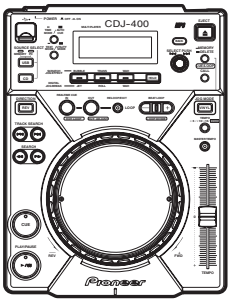
Pioneer sound.vision.soul

Service Manual



CDJ-400

ORDER NO.
RRV3679

COMPACT DISC PLAYER

CDJ-400

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

Model	Type	Power Requirement	Remarks
CDJ-400	KUCXJ	AC 120 V	
CDJ-400	WYXJ5	AC 220 to 240 V	
CDJ-400	TLFXJ	AC 110 V to 240 V	

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

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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
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T-ZZR NOV. 2007 printed in Japan

SAFETY INFORMATION

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

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

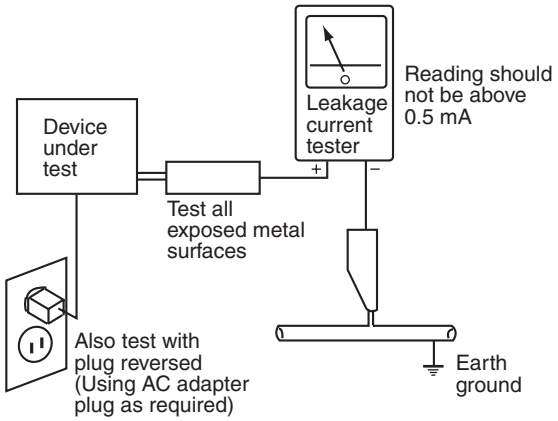
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

IMPORTANT

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

LASER DIODE CHARACTERISTICS

MAXIMUM OUTPUT POWER: 5 mW
WAVELENGTH: 780 – 785 nm

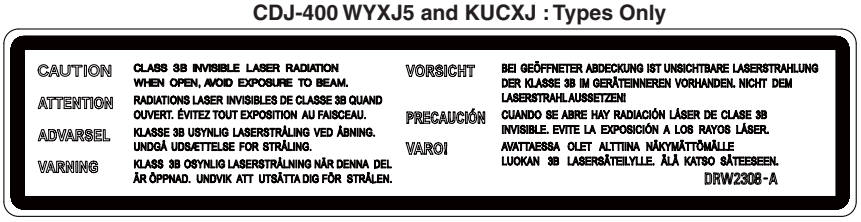
WARNING !

The AEL(accessible emission level) of the laser power output is less then **CLASS 1** but the laser component is capable of emitting radiation exceeding the limit for **CLASS 1.**

A specially instructed person should do servicing operation of the apparatus.

LABEL CHECK

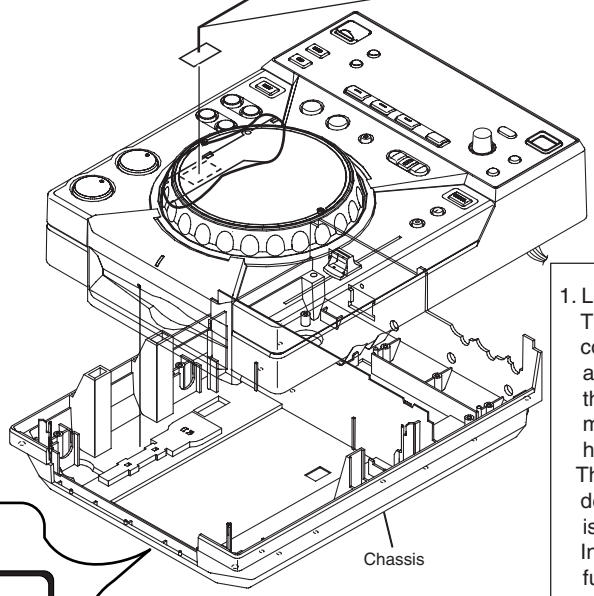
CDJ-400 WYXJ5 and KUCXJ : Types Only



(DRW2308)

for TLFXJ

(DRW2248)



for TLFXJ

Printed on the chassis

for WYXJ5 and KUCXJ

Printed on the chassis

Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S1801) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch is not in LPS1 terminal side (when the mechanism is not clamped and LPS1 signal is high level.)
   Thus, the interlock will no longer function if the switch is deliberately set to LPS1 terminal side. (if LPS1 signal is low level).
   In the test mode* the interlock mechanism will not function. Laser diode oscillation will continue, if pin 41 of TC94A15FG (IC502) on the MAIN Assy is connected to GND, or else the terminals of Q501 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.

* : Refer to page 24.

[Important Check Points for Good Servicing]

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

1. Product safety

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

① Use specified parts for repair.

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

② Do not perform modifications without proper instructions.

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

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

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

④ Make sure the screws are tightly fastened.

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

⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

⑩ Safe environment should be secured during servicing.

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

2. Adjustments

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

3. Lubricants, Glues, and Replacement parts

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

4. Cleaning

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

5. Shipping mode and Shipping screws

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

CONTENTS

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

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

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

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).

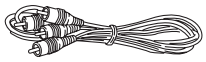
The following lead-free solders are available as service parts:

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

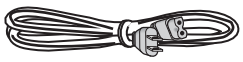
2. SPECIFICATIONS
2.1 ACCESSORIES

Accessories

Audio Cable
(VDE1064) L=1.5m



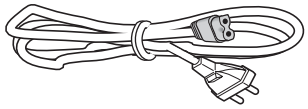
Power Cord
(ADG7021 : KUCXJ)
(ADG7097 : TLFXJ)



Forced Fject Pin
(housed in a groove in
the bottom panel)
(DEX1008)

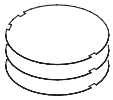
Control Cord
(ADE7108) L=1 m

(ADG1154 : WYXJ5,TLFXJ)



Screw driver
(housed in a groove in
the bottom panel)
(DEX1022)

- Jog sheets
  (1: DAH2599)
  (2: DAH2600)
  (3: DAH2601)



- Operating Instructions
  (KUCXJ: DRB1450)
  (WYXJ5: DRB1451)
  (TLFXJ: DRB1452)

- Warranty Card

2.2 SPECIFICATIONS

• KUCXJ type

1. General

System..... Compact disc digital audio system
Power requirements..... AC 120 V, 60 Hz
Power consumption..... 17 W
Operating temperature..... +5°C to +35°C (+41°F to +95°F)
Operating humidity..... 5 % to 85 %
(without condensation.)
Weight..... 2.7 kg (5.8 lb)
Dimensions..... 217.9 (W) x 107.5 (H) x 296.3 (D) mm
8.57 (W) x 4.23 (W) x 11.67 (D) in

2. Audio section

Frequency response.....4 Hz to 20 kHz
Signal-to-noise ratio..... 115 dB or more (JEITA)
Distortion..... .0.006 % (JEITA)

3. Accessories

• Operating instructions.....1
• Power cord..... 1
• Audio cable..... 1
• Control cable..... 1
• Forced eject pin (housed in a groove in the bottom panel)... 1
• Limited warranty..... 1
• Screwdriver (housed in a groove in the bottom panel)..... 1
• Jog sheets (for replacing) 3

• WYXJ5 type

1. General

System..... Compact disc digital audio system
Power requirements ..... AC 220 V to 240 V, 50/60 Hz
Power consumption ..... 19 W
Operating temperature ..... +5C to +35C
Operating humidity ..... 5 % to 85 %
(without condensation.)
Weight ..... 2.7 kg
Dimensions ..... 217.9 (W) x 107.5 (H) x 296.3 (D) mm

2. Audio section

Frequency response..... 4 Hz to 20 kHz
Signal-to-noise ratio ..... 115 dB or more (JEITA)
Distortion ..... 0.006 % (JEITA)

3. Accessories

• Operating instructions 1
• Power cord 1
• Audio cable 1
• Control cable 1
• Forced eject pin (housed in a groove in the bottom panel)... 1
• Limited warranty..... 1
• Screwdriver (housed in a groove in the bottom panel)..... 1
• Jog sheets (for replacing) 3

NOTE:
Specifications and design are subject to possible modification with-out notice.

• TLFXJ type

1. General

System..... Compact disc digital audio system
Power requirements .... AC 110 V to 240 V, 50/60 Hz
Power consumption ..... 19 W

Operating temperature ..... +5°C to +35°C
Operating humidity ..... 5 % to 85 %
(without condensation.)
Weight .....2.7 kg
Dimensions ..... 217.9 (W) x 107.5 (H) x 296.3 (D) mm

2. Audio section

Frequency response..... 4 Hz to 20 kHz
Signal-to-noise ratio ..... 115 dB or more (JEITA)
Distortion ..... 0.006 % (JEITA)

3. Accessories

• Operating instructions 1
• Power cord 1
• Audio cable 1
• Control cable 1
• Forced eject pin (housed in a groove in the bottom panel)... 1
• Screwdriver (housed in a groove in the bottom panel)..... 1
• Jog sheets (for replacing) 3

NOTE:
Specifications and design are subject to possible modification with-out notice.

2.3 DISC USABLE WITH THIS UNIT

Types of discs playable on this unit

- The following marks and logos are displayed on disc labels, packaging, or jackets.

Types and Logos of playable discs			
CD	CD-TEXT (Note 1)	CD-R (Note 2)	CD-RW (Note 2)
			

Note 1) Regarding TEXT display:
The number of characters that can be displayed is up to 48. When a display exceeds eight characters in length, the display will scroll. Only alpha-numerics and a limited number of symbols can be displayed.

This player supports playback of CD-R/CD-RW discs recorded in audio CD format or MP3.

* For details, consult the Operating Instructions for your recorder.

Notes:

- Some CD-R/CD-RW discs recorded on standalone recorders or computer drives may not be playable back on this player, due to a variety of reasons, including disc characteristics, scratches, dirt, player lens dirt or condensation, etc.
- Some discs recorded on computer drives may not be playable on this player, depending on the recording application used, its settings, and operating environment. Be sure to use the correct formatting for the discs used. For details, consult the application author.
- This unit cannot play partially recorded CD-R or CD-RW discs that have not been finalized.
- For detailed information regarding the handling of CD-R/CD-RW discs, consult the handling precautions supplied with each disc.

■ Regarding CD-R/RW discs

Due to the unique construction of CD-R/RW discs, leaving them for extended periods of time in the pause (or cue standby) mode at a single point may result in the discs' becoming difficult to play at that place. The same symptom may also occur if the loop function is used to play back a single point on the disc excessively.
As a result, users are advised to construct backup archive discs when playing discs containing important data.

■ About DualDisc playback

This product is designed to conform to standards for music CDs. No warranty is made for operation or performance when used with discs not conforming to such music CD standards.

Playing MP3 files

MP3 files may be found in two formats: Constant Bit Rate (CBR) and Variable Bit Rate (VBR). This component supports playback and DJ play with both CBR and VBR type MP3 files, but in comparison with CBR files, files recorded in VBR format will experience slower search and super-fast search speeds. As a result, when operating speed is most important, the use of the CBR recording format is recommended for MP3 files.
MP3 files must follow the format requirements listed below.

MP3 format	MPEG-1	Supports Audio Layer-3 sampling frequency 32 kHz, 44.1 kHz, 48 kHz, Bit Rate 32 Kbps to 320 Kbps.
	MPEG-2	Supports Audio Layer-3 sampling frequency 16 kHz, 22.05 kHz, 24 kHz, Bit Rate 16 Kbps (stereo) to 160 Kbps.
	ID3 tag	Supports ID3 Vers. 1.0/1.1/2.2/2.3/2.4. Displays title, album, artist. Only alpha-numerics and a limited number of symbols can be displayed.
	File extension	.mp3, .MP3, .mP3, .Mp3

■ Playing Tracks from USB memory

By connecting a USB memory device to the CDJ-400, MP3 files on the USB memory can be played.

- The CDJ-400 may not support playback with all USB memory devices or provide sufficient electrical power. Additionally, note that Pioneer is not responsible for any loss of data on a USB memory device that may occur as the result of connecting to the CDJ-400.
- Reading from a USB memory device may take time if large quantities of data are involved.
- Erratic performance may result when a USB hub is used.

■ To disconnect a USB memory device

Use SOURCE SELECT to cancel the selection of the USB memory device, and then confirm that the USB memory device indicator has gone out before removing the device.

USB Memory Device Format	Folder hierarchy	Maximum eight levels (cannot play files in folders exceeding 8th hierarchy level)
	Folder Max	10 000
	File Max	20 000 (maximum 10 000 in single folder)
	Recording format	Devices conforming to USB mass storage class (USB MSC), including external hard discs, portable flash memory devices, and digital audio playback devices (supporting FAT16 and FAT32 format).

* No file sort function. Playback is in order recorded in memory.
* Longer startup times are required with increasing numbers of files.

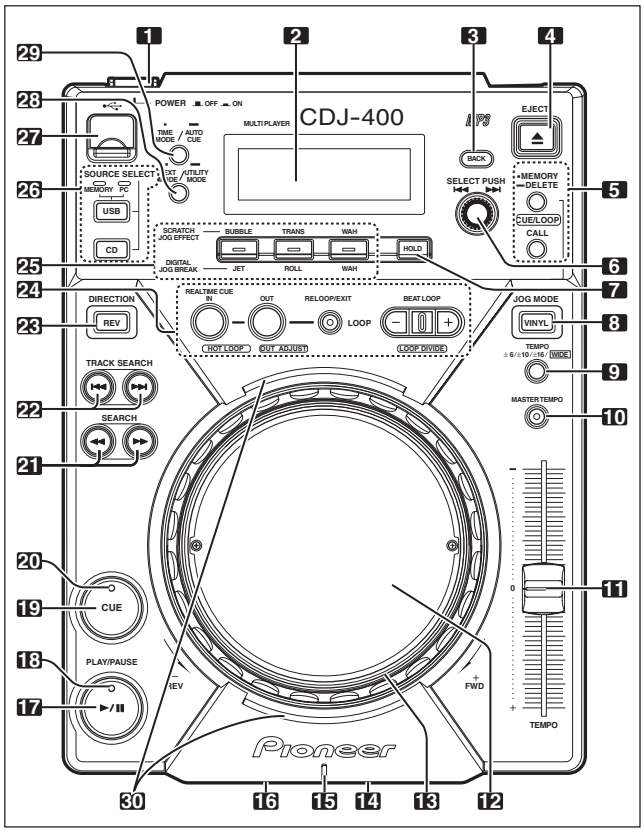
■ About CD-ROM playback

MP3 files recorded on CD-ROM can be played back on this unit.

Disc format	File extension	.mp3, .MP3, .mP3, .Mp3
	Folder layers	Maximum eight layers; files in folders exceeding eight layers cannot be played.
	Maximum number of folders	2 000
	Maximum number of files	3 000
	Multi-session	Does not support multi-session. When the disc used is a multi-session disc, only the first session will be played.
	CD-R recording method	Record following the ISO9660 CD-ROM file system. Supports only Disc At Once or Track At Once. CDJ-400 does not support Packet Write recorded discs.

* No file sort function. Playback is in order recorded in memory.
* Longer startup times are required with increasing numbers of files.

PANEL FACILITIES



1. POWER switch (■ OFF/▂ ON)
This switch is located on the rear panel of the unit. Switches the unit's power ON/OFF.

2. Display

3. Folder BACK button
Returns to the next higher level in the folder hierarchy when using a CD-ROM or USB memory with a hierarchical folder structure.

4. EJECT button
Ejects the disc.

5. CUE/LOOP button
- **CUE/LOOP MEMORY/DELETE button**

Use to record cue points and loop points.
- **CUE/LOOP CALL buttons (◄, ►)**

Use to call cue points and loop points recorded.

6. Rotary dial (SELECT PUSH I◄◄,►►I)
Use to select tracks in forward or reverse direction (track advance) and to select folders.
Press to confirm folder/track selections.

7. HOLD button
Preserves the effect of the Digital Jog Break and Scratch Jog Effect.

8. JOG MODE VINYL button
VINYL mode: The button indicator lights. When the surface of the jog dial is pressed during playback, play stops, and if the jog dial is then rotated, sound is produced in accordance with the degree of rotation.
CDJ mode: The above action does not occur when the jog dial is pressed.
- The currently set jog mode is stored in memory even when power is turned off.

9. TEMPO control range button (±6/±10/±16/WIDE)
Changes the variable range of the tempo control.
The tempo range will be saved in memory when the power is turned off.

10. MASTER TEMPO button/indicator
Turns the Master Tempo function ON/OFF (lights when turned ON).

11. TEMPO control slider
Controls the track's tempo (playback speed).

12. Jog dial (–REV/+FWD)
A photograph or other graphic of your choice can be inserted

13. Jog indicator
- Indicator lights when disc is inserted during normal mode, or if USB memory is selected during normal mode.
- The illumination pattern of the jog indicator can be changed.
- **Changing the jog indicator's illumination pattern.**

1. Hold the TEXT MODE/UTILITY MODE button depressed for one second or more to enter utility setting mode.
   Turn the rotary dial so that the display screen shows [**JOG ILLUMI**], and then press to confirm the selection.
   The display screen will show [**PATTERN 1**].
2. Turn the rotary dial to change the illumination pattern.
   Patterns can be chosen from PATTERN 1 to PATTERN 6.
3. Press the rotary dial to confirm.
   Utility setting mode will be canceled if no command is entered for 15 seconds. Pressing the **BACK** button will also exit the setting mode.

14. Disc loading slot
Located in front panel.

15. Disc indicator
- When no disc is inserted, the indicator is turned off.
- When disc loading is completed, indicator turns on.

16. Forced ejection hole
Located in front panel of the unit.

17. PLAY/PAUSE button (►/II)

18. PLAY/PAUSE indicator (►/II)
Lights when playing, and flashes when in pause mode.

19. CUE button
Use to set and confirm cue point.

20. CUE indicator
Lights when cue point is set, and flashes when in pause mode.

21. SEARCH buttons (◄◄, ►►)
Use to perform fast-forward and fast-reverse (with sound) during playback mode.

22. TRACK SEARCH buttons (I◄◄, ►►I)
Changes tracks in the forward/reverse direction.

23. Reverse button (DIRECTION REV)
When this button is pressed, its indicator lights and the unit is set to reverse play.

24. LOOP buttons

- **IN/REALTIME CUE/HOT LOOP button/indicator**

Use to input loop-in point.
Use to set the current playback point as cue point. (**REALTIME CUE**)
When pressed during loop play, returns playback to loop-in point and begins replay. (**HOT LOOP**)

- **OUT/OUT ADJUST button/indicator**

Use to input loop-out point. (**OUT**)
When pressed during loop play, adjusts loop-out point. (**OUT ADJUST**)

- **RELOOP/EXIT button**

After finishing loop play, the stored loop-in/out information can be used to begin loop play again. (**RELOOP**)
When pressed during loop play, loop play stops and playback returns to normal playback mode. (**EXIT**)

- **BEAT LOOP/LOOP DIVIDE buttons/indicator**

If pressed while playing or pausing a track, the loop-end will be calculated based on the BPM (Beat Per Minute) of the track, and loop-play will then start (**BEAT LOOP**).
Pressing the – button during loop-playback will divide the playback loop, and pressing the + button will return the playback loop to its original length (**LOOP DIVIDE**).
During loop-playback, the button's indicator will light to indicate that the LOOP DIVIDE button is enabled.

25. SCRATCH JOG EFFECT/DIGITAL JOG BREAK buttons

The button's function changes depending on the JOG mode.

- **SCRATCH JOG EFFECT buttons**

Turns on/off each of the effects BUBBLE, TRANS, and WAH during VINYL mode.

- **DIGITAL JOG BREAK buttons**

Turns on/off each of the effects JET, ROLL, and WAH during CDJ mode.

26. SOURCE SELECT buttons

- **USB select button**

Select when playing files from a connected USB memory device. Each time the button is pressed, the function alternates between USB and PC.

- **CD select button**

Select when playing CDs or files on a CD-ROM.

27. USB port

Use to connect a USB memory device.

28. TEXT MODE/UTILITY MODE button

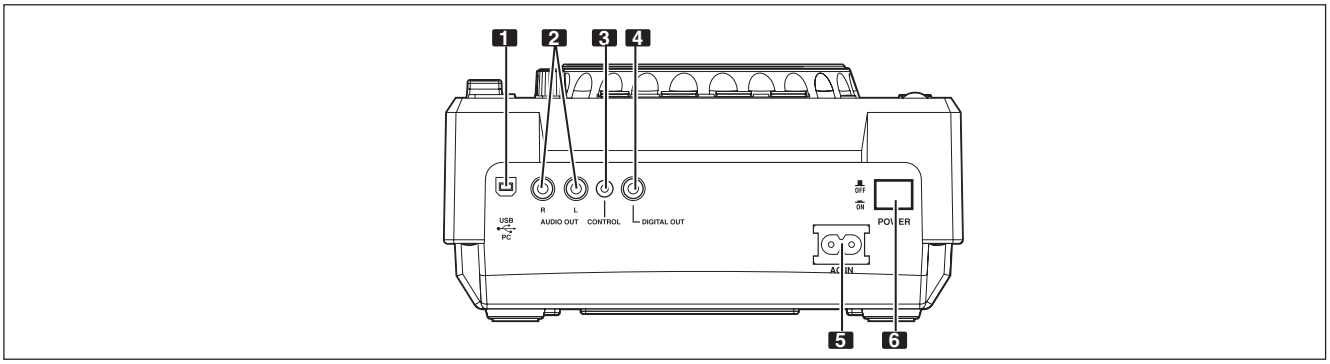
Changes the TEXT display
Hold the button depressed to enter utility setting mode.

29. TIME MODE/AUTO CUE button

Switches the display between the track's elapsed time and remaining time.
Hold the button depressed to turn the auto cue function on/off.

30. Jog touch indicators

During VINYL mode, lights when the top of the jog dial is pressed.



Rear Panel

1. USB port

Use to connect a computer.

2. AUDIO OUT L, R connectors

RCA-type analog audio output jacks.

3. CONTROL connector

When the accessory control cord is used to connect this connector to the corresponding CONTROL connector on a Pioneer DJ mixer, the DJ mixer can be used to control the CD player for fader start play and back cue.
Also, by connecting this connector to the CONTROL connector on another Pioneer DJ CD player, automatic relay play can be performed.

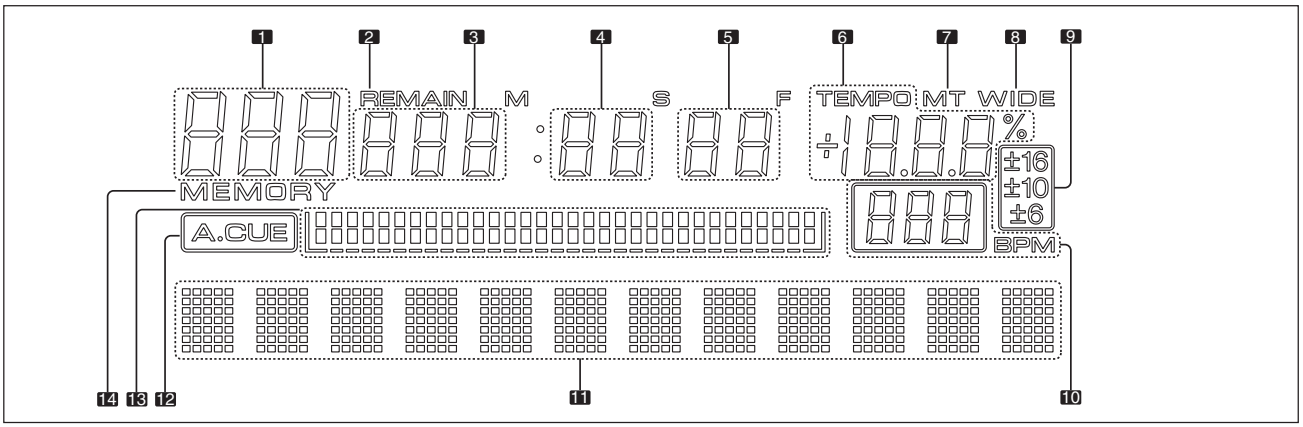
4. DIGITAL OUT connector

RCA type coaxial digital output connectors used to connect a DJ mixer or AV amplifier, CD player, etc., equipped with digital input connectors. The digital outputs here support all DJ and other functions, but only audio data is output (without subcodes; CD graphics are not supported).

5. AC inlet (AC IN)

Use the accessory power cord to connect this inlet to a standard AC power outlet.

6. POWER ■ OFF/▁ ON switch



Display

1. Segment display x3
Displays folder number, track number, or alphanumeric data.

2. REMAIN
Lights when the track remaining time is displayed.

3. Segment display x3
Displays time (minutes) or alphanumeric data.

4. Segment display x2
Displays time (seconds) or alphanumeric data.

5. Segment display x2
Displays time (frame) or alphanumeric data.

6. TEMPO
Displays the change rate of tempo.

7. MT
Lights when Master Tempo function is ON.

8. WIDE
Lights when the TEMPO control range button is set to WIDE.

9. ±6, ±10, ±16
Lights to display tempo range.

10. BPM
Displays the BPM of the track displayed.

11. Dot matrix display (7x5) x12
Displays text.

12. A.CUE
Lights when Auto Cue function is turned on.

13. Playing address display
Displays the current playback position in a one-track full-scale graph.
When displaying elapsed time, the graph lights from the left, and when displaying the remaining time the graph light turns off from the left.
When remaining time is less than 30 seconds, the graph flashes slowly, and when remaining time is less than 15 seconds the graph flashes rapidly.

14. MEMORY
Lights when a cue/loop point is saved.

Time display

- Press the **TIME MODE** button to alternate between elapsed time (TIME) and the track's remaining time (REMAIN).
- The display mode is saved when the power is turned off.

About TEXT display

Press the **TEXT MODE** button to switch the display between track name/album name/artist name for CD-TEXT. During MP3 playback, the display shows ID3 tag track name (if no ID3 tag is recorded, the display shows the file name) /ID3 tag album name/ ID3 tag artist name.

- Each item can display up to 48 characters of text; text longer than 10 characters is scrolled.
- Text may include alphanumerics and some symbols.
- If no text is available, the [NO TEXT] message will be displayed.

When a track name is selected in TEXT display, the [♪] icon will be displayed followed by the track name (with MP3, the ID3 tag's title name or file name will be displayed).
Also, during MP3 play, the bit rate will be displayed following the track name.

♪ CDJ-400 【128 Kbps】

When an album name is selected in TEXT display, the [ ] icon will be displayed followed by the album name.

Pioneer

When an artist name is selected in TEXT display, the [ ] icon will be displayed followed by the artist's name.

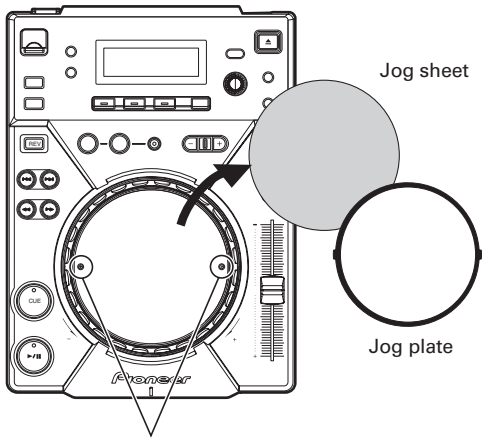
Pioneer PRO DJ

When folder search is performed with MP3, the folder name is displayed during the search.

Pioneer DJ

Removing the jog sheet

Using the furnished screwdriver, remove the two screws and the jog plate. The inner jog sheet can then be replaced with another supplied jog sheet or a graphic of your choice.



3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

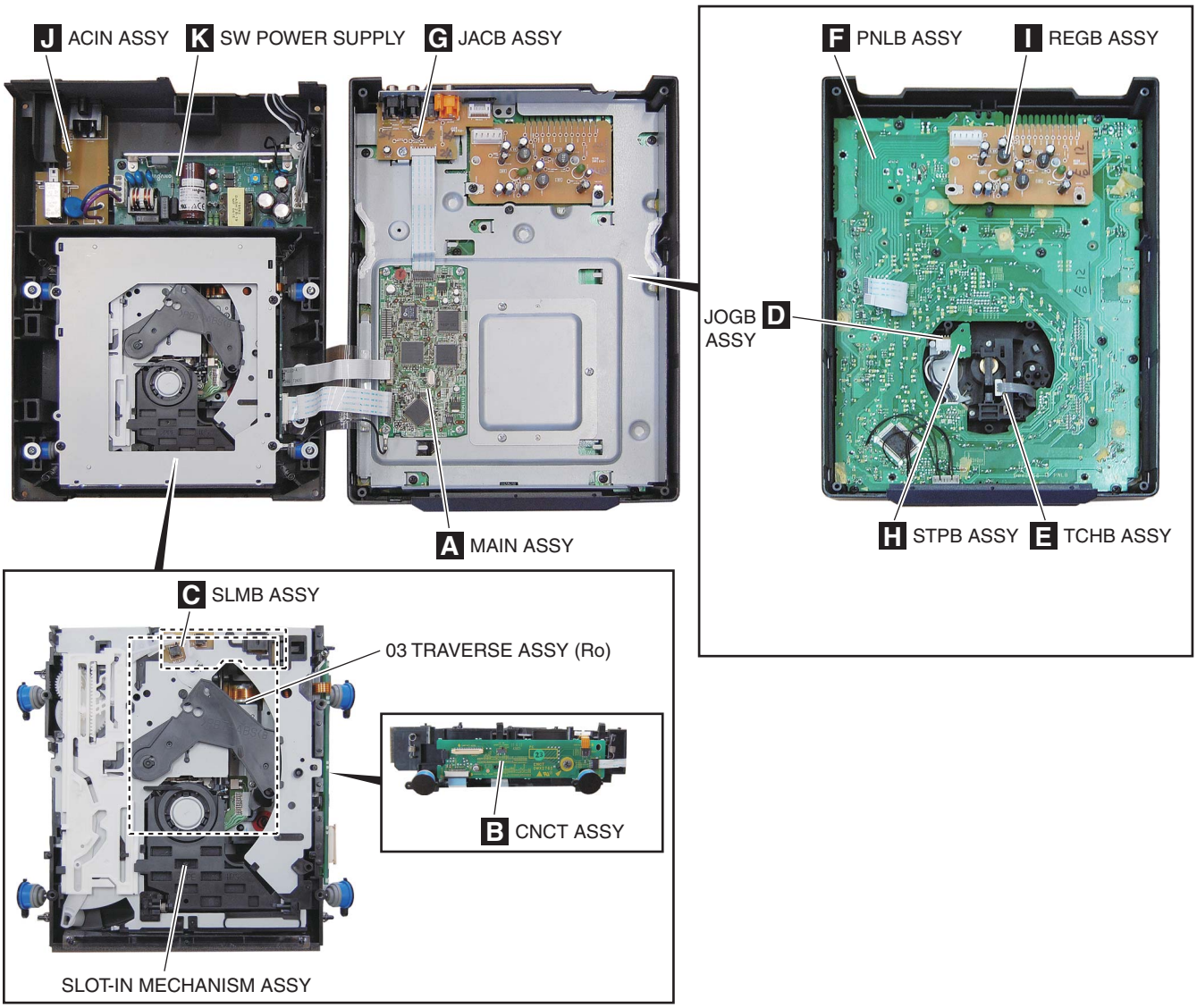
To ensure the quality of the product after repair, check the recommended items shown below:

No.	Procedures	Item to be checked
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 symptoms in question must not be reproduced. Audio and operations must be normal.
2	Chack the analog audio output.	Audio and operations must be normal.
3	Play back a CD. (track search)	Audio and operations must be normal.
4	Chack the digital audio output.	Audio and operations must be normal.
5	Check the outputs when it operated a JOG dial and a TEMPO Vol..	Audio and operations must be normal.
6	Check the exterior section.	Check for any scratches or dirt that have been made or attached on the exterior section after receiving the product for repair.

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

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

3.2 PCB LOCATIONS



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

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		MAIN ASSY	DWG1652
NSP	1	..PNLA ASSY (for KUCXJ)	DWM2323
NSP	1	..PNLA ASSY (for WYXJ5, TLFXJ)	DWM2313
	2	..REGB ASSY	DWR1442
	2	..SLMB ASSY	DWS1404
	2	..PNLB ASSY	DWX2756
	2	..JACB ASSY	DWX2759
	2	..JOGB ASSY	DWX2760
	2	..TCHB ASSY	DWX2761
	2	..STPB ASSY	DWX2792
⚠	2	..ACIN ASSY (for KUCXJ)	DWX2800
⚠	2	..ACIN ASSY (for WYXJ5, TLFXJ)	DWX2766
		CNCT ASSY	DWX2762
⚠		SW POWER SUPPLY	DWR1443
NSP		SLOT-IN MECHANISM ASSY	DXA2121
		03 TRAVERSE ASSY (Ro)	VXX3125

3.3 JIGS LIST

■ Lubricants and Glues list

Name	Lubricants and Glues No.	Remark
Dyefree	GEM1036 (ZLX-ME413A)	Refer to "9.5 SLOT-IN MECHANISM SECTION"
Grease	GYA1001 (ZLB-PN397B)	Refer to "9.4 JOG PANEL SECTION", "9.5 SLOT-IN MECHANISM SECTION"

■ Cleaning

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

Position to be cleaned	Cleaning tools	Remark
Pickup leneses	Cleaning liquid : GEM1004	Refer to "7. DISASSEMBLY SECTION" ,"9.5 SLOT-IN MECHANISM SECTION" .
	Cleaning paper : GED-008	

A

B

C

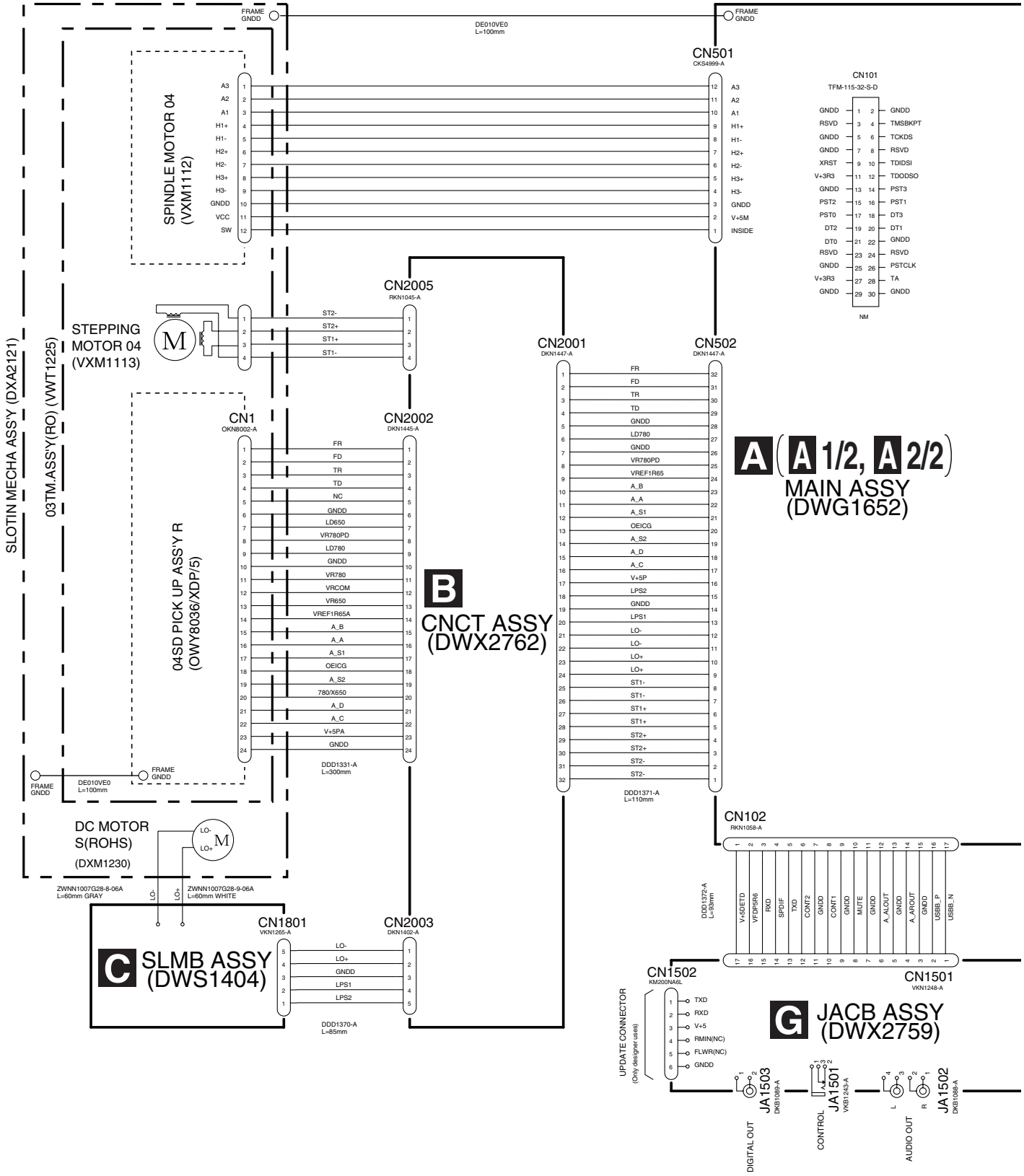
D

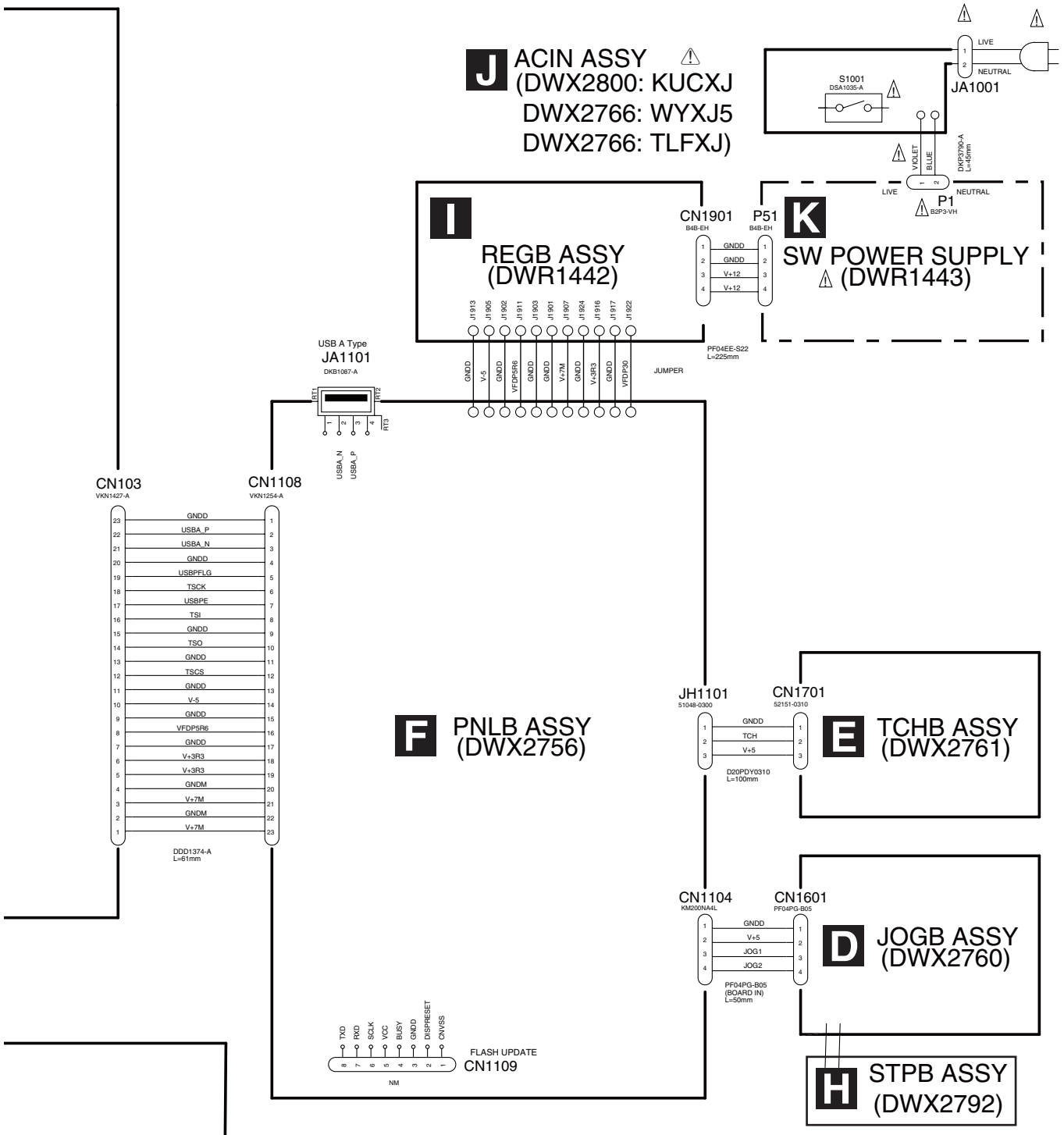
E

F

4. BLOCK DIAGRAM

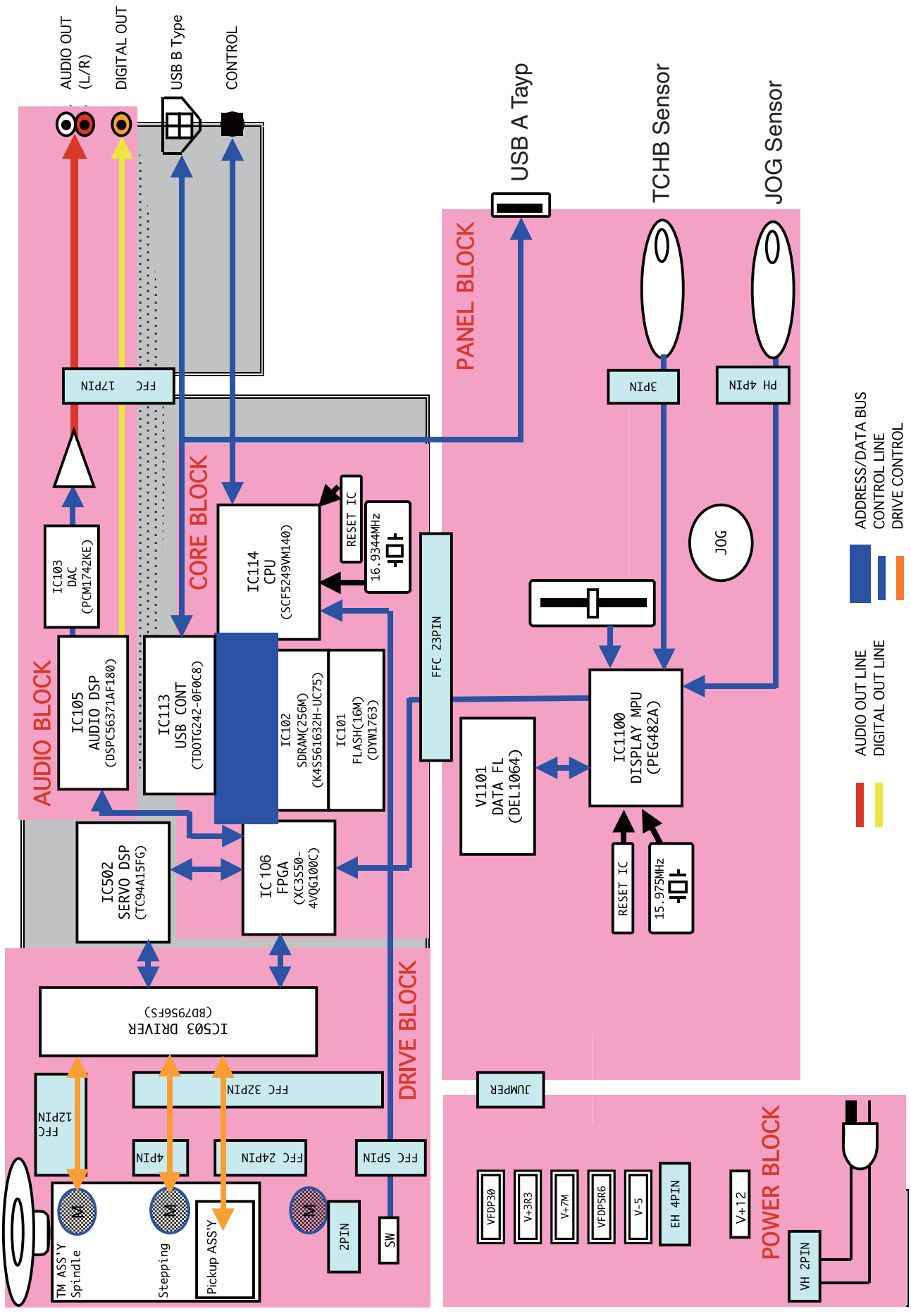
4.1 OVERALL WIRING DIAGRAM

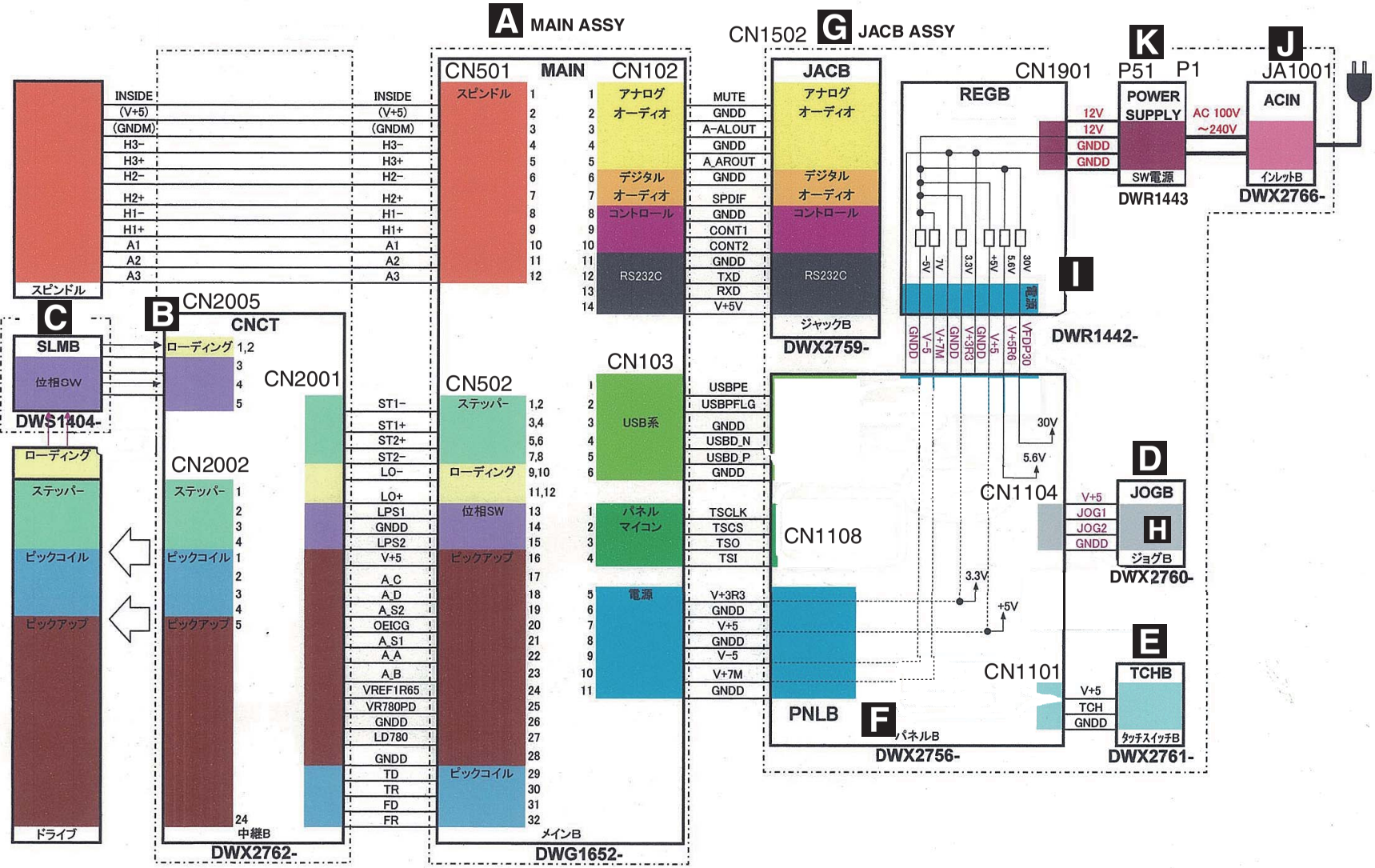




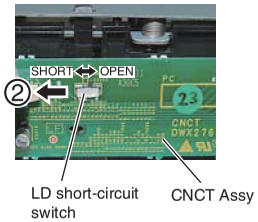
When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
: The power supply is shown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

4.2 OVERALL BLOCK DIAGRAM



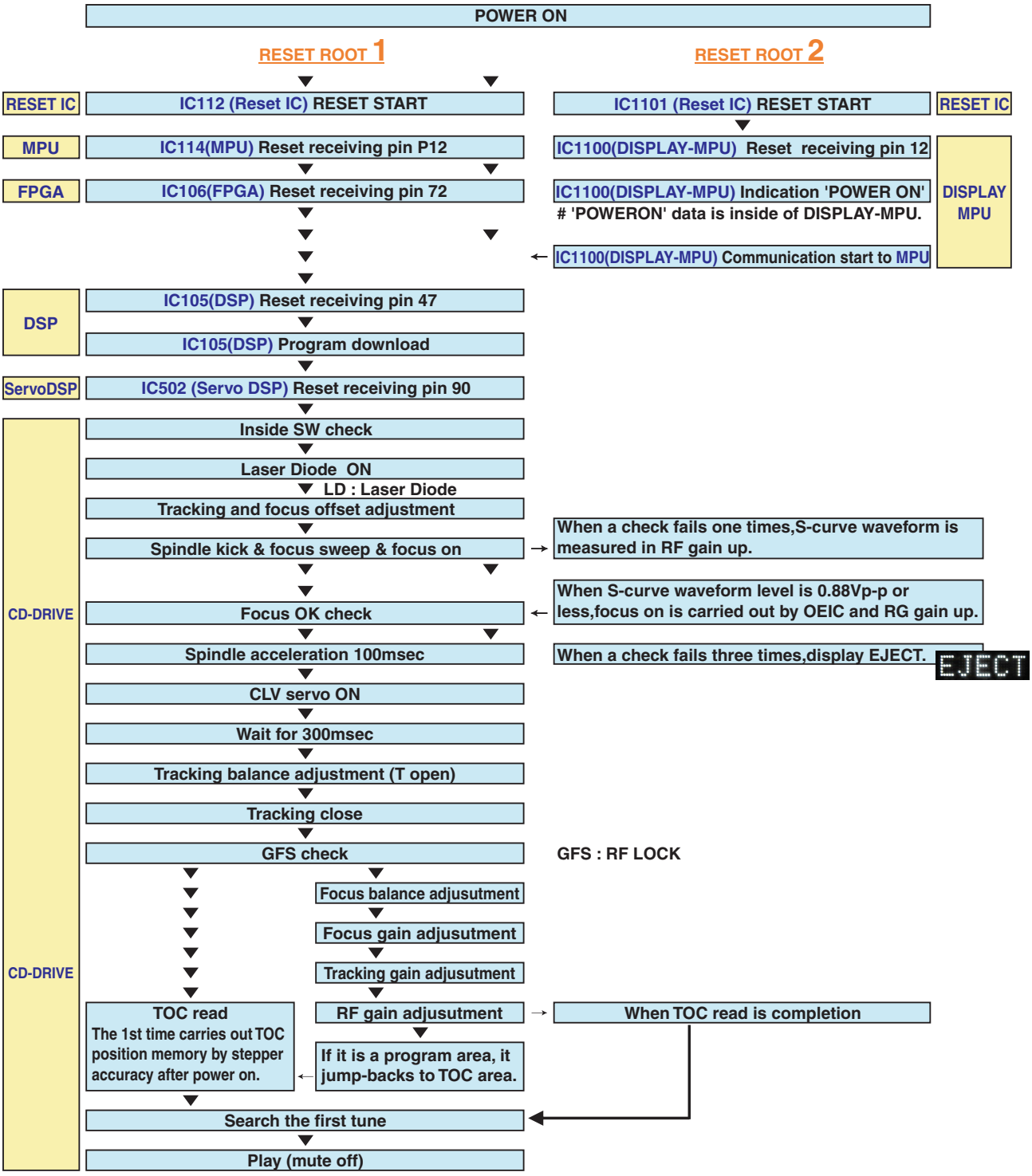

A MAIN ASSY
CN501 MAIN CN102
CN1502 G JACB ASSY
JACB
CN1901
REGB
K
P51 P1
POWER SUPPLY
SW電源
DWR1443
J
JA1001
ACIN
インレットB
DWX2766-
12V
12V
GNDD
GNDD
AC 100V ～240V
スピンドル
INSIDE
(V+5)
(GNDM)
H3−
H3+
H2−
H2+
H1−
H1+
A1
A2
A3
C
SLMB
位相SW
DWS1404-
B
CN2005
CNCT
CN2001
CN2002
ローディング
ステッパー
ピックコイル
ピックアップ
ドライブ
中継B
DWX2762-
CN502
CN103
USB系
パネル
マイコン
電源
メインB
DWG1652-
アナログ
オーディオ
デジタル
オーディオ
コントロール
RS232C
MUTE
GNDD
A-ALOUT
GNDD
A_AROUT
GNDD
SPDIF
GNDD
CONT1
CONT2
GNDD
TXD
RXD
V+5V
USBPE
USBPFLG
GNDD
USBD_N
USBD_P
GNDD
TSCLK
TSCS
TSO
TSI
V+3R3
GNDD
V+5
GNDD
V−5
V+7M
GNDD
ST1−
ST1+
ST2+
ST2−
LO−
LO+
LPS1
GNDD
LPS2
V+5
A_C
A_D
A_S2
OEICG
A_S1
A_A
A_B
VREF1R65
VR780PD
GNDD
LD780
GNDD
TD
TR
FD
FR
ジャックB
DWX2759-
I
DWR1442-
−5V
7V
3.3V
+5V
5.6V
30V
電源
GNDD
V−5
V+7M
GNDD
V+3R3
GNDD
V+5
V+5R6
VFDP30
30V
5.6V
3.3V
+5V
CN1104
CN1108
CN1101
PNLB
F
パネルB
DWX2756-
D
JOGB
H
ジョグB
DWX2760-
V+5
JOG1
JOG2
GNDD
E
TCHB
タッチスイッチB
DWX2761-
V+5
TCH
GNDD

5. DIAGNOSIS
5.1 CHECKING THE PICKUP ASSY

Item	Specifications	Measurement Procedures	Failure Judgment	Remarks
Laser Diode (LD) current	Typ. 70 mA Max. 80 mA	① Make sure that no CD is loaded. ② Enter Service mode. ③ Connect a tester between the test lands LD3S and LD CHECK to check the voltage difference between them. ④ During Test Operation mode, press the TEMPO button to turn the LD on. ⑤ Measure the voltage difference (DC value) between the test lands LD3S and LD CHECK on the MAIN Assy. ⑥ Press the TEMPO button to turn the LD off. Confirm that the voltage difference between test lands LD3S and LD CHECK becomes 0 then disconnect the tester.	If the measurement result of the LD current is 80 mA or more, the LD is deteriorated. **Note:** Check the mounting status of R502, R506, R509 and R514 (22 ohms).	
Focus coil resistance	3.4 ± 0.5 Ω	① Make sure that no CD is loaded. ② Remove the bottom plate and set the LD short-circuit switch (S2002) to Short side. (see right figure.) ③ Disconnect the FFC cable that connects the CNCT Assy and the MAIN Assy from the CN502 connector. ④ Measure the conductor resistance of the terminal assembly between Pins 31 and 32 of the FFC cable.	If the measurement result is beyond the specified value, the pickup is in failure.	
Tracking coil resistance	4.1 ± 0.6 Ω	① Make sure that no CD is loaded. ② Remove the bottom plate and set the LD short-circuit switch (S2002) to Short side. (see right figure.) ③ Disconnect the FFC cable that connects the CNCT Assy and the MAIN Assy from the CN502 connector. ④ Measure the conductor resistance of the terminal assembly between Pins 29 and 30 of the FFC cable.	If the measurement result is beyond the specified value, the pickup is in failure.	
S-shaped level Usually use a pressed CD, as the measurement result depends on the disc type.	Reference: 1.5 Vp-p	① Enter Service mode. ② Load a pressed CD. (Standby) ③ Connect and set a digital oscilloscope so that the p-p level at the test land (FE) can be measured. ④ During Test Operation mode, press the TIME, A, then CUE buttons to send a command. ⑤ Measure the p-p level (S-shaped level) at the FF.	If the measurement result is twice or more, or 50% or less of the reference value, the pickup or the MAIN ASSY is defective.	
Tracking Error (TE) level Usually use a pressed CD, as the measurement result depends on the disc type.	Reference: 1.1 Vp-p	① Enter Service mode. ② Load a pressed CD. (Standby) ③ Connect and set a digital oscilloscope so that the p-p level at the test land (TE) can be measured. ④ During Test Operation mode, press the buttons in the following order to send a command: TIME, TEMPO, RELOOP, then LOOPIN twice. ⑤ Measure the p-p level of waveform at the TE.	If the measurement result is twice or more, or 50% or less of the reference value, the pickup or the MAIN ASSY is defective.	
RFO level Usually use a pressed CD, as the measurement result depends on the disc type.	Reference: 1.2 Vp-p	① Play back a pressed CD. ② Measure the p-p level of RF waveform at the RFO test land on the MAIN Assy.	If the measurement result is twice or more, or 50% or less of the reference value, the pickup or the MAIN ASSY is defective.	You may disconnect the measuring equipment during measurement, if you wish.
Auto Gain Control (AGC) RF level The measurement result does not depend on the disc type.	1.2 Vp-p ± 10 %	① Play back a CD. ② During playback, measure the p-p level of RF waveform at the AGCRF test land on the MAIN Assy.	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.	You may disconnect the measuring equipment during measurement, if you wish.

5.2 POWER ON SEQUENCE

■ POWER ON SEQUENCE



6. SERVICE MODE

6.1 OVERVIEW OF SERVICE MODE

Two microcomputers are provided for this unit: One is for the Display section, and it controls key input, displays on the FL display, and lighting of LEDs. The other is for the Player section, and it controls the drive of the player. Test modes are provided for each microcomputer:

① Display Check mode for the Display section
Mode for confirmation of key input and display functions

② Mode for checking load on the JOG dial and Adjustment
Mode for measuring load on the JOG dial when turned

③ Version Check mode
Mode for checking the software version of each microcomputer

④ Updating mode
Mode for updating software of the microcomputer for the Player section (main microcomputer)

⑤ List of Error codes/Detail Display mode
Up to 16 error logs can be checked.

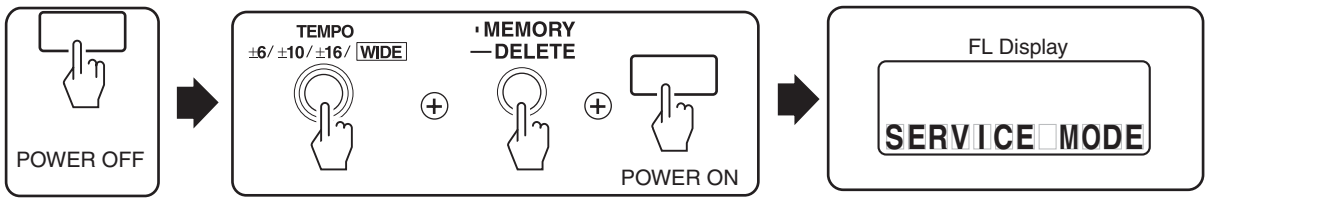
⑥ Operation Check mode for the Player section
This mode for operation check of the mechanism and servomechanism of the Player section consists of Player Operation mode and Test Operation mode.

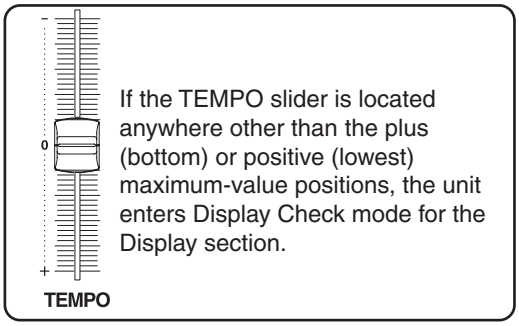
6.2 CHECK MODE OPERATION

6.2.1 Display Check mode for the Display section

In this mode, you can light up some LEDs and part of the Display section to check if the input of each key/variable control is correctly reflected on the display. An LED or part of the display is lit while the corresponding key is held pressed.

How to enter Display Check mode





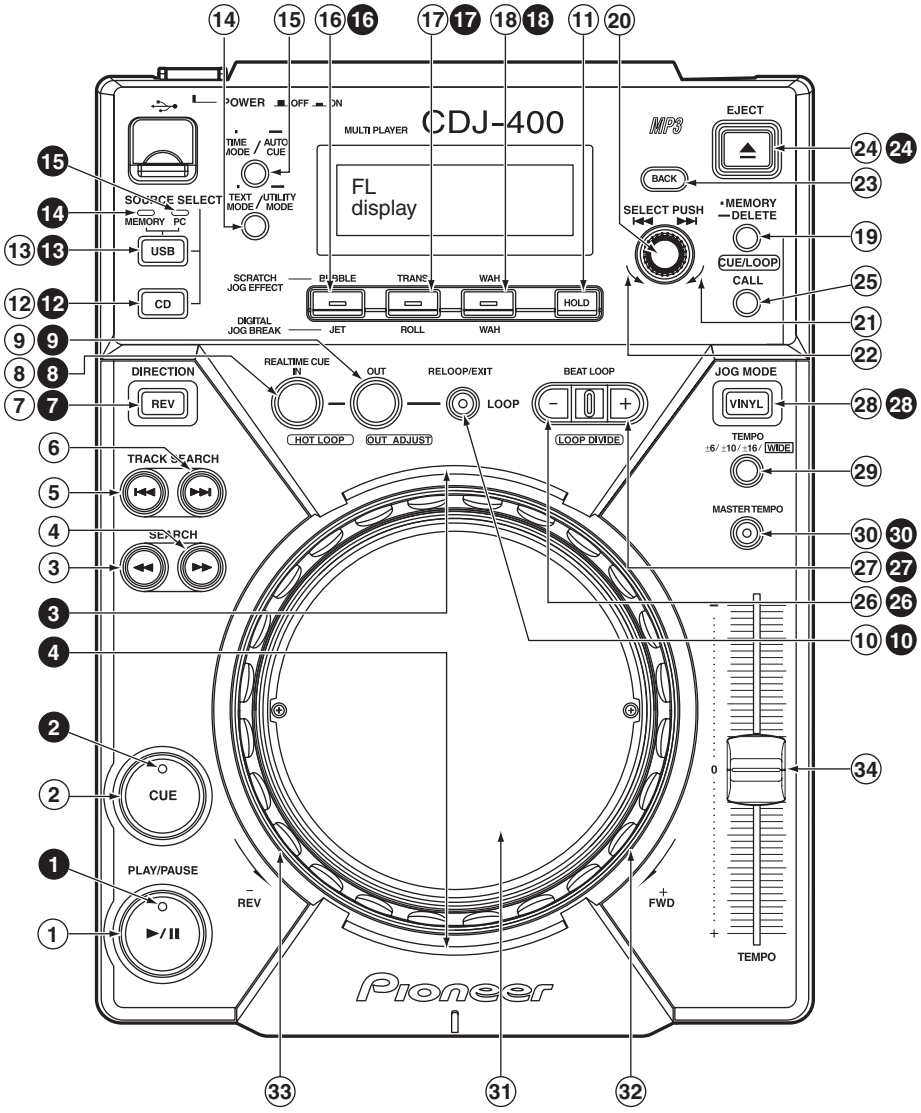
If the TEMPO slider is located anywhere other than the plus (bottom) or positive (lowest) maximum-value positions, the unit enters Display Check mode for the Display section.

Display Check mode for the Display section

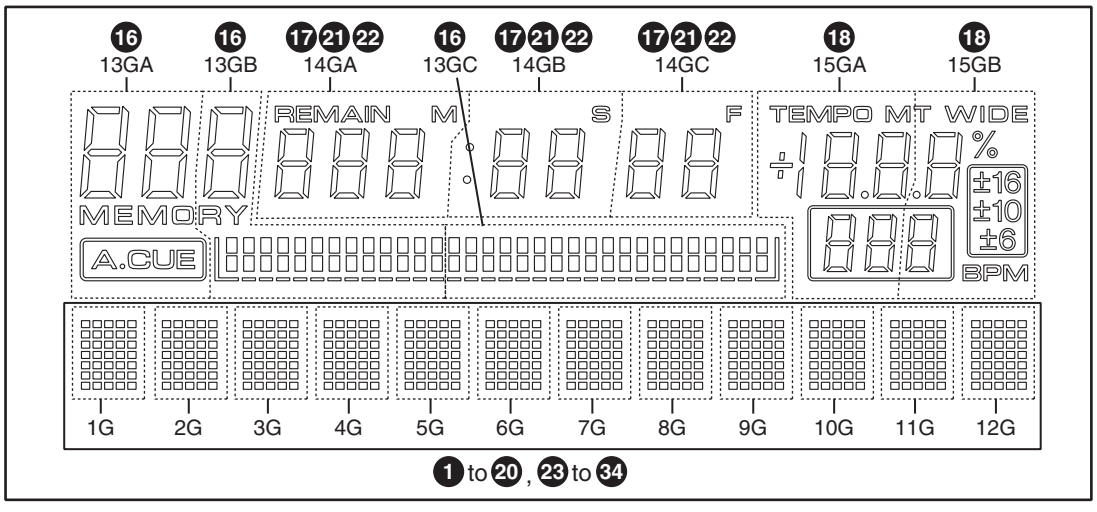
In this mode, while a key is held pressed, the corresponding FL display and LED are lit.

How to exit Display Check mode

Key and Switch Name	Dot FL Display	Other FL Display	LED Display
① PLAY/PAUSE	❶ PLAY		❶ PLAY/PAUSE
② CUE	❷ CUE		❷ CUE
③ SEARCH ◄◄	❸ REV <<		❸ JOG touch indicator 1
④ SEARCH ►►	❹ FWD >>		❹ JOG touch indicator 2
⑤ TRACK SEARCH I◄◄	❺ TRACK |<<		
⑥ TRACK SEARCH ►►I	❻ TRACK >>|		
⑦ DIRECTION REV	❼ REVERSE		❼ DIRECTION REVERSE
⑧ IN/REALTIME CUE	❽ IN		❽ IN/REALTIME CUE
⑨ OUT/OUT ADJUST	❾ OUT		❾ OUT/OUT ADJUST
⑩ RELOOP/EXIT	❿ RELOOP		❿ RELOOP/EXIT
⑪ HOLD	⓫ HOLD		
⑫ SOURCE SELECT CD	⓬ CD		⓬ SOURCE SELECT CD
⑬ SOURCE SELECT USB	⓭ USB		⓭ SOURCE SELECT USB
⑭ TEXT MODE	⓮ TEXTMODE		⓮ USB MEMORY
⑮ TIME MODE/AUTO CUE	⓯ TIME/ACUE		⓯ PC
⑯ JET/BUBBLE	⓰ JET/BUBBLE	⓰ 13G section light up	⓰ JET/BUBBLE
⑰ ROLL/TRANS	⓱ ROLL/TRANS	⓱ 14G section light up	⓱ ROLL/TRANS
⑱ WAH	⓲ WAH	⓲ 15G section light up	⓲ WAH
⑲ MEMORY	⓳ MEMORY		
⑳ SELECT PUSH	⓴ PUSH		
㉑ SELECT PUSH ►►I		㉑ 14G light up 00 to FF	
㉒ SELECT PUSH I◄◄		㉒ 14G light up FF to 00	
㉓ BACK	㉓ All the FL display light up	All the FL display light up	All the LED display light up
㉔ EJECT	㉔ EJECT		㉔ DISC IN INDICATOR
㉕ CALL	㉕ CALL		
㉖ BEAT LOOP/LOOP DIVIDE –	㉖ DIVIDE <?		㉖ BEET LOOP/LOOP DIVIDE
㉗ BEAT LOOP/LOOP DIVIDE +	㉗ DIVIDE ?>		㉗ BEET LOOP/LOOP DIVIDE
㉘ JOG MODE VINYL	㉘ JOG MODE		㉘ JOG MODE VINYL
㉙ TEMPO	㉙ TEMPO		
㉚ MASTER TEMPO	㉚ MASTER TEMPO		㉚ MASTER TEMPO
㉛ TOUCH SENSOR (JOG dial)	㉛ TOUCH SW		
㉜ During a JOG dial FWD direction rotation	㉜ JOG>		
㉝ During a JOG dial REV direction rotation	㉝ <JOG		
㉞ TEMPO slider knob	㉞ Bar display		


CDJ-400
MULTI PLAYER
FL display
POWER
OFF
ON
EJECT
MP3
BACK
SELECT PUSH
MEMORY DELETE
CUE/LOOP CALL
SOURCE SELECT
MEMORY
PC
USB
CD
SCRATCH JOG EFFECT
BUBBLE
TRANS
WAH
HOLD
DIGITAL JOG BREAK
JET
ROLL
WAH
DIRECTION
REV
REALTIME CUE IN
OUT
RELOOP/EXIT
LOOP
BEAT LOOP
HOT LOOP
OUT ADJUST
LOOP DIVIDE
JOG MODE
VINYL
TEMPO
WIDE
MASTER TEMPO
TRACK SEARCH
SEARCH
CUE
PLAY/PAUSE
REV
FWD
TEMPO
Pioneer

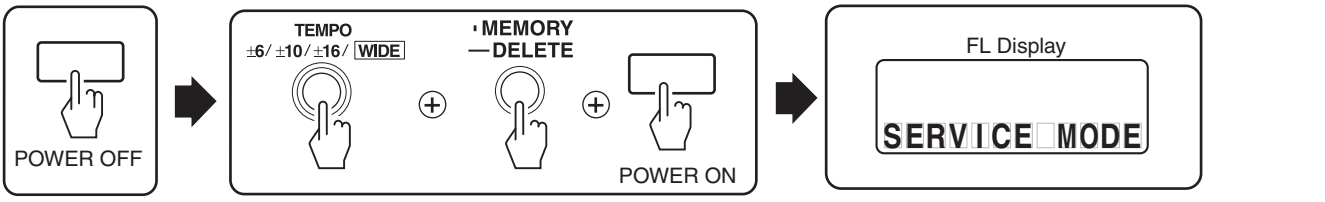
• **FL Display**


13GA
13GB
14GA
13GC
14GB
14GC
15GA
15GB
REMAIN
M
S
F
TEMPO MT WIDE
%
±16
±10
±6
MEMORY
A.CUE
BPM
1G
2G
3G
4G
5G
6G
7G
8G
9G
10G
11G
12G
1 to 20 , 23 to 34

6.2.2 Mode for checking load on the JOG dial and Adjustment

This mode is for objectively judging the load (light or heavy touch) on the JOG dial when it is turned, with a value.

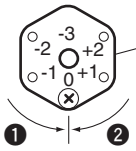
Mode for Checking Load on the JOG Dial : ON



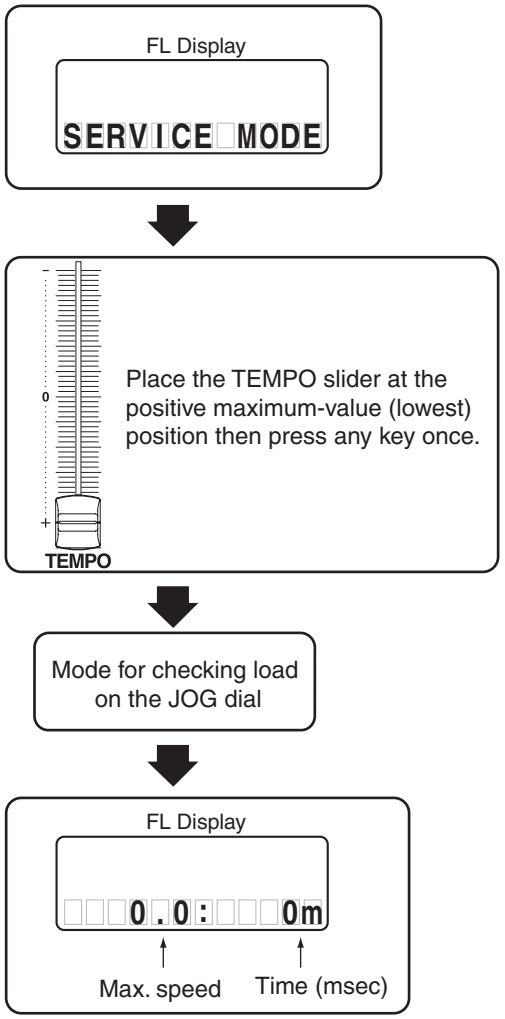
[Measuring procedure]
After entering this mode, rapidly turn the JOG dial, either clockwise or counterclockwise. The figures will be displayed.
If, for example, "8.6: 115" is displayed, each figure means the following:
8.6 : Maximum speed (Normal speed is one rotation in 1.8 sec.)
115 : Time (in msec) required for decreasing the rotation speed from 3 times to 1.5 times normal speed

To measure the time required for reducing the rotation speed, the maximum speed must be 7.0 times normal speed or higher.
If measurements are consecutively performed several times, the mean value of the results of up to four latest measurements will be displayed, in order to minimize variation.
Standard value: 95 ± 25 msec

[Adjustment procedure]
1. Enter this mode.
2. Adjust the adjustment value of Adjust plate to "0".
3. Rapidly turn the JOG dial, either clockwise or counterclockwise.
4. The rotational speed (maximum speed) and time are displayed in the dot FL display section.
   - The time required so that the rotation may decrease from 3 times normal speed to 1.5 times normal speed when maximum speed is only 7 times normal speed or more is displayed.
   - Moreover, the mean value of the measurement result at the rotation decrease time is displayed since the second times.
   - The thing that the mean value at the decrease of the rotation three times in total time is in the standard value (95 ± 25 msec) is confirmed. Perform the following procedure if coming off from the standard value.
5. When the rotational speed is smaller than 70, the adjustment value of the adjust plate is changed to "-1" and performs the procedure 3 and 4. (❶)
   When the rotational speed is larger than 120, the adjustment value of the adjust plate is changed to "+1" and performs the procedure 3 and 4. (❷)



Adjust plate
(The installation position refers to the JOG Dial of section "7. DISASSEMBLY".)

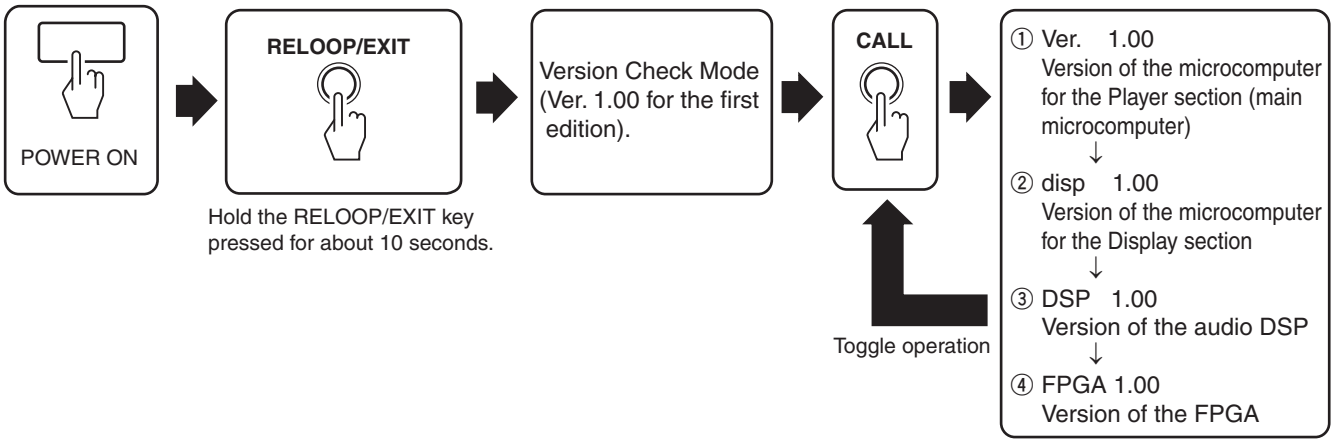


The unit enters the mode for checking load on the JOG dial, and the maximum speed and the time required for transition are displayed on the dot-matrix display.

Mode for Checking Load on the JOG Dial : CANCEL

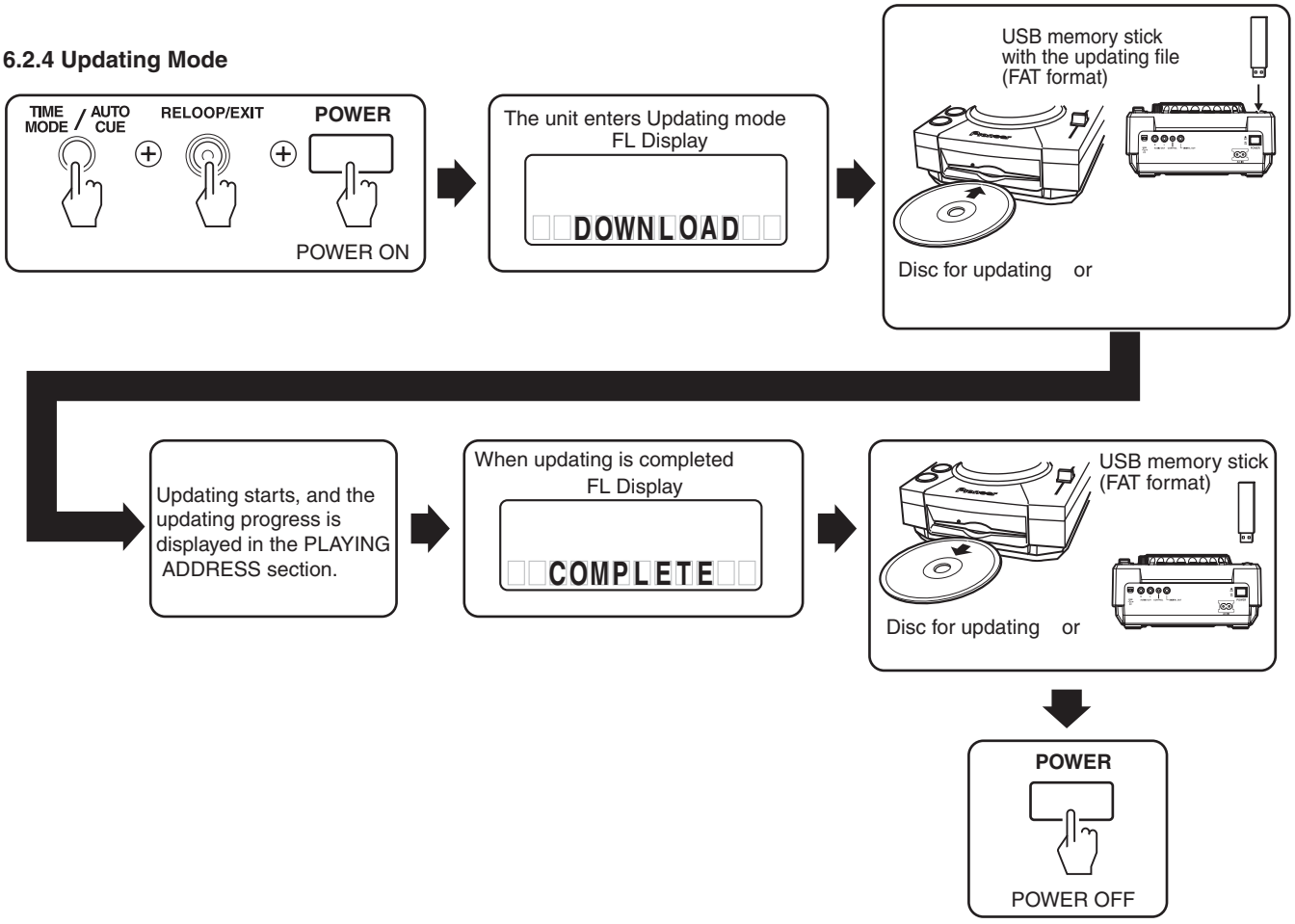
6.2.3 Version Check mode

This is the mode for checking the software version of each microcomputer.



- Audio DSP and FPGA are the processors for audio processing and control of each signal, respectively, and operate independently from the microcomputer for the Player section. However, their programs are stored in the flash ROM for the microcomputer for the Player section and are transferred from the flash ROM to each processor each time the unit is turned on.
- The version of the main microcomputer is also displayed in the TEMPO display when the unit enters Operation Check mode for the Player section, mentioned above.

6.2.4 Updating Mode



Note: NEVER turn the unit off, unplug the power cord, or remove the disc or USB memory stick before updating is completed.

6.2.5 List of Error Codes/Detail Display mode

If an error is generated during Normal mode, one of the following error codes is displayed on the FL display.
Detailed error content (error described in the Error content column of the table below: E-XX) can be confirmed if the JOG MODE key is pressed during Software Version Check mode for the Player microcomputer.
Each time the JOG MODE key is pressed, the version number and error display are cyclically displayed.
The first error displayed when the JOG MODE key is pressed is the latest, and each time the LOOP DIVIDE – key is pressed the previous error is displayed (pressing the LOOP DIVIDE + key displays the oldest error). Data for up to 16 errors are stored in memory.

For errors E-12 and E-15, the address (TNO:MIN:SEC:FRM) where an error was generated is also stored in memory, and it can be displayed by pressing the TIME MODE key (toggle operation).

Error No.	Error Name	Error Content
E-6002	DSP PROGRAM DOWNLOAD ERROR	The program cannot be written in the DSP. **
E-7201	TOC READ ERROR	26: TOC data could not be read.
E-8301	PLAYER ERROR (Startup error)	12: The desired address could not be searched. 15: Address data could not be read. 22: The Focus Servo could not be closed. } * 91: The pickup could not be returned to the inner track.
E-8302	PLAYER ERROR (Abnormality in playback)	12: The desired address could not be searched. 15: Address data could not be read. 22: The Focus Servo could not be closed.
E-8303	PLAYER ERROR (Abnormality in writing to the buffer)	99: Abnormality in writing in the buffer
E-8304	MP3 DECODE ERROR (Abnormality in decoding)	Abnormality in decoding **
E-8305	DATA FORMAT ERROR (Inappropriate data format)	A data format other than MP3 was used. **
E-8709	COMMUNICATION ERROR	Communication between the microcomputers for the Display section and the Player section could not be established. **
E-9101	MECHANICAL TIME OUT	90: Abnormality in the disc-loading mechanism (TIMEOUT)

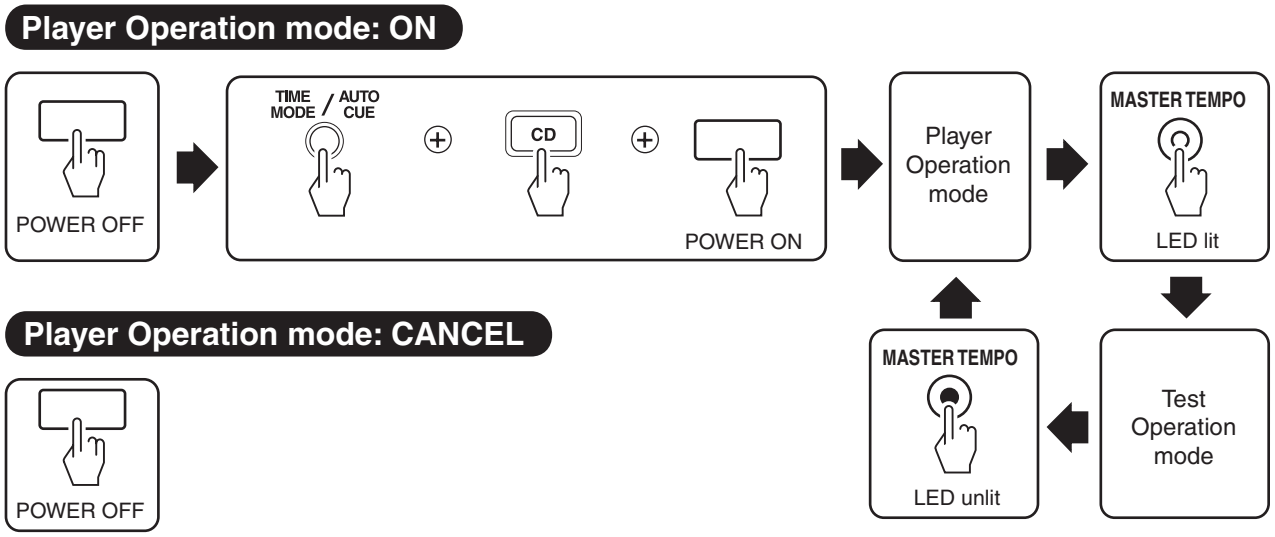
* If these errors are generated before the loaded disc is identified as a CD, the disc is automatically ejected. In this case, the error code is not displayed, but you can check it, as the error content is stored in memory.
** Data for errors E-6002, E-8304, E-8305 and E-8709 are not stored in the memory.

To clear error logs, turn on the power while simultaneously holding the BACK and USB keys pressed.
In this case, the following settings are reset to the initial settings:

Setting Item	Default Setting
AUTO CUE	OFF
AUTO CUE LEVEL	– 60dB
TIME MODE	REMAIN
JOG MODE	VINYL
MASTER TEMPO	OFF
TEMPO RANGE	±10%
JOG illumination pattern	Pattern 1
MIDI channel	Channel 1

Note: A function for storing the CUE/LOOP point in memory is provided with this unit.
If error logs are cleared, CUE/LOOP-point data are also cleared. Therefore, be careful when using this mode.

6.2.6 Operation Check mode for the Player section



This mode consists of Player Operation mode and Test Operation mode.

Player Operation mode
In this mode, basic operations of the servomechanism, such as setup, playback, pause, and track search, are checked. Error rates can also be measured.

Test Operation mode
Servo operations can be controlled step by step in detail.

Notes:
- Switching from Player Operation mode to Test Operation mode can be accomplished by pressing the MASTER TEMPO key.
- Commands in Test Operation mode are mainly for testing the mechanism and servomechanism, not for testing the DJ functions, such as scan and tempo.

• Player Operation mode

Function	Key on the main unit
Play(trace) / Pause	PLAY/PAUSE
Track Search F/R	TRACK SEARCH ►►I/I◄◄
Error Rate Count	CUE
Eject	EJECT
Mode Change	MASTER TEMPO

• Test Operation mode

Function	Key on the main unit
Servo All Off	TIME
LD On/Off	TEMPO
Focus On/Off	RELOOP
Spindle Kick, Tracking On/Off	(LOOP) IN/REALTIME CUE
Tracking Off	(LOOP) OUT
Slide FWD (2 mm)	SEARCH ►►
Slide REV (2 mm)	SEARCH ◄◄
Pickup Up/Down	TEXT
Mode Change	MASTER TEMPO

• Description of commands in Player Operation mode

Play (trace)/Pause
If this command is issued in Stop mode, the unit is set up and starts playing. If the command is issued in Playback mode, pause and playback are alternately performed each time the PLAY/PAUSE key is pressed. The address currently being played back is displayed on the FL display.

Note: In this mode, auto setup is not performed when a disc is inserted. Playback in this mode does not mean audio playback but trace of the signal area on a disc. In playback, tracing is performed at four the speed of normal playback. No audio signal is output.

Track Search F/R
The unit starts searching for the displayed track in the forward or reverse direction and will pause when it finds it.

Error Rate Count
An error rate is measured from the current Play/Pause position for about 10 seconds (duration of disc recording). The result will be displayed on the FL display. Normally, search for the track to be measured then press the CUE key in Pause mode. The error rate is displayed, for example, as "3.56E-4 OK." "OK" is displayed if the error rate is 3.00E-3 or less, and "NG" is displayed if it is more than 3.00E-3. The result is determined on the assumption that the measurement is performed using a control disc upon shipmentof the product. This measurement cannot be used for judging whether or not the product is defective during servicing.

Eject
The loaded disc is ejected.

Mode Change
Press the MASTER TEMPO key during Player Operation mode to change to Test Operation mode. The MASTER TEMPO LED lights up, and Test Operation mode (described below) is entered.

• Test Operation mode

Servo operations can be controlled step by step in detail.
Please note that incorrect use of commands in Test Operation mode may damage the player.

Servo All Off
When the TIME key is pressed during Servo ON, all the servos will be shut off. "ALL OFF" is displayed.

LD On/Off
Pressing the TEMPO key turns the LD ON or OFF. "LD ON" or "LD OFF" is displayed.

Focus On/Off
Pressing the RELOOP key during Stop mode turns the LD ON, and auto focusing is performed. "FCS ON" is displayed.

Spindle Kick, Tracking On/Off
When the IN/REAL TIME CUE (LOOP IN) key is pressed while the tracking servo is OFF, spindle kicking is performed, and the automatic adjustment process and tracking servo are turned ON. When the key is pressed while the tracking servo is ON, the tracking servo is turned OFF. "TRK ON" or "TRK OFF" is displayed.

Tracking Off
Pressing the (LOOP) OUT key while the tracking servo is ON turns the tracking servo OFF. "TRK OFF" is displayed.

Slide FWD
Pressing the SEARCH ►► (FWD) key while the tracking servo is ON turns the tracking servo OFF and moves the slider about 2 mm in the forward direction. "SLD FWD" is displayed.

Slide REV
Pressing the SEARCH ◄◄ (REV) key while the tracking servo is ON turns the tracking servo OFF and moves the slider about 2 mm in the reverse direction. "SLD REV" is displayed.

Pickup Up/Down
Pressing the TEXT key during Stop mode turns the LD ON and moves the pickup up and down. Focus will not be closed. "PU UP/DN" is displayed.

Mode Change
Pressing the MASTER TEMPO key during Test Operation mode turns the MASTER TEMPO LED off, and Player Operation mode (described above) is entered.

Note: To start up the servos step by step in Test Operation mode, input the commands in the following order:
Servo All Off, Focus On, Spindle Kick, then Tracking On.

7. DISASSEMBLY

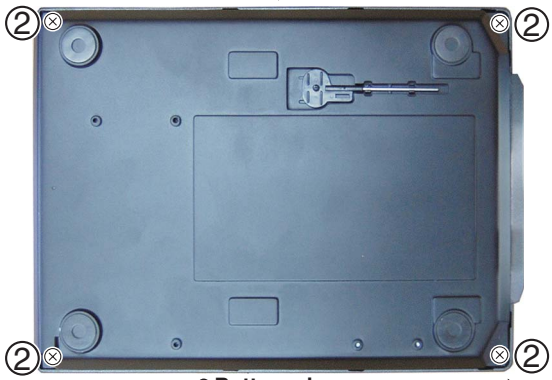
Note 1: Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
Note 2: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of MAIN Assy

① Remove the three screws.

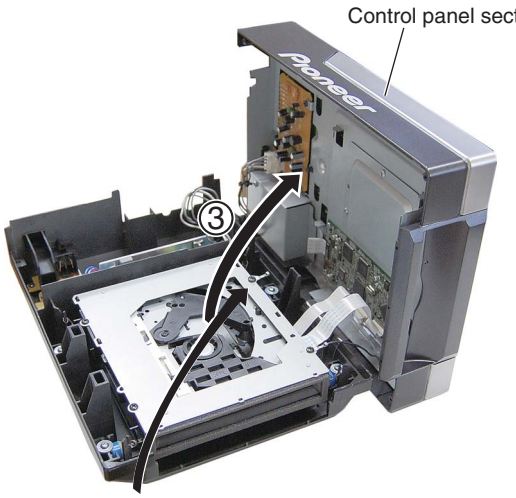
● **Rear view**

② Remove the four screws.



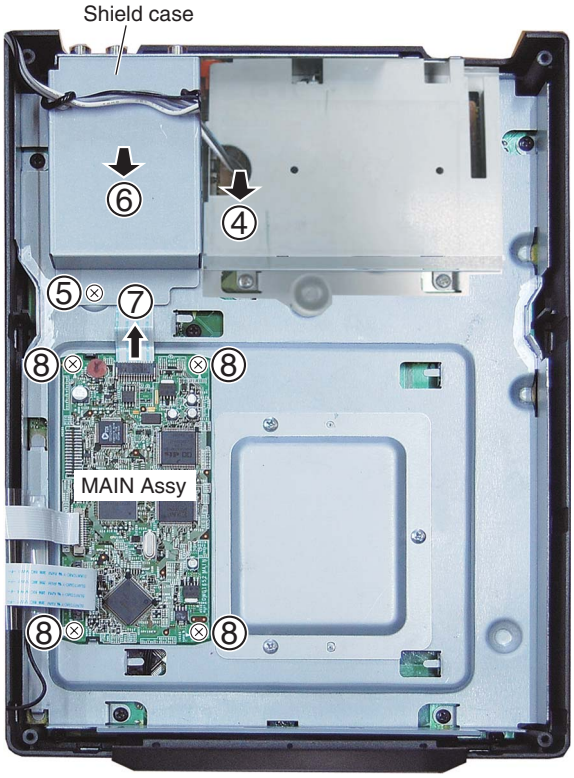
● **Bottom view** Front side ➡

③ Remove the control panel section.

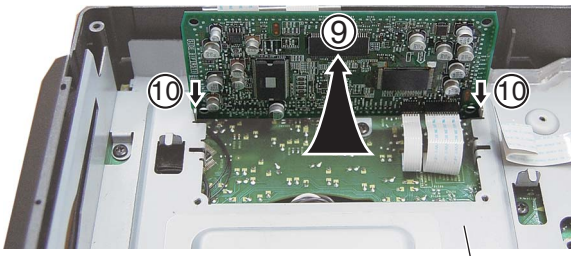


Note: Attach the ground wire in the specified direction.
If you don't, it will come into contact with the capacitor.

④ Disconnect the connector.
⑤ Remove the screw.
⑥ Remove the shield case.
⑦ Disconnect the flexible cable.
⑧ Remove the four screws.



⑨ Lift the MAIN Assy.
⑩ Insert the MAIN Assy to slit of the MAIN PCB stay.



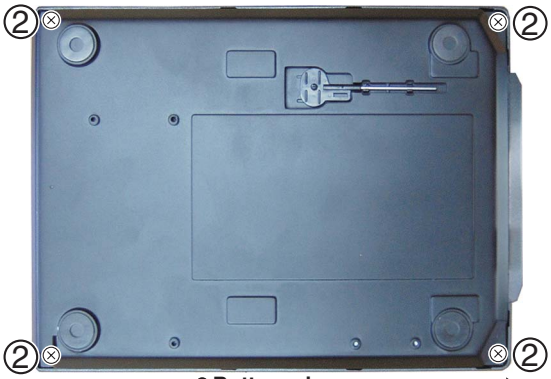
Diagnosis

Access to the Adjust plate

① Remove the three screws.

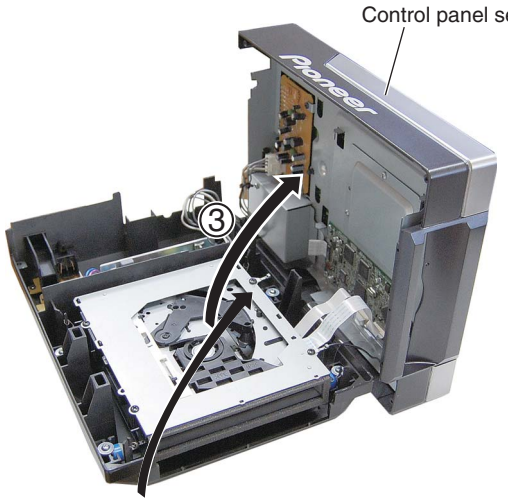
● Rear view

② Remove the four screws.



● Bottom view Front side ➡

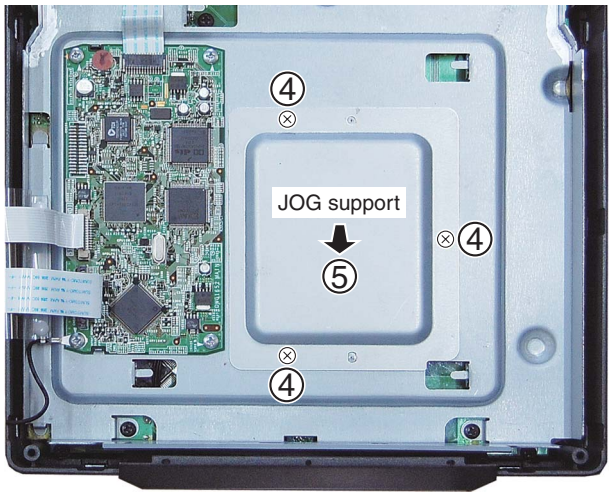
③ Remove the control panel section.

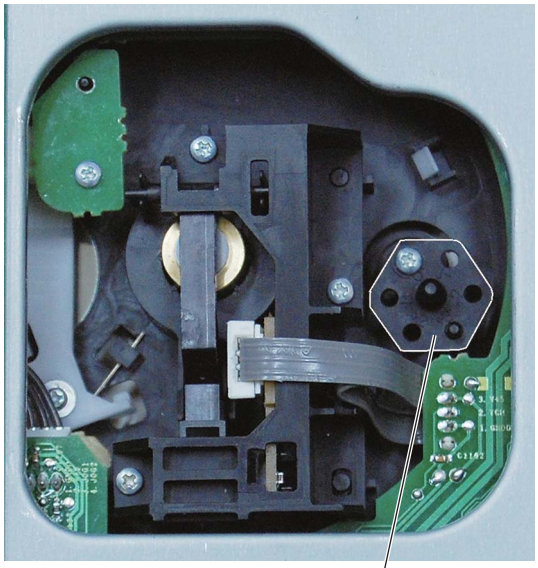


Note: Attach the ground wire in the specified direction.
If you don't, it will come into contact with the capacitor.

④ Remove the three screws.

⑤ Remove the JOG support.





Adjust plate

About details of Adjustment etc., refer to the "6.2.2 Mode for checking load on the JOG dial and Adjustment" in "6. SERVICE MODE".

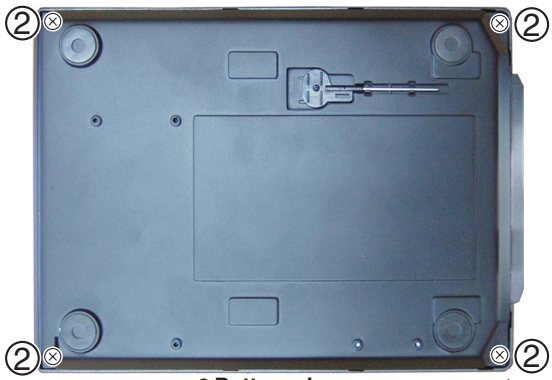
Disassembly

1 Control panel section

① Remove the three screws.

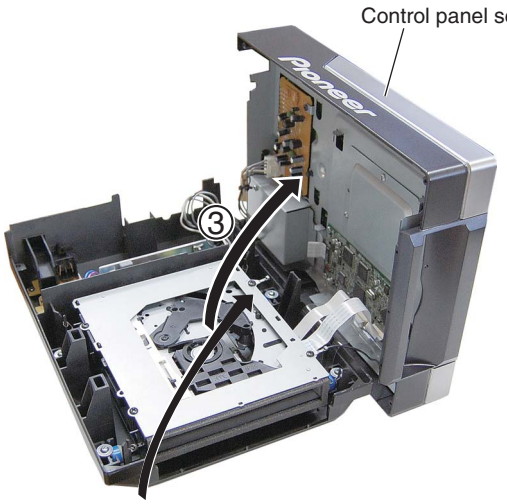
● Rear view

② Remove the four screws.



● Bottom view Front side ➡

③ Remove the control panel section.



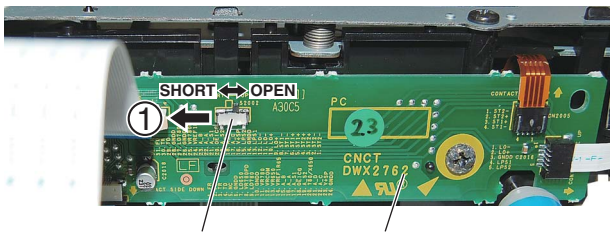
Note: Attach the ground wire in the specified direction.
If you don't, it will come into contact with the capacitor.

2 Slot-in mechanism section

❶ Remove the control panel section.
(See 1 Control panel section)

① Change the position of the LD switch on the CNCT Assy to “SHORT” .

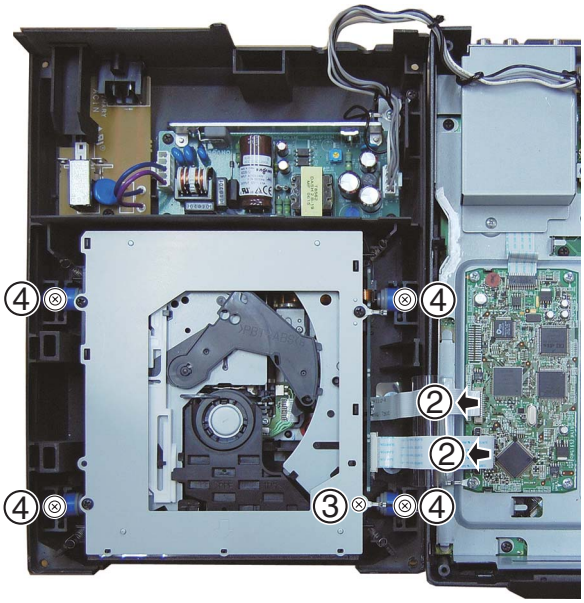
Note: After work, connect the flexible cable, then change the position to “OPEN”.



② Disconnect the two flexible cables. (MAIN Assy side)

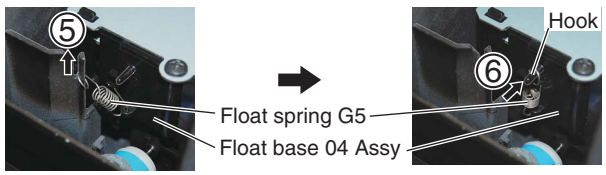
③ Remove the screw.

④ Remove the four DM screws.

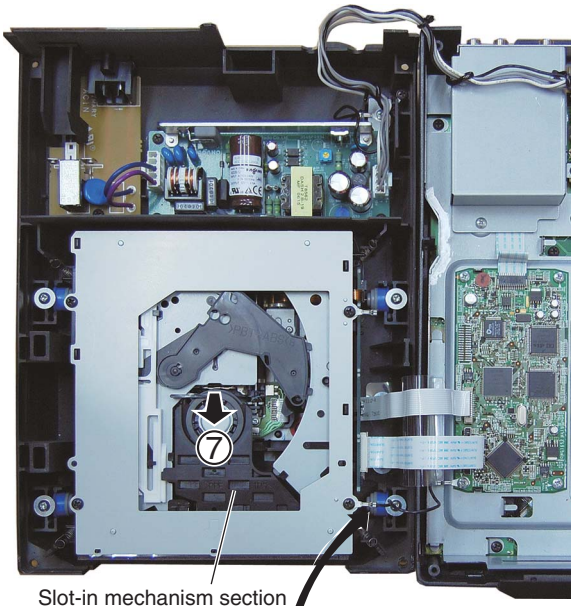


⑤ Unhook the four float springs G5.

⑥ Hook the four float springs G5 to the four hooks of the float base 04 Assy.



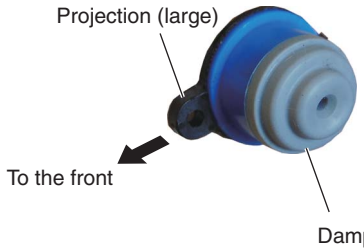
⑦ Remove the slot-in mechanism section.



Note: Attach the ground wire in the specified direction.
If you don't, it will come into contact with the capacitor.

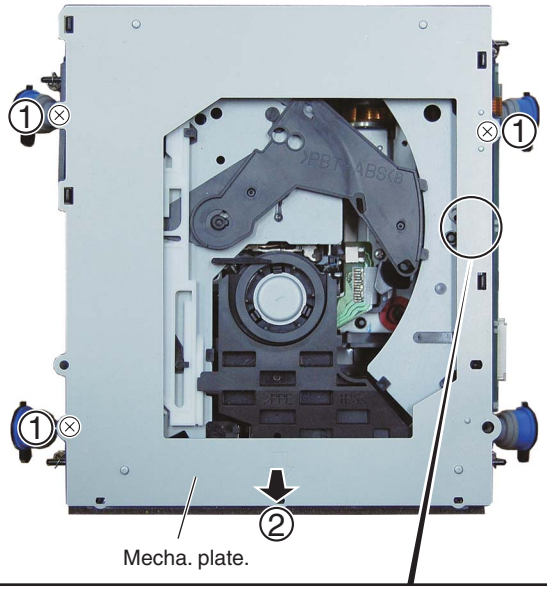
● **Direction of the dampers when attaching them**

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



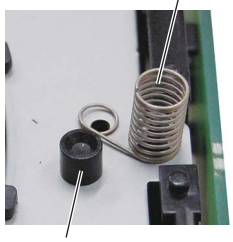
3 Slot-in mechanism Assy

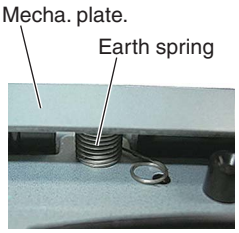
① Remove the three screws.
② Remove the mecha. plate.



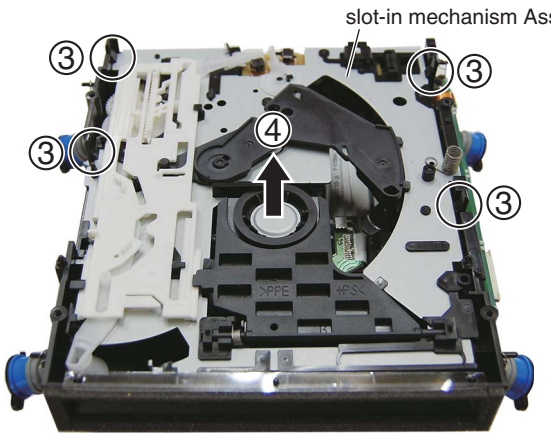
● **Note of earth spring**

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





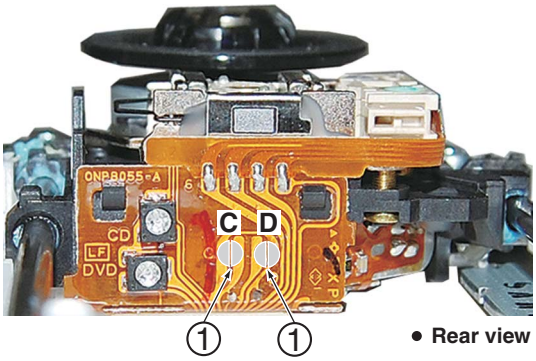
③ Unhook the four hooks.
④ Remove the slot-in mechanism Assy.



4 03 Traverse Assy (Ro)

① Short-circuit two positions of C and D soldering.

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

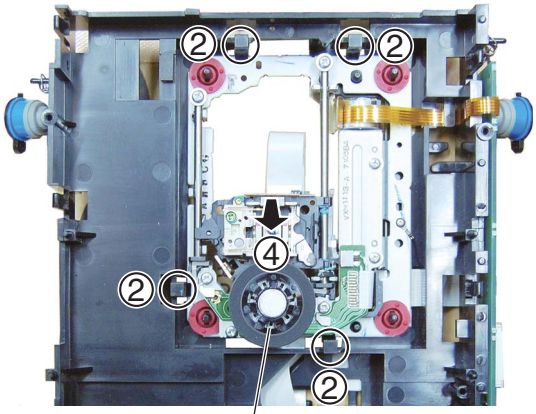


● **Rear view**

② Unhook the four hooks.

③ Disconnect the some flexible cables at need.

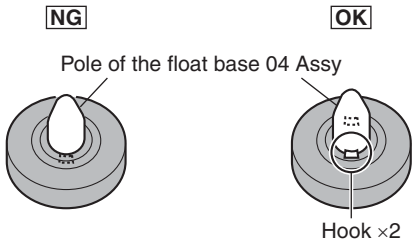
④ 03 Remove the traverse Assy (Ro).



03 Traverse Assy (Ro)

Exchange

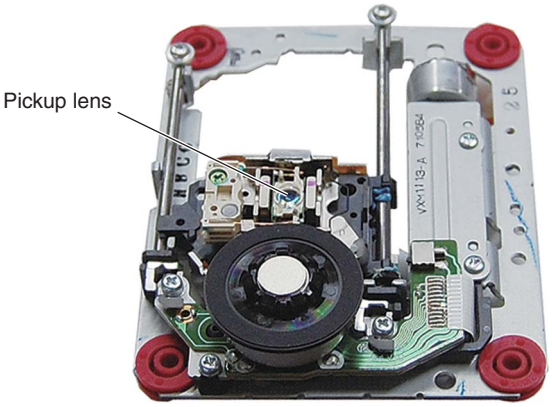
● Note on the float rubber installation



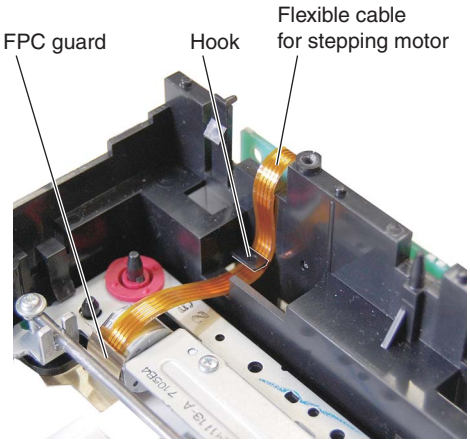
● Cleaning the pickup lens

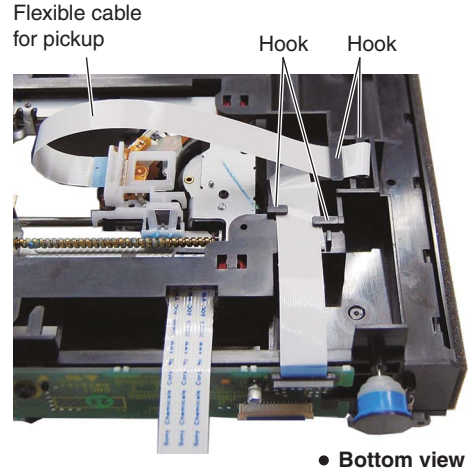
Before shipment, be sure to clean the pickup lens, using the following cleaning materials:

Cleaning liquid: GEM1004
Cleaning paper : GED-008



● Arrangement of the flexible cables



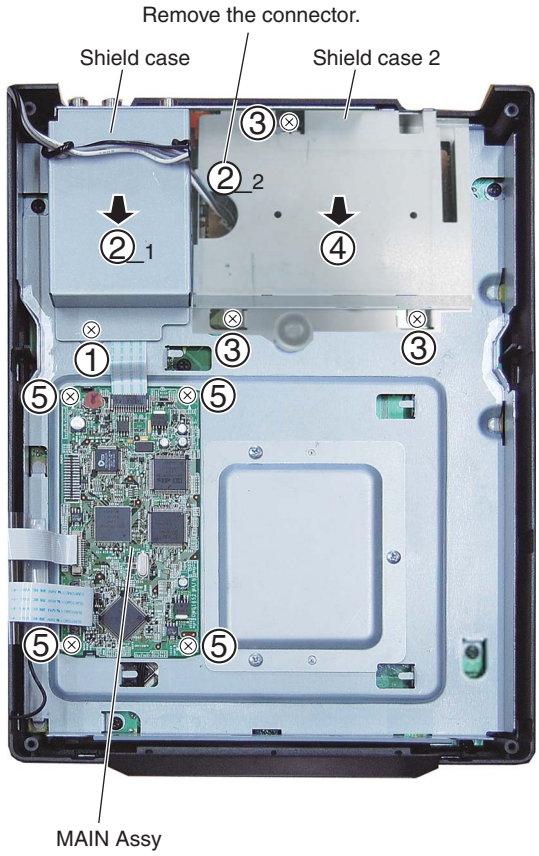


● **Bottom view**

5 JOG section

❶ Remove the control panel section.
(See 1 Control panel section)

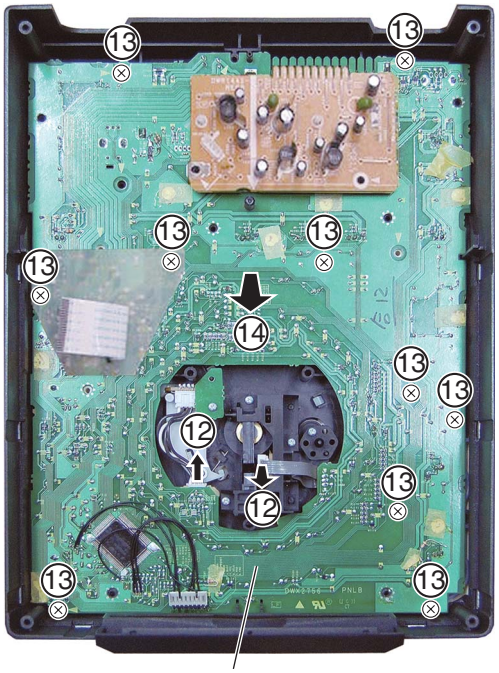
① Remove the screw.
②_1 Remove the shield case.
②_2 Remove the connector.
③ Remove the three screws.
④ Remove the shield case 2.
⑤ Remove the four screws.
⑥ Remove the MAIN Assy.
⑦ Disconnect the some flexible cables at need.



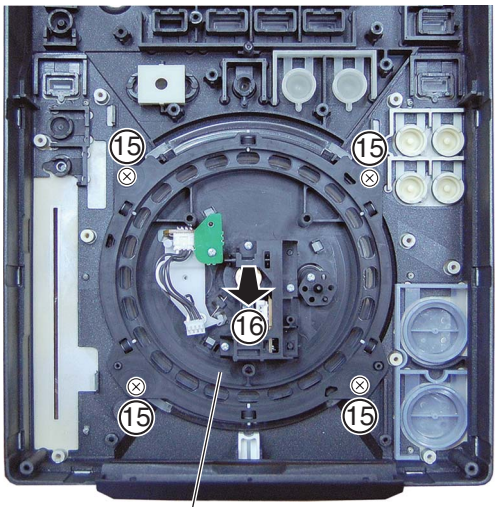
⑧ Remove the seven screws.
⑨ Remove the MAIN PCB stay.

⑩ Remove the dial knob.
⑪ Remove the slide knob.

⑫ Disconnect the two connectors.
⑬ Remove the ten screws.
⑭ Remove the PNLB Assy.

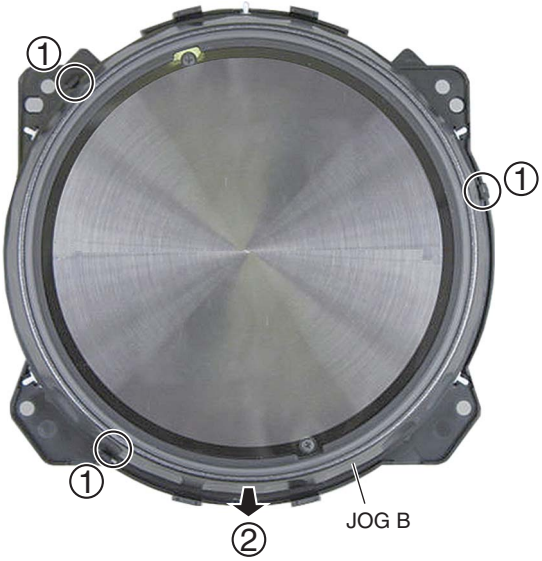


⑮ Remove the four screws.
⑯ Remove the JOG section.



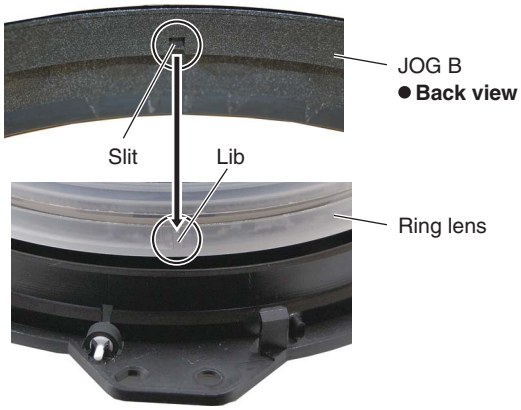
6 JOG B

① Unhook the three hooks.
② Remove the JOG B.



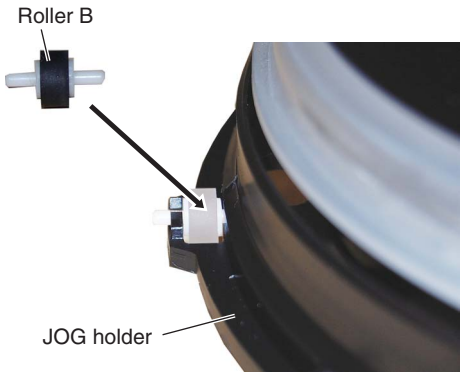
● **Note on the JOG B installation**

Fit the lib of the ring lens in a slit of JOG B.
(four places)



● **Note on the roller B exchange**

The grease application is unnecessary for JOG holder.



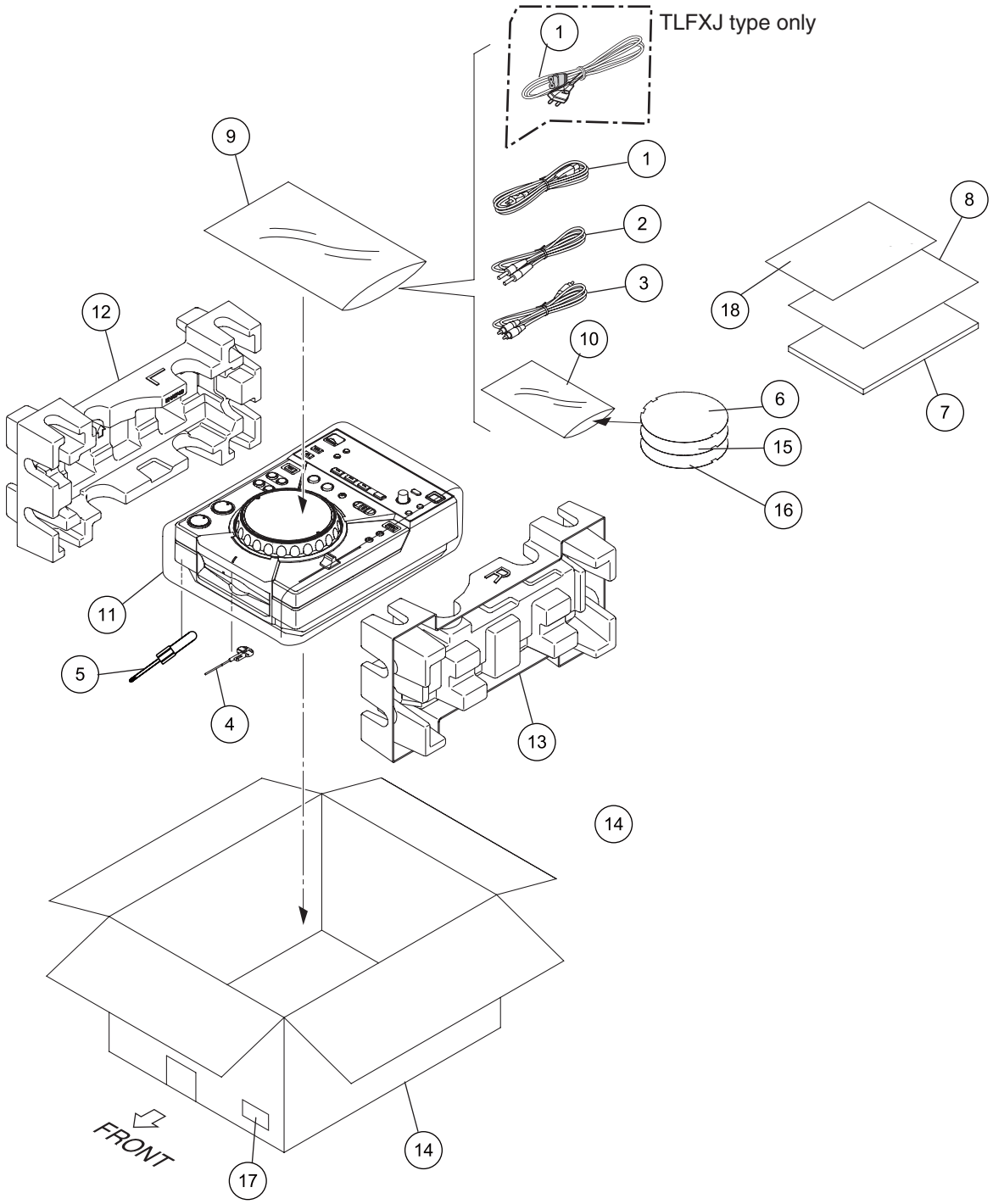
8. EACH SETTING AND ADJUSTMENT

• There is no information to be shown in this chapter.

9. EXPLODED VIEWS AND PARTS LIST

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

9.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

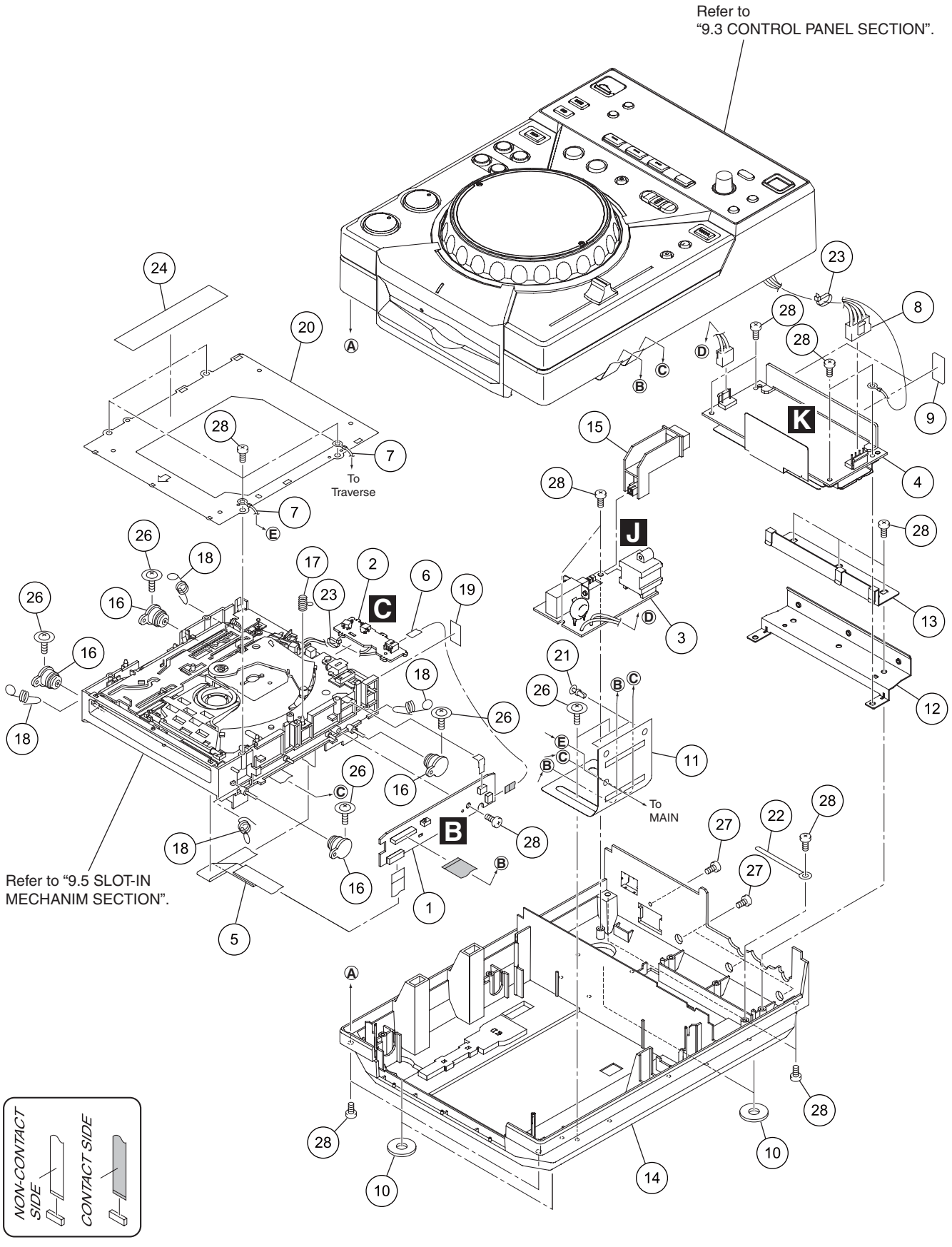
Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
	2	Control Cable (L=1.0 m)	ADE7108
	3	Audio Cable (L=1.5 m)	VDE1064
	4	Forced Eject Pin (Housed in a groove in the bottom panel)	DEX1008
	5	Screw driver	DEX1022
	6	Jog Sheet 1	DAH2599
	7	Operating Instructions	See Contrast table (2)
NSP	8	Warranty Card	See Contrast table (2)
NSP	9	Polyethylene Bag (0.06 x 230 x 340)	AHG7117
NSP	10	Polyethylene Bag	DHL1174
	11	Packing Sheet	AHG7015
	12	Pad L	DHA1749
	13	Pad R	DHA1750
	14	Packing Case	See Contrast table (2)
	15	Jog Sheet 2	DAH2600
	16	Jog Sheet 3	DAH2601
NSP	17	Label	VRW1629
	18	Caution Card SR	See Contrast table (2)

(2) CONTRAST TABLE

CDJ-400/KUCXJ, WYXJ5 and TLFXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-400/KUCXJ	CDJ-400/WYXJ5	CDJ-400/TLFXJ
⚠	1	Power Cord	ADG7021	ADG1154	ADG1154
⚠	1	Power Cord	Not used	Not used	ADG7097
	7	Operation Instructions (English)	DRB1450	Not used	Not used
	7	Operation Instructions (English, French, German, Italian, Dutch, Spanish, Russian)	Not used	DRB1451	Not used
	7	Operation Instructions (English, Spanish, Chinese)	Not used	Not used	DRB1452
NSP	8	Warranty Card	ARY7043	ARY7107	Not used
	14	Packing Case	DHG2710	DHG2709	DHG2711
	18	Caution Card SR	Not used	Not used	ARM7064

9.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

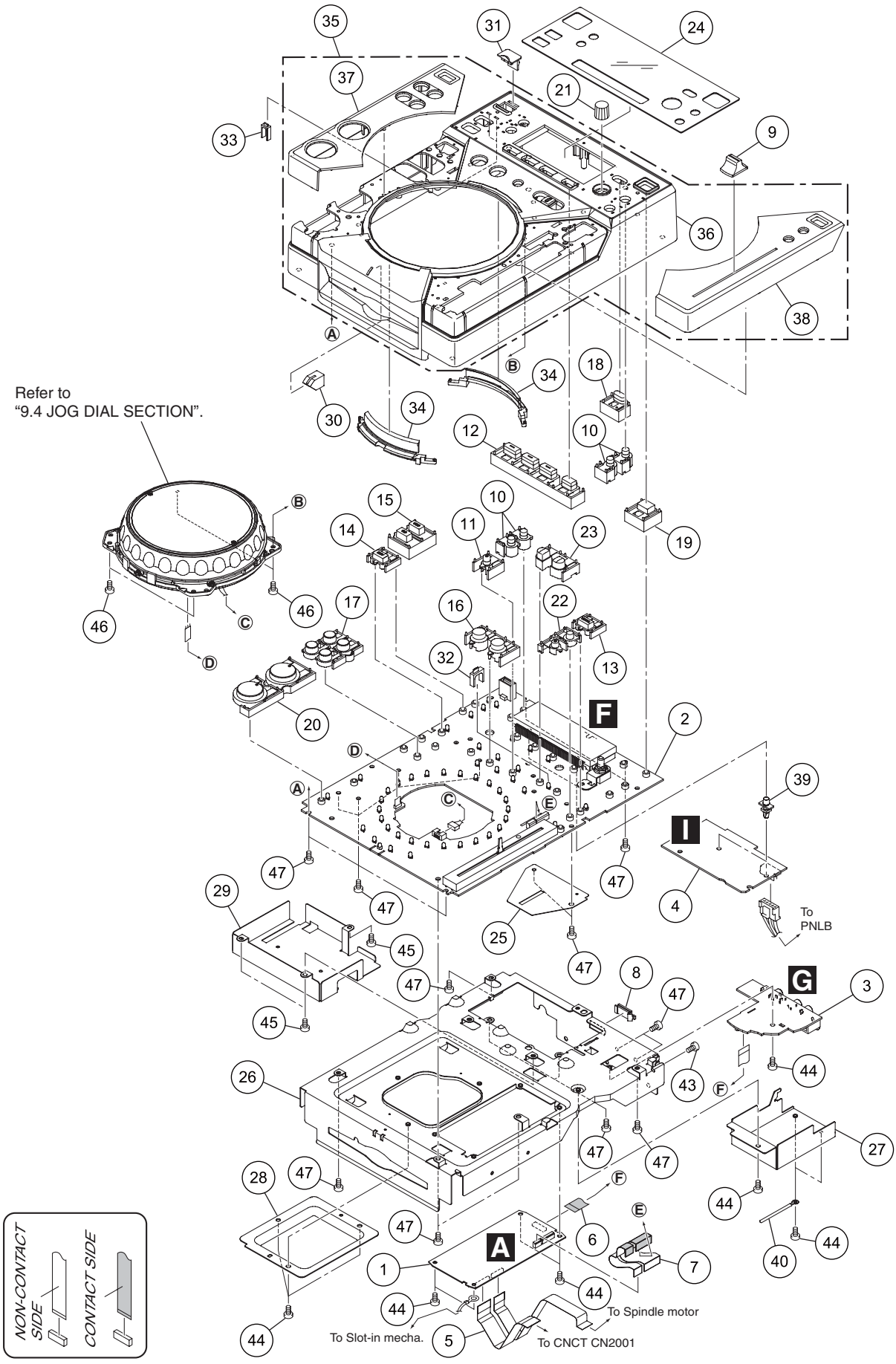
Mark	No.	Description	Part No.
	1	CNCT Assy	DWX2762
	2	SLMB Assy	DWS1404
	3	ACIN Assy	See Contrast table (2)
⚠	4	SW POWER SUPPLY	DWR1443
	5	24P FFC	DDD1331
	6	5P FFC	DDD1370
NSP	7	Earth Lead Wire	DE010VE0
	8	Connector Assy	PF04EE-S22
NSP	9	Silicone Sheet D5 L	DEB1456
	10	Insulator MO	DEC2250
	11	Cable Protector	DEC3072
	12	Heat Plate 1	DNH2814
	13	Heat Plate 2	DNH2815
NSP	14	Chassis	See Contrast table (2)
	15	Power Knob	DNK5017
	16	Damper	CNV6011
	17	Earth Spring	DBH1398
	18	Float Spring G5	DBH1494
	19	Tape	DEC3053
	20	Mecha. Plate (FE)	DNH2642
	21	Push Rivet	XEC3034
	22	Cord Clamper	RNH-184-0
	23	Binder (SKB-90BK)	ZCA-SKB90BK
	24	Laser Caution	See Contrast table (2)
	25	•••••	
	26	DM Screw (FTC)	DBA1260
	27	Screw	PBZ30P080FTB
	28	Screw	BPZ30P080FTB

(2) CONTRAST TABLE

CDJ-400/KUCXJ, WYXJ5 and TLFXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	CDJ-400/KUCXJ	CDJ-400/WYXJ5	CDJ-400/TLFXJ
	3	ACIN Assy	DWX2800	DWX2766	DWX2766
NSP	14	Chassis	DNK4984	DNK4983	DNK4985
	24	Laser Caution	DRW2308	DRW2308	DRW2248

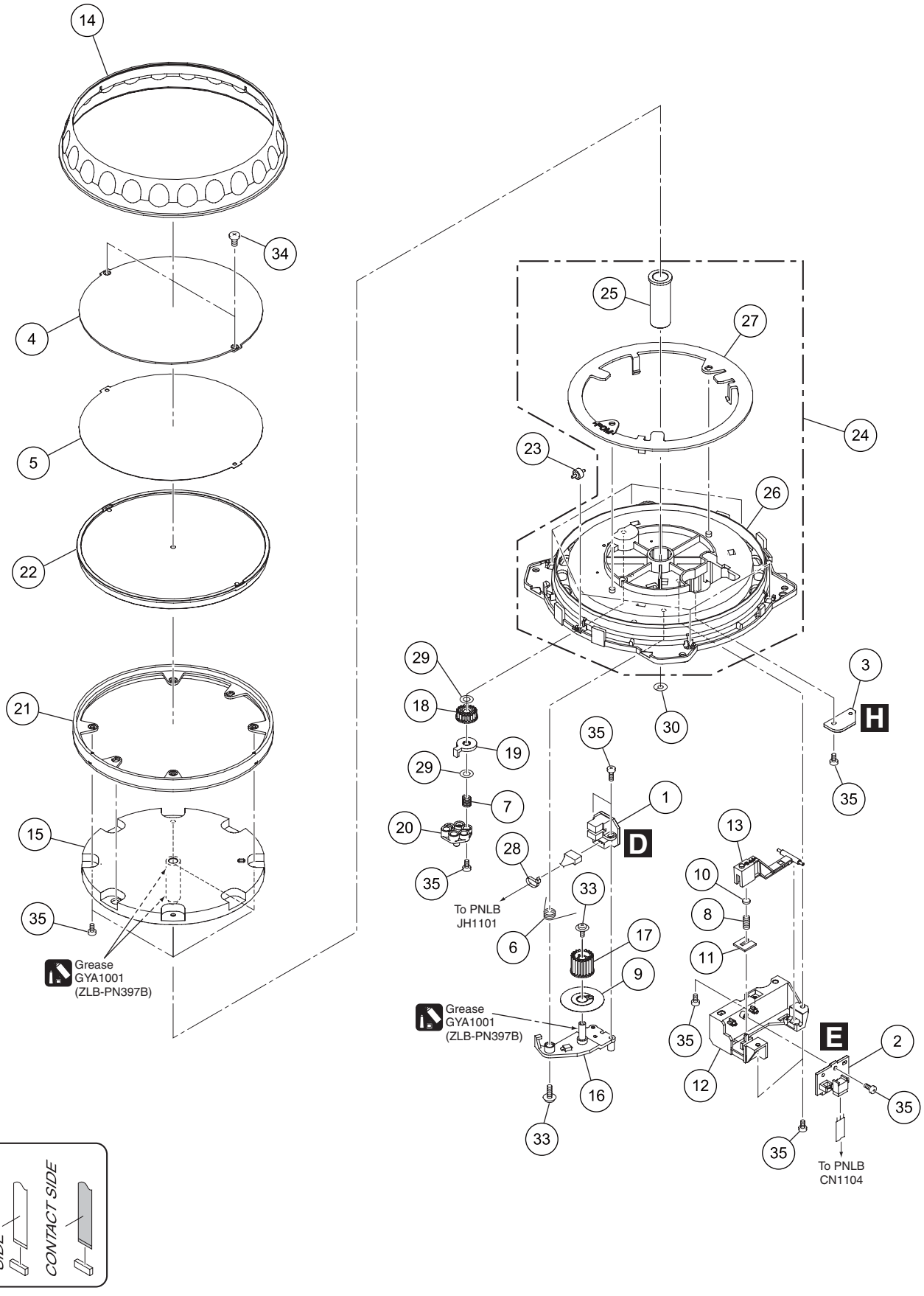
9.3 CONTROL PANEL SECTION



CONTROL PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
NSP	1	MAIN Assy	DWG1652
	2	PNLB Assy	DWX2756
	3	JACB Assy	DWX2759
	4	REGB Assy	DWR1442
	5	32P FFC	DDD1371
	6	17P FFC	DDD1372
	7	23P FFC	DDD1374
	8	Blind Cap	DNK4218
	9	Slide Knob	DAC2406
	10	TIME Knob	DAC2407
	11	RELOOP Knob	DAC2409
	12	JOG EFFECT Knob	DAC2410
	13	VINYL Knob	DAC2411
	14	REVERSE Knob	DAC2412
	15	Set Knob (SELECT)	DAC2413
	16	Set Knob (LOOP)	DAC2414
	17	Set Knob (SEARCH)	DAC2415
	18	BACK Knob	DAC2416
	19	EJECT Knob	DAC2417
	20	PLAY Button	DAC2418
	21	Dial Knob	DAC2419
	22	TEMPO Knob	DAC2423
	23	BEAT LOOP Knob	DAC2424
	24	Display Panel	DAH2549
	25	FFC guard	DEC3056
	26	MAIN PCB Stay	DNH2800
	27	Shield Case	DNH2801
	28	JOG Support	DNH2808
	29	Shield Case 2	DNH2813
	30	FRONT Lens	DNK4997
	31	USB Cover	DNK4999
	32	BEAT LOOP Lens	DNK5042
	33	MEMORY Lens	DNK5049
	34	JOG Lens	DNK5078
	35	Control Panel Assy	DXB1977
	36	Control Panel	DNK5030
	37	Top Panel (L)	DNK5031
	38	Top Panel (R)	DNK5073
	39	Locking Card Spacer	VEC2234
	40	Cord Clamper	RNH-184-0
	41	•••••	
	42	•••••	
	43	Screw (M3 x 5)	DBA1340
	44	Screw	BBZ30P060FTC
	45	Screw	BPZ30P100FTC
	46	Screw	CPZ30P080FTB
	47	Screw	BPZ30P080FTB

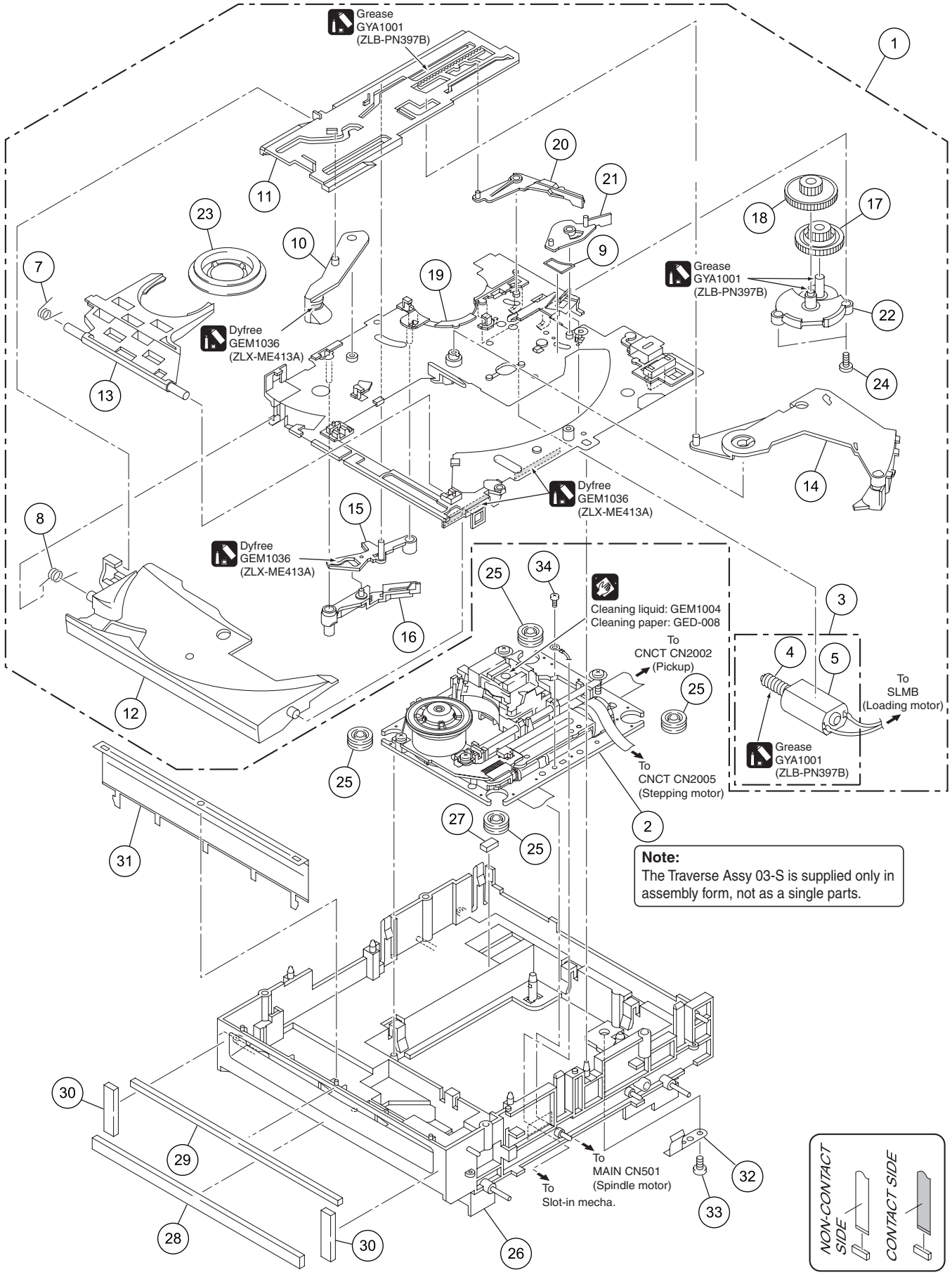
9.4 JOG DIAL SECTION



JOG DIAL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	JOGB Assy	DWX2760
	2	TCHB Assy	DWX2761
	3	STPB Assy	DWX2792
	4	Jog Plate	DAH2565
	5	Jog Sheet	DAH2581
	6	Arm Spring	DBH1612
	7	Load Spring	DBH1632
	8	Lever Spring	DBH1626
	9	Encoder Plate	DEC2889
	10	Lever Cushion (A)	DEC3001
	11	Lever Cushion (B)	DEC3002
	12	Lever Holder	DNK4762
	13	Jog Lever	DNK4763
	14	Jog B	DNK4932
	15	Jog Shaft	DNK4934
	16	Encoder Arm	DNK4936
	17	Encoder Gear	DNK4937
	18	Load Gear	DNK4938
	19	Load Smoother	DNK4939
	20	Adjust Plate	DNK4943
	21	Ring Lens	DNK4979
	22	Jog A Assy	DXA2122
	23	Roller B Assy	DXB1877
	24	Jog Holder Assy	DXB1982
	25	Shaft Holder	DLA2042
	26	Jog Holder	DNK4933
	27	Slide Ring	DNK4935
	28	Binder (SKB-90BK)	ZCA-SKB90BK
	29	Washer	WA42D080D025
	30	Washer	WT32D080D050
	31	•••••	
	32	•••••	
	33	Screw (FE)	DBA1265
	34	Screw	DBA1347
	35	Screw	BPZ20P060FTC

9.5 SLOT-IN MECHANISM SECTION



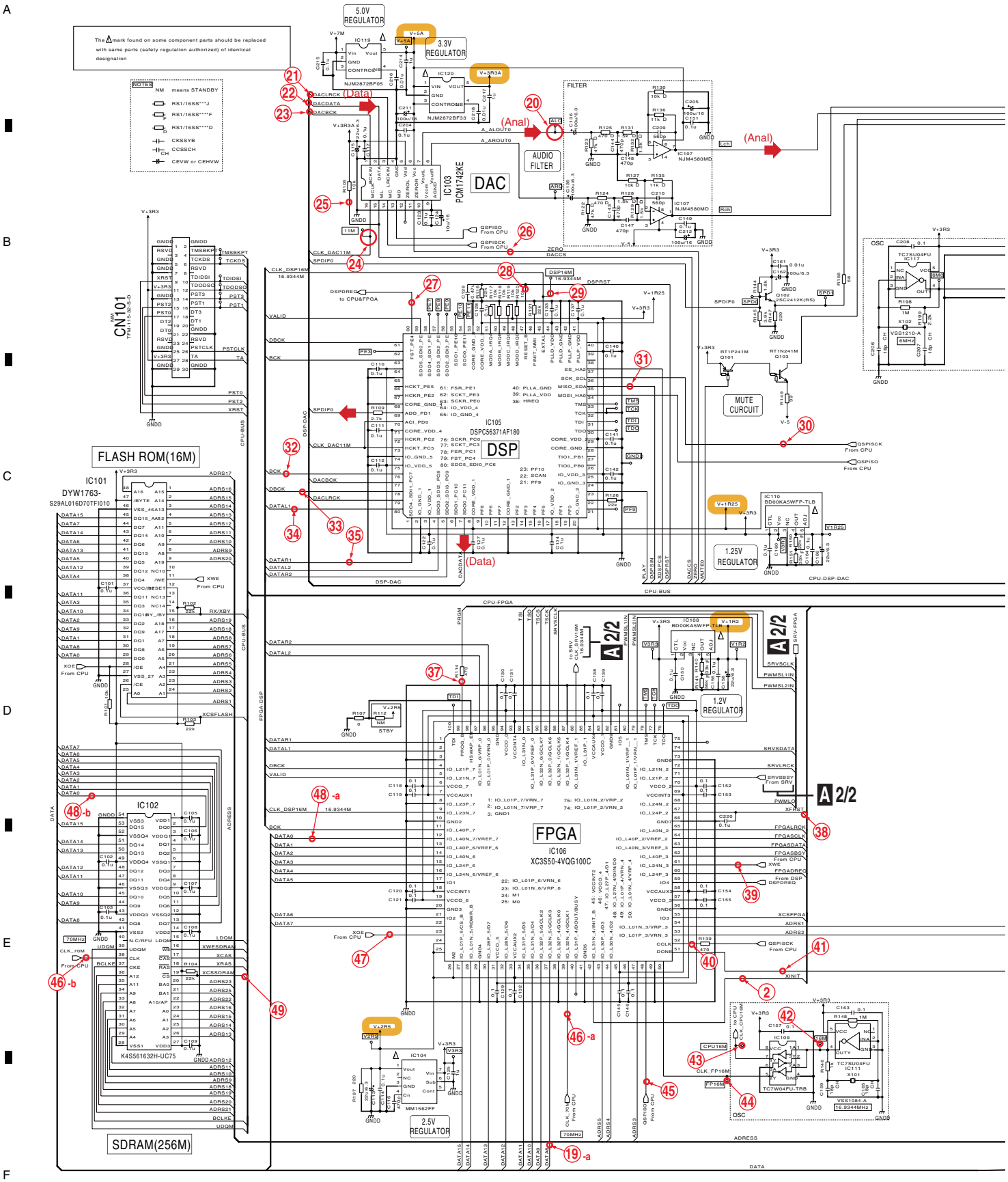
Note:
The Traverse Assy 03-S is supplied only in assembly form, not as a single parts.

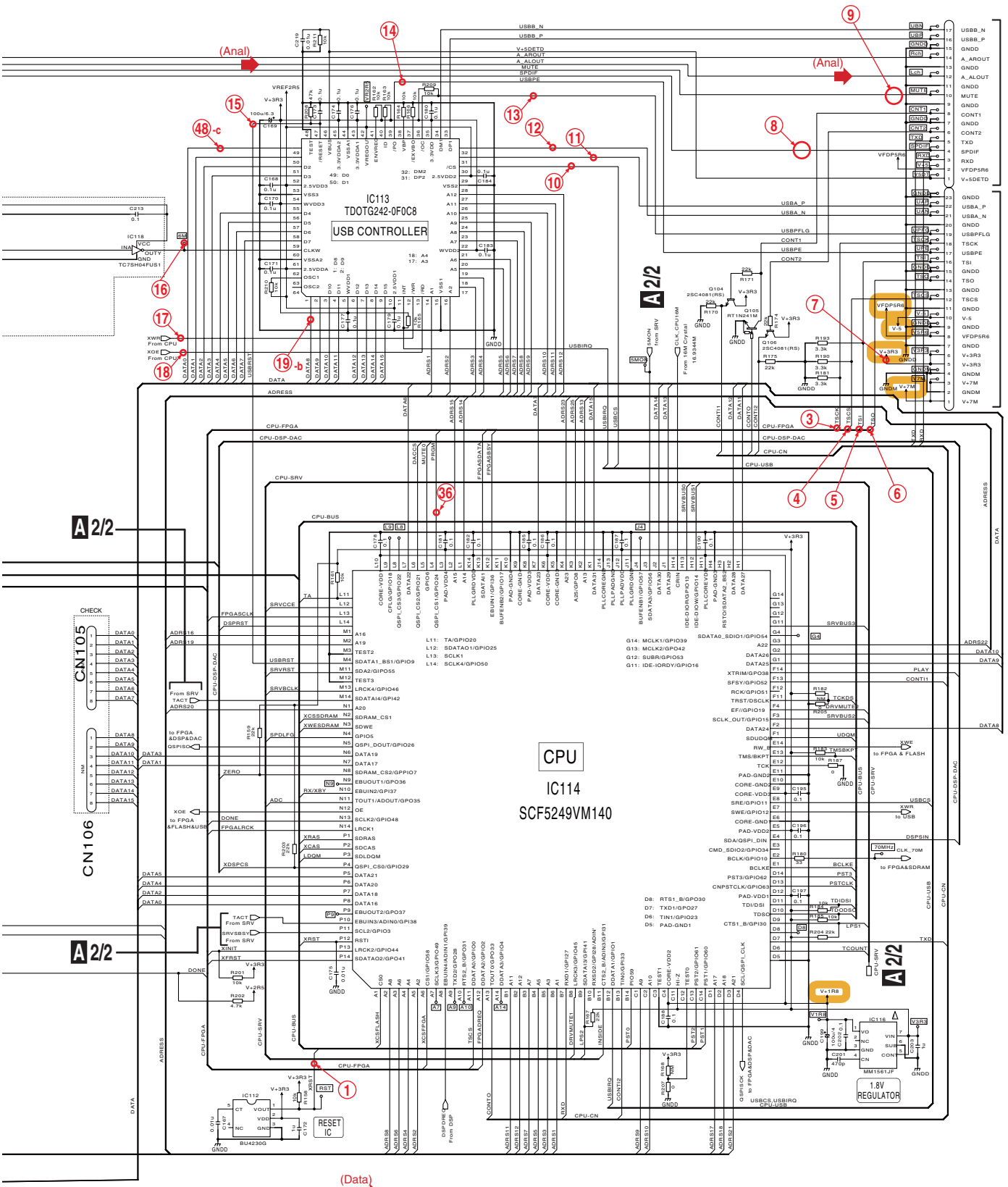
SLOT-IN MECHANISM SECTION PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Slot-in Mechanism Assy	DXA2121
	2	03 Traverse Assy (Ro)	VXX3125
	3	Loading Motor Assy-S	DXX2510
NSP	4	Worm Gear	DNK3910
NSP	5	DC Motor S (ROHS)	DXM1230
	6	•••••	
	7	Clamp Spring	DBH1374
	8	Guide Spring	DBH1375
	9	SW Lever Spacer SV	DEC2831
	10	Loading Gear	DNK3406
	11	Main Cam	DNK3407
	12	Disc Guide	DNK3478
	13	Clamp Arm	DNK3576
	14	Eject Lever	DNK3684
	15	Lever AP	DNK3835
	16	Lever BP	DNK3836
	17	Loading Gear	DNK3911
	18	Drive Gear	DNK3912
	19	Loading Base SV	DNK4369
	20	SW Lever SV1	DNK4370
	21	SW Lever SV2	DNK4371
	22	Gear Holder SV	DNK4372
	23	Clamper 04 Assy	DXB1859
	24	Screw	BPZ20P060FTC
	25	Float Rubber (SI)	VEB1351
	26	Float Base 04 Assy	DXB1838
	27	Spacer POR (T3)	DEB1566
	28	Vessel Cushion A	DEC2852
	29	Vessel Cushion B	DEC2853
	30	Vessel Cushion C	DEC2854
	31	Front Sheet	DED1132
	32	FPC Guard	DBK1282
	33	Screw	BPZ30P080FTB
	34	Screw	BBZ26P040FTC

10. SCHEMATIC DIAGRAM

10.1 MAIN ASSY (1/2)



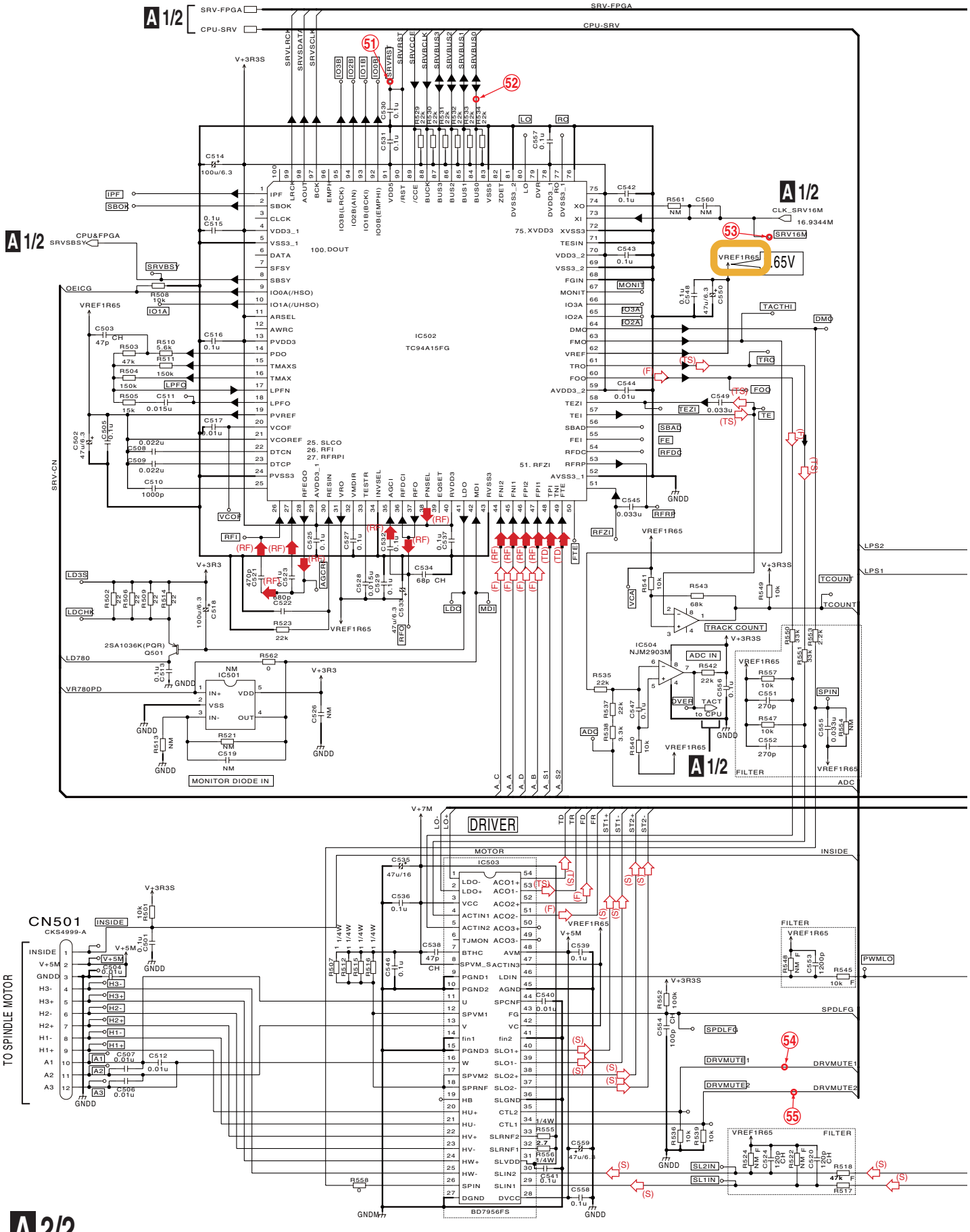


(Data) : DIGITAL DATA SIGNAL ROUTE(Digital)

(Anal) : AUDIO Lch OUT SIGNAL ROUTE(Analog)

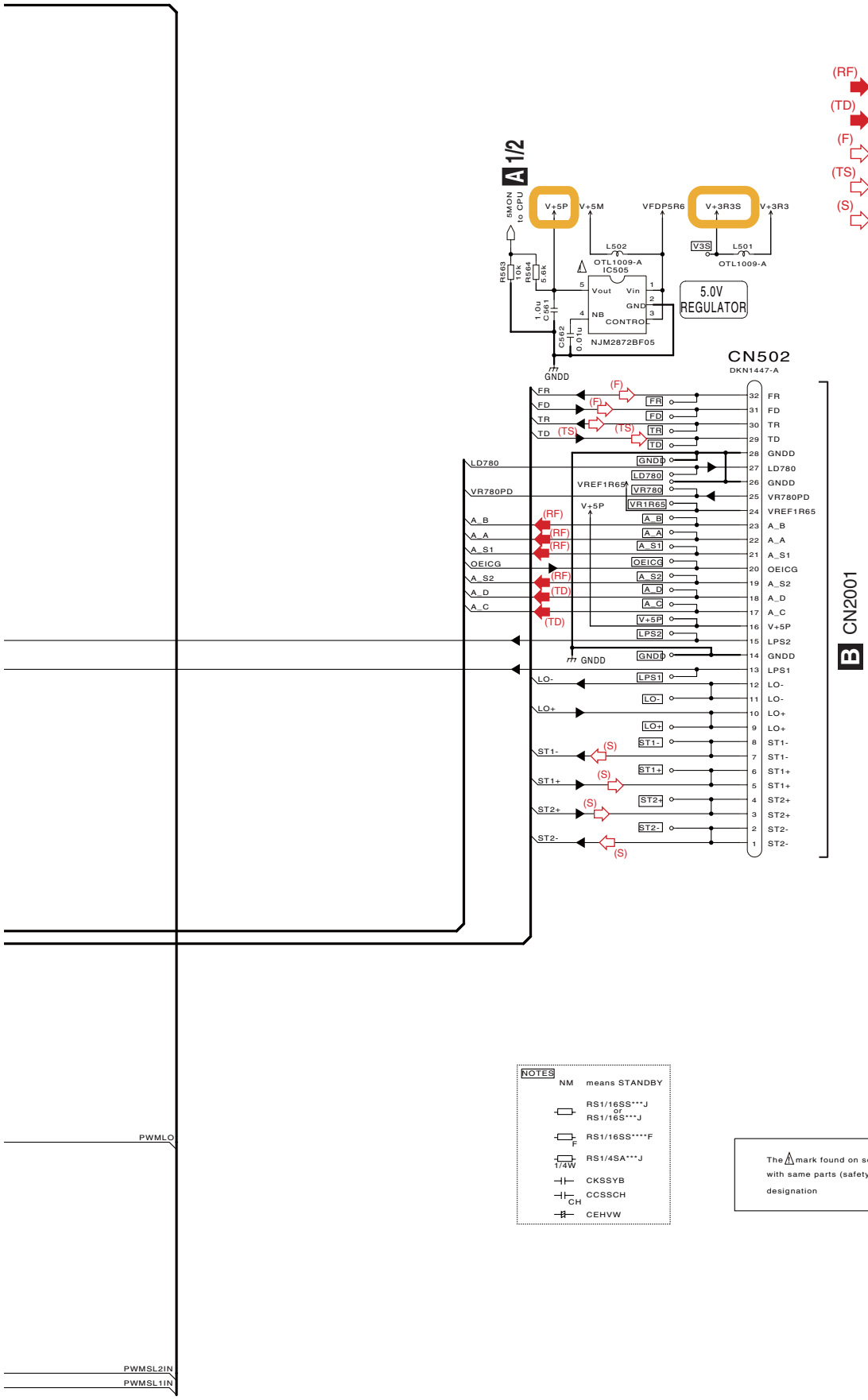
: DIGITAL AUDIO SIGNAL ROUTE

10.2 MAIN ASSY (2/2)



A 2/2 MAIN ASSY (DWG1652)

(RF) : RF DATA SIGNAL ROUTE
(TD) : TRACKING DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(TS) : TRACKING SERVO LOOP LINE
(S) : STEPPING SERVO LOOP LINE



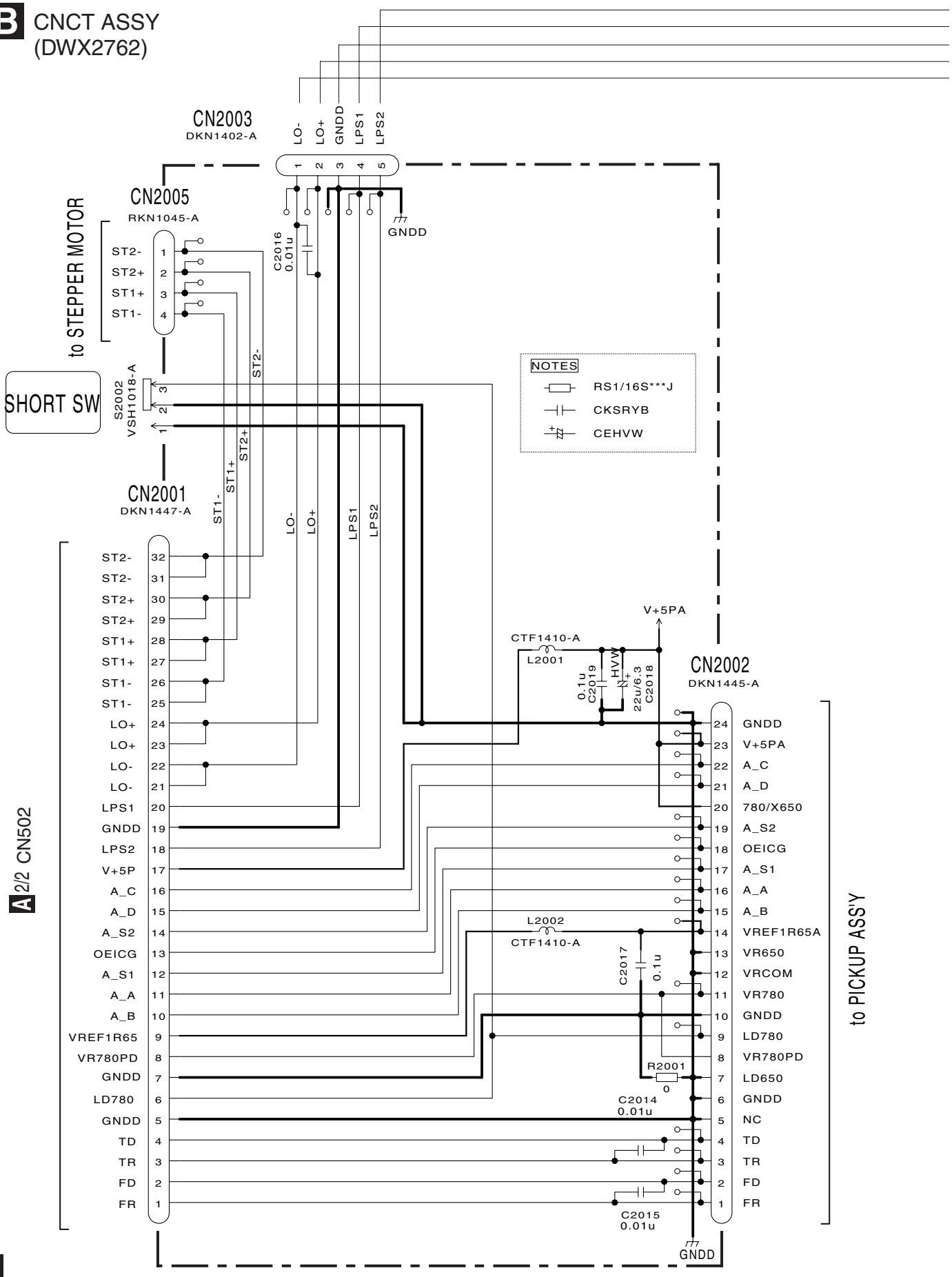
NOTES
NM means STANDBY
RS1/16SS***J or RS1/16S***J
RS1/16SS****F
RS1/4SA***J 1/4W
CKSSYB
CCSSCH CH
CEHVW

The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation

&EP036 CDJ-400
MAIN SCHEMA (2/2)
A 2/2

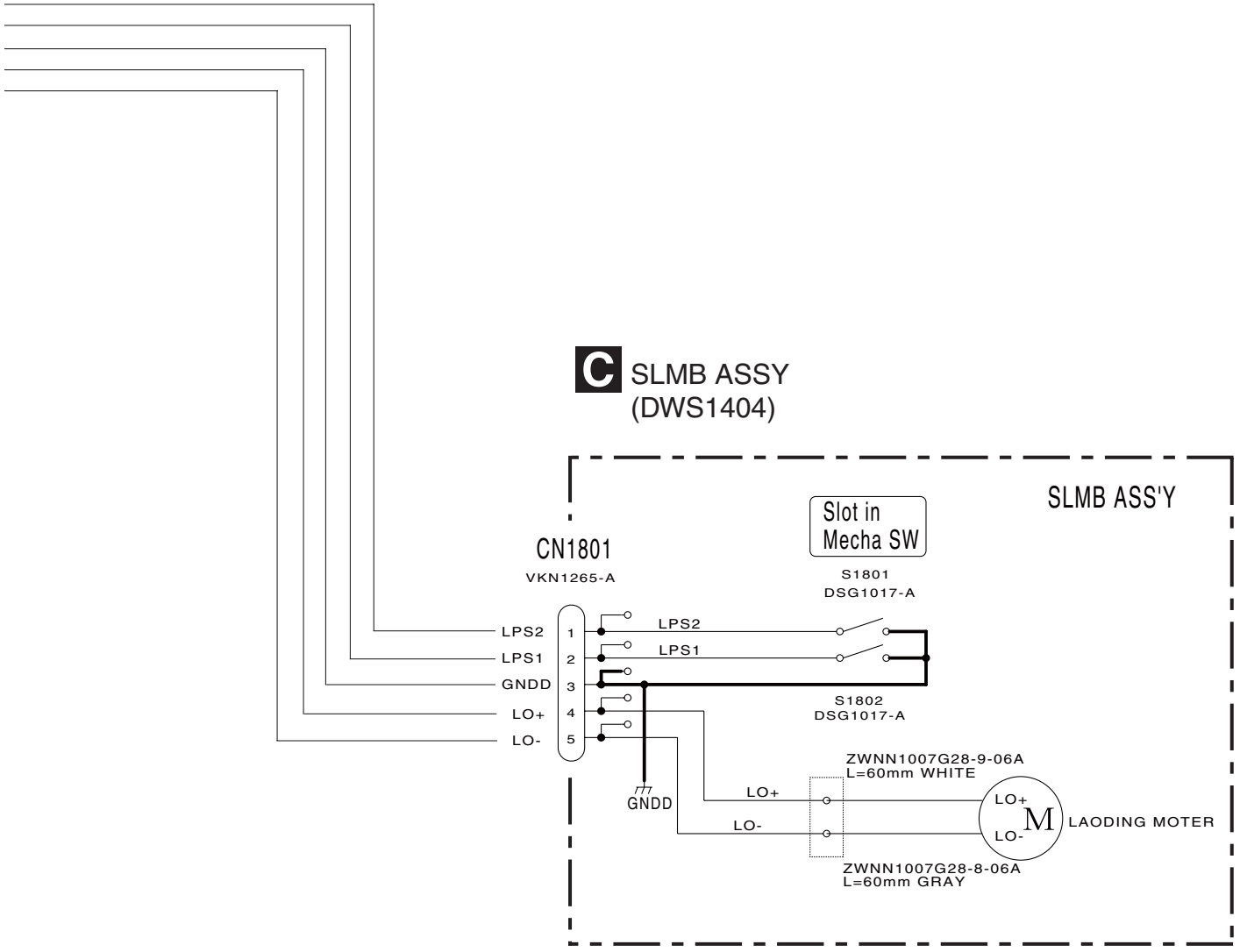
10.3 CNCT and SLMB ASSYS

B CNCT ASSY
(DWX2762)

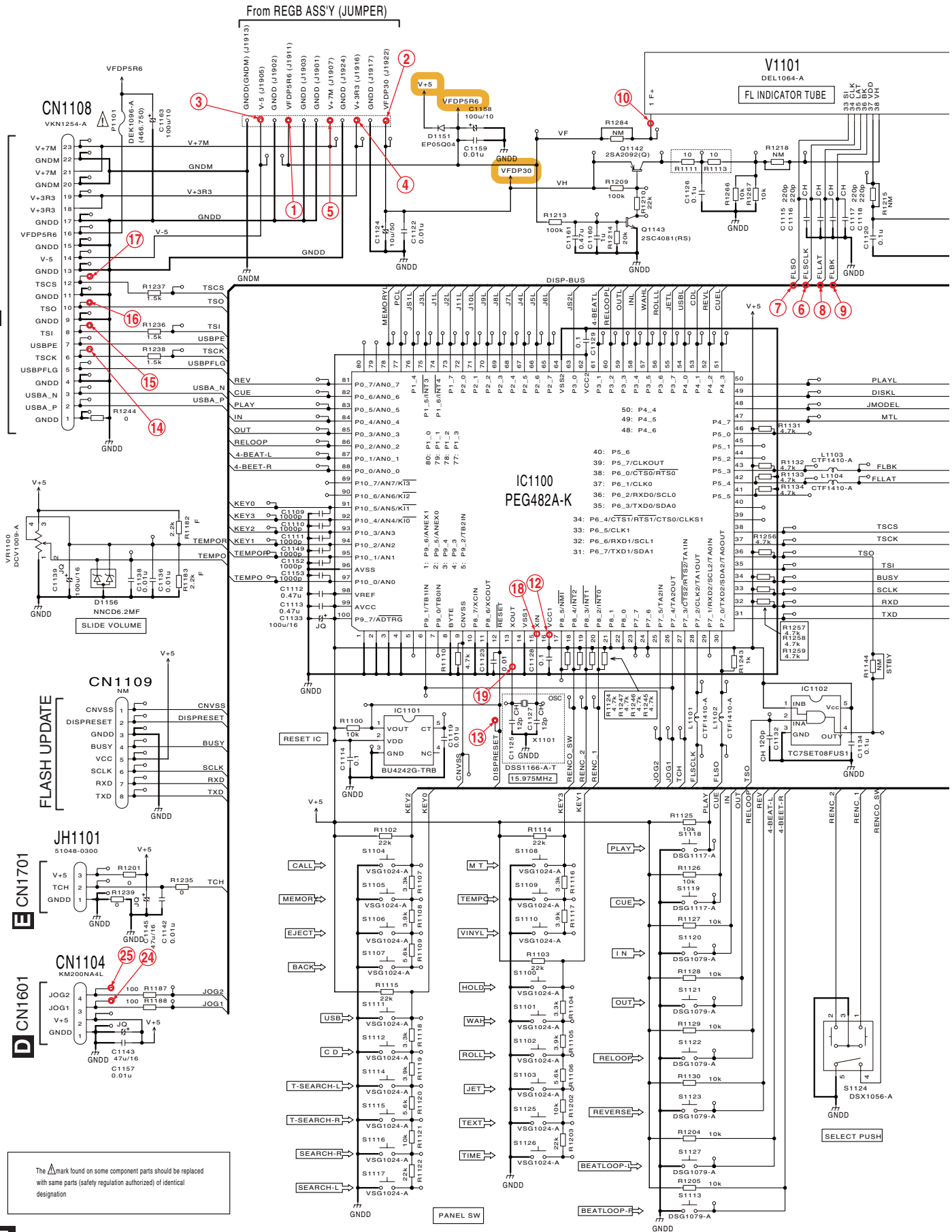


B

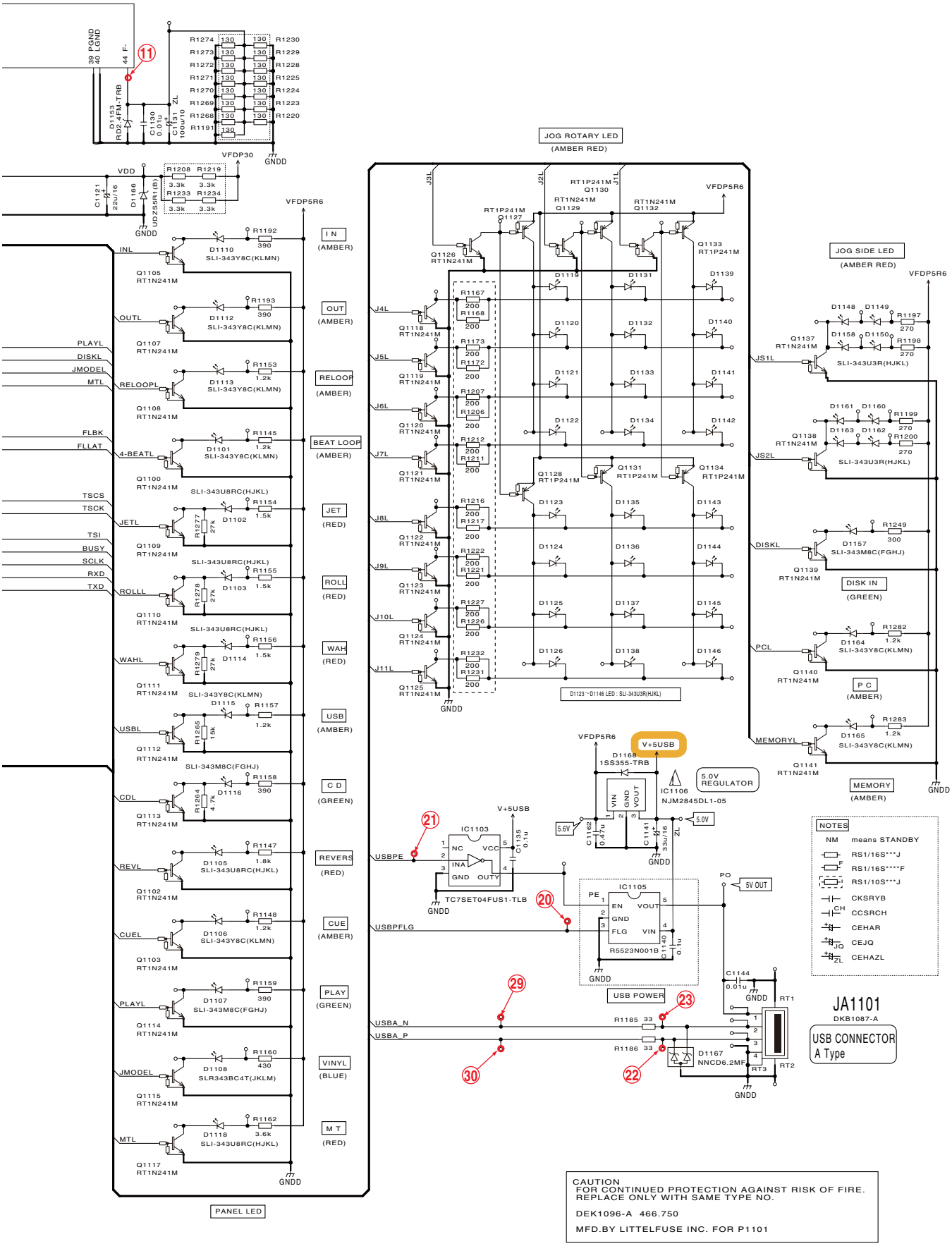
C SLMB ASSY
(DWS1404)



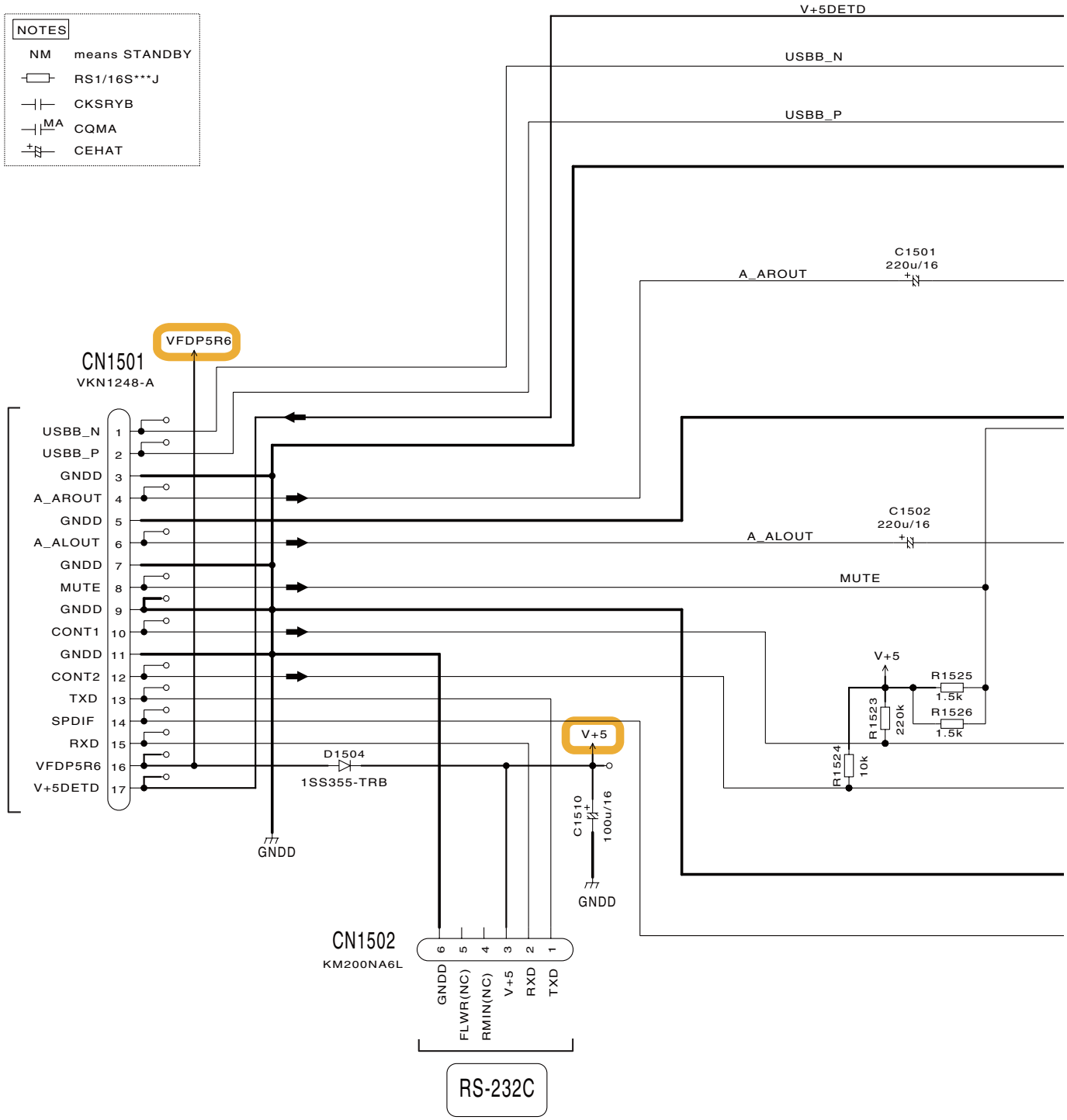
10.4 PNLB ASSY

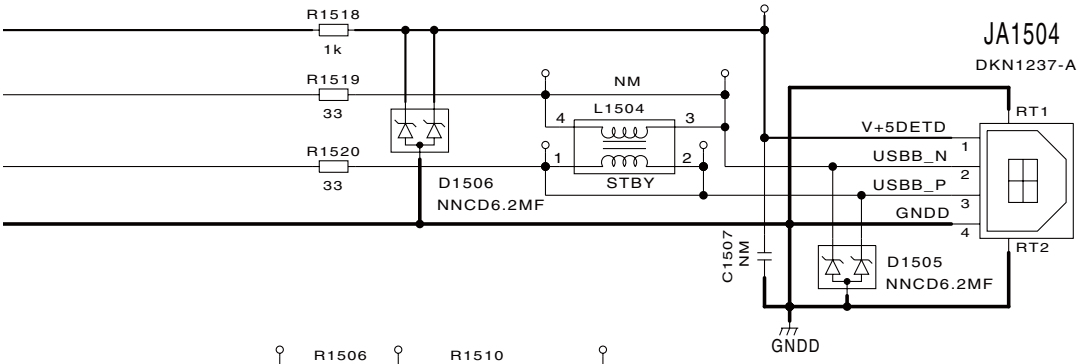


F PNLB ASSY (DWX2756)

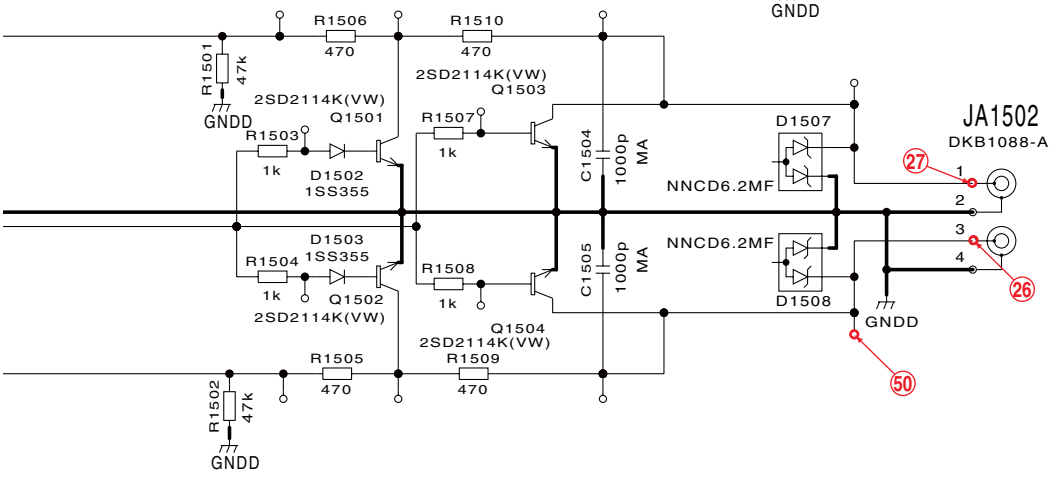


G JACB ASSY (DWX2759)

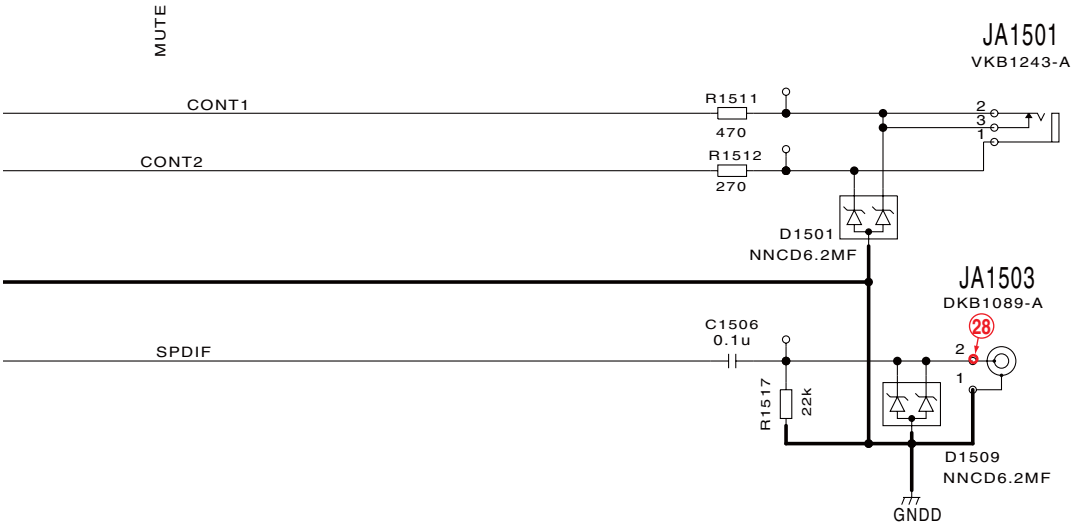




USB CONNECTOR
B Type



AUDIO OUT

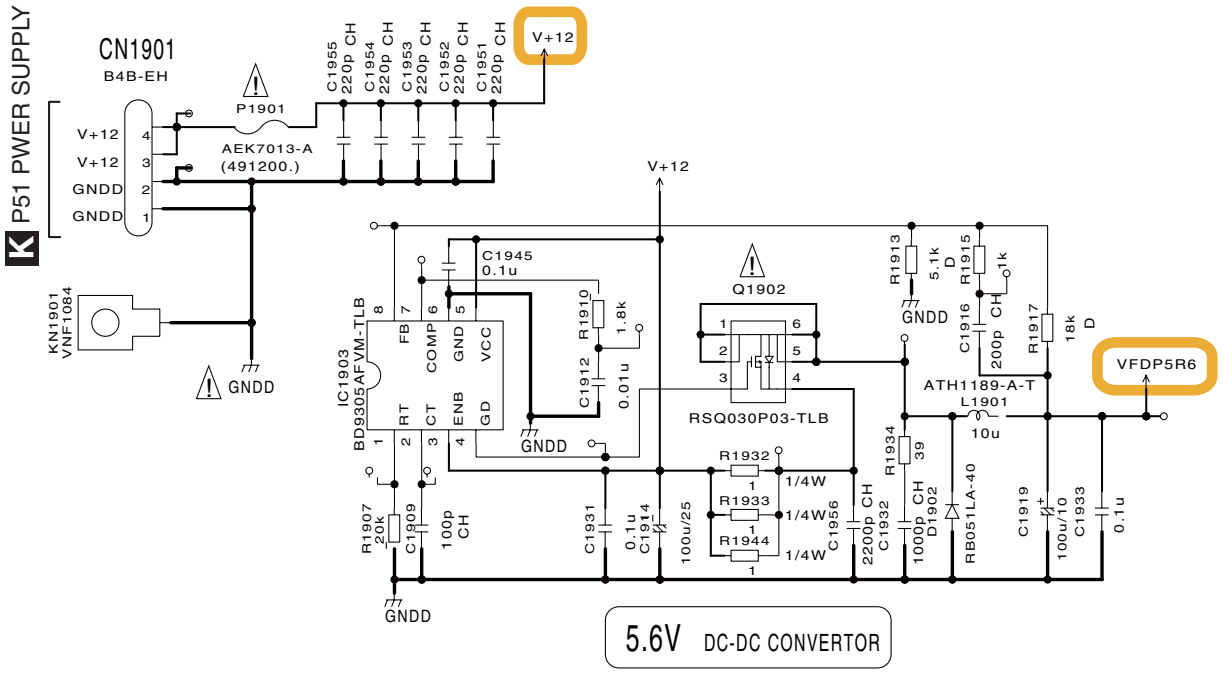


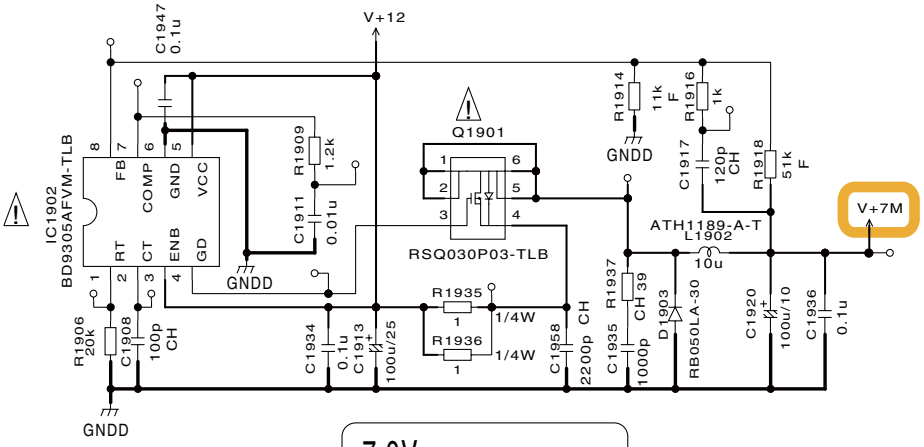
CONTROL

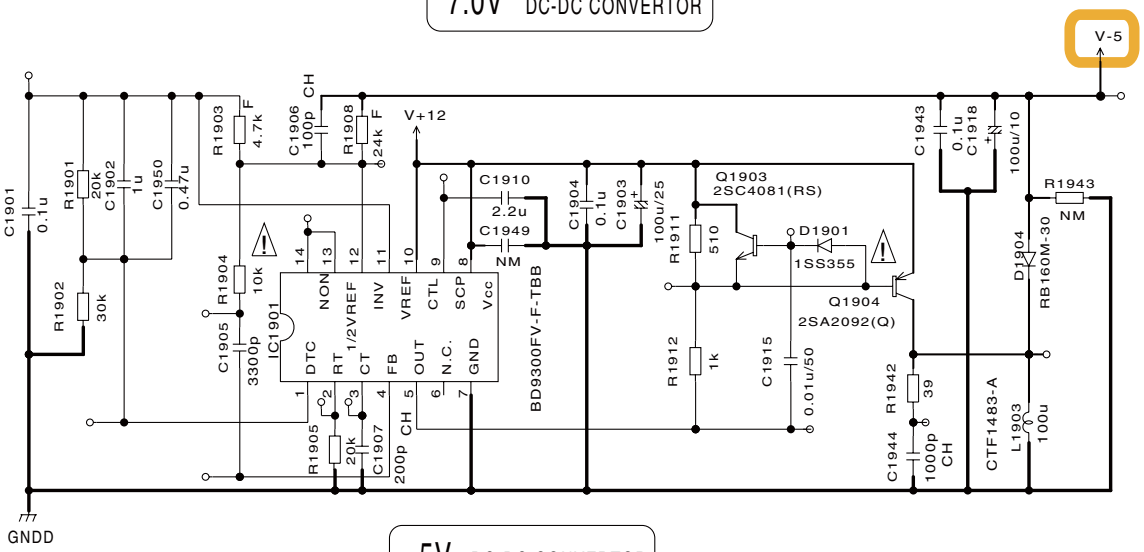
DIGITAL OUT

10.6 REGB and ACIN ASSYS

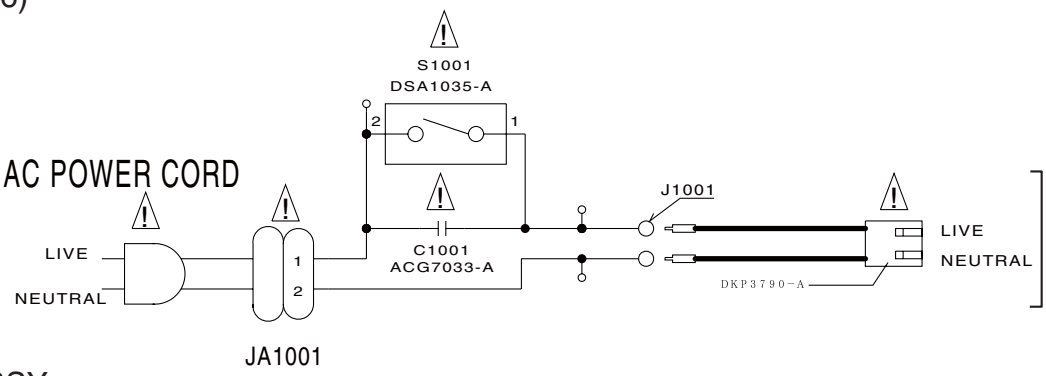
REGB ASSY (DWR1442)



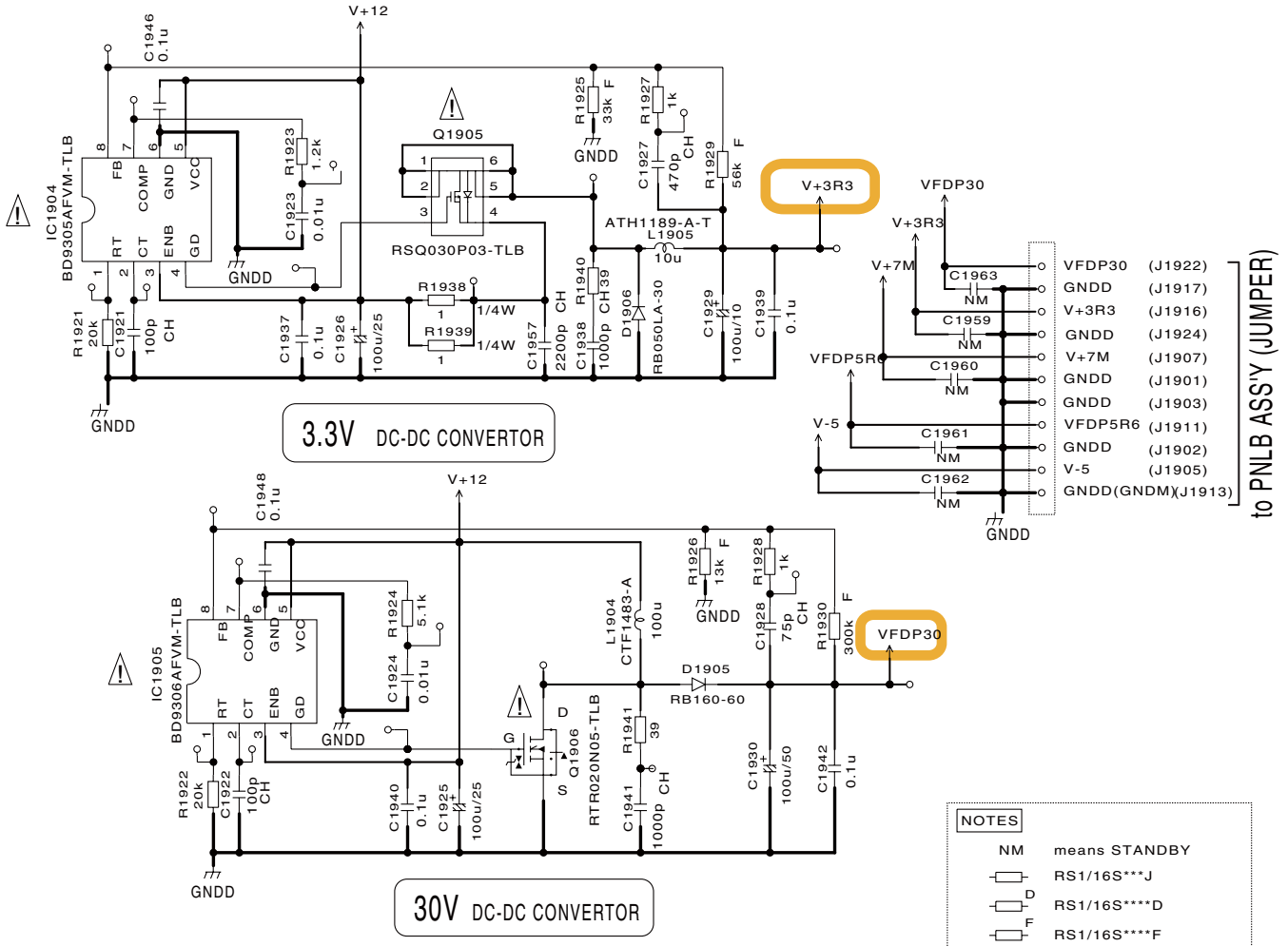




J ACIN ASSY (DWX2766)



I REGB ASSY (DWR1442)



NOTES

NM means STANDBY

RS1/16S***J

RS1/16S****D

RS1/16S****F

RS1/4SA***J

CKSRYB or CKSQYB

CCSRCH

CEHAZL

CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO.

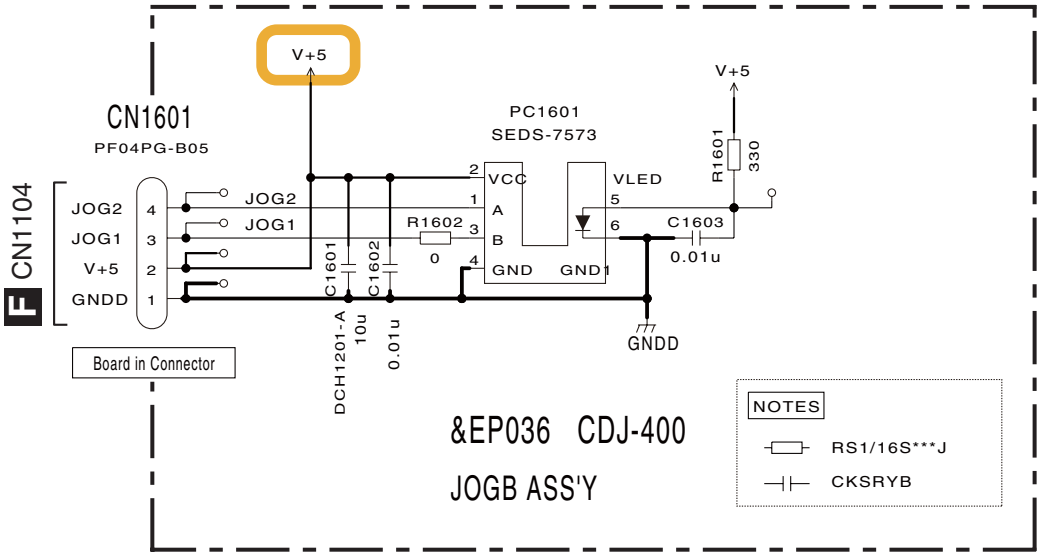
AEK7013-A 491002.

MFD.BY LITTELFUSE INC. FOR P1901

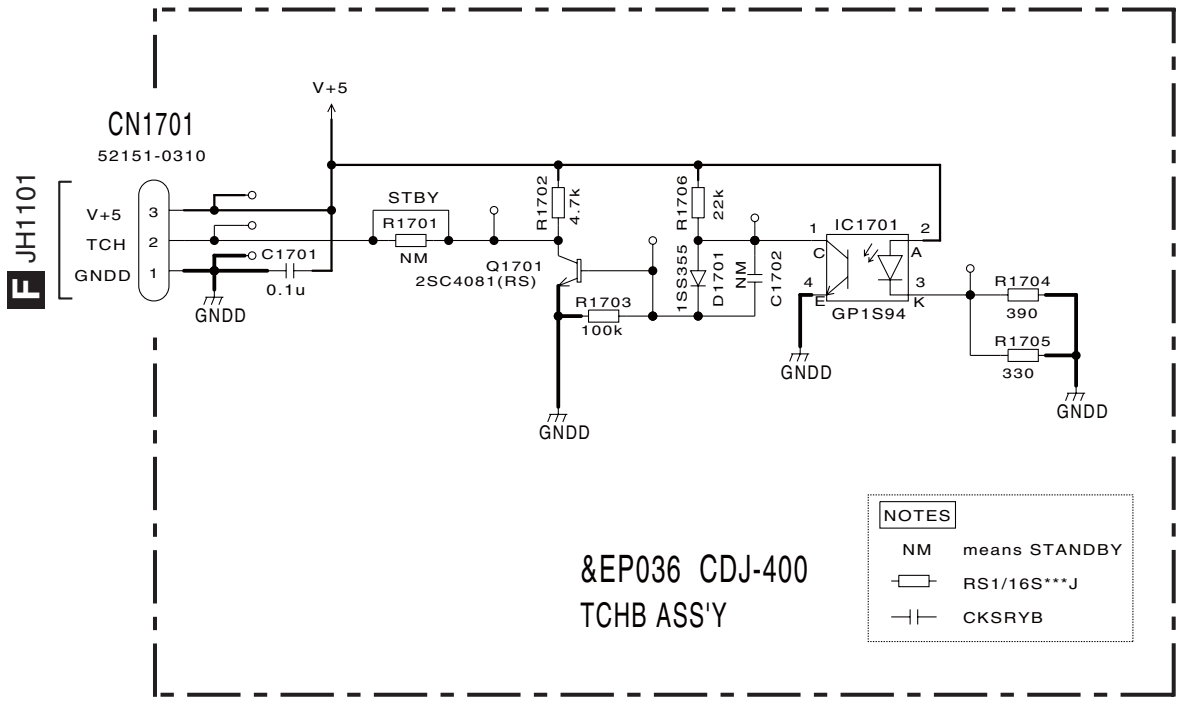
The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation

10.7 JOGB, TCHB and SW POWER SUPPLY ASSYS

D JOGB ASSY (DWX2760)



E TCHB ASSY (DWX2761)

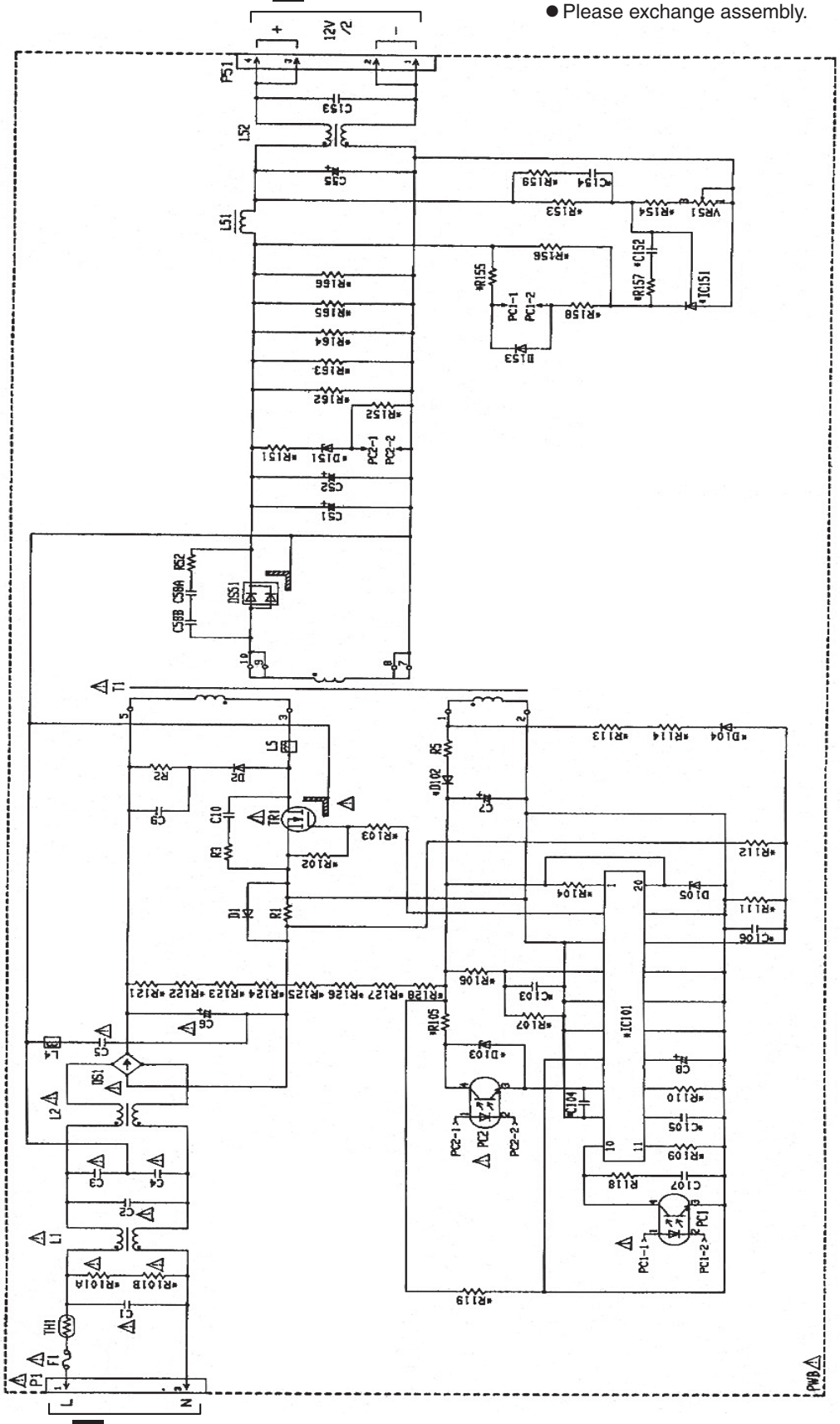


K SW POWER SUPPLY ASSY (DWR1443) ⚠

I CN1901

[Figure of reference]

- This assembly has no service part.
- Please exchange assembly.



K J K

10.8 VOLTAGES

Note: The voltage measured using the HOZAN DT-113 Digital Tester is an approximation of DC voltage.
Note that the result of measurement of a waveform comprising many AC-current components will vary from tester to tester.

Conditions of measurement:

Play back Track 2 of the STD-905 Test Disc from Pioneer.

- For the IC mounted on the SECB Assy, measurement is performed with loads at the downstream stages lifted.
- The voltage at the MPU (IC301 on the MAIN Assy) is to be measured in Standby mode (not during CD playback), because the unit will freeze up (cannot play back a CD) if the core block is defective.

A MAIN ASSY

IC101 DYW1763-

Pin No.	Voltage (V)
1	2.2
2	2.1–2.4
3	0.9–1.2
4	1.7–2.0
5	1.7–1.9
6	1.9–2.2
7	2.0–2.2
8	2.1–2.4
9	0.0
10	0.0
11	2.5–2.8
12	3.3
13	0.0
14	0.0
15	3.3
16	0.5
17	1.2–1.5
18	2.1–2.4
19	2.1–2.4
20	1.8–2.2
21	1.9–2.2
22	1.9–2.2
23	0.9–1.1
24	2.1–2.4
25	1.9
26	3.3
27	0.0
28	3.3
29	0.0
30	3.3
31	0.5–0.8
32	0.5–0.9
33	0.5–0.8
34	0.5–0.8
35	0.5–0.8
36	0.4–0.7
37	3.3
38	0.7–0.8
39	0.6–0.8
40	0.6–0.8
41	0.8–1.0
42	0.5–0.7
43	0.4–0.6
44	0.6–0.7
45	0.5–0.7
46	0.0
47	3.3
48	1.3–1.5

IC105 DSPC56371AF180

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.0	41	3.3
2	0.0	42	0.0
3	3.3	43	0.0
4	0.0	44	1.3
5	0.0	45	1.7–1.8
6	0.0	46	1.2
7	0.8	47	3.3
8	1.3	48	0.6
9	0.0	49	3.3
10	0.0	50	0.6
11	0.0	51	3.3
12	0.0	52	1.3
13	0.0	53	0.0
14	0.0	54	0.0
15	0.0	55	0.0
16	0.0	56	0.0
17	3.3	57	0.0
18	0.0	58	0.0
19	0.0	59	1.0
20	0.0	60	3.2
21	0.0	61	1.6
22	0.0	62	0.0
23	3.3	63	1.7
24	0.0	64	3.3
25	3.3	65	0.0
26	0.0	66	0.0
27	0.0	67	0.0
28	0.0	68	0.0
29	1.3	69	1.6
30	1.1	70	1.6
31	3.0	71	1.3
32	0.0	72	0.0
33	3.0	73	1.6
34	0.0	74	0.0
35	2.6	75	3.3
36	0.0	76	1.7
37	3.3	77	1.6
38	0.0	78	1.6
39	3.3	79	1.6
40	0.0	80	0.0

IC109 TC7W04FU

Pin No.	Voltage (V)
1	0.0
2	1.7
3	0.0
4	0.0
5	3.3
6	1.6
7	3.3
8	3.3

IC502 TC94A15FG

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.0	51	1.6
2	2.9–3.3	52	0.0
3	0.0	53	2.4
4	3.3	54	1.6
5	0.0	55	1.5
6	0.0	56	1.8
7	0.0	57	1.7
8	0.0	58	1.6
9	0.0	59	3.3
10	0.0	60	1.6
11	3.3	61	1.6
12	0.0	62	1.6
13	3.3	63	1.6
14	1.6	64	2.0
15	1.6	65	0.0
16	1.6	66	0.0
17	1.6	67	0.7–1.0
18	1.4	68	0.0
19	1.6	69	0.0
20	0.6	70	3.3
21	1.6	71	0.0
22	1.6	72	0.0
23	1.6	73	1.6
24	0.0	74	1.5
25	1.7	75	3.3
26	1.6	76	0.0
27	1.6	77	1.6
28	1.6	78	3.3
29	3.3	79	0.0
30	1.5	80	1.6
31	1.6	81	0.0
32	1.5	82	0.0
33	1.6	83	0.0
34	0.0	84	3.2
35	1.6	85	3.2
36	1.3	86	3.2
37	1.3	87	3.2
38	3.3	88	3.2
39	0.0	89	2.8–3.0
40	3.3	90	3.3
41	2.4	91	3.3
42	0.2	92	1.8–2.4
43	0.0	93	3.3
44	1.8	94	0.0
45	1.7	95	3.3
46	1.7	96	0.0
47	1.7	97	1.7
48	1.8	98	1.7
49	1.8	99	1.7
50	–	100	0.0

IC114 SCF5249VM140

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
A1	3.3	F2	0.3	M13	3.2
A2	3.3	F3	3.2	M14	1.5
A3	2.3	F4	0.0	N1	0.7
A4	2.4	F11	0.0	N2	1.2
A5	2.4	F12	0.0	N3	3.0
A6	3.3	F13	3.3	N4	3.3
A7	0.0	F14	0.0	N5	0.0
A8	3.3	G1	0.5	N6	0.6
A9	3.3	G2	0.5	N7	0.4
A10	0.0	G3	0.8	N8	0.0
A11	2.7	G4	0.0	N9	0.0
A12	3.3	G11	3.3	N10	3.3
A13	0.0	G12	0.0	N11	1.7
A14	0.0	G13	0.0	N12	3.3
B1	2.3	G14	0.0	N13	2.5
B2	2.0	H1	0.4	N14	1.7
B3	2.3	H2	0.6	P1	3.0
B4	2.4	H3	0.0	P2	2.6
B5	0.9	H4	0.0	P3	0.0
B6	2.1	H11	1.8	P4	3.3
B7	3.3	H12	3.2	P5	3.3
B8	0.0	H13	3.3	P6	3.3
B9	3.3	H14	1.6	P7	0.6
B10	0.0	J1	0.7	P8	0.5
B11	3.3	J2	0.4	P9	0.0
B12	0.0	J3	3.2	P10	1.5
B13	3.2	J4	0.0	P11	0.0
B14	0.0	J11	0.0	P12	3.3
C1	2.4	J12	3.3	P13	3.3
C2	2.1	J13	0.0	P14	3.3
C3	0.0	J14	0.0		
C4	1.8	K1	0.5		
C11	3.3	K2	2.0		
C12	2.2	K3	0.0		
C13	0.0	K4	0.0		
C14	0.0	K5	0.0		
D1	1.2	K6	1.8		
D2	1.1	K7	0.5		
D3	0.3	K8	3.3		
D4	0.0	K9	0.0		
D5	0.0	K10	0.0		
D6	0.0	K11	0.0		
D7	3.3	K12	0.0		
D8	0.0	K13	0.0		
D9	0.0	K14	0.0		
D10	0.0	L1	0.9		
D11	0.0	L2	2.4		
D12	0.0	L3	3.3		
D13	0.0	L4	3.3		
D14	0.0	L5	3.3		
E1	3.3	L6	3.3		
E2	1.7	L7	4.9		
E3	0.0	L8	0.0		
E4	2.7	L9	4.4		
E5	3.3	L10	1.8		
E6	0.0	L11	0.0		
E7	3.3	L12	3.2		
E8	3.3	L13	1.6		
E9	1.8	L14	3.3		
E10	0.0	M1	2.3		
E11	0.0	M2	0.6		
E12	0.0	M3	0.0		
E13	0.0	M4	0.0		
E14	0.0	M11	3.3		
F1	0.0	M12	0.0		

IC106 XC3S50-4VQG100C

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0–1.8	51	2.5
2	1.6	52	0.0
3	0.0	53	2.0
4	3.2	54	1.9–2.2
5	0.0	55	0.0
6	3.3	56	0.0
7	2.5	57	3.3
8	0.0	58	2.5
9	1–4.5	59	0.9
10	0.0	60	2.4
11	1–4.5	61	2.8
12	1.6	62	0.0
13	1.6–1.8	63	3.3
14	1.7	64	3.3
15	1.7	65	0.0
16	1.8	66	0.0
17	1.9	67	1.6
18	1.2	68	1.7
19	3.3	69	1.2
20	0.0	70	3.3
21	0.5–0.7	71	1.6
22	0.5–0.7	72	3.3
23	0.5–0.7	73	0.0
24	2.5	74	3.2
25	2.5	75	0.2
26	2.5	76	2.5
27	0.7–0.9	77	2.5
28	0.7–0.9	78	2.5
29	0.0	79	0.0
30	0.5–0.7	80	2.7
31	3.3	81	0.0
32	0.4–0.7	82	0.0
33	2.5	83	3.3
34	0.6–0.9	84	2.5
35	0.4–0.8	85	0.0
36	0.5–0.7	86	0.0
37	1.6	87	0.0
38	0.5–0.7	88	0.0
39	1.7	89	0.0
40	0.0	90	0.0
41	0.0	91	0.0
42	3.3	92	0.0
43	0.5–0.7	93	1.2
44	0.8–1.0	94	3.3
45	1.2	95	0.0
46	3.3	96	0.0
47	0.6–0.8	97	0.0
48	0.0	98	0.0
49	0.5–0.8	99	2.5
50	0.5–0.8	100	2.5

10.9 WAVEFORMS

Note: The numbers for the waveform photos (circled) are identical to those for the schematic diagrams flowcharts.

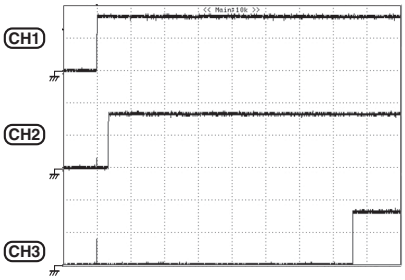
A MAIN ASSY

Conditions: At the time of power on, without a disc loaded

(7) **CH1 : V+3R3 (CN105-5pin)**
V: 2.0 V/div. H: 200 msec/div.

(1) **CH2 : XRST (IC112-1pin)**
V: 2.0 V/div. H: 200 msec/div.

(15) **CH3 : USBRST (IC113-47pin)**
V: 2.0 V/div. H: 200 msec/div.

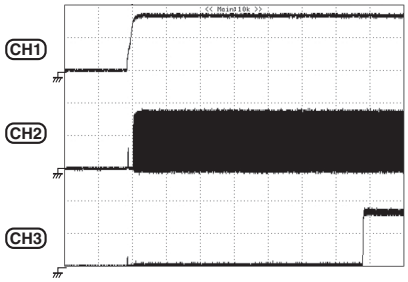


Conditions: At the time of power on, without a disc loaded

(7) **CH1 : V+3R3 (CN103-5pin)**
V: 2.0 V/div. H: 10 msec/div.

(43) **CH2 : CLK_CPU16M (IC109-7pin)**
V: 2.0 V/div. H: 10 msec/div.

(1) **CH3 : XRST (IC112-1pin)**
V: 2.0 V/div. H: 10 msec/div.



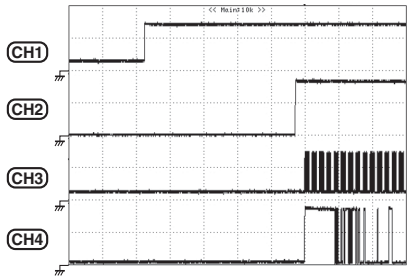
Conditions: At the time of power on, without a disc loaded

(37) **CH1 : PROG-B (IC106-99pin)**
V: 2.0 V/div. H: 20 usec/div.

(2) **CH2 : XINT (IC106-42pin)**
V: 2.0 V/div. H: 20 usec/div.

(40) **CH3 : QSPISCK (IC106-52pin)**
V: 2.0 V/div. H: 20 usec/div.

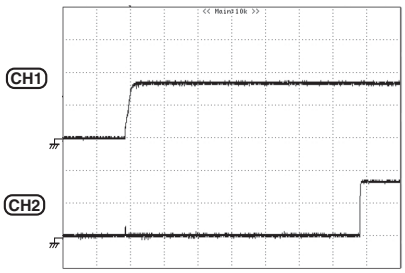
(45) **CH4 : QSPISO (IC106-48pin)**
V: 2.0 V/div. H: 20 usec/div.



Conditions: At the time of power on, without a disc loaded

(7) **CH1 : V+3R3 (CN103-5pin)**
V: 2.0 V/div. H: 10 msec/div.

(1) **CH2 : XRST (IC112-1pin)**
V: 2.0 V/div. H: 10 msec/div.



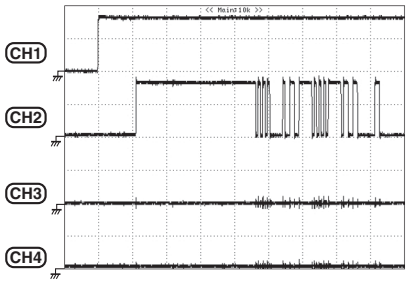
Conditions: At the time of power on, without a disc loaded

(2) **CH1 : XINIT (IC106-42pin)**
V: 2.0 V/div. H: 5 usec/div.

(45) **CH2 : QSPISO (IC106-48pin)**
V: 2.0 V/div. H: 5 usec/div.

(41) **CH3 : DONE (IC106-51pin)**
V: 2.0 V/div. H: 5 usec/div.

(38) **CH4 : XFRST (IC106-67pin)**
V: 2.0 V/div. H: 5 usec/div.



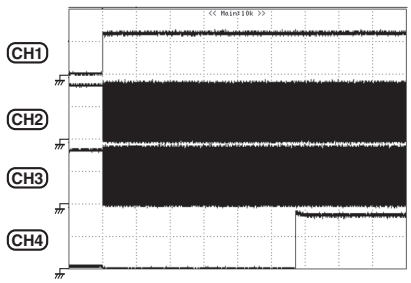
Conditions: At the time of power on, without a disc loaded

(41) **CH1 : DONE (IC106-51pin)**
V: 2.0 V/div. H: 500 usec/div.

(53) **CH2 : CLK_SRV16M (IC502-73pin)**
V: 2.0 V/div. H: 500 usec/div.

(29) **CH3 : CLK_DSP16M (IC105-45pin)**
V: 2.0 V/div. H: 500 usec/div.

(38) **CH4 : XFRST (IC106-67pin)**
V: 2.0 V/div. H: 500 usec/div.



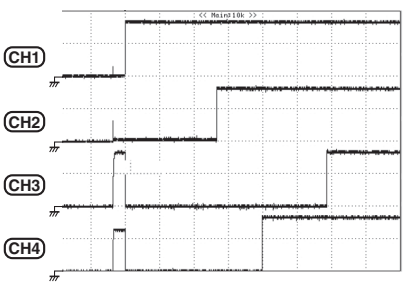
Conditions: At the time of power on, without a disc loaded

(1) **CH1 : XRST (IC112-1pin)**
V: 2.0 V/div. H: 200 msec/div.

(36) **CH2 : PRGM (IC114-L4pin)**
V: 2.0 V/div. H: 200 msec/div.

(51) **CH3 : SRVRST (IC502-90pin)**
V: 2.0 V/div. H: 200 msec/div.

(28) **CH4 : DSPRST (IC105-47pin)**
V: 2.0 V/div. H: 200 msec/div.



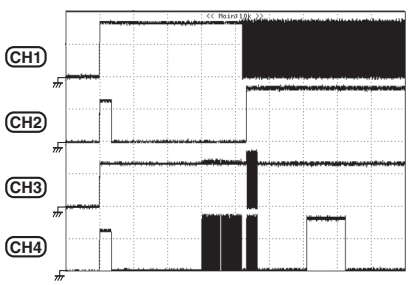
Conditions: At the time of power on, without a disc loaded

(29) **CH1 : CLK_DSP16M (IC105-45pin)**
V: 2.0 V/div. H: 200 msec/div.

(28) **CH2 : DSPRST (IC105-47pin)**
V: 2.0 V/div. H: 200 msec/div.

(31) **CH3 : DSPSIN (IC105-35pin)**
V: 2.0 V/div. H: 200 msec/div.

(30) **CH4 : QSPISCK (IC105-36pin)**
V: 2.0 V/div. H: 200 msec/div.



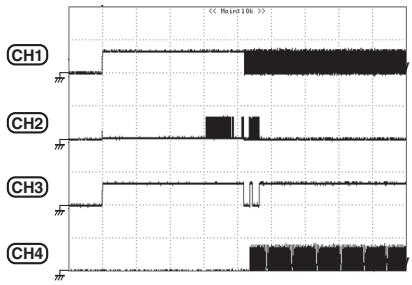
Conditions: At the time of power on, without a disc loaded

(29) **CH1 : CLK_DSP16M** (IC105-45pin)
V: 2.0 V/div. H: 200 msec/div.

(45) **CH2 : QSPISO (IC106-48pin)**
V: 2.0 V/div. H: 200 msec/div.

(27) **CH3 : DSPDREQ (IC105-60pin)**
V: 2.0 V/div. H: 200 msec/div.

(24) **CH4 : CLK_DAC11M (IC3-16pin)**
V: 2.0 V/div. H: 200 msec/div.



Note: The numbers for the waveform photos (circled) are identical to those for the schematic diagrams flowcharts.

A MAIN ASSY

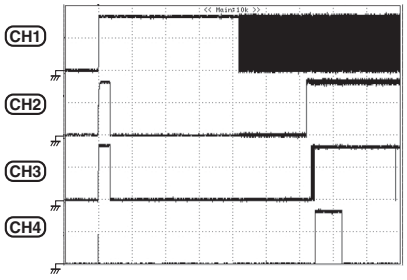
Conditions: At the time of power on, without a disc loaded

(53) **CH1 : CLK_SRV16M (IC502-73pin)**
V: 2.0 V/div. H: 200 msec/div.

(51) **CH2 : SRVRST (IC502-90pin)**
V: 2.0 V/div. H: 200 msec/div.

(52) **CH3 : SRVBUS0 (IC502-84pin)**
V: 2.0 V/div. H: 200 msec/div.

(54) **CH4 : DRVMUTE2 (IC503-35pin)**
V: 2.0 V/div. H: 200 msec/div.

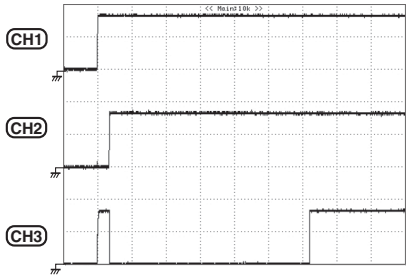


Conditions: At the time of power on, without a disc loaded

(7) **CH1 : V+3R3 (CN103-5pin)**
V: 2.0 V/div. H: 200 msec/div.

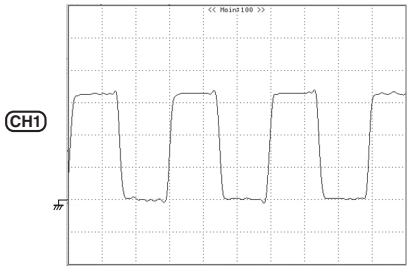
(1) **CH2 : XRST (IC112-1pin)**
V: 2.0 V/div. H: 200 msec/div.

(51) **CH3 : SRVRST (IC502-90pin)**
V: 2.0 V/div. H: 200 msec/div.



Conditions: At the time of power on, without a disc loaded

(43) **CH1 : CLK_CPU16M (IC109-7pin)**
V: 1.0 V/div. H: 20 nsec/div.



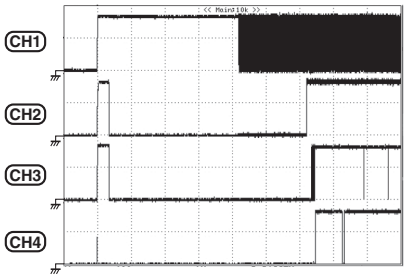
Conditions: At the time of power on, without a disc loaded

(53) **CH1 : CLK_SRV16M (IC502-73pin)**
V: 2.0 V/div. H: 200 msec/div.

(51) **CH2 : SRVRST (IC502-90pin)**
V: 2.0 V/div. H: 200 msec/div.

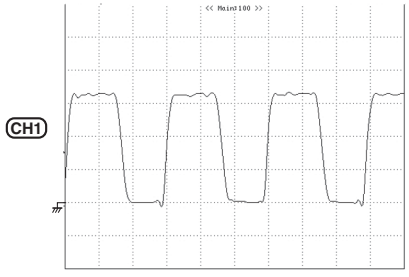
(52) **CH3 : SRVBUS0 (IC502-84pin)**
V: 2.0 V/div. H: 200 msec/div.

(55) **CH4 : DRVMUTE2 (IC503-34pin)**
V: 2.0 V/div. H: 200 msec/div.



Conditions: At the time of power on, without a disc loaded

(53) **CH1 : CLK_SRV16M (IC502-73pin)**
V: 1.0 V/div. H: 20 nsec/div.



Conditions: At the time of power on, without a disc loaded

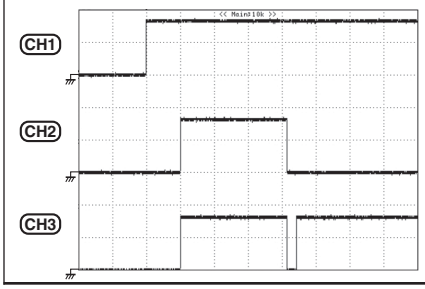
(44) **CH1 : CLK_FP16M (IC109-5pin)**
V: 1.0 V/div. H: 20 nsec/div.

Conditions: At the time of power on, without a disc loaded

(51) **CH1 : SRVRST (IC502 - 90pin)**
V: 2.0 V/div. H: 50 msec/div.

(54) **CH2 : DRVMUTE1 (IC503-35pin)**
V: 2.0 V/div. H: 50 msec/div.

(55) **CH3 : DRVMUTE2 (IC503-34pin)**
V: 2.0 V/div. H: 50 msec/div.

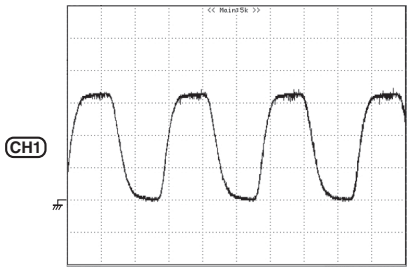


Conditions: At the time of power on, without a disc loaded

(42) **CH1 : 16.9344Mz (IC111-4pin)**
V: 1.0 V/div. H: 20 nsec/div.

Conditions: At the time of power on, without a disc loaded

(45)-a **CH1 : CLK_70M (IC6-39pin)**
V: 1.0 V/div. H: 200 msec/div.

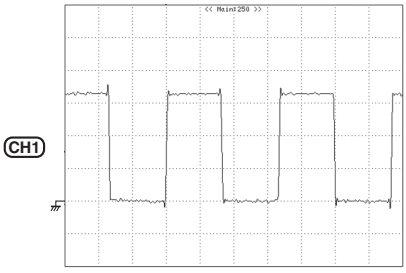


Note: The numbers for the waveform photos (circled) are identical to those for the schematic diagrams flowcharts.

A MAIN ASSY

Conditions: At the time of power on, without a disc loaded

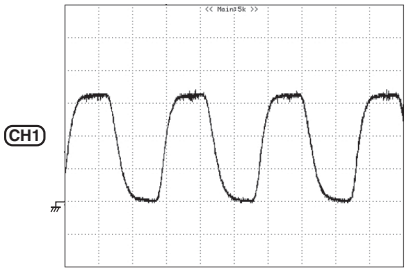
16 **CH1 : 6M (IC113-59pin)**
V: 1.0 V/div. H: 50 nsec/div.



Conditions: At the time of power on, without a disc loaded

46b **CH1 : CLK_70M (IC102-38pin)**
V: 1.0 V/div. H: 5 nsec/div.

Conditions: SDRAM side in the 70MHz clock signal



Conditions: At the time of power on, with a disc loaded → PLAY(CD)

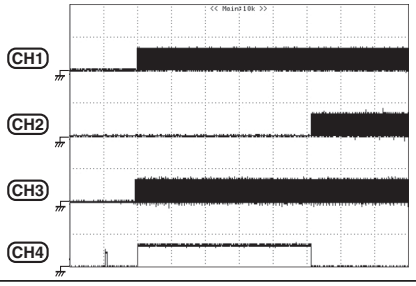
21 **CH1 : DACLRCK (CN103-3pin)**
V: 5.0 V/div. H: 1 sec/div.

22 **CH2 : DACDATA (IC103-2pin)**
V: 5.0 V/div. H: 1 sec/div.

23 **CH3 : DACBCK (CN103-1pin)**
V: 5.0 V/div. H: 1 sec/div.

26 **CH4 : ZERO (CN103-11pin)**
V: 5.0 V/div. H: 1 sec/div.

Conditions : POWER ON



Conditions: At the time of power on, without a disc loaded

29 **CH1 : CLK_DSP16M (IC105-45pin)**
V: 1.0 V/div. H: 20 nsec/div.

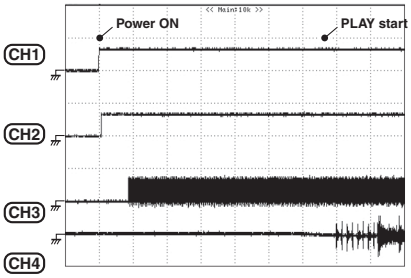
Conditions: At the time of power on, with a disc loaded → PLAY(CD)

7 **CH1 : V+3R3 (CN103-5pin)**
V: 5.0 V/div. H: 1 sec/div.

1 **CH2 : XRST (IC112-1pin)**
V: 5.0 V/div. H: 1 sec/div.

24 **CH3 : CLK_DAC11M (IC103-16pin)**
V: 5.0 V/div. H: 1 sec/div.

50 **CH4 : L -OUT (JA1502-3pin)**
V: 5.0 V/div. H: 1 sec/div.



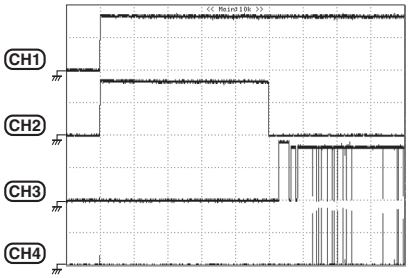
Conditions: At the time of power on, without a disc loaded → PLAY(USB)

13 **CH1 : USBPFLG (IC113-36pin)**
V: 2.0 V/div. H: 1 sec/div.

14 **CH2 : USBPE (IC113-39pin)**
V: 2.0 V/div. H: 1 sec/div.

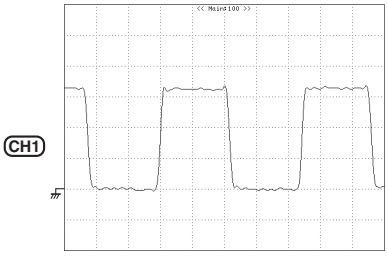
11 **CH3 : USBA_P (IC113-31pin)**
V: 2.0 V/div. H: 1 sec/div.

12 **CH4 : USBA_N (IC113-32pin)**
V: 2.0 V/div. H: 1 sec/div.



Conditions: At the time of power on, without a disc loaded

24 **CH1 : CLK_DAC11M (IC103-16pin)**
V: 1.0 V/div. H: 20 nsec/div.



Conditions: At the time of power on, with a disc loaded → PLAY(CD)

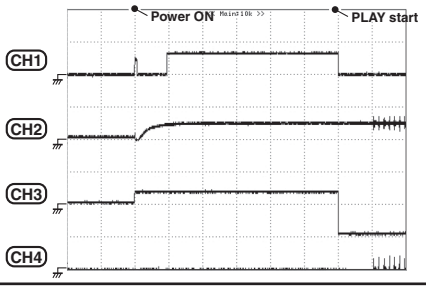
26 **CH1 : ZERO (CN103-11pin)**
V: 5.0 V/div. H: 1 sec/div.

20 **CH2 : A_ALOUT0 (IC103-7pin)**
V: 5.0 V/div. H: 1 sec/div.

9 **CH3 : MUTE (CN102-10pin)**
V: 5.0 V/div. H: 1 sec/div.

50 **CH4 : L-OUT (JA1502-3pin)**
V: 5.0 V/div. H: 1 sec/div.

Conditions : POWER ON



Conditions: At the time of power on, with a disc loaded → PLAY(CD)

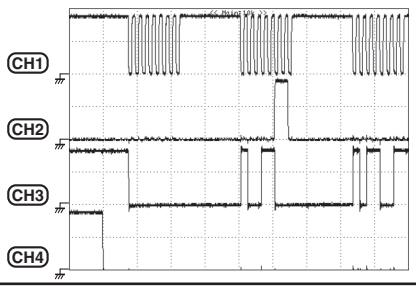
3 **CH1 : TSCK (CN103-18pin)**
V: 2.0 V/div. H: 5 usec/div.

4 **CH2 : TSCS (CN103-12pin)**
V: 2.0 V/div. H: 5 usec/div.

5 **CH3 : TSI (CN103-16pin)**
V: 2.0 V/div. H: 5 usec/div.

6 **CH4 : TSO (CN103-14pin)**
V: 2.0 V/div. H: 5 usec/div.

Conditions : During playback



Note: The numbers for the waveform photos (circled) are identical to those for the schematic diagrams flowcharts.

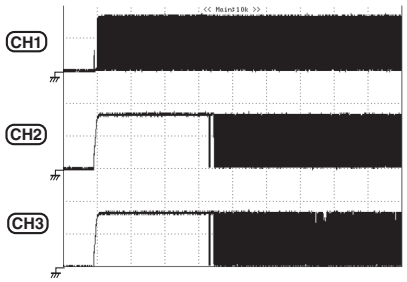
A MAIN ASSY

Conditions: At the time of power on, without a disc loaded

46-a **CH1 : CLK_70M (IC106-39pin)**
V: 2.0 V/div. H: 20 msec/div.

47 **CH2 : XOE (IC106-23pin)**
V: 2.0 V/div. H: 20 msec/div.

48-a **CH3 : DATA0 (IC106-12pin)**
V: 2.0 V/div. H: 20 msec/div.



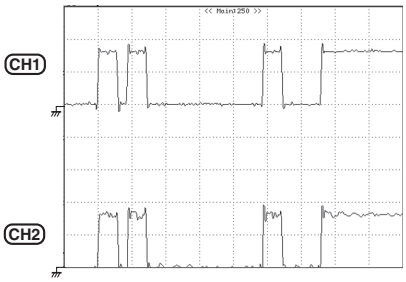
Conditions: At the time of power on, without a disc loaded

19-a **CH1 : DATA8 (IC103-18pin)**
V: 2.0 V/div. H: 50 nsec/div.

* Signal line distance short.

19-b **CH1 : DATA8 (IC103-37pin)**
V: 2.0 V/div. H: 50 nsec/div.

* Signal line distance long.



F PNLB ASSY

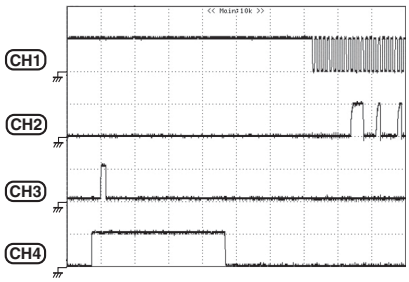
MODE : PLAY

6 **CH1 : DEL1064-34pin (FLCSCLK)**
V: 0.5 V/div. H: 100 msec/div.

7 **CH2 : DEL1064-33pin (FLSO)**
V: 0.5 V/div. H: 100 msec/div.

8 **CH3 : DEL1064-73pin (FLLAT)**
V: 0.5 V/div. H: 100 msec/div.

9 **CH4 : DEL1064-74pin (FLBK)**
V: 0.5 V/div. H: 100 msec/div.

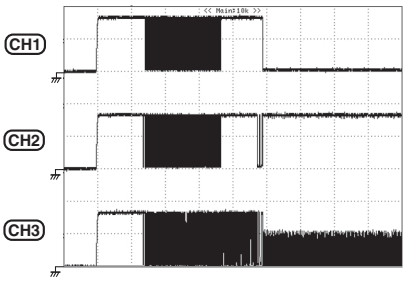


Conditions: At the time of power on, without a disc loaded

39 **CH1 : XWE (IC106-61pin)**
V: 2.0 V/div. H: 50 msec/div.

47 **CH2 : XOE (IC106-23pin)**
V: 2.0 V/div. H: 50 msec/div.

48-a **CH3 : DATA0 (IC106-12pin)**
V: 2.0 V/div. H: 50 msec/div.



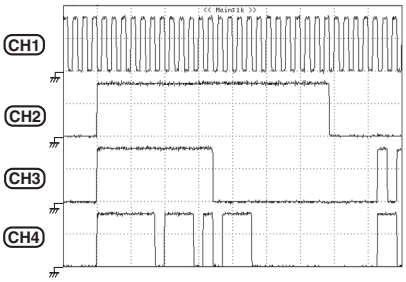
Conditions: At the time of power on, with a disc loaded → PLAY(CD)

32 **CH1 : BCK (CN105-76pin)**
V: 2.0 V/div. H: 200 nsec/div.

33 **CH2 : DBCK (IC105-78pin)**
V: 2.0 V/div. H: 200 nsec/div.

34 **CH3 : DATAL1 (IC105-80pin)**
V: 2.0 V/div. H: 200 nsec/div.

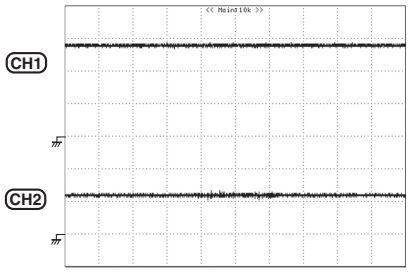
35 **CH4 : DATAR1 (IC105-1pin)**
V: 2.0 V/div. H: 200 nsec/div.



MODE : PLAY

10 **CH1 : DEL1064-1pin (F +)**
V: 2.0 V/div. H: 20 msec/div.

11 **CH2 : DEL1064-44pin (F -)**
V: 2.0 V/div. H: 20 msec/div.

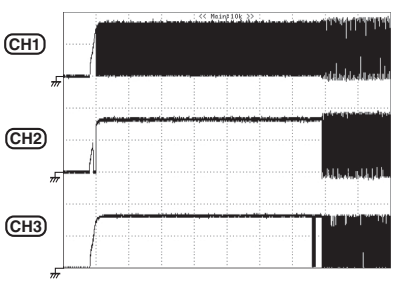


Conditions: At the time of power on, without a disc loaded

46-b **CH1 : CLK_70M (IC102-38pin)**
V: 2.0 V/div. H: 10 msec/div.
* SDRAM side in the 70MHz

49 **CH1 : XCSSDRAM (IC102-19pin)**
V: 2.0 V/div. H: 10 msec/div.

48-b **CH1 : DATA0 (IC106-12pin)**
V: 2.0 V/div. H: 10 msec/div.



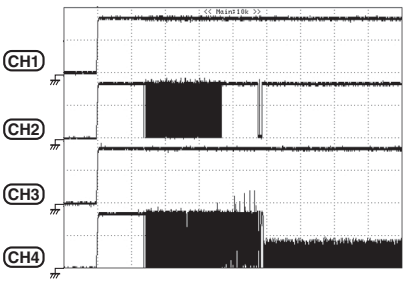
Conditions: At the time of power on, without a disc loaded → PLAY(USB)

17 **CH1 : XWR (CN113-12pin)**
V: 2.0 V/div. H: 50 msec/div.

18 **CH2 : XDE (IC113-13pin)**
V: 2.0 V/div. H: 50 msec/div.

10 **CH3 : USBCS (IC113-30pin)**
V: 2.0 V/div. H: 50 msec/div.

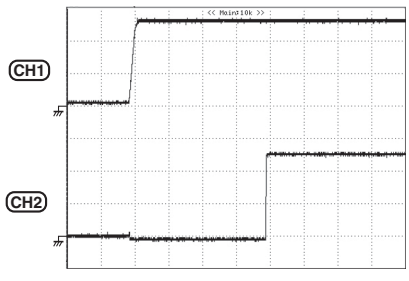
48-c **CH4 : DATA0 (IC113-49pin)**
V: 2.0 V/div. H: 50 msec/div.



MODE : POWER ON

12 **CH1 : IC1100-16pin (V+5V)**
V: 2.0 V/div. H: 20 msec/div.

13 **CH2 : IC1100-12pin (DISPRESET)**
V: 2.0 V/div. H: 20 msec/div.



Note: The numbers for the waveform photos (circled) are identical to those for the schematic diagrams flowcharts.

F PNLB ASSY

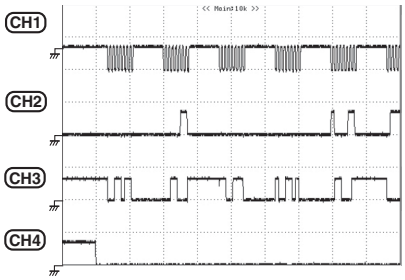
MODE : PLAY

⑭ **CH1 : CN1108-6pin (TSCLK)**
V: 5.0 V/div. H: 10 usec/div.

⑮ **CH2 : CN1108-8pin (TSI)**
V: 5.0 V/div. H: 10 usec/div.

⑯ **CH3 : CN1108-10pin (TSO)**
V: 5.0 V/div. H: 10 usec/div.

⑰ **CH4 : CN1108-12pin (TSCS)**
V: 5.0 V/div. H: 10 usec/div.



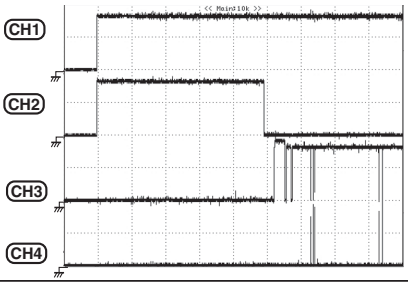
MODE : POWER ON → PLAY(USB)

⑳ **CH1 : IC1105-3pin (USBPFLG)**
V: 2.0 V/div. H: 200 nsec/div.

㉑ **CH2 : IC1103-2pin (USBPE)**
V: 2.0 V/div. H: 200 nsec/div.

㉒ **CH3 : JA1101-3pin (USBA_P)**
V: 2.0 V/div. H: 200 nsec/div.

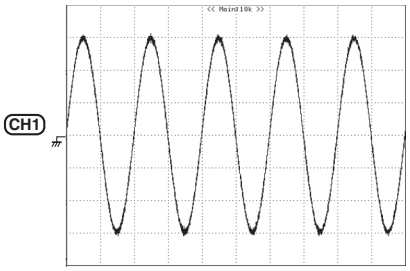
㉓ **CH4 : JA1101-2pin (USBA_N)**
V: 2.0 V/div. H: 200 nsec/div.



MODE : PLAY (1kHz 0dB)

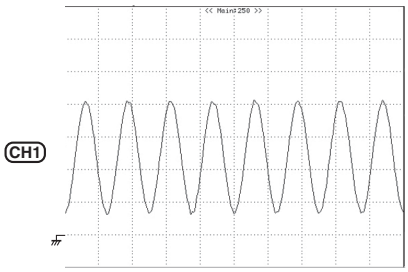
㉖ **CH1 : JA1502-3pin (LOUT)**
V: 1.0 V/div. H: 500 usec/div.

Conditions: 10 kΩ terminal on



MODE : PLAY

⑱ **CH1 : IC1100-15pin (XIN_15.975MHz)**
V: 1.0 V/div. H: 50 nsec/div.

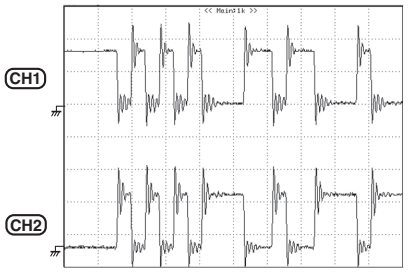


MODE : POWER ON → PLAY(USB)

㉒ **CH1 : JA1101-3pin (USBA_P)**
V: 2.0 V/div. H: 200 nsec/div.

㉓ **CH2 : JA1101-2pin (USBA_N)**
V: 2.0 V/div. H: 200 nsec/div.

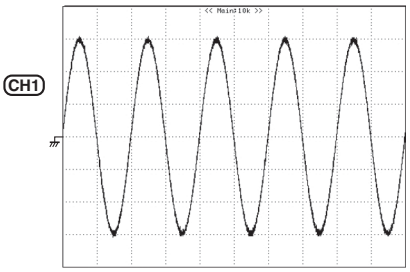
Magnification



MODE : PLAY (1kHz 0dB)

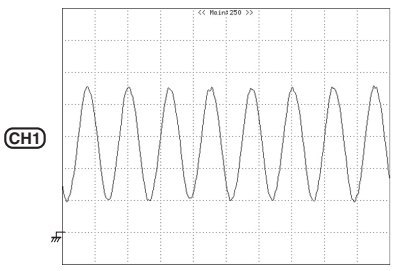
㉗ **CH1 : JA1502-1pin (ROUT)**
V: 1.0 V/div. H: 500 nsec/div.

Conditions: 10 kΩ terminal on



MODE : PLAY

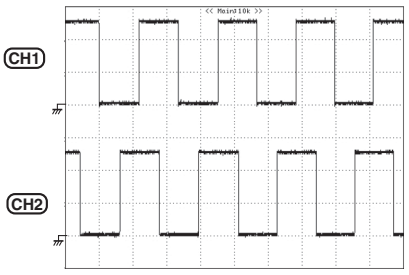
⑲ **CH1 : IC1100-13pin (XOUT_15.975MHz)**
V: 2.0 V/div. H: 10 msec/div.



MODE : PLAY

㉔ **CH1 : CN1104-3pin (JOG1)**
V: 2.0 V/div. H: 500 usec/div.

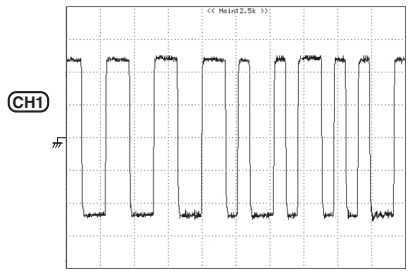
㉕ **CH2 : CN1104-4pin (JOG2)**
V: 2.0 V/div. H: 500 usec/div.



MODE : PLAY

㉘ **CH1 : JA1503-2pin (D-OUT)**
V: 0.1 V/div. H: 500 nsec/div.

Conditions: 75 Ω terminal on



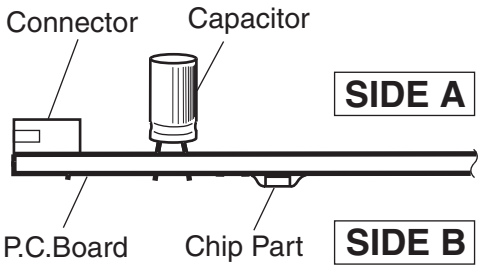
11. PCB CONNECTION DIAGRAM
11.1 TCHB ASSY

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

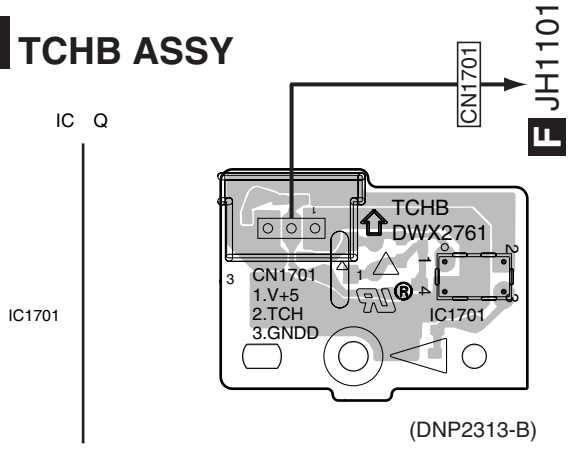
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



SIDE A

SIDE A

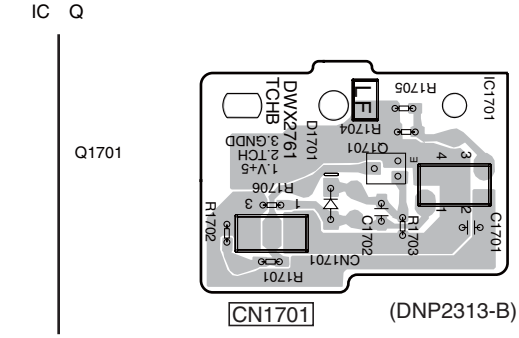
E TCHB ASSY



(DNP2313-B)

SIDE B

SIDE B

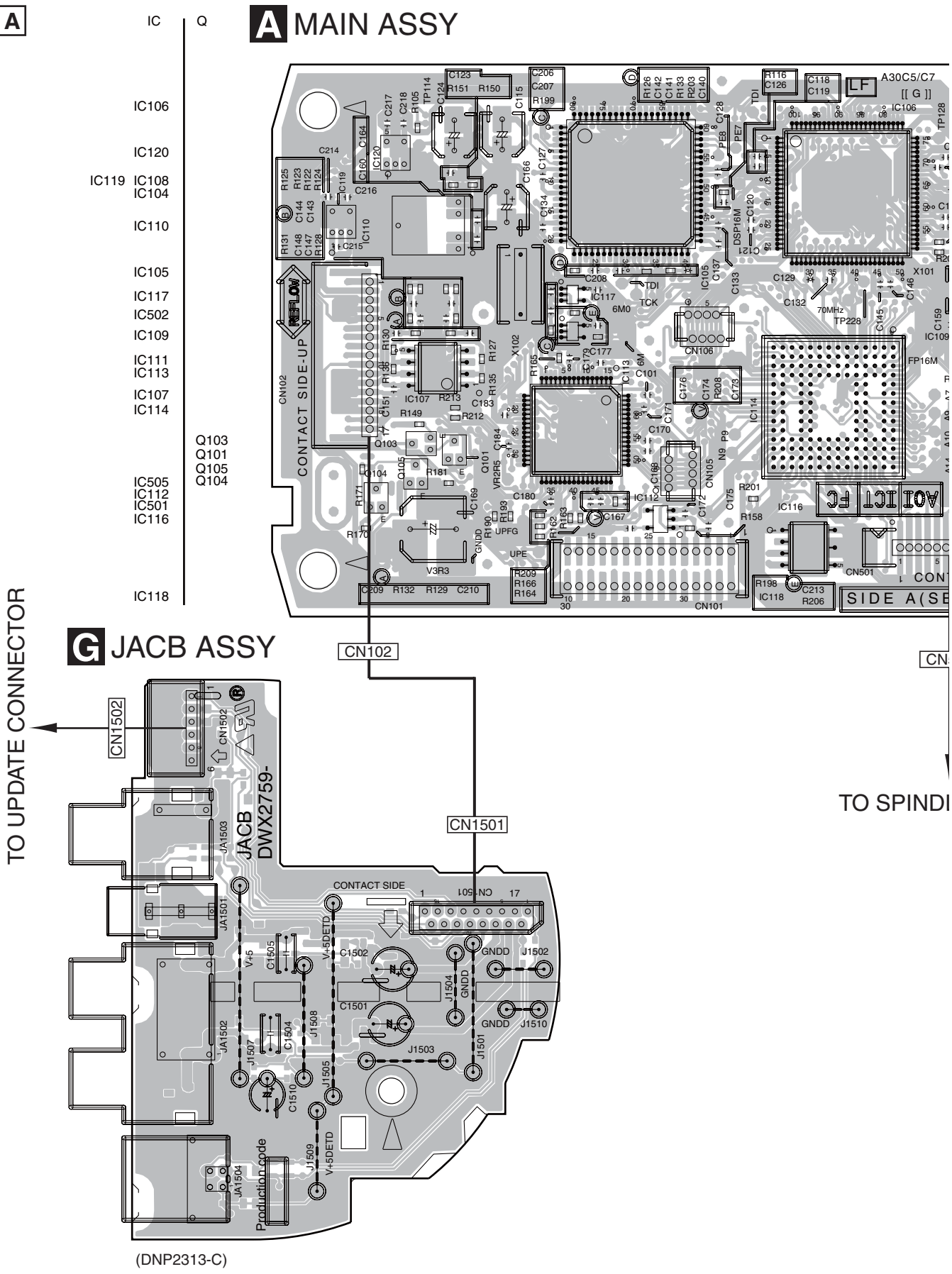


(DNP2313-B)

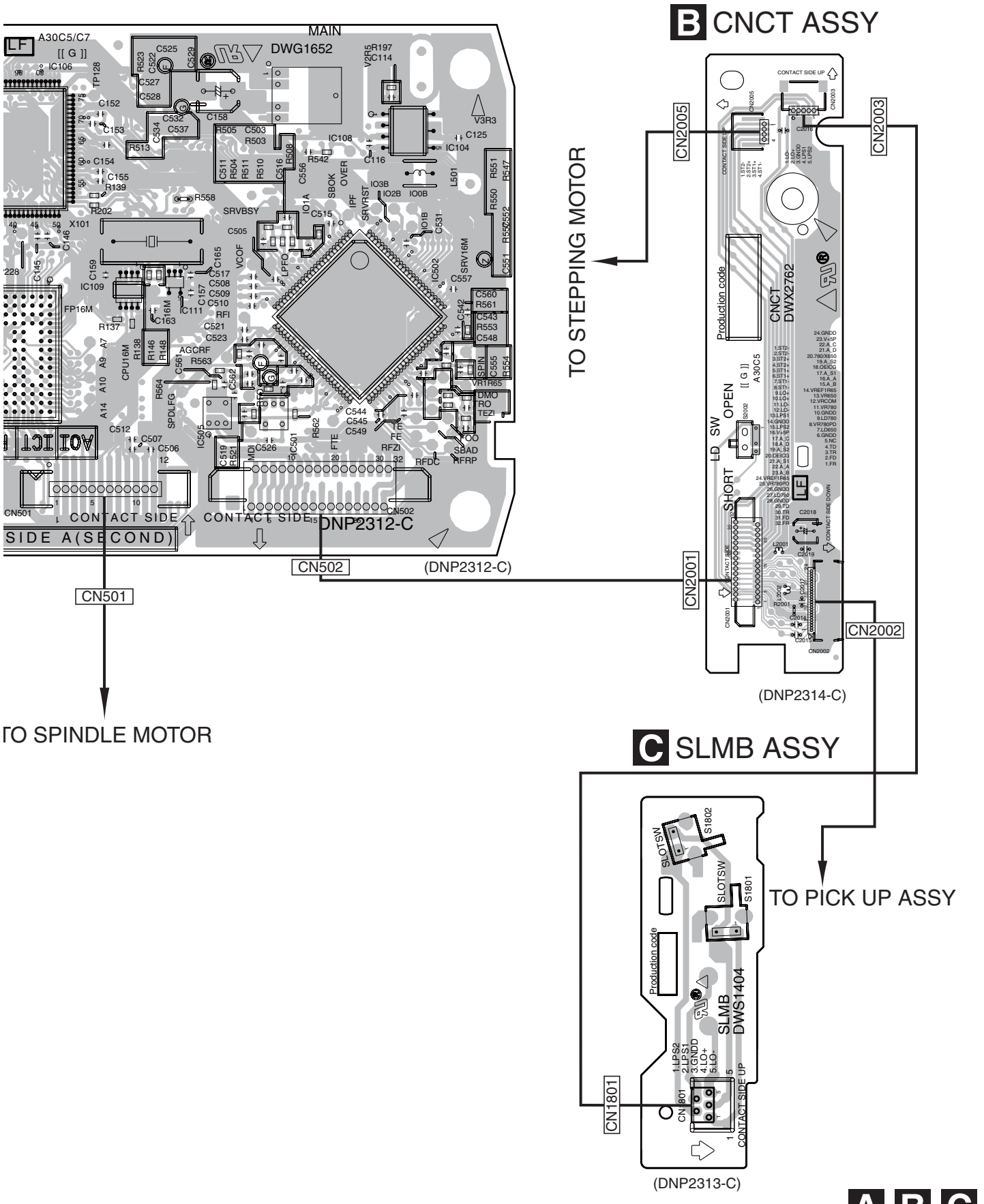
E

E

11.2 MAIN, CNCT, SLMB and JACB ASSYS



SIDE A


B CNCT ASSY
MAIN
DWG1652
DNP2312-C
(DNP2312-C)
CN501
CN502
CN2005
CN2003
CN2001
CN2002
TO STEPPING MOTOR
TO SPINDLE MOTOR
CONTACT SIDE
SIDE A(SECOND)
CNCT DWX2762
Production code
LD SW
OPEN
SHORT
(DNP2314-C)
C SLMB ASSY
SLOTSW
S1802
S1801
TO PICK UP ASSY
CN1801
SLMB DWS1404
(DNP2313-C)

SIDE B

A MAIN ASSY

IC Q

IC504

IC103 IC102

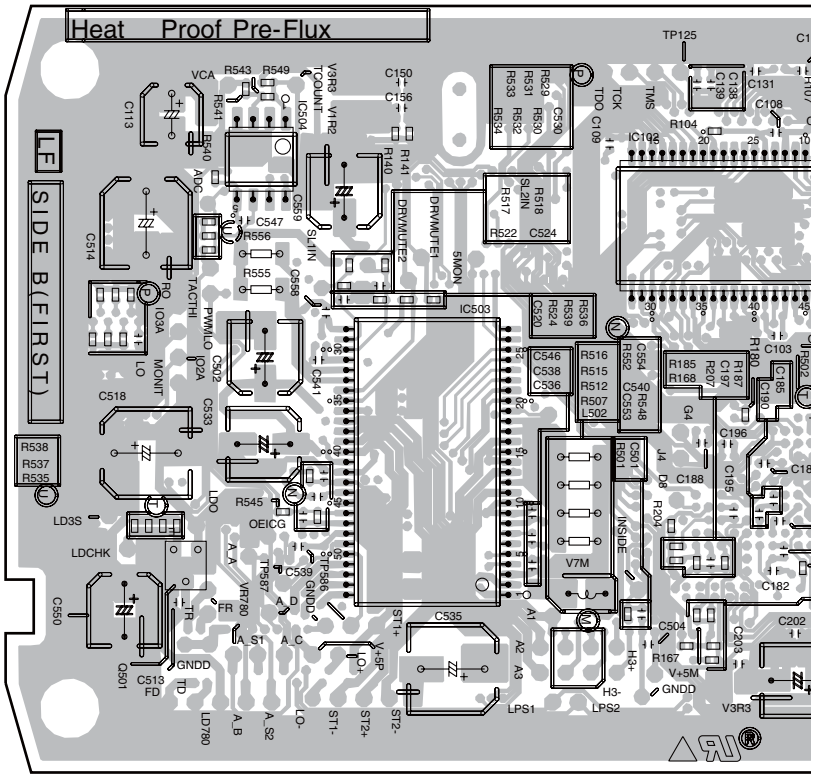
IC503

IC101

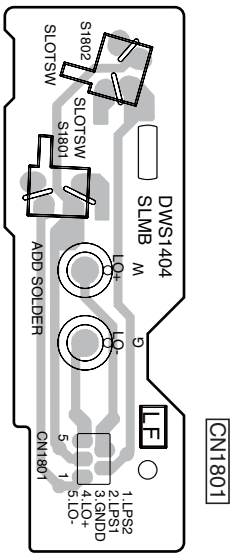
Q102

Q106

Q501

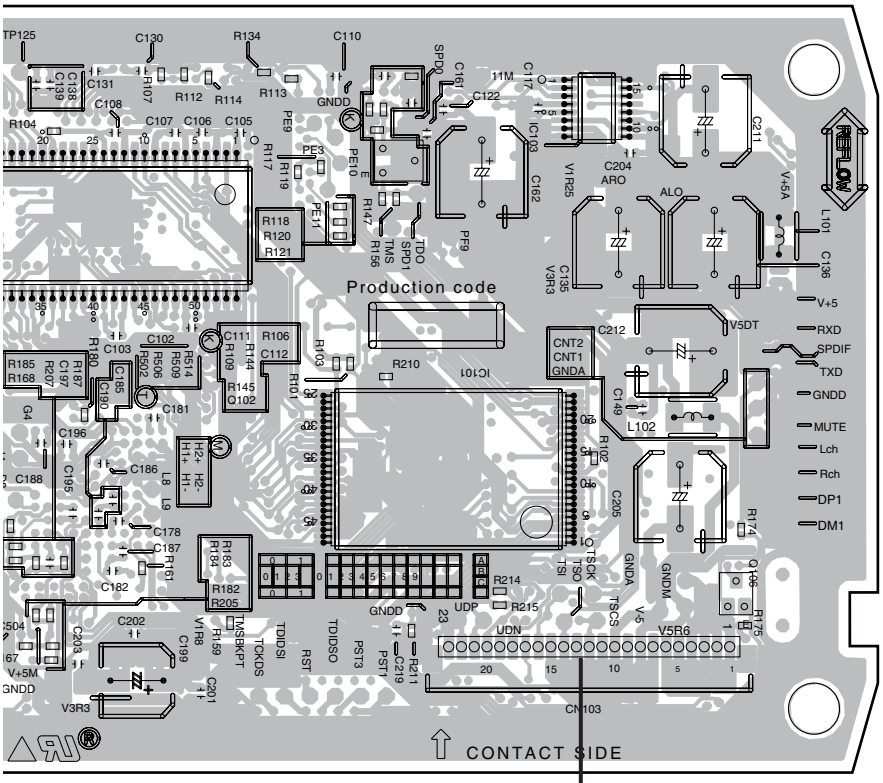


C SLMB ASSY



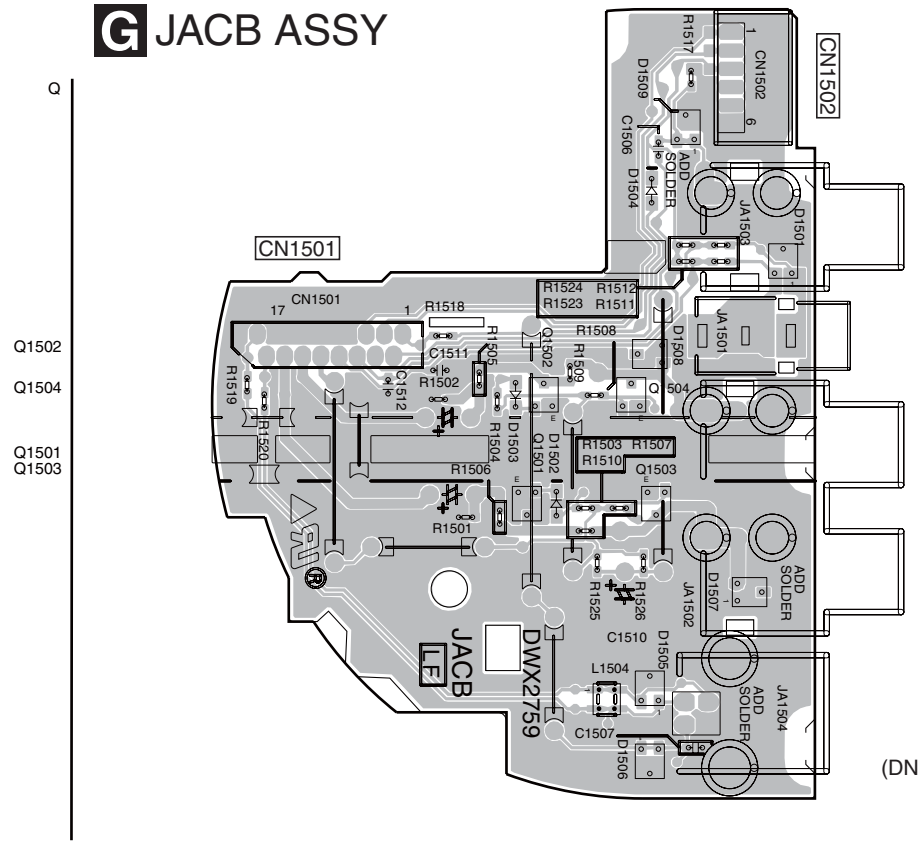
(DNP2313-C)

SIDE B



CN103 (DNP2312-C) → **F** CN1108

G JACB ASSY

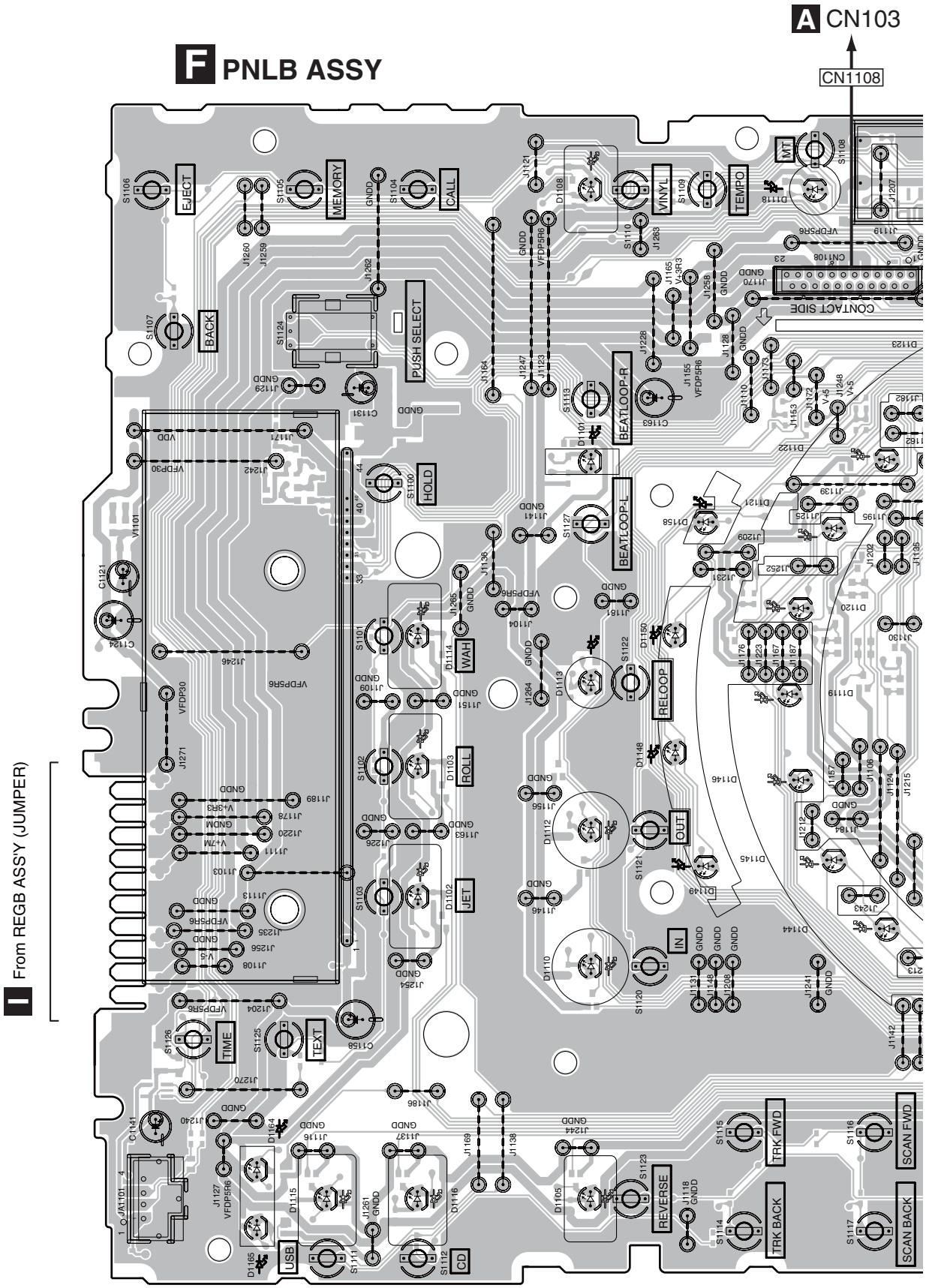


(DNP2313-C)

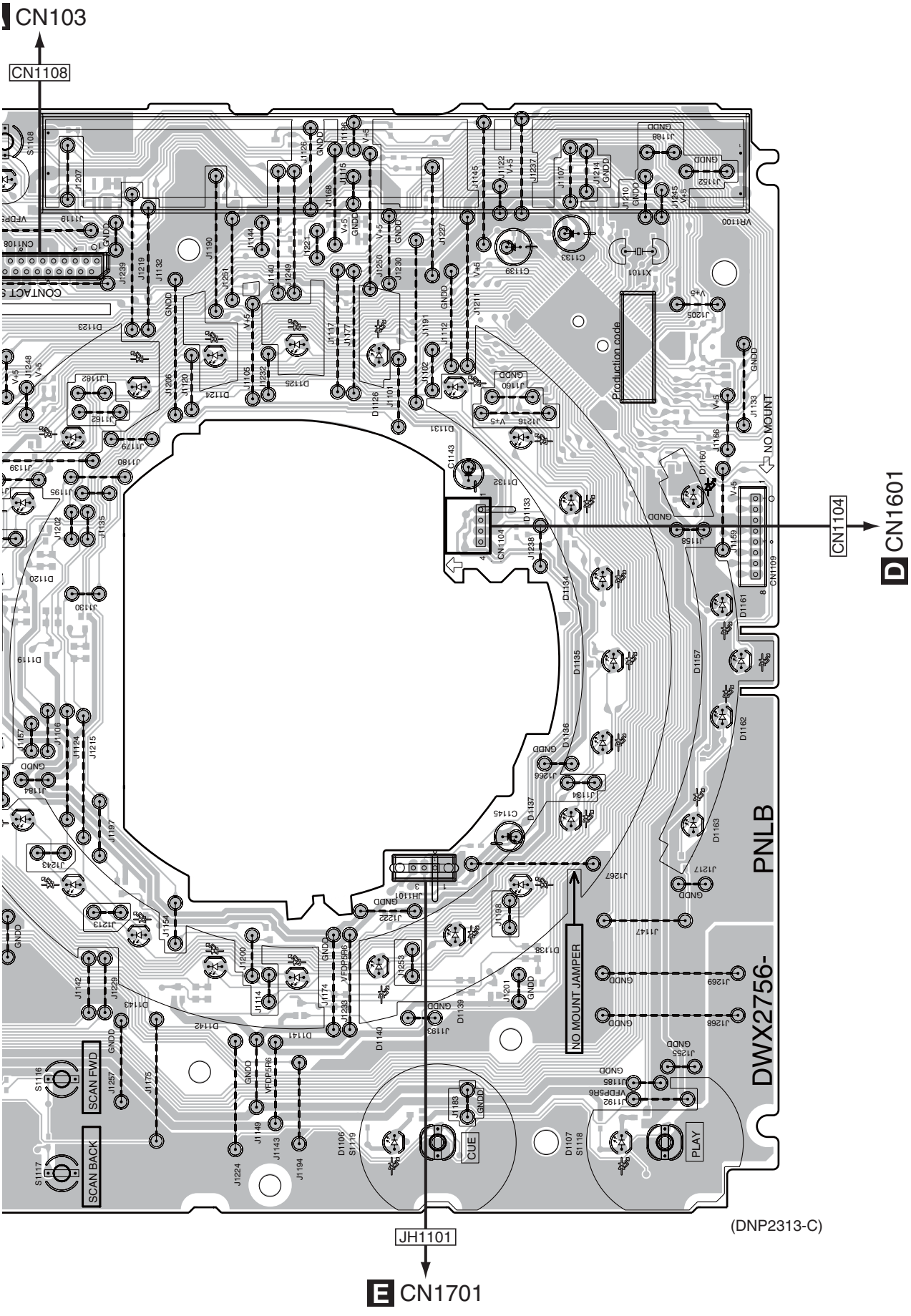
A **G**

11.3 PNLB ASSY

SIDE A



SIDE A


CN103
CN1108
CN1104
D CN1601
NO MOUNT
NO MOUNT JUMPER
JH1101
E CN1701
SCAN FWD
SCAN BACK
CUE
PLAY
DWX2756-
PNLB
Production code
(DNP2313-C)

SIDE B

F PNLB ASSY

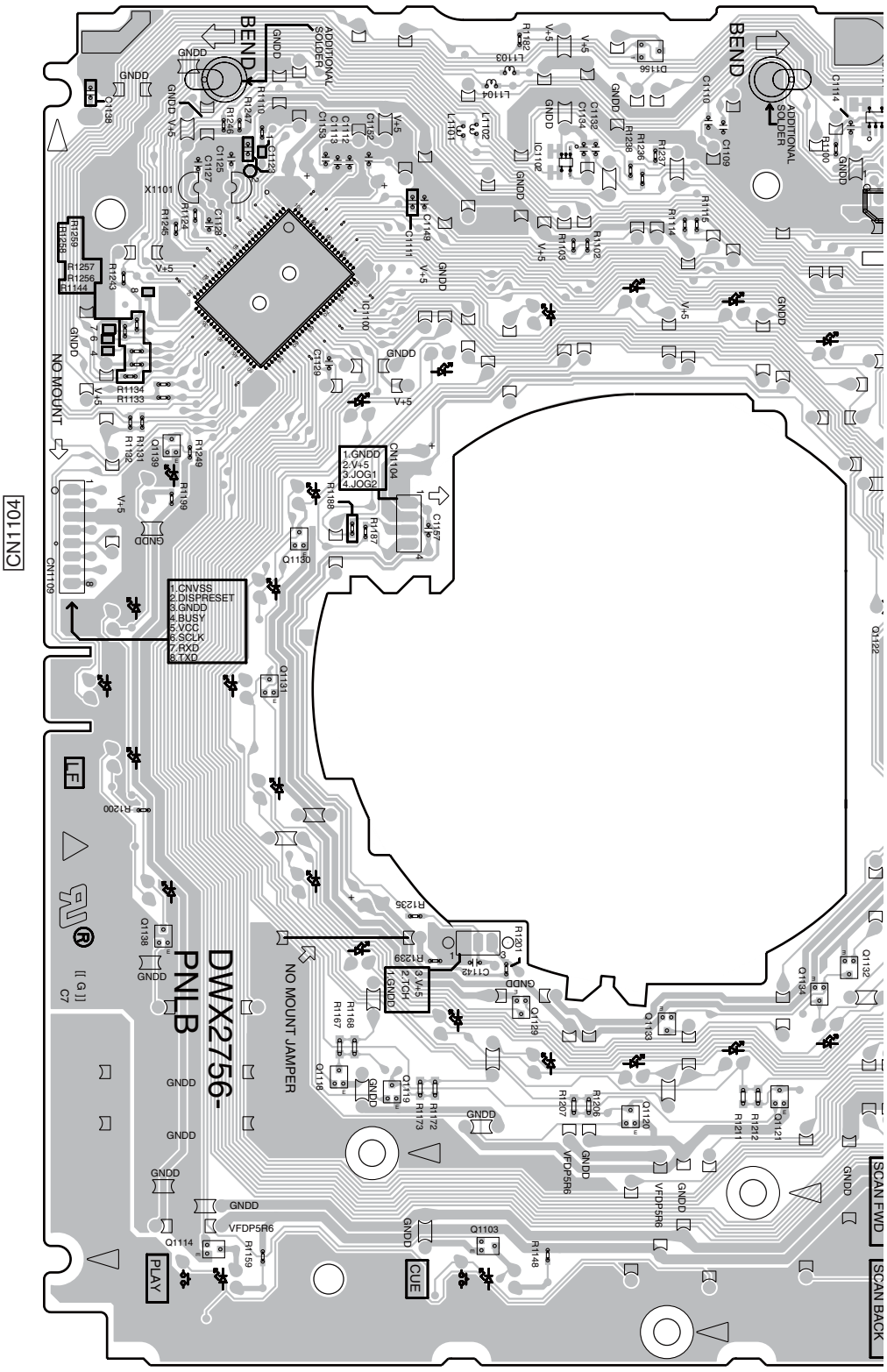
IC Q

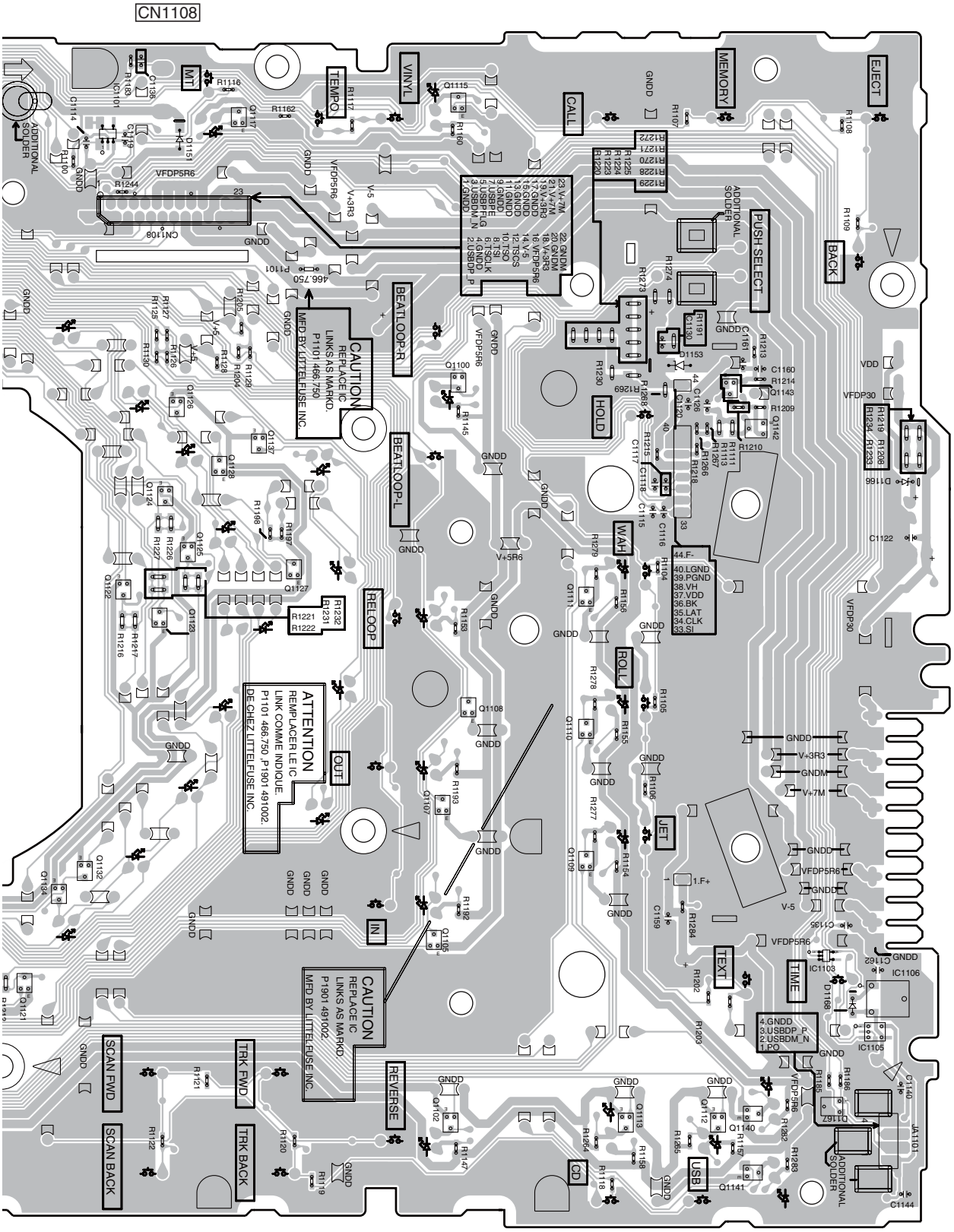
IC1101 Q1115 Q1117

IC1102

IC1100

Q1100 Q1143 Q1126 Q1142 Q1139 Q1137 Q1128 Q1124 Q1130 Q1125 Q1122 Q1127 Q1111 Q1131 Q1123 Q1108 Q1110 Q1107 Q1138 Q1109 Q1132 Q1134 Q1133 Q1129 Q1105 IC1103 Q1118 IC1106 Q1119 Q1120 Q1121 IC1105 Q1103 Q1102 Q1112 Q1114 Q1113 Q1140 Q1141



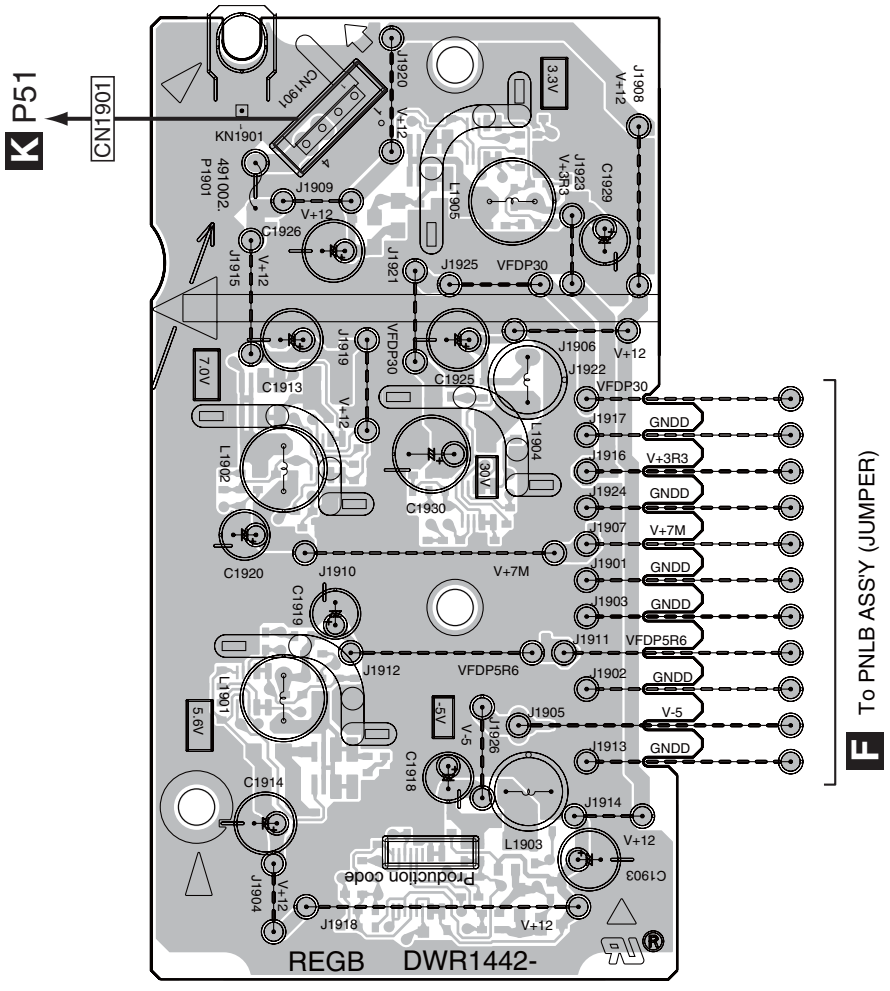

CN1108
MT
TEMPO
VINYL
CALL
MEMORY
EJECT
PUSH SELECT
BACK
BEATLOOP-R
BEATLOOP-L
HOLD
WAH
RELOOP
ROLL
JET
TEXT
TIME
USB
CD
OUT
IN
REVERSE
SCAN FWD
SCAN BACK
TRK FWD
TRK BACK
CAUTION
REPLACE IC
LINKS AS MARKD.
P1101 466.750
MFD BY LITTELFUSE INC.
ATTENTION
REMPLACER LE IC
LINK COMME INDIQUE.
P1101 466.750 P1901 491002.
DE CHEZ LITTELFUSE INC.
ADDITIONAL SOLDER
VFDP5R6
V-5
V+3R3
GNDD
VDD
VFDP30
V+5R6
V+7M
GNDM
44.F-
40.LGND
39.PGND
38.VH
37.VDD
36.BK
35.LAT
34.CLK
33.SI
1.F+
4.GNDD
3.USBDP_P
2.USBDM_N
1.PO

(DNP2313-C)

11.4 REGB ASSY

SIDE A **SIDE A**

I REGB ASSY



(DNP2313-C)

SIDE B

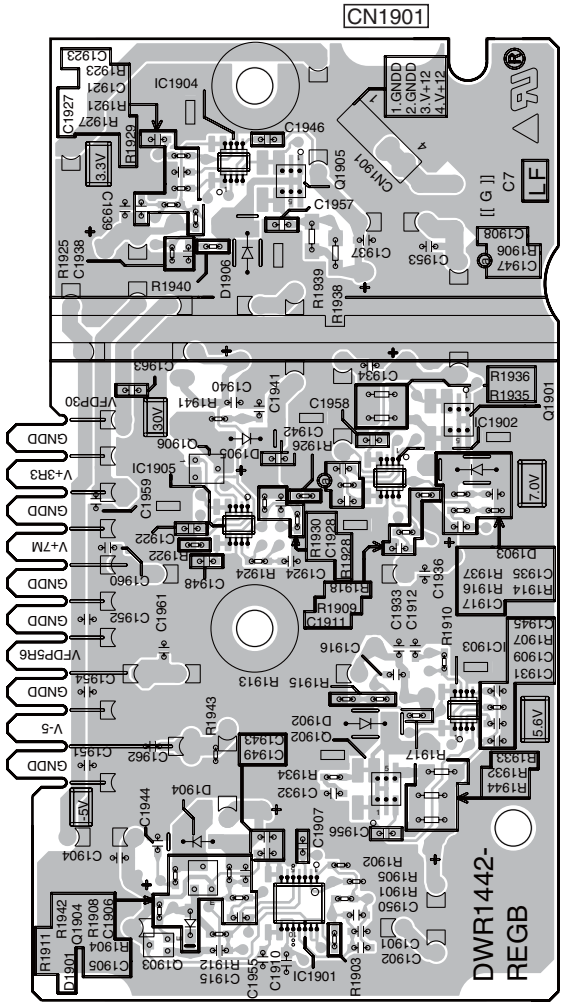
SIDE B

A B C D E F

REGB ASSY

IC Q

IC1904
Q1905
IC1902
Q1901
Q1906
IC1905
IC1903
Q1902
Q1904
Q1903
IC1901



(DNP2313-C)

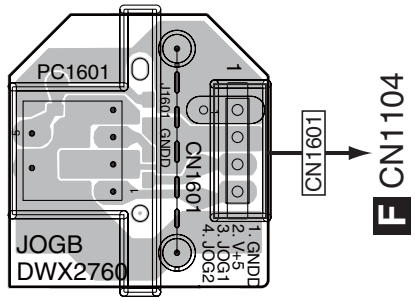
5 6 7 8

11.5 JOGB and ACIN ASSYS

SIDE A

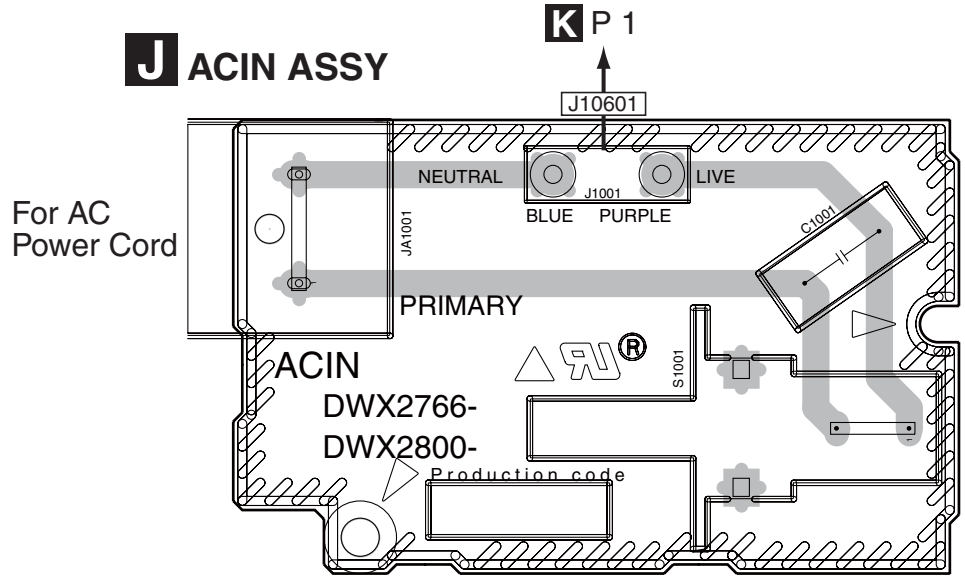
SIDE A

D JOGB ASSY



(DNP2313-C)

J ACIN ASSY



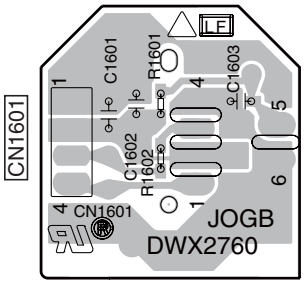
(DNP2313-C)

D J

D J

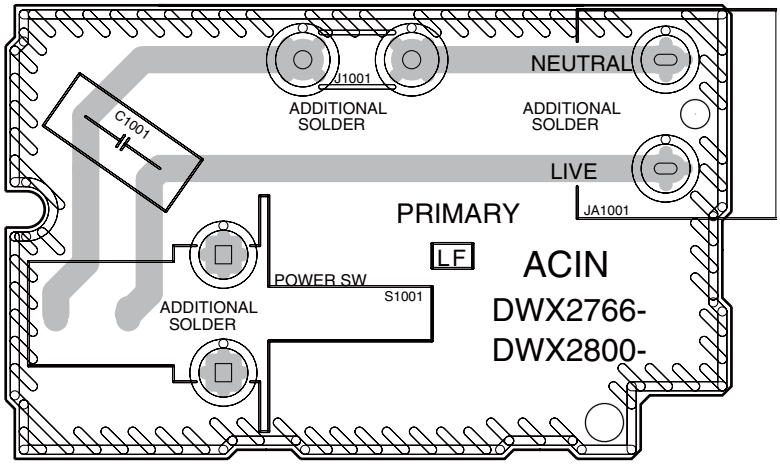
SIDE B

D JOGB ASSY



(DNP2313-C)

J ACIN ASSY



(DNP2313-C)

12. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

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

560 Ω → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

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

5.62k Ω → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	CDJ-400 /KUCXJ	CDJ-400 /WYXJ5	CDJ-400 /TLFXJ
	1..MAIN ASSY	DWG1652	DWG1652	DWG1652
NSP	1..PNLA ASSY	DWM2323	DWM2313	DWM2313
	2..REGB ASSY	DWR1442	DWR1442	DWR1442
	2..SLMB ASSY	DWS1404	DWS1404	DWS1404
	2..PNLB ASSY	DWX2756	DWX2756	DWX2656
	2..JACB ASSY	DWX2759	DWX2759	DWX2659
	2..JOGB ASSY	DWX2760	DWX2760	DWX2660
	2..TCHB ASSY	DWX2761	DWX2761	DWX2761
⚠	2..ACIN ASSY	DWX2800	DWX2766	DWX2766
	2..STPB ASSY	DWX2792	DWX2792	DWX2792
	1..CNCT ASSY	DWX2762	DWX2762	DWX2762
⚠	1..SW POWER SUPPLY	DWR1443	DWR1443	DWR1443

■ CONTRAST OF PCB ASSEMBLIES

J ACIN ASSY

DWX2800 and DWX2766 are constructed the same except for the following :

Mark	Symbol and Description	DWX2800	DWX2766
⚠	JA1001AC Inlet 1P	XKP3042	Not used
⚠	JA1001AC Inlet 1P	Not used	XKP3041

■ PCB PARTS LIST FOR CDJ-400 / KUCXJ UNLESS OTHER WISE NOTED

Mark	No.	Description	Part No.
A		**MAIN ASSY**	
		SEMICONDUCTORS	
	IC	101	DYW1763
	IC	102	K4S561632H-UC75
	IC	103	PCM1742KE
	IC	104	MM1562FF
	IC	105	DSPC56371AF180
	IC	106	XC3S50-4VQG100C
	IC	107	NJM4580MD
	IC	108,110	BD00KA5WFP
	IC	109	TC7W04FU
	IC	111,117	TC7SU04FU
	IC	112	BU4230G
	IC	113	TDOTG242-0F0C8
	IC	114	SCF5249VM140
	IC	116	MM1561JF
	IC	118	TC7SH04FUS1
	IC	119	NJM2872BF05
	IC	120	NJM2872BF33
	IC	502	TC94A15FG
	IC	503	BD7956FS
	IC	504	NJM2903M
⚠	IC	505	NJM2872BF05
	Q	101	RT1P241M
	Q	102	2SC2412K
	Q	103,105	RT1N241M
	Q	104,106	2SC4081
	Q	501	2SA1036K
		MISCELLANEOUS	
	L	501,502 CHIP COIL	OTL1009
	X	101 CRYSTAL RESONATOR (16.9 MHz)	VSS1084
	X	102 CRYSTAL RESONATOR (6 MHz)	VSS1210
	CN	102 17P CONNECTOR	RKN1058
	CN	103 23P CONNECTOR	VKN1427
	CN	501 CONNECTOR	CKS4999
	CN	502 32P FFC CONNECTOR	DKN1447
		RESISTORS	
	R	122,123	RS1/16SS4702D
	R	124,125	RS1/16SS4700D
	R	127,130	RS1/16SS1002D
	R	128,129,131,132	RS1/16SS1501D
	R	135,136	RS1/16SS1102D
	R	140,151	RS1/16SS3302F
	R	141	RS1/16SS5602F
	R	150	RS1/16SS2202F
	R	507,512,515,516	RS1/4SA1R0J
	R	517,518	RS1/16SS4702F
	R	545	RS1/16SS1002F
	R	555,556	RS1/4SA2R7J
	R	558	RS1/16S0R0J
	Other Resistors		RS1/16SS###J
		CAPACITORS	
	C	101-103,105-112	CKSSYB104K10
	C	113	CEHVW220M6R3
	C	114,117-123	CKSSYB104K10
	C	115,158,166	CEVW220M6R3
	C	116,143,144,147	CKSSYB471K50
	C	124	CEVW100M16
	C	125,172,203,214	CKSSYB105K6R3
	C	126	CKSSYB474K6R3
	C	127-134,137-142	CKSSYB104K10
	C	135,136,162,169	CEVW101M6R3
	C	145,146,149-157	CKSSYB104K10
	C	148,201,521	CKSSYB471K50
	C	159,165,206,207	CCSSCH180J50
	C	160,163,164,168	CKSSYB104K10
	C	161,167,175,216	CKSSYB103K16
	C	170,171,173,174	CKSSYB104K10
	C	176-188,190	CKSSYB104K10
	C	195-197,202,204	CKSSYB104K10
	C	199	CEVW101M4
	C	205,211,212	CEVW101M16
	C	208,213,215,220	CKSSYB104K10
	C	209,210	CKSSYB561K50
	C	217	CKSSYB105K6R3
	C	218,219,504,506	CKSSYB103K16
	C	501,505,513,515	CKSSYB104K10
	C	502,533,550,559	CEHVW470M6R3
	C	503,538	CCSSCH470J50
	C	507,512,517,540	CKSSYB103K16
	C	508,509	CKSSYB223K16
	C	510	CKSSYB102K50
	C	511,528	CKSSYB153K16
	C	514,518	CEHVW101M6R3
	C	516,523,525,527	CKSSYB104K10
	C	520,524	CCSSCH121J50
	C	522	CKSSYB681K50
	C	529-532,536,537	CKSSYB104K10
	C	534	CCSSCH680J50
	C	535	CEHVW470M16
	C	539,541-543	CKSSYB104K10
	C	544,562	CKSSYB103K16
	C	545,549,555	CKSSYB333K10
	C	546-548,556-558	CKSSYB104K10
	C	551,552	CKSSYB271K50
	C	553	CKSSYB122K50
	C	554	CCSSCH101J50
	C	561	CKSSYB104K10
B		**CNCT ASSY**	
		MISCELLANEOUS	
	L	2001,2002 INDUCTOR	CTF1410
	S	2002 SLIDE SWITCH	VSH1018
	CN	2001 32P FFC CONNECTOR	DKN1447
	CN	2002 24P FFC CONNECTOR	DKN1445
	CN	2003 5P CONNECTOR	DKN1402
	CN	2005 04P CONNECTOR	RKN1045
		RESISTORS	
	All Resistors		RS1/16S###J
		CAPACITORS	
	C	2014-2016	CKSRYB103K50

Mark	No.	Description	Part No.
C	2017,2019		CKSRYB104K50
C	2018		CEHVW220M6R3

C SLMB ASSY

MISCELLANEOUS

S	1801,1802	PUSH SWITCH	DSG1017
CN	1801	5P CONNECTOR	VKN1265

D JOGB ASSY

MISCELLANEOUS

CN	1601	CONNECTOR ASS'Y	PF04PG-B05

RESISTORS

All Resistors			RS1/16S###J

MISCELLANEOUS

PC	1601	PHOTO INTERRUPTER	SEDS-7573

CAPACITORS

C	1601		DCH1201
C	1602,1603		CKSRYB103K50

E TCHB ASSY

SEMICONDUCTORS

IC	1701		GP1S94
Q	1701		2SC4081
D	1701		1SS355

MISCELLANEOUS

CN	1701	3PJUMPER CONNECTOR	52151-0310

RESISTORS

All Resistors			RS1/16S###J

CAPACITORS

C	1701		CKSRYB104K16

F PNLB ASSY

SEMICONDUCTORS

IC	1100		PEG482A8
IC	1101		BU4242G
IC	1102		TC7SET08FUS1
IC	1103		TC7SET04FUS1
IC	1105		R5523N001B
IC	1106		NJM2845DL1-05
Q	1100,1102,1103,1105		RT1N241M
Q	1107-1115,1117-1126		RT1N241M
Q	1127,1128,1130,1131		RT1P241M
Q	1129,1132,1137-1141		RT1N241M
Q	1133,1134		RT1P241M
Q	1142		2SA2092
Q	1143		2SC4081
D	1101,1106,1110,1112		SLI-343Y8C(KLMN)
D	1102,1103,1105,1114		SLI-343U8RC(HJKL)
D	1107,1116,1157		SLI-343M8C(FGHJ)
D	1108		SLR343BC4T(JKLM)
D	1113,1115,1164,1165		SLI-343Y8C(KLMN)
D	1118		SLI-343U8RC(HJKL)
D	1119-1126,1131-1146		SLI-343U3R(HJKL)
D	1148-1150,1158		SLI-343U3R(HJKL)
D	1151		EP05Q04
D	1153		RD2.4FM
D	1156,1167		NNCD6.2MF
D	1160-1163		SLI-343U3R(HJKL)
D	1166		UDZS5R1(B)
D	1168		1SS355

MISCELLANEOUS

L	1101-1104	INDUCTOR	CTF1410
JA	1101	USB CONNECTOR A	DKB1087
V	1101	FL INDICATOR TUBE	DEL1064
VR	1100	VR	DCV1009
S	1100-1112,1114-1117	SWITCH	VSG1024
S	1113,1120-1123,1127	TACT SWITCH	DSG1079
S	1118,1119	TACT SWITCH	DSG1117
S	1124	JOG SWITCH	DSX1056
S	1125,1126	SWITCH	VSG1024
X	1101	CRYSTAL RESONATOR (15.975M)	DSS1166
CN	1104	L-PLUG(4P)	KM200NA4L
CN	1108	23P CONNECTOR	VKN1254
		FL HOLDER	DNF1778
JH	1101	3P CABLE HOLDER	51048-0300
JP	1101	3P JUMPER WIRE	D20PDY0310E
⚠ P	1101	PROTECTOR(0.750A)	DEK1096

RESISTORS

R	1111,1113		RS1/10S100J
R	1167,1168,1172,1173		RS1/10S221J
R	1182,1183		RS1/16S2201F
R	1191,1220,1223-1225		RS1/10S131J
R	1206,1207,1211,1212		RS1/10S221J
R	1208,1219,1233,1234		RS1/10S332J
R	1216,1217,1221,1222		RS1/10S221J
R	1226,1227,1231,1232		RS1/10S221J
R	1228-1230,1268-1274		RS1/10S131J
Other Resistors			RS1/16S###J

CAPACITORS

C	1109-1111,1149,1152		CKSRYB102K50
C	1112,1113		CKSRYB474K16
C	1114,1120,1128,1129		CKSRYB104K16
C	1115-1118		CCSRCH221J50
C	1119,1122,1123,1130		CKSRYB103K50
C	1121		CEHAR220M16
C	1124		CEHAR100M50
C	1125,1127		CCSRCH120J50
C	1126		CKSRYB104K50
C	1131		CEHAZL101M10
C	1132		CCSRCH121J50
C	1133,1139		CEJQ101M16
C	1134,1135,1140		CKSRYB104K16
C	1136,1138,1142,1144		CKSRYB103K50
C	1141		CEHAZL330M16
C	1143,1145		CEJQ470M16
C	1153		CKSRYB102K50
C	1157,1159		CKSRYB103K50
C	1158,1163		CEHAR101M10

Mark	No.	Description	Part No.
C	1160		CKSRYB105K16
C	1161,1162		CKSRYB474K10

G JACB ASSY

SEMICONDUCTORS

Q	1501-1504		2SD2114K
D	1501,1505-1509		NNCD6.2MF
D	1502-1504		1SS355

MISCELLANEOUS

JA	1501	JACK	VKB1243
JA	1502	2P JACK	DKB1088
JA	1503	1P JACK	DKB1089
JA	1504	USB CONNECTOR	DKN1237
CN	1501	17P CONNECTOR	VKN1248
CN	1502	L-PLUG(6P)	KM200NA6L

RESISTORS

All Resistors		RS1/16S###J

CAPACITORS

C	1501,1502		CEHAT221M16
C	1504,1505		CQMA102J50
C	1506		CKSRYB104K50
C	1510		CEHAT101M16
C	1511,1512		CKSRYB103K50

H DC MOTORS ASSY

DC MOTORS assembly has no service dart

I REGB ASSY

SEMICONDUCTORS

⚠ IC	1901		BD9300FV
⚠ IC	1902-1904		BD9305AFVM
⚠ IC	1905		BD9306AFVM
⚠ Q	1901,1902,1905		RSQ030P03
Q	1903		2SC4081
⚠ Q	1904		2SA2092
⚠ Q	1906		RTR020N05
D	1901		1SS355
D	1902		RB051LA-40
D	1903,1906		RB050LA-30
D	1904		RB160M-30
D	1905		RB160M-60

MISCELLANEOUS

L	1901,1902,1905	COIL	ATH1189
L	1903,1904	INDUCTOR	CTF1483
KN	1901	WRAPPING TERMINAL	VNF1084
CN	1901	CONNECTOR	B4B-EH
	0	G PLATE	DNH2819
⚠ P	1901	PROTECTOR(2A)	AEK7013

RESISTORS

R	1903		RS1/16S4701F
R	1908		RS1/16S2402F
R	1913		RS1/16S5101D
R	1914		RS1/16S1102F
R	1917		RS1/16S1802D
R	1918		RS1/16S5102F
R	1925		RS1/16S3302F
R	1926		RS1/16S1302F
R	1929		RS1/16S5602F
R	1930		RS1/16S3003F
R	1932,1933,1935,1936		RS1/4SA1R0J
R	1938,1939,1944		RS1/4SA1R0J
Other Resistors			RS1/16S###J

CAPACITORS

C	1901		CKSRYB104K25
C	1902		CKSRYB105K16
C	1903,1913,1914,1925		CEHAZL101M25
C	1904,1931,1933,1934		CKSRYB104K50
C	1905		CKSRYB332K50
C	1906,1908,1909,1921		CCSRCH101J50
C	1907,1916		CCSRCH201J50
C	1910		CKSQYB225K16
C	1911,1912,1915,1923		CKSRYB103K50
C	1917		CCSRCH121J50
C	1918-1920,1929		CEHAZL101M10
C	1922		CCSRCH101J50
C	1924		CKSRYB103K50
C	1926		CEHAZL101M25
C	1927		CCSRCH471J50
C	1928		CCSRCH750J50
C	1930		CEHAZL101M50
C	1932,1935,1938,1941		CCSRCH102J50
C	1936,1937,1939,1940		CKSRYB104K50
C	1942,1943,1945-1948		CKSRYB104K50
C	1944		CCSRCH102J50
C	1950		CKSRYB474K16
C	1951-1955		CCSRCH221J50
C	1956-1958		CCSRCH222J50

J ACIN ASSY

MISCELLANEOUS

⚠ JA	1001	AC INLET 1P	XKP3042
⚠ S	1001	SWITCH	DSA1035
⚠ JP	1001	VH-BOARDIN	DKP3790

CAPACITORS

⚠ C	1001		ACG7033

K SW POWER SUPPLY

SW POWER assembly has no service dart