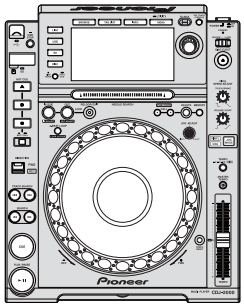
Pioneer

Service Manual



CDJ-2000

ORDER NO.
RRV3999

MULTI PLAYER

CDJ-2000

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

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

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

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K-IZE OCT. 2009 Printed in Japan

SAFETY INFORMATION

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

WARNING

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

Health & Safety Code Section 25249.6 - Proposition 65

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

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

IMPORTANT

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

Laser Pickup specifications and Laser characteristics

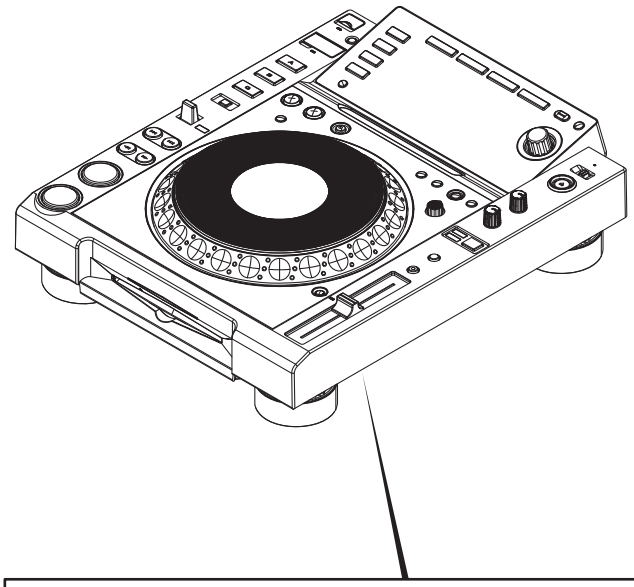
For DVD	Wave length (typ)	: 655 nm
	Operation output	: 3 mW CW, Class 1
	Maximum output	: Class 1 (Under fault condition)
For CD	Wave length (typ)	: 790 nm
	Operation output	: 4.5 mW CW, Class 1
	Maximum output	: Class 1 (Under fault condition)

Additional Laser Caution

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

2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

LABEL CHECK



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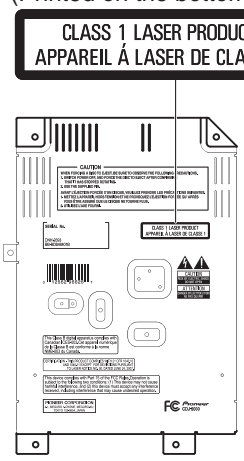

CUXJ

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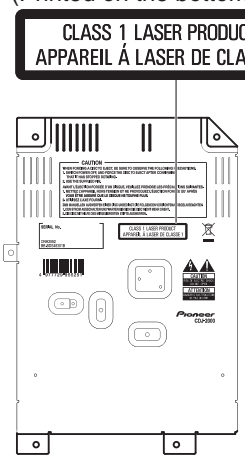

SYXJ8

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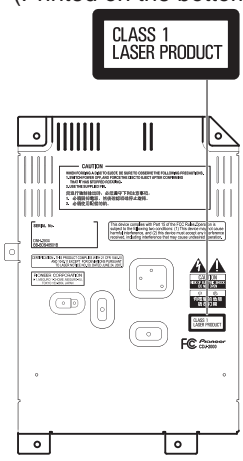

FLXJ

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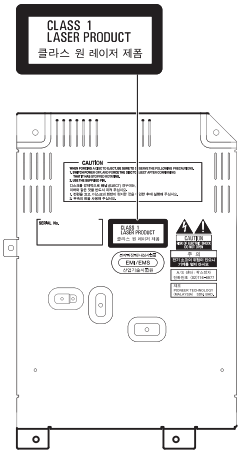

KXJ5

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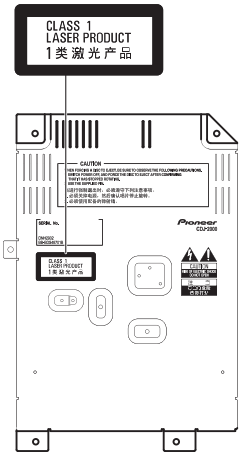


AXJ5

[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

5 6 7 8

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

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

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

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

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

The following lead-free solders are available as service parts:
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 NOTES ON FLASH ROM

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

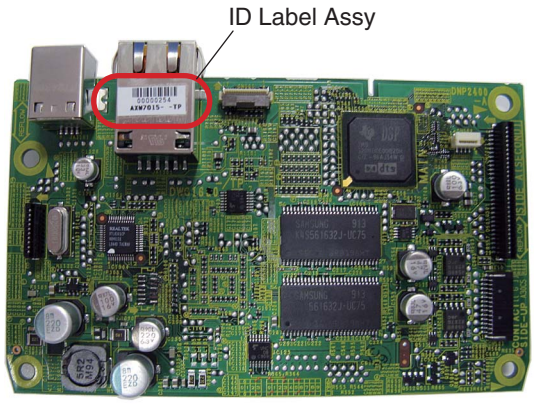
1.3 NOTES ON PANEL CPU

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

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

1.4 NOTES ON LINK CONNECTOR

If the LINK connector (JA1301) is replaced during a repair of the MAIN Assy, detach the label from the old connector then attach it to the new connector.
As an IEEE 802.3-based MAC address specific to this unit has been printed on the ID Label Assy (AXW7015-T-J) be sure to attach it.



MAIN Assy

1.5 NOTES ON LCD DISPLAY PANEL

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

2. SPECIFICATIONS
2.1 SPECIFICATIONS

Power requirements..... AC 120 V, 60 Hz (CUXJ)
AC 220 V to 240 V, 50 Hz/60 Hz (SYXJ8, AXJ5)
AC 110 V to 240 V, 50 Hz/60 Hz (FLXJ)
AC 220 V, 60 Hz (KXJ5)
Power consumption.....28 W
Power consumption (standby).....0.4 W
Main unit weight..... 4.6 kg
External dimensions...320 mm (W) x 106.4 mm (H) x 405.7 mm (D)
Tolerable operating temperature.....+5 °C to +35 °C
Tolerable operating humidity..... 5 % to 85 % (no condensation)

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

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

USB downstream section (USB)
Port..... Type A
Power supply..... 5V/ 500 mA or less

USB upstream section (USB)
Port..... Type B

LAN (PRO DJ LINK)
Rating.....100Base-TX

Control output (CONTROL)
Port..... Mini-jack

SD memory card section
File system.....Conforming to “SD Specifications Part 2 File System Specification Version 2.00”
Max. memory capacity..... 32 GB

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

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

2.2 DISCS / FILES PLAYABLE

Playable discs

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

Types of discs that can be played and marks

		
CD	CD-TEXT	CD-R
		
CD-RW	DVD-R	DVD-RW

DVD is a trademark of DVD Format/Logo Licensing Corporation.

Discs playable on this player are as shown below.

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

❖ Discs that cannot be played

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

❖ Playback of discs created on a computer or DVD recorder

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

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

❖ Creating backup discs

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

When playing valuable discs, we recommend making backup discs.

❖ Regarding copy protected CDs

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

❖ About 8 cm single CDs

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

❖ About CD-Text

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

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

About CD playback

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

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

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

About SD memory cards

Music files (MP3/AAC/WAV/AIFF) recorded on SD and SDHC memory cards conforming to SD standards can be played.

Such data as disc identification information, cue points, loop points and hot cues can be recorded on SD memory cards.

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

[1] CPRM is not supported.

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

❖ Cautions on using SD memory cards

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

About USB devices

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

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

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

❖ Cautions on using USB devices

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

About MP3 files

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

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

[1] To display characters written in a local code other than Unicode, change the [**LANGUAGE**] setting at [**UTILITY**].
[2] Files larger than 800 x 800 dots cannot be displayed.

About AAC files

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

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

[1] To display characters written in a local code other than Unicode, change the [**LANGUAGE**] setting at [**UTILITY**].
[2] Files larger than 800 x 800 dots cannot be displayed.

About WAV files

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

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

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

About AIFF files

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

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

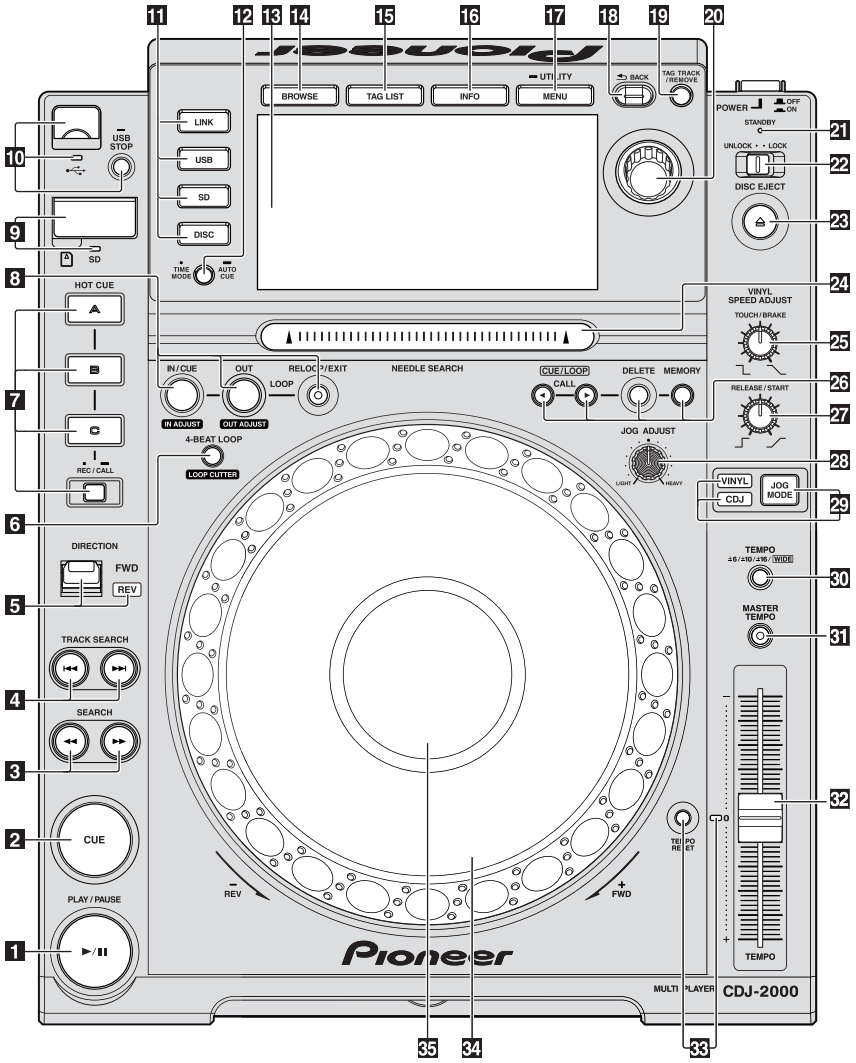
[1] To display characters written in a local code other than Unicode, change the [**LANGUAGE**] setting at [**UTILITY**].

About rekordbox

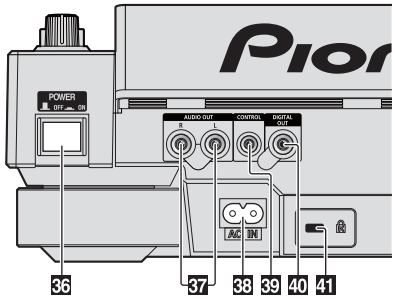
- rekordbox is an application for managing music files which are used for DJ play with a Pioneer DJ Player (i.e. CDJ-2000, CDJ-900).
  Data that has been detected and measured, as well as any points which have been set and stored using rekordbox, can be used in combination with a Pioneer DJ Player (i.e.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

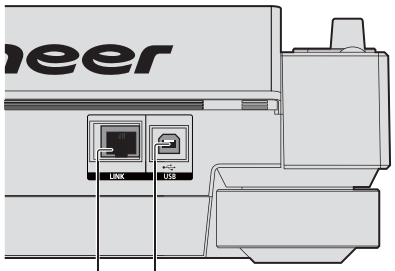
2.3 PANEL FACILITIES

Control Panel

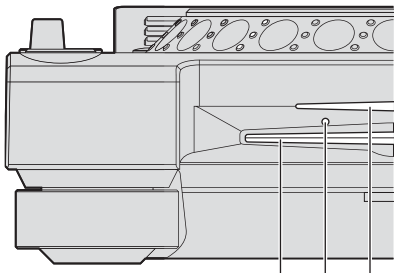


Rear Panel





Front Panel



Control Panel

1 PLAY/PAUSE►/II and PLAY/PAUSE►/II indicator
This lights when playing tracks and flashes when in the pause mode.

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

3 SEARCH◄◄/►►

4 TRACK SEARCH|◄◄/►►|

5 DIRECTION FWD REV and REV indicator

6 4-BEAT LOOP/LOOP CUTTER

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

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

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

10 USB device insertion slot, USB indicator and USB STOP

11 LINK, USB, SD, DISC

12 TIME MODE/AUTO CUE

13 Main unit display

14 BROWSE

15 TAG LIST

16 INFO

17 MENU/UTILITY

18 BACK

19 TAG TRACK/REMOVE

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

21 STANDBY indicator
This lights when in the standby mode.

22 UNLOCK, LOCK

23 DISC EJECT▲ and DISC EJECT indicator

24 NEEDLE SEARCH pad

25 VINYL SPEED ADJUST TOUCH/BRAKE

26 CUE/LOOP CALL◄/►, DELETE, MEMORY

27 VINYL SPEED ADJUST RELEASE/START

28 JOG ADJUST

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

30 TEMPO ±6/±10/±16/WIDE

31 MASTER TEMPO

32 TEMPO

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

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

35 Jog dial display section

Rear Panel

36 POWER ON OFF
Press to turn the power on and off.

37 AUDIO OUT L/R

38 AC IN

39 CONTROL

40 DIGITAL OUT

41 Kensington security slot

42 LINK

43 USB

Front Panel

44 Disc insertion slot

45 Disc force eject pin insertion hole

46 Disc insertion slot indicator

About ejecting discs by force

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

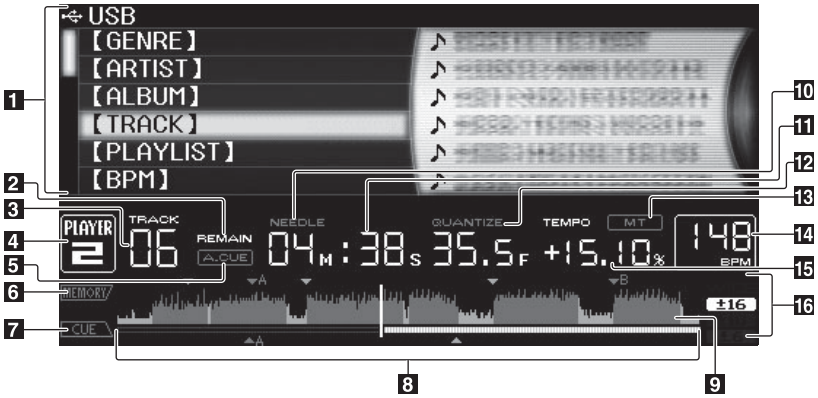
1 Press [POWER] and wait at least 1 minute after the set's power has turned off.

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

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

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

Main unit display



1 Information display section

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

3 TRACK
This indicates the track number (01 – 99).

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

5 A.CUE
This lights when auto cue is set.

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

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

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

9 WAVE display
This displays the WAVE display, guidance, etc.

10 NEEDLE
This lights when needle searching is possible.

11 Time display (minutes, seconds and frames)
There are 75 frames to a second.

12 QUANTIZE
This lights red when [**QUANTIZE**] is turned on.
When [**QUANTIZE**] is turned on, the loop points and hot cue are automatically set to the beat nearest the position at which [**LOOP IN**/**CUE** (**IN ADJUST**)], [**LOOP OUT** (**OUT ADJUST**)], [**4-BEAT LOOP**] or [**HOT CUE**] (**A**, **B** or **C**) was pressed.
The quantize function does not work in the following situations ([**QUANTIZE**] is displayed in gray):
- When playing tracks recorded on discs
- When playing music files that have not been analyzed with rekordbox
- In the pause mode

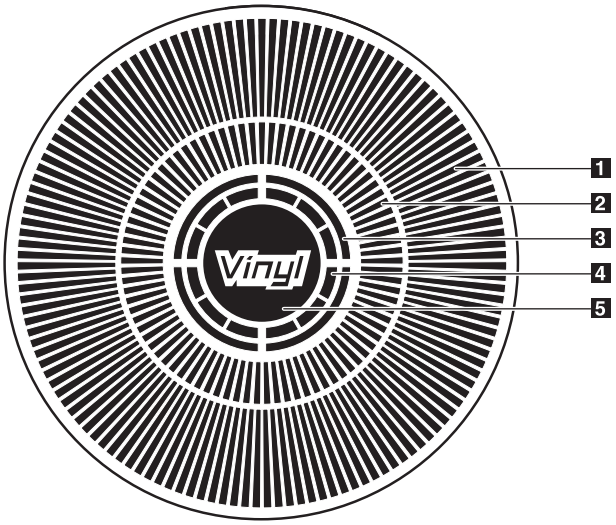
13 MT (page)
This lights when the master tempo is set .

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

15 Playing speed display
The number changes according to the position of [**TEMPO**].

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

Jog dial display section



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

2 Cue point display

3 Audio memory status display
This flashes when the audio memory is being written. It stops flashing, remaining lit, when writing is completed.
The operations below may not be possible while the audio memory is being written.
- Setting Cue Point during playback (Real Time Cue)
- Setting Hot Cue

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

4 Jog touch detection display
When the jog mode is set to VINYL, the top of the jog dial lights when pressed.

5 VINYL
This lights when the jog mode is set to VINYL .

3. BASIC ITEMS FOR SERVICE
3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing / CDJ

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

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

Specific Items to be Checked

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

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

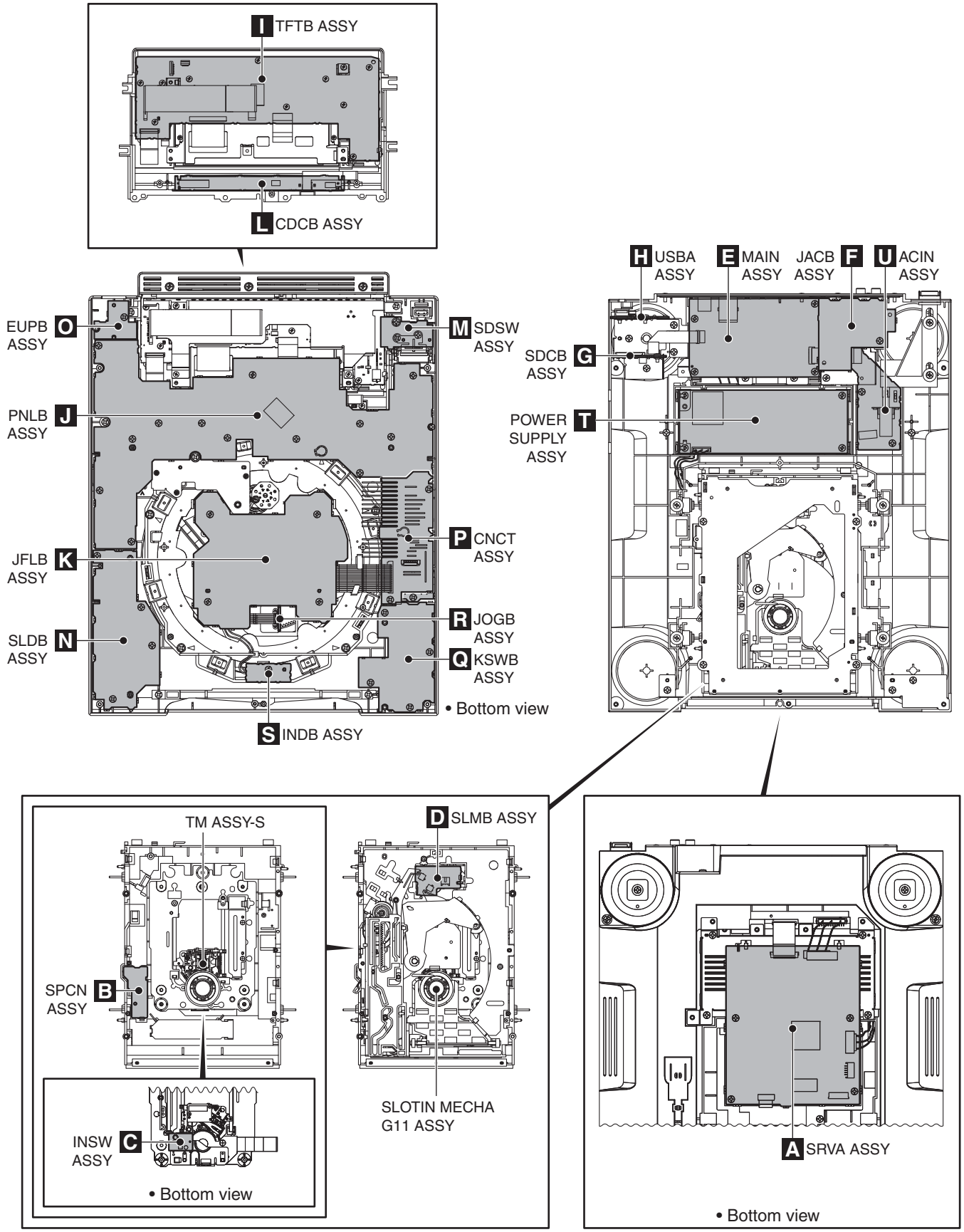
Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

Cleaning

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

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

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

3.3 JIGS LIST

Lubricants and Glues List

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

A

B

C

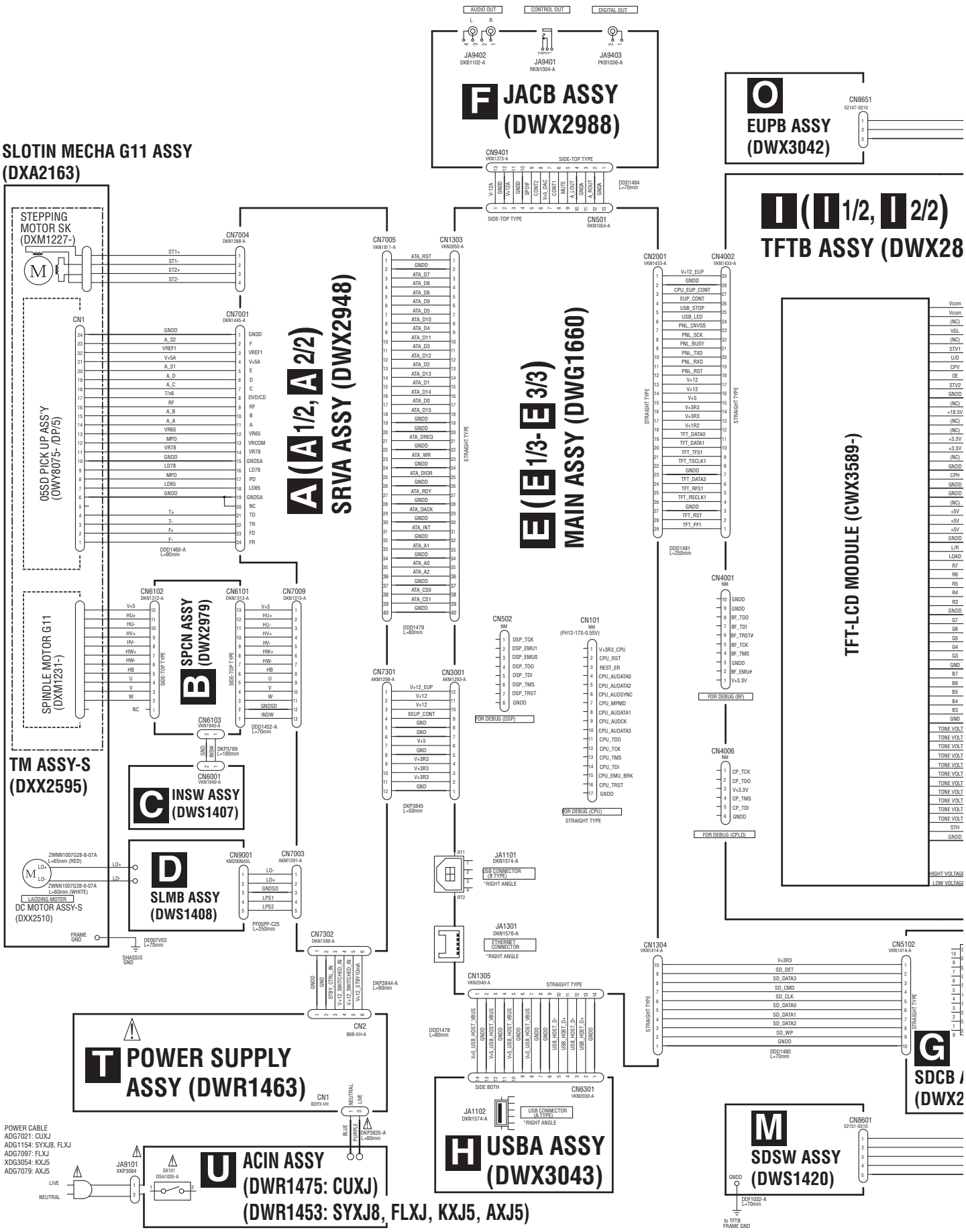
D

E

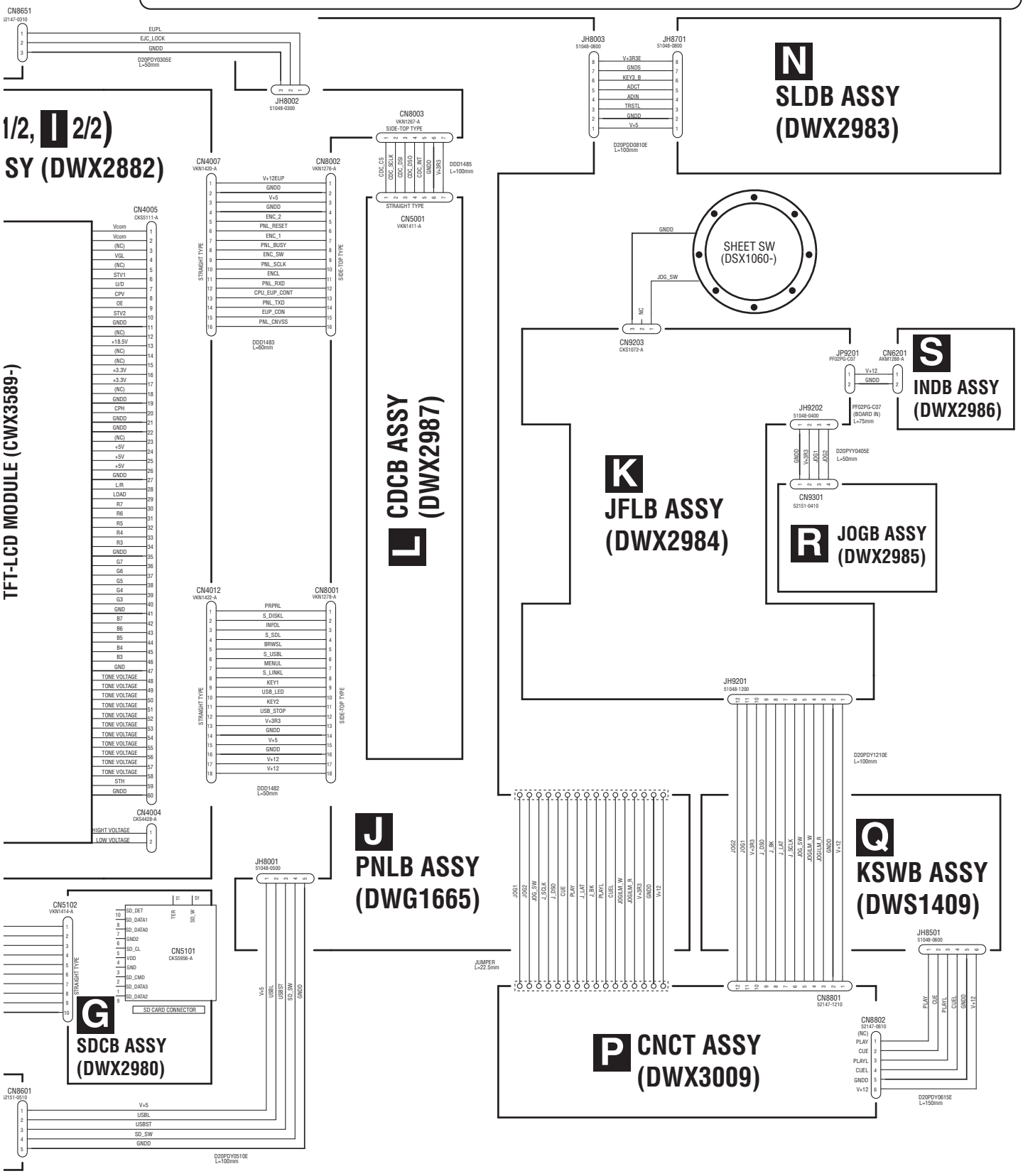
F

4. BLOCK DIAGRAM

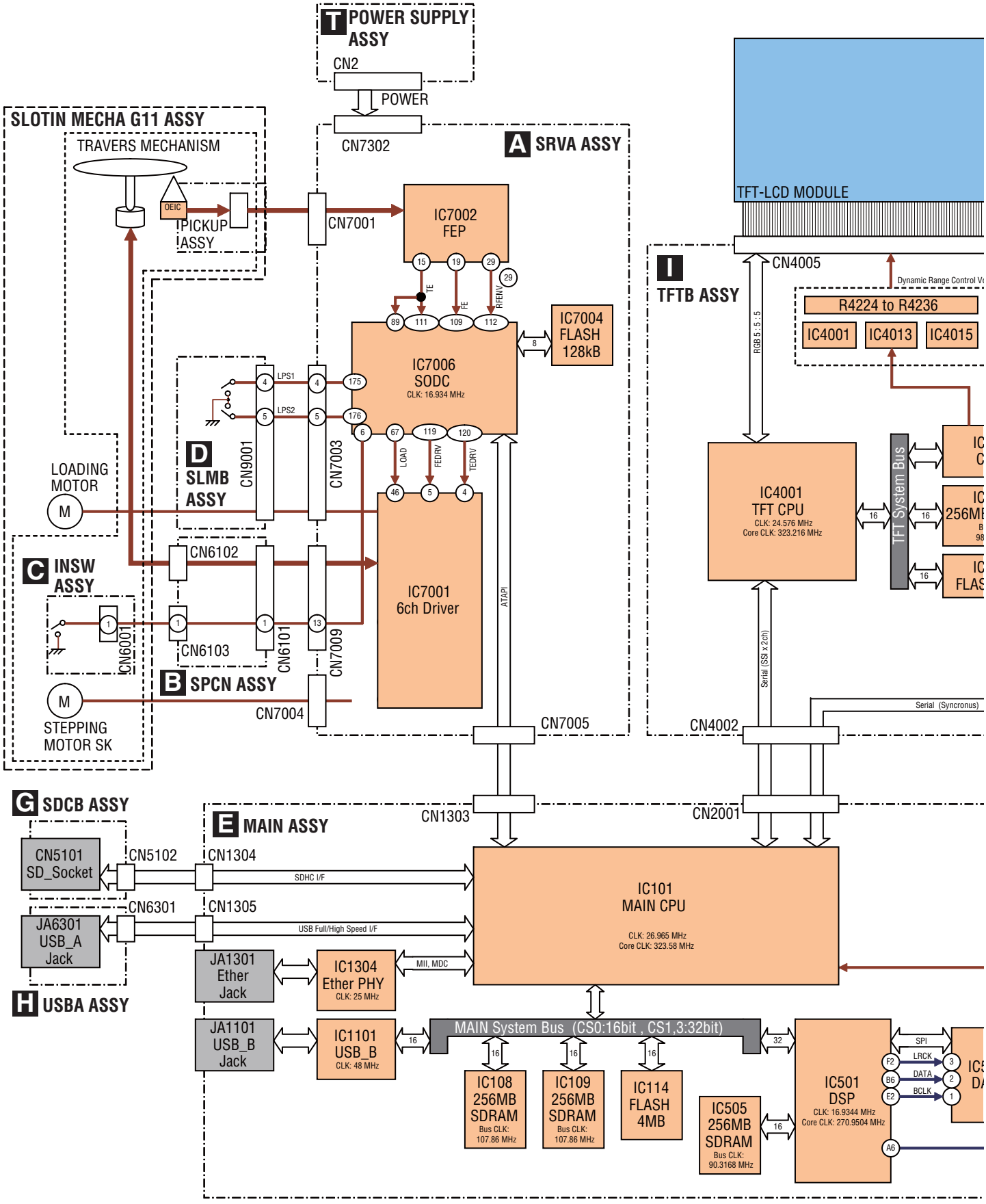
4.1 OVERALL WIRING DIAGRAM

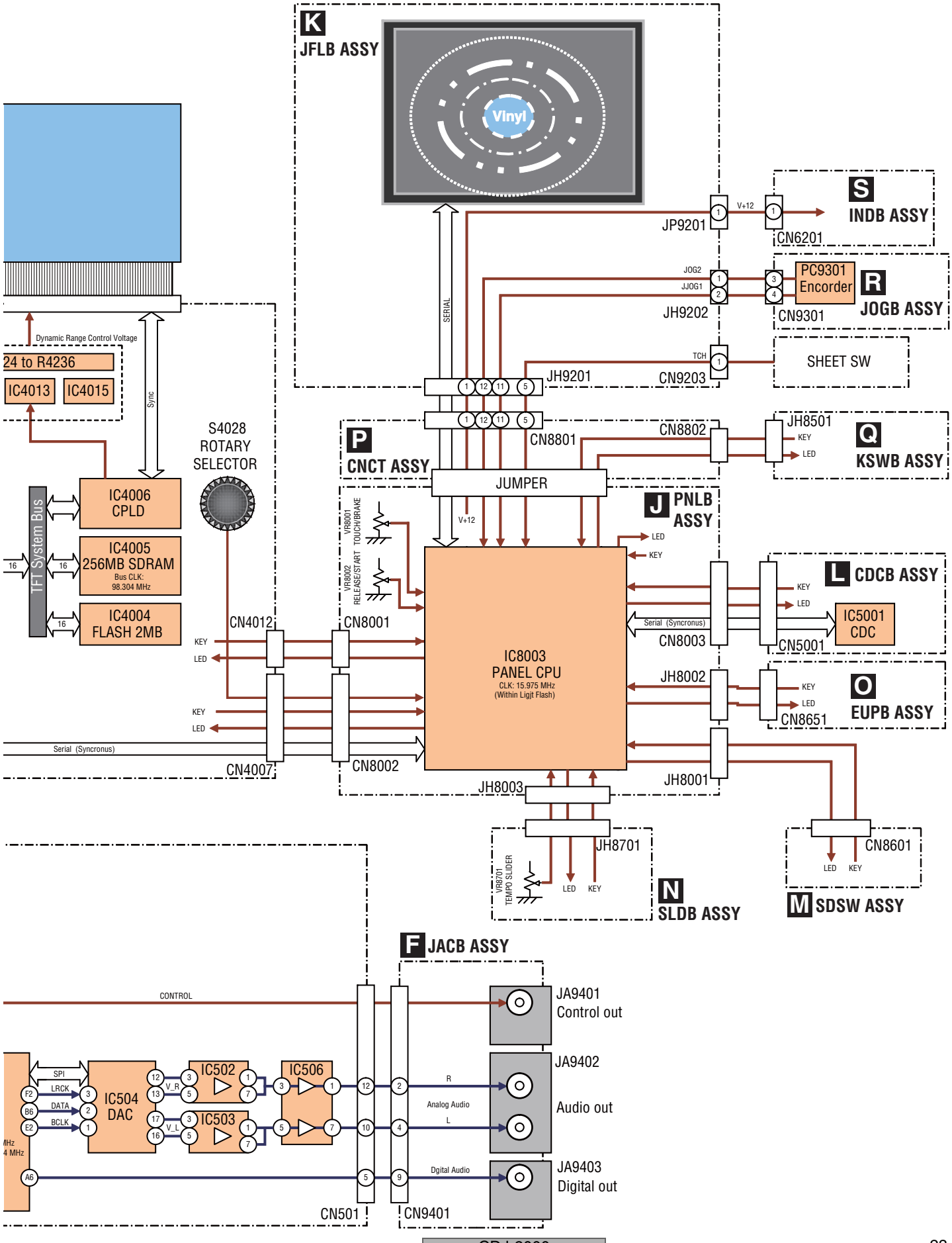


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply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

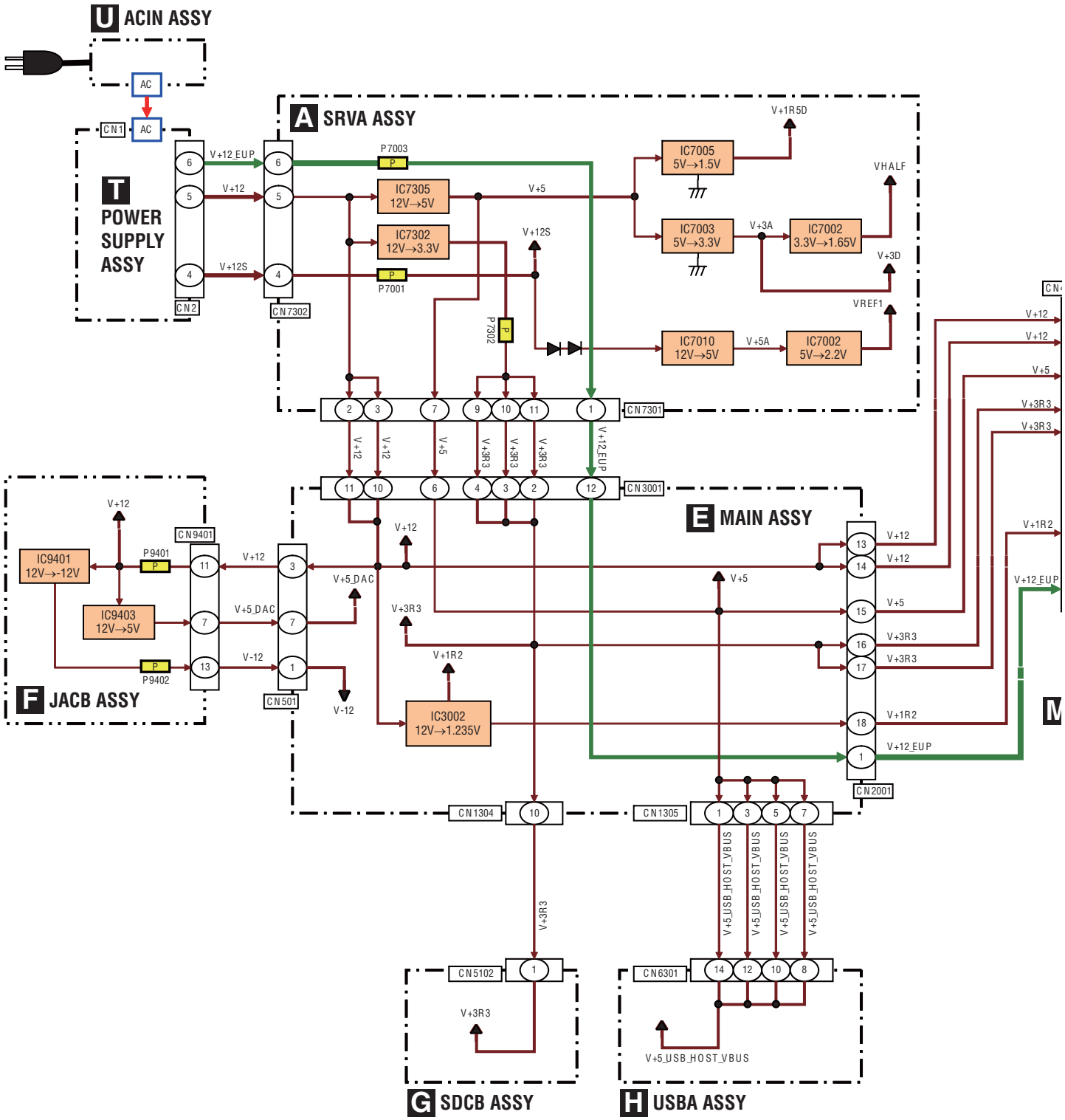


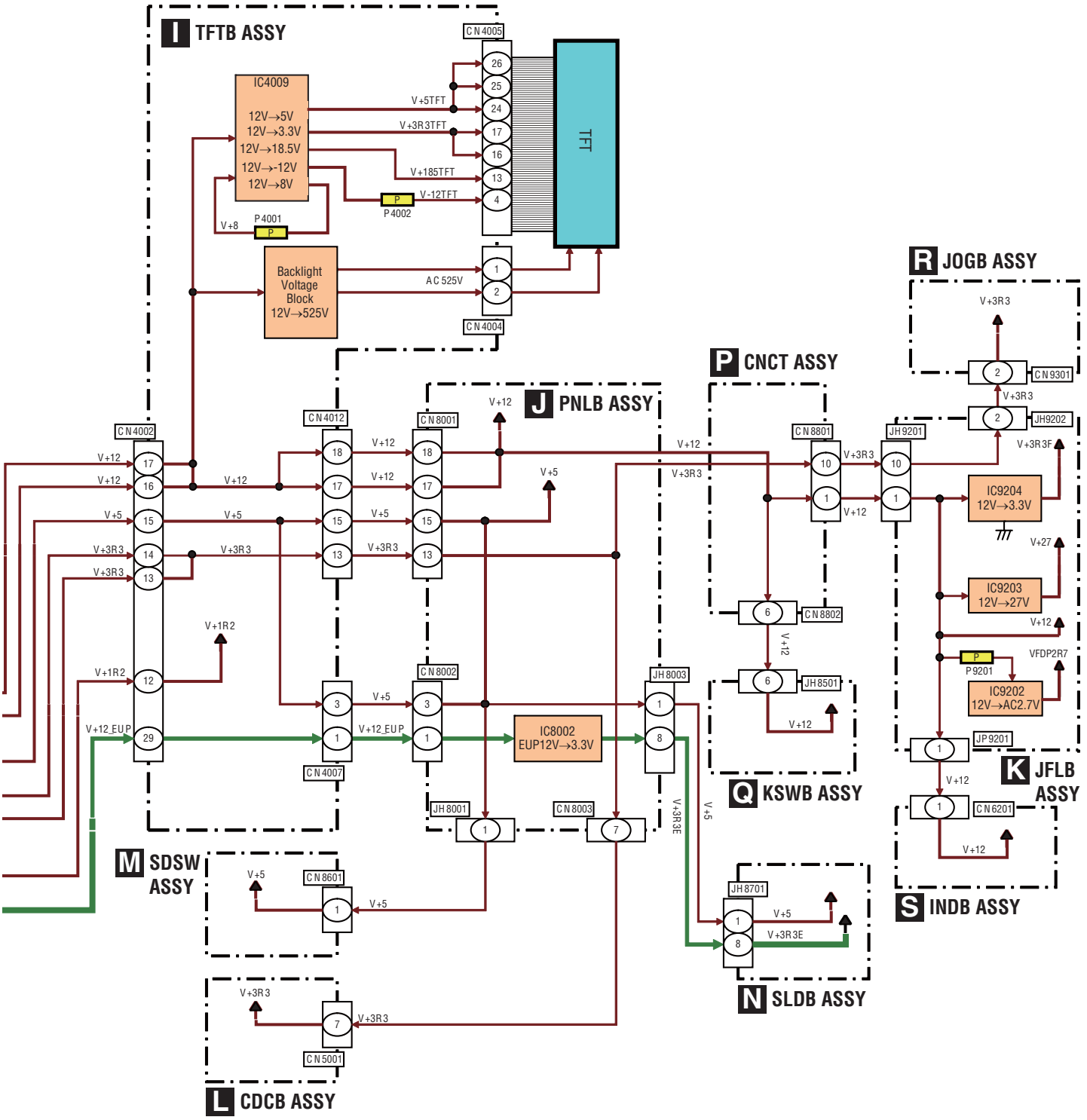
4.2 SIGNAL BLOCK DIAGRAM




K
JFLB ASSY
Vinyl
SERIAL
JP9201
V+12
CN6201
S
INDB ASSY
JOG2
JOG1
JH9202
PC9301
Encorder
CN9301
R
JOGB ASSY
TCH
CN9203
SHEET SW
JH9201
Dynamic Range Control Voltage
24 to R4236
IC4013
IC4015
Sync
S4028
ROTARY
SELECTOR
P
CNCT ASSY
CN8801
CN8802
JH8501
KEY
LED
Q
KSWB ASSY
JUMPER
J
PNLB
ASSY
V+12
VR8001
TOUCH/BRAKE
VR8002
RELEASE/START
IC4006
CPLD
IC4005
256MB SDRAM
Bus CLK:
98.304 MHz
IC4004
FLASH 2MB
TFT System Bus
16
CN4012
CN8001
KEY
LED
IC8003
PANEL CPU
CLK: 15.975 MHz
(Within Ligjt Flash)
L
CDCB ASSY
Serial (Syncronus)
CN8003
CN5001
IC5001
CDC
JH8002
CN8651
O
EUPB ASSY
CN4007
CN8002
JH8001
JH8003
JH8701
VR8701
TEMPO SLIDER
N
SLDB ASSY
CN8601
M
SDSW ASSY
F
JACB ASSY
CONTROL
SPI
LRCK
DATA
BCLK
IC504
DAC
IC502
IC503
IC506
V_R
V_L
R
Analog Audio
L
Dgital Audio
JA9401
Control out
JA9402
Audio out
JA9403
Digital out
CN501
CN9401

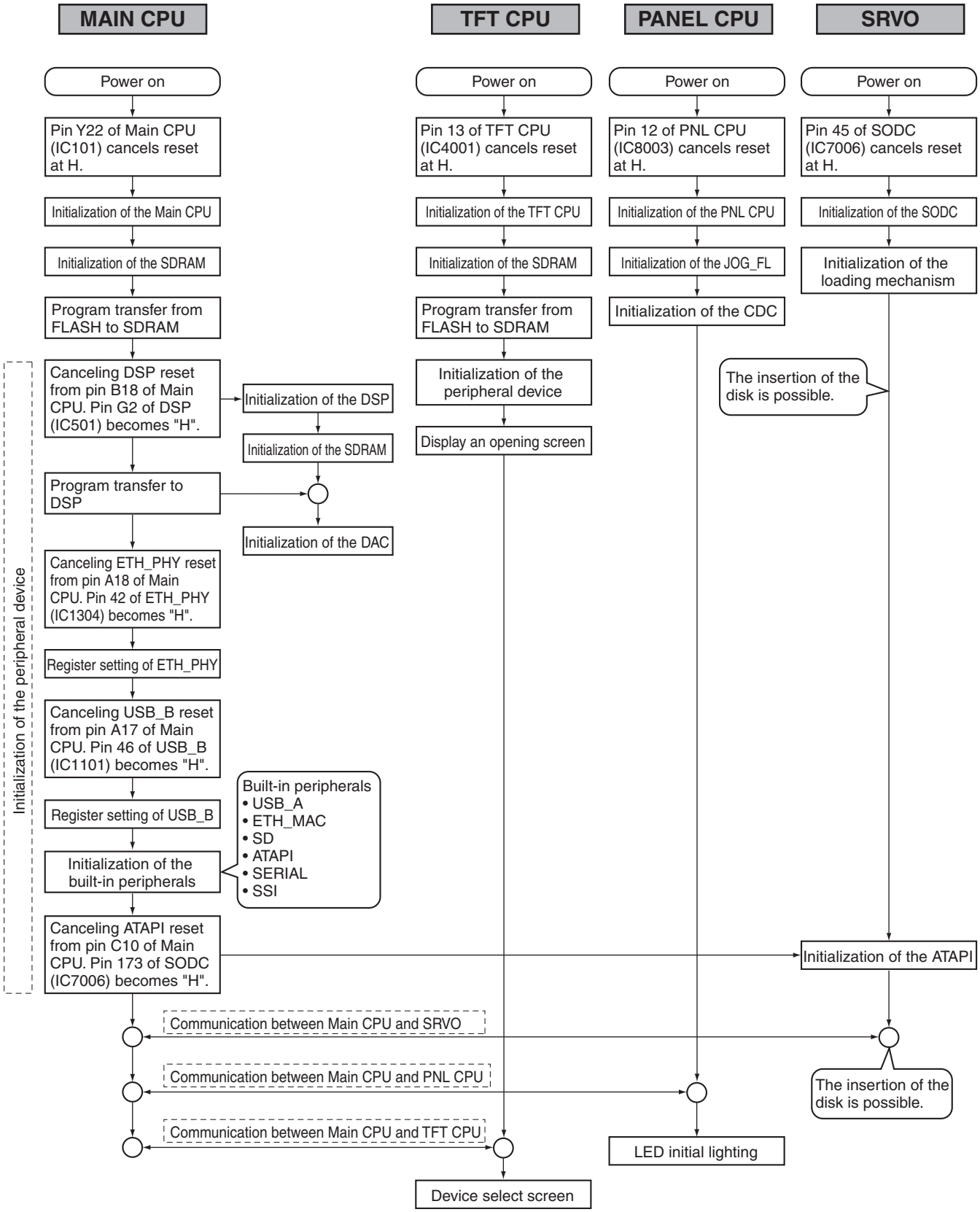
4.3 POWER SUPPLY BLOCK DIAGRAM




I TFTB ASSY
CN4005
IC4009
12V→5V
12V→3.3V
12V→18.5V
12V→-12V
12V→8V
V+5TFT
V+3R3TFT
V+185TFT
V-12TFT
P4002
P4001
V+8
TFT
Backlight Voltage Block 12V→525V
AC 525V
CN4004
R JOGB ASSY
V+3R3
CN9301
JH9202
V+3R3F
IC9204 12V→3.3V
V+27
IC9203 12V→27V
VFDP2R7
P9201
IC9202 12V→AC2.7V
JP9201
CN6201
K JFLB ASSY
S INDB ASSY
P CNCT ASSY
CN8801
JH9201
CN8802
JH8501
Q KSWB ASSY
J PNLB ASSY
CN4002
CN4012
CN8001
CN8002
CN4007
JH8003
IC8002 EUP12V→3.3V
V+12_EUP
V+1R2
JH8001
CN8003
V+3R3E
M SDSW ASSY
CN8601
JH8701
N SLDB ASSY
L CDCB ASSY
CN5001
V+12
V+5
V+3R3

5. DIAGNOSIS
5.1 POWER ON SEQUENCE

■ Power-on Sequence



5.2 FAILURE JUDGEMENT OF THE PICKUP ASSY

● LD power after passing through the objective lens [mW]
SPEC: DVD 0.180 ±0.03
CD 0.210 ±0.03
Check method: Measure the LD power, using an optical power meter.
Failure judgment: A value out of the range of the specifications is judged as failure.

● LD current [mA]
SPEC: DVD TYP50 MAX70
CD TYP65 MAX75

Check method

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

[Detailed check method]

1. For details on how to emit light from the LD, see the "[5] Confirmation of movement of the drive unit" in 6. SERVICE MODE.
2. With the LD OFF, apply the probes of a tester to the reference probe pad and 78CHK (65CHK). (CD: 78CHK/DVD: 65CHK)
   Note: Be careful not to apply the probes to the pads with LD ON. If you do so, the LD may be damaged.
3. With the probes applied to the above-mentioned pads, turn the LD ON to measure the voltage between them.
4. After measurement, turn the LD OFF (ALL OFF) then pull the probes away.
5. Calculate the current value by dividing the measured voltage value by the resistance value.
   (Resistance values to be used: CD: R7008 = 22 ohms, DVD: R7007 = 12 ohms)

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

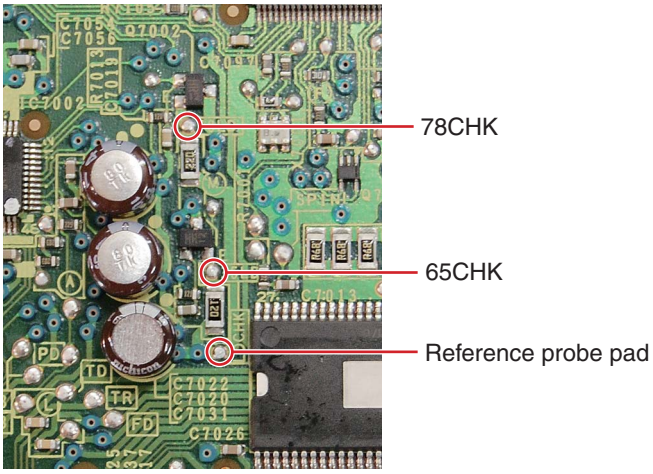


Fig.1 SRVA Assy

●Actuator resistance value [ohms]
Specifications on the focus side: 3.7 ±0.55
Specifications on the tracking side: 4.3 ±0.65
Check method: Disconnect* the FFC connected to the CN7001 on the focus side then measure the resistance value between FFC pins 23 and 24.
Disconnect* the FFC connected to the CN7001 on the tracking side then measure the resistance value between FFC pins 21 and 22.
*Short-circuit the LD short-circuit pad. (Refer to the "TM Assy-S" in 7. DISASSEMBLY.)
Failure judgment: A value out of the range of the specifications is judged as failure.

5.3 TROUBLESHOOTING

In this section, causes of failure, diagnostics points, and corrective measures can be searched for according to symptoms.
Before disassembling this unit, it is recommended to infer a failure point by performing a status check and referring to the error code.
For the relationship of each power-supply and signal system, see “4. BLOCK DIAGRAM,” and “10. SCHEMATIC DIAGRAM.”
If software of the product is updated before performing diagnostics, check that software updating has been performed properly before proceeding to diagnostics.
If software updating has not been performed properly, update the software, following the instructions in [7] Firmware update of “6.2 DETAILS OF THE SERVICE MODE.”

Contents

[0] Prior Confirmation

[0-1] Checking in Service Mode

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

[0-2] Checking the Alarm Port

If “[0-1] Checking in Service Mode” is performed, this check is not required.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1		Alarm port on the MAIN Assy (Fig. 1)	Check the output waveforms from the alarm port.	If an output waveform is judged to be improper, see the section describing locations of defects in this manual.	Outputs of the Alarm Port in 6. SERVICE MODE

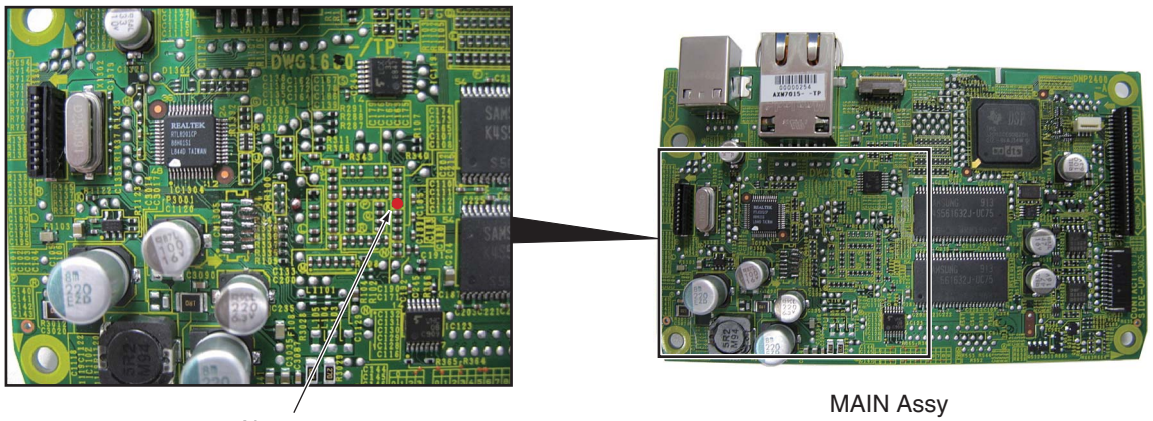


Fig. 1

[0-3] Checking Cables

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

[1] Failure in Startup

[1-1] No power

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

[1-2] Indications on the LCD

Check the indications on the LCD.

Nothing is displayed on the LCD. (Black screen)

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

Indications on the LCD are in white screen.

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

Startup stops with the “Pioneer” logo displayed.

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

[2] Display (JOG FL/LED)

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

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

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

[2-2] An LED does not light.

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

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

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

[3-1] No key functions.

The PLAY, CUE, AUTO BEAT LOOP, BEAT SELECT, REV, LOOP IN, LOOP OUT, or RELOOP key does not function (direct input).

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC8003) up to the SW.	If there is no loose connection and if the signal does not become L when the SW is pressed, that SW is defective. Replace it.	
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

Other keys (except for the USB STOP key) do not function. (Because of A/D input, multiple SWs are connected to the same port on the PANEL CPU.

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	Related point	Check if there is loose connection on the signal line from the PANEL CPU (IC8003) up to the SW.	If other SWs connected to the same port on the PANEL CPU (IC8003) function properly and if connection is properly made, replace the SW.	
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

The USB STOP key does not function. (The signal from the USB STOP key is input to the MAIN CPU.)

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective SW	SDSW Assy, MAIN Assy	Check if there is loose connection on the signal line from the MAIN CPU (IC101) up to the SW.	If there is no loose connection and if the signal does not become L when the SW is pressed, that SW is defective. Replace it.	
2	Defective MAIN CPU	MAIN Assy	If the symptom persists after the above corrections,	The MAIN CPU (IC101) is defective. Replace it.	

[3-2] Variable controls not controllable

Tempo slider not controllable

No.	Cause	Diagnostics Point	Item to be Checked	Corrective Action	Reference
1	Defective Tempo slider	SLDB Assy, Related point	Check the waveform of signals on the signal line (ADCT, ADIN).	If the voltage on the signal line (ADIN) fluctuates within the range of 0–3.3 V, with 1.65 V at the center, go to Step 2. If it does not, the Tempo slider (VR8701) is defective. Replace it.	10.14 SLDB and EUPB ASSYS
2	Defective PANEL CPU	Related point	If the symptom persists after the above corrections,	Check the connection of the PANEL CPU (IC8003). If the connection is OK, the port may be damaged. Replace it.	

TOUCH/BRAKE and RELEASE/START not controllable

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

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

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

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

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

[3-5] Abnormalities regarding the JOG dial

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

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

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

The ADJ KNOB does not work or does not stop at the intended position.					
No.	**Cause**	**Diagnostics Point**	**Item to be Checked**	**Corrective Action**	**Reference**
1	Improper adjustment or assembly of the JOG dial	JOG Assy	Check if the plate spring of the JOG HOLDER is worn out or deformed.	Replace the JOG HOLDER. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial.	
			Check if there is any foreign object in the link section (gears).	Remove the foreign object. During reassembly, pay attention to the position of the cam plate. After replacement, adjust the position of the Adjust Plate to change the load value for the JOG dial.	

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

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

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

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

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

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

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

[5] LAN

[5-1] No LAN communication

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

[6] ATAPI DRIVE

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

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

[7] AUDIO OUT

[7-1] No sound

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

[8] CONTROL

[8-1] Improper fader operation after fader start

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

[9] DRIVE ASSY

[9-1] Improper operation of the loading mechanism

No loading

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

[9-2] The stepper does not work.

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

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

[9-3] No playback

Neither a CD nor a DVD can be played back.

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

Only a CD cannot be played back

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

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

[10] EUP Mode

Shifting to EUP mode is not possible.					
No.	**Cause**	**Diagnostics Point**	**Item to be Checked**	**Corrective Action**	**Reference**
1	Defective PANEL CPU	Related point	Check that the signal from Pin 29 of the PANEL CPU (IC8003) changes from H to L during mode shift.	The PANEL CPU (IC8003) may be defective. Check the soldering of the PANEL CPU and its periphery. If the soldering is OK, then replace it.	10.11 PNLB ASSY
2	Disconnection, breakage, or loose connection of cables	SRVA Assy	Check that the signal from Pin 3 of the CN7302 changes from L to H during mode shift.	The signal line cable may be defective. If it is loosely connected, securely connect it. If it is broken, replace it.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
3	Defective SW power supply			The SW power-supply is defective. Replace it.	
EUP mode cannot be exited.					
No.	**Cause**	**Diagnostics Point**	**Item to be Checked**	**Corrective Action**	**Reference**
1	Defective key or loose connection of the signal line	Related point and its periphery	Check the connection of the nonresponding key.	Check the connection of the signal line for the nonresponding key. If the connection is proper, replace the connected SW.	
2	Defective PANEL CPU	Related point	Check that the signal from Pin 29 of the PANEL CPU (IC8003) changes from L to H during mode shift.	The PANEL CPU (IC8003) may be defective. Check the soldering of the PANEL CPU and its periphery. If the soldering is OK, then replace it.	10.11 PNLB ASSY
3	Disconnection, breakage, or loose connection of cables	SRVA Assy	Check that the signal from Pin 3 of the CN7302 changes from H to L during mode shift.	The signal line cable may be defective. If it is loosely connected, securely connect it. If it is broken, replace it.	10.2 SRVA(2/2), SPCN, INSW and SLMB ASSYS
4	Defective SW power supply			The SW power-supply is defective. Replace it.	

Reference: Signal logic during EUP mode

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

X : Not Concerned

[11] SERVICE MODE

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

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

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

[12] Error Codes

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

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

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

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

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

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

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

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

The PHY CHIP (IC1304) does not work properly.					
No.	**Cause**	**Diagnostics Point**	**Item to be Checked**	**Corrective Action**	**Reference**
1		-		If it is judged as NG, the PHY CHIP (IC1304) does not work properly or communication between the MAIN CPU (IC101) and PHY CHIP is not established. Proceed as follows: See also "[5-1] No LAN communication."	
2	Power is not supplied properly.	MAIN Assy	Check the power voltages of V+3R3_ETH and V+3R3A_ETHR) lines.	Check the connections of the power supply lines. If soldering is improper, resolder it.	
3	The clock is not properly input.	MAIN Assy	Check that the frequency at Pin 47 (X2) of PHY CHIP (IC1304) is 25 MHz.	Check the connections between X1302 and PHY CHIP. If soldering is improper, resolder it.	10.5 MAIN ASSY (3/3)
4	The RESET signal is not properly input.	MAIN Assy	Check that the signals of the ETHER_RST and CPU_ETHER_RST lines are H.	Check the connection of the logic IC (IC123). If soldering is improper, resolder it. If the signal of the CPU_ETHER_RST line is L, the port on the MAIN CPU may be damaged. If the signal of the ETHER_RST line is L, check the connection of the logic IC (IC123) and its periphery.	10.5 MAIN ASSY (3/3) 10.3 MAIN ASSY (1/3)
5	Loose connection between the MAIN CPU and MAIN DSP	MAIN Assy	Check the connection between the MAIN CPU and PHY CHIP controller.	Check the connections between MAIN CPU (IC101) and PHY CHIP (IC1304). If soldering is improper, resolder it.	10.3 MAIN ASSY (1/3) 10.5 MAIN ASSY (3/3)
6		-	If the symptom persists after the above corrections,	Replace the PHY CHIP (IC1304).	

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

The TFT CPU (IC4001)does not work properly.

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

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

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

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

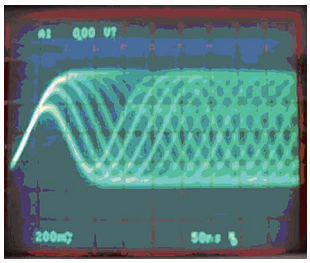
[12-7] E-8709: COMMUNICATION ERROR

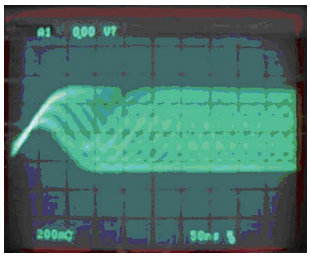
Communication between the TFT CPU (IC4001) and MAIN CPU (IC101) is not possible.

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

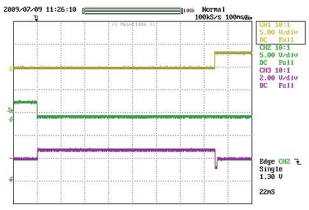
5.4 OPERATIONAL WAVEFORMS

■ RF (CD: STD-905/DVD: Z-1)

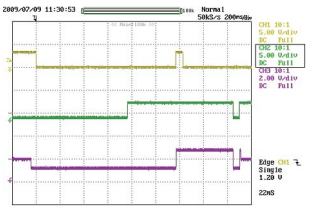




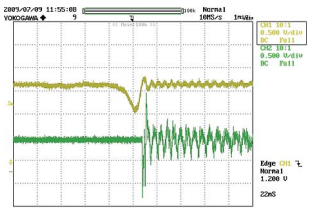
■ Loading in (1-ch LPS1, 2-ch LPS2, 3-ch LOAD)

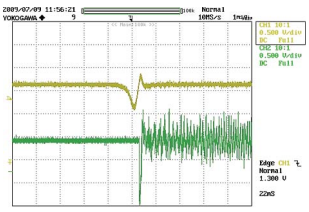


■ Loading out (1-ch LPS1, 2-ch LPS2, 3-ch LOAD)

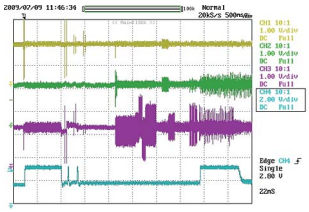


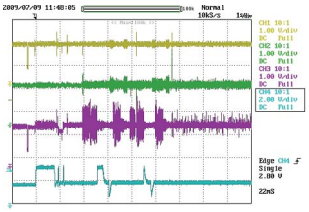
■ In-focus (CD/DVD) 1-ch FE, 2-ch FEDRV



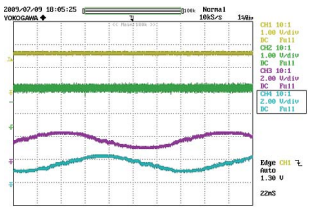


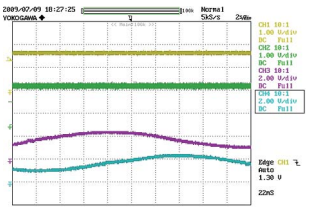
■ Setup (CD/DVD) 1-ch FE, 2-ch FEDRV, 3-ch TE, 4-ch SPIN



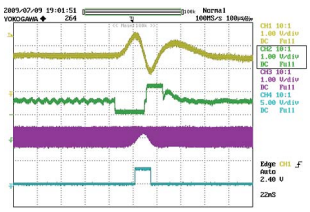


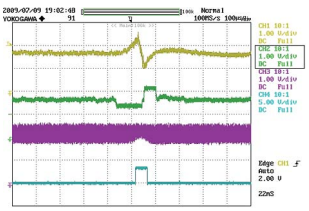
■ Playback (CD/DVD) 1-ch FE, 2-ch TE, 3-ch SLIN1, 4-ch SLIN2



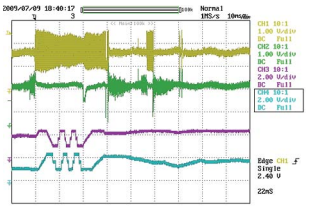


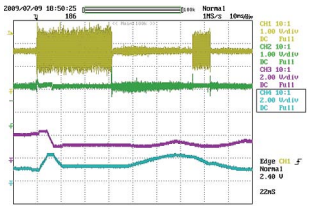
■ Pause (CD/DVD) 1-ch TE, 2-ch TEDRV, 3-ch RF, 4-ch OFTR



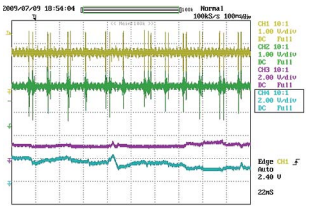


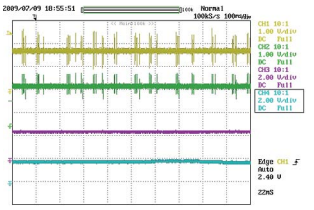
■ Track search (CD/DVD)
1-ch TE, 2-ch TEDRV, 3-ch SLIN1, 4-ch SLIN2



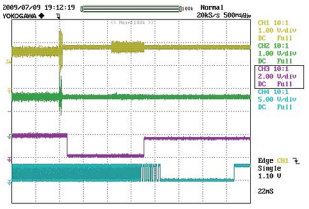


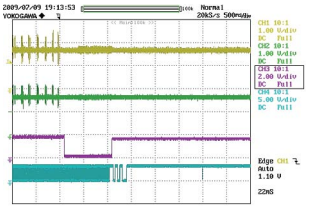
■ Search (CD-DA/DVD-MP3)
1-ch TE, 2-ch TEDRV, 3-ch SLIN1, 4-ch SLIN2



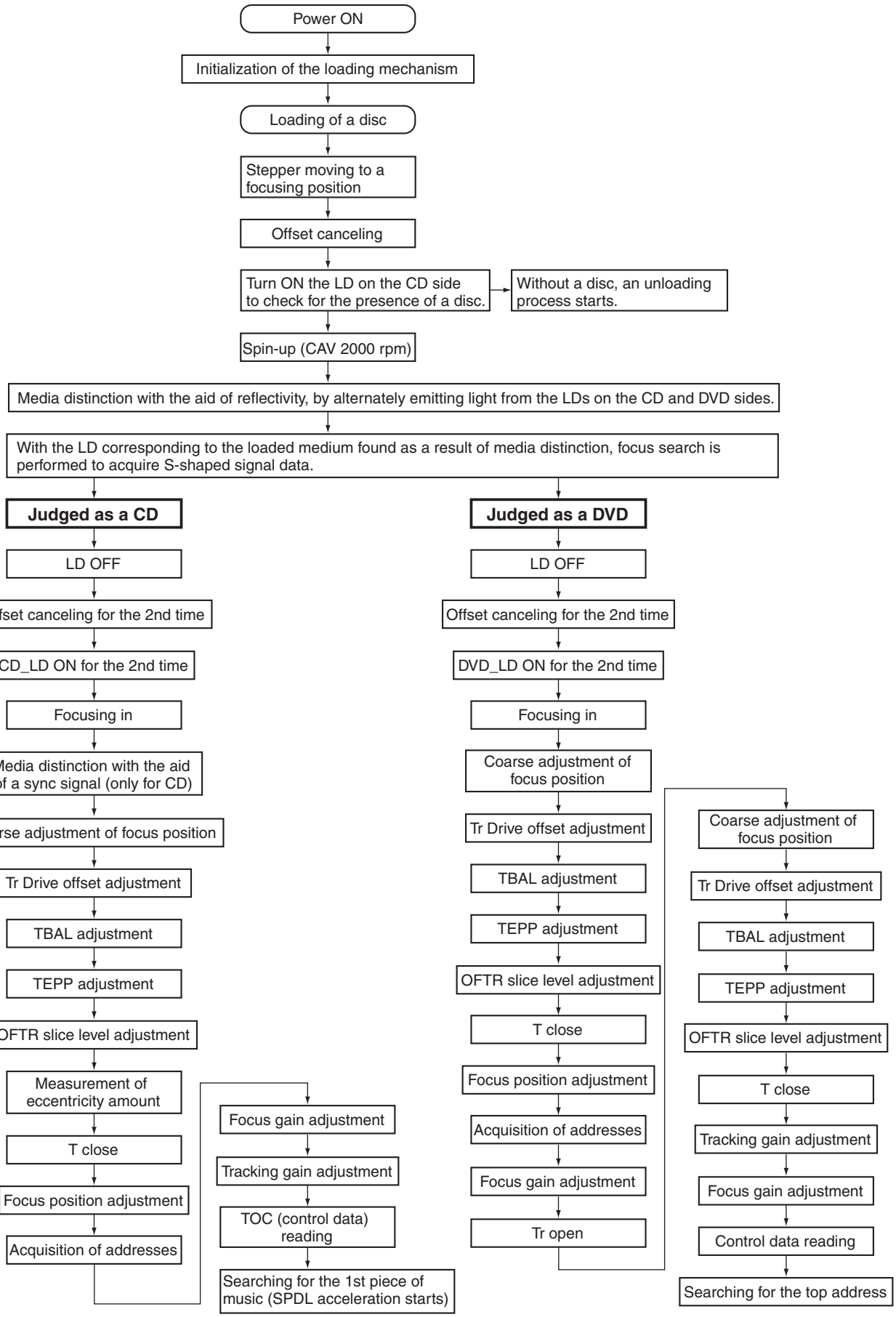


■ Stop (CD/DVD)
1-ch FE, 2-ch FEDRV, 3-ch SPIN, 4-ch SPDLFG





5.5 SETUP SEQUENCE



5.6 CONNECTION CONFIRMATION WITH THE PC

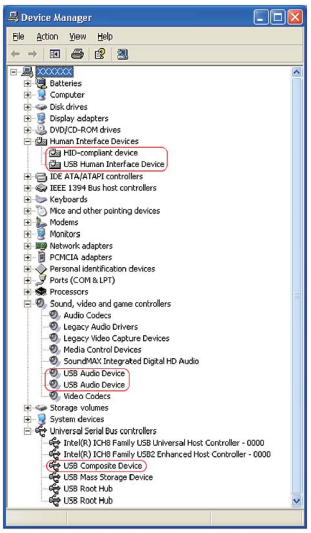
[1. USB B connector]

Whether communication between the PC connected via the USB B connector and this unit is properly performed or not can be confirmed on the PC.
Note: Installation of the driver software is not necessary.

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

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

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



[2. LINK]

Whether communication between the PC connected via the LINK connector and this unit is properly performed or not can be confirmed on this unit.
Note: Use a Category 5 cable or a cable with higher specifications for connection.
Either a straight or cross LAN cable can be used when the unit is directly connected with the PC, but when the unit is connected with the PC via a hub, be sure to use a straight cable.

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

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

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

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

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

6. SERVICE MODE
6.1 OUTLINE OF THE SERVICE MODE

The following service modes are prepared for this unit.

① Confirmation of the button input and an indication function.
It is the mode which checks each input and display function of a button, a JOG dial, the slider volume, a encoder and a needle pad.

② Check mode of the load of JOG dial.
It is the mode which measures the load when rotating JOG dial.

③ Indication of various information
It is a mode displaying information such as a version and an error history, a device normal / abnormality judgment.

④ Error display list
An error code and the contents are shown.

⑤ Confirmation of movement of the drive unit
It is the mode which checks operation of a mechanism and servo of drive unit.

⑥ Output of the alarm port
Explanation of the meaning of output of status terminal on a PC Board Assy.

⑦ Firmware update.
Explanation of the method of firmware update.

6.2 ABOUT THE DEVICE OF CDJ-2000

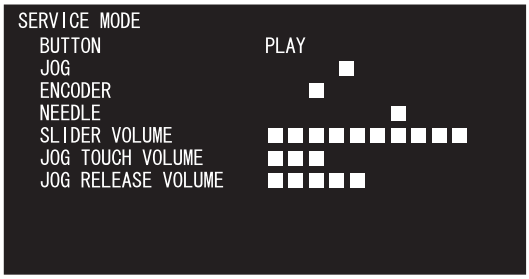
Device Name	Function	Part No.	Ref No.	Assy
MAIN CPU	Main control	R5S77641N300BG	IC101	MAIN Assy
FLASH	Memory for MAIN CPU (Firmware)	DYW1779	IC114	MAIN Assy
SDRAM	Memory for MAIN CPU (Work)	K4S561632J-UC75	IC108, IC109	MAIN Assy
DSP	Audio DSP	D710E001BZDHA275	IC501	MAIN Assy
SDRAM	Memory for DSP (Work)	K4S561632J-UC75	IC505	MAIN Assy
USB_B CONTROLLER	CONTROLLER for USB-B (function)	M66291GP	IC1101	MAIN Assy
ETHER PHY	PHY for LINK	RTL8201CP-LF	IC1304	MAIN Assy
GUI CPU	LCD display control	ADSP-BF531SBSTZ400	IC4001	TFTA Assy
FLASH	Memory for GUI CPU (Firmware)	DYW1781	IC4004	TFTA Assy
SDRAM	Memory for GUI CPU (Work)	K4S561632J-UC75	IC4005	TFTA Assy
PANEL CPU	Button input, LED & JOG FL control	M3030RFCPFP	IC8003	PNLB Assy
SODC	Disc drive control	MN103S71F	IC7006	SRVA Assy
FLASH	Memory for DRIVE CONTROLLER	DYW1771	IC7004	SRVA Assy
CDC	Contact position detection of a needle pad	AD7147ACPZ500RL7	IC5001	CDCB Assy

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

6.3 DETAILS OF THE SERVICE MODE

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

When it spends a power supply while pushing a TEMPO button and a MEMORY button simultaneously, It is displayed in the LCD display part, "CDJ-2000 SERVICE MODE", and enters into this mode. (Please continue pushing until "Pioneer LOGO" screen disappears.)
When it enters this mode, the TAG-TRACK button is pushed, and the screen is sent as follows, the following status displays are done.
In this mode, the input of each button, JOG, volume, etc. is normal, and it can check that a display can also be performed normally.
In addition, indication turns on while you push a button.
Caution: In this status display, if a TOUCH/BRAKE knob is turned to the limit of the right, it will shift to "the load measurement mode of JOG."(Refer to the following clause.)

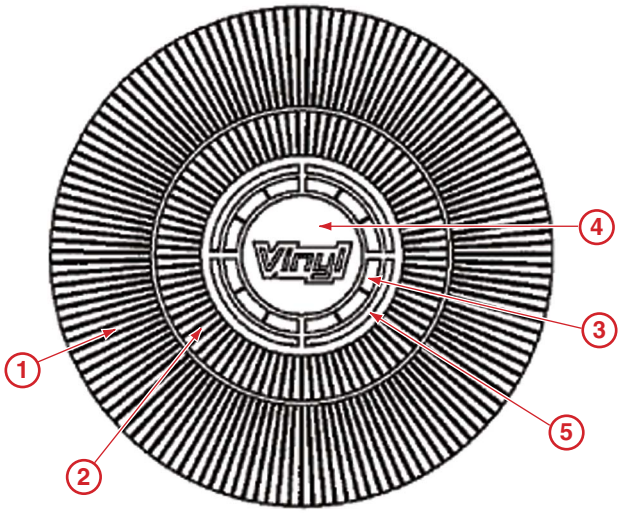


BUTTON : The pushed button name is displayed.
JOG : The point moves according to the direction that JOG turned.
ENCODER : The point moves according to the direction that ENCODER switch turned.
NEEDLE : The point moves according to the direction to which touched the needle pad and it was made to move.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

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

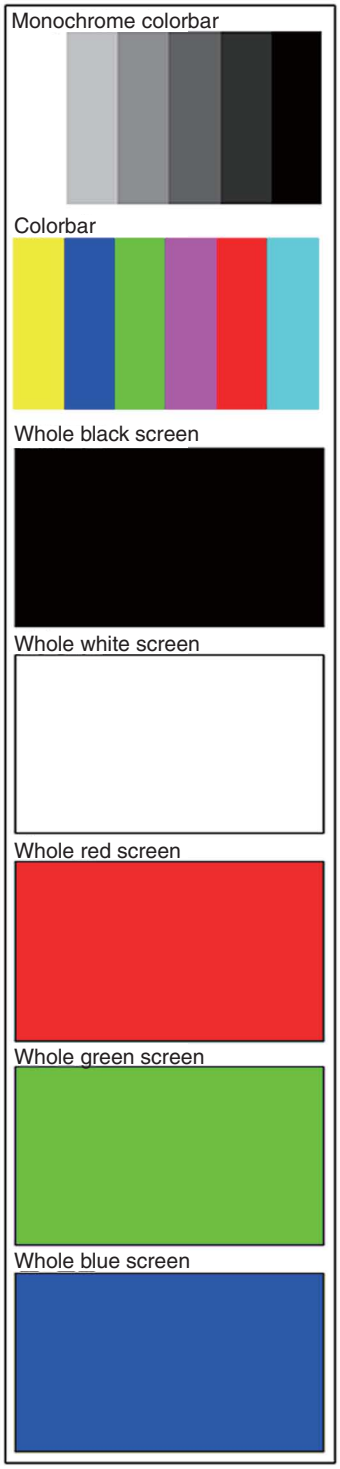
*1 About the LED of the HOT CUE button, red turns on HOT CUE(A), green turns on HOT CUE(B), and LED of the umber turns on HOT CUE(C).

Display pattern of JOG FL



Color pattern display of LCD

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



[2] Check mode of the load of JOG dial

Measurement

It is the mode which judges the load (light/heavy) when rotating JOG dial numerically objective.
It goes into "[1] Confirmation of the button input and a indication function", and it will become this mode if a TOUCH/BRAKE switch is turned to the limit of the right.

It goes into this mode, and a number will be displayed if JOG dial is turned with sufficient vigor.
The rotation direction -- right-handed rotation and left-handed rotation -- either is O.K.
The meaning of the numerical value displayed is as follows.

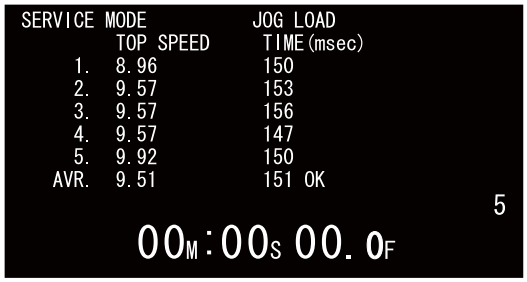
TOP SPEED: Top speed (let the time of turning one rotation in 1.8 second be 1 speed)
TIME: Time taken for rotation to fall to 1.5 speed from 3 speed

It is necessary to make it rotate top speed to 7.0 or more times to measure the rotation fall time required.
Not more than 7.0 times faster in the display " 00M:00S 00.0F " to be flashing a warning.

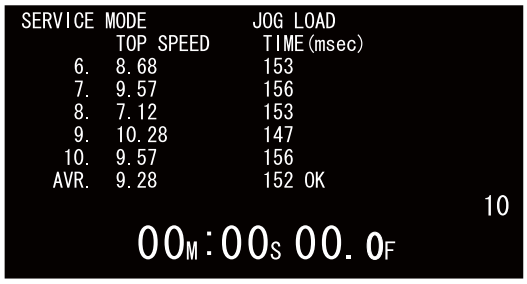
In addition, when it carries out continuously several times, about time, 2nd henceforth takes and displays an average of a maximum of 99 times.
Measurement which absorbed variation by this can be performed.

Input data twice.

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



Input data 5 times.



Input data 10 times.

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

Judgment result

If time is in a certain uniformity range, I display it with "OK" in the line of title, but display "NG" if I do not enter.
This judgment value is 170 ± 20 msec.

Record of a judgement

If USB memory is inserted and MASTER TEMPO button is pushed, a measurement result can write out as a CSV file of the name "JOGLOAD_2K.CSV."
In addition, data is added whenever it pushes MASTER TEMPO button.
Moreover, the MAC address is filled in as solid identification.

● MAC_ADDR:00-E0-36-00-84-40

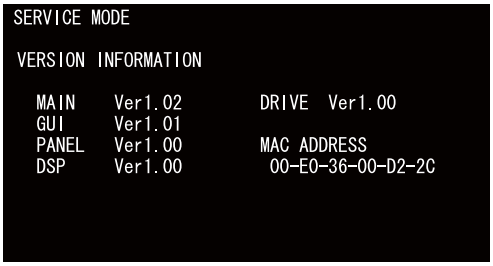
NO.	TOP SPEED	TIME(msec)
1	7.71	138
2	8.17	138
3	7.61	138
4	9.25	141
5	8.81	135
6	8.41	138
7	8.68	141
8	7.12	141
9	8.17	138
10	8.68	135
11	8.17	138
12	8.54	132
13	7.82	135
AVR	8.24	137(NG)

(judge : 150ms <= Time <= 190ms)

[3] Indication of various information

If a power supply is switched on, pushing "TEMPO" "CUE/LOOP CALL ◄" button simultaneously with a button, it will be displayed on LCD display part as "CDJ-2000 SERVICE MODE", and will go into this mode.
(Please continue pushing until "Pioneer LOGO"screen disappears.)
It goes into this mode, and if a TAG-TRACK button is pushed and a screen is sent, the contents of a display will change as follows. Moreover, it can return with BACK button.

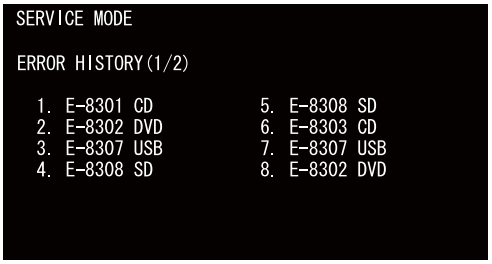
① Version information

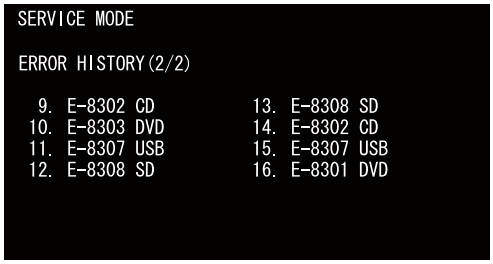


The version number of CPU/microcomputer carried in this machine is displayed.
The MAC Address of Ethernet simultaneously built in this machine is also displayed.

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

② Error history





16 pieces are divided into two screens and the error history generated in the past is displayed. “1” becomes the newest error code.
The 16 newest pieces are displayed.
The screen is selected with the BACK button or TAG TRACK button.
Moreover, the item which follows an error code expresses a media. (The error which is not related to media is blank.)

USB : USB device (MEMORY/HDD)
SD : SD card
CD : DRIVE - CD media (CDDA/CD-ROM)
DVD : DRIVE - DVD media (DVD-ROM)
About contents of an error code, please refer to "[4] Error display list".

③ Auto device diagnosis

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

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

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

④ Factory reset

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

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

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

<<Error history>>
- ALL CLEAR

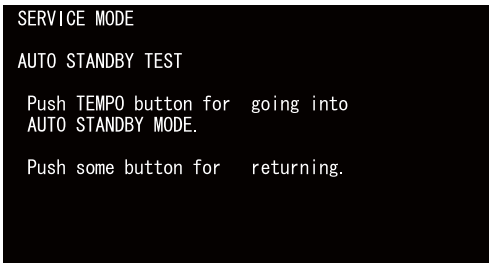
(*) This function is not mounted by the initial version.

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

⑤ Drive operation / error rate measurement

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

⑥ A check of auto standby



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

If operation excluding the following from the state of being in the auto standby mode is performed,
- Push the USB STOP button
- JOG rotation (except for touching the Table top)
- Turn the TOUCH/BRAKE and RELEASE/START volumes
- Move the TEMPO slider
- Touch the needle search ribbon
- Switch the DIRECTION lever

It will return from the auto standby mode.

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

[4] Error display list

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

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

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

* New

[5] Confirmation of movement of the drive unit

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

<Player operation mode>
Basic operation of Servo, such as setup, play, pause, and track search, is carried out.
Moreover, measurement of an error rate can also be performed.
<Test operation mode>
Servo operation is finely controllable gradually.

* It becomes player operation mode and shifts to test operation mode by the key input in the beginning.
* The command treated here is for mainly testing a mechanism and a servo system, and is not for DJ functions, such as scan and tempo.

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

■ Player operation mode command

Play(Trace) / Pause

If it is in a stop state, it will set up and play. Moreover, if it is in a play state, whenever it will push a button, a pause and a play are carried out by turns.
It is displayed on a drive state display part as "PLAY or PAUSE."
In the case of CD, the track number and time under present trace are displayed.
In the case of DVD, the layer number under present trace is displayed on the place of TRACK, and it displays a physical address on the place of MSF.
Note: In this mode, even if it inserts a disk, an automatic setup is not carried out.
Moreover, a play is not carrying out audio reproduction, but is tracing the signal side of a disk.

Track Search F/R

Search a track displayed by a FWD / REV course and, in the case of a CD, do pause.
It is indicated with [SEARCH] in the drive condition indication part.
Note: A track search is not possible in CD-ROM (MP3/AAC/WAV/AIFF).

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

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

When a REV direction was pushed with DUAL LAYER DISC.

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

When a FWD direction was pushed with SINGLE LAYER DISC.

→ L0 inside → L0 middle → L0 outside →

When a REV direction was pushed with SINGLE LAYER DISC.

← L0 inside ← L0 middle ← L0 outside ←

It is indicated in the indication part as follows.

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

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

Error Rate Count

Measure an error rate of 10000 blocks in the case of DVD in the case of a CD from a present position doing a play/pause for about 20 seconds and display a measurement result in FL.
Usually, a track to measure is made to search and this button is inputted from a pause state.
For example, it is displayed as "3.56E-4 O.K." etc.
If an error rate is less than 3.00E-3, it will be displayed as O.K. If an error rate is larger than 3.00E-3, it will be displayed as NG. Measurement with the managed disk at the time of factory shipments is a premise.
The product does not judge whether they are inferior goods at the time of service.

Eject

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

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

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

■ Test operation mode command

Serbo operation is finely controllable gradually.
Keep in mind a test operation mode command that it may give a damage to a player as mistaking the usage.
Please operate this mode after making a dis c a set completion state.
Note: Operate it after you take a state of loading in.

Servo All Off

When servo is ON, all servo will be turned off if the TIME button is pushed.
It is indicated with [ALL OFF] in the indication part.

CD Select

When you start a CD, push a MEMORY button and choose a CD.
It is indicated with [CD SELECT] in the indication part.

DVD Select

When you start a DVD, push a CALL button and choose a DVD.
It is indicated with [DVD SELECT] in the indication part.

Focus Jump Up

In DVD choice, a focus jumps in L1.
It is indicated with [FOCUS JUMP UP] in the indication part.

Focus Jump Down

In DVD choice, a focus jumps in L0.
It is indicated with [FOCUS JUMP DOWN] in the indication part.

Slider Move Fwd

You send about 1.8 mm sliders to a circumference direction whenever you push a SEARCH FWD button.
It is indicated with [SLIDER FWD] in the indication part.

Slider Move Rev

You send about 1.8 mm sliders to an internal circumference direction whenever you push a SEARCH REV button.
It is indicated with [SLIDER REV] in the indication part.

Step command

Perform the serial movement of the setup by a step.

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

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

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

Mode Change (The end of the test movement mode)

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

[6] Output of the alarm port

Although "Normal/abnormalities of each device at the time of power supply ON and initialization" can be judged by Auto device diagnosis of a "[3] Indication of various information", the test port output on a main board can also be checked.
When a defect is detected by the device by power supply ON, an alarm port performs the following pulse outputs.

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

[7] Firmware update

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

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

A version is not contained in a file name.
Since the character sequence containing a version etc. is added to the head of each file, it can check by the editor, viewer, etc.

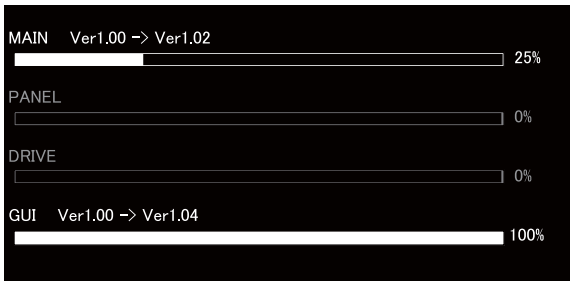
■ When USB memory is used

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

① A file to update is copied to USB memory.
(One files will be copied if it is one pieces. Two files will be copied if it is two pieces. ……)

② Please turn on a power supply, pushing both the buttons of MEDIA SELECT/USB and RELOOP.
(Please continue pushing until "Pioneer LOGO"screen disappears.)
It is displayed the message of "Connect a USB storage device to the USB port.", USB memory is inserted in USB port of the front or the back. (If USB memory is put and it goes into the mode, a message will not be displayed but update will start immediately.)

③ Update is automatically performed in the order of "GUI -> drive -> main -> panel".
The status is displayed with the bar graph and % as follows during update. Moreover, an old version and a new version are also displayed.



④ When there is no file, gray out of the display of the device is carried out, and update is not performed.
And, %-display is a standard and is not exact.

⑤ Since the message of "Firmware update is completed.Turn the power off before using." will be displayed if update is completed, please return on a power supply.

■ When CD-R/RW is used

① A file to update is copied to CD-R/RW.
(One files will be copied if it is one pieces. Two files will be copied if it is two pieces. ……)

② Please turn on a power supply, pushing both the buttons of MEDIA SELECT/DISC and RELOOP.
(Please continue pushing until "Pioneer LOGO"screen disappears.)
Insert CD-ROM, if the message "Insert CD-ROM disc" is displayed.

③ The rest is the same as that of the case where USB memory is used.

■ Recovery when failing

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

① Failure of a MAIN
When the message of "MAIN firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7024: MAIN CPU ERROR" will be displayed.
In this case, update will be possible if it usually carries out again using a passage MEDIA SELECT/USB button and RELOOP button.
In addition, only MAIN is updated even if files other than MAIN are in USB memory.
If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the whole MAIN Assy.
(This is because provision of a FLASH ROM in which a specific MAC address has been written is not possible.
For details, see section”1.2 NOTES ON FLASH ROM”).

② Failure of a GUI
When the message of "GUI firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7023: GUI CPU ERROR" will be displayed.
In this case, update will be possible if it usually carries out again using a passage MEDIA SELECT/USB button and RELOOP button.
In addition, if files other than GUI are contained in USB memory, it will usually pass and all they will be updated.
If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the IC4004 (FLASH ROM).

③ Failure of a PANEL
When the message of "PANEL firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7022: PANEL CPU ERROR" will be displayed.
In this case, how to the update mode to enter differs from usual.
Please continue pushing a button 10 seconds or more until it turns on a power supply and the message of "Connect a USB storage device to the USB port." is displayed, pushing only a USB-STOP button.
In addition, if files other than PANEL are contained in USB memory, it will usually pass and all they will be updated.
If the unit cannot be recovered after a retrial of downloading, a part may be defective. Replace the IC8003 (PANEL CPU).

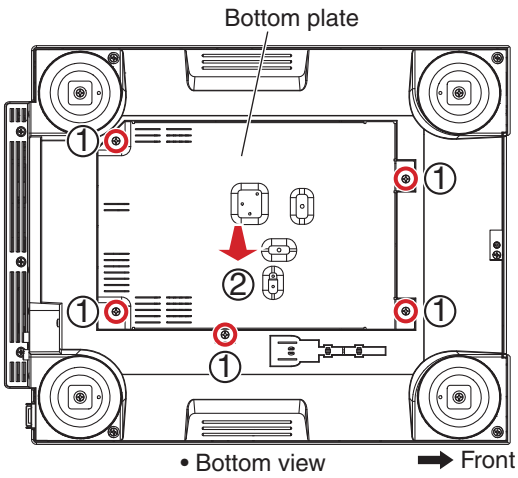
④ Failure of a DRIVE
When the message of "DRIVE firmware update failed." is displayed or the power supply has been turned off on the way, if a power supply is returned on again, the error code of "E-7001: DISC DRIVE ERROR" will be displayed.
In such a case, the unit cannot be recovered by a retrial of downloading. Replacement of IC7004 (FLASH ROM) is required.

7. DISASSEMBLY

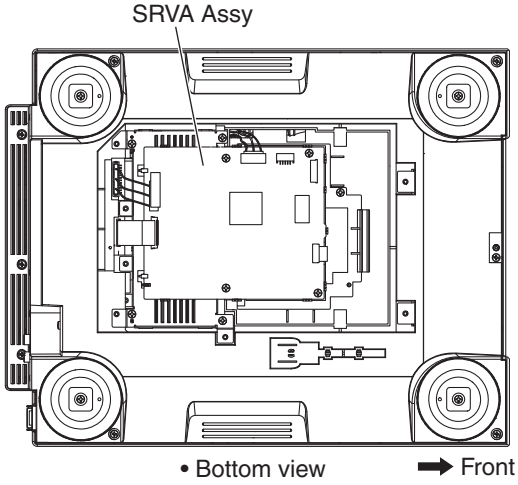
Note:
(1) Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
(2) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of SRVA Assy

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



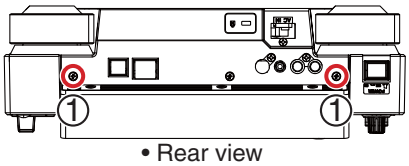
Diagnosis



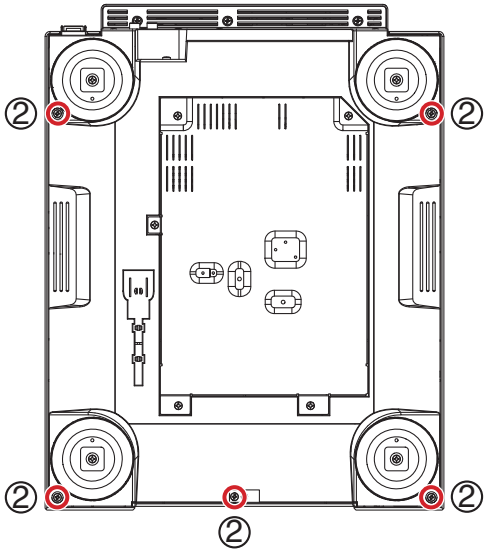
Diagnosis of MAIN Assy

[1] Control Panel Section

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

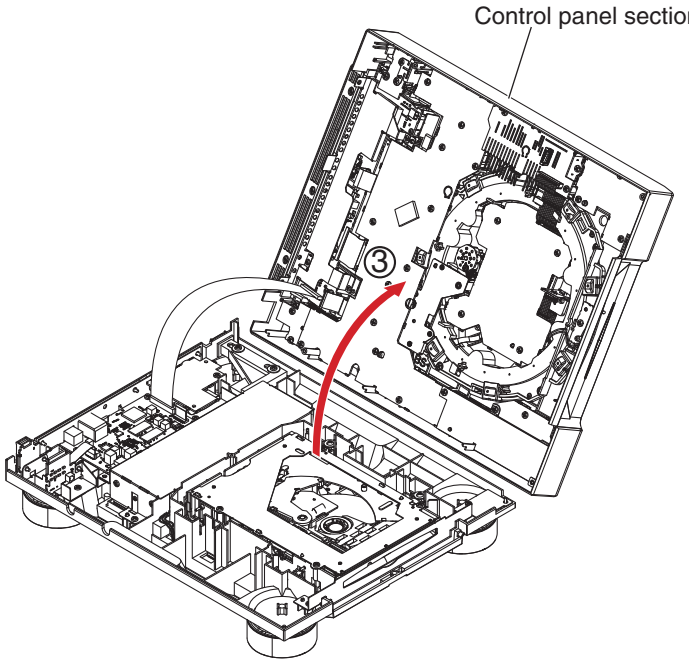


• Rear view



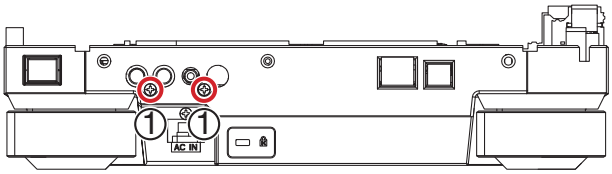
• Bottom view

(3) Remove the control panel section.



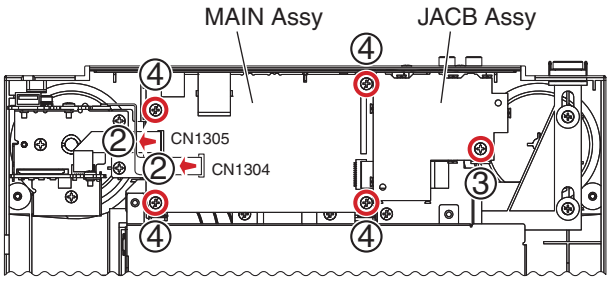
[2] MAIN and JACB Assemblies

(1) Remove the two screws. (BPZ30P080FTB)



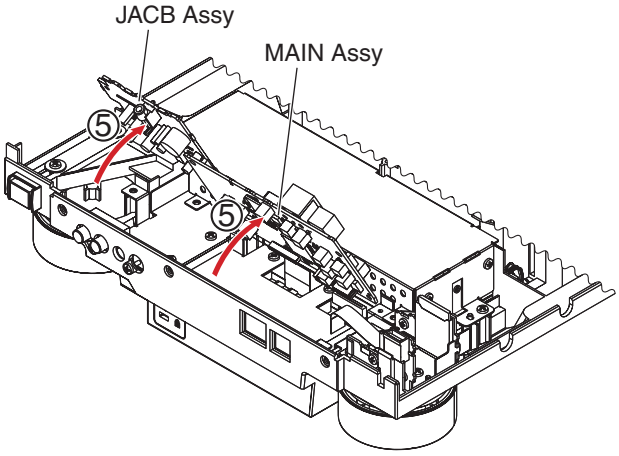
• Rear view

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



(5) Stand the MAIN and JACB Assemblies.

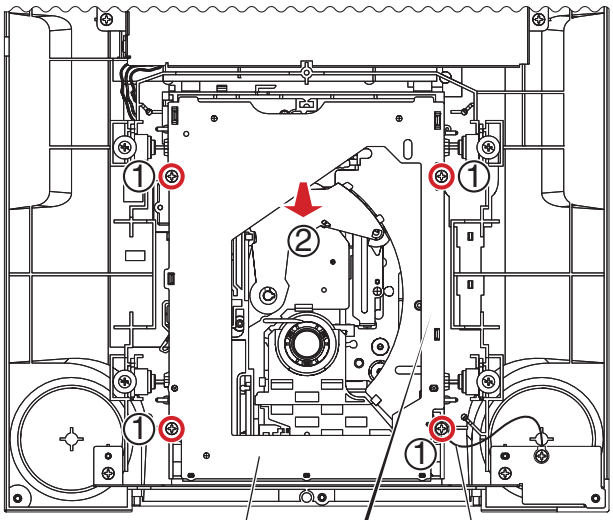
Diagnosis



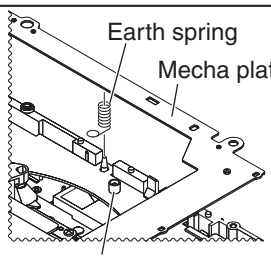
Slotin Mechanism Section

[1] Mecha Plate

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

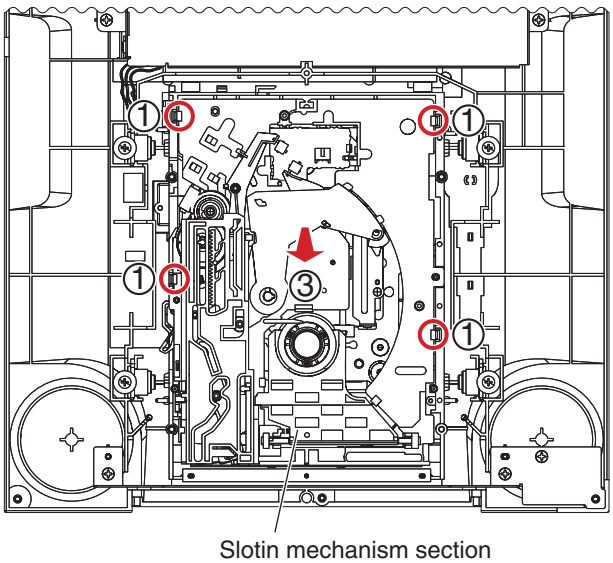


Note of earth spring
- Be sure not to lose it.
- Be careful to the installation places.
- Confirm it by viewing.



[2] Slotin Mechanism Section

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

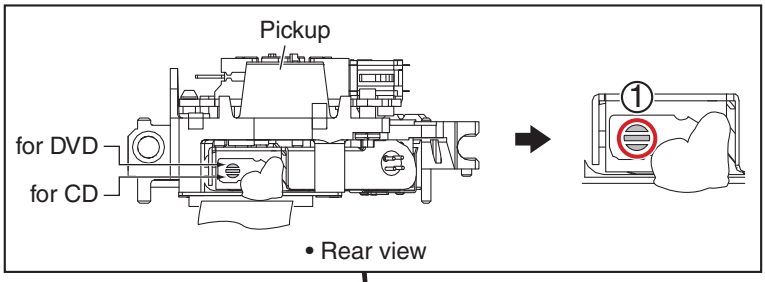


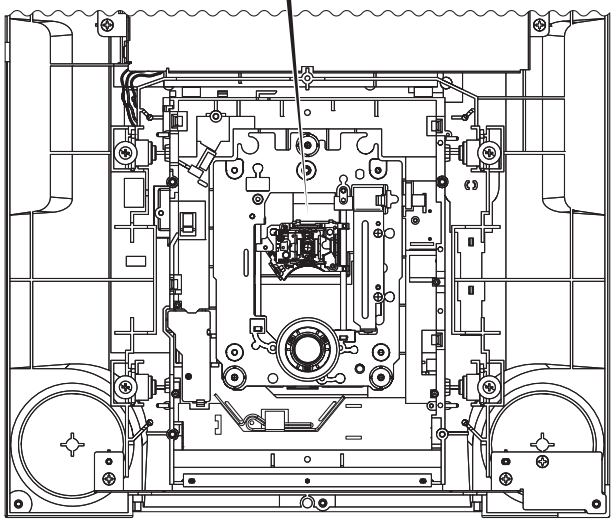
TM Assy-S

[1] Float Base Section

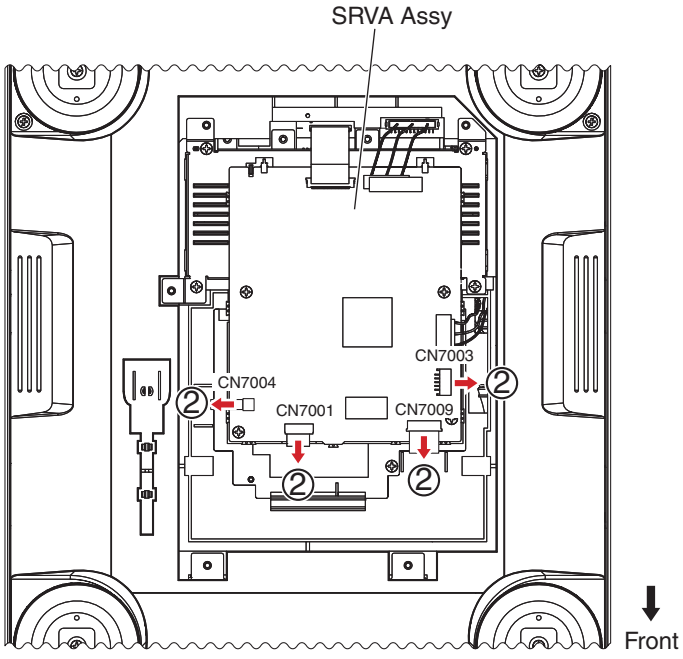
(1) solder the short-circuit point. (short)

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

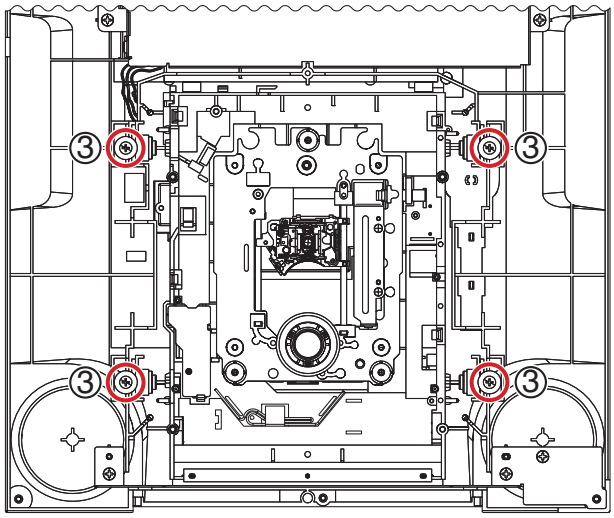




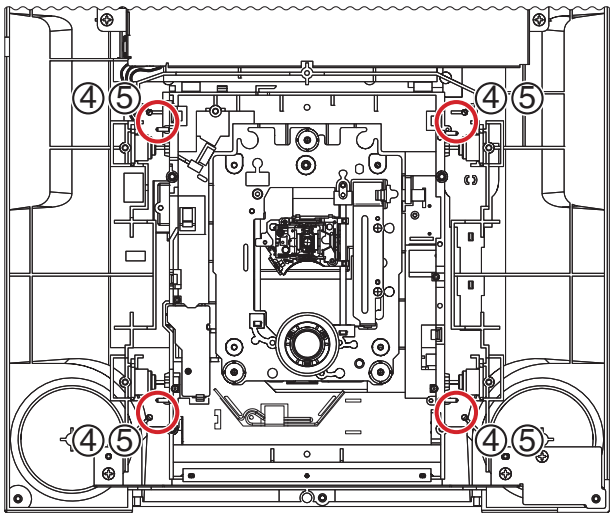
(2) Disconnect the one connector and three flexible cables.

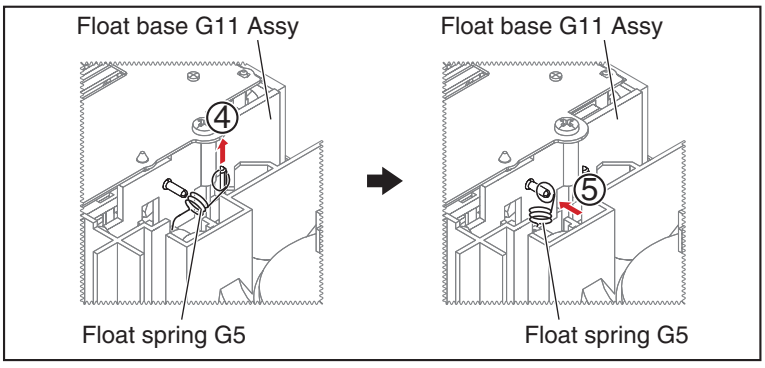


(3) Remove the four DM screws. (DBA1260)

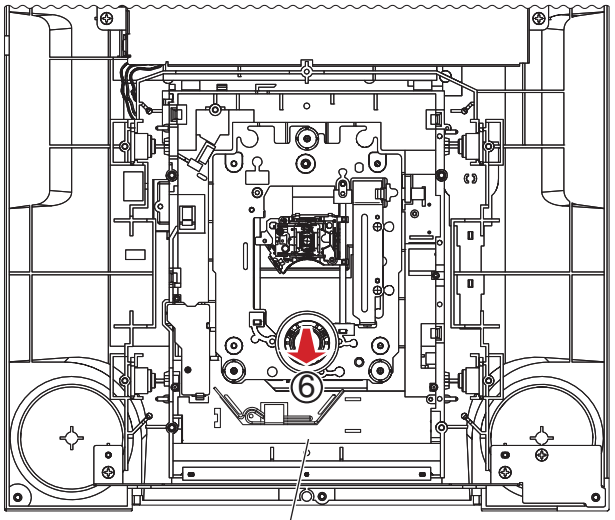


(4) Remove the four float springs (G5).
(5) Hook the four float springs G5 to the four hooks of the float base G11 Assy.



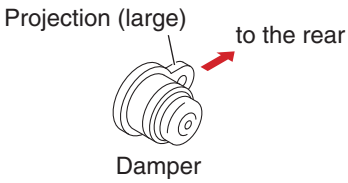


(6) Remove the float base section.

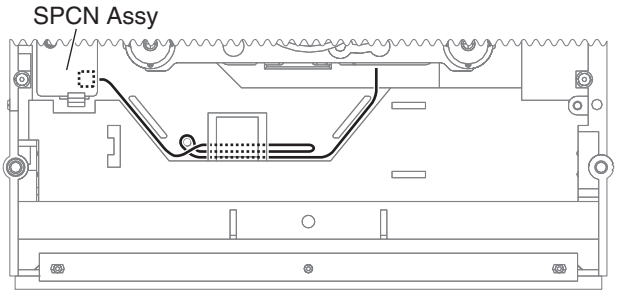


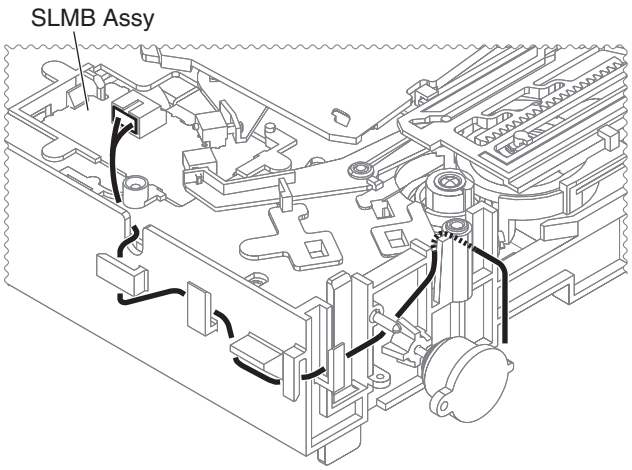
Direction of the dampers when attaching them

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



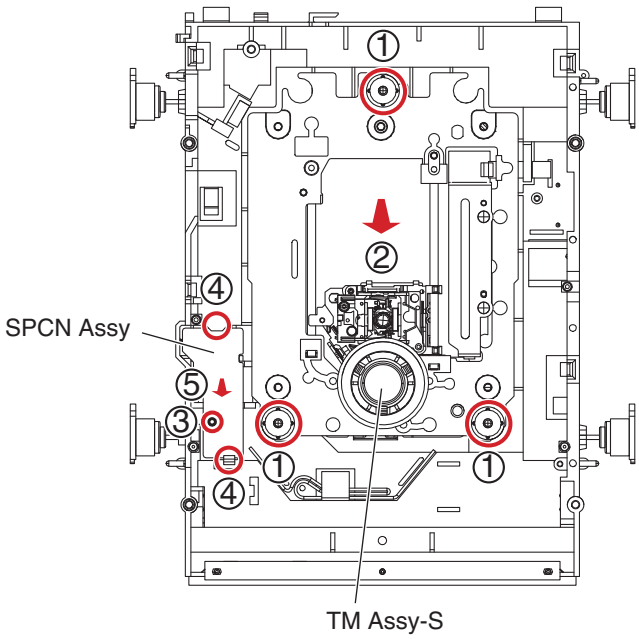
Arrangement of the jumper wires





[2] TM Assy-S

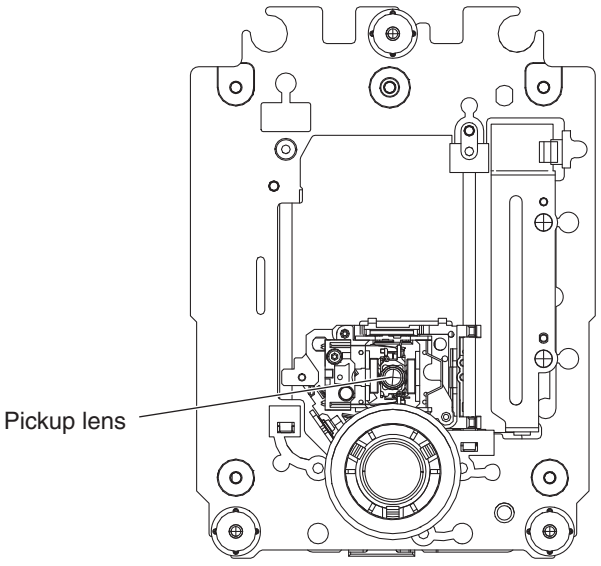
(1) Remove the three float screws. (DBA1286)
(2) Remove the TM Assy-S.
(3) Remove the one screw. (IPZ20P060FTC)
(4) Unhook the two hooks.
(5) Remove the SPCN Assy.



Cleaning the pickup lens

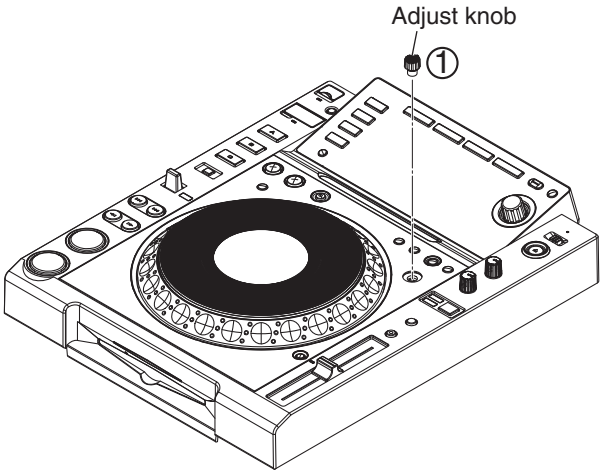
Before shipment, be sure to clean the pickup lens, using the following cleaning materials:

Cleaning liquid : GEM1004
Cleaning paper: GED-008

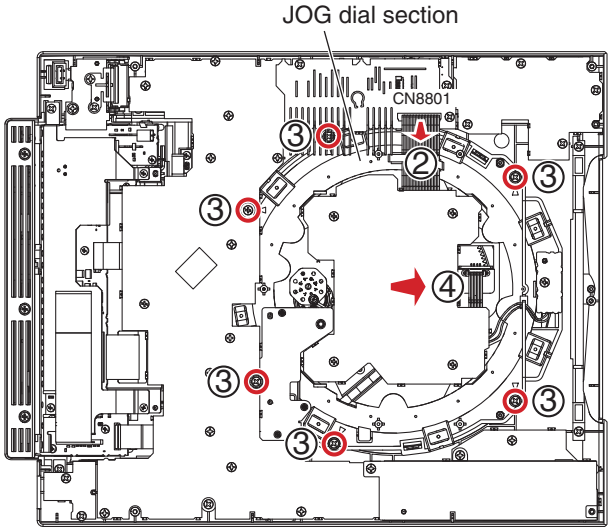


JOG Dial Section

(1) Remove the adjust knob.

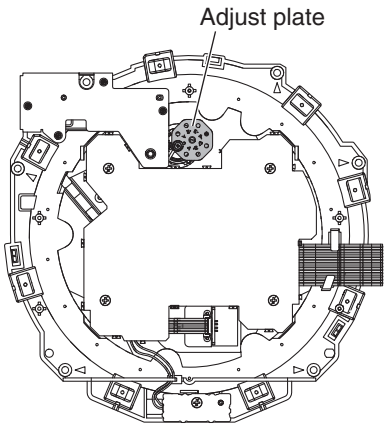


(2) Disconnect the connector.
(3) Remove the six screws. (BPZ30P080FNI)
(4) Remove it while pulling JOG dial section in front side.

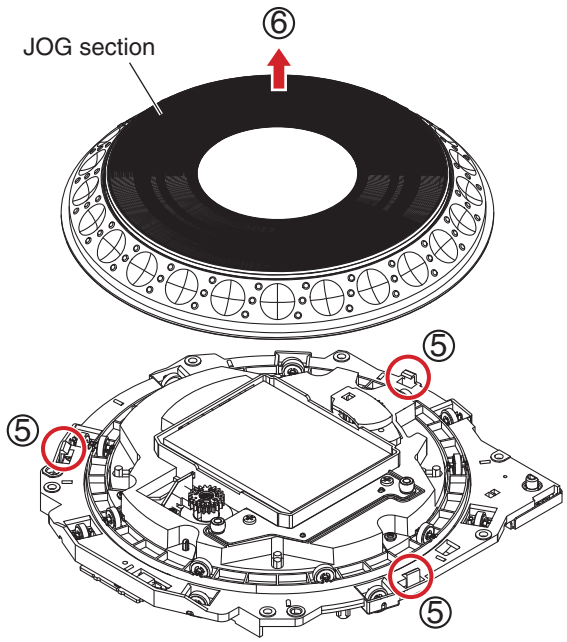


Position of the Adjust plate

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

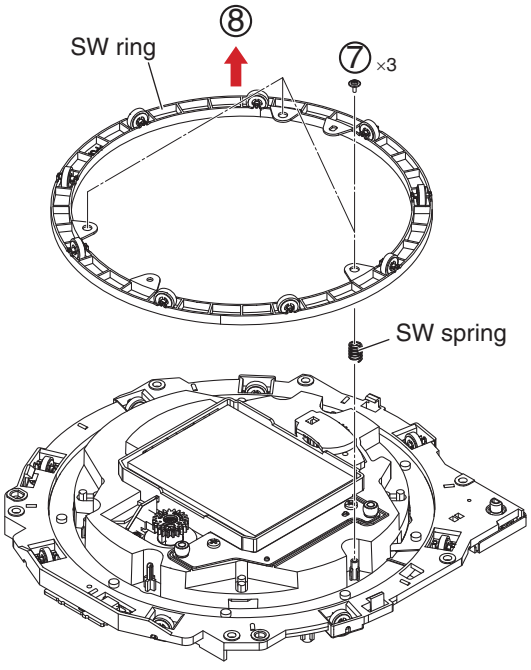


(5) Unhook the three hooks.
(6) Remove the JOG section.



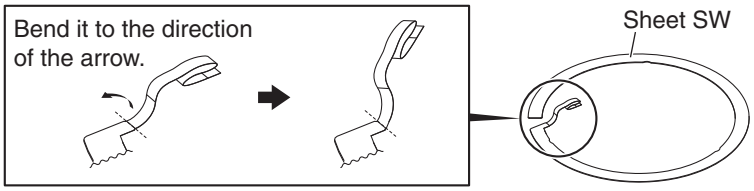
(7) Remove the three screws. (DBA1265)
(8) Remove the SW ring.

Note:
Be careful not to lost SW spring.



Notes on replacing the Sheet SW

Styling of the Sheet SW

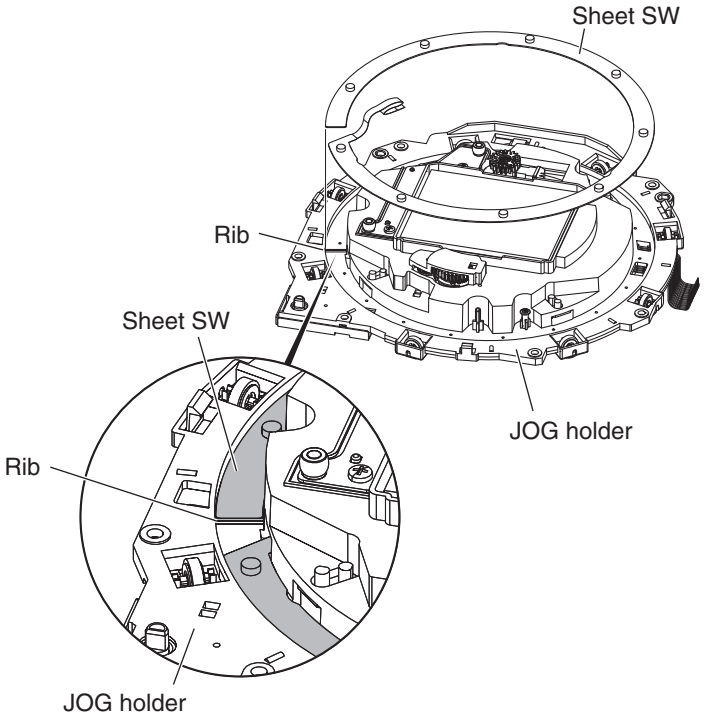


Notes on replacing the Sheet SW

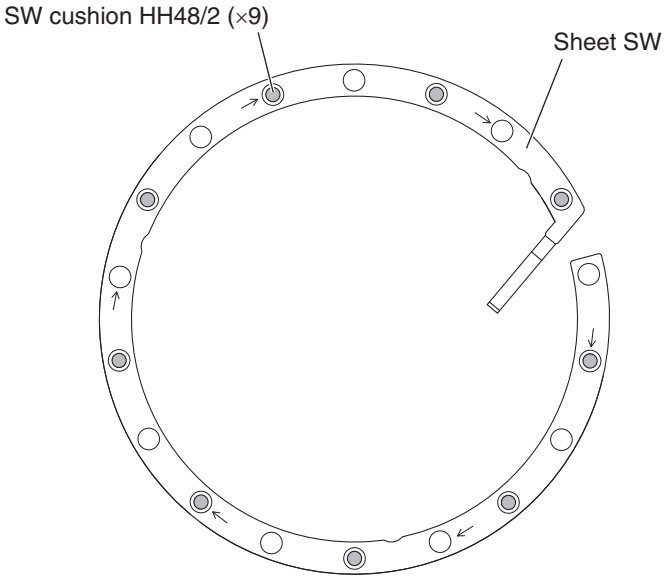
Pasting position of the Sheet SW

Notes:

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

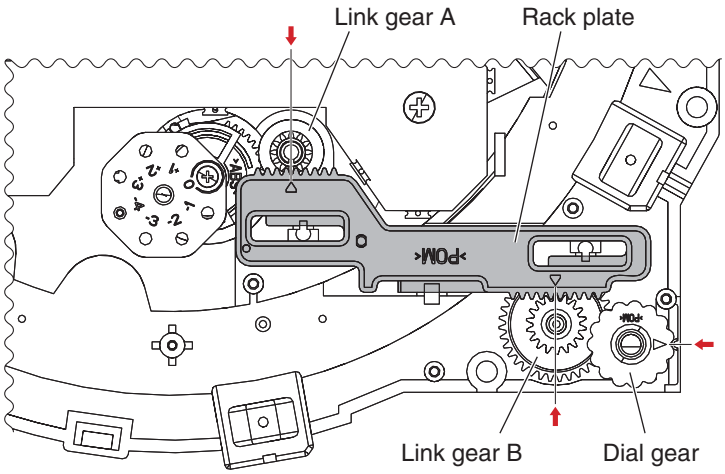


Pasting position of the SW cushion HH48/2

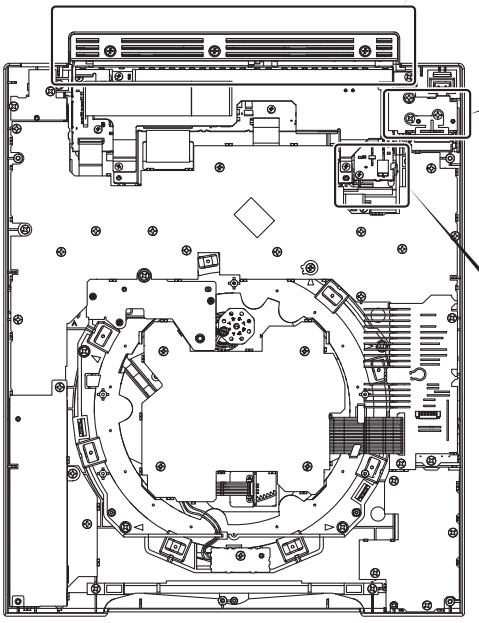


Alignment of the Rack Plate

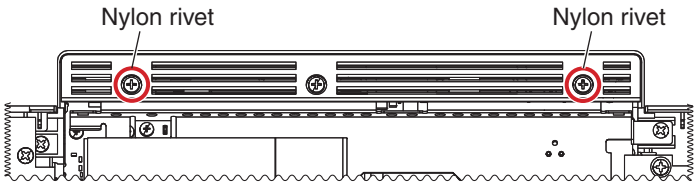
Place the rack plate so that its teeth are engaged with those of the gears and its triangular marks are positioned as shown in the figure.



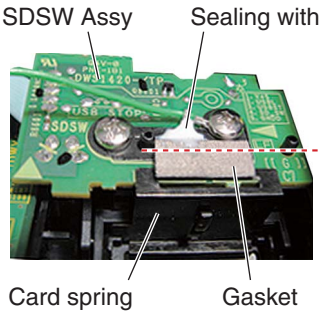
Notes on Disassembly and Reassembly



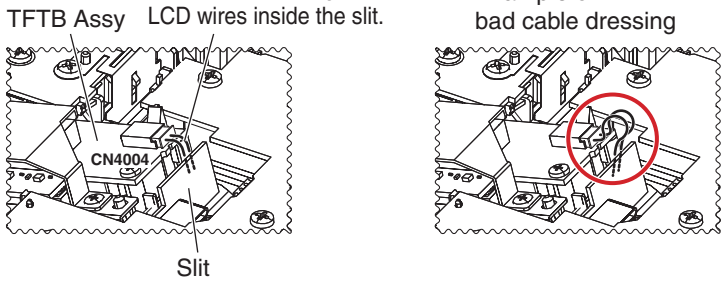
When removing the nylon rivets, be careful not to damage the finish around them.



Note on sealing with adhesive



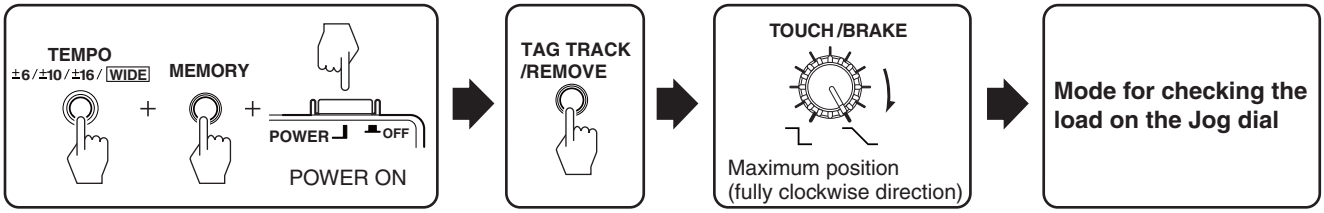
Cable dressing



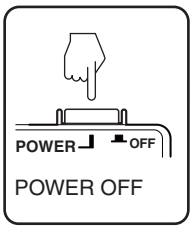
8. EACH SETTING AND ADJUSTMENT
8.1 JOG DIAL ROTATION LOAD ADJUSTMENT

JOG Check Mode : ON

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



JOG Check Mode : CANCEL



[Measuring method]

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

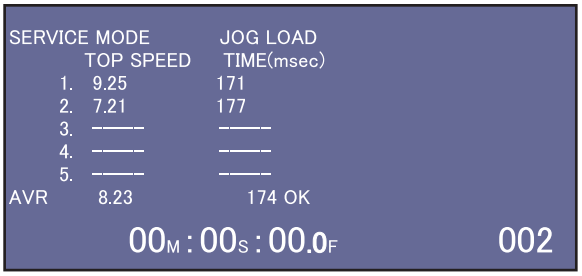


Fig. 1 Example of displaying LCD

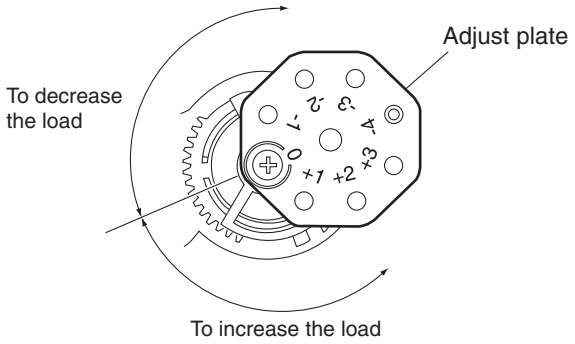


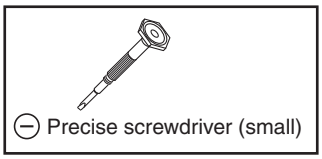
Fig. 2 Adjust plate

[Load adjustment method]

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

8.2 TEMPO ZERO POINT ADJUSTMENT

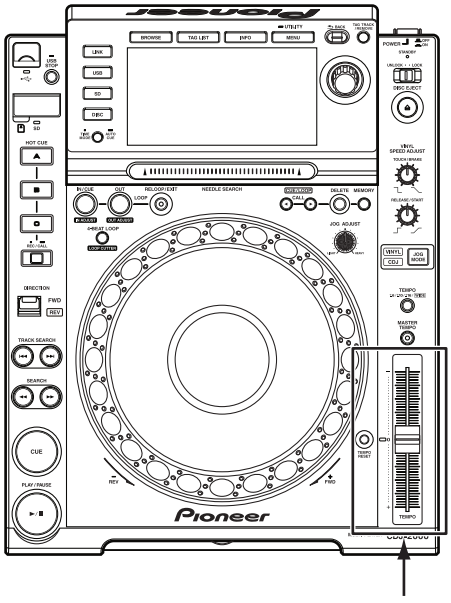
■ Jig

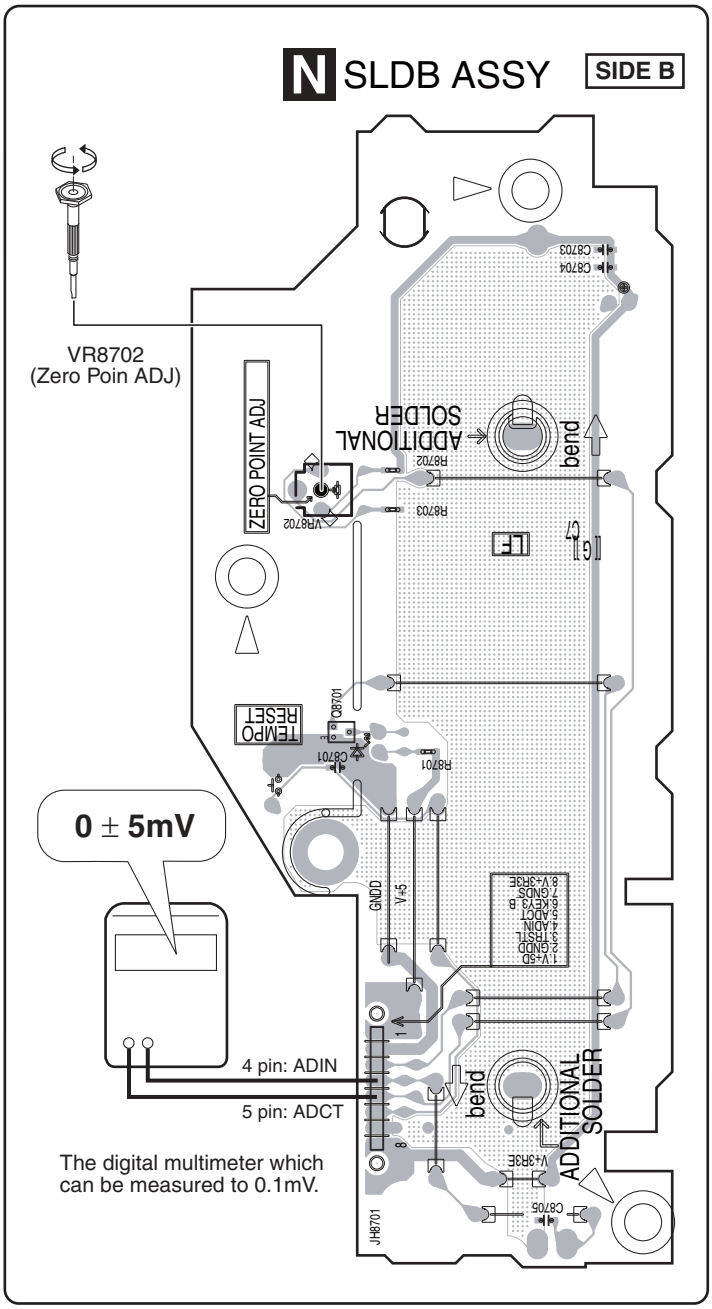


■ Necessary Adjustment Points

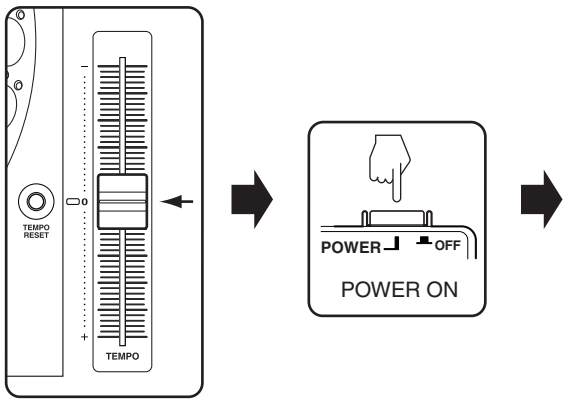
When	Adjustment points
Exchange the SLIDER VR	VR8702 (Zero Point ADJ.)

■ Adjustment and Check Points





Zero Point ADJ.



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

8.3 ITEMS FOR WHITCH USERS SETTING IS AVAILABLE

The following data have been set in each IC.

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

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

8.4 FIRMWARE UPDATE / RECOVERY

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

A

B

C

D

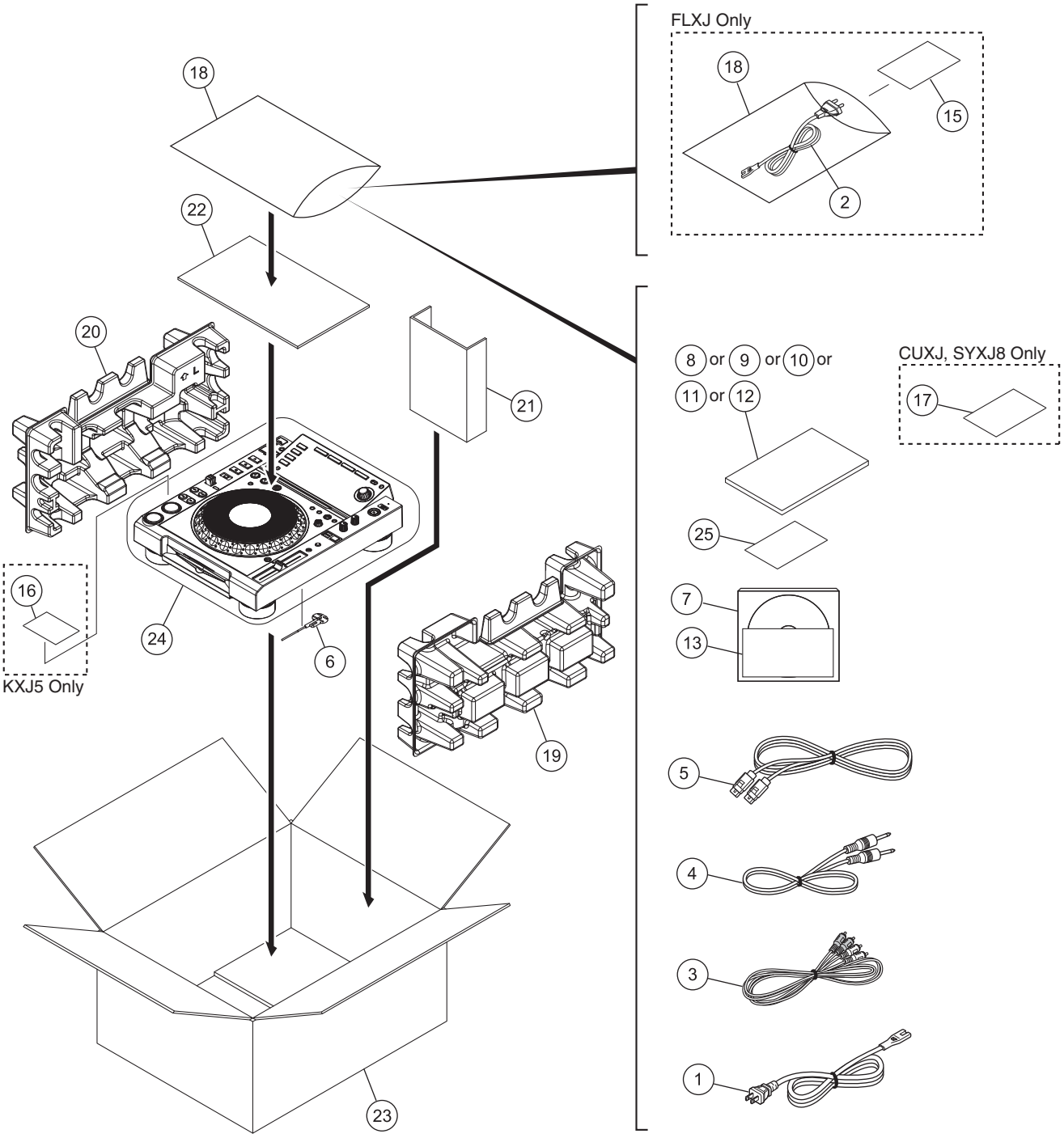
E

F

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

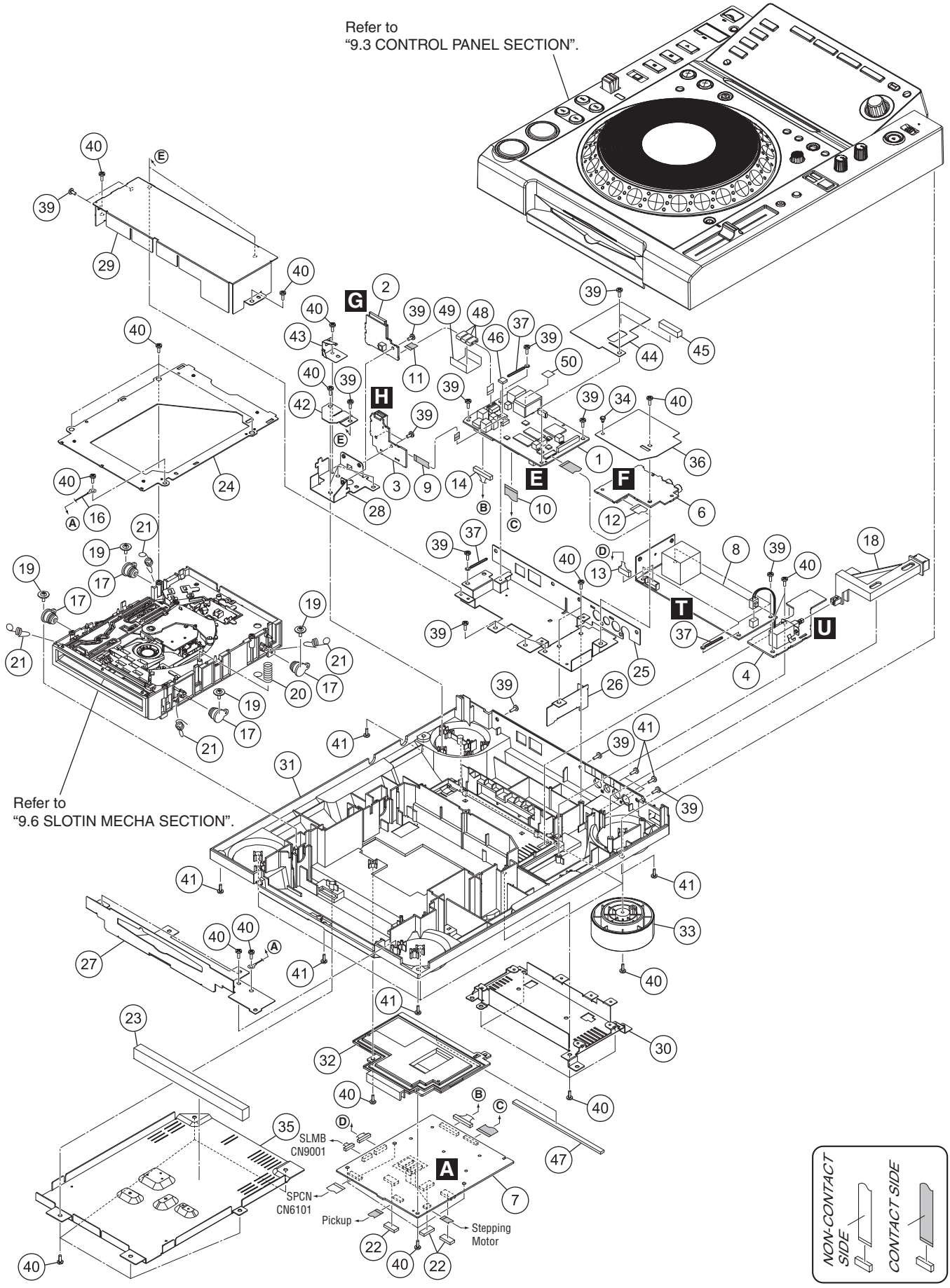
Mark	No.	Description	Part No.
⚠	1	Power Cable	See Contrast table (2)
⚠	2	Power Cable	See Contrast table (2)
	3	Audio Cable (L = 1.5 m)	XDE3045
	4	Control Cord (L = 1 m)	XDE3063
	5	LAN Cable (1M UTP)	DDE1130
	6	Disc Force Eject Pin	DEX1013
	7	CD-ROM (rekordbox)	DXX2598
	8	Operating Instructions	See Contrast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

(2) CONTRAST TABLE

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

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

9.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

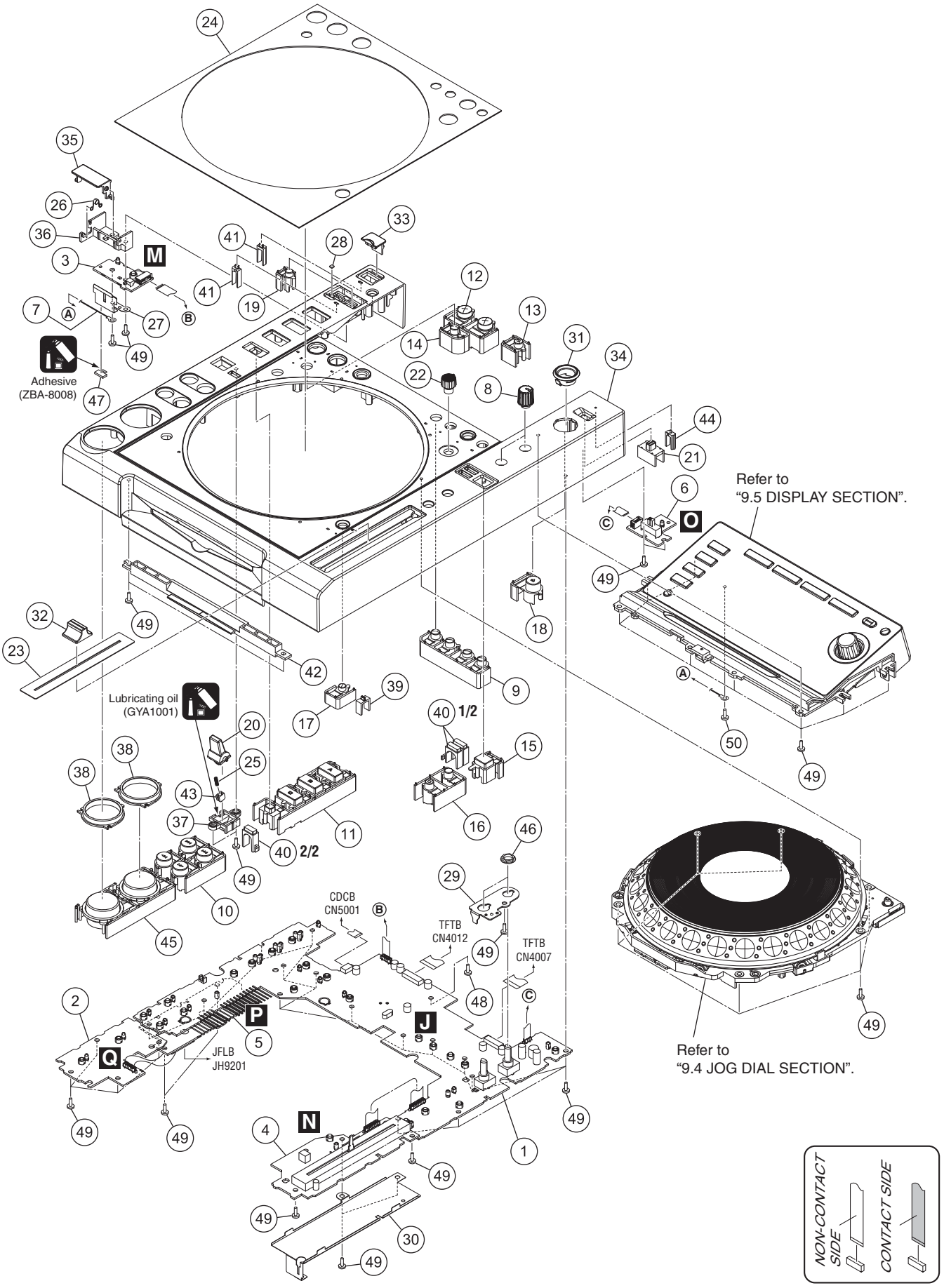
Mark	No.	Description	Part No.
	1	MAIN Assy	DWG1660
	2	SDCB Assy	DWX2980
	3	USBA Assy	DWX3043
	4	ACIN Assy	See Contrast table (2)
	5	•••••	
	6	JACB Assy	DWX2988
	7	SRVA Assy	DWX2948
⚠	8	POWER SUPPLY Assy	DWR1463
	9	14P FFC	DDD1478
	10	40P FFC	DDD1479
	11	10P FFC	DDD1480
	12	13P FFC	DDD1484
	13	Connector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

(2) CONTRAST TABLE

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

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

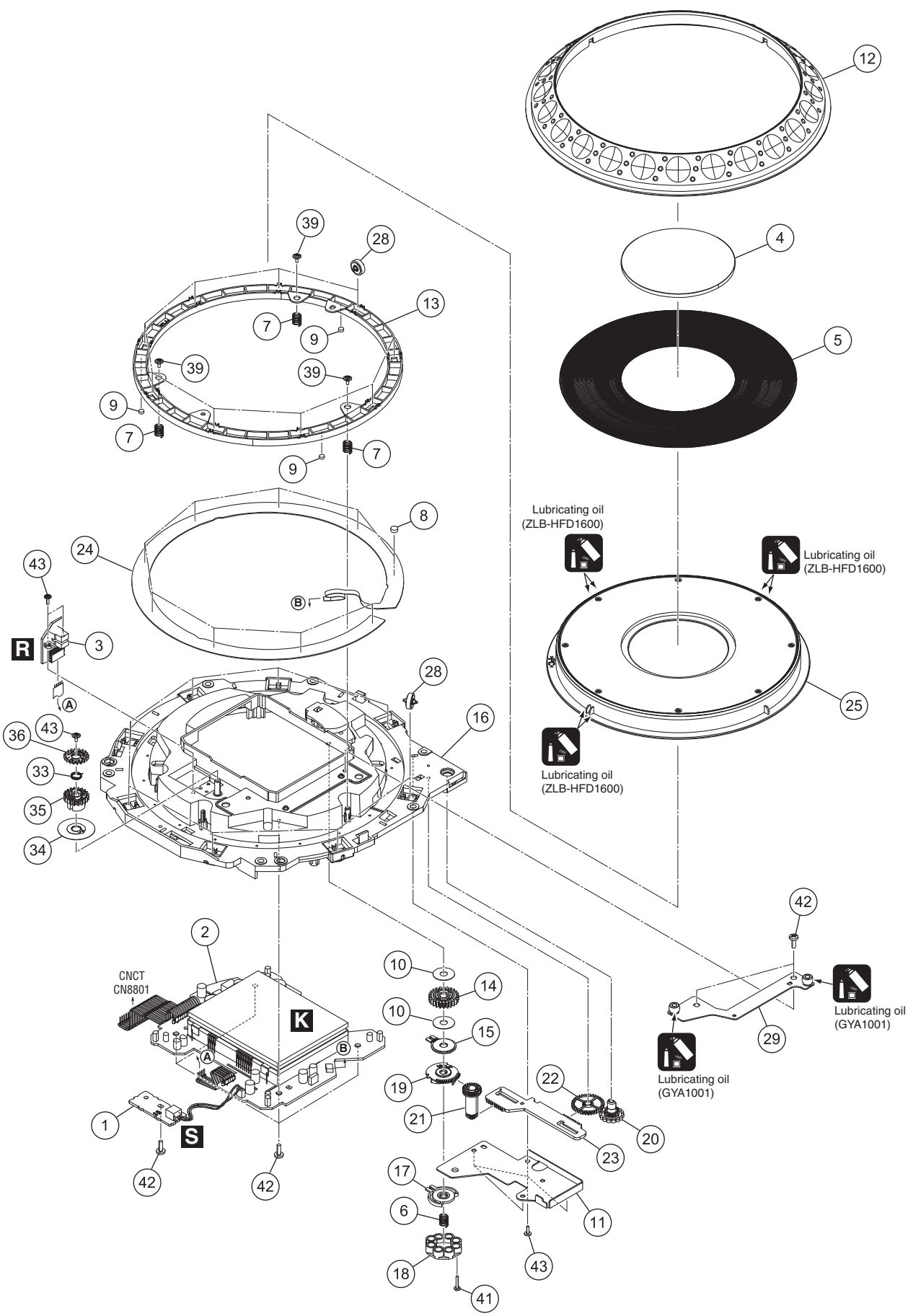
9.3 CONTROL PANEL SECTION



CONTROL PANEL SECTION PARTS LIST

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

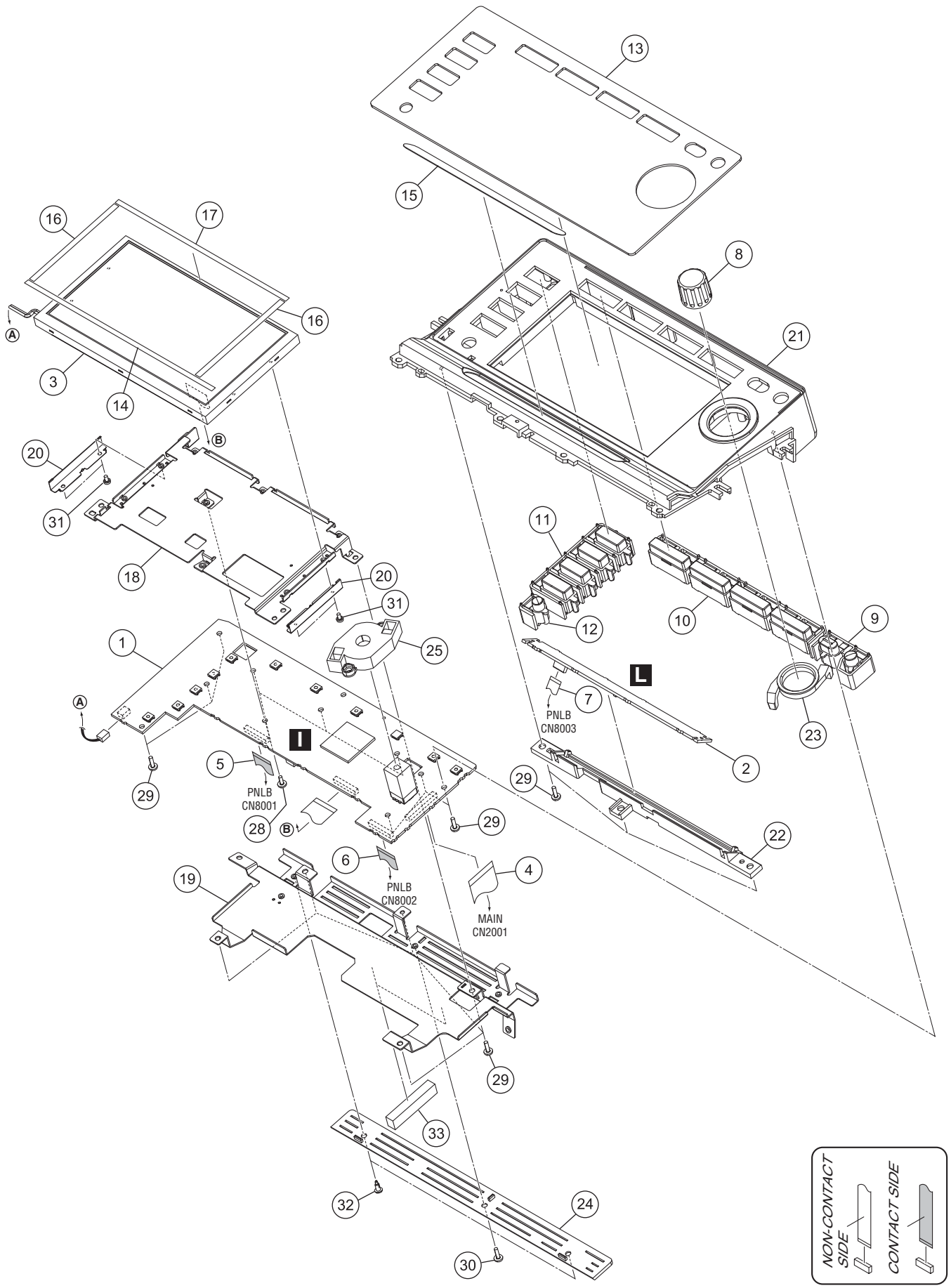
9.4 JOG DIAL SECTION



JOG DIAL SECTION PARTS LIST

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

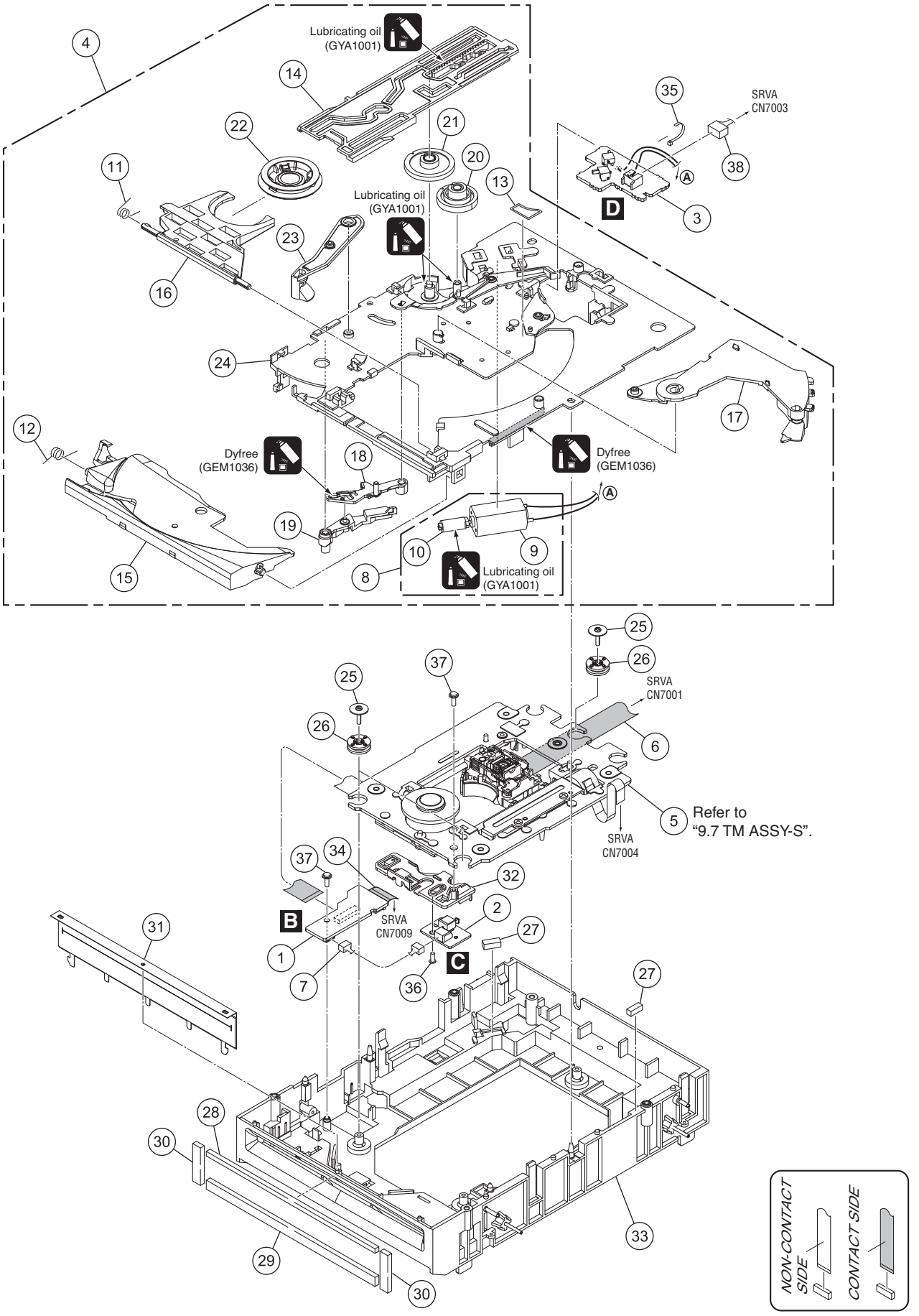
9.5 DISPLAY SECTION



DISPLAY SECTION PARTS LIST

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

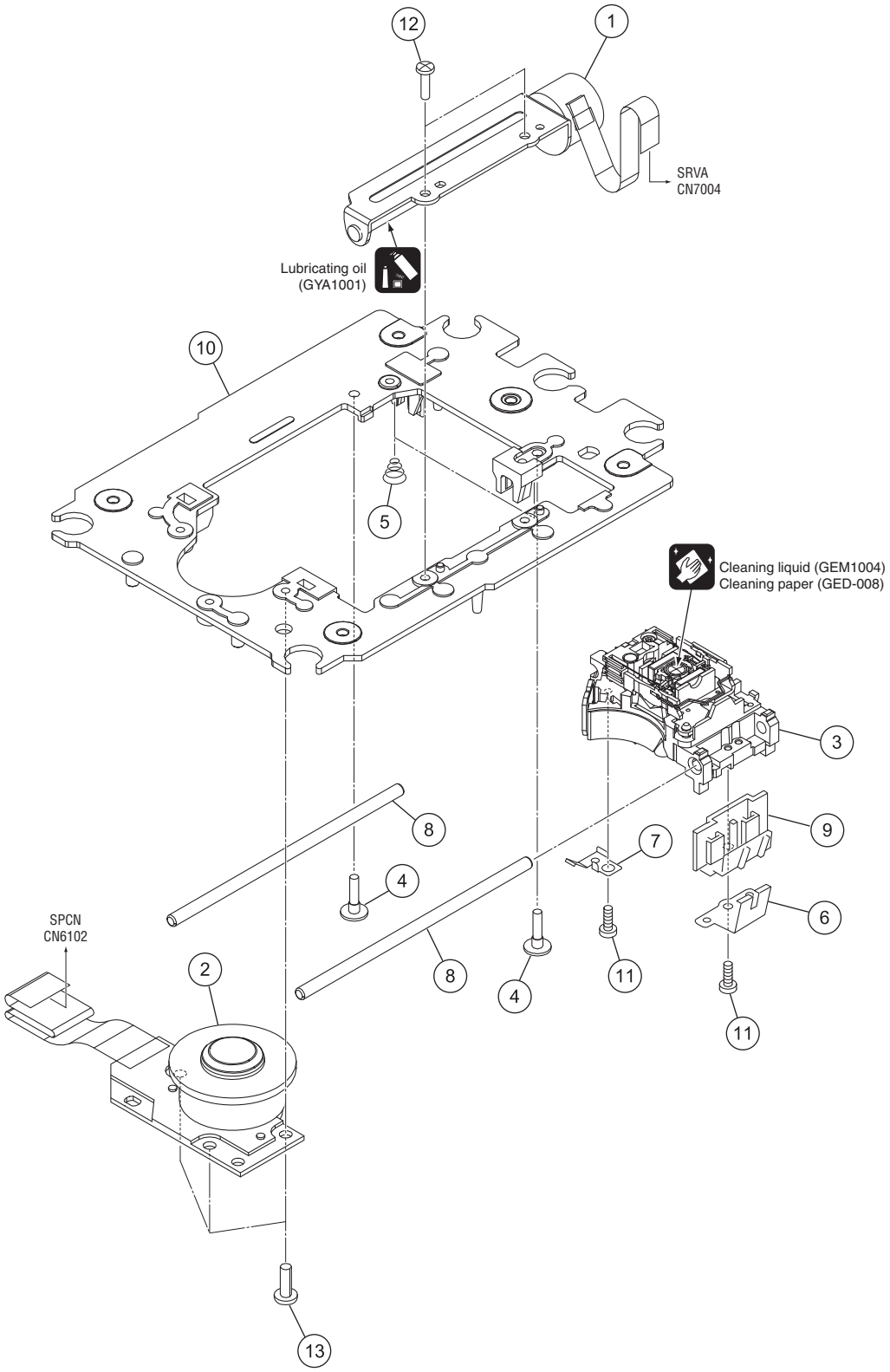
9.6 SLOTIN MECHA SECTION



SLOTIN MECHA SECTION PARTS LIST

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

9.7 TM ASSY-S

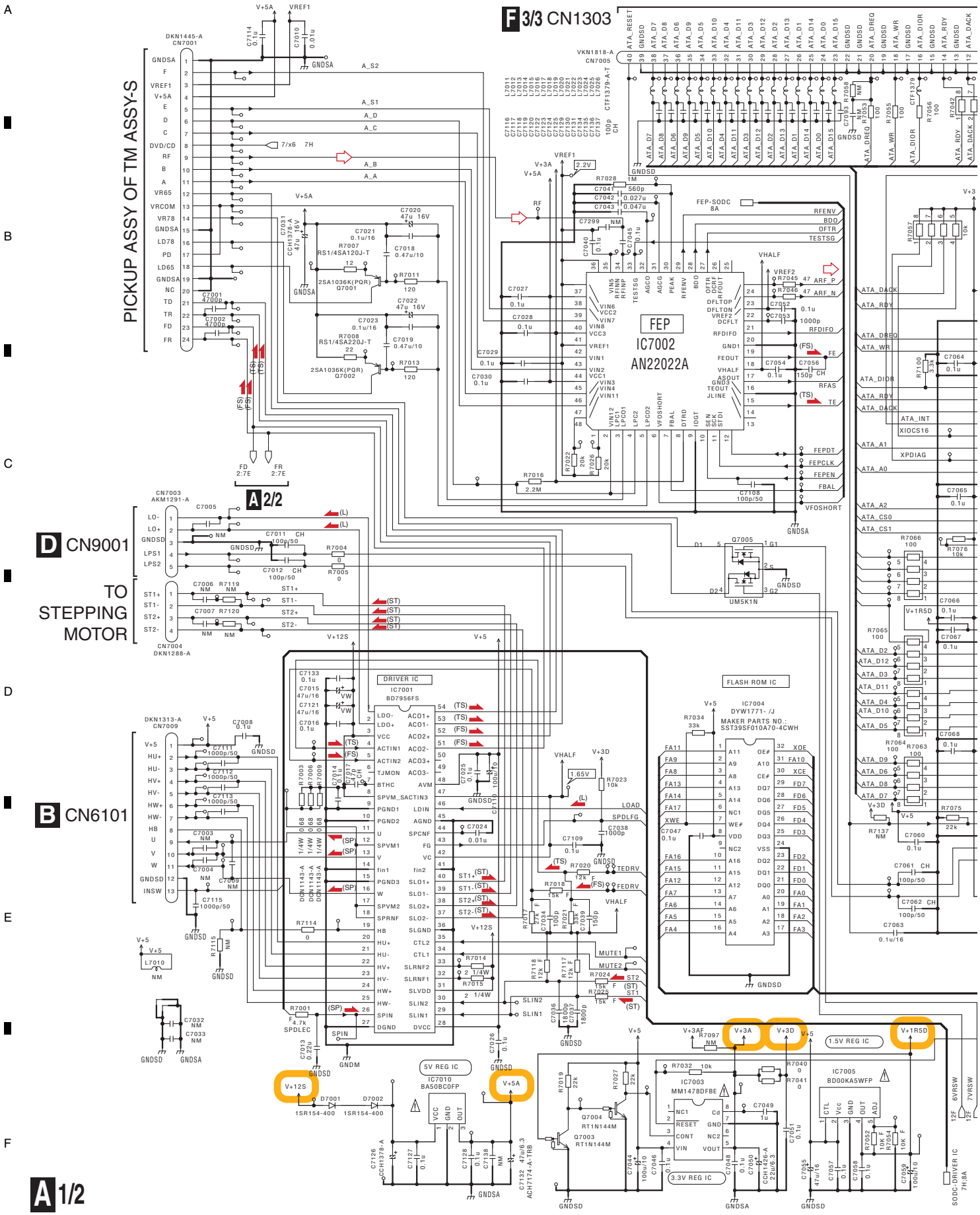

12
1
SRVA
CN7004
Lubricating oil
(GYA1001)
10
5
Cleaning liquid (GEM1004)
Cleaning paper (GED-008)
3
8
9
7
4
6
SPCN
CN6102
2
8
4
11
11
13

TM ASSY-S PARTS LIST

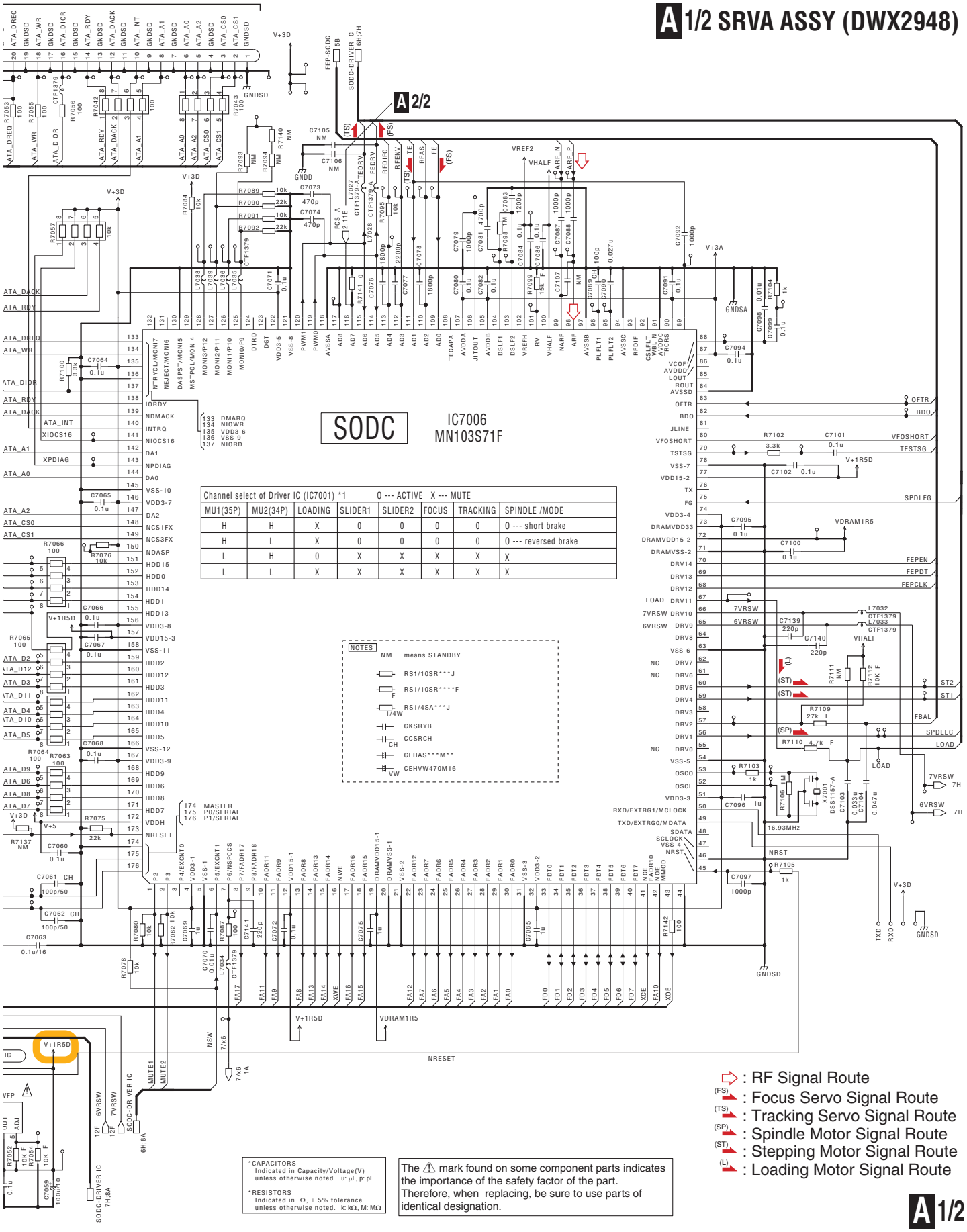
Mark	No.	Description	Part No.
NSP	1	Stepping Motor (SK)	DXM1227
NSP	2	Spindle Motor G11 (N)	DXM1231
NSP	3	05SD Pickup Assy R	OWY8075
NSP	4	Adjust Screw	DBA1263
NSP	5	Skew Spring (SWPB)	DBH1437
NSP	6	Joint Spring (J)	DBK1261
NSP	7	Slider Spring G11 (J)	DBK1262
NSP	8	Guide Shaft (S)	DLA1918
	9	Joint	DNK3858
NSP	10	Mounting Plate G11 (J)	DNK4307
	11	Tapping Screw 04	VBA1092
	12	Screw	BPZ20P080FTC
	13	Screw	BPZ26P080FTC

10. SCHEMATIC DIAGRAM

10.1 SRVA ASSY (1/2)



A 1/2 SRVA ASSY (DWX2948)



Channel select of Driver IC (IC7001) *1		O --- ACTIVE X --- MUTE					
MU1(35P)	MU2(34P)	LOADING	SLIDER1	SLIDER2	FOCUS	TRACKING	SPINDLE /MODE
H	H	X	0	0	0	0	O --- short brake
H	L	X	0	0	0	0	O --- reversed brake
L	H	0	X	X	X	X	X
L	L	X	X	X	X	X	X

NOTES
NM means STANDBY
RS1/10SR***J
RS1/10SR****F
RS1/4SA***J 1/4W
CKSRYB
CCSRCH CH
CEHAS***M** CH
CEHVW470M16 VW

: RF Signal Route
(FS) : Focus Servo Signal Route
(TS) : Tracking Servo Signal Route
(SP) : Spindle Motor Signal Route
(ST) : Stepping Motor Signal Route
(L) : Loading Motor Signal Route

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

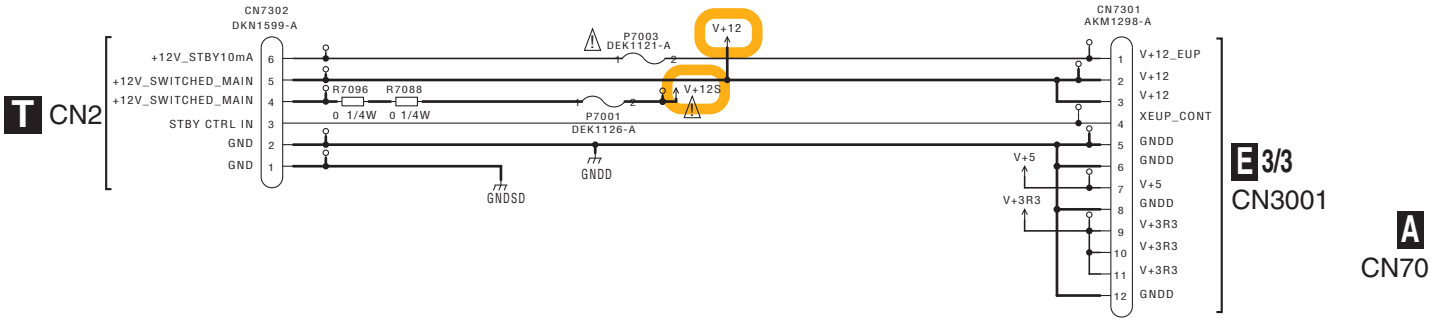
*RESISTORS
Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ

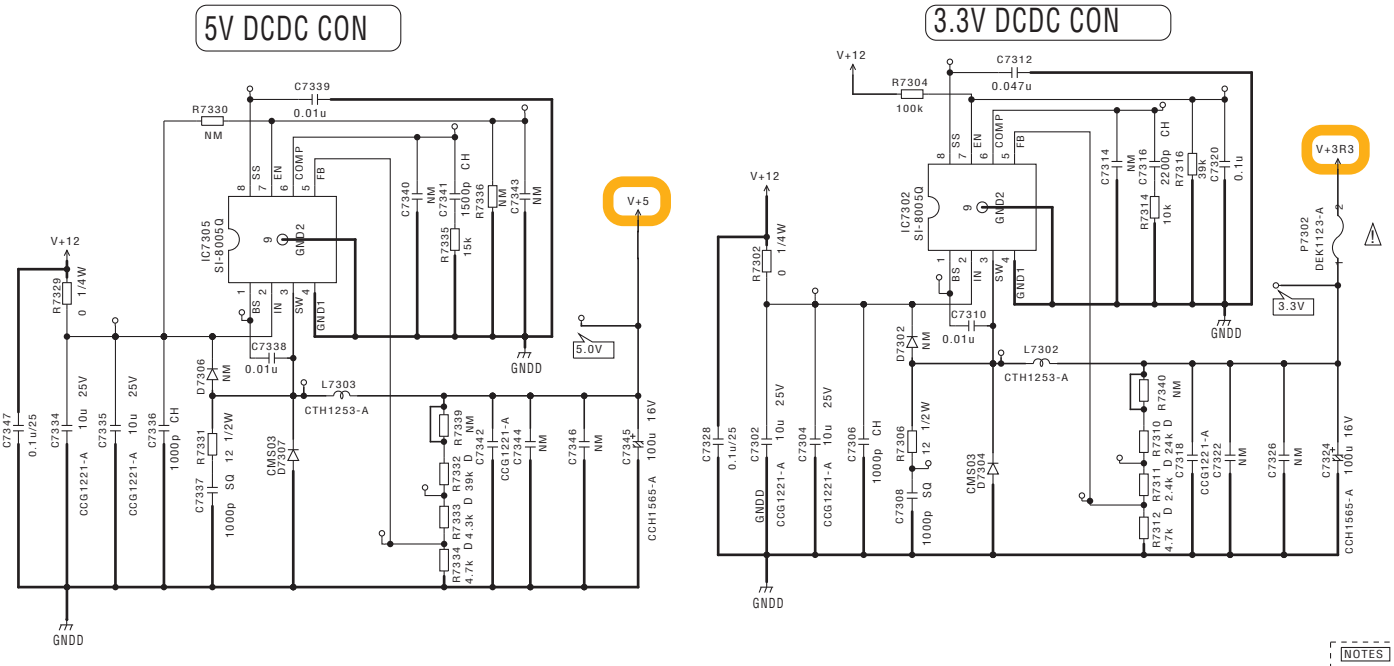
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

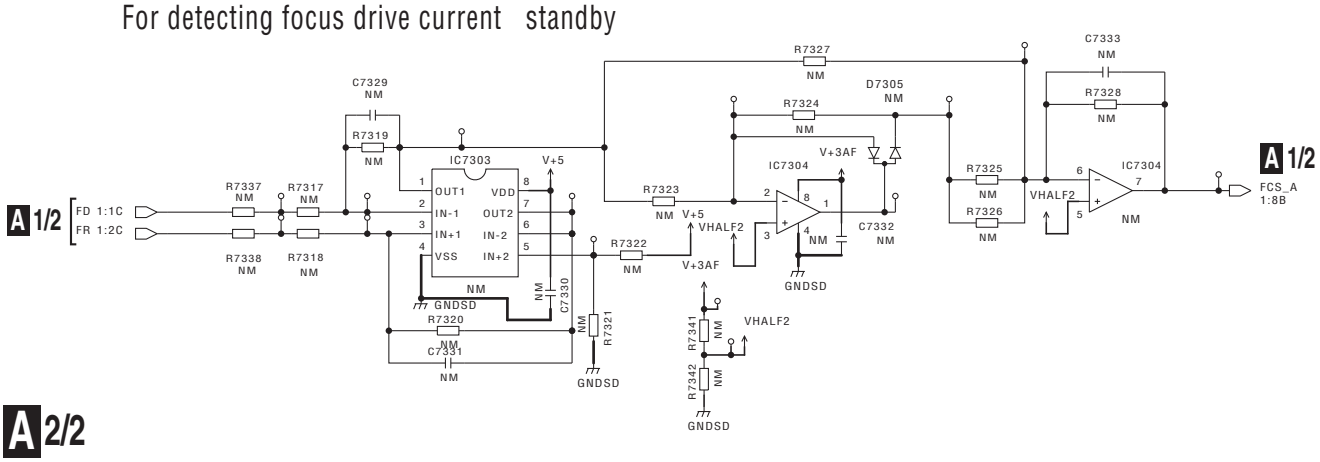
A 1/2

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

A 2/2 SRVA ASSY (DWX2948)







NOTES
NM

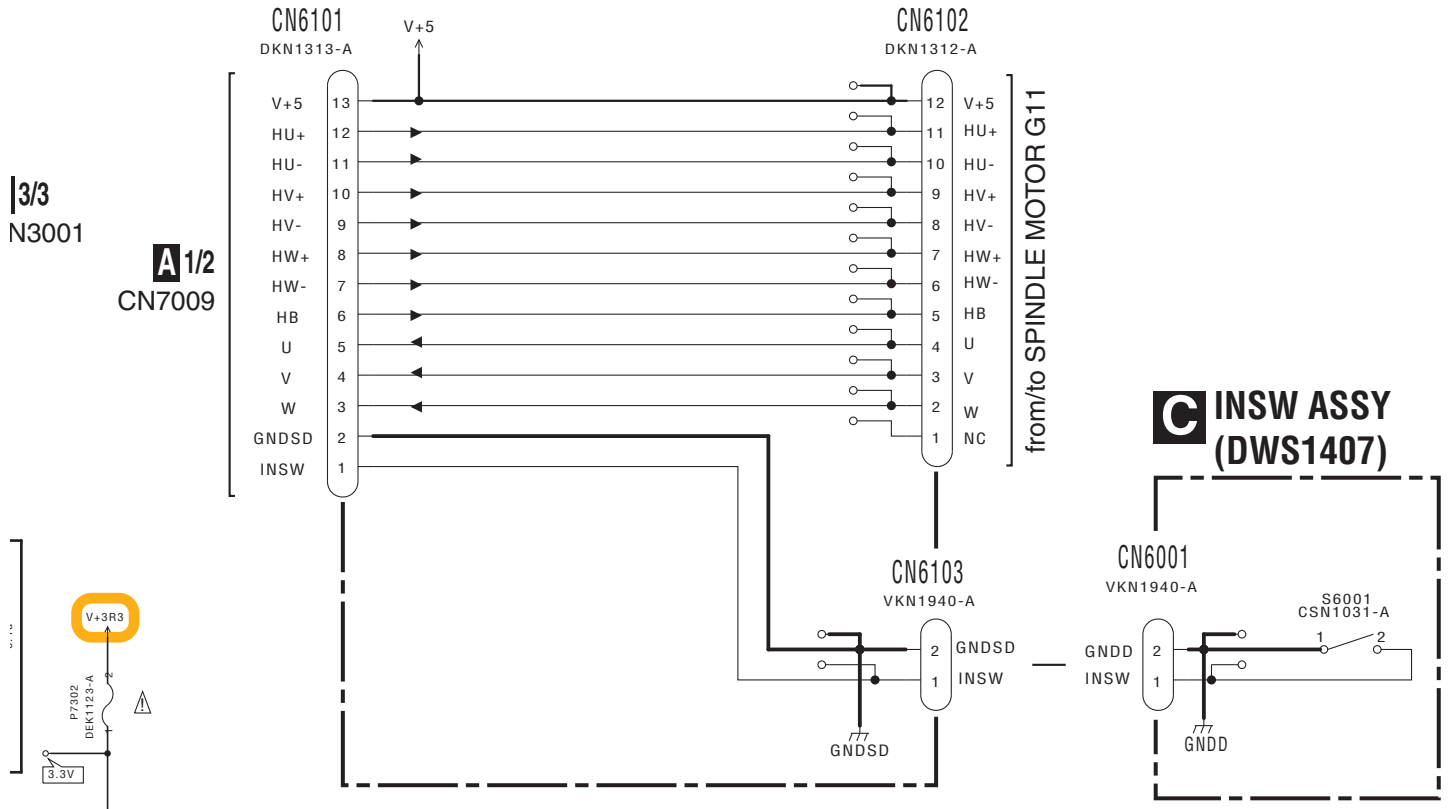
*CAPACITORS
Indicated in
unless other

*RESISTORS
Indicated in
unless other

The ⚠ ma
the importa
Therefore,
identical de

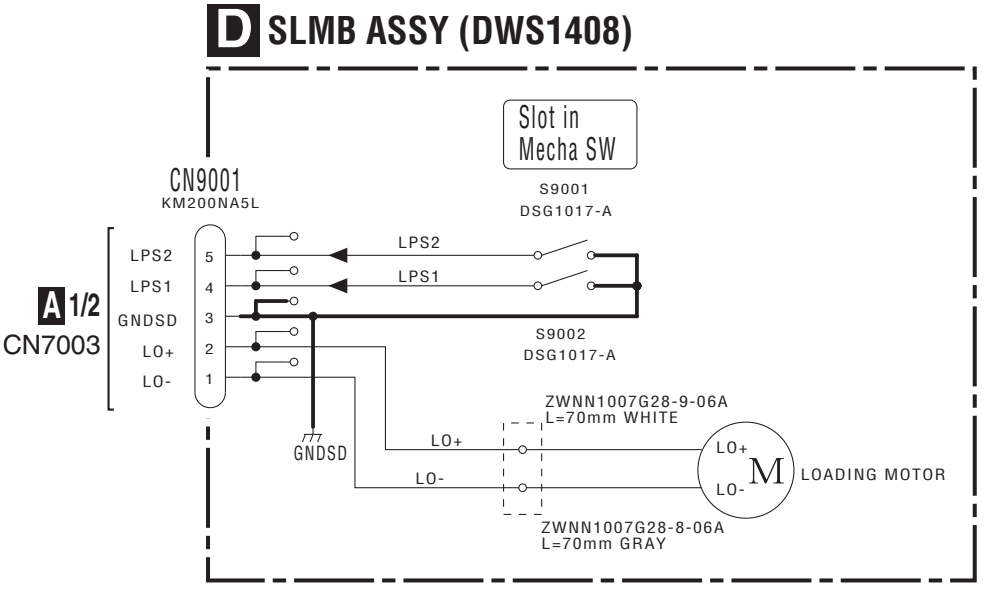
A 2/2

B SPCN ASSY (DWX2979)



C INSW ASSY (DWS1407)

D SLMB ASSY (DWS1408)



A 1/2
FCS_A
1:8B

NOTES
NM means STANDBY
RS1/10SR***J
RS1/10SR****F
RS1/4SA***J 1/4W
RST1/2SP*** 1/2W
CKSRYB
CCSRCH CH
CKSQYB SQ

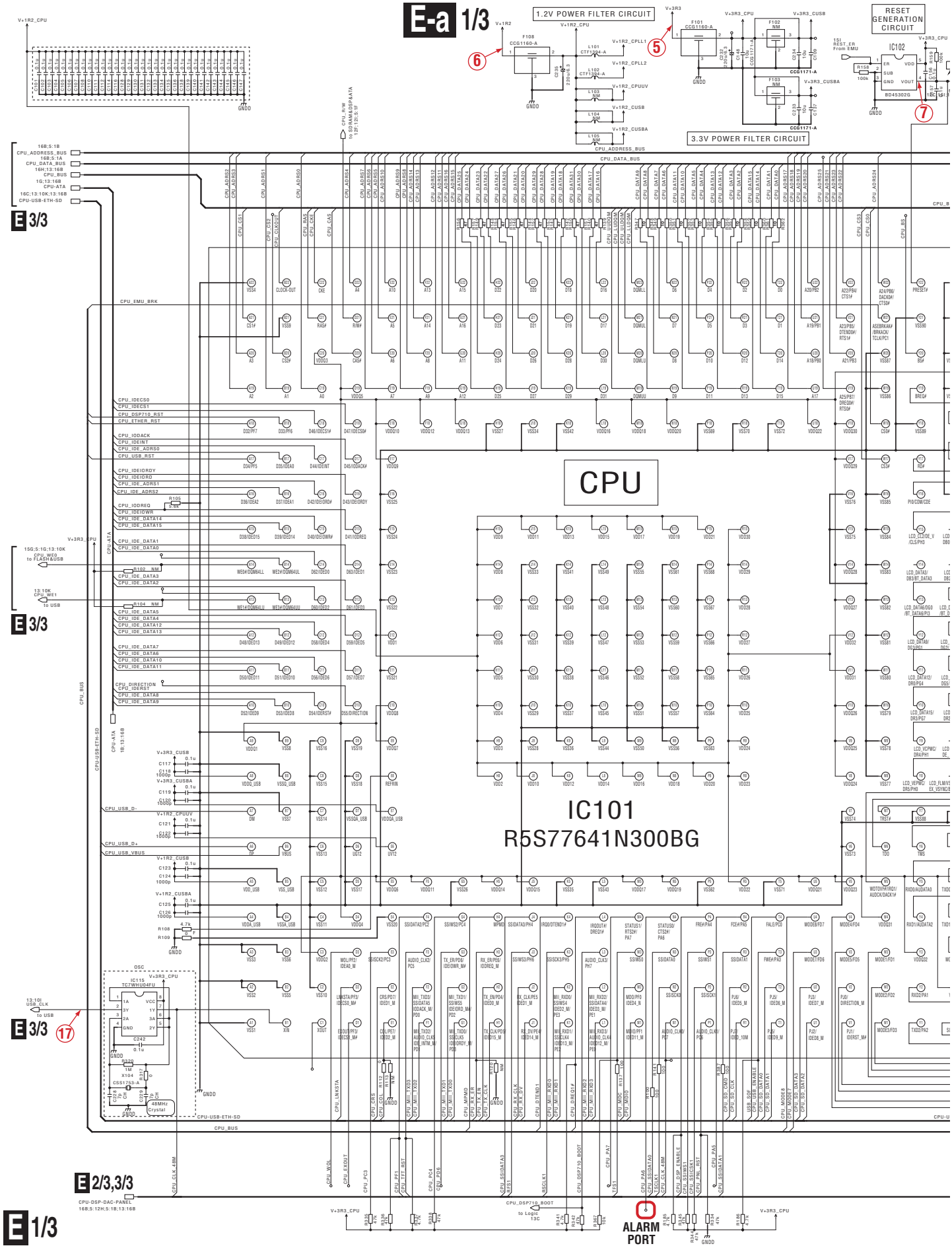
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u: µF, p: pF

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

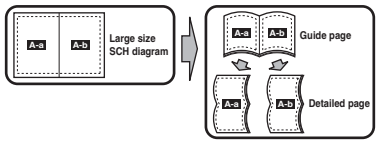
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A 2/2 B C D

10.3 MAIN ASSY (1/3)



E 1/3 MAIN ASSY (DWG1660)



E 2/3
E 3/3
E 1/3

RESET GENERATION CIRCUIT

IC102 BD45302G

IC108 K4S561632J-UC75 Low

IC109 K4S561632J-UC75 High

256M SDRAM

FLASH ROM

IC114 S29GL032N90TFI030

for Debug

IC124 TC7WHU04FU

IC122 TC7W08FU

IC123 TC74VHC08FTS1

IC119 TC74LCX32FTS1

IC120 TC7SH04FU

CN101 CKS5064-A

RST logical circuit

CS distribute circuit

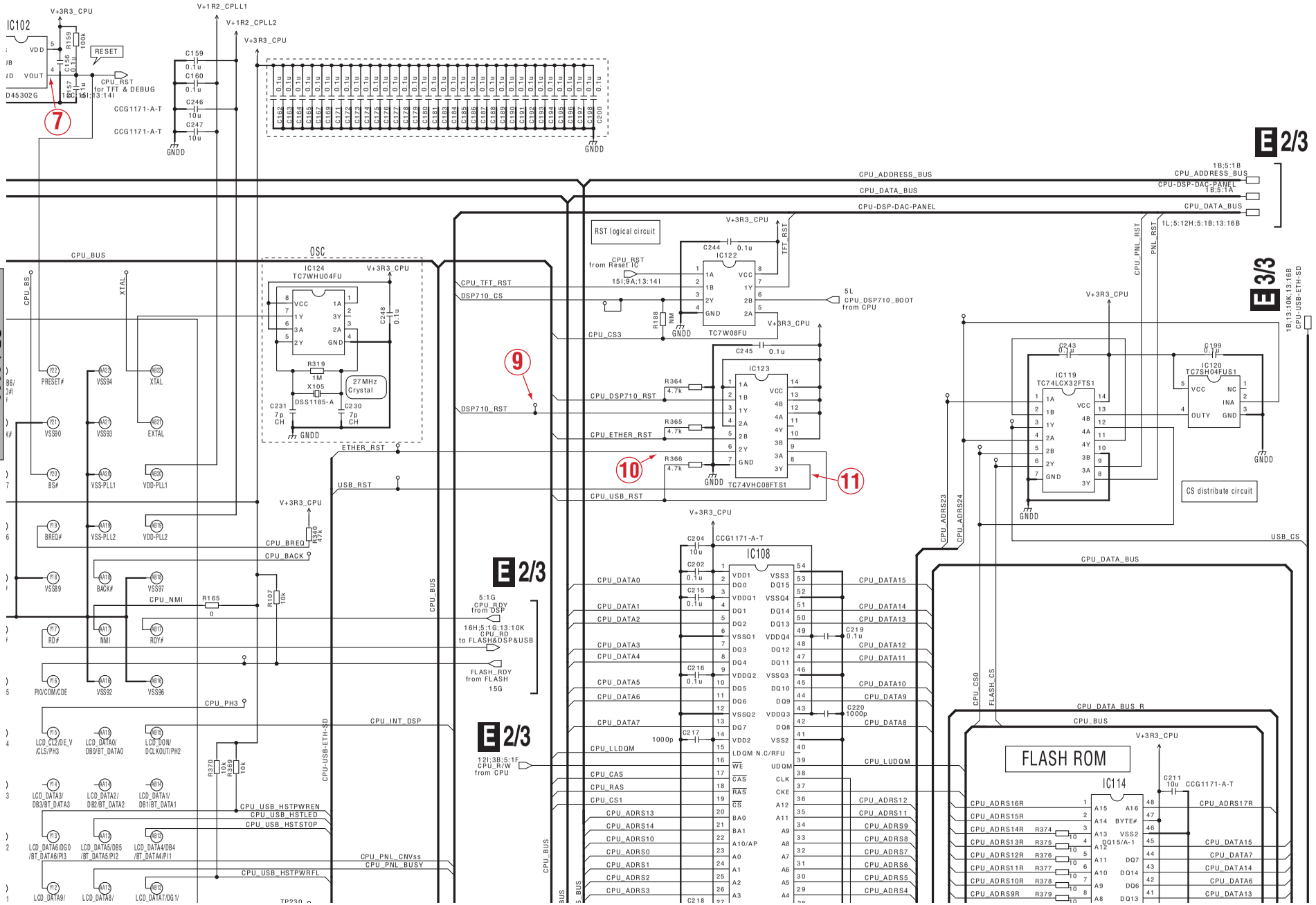
OSC

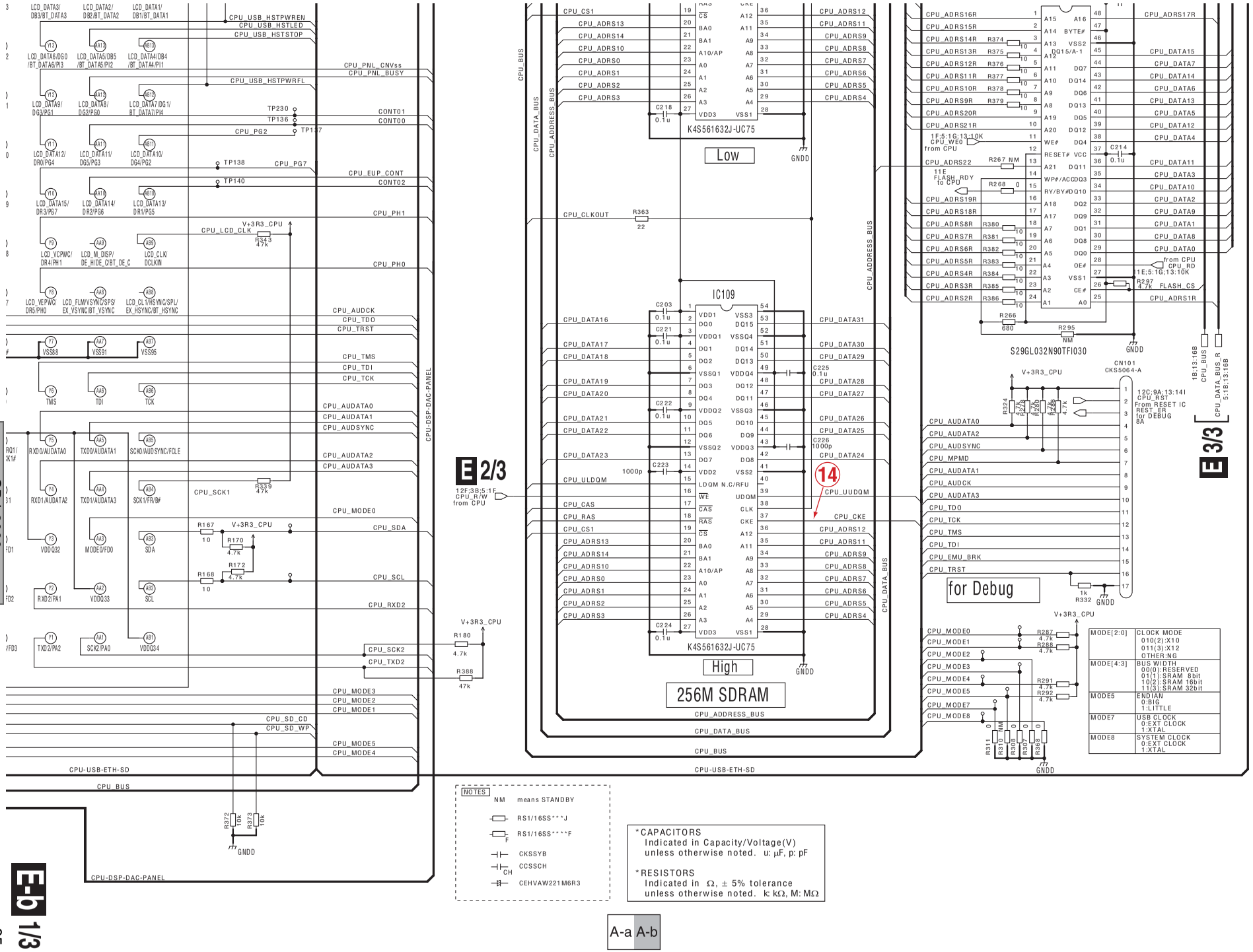
27MHz crystal

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

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

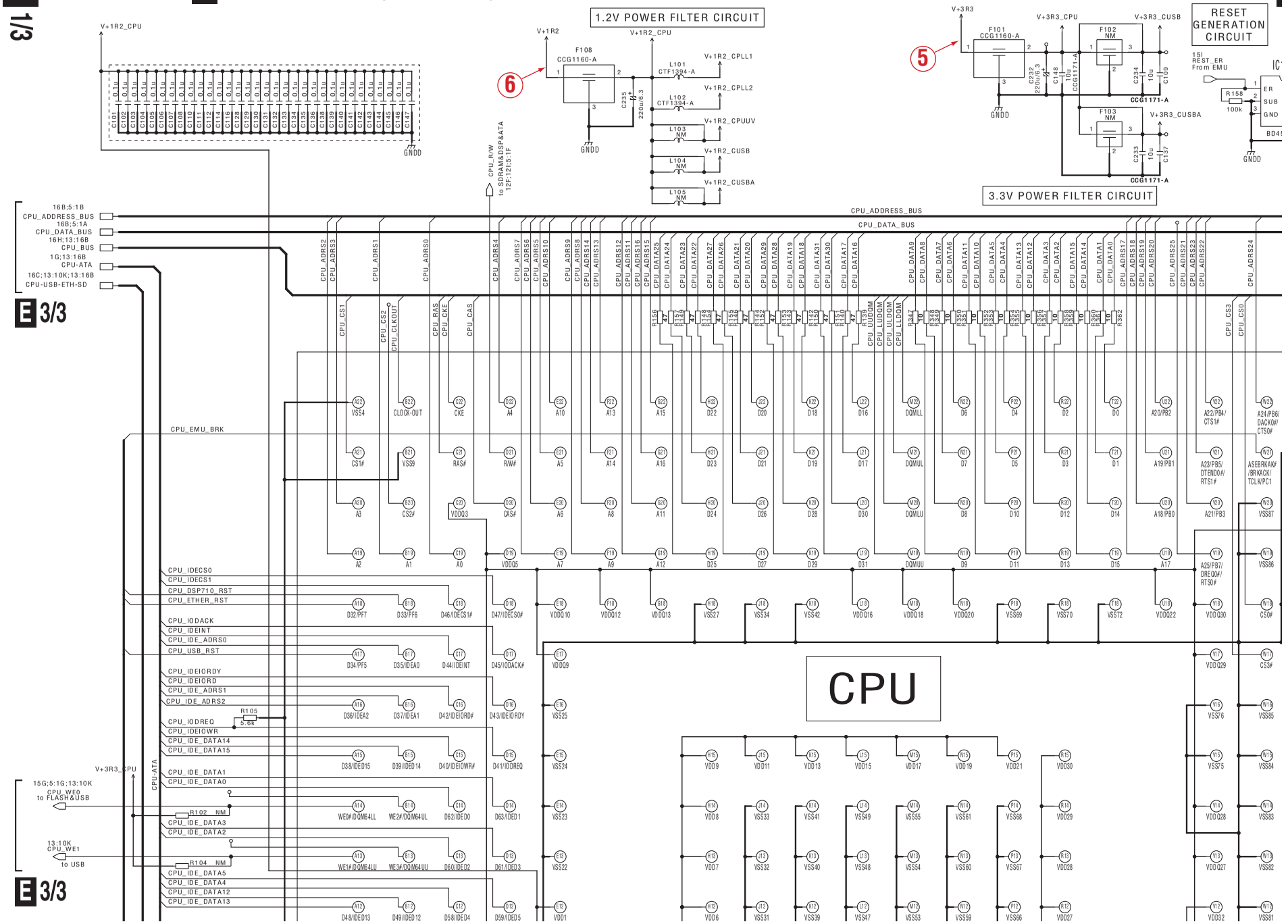
*RESISTORS
Indicated in Ω, ± 5% tolerance
unless otherwise noted. k: kΩ, M: MΩ

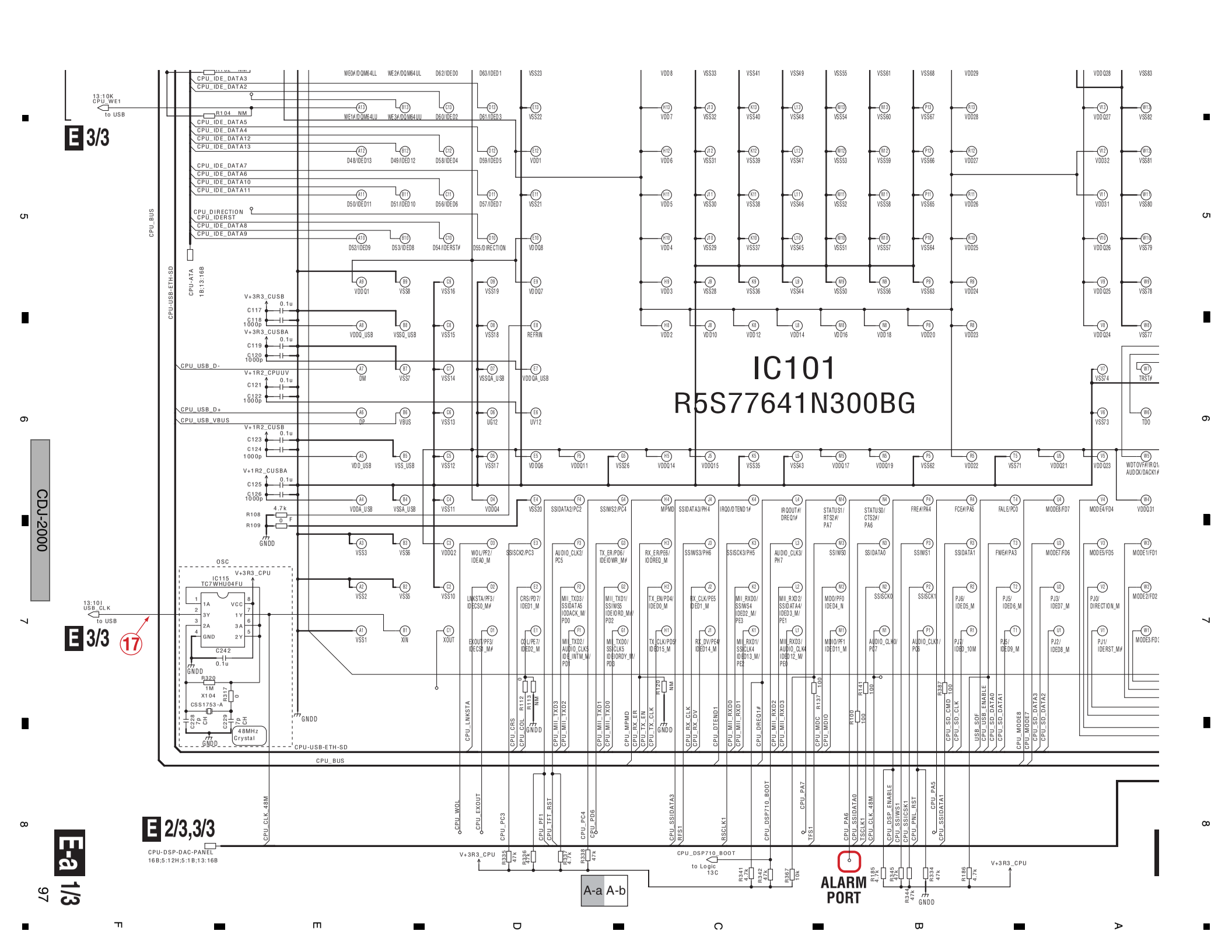

IC102
V+3R3_CPU
RESET
CPU_RST
for TFT & DEBUG
V+1R2_CPLL1
V+1R2_CPLL2
CCG1171-A-T
GNDD
CPU_ADDRESS_BUS
CPU_DATA_BUS
CPU-DSP-DAC-PANEL
E 2/3
E 3/3
CPU_BUS
OSC
IC124
TC7WHU04FU
27MHz Crystal
DSS1185-A
ETHER_RST
USB_RST
CPU_BREQ
CPU_BACK
CPU_NMI
CPU_PH3
CPU_INT_DSP
CPU_USB_HSTPWREN
CPU_USB_HSTLED
CPU_USB_HSTSTOP
CPU_PNL_CNVss
CPU_PNL_BUSY
CPU_USB_HSTPWRFL
CPU_TFT_RST
DSP710_CS
DSP710_RST
CPU_CS3
CPU_DSP710_RST
CPU_ETHER_RST
CPU_USB_RST
RST logical circuit
IC122
TC7W08FU
IC123
TC74VHC08FTS1
IC108
CPU_DATA0
CPU_DATA1
CPU_DATA2
CPU_DATA3
CPU_DATA4
CPU_DATA5
CPU_DATA6
CPU_DATA7
CPU_LLDQM
CPU_CAS
CPU_RAS
CPU_CS1
CPU_ADRS13
CPU_ADRS14
CPU_ADRS10
CPU_ADRS0
CPU_ADRS1
CPU_ADRS2
CPU_ADRS3
CPU_ADRS4
CPU_ADRS5
CPU_ADRS6
CPU_ADRS7
CPU_ADRS8
CPU_ADRS9
CPU_ADRS11
CPU_ADRS12
CPU_LUDQM
CPU_DATA8
CPU_DATA9
CPU_DATA10
CPU_DATA11
CPU_DATA12
CPU_DATA13
CPU_DATA14
CPU_DATA15
IC119
TC74LCX32FTS1
IC120
TC7SH04FUS1
CS distribute circuit
USB_CS
CPU_CS0
FLASH_CS
CPU_DATA_BUS_R
FLASH ROM
IC114
CPU_ADRS16R
CPU_ADRS15R
CPU_ADRS14R
CPU_ADRS13R
CPU_ADRS12R
CPU_ADRS11R
CPU_ADRS10R
CPU_ADRS9R
CPU_ADRS17R
CPU_DATA7
CPU_DATA14
CPU_DATA6
CPU_DATA13
CPU-USB-ETH-3D
CPU-USB-ETH-SD
5:1G CPU_RDY from DSP
16H:5;1G;13:10K CPU_RD to FLASH&DSP&USB
FLASH_RDY from FLASH 15G
12I;3B;5:1F CPU_R/W from CPU
5L CPU_DSP710_BOOT from CPU
CPU_PNL_RST
1B;5:1B CPU_ADDRESS_BUS
CPU-DSP-DAC-PANEL 1B;5:1A
CPU_DATA_BUS 1L;5:12H;5:1B;13:16B
18:13:10K:13:16B CPU-USB-ETH-SD
7
9
10
11


CDJ-2000
E-b 1/3
95
E 2/3
E 3/3
CPU-DSP-DAC-PANEL
CPU_BUS
CPU_ADDRESS_BUS
CPU_DATA_BUS
CPU-USB-ETH-SD
CPU_USB_HSTPWREN
CPU_USB_HSTLED
CPU_USB_HSTSTOP
CPU_USB_HSTPWRFL
CPU_PNL_CNVss
CPU_PNL_BUSY
CONT01
CONT00
CPU_EUP_CONT
CONT02
CPU_PH1
CPU_PH0
CPU_AUDCK
CPU_TDO
CPU_TRST
CPU_TMS
CPU_TDI
CPU_TCK
CPU_AUDATA0
CPU_AUDATA1
CPU_AUDSYNC
CPU_AUDATA2
CPU_AUDATA3
CPU_MODE0
CPU_SDA
CPU_SCL
CPU_RXD2
CPU_SCK2
CPU_TXD2
CPU_MODE3
CPU_MODE2
CPU_MODE1
CPU_SD_CD
CPU_SD_WP
CPU_MODE5
CPU_MODE4
CPU_SCK1
CPU_LCD_CLK
V+3R3_CPU
TP230
TP136
TP137
TP138
TP140
CPU_PG2
CPU_PG7
LCD_DATA3/ DB3/BT_DATA3
LCD_DATA2/ DB2/BT_DATA2
LCD_DATA1/ DB1/BT_DATA1
LCD_DATA6/DG0 /BT_DATA6/PI3
LCD_DATA5/DB5 /BT_DATA5/PI2
LCD_DATA4/DB4 /BT_DATA4/PI1
LCD_DATA9/ DG3/PG1
LCD_DATA8/ DG2/PG0
LCD_DATA7/DG1/ BT_DATA7/PI4
LCD_DATA12/ DR0/PG4
LCD_DATA11/ DG5/PG3
LCD_DATA10/ DG4/PG2
LCD_DATA15/ DR3/PG7
LCD_DATA14/ DR2/PG6
LCD_DATA13/ DR1/PG5
LCD_VCPWC/ DR4/PH1
LCD_M_DISP/ DE_H/DE_C/BT_DE_C
LCD_CLK/ DCLKIN
LCD_VEPWC/ DR5/PH0
LCD_FLM/VSYNC/SPS/ EX_VSYNC/BT_VSYNC
LCD_CLT/HSYNC/SPL/ EX_HSYNC/BT_HSYNC
VSS88
VSS91
VSS95
TMS
TDI
TCK
RXD0/AUDATA0
TXD0/AUDATA1
SCK0/AUDSYNC/FCLE
RXD1/AUDATA2
TXD1/AUDATA3
SCK1/FR/B#
VDDQ32
MODE0/FD0
SDA
RXD2/PA1
VDDQ33
SCL
TXD2/PA2
SCK2/PA0
VDDQ34
R167 10
R168 10
R170 4.7k
R172 4.7k
R180 4.7k
R388 47k
R339 47k
R343 47k
R372 10k
R373 10k
GNDD
CPU_CS1
CPU_ADRS13
CPU_ADRS14
CPU_ADRS10
CPU_ADRS0
CPU_ADRS1
CPU_ADRS2
CPU_ADRS3
CPU_ADRS12
CPU_ADRS11
CPU_ADRS9
CPU_ADRS8
CPU_ADRS7
CPU_ADRS6
CPU_ADRS5
CPU_ADRS4
K4S561632J-UC75
Low
High
IC109
256M SDRAM
CPU_CLKOUT
R363 22
CPU_DATA16
CPU_DATA17
CPU_DATA18
CPU_DATA19
CPU_DATA20
CPU_DATA21
CPU_DATA22
CPU_DATA23
CPU_ULDQM
CPU_CAS
CPU_RAS
CPU_CKE
CPU_UUDQM
CPU_DATA31
CPU_DATA30
CPU_DATA29
CPU_DATA28
CPU_DATA27
CPU_DATA26
CPU_DATA25
CPU_DATA24
C203 0.1u
C221 0.1u
C222 0.1u
C223 1000p
C224 0.1u
C225 0.1u
C226 1000p
C218 0.1u
14
12F;3B;5:1F CPU_R/W from CPU
CPU_ADRS16R
CPU_ADRS15R
CPU_ADRS14R
CPU_ADRS13R
CPU_ADRS12R
CPU_ADRS11R
CPU_ADRS10R
CPU_ADRS9R
CPU_ADRS20R
CPU_ADRS21R
CPU_ADRS22
CPU_ADRS19R
CPU_ADRS18R
CPU_ADRS8R
CPU_ADRS7R
CPU_ADRS6R
CPU_ADRS5R
CPU_ADRS4R
CPU_ADRS3R
CPU_ADRS2R
CPU_ADRS17R
CPU_ADRS1R
CPU_DATA15
CPU_DATA7
CPU_DATA14
CPU_DATA6
CPU_DATA13
CPU_DATA5
CPU_DATA12
CPU_DATA4
CPU_DATA11
CPU_DATA3
CPU_DATA10
CPU_DATA2
CPU_DATA9
CPU_DATA1
CPU_DATA8
CPU_DATA0
1F;5:1G;13:10K CPU_WE0 from CPU
11E FLASH_RDY to CPU
from CPU CPU_RD
11E;5:1G;13:10K
R267 NM
R268 0
R374
R375
R376
R377
R378
R379
R380
R381
R382
R383
R384
R385
R386
R266 680
R295 NM
R297 4.7k FLASH_CS
C214 0.1u
S29GL032N90TFI030
CN101 CKS5064-A
12C;9A;13:14I CPU_RST From RESET IC REST_ER for DEBUG 8A
1B:13:16B CPU_BUS
CPU_DATA_BUS_R 5:1B;13:16B
R324 4.7k
R325 4.7k
R326 4.7k
R327 4.7k
R328 4.7k
R329 4.7k
CPU_AUDATA0
CPU_AUDATA2
CPU_AUDSYNC
CPU_MPMD
CPU_AUDATA1
CPU_AUDCK
CPU_AUDATA3
CPU_TDO
CPU_TCK
CPU_TMS
CPU_TDI
CPU_EMU_BRK
CPU_TRST
for Debug
R332 1k
GNDD
CPU_MODE0
CPU_MODE1
CPU_MODE2
CPU_MODE3
CPU_MODE4
CPU_MODE5
CPU_MODE7
CPU_MODE8
R287 4.7k
R288 4.7k
R291 4.7k
R292 4.7k
R311 0
R312 0
R308 0
R307 0
R306 0
MODE[2:0] CLOCK MODE 010(2):X10 011(3):X12 OTHER:NG
MODE[4:3] BUS WIDTH 00(0):RESERVED 01(1):SRAM 8bit 10(2):SRAM 16bit 11(3):SRAM 32bit
MODE5 ENDIAN 0:BIG 1:LITTLE
MODE7 USB CLOCK 0:EXT CLOCK 1:XTAL
MODE8 SYSTEM CLOCK 0:EXT CLOCK 1:XTAL
NOTES
NM means STANDBY
RS1/16SS****J
RS1/16SS****F
CKSSYB
CCSSCH
CEHVAW221M6R3
*CAPACITORS Indicated in Capacity/Voltage(V) unless otherwise noted. u: μF, p: pF
*RESISTORS Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ
A-a A-b

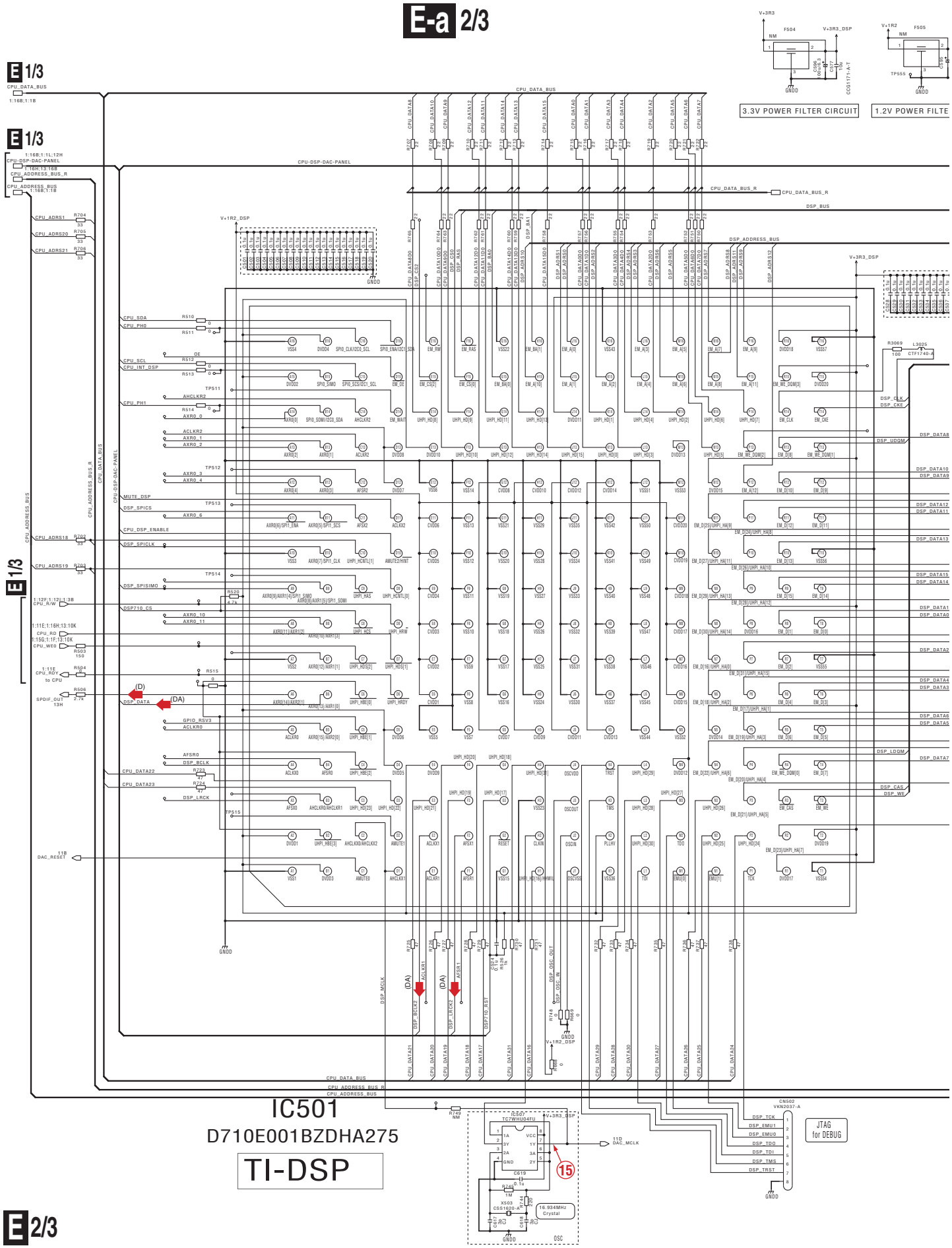
E 1/3 MAIN ASSY (DWG1660)

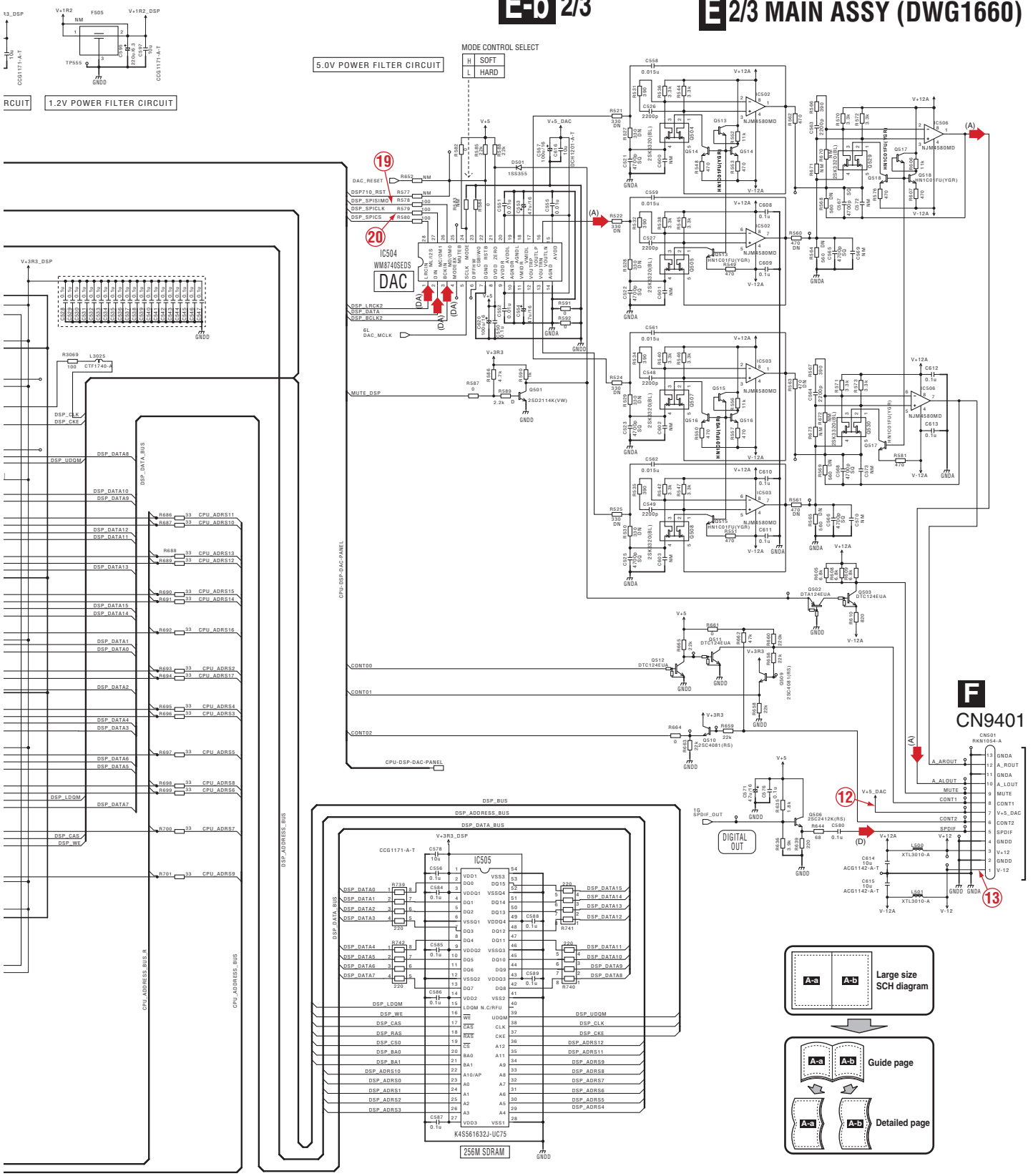
A-a A-b

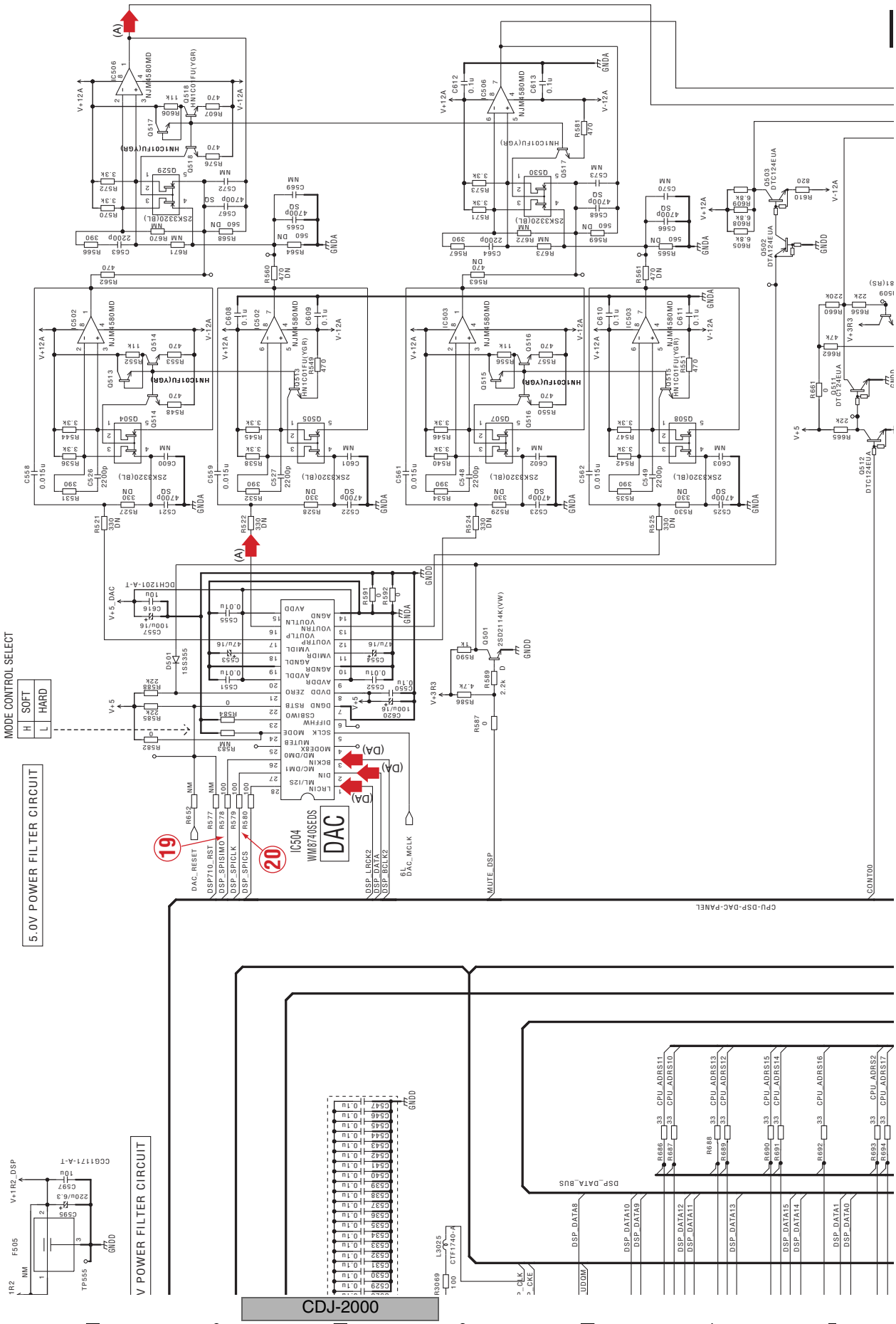


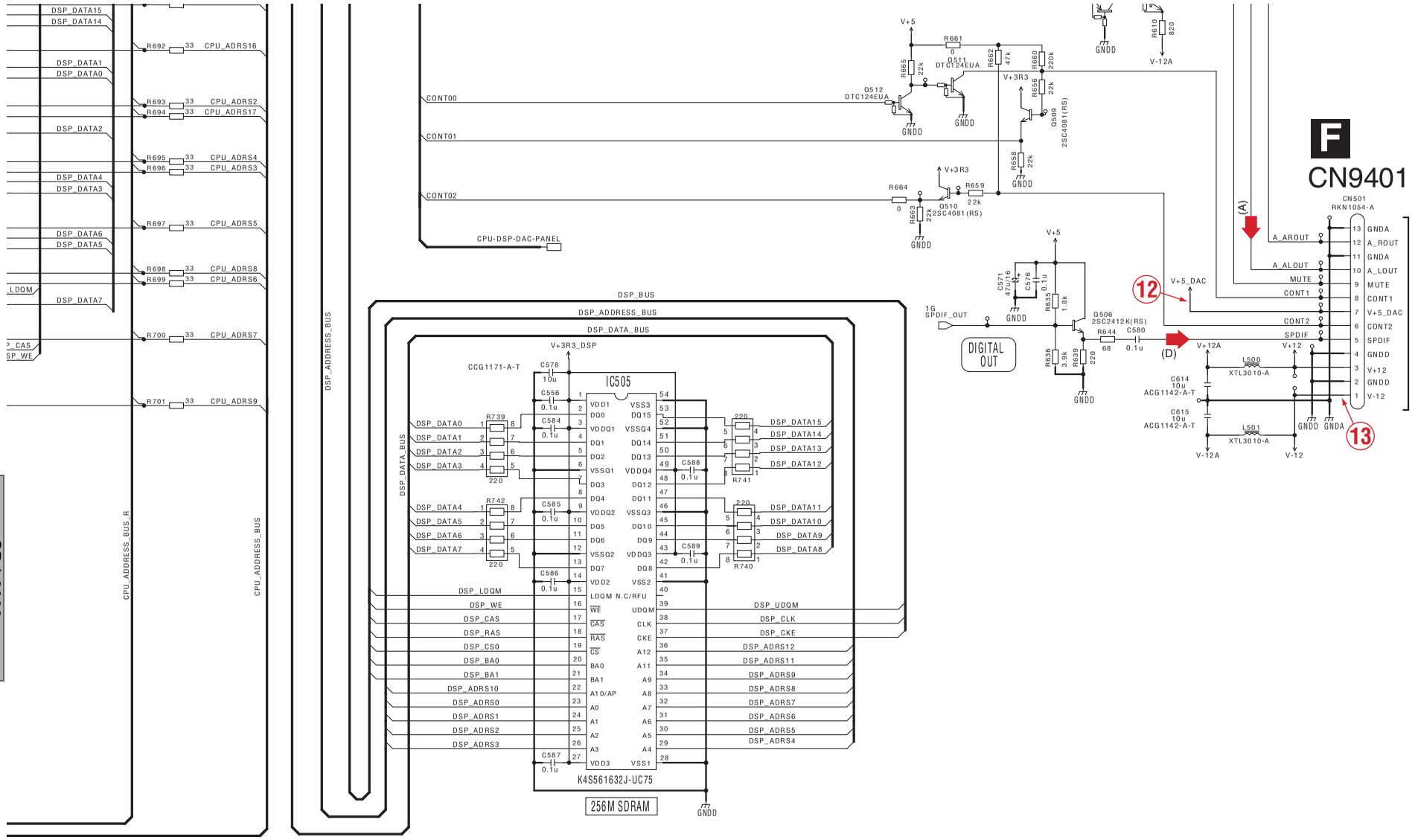

IC101
R5S77641N300BG
CDJ-2000
E 3/3
E 2/3,3/3
E-a 1/3
97
CPU_BUS
CPU-USB-ETH-SD
CPU-ATA
1B;13:16B
CPU-DSP-DAC-PANEL
16B;5:12H;5:1B;13:16B
13:10K
CPU_WE1
to USB
13:10I
USB_CLK
to USB
17
OSC
IC115
TC7WHU04FU
V+3R3_CPU
48MHz
Crystal
X104
CSS1753-A
C242
0.1u
GNDD
R320
1M
R317
0
C228
7p
CH
C229
7p
CH
CPU_IDE_DATA3
CPU_IDE_DATA2
R104 NM
CPU_IDE_DATA5
CPU_IDE_DATA4
CPU_IDE_DATA12
CPU_IDE_DATA13
CPU_IDE_DATA7
CPU_IDE_DATA6
CPU_IDE_DATA10
CPU_IDE_DATA11
CPU_DIRECTION
CPU_IDERST
CPU_IDE_DATA8
CPU_IDE_DATA9
CPU_USB_D-
CPU_USB_D+
CPU_USB_VBUS
V+3R3_CUSB
V+3R3_CUSBA
V+1R2_CPUUV
V+1R2_CUSB
V+1R2_CUSBA
0.1u
1000p
C117
C118
C119
C120
C121
C122
C123
C124
C125
C126
4.7k
R108
R109
0
F
CPU_LNKSTA
CPU_CRS
CPU_COL
R112
R113
CPU_MII_TXD3
CPU_MII_TXD2
CPU_MII_TXD1
CPU_MII_TXD0
CPU_MPMD
CPU_RX_ER
CPU_TX_EN
CPU_TX_CLK
R120
CPU_RX_CLK
CPU_RX_DV
CPU_DTEND1
CPU_MII_RXD0
CPU_MII_RXD1
CPU_DREQ1#
CPU_MII_RXD2
CPU_MII_RXD3
CPU_MDC
CPU_MDIO
R137
100
R141
R140
R367
R368
CPU_SD_CMD
CPU_SD_CLK
USB_SOF
CPU_USB_ENABLE
CPU_SD_DATA0
CPU_SD_DATA1
CPU_MODE8
CPU_MODE7
CPU_SD_DATA3
CPU_SD_DATA2
CPU_CLK_48M
CPU_WOL
CPU_EXOUT
CPU_PC3
CPU_PF1
CPU_TFT_RST
CPU_PC4
CPU_PD6
CPU_SSIDATA3
RFS1
RSCLK1
CPU_DSP710_BOOT
TFS1
CPU_PA7
CPU_PA6
CPU_SSIDATA0
TSCLK1
CPU_DSP_ENABLE
CPU_SSIWS1
CPU_SSICSK1
CPU_PNL_RST
CPU_PA5
CPU_SSIDATA1
V+3R3_CPU
R335
47K
R338
47K
R337
47K
R339
47K
CPU_DSP710_BOOT
to Logic
13C
R341
4.7k
R342
47K
R367
10k
R185
4.7k
R345
47K
R344
47K
R334
47K
R186
4.7k
ALARM
PORT
GNDD
A-a A-b

10.4 MAIN ASSY (2/3)




1.2V POWER FILTER CIRCUIT
5.0V POWER FILTER CIRCUIT
MODE CONTROL SELECT
H SOFT
L HARD
IC504
WM8740SEDS
DAC
IC505
K4S561632J-UC75
256M SDRAM
CN9401
DIGITAL OUT
CPU-DSP-DAC-PANEL
DSP_BUS
DSP_ADDRESS_BUS
DSP_DATA_BUS
Large size SCH diagram
Guide page
Detailed page
(DA) : Audio Data Signal Route
(A) : Analog Audio Signal Route
(D) : Digital Data Signal Route
*CAPACITORS
Indicated in Capacity/Voltage(V)
unless otherwise noted. u: µF, p: pF
*RESISTORS
Indicated in Ω, ± 5% tolerance
unless otherwise noted. k: kΩ, M: MΩ


MODE CONTROL SELECT
H SOFT
L HARD
5.0V POWER FILTER CIRCUIT
DAC
IC504
WM8740SEDS
CDJ-2000



NOTES

NM means STANDBY

RS1/16SS***J

RN1/16SE****D (DN)

RS1/16SS****D (D)

RAB4CQ***J (CQ)

CKSSYB

CCSSCJ (CJ)

CFHXSQ (SQ)

CEHVAW

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

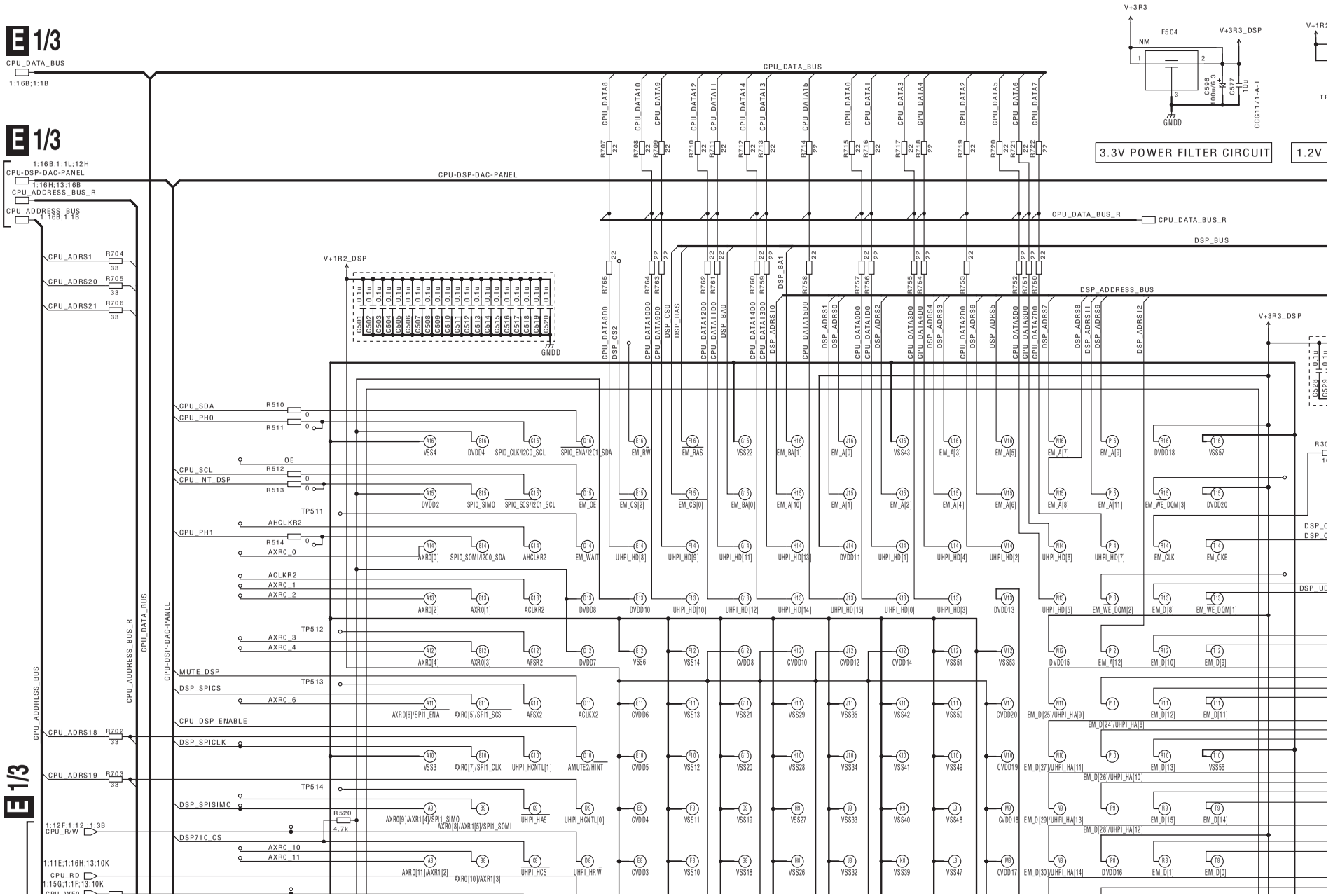
*RESISTORS
Indicated in Ω, ± 5% tolerance
unless otherwise noted. k: kΩ, M: MΩ

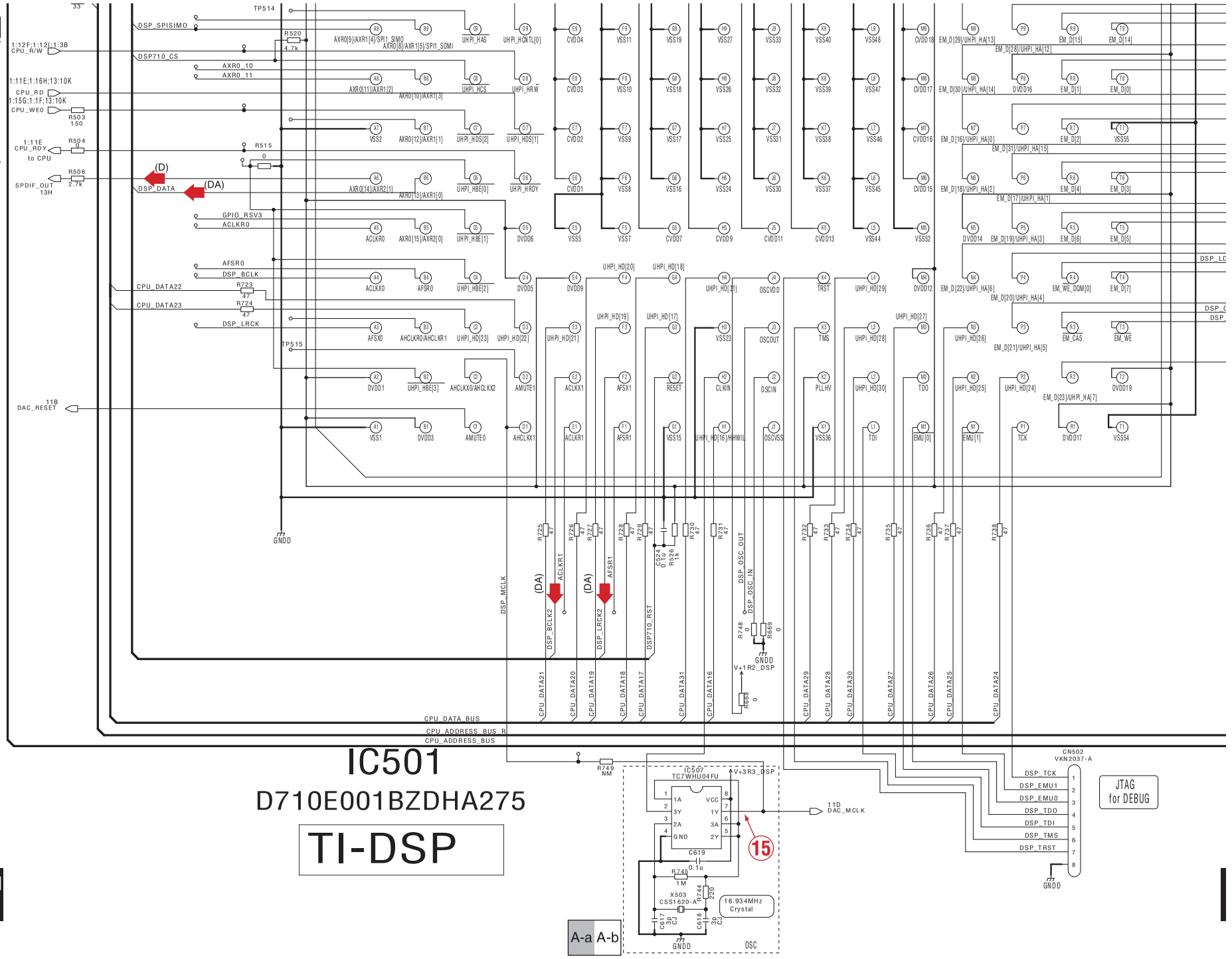
(DA) : Audio Data Signal Route

(A) : Analog Audio Signal Route

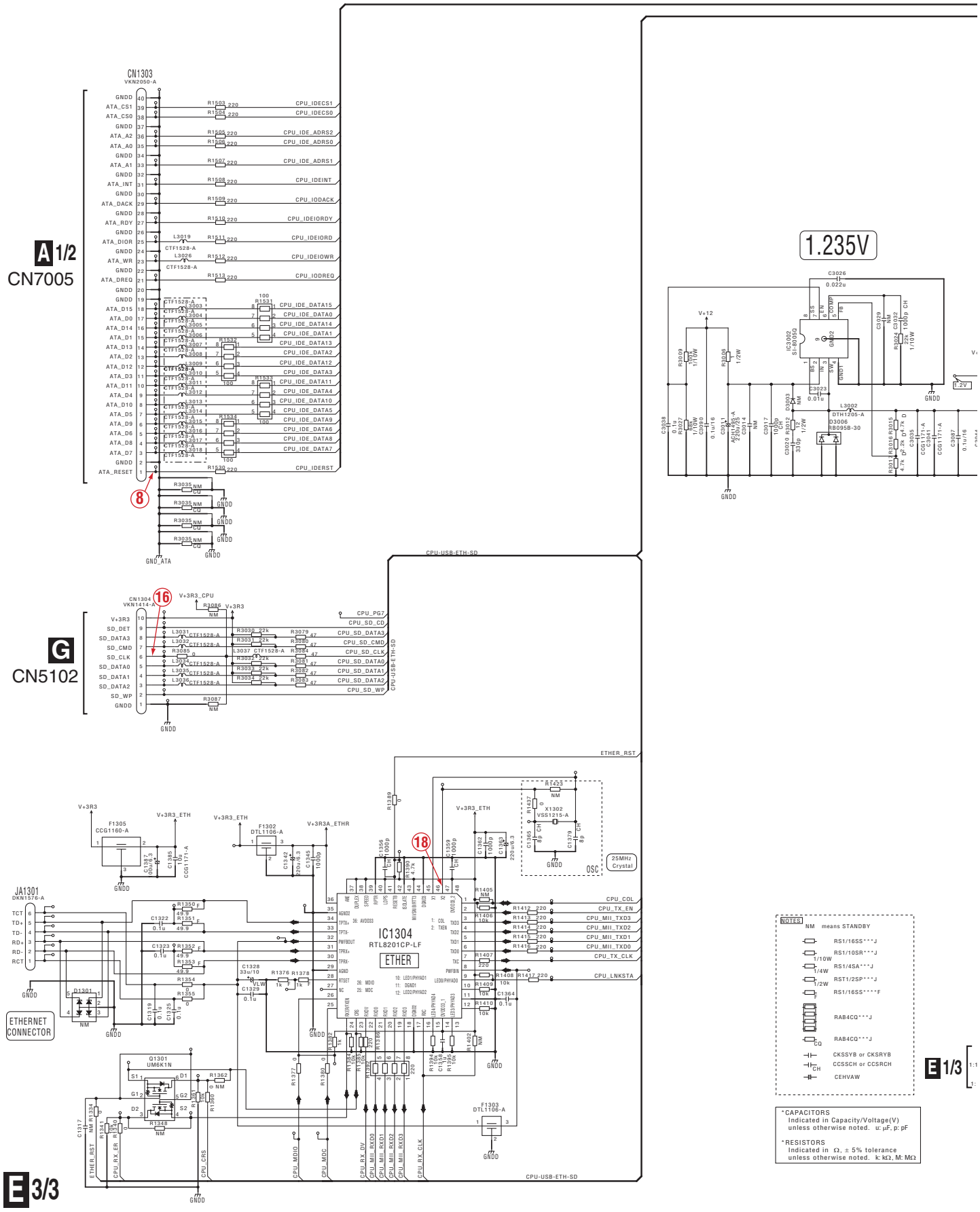
(D) : Digital Data Signal Route

A-a A-b

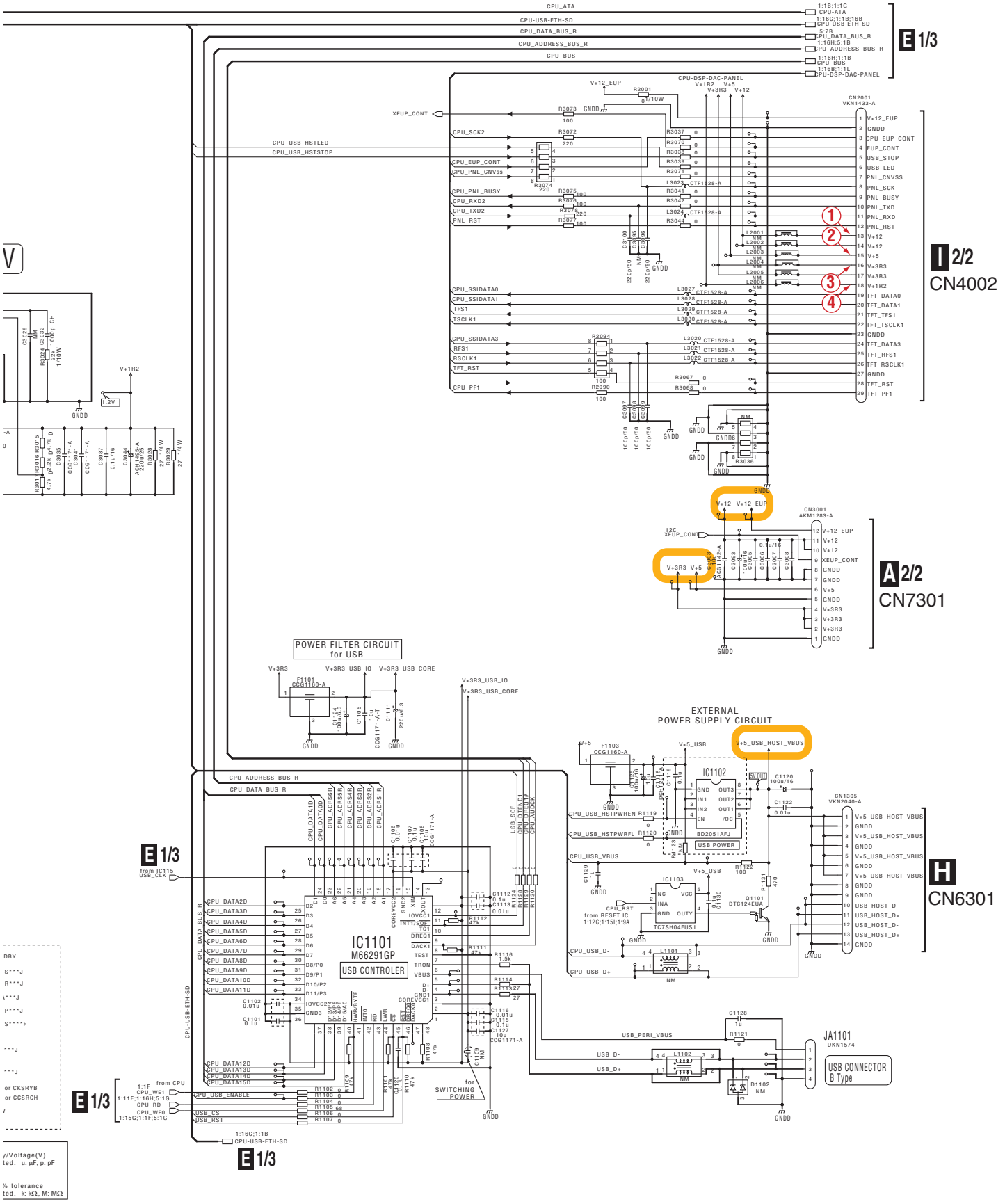

E 1/3
CPU_DATA_BUS
1:16B;1:1B
CPU_DATA_BUS
V+3R3
F504
NM
V+3R3_DSP
C596 100u/6.3
C577 10u
CCG1171-A-T
GNDD
3.3V POWER FILTER CIRCUIT
1.2V
E 1/3
1:16B;1:1L;12H
CPU-DSP-DAC-PANEL
1:16H;13:16B
CPU_ADDRESS_BUS_R
CPU_ADDRESS_BUS
1:16B;1:1B
CPU-DSP-DAC-PANEL
CPU_DATA_BUS_R
DSP_BUS
DSP_ADDRESS_BUS
V+1R2_DSP
GNDD
V+3R3_DSP
CPU_ADRS1 R704 33
CPU_ADRS20 R705 33
CPU_ADRS21 R706 33
CPU_SDA R510 0
CPU_PH0 R511 0
CPU_SCL R512 0
CPU_INT_DSP R513 0
TP511
CPU_PH1 R514 0
TP512
TP513
DSP_SPICS
CPU_DSP_ENABLE
DSP_SPICLK
TP514
DSP_SPISIMO
DSP710_CS
CPU_ADRS18 R702 33
CPU_ADRS19 R703 33
E 1/3
1:12F;1:12L;1:3B
CPU_R/W
1:11E;1:16H;13:10K
CPU_RD
1:15G;1:1F;13:10K
R520 4.7k
CPU_ADDRESS_BUS
CPU_ADDRESS_BUS_R
CPU_DATA_BUS
CPU-DSP-DAC-PANEL
OE
AHCLKR2
ACLKR2
AXR0_0
AXR0_1
AXR0_2
AXR0_3
AXR0_4
MUTE_DSP
AXR0_6
AXR0_10
AXR0_11
VSS4
DVDD4
SPI0_CLK/I2C0_SCL
SPI0_ENA/I2C1_SDA
EM_RW
EM_RAS
VSS22
EM_BA[1]
EM_A[0]
VSS43
EM_A[3]
EM_A[5]
EM_A[7]
EM_A[9]
DVDD18
VSS57
DVDD2
SPI0_SIMO
SPI0_SCS/I2C1_SCL
EM_OE
EM_CS[2]
EM_CS[0]
EM_BA[0]
EM_A[10]
EM_A[1]
EM_A[2]
EM_A[4]
EM_A[6]
EM_A[8]
EM_A[11]
EM_WE_DQM[3]
DVDD20
AXR0[0]
SPI0_SOMI/I2C0_SDA
AHCLKR2
EM_WAIT
UHPI_HD[8]
UHPI_HD[9]
UHPI_HD[11]
UHPI_HD[13]
DVDD11
UHPI_HD[1]
UHPI_HD[4]
UHPI_HD[2]
UHPI_HD[6]
UHPI_HD[7]
EM_CLK
EM_CKE
AXR0[2]
AXR0[1]
ACLKR2
DVDD8
DVDD10
UHPI_HD[10]
UHPI_HD[12]
UHPI_HD[14]
UHPI_HD[15]
UHPI_HD[0]
UHPI_HD[3]
DVDD13
UHPI_HD[5]
EM_WE_DQM[2]
EM_D[8]
EM_WE_DQM[1]
AXR0[4]
AXR0[3]
AFSR2
DVDD7
VSS6
VSS14
CVDD8
CVDD10
CVDD12
CVDD14
VSS51
VSS53
DVDD15
EM_A[12]
EM_D[10]
EM_D[9]
AXR0[6]/SPI1_ENA
AXR0[5]/SPI1_SCS
AFSX2
ACLKX2
CVDD6
VSS13
VSS21
VSS29
VSS35
VSS42
VSS50
CVDD20
EM_D[25]/UHPI_HA[9]
EM_D[24]/UHPI_HA[8]
EM_D[12]
EM_D[11]
VSS3
AXR0[7]/SPI1_CLK
UHPI_HCNTL[1]
AMUTE2/HINT
CVDD5
VSS12
VSS20
VSS28
VSS34
VSS41
VSS49
CVDD19
EM_D[27]/UHPI_HA[11]
EM_D[26]/UHPI_HA[10]
EM_D[13]
VSS56
AXR0[9]/AXR1[4]/SPI1_SIMO
AXR0[8]/AXR1[5]/SPI1_SOMI
UHPI_HAS
UHPI_HCNTL[0]
CVDD4
VSS11
VSS19
VSS27
VSS33
VSS40
VSS48
CVDD18
EM_D[29]/UHPI_HA[13]
EM_D[28]/UHPI_HA[12]
EM_D[15]
EM_D[14]
AXR0[11]/AXR1[2]
AXR0[10]/AXR1[3]
UHPI_HCS
UHPI_HRW
CVDD3
VSS10
VSS18
VSS26
VSS32
VSS39
VSS47
CVDD17
EM_D[30]/UHPI_HA[14]
DVDD16
EM_D[1]
EM_D[0]


IC501
D710E001BZDHA275
TI-DSP
CDJ-2000
E-a 2/3
103
E1
DSP_SPISIMO
CPU_R/W
DSP710_CS
AXR0_10
AXR0_11
CPU_RD
CPU_WE0
CPU_RDY to CPU
SPDIF_OUT
DSP_DATA
GPIO_RSV3
ACLKR0
AFSR0
DSP_BCLK
CPU_DATA22
CPU_DATA23
DSP_LRCK
DAC_RESET
TP514
TP515
GNDD
DSP_MCLK
DSP_BCLK2
DSP_LRCK2
DSP710_RST
DSP_OSC_OUT
DSP_OSC_IN
V+1R2_DSP
CPU_DATA_BUS
CPU_ADDRESS_BUS_R
CPU_ADDRESS_BUS
IC507
TC7WHU04FU
V+3R3_DSP
11D
DAC_MCLK
X503
CSS1620-A
16.934MHz
Crystal
OSC
CN502
VKN2037-A
DSP_TCK
DSP_EMU1
DSP_EMU0
DSP_TDO
DSP_TDI
DSP_TMS
DSP_TRST
JTAG
for DEBUG
A-a A-b

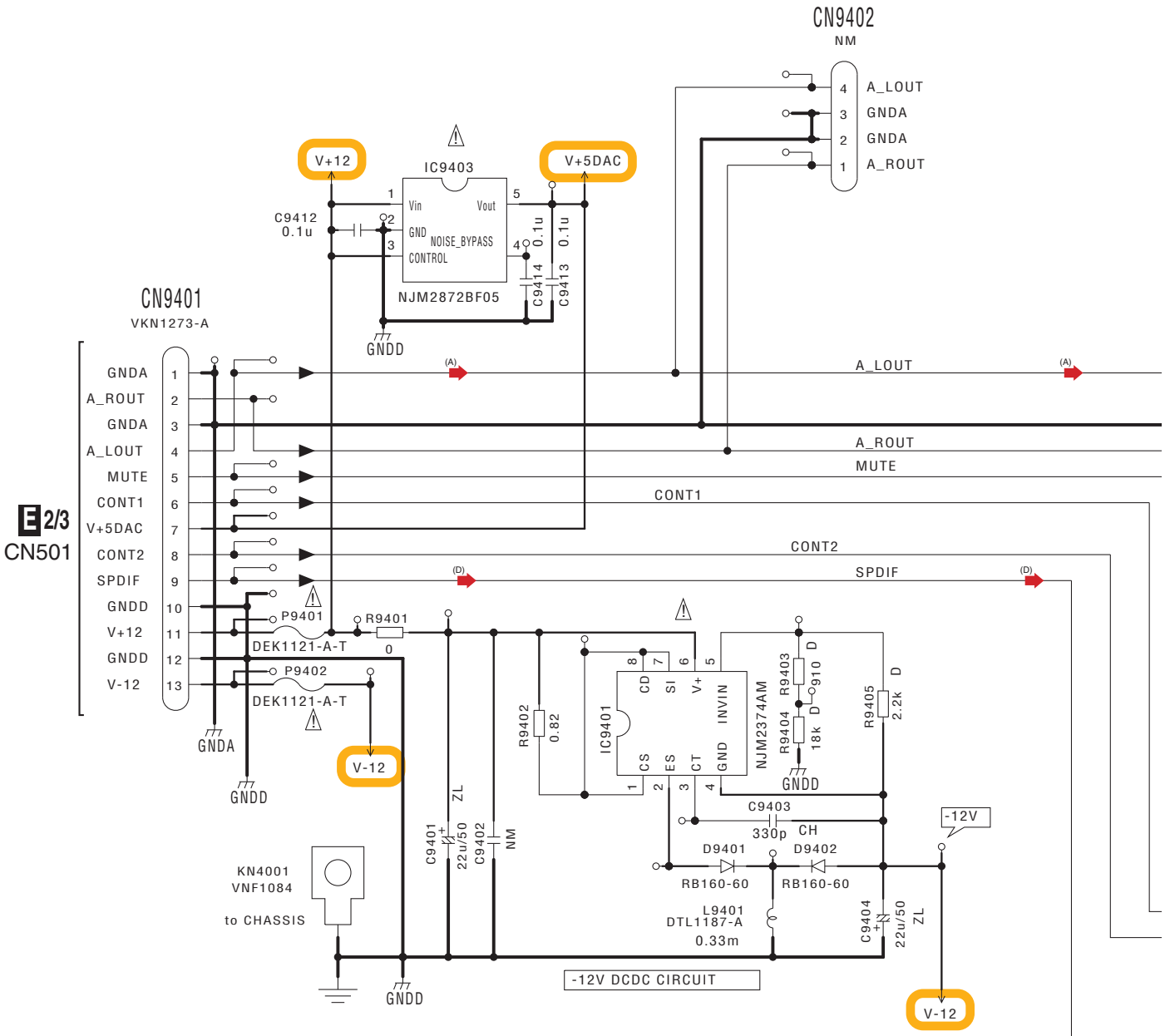
10.5 MAIN ASSY (3/3)



E 3/3 MAIN ASSY (DWG1660)



10.6 JACB ASSY



NOTES

NM means STANDBY

RS1/10SR***J

D RN1/16SE****D

VM RD1/2VM***J

SA RS1/4SA***J

CKSRYB or CKSYB

MA CQMAQ

CH CCSRCH

CEHAT

ZL CEHAZL

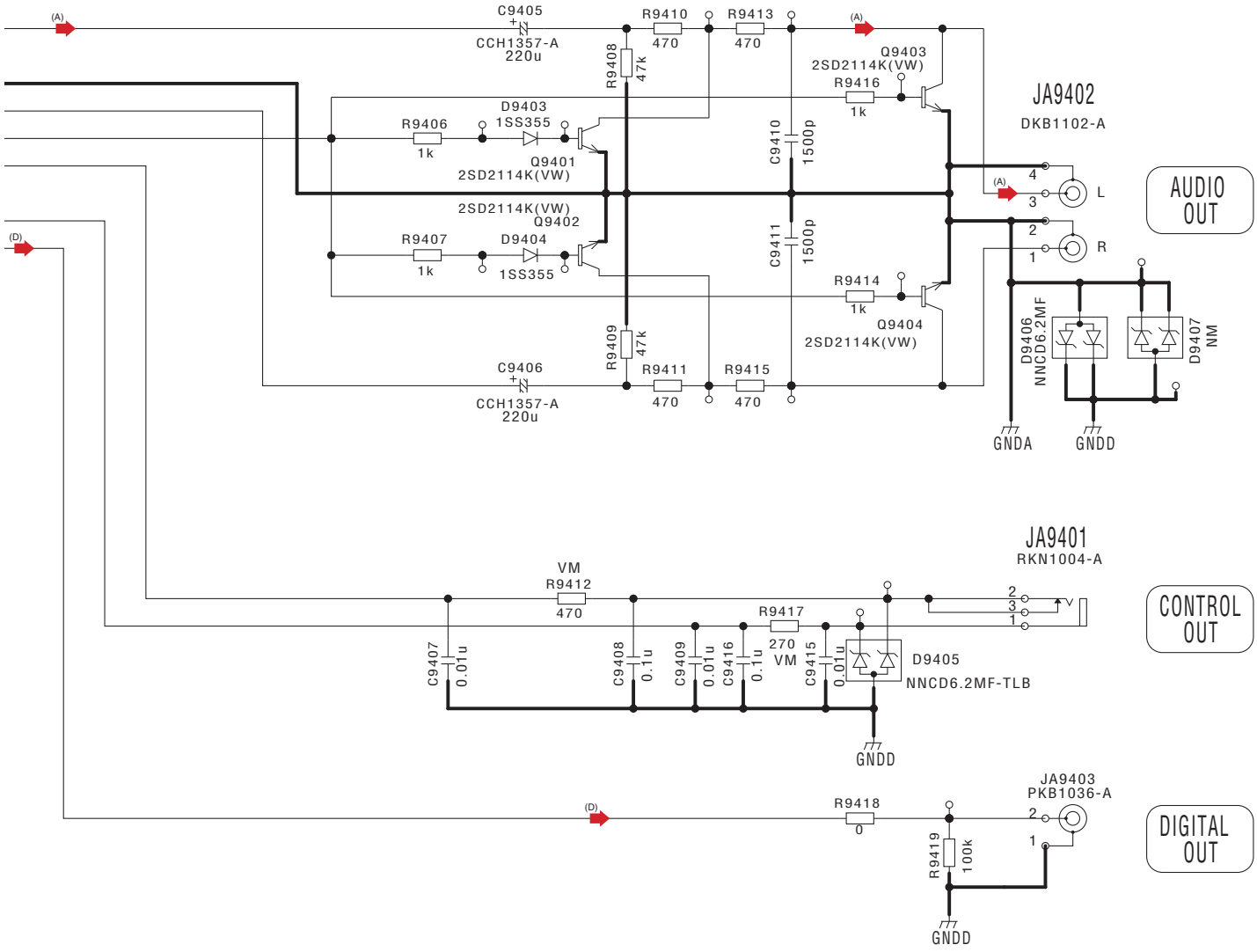
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

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

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

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

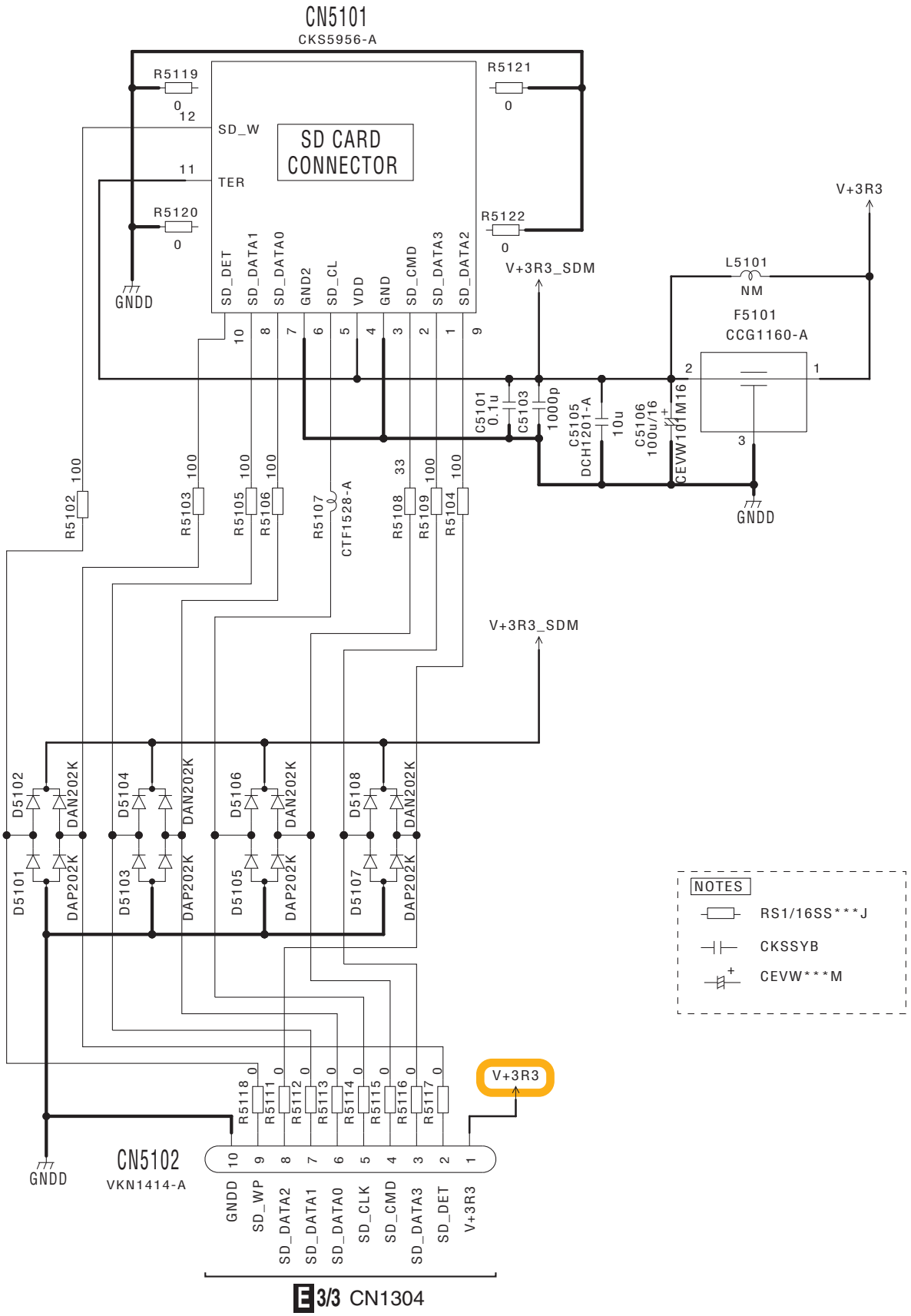
F JACB ASSY (DWX2988)



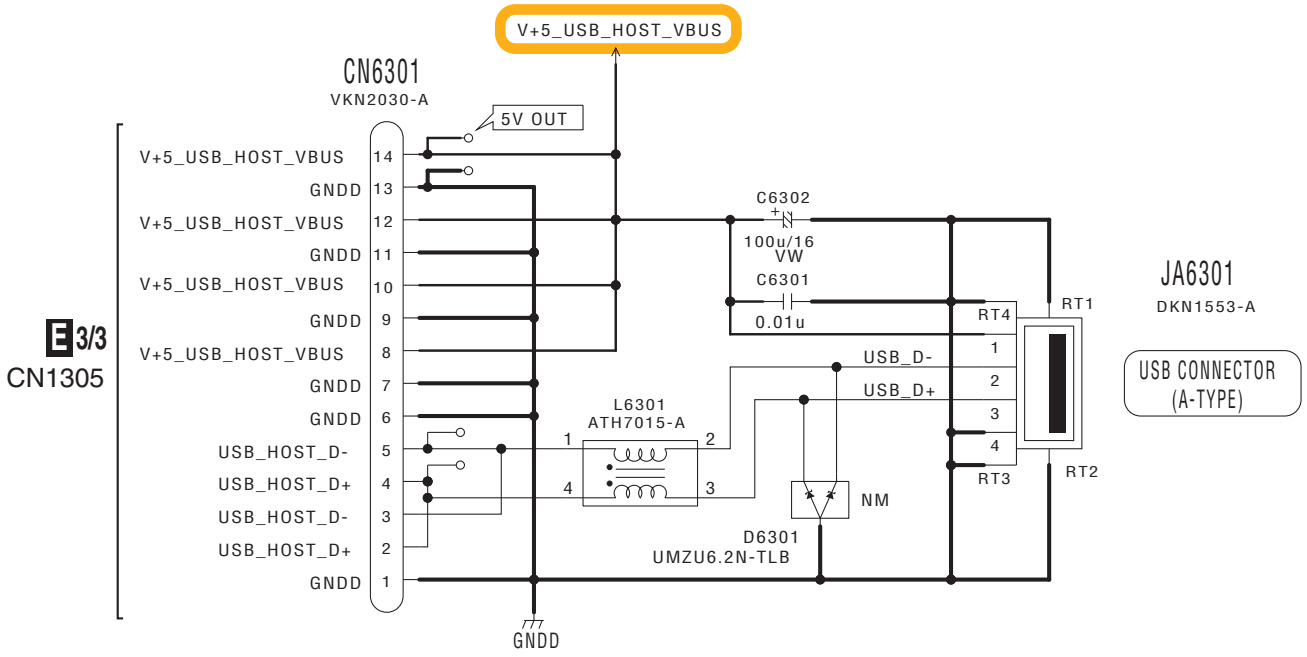
(A) : Analog Audio Signal Route
(D) : Digital Data Signal Route

10.7 SDCB ASSY

G SDCB ASSY (DWX2980)



H USBA ASSY (DWX3043)



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

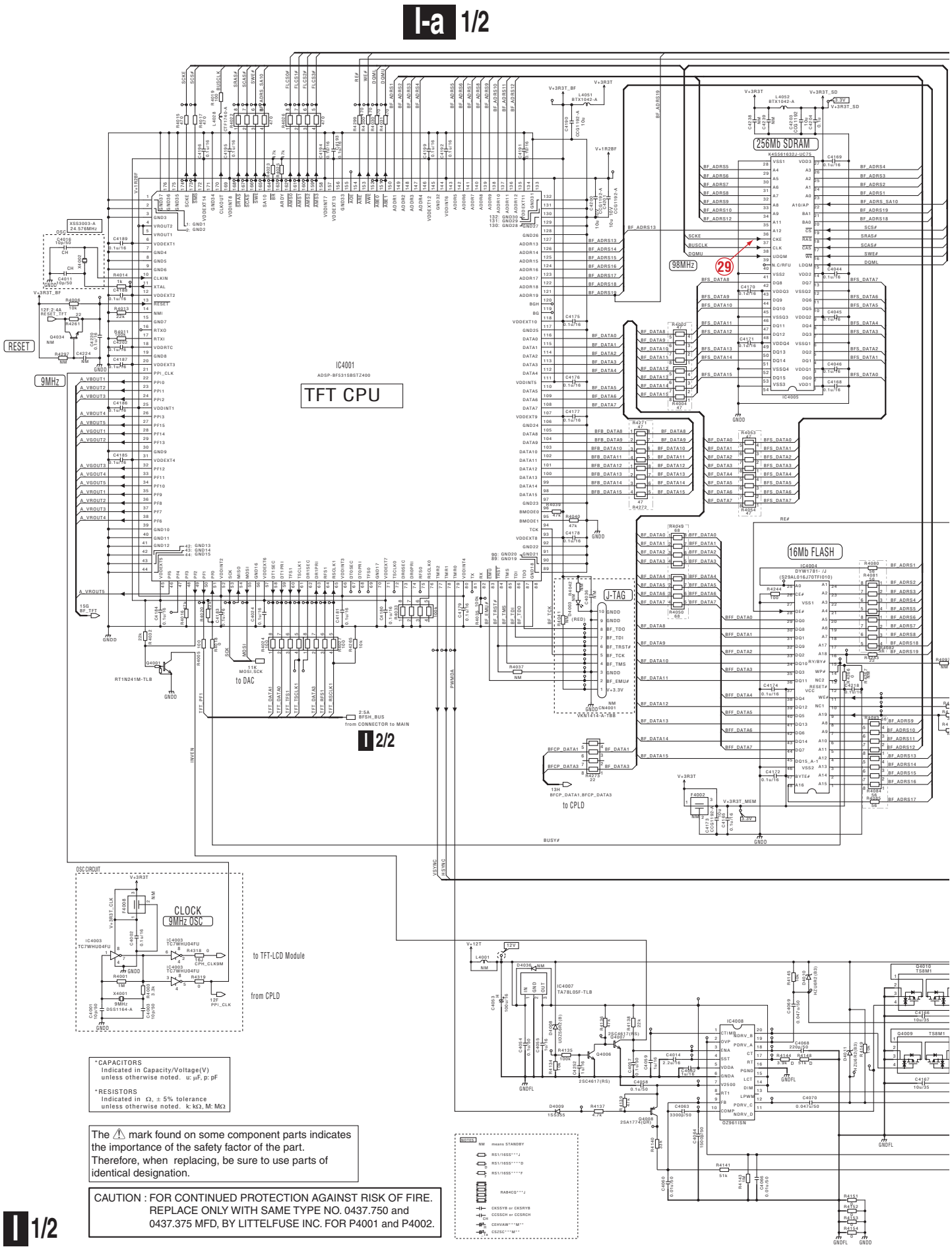
*RESISTORS
Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ

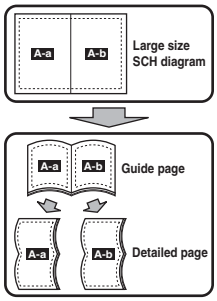
NOTES

CEVW***

CKSRYB***K

10.9 TFTB ASSY (1/2)



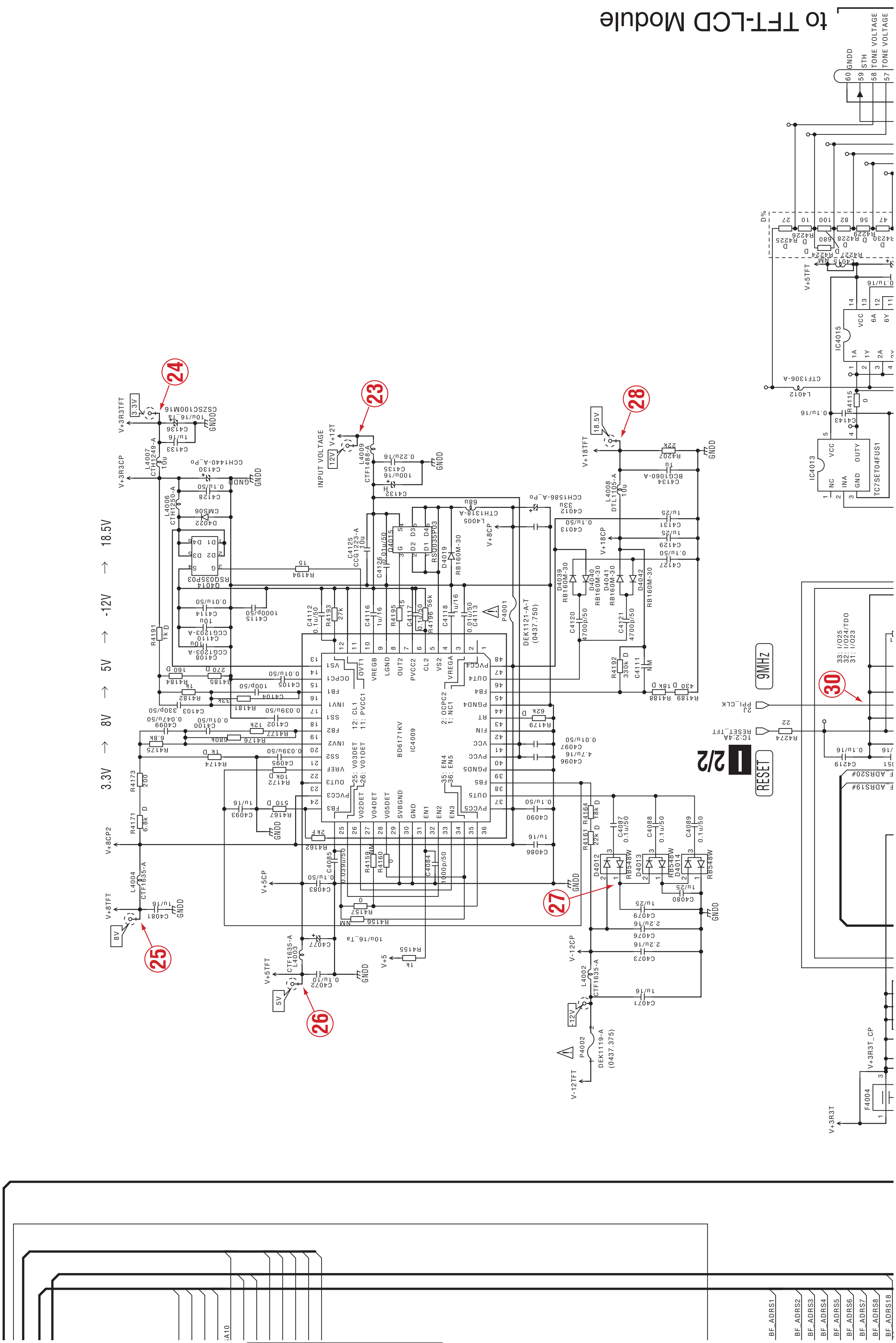


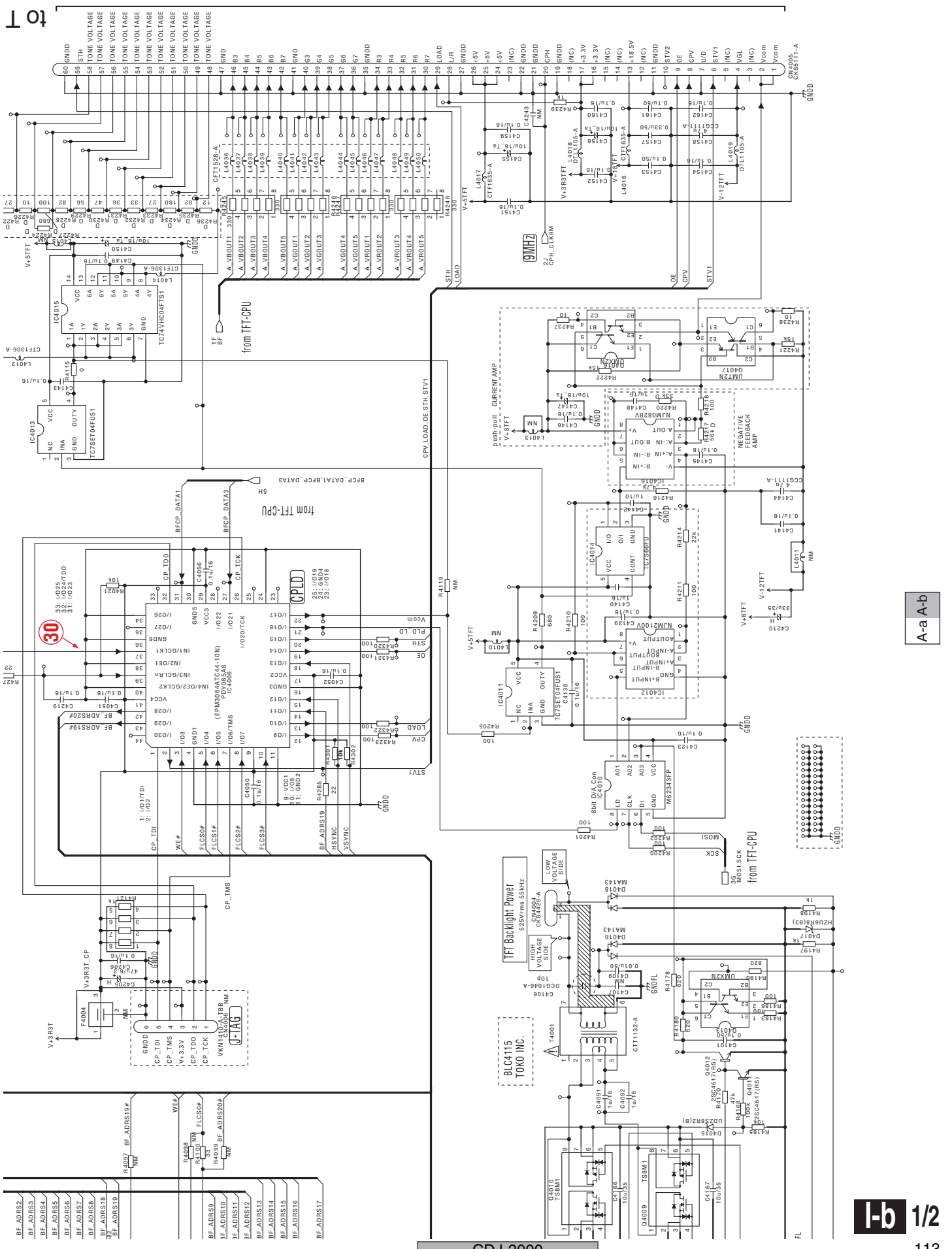
to TFT-LCD Module

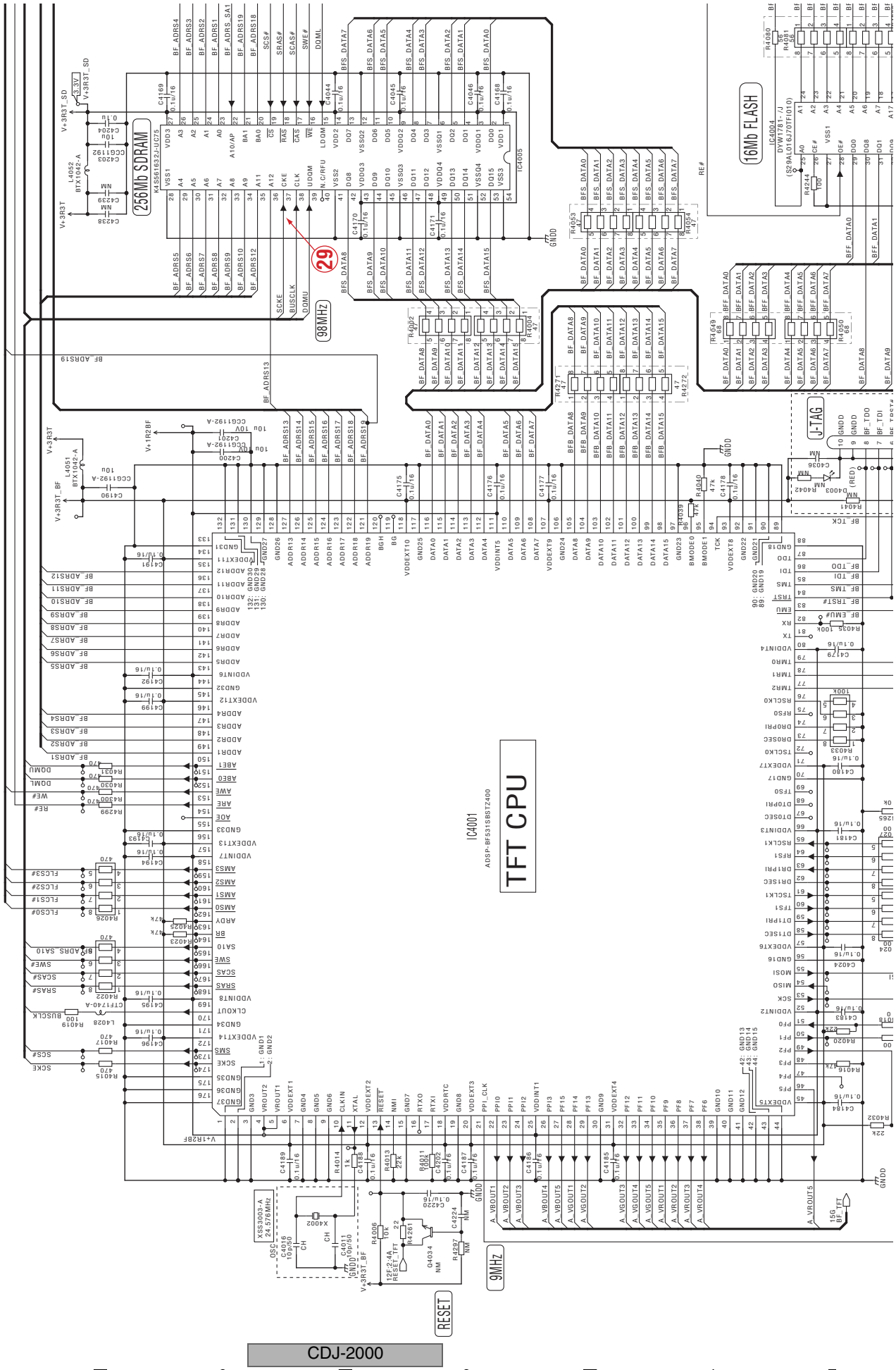
A B C D E F

I 1/2 TFTB ASSY (DWX2882)

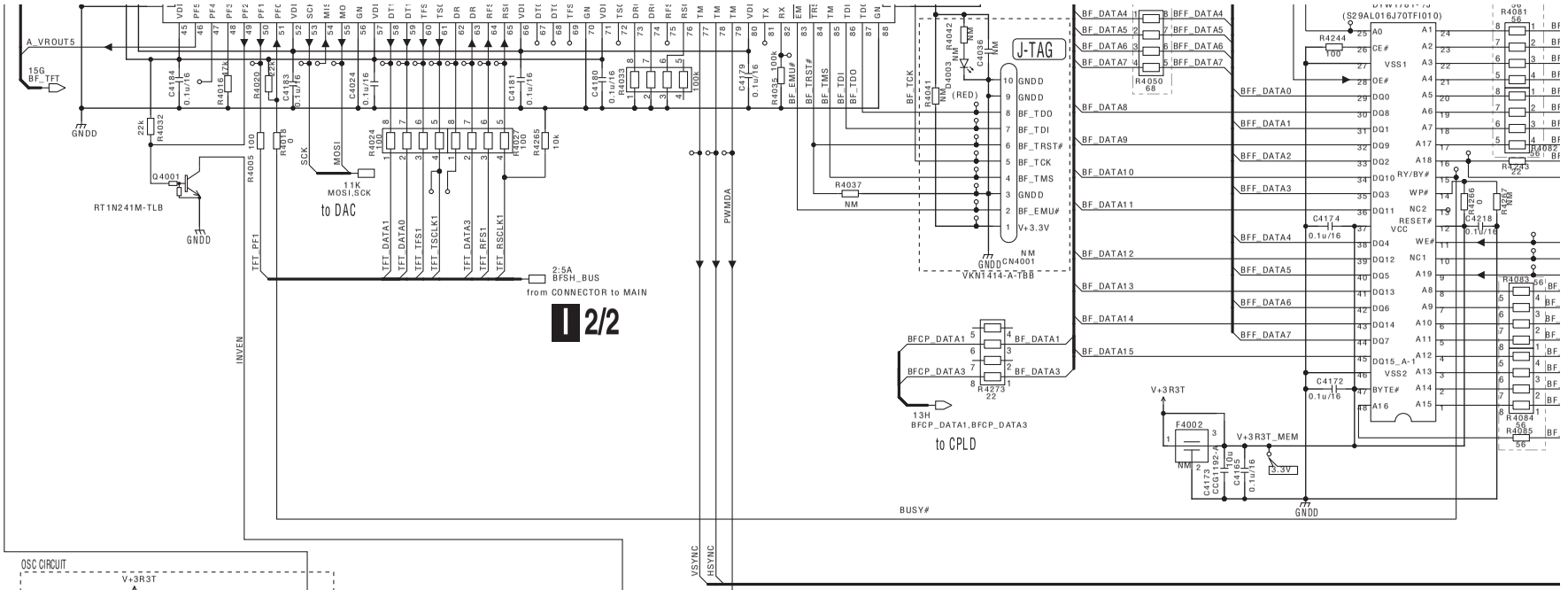
A-a A-b

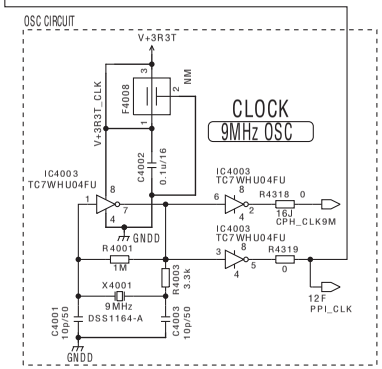


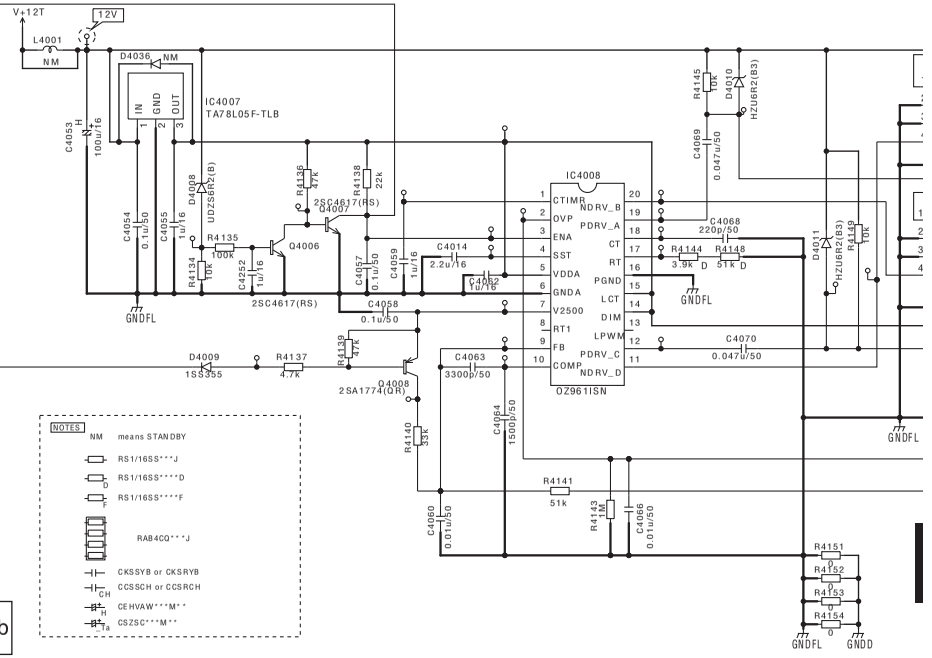

to T
from TFT-CPU
from TFT-CPU
CPLD
TFT Backlight Power
525Vrms 55kHz
BLC4115
TOKO INC.
J-TAG
CDJ-2000


TFT CPU
IC4001
ADSP-BF531SBST2400
256Mb SDRAM
16Mb FLASH
J-TAG
98MHz
9MHz
RESET
29

A-a A-b







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

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

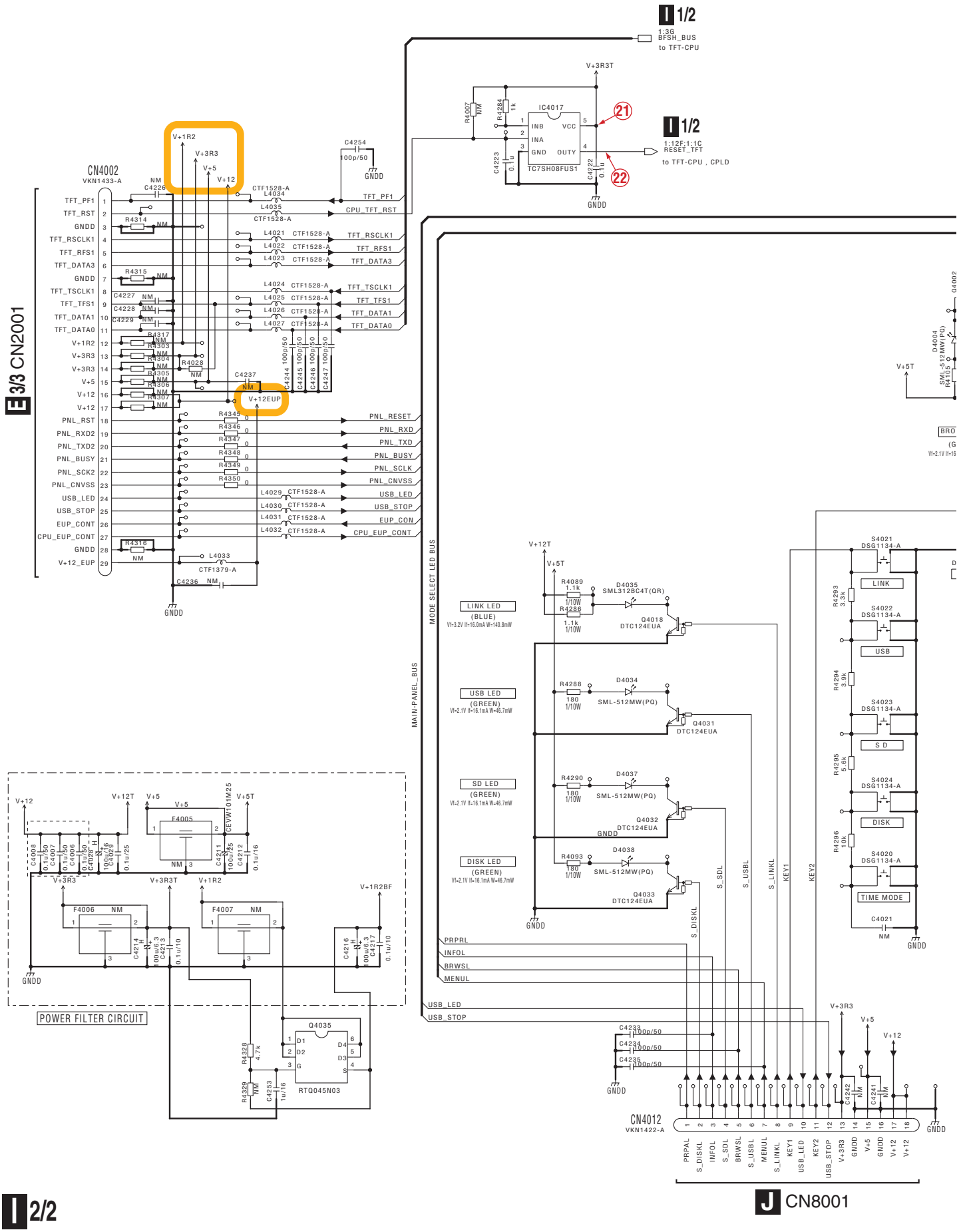
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.

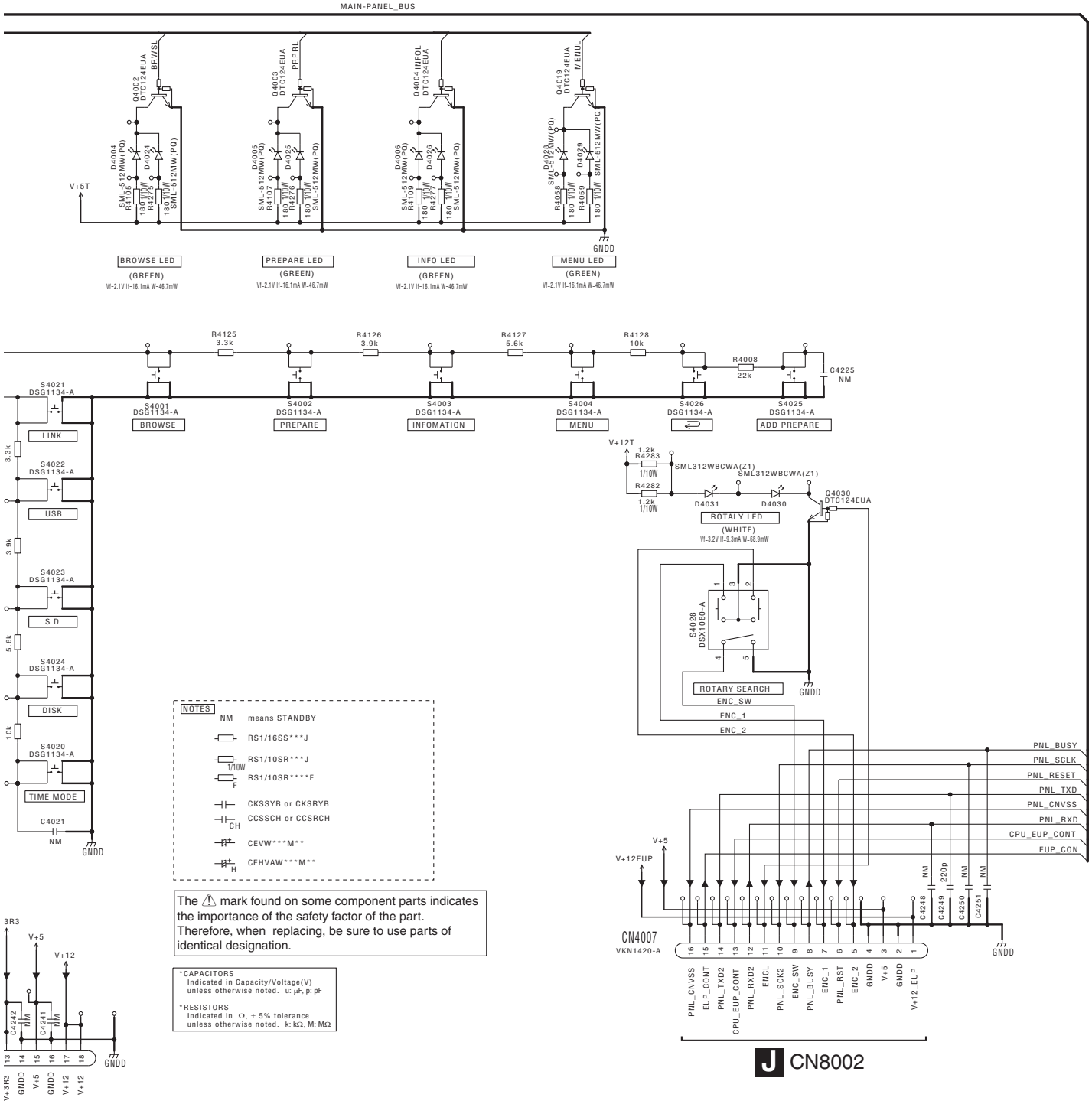
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 0437.750 and
0437.375 MFD, BY LITTELFUSE INC. FOR P4001 and P4002.

NOTES
NM means STANDBY
RS1/16SS***J
RS1/16SS****D
RS1/16SS****F
RAB4C0***J
CKSSYB or CKSRYB
CCSSCH or CCSRCH
CEHVAW***M**
CSZSC***M**

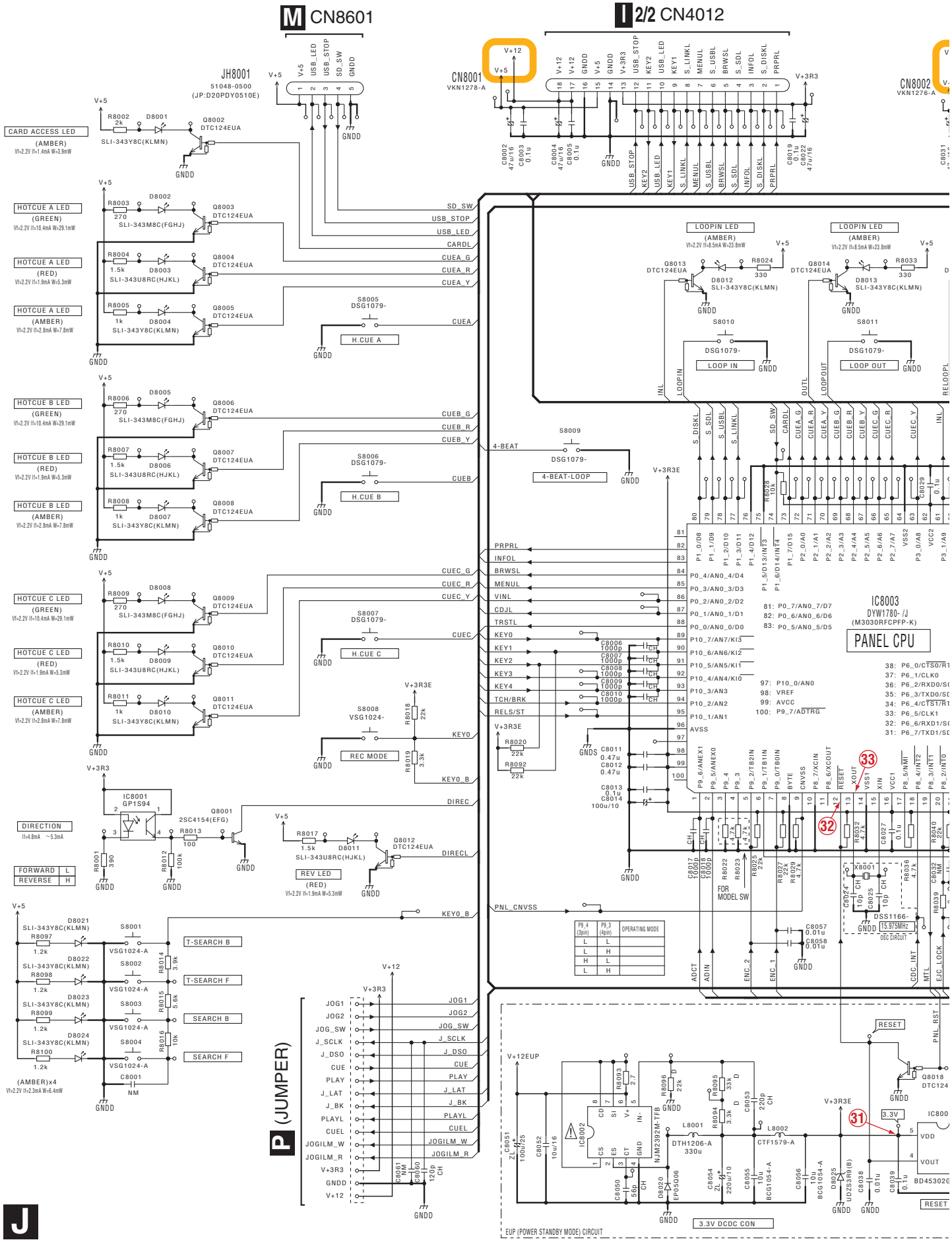
A-a A-b

10.10 TFTB ASSY (2/2)



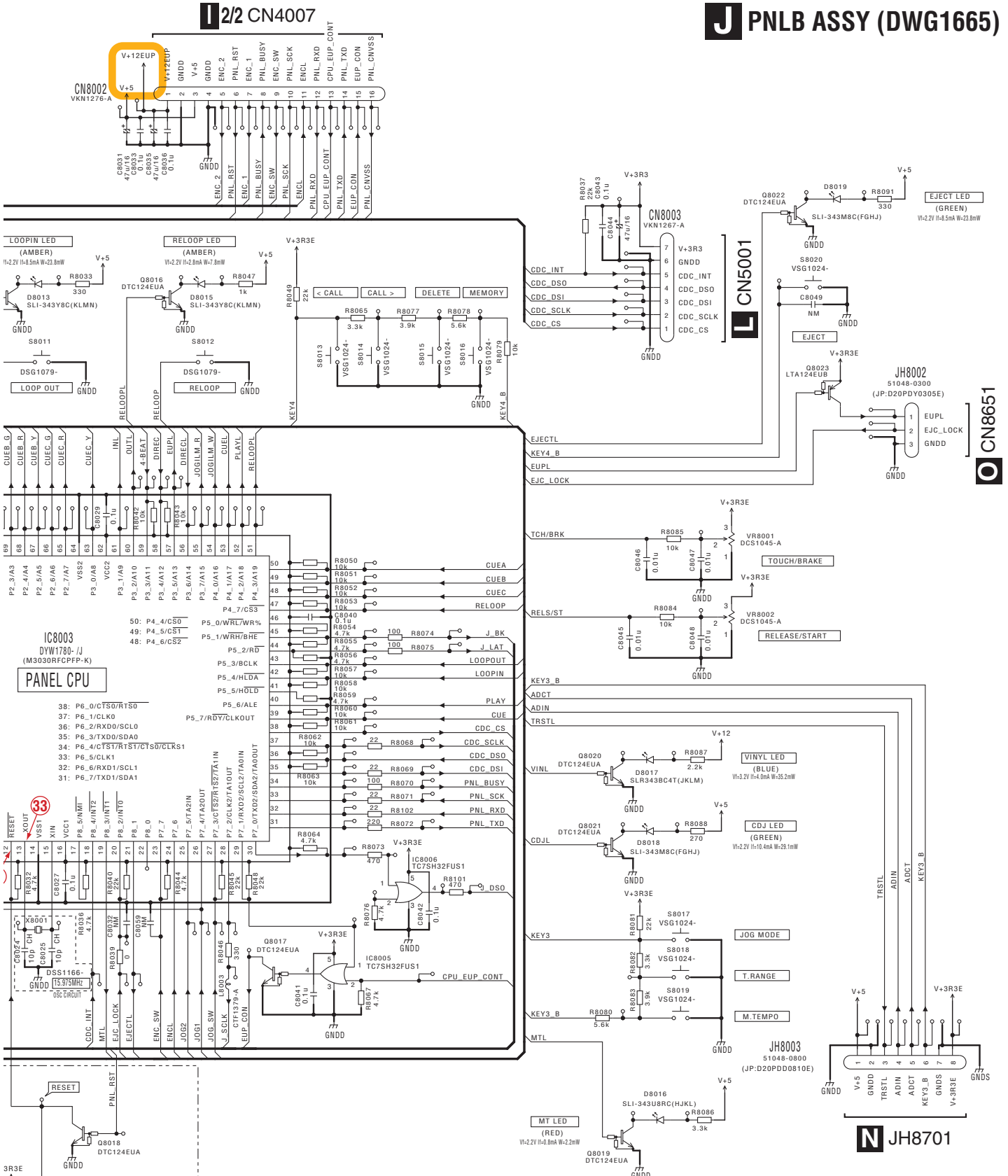

MAIN-PANEL_BUS
BROWSE LED
PREPARE LED
INFO LED
MENU LED
(GREEN)
V+5T
GNDD
BROWSE
PREPARE
INFOMATION
MENU
ADD PREPARE
LINK
USB
S D
DISK
TIME MODE
ROTARY SEARCH
ENC_SW
ENC_1
ENC_2
ROTALY LED
(WHITE)
V+12T
V+5
V+12EUP
CN4007
VKN1420-A
J CN8002
PNL_BUSY
PNL_SCLK
PNL_RESET
PNL_TXD
PNL_CNVSS
PNL_RXD
CPU_EUP_CONT
EUP_CON
NOTES
NM means STANDBY
CKSSYB or CKSRYB
CCSSCH or CCSRCH
CEVW***M**
CEHVAW***M**
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
*CAPACITORS
Indicated in Capacity/Voltage(V) unless otherwise noted. u: µF, p: pF
*RESISTORS
Indicated in Ω, ± 5% tolerance unless otherwise noted. k: kΩ, M: MΩ

10.11 PNLB ASSY



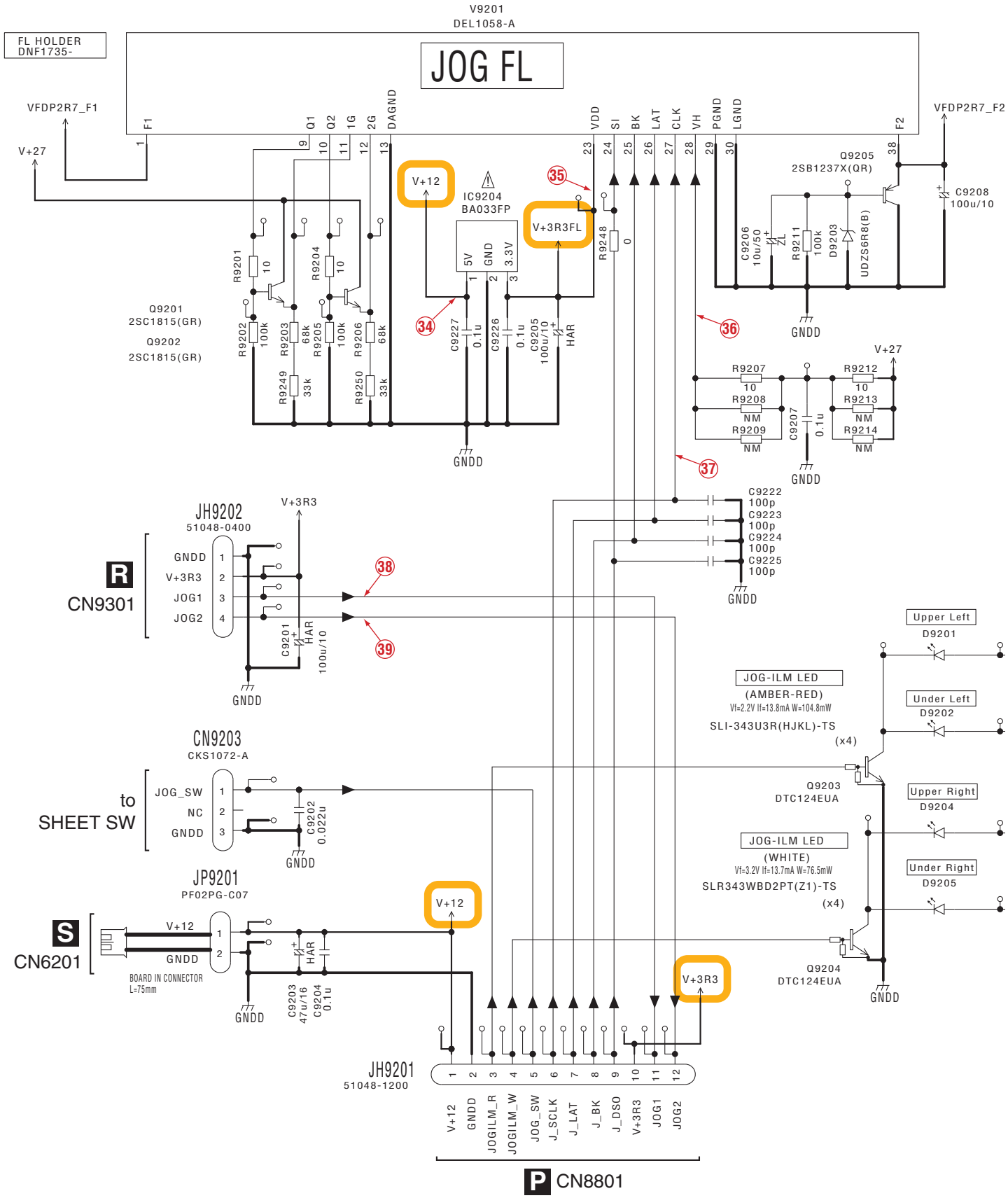
J PNLB ASSY (DWG1665)

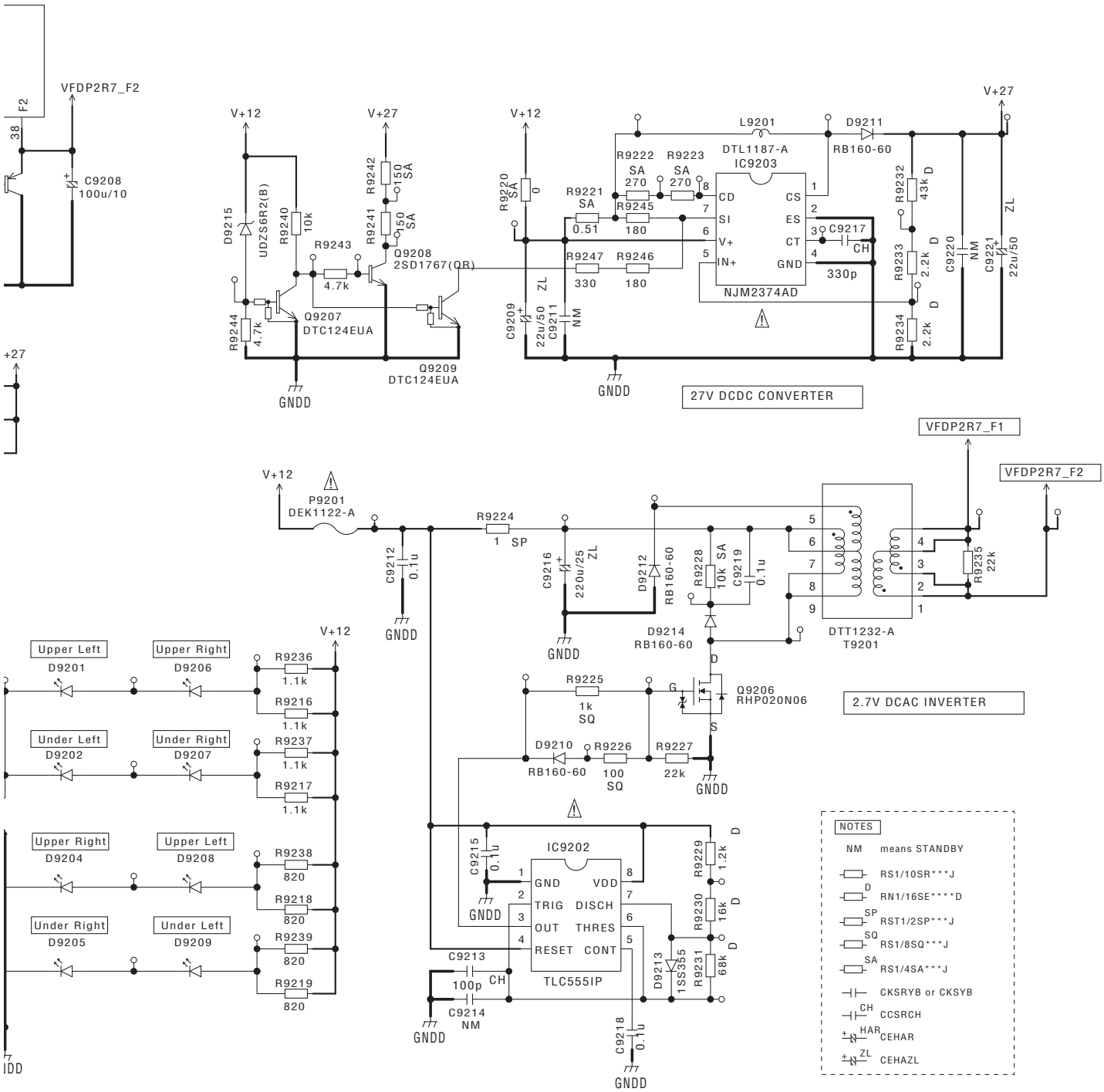
I 2/2 CN4007



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.

10.12 JFLB ASSY





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.

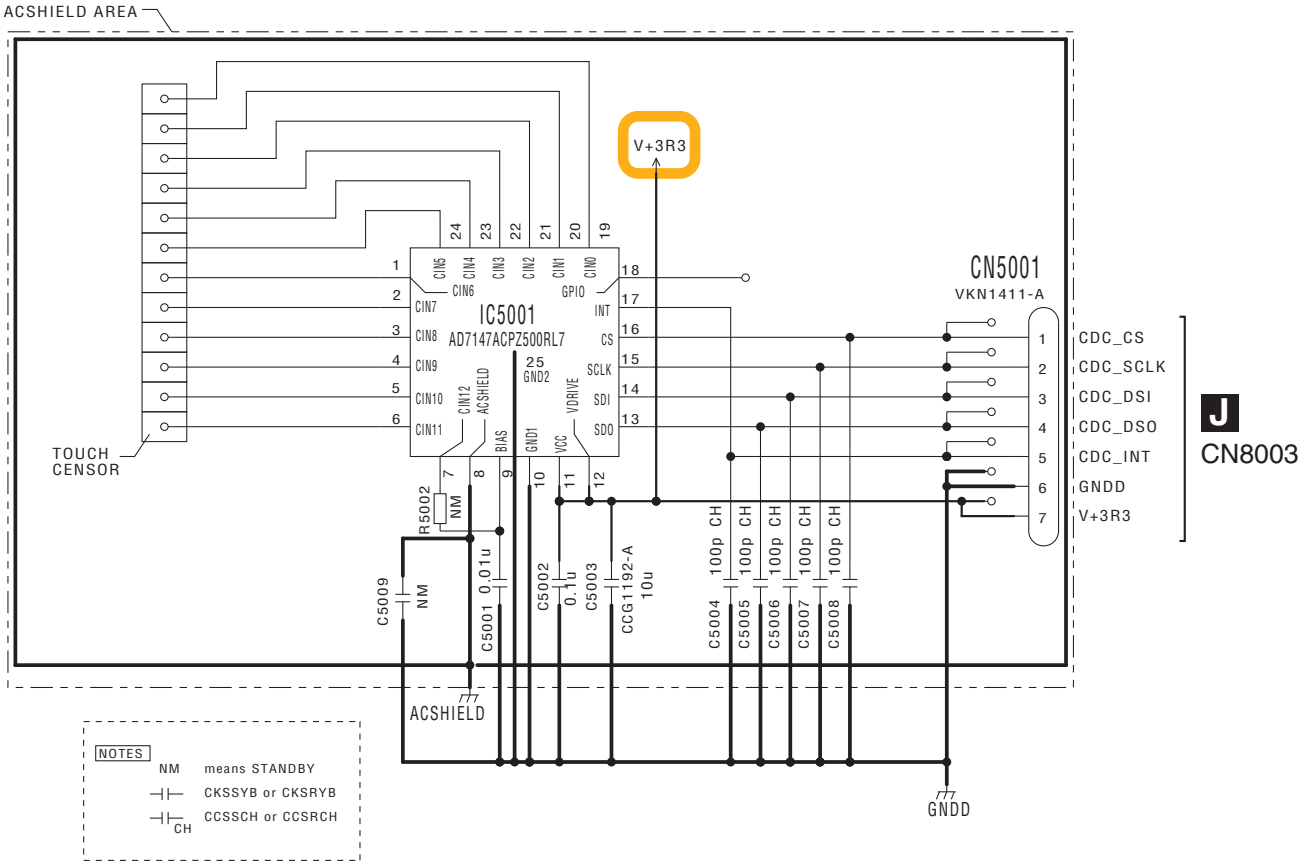
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 0437001. MFD, BY LITTELFUSE INC. FOR P9201.

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

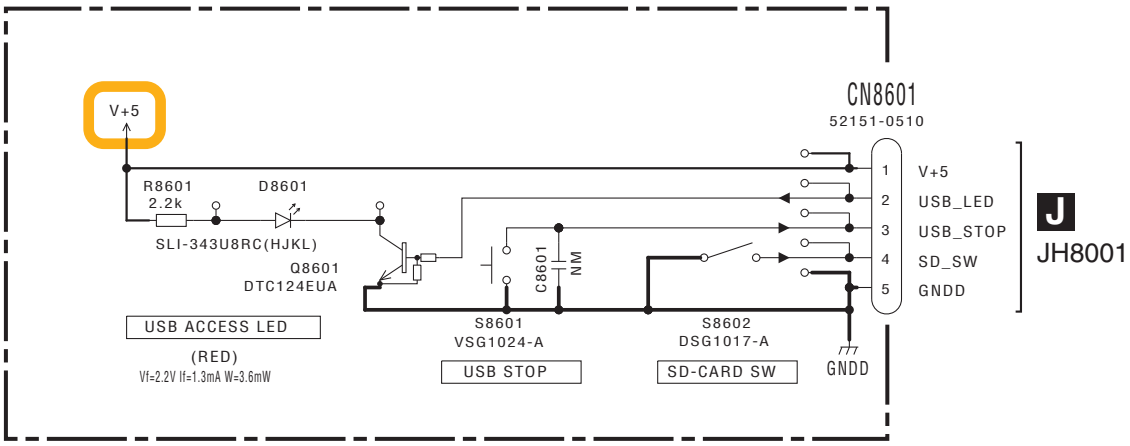
*RESISTORS
Indicated in Ω, ± 5% tolerance
unless otherwise noted. k: kΩ, M: MΩ

10.13 CDCB and SDSW ASSYS

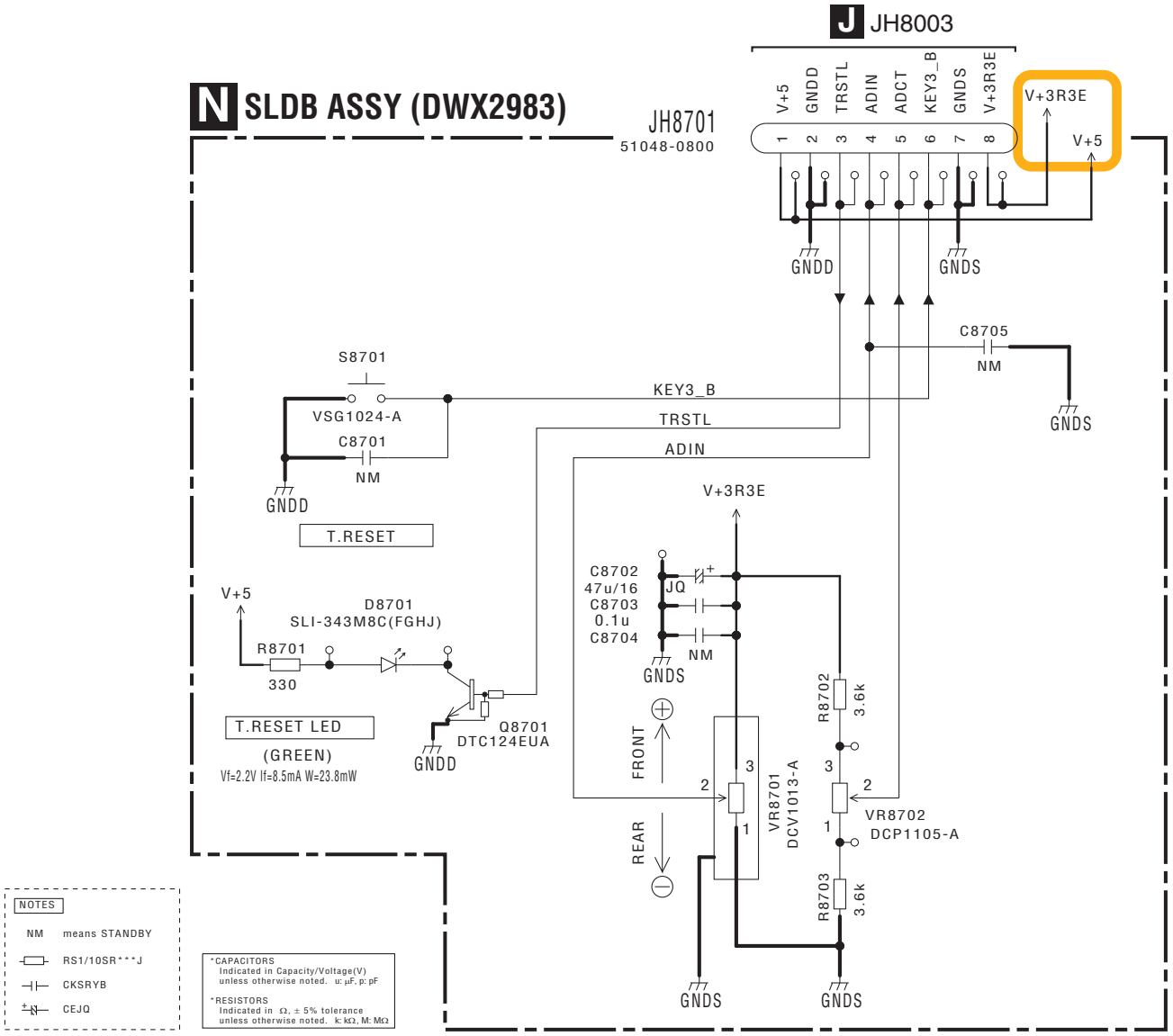
L CDCB ASSY (DWX2987)

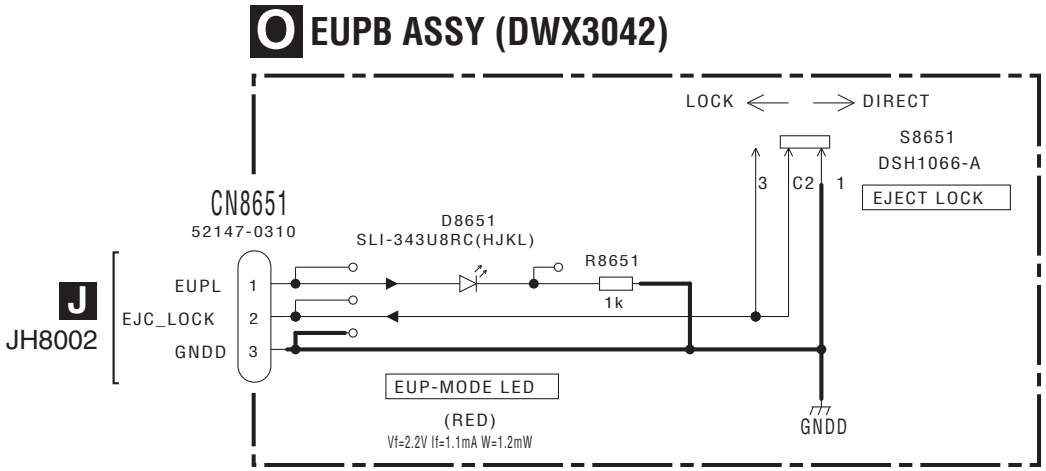


M SDSW ASSY (DWS1420)



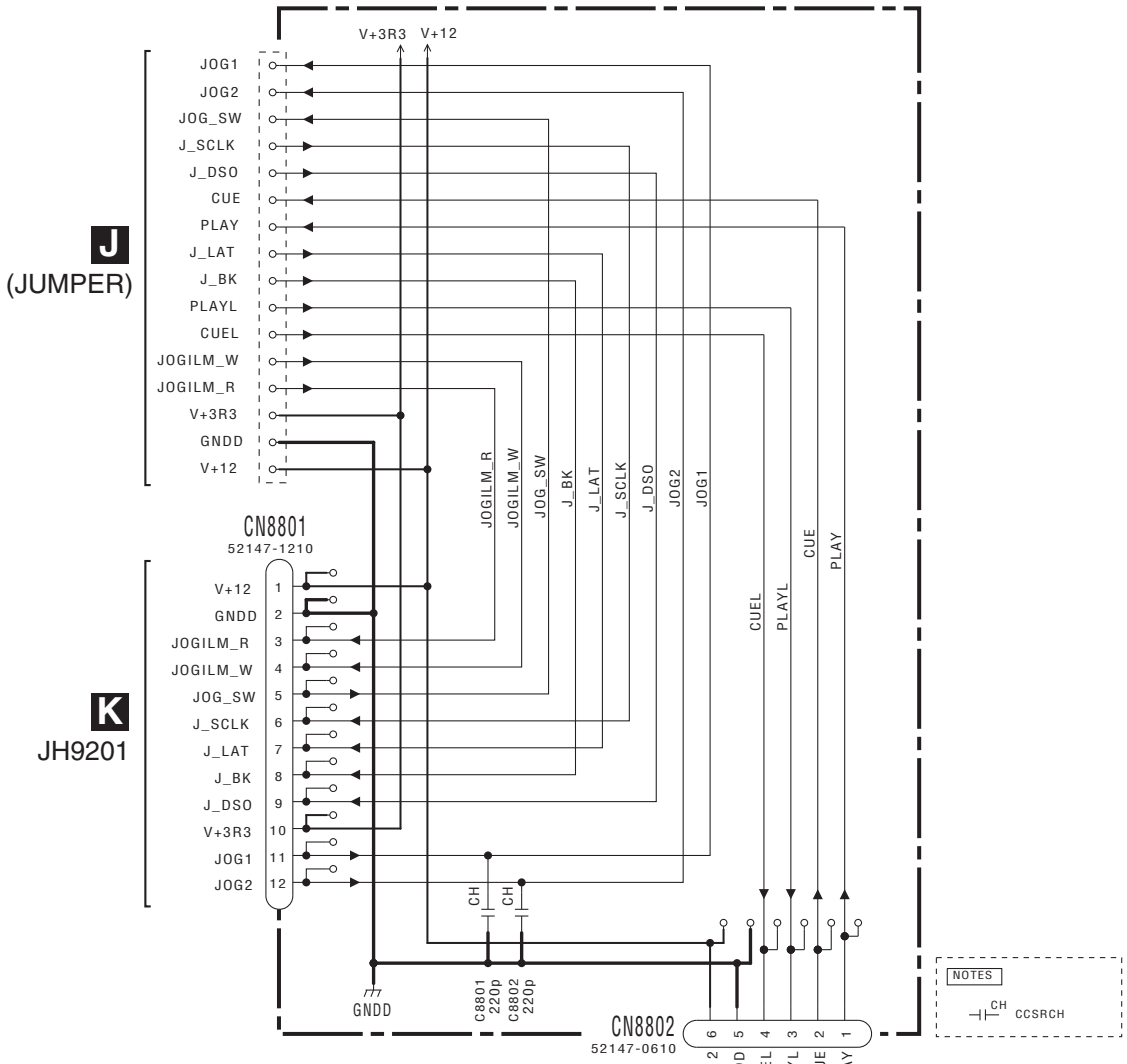
10.14 SLDB and EUPB ASSYS



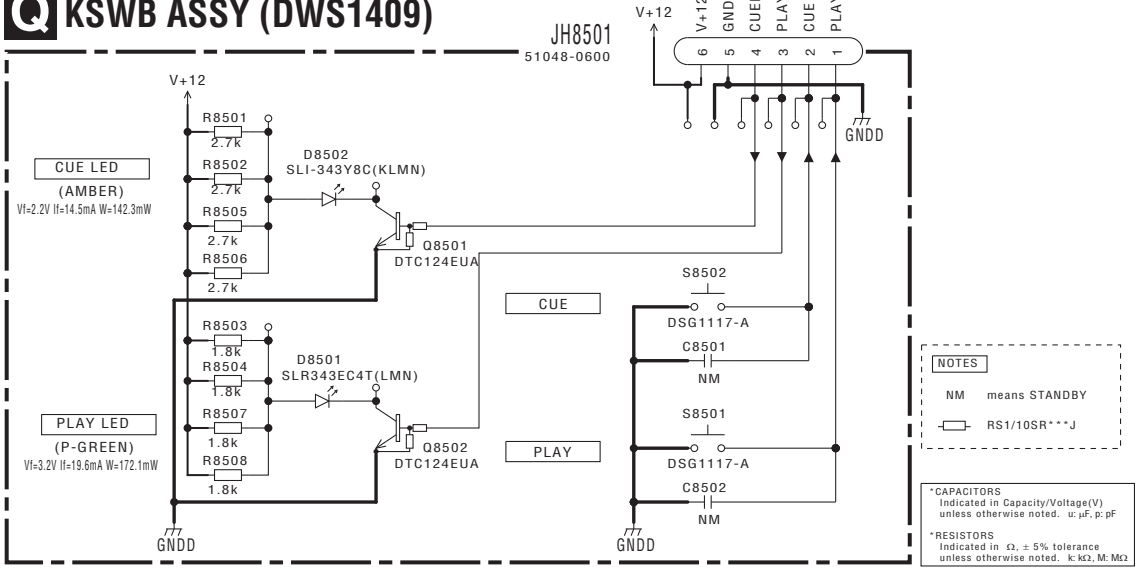


10.15 CNCT and KSWB ASSYS

P CNCT ASSY (DWX3009)



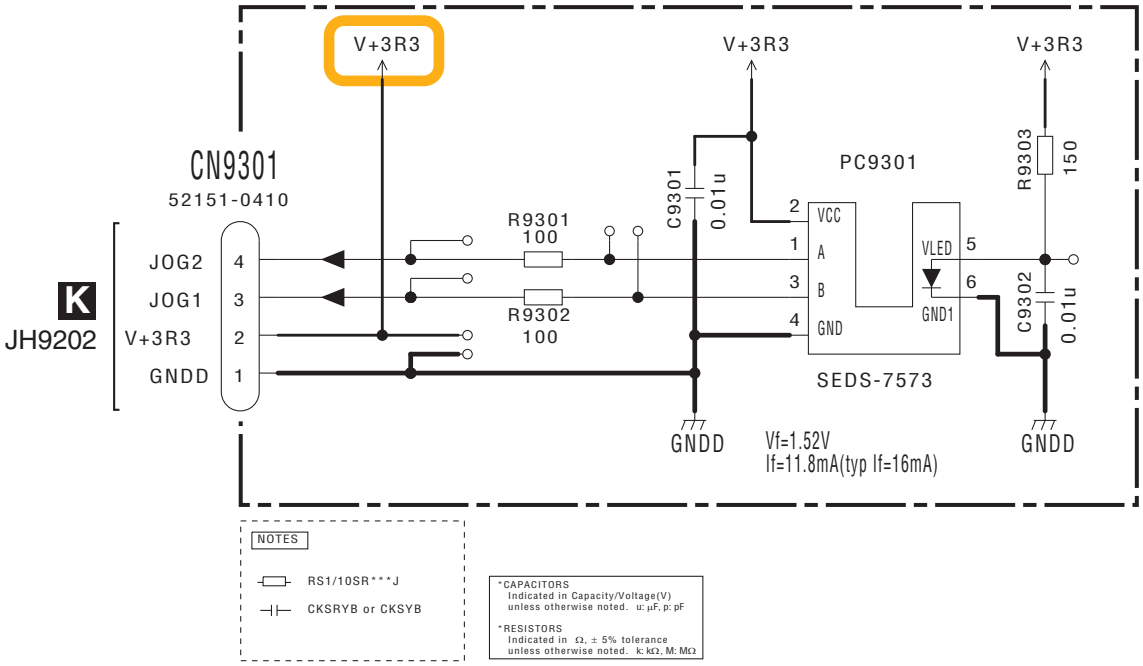
Q KSWB ASSY (DWS1409)



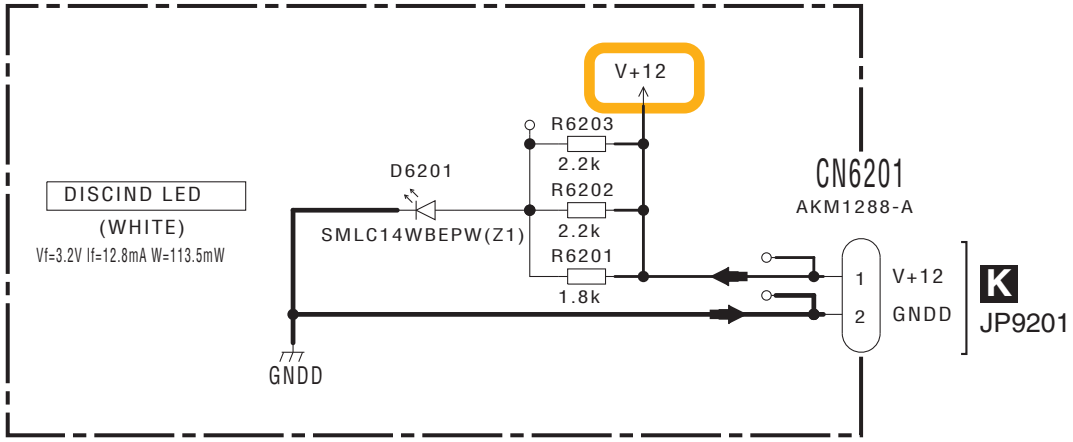
P Q

10.16 JOGB and INDB ASSYS

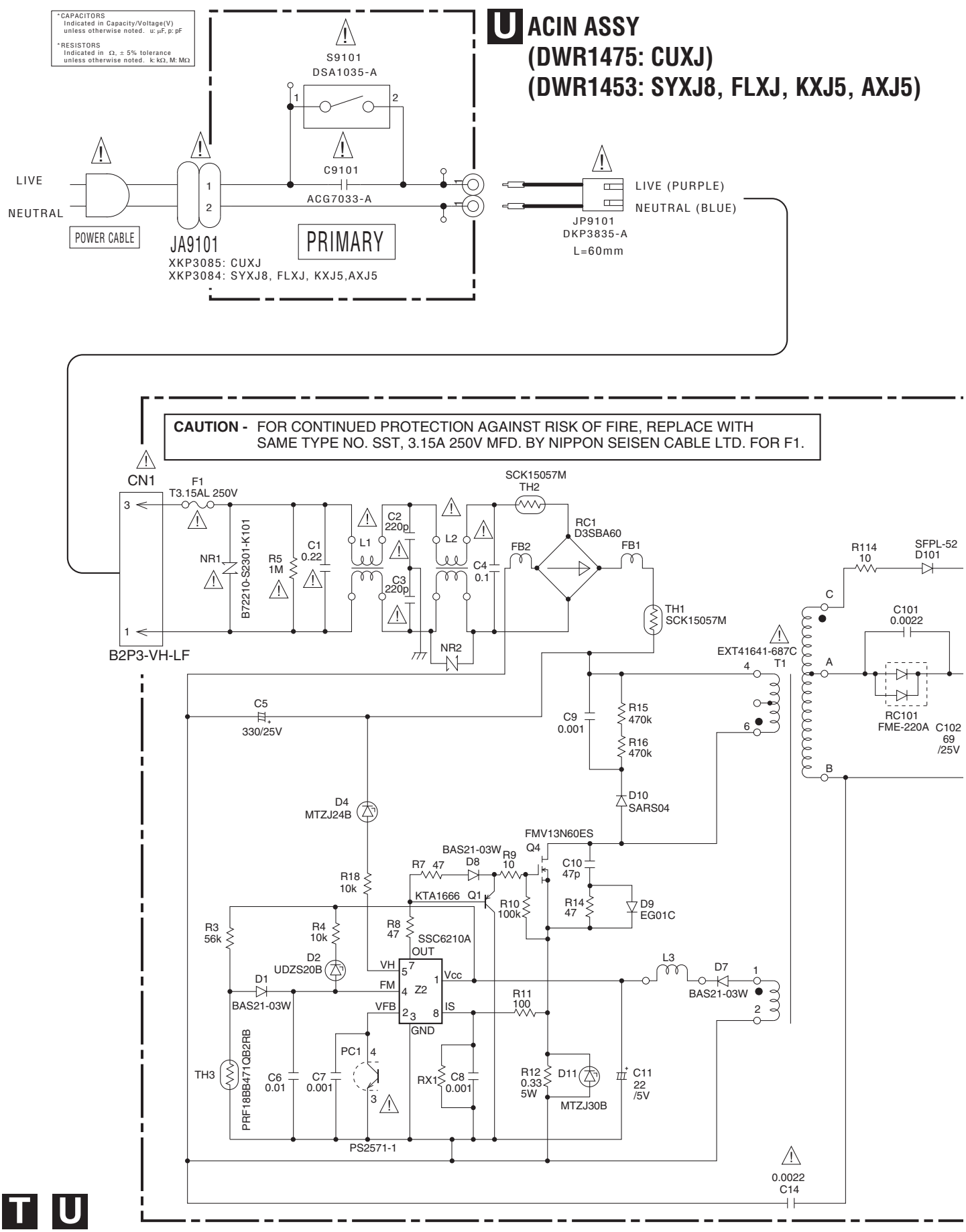
R JOGB ASSY (DWX2985)



S INDB ASSY (DWX2986)



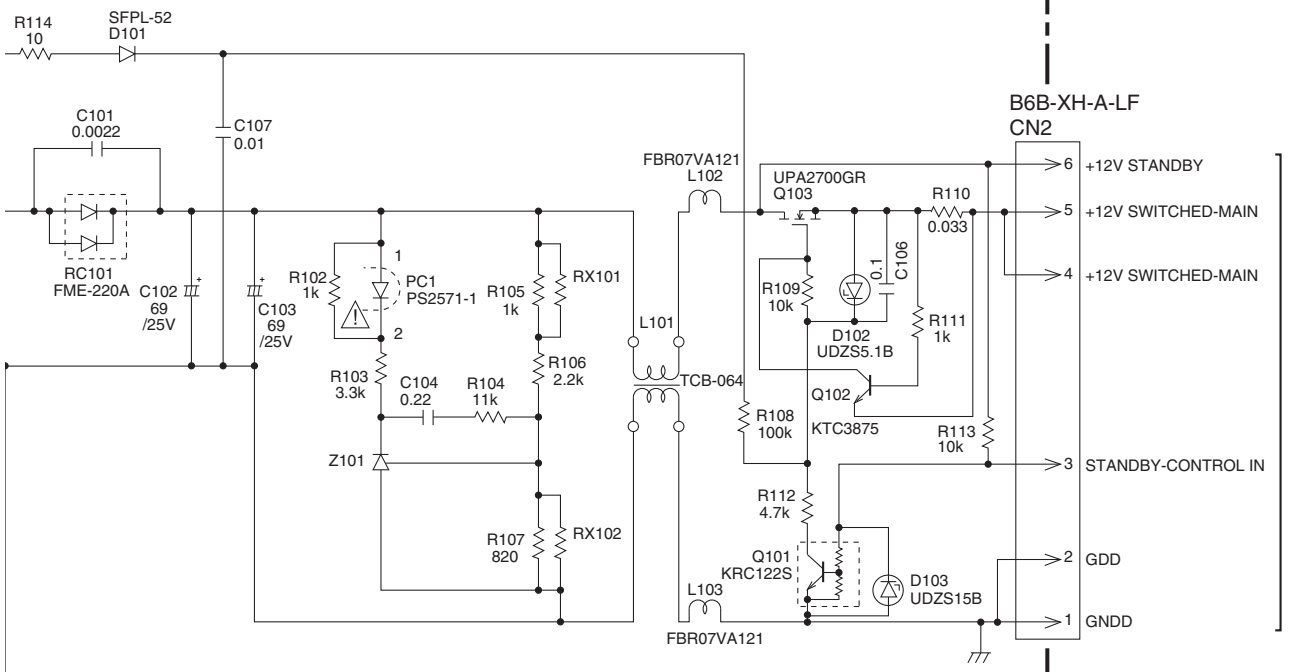
10.17 POWER SUPPLY and ACIN ASSYS



, AXJ5)

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

T POWER SUPPLY ASSY (DWR1463)



10.18 WAVEFORMS

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

E MAIN ASSY

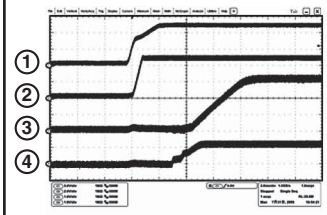
MODE: POWER ON

① **CN2001 - pin 13 (V+12)**
V: 5.0 V/div. H: 2.0 msec/div.

② **CN2001 - pin 15 (V+5)**
V: 2.0 V/div. H: 2.0 msec/div.

③ **CN2001 - pin 16 (V+3R3)**
V: 1.0 V/div. H: 2.0 msec/div.

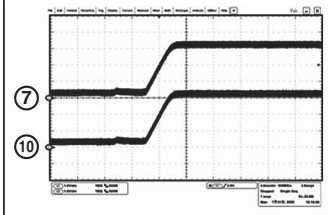
④ **CN2001 - pin 18 (V+1R2)**
V: 1.0 V/div. H: 2.0 msec/div.



MODE: PLAY

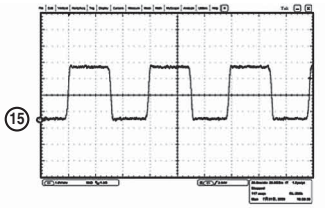
⑦ **IC102 - pin 4 (CPU_RST)**
V: 1.0 V/div. H: 4.0 msec/div.

⑩ **IC123 - pin 6 (ETHER_RST)**
V: 1.0 V/div. H: 4.0 msec/div.



MODE: PLAY

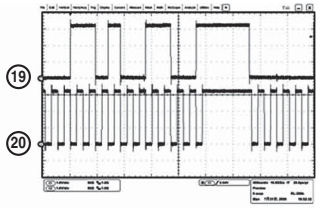
⑮ **IC507 - pin 7 (DAC_MCLK)**
V: 1.0 V/div. H: 20.0 nsec/div.



MODE: PLAY

⑲ **R578 (DSP_SPISIMO)**
V: 1.0 V/div. H: 400 nsec/div.

⑳ **R579 (DSP_SPICLK)**
V: 1.0 V/div. H: 400 nsec/div.

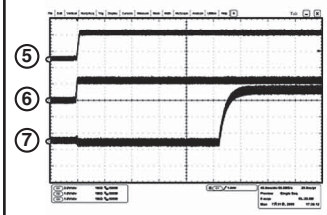


MODE: POWER ON

⑤ **F101 (V+3R3)**
V: 2.0 V/div. H: 40 msec/div.

⑥ **F108 (V+1R2)**
V: 1.0 V/div. H: 40 msec/div.

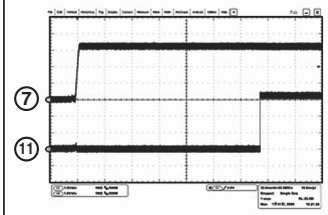
⑦ **IC102 - pin 4 (CPU_RST)**
V: 1.0 V/div. H: 40 msec/div.



MODE: PLAY

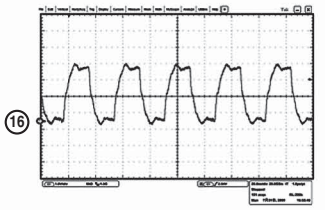
⑦ **IC102 - pin 4 (CPU_RST)**
V: 1.0 V/div. H: 32.0 msec/div.

⑪ **IC123 - pin 8 (USB_RST)**
V: 1.0 V/div. H: 32.0 msec/div.



MODE: SD CARD PLAY

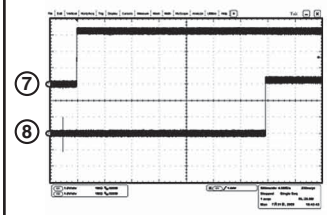
⑯ **CN1304 - pin 6 (CPU_SD_CLK)**
V: 1.0 V/div. H: 20.0 nsec/div.



MODE: PLAY

⑦ **IC102 - pin 4 (CPU_RST)**
V: 1.0 V/div. H: 500 msec/div.

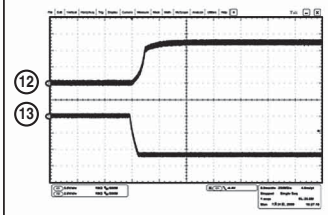
⑧ **CN1303 - pin 1 (CPU_IDERST)**
V: 1.0 V/div. H: 500 msec/div.



MODE: PLAY

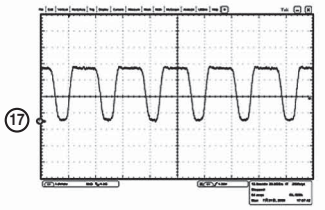
⑫ **CN501 - pin 7 (V+5_DAC)**
V: 5.0 V/div. H: 8.0 msec/div.

⑬ **CN501 - pin 1 (V-12)**
V: 2.0 V/div. H: 8.0 msec/div.



MODE: PLAY

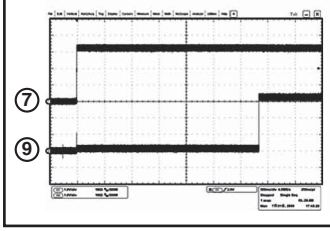
⑰ **IC115 - pin 2 (USB_CLK)**
V: 1.0 V/div. H: 12.5 nsec/div.



MODE: PLAY

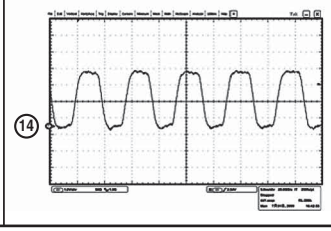
⑦ **IC102 - pin 4 (CPU_RST)**
V: 1.0 V/div. H: 500 msec/div.

⑨ **IC123 - pin 3 (DSP710_RST)**
V: 1.0 V/div. H: 500 msec/div.



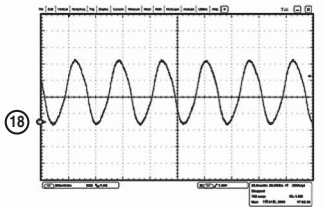
MODE: PLAY

⑭ **IC109 - pin 37 (CPU_CLKOUT)**
V: 1.0 V/div. H: 5.0 nsec/div.



MODE: PLAY

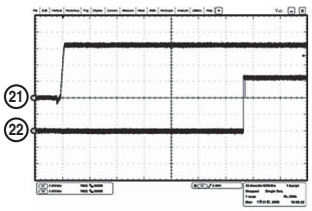
⑱ **IC1304 - pin 47 ((X2)ETHER_CLK)**
V: 500 mV/div. H: 25.0 nsec/div.



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

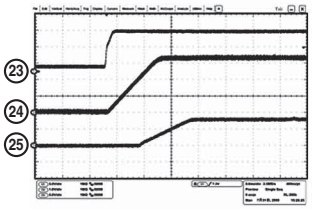
I TFTB ASSY

MODE: PLAY
(21) **IC4017 - pin 5 (V+3R3T)**
V: 1.0 V/div. H: 32.0 msec/div.
(22) **IC4017 - pin 4 (RESET_TFT)**
V: 1.0 V/div. H: 32.0 msec/div.

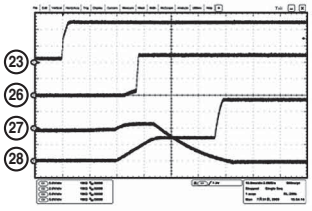


MODE: PLAY
(30) **IC4003 - pin 37 (PPI_CLK)**
V: 1.0 V/div. H: 50.0 nsec/div.

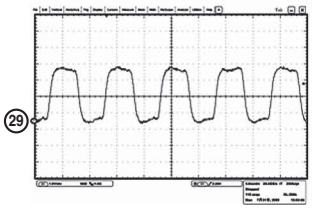
MODE: PLAY
(23) **L4009 (V+12T)**
V: 5.0 V/div. H: 8.0 msec/div.
(24) **L4007 (V+3R3TFT)**
V: 1.0 V/div. H: 8.0 msec/div.
(25) **L4004 (V+8TFT)**
V: 5.0 V/div. H: 8.0 msec/div.



MODE: PLAY
(23) **L4009 (V+12T)**
V: 5.0 V/div. H: 10.0 msec/div.
(26) **L4003 (V+5T)**
V: 2.0 V/div. H: 10.0 msec/div.
(27) **C4079 (V-12TFT)**
V: 5.0 V/div. H: 10.0 msec/div.
(28) **L4008 (V+18.5TFT)**
V: 5.0 V/div. H: 10.0 msec/div.

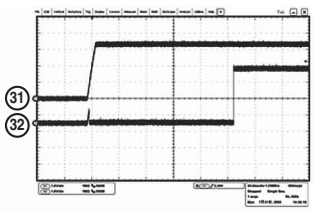


MODE: PLAY
(29) **IC4005 - pin 37 (BUSCLK)**
V: 1.0 V/div. H: 5.0 nsec/div.

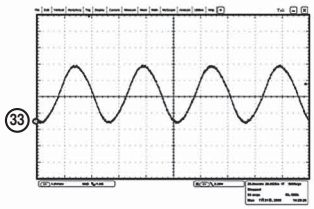


J PNLB ASSY

MODE: PLAY
(31) **IC8004 - pin 5 (V+3R3E)**
V: 1.0 V/div. H: 40.0 msec/div.
(32) **IC8003 - pin 12 (RESET)**
V: 1.0 V/div. H: 40.0 msec/div.

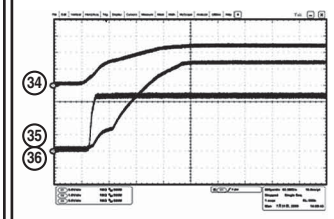


MODE: PLAY
(33) **IC8003 - pin 13 (XOUT)**
V: 1.0 V/div. H: 25.0 nsec/div.

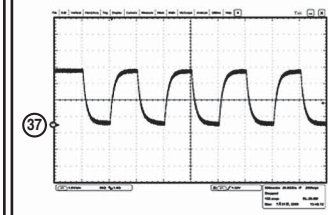


K JFLB ASSY

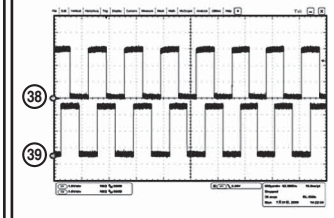
MODE: PLAY
(34) **IC9204 - pin 1 (V+12)**
V: 5.0 V/div. H: 800 µsec/div.
(35) **V9201 - pin 23 (VDD)**
V: 1.0 V/div. H: 800 µsec/div.
(36) **V9201 - pin 28 (VH)**
V: 5.0 V/div. H: 800 µsec/div.



MODE: PLAY
(37) **V9201 - pin 27 (CLK)**
V: 1.0 V/div. H: 800 nsec/div.

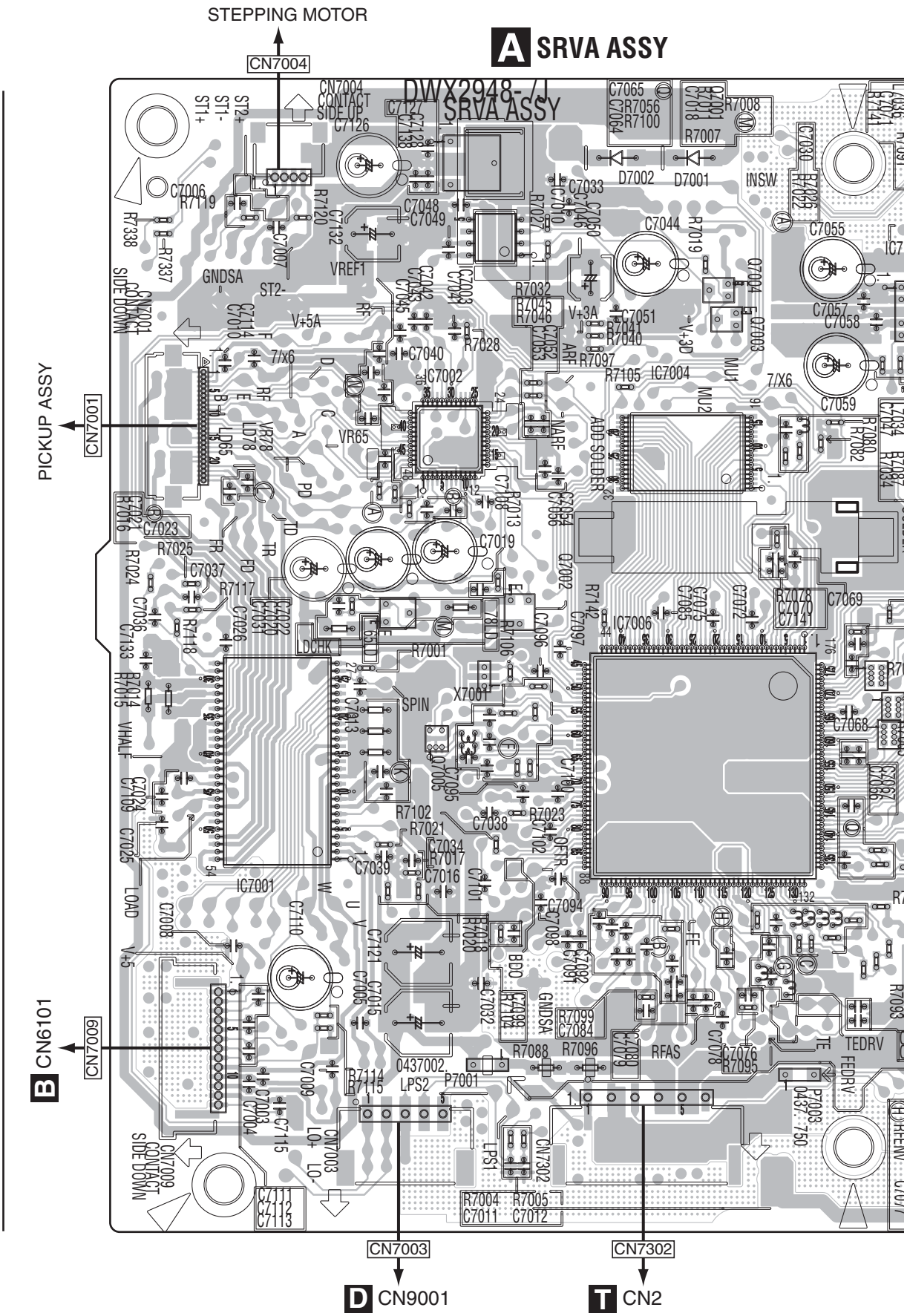


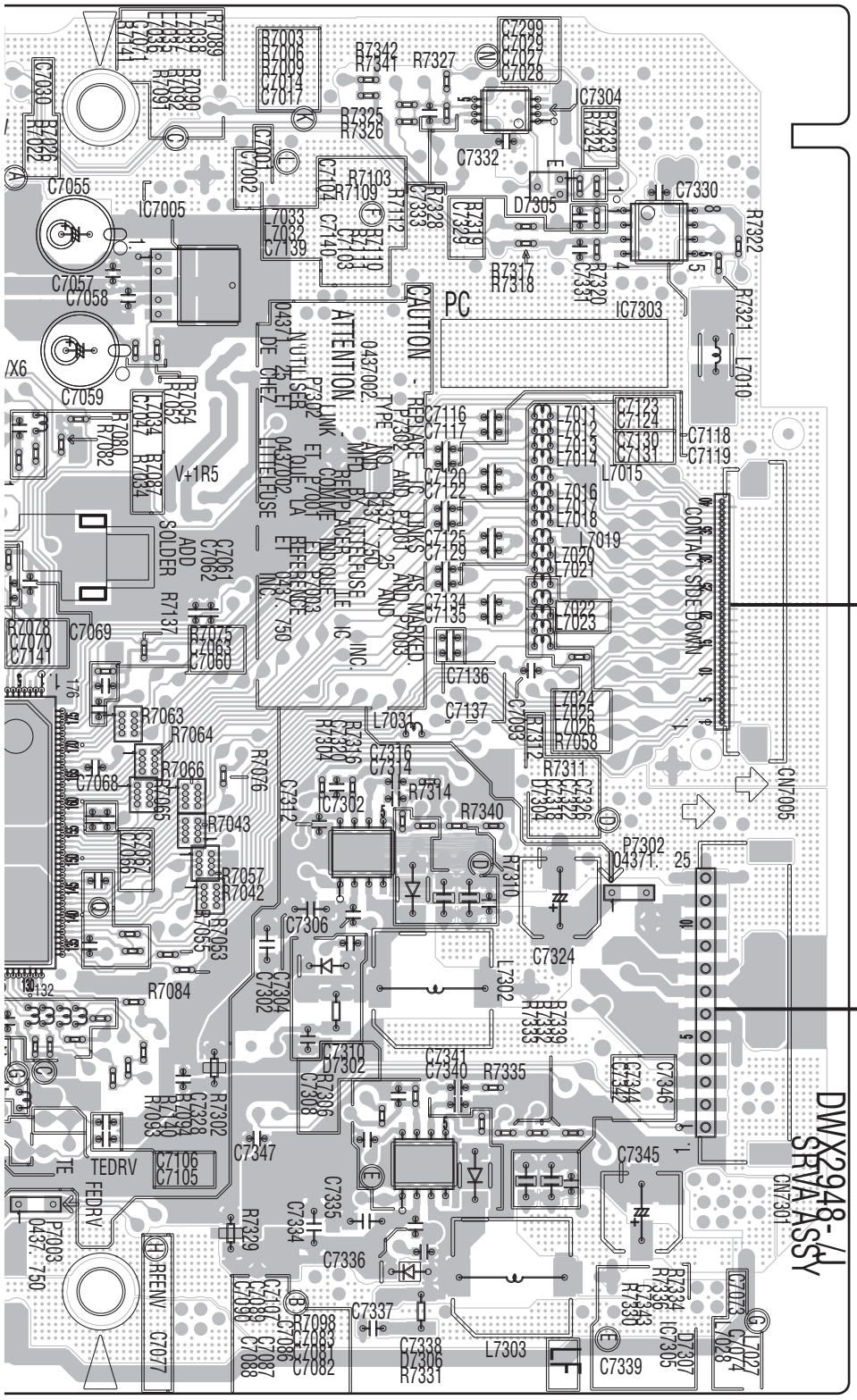
MODE: JOG rotate at PLAY
(38) **JH9202 - pin 3 (JOG1)**
V: 1.0 V/div. H: 800 µsec/div.
(39) **JH9202 - pin 4 (JOG2)**
V: 1.0 V/div. H: 800 µsec/div.



11. PCB CONNECTION DIAGRAM
11.1 SRVA ASSY

SIDE A



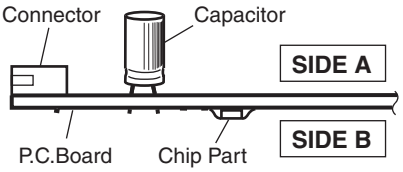


(DNP2446-D)

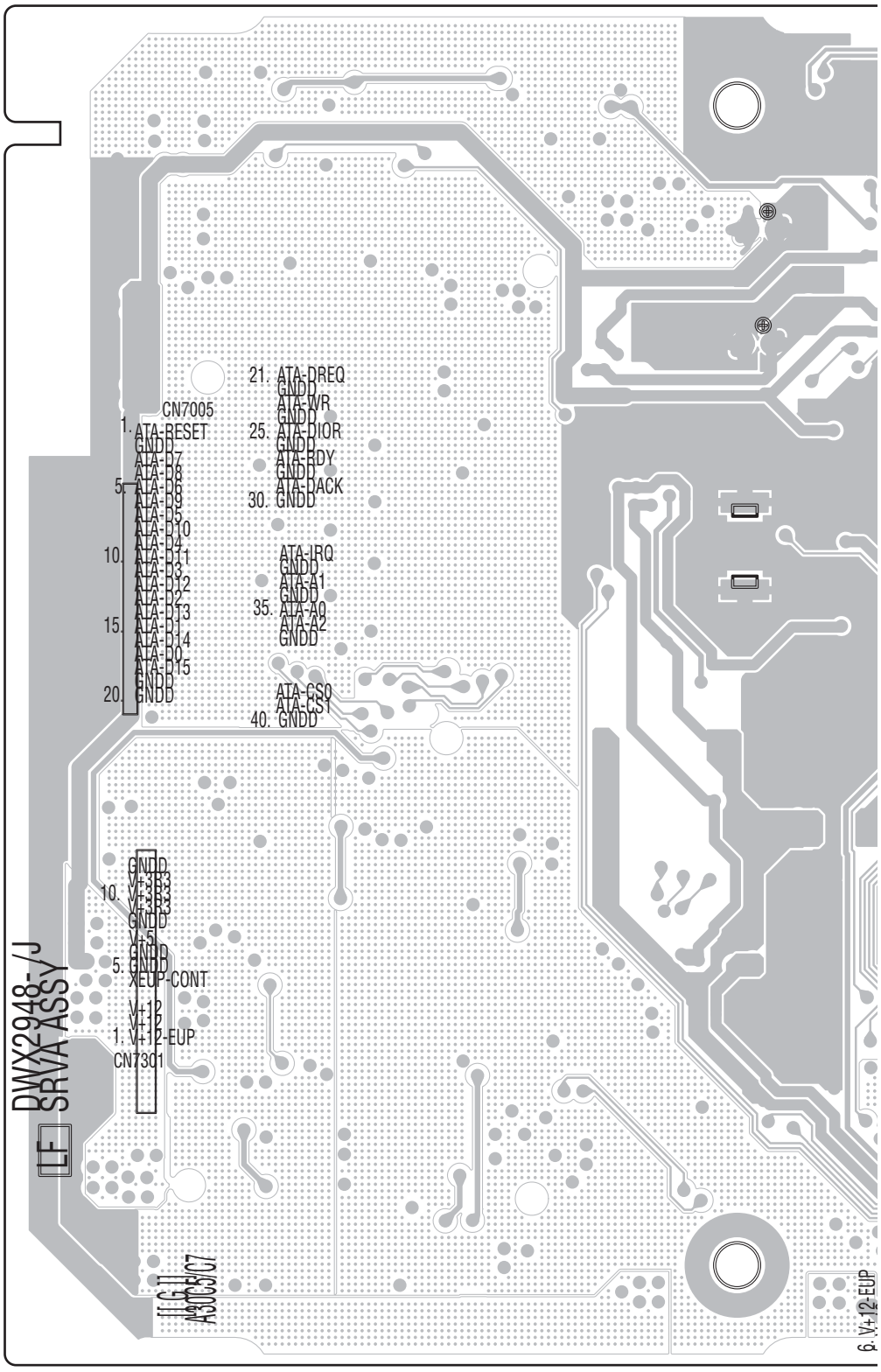
NOTE FOR PCB DIAGRAMS :

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

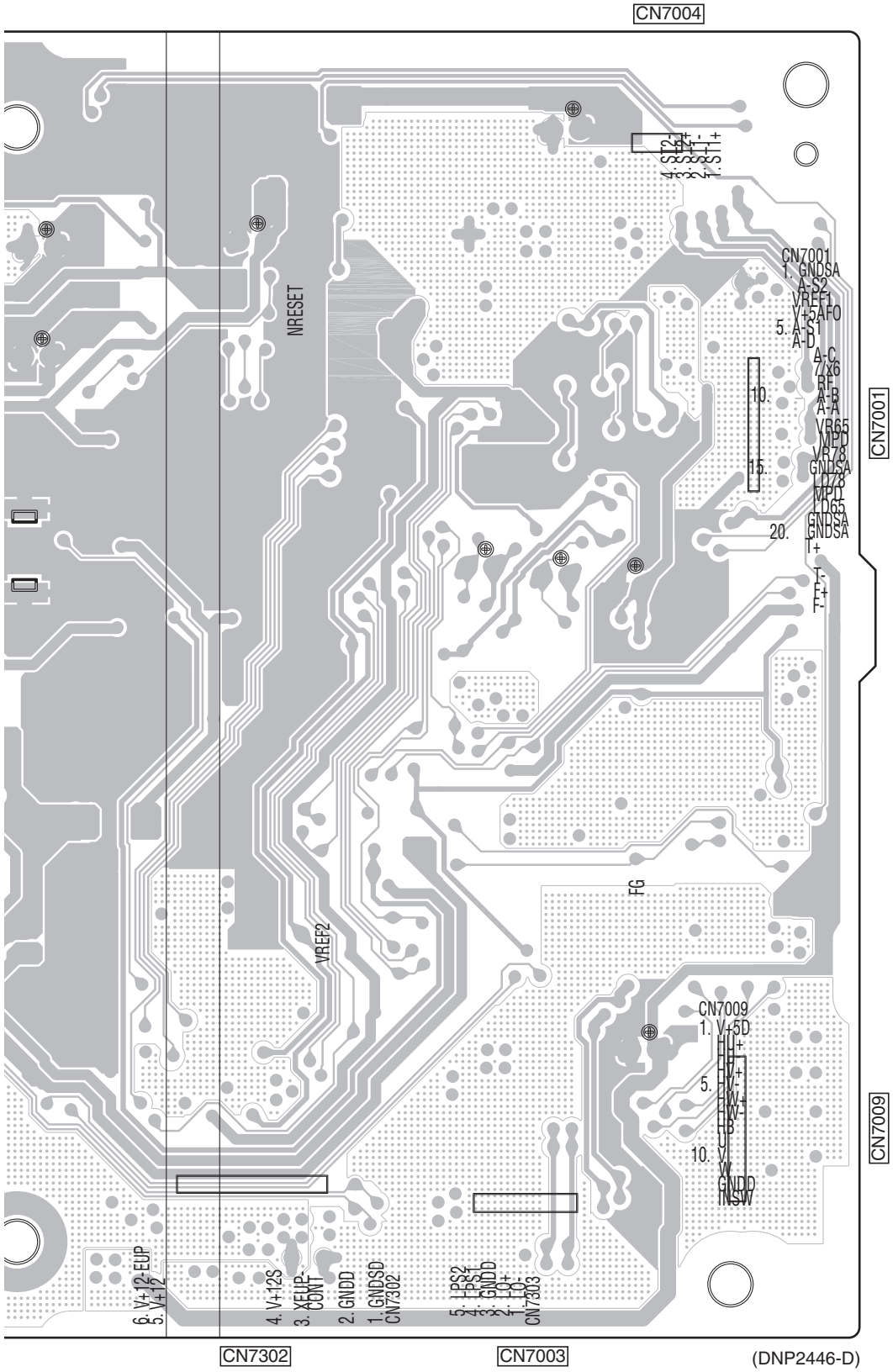
2. View point of PCB diagrams.



A SRVA ASSY


CN7005
1. ATA-RESET
GNDD
ATA-D7
ATA-D8
5. ATA-D6
ATA-D9
ATA-D5
ATA-D10
ATA-D4
10. ATA-D11
ATA-D3
ATA-D12
ATA-D2
ATA-D13
15. ATA-D1
ATA-D14
ATA-D0
ATA-D15
GNDD
20. GNDD
21. ATA-DREQ
GNDD
ATA-WR
GNDD
25. ATA-DIOR
GNDD
ATA-RDY
GNDD
ATA-DACK
30. GNDD
ATA-IRQ
GNDD
ATA-A1
GNDD
35. ATA-A0
ATA-A2
GNDD
ATA-CS0
ATA-CS1
40. GNDD
CN7005
CN7301
GNDD
V+3R3
10. V+3R3
V+3R3
GNDD
V+5
GNDD
5. GNDD
XEUP-CONT
V+12
V+12
1. V+12-EUP
CN7301
LF
RWX2948-/J
SRVA ASSY
A3003/07
6. V+12-EUP

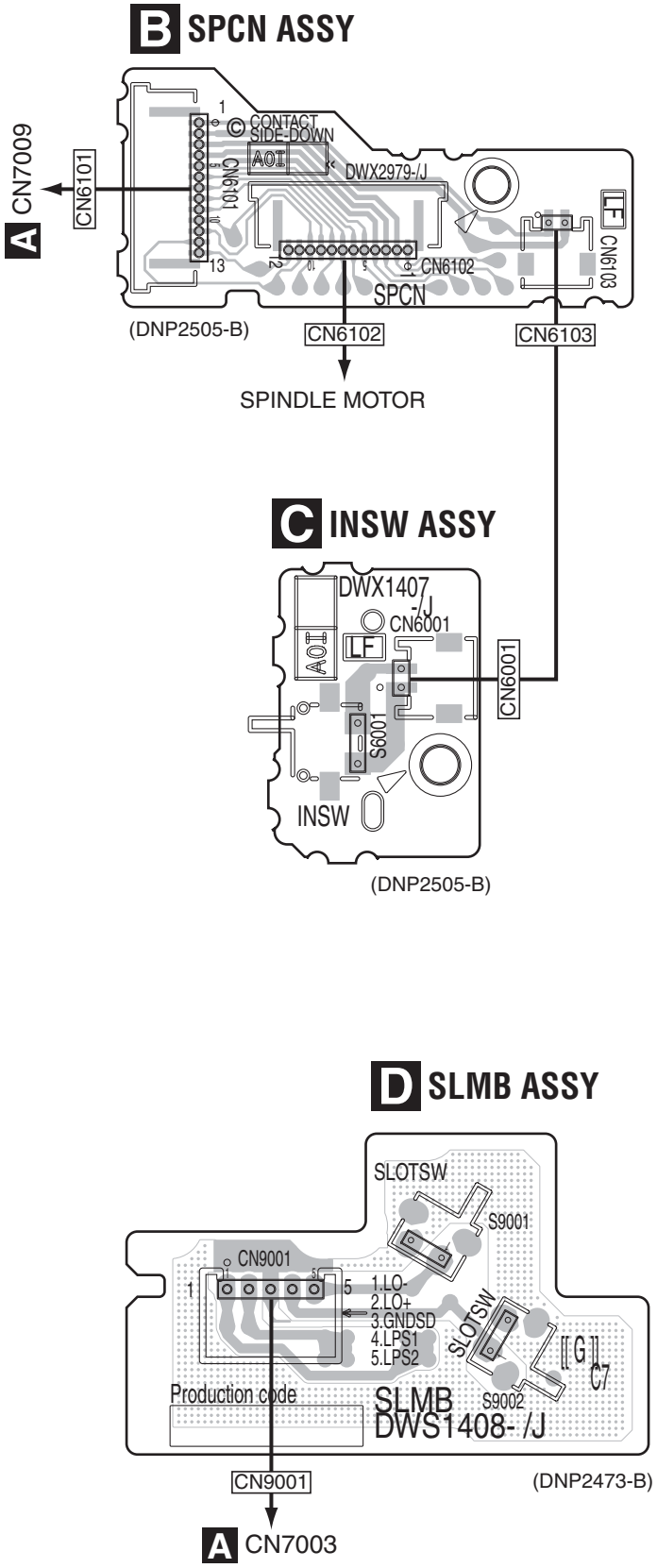
SIDE B



(DNP2446-D)

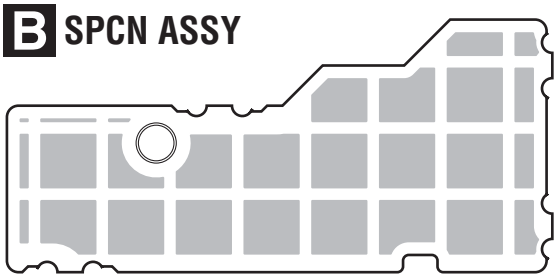
11.2 SPCN, INSW and SLMB ASSYS

SIDE A



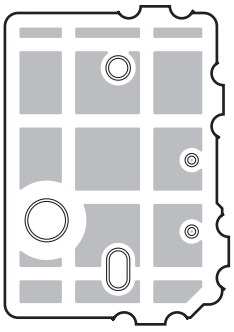
B C D

B SPCN ASSY



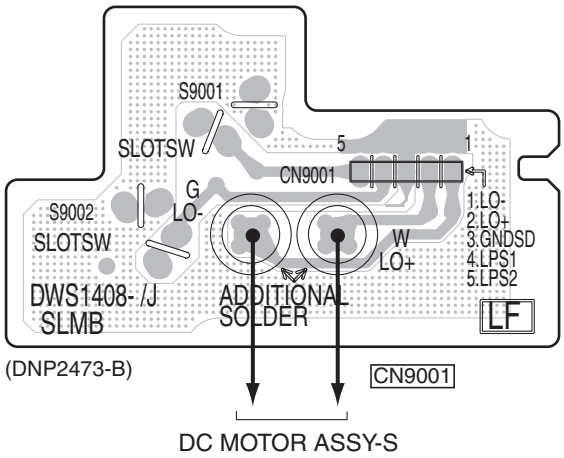
(DNP2505-B)

C INSW ASSY



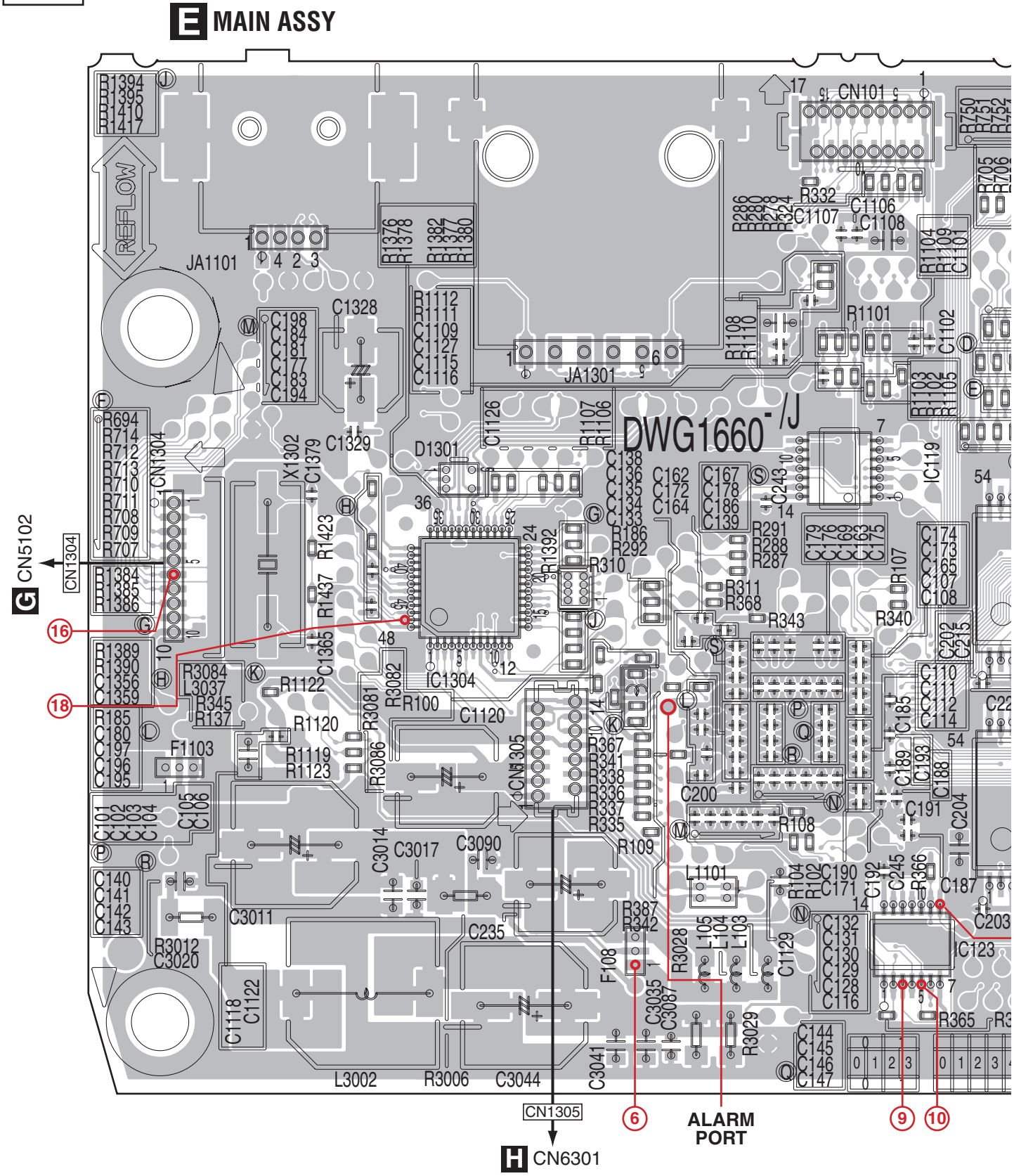
(DNP2505-B)

D SLMB ASSY



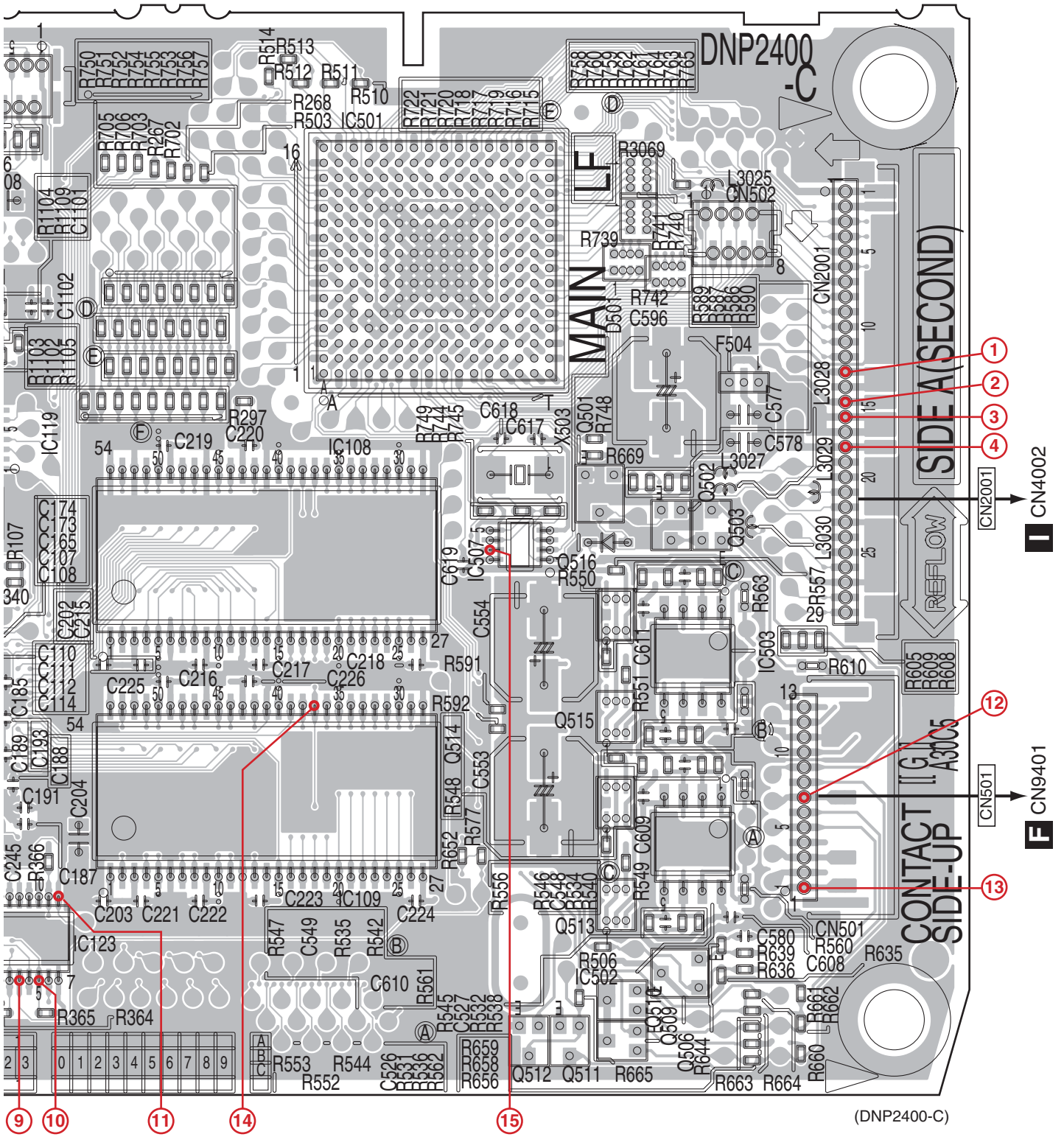
11.3 MAIN ASSY

SIDE A



SIDE A

NOTE: The encircled numbers denote measuring point.



IC123

IC108
IC109

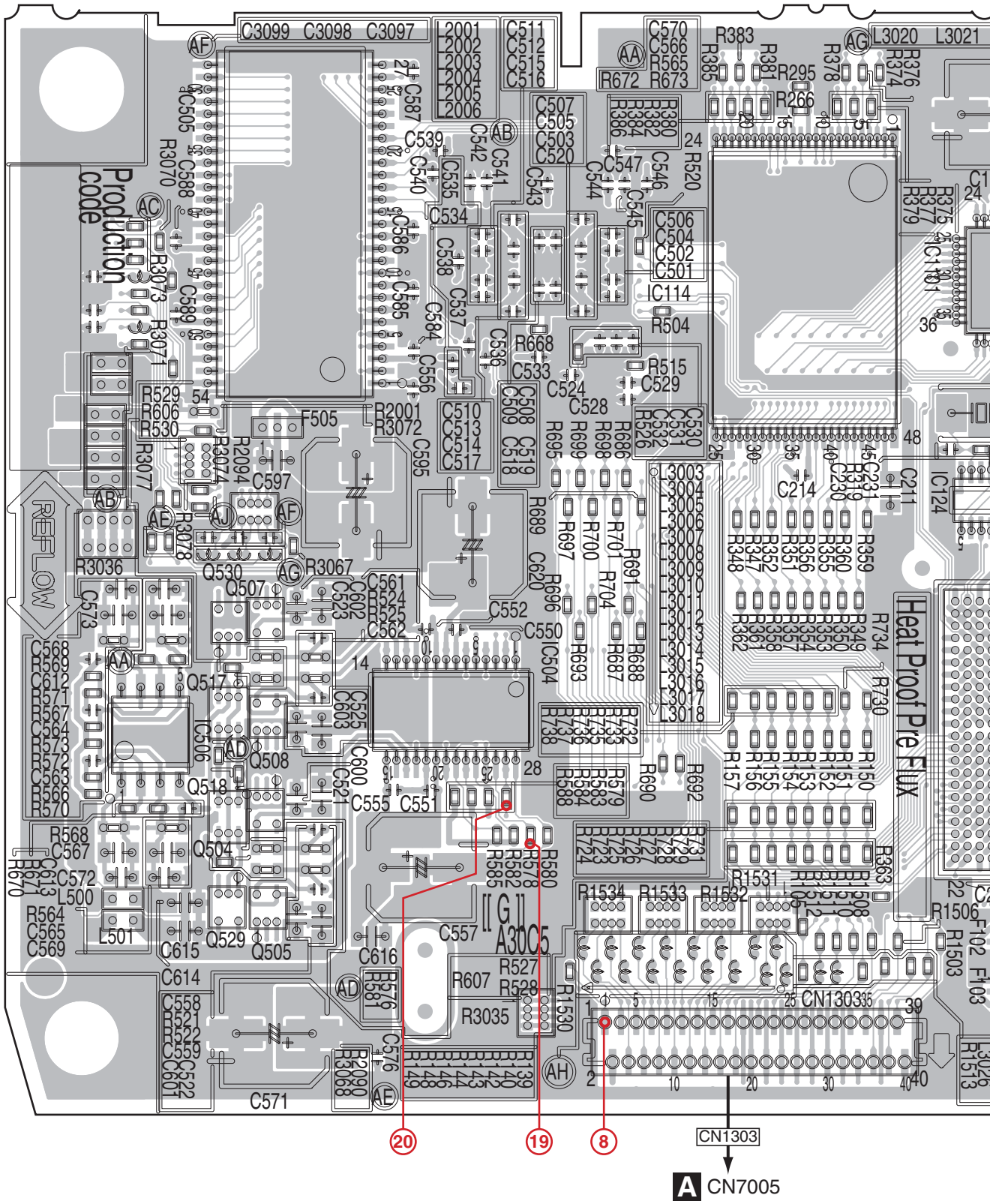
IC501

IC507

Q501 Q516 Q502 Q503
Q515 Q514 IC503
Q513 IC502
Q510 Q506
Q512 Q511 Q509

SIDE B

E MAIN ASSY



IC505

IC506 Q530 Q507 Q517 Q508 Q518 Q504 Q529 Q505

IC504

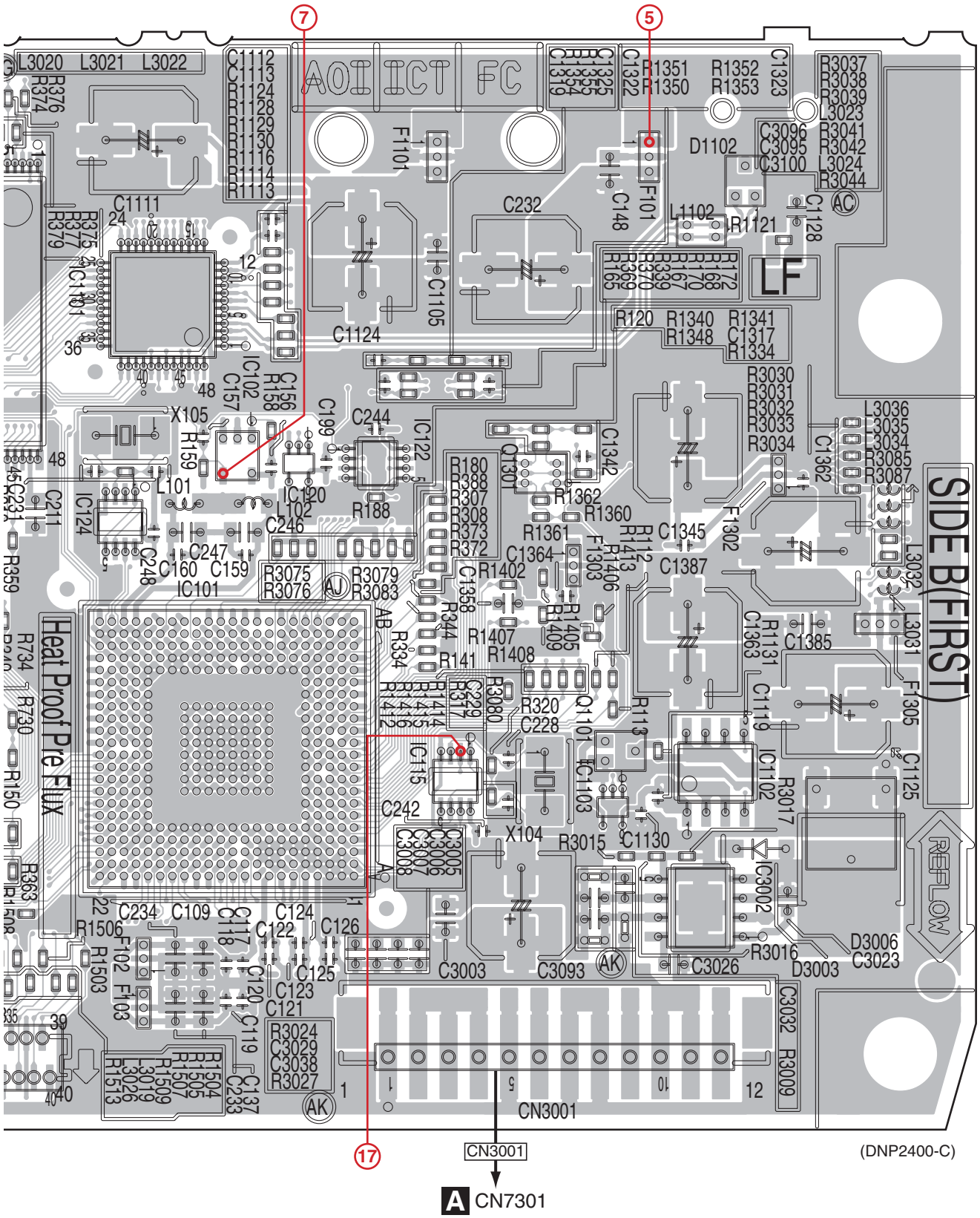
IC114

IC124

E

SIDE B

NOTE: The encircled numbers denote measuring point.

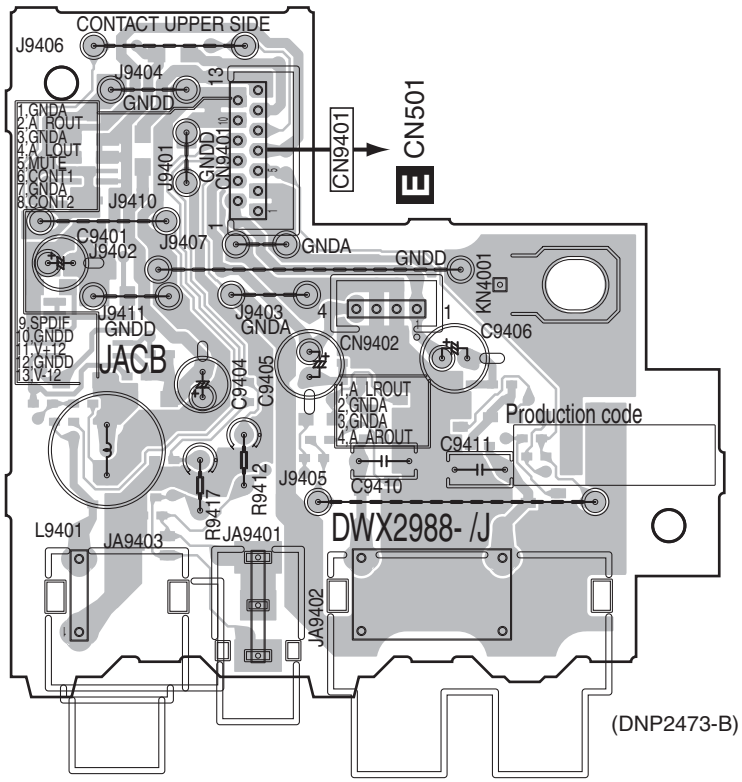


IC1101 IC102 IC120 IC122 Q1301
IC124 IC115 Q1101 IC1102
IC101 IC1103 IC3002

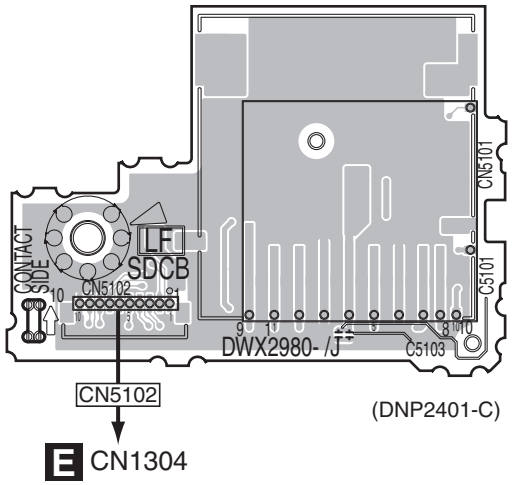
11.4 JACB, SDCB and USBA ASSYS

SIDE A

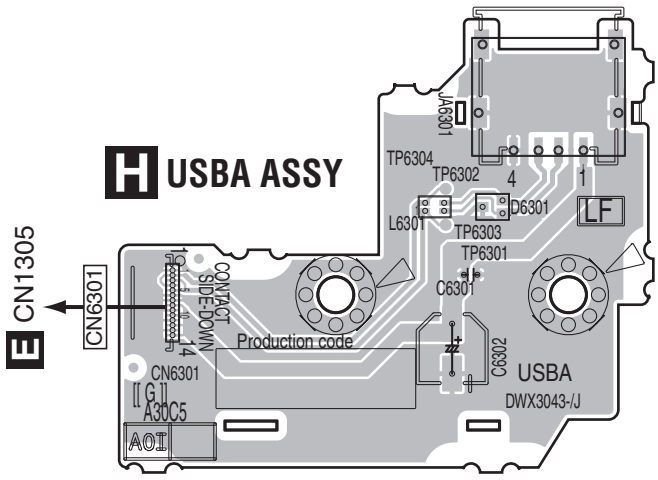
F JACB ASSY



G SDCB ASSY

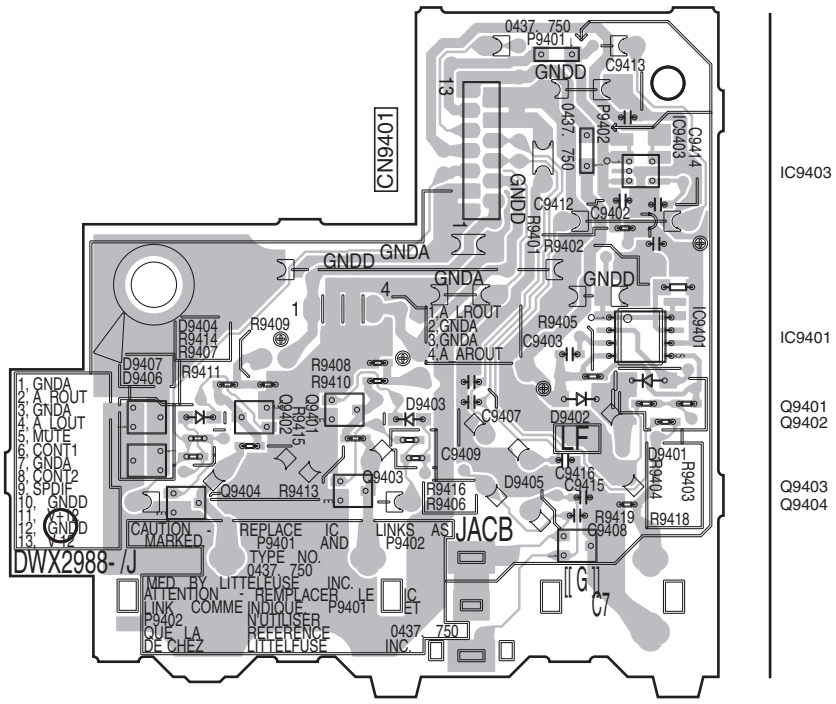


H USBA ASSY



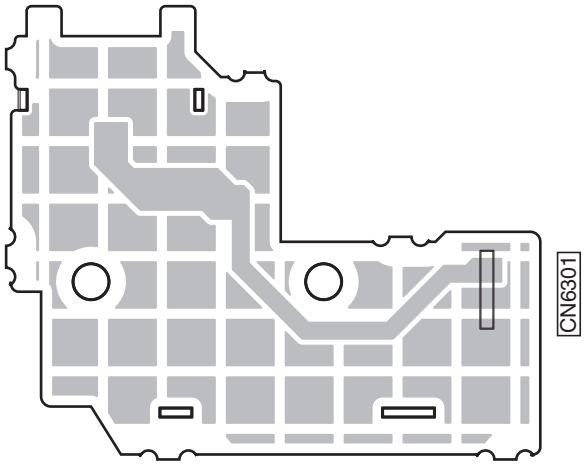
F G H

F JACB ASSY



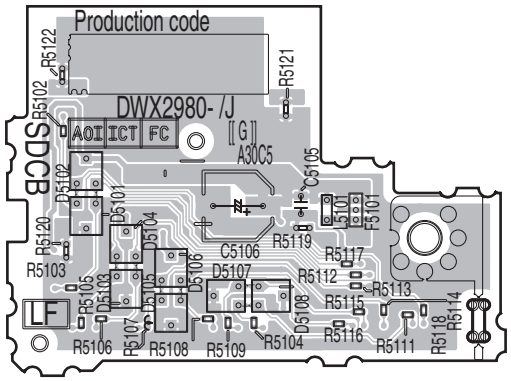
(DNP2473-B)

H USBA ASSY



(DNP2505-B)

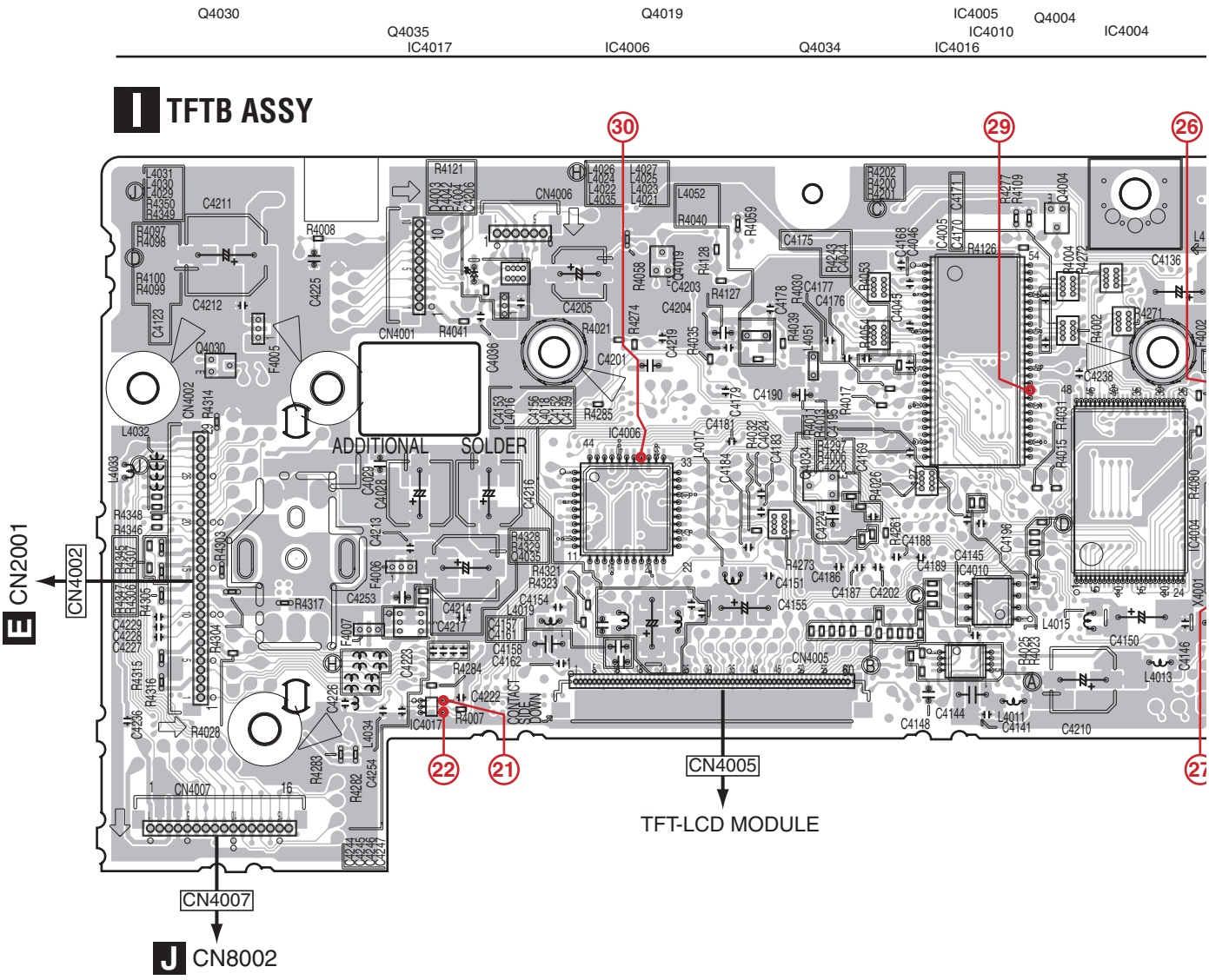
G SDCB ASSY



(DNP2401-C)

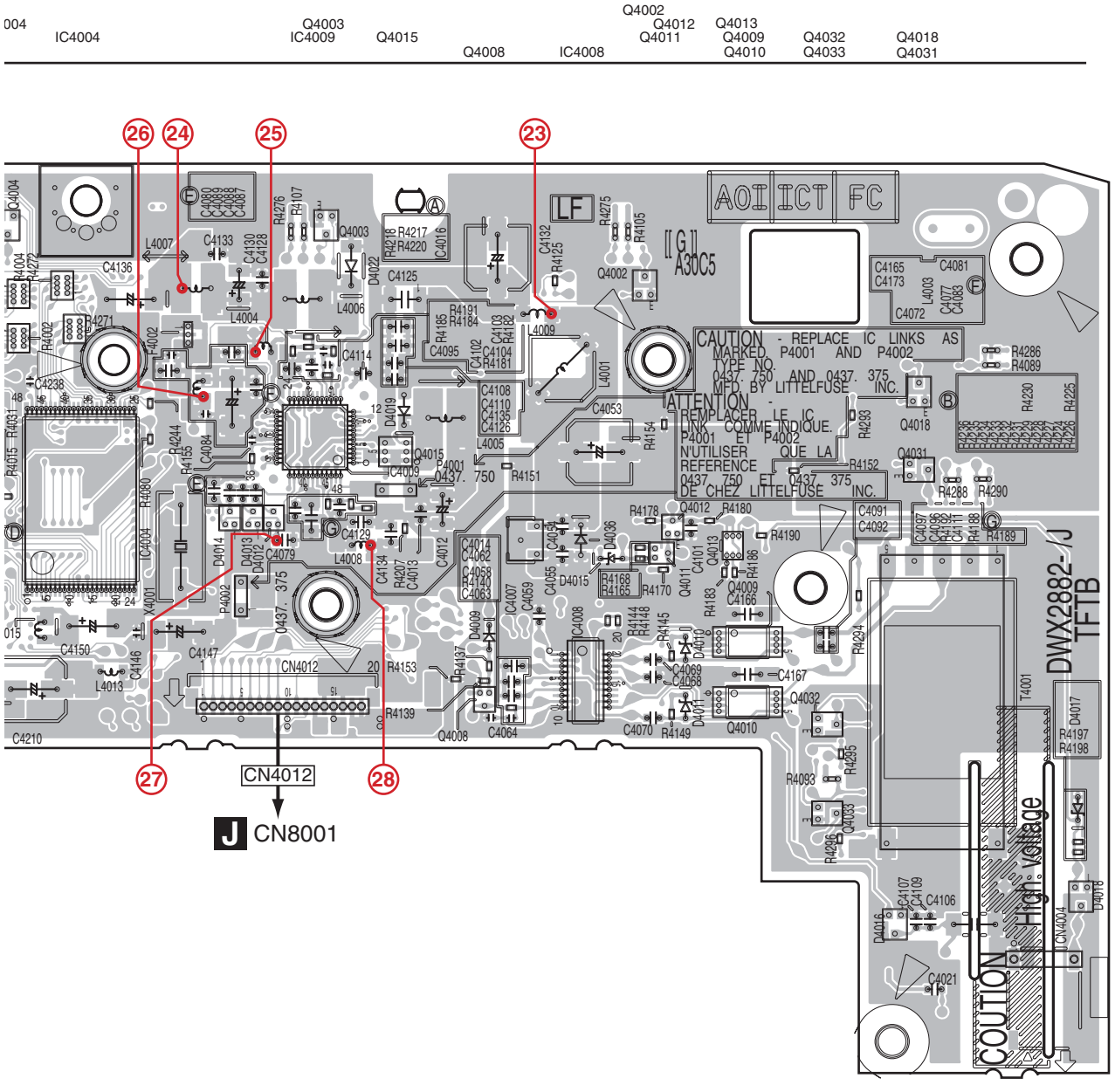
11.5 TFTB ASSY

SIDE A



SIDE A

NOTE: The encircled numbers denote measuring point.



(DNP2401-C)

SIDE B

A

B

C

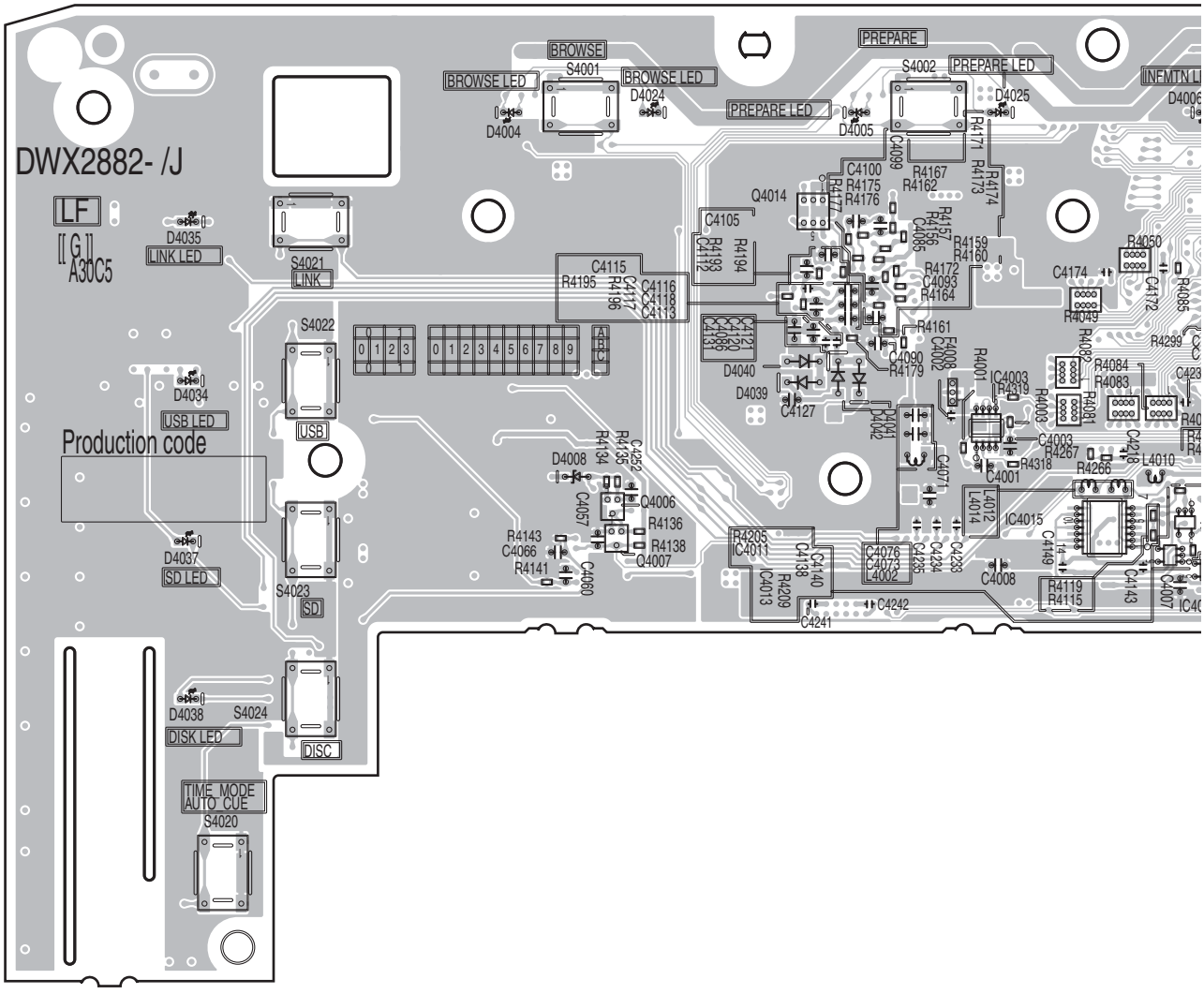
D

E

F

Q4006
Q4007
Q4014
IC4003
IC4015
IC401
IC4013 I

I TFTB ASSY



SIDE B

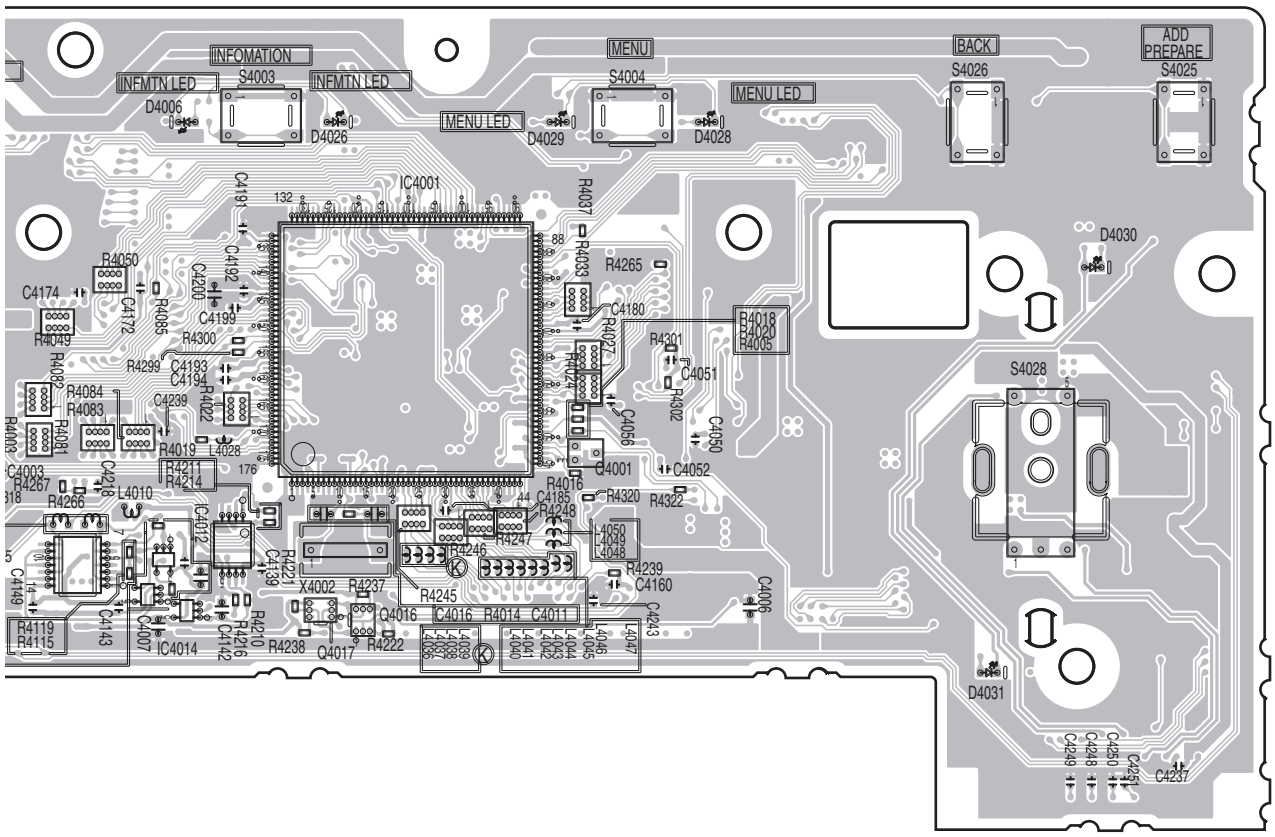
IC4001

IC4015 IC4012

IC4011

Q4017

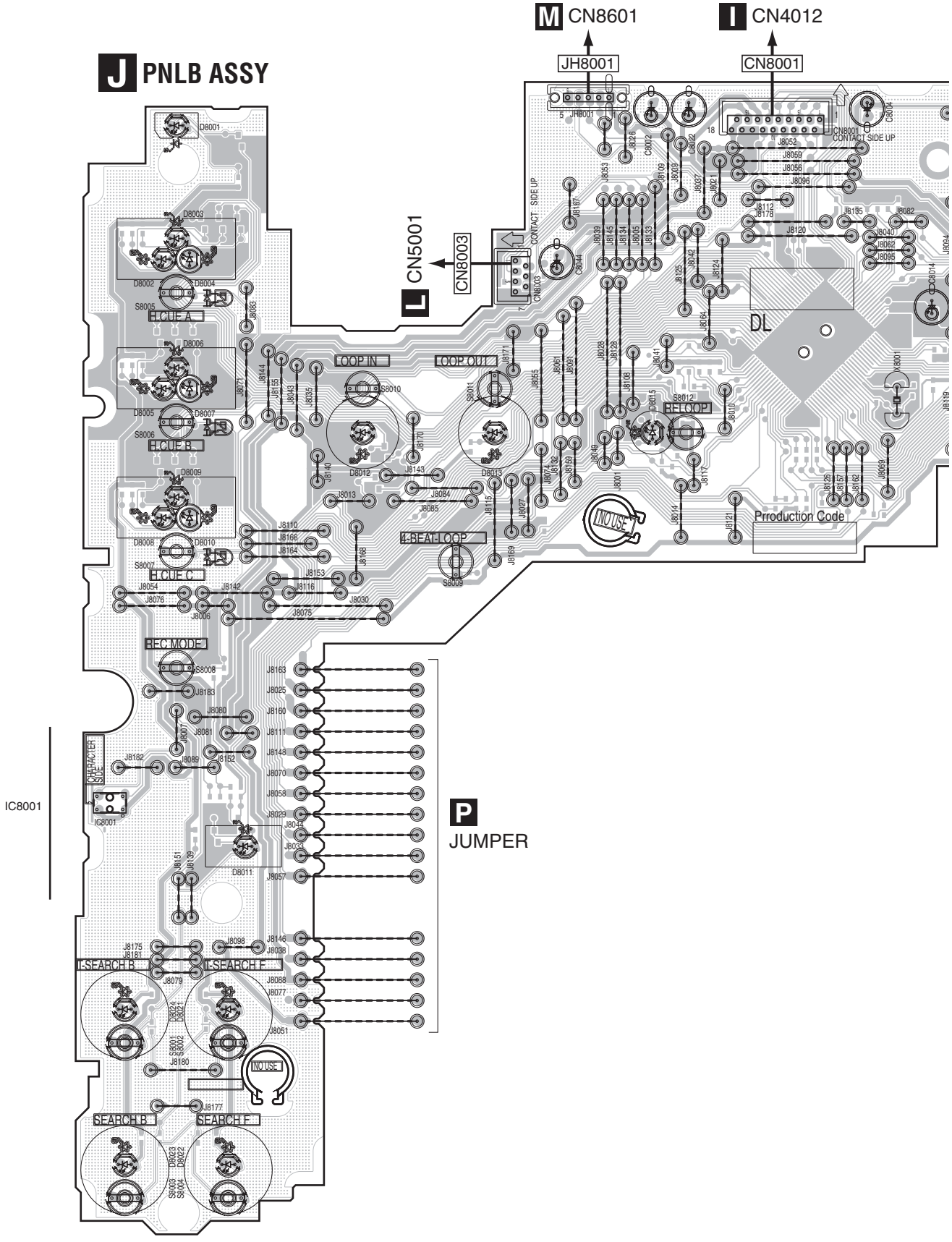
IC4013 IC4014 Q4016 Q4001

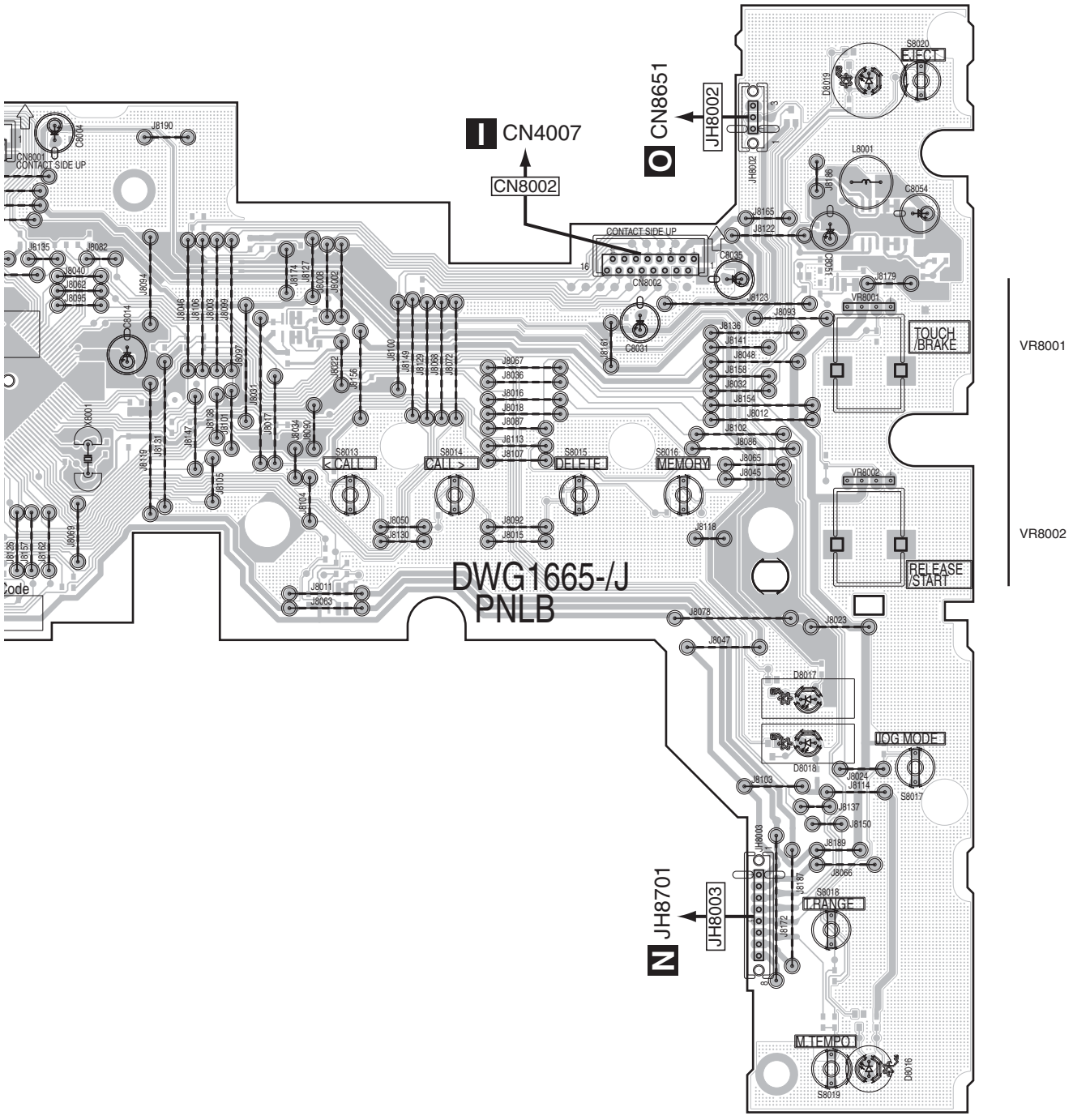


(DNP2401-C)

11.6 PNLB ASSY

SIDE A

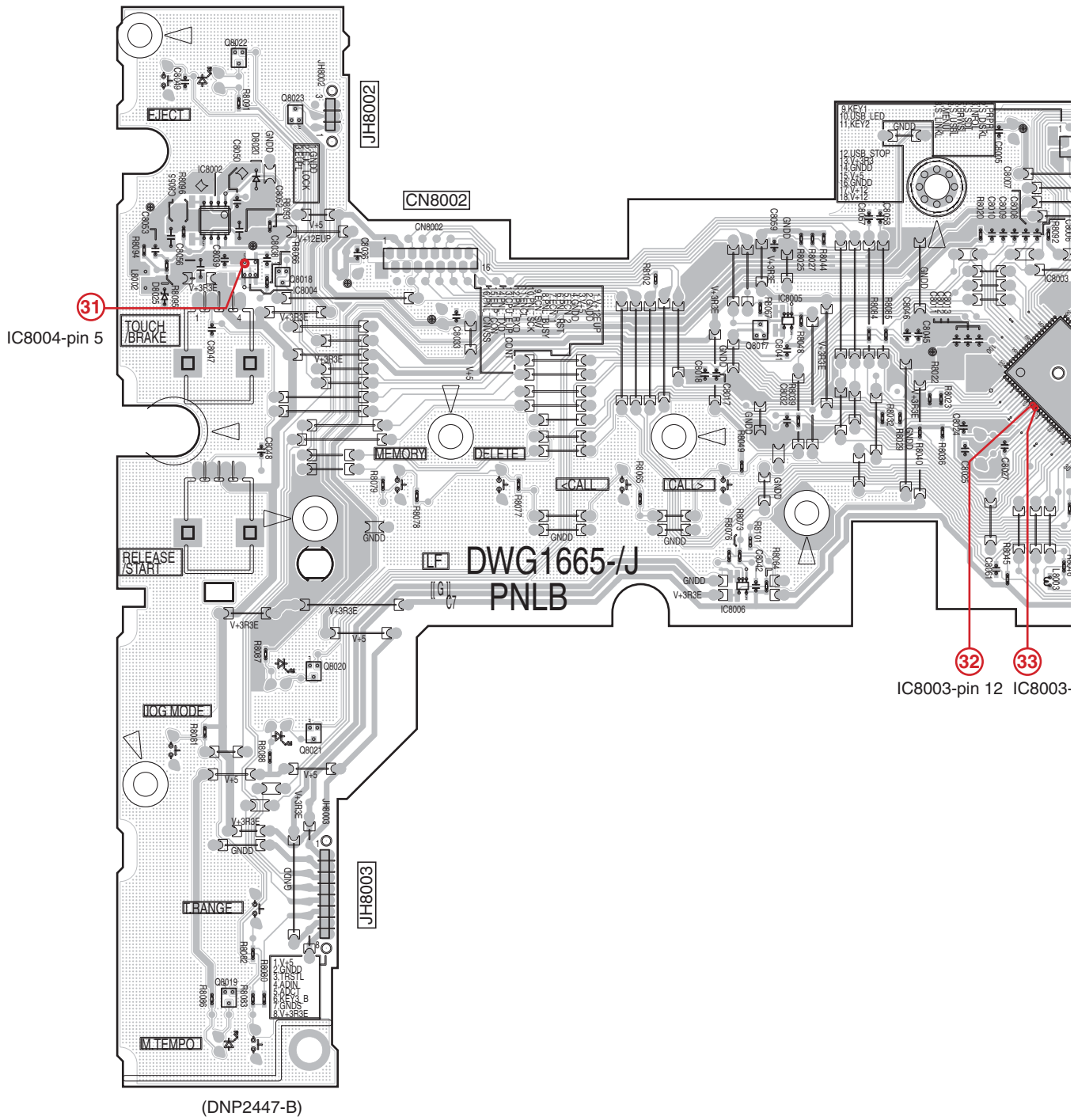



I CN4007
CN8002
O CN8651
JH8002
CONTACT SIDE UP
CN8001
CONTACT SIDE UP
CN8002
S8020
EJECT
L8001
C8054
J8165
J8122
C8035
J8179
VR8001
TOUCH /BRAKE
VR8001
VR8002
RELEASE /START
VR8002
S8013
< CALL
S8014
CALL >
S8015
DELETE
S8016
MEMORY
DWG1665-/J
PNLB
J8078
J8023
J8047
D8017
D8018
JOG MODE
J8024
J8114
S8017
J8103
J8137
J8150
J8189
J8066
JH8003
N JH8701
JH8003
S8018
T.RANGE
M.TEMPO
S8019
D8016

(DNP2447-B)

SIDE B

J PNLB ASSY



(DNP2447-B)

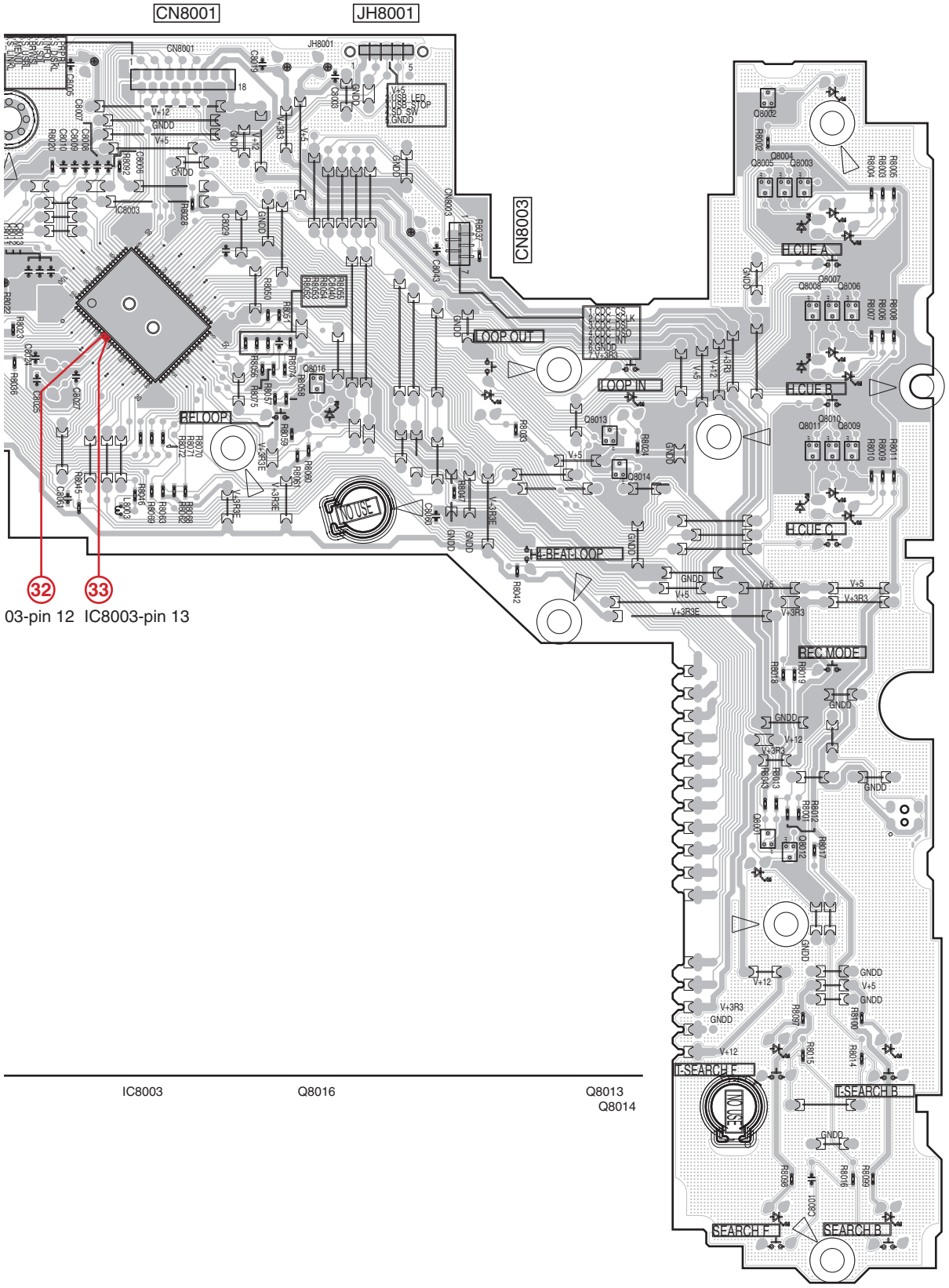
Q8022 Q8023
IC8002 IC8004
Q8018
Q8020
Q8019 Q8021

Q8017 IC8005
IC8006

IC8

SIDE B

NOTE: The encircled numbers denote measuring point.

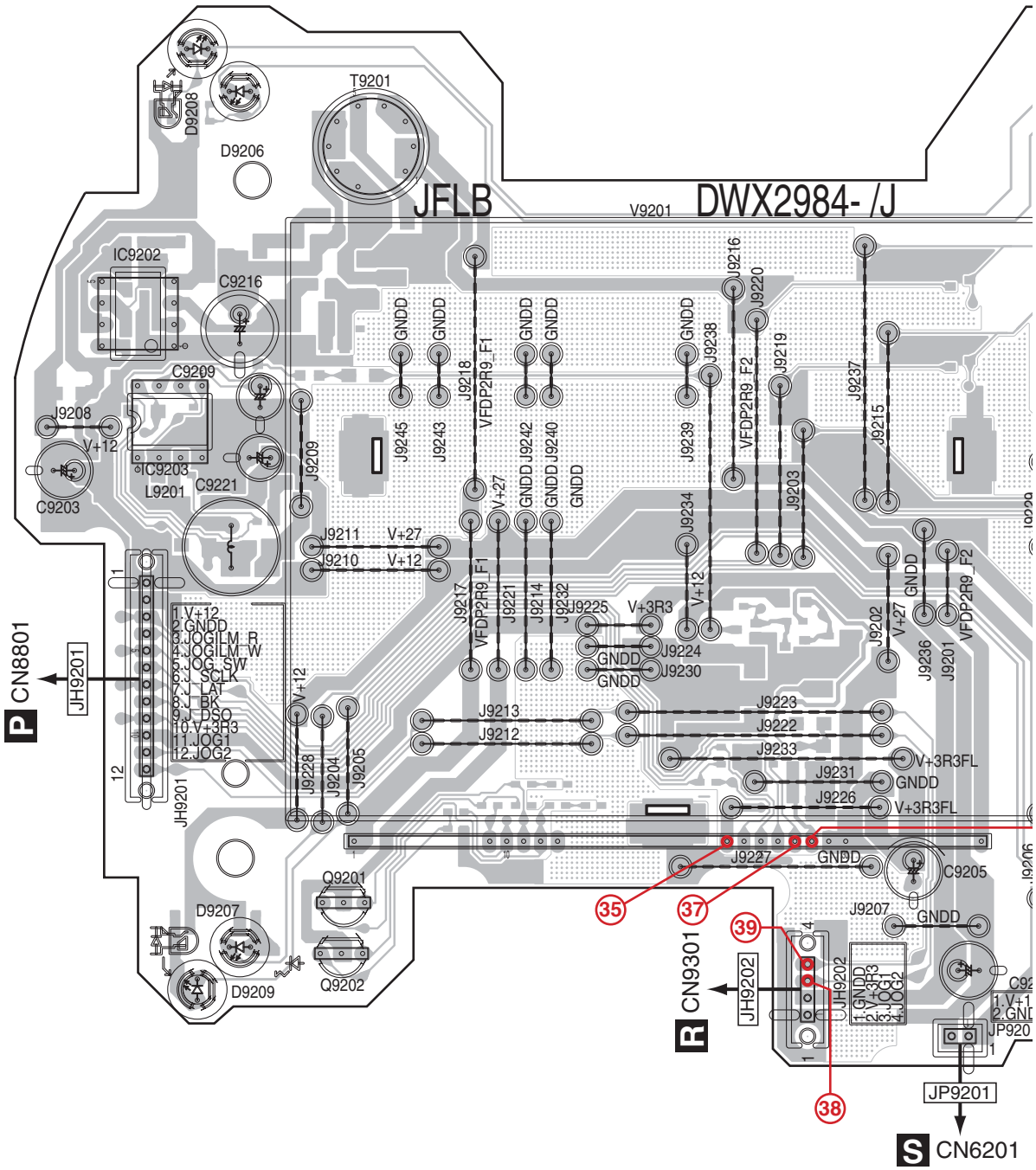


11.7 JFLB, CDCB and SDSW ASSYS

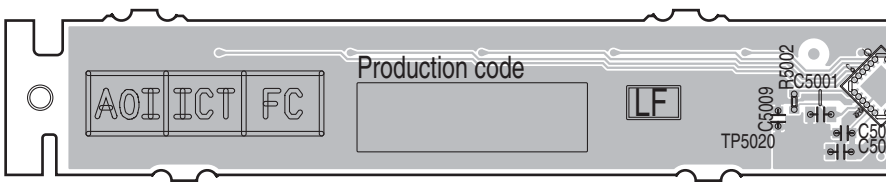
SIDE A

NOTE

K JFLB ASSY

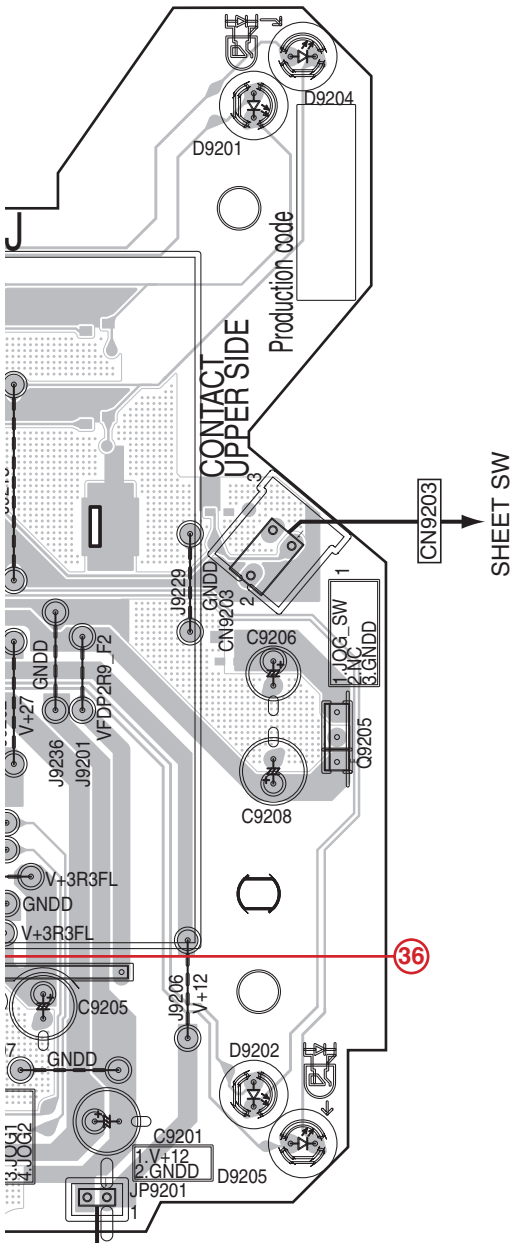


L CDCB ASSY



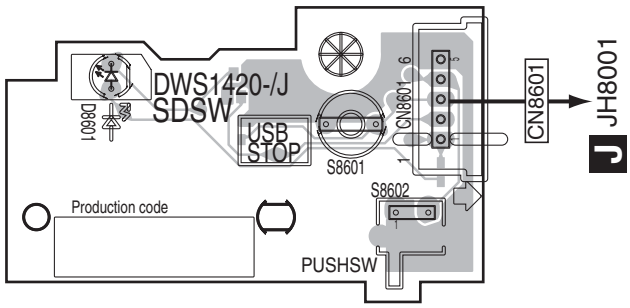
SIDE A

NOTE: The encircled numbers denote measuring point.

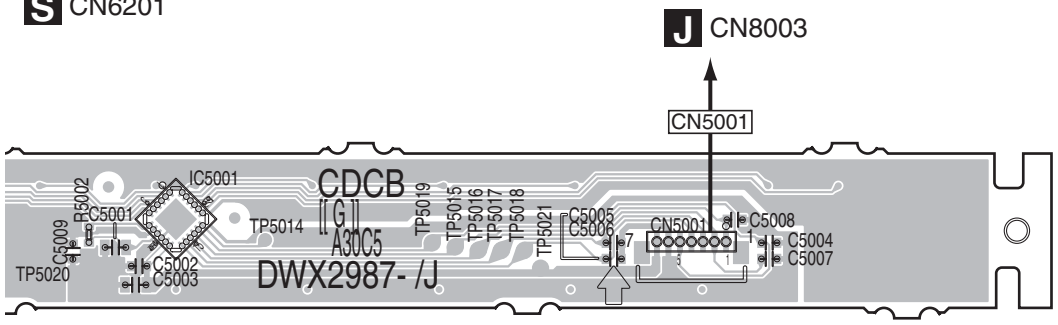


(DNP2473-B)

M SDSW ASSY



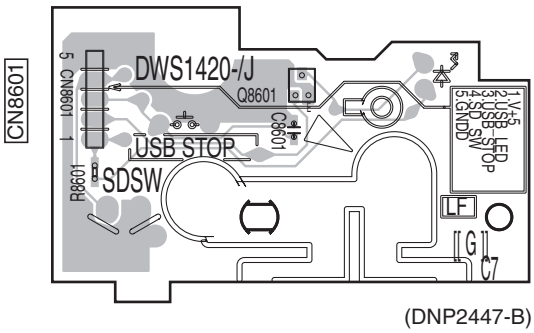
(DNP2447-B)



(DNP2401-C)

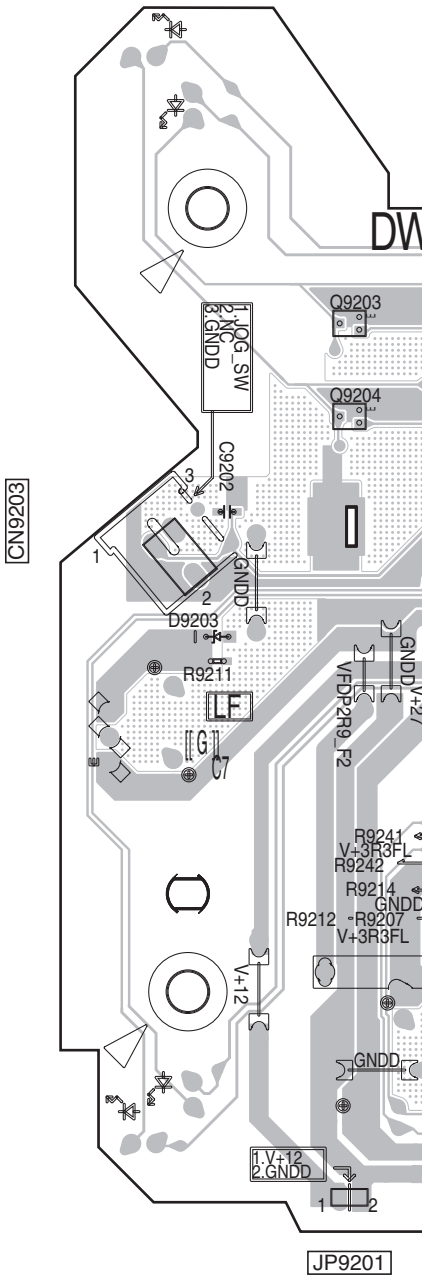
SIDE B

M SDSW ASSY

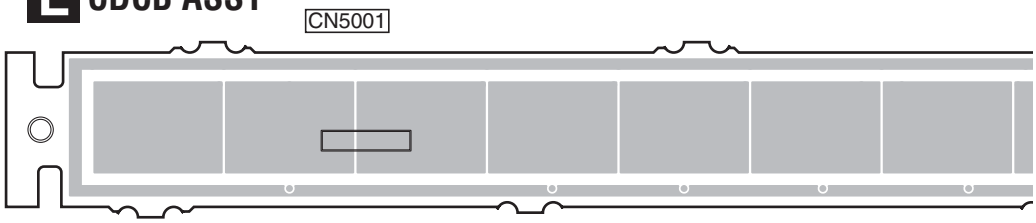


(DNP2447-B)

K JFLB ASSY



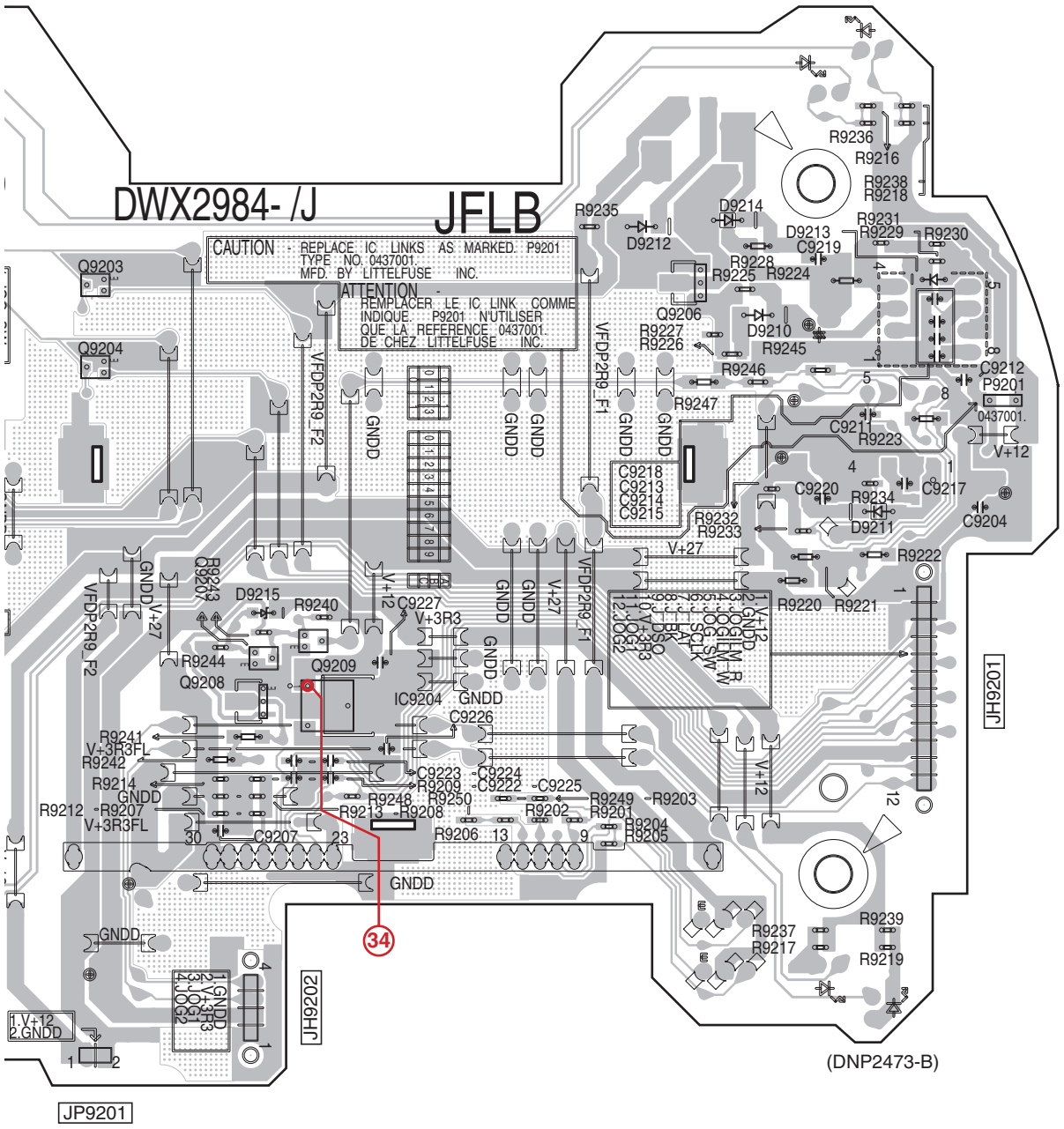
L CDCB ASSY



SIDE B

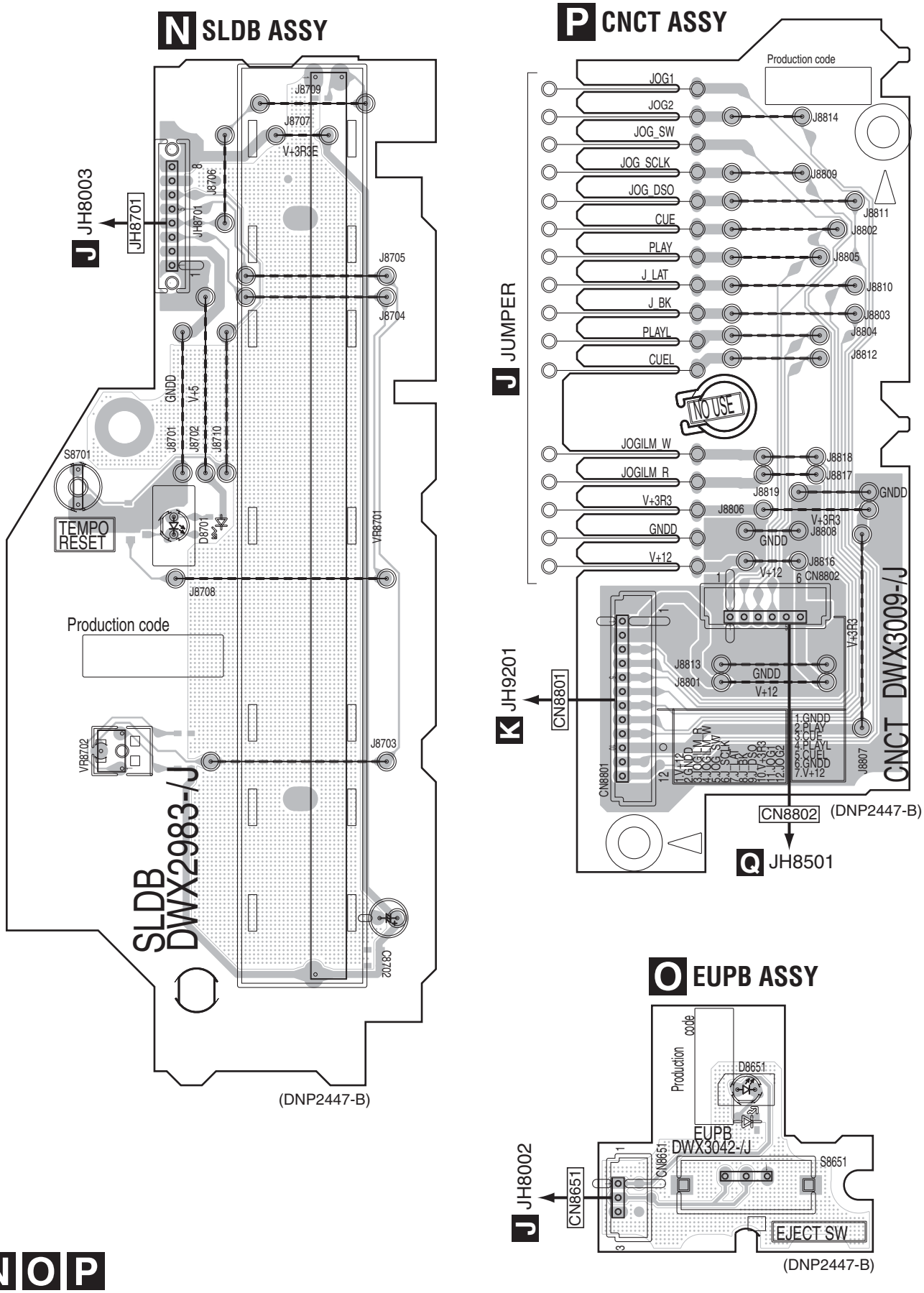
NOTE: The encircled numbers denote measuring point.

3 ASSY

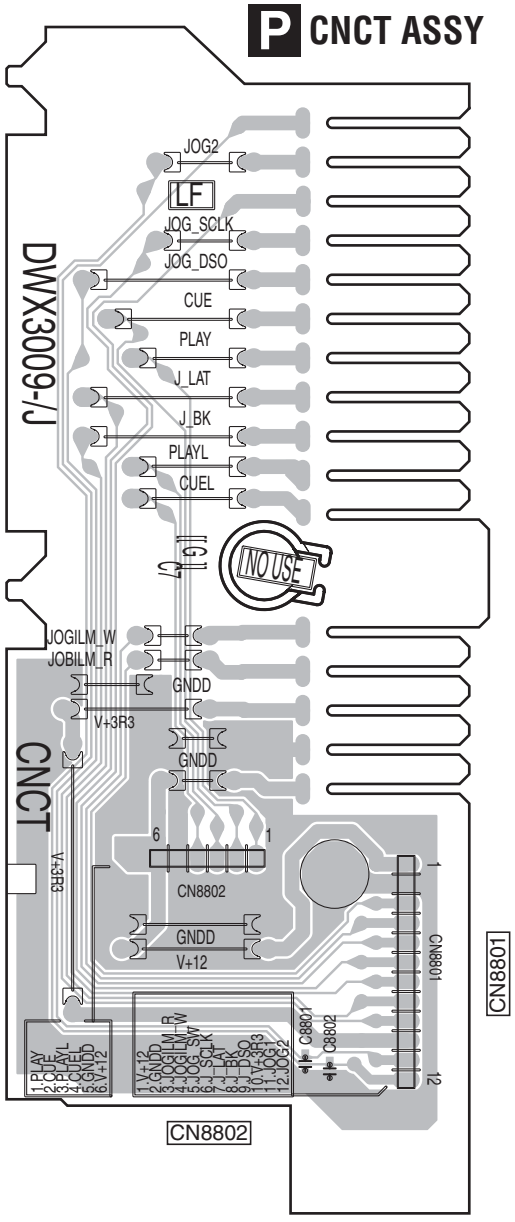


11.8 SLDB, EUPB and CNCT ASSYS

SIDE A

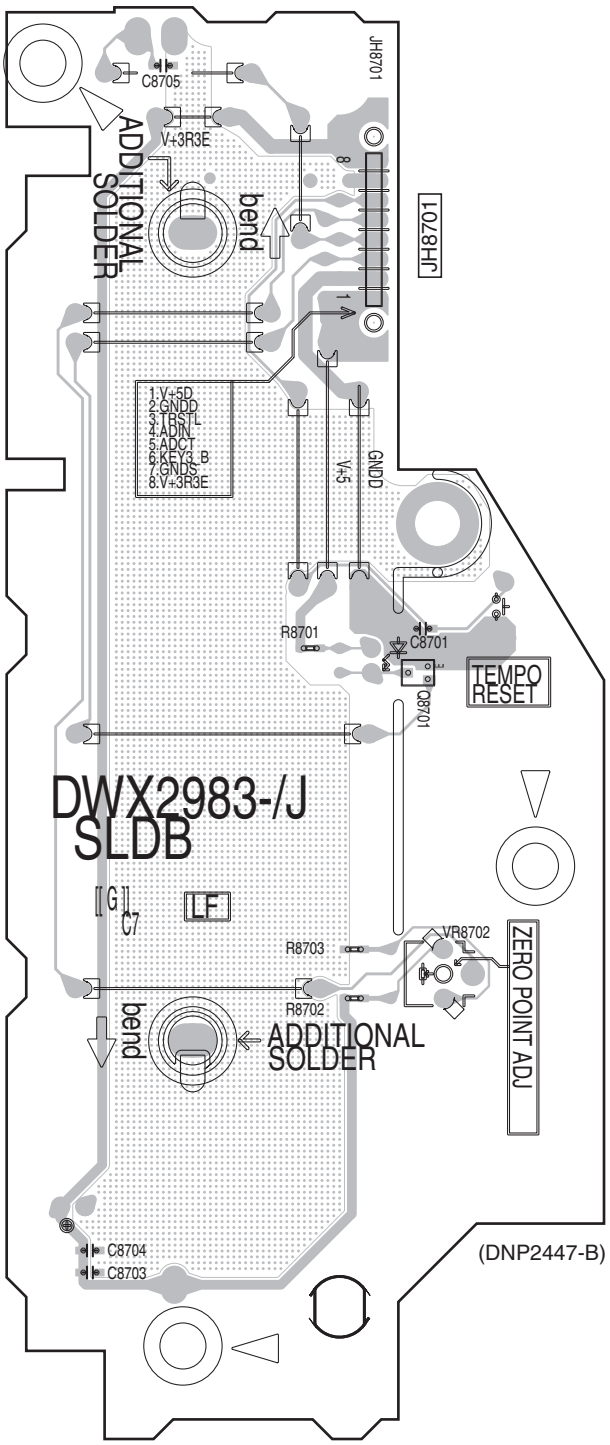


P CNCT ASSY



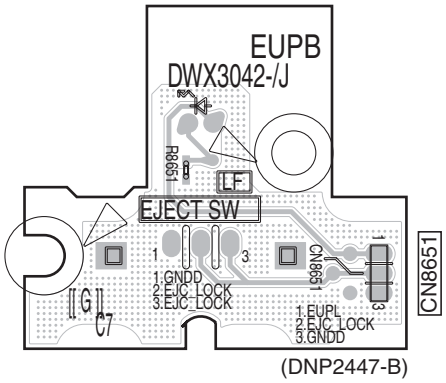
(DNP2447-B)

N SLDB ASSY



(DNP2447-B)

O EUPB ASSY

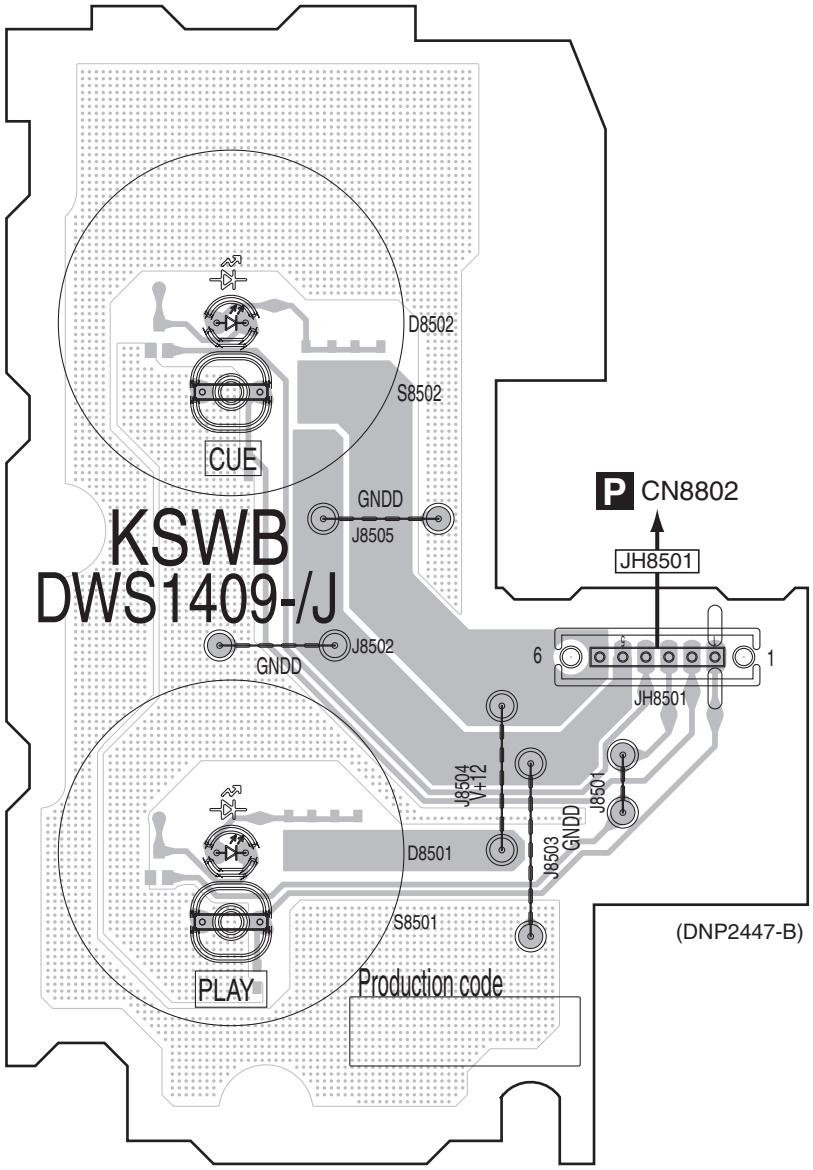


(DNP2447-B)

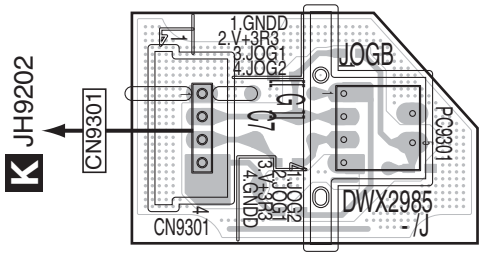
11.9 KSWB, JOGB and INDB ASSYS

SIDE A

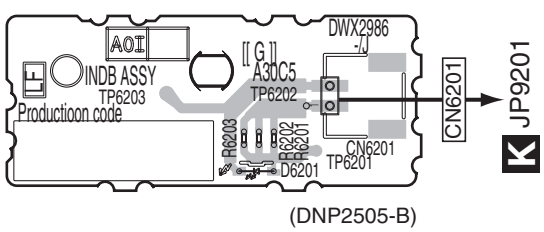
Q KSWB ASSY



R JOGB ASSY

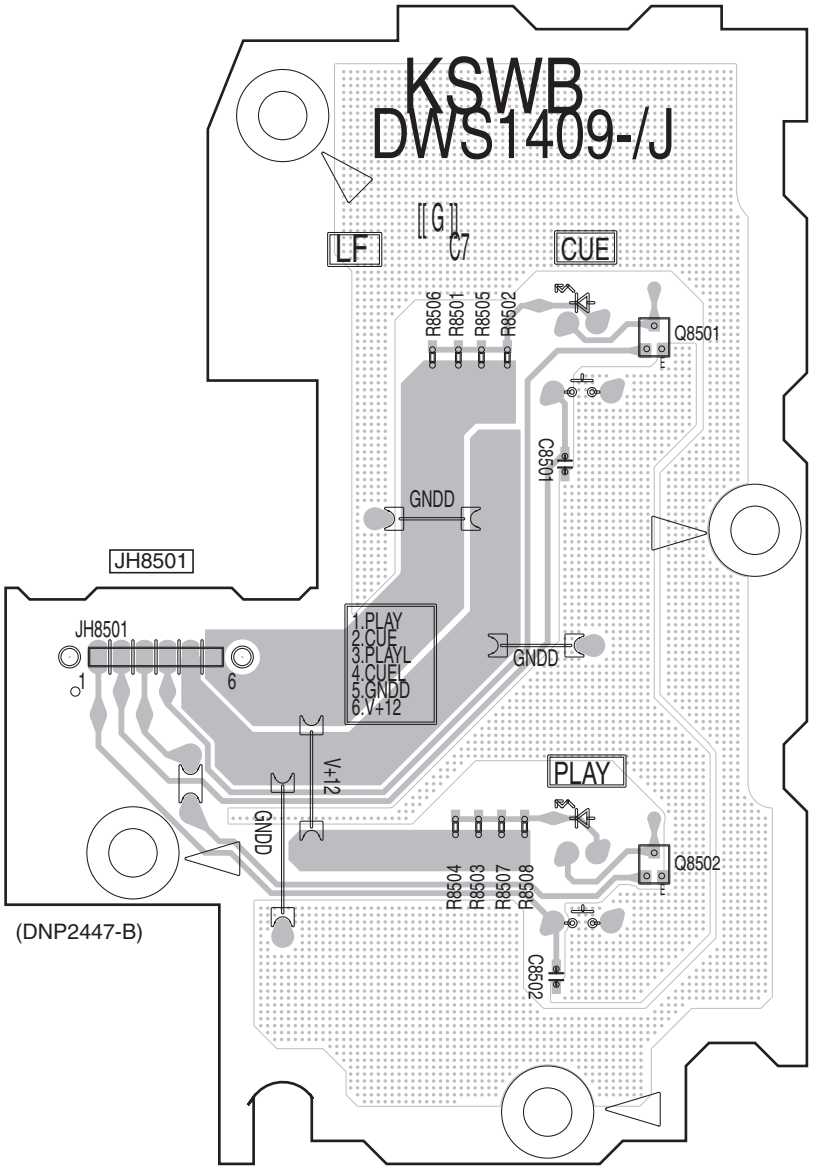


S INDB ASSY



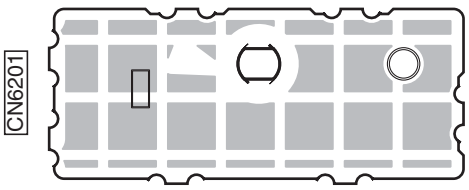
Q R S

Q KSWB ASSY



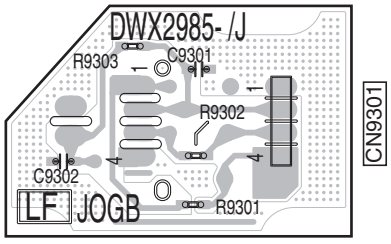
(DNP2447-B)

S INDB ASSY



(DNP2505-B)

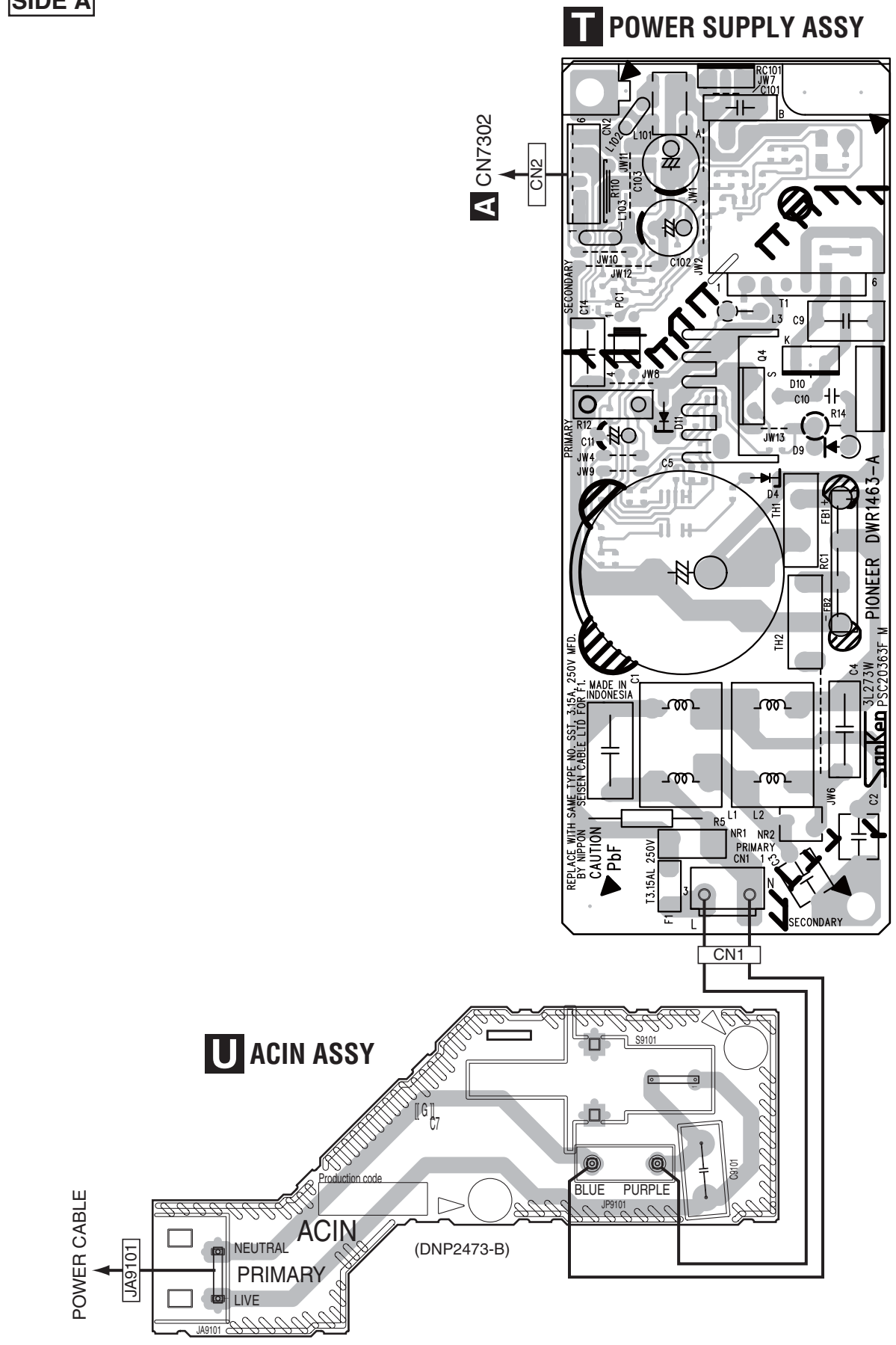
R JOGB ASSY



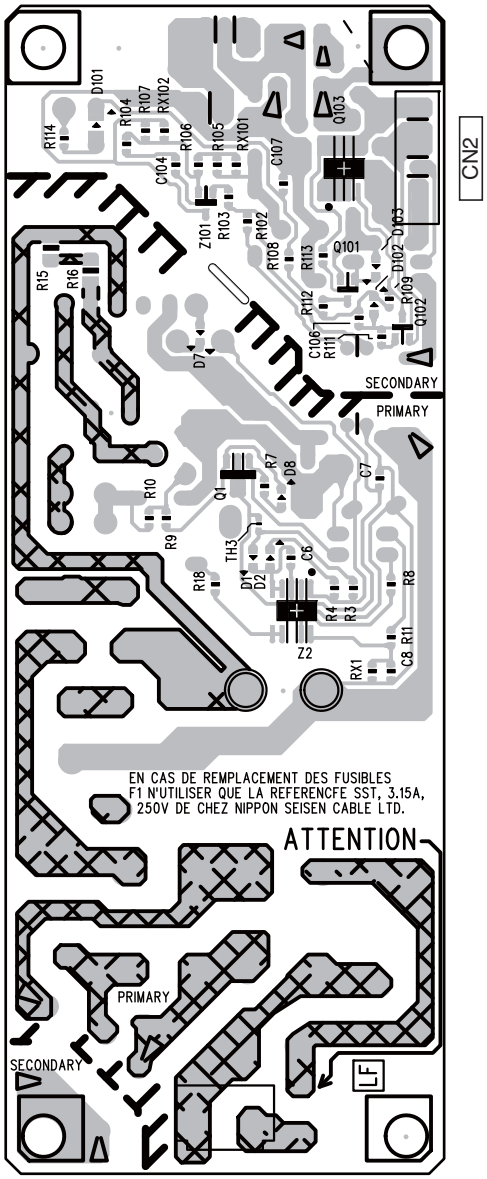
(DNP2473-B)

11.10 POWER SUPPLY and ACIN ASSYS

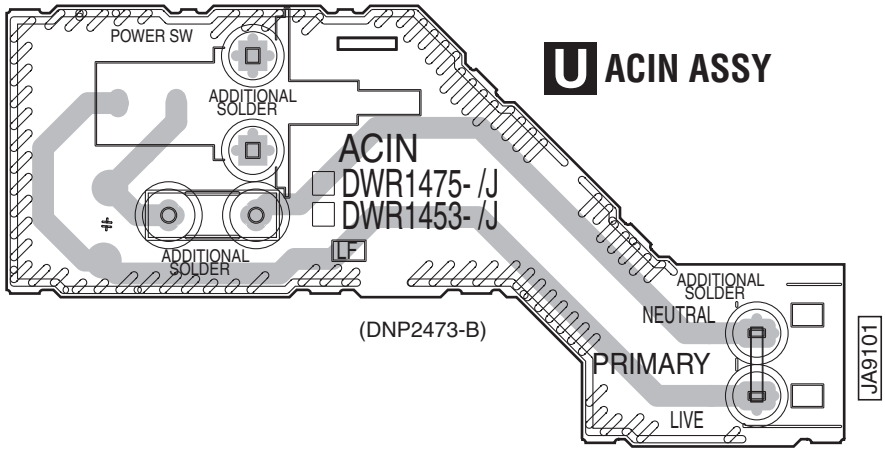
SIDE A



T POWER SUPPLY ASSY



U ACIN ASSY



12. PCB PARTS LIST

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

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

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

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

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

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

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

● *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
IC 301 (A, 91, 111) IC NJM2068V

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	MAIN ASSY	DWG1660
NSP	1	PNLA ASSY	DWM2346
	2	PNLB ASSY	DWG1665
	2	KSWB ASSY	DWS1409
	2	SDSW ASSY	DWS1420
	2	SLDB ASSY	DWX2983
	2	CNCT ASSY	DWX3009
	2	EUPB ASSY	DWX3042
NSP	1	TFTA ASSY	DWM2355
	2	TFTB ASSY	DWX2882
	2	SDCB ASSY	DWX2980
	2	CDCB ASSY	DWX2987
NSP	1	SUBA ASSY	DWM2364
	2	INSW ASSY	DWS1407
	2	SPCN ASSY	DWX2979
	2	INDB ASSY	DWX2986
	2	USBA ASSY	DWX3043
NSP	1	JFLA ASSY (CUXJ)	DWM2369
NSP	1	JFLA ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWM2347
	2	ACIN ASSY (CUXJ)	DWR1475
	2	ACIN ASSY (SYXJ8, FLXJ, KXJ5, AXJ5)	DWR1453
	2	SLMB ASSY	DWS1408
	2	JFLB ASSY	DWX2984
	2	JOGB ASSY	DWX2985
	2	JACB ASSY	DWX2988
	1	SRVA ASSY	DWX2948
⚠	1	POWER SUPPLY ASSY	DWR1463

A SRVA ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC	7001	BD7956FS
	IC	7002	AN22022A
⚠	IC	7003	MM1478DFBE
	IC	7004	DYW1771
⚠	IC	7005	BD00KA5WFP
	IC	7006	MN103S71F
⚠	IC	7010	BA50BC0FP
	IC	7302,7305	SI-8005Q
	Q	7001,7002	2SA1036K (PQR)
	Q	7003,7004	RT1N144M
	Q	7005	UM5K1N
	D	7001,7002	1SR154-400
	D	7304,7307	CMS03

MISCELLANEOUS

	L	7011-7028 INDUCTOR	CTF1379
	L	7031-7038 INDUCTOR	CTF1379
	L	7302,7303 INDUCTOR	CTH1253
	X	7001 CERAMIC RESONATOR	DSS1157
	CN	7001 24P FFC CONNECTOR	DKN1445
	CN	7003 CONNECTOR	AKM1291
	CN	7004 4P CONNECTOR	DKN1288
	CN	7005 40P CONNECTOR	VKN1818
	CN	7009 CONNECTOR	DKN1313
	CN	7301 CONNECTOR	AKM1298
	CN	7302 XH CONNECTOR (6P)	DKN1599
		0 EARTH SPRING(SERVO)	DBK1352
⚠	P	7001 PROTECTOR (2.000 A)	DEK1126
⚠	P	7003 PROTECTOR (0.750 A)	DEK1121
⚠	P	7302 PROTECTOR (1.250 A)	DEK1123

RESISTORS

	R	7001,7110	RS1/10SR4701F
	R	7003,7006,7009	DCN1143
	R	7007	RS1/4SA120J
	R	7008	RS1/4SA220J
	R	7014,7015	RS1/4SA2R0J
	R	7017,7109	RS1/10SR2702F
	R	7018,7024,7025,7099	RS1/10SR1502F
	R	7020,7117,7118	RS1/10SR1202F
	R	7021	RS1/10SR3302F
	R	7042,7043	RAB4CQ101J
	R	7052,7054,7112	RS1/10SR1002F
	R	7057	RAB4CQ103J
	R	7063-7066	RAB4CQ101J
	R	7088,7096,7302,7329	RS1/4SA0R0J
	R	7306,7331	RST1/2SP120J

Mark	No.	Description	Part No.
	R	7310	RS1/10SR2402D
	R	7311	RS1/10SR2401D
	R	7312,7334	RS1/10SR4701D
	R	7332	RS1/10SR3902D
	R	7333	RS1/10SR3301D
		Other Resistors	RS1/10SR###J

CAPACITORS

	C	7001,7002,7081	CKSRYB472K50
	C	7008,7014,7016,7021	CKSRYB104K16
	C	7010,7024,7070,7098	CKSRYB103K50
	C	7011,7012,7034,7061	CCSRCH101J50
	C	7013	CKSRYB224K10
	C	7015,7121	CEHVW470M16
	C	7017	CCSRCH470J50
	C	7018,7019	CKSRYB474K10
	C	7020,7022,7055	CEHAS470M16
	C	7023,7025-7030,7040	CKSRYB104K16
	C	7031,7126	CCH1378
	C	7036,7037,7076,7078	CKSRYB182K50
	C	7038,7053,7079,7087	CKSRYB102K50
	C	7039,7056	CCSRCH151J50
	C	7041	CKSRYB561K50
	C	7042,7090	CKSRYB273K25
	C	7043,7104,7312	CKSRYB473K50
	C	7044,7059,7110	CEHAS101M10
	C	7045-7048,7051,7052	CKSRYB104K16
	C	7049,7069,7075,7085	CKSRYB105K10
	C	7050	CCH1426
	C	7054,7057,7058,7060	CKSRYB104K16
	C	7062,7089,7108	CCSRCH101J50
	C	7063-7068,7071,7072	CKSRYB104K16
	C	7073,7074	CKSRYB471K50
	C	7077	CKSRYB222K50
	C	7080,7082,7084,7086	CKSRYB104K16
	C	7083	CKSRYB122K50
	C	7088,7092,7097	CKSRYB102K50
	C	7091,7094,7095	CKSRYB104K16
	C	7096	CKSRYB105K10
	C	7099-7102,7109,7114	CKSRYB104K16
	C	7103	CKSRYB333K16
	C	7111-7113,7115	CKSRYB102K50
	C	7127,7128,7133	CKSRYB104K16
	C	7132	ACH7174
	C	7302,7304,7318,7334	CCG1221
	C	7306,7336	CCSRCH102J50
	C	7308,7337	CKSQYB102K50
	C	7310,7338,7339	CKSRYB103K50
	C	7316	CCSRCH222J50
	C	7320,7328,7347	CKSRYB104K25
	C	7324,7345	CCH1565
	C	7335,7342	CCG1221
	C	7341	CCSRCH152J50
	C	7116-7120,7122-7125	CCSRCH101J50
	C	7129-7131,7134-7137	CCSRCH101J50
	C	7139-7141	CCSRCH221J50

Mark	No.	Description	Part No.

B SPCN ASSY

MISCELLANEOUS

	CN	6101 CONNECTOR	DKN1313
	CN	6102 CONNECTOR	DKN1312
	CN	6103 CONNECTOR	VKN1940

C INSW ASSY

MISCELLANEOUS

	S	6001 SPRING SWITCH	CSN1031
	CN	6001 CONNECTOR	VKN1940

D SLMB ASSY

MISCELLANEOUS

	S	9001,9002 PUSH SWITCH	DSG1017
	CN	9001 L-PLUG (5P)	KM200NA5L

E MAIN ASSY

SEMICONDUCTORS

	IC	101	R5S77641N300BG
	IC	102	BD45302G
	IC	108,109,505	K4S561632J-UC75
NSP	IC	114	DYW1779
	IC	115,124,507	TC7WHU04FU
	IC	119	TC74LCX32FTS1
	IC	120,1103	TC7SH04FUS1
	IC	122	TC7W08FU
	IC	123	TC74VHC08FTS1
	IC	501	D710E001BZDHA275
	IC	502,503,506	NJM4580MD
	IC	504	WM8740SEDS
	IC	1101	M66291GP
	IC	1102	BD2051AFJ
	IC	1304	RTL8201CP-LF
⚠	IC	3002	SI-8005Q
	Q	501	2SD2114K
	Q	502	DTA124EUA
	Q	503,511,512,1101	DTC124EUA
	Q	504,505,507,508	2SK3320
	Q	506	2SC2412K
	Q	509,510	2SC4081
	Q	513-518	HN1C01FU
	Q	529,530	2SK3320
	Q	1301	UM6K1N
	D	501	1SS355
	D	3006	RB095B-30

MISCELLANEOUS

	L	101,102 INDUCTOR	CTF1394
	L	500,501 CHIP SOLID INDUCTOR	XTL3010
	L	3002 POWER INDUCTOR	DTH1205
	L	3003-3024 FERRITE BEAD	CTF1528
	L	3025 INDUCTOR	CTF1740
	L	3026-3032 FERRITE BEAD	CTF1528
	L	3034-3037 FERRITE BEAD	CTF1528
	F	101,108,1101,1103 EMI FILTER	CCG1160

Mark	No.	Description	Part No.
	F	1302,1303 EMI FILTER	DTL1106
	F	1305 EMI FILTER	CCG1160
	JA	1101 USB CONNECTOR B	DKN1574
	JA	1301 RJ45 MODULAR JACK	DKN1576
	X	104 RESONATOR	CSS1753
	X	105 CRYSTAL (26.965 MHz)	DSS1185
	X	503 RESONATOR	CSS1620
	X	1302 CRYSTAL (25 MHz)	VSS1215
	CN	101 CONNECTOR	CKS5064
	CN	501 13P CONNECTOR	RKN1054
	CN	502 CONNECTOR	VKN2037
	CN	1303 CONNECTOR	VKN2050
	CN	1304 10P CONNECTOR	VKN1414
	CN	1305 CONNECTOR	VKN2040
	CN	2001 29P CONNECTOR	VKN1433
	CN	3001 CONNECTOR	AKM1283
NSP		0 ID LABEL ASSY	AXW7015

RESISTORS

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

CAPACITORS

	C	101-108,110-112	CKSSYB104K10
	C	109,137,148,204	CCG1171
	C	114,116,117,119	CKSSYB104K10
	C	118,120,122,124	CKSSYB102K50
	C	121,123,125	CKSSYB104K10
	C	126,217,220,223	CKSSYB102K50
	C	128-136,138-147	CKSSYB104K10
	C	156,157,159,160	CKSSYB104K10
	C	162-165,167,169	CKSSYB104K10
	C	171-181,183-200	CKSSYB104K10
	C	202,203,214-216	CKSSYB104K10
	C	211,233,234,246	CCG1171
	C	218,219,221,222	CKSSYB104K10
	C	224,225,242-245	CKSSYB104K10
	C	226,1345,1356,1359	CKSSYB102K50
	C	228-231	CCSSCH7R0C50
	C	232,235,595,1111	CEHVAW221M6R3
	C	247,577,578,597	CCG1171
	C	248,501-520,524	CKSSYB104K10
	C	521-523,525	CFHXSQ472J16
	C	526,527,548,549	CKSSYB222K50
	C	528-547,550,556	CKSSYB104K10
	C	551,552,555,1102	CKSSYB103K16
	C	553,554,571	CEHVAW470M16
	C	557,620,1120,1125	CEHVAW101M16
	C	558,559,561,562	CKSSYB153K16
	C	563,564	CKSSYB222K50
	C	565-568	CFHXSQ472J16
	C	576,580,584-589	CKSSYB104K10
	C	596,1124,1387	CEHVAW101M6R3
	C	608-613,619,1101	CKSSYB104K10
	C	614,615,3003	ACG1142
	C	616,1118	DCH1201
	C	617,618	CCSSCJ3R0C50
	C	1105,1108,1127,1385	CCG1171
	C	1106,1113,1116,1122	CKSSYB103K16
	C	1107,1112,1115,1119	CKSSYB104K10
	C	1126,1130,1319,1322	CKSSYB104K10
	C	1128,1129,1358	CKSRYB105K10
	C	1323,1325,1329,1364	CKSSYB104K10
	C	1328	CEHVAW330M10
	C	1342,1363	CEHVAW221M6R3
	C	1362	CKSSYB102K50
	C	1365,1379	CCSSCH8R0D50
	C	3005-3008,3038,3087	CKSRYB104K16
	C	3011,3044	ACH1495
	C	3017,3032	CCSRCH102J50
	C	3020	CKSRYB331K50
	C	3023	CKSRYB103K50
	C	3026	CKSRYB223K50
	C	3035,3041	CCG1171
	C	3090	CKSRYB104K16
	C	3093	CEHVAW101M16
	C	3096,3100	CCSSCH221J50
	C	3097-3099	CCSSCH101J50

F JACB ASSY

SEMICONDUCTORS

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

MISCELLANEOUS

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

RESISTORS

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

Mark	No.	Description	Part No.
	R	9417	RD1/2VM271J
		Other Resistors	RS1/10SR###J
		CAPACITORS	
	C	9401,9404	CEHAZL220M50
	C	9403	CCSRCH331J50
	C	9405,9406	CCH1357
	C	9407,9409,9415	CKSRYB103K50
	C	9408,9412-9414,9416	CKSRYB104K50
	C	9410,9411	DCE1017

G SDCB ASSY

		SEMICONDUCTORS	
	D	5101,5103,5105,5107	DAP202K
	D	5102,5104,5106,5108	DAN202K
		MISCELLANEOUS	
	F	5101 EMI FILTER	CCG1160
	CN	5101 CONNECTOR	CKS5956
	CN	5102 10P CONNECTOR	VKN1414
		RESISTORS	
	R	5107	CTF1528
	R	5119-5122	RS1/10SR0R0J
		Other Resistors	RS1/16SS###J
		CAPACITORS	
	C	5101	CKSSYB104K16
	C	5103	CKSSYB102K50
	C	5105	DCH1201
	C	5106	CEVW101M16

H USBA ASSY

		MISCELLANEOUS	
	L	6301 COIL	ATH7015
	JA	6301 USB CONNECTOR A	DKN1553
	CN	6301 CONNECTOR	VKN2030
		CAPACITORS	
	C	6301	CKSRYB103K50
	C	6302	CEVW101M16

I TFTB ASSY

		SEMICONDUCTORS	
	IC	4001	ADSP-BF531SBSTZ400
	IC	4003	TC7WHU04FU
	IC	4004	DYW1781
	IC	4005	K4S561632J-UC75
	IC	4006	PDY085A8
	IC	4007	TA78L05F
	IC	4008	OZ961ISN
	IC	4009	BD6171KV
	IC	4010	M62343FP
	IC	4011,4013	TC7SET04FUS1
	IC	4012	NJM2100V
	IC	4014	TC7S66FU
	IC	4015	TC74VHC04FTS1
	IC	4016	NJM082BV
	IC	4017	TC7SH08FUS1
	Q	4001	RT1N241M
	Q	4002-4004,4018,4019	DTC124EUA
	Q	4006,4007,4011,4012	2SC4617
	Q	4008	2SA1774
	Q	4009,4010	TS8M1
	Q	4013,4016	UMX2N
	Q	4014,4015	RSQ035P03
	Q	4017	UMT2N
	Q	4030-4033	DTC124EUA
	Q	4035	RTQ045N03
	D	4004-4006,4024-4026	SML-512MW(PQ)
	D	4008	UDZS6R2(B)
	D	4009	1SS355
	D	4010,4011	HZU6R2(B3)
	D	4012-4014	RB548W
	D	4015	UDZS8R2(B)
	D	4016,4018	MA143
	D	4017	HZU6R8(B3)
	D	4019,4039-4042	RB160M-30
	D	4022	CMS06
	D	4028,4029,4034,4037	SML-512MW(PQ)
	D	4030,4031	SML312WBCWA(Z1)
	D	4035	SML312BC4T(QR)
	D	4038	SML-512MW(PQ)
		MISCELLANEOUS	
	L	4002-4004,4016,4017 INDUCTOR	CTF1635
	L	4005 CHOKE COIL	CTH1318
	L	4006 CHOKE COIL	CTH1250
	L	4007 CHOKE COIL	CTH1249
	L	4008,4018 CHIP INDUCTOR (10 u)	DTL1105
	L	4009 INDUCTOR	CTF1488
	L	4012,4014 INDUCTOR	CTF1306
	L	4019 CHIP INDUCTOR (10 u)	DTL1105
	L	4021-4027 FERRITE BEAD	CTF1528
	L	4028 INDUCTOR	CTF1740
	L	4029-4032 FERRITE BEAD	CTF1528
	L	4033 INDUCTOR	CTF1379
	L	4034-4050 FERRITE BEAD	CTF1528
	L	4051,4052 CHIP BEEDS FILTER	BTX1042
	S	4001-4004,4020-4026 TACT SWITCH	DSG1134
	S	4028 ENCODER SW	DSX1080
⚠	T	4001 TRANSFORMER	CTT1132
	X	4001 CRYSTAL RESONATOR	DSS1164
	X	4002 CRYSTAL RESONATOR	XSS3003
	CN	4002 29P CONNECTOR	VKN1433
	CN	4004 CONNECTOR	CKS4428
	CN	4005 CONNECTOR	CKS5111
	CN	4007 16P CONNECTOR	VKN1420
	CN	4012 18P CONNECTOR	VKN1422
⚠	P	4001 PROTECTOR (0.750 A)	DEK1121
⚠	P	4002 PROTECTOR (0.375 A)	DEK1119
		RESISTORS	
	R	4002,4004,4053,4054	RAB4CQ470J
	R	4022,4026	RAB4CQ471J
	R	4024,4027	RAB4CQ101J
	R	4033	RAB4CQ104J
	R	4049,4050	RAB4CQ680J

Mark	No.	Description	Part No.
	R	4058,4059,4093,4105	RS1/10SR181J
	R	4081-4084	RAB4CQ560J
	R	4089,4286	RS1/10SR112J
	R	4107,4109,4275-4277	RS1/10SR181J
	R	4121	RAB4CQ102J
	R	4144	RS1/16SS3901D
	R	4148	RS1/16SS5102D
	R	4161	RS1/16SS2202D
	R	4162	RS1/16SS2001F
	R	4164,4188	RS1/16SS1802D
	R	4167	RS1/16SS5100D
	R	4171	RS1/16SS6801D
	R	4172	RS1/16SS1002D
	R	4174,4191	RS1/16SS1001D
	R	4179	RS1/16SS6202D
	R	4184	RS1/16SS1600D
	R	4185	RS1/16SS2700D
	R	4189	RS1/16SS4300D
	R	4192	RS1/16SS3303D
	R	4217	RS1/16SS5602D
	R	4220	RS1/16SS3302D
	R	4224	RS1/16SS6800D
	R	4225,4233	RS1/16SS27R0D
	R	4226	RS1/16SS10R0D
	R	4227	RS1/16SS1000D
	R	4228,4235	RS1/16SS82R0D
	R	4229	RS1/16SS56R0D
	R	4230	RS1/16SS47R0D
	R	4231	RS1/16SS36R0D
	R	4232	RS1/16SS33R0D
	R	4234	RS1/16SS1800D
	R	4236	RS1/16SS12R0D
	R	4245-4248	RAB4CQ331J
	R	4271,4272	RAB4CQ470J
	R	4273	RAB4CQ220J
	R	4282,4283	RS1/10SR122J
	R	4288,4290	RS1/10SR181J
	Other Resistors		RS1/16SS###J

CAPACITORS

	C	4001,4003,4011,4016	CCSRCH100D50
	C	4002,4024,4044-4046	CKSSYB104K16
	C	4006-4008,4013,4054	CKSRYB104K50
	C	4012	CCH1586
	C	4014,4073,4076	CKSQYB225K16
	C	4028,4053,4132	CEHVAW101M16
	C	4029	CKSRYF104Z25
	C	4050-4052,4056,4123	CKSSYB104K16
	C	4055,4059,4062,4071	CKSRYB105K16
	C	4057,4058,4083	CKSRYB104K50
	C	4060,4066,4097,4100	CKSRYB103K50
	C	4063	CKSSYB332K50
	C	4064	CKSSYB152K50
	C	4068	CCG1260
	C	4069,4070,4099	CKSRYB473K50
	C	4072,4213,4217	CKSSYB104K10
	C	4077,4136,4147,4150	CSZSC100M16
	C	4079,4080,4129,4131	CKSQYB105K25
	C	4081,4086,4091-4093	CKSRYB105K16
	C	4084,4115	CKSSYB102K50
	C	4085,4095,4102	CKSRYB393K50
	C	4087-4090,4101,4112	CKSRYB104K50
	C	4096	CKSYB475K16
	C	4103	CKSSYB331K50
	C	4104,4233-4235	CCSSCH101J50
	C	4105,4109,4113,4114	CKSRYB103K50
	C	4106	DCG1046
	C	4108,4110	CCG1203
	C	4116,4118,4133,4140	CKSRYB105K16
	C	4117,4127,4128,4153	CKSRYB104K50
	C	4120,4121	CKSSYB472K50
	C	4125	CCG1223
	C	4126	CKSRYB103K50
	C	4130	CCH1440
	C	4134	BCG1060
	C	4135	CKSRYF224Z16
	C	4138,4139,4141,4143	CKSSYB104K16
	C	4142	CKSRYB105K10
	C	4144,4158	CCG1111
	C	4145,4146,4149,4151	CKSSYB104K16
	C	4148,4252,4253	CKSRYB105K16
	C	4152,4154,4159,4160	CKSSYB104K16
	C	4155,4156	CSZSC100M16
	C	4157	CKSQYB334K50
	C	4161	CKSRYB104K50
	C	4162,4165,4168-4172	CKSSYB104K16
	C	4166,4167	CCG1236
	C	4173,4190,4200,4201	CCG1192
	C	4174-4181,4183-4189	CKSSYB104K16
	C	4191-4196,4199,4202	CKSSYB104K16
	C	4203	CCG1192
	C	4204,4206,4212	CKSSYB104K16
	C	4205	CEHVW470M6R3
	C	4210	CEHVAW330M35
	C	4211	CEVW101M25
	C	4214,4216	CEHVAW101M6R3
	C	4218-4220,4222,4223	CKSSYB104K16
	C	4244-4247,4254	CCSSCH101J50
	C	4249	CCSSCH221J50

J PNLB ASSY

SEMICONDUCTORS

	IC	8001	GP1S94
⚠	IC	8002	NJM2392M
	IC	8003	M3030RFCPFP
	IC	8004	BD45302G
	IC	8005,8006	TC7SH32FUS1
	Q	8001	2SC4154
	Q	8002-8014,8016-8022	DTC124EUA
	Q	8023	LTA124EUB
	D	8001,8004,8007,8010	SLI-343Y8C(KLMN)
	D	8002,8005,8008,8018	SLI-343M8C(FGHJ)
	D	8003,8006,8009,8011	SLI-343U8RC(HJKL)
	D	8012,8013,8015	SLI-343Y8C(KLMN)
	D	8016	SLI-343U8RC(HJKL)
	D	8017	SLR343BC4T(JKLM)
	D	8019	SLI-343M8C(FGHJ)

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

K JFLB ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
⚠	IC	9202	TLC555IP
⚠	IC	9203	NJM2374AD
⚠	IC	9204	BA033FP
	Q	9201,9202	2SC1815
	Q	9203,9204,9207,9209	DTC124EUA
	Q	9205	2SB1237X
	Q	9206	RHP020N06
	Q	9208	2SD1767
	D	9201,9202,9206,9207	SLI-343U3R(HJKL)
	D	9203	UDZS6R8(B)
	D	9204,9205,9208,9209	SLR343WBD2PT(Z1)
	D	9210-9212,9214	RB160M-60
	D	9213	1SS355
	D	9215	UDZS6R2(B)
		MISCELLANEOUS	
	L	9201 POWER INDUCTOR	DTL1187
	V	9201 FL INDICATOR TUBE	DEL1058
	T	9201 POWER TRANSFORMER	DTT1232
	CN	9203 CONNECTOR	CKS1072
		0 FL HOLDER	DNF1735
	JH	9201 12P CABLE HOLDER	51048-1200
	JH	9202 4P CABLE HOLDER	51048-0400
	JP	9202 JUMPER WIRE	D20PYY0405E
	JP	9203 JUMPER WIRE	D20PDY1210E
⚠	P	9201 PROTECTOR (1.000 A)	DEK1122
		RESISTORS	
	R	9220	RS1/4SA0R0J
	R	9221	RS1/4SAR51J
	R	9222,9223	RS1/4SA271J
	R	9224	RST1/2SP1R0J
	R	9225	RS1/8SQ102J
	R	9226	RS1/8SQ101J
	R	9228	RS1/4SA103J
	R	9229	RN1/16SE1201D
	R	9230	RN1/16SE1602D
	R	9231	RN1/16SE6802D
	R	9232	RN1/16SE4302D
	R	9233,9234	RN1/16SE2201D
	R	9235	RS1/8SQ223J
	R	9241,9242	RS1/4SA151J
	R	9245,9246	RS1/8SQ181J
	R	9247	RS1/4SA331J
		Other Resistors	RS1/10SR###J
		CAPACITORS	
	C	9201,9205,9208	CEHAR101M10
	C	9202	CKSRYB223K16
	C	9203	CEHAR470M16
	C	9204,9226,9227	CKSRYB104K16
	C	9206	CEHAZL100M50
	C	9207,9212,9215,9218	CKSRYB104K50
	C	9209,9221	CEHAZL220M50
	C	9213,9222-9225	CCSRCH101J50
	C	9216	CEHAZL221M25-P35
	C	9217	CCSRCH331J50
	C	9219	CKSRYB104K50

L CDCB ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
	IC	5001	AD7147ACPZ500RL7
		MISCELLANEOUS	
	CN	5001 7P CONNECTOR	VKN1411
		CAPACITORS	
	C	5001	CKSQYB103K50
	C	5002	CKSRYB104K16
	C	5003	CCG1192
	C	5004-5008	CCSRCH101J50

Mark	No.	Description	Part No.

M SDSW ASSY

SEMICONDUCTORS

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

MISCELLANEOUS

	S	8601	SWITCH
	S	8602	PUSH SWITCH

RESISTORS

	All Resistors		RS1/10SR###J

N SLDB ASSY

SEMICONDUCTORS

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

MISCELLANEOUS

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

RESISTORS

	All Resistors		RS1/10SR###J

MISCELLANEOUS

	JH	8701	8P CABLE HOLDER

CAPACITORS

	C	8702	CEJQ470M16
	C	8703	CKSRYB104K16

O EUPB ASSY

SEMICONDUCTORS

	D	8651	SLI-343U8RC(HJKL)

MISCELLANEOUS

	S	8651	SLIDE SWITCH
	CN	8651	3P JUMPER CONNECTOR

RESISTORS

	All Resistors		RS1/10SR###J

P CNCT ASSY

MISCELLANEOUS

	CN	8801	12PJUMPER CONNECTOR
	CN	8802	6P JUMPER CONNECTOR

CAPACITORS

	C	8801,8802	CCSRCH221J50

Q KSWB ASSY

SEMICONDUCTORS

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

MISCELLANEOUS

	S	8501,8502	TACT SWITCH

RESISTORS

	All Resistors		RS1/10SR###J

MISCELLANEOUS

	JH	8501	6P CABLE HOLDER
	JP	8501	JUMPER WIRE

R JOGB ASSY

MISCELLANEOUS

	CN	9301	4PJUMPER CONNECTOR

RESISTORS

	All Resistors		RS1/10SR###J

MISCELLANEOUS

	PC	9301	PHOTO INTERRUPTER

CAPACITORS

	C	9301,9302	CKSRYB103K50

S INDB ASSY

SEMICONDUCTORS

	D	6201	SMLC14WBEPW(Z1)

MISCELLANEOUS

	CN	6201	CONNECTOR

RESISTORS

	All Resistors		RS1/10SR###J

T POWER SUPPLY ASSY

There is no service parts.

U ACIN ASSY (DWR1475)

MISCELLANEOUS

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

CAPACITORS

⚠	C	9101		ACG7033

U ACIN ASSY (DWR1453)

MISCELLANEOUS

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

CAPACITORS

⚠	C	9101		ACG7033