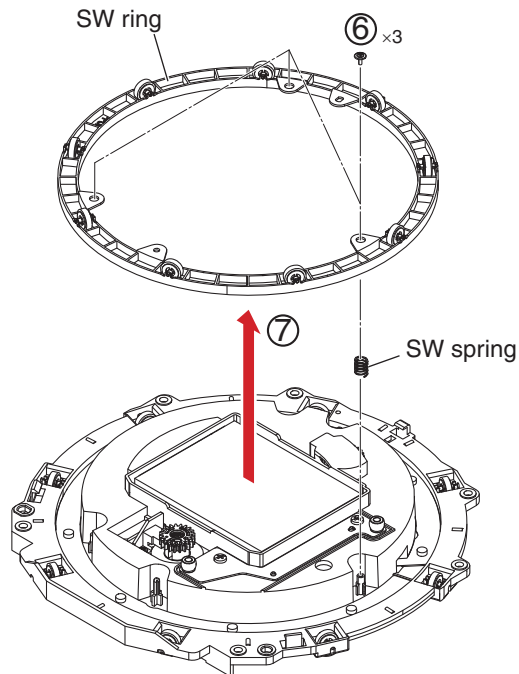


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- D (6) Remove the three screws. (DBA1265)
- (7) Remove the SW ring.

Note:
Be careful not to lost SW spring.

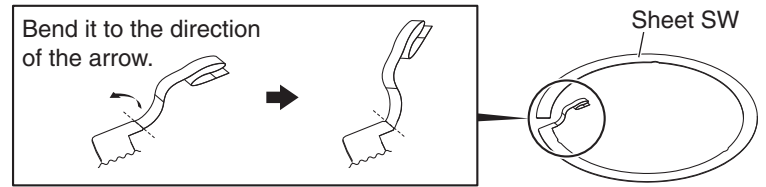


E

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Notes on replacing the Sheet SW

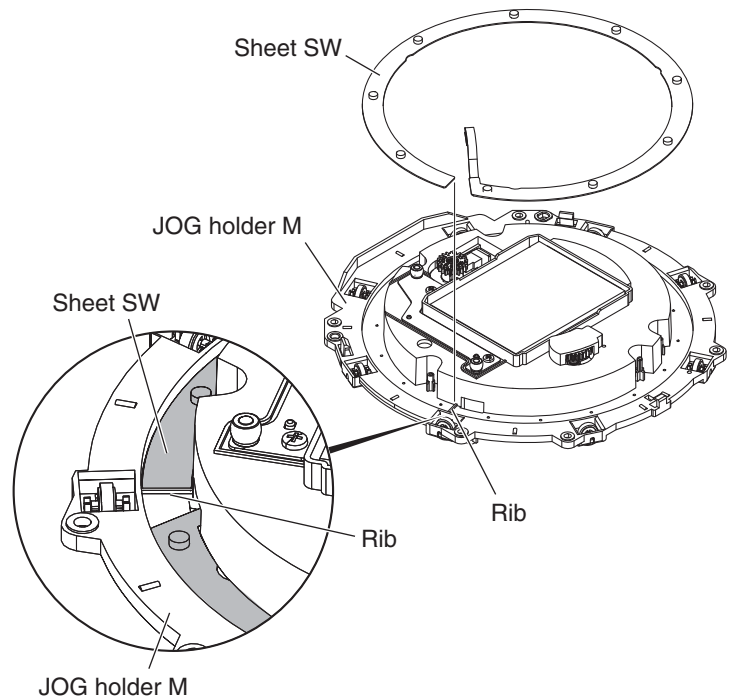
Styling of the Sheet SW



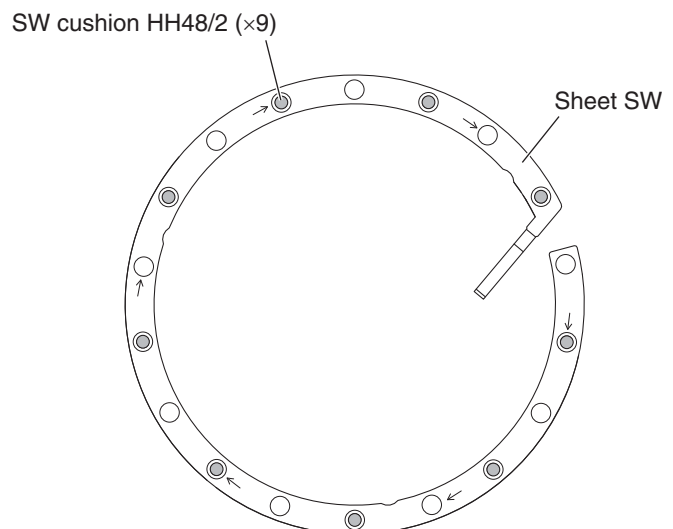
Pasting position of the Sheet SW

Notes:

1. Be careful not to warp the sheet SW.
2. Remove any dirt on the JOG holder M to which the sheet SW is to be adhered. If some adhesive for the old sheet SW remains on the JOG holder M, 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.



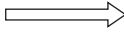
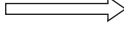
Pasting position of the SW cushion HH48/2



8. EACH SETTING AND ADJUSTMENT

8.1 NECESSARY ITEMS TO BE NOTED

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

- MAIN Assy (MAIN CPU)  • Confirmation of the version of the firmware (MAIN CPU)
• Updating to the latest version of the firmware
- Part of JOG dial section  • JOG dial rotation load adjustment

B

C

8.2 USER SETABLE ITEMS

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
A. CUE LEVEL	-36 dB/-42 dB/-48 dB/ -54 dB/ -60 dB -66 dB/ -72 dB/-78 dB	DYW1796	Flash ROM	IC101	MAIN	UTILITY setting
MIDI CHANNEL	1 to 16					
LIBRARY CREATOR	LIBRARY /FOLDER					
HISTORY NAME	HISTORY					
TAGLIST NAME	TAG LIST					
AUTO STANDBY	OFF/ ON					
VERSION No.	—					
TIME MODE	TIME/ REMAIN	DYW1796	Flash ROM	IC101	MAIN	Statuses of keys
AUTO CUE	ON/ OFF					
JOG MODE	CDJ/ VINYL					

D

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8.3 UPDATING OF THE FIRMWARE

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

	Device	File Name
MAIN	MAIN CPU	C850MAIN.UPD

A version is not contained in a file name.

■ When USB memory is used

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

- ① A file to update is copied to USB memory.
- ② Please turn on the power supply, pushing both the buttons of SOURCE SELECT/USB and RELOOP.
(Please continue pushing until the following caution screen appears.)



- ③ Starts updating when USB memory is inserted. The FL is displayed the following screen during update. At the same time, a current version and rewriting version are displayed.



- ④ Following screen will be displayed if update is completed, the power is shut off once, then the unit back on.



■ When CD-R/RW is used

- ① A file to update is copied to CD-R/RW.
- ② Please turn on a power supply, pushing both the buttons of SOURCE SELECT/DISC and RELOOP.
(Please continue pushing until the following caution screen appears.)



- ③ The following procedure is the same as that of the case where USB memory is used.

■ Recovery when failing

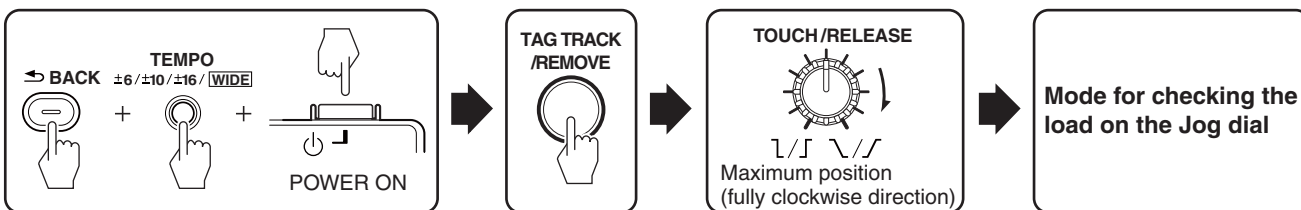
When the power supply has been turned off on the way, subsequent normal operation becomes impossible. When the error code of "E-7024" is displayed, the recovery mode operates when performing the update procedure mentioned above again, and update is performed.

In this case, please perform the recovery by USB memory. CD-ROM cannot be used.

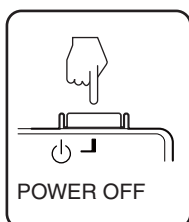
8.4 JOG DIAL ROTATION LOAD ADJUSTMENT

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 FL (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.

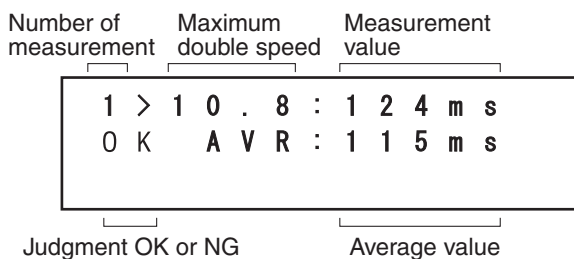


Fig. 1 Example of displaying FL

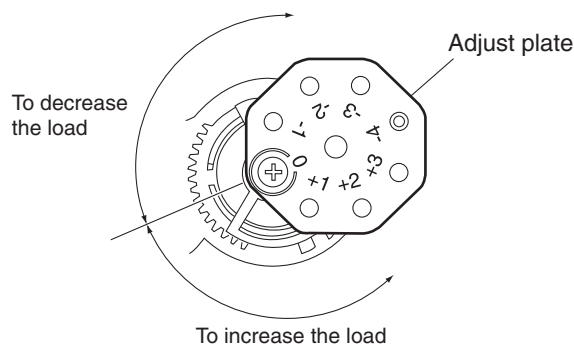


Fig. 2 Adjust plate

[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

9. EXPLODED VIEWS AND PARTS LIST

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

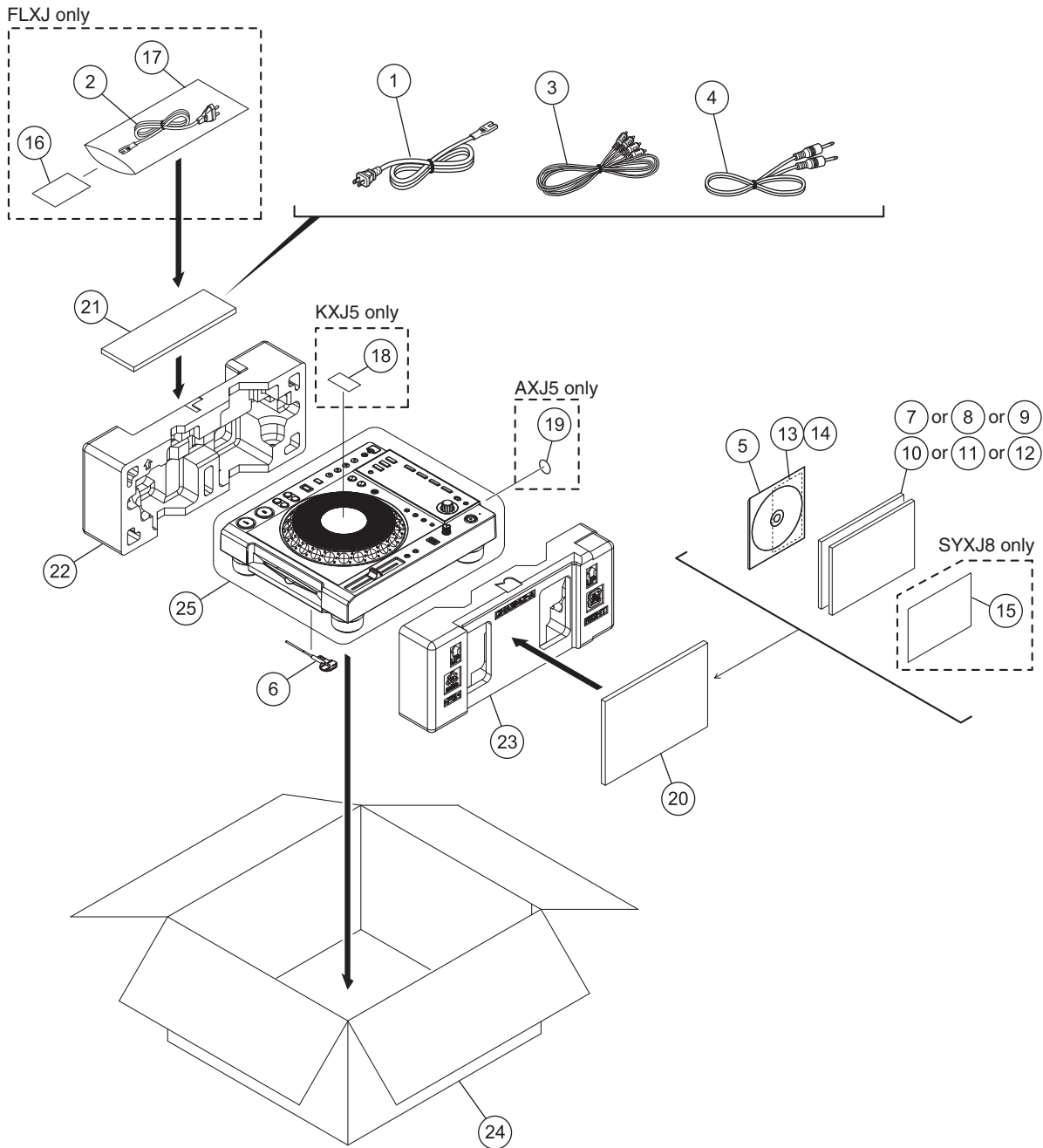
● The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical design.

● 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

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
⚠	1 Power Cord	See Contrast table (2)	NSP 15	Warranty Card	See Contrast table (2)
⚠	2 Power Cord	See Contrast table (2)	16	Caution Card SB	See Contrast table (2)
	3 Audio cable	XDE3045	17	Vinyl Bag	See Contrast table (2)
	4 Control cord	XDE3063	18	Recycle Label (M)	See Contrast table (2)
	5 CD-ROM (rekordbox license key attached)	DXX2654	NSP 19	CCC S & E Label	See Contrast table (2)
	6 Disc force eject pin (mounted on bottom of product)	DEX1008	NSP 20	Polyethylene Bag	AHG7117
	7 Operating Instructions	See Contrast table (2)	21	Vinyl Bag	Z21-013
	8 Operating Instructions	See Contrast table (2)	22	Pad L	DHA1841
	9 Operating Instructions	See Contrast table (2)	23	Pad R	DHA1842
	10 Operating Instructions	See Contrast table (2)	24	Packing Case	See Contrast table (2)
	11 Operating Instructions	See Contrast table (2)			
	12 Operating Instructions	See Contrast table (2)	25	Sheet	RHX1006
NSP	13 License Key Label	DRW2402			
NSP	14 License Key Label Assy	DXA2190			

(2) CONTRAST TABLE

CDJ-850/SYXJ8, CUXJ, FLXJ, KXJ5 and AXJ5 are constructed the same except for the following:

<u>Mark</u>	<u>No.</u>	<u>Symbol and Description</u>	<u>CDJ-850 /SYXJ8</u>	<u>CDJ-850 /CUXJ</u>	<u>CDJ-850 /FLXJ</u>	<u>CDJ-850 /KXJ5</u>	<u>CDJ-850 /AXJ5</u>
⚠	1	Power Cord	ADG1154	ADG7022	ADG1154	XDG3054	ADG7079
⚠	2	Power Cord	Not used	Not used	ADG7097	Not used	Not used
	7	Operating Instructions (En, Fr, De)	DRB1527	Not used	Not used	Not used	Not used
	8	Operating Instructions (It, NI, Es, Ru)	DRB1535	Not used	Not used	Not used	Not used
	9	Operating Instructions (En, Fr)	Not used	DRB1526	Not used	Not used	Not used
	10	Operating Instructions (En, Es, Zhtw)	Not used	Not used	DRB1528	Not used	Not used
	11	Operating Instructions (Ko)	Not used	Not used	Not used	DRB1530	Not used
	12	Operating Instructions (Zhcn, En)	Not used	Not used	Not used	Not used	DRB1529
NSP	15	Warranty Card	ARY7107	Not used	Not used	Not used	Not used
	16	Caution Card SB	Not used	Not used	ARM7064	Not used	Not used
	17	Vinyl Bag	Not used	Not used	Z21-013	Not used	Not used
	18	Recycle Label (M)	Not used	Not used	Not used	DRW2307	Not used
NSP	19	CCC S & E Label	Not used	Not used	Not used	Not used	DRW2310
	24	Packing Case	DHG2918	DHG2919	DHG2920	DHG2923	DHG2922

9.2 EXTERIOR SECTION

1

2

3

4

A

B

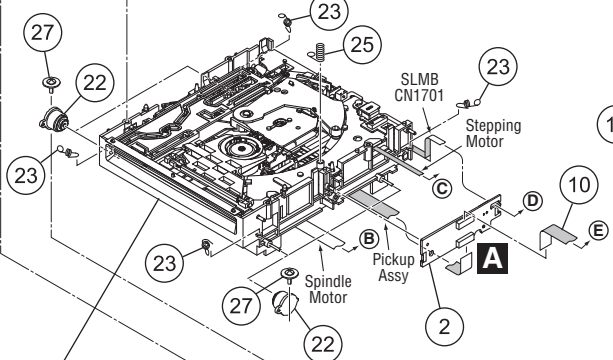
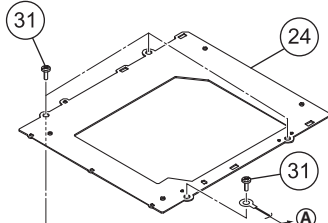
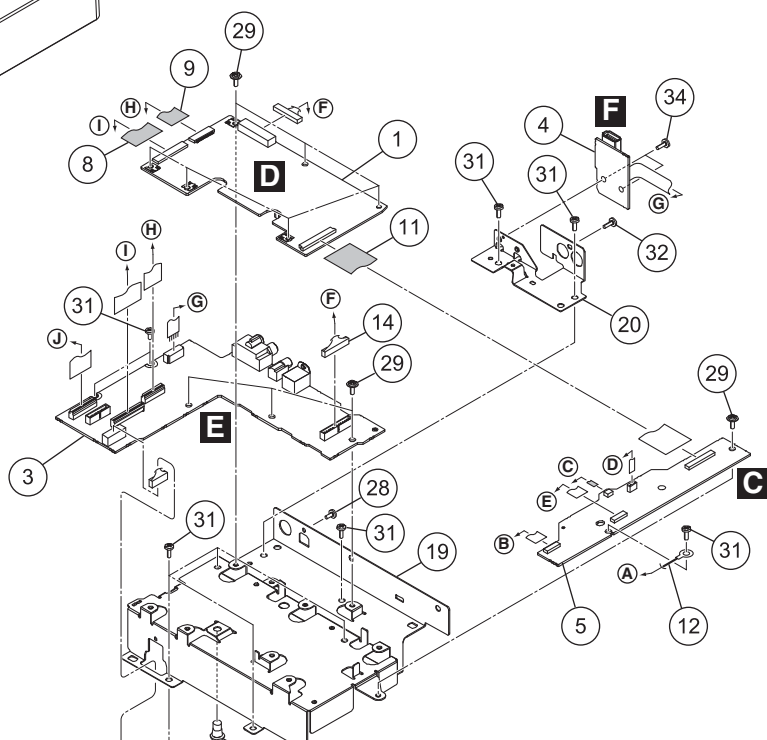
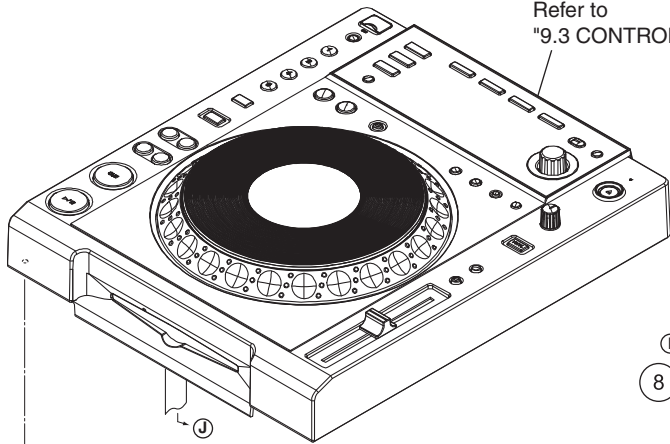
C

D

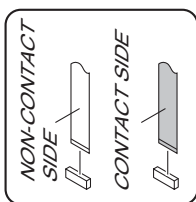
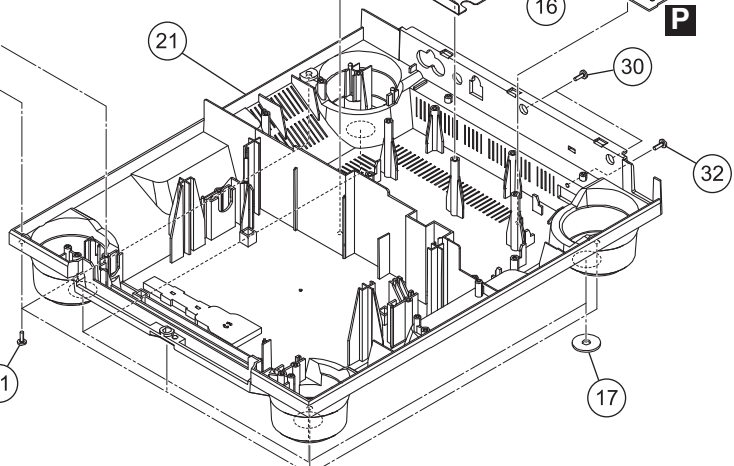
E

F

Refer to
"9.3 CONTROL PANEL SECTION".



Refer to
"9.5 SLOTIN MECHA SECTION".



1

2

3

4

(1) EXTERIOR SECTION PARTS LIST

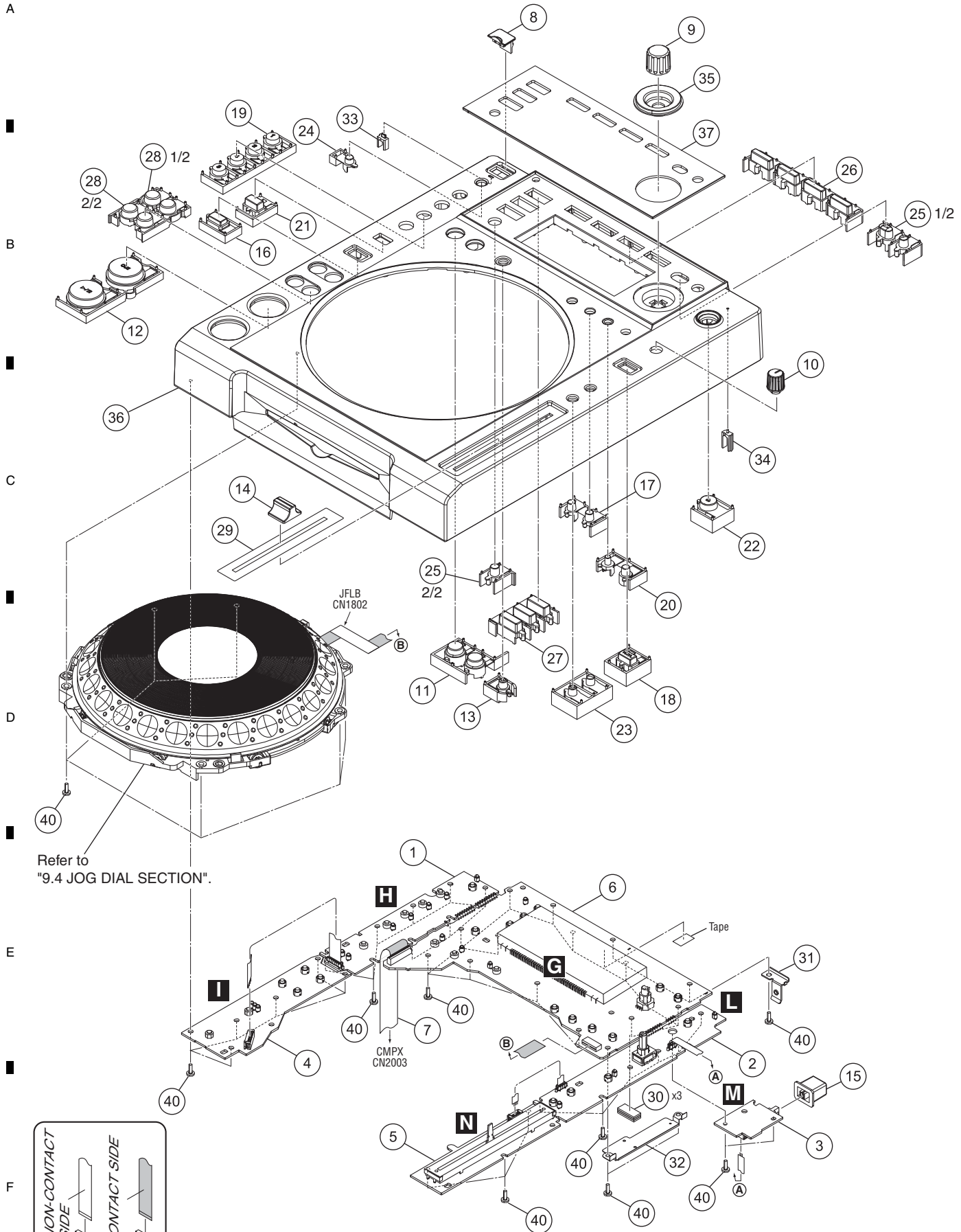
Mark No.	Description	Part No.	Mark No.	Description	Part No.
	1 MAIN Assy	DWX3174	△ 21	Chassis	See Contrast table (2)
	2 CNCT Assy	DWX3151	22	Damper	CNV6011
	3 CMPX Assy	DWX3153	23	Float Spring G5	DBH1494
	4 USBA Assy	DWX3156	24	Mecha Plate	DNH2642
	5 JINT Assy	DWX3157	25	Earth Spring	DBH1398
	6 ACIN Assy	See Contrast table (2)	26	•••••	
△	7 POWER SUPPLY Assy	DWR1463	27	DM Screw (FTC)	DBA1260
	8 27P FFC	DDD1523	28	Screw (M3 x 5)	DBA1340
	9 17P FFC	DDD1524	29	Screw	ABZ30P060FTC
	10 24P FFC	DDD1535	30	Screw	BBZ30P060FTB
			31	Screw	BPZ30P080FNI
	11 50P FFC	DDD1536			
NSP	12 Cord With Plug	DE010VE0	32	Screw	BPZ30P080FTB
	13 Connector Assy 6P	DKP3869	33	Screw	BPZ30P100FTC
	14 Connector Assy	PF13PP-S07	34	Screw	BSZ30P060FTC
	15 Card Spacer	AEC7133			
	16 Edge Saddle	AEC7582			
	17 Cushion	DEC3177			
	18 Power Supply Stay	DNH2936			
	19 Main PCB Stay	DNH2937			
NSP	20 USB Stay	DNH2938			

(2) CONTRAST TABLE

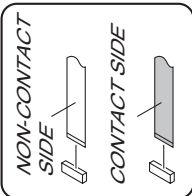
CDJ-850/SYXJ8, CUXJ, FLXJ, KXJ5 and AXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-850 /SYXJ8	CDJ-850 /CUXJ	CDJ-850 /FLXJ	CDJ-850 /KXJ5	CDJ-850 /AXJ5
△	6 21	ACIN Assy Chassis	DWX3158 DNK5785	DWX3173 DNK5819	DWX3158 DNK5820	DWX3158 DNK5823	DWX3158 DNK5822

9.3 CONTROL PANEL SECTION



Refer to "9.4 JOG DIAL SECTION".



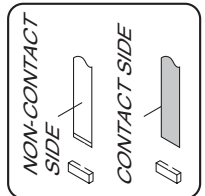
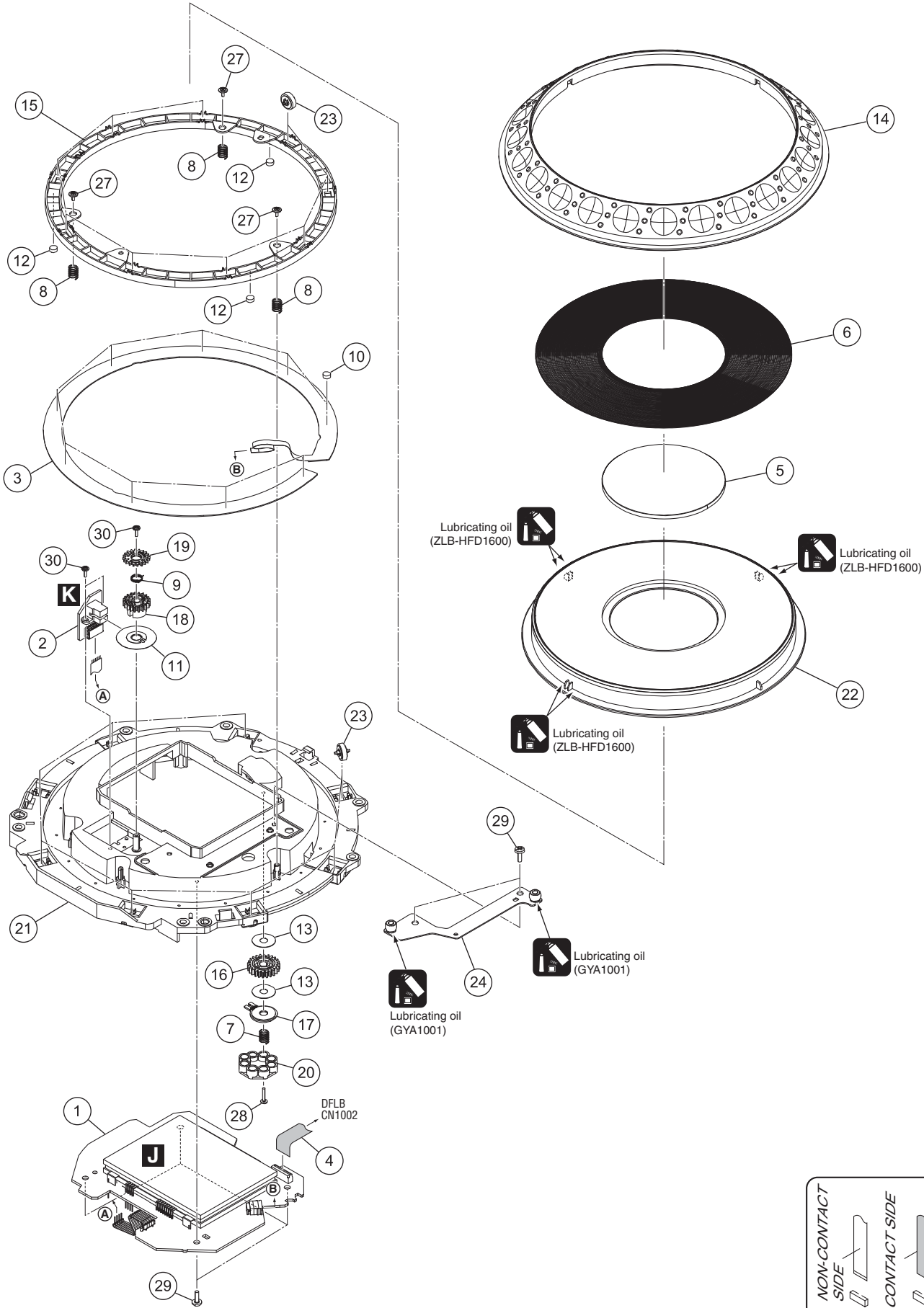
CONTROL PANEL SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
NSP 1	KSW1 Assy	DWS1422
NSP 2	SLD1 Assy	DWS1423
3	PSWB Assy	DWS1424
4	KSW2 Assy	DWS1426
5	SLD2 Assy	DWS1427
6	DFLB Assy	DWX3152 *
7	21P FFC	DDD1522
8	USB Cover	DNK4999
9	Rotary Knob C	DAA1194
10	Dial Knob	DAA1259
11	Loop Knob	DAC2066
12	Play Knob	DAC2286
13	Reloop Knob	DAC2291
14	Slide Knob	DAC2292
15	Power Knob	DAC2306
16	Reverse Knob	DAC2364
17	Set Button (CALL)	DAC2497
18	Vinyl Knob	DAC2542
19	Auto Beat Roop Knob	DAC2543
20	Del/Memo Knob	DAC2545
21	Beat Select Button	DAC2546
22	Eject Button	DAC2548
23	Tempo Button	DAC2549
24	USB Stop Button	DAC2550
25	Back Button	DAC2613
26	Device Select Button	DAC2614
27	Mode Select Button	DAC2615
28	Search Button Silver	DAC2627
29	Slide Sheet 1C	DAH2404
NSP 30	Silicon Rubber D5 L	DEB1456
31	Earth Bracket	DNH2941
32	Heatsink	DNH2958
33	USB Lens	DNK5353
34	EUP Lens	DNK5408
35	Encoder Ring	DNK5489
⚠ 36	Control Panel	DNK5786
37	Display Window	DNK5793
38	•••••	
39	•••••	
40	Screw	BPZ30P080FNI

* The service part of DFLB Assy (DWX3152) is supplied with KSW1 Assy (DWS1422) and SLD1 Assy (DWS1423).
(There assemblies are connected with the jumper wires.)

9.4 JOG DIAL SECTION

A
B
C
D
E
F



JOG DIAL SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	JFLB Assy	DWX3154	
2	JOGB Assy	DWX3155	A
3	Sheet SW	DSX1078	
4	13P FFC	DDD1521	
5	JOG Panel	DAH2609	
6	JOG Plate	DAH2839	
7	Load Spring	DBH1680	
8	SW Spring	DBH1681	
9	Encoder Spring	DBH1710	
10	SW Cushion HH48/2	DEC2538	
11	Encoder Plate	DEC2889	B
12	Ring Cushion L24/2.0	DEC2958	
13	Washer	DEC3137	
14	JOG B	DNK4068	
15	SW Ring	DNK5233	
16	Load Gear	DNK5236	
17	Smoother	DNK5237	
18	Gear A	DNK5241	
19	Gear B	DNK5242	
20	Adjust Plate	DNK5300	C
21	JOG Holder M	DNK5356	
22	JOG Dial A	DNK5357	
23	Roller A Assy	DXB2010	
24	JOG Stay Assy	DXB2015	
25	•••••		
26	•••••		
27	Screw (FE)	DBA1265	
28	Screw	BPZ20P100FTC	
29	Screw	BPZ30P080FNI	D
30	Screw	IPZ20P060FTC	

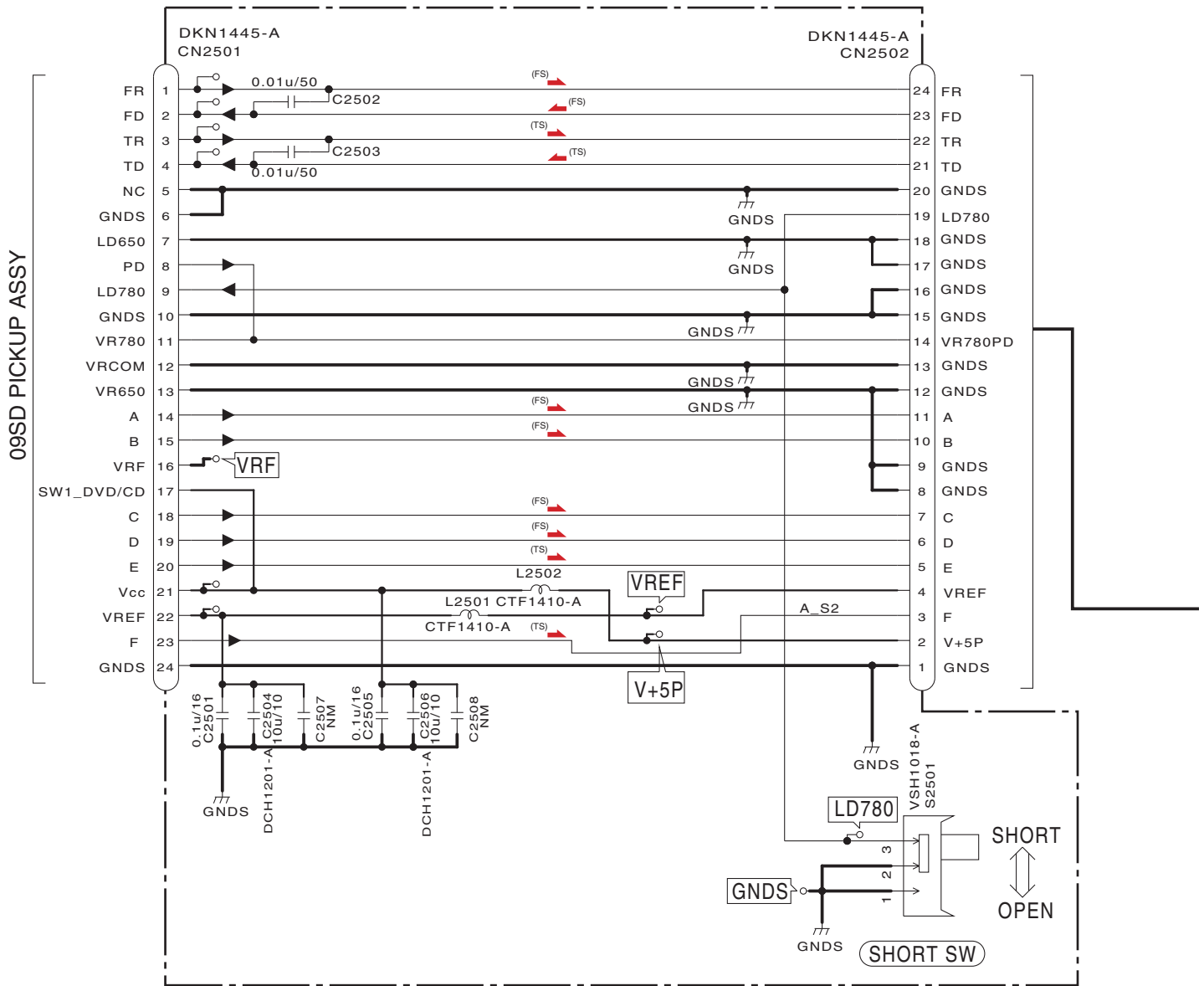
SLOTIN MECHA SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
	1 SLMB Assy	DWS1425	
	2 TM Assy-S (VTM091)	DXX2616	A
	3 24P FFC	DDD1491	
	4 5P FFC	DDD1527	
NSP	5 SLOTIN MECHA Assy	DXA2206	
	6 Loading Motor Assy-S	DXX2615	
NSP	7 DC Motor	DXM1384	
NSP	8 Worm Gear	DNK3910	
	9 Lead Wire	ZWNN1007G28-8-06A	
	10 Lead Wire	ZWNN1007G28-9-06A	
	11 Clamp Spring	DBH1374	B
	12 Guide Spring	DBH1375	
	13 SW. Lever Spacer SV	DEC2831	
	14 Loading Lever	DNK3406	
	15 Main Cam	DNK3407	
	16 Disc Guide	DNK3478	
	17 Clamp Arm	DNK3576	
	18 Eject Lever	DNK3684	
	19 Lever AP	DNK3835	
	20 Lever BP	DNK3836	C
	21 Loading Gear	DNK3911	
	22 Drive Gear	DNK3912	
	23 Loading Base SV	DNK4369	
	24 SW Lever SV1	DNK4370	
	25 SW Lever SV2	DNK4371	
	26 Gear Holder SV	DNK4372	
	27 Clamper Assy-S	DXX2661	
	28 •••••		
	29 •••••		D
	30 Screw	BPZ20P060FTC	
	31 Spacer POR (T3)	DEB1566	
	32 Vessel Cushion (C)	DEC2854	
	33 Vessel Cushion T	DEC3349	
	34 Vessel Cushion U	DEC3350	
	35 Front Sheet	DED1132	
	36 Float Base 05 Assy	DXB2068	
	37 Floating Rubber	VEB1351	
	38 Binder	ZCA-SKB90BK	E

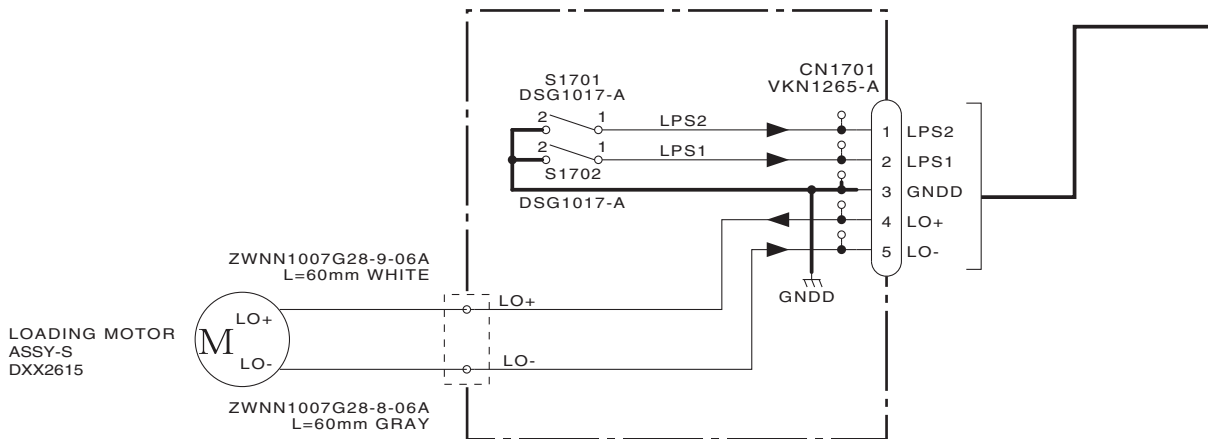
10. SCHEMATIC DIAGRAM

10.1 CNCT, SLMB and JINT ASSYS

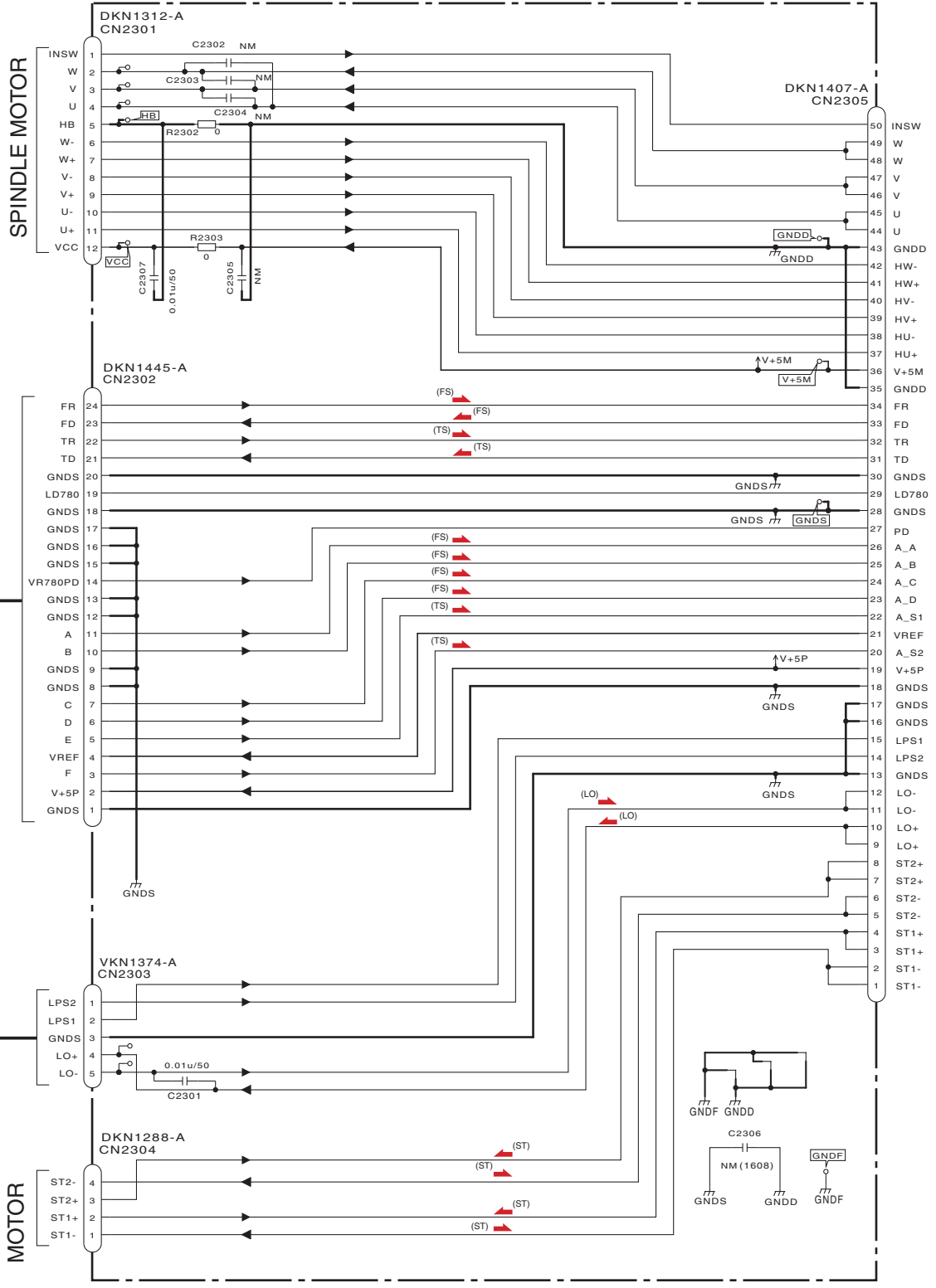
A CNCT ASSY (DWX3151)



B SLMB ASSY (DWS1425)



C JINT ASSY (DWX3157)



NOTES	
NM	NO MOUNT
RS1/10SR***J	
CKSRYB***K	
GNDD	GND for Digital
GNDF	GND for Servo
GNDS	GND for Frame

*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 .

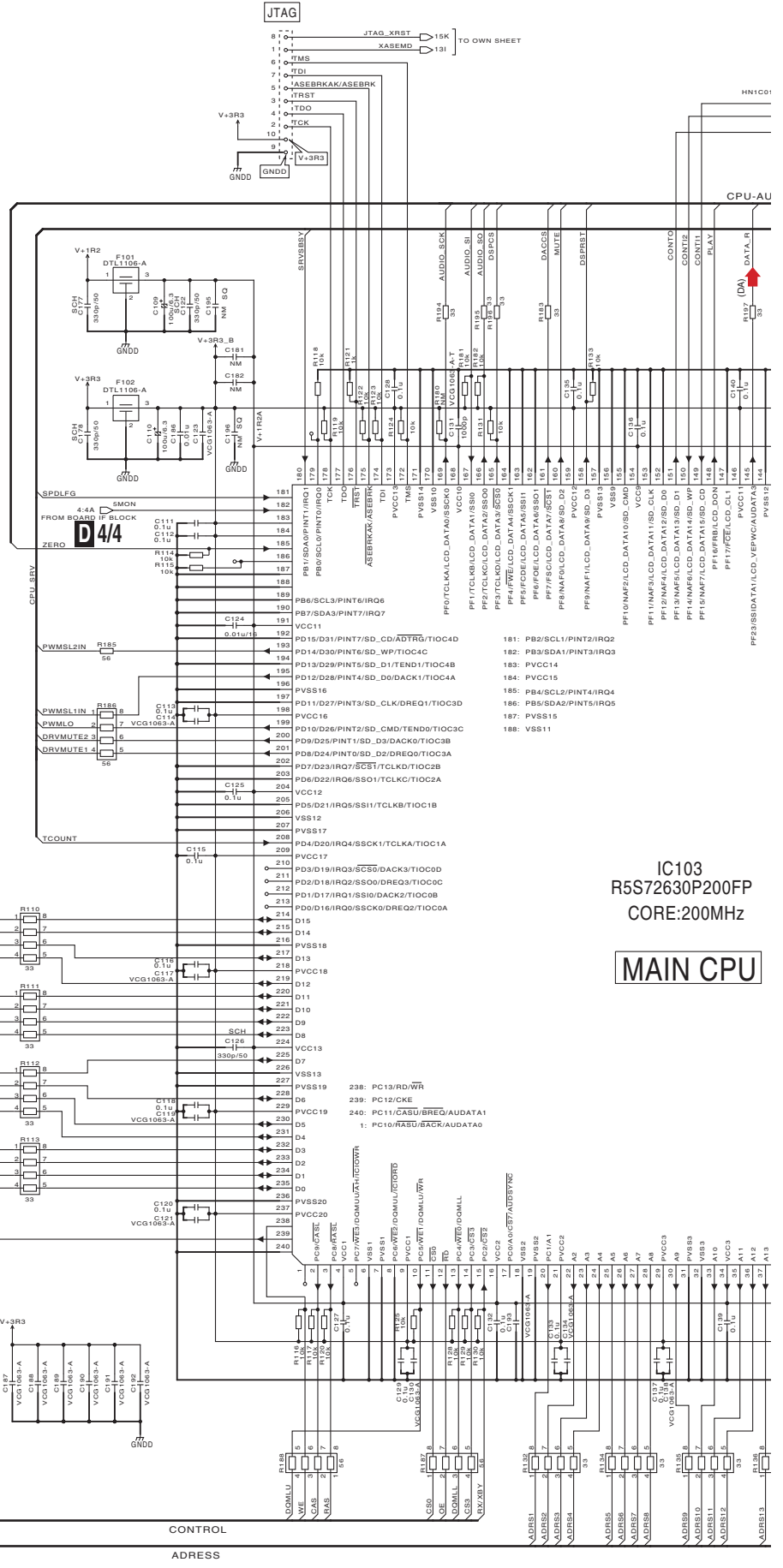
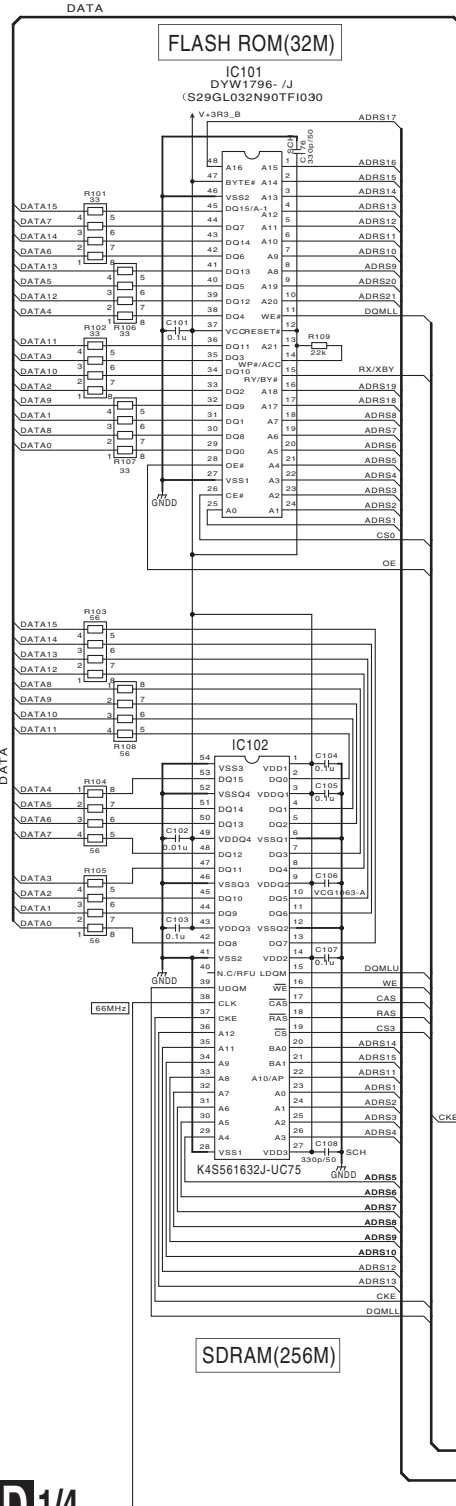
- (FS) : Focus Servo Signal Route
- (TS) : Tracking Servo Signal Route
- (ST) : Stepping Motor Signal Route
- (LO) : Loading Motor Signal Route

D2/4 CN201

10.2 MAIN ASSY (1/4)

D1/4 MAIN ASSY (DWX3174) • MAIN CPU Block

- (DA) : Audio Data Signal Route
- (USB_DN) : USB_D_N Signal Route
- (USB_DP) : USB_D_P Signal Route
- (CONT1) : CONTROL1 Signal Route
- (CONT2) : CONTROL2 Signal Route
- : Waveform Measuring Point
- : Signal Level Point

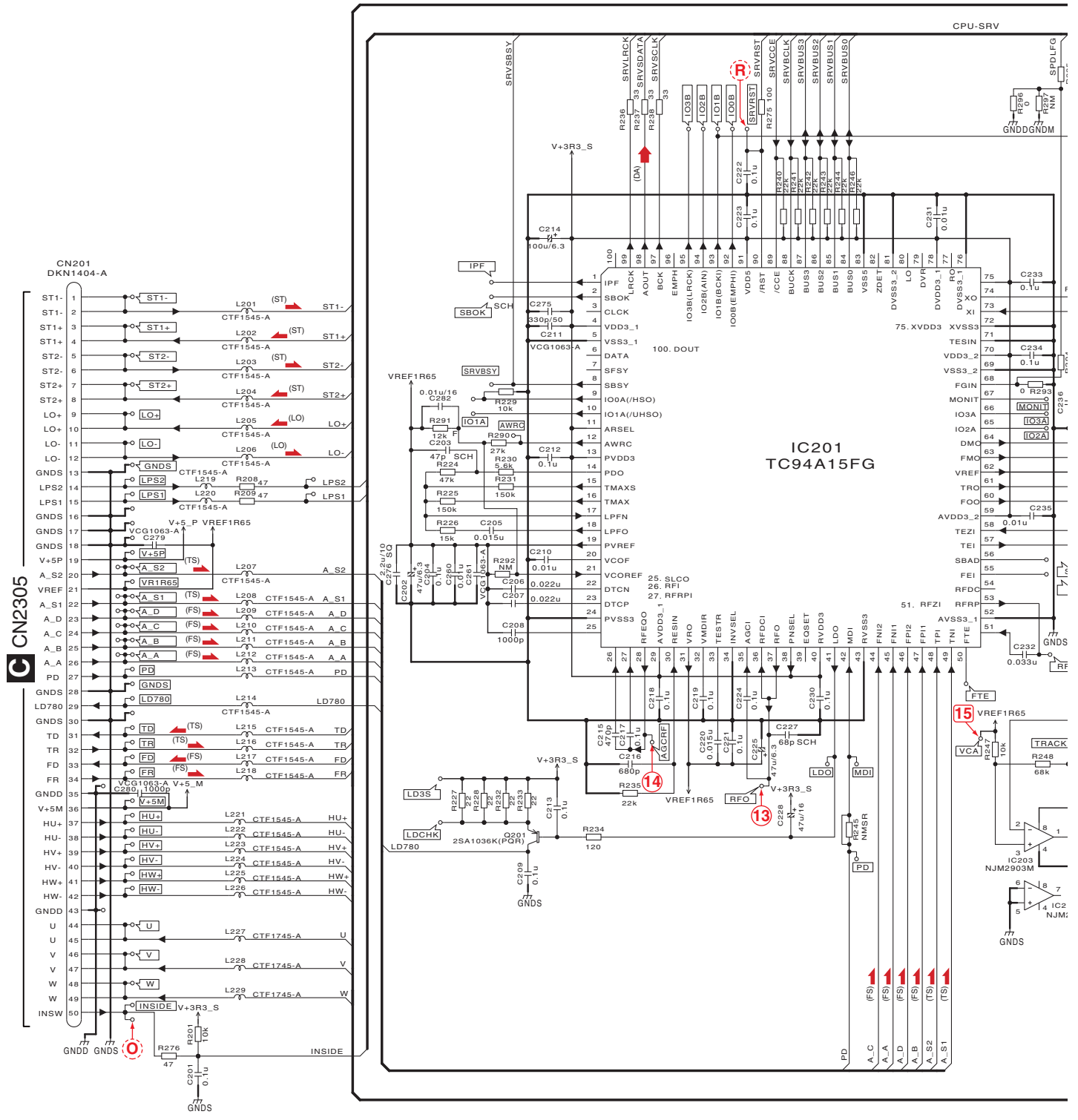


10.3 MAIN ASSY (2/4)

D2/4 MAIN ASSY (DWX3174) • SERVO Block

SERVO DSP

A
B
C
D
E
F



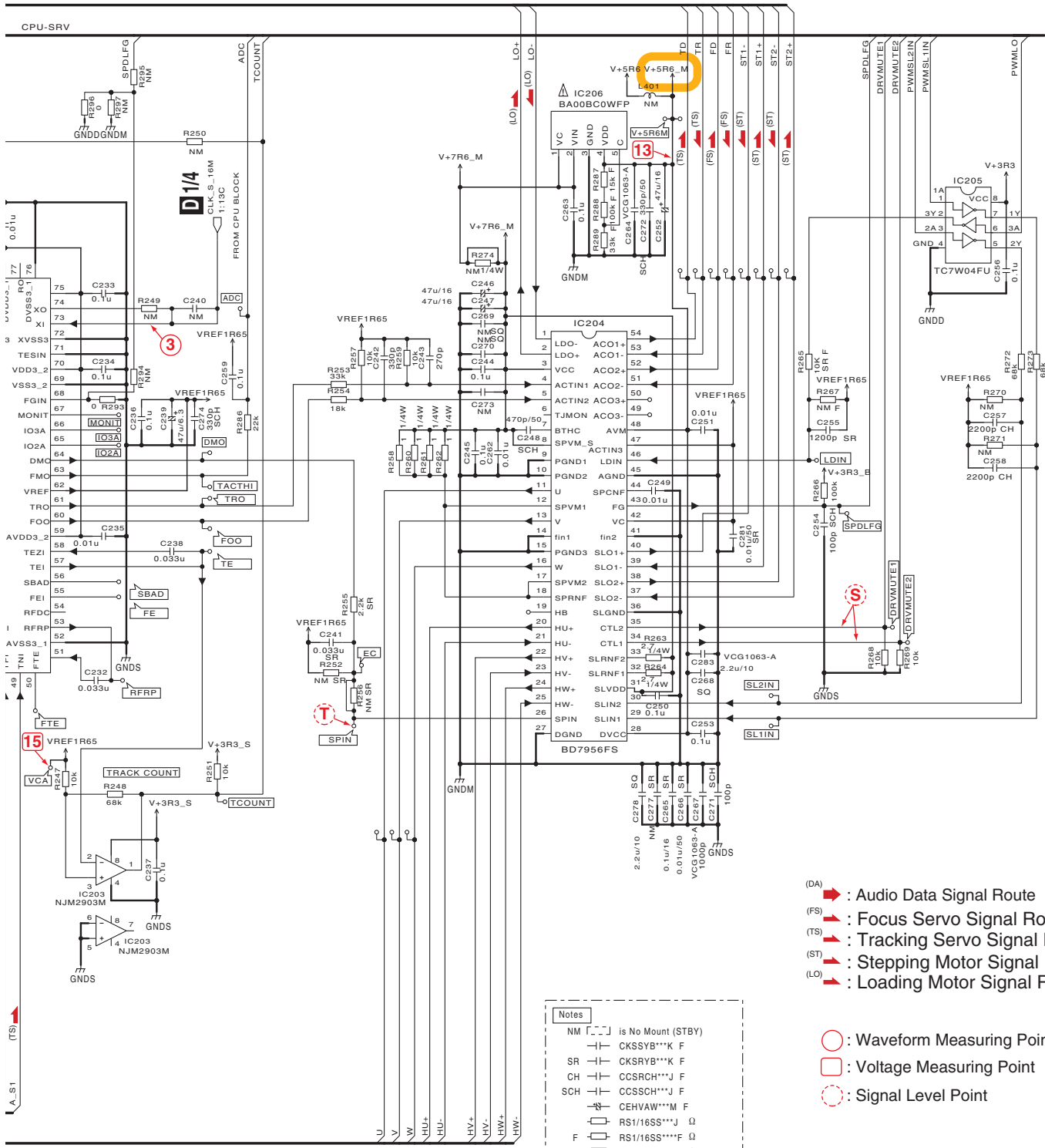
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

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

SERVO DRIVER

D1/4

CPU_SRV
1:13J



- (DA) : Audio Data Signal Route
- (FS) : Focus Servo Signal Route
- (TS) : Tracking Servo Signal Route
- (ST) : Stepping Motor Signal Route
- (LO) : Loading Motor Signal Route

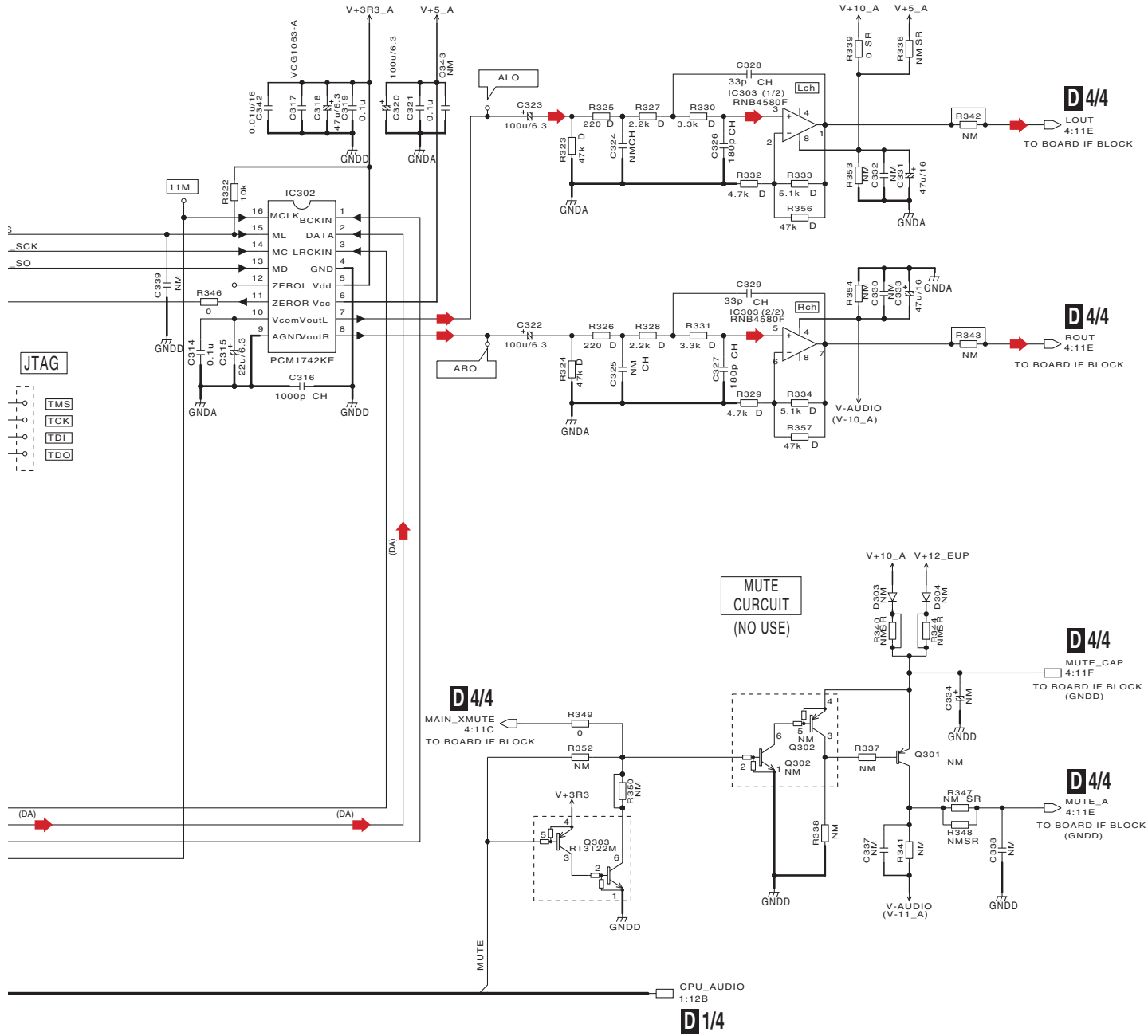
- : Waveform Measuring Point
- : Voltage Measuring Point
- : Signal Level Point

Notes	
NM	is No Mount (STBY)
CKSSYB***K	F
CKSRV***K	F
CH	CCSRCH***J F
SCH	CCSSCH***J F
CEHVAW***M	F
RS1/16SS***J	Ω
RS1/16SS****F	Ω
RS1/16SS****D	Ω
SRF	RS1/10SR****F Ω
SR	RS1/10SR***J Ω
1/4W	RS1/4SA***J Ω
VCG1063A-T	1000pF/50V

D2/4

AUDIO DAC

AUDIO FILTER

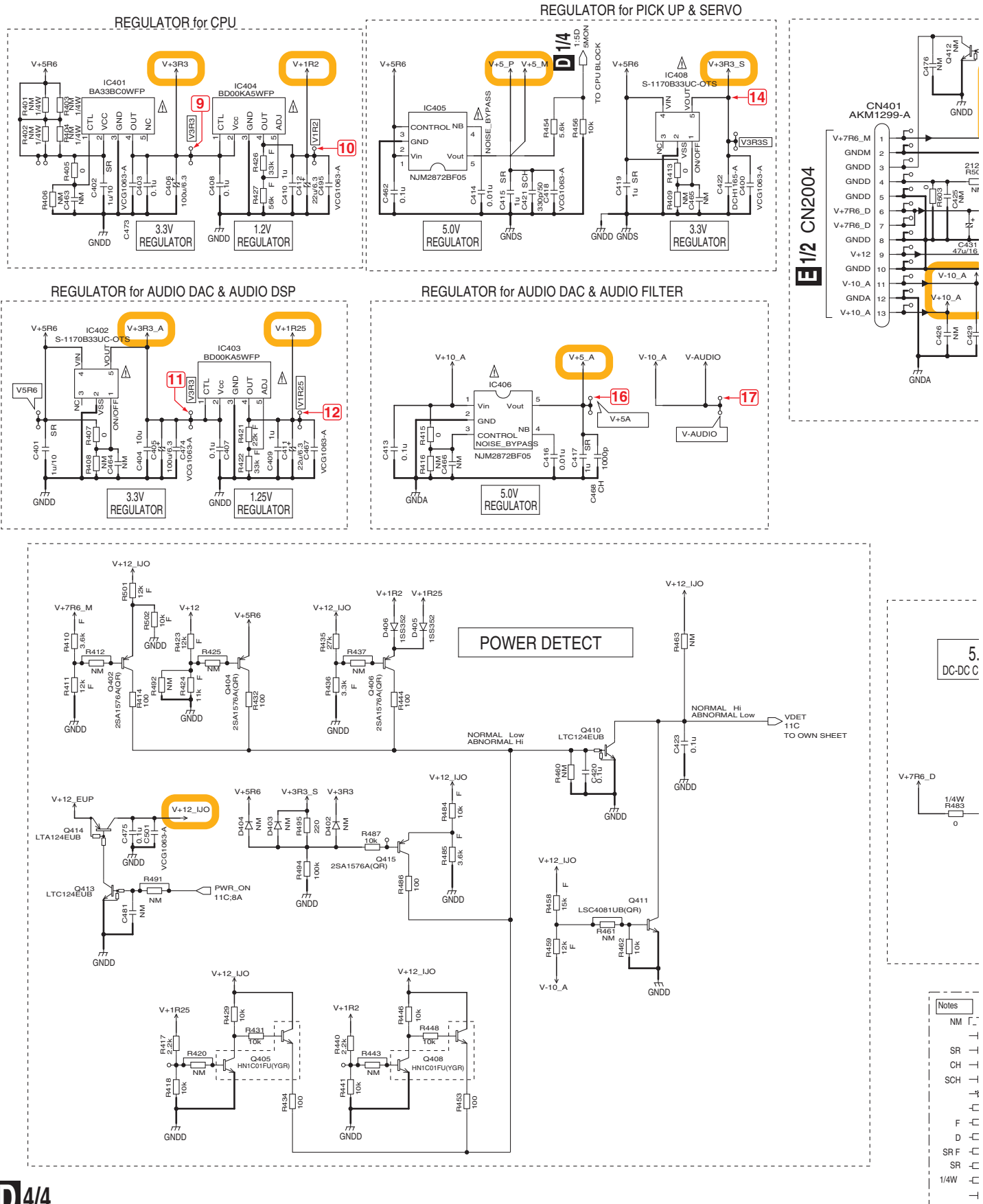


- ➔ : Analog Audio Signal Route
- (DA) ➔ : Audio Data Signal Route
- : Waveform Measuring Point
- : Signal Level Point

10.5 MAIN ASSY (4/4)

D4/4 MAIN ASSY (DWX3174) • BOARD IF and POWER SUPPLY Block

(USB_DN)
(USB_DP)

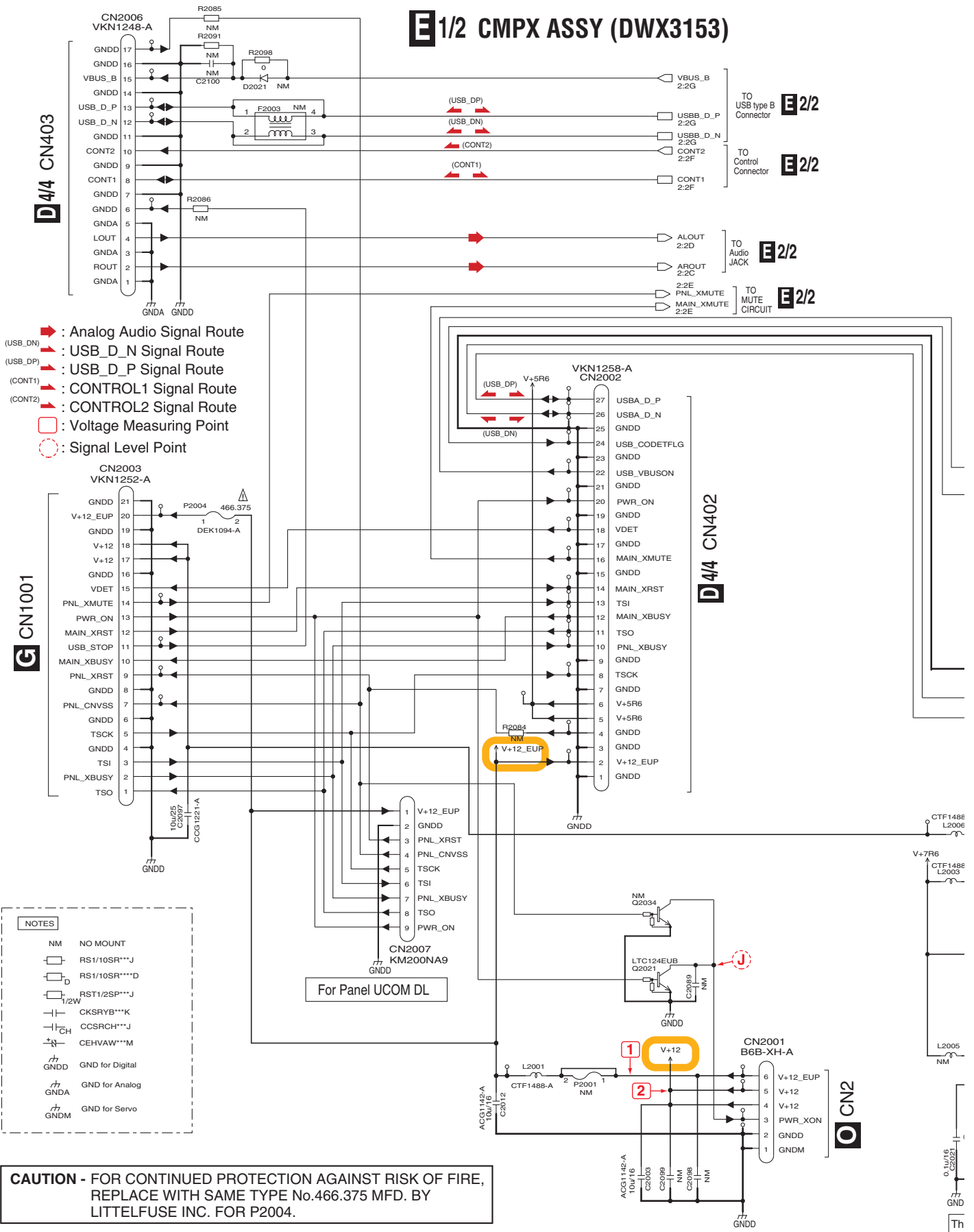


D4/4

10.6 CMPX (1/2) and USBA ASSYS

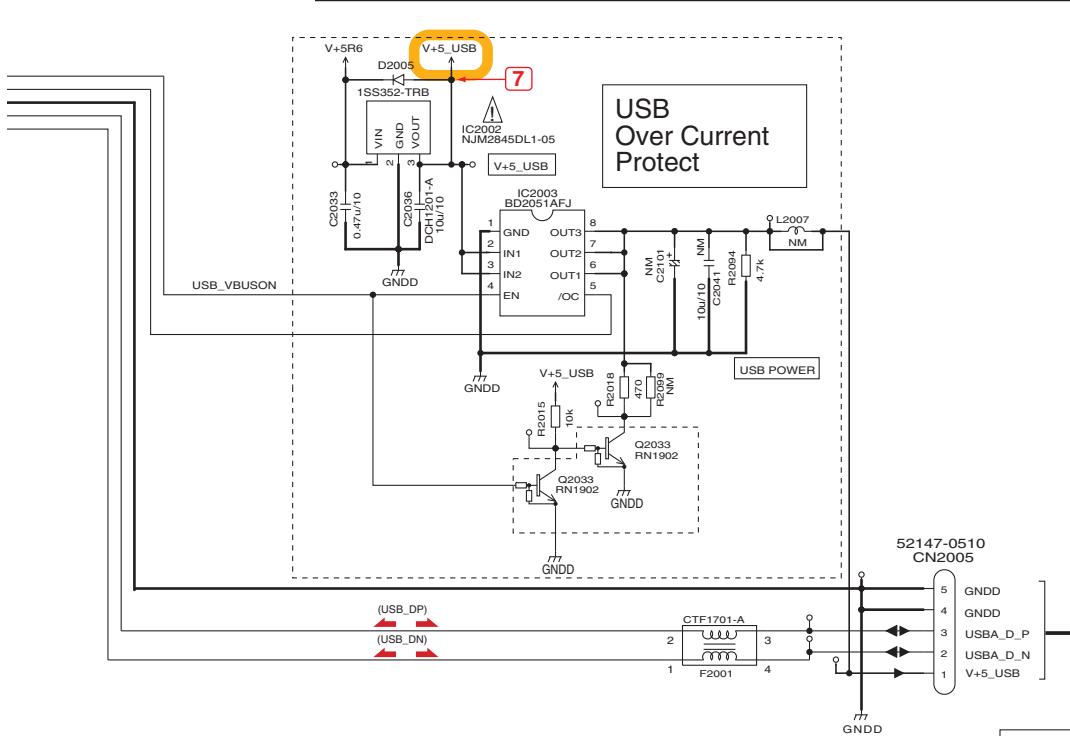
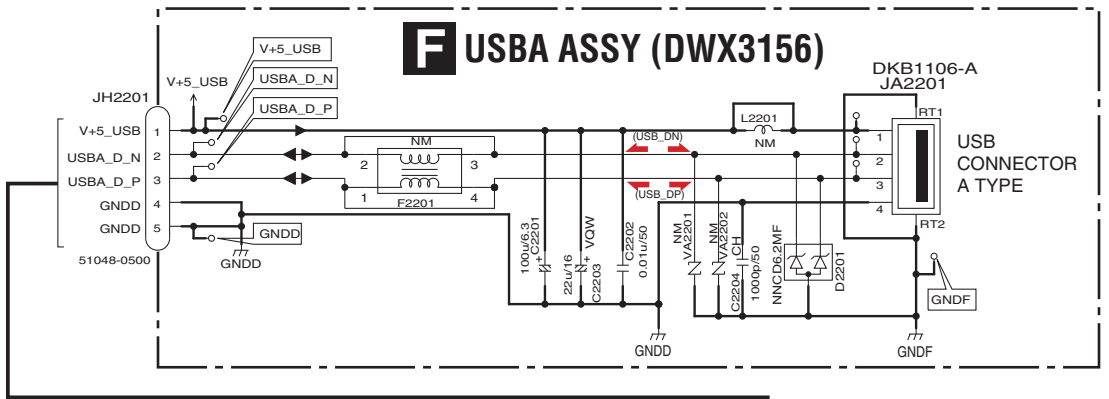
E 1/2 CMPX ASSY (DWX3153)

A
B
C
D
E
F



E 1/2

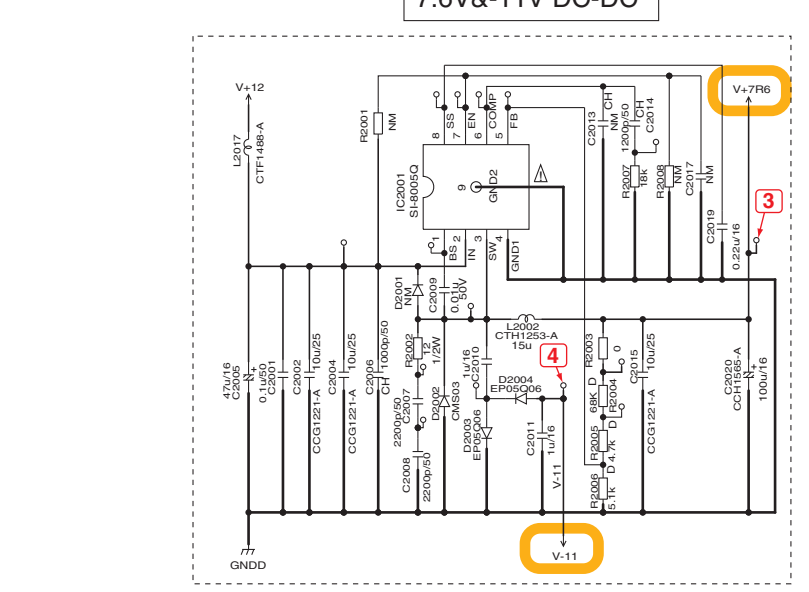
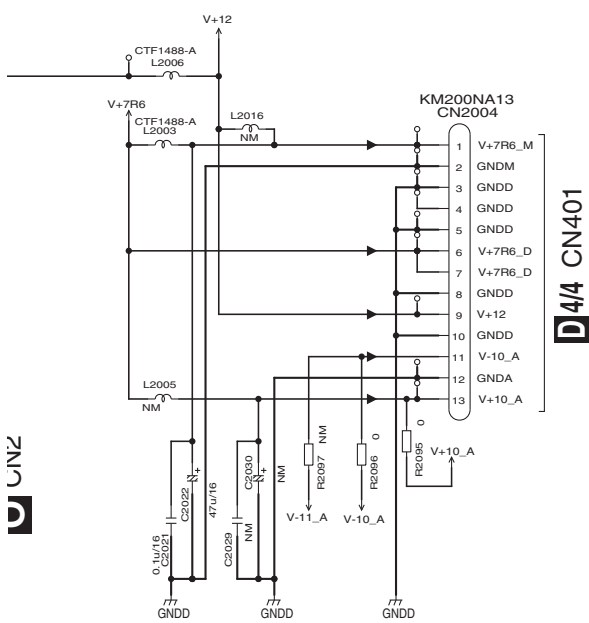
Th ind Th of



NOTES

- NM NO MOUNT
- CKSRYB***K
- CCSRCH***J
- CEHVAW***M
- CEHVQW***M
- GNDD GND for Digital
- GNDF GND for Frame

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

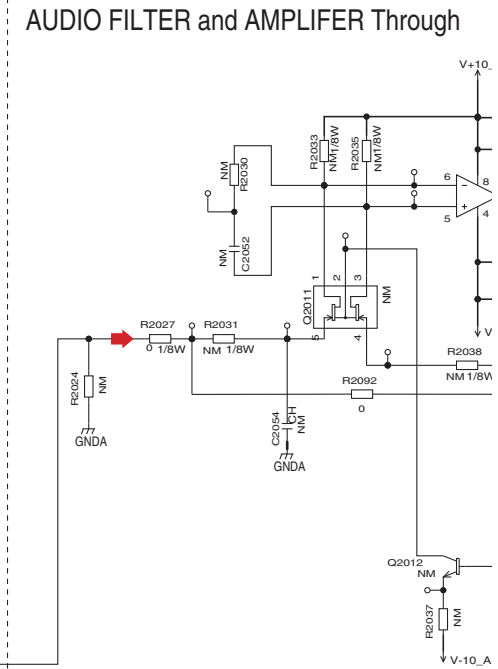
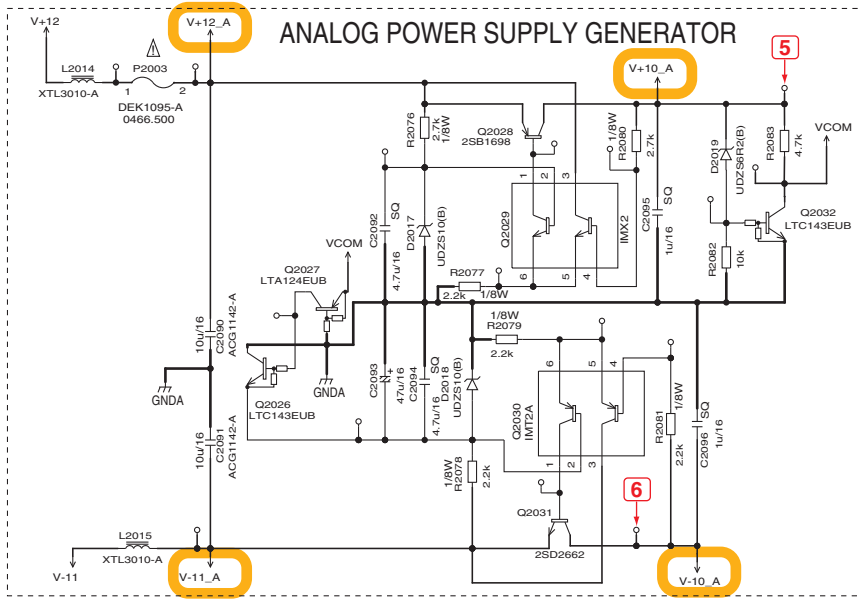


The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

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

10.7 CMPX ASSY (2/2)

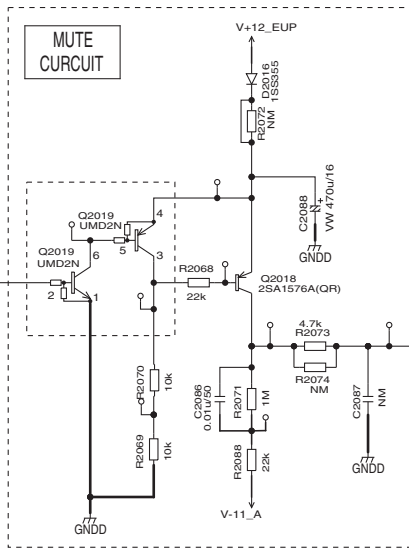
E 2/2 CMPX ASSY (DWX3153)



E 1/2



PANEL_XMUTE			
MUTE_HOST (MAIN/ALTE)	Low	HiZ	Hi
Low	MUTE	-	MUTE
HiZ	MUTE	MUTE	OPEN
Hi	MUTE	-	OPEN



- ➔ : Analog Audio Signal Route
- ➔ : USB_D_N Signal Route
- ➔ : USB_DP Signal Route
- ➔ : USB_D_P Signal Route
- ➔ : CONTROL1 Signal Route
- ➔ : CONTROL2 Signal Route
- : Voltage Measuring Point
- : Signal Level Point

E 1/2



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

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

**CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE WITH SAME TYPE No.466.500 MFD. BY
LITTELFUSE INC. FOR P2003.**

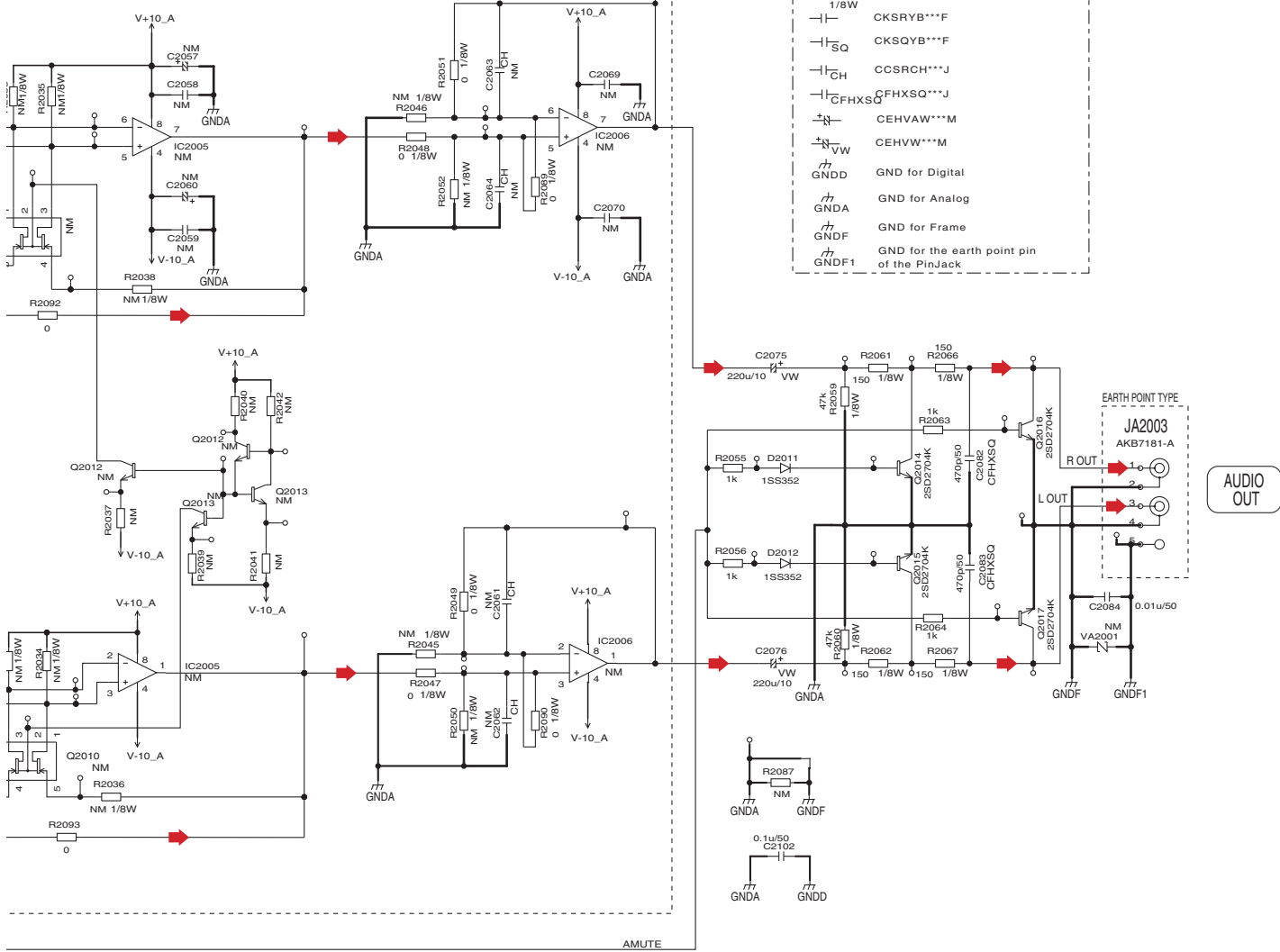
△印の
交換する
必ず指定

The △ r
indicates
Therefore
of identic

FER Through

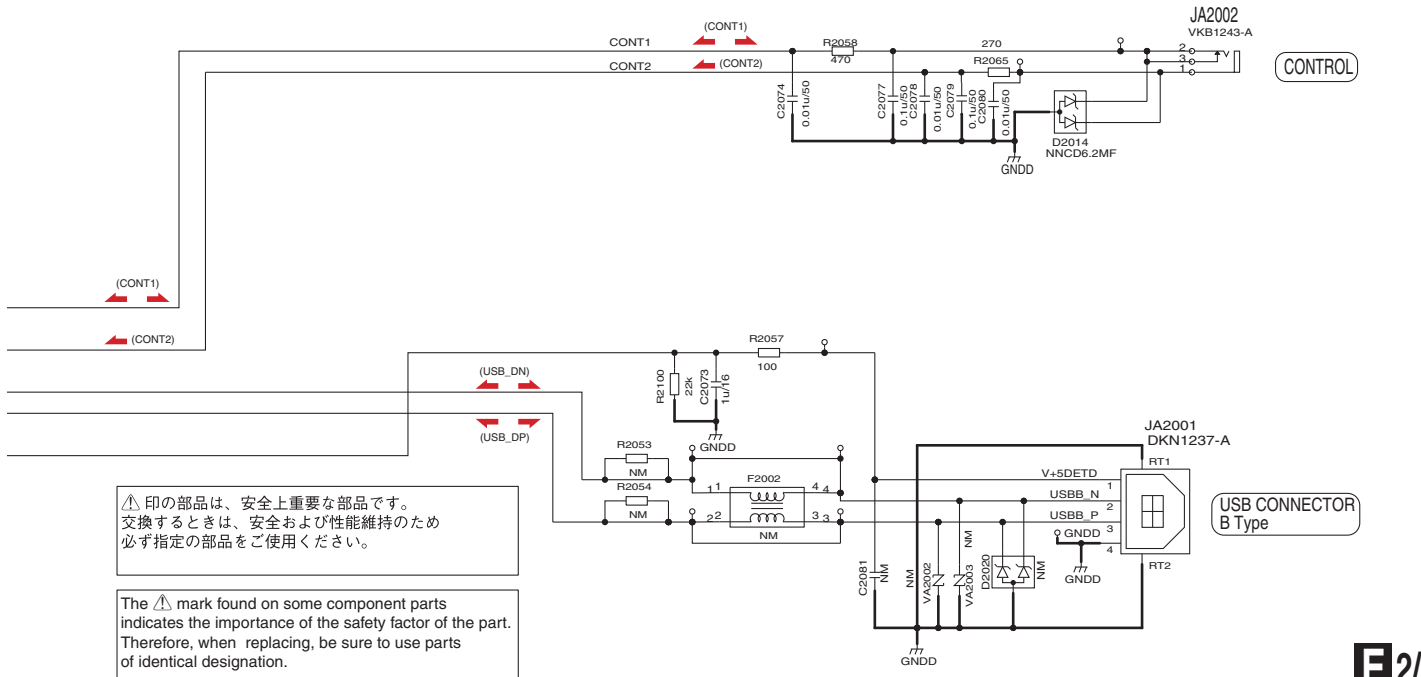
NOTES

NM	NO MOUNT
	RS1/10SR***J
	RS1/8SQ***J
	CKSRYB***F
	CKSQYB***F
	CCSRCH***J
	CFHXSQ***J
	CEHVAW***M
	CEHW***M
	GNDG
	GND for Digital
	GND for Analog
	GND for Frame
	GND for the earth point pin of the PinJack



AUDIO OUT

CONTROL



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

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

10.9 KSW1 and KSW2 ASSYS

NOTES

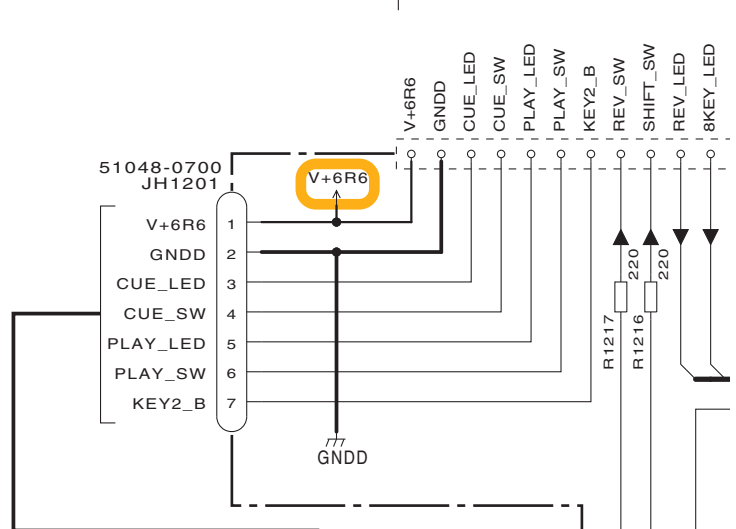
NM means STANDBY

RS1/10SR***J

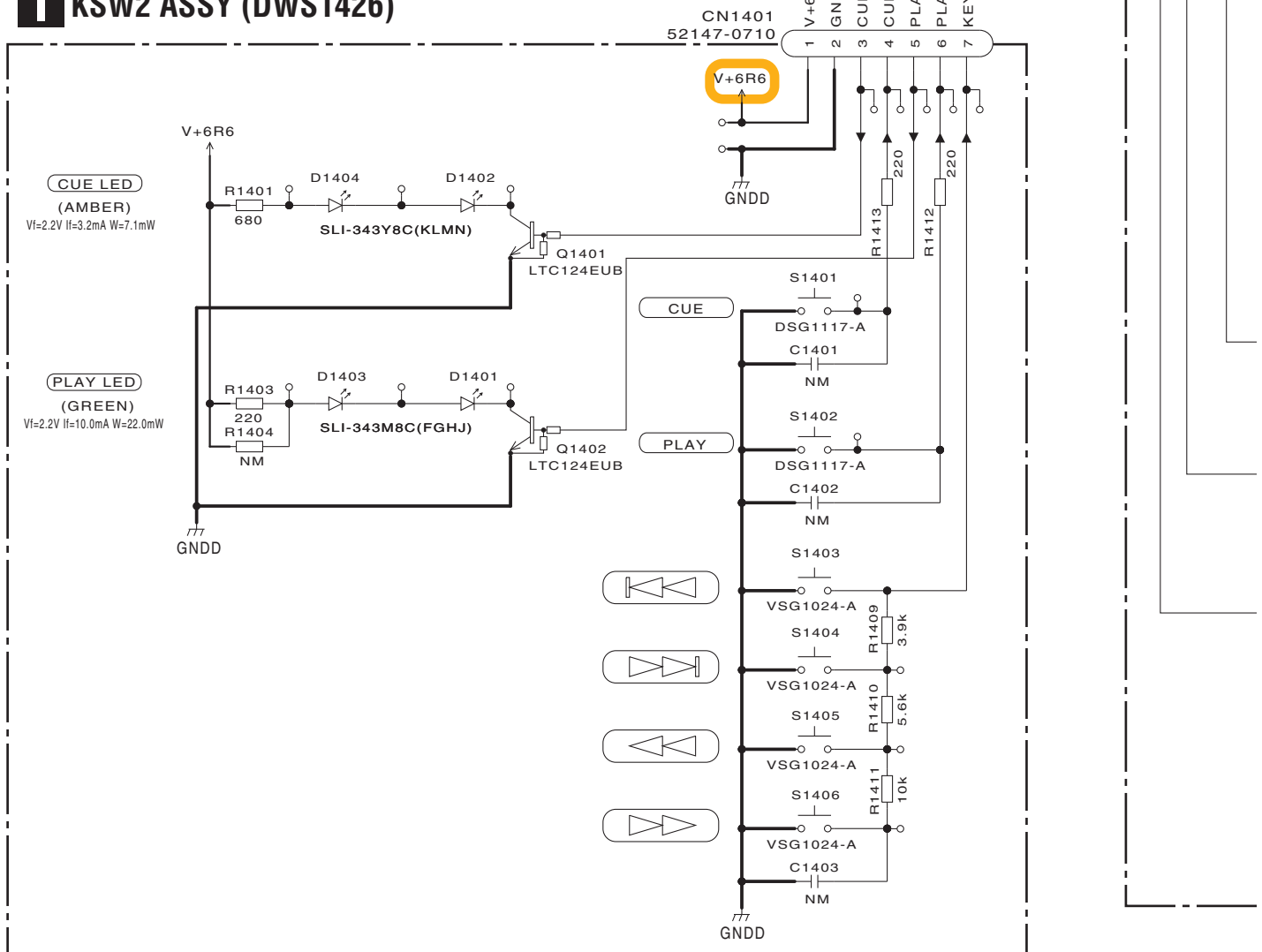
CKSRYB

***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 .

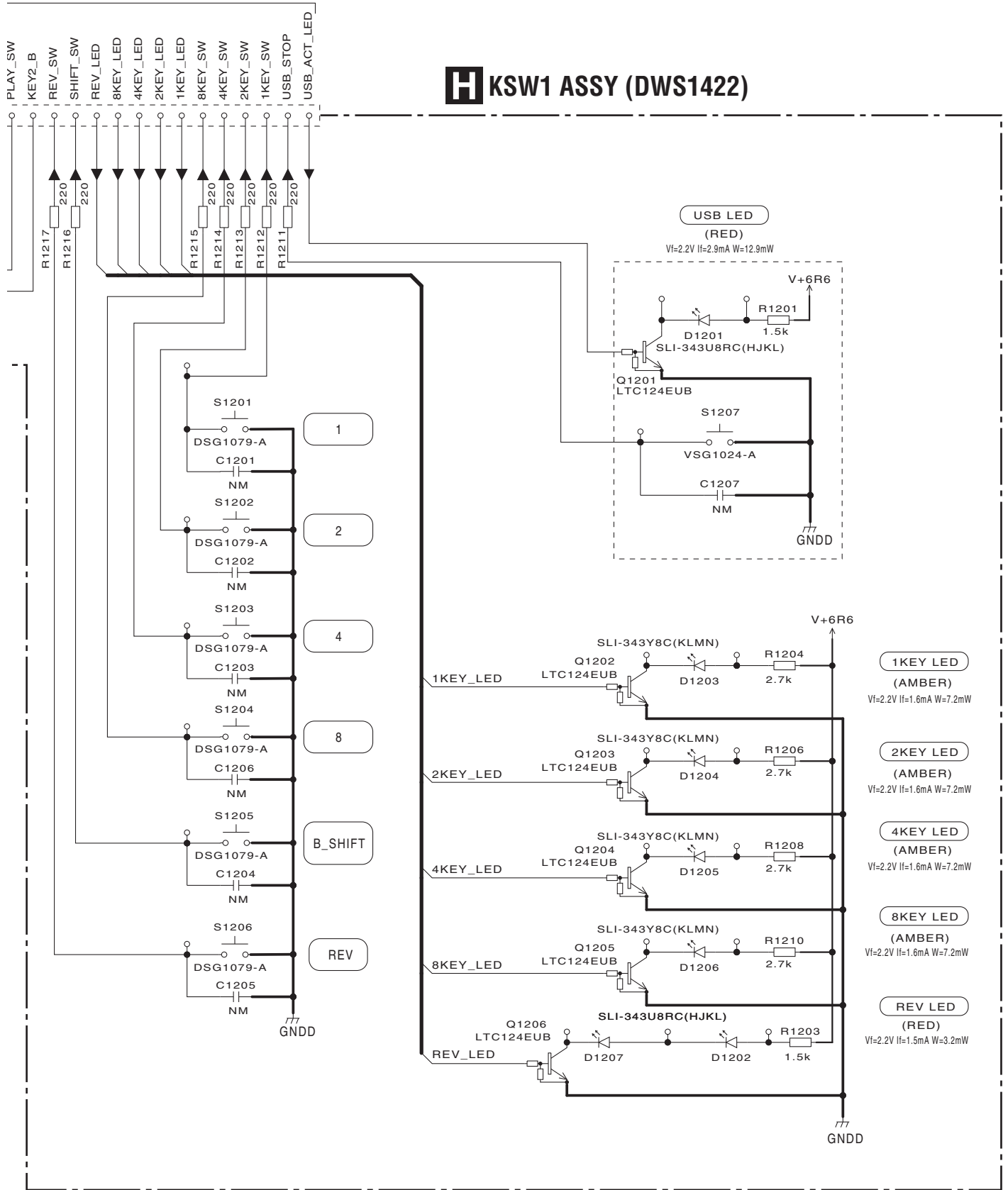


KSW2 ASSY (DWS1426)

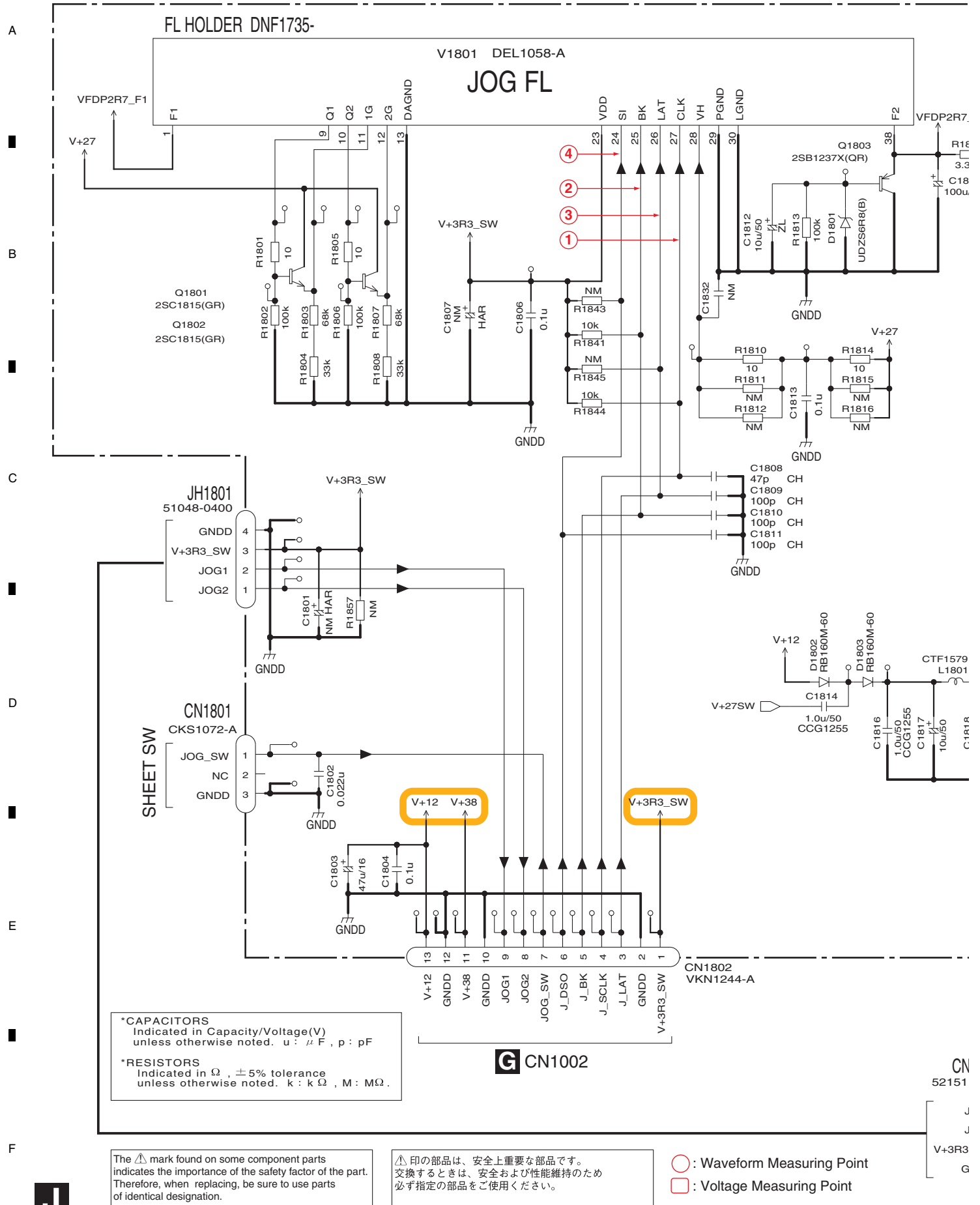


G-H JUMPER

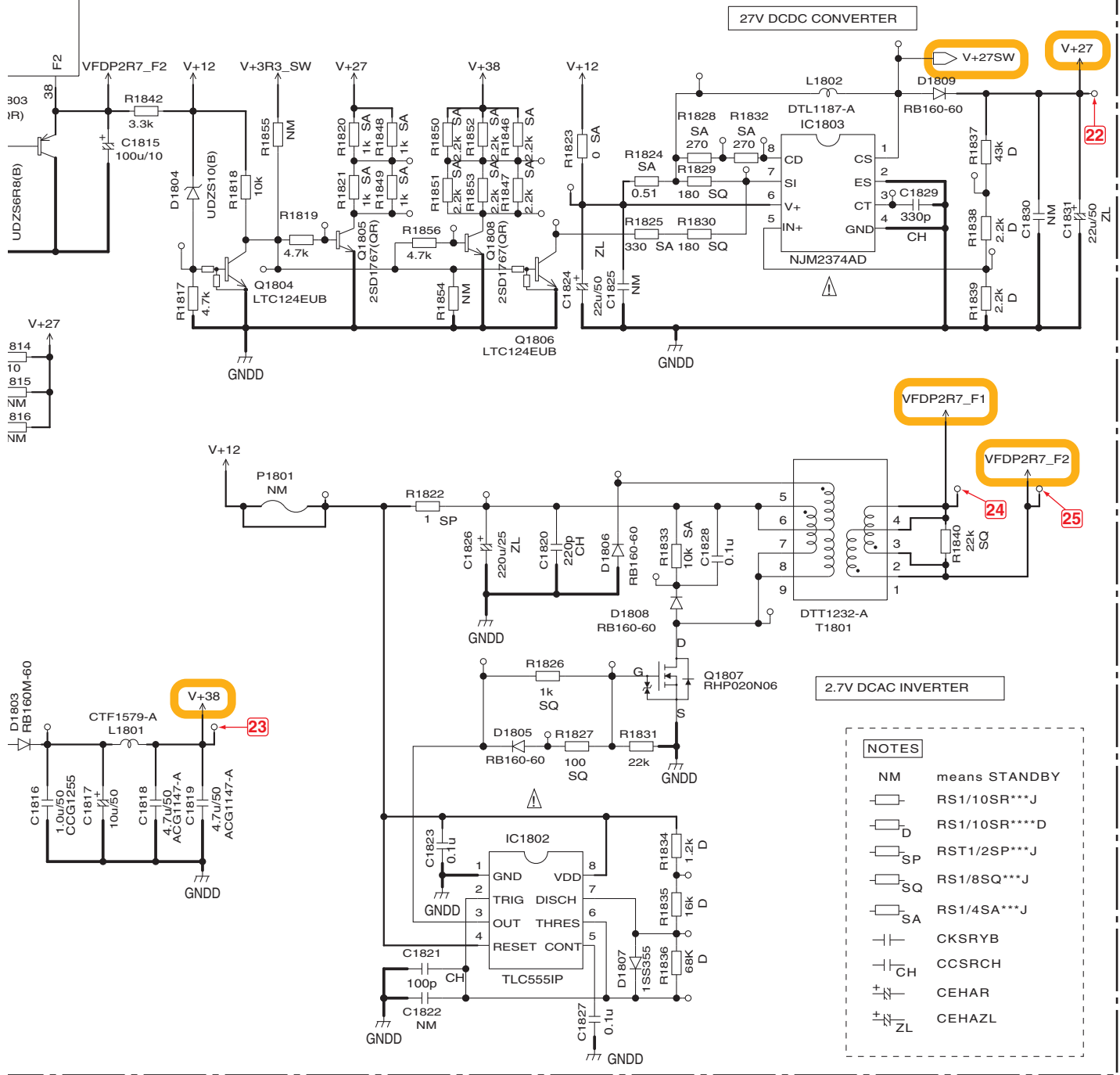
KSW1 ASSY (DWS1422)



10.10 JFLB and JOGB ASSYS

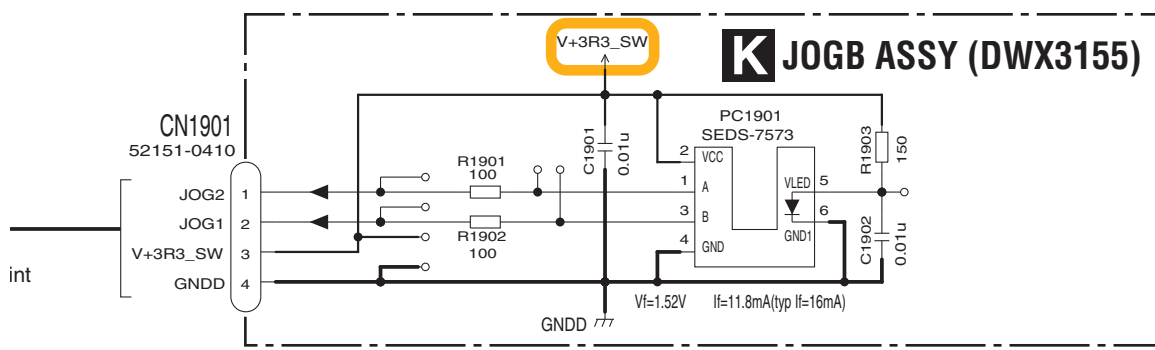


J JFLB ASSY (DWX3154)



NOTES	
NM	means STANDBY
RS1/10SR***J	
RS1/10SR***D	
RST1/2SP***J	
RS1/8SQ***J	
RS1/4SA***J	
CKSRYB	
CCSRCH	
CEHAR	
CEHAZL	

K JOGB ASSY (DWX3155)

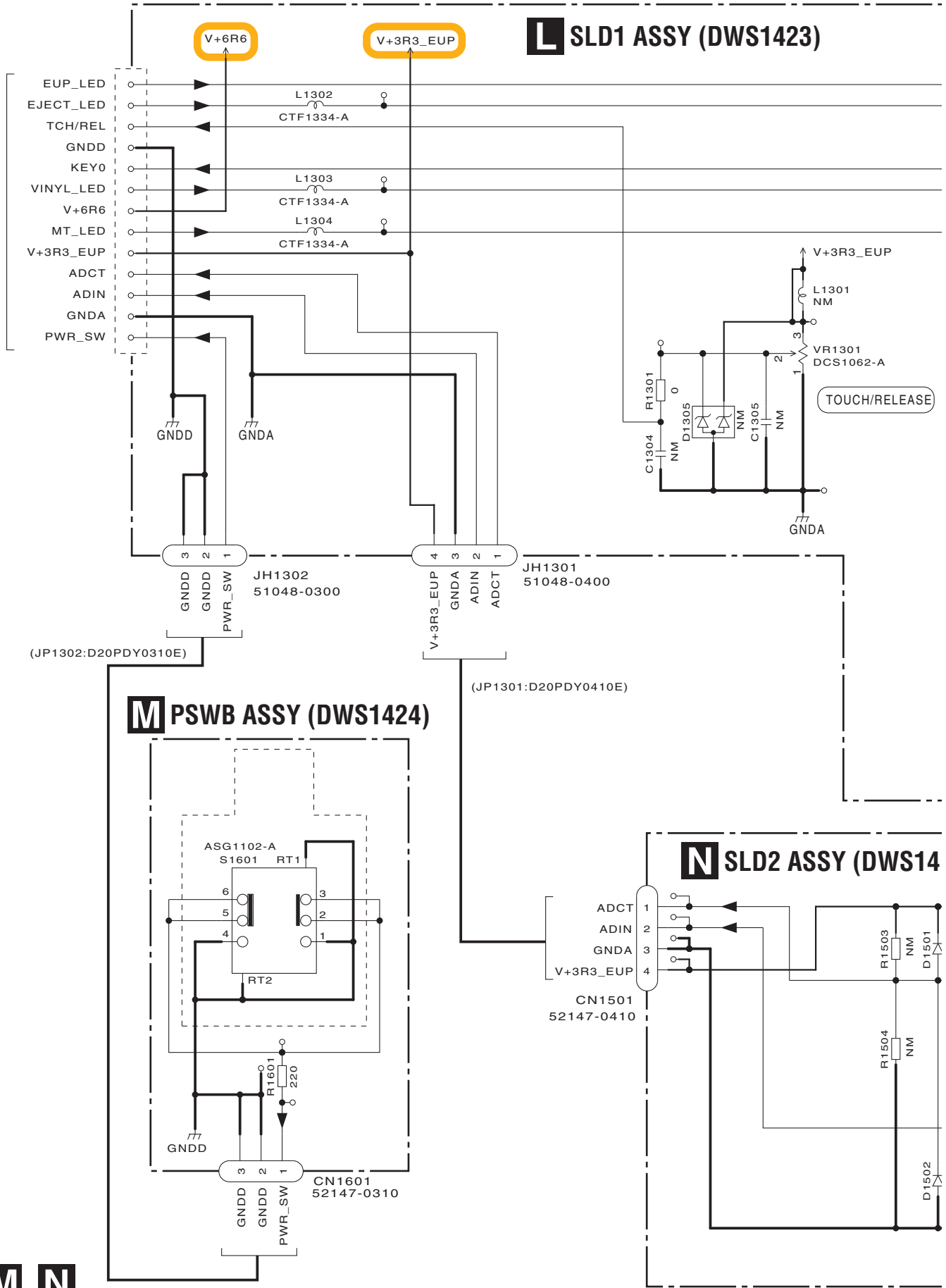


10.11 SLD1, PSWB and SLD2 ASSYS

1 2 3 4

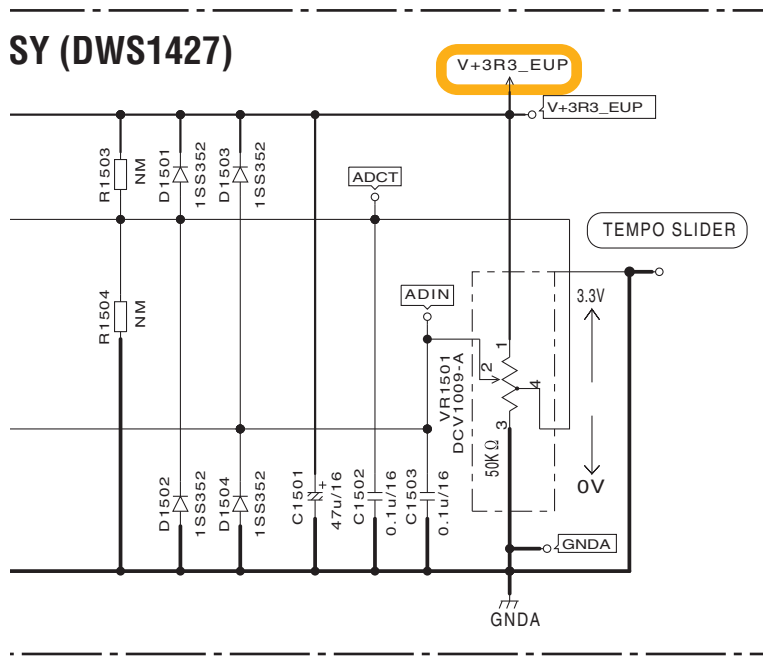
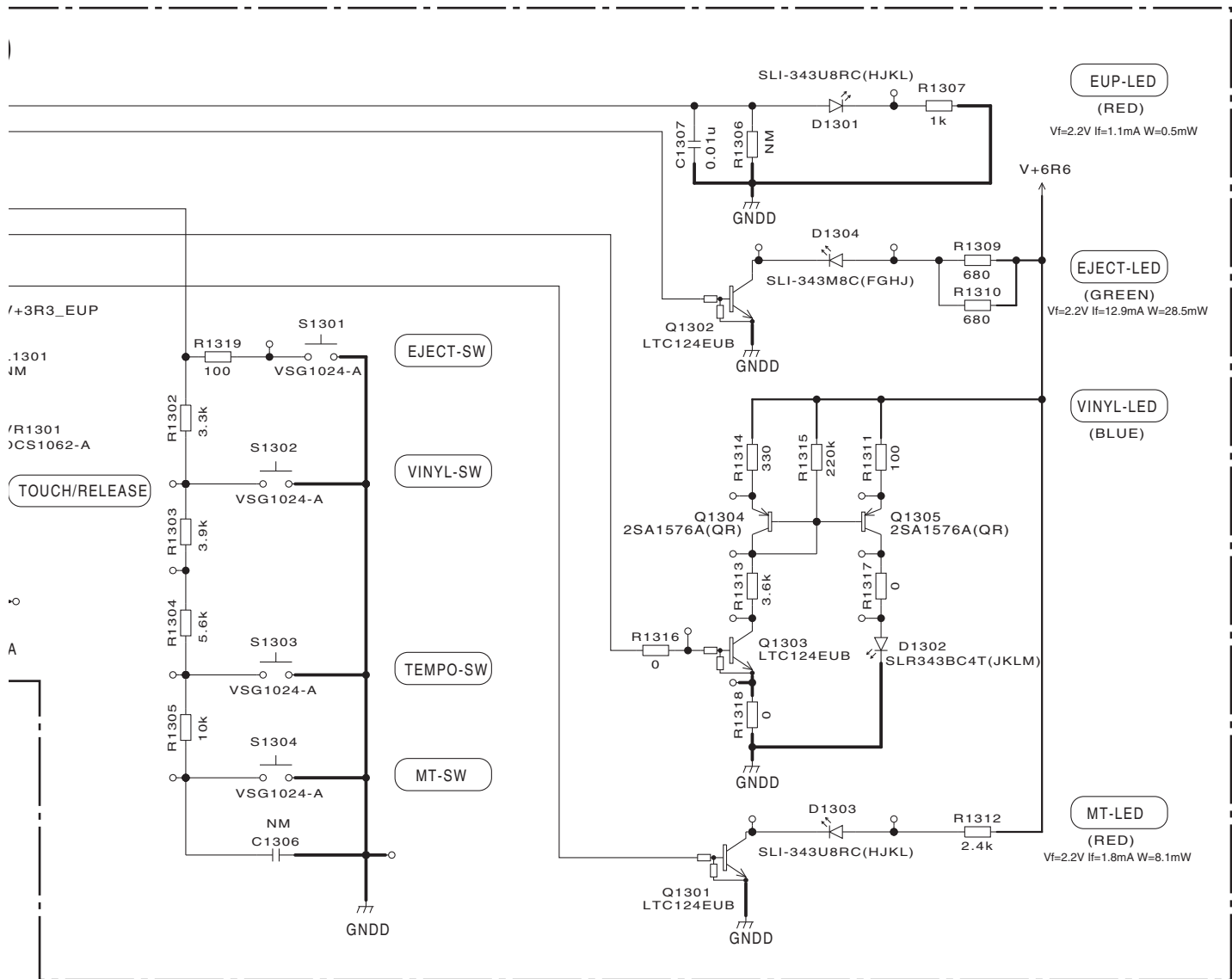
A
B
C
D
E
F

G-L JUMPER



L M N

1 2 3 4



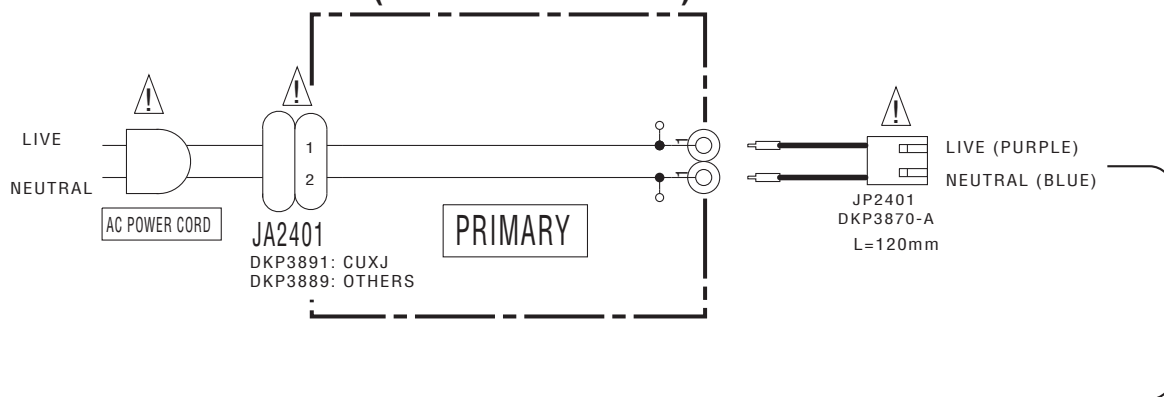
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u : μ F , p : p F

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

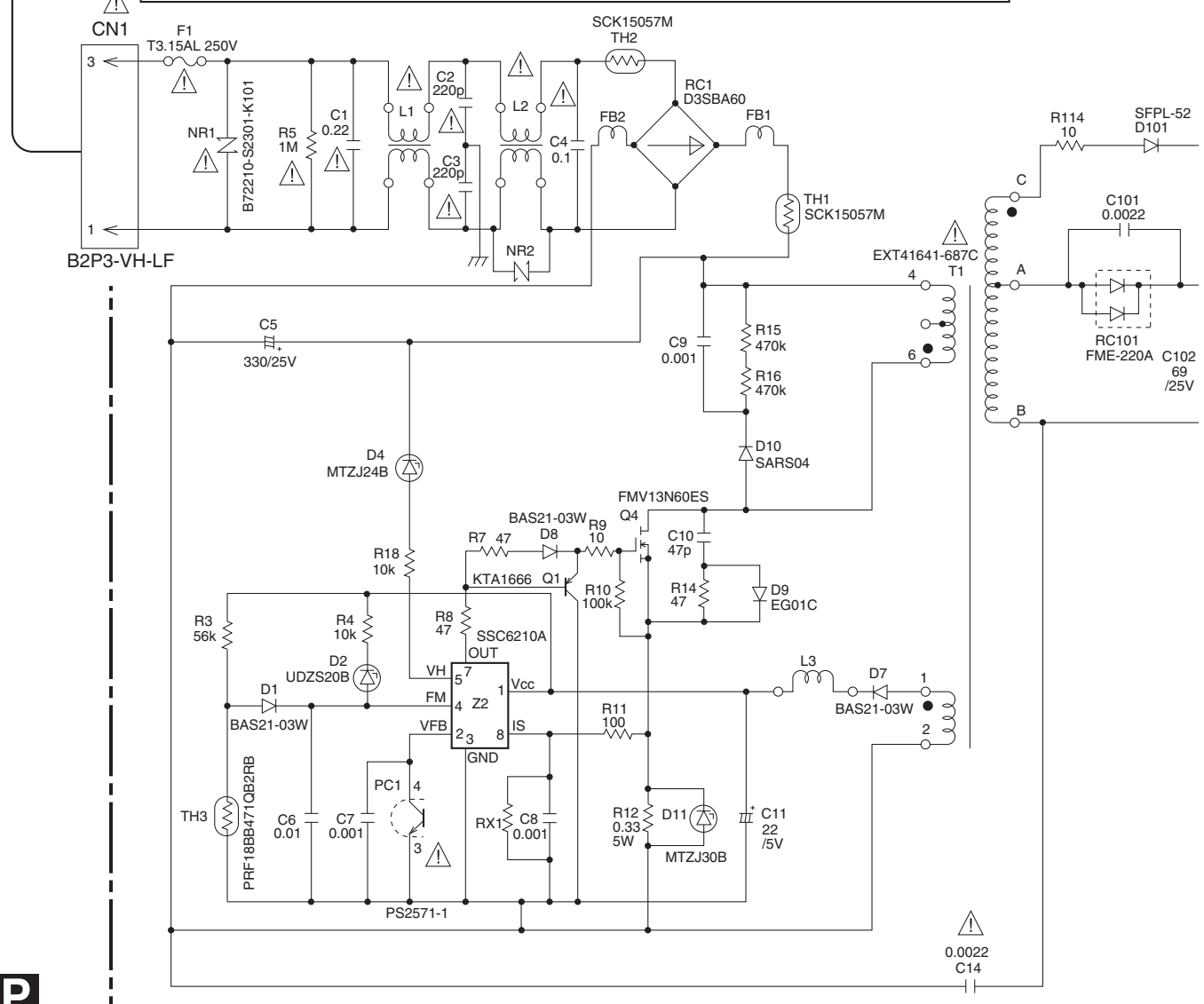
- NOTES
- NM means STANDBY
 - RS1/10SR***J
 - CKSRYB
 - CEJQ

10.12 POWER SUPPLY and ACIN ASSYS

ACIN ASSY (DWX3173: CUXJ) (DWX3158: OTHERS)

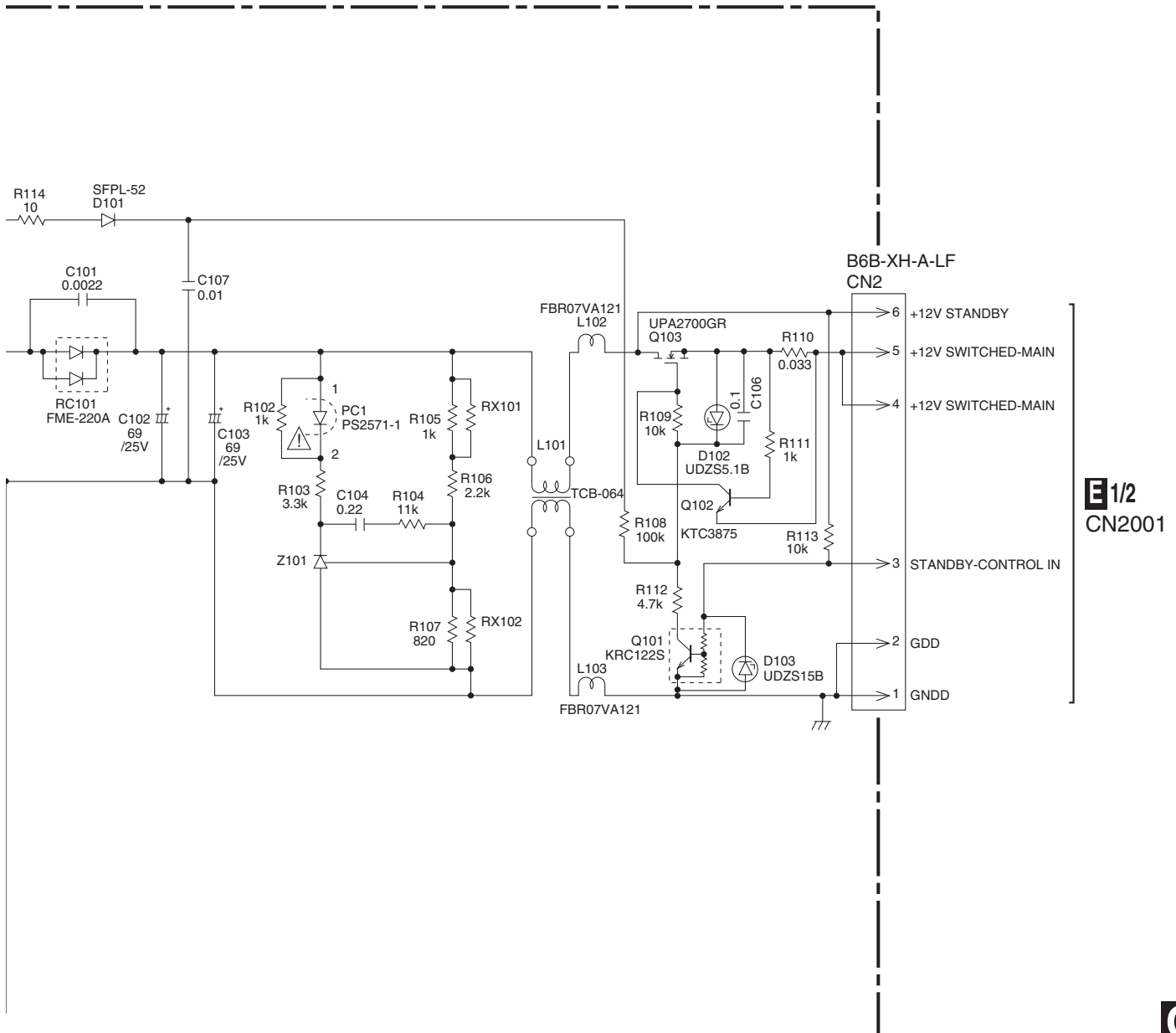


CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE NO. SST, 3.15A 250V MFD. BY NIPPON SEISEN CABLE LTD. FOR F1.



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.

⚠ **POWER SUPPLY ASSY (DWR1463)**



E1/2
CN2001



10.13 VOLTAGES

E CMPX ASSY

Point to be checked	Name	Normal voltage level	Possible defective point when a voltage error is generated	STANDBY (At POWER SW is OFF)
1	V+12_EUP	11.4 to 12.6 V	POWER SUPPLY ASSY, IC1001	ON
2	V+12	11.4 to 12.6 V	POWER SUPPLY ASSY, MAIN ASSY, CMPX ASSY, DFLB ASSY, JFLB ASSY	OFF
3	V+7R6	7.22 to 7.98 V	IC2001, R2003-R2006	OFF
4	V-11	-9.9 to -12.1 V	IC2001, R2003-R2006	OFF
5	V+10_A	9.5 to 10.5 V	Q2028, D2017, IC303	OFF
6	V-10_A	-9.5 to -10.5 V	Q2031, D2018, IC303	OFF
7	V+5_USB	4.95 to 5.05 V	IC2002	OFF

D MAIN ASSY

Point to be checked	Name	Normal voltage level	Possible defective point when a voltage error is generated	STANDBY (At POWER SW is OFF)
8	V+5R6	5.53 to 5.87 V	IC409	OFF
9	V+3R3	3.2 to 3.4 V	IC401	OFF
10	V+1R2	1.19 to 1.21 V	IC404, R426, R427	OFF
11	V+3R3_A	3.27 to 3.33 V	IC402, IC302, IC301	OFF
12	V+1R25	1.24 to 1.26 V	IC403, R421, R422	OFF
13	V+5R6_M	5.54 to 5.66 V	IC206	OFF
14	V+3R3_S	3.27 to 3.33 V	IC408	OFF
15	VREF1R65	1.57 to 1.73 V	IC201, IC408	OFF
16	V+5_A	4.95 to 5.05 V	IC406	OFF
17	V-AUDIO (V-10_A)	-9.5 to -10.5 V	Q2031, D2018, IC303	OFF

G DFLB ASSY

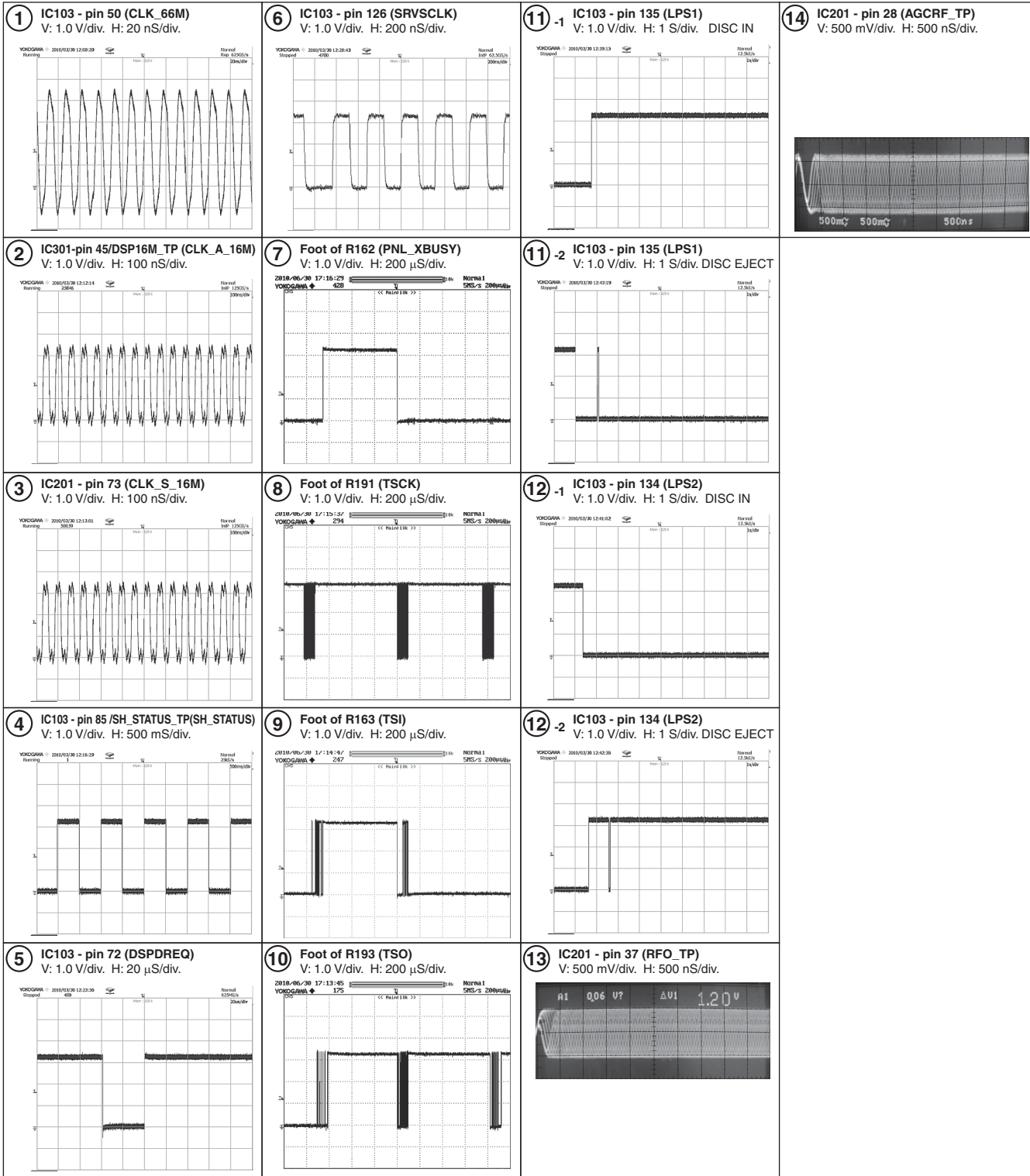
Point to be checked	Name	Normal voltage level	Possible defective point when a voltage error is generated	STANDBY (At POWER SW is OFF)
18	V+3R3_EUP	3.27 to 3.33 V	IC1001, IC1007	ON
19	V+3R3_SW	3.27 to 3.33 V	Q1018, V1001, V1801	OFF
20	V+6R6	6.53 to 6.67 V	IC1006, V1001, LED	OFF
21	F+	2.4 to 2.6 V	V1001, R1142, R1144, Q1022	OFF

J JFLB ASSY

Point to be checked	Name	Normal voltage level	Possible defective point when a voltage error is generated	STANDBY (At POWER SW is OFF)
22	V+27	25.7 to 28.4 V	IC1803, R1837-1839	OFF
23	V+38	34.2 to 41.8 V	D1802, D1803, V1001	OFF
24	VFDP2R7_F1	AC2.7 V, DC7.1 to 7.8 V	IC1802, Q1807, T1801, D1801, Q1803	OFF
25	VFDP2R7_F2	7.1 to 7.8 V	D1801, Q1803	OFF

D MAIN ASSY

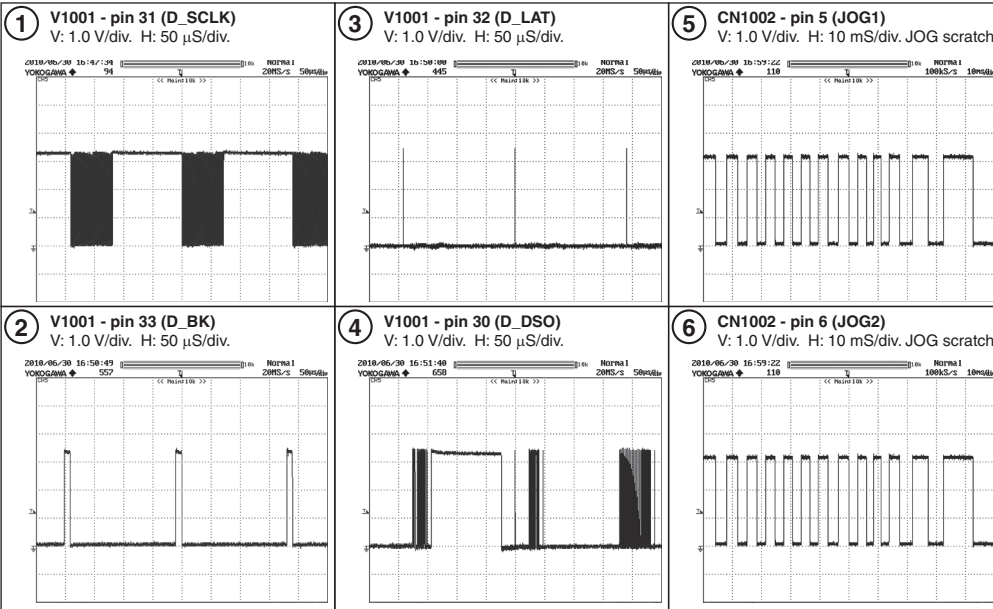
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram and PCB diagram.



A

G DFLB ASSY

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram and PCB diagram.

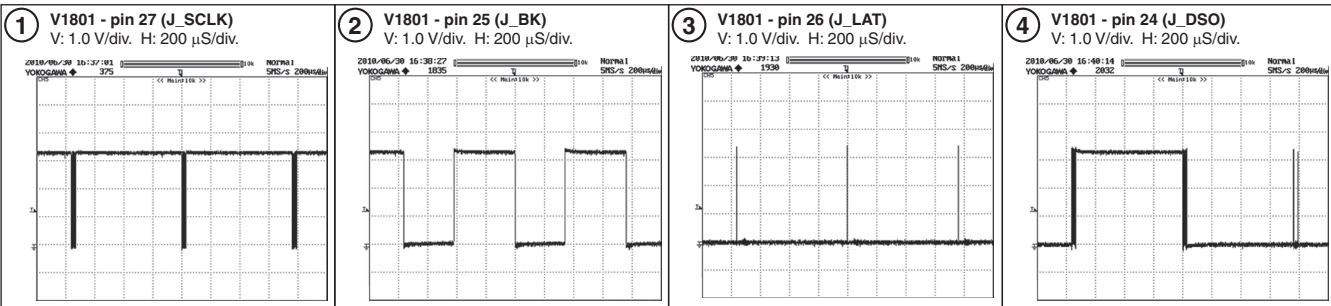


B

C

J JFLB ASSY

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram and PCB diagram.



D

E

F

10.15 EACH SIGNAL LEVEL

G DFLB ASSY

Point to be checked	Signal Name	Signal Level
A	PWR_SW	H (3.3 V): Switch OFF L (0 V): Switch ON
B	PWR_ON	H (3.3 V): Power ON L (0 V): Power OFF
—	PLAY/CUE/AUTO BEAT LOOP 1-4/BEAT SELECT/ REV/LOOP IN/OUT/RELOOP/ USB STOP/RENC_SW	H (3.3 V): When the buttons are not pressed L (0 V): When the buttons are pressed
C	ADCT	1.65 V
D	ADIN	3.3 V to 0 V: TEMPO slider + side to - side
E	TCH/REL	3.3 V to 0 V: Turn it from clockwise direction to counterclockwise direction
F	JOG_SW	H (3.3 V): When does not touch the JOG L (0 V): When touch the JOG
G	RESET(PNL_XRST)	H (3.3 V): Release PANEL CPU reset L (0 V): PANEL CPU reset

E CMPX ASSY

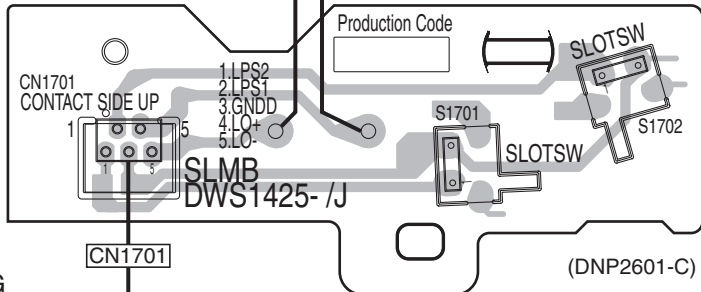
Point to be checked	Signal Name	Signal Level
H	AMUTE	H (12 V): Audio mute L (0 V): Release audio mute
I	MAIN_XMUTE	H (3.3 V): Release audio mute L (0 V): Audio mute
J	PWR_XON	H (3.3 V): Power OFF L (0 V): Power ON

D MAIN ASSY

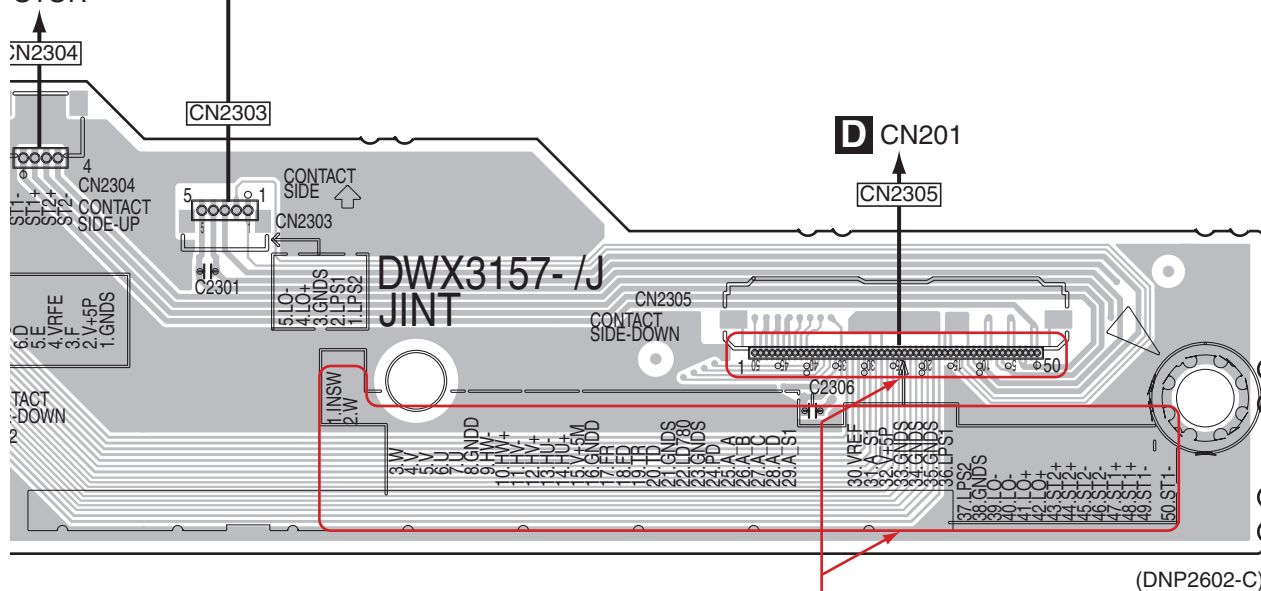
Point to be checked	Signal Name	Signal Level
K	USB_VBUSON	H (3.3 V): USB VBUS ON L (0 V): USB VBUS OFF
L	USB_CDETF LG	H (3.3 V): Normal L (0 V): Overcurrent detection
M	USB_ABSEL	H (3.3 V): USBA L (0 V): USBB
N	VBUS	H (5 V): External PC connection (at PC mode) L (0 V): External PC no connection (at PC mode)
O	INSW(INSIDE)	H (3.3 V): Pickup position is except for the most internal circumference. L (0 V): Pickup position is in the most internal circumference.
P	MAIN_XRST	H (3.3 V): Release MAIN CPU reset L (0 V): MAIN CPU reset
Q	DSRST	H (3.3 V): Release AUDIO DSP reset L (0 V): AUDIO DSP reset
R	SRVRST	H (3.3 V): Release SERVO DSP reset L (0 V): SERVO DSP reset
S	DRVMUTE1, 2	H (3.3 V): After the disc insertion L (0 V): The disc non-insertion
T	SPIN	1.65 V: In normal (At the acceleration of the start-up is around 3V.)

LOADING MOTOR ASSY-S

B SLMB ASSY

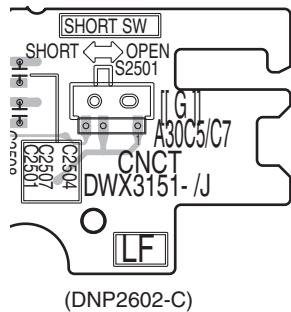


LOADING MOTOR



The pin No. indications (1 and 50) near the CN2305 connector and the pin numbers adjacent to the signal names are printed in reverse on the board. On the board, the leftmost pin is labeled Pin No. ① and the rightmost Pin No. ⑤①. However, the actual pin numbering is Pin No. ① at rightmost and Pin No. ⑤① at leftmost.

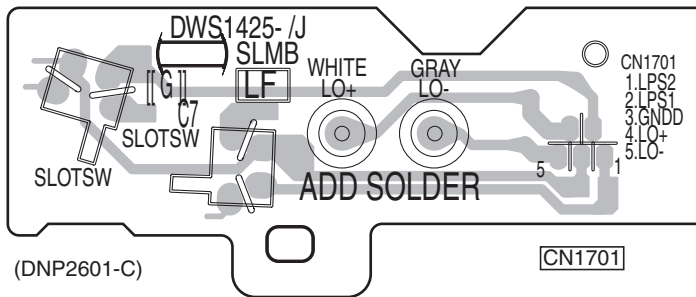
Note that only the printing of the pin numbers is wrong but that that of the signal names is correct. When performing diagnosis, be sure to interpret the pin numbers of the connector in reverse (enumerated right to left).



SIDE B

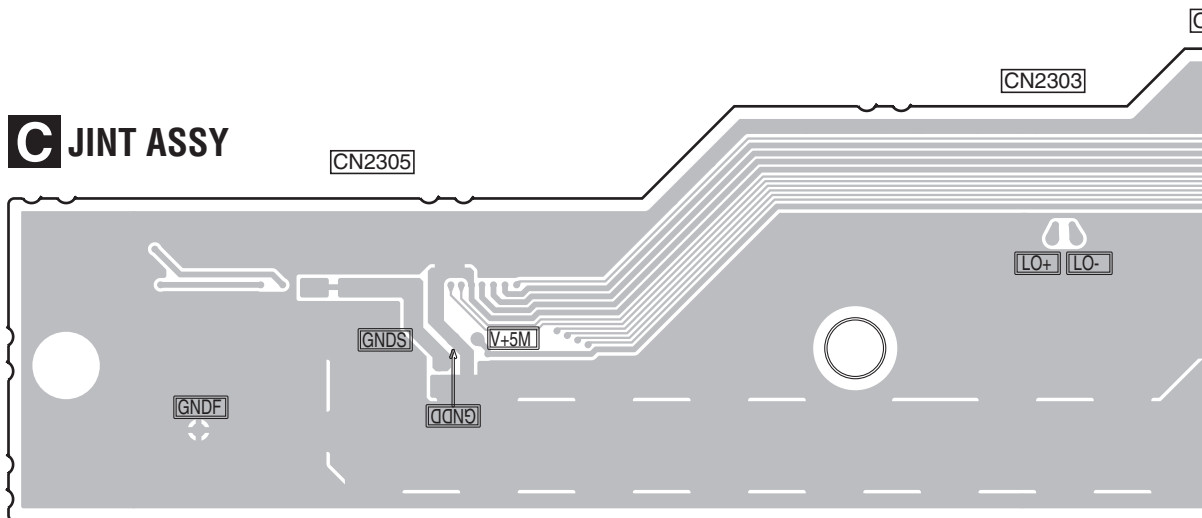
A

B SLMB ASSY



B

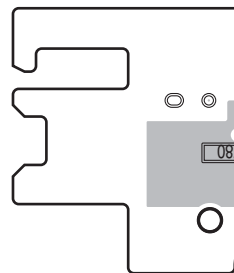
C JINT ASSY



C

D

A CNCT ASSY



E

F

A B C

SIDE B

A

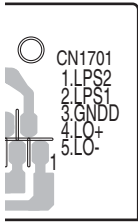
B

C

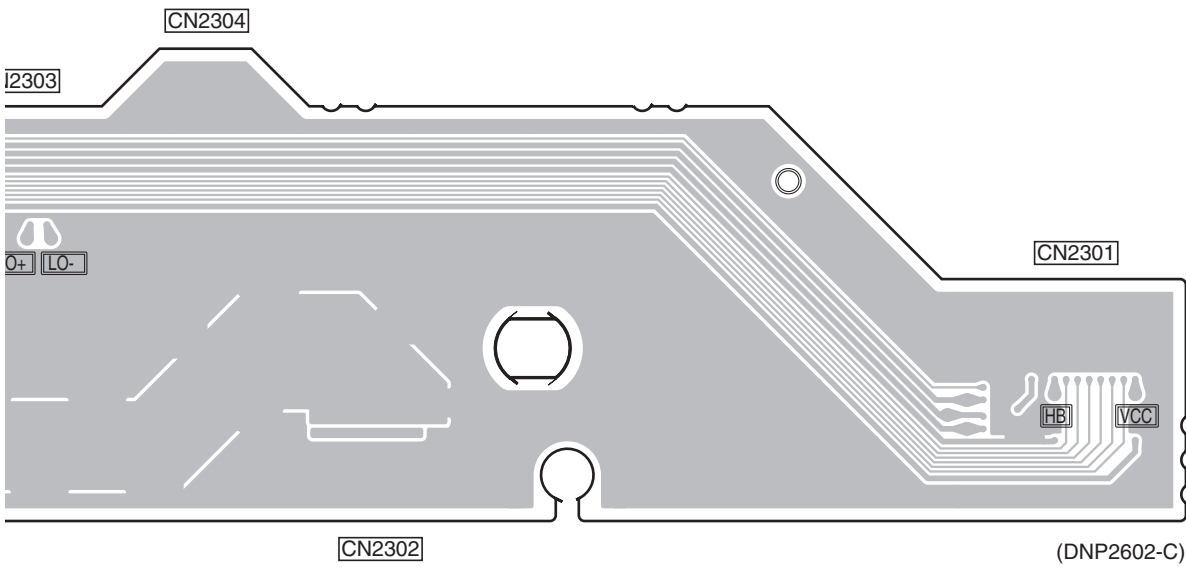
D

E

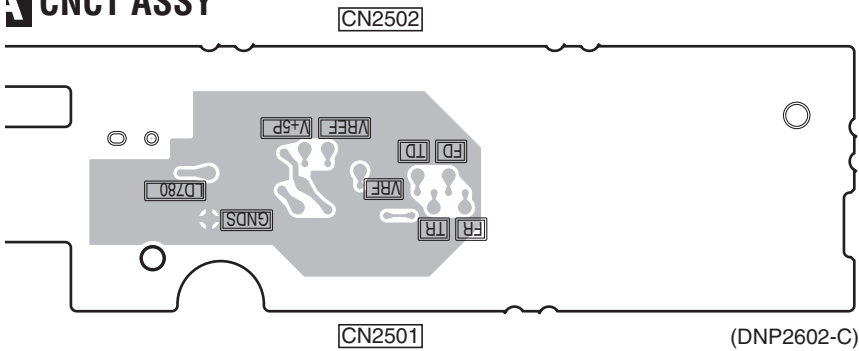
F



U1701



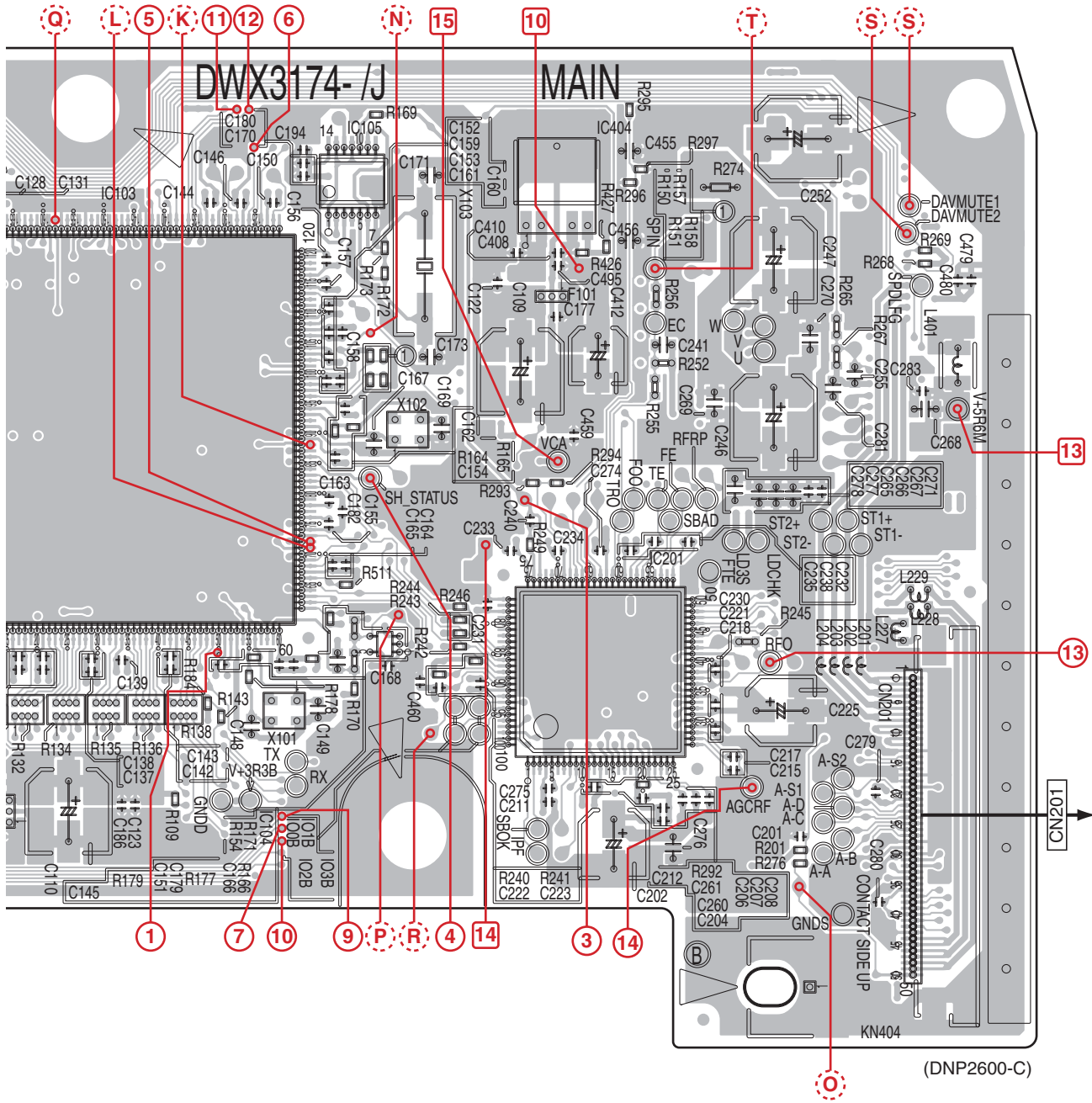
CNCT ASSY



SIDE A

注意: ○で囲まれた数字は各測定ポイントの番号を示します。

NOTE: The encircled numbers denote measuring point.



IC103

IC105
IC104

IC404
IC201

CDJ-850

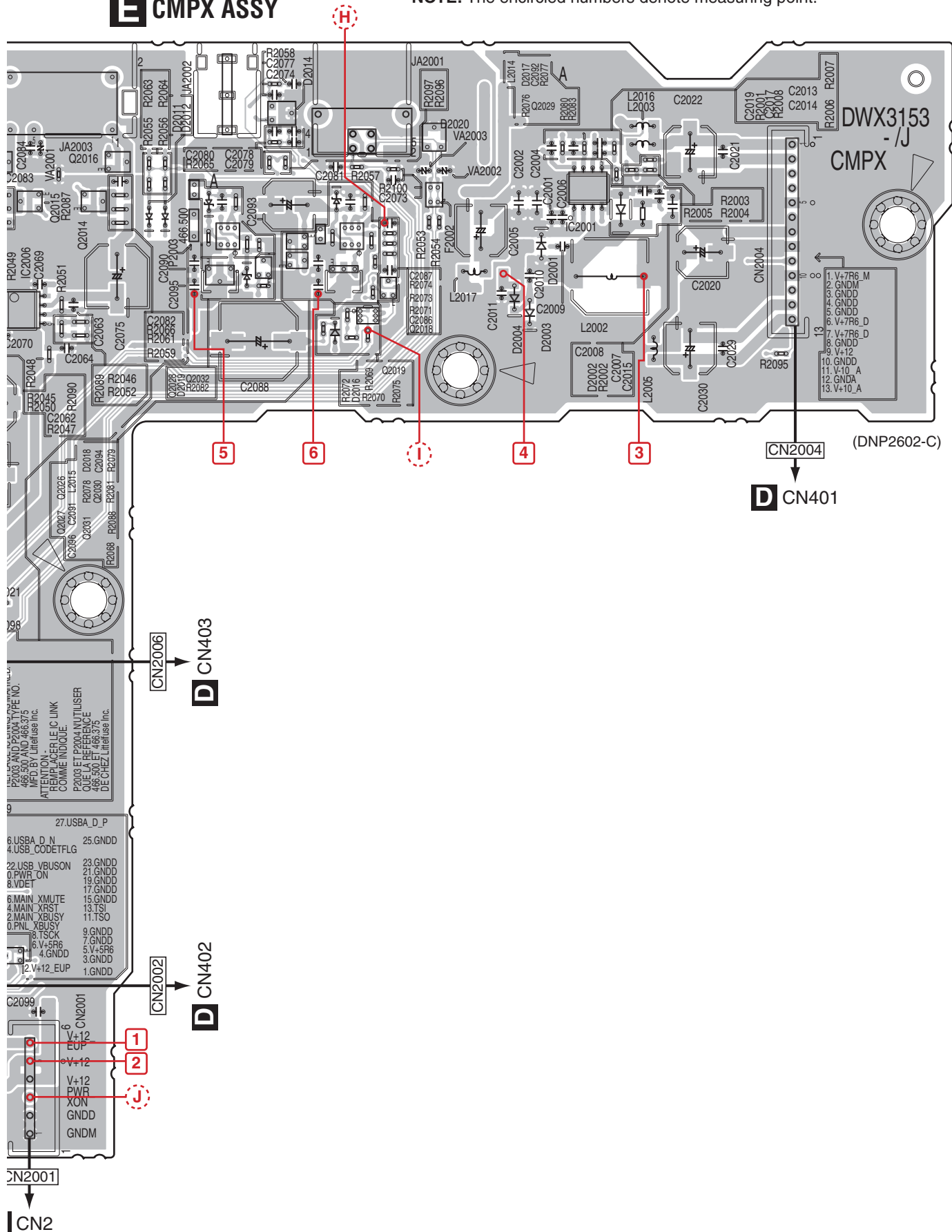
D

SIDE A

注意: ○で囲まれた数字は各測定ポイントの番号を示します。

NOTE: The encircled numbers denote measuring point.

E **CMPX ASSY**

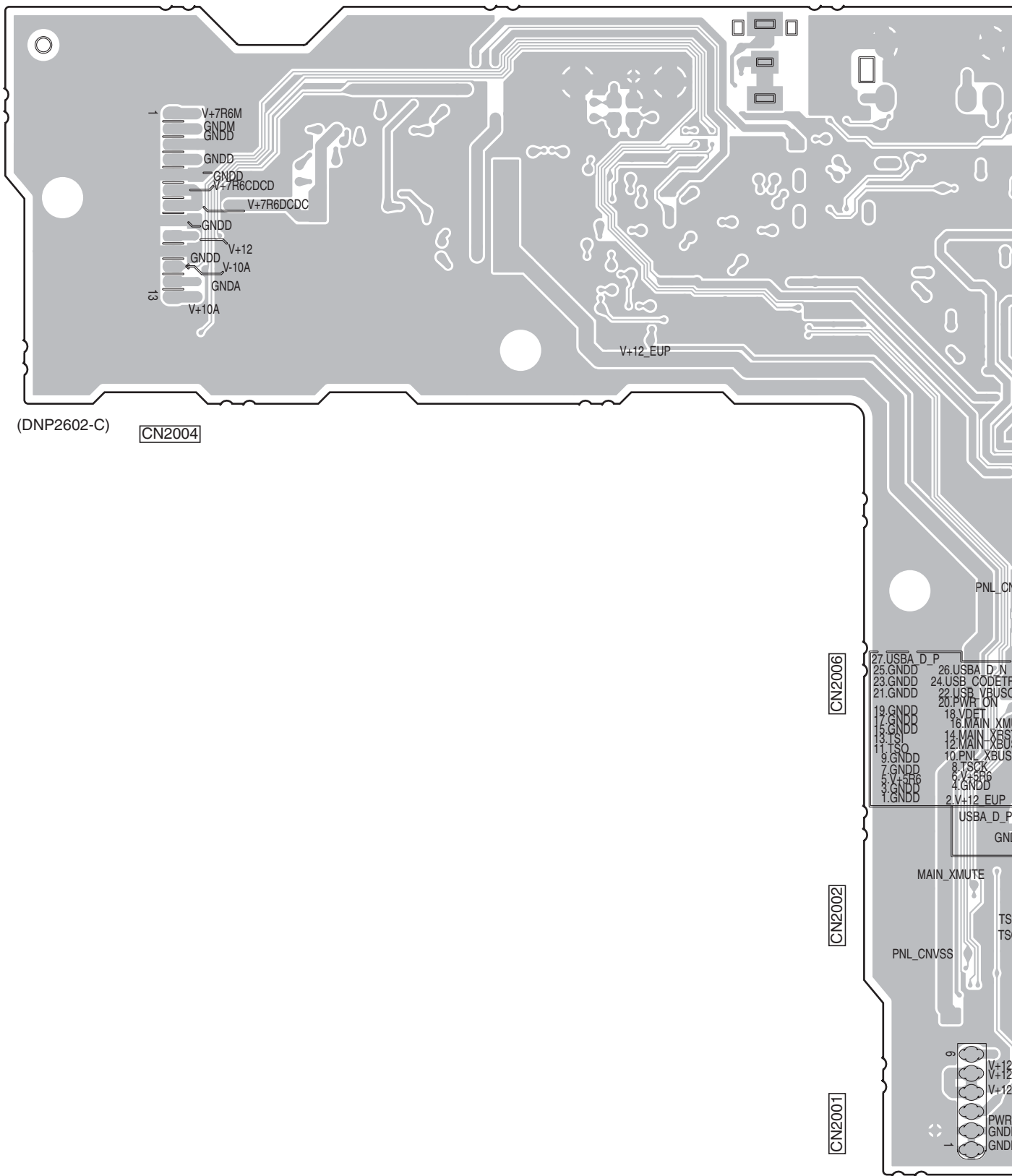


E

SIDE B

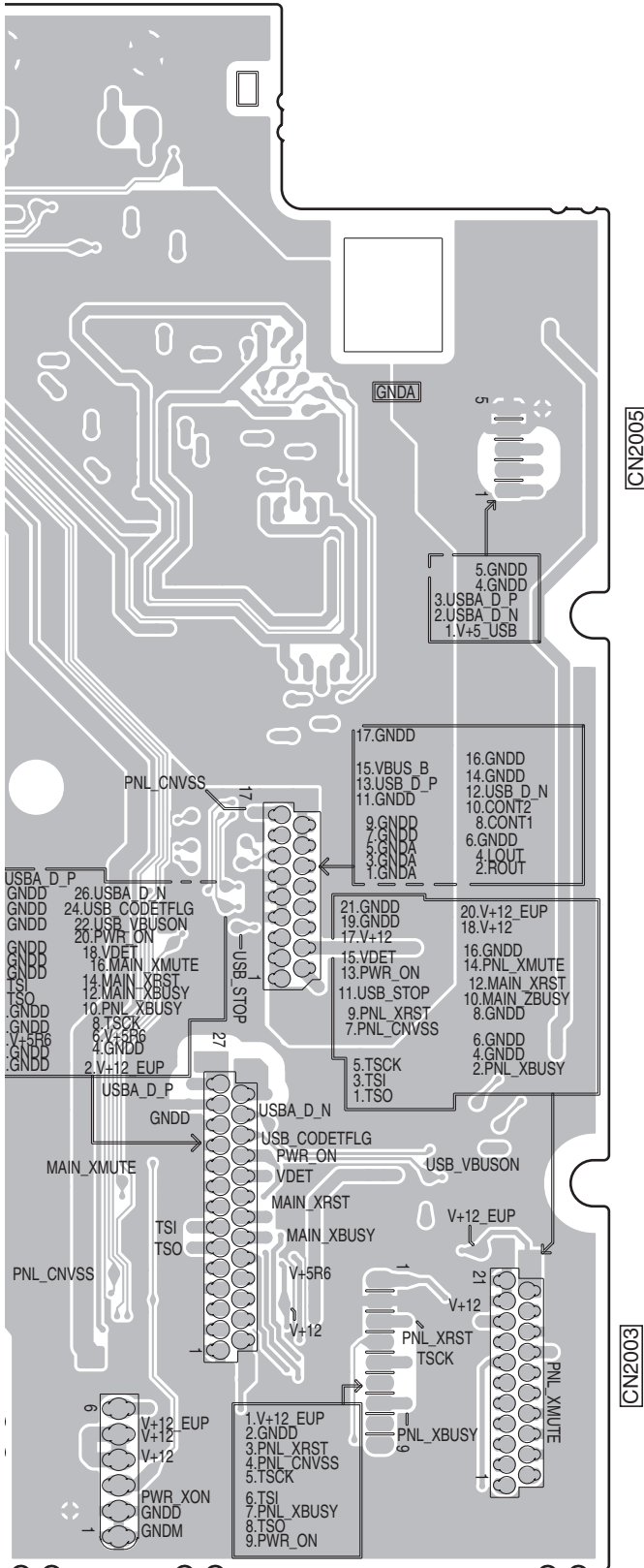
E CMPX ASSY

A
B
C
D
E
F

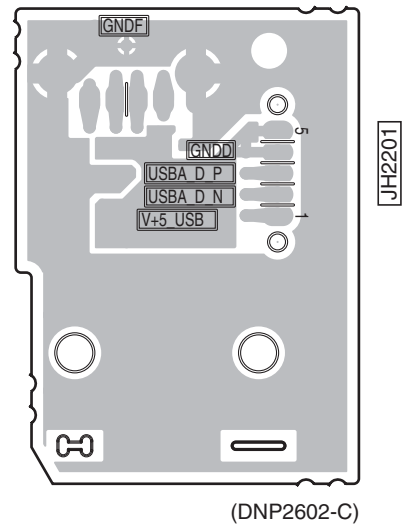


SIDE B

A
B
C
D
E
F



F USBA ASSY

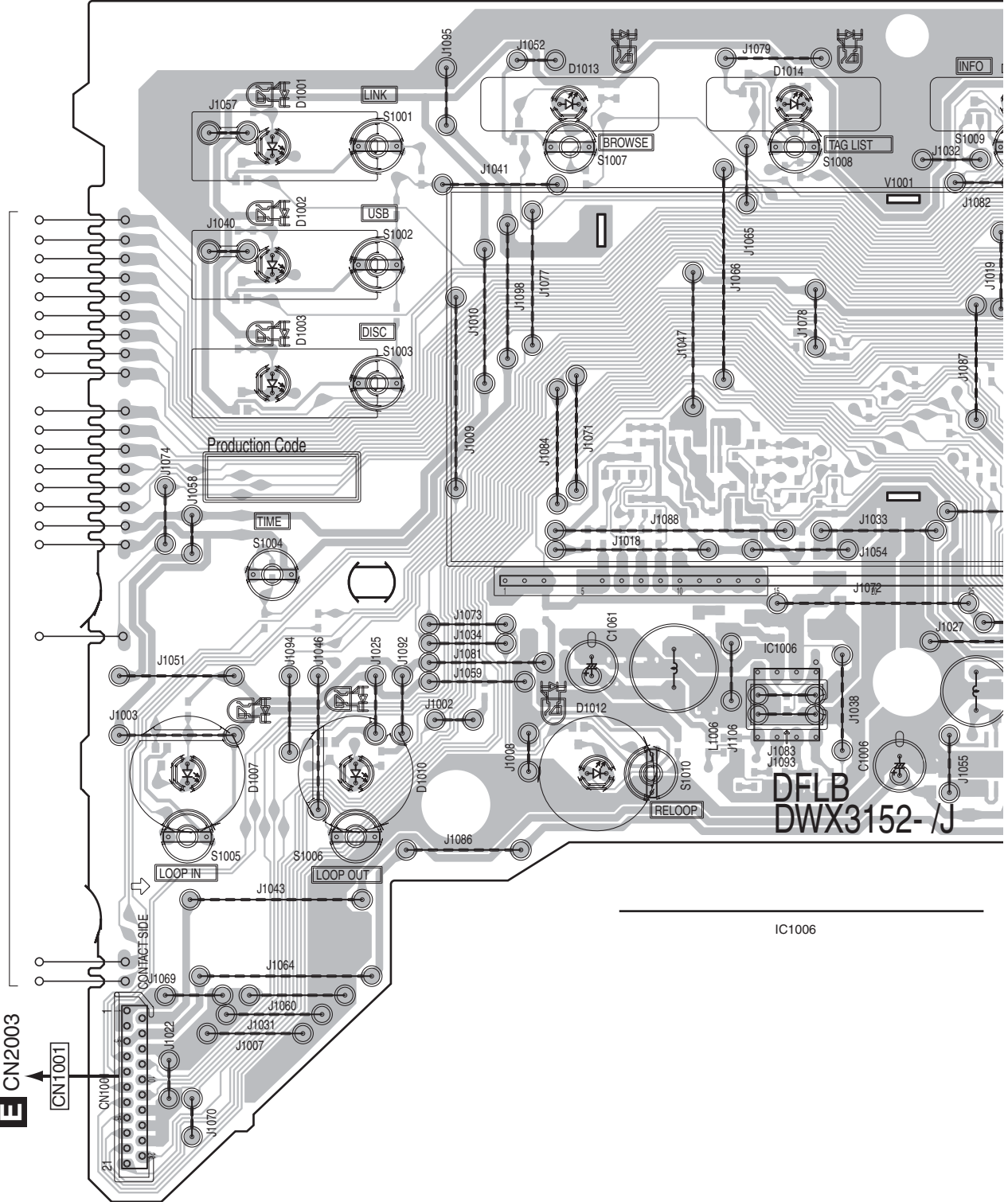


11.4 DFLB ASSY

SIDE A

G DFLB ASSY

G-H JUMPER



IC1006

G

SIDE A

A

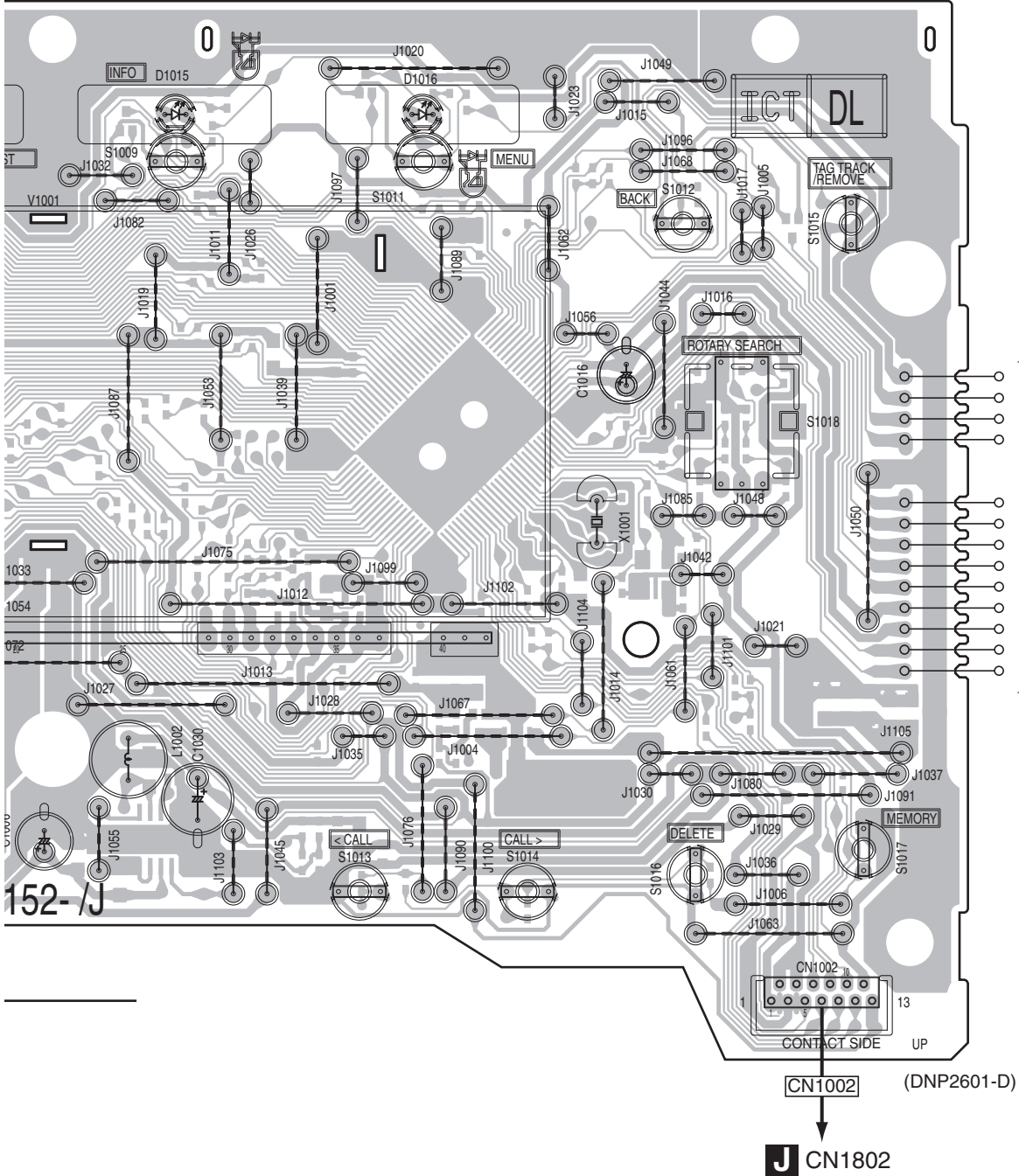
B

C

D

E

F



G-L JUMPER

CN1002 (DNP2601-D)

J CN1802

A

B

C

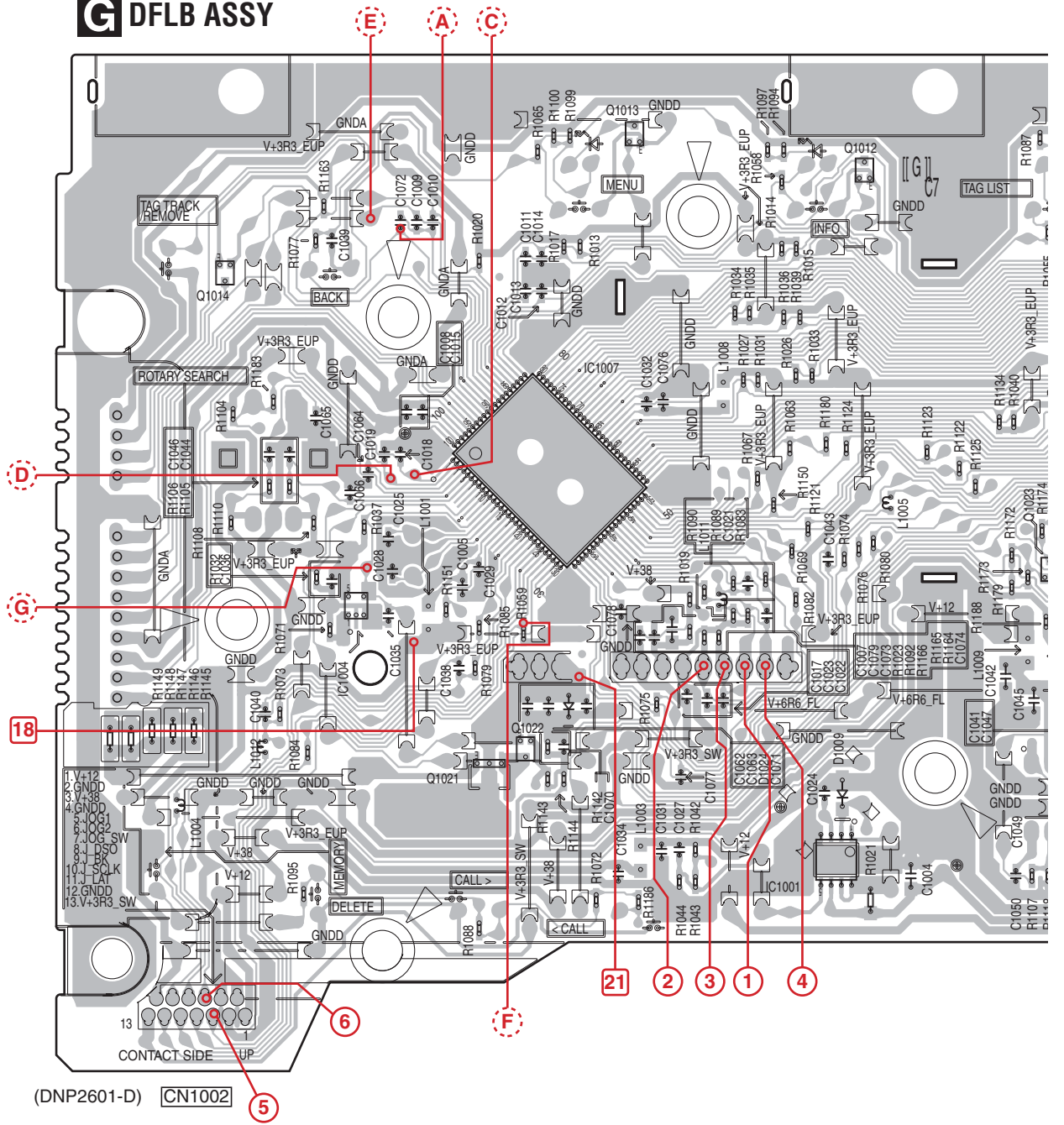
D

E

F

Q1014 IC1004 Q1021 Q1022 IC1007 Q1013 Q1012 IC1001 Q102

G DFLB ASSY



注意: ○で囲まれた数字は各測定ポイントの番号を示します。

NOTE: The encircled numbers denote measuring point.

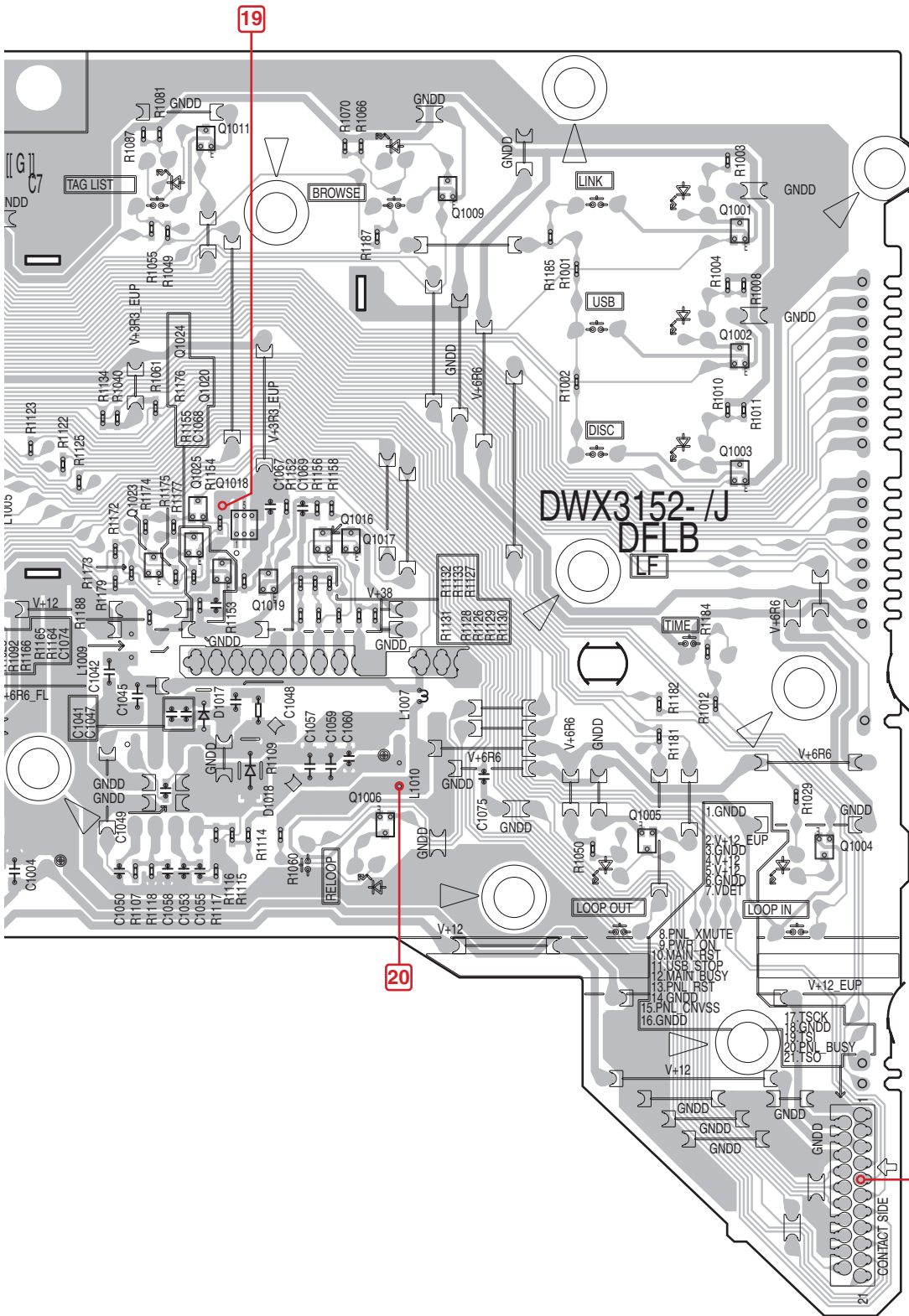
1

2

3

4

Q1011 Q1009 Q1001
 Q1025 Q1018 Q1016 Q1017 Q1002 Q1003
 Q1023 Q1024 Q1020 Q1019 Q1006 Q1005 Q1004



CDJ-850

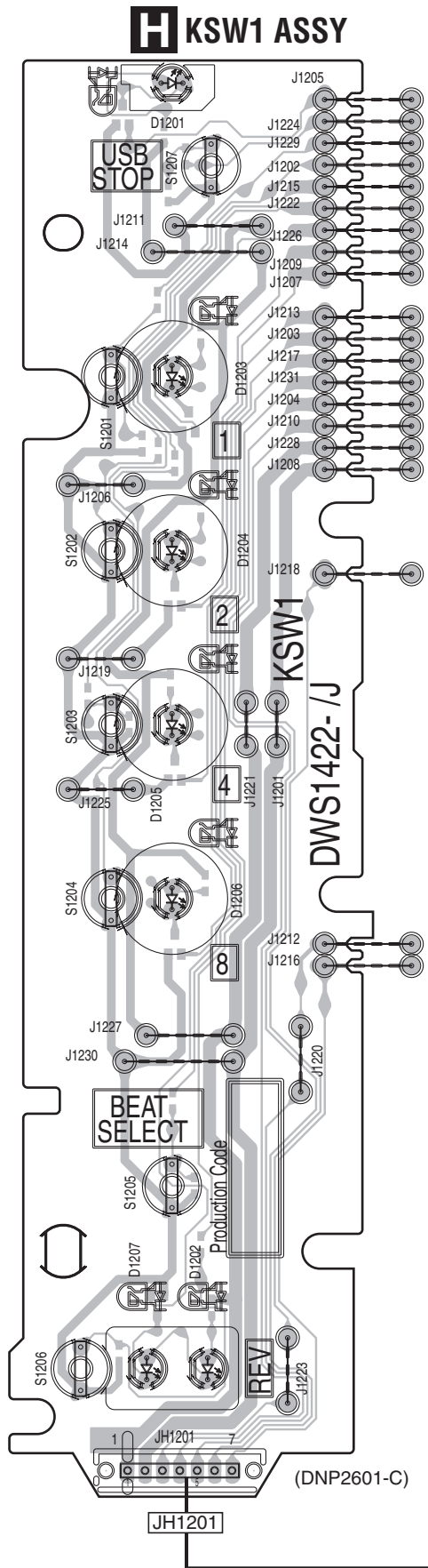


11.5 KSW1 and KSW2 ASSYS

SIDE A

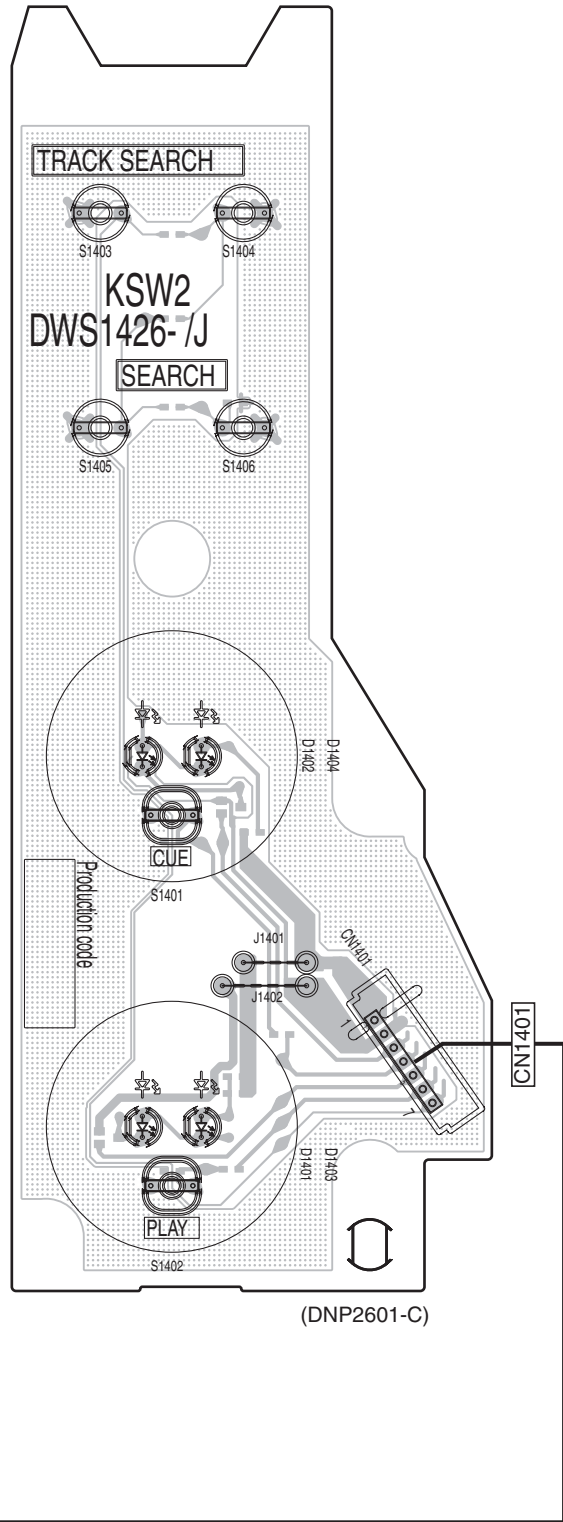
SIDE A

A
B
C
D
E
F



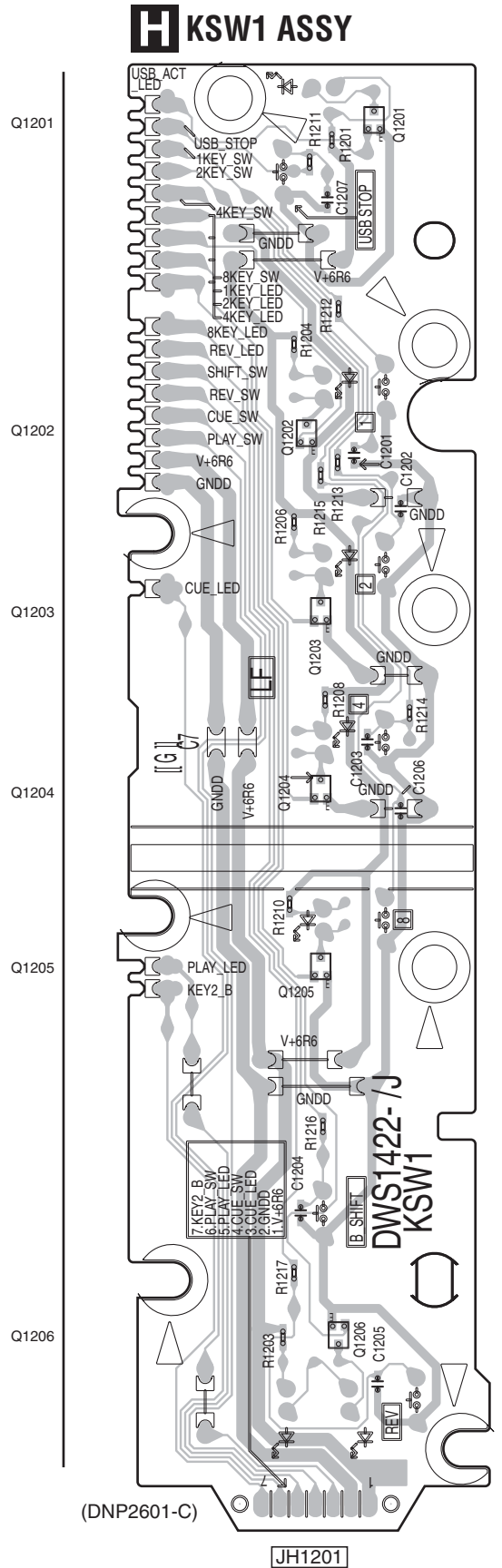
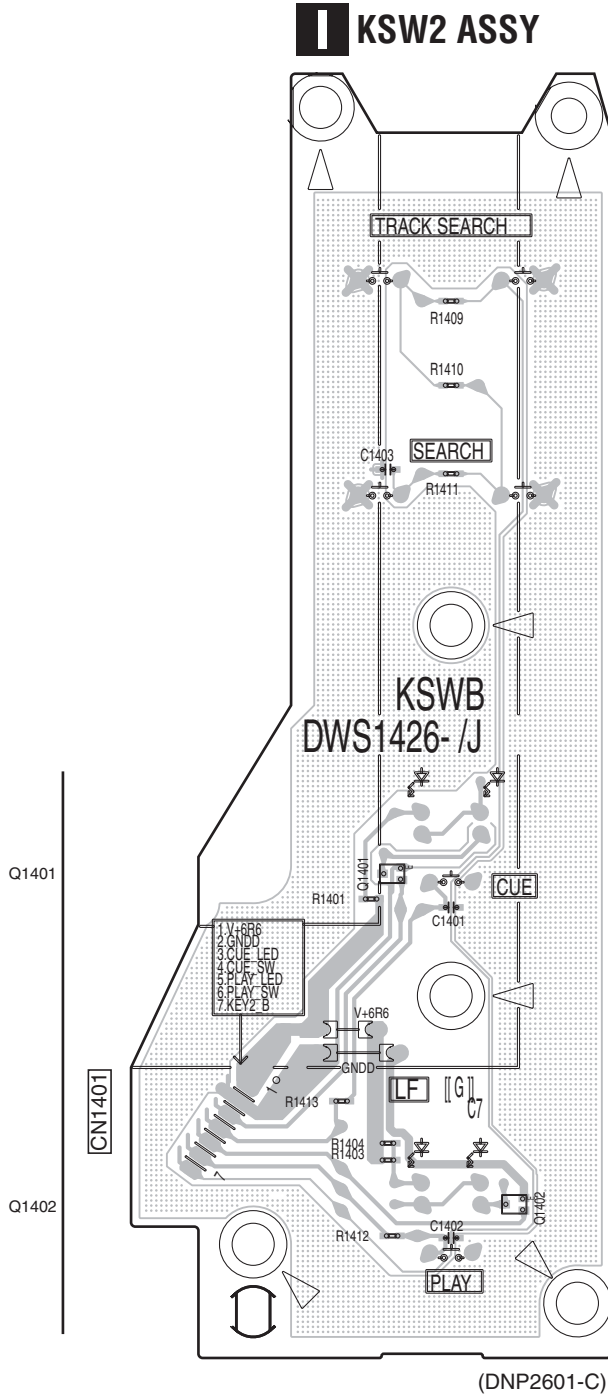
G - H JUMPER

KSW2 ASSY



SIDE B

SIDE B



11.6 JFLB and JOGB ASSYS

SIDE A

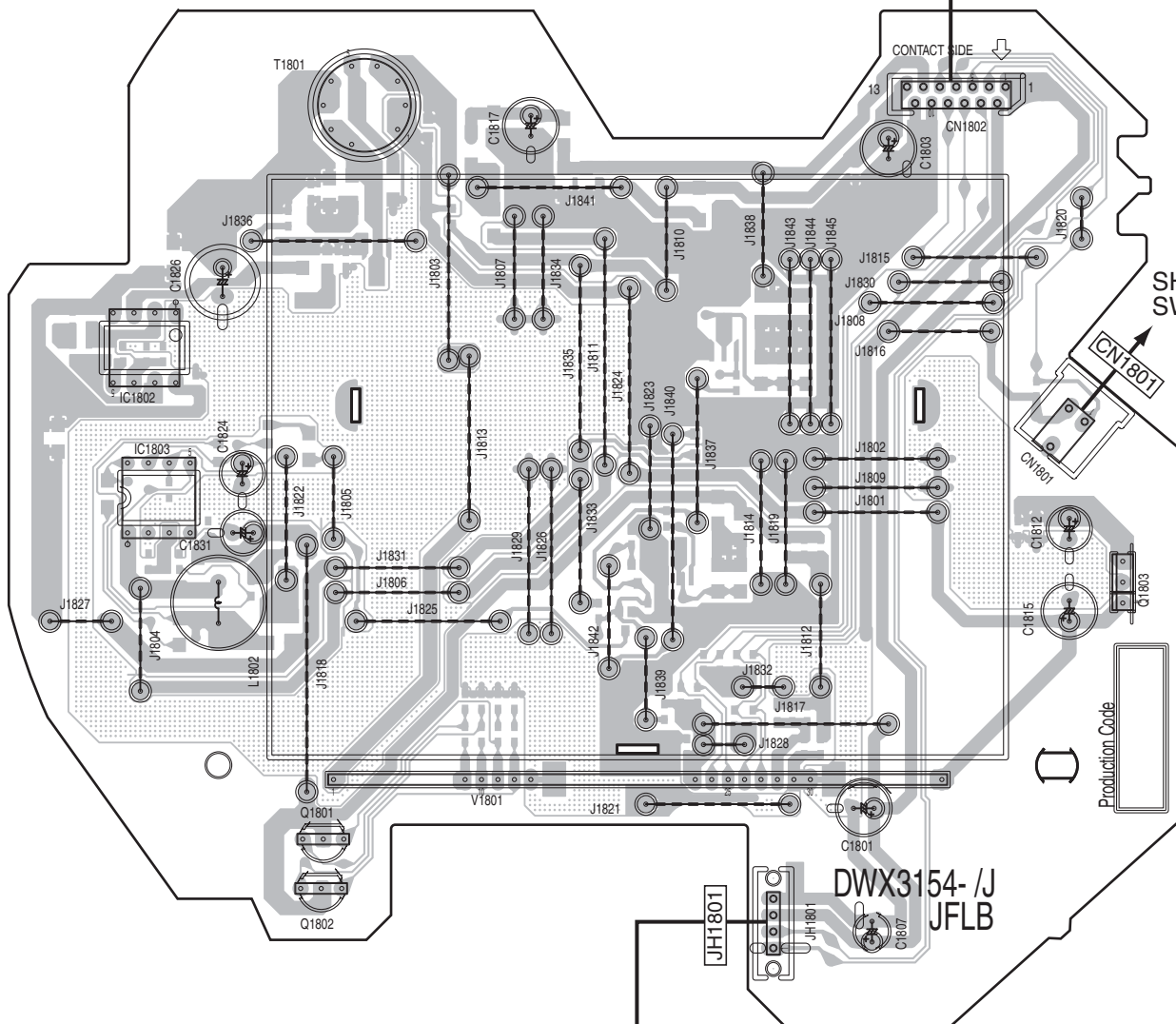
SIDE A

J JFLB ASSY

G CN1002

CN1802

CONTACT SIDE



SHEET SW

Production Code

DWX3154- /J
JFLB

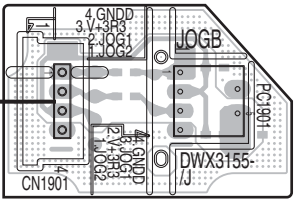
(DNP2601-C)

IC1802
IC1803

Q1801
Q1802

Q1803

K JOGB ASSY



(DNP2601-C)

J K

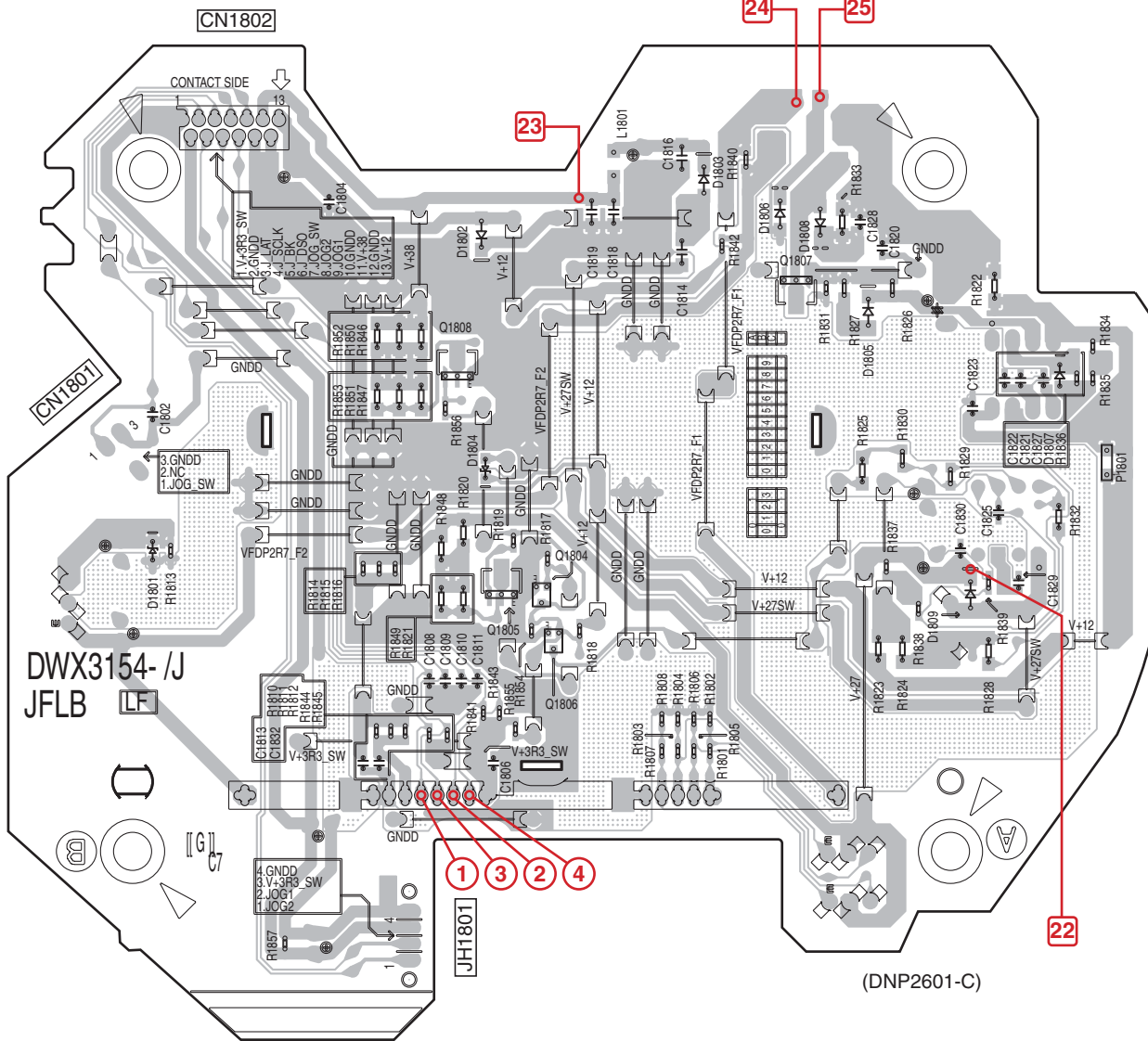
SIDE B

SIDE B

注意: ○で囲まれた数字は各測定ポイントの番号を示します。

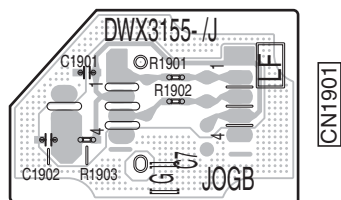
NOTE: The encircled numbers denote measuring point.

J JFLB ASSY



Q1808 Q1805 Q1804 Q1807
Q1806

K JOGB ASSY



(DNP2601-C)

11.7 SLD1, PSWB and SLD2 ASSYS

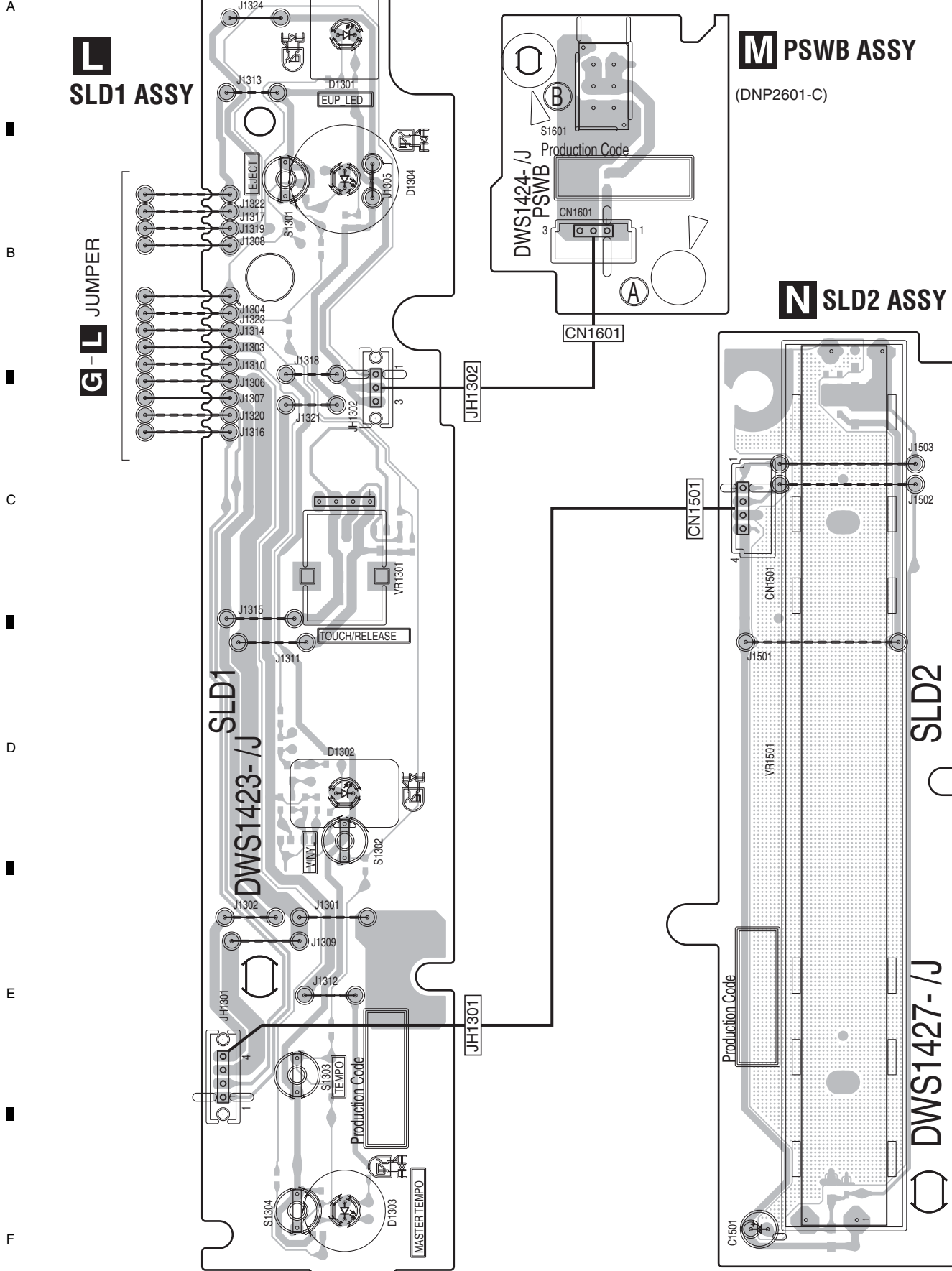
SIDE A

SIDE A

L
SLD1 ASSY

M
PSWB ASSY
(DNP2601-C)

N
SLD2 ASSY



L **M** **N**

(DNP2601-C)

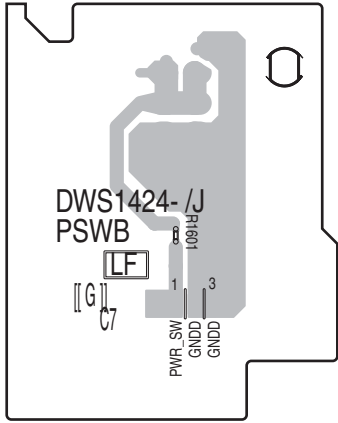
(DNP2601-C)

SIDE B

SIDE B

M PSWB ASSY

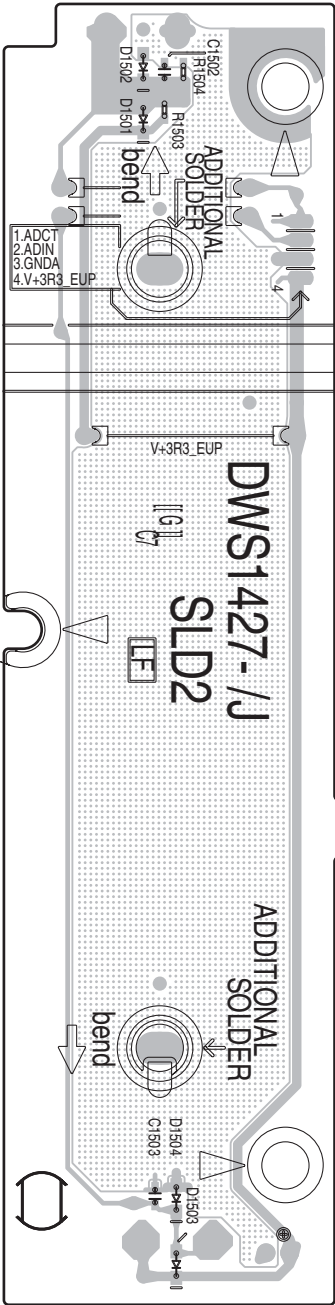
(DNP2601-C)



CN1601

N SLD2 ASSY

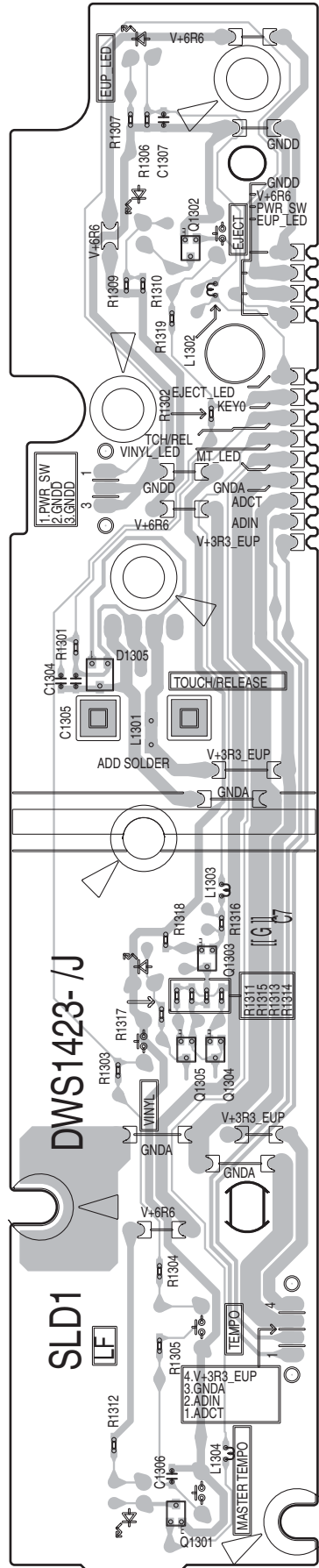
DWS1427- /J
SLD2



CN1501

(DNP2601-C)

L SLD1 ASSY



JH1302

DWS1423- /J

SLD1

(DNP2601-C)

Q1302

Q1303

Q1304
Q1305

Q1301

JH1301

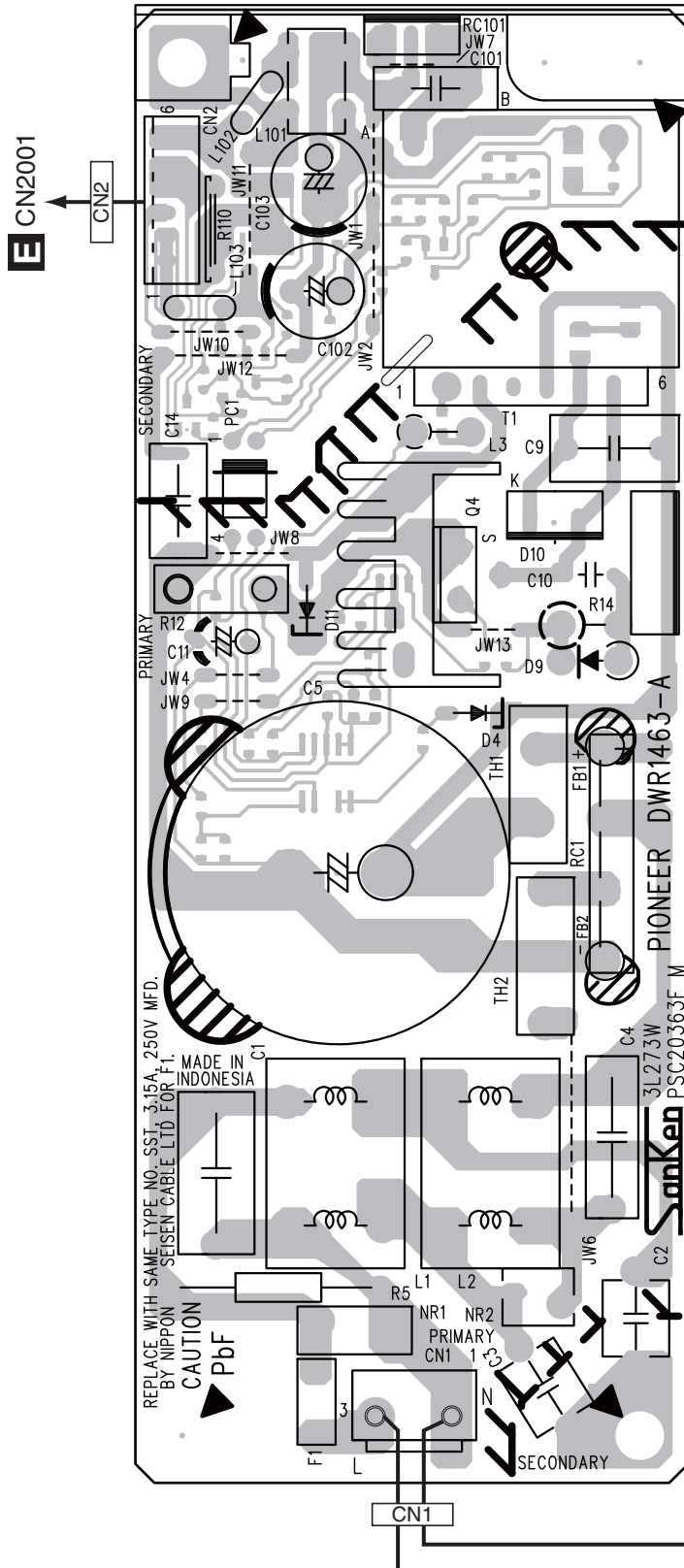
A
B
C
D
E
F

11.8 POWER SUPPLY and ACIN ASSYS

SIDE A

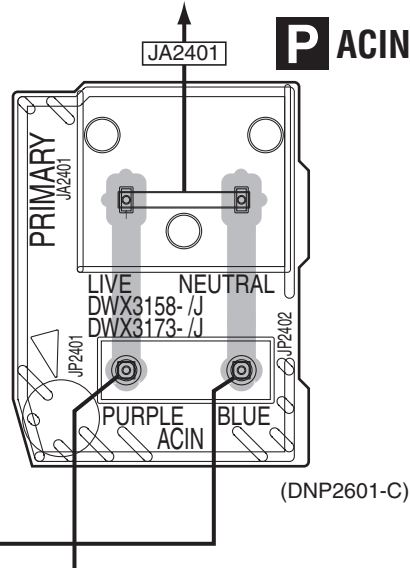
SIDE A

POWER SUPPLY ASSY



AC POWER CORD

P ACIN ASSY



OP

SIDE B

SIDE B

A

B

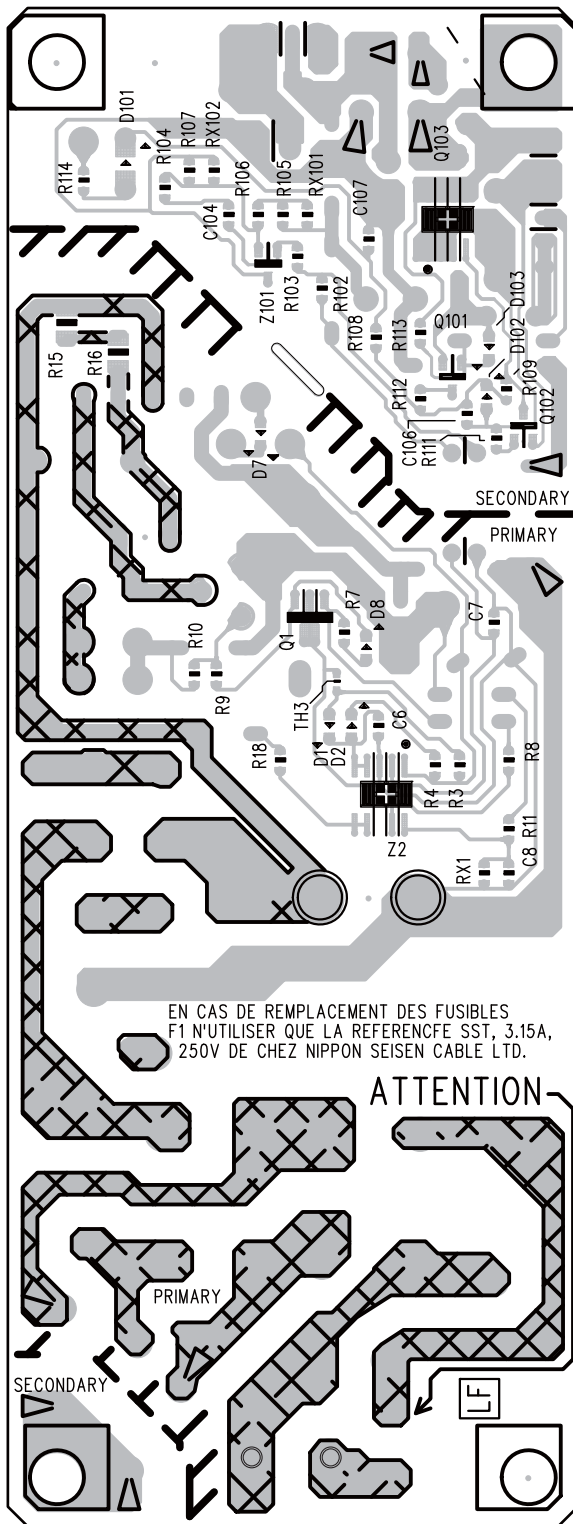
C

D

E

F

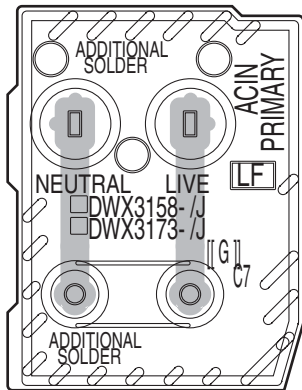
POWER SUPPLY ASSY



EN CAS DE REMPLACEMENT DES FUSIBLES
 F1 N'UTILISER QUE LA REFERENCE SST, 3.15A,
 250V DE CHEZ NIPPON SEISEN CABLE LTD.

ATTENTION

P ACIN ASSY JA2401



(DNP2601-C)

CN1

OP

12. PCB PARTS LIST

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

● 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.

● When ordering resistors, first convert resistance values into code form as shown in the following examples.

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

560 Ω → 56 × 10¹ → 561 RD1/APU $\boxed{5}$ $\boxed{6}$ $\boxed{7}$ J
 47 k Ω → 47 × 10³ → 473 RD1/APU $\boxed{4}$ $\boxed{7}$ $\boxed{3}$ J
 0.5 Ω → R50 RN2H \boxed{R} $\boxed{5}$ $\boxed{0}$ K
 1 Ω → 1R0 RS1P $\boxed{7}$ \boxed{R} $\boxed{0}$ K

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

5.62 k Ω → 562 × 10¹ → 5621 RN1/4PC $\boxed{5}$ $\boxed{6}$ $\boxed{2}$ $\boxed{1}$ 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	DWX3174
NSP	1..SUB1 ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWM2399
NSP	1..SUB1 ASSY (CUXJ)	DWM2405
NSP	2..KSW1 ASSY	DWS1422
NSP	2..SLD1 ASSY	DWS1423
	2..PSWB ASSY	DWS1424
	2..SLMB ASSY	DWS1425
	2..KSW2 ASSY	DWS1426
	2..SLD2 ASSY	DWS1427
	2..DFLB ASSY	DWX3152 *
	2..JFLB ASSY	DWX3154
	2..J0GB ASSY	DWX3155
	2..ACIN ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWX3158
	2..ACIN ASSY (CUXJ)	DWX3173
NSP	1..SUB2 ASSY	DWM2400
	2..CNCT ASSY	DWX3151
	2..CMPX ASSY	DWX3153
	2..USBA ASSY	DWX3156
	2..JINT ASSY	DWX3157
Δ	1..POWER SUPPLY ASSY	DWR1463

* The service part of DFLB Assy (DWX3152) is supplied with KSW1 Assy (DWS1422) and SLD1 Assy (DWS1423). (These assemblies are connected with the jumper wires.)

Mark No. Description Part No.

A CNCT ASSY

MISCELLANEOUS

L	2501,2502 INDUCTOR	CTF1410
S	2501 SLIDE SWITCH	VSH1018
CN	2501,2502 24P FFC CONNECTOR	DKN1445

CAPACITORS

C	2501,2505	CKSRYB104K16
C	2502,2503	CKSRYB103K50
C	2504,2506	DCH1201

Mark No. Description Part No.

B SLMB ASSY

MISCELLANEOUS

S	1701,1702 PUSH SWITCH	DSG1017
CN	1701 5P CONNECTOR	VKN1265

C JINT ASSY

MISCELLANEOUS

CN	2301 CONNECTOR	DKN1312
CN	2302 24P FFC CONNECTOR	DKN1445
CN	2303 5P CONNECTOR	VKN1374
CN	2304 4P CONNECTOR	DKN1288
CN	2305 CONNECTOR	DKN1407

RESISTORS

	All Resistors	RS1/10SR###J
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CAPACITORS

C	2301,2307	CKSRYB103K50
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D MAIN ASSY

SEMICONDUCTORS

IC	101	DYW1796
IC	102	K4S561632J-UC75 or H57V2562GTR-75C
IC	103	R5S72630P200FP
IC	105	TC74VHC04FT
IC	107	TS3USB30RSW
IC	201	TC94A15FG
IC	203	NJM2903M
IC	204	BD7956FS
IC	205	TC7W04FU
Δ IC	206	BA00BCOWFP
IC	301	DSPC56371AF180
IC	302	PCM1742KE
IC	303	RNB4580F
Δ IC	401	BA33BCOWFP
Δ IC	402,408	S-1170B33UC-OTS
Δ IC	403,404	BD00KA5WFP
Δ IC	405,406	NJM2872BF05
Δ IC	409	BD9326EFJ
Q	101,405,408	HN1C01FU

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
Q	102,109,410,413		LTC124EUB	C	101,103-105,107		CKSSYB104K10
Q	104,107,303		RT3T22M	C	102,124,152,186		CKSSYB103K16
Q	201		2SA1036K	C	106,114,117,119		VCG1063
Q	402,404,406,415		2SA1576A	C	108,122,126,150		CCSSCH331J50
Q	411		LSC4081UB	C	109,110,214,320		CEHVAW101M6R3
Q	414		LTA124EUB	C	111-113,115,116		CKSSYB104K10
D	101,103,405,406		1SS352	C	118,120,125		CKSSYB104K10
D	401		RSX201L-30	C	121,123,130,131		VCG1063
				C	127-129,132,133		CKSSYB104K10
				C	134,138,143,154		VCG1063
MISCELLANEOUS							
L	201-226,407,408	INDUCTOR	CTF1545	C	135-137,139-142		CKSSYB104K10
L	227-229	INDUCTOR	CTF1745	C	144-147,151,153		CKSSYB104K10
L	403	INDUCTOR	CTH1254	C	148,169		CCSRCH100D50
F	101,102,301	EMI FILTER	DTL1106	C	149,167		CCSRCH9ROD50
F	401,402	FILTER	CTF1701	C	155-158,160		CKSSYB104K10
KN	404	WRAPPING TERMINAL	CKF1089	C	159,161,165,179		VCG1063
X	101	CRYSTAL (33 MHz)	DSS1193	C	162-164,170,174		CKSSYB104K10
X	102	CRYSTAL (48.000 MHz)	ASS7099	C	166,437		CKSRYP474K10
X	103	CRYSTAL RESONATOR (16.9344 MHz)	VSS1084	C	171,173		CCSRCH180J50
CN	201	CONNECTOR	DKN1404	C	176-178,272,274		CCSSCH331J50
CN	401	CONNECTOR	AKM1299	C	180,187-193,211		VCG1063
CN	402	27P CONNECTOR	RKN1068	C	184,254,271		CCSSCH101J50
CN	403	17P CONNECTOR	RKN1058	C	194,210,231,235		CKSSYB103K16
				C	201,204,209,212		CKSSYB104K10
				C	202,225,239,318		CEHVAW470M6R3
RESISTORS							
R	101,102,106,107		RAB4CQ330J	C	203		CCSSCH470J50
R	103-105,108		RAB4CQ560J	C	205,220		CKSSYB153K16
R	110-113,132		RAB4CQ330J	C	206,207		CKSSYB223K16
R	134-136,138		RAB4CQ330J	C	208		CKSSYB102K50
R	156		RS1/16SS5601F	C	213,217-219		CKSSYB104K10
R	166,339,345,602		RS1/10SR0R0J	C	215		CKSSYB471K50
R	186-188		RAB4CQ560J	C	216		CKSSYB681K50
R	255		RS1/10SR222J	C	221-224,230,233		CKSSYB104K10
R	258,260-262		RS1/4SA1R0J	C	227		CCSSCH680J50
R	263,264		RS1/4SA2R7J	C	228,246,247,252		CEHVAW470M16
R	265		RS1/10SR1002F	C	232,238		CKSSYB333K10
R	272,273		RS1/10SR683J	C	234,236,237,253		CKSSYB104K10
R	287,458		RS1/16SS1502F	C	241		CKSRYP333K25
R	288		RS1/16SS1003F	C	242		CKSSYB331K50
R	289,422,426		RS1/16SS3302F	C	243		CKSSYB271K50
R	291,411,423,459		RS1/16SS1202F	C	244,245,250,263		CKSSYB104K16
R	323,324,356,357		RS1/16SS4702D	C	248		CCSSCH471J50
R	325,326		RS1/16SS2200D	C	249,251,260,262		CKSSYB103K16
R	327,328,469		RS1/16SS2201D	C	255		CKSRYP122K50
R	329,332		RS1/16SS4701D	C	256,259,301-303		CKSSYB104K10
R	330,331		RS1/16SS3301D	C	257,258		CKSRYP222K50
R	333,334		RS1/16SS5101D	C	261,264,267,279		VCG1063
R	410,485		RS1/16SS3601F	C	265,436,455,461		CKSRYP104K16
R	421		RS1/16SS2202F	C	266,281,496		CKSRYP103K50
R	424		RS1/16SS1102F	C	268,276,278,340		CKSQYB225K10
R	427		RS1/16SS5602F	C	275,308,311,335		CCSSCH331J50
R	436		RS1/16SS3301F	C	280,283,309,312		VCG1063
R	467		RS1/16SS7500F	C	282,304,305,307		CKSSYB103K16
R	468		RS1/16SS1102D	C	306,310,313,314		CKSSYB104K10
R	470,471,483		RS1/4SA0R0J	C	315,411,412		CEHVAW220M6R3
R	472-474,480,481		RS1/10SR330J	C	316,445,451,468		CCSRCH102J50
R	484,502		RS1/16SS1002F	C	317,400,418,430		VCG1063
R	501		RS1/16SS1202F	C	319,321,403,407		CKSSYB104K10
Other Resistors			RS1/16SS###J	C	322,323,405,406		CEHVAW101M6R3
				C	326,327		CCSRCH181J50
CAPACITORS							

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	C	328,329	CCSRCH330J50		CN	2004 PLUG (13P)	KM200NA13
A	C	331,333,431,448	CEHVAW470M16		CN	2005 5P JUMPER CONNECTOR	52147-0510
	C	341,499,502	CKSQYB225K10		CN	2006 17P CONNECTOR	VKN1248
	C	342,414,416,435	CKSSYB103K16		CN	2007 PLUG (9P)	KM200NA9
	C	401,402,415,417	CKSRYP105K10	⚠	P	2003 PROTECTOR (0.500 A)	DEK1095
	C	404,422,424,427	DCH1165	⚠	P	2004 PROTECTOR (0.375 A)	DEK1094
	C	408,420,423,438	CKSSYB104K10				
	C	409,410	CKSSYB105K6R3				
	C	413,428,432	CKSSYB104K16				
	C	419	CKSRYP105K10				
	C	421,434,497,506	CCSSCH331J50				
	C	440	CKSSYB222K50				
	C	442,443	DCH1165				
B	C	444,453,458-460	CKSSYB104K10		R	2051,2089,2090	RS1/8SQ0R0J
	C	462,475,478,480	CKSSYB104K10		R	2059,2060	RS1/8SQ473J
	C	467,472-474,495	VCG1063		R	2061,2062,2066,2067	RS1/8SQ151J
	C	470,498,504	CKSSYB103K16		R	2076,2080	RS1/8SQ272J
	C	471	CCSRCH102J50		R	2077-2079,2081	RS1/8SQ222J
	C	483-485	CKSSYB221K50			Other Resistors	RS1/10SR###J
	C	486-488,490	CCSSCH101J50				
	C	492-494	CCSSCH101J50				
	C	501	VCG1063				
	C	507	CCSSCH331J50				

RESISTORS

R	2002	RST1/2SP120J
R	2004	RS1/10SR6802D
R	2005	RS1/10SR4701D
R	2006	RS1/10SR5101D
R	2026,2027,2047-2049	RS1/8SQ0R0J
R	2051,2089,2090	RS1/8SQ0R0J
R	2059,2060	RS1/8SQ473J
R	2061,2062,2066,2067	RS1/8SQ151J
R	2076,2080	RS1/8SQ272J
R	2077-2079,2081	RS1/8SQ222J

CAPACITORS

C	2001,2077,2079,2102	CKSRYP104K50
C	2002,2004,2015,2097	CCG1221
C	2003,2012,2090,2091	ACG1142
C	2005,2022,2093	CEHVAW470M16
C	2006	CCSRCH102J50
C	2007,2008	CKSRYP222K50
C	2009,2074,2078,2080	CKSRYP103K50
C	2010,2011,2073	CKSRYP105K16
C	2014	CCSRCH122J50
C	2019	CKSRYP224K16
C	2020	CCH1565
C	2021	CKSRYP104K16
C	2033	CKSRYP474K10
C	2036	DCH1201
C	2075,2076	CEVW221M10
C	2082,2083	CFHXSQ471J50
C	2084,2086	CKSRYP103K50
C	2088	CEVW471M16
C	2092,2094	CKSQYB475K16
C	2095,2096	CKSQYB105K16

**F USBA ASSY
SEMICONDUCTORS**

D	2201	NNCD6.2MF
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MISCELLANEOUS

JA	2201	USB CONNECTOR	DKB1106
JH	2201	5P CABLE HOLDER	51048-0500
JP	2201	JUMPER WIRE	D20PDY0510E

CAPACITORS

C	2201	CEHVAW101M6R3
C	2202	CKSRYP103K50
C	2203	CEVQW220M16
C	2204	CCSRCH102J50

**G DFLB ASSY
SEMICONDUCTORS**

⚠	IC	1001	NJM2392M
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**E CMPX ASSY
SEMICONDUCTORS**

⚠	IC	2001	SI-8005Q
⚠	IC	2002	NJM2845DL1-05
	IC	2003	BD2051AFJ
	Q	2014-2017	2SD2704K
	Q	2018	2SA1576A
	Q	2019	UMD2N
	Q	2021	LTC124EUB
D	Q	2026,2032	LTC143EUB
	Q	2027	LTA124EUB
	Q	2028	2SB1698
	Q	2029	IMX2
	Q	2030	IMT2A
	Q	2031	2SD2662
	Q	2033	RN1902
D	2002	CMS03	

D	2003,2004	EP05Q06	
D	2005,2011,2012	1SS352	
D	2014	NNCD6.2MF	
E	D	2016	1SS355
	D	2017,2018	UDZS10(B)
	D	2019	UDZS6R2(B)

MISCELLANEOUS

L	2001,2003,2006,2017	INDUCTOR	CTF1488
L	2002	INDUCTOR	CTH1253
L	2014,2015	CHIP SOLID INDUCTOR	XTL3010
F	2001	FILTER	CTF1701
JA	2001	USB CONNECTOR	DKN1237

JA	2002	JACK	VKB1243
JA	2003	PIN JACK (2P)	AKB7181
CN	2001	CONNECTOR	B6B-XH-A
CN	2002	27P CONNECTOR	VKN1258
CN	2003	21P CONNECTOR	VKN1252

Mark	No.	Description	Part No.
	IC	1004	BD45302G
⚠	IC	1006	SI-8105QL
	IC	1007	PEG799A8
	Q	1001-1006,1009	LTC124EUB
	Q	1011-1013,1019,1020	LTC124EUB
	Q	1014	LTA124EUB
	Q	1016,1017	2SC4081
	Q	1018	RTQ040P02
	Q	1021	2SD1898
	Q	1022-1024	2SA1576A
	Q	1025	LTC124EUB
	D	1001,1007,1010,1012	SLI-343Y8C(KLMN)
	D	1002,1003,1013-1016	SLI-343M8C(FGHJ)
	D	1009	EP05Q06
	D	1018	CMS03

MISCELLANEOUS

L	1001,1003,1008-1010	INDUCTOR	CTF1579
L	1002	RADIAL LEAD INDUCTER	DTH1206
L	1004,1007,1012	INDUCTOR	CTF1378
L	1005	INDUCTOR	CTF1357
L	1006	POWER INDUCTOR	DTL1185
L	1011	INDUCTOR	CTF1334
V	1001	VFD	DEL1069
S	1001-1004,1007-1009	SWITCH	VSG1024
S	1005,1006,1010	TACT SWITCH	DSG1079
S	1011-1017	SWITCH	VSG1024
S	1018	ROTARY SW	YSD5019
X	1001	CRYSTAL RESONATOR (15.975 MHz)	DSS1166
CN	1001	21P CONNECTOR	VKN1252
CN	1002	13P CONNECTOR	VKN1273
O		FL HOLDER	DNF1862

RESISTORS

R	1021	RS1/4SA2R7J
R	1042,1173	RS1/10SR3301D
R	1043,1172	RS1/10SR3302D
R	1044	RS1/10SR2202D
R	1109	RST1/2SP120J
R	1114	RS1/10SR5602D
R	1115	RS1/10SR1501D
R	1116,1175,1176	RS1/10SR4701D
R	1142	RS1/10SR2701F
R	1144	RS1/10SR1001F
R	1145-1149	RS1/4SA240J
	Other Resistors	RS1/10SR###J

CAPACITORS

C	1004,1042,1045,1057	ACG1128
C	1005,1031,1034,1062	DCH1201
C	1006	CEHAZL680M16
C	1007,1079	CKSRYB104K50
C	1008,1017,1029,1032	CKSRYB104K16
C	1009-1014,1018,1019	CCSRCH102J50
C	1015	CKSRYB474K10
C	1016	CEHAS101M10
C	1021,1038,1040,1043	CCSRCH470J50
C	1022,1023	CCSRCH220J50
C	1024	CCSRCH560J50
C	1025,1028	CCSRCH270J50
C	1027,1078	CCSRCH221J50
C	1030	CEHAZL221M6R3

Mark	No.	Description	Part No.
C	1035,1044,1046,1049		CKSRYB103K50
C	1036,1041,1072		CKSRYB104K16
C	1047,1064-1066		CCSRCH102J50
C	1048		CKSQYB102K50
C	1050		CKSRYB103K50
C	1055		CCSRCH182J50
C	1061		DCH1324
C	1063,1076		DCH1201
C	1067		CKSRYB474K16
C	1070		CKSRYB105K16
C	1074,1075		CCSRCH470J50
C	1077		CCSRCH101J50

**H KSW1 ASSY
SEMICONDUCTORS**

Q	1201-1206	LTC124EUB
D	1201,1202,1207	SLI-343U8RC(HJKL)
D	1203-1206	SLI-343Y8C(KLMN)

MISCELLANEOUS

S	1201-1206	TACT SWITCH	DSG1079
S	1207	SWITCH	VSG1024

RESISTORS

All Resistors	RS1/10SR###J
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MISCELLANEOUS

JH	1201	7P CABLE HOLDER	51048-0700
JP	1201	JUMPER WIRE	D20PDY0720E

**I KSW2 ASSY
SEMICONDUCTORS**

Q	1401,1402	LTC124EUB
D	1401,1403	SLI-343M8C(FGHJ)
D	1402,1404	SLI-343Y8C(KLMN)

MISCELLANEOUS

S	1401,1402	TACT SWITCH	DSG1117
S	1403-1406	SWITCH	VSG1024
CN	1401	7P JUMPER CONNECTOR	52147-0710

RESISTORS

All Resistors	RS1/10SR###J
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**J JFLB ASSY
SEMICONDUCTORS**

⚠	IC	1802	TLC555IP
⚠	IC	1803	NJM2374AD
Q	1801,1802	2SC1815	
Q	1803	2SB1237X	
Q	1804,1806	LTC124EUB	
Q	1805,1808	2SD1767	
Q	1807	RHP020N06	
D	1801	UDZS6R8(B)	
D	1802,1803,1805,1806	RB160M-60	
D	1804	UDZS10(B)	
D	1807	1SS355	
D	1808,1809	RB160M-60	

Mark	No.	Description	Part No.
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MISCELLANEOUS

L	1801	INDUCTOR	CTF1579
L	1802	POWER INDUCTOR	DTL1187
V	1801	FL INDICATOR TUBE	DEL1058
T	1801	POWER TRANSFORMER	DTT1232
CN	1801	CONNECTOR	CKS1072
CN	1802	13P CONNECTOR	VKN1244
O		FL HOLDER	DNF1735
JH	1801	4P CABLE HOLDER	51048-0400
JP	1801	JUMPER WIRE	D20PDY0405E

RESISTORS

R	1820,1821,1848,1849	RS1/4SA102J
R	1822	RST1/2SP1R0J
R	1823	RS1/4SA0R0J
R	1824	RS1/4SAR51J
R	1825	RS1/4SA331J

R	1826	RS1/8SQ102J
R	1827	RS1/8SQ101J
R	1828,1832	RS1/4SA271J
R	1829,1830	RS1/8SQ181J
R	1833	RS1/4SA103J

R	1834	RS1/10SR1201D
R	1835	RS1/10SR1602D
R	1836	RS1/10SR6802D
R	1837	RS1/10SR4302D
R	1838,1839	RS1/10SR2201D

R	1840	RS1/8SQ223J
R	1846,1847,1850-1853	RS1/4SA222J
	Other Resistors	RS1/10SR###J

CAPACITORS

C	1802	CKSRYB223K16
C	1803	CEHAR470M16
C	1804,1806	CKSRYB104K16
C	1808	CCSRCH470J50
C	1809-1811,1821	CCSRCH101J50

C	1812	CEHAZL100M50
C	1813,1823,1827,1828	CKSRYB104K50
C	1814,1816	CCG1255
C	1815	CEHAR101M10
C	1817	CEHAR100M50

C	1818,1819	ACG1147
C	1820	CCSRCH221J50
C	1824,1831	CEHAZL220M50
C	1826	CEHAZL221M25-P35
C	1829	CCSRCH331J50

K JOGB ASSY**MISCELLANEOUS**

CN	1901	4P JUMPER CONNECTOR	52151-0410
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RESISTORS

	All Resistors	RS1/10SR###J
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MISCELLANEOUS

PC	1901	PHOTO INTERRUPTER	SEDS-7573
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CAPACITORS

C	1901,1902	CKSRYB103K50
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Mark	No.	Description	Part No.
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L SLD1 ASSY**SEMICONDUCTORS**

Q	1301-1303	LTC124EUB
Q	1304,1305	2SA1576A
D	1301,1303	SLI-343U8RC(HJKL)
D	1302	SLR343BC4T(JKLM)
D	1304	SLI-343M8C(FGHJ)

MISCELLANEOUS

L	1302-1304	INDUCTOR	CTF1334
VR	1301	POTENTIOMETER	DCS1062
S	1301-1304	SWITCH	VSG1024

RESISTORS

	All Resistors	RS1/10SR###J
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MISCELLANEOUS

JH	1301	4P CABLE HOLDER	51048-0400
JH	1302	3P CABLE HOLDER	51048-0300
JP	1301	JUMPER WIRE	D20PDY0410E
JP	1302	3P JUMPER WIRE	D20PDY0310E

CAPACITORS

C	1307	CKSRYB103K50
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M PSWB ASSY**MISCELLANEOUS**

S	1601	PUSH SW	ASG1102
CN	1601	3P JUMPER CONNECTOR	52147-0310

RESISTORS

	All Resistors	RS1/10SR###J
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N SLD2 ASSY**SEMICONDUCTORS**

D	1501-1504	1SS352
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MISCELLANEOUS

VR	1501	VR	DCV1009
CN	1501	4P JUMPER CONNECTOR	52147-0410

CAPACITORS

C	1501	CEJQ470M16
C	1502,1503	CKSRYB104K16

O POWER SUPPLY ASSY

There is no service parts.

P ACIN ASSY (DWX3158)**MISCELLANEOUS**

⚠	JA 2401	AC INLET	DKP3889
⚠	JP 2401	CONNECTOR ASSY 2P	DKP3870

P ACIN ASSY (DWX3173)**MISCELLANEOUS**

⚠	JA 2401	AC INLET	DKP3891
⚠	JP 2401	CONNECTOR ASSY 2P	DKP3870