

# DVP-CX777ES

## SERVICE MANUAL

Ver 1.1 2004.09

US Model  
Canadian Model

*Self Diagnosis*  
Supported model



ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Model Name Using Similar Mechanism	NEW
CD/DVD Mechanism Type	CDM62-DVBU26
Base Unit Name	DVBU26
Optical Pick-up Name	KHM-290AAA

### SPECIFICATIONS

#### System

**Laser:** Semiconductor laser  
 $\lambda = 780$  nm for CD  
 $\lambda = 650$  nm for SA-CD and DVD  
Emission duration: continuous  
**Signal format system:** NTSC

#### Audio characteristics

**Frequency response:** DVD VIDEO (PCM 96 kHz): 2 Hz to 44 kHz (44 kHz: -2 dB  $\pm 1$  dB), Super Audio CD: 2 Hz to 100 kHz (50 kHz: -3 dB  $\pm 1$  dB), CD: 2 Hz to 20 kHz ( $\pm 0.5$  dB)  
**Signal-to-noise ratio (S/N ratio):** 115 dB (LINE OUT AUDIO L/R 1/2 jacks only)  
**Harmonic distortion:** 0.003 %  
**Dynamic range:** DVD VIDEO/Super Audio CD: 103 dB, CD: 99 dB  
**Wow and flutter:** Less than detected value ( $\pm 0.001\%$  W PEAK)

#### Outputs

(**Jack name:** Jack type/Output level/Load impedance)  
**LINE OUT AUDIO L/R 1/2:** Phono jack/ 2 Vrms/10 kilohms  
**DIGITAL OUT (OPTICAL):** Optical output jack/-18 dBm (wave length: 660 nm)  
**DIGITAL OUT (COAXIAL):** Phono jack/ 0.5 Vp-p/75 ohms  
**5.1CH OUTPUT:** Phono jack/2 Vrms/ 10 kilohms  
**COMPONENT VIDEO OUT (Y, P<sub>B</sub>/C<sub>B</sub>, P<sub>R</sub>/C<sub>R</sub>):** Phono jack/Y: 1.0 Vp-p/P<sub>B</sub>/C<sub>B</sub>, P<sub>R</sub>/C<sub>R</sub>: interlace\*=0.648 Vp-p, progressive or interlace\*\*=0.7 Vp-p/ 75 ohms  
\* BLACK LEVEL is ON  
\*\* BLACK LEVEL is OFF  
**LINE OUT VIDEO 1/2:** Phono jack/ 1.0 Vp-p/75 ohms  
**S VIDEO OUPUT 1/2:** 4-pin mini DIN/ Y: 1.0 Vp-p/C: 0.286 Vp-p /75 ohms  
**S-LINK (CONTROL S IN):** Mini jack

#### General

**Power requirements:** 120 V AC, 60 Hz  
**Power consumption:** 24 W  
**Dimensions (approx.):** 430 × 189 × 545 mm (17 × 7 1/2 × 21 1/2 in.) (width/height/ depth) incl. projecting parts  
**Mass (approx.):** 10 kg (22 lb 1 oz)  
**Operating temperature:** 5 °C to 35 °C (41 °F to 95 °F)  
**Operating humidity:** 25 % to 80 %

#### Supplied accessories

- Audio/video cord (pinplug × 3 ↔ pinplug × 3) (1)
- Remote commander (remote) (1)
- Size AA (R6) batteries (2)

Specifications and design are subject to change without notice.

## CD/DVD PLAYER

9-961-043-02 Sony Corporation  
2004I05-1 Audio Group  
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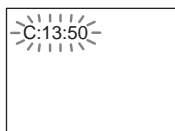
# SONY®

## SELF DIAGNOSIS FUNCTION

### Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the player from malfunctioning, a five-character service number (e.g., C 13 50) with a combination of a letter and four digits appears on the screen and the front panel display. In this case, check the following table.



First three characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➔ Clean the disc with a soft cloth.
C 31	The disc is not inserted correctly. ➔ Re-insert the disc correctly.
C 32	The front cover automatically opens and the player enters standby mode. ➔ Check that there is nothing wrong inside the rotary table, such as a fallen disc. After you have checked the inside of the rotary table and resolved any possible problems, press ▷.
E XX (xx is a number)	To prevent a malfunction, the player has performed the self-diagnosis function. ➔ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

**Note:** Refer to the “4. TEST MODE” (page 23) for another self-diagnosis function.

**Notes on chip component replacement**

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

**Flexible Circuit Board Repairing**

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

**SAFETY CHECK-OUT**

After correcting the original service problem, perform the following safety check before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

**LEAKAGE TEST**

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

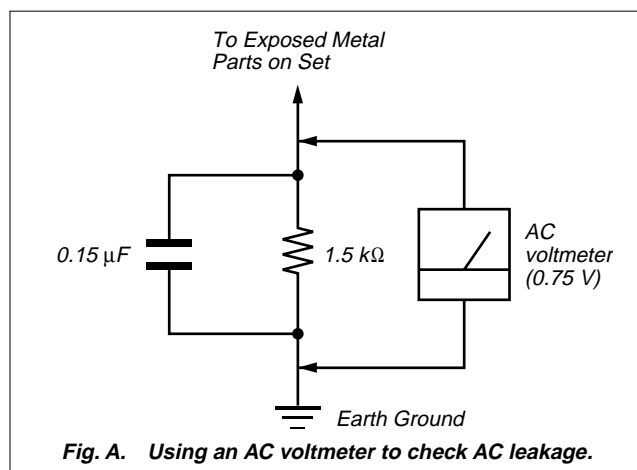


Fig. A. Using an AC voltmeter to check AC leakage.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**UNLEADED SOLDER**

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

**LF : LEAD FREE MARK**

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder. Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time. Soldering irons using a temperature regulator should be set to about 350 °C. Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity. Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder. It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.






**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## This Player Can Play the Following Discs

Format of discs	
DVD VIDEO	
DVD-RW	
Super Audio CD	
VIDEO CD	
Music CD	

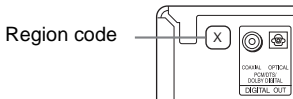
“DVD VIDEO” and “DVD-RW” are trademarks.

### Region code

Your player has a region code printed on the back of the unit and will only play DVD VIDEOS (playback only) labeled with identical region codes. This system is used to protect copyrights.

DVD VIDEOS labeled  will also play on this player.

If you try to play any other DVD VIDEO, the message “Playback prohibited by area limitations.” will appear on the TV screen. Depending on the DVD VIDEO, no region code indication may be labeled even though playing the DVD VIDEO is prohibited by area restrictions.



### Example of discs that the player cannot play

The player cannot play the following discs:

- All CD-ROMs (including PHOTO CDs)/CD-Rs/CD-RWs other than those recorded in the following formats:
  - music CD format
  - video CD format
  - MP3 format that conforms to ISO9660\* Level 1/Level 2, or its extended format, Joliet
- Data part of CD-Extras
- DVD-ROMs
- DVD Audios
- \* A logical format of files and folders on CD-ROMs defined by ISO (International Standards Organization).

Also, the player cannot play the following discs:

- A DVD VIDEO with a different region code.
- A disc recorded in a color system other than NTSC, such as PAL or SECAM (this player conforms to the NTSC color system).
- A disc that has a non-standard shape (e.g., card, heart).
- A disc with paper or stickers on it.
- A disc that has the adhesive of cellophane tape or a sticker still left on it.

### Notes

- Note about DVD-RWs/DVD-Rs, DVD+RWs/DVD+Rs, or CD-Rs/CD-RWs.** Some DVD-RWs/DVD-Rs, DVD+RWs/DVD+Rs, or CD-Rs/CD-RWs cannot be played on this player due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software. Also, images in DVD-RWs with CPRM\* protection may not be played if they contain a copy protection signal. “Copyright lock” appears on the screen. For more information, see the operating instructions for the recording device. Note that discs created in the Packet Write format cannot be played.
- \* CPRM (Content Protection for Recordable Media) is a coding technology that protects copyright for images.

### • Music discs encoded with copyright protection technologies

This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

### Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

### Copyrights

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.



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## SECTION 1 SERVICING NOTES

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

### NOTE OF REPLACING THE MB BOARD

When replacing the MB board, since the adjustment value is not set up correctly, "Drive Auto Adjustment" can't be performed. In this case, initialize Memory in the following procedures.

#### Procedure:

1. Set the test mode. (See page 23)
2. Press the [2] key of the remote commander, and set the "DRIVE MANUAL OPERATION". (See page 29)
3. Press the [6] key of the remote commander, and set the "2-6, Memory Check". (See page 32)
4. Press the [CLEAR] key of the remote commander, and initialize Memory.

### CHECK OF POWER BOARD WITH THE POWER ON

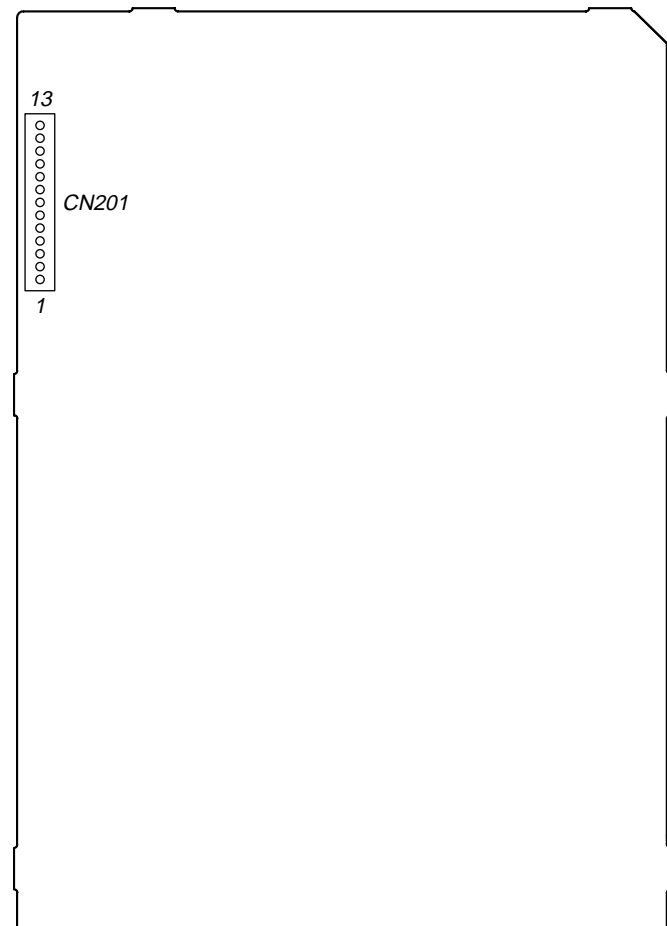
It is possible to analyze the defect with only POWER board power ON.

#### Procedure:

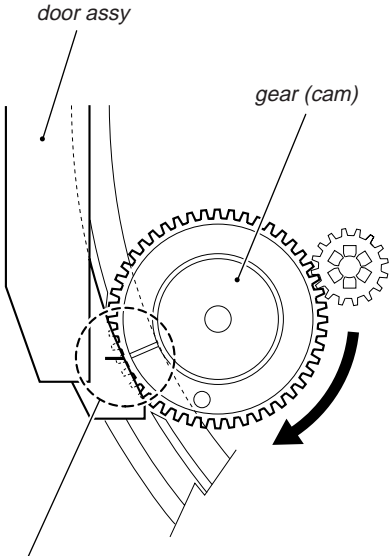
1. Set to power OFF state.
2. Remove the connector from CN201 on the POWER board.
3. Short between CN201 pin ① (P-CONT) and CN201 pin ⑩ (EVER+3.3V) on the POWER board.
4. Turn the power ON.
5. Confirm that the voltage value of CN201 each pin on the POWER board satisfy following value .

CN201 Pin	Voltage Value
pin ② (EVER-11V)	-11V
pin ③ (SW-11V)	-11V
pin ⑥, ⑦ (SW+11V)	+11V
pin ⑧ (SW+3.3V)	+3.3V
pin ⑩ (EVER+3.3V)	+3.3V
pin ⑫ (SW+5V)	+5V
pin ⑬ (EVER+5V)	+5V

### - POWER Board (Conductor Side) -

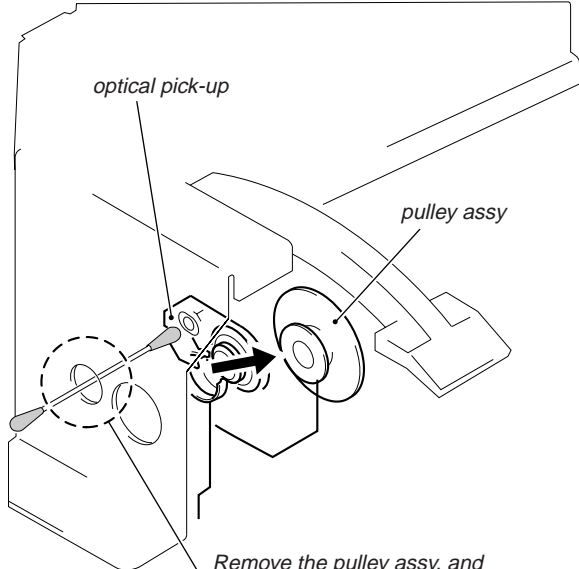


**ALIGNMENT OF GEAR (CAM) PHASE WITH DOOR ASSY**



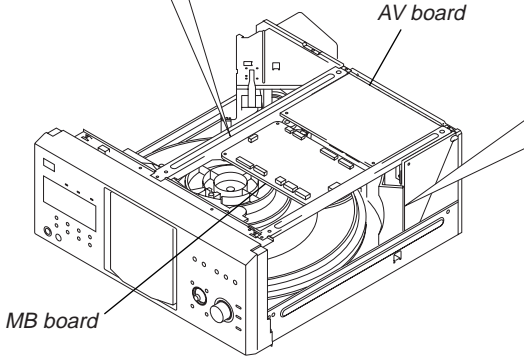
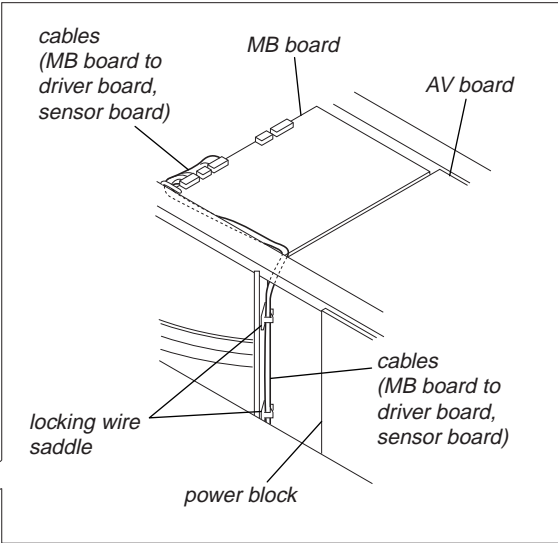
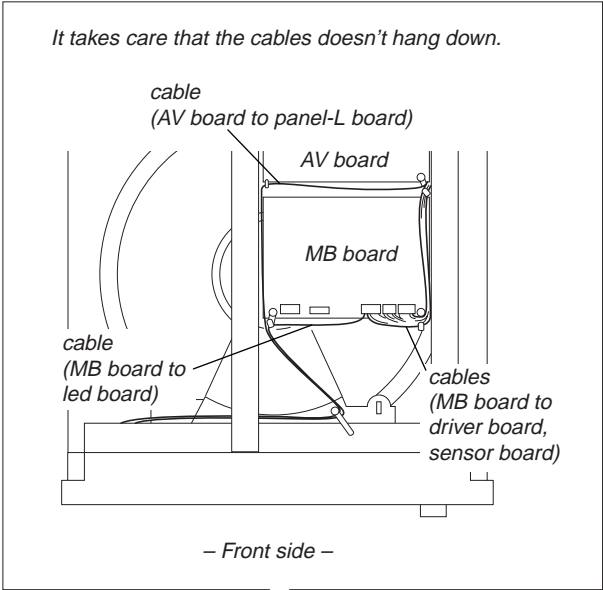
Align a slit of door assy with a marking on the bottom land of gear tooth when the gear is rotated fully in arrow direction, as shown.

**CLEANING OF OPTICAL PICK-UP**

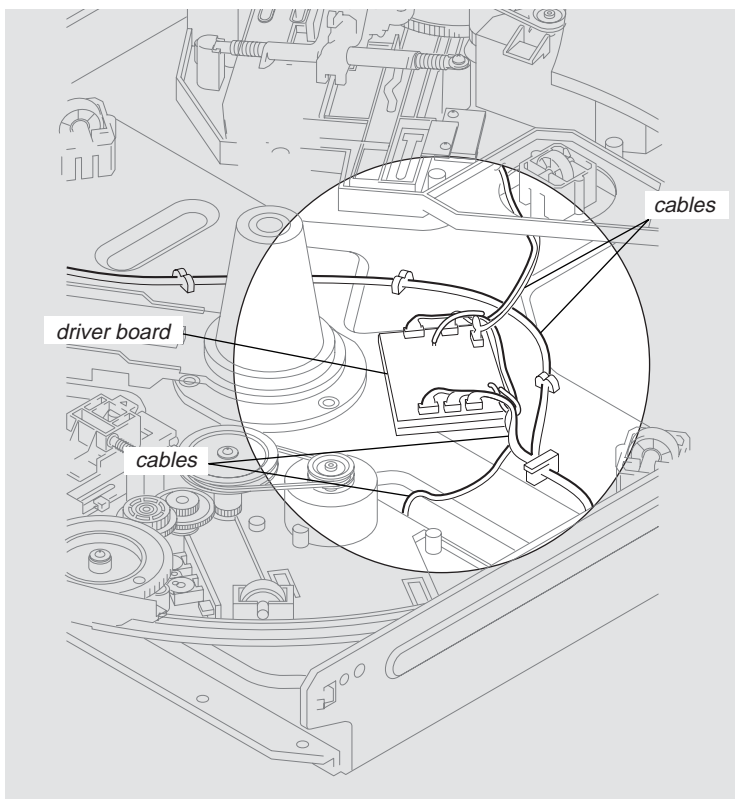


Remove the pulley assy, and clean the lens of optical pick-up through this hole.

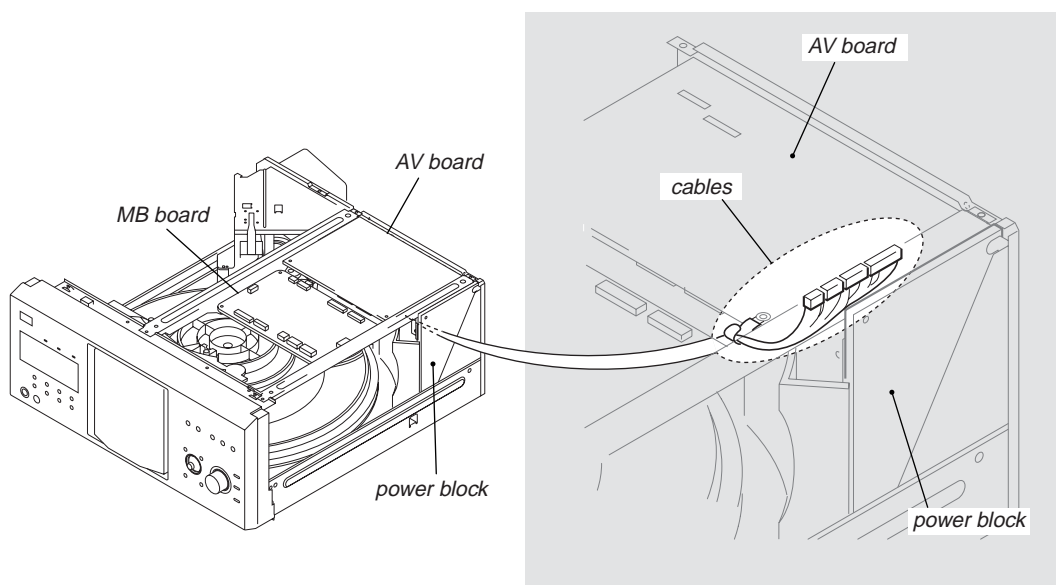
**NOTE FOR INSTALLATION**



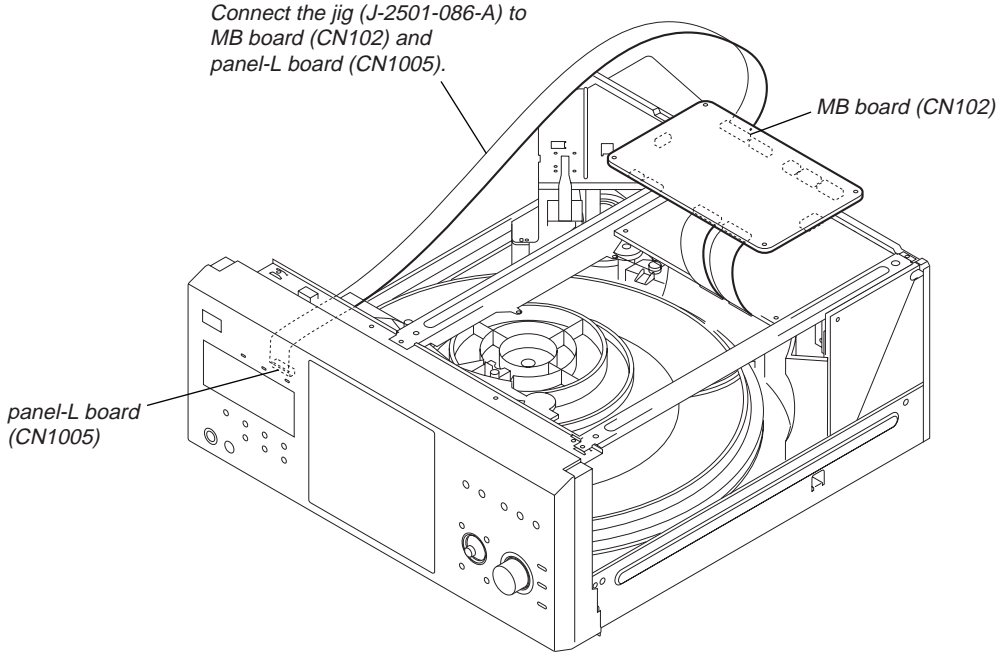
When installing the cables, it is made to make it crawl in a chassis.



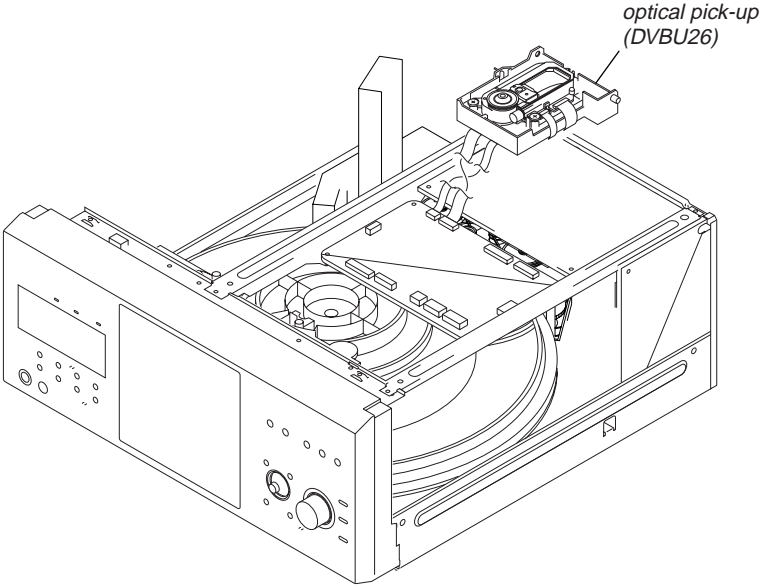
It is made to contact and for there not to be a power block and cables.



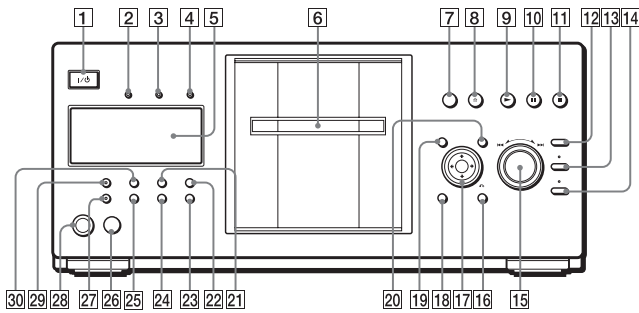
**SERVICE POSITION**  
**– MB board –**



**– Optical pick-up block –**



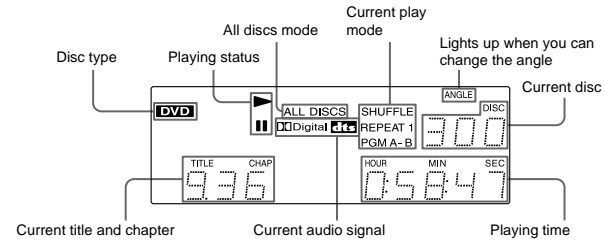
Front panel



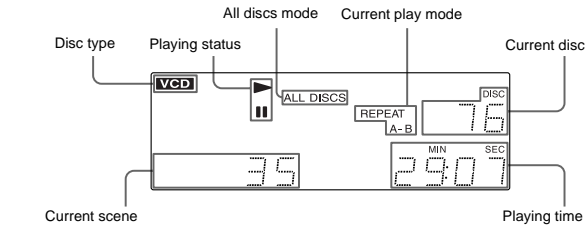
- 1 I/O (on/standby) button
- 2 PROGRESSIVE indicator  
— Lights up when the player outputs progressive signals.
- 3 SACD (Super Audio CD) indicator  
Lights up when:  
— playing a Super Audio CD.  
— no disc is inserted.
- 4 MULTI CHANNEL indicator  
Lights up when:  
— Playing a track or chapter that contains three or more audio signal channels.  
— no disc is inserted.
- 5 Front panel display
- 6 Front cover
- 7 OPEN/CLOSE button
- 8 DISC EJECT button
- 9 ► (play) button
- 10 || (pause) button
- 11 ■ (stop) button
- 12 +100 button
- 13 DISC CHANGE button/indicator
- 14 DIRECT SEARCH button/indicator
- 15 ◀▶/▶▶/▶▶+ENTER (previous/next/enter) dial
- 16 ↻ RETURN button
- 17 ◀▶/▶▶/▶▶+ENTER buttons
- 18 DISPLAY button
- 19 TOP MENU button
- 20 MENU button
- 21 VIDEO CONTROL button
- 22 SURROUND button
- 23 ONE/ALL DISCS button
- 24 FOLDER button
- 25 LOAD button
- 26 (remote sensor)
- 27 VIDEO OFF indicator
- 28 KEYBOARD jack
- 29 FL OFF button/indicator
- 30 TIME/TEXT button

Front panel display

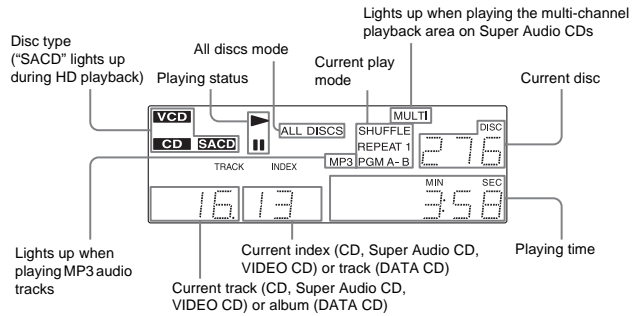
When playing back a DVD VIDEO/DVD-RW



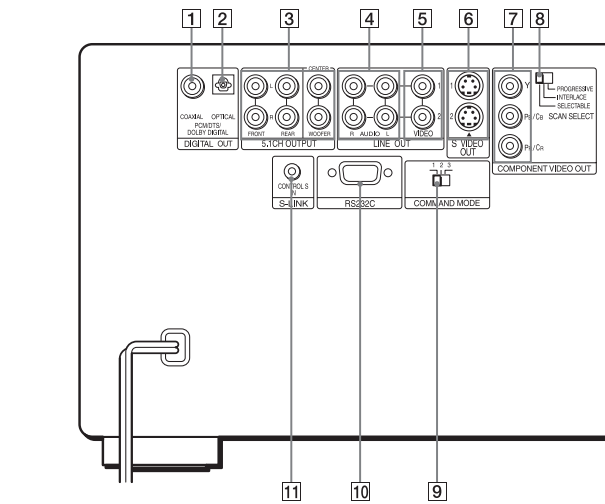
When playing back a VIDEO CD with Playback Control (PBC)



When playing back a CD, Super audio CD, DATA CD (MP3 audio), or VIDEO CD (without PBC)



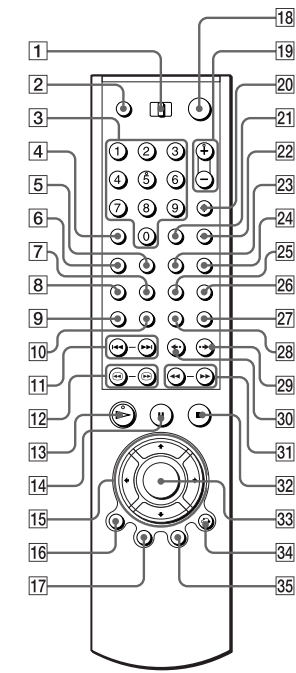
Rear panel



- 1 DIGITAL OUT (COAXIAL) jack
- 2 DIGITAL OUT (OPTICAL) jack
- 3 5.1CH OUTPUT jacks
- 4 LINE OUT AUDIO L/R 1/2 jacks
- 5 LINE OUT VIDEO 1/2 jacks
- 6 S VIDEO OUT 1/2 jacks
- 7 COMPONENT VIDEO OUT (Y, Pb/Cb, Pr/Cr) jacks
- 8 COMPONENT VIDEO OUT/SCAN SELECT switch
- 9 COMMAND MODE switch
- 10 RS232C jack\*
- 11 S-LINK/CONTROL S IN jack

\* This port is intended for future applications.

Remote



- 1 TV/DISC EXPLORER/DVD switch
- 2 OPEN/CLOSE button
- 3 Number buttons  
The number 5 button has a tactile dot.\*
- 4 CLEAR button
- 5 SUR (surround) button
- 6 VIDEO CONTROL button

- 7 SUBTITLE button
- 8 AUDIO button
- 9 PICTURE NAVI (picture navigation) button
- 10 REPEAT button
- 11 ◀▶/▶▶/▶▶ PREV/NEXT (previous/next) buttons
- 12 ◀◀/▶▶/▶▶ SEARCH/STEP buttons
- 13 ▷ PLAY button  
The ▷ button has a tactile dot.\*
- 14 || PAUSE button
- 15 ◀▶/▶▶/▶▶ buttons
- 16 DISPLAY/FILE button
- 17 TOP MENU/EDIT button
- 18 I/O (on/standby) button
- 19 VOL (volume) +/- buttons  
The + button has a tactile dot.\*
- 20 TV/VIDEO/DISC SKIP + button
- 21 ENTER button
- 22 WIDE MODE/DISC SKIP - button
- 23 FOLDER button
- 24 PICTURE MEMORY button
- 25 ANGLE button
- 26 TIME/TEXT button
- 27 SACD/CD (Super Audio CD/CD) button
- 28 SACD MULTI/2CH (Super Audio CD multi/2 channel) button
- 29 ↔ INSTANT SEARCH button
- 30 ◀◀ INSTANT REPLAY button
- 31 ◀◀/▶▶/▶▶ SCAN/SLOW buttons
- 32 ■ STOP button
- 33 ENTER button
- 34 ↻ RETURN button
- 35 MENU/SORT button

\* Use the tactile dot as a reference when operating the player.

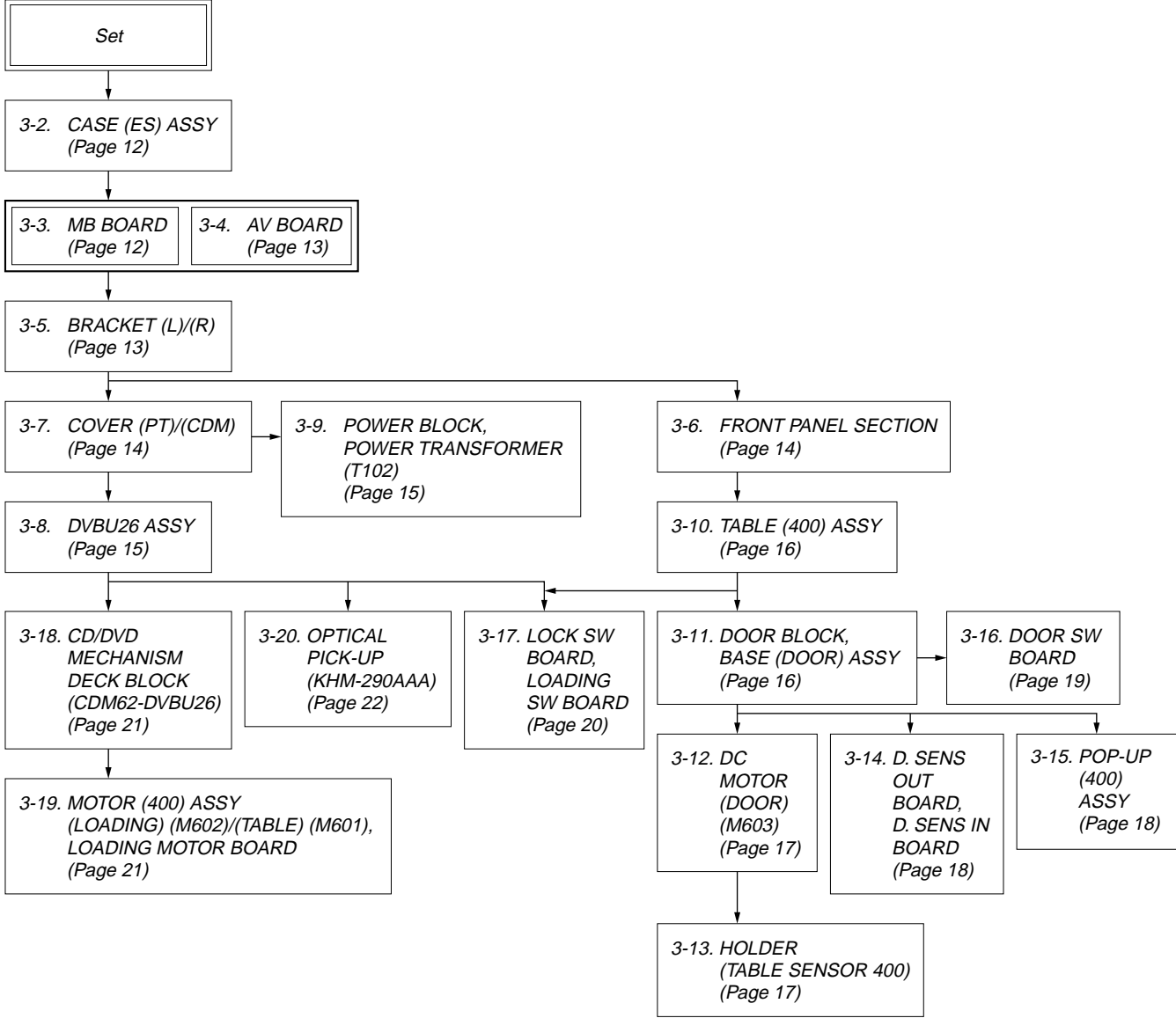
# SECTION 3 DISASSEMBLY

• This set can be disassembled in the order shown below.

## 3-1. DISASSEMBLY FLOW

**Note 1:** The process described in [ ] can be performed in any order.

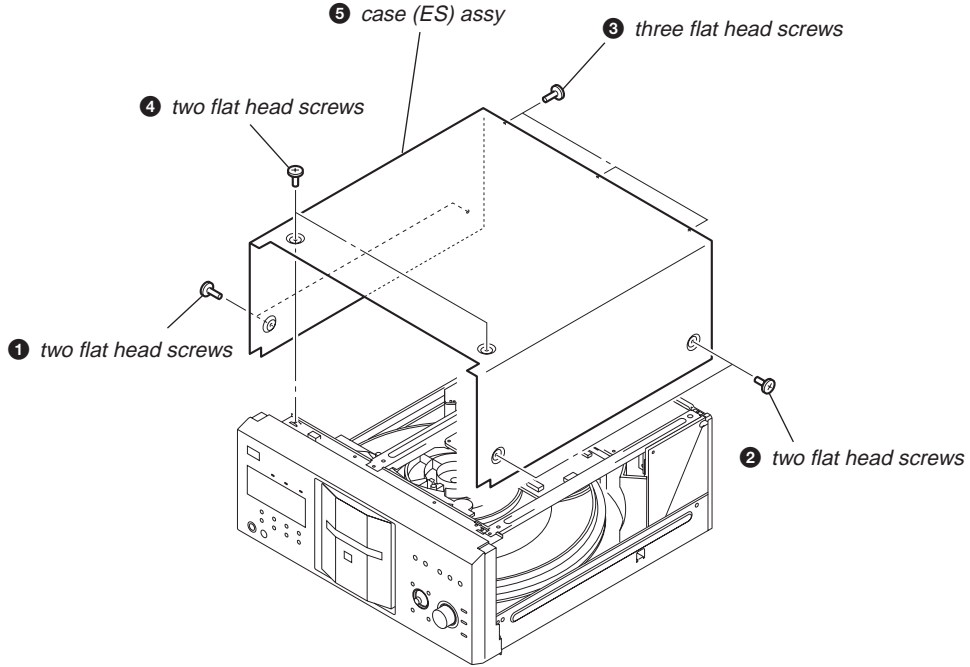
**Note 2:** Without completing the process described in [ ], the next process can not be performed.



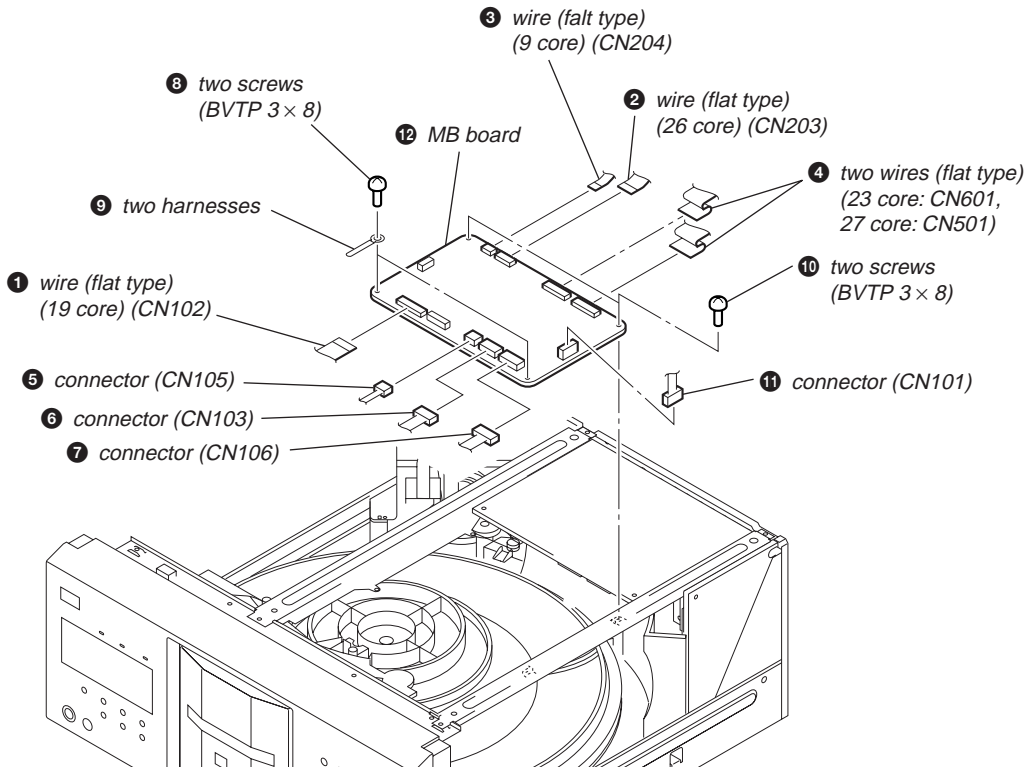


**Note:** Follow the disassembly procedure in the numerical order given.

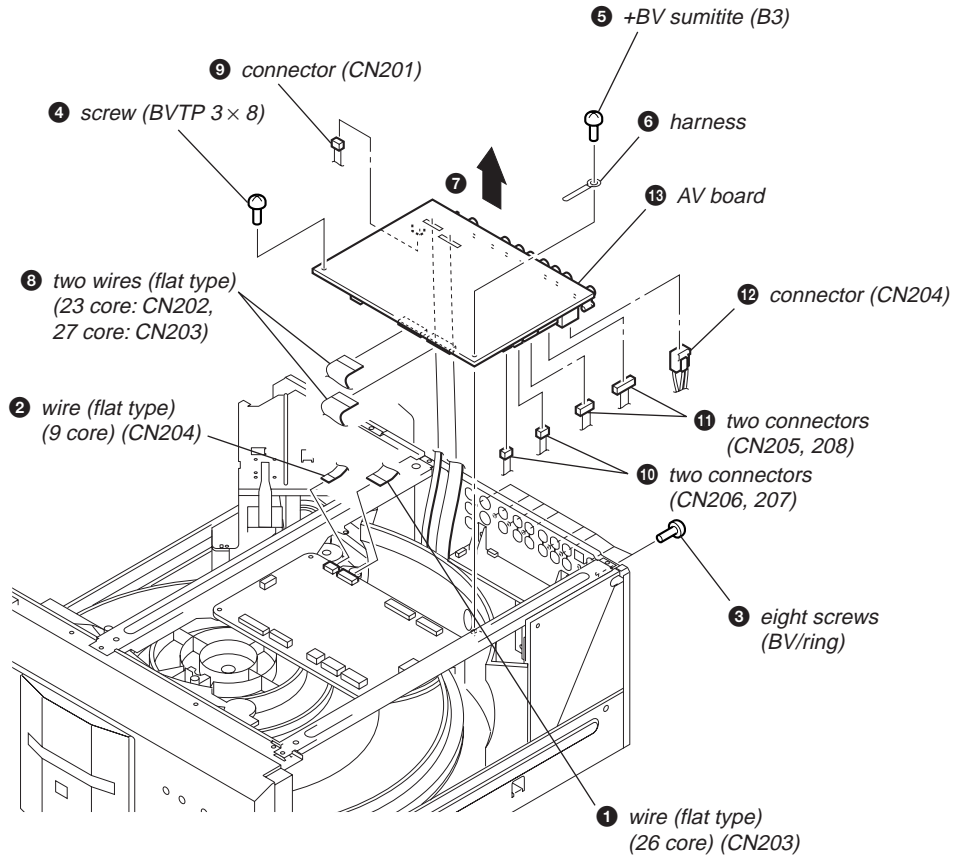
**3-2. CASE (ES) ASSY**



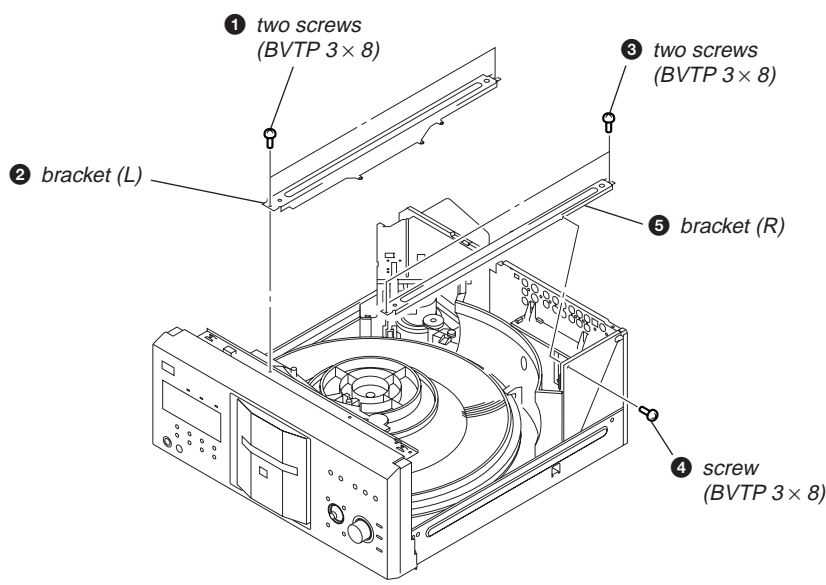
**3-3. MB BOARD**



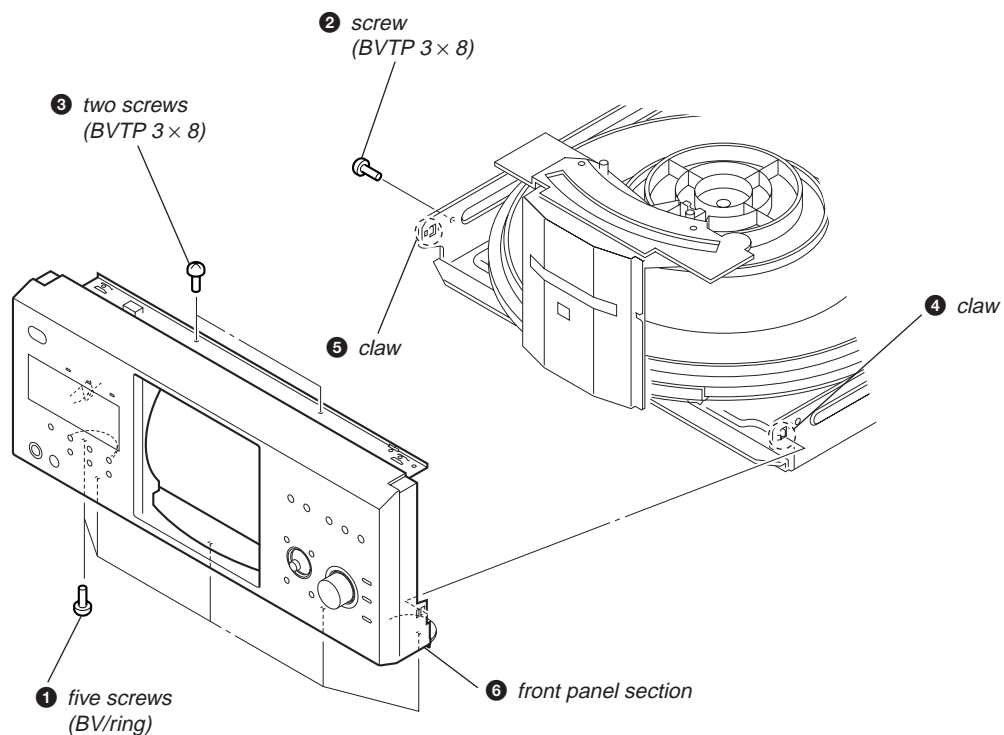
3-4. AV BOARD



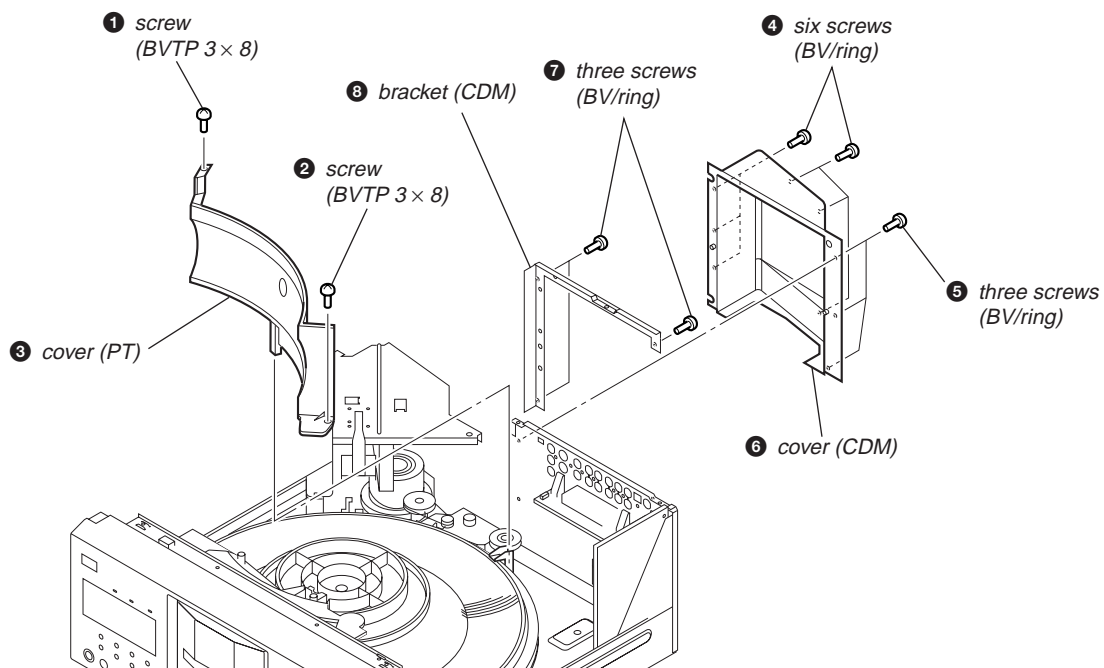
3-5. BRACKET (L)/(R)



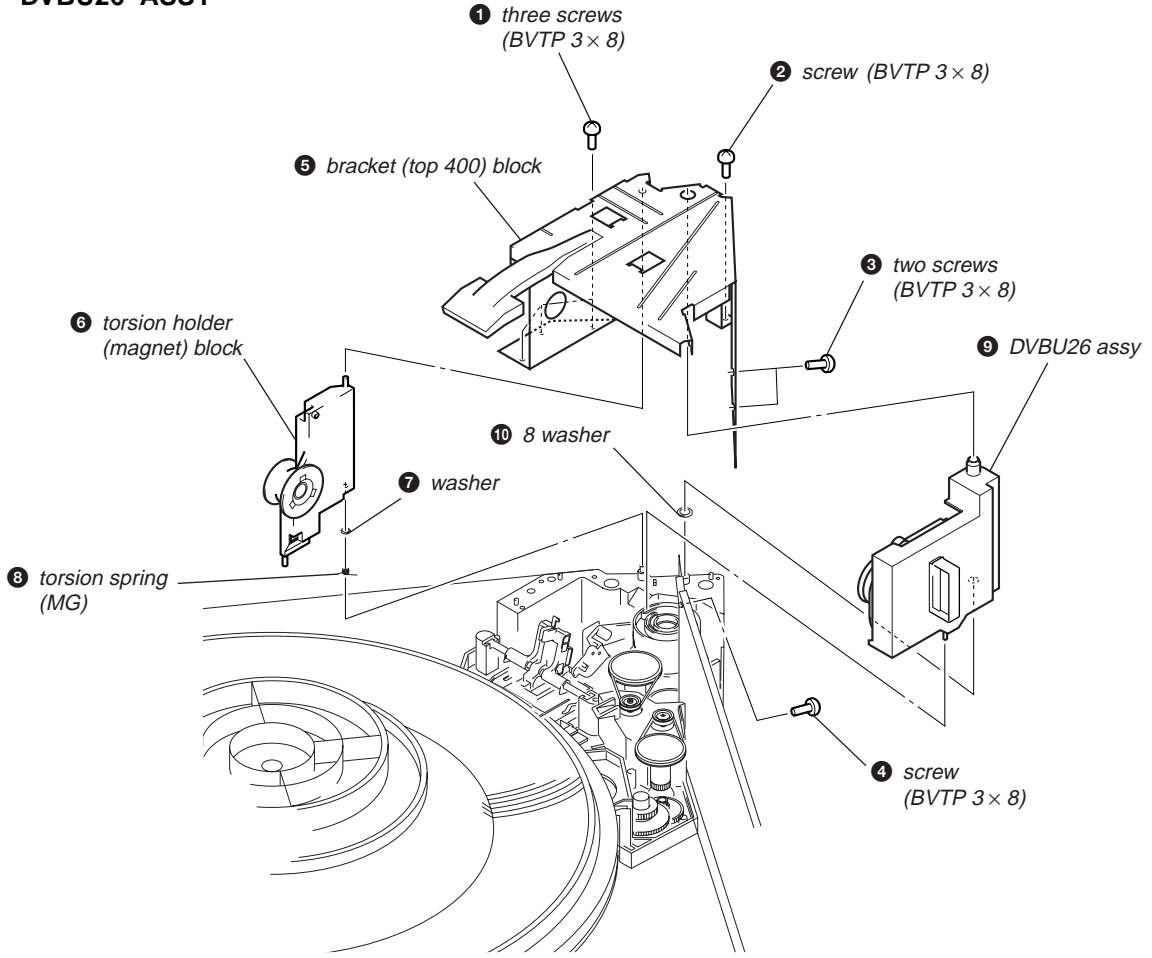
3-6. FRONT PANEL SECTION



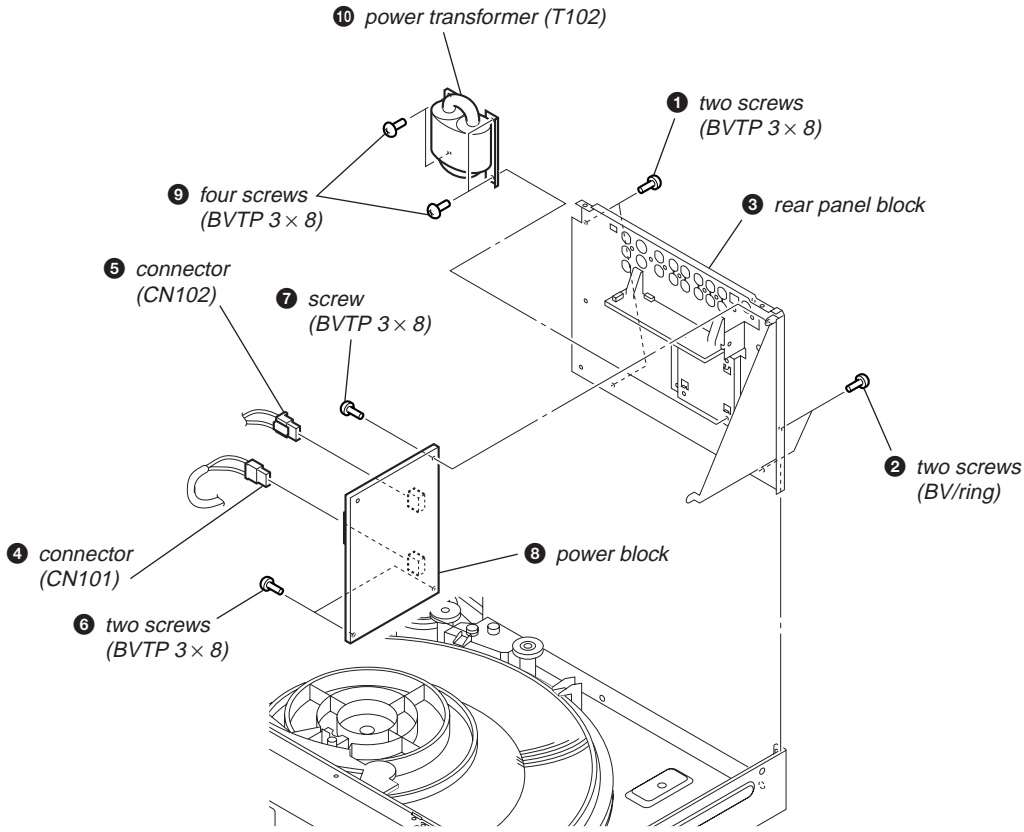
3-7. COVER (PT)/(CDM)



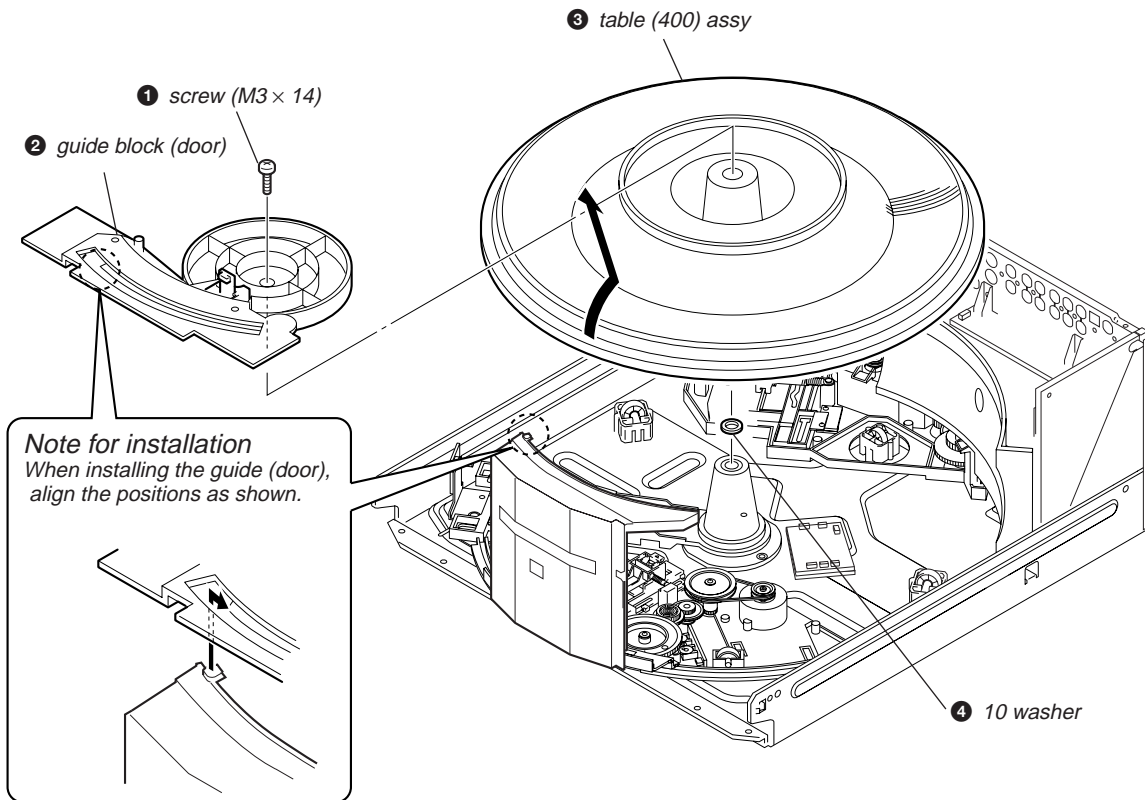
3-8. DVBU26 ASSY



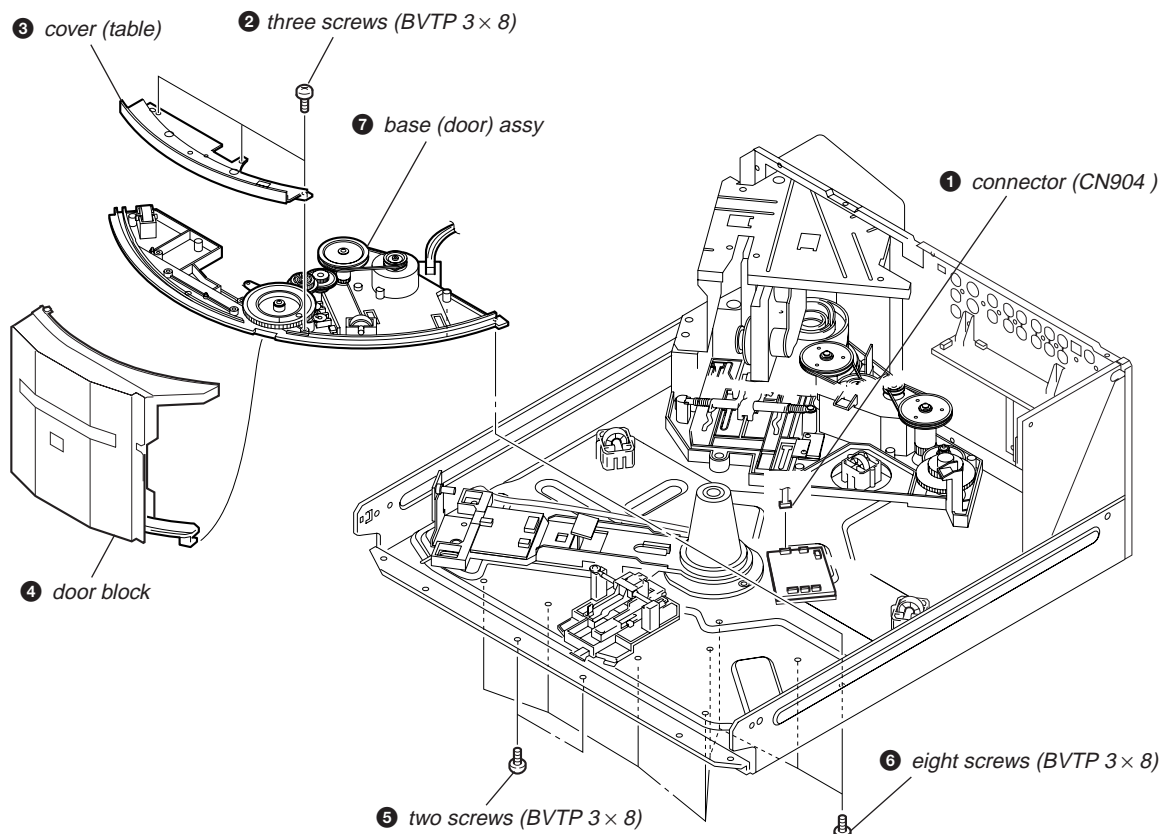
3-9. POWER BLOCK, POWER TRANSFORMER (T102)



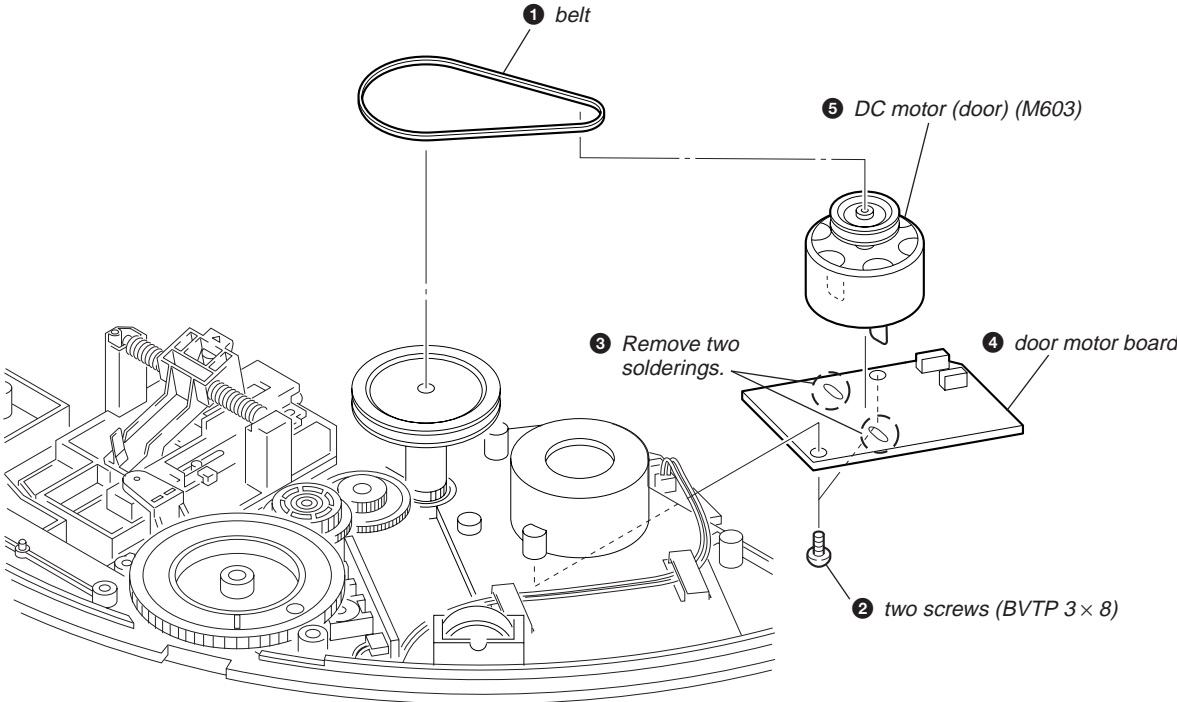
3-10. TABLE (400) ASSY



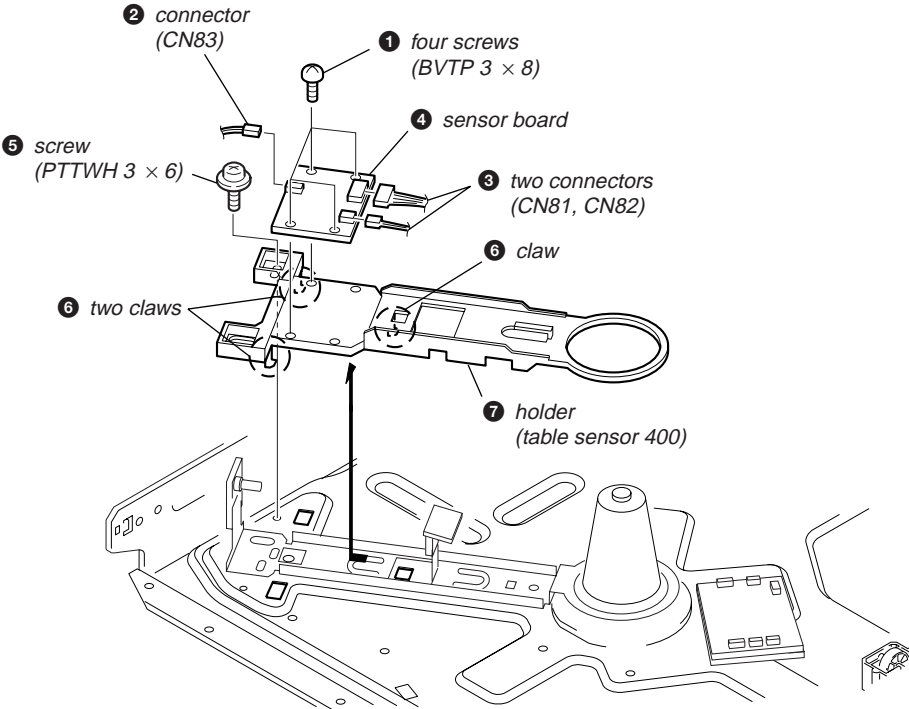
3-11. DOOR BLOCK, BASE (DOOR) ASSY



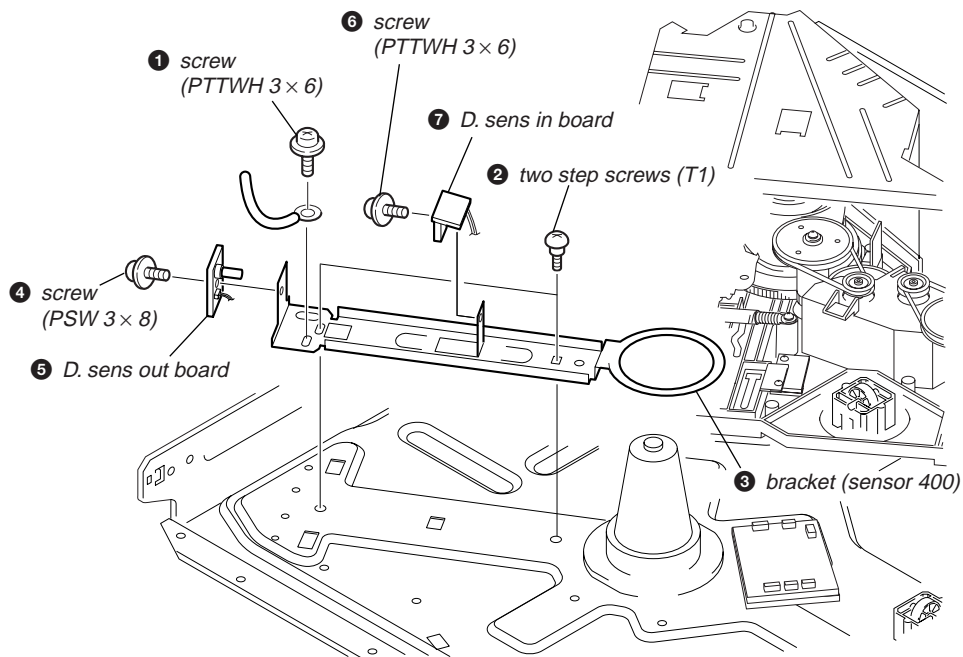
3-12. DC MOTOR (DOOR) (M603)



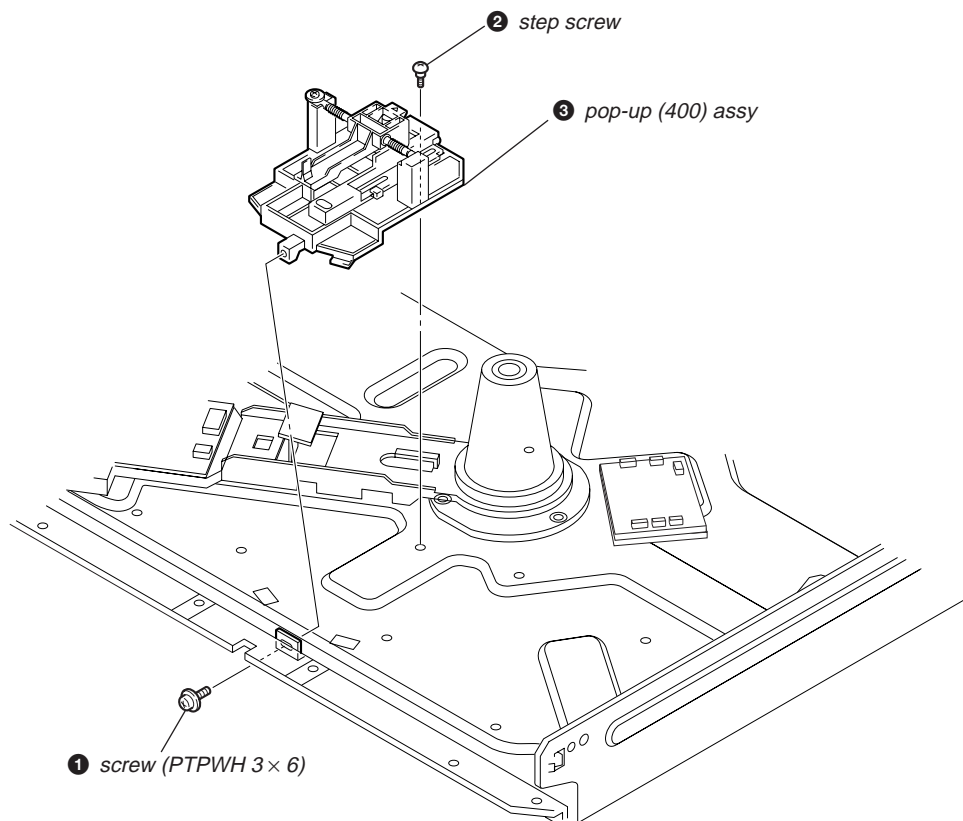
3-13. HOLDER (TABLE SENSOR 400)



3-14. D. SENS OUT BOARD, D. SENS IN BOARD

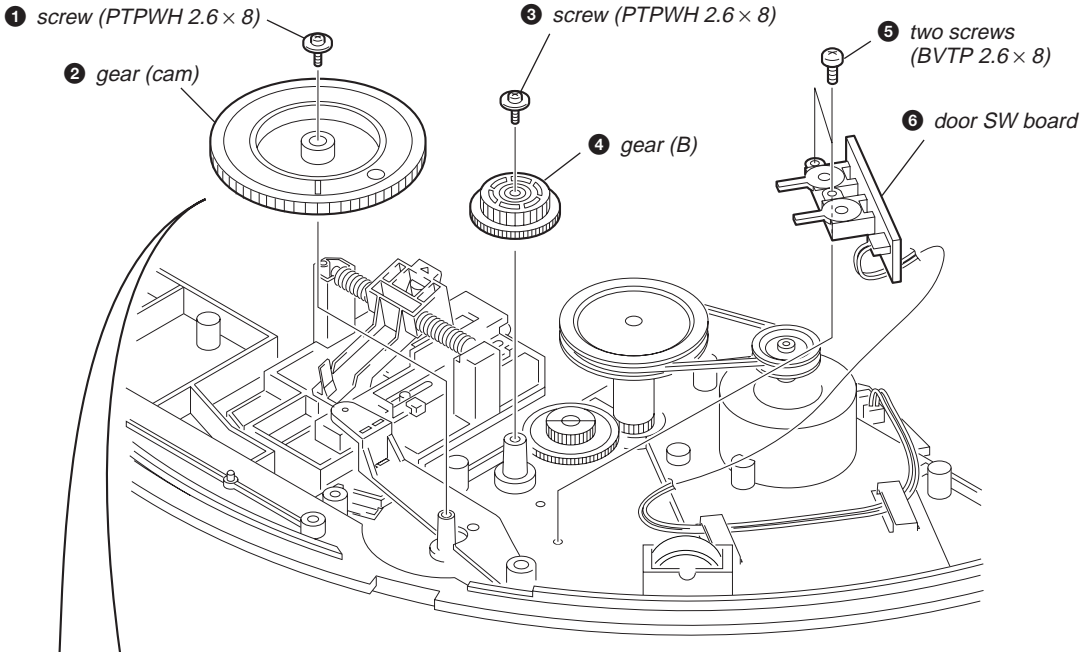


3-15. POP-UP (400) ASSY



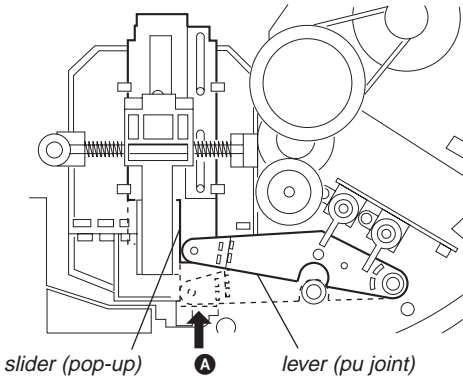


3-16. DOOR SW BOARD

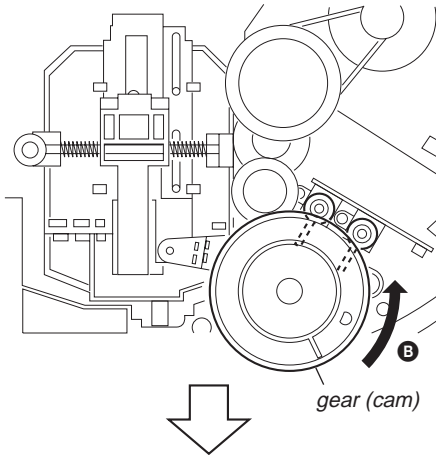


Precaution during the gear (cam) installation

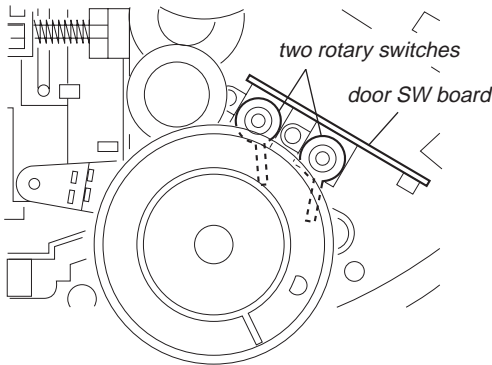
1 Move the slider (pop-up) and the lever (pu joint) fully in the direction of the arrow A.



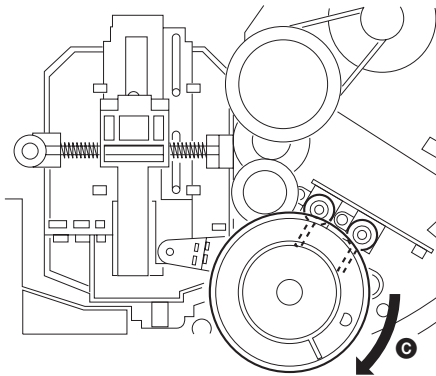
2 Install the gear (cam) in the direction shown in the illustration and rotate it fully in the direction of the arrow B.



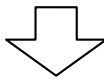
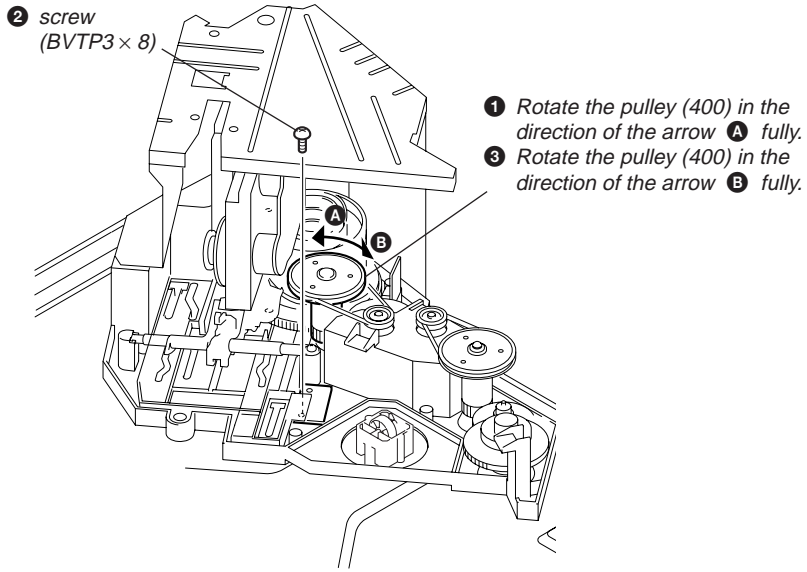
(The levers of the two rotary switches on the door SW board are shown in the illustration below.)



3 When the gear (cam) happens to go too deep, return it to the original position in the direction of the arrow C.



3-17. LOCK SW BOARD, LOADING SW BOARD



**Note for installation**

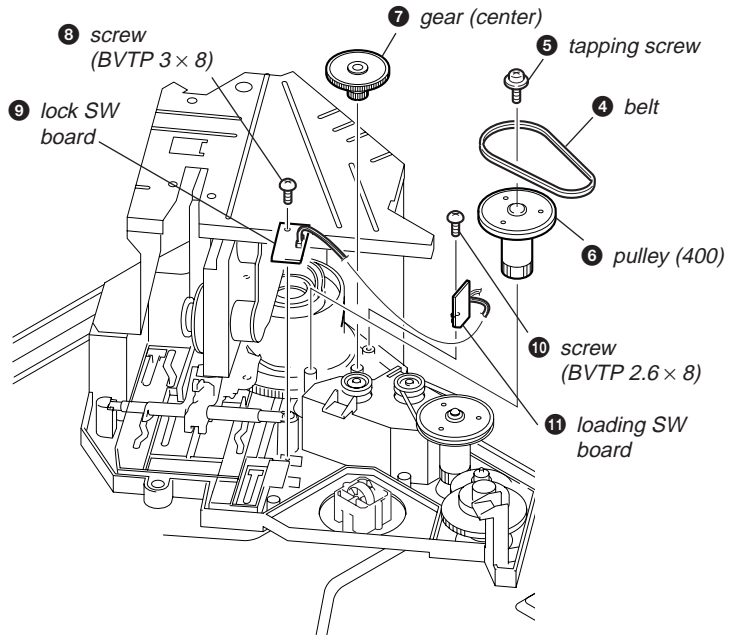
When installing the loading SW board and lock SW boards, align the leads position as shown.

loading SW board

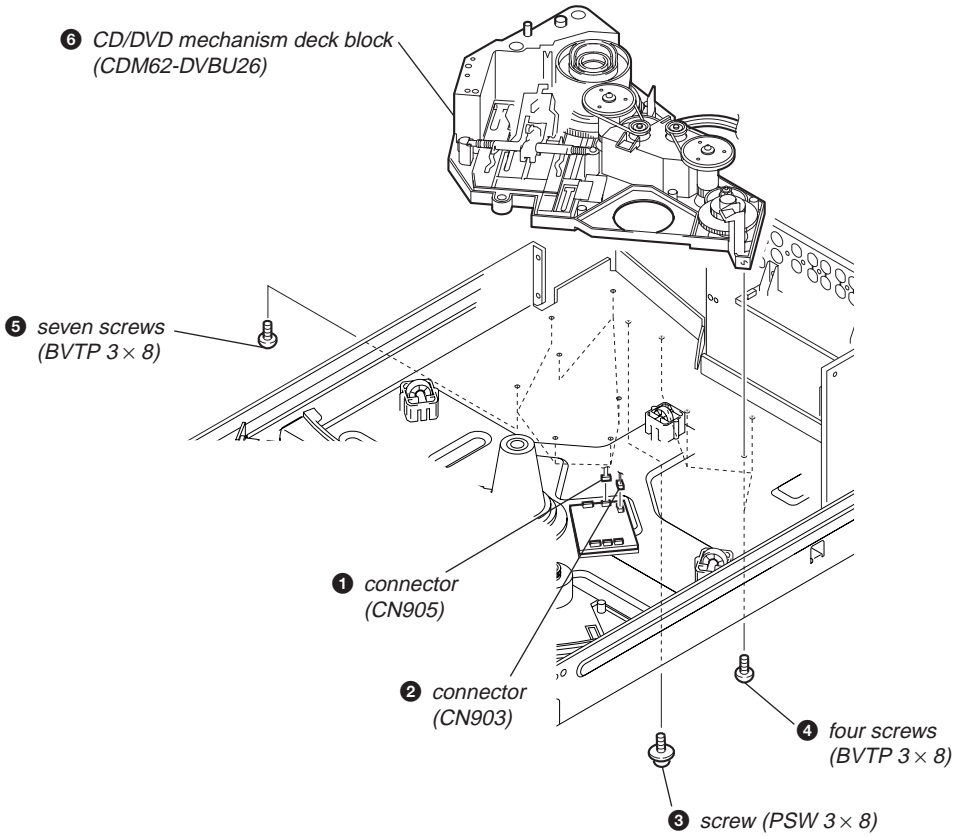
claws

leads position

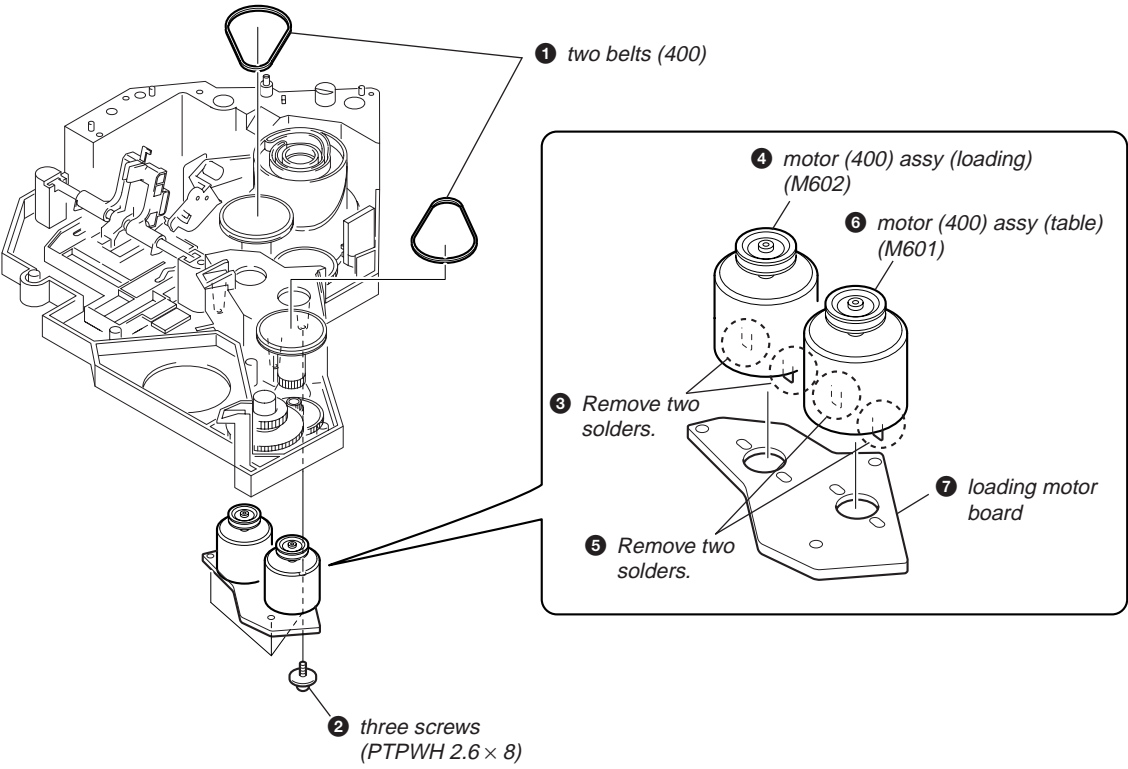
lock SW board



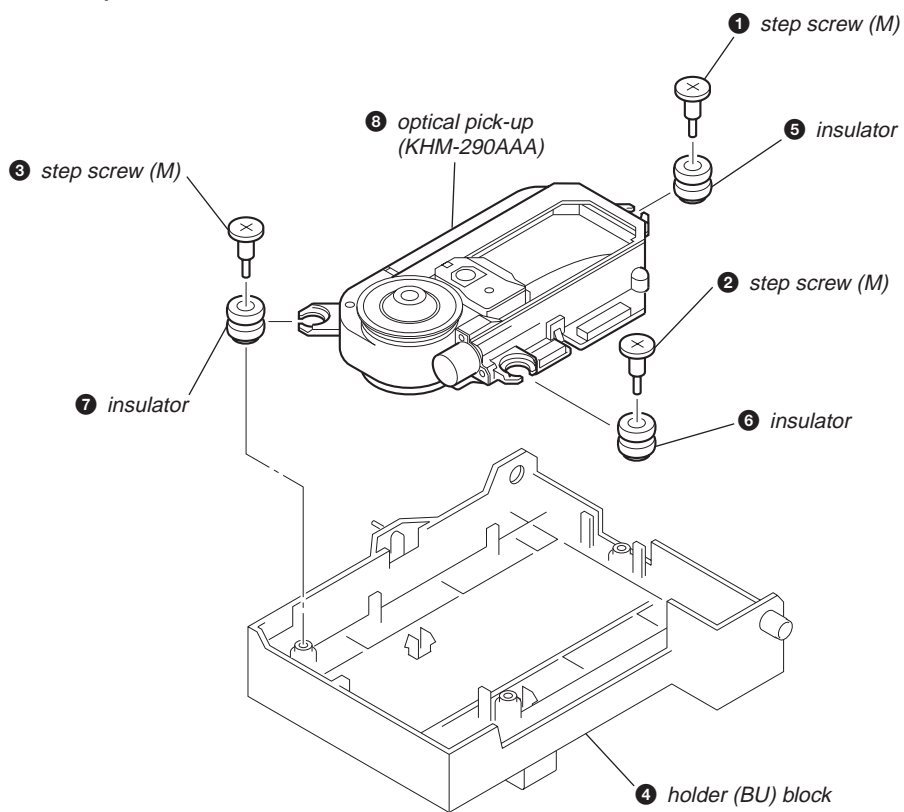
**3-18. CD/DVD MECHANISM DECK BLOCK (CDM62-DVBU26)**



**3-19. MOTOR (400) ASSY (LOADING) (M602)/(TABLE) (M601), LOADING MOTOR BOARD**



3-20. OPTICAL PICK-UP  
(KHM-290AAA)



## SECTION 4 TEST MODE

### 4-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

### 4-2. STARTING TEST MODE

Press the [TOP MENU], [CLEAR], [I/O] keys on the remote commander in this order with the power of main unit in OFF status, and the Test Mode starts, then "DIAG START" will be displayed on the fluorescent display tube and the menu shown below will be displayed on the TV screen. At the bottom of menu screen, the model name and revision number are displayed. Last Off at the lower right of screen indicates the information code concerning the last power off. To execute each function, select the desired menu and press its number on the remote commander. To exit from the Test Mode, press the [I/O] key.

```

Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Version Information
6. Video Level Adjustment
                               Exit: POWER Key

Model   :TTX-15xxxx
Revision:x.xxx   Last Off: xx

```

#### Power Off Information Code List

- 00: Primary Power Off
- 01: Power Off Request from SYSTEM CONTROL
- 02: Power Off by Emergency Power Off Command from SYSTEM CONTROL  
(if information is sent from SYSTEM CONTROL)
- 03: IF CON Judged that SYSTEM CONTROL is Faulty
- 04: Power Off from Diagnosis Mode of IF CON
- 05: Forced Power Off by the User
- 06: Power Off by Power Supply Voltage Monitor

### 4-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander. On the Test Mode Menu screen, press [0] key on the remote commander, and the following check menu will be displayed.

```

### Syscon Diagnosis ###
Check Menu

0 . Quit
1 . All
2 . Version
3 . Peripheral
4 . Servo
5 . Supply
6 . AV Decoder
7 . Video
8 . Audio
-

```

#### 0. (Quit)

Quit the Syscon Diagnosis and return to the Test Mode Menu.

#### 1. (All items continuous check)

This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```

### Syscon Diagnosis ###

Diag All Check
No. 2 Version

2-3. ROM Check Sum
Check Sum = xxxx

Press NEXT Key to Continue
Press PREV key to Repeat

```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.

Following the message, press [▶▶] key to go to the next item, or [◀◀] key to repeat the same check again.

To quit the diagnosis and return to the Check Menu screen, press **ESC** or **ENTER** key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```

### Syscon Diagnosis ###

3-2. EEPROM Check
Error 03 : EEPROM Write/Read N
Address  : 00000001
Write Data: 2492
Read Data : 2490
Press NEXT Key to Continue
Press PREV key to Repeat
-
    
```

Press **ESC** key to quit the diagnosis, or **LEFT** key to repeat the same item where an error occurred, or **RIGHT** key to continue the check from the item next to faulty item.

\* In "All item continuous check", pressing stop or enter will not quit the diagnosis.

Selecting **2** and subsequent items call the submenu screen of each item. When "—" is displayed in the submenu, it means that the test is not supported in the model.

For example, if "5. Supply" is selected, the following submenu will be displayed.

```

### Syscon Diagnosis ###
      Check Menu
      No. 5 Supply

0. Quit
1. All
2. ARP Register Check
3. ARP to RAM Data Bus
4. ARP to RAM Address Bus
5. ARP RAM Check
    
```

## 0. (Quit)

Quit the submenu and return to the main menu.

## 1. (All submenu items continuous check.)

This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry. Normally, all items are checked successively one after another automatically unless an error is found.

Selecting **2** and subsequent items executes respective menus and outputs the results.

For the contents of each submenu, see "General Description of Checking Method" and "Check Items List".

## General Description of Checking Method

### 2. Version

#### (2-2) Revision

ROM revision number is displayed.

Error: Not detected.

The revision number defined in the source file is displayed with four digits.

#### (2-3) ROM Check Sum

Check sum is calculated.

Error: Not detected.

8-bit data are added up to the ROM address 0x000F0000 to 0x002EFFFF, and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

#### (2-4) Model Type

Model code is displayed.

Error: Not detected.

The model code read from the EEPROM is displayed with 2-digit hexadecimal number.

#### (2-5) Region

Region code is displayed.

Error: Not detected.

The region code determined from the model code is displayed.

#### (2-6) M't Check

Mount resistance is checked.

Error 22: The region code does not accord.

Check whether the region code that is deduced from model resistance and destination resistance accords with the region code that is deduced from region resistance value.

### 3. Peripheral

#### (3-2) EEPROM Check

Data write → read, and accord check

Error 03: EEPROM write/read discord

0x9249, 0x2942 and 0x4294 are written to the address 0x00 to 0xFF of the EEPROM and then read for checking. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

#### (3-3) Gate Array Check

Data write → read, and accord check

Error 02: Gate Array write/read discord

Data of 0x00 to 0xFF is written sequentially to the address 0xF and then read for checking.

#### (3-4) NAND FLASH Check

Data delete → write → read, and accord check

Error 04: delete error

Error 05: write error

Error 06: read data discord

Error 21: more than ten blocks are defective

Deleting, writing and checking read data are executed to the zeroth block of Flash memory.

If any detective block is found, the address is displayed.

When more than ten blocks are defective, it is considered as an error.

#### (3-5) SACD Check

Device reset → internal organs RAM check.

Error 50: Write and read data discord.

- (3-6) VENC Check  
Data write → read, and accord check  
Error 52: Write/read data discord  
Error may occur due to defect of access with syscon.
- (3-7) \_\_\_\_\_  
Check no support.
- (3-8) EX RAM Check  
Test Data write → read, and accord check  
Error 02: The external RAM used in the system control is checked.

#### 4. Servo

- (4-2) Servo DSP Check  
Data write → read, and accord check  
Error 12: Read data discord  
0x9249, 0x2942 and 0x4294 are written to the RAM address 0x602 of the Servo DSP and then read for checking.
- (4-3) \_\_\_\_\_  
Check no support.
- (4-4) RF Amp (SSI) W/R Check  
Data write → read, and accord check  
Error 13: RF Amp register write, and read data discord  
Implement 8-bit shift operation of the 0x01 to the readable/writable register of the RF Amp. If once write data do not accord with read data, it is NG.

#### 5. Data Supply System

- (5-2) ARP Register Check  
Data write → read, and accord check  
Error 08: ARP register write, and read data discord  
Data 0x00 to 0xFF is written sequentially to the ARP TMAX register (address 0xC6) and then read for checking.
- (5-3) ARP to RAM Data Bus  
Data write → read, and accord check  
Error 09: ARP ↔ RAM data bus error  
Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

- (5-4) ARP to RAM Address Bus  
Data write → other address read discord check  
Error 10: ARP ↔ RAM address bus error  
Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).  
Before starting the test, all addresses of RAM (IC303) are cleared to 0x0000.  
First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.  
If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```

### Syscon Diagnosis ###

5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address      : 0000A55A
Write Data   : 00000000
Read Data    : 00080000
Press NEXT Key to Continue
Press PREV key to Repeat
-

```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

- (5-5) ARP RAM Check  
Data write → read, and accord check  
Error 11: ARP RAM read data discord  
The program code data stored in ROM are copied to all areas of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.



## 6. AV Decoder

### (6-2) 1935 RAM

Data write → read, and accord check

Error 14: AVD RAM read data discord

The program code data stored in ROM (IC106) are copied to all areas of RAM (IC404, 405) connected to the AVD (IC403) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 14, and the test is suspended.

During the test, OSD display becomes blank as the OSD area is also checked.

### (6-3) 1935 SP

ROM → AVD RAM → Video OUT

Error: Not detected.

The data including sub picture streams in ROM (IC106) are transferred to the RAM (IC404, 405) in AVD (IC403), and output as video signals from the AVD (IC403).

Though OSD display becomes blank, the output of video signals continues until the key is pressed.

## 7. Video Output

### (7-2) Color Bar

AVD color bar command write → Video OUT

Error: Not detected.

The command is transferred to the AVD, and the color bar signals are output from video terminals.

### (7-3) Composite Out

AVD color bar command write → Video (Composite, Y/C) OUT

Error: Not detected.

The command is transferred to the AVD, and the color bar signals are output from video terminals.

### (7-4) Y/C Out

AVD color bar command write → Video (Composite, Y/C) OUT

Error: Not detected.

The command is transferred to the AVD, and the color bar signals are output from video terminals.

They are output from all video terminals (Composite, Y/C, Component).

### (7-5) \_\_\_\_\_

Check no support.

### (7-6) Component Out

AVD color bar command write → Video (Component, Y/C) OUT

Error: Not detected.

The command is transferred to the AVD, and the color bar signals are output from video terminals.

### (7-7) \_\_\_\_\_

Check no support.

## 8. Audio Output

### (8-2) ARP → 1935

Data flow from supply system DRAM to SDRAM of AV Decoder is tested.

Error 15: ARP → 1935 video NG

16: ARP → 1935 audio NG

### (8-3) Audy


Register check of Audy (IC801) and SDRAM (IC802) check are performed. After above checks are performed, transit to the next test tone (8-4).

### (8-4) Test Tone

Pink noise output

Error: Not detected.

In the models without DD output, the test tone is output from L and R of 2-channel only, and in the models with DD output, the test tone is output from L and R of 2-channel, and all channels of 5.1 output.

After turning on all outputs, each time the  key is pressed, the output channel is switched for individual channel checking.

## Diagnosis Check Items List

### 2. Version Display

(2-2) Revision

(2-3) ROM Check Sum

(2-4) Model Type

(2-5) Region

(2-6) M't Check

### 3. Peripheral

(3-2) EEPROM Check

(3-3) Gate Array Check

(3-4) NAND FLASH Check

(3-5) SACD Check

(3-6) VENC Check

(3-7) \_\_\_\_\_ (Function not supported)

(3-8) EX RAM Check

### 4. Servo

(4-2) Servo DSP Check

(4-3) \_\_\_\_\_ (Function not supported)

(4-4) RF Amp (SSI) W/R Check

### 5. Data Supply System

(5-2) ARP Register Check

(5-3) ARP to RAM Data Bus

(5-4) ARP to RAM Address Bus

(5-5) ARP RAM Check

### 6. AV Decoder

(6-2) 1935 RAM

(6-3) 1935 SP

### 7. Video Output

(7-2) Color Bar

(7-3) Composite Out

(7-4) Y/C Out

(7-5) \_\_\_\_\_ (Function not supported)

(7-6) Component Out

(7-7) \_\_\_\_\_ (Function not supported)

### 8. Audio Output

(8-2) ARP → 1935

(8-3) Audy

(8-4) Test Tone

**Error Codes List**

00: Error not detected  
 01: RAM write/read data discord  
 03: EEPROM NG  
 04: Flash memory clear error  
 05: Flash memory write error  
 06: Flash memory read data discord  
 08: ARP register read data discord  
 09: ARP  $\longleftrightarrow$  RAM data bus error  
 10: ARP  $\longleftrightarrow$  RAM address bus error  
 11: ARP RAM read data discord  
 12: Servo DSP NG  
 13: RF Amp NG  
 14: 1935 SDRAM NG  
 15: ARP  $\rightarrow$  1935 video NG  
 16: ARP  $\rightarrow$  1935 audio NG  
 1A: System call error (Function not supported)  
 1B: System call error (Parameter error)  
 1C: System call error (Illegal ID number)  
 20: System call error (Time out)  
 22: Resistor installation error  
 50: SACD Decoder W/R NG  
 52: Video Encoder W/R NG  
 55: External RAM W/R NG  
 90: Error occurred  
 91: User verification NG  
 92: Diagnosis cancelled

**4-4. DRIVE AUTO ADJUSTMENT**

DVD reference disc

Single Layer

HLX-503 (J-6090-069-A) (NTSC) OR

HLX-504 (J-6090-088-A) (NTSC)

Dual Layer

HLX-501 (J-6090-071-A) (NTSC) OR

HLX-505 (J-6090-089-A) (NTSC)

CD reference disc

YEDS-18 (3-702-101-01) OR

PATD-012 (4-225-203-01)

On the Test Mode Menu screen, press **[1]** key on the remote commander, and the drive auto adjustment menu will be displayed.

```

## Drive Auto Adjustment ##

          Adjustment Menu

0. ALL
1. DVD-SL
2. CD
3. DVD-DL
4. LCD

-

Exit: RETURN
  
```

Normally, **[0]** is selected to adjust DVD (single layer), CD, and DVD (dual layer) in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen. Which disc is currently adjusted is displayed on the fluorescent display tube.

**0. ALL**

You will be asked if EEPROM data are initialized or not, and for this prompt, select **[0]** and press the **[ENTER]** key. First, the servo setting data in EEPROM, Emergency History and Hour Meter are cleared to initialize. Then, [1] DVD-SL disc, [2] CD disc, and [3] DVD-DL disc are adjusted in this order. Because the changer model can accept multiple discs in advance of adjustment, adjustments can be continued by exchanging discs automatically whenever an adjustment is completed following the instruction on screen. You can exit the adjustment by pressing the **[■]** button. In adjusting each disc, the mirror time is measured to check the disk type. In the auto adjustment, whether the disc type is correct is not checked unlike conventional models, and accordingly, take care not to insert a different type of disc.

Three kinds of discs can be set in advance. In this case, set discs in order to the displayed number with following the message. Every time after adjusting a disc, the disc is replaced and adjustment is continued automatically.

Set Disc

Disc slot number 1: DVD-SL

Disc slot number 2: CD

Disc slot number 3: DVD-DL

## 1. DVD Single Layer Disc

Select [1], insert DVD single layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 1 is used in the changer type model. If there is no disc on the disc slot No. 1, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the SL disc is set on the disc slot 1.

### DVD Single Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory SL
3. Set Disc Type SL
4. Spindle Start
5. Laser Diode ON
6. Focus Error Check
7. Focus ON 0 with PI Level measure
8. Auto Track Offset Adjust L0
9. Try Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto Focus Balance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. EQ Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. RF Level Measure
21. Jitter measure
22. Eep Copy Loop Filter Offset
23. All Servo Off

## 2. CD Disc

Select [2], insert CD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 2 is used in the changer type model. If there is no disc on the disc slot No. 2, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the CD is set on the disc slot 2.

### CD Adjustment Steps

1. Sled Reset
2. Disc Check Memory CD
3. Set Disc Type CD
4. Spindle Start
5. Laser Diode ON
6. Focus Error Check
7. Focus ON 0 with PI Level measure
8. Auto Track Offset Adjust L0
9. Try Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto Focus Balance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. EQ Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. Copy Adjustment Data to LCD
21. RF Level Measure
22. Jitter measure
23. All Servo Off

## 3. DVD Dual Layer Disc

Select [3], insert DVD dual layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 3 is used in the changer type model. If there is no disc on the disc slot No. 3, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the DL disc is set on the disc slot 3.

### DVD Dual Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory DL
3. Set Disc Type DL  
DVD DL Layer 1 Adjust
4. Spindle Start
5. Laser Diode ON
6. Focus ON 0 with PI Level measure
7. Auto Track Offset Adjust L1
8. Tracking ON
9. CIVA ON
10. Sled ON
11. Auto Focus Balance Adjust
12. Auto Loop Filter Offset Adjust
13. Auto Focus Gain Adjust L1
14. EQ Boost Adjust L1
15. Auto Track Gain Adjust L1
16. Jitter measure  
DVD DL Layer 0 Adjust
17. Focus Jump (L1 → L0)
18. Auto Track Offset Adjust L0
19. Tracking ON
20. CIVA ON
21. Sled ON
22. Auto Focus Balance Adjust
23. Auto Focus Gain Adjust L0
24. Auto Focus Balance Adjust L0
25. EQ Boost Adjust L0
26. Auto Track Gain Adjust L0
27. Jitter measure
28. All Servo Stop

## 4. LCD

LCD disc is not adjusted because the adjusted data of CD are reflected, and SACD (hybrid disc) is not adjusted because the adjusted data of CD and DVD-DL are reflected.

### 4-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select **[2]**, and the manual operation menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```

## Drive Manual Operation ##
      Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check
7. Changer Manual Move
8. Changer Mecha Check
0. Disc Check Memory
-
Exit: RETURN
    
```

In using the Manual Operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

1. Set correctly the disc type to be used on the Disc Type setting screen.  
The Disc Type setting must be performed after a disc is loaded.  
The set Disc Type is cleared when the tray is opened.
2. After power ON, if the Manual Operation was selected, first perform "Reset SLED TILT" by opening 1. Disc Type screen.
3. In case of an alarm, immediately press the **[■]** button to stop the servo operation, and turn the power OFF.

Basic operation (controllable from front panel or remote commander)

- [I/O]** : Power OFF
- [■]** : Servo stop
- [EJECT]** (DISC EJECT) : Stop+Eject/Loading
- [RETURN]** : Return to Operation Menu or Test Mode Menu
- [▶▶]** , **[◀◀]** : Transition between sub modes of menu
- [1]** to **[9]**, **[0]** : Selection of menu and items
- Cursor **[↑]**/**[↓]** : Increase/Decrease in manually adjusted value

### 0. Disc Check Memory

```

Disc Check
1. SL Disc Check
2. CD Disc Check
3. DL Disc Check

0. Reset SLED TILT
-
    
```

On this screen, the mirror time is measured and written to the EEPROM to check the disc type. First, set a DVD SL disc and press **[1]**, then set a CD disc and press **[2]**, and finally set a DVD DL disc and press **[3]**. The measured mirror time is displayed respectively.

The adjustment must be executed more than once after default data were written.

From this screen, you can go to another mode by pressing **[▶▶]** or **[◀◀]** key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

#### 1. Disc Type

```

Disc Type
1. Disc Type Auto Check
2. DVD SL 12cm
3. DVD DL 12cm
4. CD 12cm
5. LCD 12cm
6. DVD SL 8cm
7. DVD DL 8cm
8. CD 8cm
9. LCD 8cm
0. Reset SLED TILT
-
0. Reset SLED TIL
EMG. 00
    
```

On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting **[1]** automatically selects and displays the disc type. In case of wrong display, retry "Disc Check Memory". Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.

In performing manual operation, the disc type must be set.

Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```

Disc Type
1. Disc Type Auto Check
2. DVD SL 12cm
3. DVD DL 12cm
4. CD 12cm
5. LCD 12cm
6. DVD SL 8cm
7. DVD DL 8cm
8. CD 8cm
9. LCD 8cm
0. Reset SLED TILT
- SA.----- SI.-- EMG.00
DVD SL 12cm Jitter FF
    
```

**Display when DVD SL 12cm disc was selected**

```

Disc Type
1. Disc Type Auto Check
2. DVD SL 12cm
3. DVD DL 12cm
4. CD 12cm
5. LCD 12cm
6. DVD SL 8cm
7. DVD DL 8cm
8. CD 8cm
9. LCD 8cm
0. Reset SLED TILT
- TC.---:---:-- EMG.00
CD 12cm Jitter FF
    
```

**Display when CD 12cm disc was selected**

- [0] Reset SLED TILT : Reset the Sled and Tilt to initial position. (Reset the Sled only to initial position because the Tilt mechanism is not available in this model.)
- [1] Disc Type Check : Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct. If Disc Check Memory menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).
- [2] to [9] : Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if [1] was selected.

**2. Servo Control**

```

Servo Control
1. LD Off R. Sled FWD
2. SP Off L. Sled REV
3. Focus Off
4. TRK. Off
5. Sled Off
6. CLVA Off
7. FCS. Srch Off

0. Reset SLED TILT
- SA.----- SI.-- EMG.00
DVD SL 12cm Jitter FF
    
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.

The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

- [0] Reset SLED TILT : Reset the Sled and Tilt to initial position. (Reset the Sled only to initial position because the Tilt mechanism is not available in this model.)
- [1] LD : Turn ON/OFF the laser.
- [2] SP : Turn ON/OFF the spindle.
- [3] Focus : Search the focus and turn on the focus.
- [4] TRK. : Turn ON/OFF the tracking servo.
- [5] Sled : Turn ON/OFF the sled servo. When PLL is not locked (cannot be locked), the sled servo is not turned ON. The display keeps OFF.)
- [6] CLVA : Turn ON/OFF normal servo of spindle servo.
- [7] FCS. Srch : Apply same voltage as that of focus search to the focus drive to check the focus drive system.
- [⇨] Sled FWD : Move the sled outward. Perform this operation with the tracking servo turned off.
- [⇩] Sled REV : Move the sled inward. Perform this operation with the tracking servo turned off.

### 3. Track/Layer Jump

Track/Layer Jump				
1.	1Tj	FWD	R. Fj	(L1->L0)
2.	1Tj	REV	L. Fj	(L0->L1)
3.	2Tj	FWD	U. Lj	(L1->L0)
4.	2Tj	REV	D. Lj	(L0->L1)
5.	NTj	FWD		
6.	NTj	REV		
7.	500Tj	FWD		
8.	500Tj	REV		
9.	10k/20k	FWD		
0.	10k/20k	REV		
- SA.----- SI.-- EMG.00				
DVD DL		12cm	Jitter	FF

On this screen, track jump, etc. can be performed. Only for the DVD-DL, the focus jump and layer jump are displayed in the right field.

- [1] 1Tj FWD : 1-track jump forward.
- [2] 1Tj REV : 1-track jump reverse.
- [3] 2Tj FWD : 2-track jump forward.
- [4] 2Tj REV : 2-track jump reverse.
- [5] NTj FWD : N-track jump forward.
- [6] NTj REV : N-track jump reverse.
- [7] 500Tj FWD : Fine search forward.
- [8] 500Tj REV : Fine search reverse.
- [9] 10k/20k FWD : Direct search forward.
- [0] 10k/20k REV : Direct search reverse.

- The following commands are valid for DVD-DL disc only -

- [→] (L1 → L0): Focus jump (Trk/Sled Servo OFF) forward.
- [←] (L0 → L1): Focus jump (Trk/Sled Servo OFF) reverse.
- [↑] (L1 → L0): Layer jump (Trk/Sled Servo ON) forward.
- [↓] (L0 → L1): Layer jump (Trk/Sled Servo ON) reverse.

### 4. Manual Adjustment

Manual Adjustment:Up/Down				
1.	TRK.	Offset		
2.	Focus	Gain		
3.	TRK.	Gain		
4.	Focus	Offset		
5.	Focus	Balance		
6.	L.F.	Offset		
7.	Analog	FRSW		
8.	PLL	Dac Gain		
9.	EQ	BOOST		
0.	TRK.	Balance		
- SA.----- SI.-- EMG. 00				
DVD SL		12cm	Jitter	FF

On this screen, each item can be adjusted manually. Select the desired number [1] to [0] from the remote commander, and current setting for the selected item will be displayed, then increase or decrease numeric value with [↑] key or [↓] key. This value is stored in the EEPROM. If CLV has been applied, the jitter is displayed for reference for the adjustment.

- [1] TRK. Offset : Adjusts tracking offset.
- [2] Focus Gain : Adjusts focus gain.
- [3] TRK. Gain : Adjusts track gain.
- [4] Focus Offset : Adjusts focus offset.
- [5] Focus Balance : Adjusts focus balance.
- [6] L.F. Offset : Adjusts loop filter offset.
- [7] Analog FRSW : Sets select switch of analog feedback circuit.
- [8] PLL Dac Gain : Adjusts D/A converter gain of PLL.
- [9] EQ BOOST : Adjusts boost amount of equalizer.
- [0] TRK. Balance : Adjusts tracking balance.

5. Auto Adjustment

```

Auto Adjustment
1. Auto TRK. Offset
2. Auto FCS Balance
3. Auto Focus Offset
4. Auto Focus Gain
5. Auto TRK. Gain
6. Auto EQ.
7. Auto L.F. Offset
8. Auto Group Delay
9. Auto TRK. Balance

_ SA.----- SI.-- EMG.00
DVD SL      12cm  Jitter FF
    
```

On this screen, each item can be adjusted automatically. Select the desired number [1] to [8] from the remote commander, and selected item is adjusted automatically.

- [1] Auto TRK. Offset : Adjusts tracking offset.
- [2] Auto FCS Balance : Adjusts focus balance.
- [3] Auto Focus Offset : Adjusts focus offset.
- [4] Auto Focus Gain : Adjusts focus gain.
- [5] Auto TRK. Gain : Adjusts track gain.
- [6] Auto EQ : Adjusts EQ.
- [7] Auto L.F. Offset : Adjusts loop filter offset.
- [8] Auto Group Delay : Adjusts amount of group delay.
- [9] Auto TRK. Balance : Adjusts tracking balance.

6. Memory Check

The display image is shown below and three screens in total can be selected.

```

EEPROM Data 1      -- DL --
                   CD LCD SL L0 L1
Focus Gain        xx xx xx xx xx
TRK. Gain         xx xx xx xx xx
FCS Balance       xx xx xx xx xx
Focus Bias        xx xx xx xx xx
TRV. Offset       xx xx xx xx xx
L.F. Offset       xx xx xx xx xx
EQ. Boost         xx xx xx xx xx

_ UP      : Last Data
DOWN     : Next Data
CLEAR    : Default Set  page.1/3
    
```

```

EEPROM Data 2      -- DL --
                   CD LCD SL L0 L1
RF Jitter         xx -- xx xx xx
RF Level          xx -- xx -- --
FE Level          xx -- xx -- --
FE Balance        xx -- xx -- --
TRV.Level         xx -- xx -- --
TE Gain           xx xx -- -- --
PI Level          xx -- xx xx --

_ UP      : Prev Data
DOWN     : Next Data
CLEAR    : Default Set  page.2/3
    
```

```

EEPROM Data 3      -- DL --
                   CD LCD SL L0 L1
Analog FRSW       xx xx xx xx xx
PLL Dac Gain      xx xx xx xx xx
Mirror Time       xx xx xx xx xx
TRK. Balance      xx xx xx xx xx

THR A&L : xx xx xx/xx xx xx

_ UP      : Prev Data
DOWN     : First Data
CLEAR    : Default Set  page.3/3
    
```

On this screen, current servo adjusted data stored in the EEPROM are displayed. The adjusted data are initialized by pressing the [CLEAR] key, but be careful that they are not recoverable after initialization.

Before clearing the adjusted data, make a note of the set data. This screen will also appear if [0] All is selected in the Drive Auto Adjustment. In this case, default setting cannot be made. "THR A&L" data on the third page cannot be changed if default setting is once made.



### 7. Changer Manual Move

On this test mode screen, selecting **[7]** enables the machine operation such as disc loading. The following screen appears.

Display when **[7]** is selected in the Drive Manual Operation

```

## Changer Manual Move ##
ENTER : Mecha Initial
PLAY  : Loading In
STOP  : Loading Out
OP/CL : Door Open/Close
UP    : Poper Up
DOWN  : Poper Down
jogFOR : Table R StepTurn
jogPRV : Table L StepTurn
DISP  : Sensor Status

_
RETURN : Exit
    
```

- [ENTER]** : Performs initialization of mechanism.  
Mecha Initial Because the mechanical initialization is performed when the machine enters the Drive Manual Operation mode, use this item when an error such as adjustment error occurs.
  
- [PLAY]** : Loads the disc from the chucking position of the T. table toward inside the MD.  
Loading In When the Disc Load is selected, a series of operation starting from Loading – Chucking is performed.
  
- [STOP]** : Moves the disc from inside the MD to the T. table.  
Loading Out When the Disc Unload is selected, a series of operation starting from Unloading – Chucking is performed.
  
- [OP/CL]** : Opens and closes the door.  
Door Open/Close
  
- [UP]** : Pops up the lever.  
Popper Up
  
- [DOWN]** : Pops down the lever.  
Popper Down
  
- [jog FOR]** : Moves the T. table to the right in units of the slit.  
Table R step Turn The T. table number is incremented in the direction of positive (+) number.
  
- [jog PRV]** : Moves the T. table to the left in units of the slit.  
Table L step Turn The T. table number is decremented in the direction of negative (-) number.
  
- [DISP]** : When this item is selected, the 400CHG Sensor Status  
Sensor Status Sensor Check appears on the screen.
  
- [RETURN]** : Returns to the Operation Menu.  
Exit

Display when the Sensor Status is selected in the Changer Manual Move.

```

## 400CHG Sensor Check ##
Table 1/2/3/4 : X/X/X/X
Table lock    : X
Load in      : X
Load out     : X
Door open    : X
Door close   : X
Popper up    : X
Popper down  : X
Disc Sensor   : XXX

_
RETURN : Exit
    
```

- Table 1/2/3/4 : Indicates table sensor 1/2/3/4 status.  
( 1 : High , 2 : Low )
  
- Table lock  
Load in/out  
Door open/close  
Popper up/down } : Indicates each switch status.  
( 1 : On , 2 : Off )
  
- Disc Sensor : Indicates sensitivity of the disc sensor.  
The value is ranging from 0 to 3FF.

## 8. Changer Mecha Check

On this test mode screen, selecting **[8]** enables the table sensor and the disc sensor adjustment. The following screen appears.

Display when **[8]** is selected in the Drive Manual Operation

```

## Changer Mecha Check ##
ENTER : Mecha Initial
OP/CL : Disc Load/UnLoad
jogFOR : Table R StepTurn
jogPRV : Table L StepTurn

PLAY : Table Rotate
PAUSE : Mecha Adjust
DISP : Sensor Status

-
RETURN : Exit
    
```

All operations are the same as those of the Changer Manual Move except **[OP/CL]**, **[PLAY]** and **[PAUSE]**.

**[OP/CL]** : Loads the disc from the chucking position of the T.table toward inside the MD or from inside the MD to the T.table. When the Disc Load is selected a series of operation starting from Door Close – T.table Rotate – Chucking is performed. When the Disc UnLoad is selected a series of operation starting from Unchucking – T.table Rotate – Door Open is performed.

**[PLAY]** : Enters the Disc Sensor Adjustment Mode. (Refer to the “5. Mechanical Adjustments” (page 45)) The 400CHG Table Rotate appears on the screen.

**[PAUSE]** : Enters the Table Sensor Adjustment Mode. (Refer to the “5. Mechanical Adjustments” (page 45)) The 400CHG Mecha Adjust appears on the screen.

Display when **[PLAY]** is selected in the Changer Mecha Check.

```

## 400CHG Table Rotate ##
RIGHT : Turn Right
LEFT : Turn Left

Table 1/2/3/4 : X/X/X/X
Disc Sensor : XXX

RETURN : Exit
    
```

**[RIGHT]** : Rotates T.table anti clock wise. Turn Right

**[LEFT]** : Rotates T.table clock wise. Turn Left

Table 1/2/3/4 — : These items are the same as those of the Disc Sensor — 400CHG Sensor Check.

Display when **[PAUSE]** is selected in the Changer Mecha Check.

```

## 400CHG Mecha Adjust ##
UP : Load in
DOWN : Load out
RIGHT : Pop Up
LEFT : Pop Down

Table 1/2/3/4 : X/X/X/X

RETURN : Exit
    
```

**[UP]** : Loads the disc from the chucking position of the T.table toward inside the MD during pressing **[UP]**. Load in

**[DOWN]** : Loads the disc from inside the MD to the T.table during pressing **[DOWN]**. Load out

**[RIGHT]** : Pops up the lever. Pop Up

**[LEFT]** : Pops down the lever. Pop Down

Table 1/2/3/4 : This item is the same as that of the 400CHG Sensor Check.

#### 4-6. MECHA AGING

The mechanism aging is not supported.

#### 4-7. EMERGENCY HISTORY

### EMG. History ###							
Laser Hours CD				xxh xxm			
DVD				xxh xxm			
1.	00	00	00	00	00	00	00
	00	00	00	00	00	00	00
2.	00	00	00	00	00	00	00
	00	00	00	00	00	00	00
-							
Select :		1-9		Scroll :		UP/DOWN	
(1: Last EMG.)		Exit : RETURN					

On the Test Mode Menu screen, selecting **[4]** displays the information such as servo emergency history. The history information from last "1" up to "10" can be scrolled with **[↑]** key or **[↓]** key. Also, specific information can be displayed by directly entering that number with the ten-key pad from **[1]** to **[9]**.

The upper two lines display the laser ON total hours. Data below minutes are omitted.

##### Clearing History Information

- ⊙ Clearing laser hours  
Press **[DISPLAY]** and **[CLEAR]** keys in this order.  
Both CD and DVD data are cleared.
- ⊙ Clearing emergency history  
Press **[TOP MENU]** and **[CLEAR]** keys in this order.
- ⊙ Initializing setup data  
Press **[MENU]** and **[CLEAR]** keys in this order.  
The data have been initialized when "Set Up Initialized" message is displayed.  
The EMG. History display screen will be restored soon.

#### 4-8. VERSION INFORMATION

### Version Information ###	
IF con.	Ver: x.xxx(xxxx)
Group	xx
SYScon.	Ver: x.xxx(xxxx)
Model	xx
Region	0x
Servo DSP Ver:	x.xxx
AVD ucode Ver:	xxxxxxxx
Exit : RETURN	

The ROM version, region code, OPT type, etc. are displayed if **[5]** is selected in the Test Mode Menu. The parenthesized hexadecimal number in the version number field indicates the checksum value of the ROM.

##### \* Note after Downloading

After downloading ROM data, sometimes it happens that checksum is not the same as that of ROM data that has been downloaded. In such a case, go back to the menu screen and select "0. Syscon Diagnosis", then select "1. All" in "2. Version". If the result of this operation does not give an agreement, it must be either Download error or ROM error.

#### 4-9. VIDEO LEVEL ADJUSTMENT

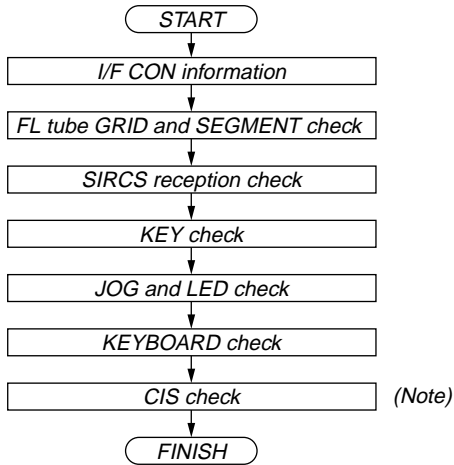
On the Test Mode Menu screen, selecting **[6]** displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing any key.

## 4-10. IF CON SELF DIAGNOSTIC FUNCTION

### 1. PANEL-L BOARD (IF CON) TEST MODE

The PANEL-L board test mode is the IF CON self diagnostic mode. The IF CON can diagnose the functions of the PANEL-L board that the IF CON controls. Normally, the IF CON makes a serial communication with the SYSTEM CONTROL and operates following the commands from the SYSTEM CONTROL, but in the Test mode, the IF CON operates independently from the SYSTEM CONTROL.

Execute the Self Check Mode along the following flow.



Note: As for the CIS check, conduct the test by another method.

### 2. OPERATION OF SELF CHECK MODE

The Self Check mode is the function to conduct the basic test to the FL display and panel section.

#### 2-1. How to enter the Self Check mode

The Self Check mode starts if either of the following conditions is satisfied.

Condition 1:

With the SELF\_CHECK (pin ⑨) of the IF CON (IC1003) on the PANEL-L board kept "low", turn the power on. (Short the CL1001.)

Condition 2:

While pressing the key on the set when the set is in standby state, press the (RETURN) → (DISPLAY) key on the remote commander and the mode transits to the Self Check mode.

When the Self Check mode started, "TEST START" is displayed on the FL tube for 2 seconds and then the Self Check proceeds to the IF CON information display.

#### 2-2. How to release the Self Check mode

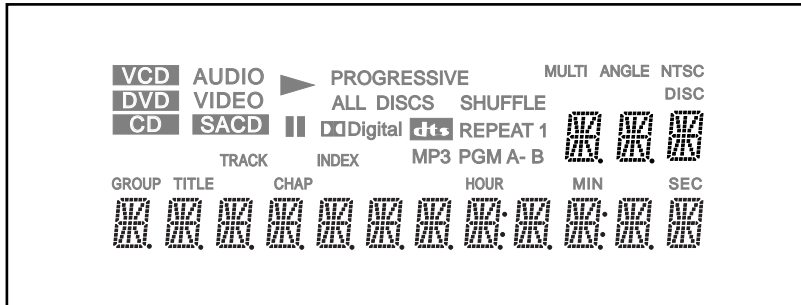
To release the Self Check mode, press the key on the set or remote commander during the Self Check mode.

**2-3. IF CON information display**

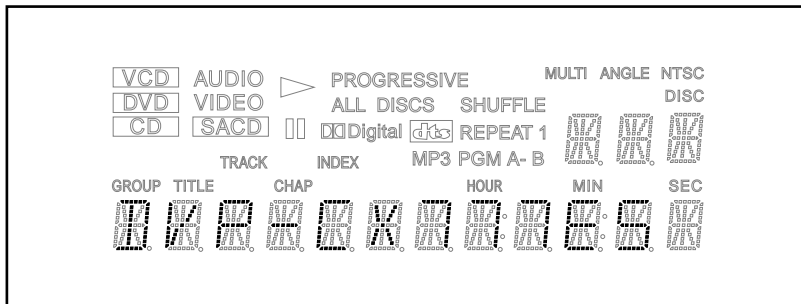
Upon transition to the IF CON information display, the display of

(1) to (4) shown below is repeated.

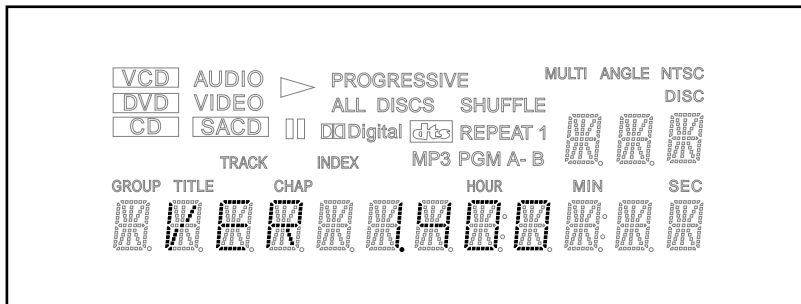
(1) FLD all ON (for 2 seconds)



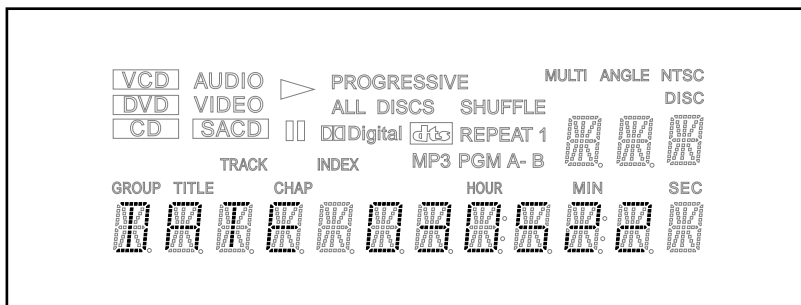
(2) MODEL display (for 2 seconds)



(3) Version display (for 2 seconds)



(4) ROM creation date display (for 2 seconds)



If the JOG dial on the front panel of the set is pressed, the test proceeds to the following FL tube GRID and SEGMENT check.

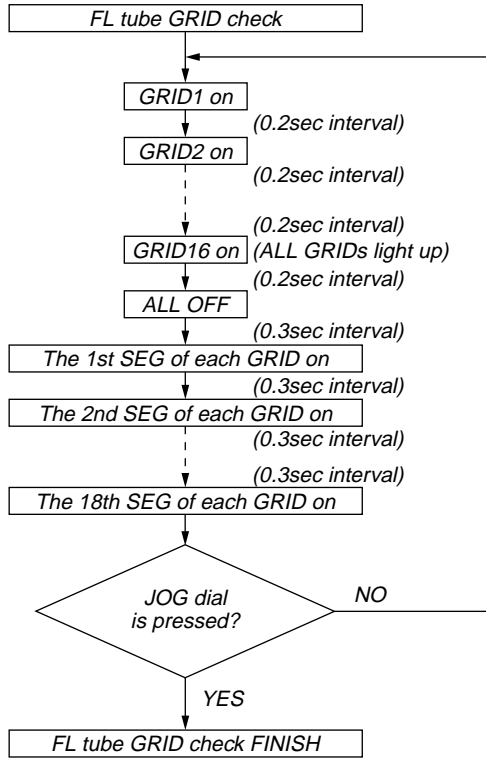
**2-4. FL tube GRID and SEGMENT check**

First, a grid lights up one after another, and when grid 16 lights up, all grids light up.

Next, all grids go off, and segments are displayed while changing the patterns.

A way of this display is repeated.

(The interval of grid lighting is 0.2 second, and that of segment lighting is 0.3 second.)

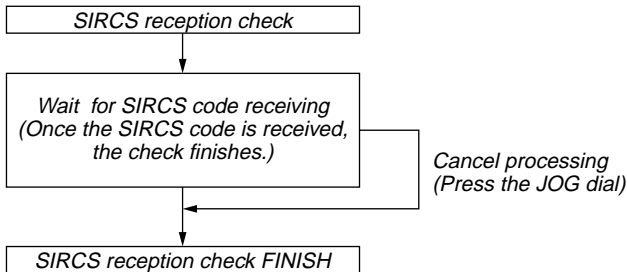


If the JOG dial on the front panel of the set is pressed, the test proceeds to the following SIRCS reception check.

**2-5. SIRCS reception check**

Upon start of the SIRCS reception check, "SIRCS CHECK" is displayed on the FL tube.

Once the SIRCS key code is received, the test proceeds to the following KEY check.



If the JOG dial on the front panel of the set is pressed as a cancel processing of the SIRCS reception check, the test proceeds to the following KEY check.

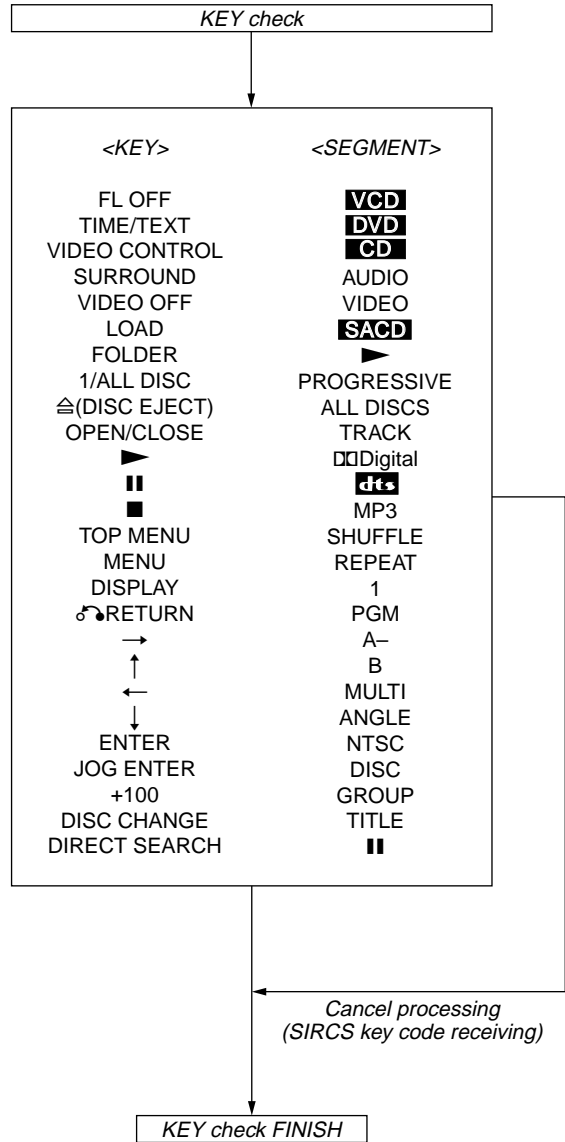
**2-6. KEY check**

After the SIRCS reception check finished, the KEY check is executed.

Upon start of the KEY check, "KEY CHECK" is displayed on the FL tube.

25 keys are checked as described below.

Each time a key (except [I/O] key) is pressed, the specified segment lights up, and at one second after all keys were pressed, all of FL tube go off and the Key check finishes.



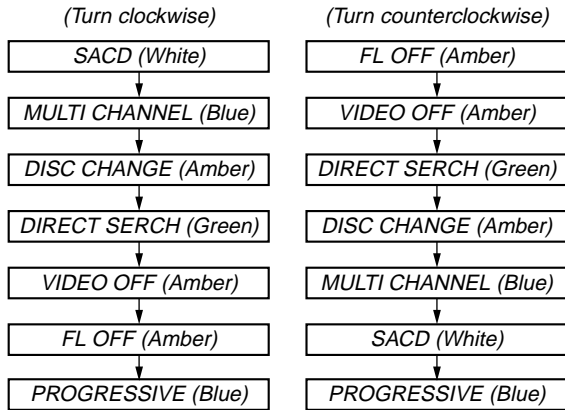
If the SIRCS key code is received as a cancel processing of the KEY check, the test proceeds to the following JOG and LED check.

**2-7. JOG and LED check**

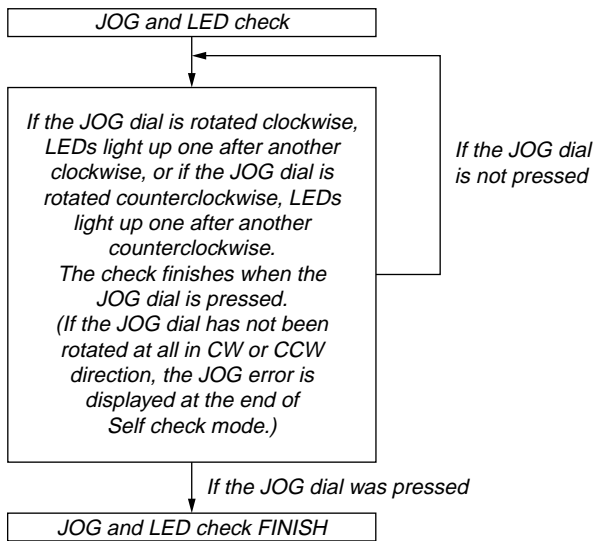
After the Key check finished, the JOG and LED check is executed as follows.

Upon start of the JOG and LED check, "JOG AND LED" is displayed on the FL tube.

There are seven LEDs. The order in which the LEDs light up when the JOG dial is rotated is as described below.



If the JOG dial is pressed during the JOG and LED check, the JOG and LED check finishes and the test proceeds to the following KEYBOARD check.

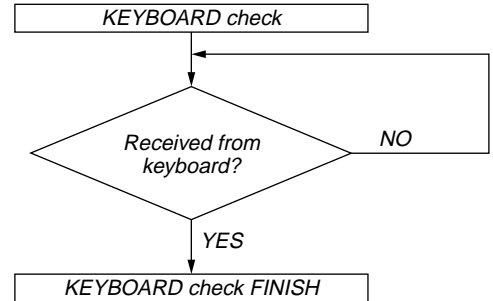


**2-8. KEYBOARD check**

After the JOG and LED check finished, the KEYBOARD check is executed.

Once a signal is received from the keyboard, the KEYBOARD check finishes.

The "KEYBOARD" is displayed on the FL tube until a signal is received from the keyboard.



If the JOG dial on the front panel of the set is pressed during the KEYBOARD check, the KEYBOARD check finishes and the test proceeds to the following check.

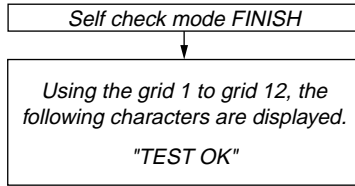
**2-9. CIS check**

The CIS check is conducted by another method, and therefore it is not executed in the IF CON Self Check mode.

## 2-10. Operation at completion of Self Check Mode

After the CIS check finished, characters indicating the completion of Self Check mode are displayed.

At this time, even if a signal from a key on the set, remote commander, or keyboard is received, nothing changes.



At the SIRCS reception check, KEY check, JOG and LED check, and KEYBOARD check, if you proceed to the next check without completing current check, the check name that has not completed yet is displayed instead of “TEST OK”, as follows.

If SIRCS reception check has not completed (If JOG dial is pressed during SIRCS reception check)	“SIRCS NG”
If KEY check has not completed (If SIRCS key code is received during KEY check)	“KEY NG”
If JOG and LED check has not completed (If JOG dial is pressed without rotating JOG dial even once during JOG and LED check)	“JOG LED NG”
If KEYBOARD check has not completed (If JOG dial is pressed during a signal reception from keyboard)	“KEYBOARD NG”

Also, if two or more checks have not completed yet

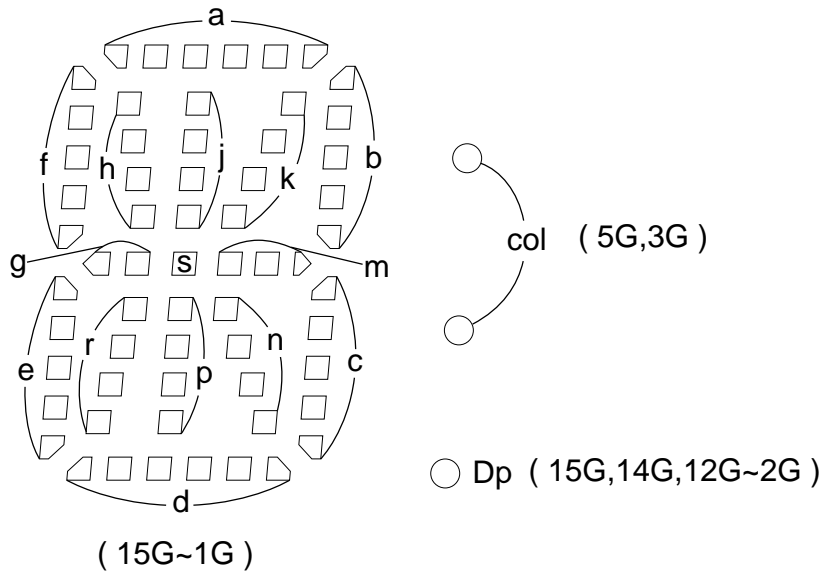
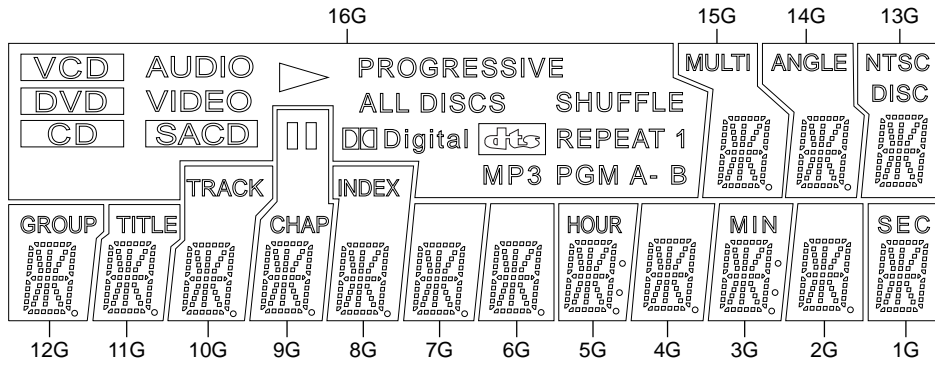
All four checks are erroneous	“S KY J KB NG”
Three checks are erroneous	“S J KB NG” “S KY KB NG”
Two checks are erroneous	“ KY KB NG” “ KY J NG”

Each error is displayed at the fixed position of the FL tube (not left aligned), and the items that have completed are blank.

**Note:** The alphabets mentioned above denote the following checks.

- S : SIRCS reception check
- KY : KEY check
- J : JOG and LED check
- KB : KEYBOARD check
- NG : There are error items.





ANODE CONNECTION

	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	CD	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
P2	SACD	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
P3	DVD	j	j	j	j	j	j	j	j	j	j	j	j	j	j	j
P4	VCD	k	k	k	k	k	k	k	k	k	k	k	k	k	k	k
P5	VIDEO	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
P6	AUDIO	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
P7	Digital	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
P8	MP3	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
P9	PGM	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
P10	A-	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e
P11	B	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
P12	PROGRESSIVE	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
P13	Digital	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
P14	ALL DISCS	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
P15	SHUFFLE	-	-	-	-	-	-	-	-	-	-	col	-	col	-	-
P16	REPEAT	Dp	Dp	DISC	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	-
P17	1	MULTI	ANGLE	NTSC	GROUP	TITLE	TRACK	CHAP	INDEX	-	-	HOUR	-	MIN	-	SEC

## 4-11. TROUBLESHOOTING

### 4-11-1. Cannot Enter Test Mode

You cannot enter the Test mode when either button has been pressed by any reason with the board assembled in the front panel. In this state, the power does not turn on even under normal condition (the unit is kept in standby state), and also no button is active and the remote commander is not accepted. To check this state, you can enter forcibly the IF CON self-diagnosis mode by turning on the AC power with the SELF\_CHECK (pin ⑨) of the IF CON (IC1003) on the PANEL-L board kept "low". The IF CON (IC1003) checks the SELF CHECK port only after the power on reset (only at AC supply, not in standby state).

### 4-11-2. Faults in Test Mode (MB board)

#### 1. The test mode menu is not displayed.

##### 1-1. Board visual check

Check that the ICs of SYSCON (IC104), ROM (IC106), AVD (IC403), ARP & SERVO (IC301) are working correctly.

Check that outside appearance of the ICs is normal.

Check that IC pins are not short-circuited.

Check that there is no soldering error.

Check that outside appearance of the capacitors and resistors is normal.

##### 1-2. Power supply voltage check

Check the power voltage of the power connector (CN101).

Check the power voltage of SYSCON (IC104).

Check the power voltage of ROM (IC106).

Check the power voltage of AVD (IC403).

Check the power voltage of ARP & SERVO (IC301).

If the power voltage has any abnormality →

Check that the power supply lines are not shorted.

Check that there is no soldering error.

If any abnormality cannot be found still →

Check that each IC is working normally.

### 1-3. Clock signal check

Measure the clock signal frequency at CPUCK (CL102) of SYSCON (IC104) with an oscilloscope.

If the 8.25 MHz signal appears. → Check the machine according to section 1-3-1

If the 33 MHz signal appears. → Check the machine according to section 1-3-2.

If other frequencies are output.

R106 and R107 have defective soldering, X101 crystal oscillator is defective.

If the measurement point is fixed to either "H" or "L". →

Observe XRESET (pin-⑦) of SYSCON (IC104) with an oscilloscope.

If the measurement point is "L", check the following items.

If the IC has defective soldering, if the IC is short-circuited.

If the measurement point is "H",

→ Component X101 or SYSCON (IC104) is defective.

#### 1-3-1. When the 8.25 MHz signal appears at CPUCK

- Check the XRD, XWRH and CSOX signal.

Observe XRD (pin-⑩), XWRH (pin-⑪), and XROMCS (pin-⑨) of SYSCON (IC104) with an oscilloscope.

If these pins are fixed to either "L" (0V) or "H" (3.3V), or if these pins stay in the center voltage, check the followings.

Check if the signal line does not have the defective soldering.

Check if the signal line is short-circuited with other signal lines.

If you cannot find any problem → SYSCON (IC104) is defective.

- HA [0 to 21] signal and HD [0 to 15] signal check

Observe HA [0 to 21] (pins-⑩ to ⑲, ⑪ to ⑲, ⑲, ① to ⑤) of SYSCON (IC104) and HD [0 to 15] (pins-⑧ to ⑲) with an oscilloscope.

If these pins are fixed to either "L" (0V) or "H" (3.3V), or if the HA pin stays in the center voltage, check the followings. (HD stays in the center voltage when it is normal.)

→ Check if the signal line does not have the defective soldering, or is short-circuited with other signal line or SYSCON (IC104) is defective.

- Reset signal check

Check if XRESET (pin-⑦) of SYSCON (IC104) normal or not.

The signal starts up at the same time as Vcc → Defective soldering.

If the trouble does not apply to any of the above-described phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

**1-3-2. When the 33 MHz signal appears at CPUCK**• **WAIT signal check**

Observe XWAIT (pin-⑥7) of SYSCON (IC104) with an oscilloscope.

If it is fixed to “L” (0V). → Observe XAVCS0, XAVCS1, XARPCS and XSDSPCS (pins-⑥0 to ⑥3).

If XAVCS0 or XAVCS1 is “L”. → AVD (IC403) has defective soldering or AVD is defective.

If XARPCS or XSDSPCS is “L”. → ARP & SERVO (IC301) has defective soldering or ARP & SERVO is defective.

If any one of the above is not “L”. → XWAIT, XAVCS0, XAVCS1, XARPCS and XSDSPCS is short-circuited or has the defective soldering or AVD (IC403) is defective or ARP & SERVO (IC301) is defective.

Center voltage → The XWAIT line has defective soldering or is short-circuited or AVD (IC403) is defective or ARP & SERVO (IC301) is defective or SYSCON (IC104) is defective.

• **XROMCS, XRAMCS, XAVCS0, XAVCS1, XARPCS and XSDSPCS signal check**

Observe XROMCS, XRAMCS, XAVCS0, XAVCS1, XARPCS and XSDSPCS (pins-⑤8 to ⑤3) of SYSCON (IC104) with an oscilloscope.

If they are fixed to “L” (0V) or if to center voltage → Check that the ICs do not have the defective soldering or is shortcircuited with the other signal lines or SYSCON (IC104) is defective.

XROMCS: ROM (IC106)

XAVCS0, XAVCS1: AVD (IC403)

XARPCS, XSDSPCS: ARP & SERVO (IC301)

If the trouble symptom does not apply to any of the above phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

**2. Test mode menu is displayed but the machine stops when menu is selected****2-1. AVD (IC403) check**

Observe SDCLKO (pin-⑫0) of AVD (IC403) with an oscilloscope.

95 MHz → No problem

27 MHz → Observe the XRST, HA, HD, XRD, XWRH and CS signal waveform at the respective pins of AVDEC, AVD (IC403) is defective.

If the signal is other than the above frequencies → AVD (IC403) 27MHz signal line (CLKI (pin-⑫0), SCLKIN (pin-⑫0)) is short-circuited, IC mount is defective, AVD (IC403) is defective, PLL (IC103) is defective.

**2-2. INT signal check**

Observe XAVDECINT, XARPINT and XSDSPINT (pins-⑫0 to ⑫3) of SYSCON (IC104) with an oscilloscope.

If they are fixed to “L” (0V) or fixed to the center voltage → Check that the ICs do not have the defective soldering, or are short-circuited, SYSCON (IC104) is defective, or the following ICs are not defective.

XAVDECINT: AVD (IC403)

XARPINT, XSDSPINT: ARP & SERVO (IC301)

**2-3. If any abnormality cannot be confirmed by the above-described checks, check the CS signal that is currently output.**

The CS signal other than XROMCS is being output. → IC mount is defective or the IC is defective depending on the moving CS signal.

XAVCS0, XAVCS1: AVD (IC403)

XARPCS, XSDSPCS: ARP & SERVO (IC301)

If the trouble is not applicable to any of the above phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

**3. If the message “SDSP No Ack” appears after the menu is displayed.****3-1. ARP & SERVO (IC301) clock signal check**

Check frequency of CLKIN (pin-⑫0)

33 MHz → Normal

Frequency other than 33 MHz → CLKIN is short-circuited or defective soldering or PLL (IC103) is defective or ARP & SERVO (IC301) is defective

**3-2. ARP & SERVO (IC301) PLL oscillation check**

Observe PLCKO (pin-⑫7) of ARP & SERVO (IC301) with an oscilloscope.

If the pin is fixed to either “L” (0V) or “H” (3.3V).

If XRST if fixed to “L”. XRST has the defective soldering. In all other cases. ARP & SERVO (IC301) is defective

If it is oscillating.

HA [0 to 7] are HD [8 to 15] are short-circuited, check XSDPIT and XSDPCS or ARP & SERVO (IC301) is defective.

**4. If trouble occurs at the specific item of the “Diag All Check”.**

IC mount of the NG item is defective or IC is defective.

**5. Picture and audio are not output.**

Check connection of CN501 and CN601

Check for the defective connection of flat cable and check of damage of the flat cable.

**6. Picture is output but audio is not output.**

Check the audio data output (at pins-⑫4, ⑫9, and ⑫9) of AVD (IC403)

The audio data is not output. → AVD (IC403) or audio DAC (IC502) mount is defective or power supply is defective or AVD (IC403) or audio DAC (IC502) is defective.

PLL (IC103) 512fs output check

If the frequency or waveform has abnormality. → The signal line has defective soldering or the signal line is short-circuited with other signal lines or PLL (IC103) is defective.

**7. Audio is output but picture is not output.**

Observe pins-⑫7, ⑫8, ⑫9, ⑫2, ⑫3 and ⑫4 of VDAC (IC604) with an oscilloscope.

If the analog signal is not output. → The signal line has the defective soldering or is short-circuited or parts are defective or VDAC (IC604) is defective.

**4-11-3. Drive Auto Adjustment stops due to error.**

The ARP & SERVO (IC301) analog circuit of MB board is defective or RF-Amp (IC201) or M-Driver (IC202) peripheral circuit is defective or optical pickup block is defective or flat cable connection is defective

## 4-11-4. The product itself is defective.

- If MB does not have any problem,  
The board other than MB board is defective or connection is defective or optical pickup block is defective or mechanism deck is defective

### 1. FL display does not light when the POWER button is pressed.

#### 1-1. Check the EVER -11V (pin-②), EVER +5V (pin-⑬), EVER +3.3V (pin-⑪), SW +5V (pin-⑫) voltage at CN201 of the power supply block

If voltage is abnormal. → The power supply block is defective.

#### 1-2. Check if the fuse on the power block has blown or not.

If the fuse has blown → Replace the fuse.

#### 1-3. Check the P-CONT (pin-①) at CN205 of the AV board when the POWER button is pressed.

If it remains at “L”,

→ The signal line has the defective soldering or it is short-circuited with other signal lines or capacitor or resistor is defective or IFCON is defective or connection between the power supply block and the AV board is defective, or connector installation is defective, or the power supply block is defective.

#### 1-4. Check if the button is kept depressed in the IFCON self mode.

If the button is kept depressed. → The front panel is defective, or PANEL-L board is defective.

#### 1-5. Check PON\_CHECK (pin-⑨) of IFCON (IC1003) on the PANEL-L board.

If it is 0.5 V or more. → The power supply is defective, or PANEL-L board is defective.

#### 1-6. Check FL1001 (pin-① & pin-⑦) on the PANEL-L board.

If no voltage supply → DC/DC converter (T1081) defective, or the PANEL-L board is defective.

### 2. FL display light once and becomes not light when POWER button is pressed.

#### 2-1. Check CN201 voltage of the power supply block when the FL display light on.

If voltage is abnormal. → The power supply block is defective, or the PANEL-L board is defective, or MB board is defective.

#### 2-2. Check XFRRST (pin-②) at CN102 on the MB board.

If it is fixed to “L”. → The signal line has defective soldering, or is short-circuited with other signal lines, or parts are defective.

#### 2-3. Check XIFBUSY (pin-③), XIFCS (pin-④), SIO (pin-⑤), SO0 (pin-⑥) and SC0 (pin-⑦) at CN102

If they are fixed to “H” or “L”.

→ The signal line has defective soldering, or is short-circuited with other signal line, or parts are defective, or SYSCON (IC104) is defective

If they change between “L/H”.

Connector installation is defective, or the PANEL-L board is defective, or SYSCON (IC104) is defective.

If they stay in the center voltage.

Poor connection of flexible wiring board such as it is inserted in an angle diagonally, or defective soldering, or is short-circuited with other signal line.

#### 2-4. Check PON\_CHECK (pin-⑨) of IFCON (IC1003) on the PANEL-L board.

If rise-up time from 0.5 V to 1.5 V or more takes longer time, or it does not exceed 1.5 V or more. → The PANEL-L board is defective.

### 3. Both picture and audio are not output.

Connection between the power supply block and the AV board is defective, or connection between the AV board and the MB board is defective, or connector installation is defective, or AV board is defective.

### 4. Picture is not normal. (Block noise or others appear.)

The MB board AVD (IC403) or SDRAM (IC404, IC405) is defective, or ARP & SERVO (IC301) is defective.

# SECTION 5 MECHANICAL ADJUSTMENTS

## POP UP MECHANISM ADJUSTMENT

1. Connect the AC plug of the set to AC consent, then the set enters standby mode.
2. Press the **TOP MENU**, **CLEAR** and **I/O** key in turn, then the set enters the diag mode.
3. Select 2. Drive Manual Operation by pressing the **2** key.
4. Select 8. Changer Mecha check by pressing the **8** key.
5. Press the **ENTER** key, then the CDM initializes.
6. Press the **PAUSE** key, then the T.table rotates to the mecha adjustment position, the door opens and the T. table locks. (Fig. 1)
7. Keep pressing the **RIGHT** key to raise the pop up part.
8. Loosen the adjusting screw, move the screwdriver left and right until the lever (POP UP) does not touch the slit wall, and secure the screw. (Fig. 2)

The following keys have special functions in this mode.

- UP** key : Loading mechanism IN operation
- DOWN** key : Loading mechanism OUT operation
- RIGHT** key : Pop up part UP operation
- LEFT** key : Pop up part DOWN operation

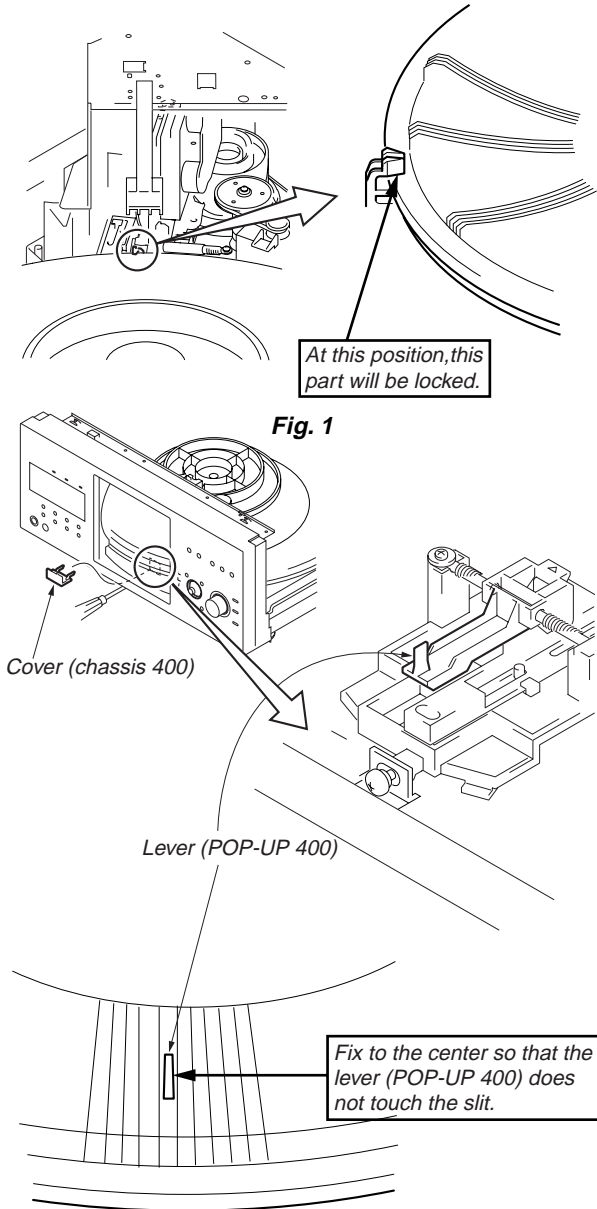


Fig. 2

## TABLE SENSOR ADJUSTMENT

After the Pop Up Mechanism Adjustment, perform this adjustment continuously.

1. Loosen the fixing screw. Moving the holder little by little, stop it at a boundary point where the PROGRESSIVE LED (blue) goes off and the SACD LED (white) lights up. If the holder is moved in reverse direction, stop the holder at a point where the SACD LED goes off and the PROGRESSIVE LED lights up.
2. Moving the T. table right and left with a hand after the screw is fixed, the table will move by the play of the T. table. If the LEDs light up alternately, the adjustment will be performed correctly. (Fig. 3)

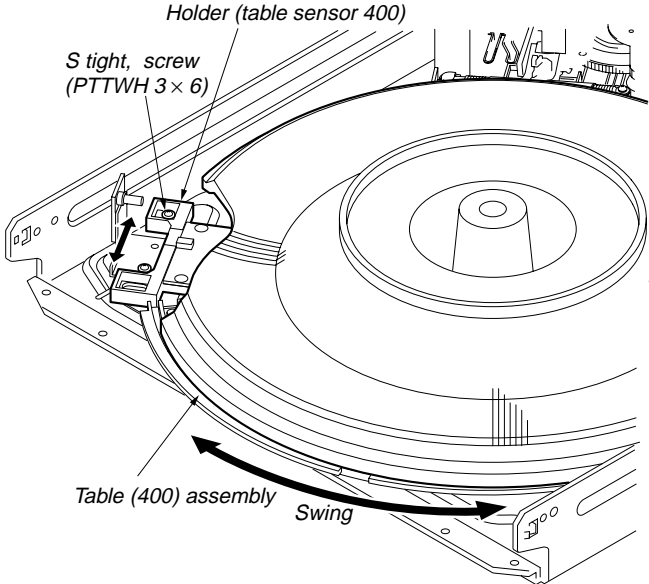


Fig. 3

## SECTION 6 ELECTRICAL ADJUSTMENTS

**In making adjustment, refer to 5-5. Adjustment Related Parts Arrangement.**

This section describes procedures and instructions necessary for adjusting electrical circuits in this unit.

### Instruments required:

- 1) Color monitor TV
- 2) Oscilloscope 1 or 2 phenomena, band width over 100 MHz, with delay mode
- 3) Frequency counter (over 8 digits)
- 4) Digital voltmeter
- 5) Standard commander (RM-DX700)
- 6) CD reference disc  
YEDS-18 (3-702-101-01)  
PATD-012 (4-225-203-01)
- 7) DVD reference disc  
HLX-501 (J-6090-071-A) (dual layer) (NTSC)  
HLX-503 (J-6090-069-A) (single layer) (NTSC)  
HLX-504 (J-6090-088-A) (single layer) (NTSC)  
HLX-505 (J-6090-089-A) (dual layer) (NTSC)
- 8) SACD reference disc  
HLXA-509 (J-6090-090-A)
- 9) Extension Cable (J-6090-107-A)

### 6-1. AUTO SERVO ADJUSTMENT

After parts related to the servo circuit (RF amplifier (IC201), DSP (IC301), motor driver (IC202), EEPROM (IC101) so on) are replaced, re-adjusting the servo circuit is necessary. Select "ALL" at "DRIVE AUTO ADJUSTMENT" (Refer to page 27 in TEST MODE) and adjust DVD-SL (single layer), CD and DVD-DL (dual layer).

## 6-2. POWER SUPPLY CHECK

### 1. POWER Board

Mode	E-E
Instrument	Digital voltmeter
EVER +3.3 V Check	
Test point	CN201 pin ⑪
Specification	$3.5 \pm 0.2$ Vdc
SW +3.3 V Check	
Test point	CN201 pin ⑧
Specification	$3.5 \pm 0.2$ Vdc
SW +5 V Check	
Test point	CN201 pin ⑫
Specification	$5.0 \pm 0.3$ Vdc
SW +11 V Check	
Test point	CN201 pin ⑥, ⑦
Specification	$11.0 \pm 1.0$ Vdc
EVER +5 V Check	
Test point	CN201 pin ⑬
Specification	$5.0 \pm 0.3$ Vdc
EVER -11 V Check	
Test point	CN201 pin ②
Specification	$-11.0 \pm 1.0$ Vdc

### Checking method:

- 1) Confirm that each voltage satisfies the specification.

### Note

Because the heatsink installed on the power supply board is a part of the primary side, never touch it to avoid electrical shock.

### 6-3. ADJUSTMENT OF VIDEO SYSTEM

#### 1. Video Level Adjustment (MB Board)

**<Purpose>**

This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	LINE OUT (VIDEO) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV601
Specification	$1.0^{+0.04}_{-0.02}$ Vp-p

**Adjusting method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Adjust the RV601 to attain  $1.0^{+0.04}_{-0.02}$  Vp-p.

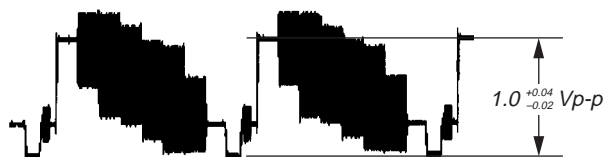


Fig. 6-1

#### 2. Progressive Video Output Level Adjustment (MB Board)

**<Purpose>**

This adjusts progressive video output level. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV602
Specification	$1.0^{+0.04}_{-0.02}$ Vp-p

**Adjusting method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Adjust the RV602 to attain  $1.0^{+0.04}_{-0.02}$  Vp-p.



Fig. 6-2

#### 3. Checking S Video Output S-Y

**<Purpose>**

Check S-terminal video output. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with a S-terminal cable.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	$1.0 \pm 0.05$ Vp-p

**Checking method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Confirm that the S-Y level is  $1.0 \pm 0.05$  Vp-p.



Fig. 6-3

#### 4. Checking S Video Output S-C

**<Purpose>**

This checks whether the S-C satisfies the NTSC standard. If it is not correct, the colors will be too dark or light.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-C) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	$A = 286 \pm 30$ mVp-p (NTSC)

**Checking method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Confirm that the S-C burst is “A”.

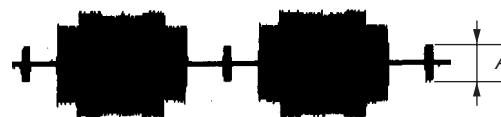


Fig. 6-4

**5. Checking Component Video Output Y**

**<Purpose>**

This checks component video output Y. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	$1.0 \pm 0.05$ Vp-p

**Checking method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Confirm that the Y level is  $1.0 \pm 0.05$  Vp-p.



Fig. 6-5

**6. Checking Component Video Output B-Y**

**<Purpose>**

This checks component video output B-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P <sub>B</sub> /C <sub>B</sub> ) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	$A = 646 \pm 50$ mVp-p

**Checking method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Confirm that the B-Y level is A.

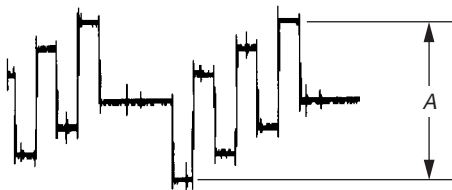


Fig. 6-6

**7. Checking Component Video Output R-Y**

**<Purpose>**

This checks component video output R-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P <sub>R</sub> /C <sub>R</sub> ) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	$B = 646 \pm 50$ mVp-p

**Checking method:**

- 1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
- 2) Confirm that the R-Y level is B.

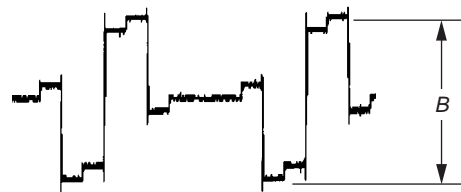


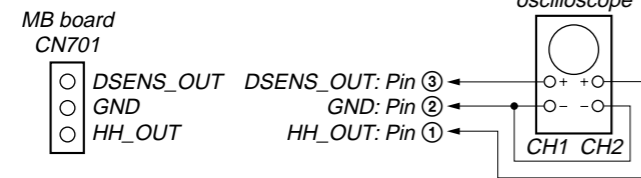
Fig. 6-7



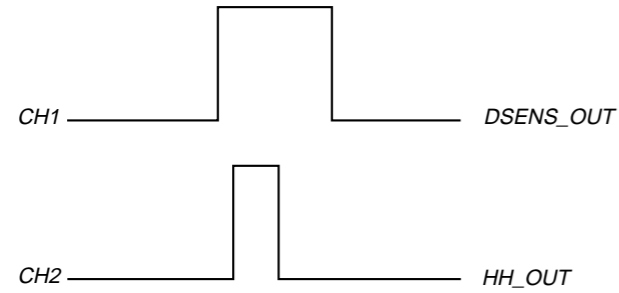
**6-4. DISC DETECT SENSOR ADJUSTMENT**

Be sure to perform this adjustment after sensor adjustment in MECHANICAL ADJUSTMENT.

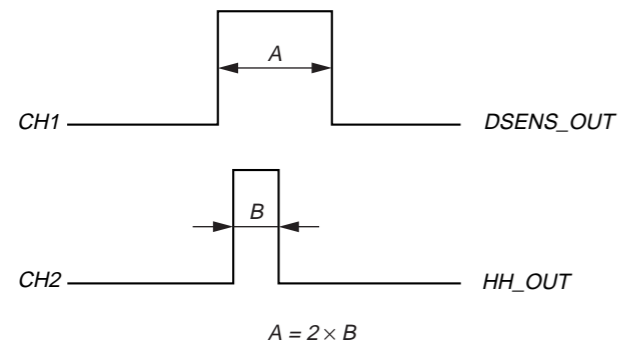
**Connection:**



**Waveform:**

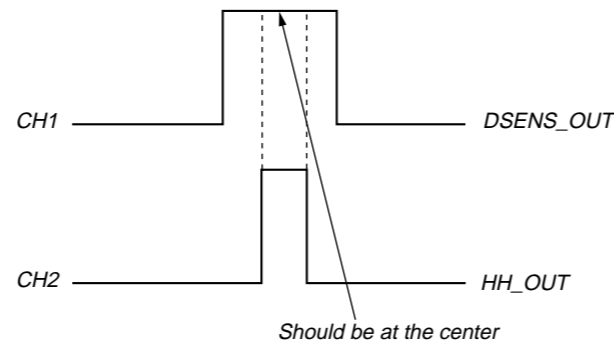
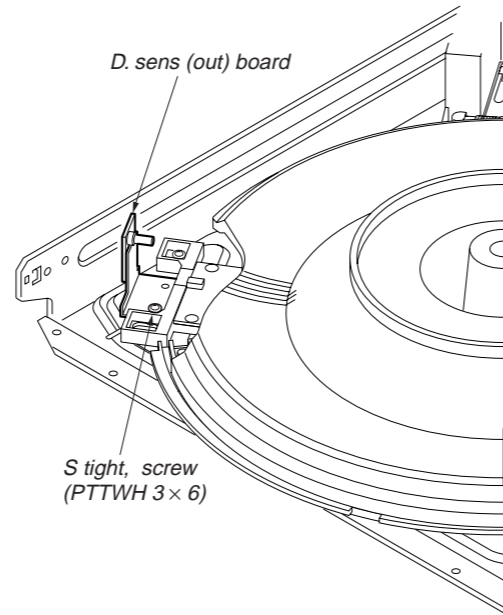


1. Connect the oscilloscope to Pins ①, ② and ③ of CN701 of the MB board.
2. Check that no discs are loaded in the unit.
3. Perform from step 1 to step 5 in Pop Up Mechanism Adjustment.
4. Press the [PAUSE] key, then the T.table starts to rotate in the clockwise direction.
5. Rotate RV101 of MB board and adjust so that the H portion A of DSENS\_OUT waveform is twice the width of the H portion B of HH\_OUT waveform.



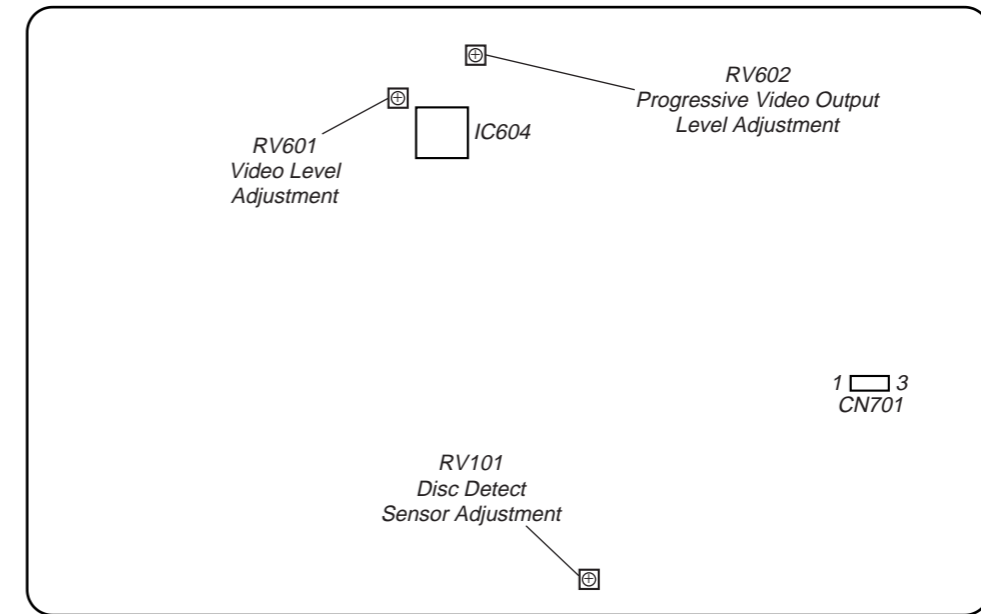
**Adjustment Location: MB board**

6. Loosen the fixing screw, move the mounting board (SENSOR), and secure the mounting board (SENSOR) at the point the H portion of the HH\_OUT waveform comes the center of the H portion of the DSENS\_OUT waveform.

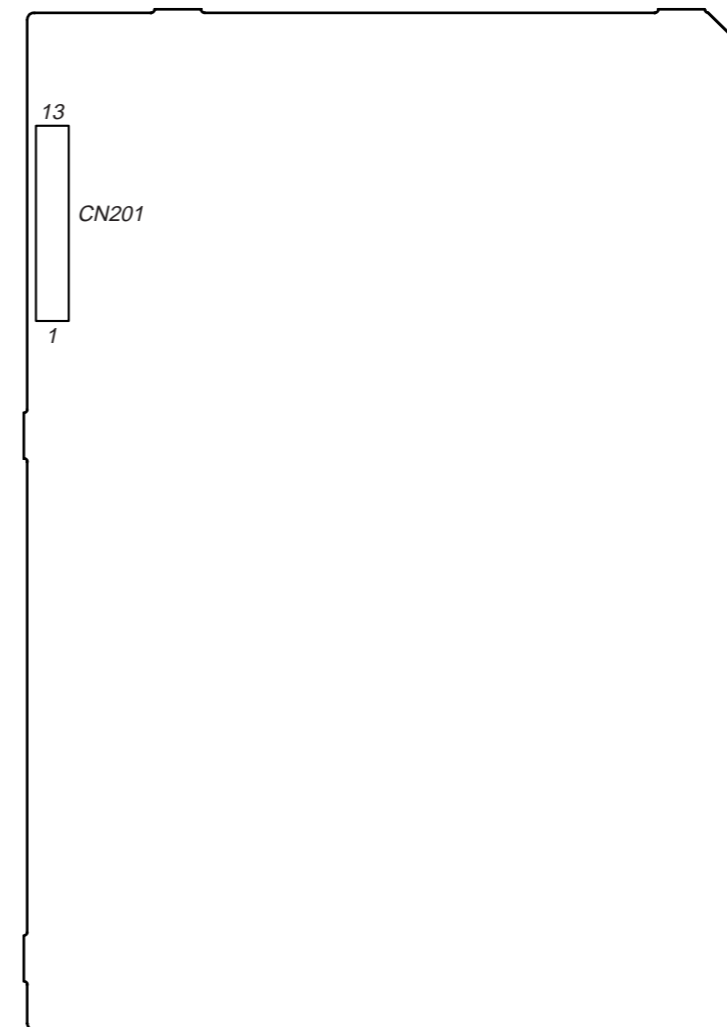


**Adjustment Location:**

**- MB Board (Component Side) -**

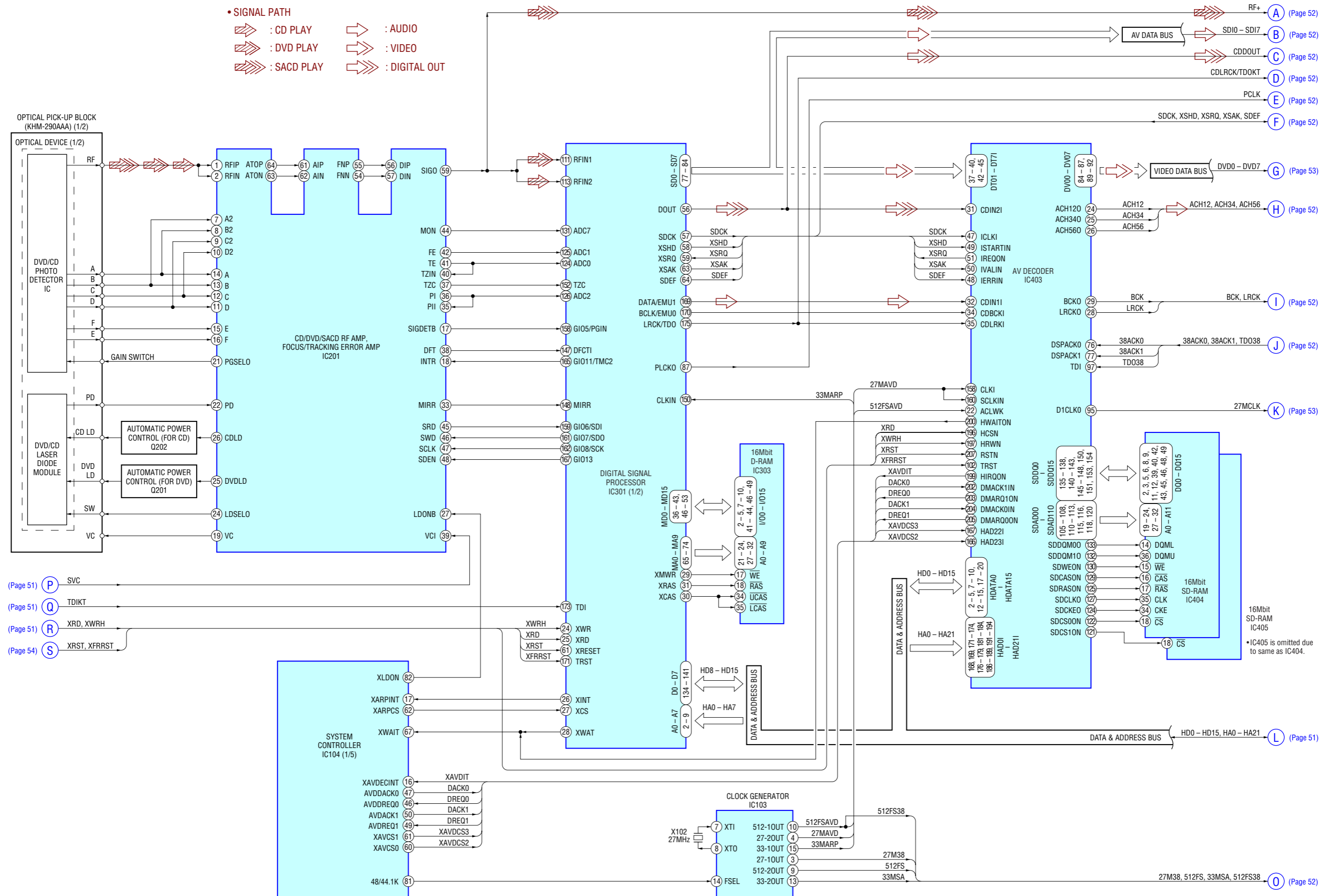


**- POWER Board (Conductor Side) -**

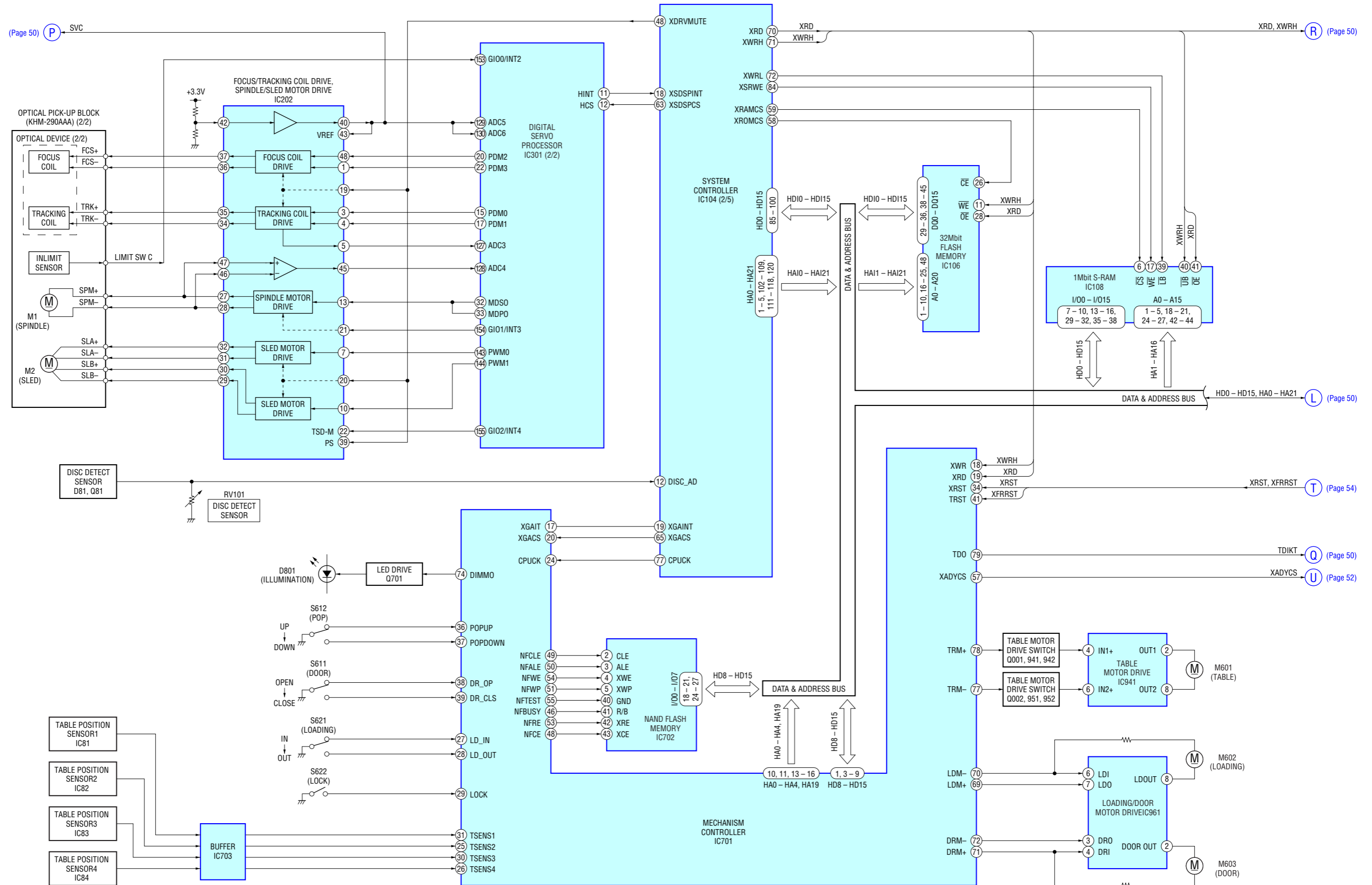


SECTION 7  
DIAGRAMS

7-1. BLOCK DIAGRAM – RF Section –

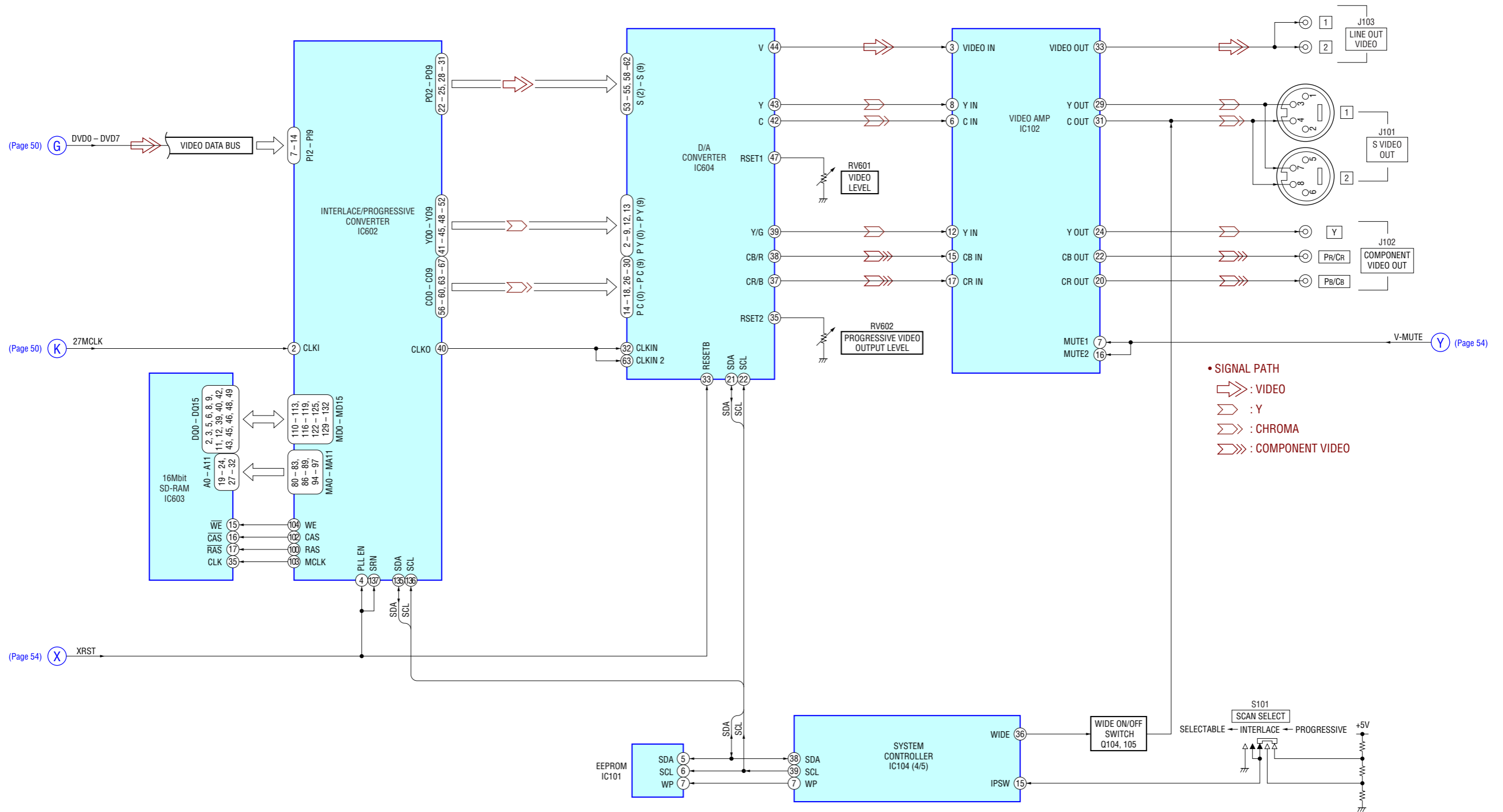


7-2. BLOCK DIAGRAM – SERVO/CHANGER Section –

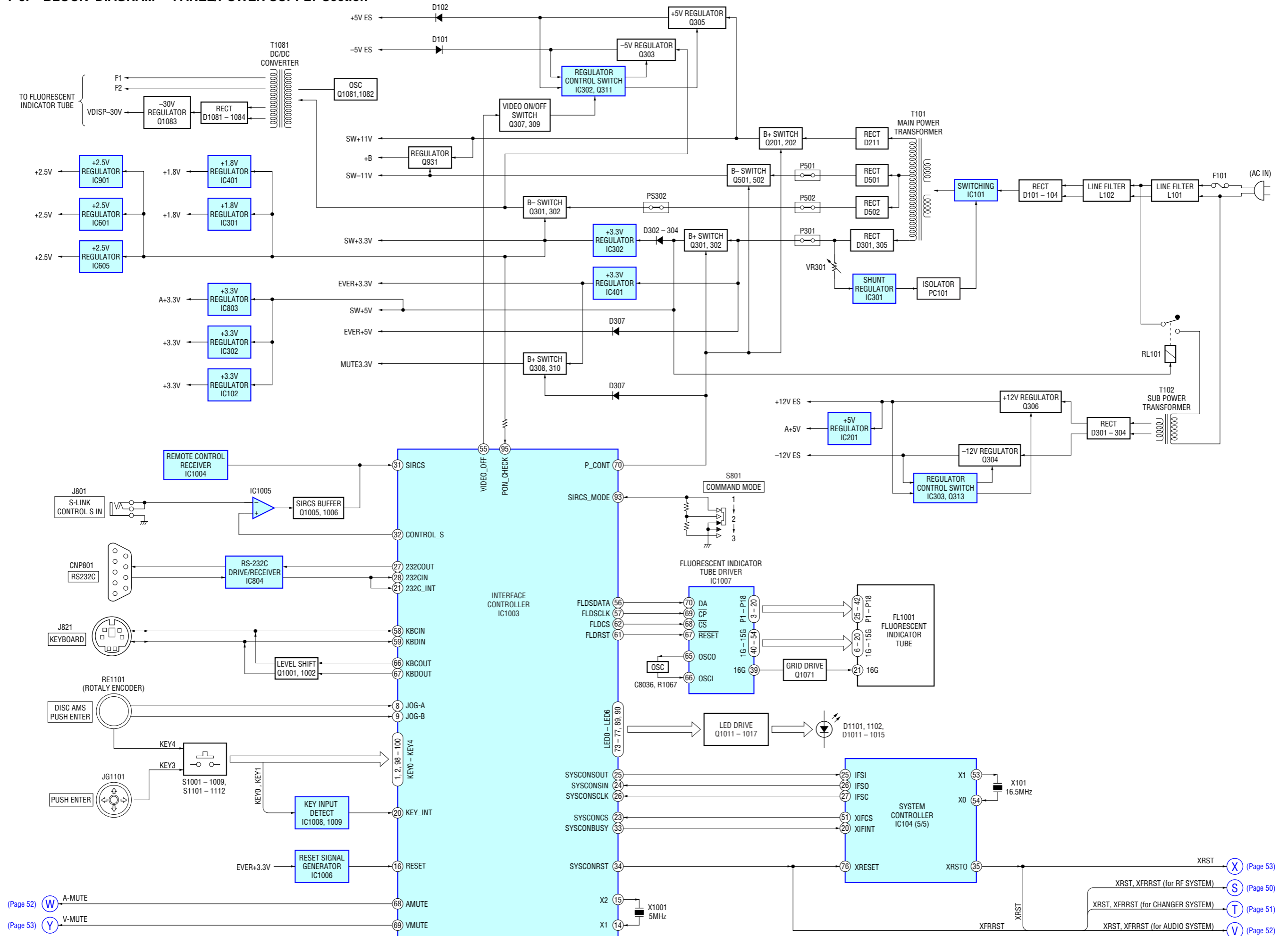




7-4. BLOCK DIAGRAM – VIDEO Section –



7-5. BLOCK DIAGRAM – PANEL/POWER SUPPLY Section –



(Page 52) W A-MUTE  
 (Page 53) Y V-MUTE

XRST (X) (Page 53)  
 XRST, XFRST (for RF SYSTEM) (S) (Page 50)  
 XRST, XFRST (for CHANGER SYSTEM) (T) (Page 51)  
 XRST, XFRST (for AUDIO SYSTEM) (V) (Page 52)

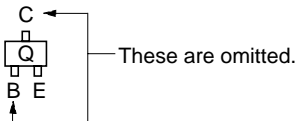
7-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

**Note on Printed Wiring Board:**

- — : parts extracted from the component side.
  - : parts extracted from the conductor side.
  - △ : internal component.
  - : Pattern from the side which enables seeing.
- (The other layers' patterns are not indicated.)

**Caution:**  
 Pattern face side: Parts on the pattern face side seen from (Conductor Side) the pattern face are indicated.  
 Parts face side: Parts on the parts face side seen from (Component Side) the parts face are indicated.

- MB board is multi-layer board. However, the patterns of intermediate-layer not been included in diagram.
- Indication of transistor



**Note on Schematic Diagram:**

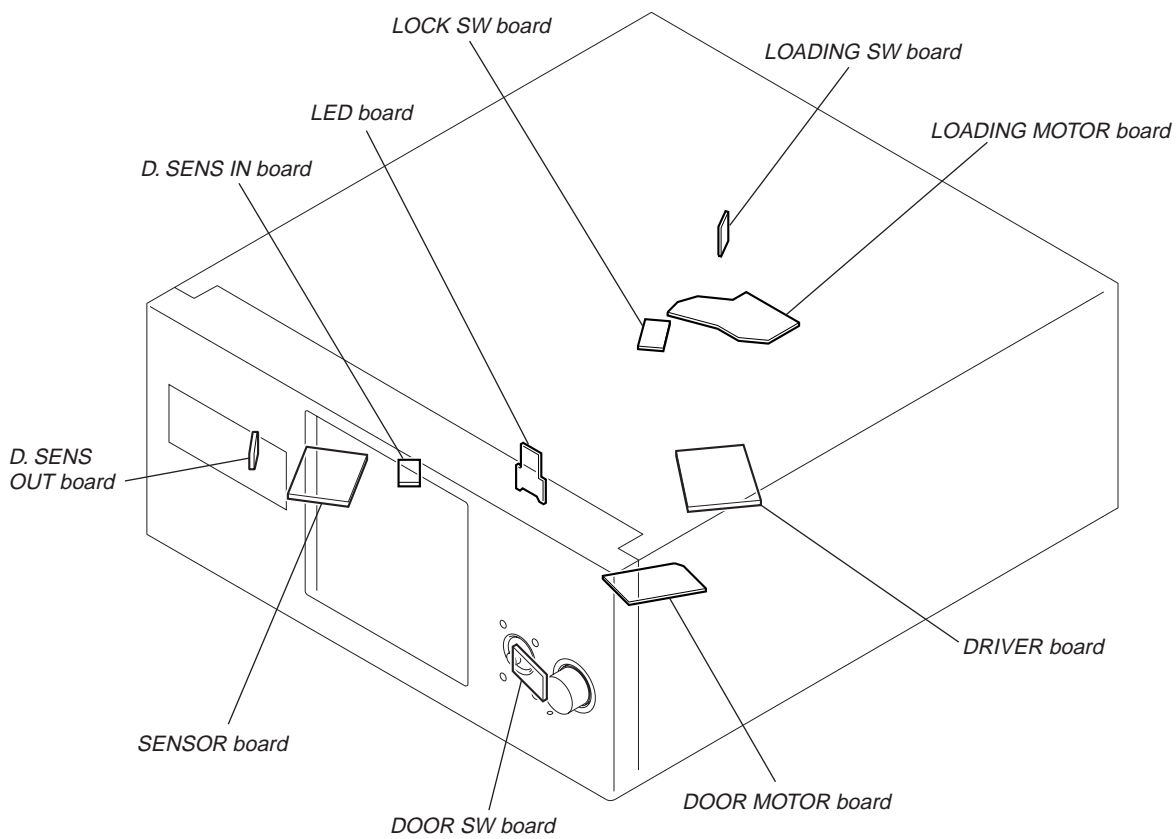
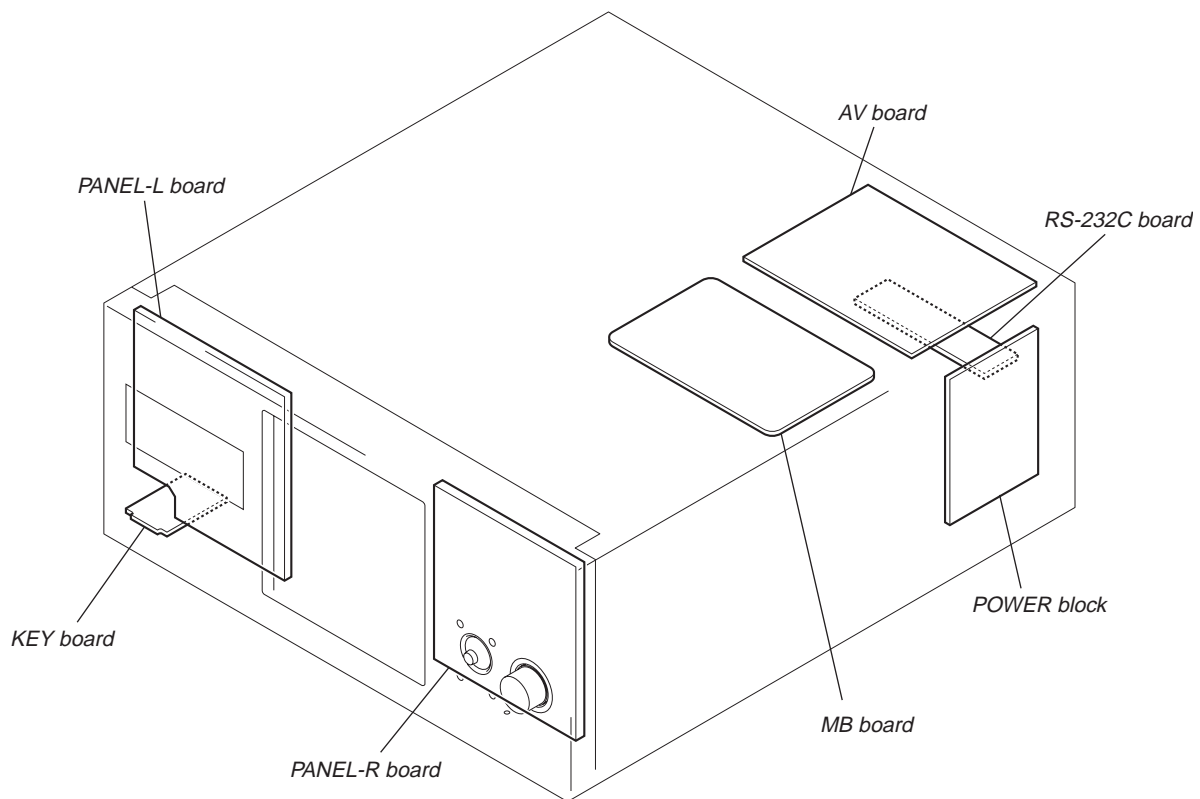
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

<p><b>Note:</b>                  The components identified by mark △ or dotted line with mark △ are critical for safety.                  Replace only with part number specified.</p>	<p><b>Note:</b>                  Les composants identifiés par une marque △ sont critiques pour la sécurité.                  Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	--

- : B+ Line.
- : B- Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.  
 no mark : DVD PLAY  
 ( ) : SACD PLAY  
 [ ] : CD PLAY  
 \* : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.  
 : CD PLAY  
 : DVD PLAY  
 : SACD PLAY  
 : AUDIO  
 : VIDEO  
 : DIGITAL OUT  
 : Y  
 : CHROMA  
 : COMPONENT VIDEO



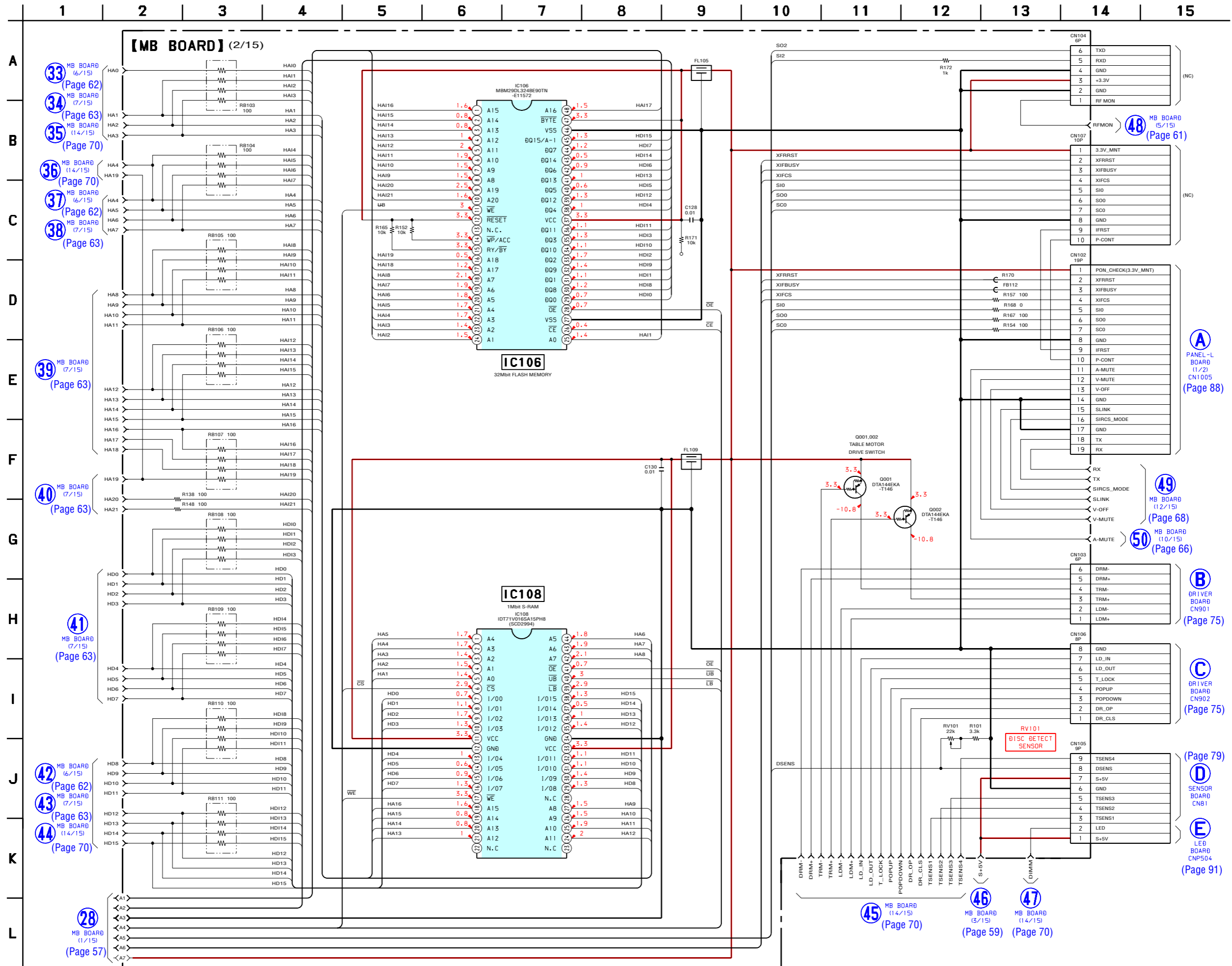
## • Circuit Boards Location



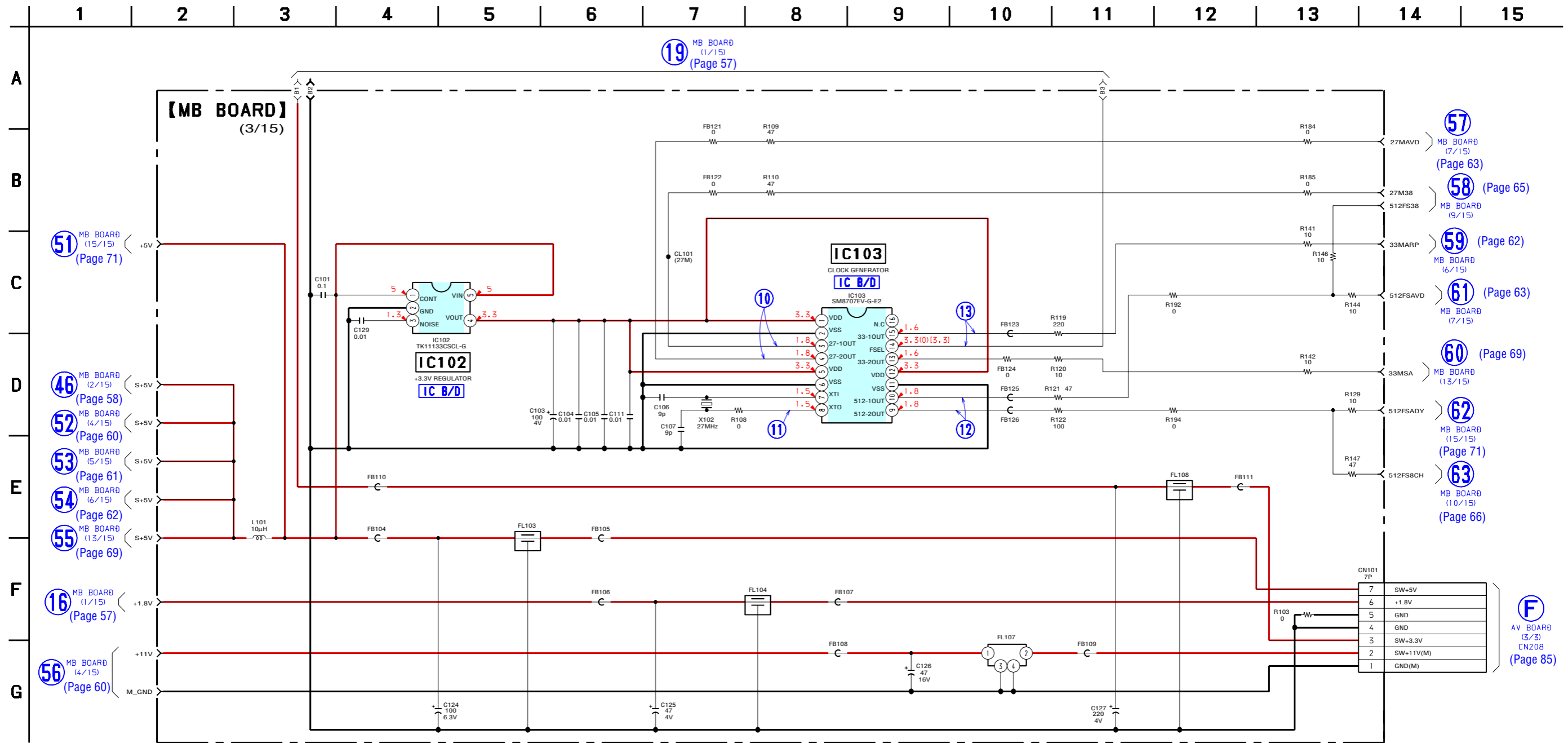




7-8. SCHEMATIC DIAGRAM - MB Board (2/15) -



7-9. SCHEMATIC DIAGRAM – MB Board (3/15) – • See page 94 for Waveforms. • See page 98 for IC Block Diagrams.



19 MB BOARD (1/15) (Page 57)

57 MB BOARD (7/15) (Page 63)

58 MB BOARD (9/15) (Page 65)

59 MB BOARD (6/15) (Page 62)

61 MB BOARD (7/15) (Page 63)

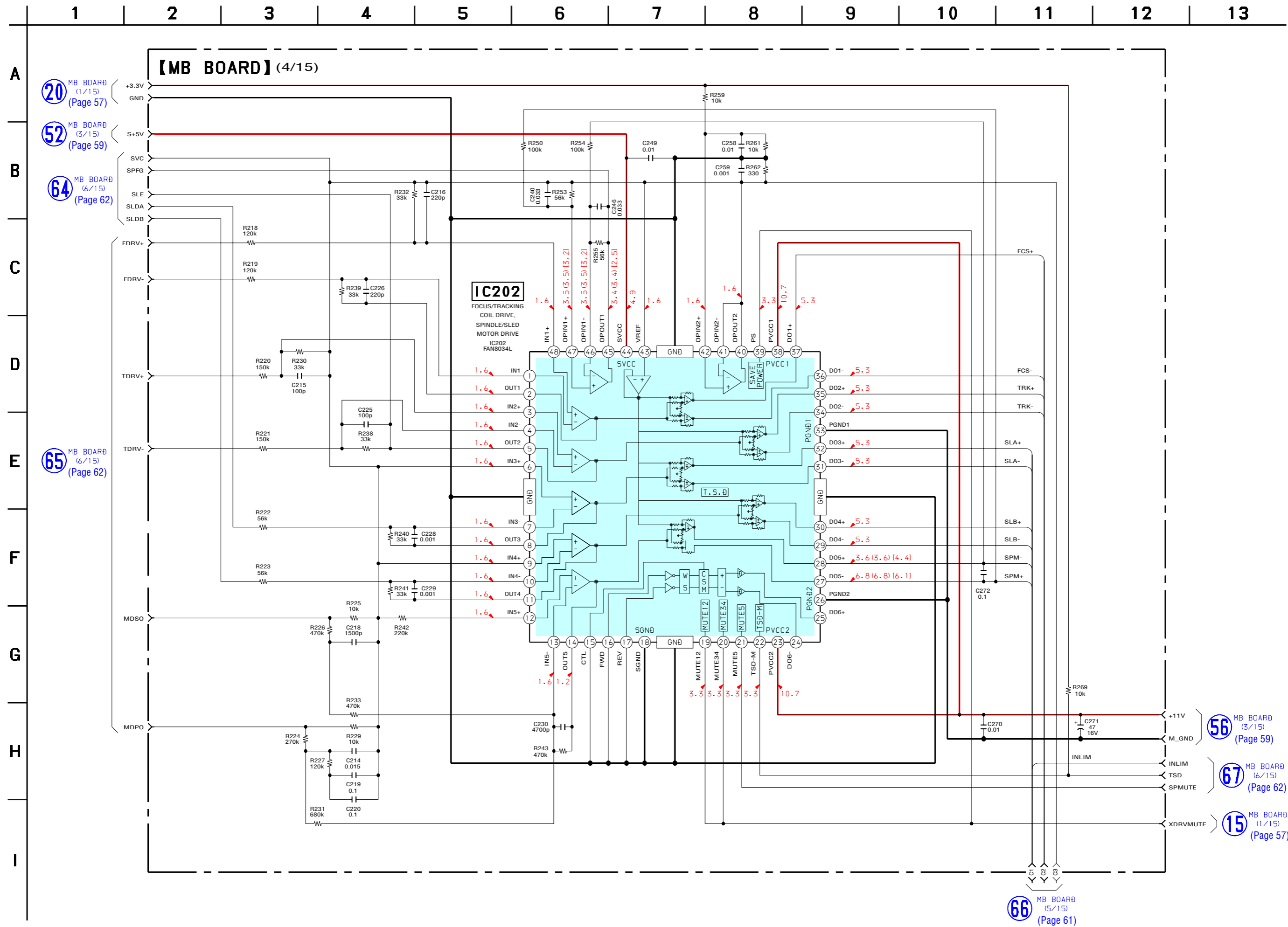
60 MB BOARD (13/15) (Page 69)

62 MB BOARD (15/15) (Page 71)

63 MB BOARD (10/15) (Page 66)

F AV BOARD (3/3) CN208 (Page 85)

7-10. SCHEMATIC DIAGRAM - MB Board (4/15) -



20 MB BOARD (1/15) (Page 57)

52 MB BOARD (3/15) (Page 59)

64 MB BOARD (6/15) (Page 62)

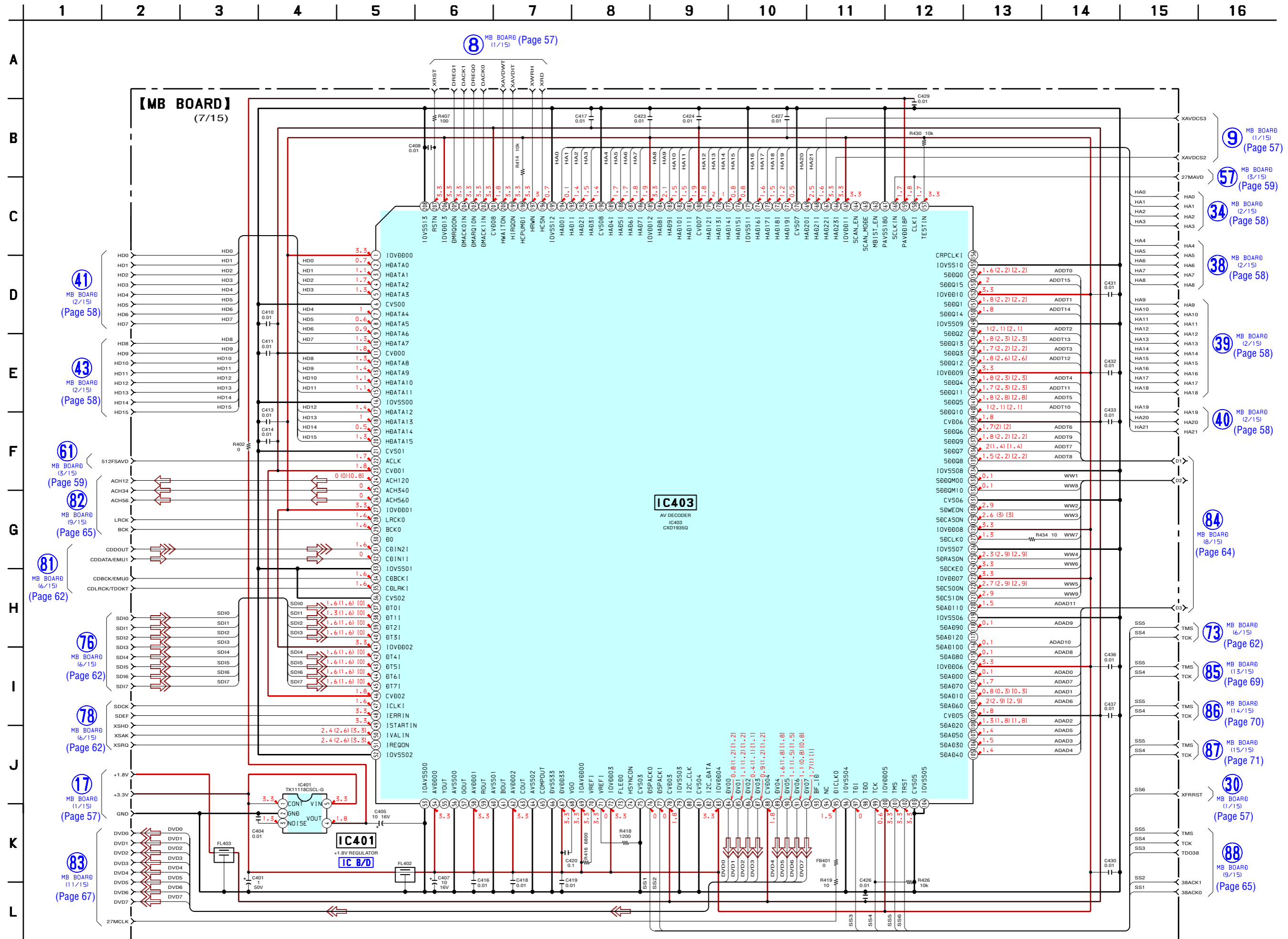
65 MB BOARD (6/15) (Page 62)



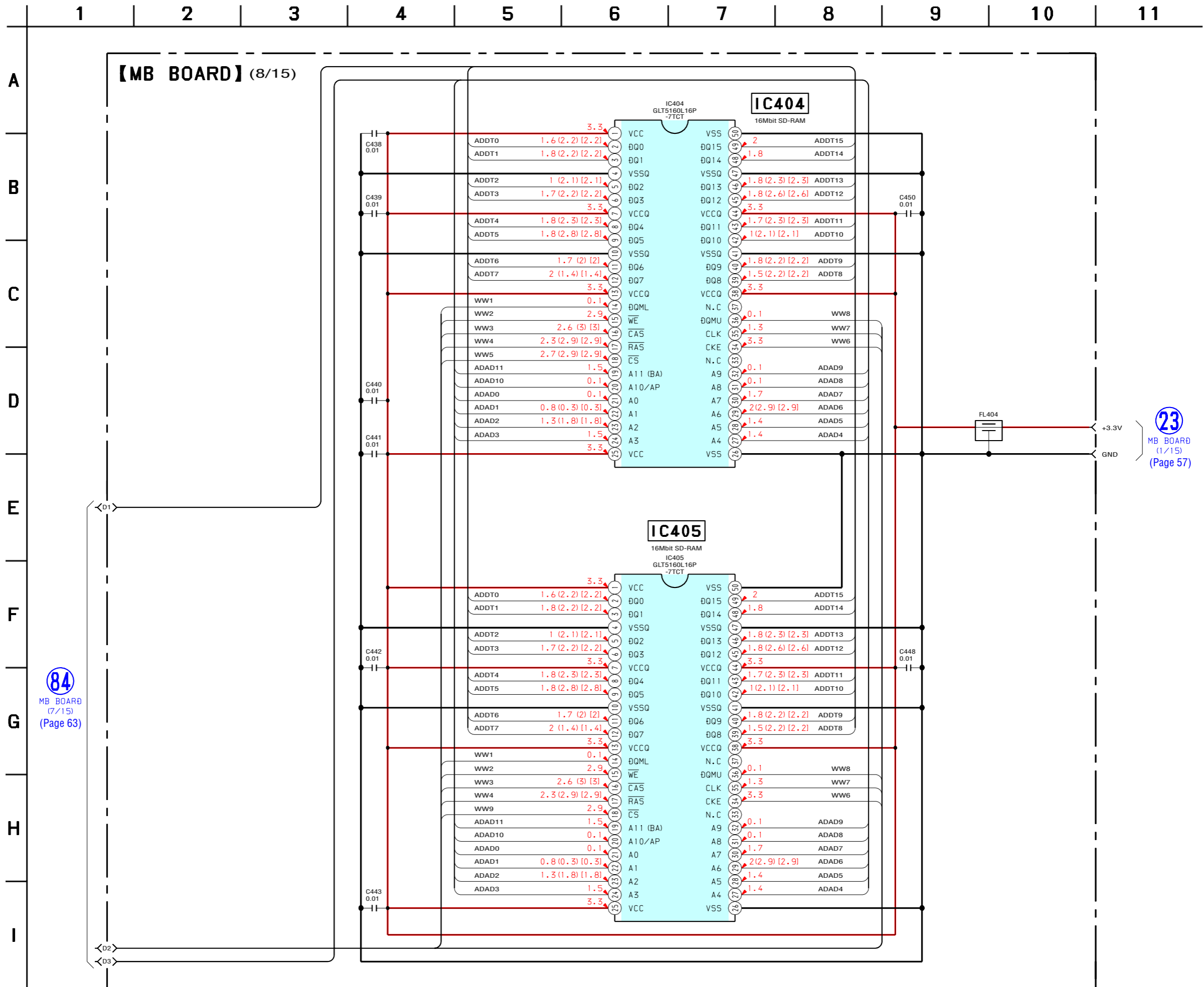




7-13. SCHEMATIC DIAGRAM – MB Board (7/15) – • See page 98 for IC Block Diagram.



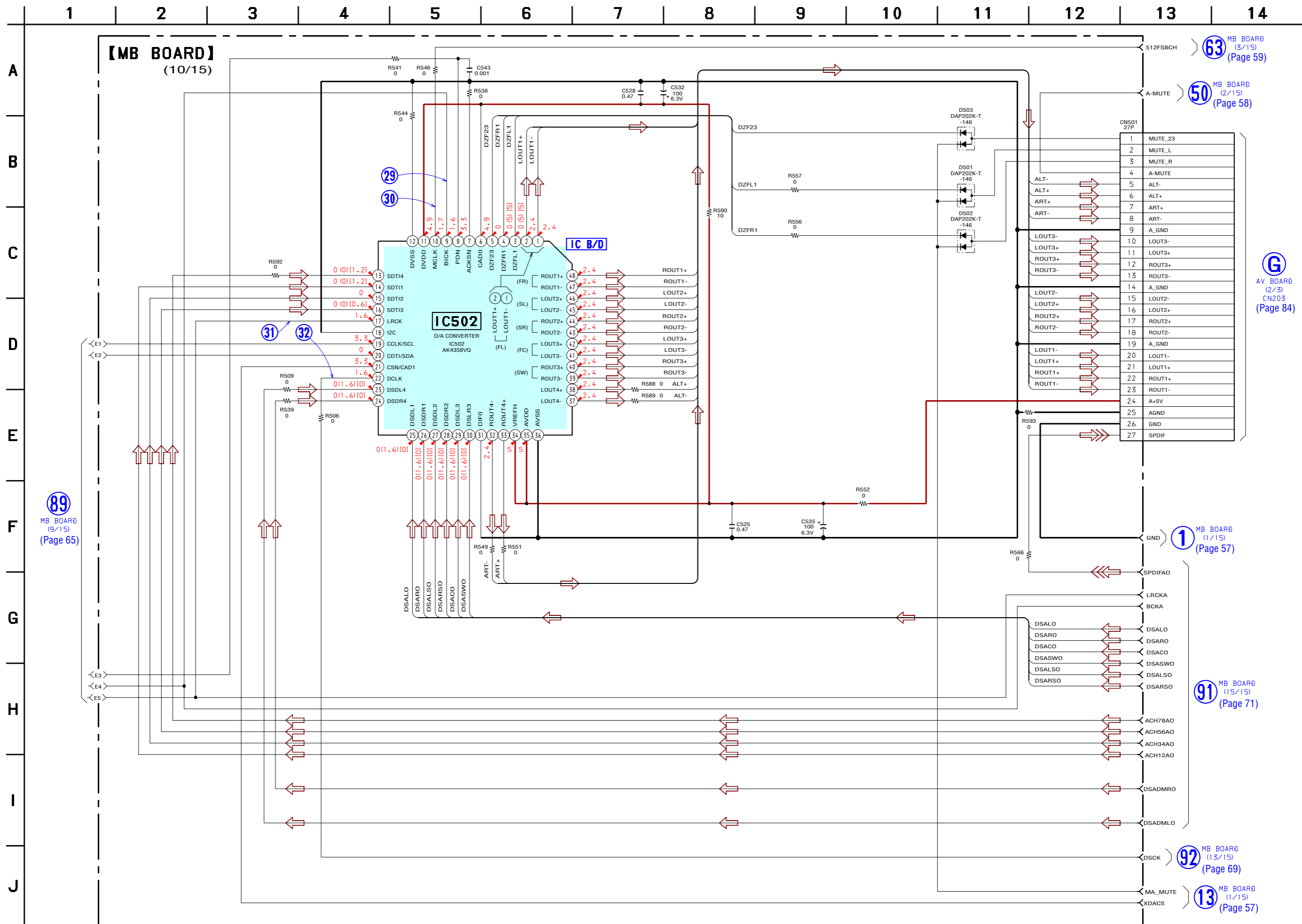
7-14. SCHEMATIC DIAGRAM – MB Board (8/15) –





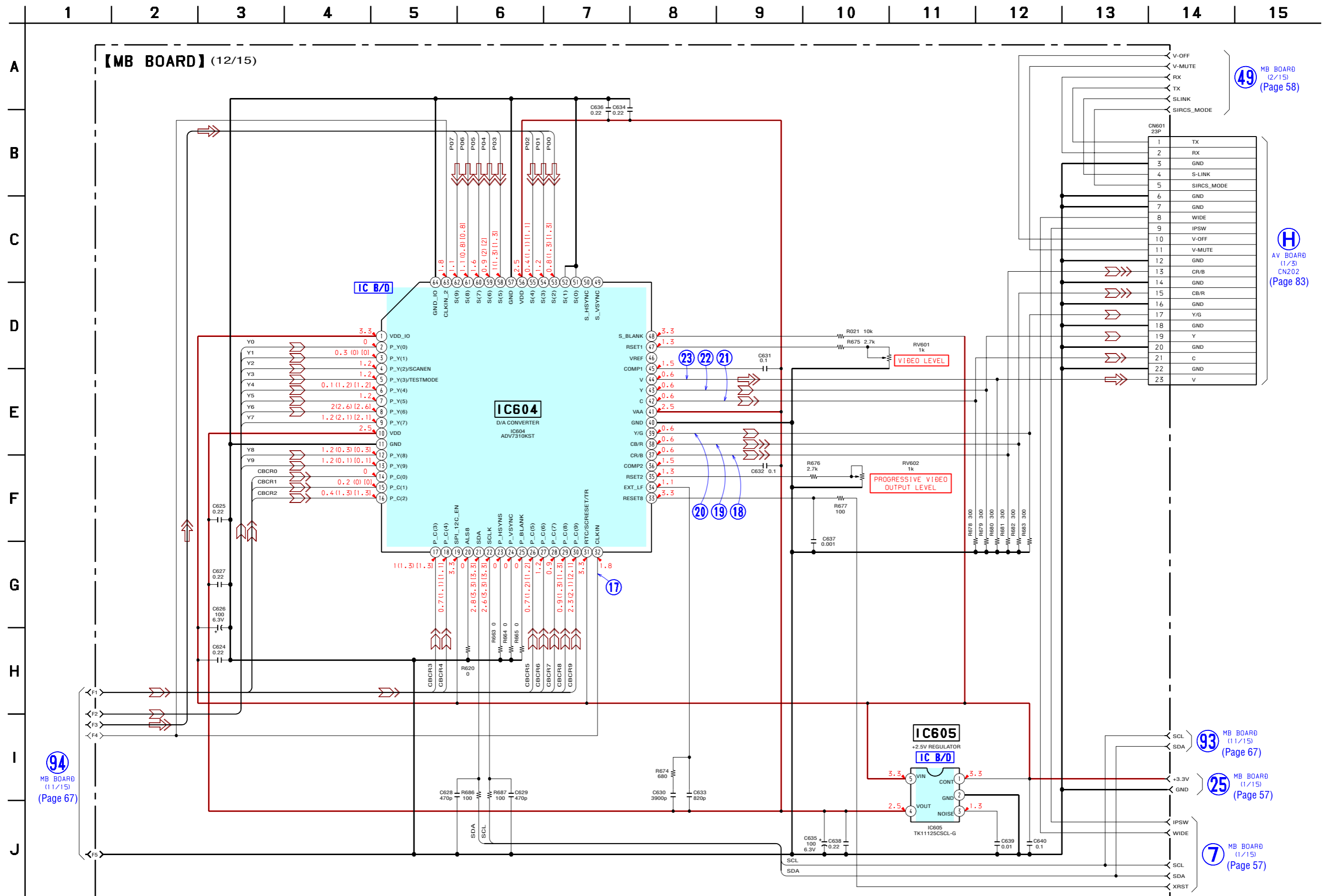


7-16. SCHEMATIC DIAGRAM – MB Board (10/15) – • See page 94 for Waveforms. • See page 98 for IC Block Diagram.



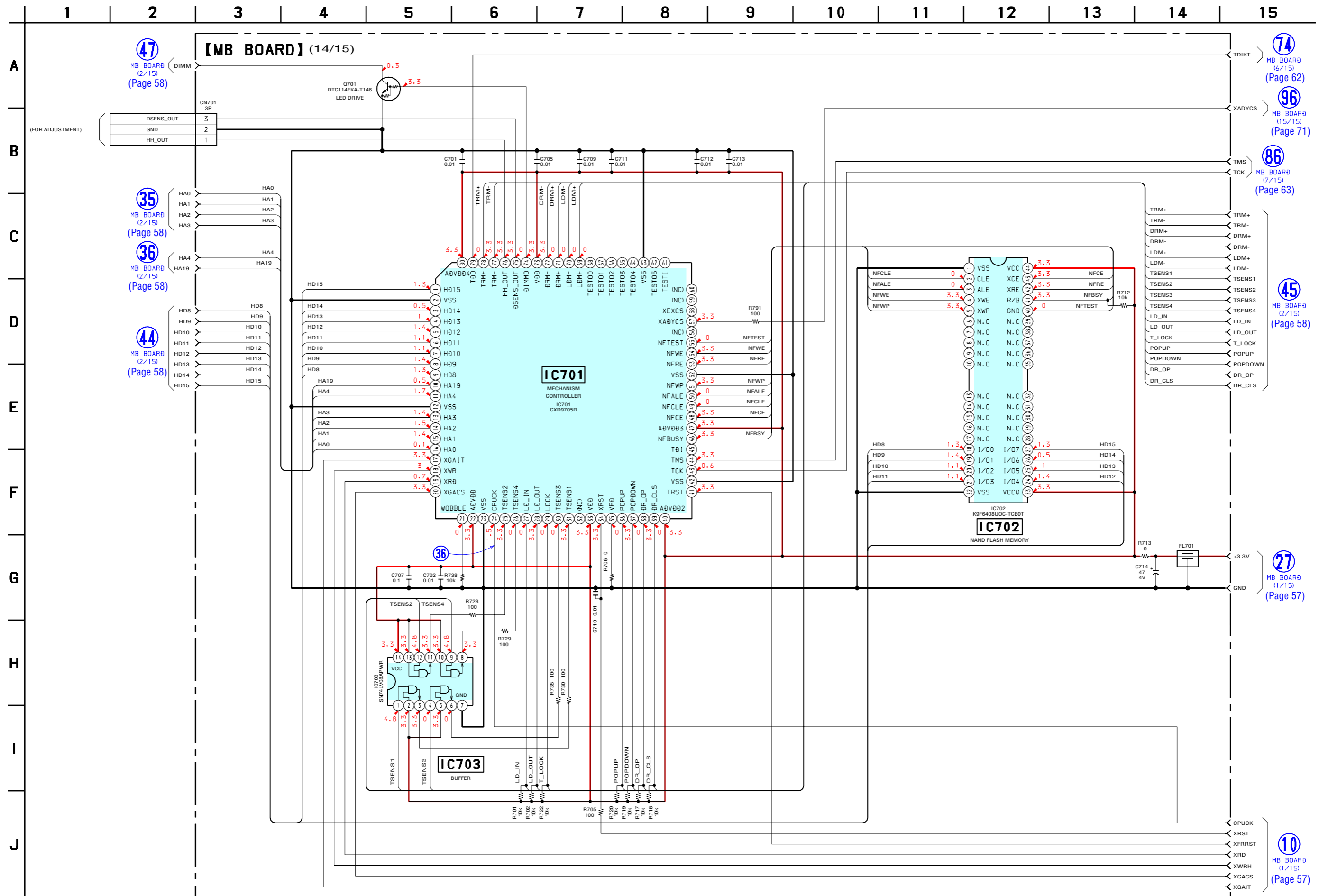


7-18. SCHEMATIC DIAGRAM – MB Board (12/15) – • See page 94 for Waveforms. • See page 98 for IC Block Diagrams.






7-20. SCHEMATIC DIAGRAM – MB Board (14/15) – • See page 94 for Waveform.



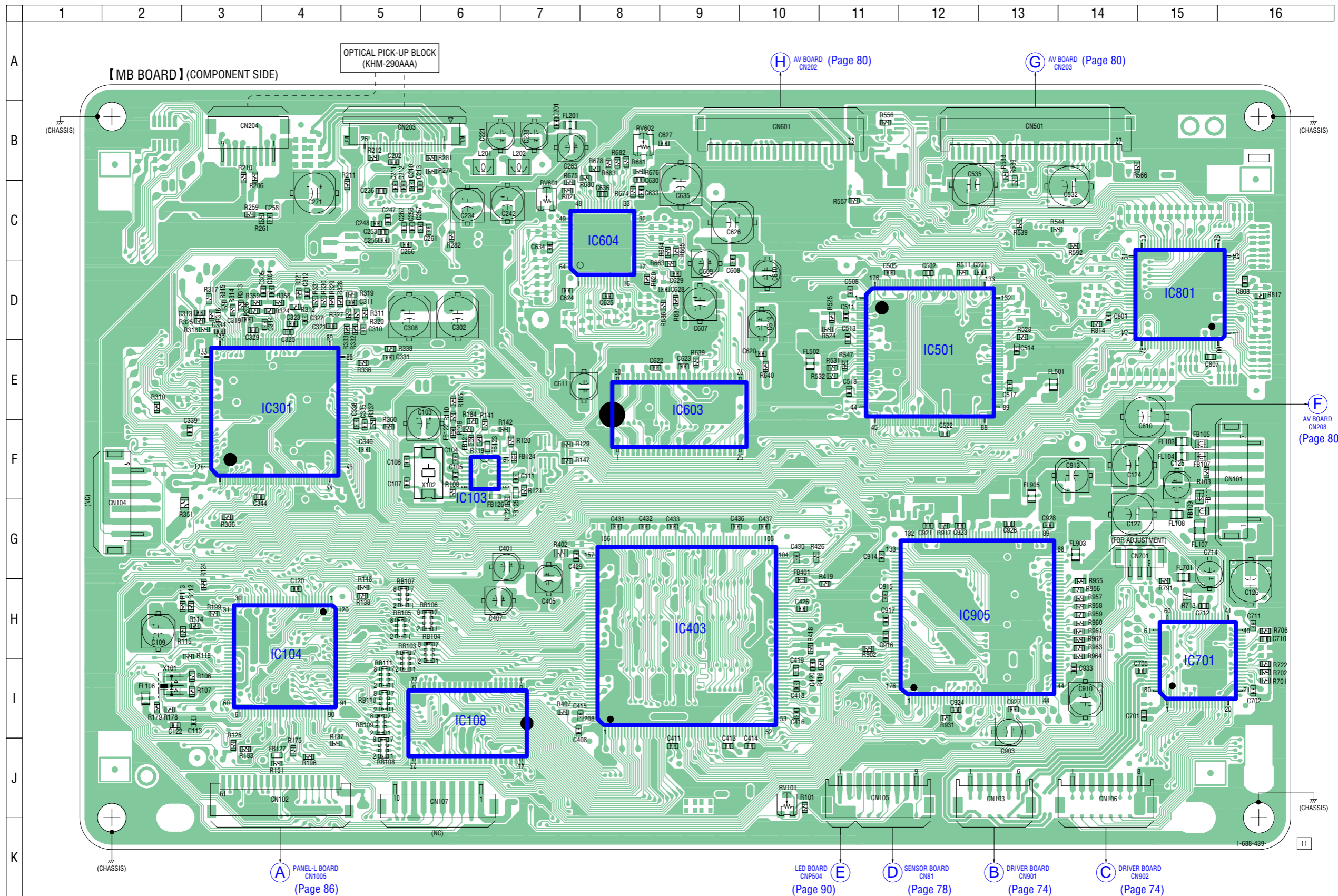




7-22. PRINTED WIRING BOARD – MB Board (Component Side) – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.


• Semiconductor Location

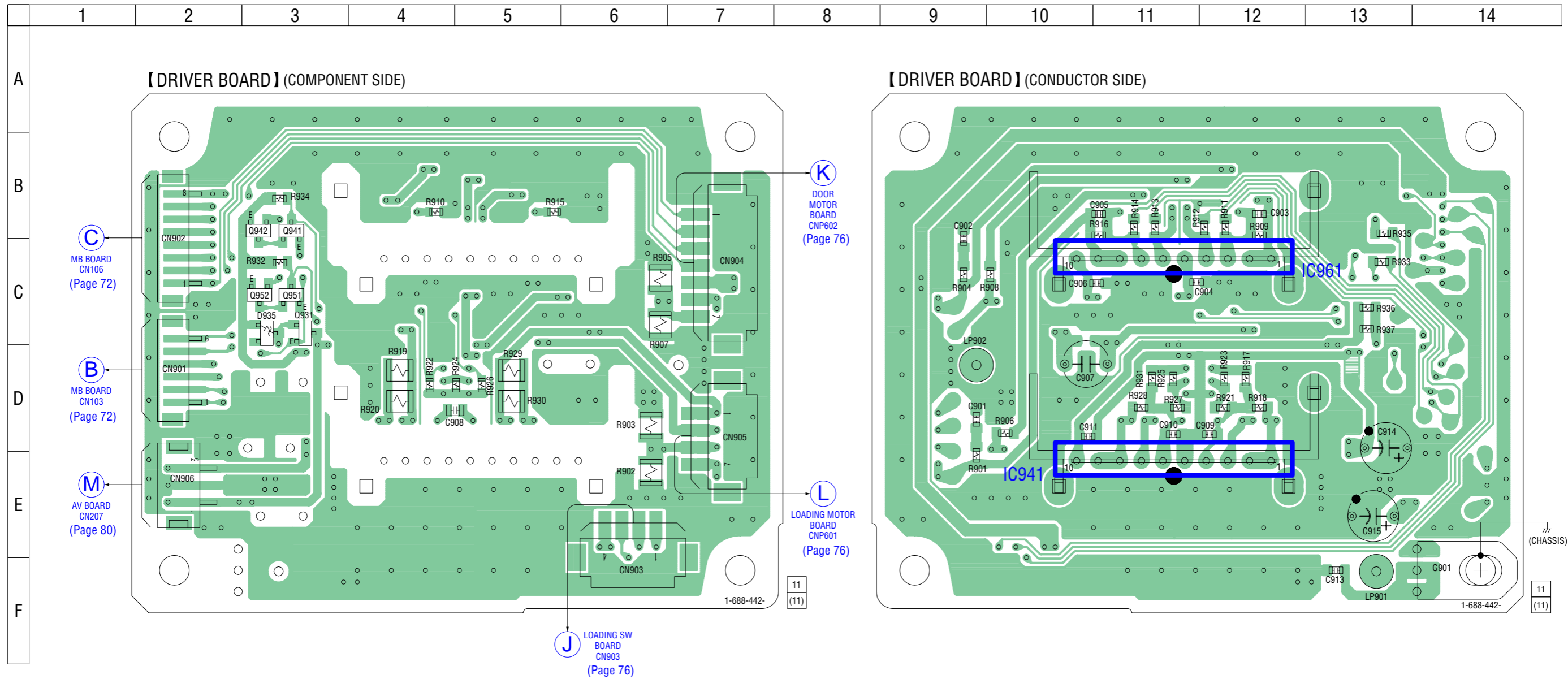
Ref. No.	Location
IC103	F-6
IC104	H-4
IC108	I-6
IC301	E-4
IC403	H-9
IC501	E-12
IC603	E-9
IC604	C-8
IC701	I-15
IC801	D-15
IC905	H-12







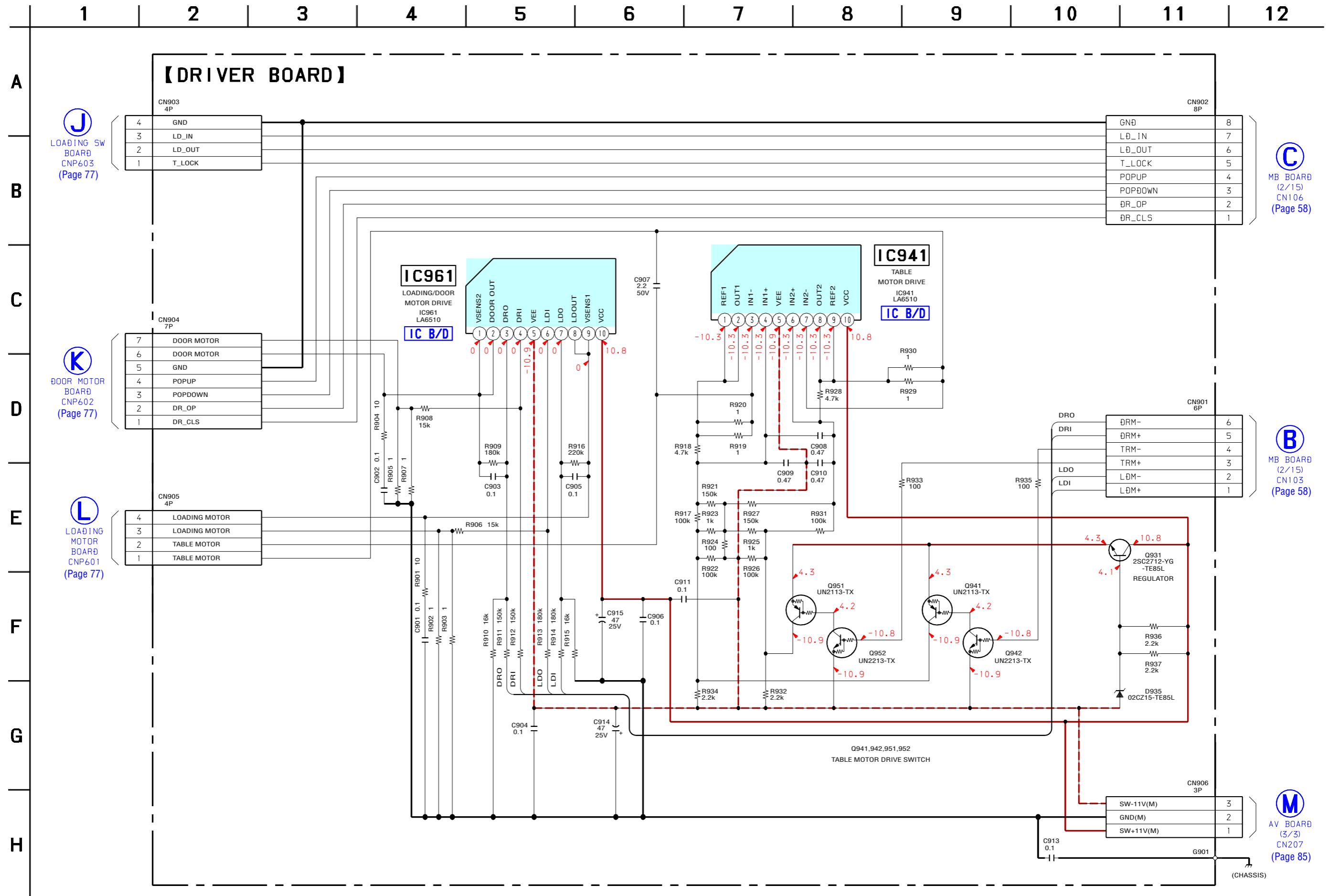
7-24. PRINTED WIRING BOARD – DRIVER Board – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.




• Semiconductor Location

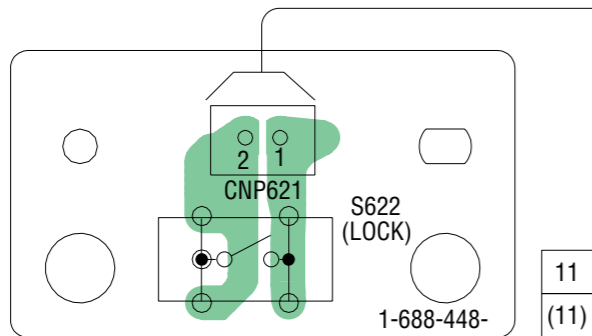
Ref. No.	Location
D935	C-3
IC941	E-11
IC961	C-11
Q931	C-3
Q941	B-3
Q942	B-3
Q951	C-3
Q952	C-3

7-25. SCHEMATIC DIAGRAM – DRIVER Board – • See page 98 for IC Block Diagrams.



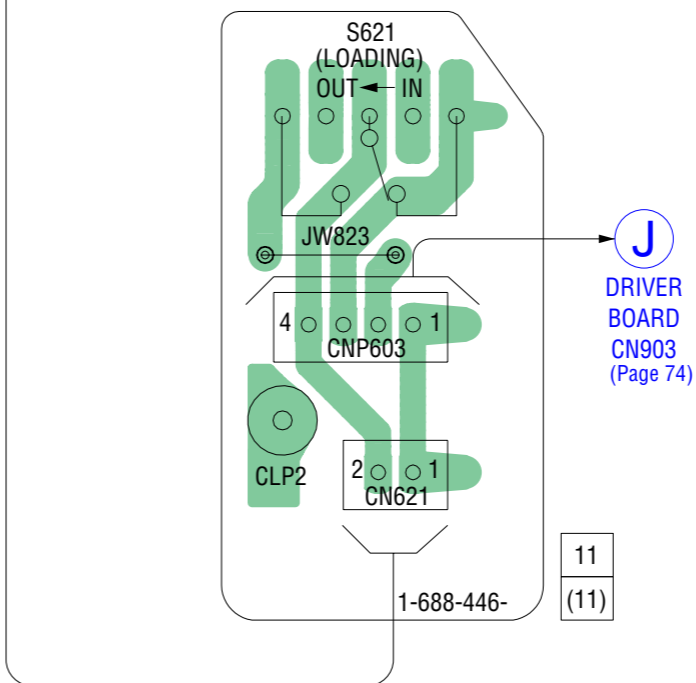
7-26. PRINTED WIRING BOARDS – MOTOR/SWITCH Section – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.

【 LOCK SW BOARD】



11  
(11)

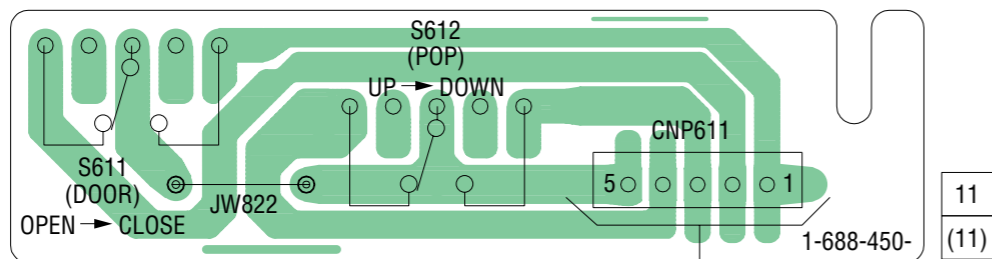
【 LOADING SW BOARD】



**J**  
DRIVER BOARD  
CN903  
(Page 74)

11  
(11)

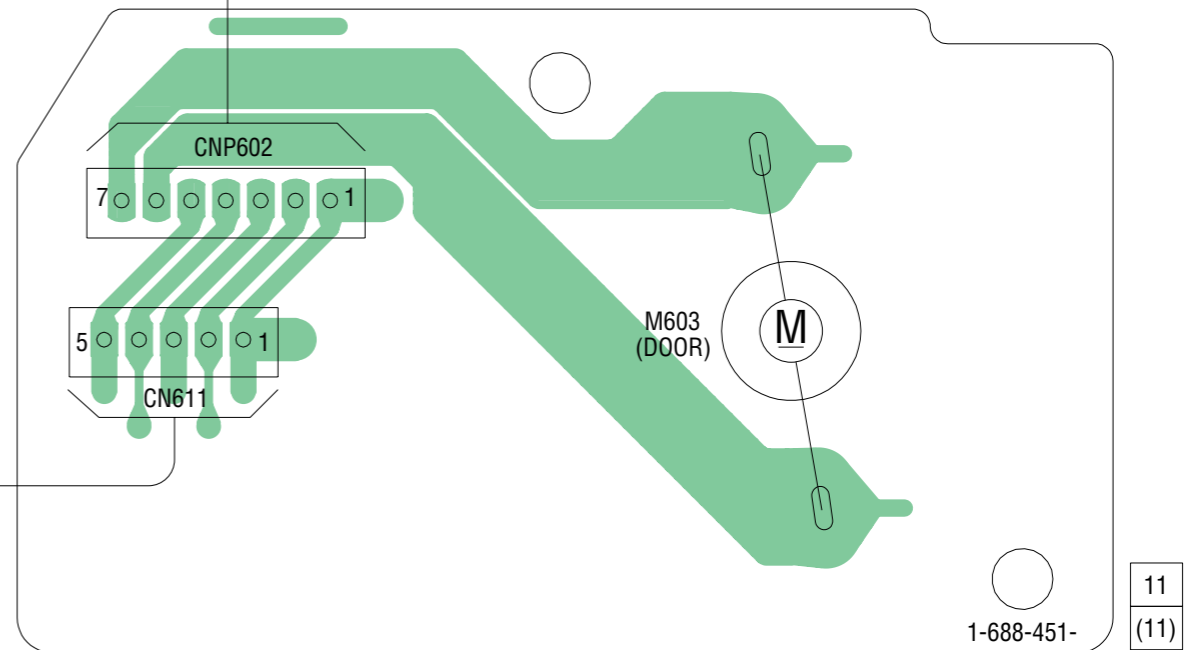
【 DOOR SW BOARD】



11  
(11)

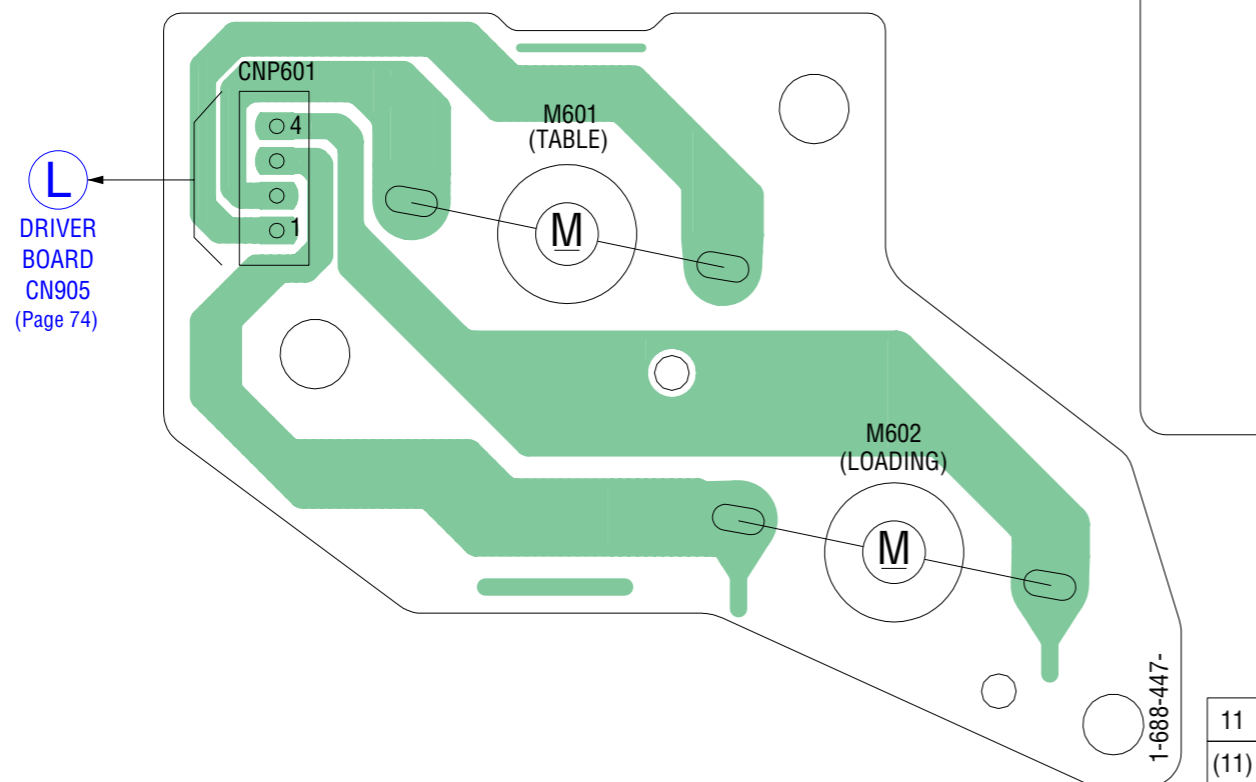
DRIVER BOARD  
CN904  
(Page 74)

【 DOOR MOTOR BOARD】



11  
(11)

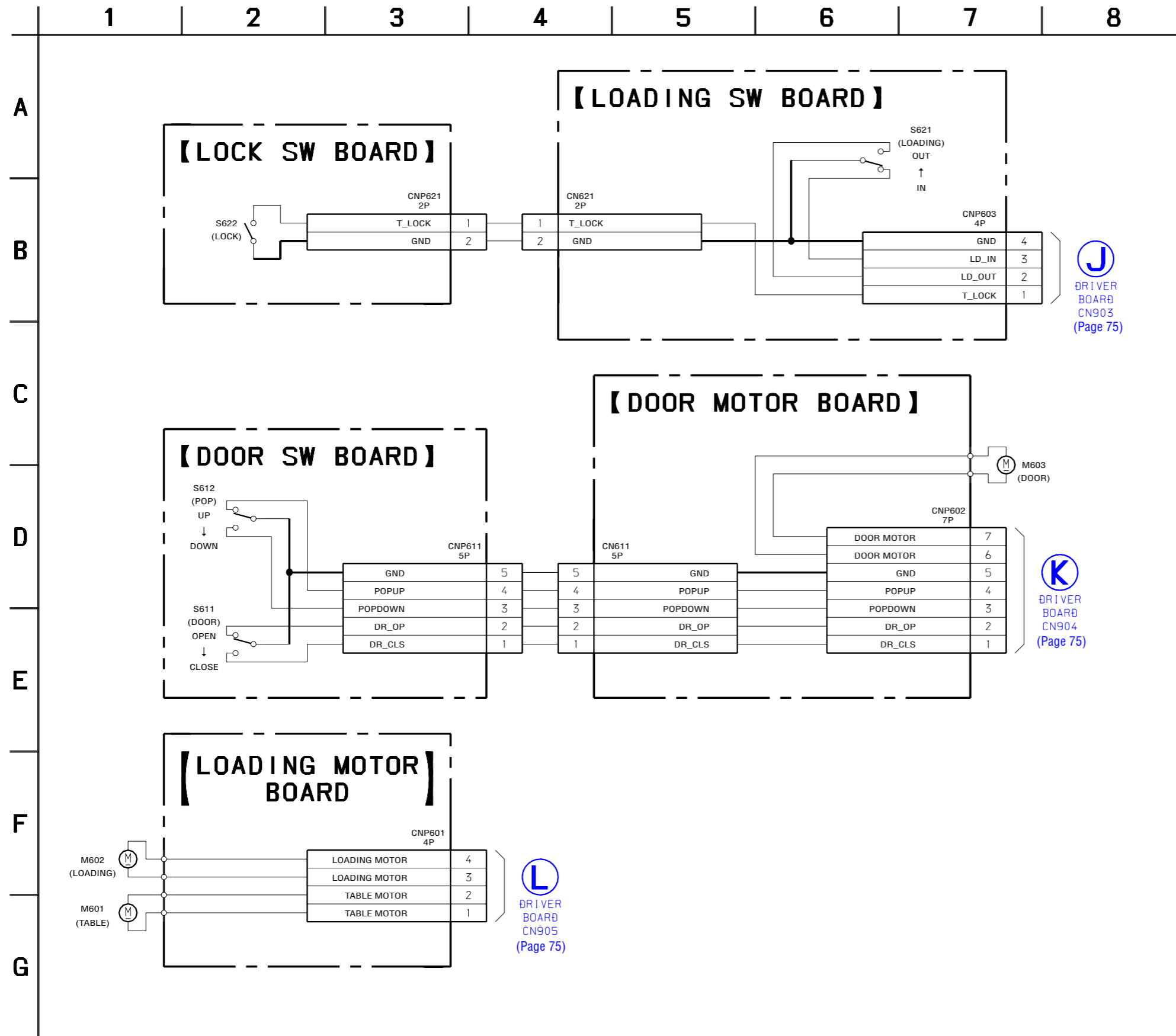
【 LOADING MOTOR BOARD】




**L**  
DRIVER BOARD  
CN905  
(Page 74)

11  
(11)

7-27. SCHEMATIC DIAGRAM – MOTOR/SWITCH Section –

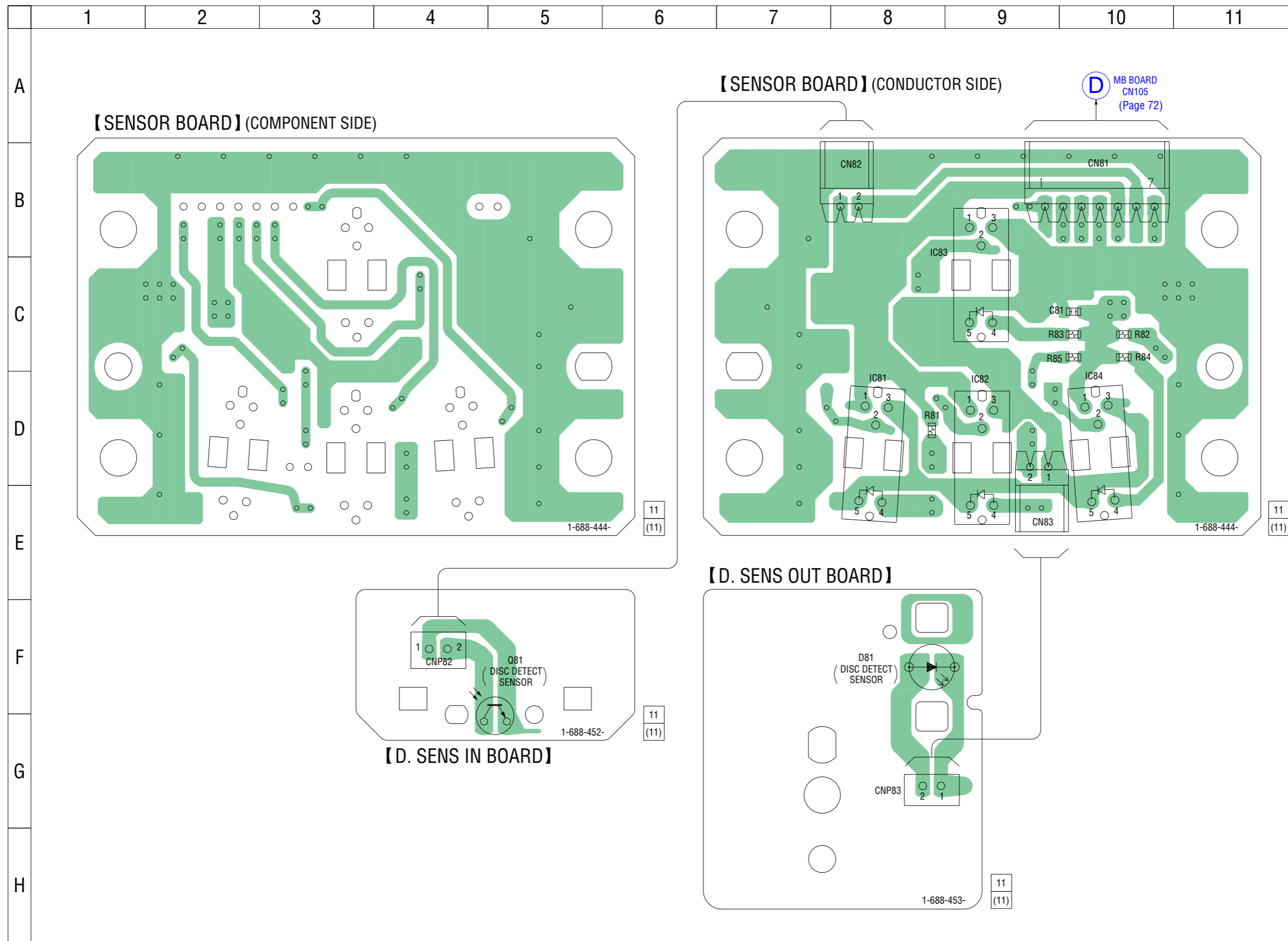




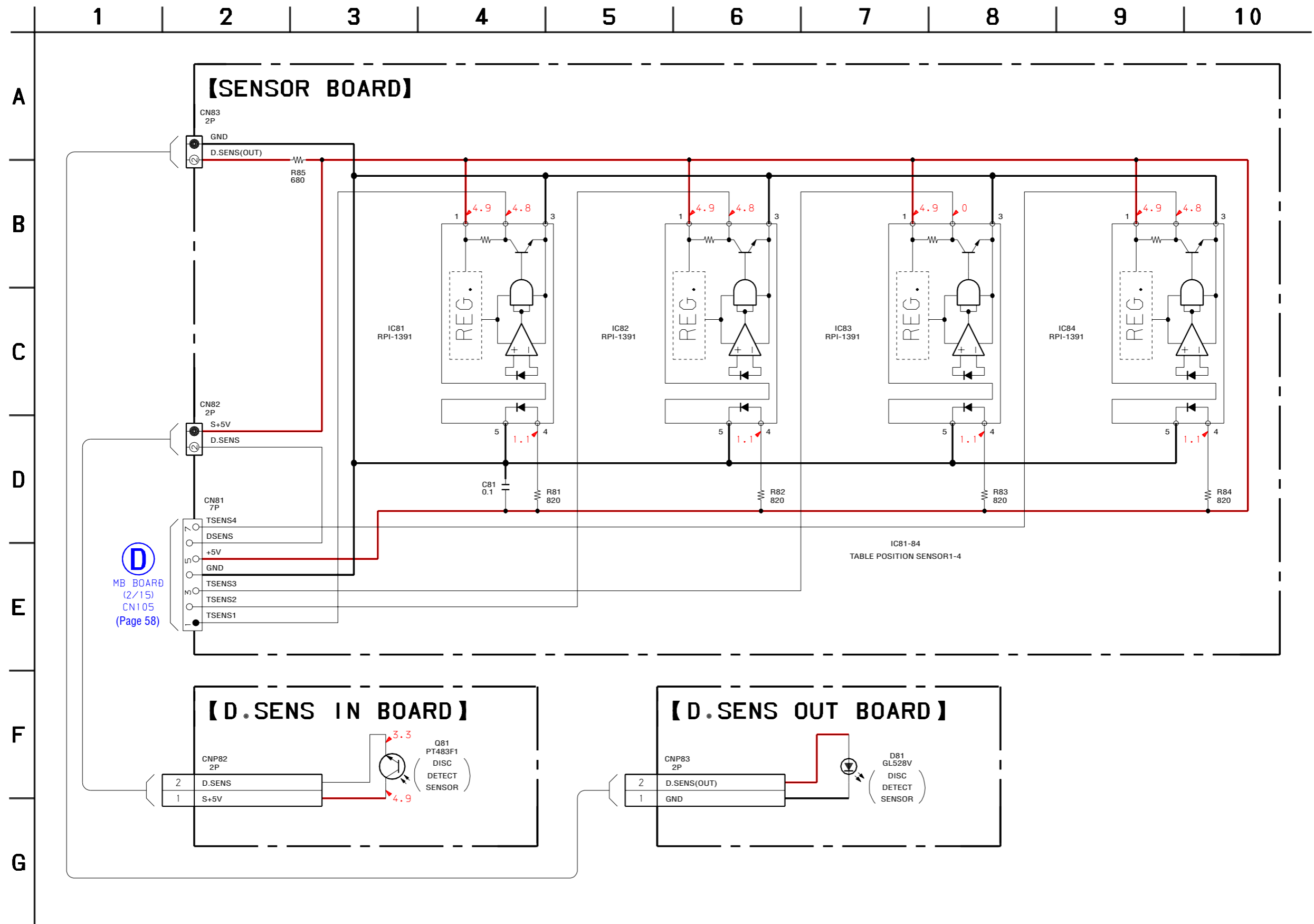
7-28. PRINTED WIRING BOARDS – SENSOR Section – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.


• Semiconductor Location

Ref. No.	Location
D81	F-8
IC81	D-8
IC82	D-9
IC83	D-10
IC84	C-9
Q81	G-5



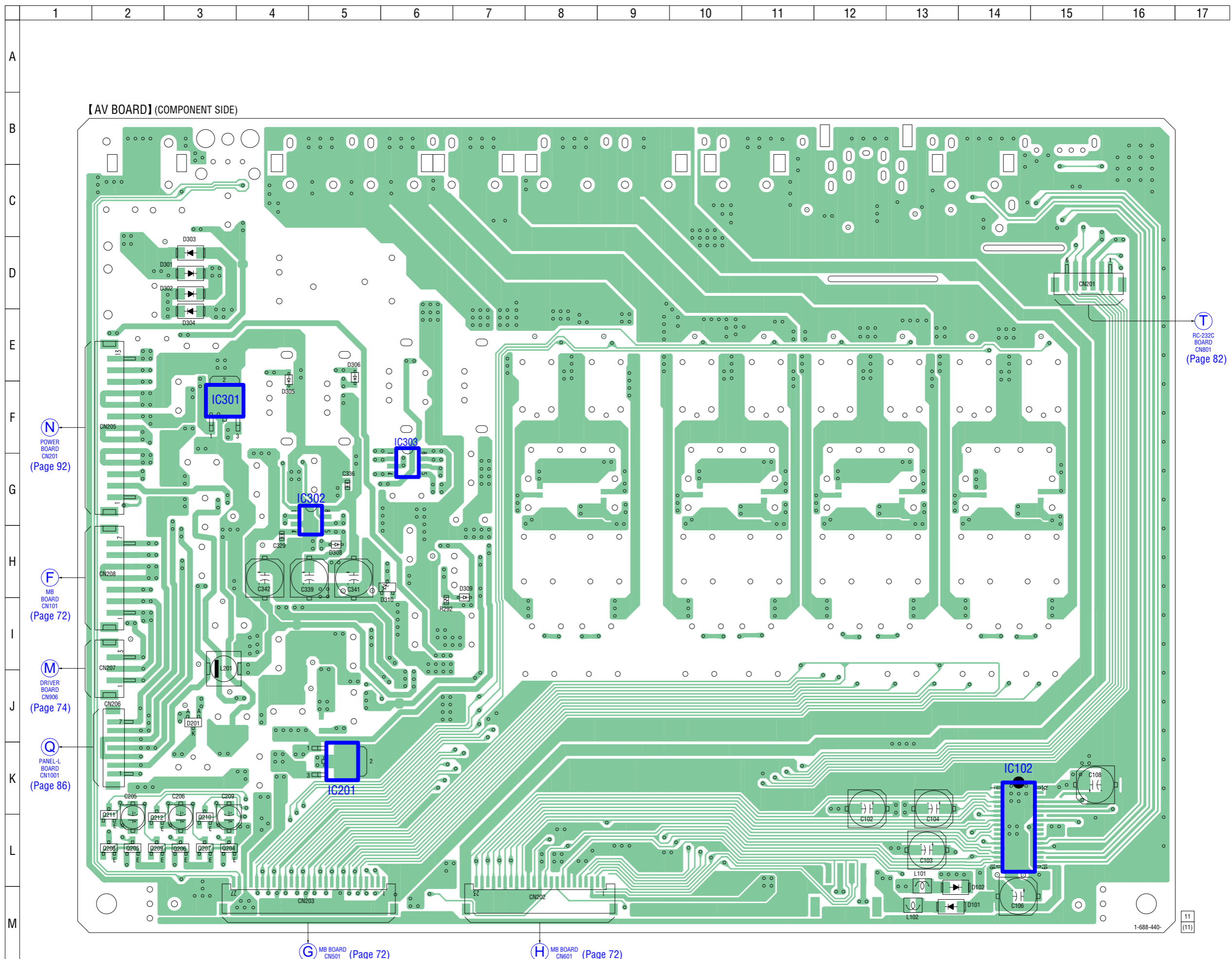
7-29. SCHEMATIC DIAGRAM – SENSOR Section –




7-30. PRINTED WIRING BOARD – AV Board (Component Side) – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.

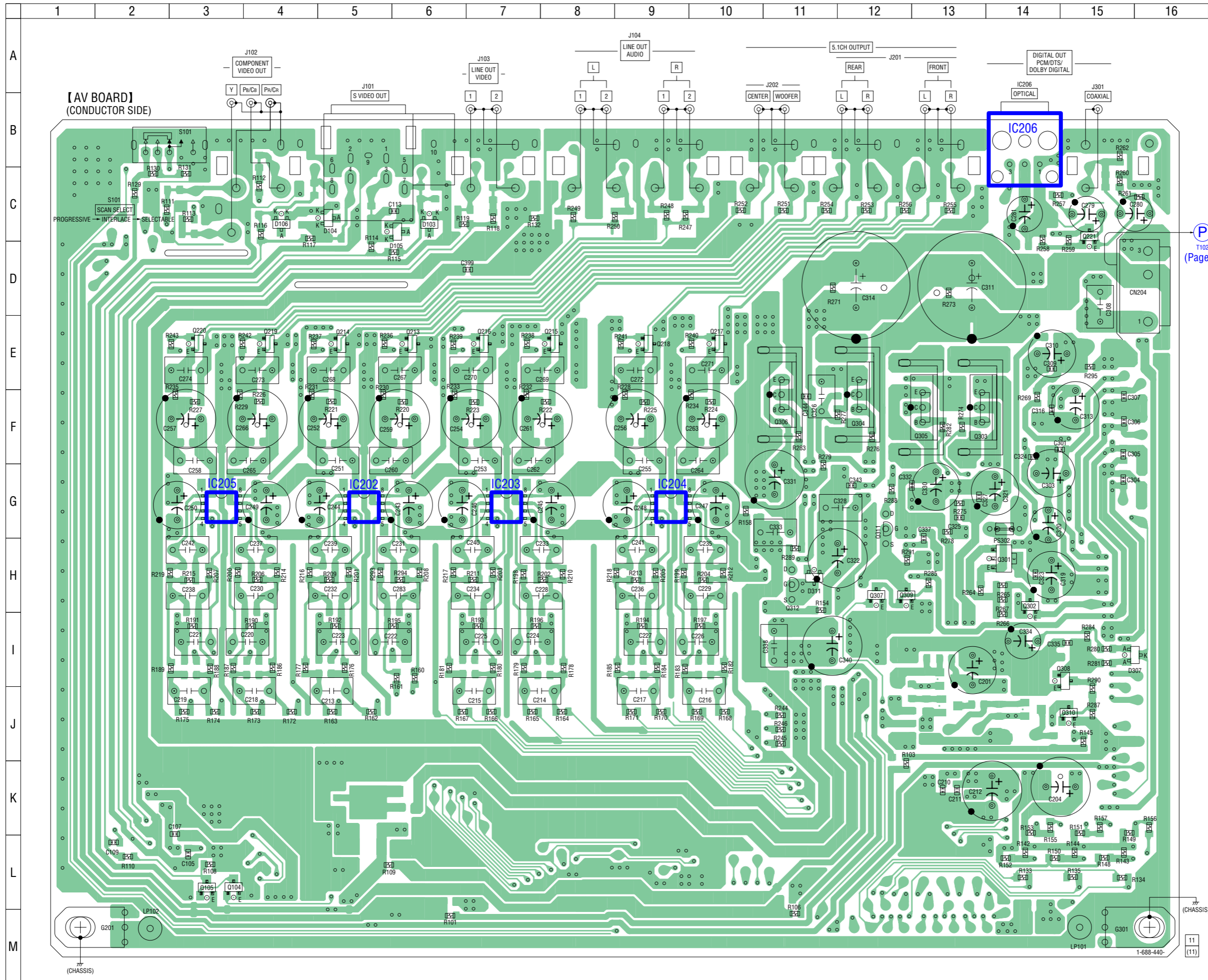
• Semiconductor Location

Ref. No.	Location
D101	M-13
D102	M-13
D201	J-3
D301	D-3
D302	D-3
D303	D-3
D304	E-3
D305	E-4
D306	E-5
D308	H-5
D309	H-7
D310	H-6
IC102	L-14
IC201	K-5
IC301	F-3
IC302	G-5
IC303	G-6
Q204	L-3
Q205	L-2
Q206	L-3
Q207	L-3
Q208	L-2
Q209	L-2
Q210	L-3
Q211	L-2
Q212	L-2






7-31. PRINTED WIRING BOARD – AV Board (Conductor Side) – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.

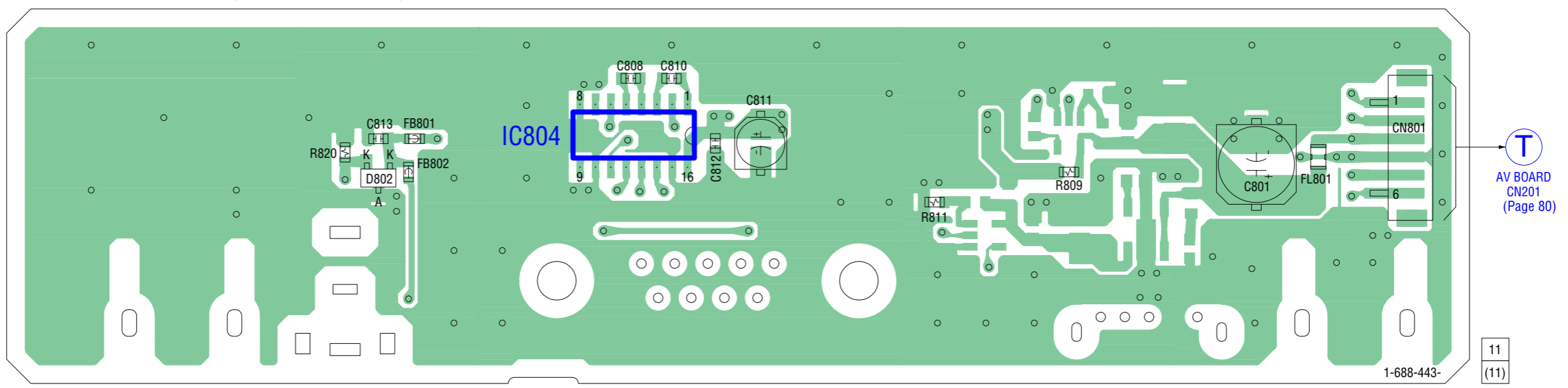


• Semiconductor Location

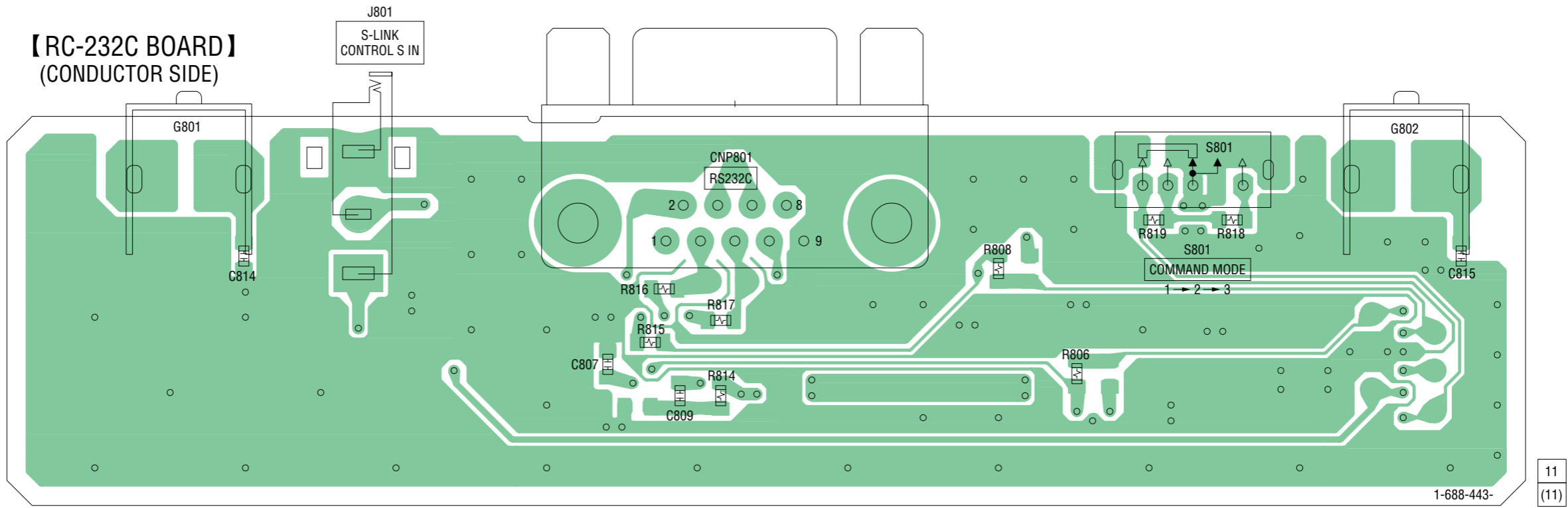
Ref. No.	Location
D103	C-6
D104	C-5
D105	C-6
D106	C-4
D307	I-16
D311	H-11
IC202	G-5
IC203	G-7
IC204	G-9
IC205	G-3
IC206	B-14
Q104	L-3
Q105	L-3
Q213	E-6
Q214	E-5
Q215	E-8
Q216	E-7
Q217	E-10
Q218	E-9
Q219	E-4
Q220	E-3
Q221	C-15
Q301	H-14
Q302	H-14
Q303	F-13
Q304	F-12
Q305	F-13
Q306	F-11
Q307	H-12
Q308	I-15
Q309	H-12
Q310	J-15
Q311	G-12
Q312	H-11

7-32. PRINTED WIRING BOARD – RS-232C Board – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.

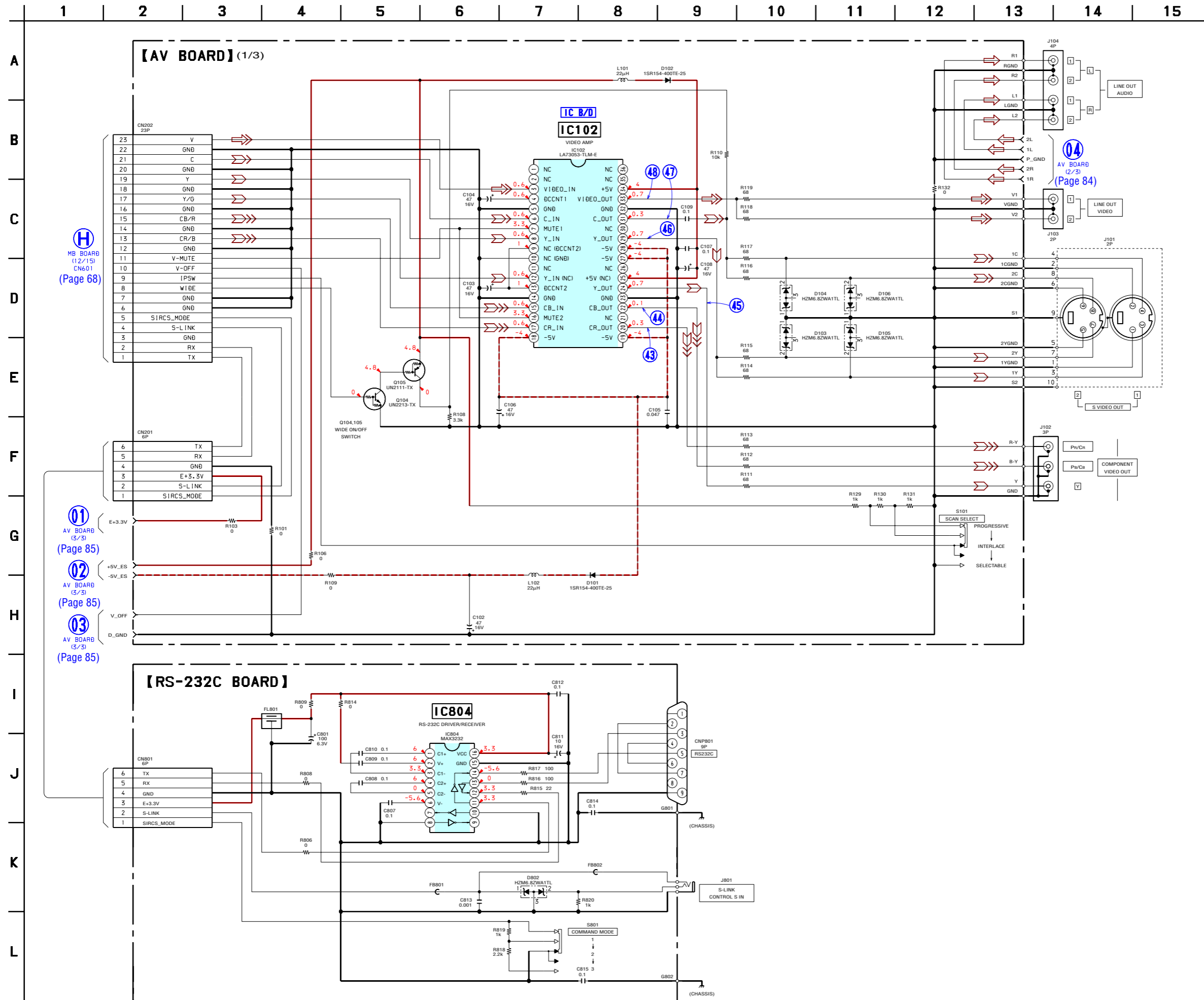
【RC-232C BOARD】(COMPONENT SIDE)



【RC-232C BOARD】(CONDUCTOR SIDE)

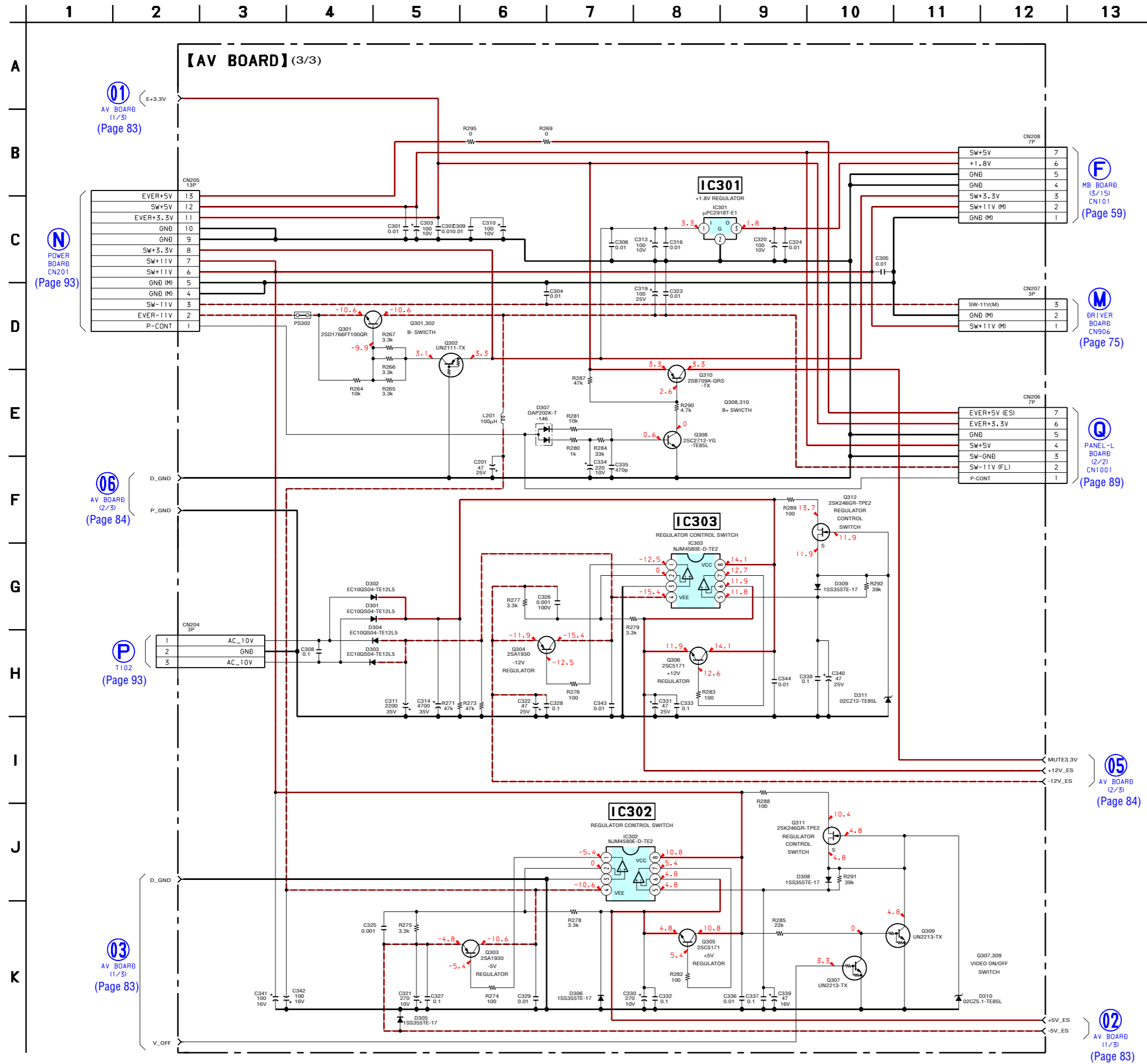


7-33. SCHEMATIC DIAGRAM – AV (1/3)/RS-232C Boards – • See page 94 for Waveforms. • See page 98 for IC Block Diagram.






7-35. SCHEMATIC DIAGRAM – AV Board (3/3) –

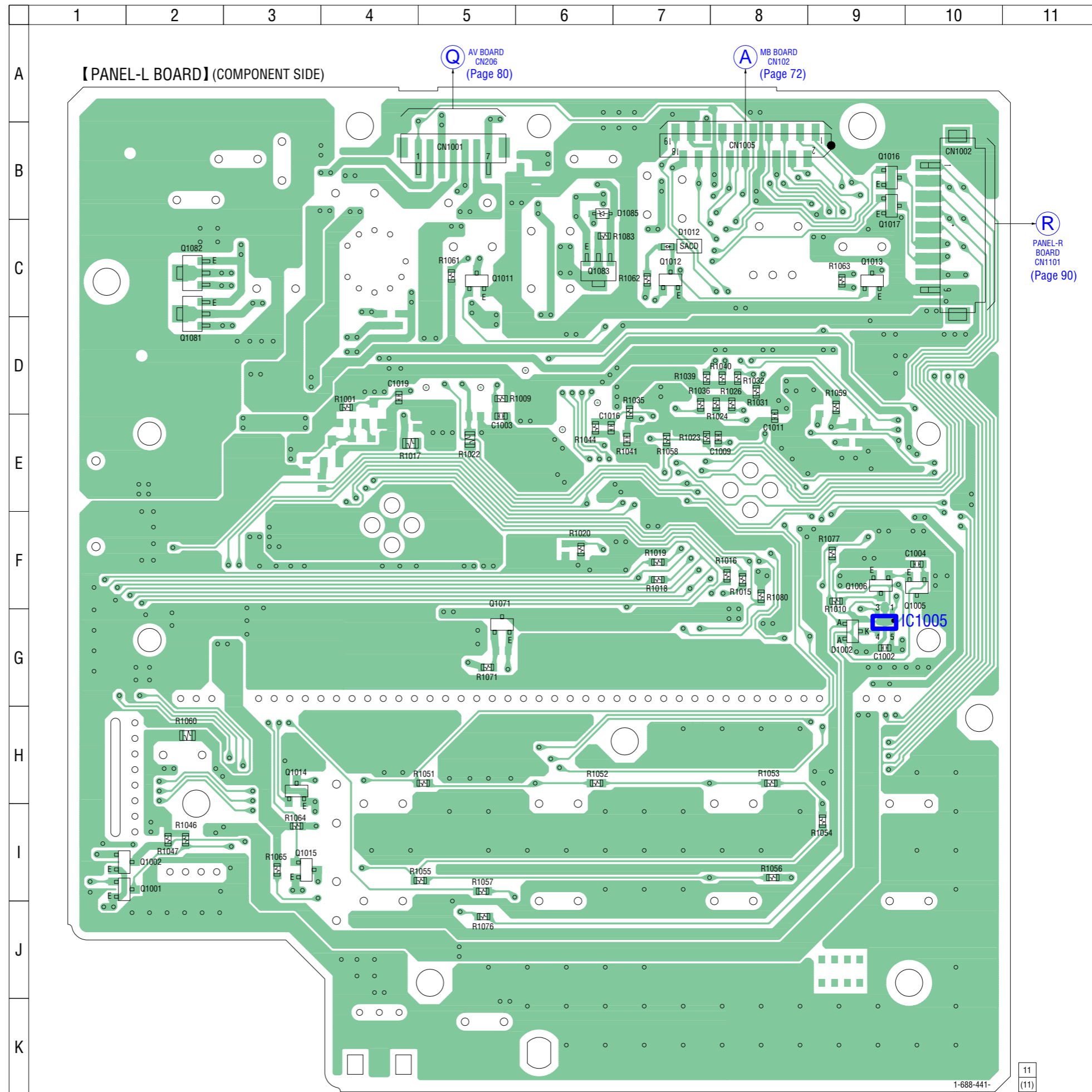





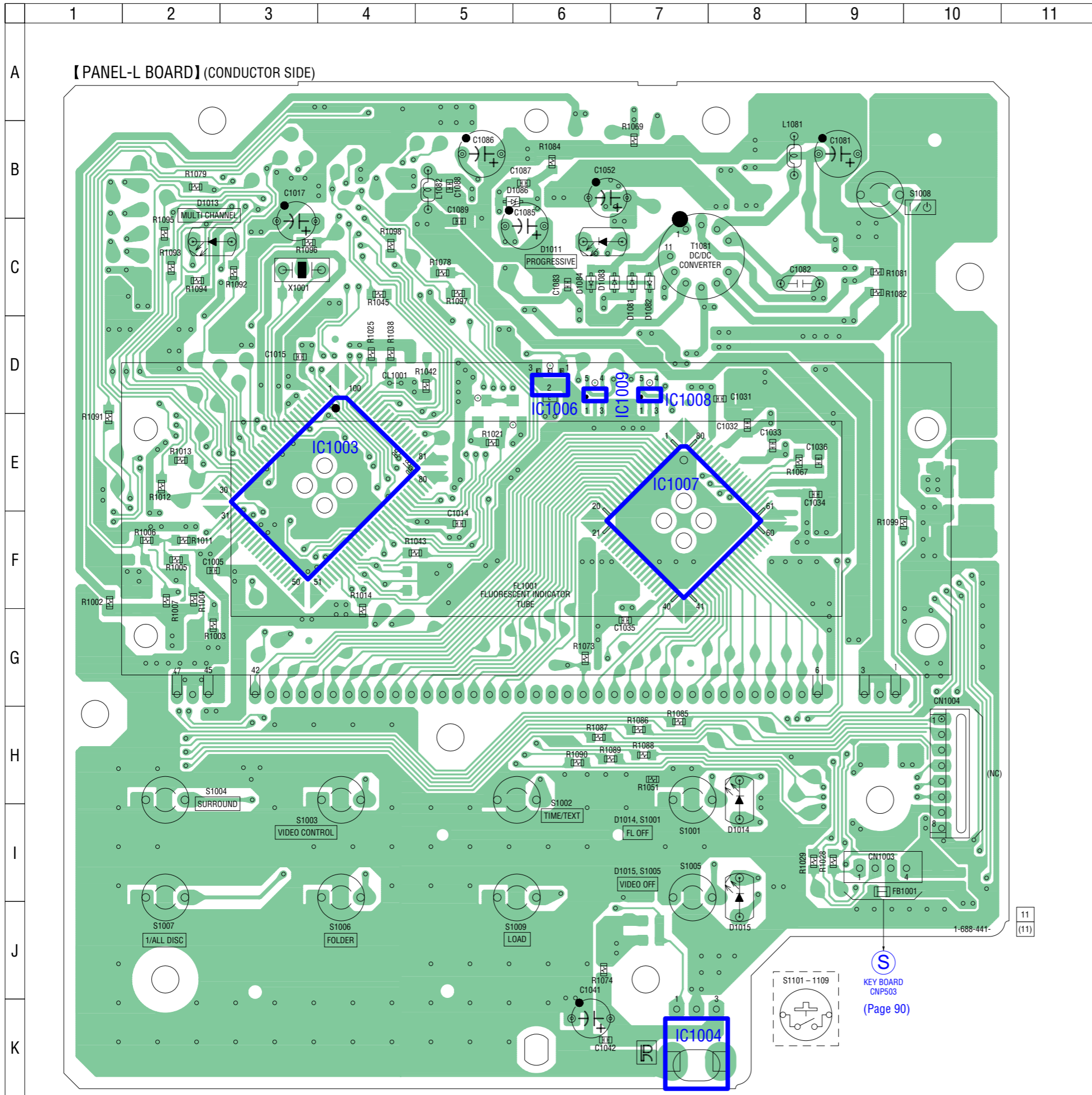
7-36. PRINTED WIRING BOARD – PANEL-L Board (Component Side) – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D1002	G-9
D1012	C-7
D1085	B-6
IC1005	G-9
Q1001	I-1
Q1002	I-1
Q1005	F-10
Q1006	F-9
Q1011	C-5
Q1012	C-7
Q1013	C-9
Q1014	H-3
Q1015	I-3
Q1016	B-9
Q1017	B-9
Q1071	G-5
Q1081	C-2
Q1082	C-2
Q1083	C-6



7-37. PRINTED WIRING BOARD – PANEL-L Board (Conductor Side) – • See page 56 for Circuit Boards Location.  :Uses unleaded solder.



• Semiconductor Location

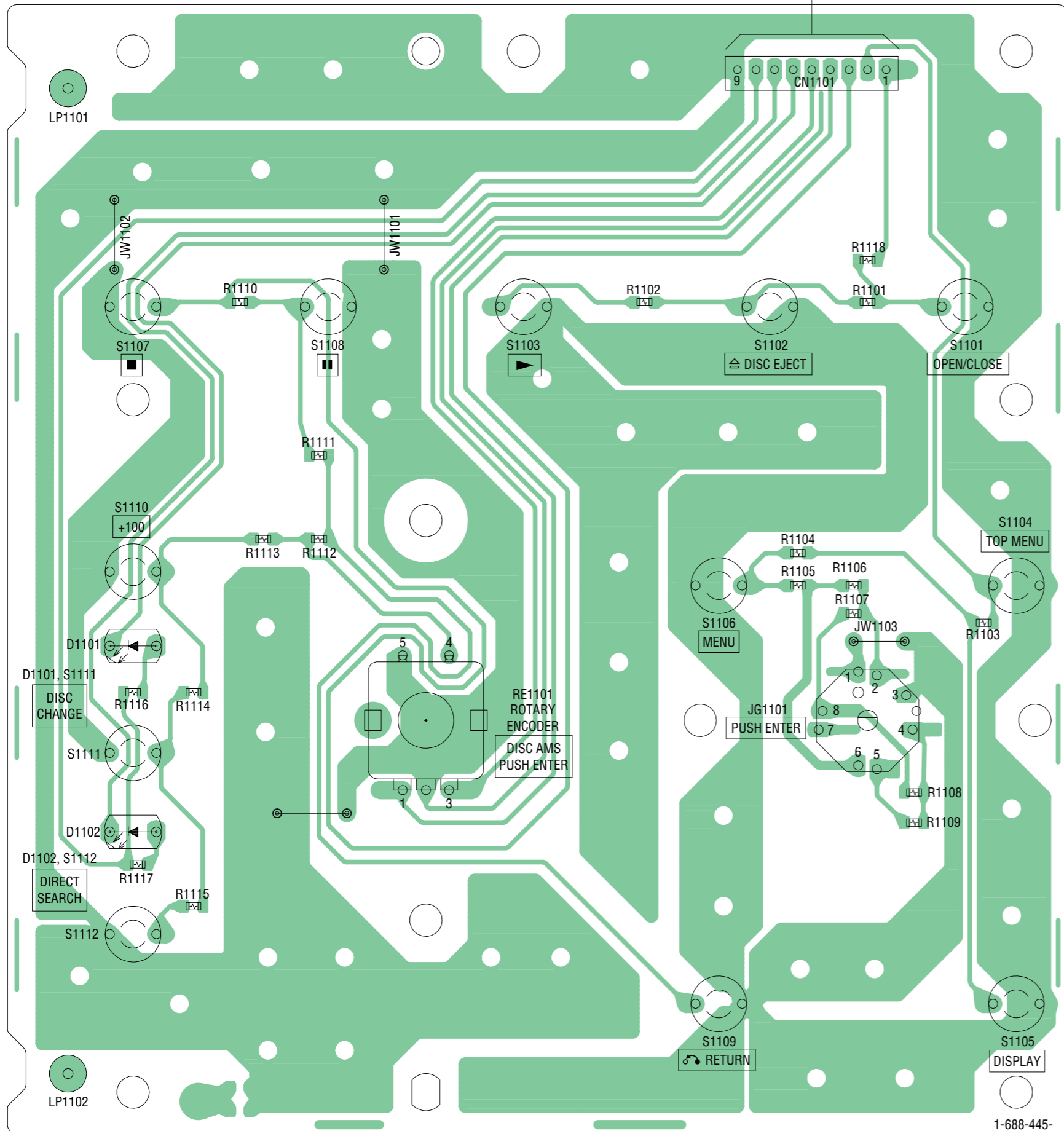
Ref. No.	Location
D1011	C-6
D1013	C-2
D1014	H-8
D1015	I-8
D1081	C-7
D1082	C-7
D1083	C-7
D1084	C-6
D1086	B-6
IC1003	E-4
IC1004	K-7
IC1006	D-6
IC1007	F-7
IC1008	D-7
IC1009	D-6





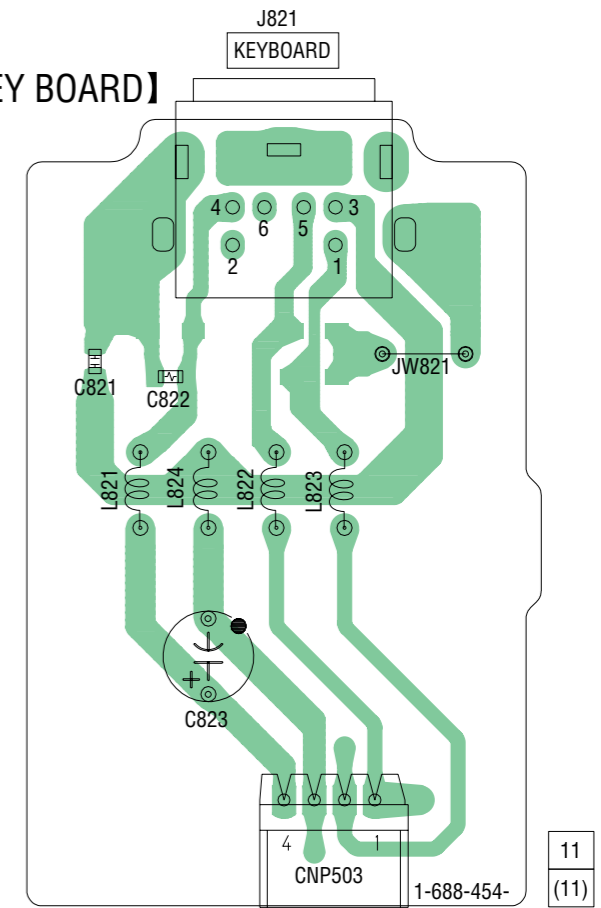



【PANEL-R BOARD】



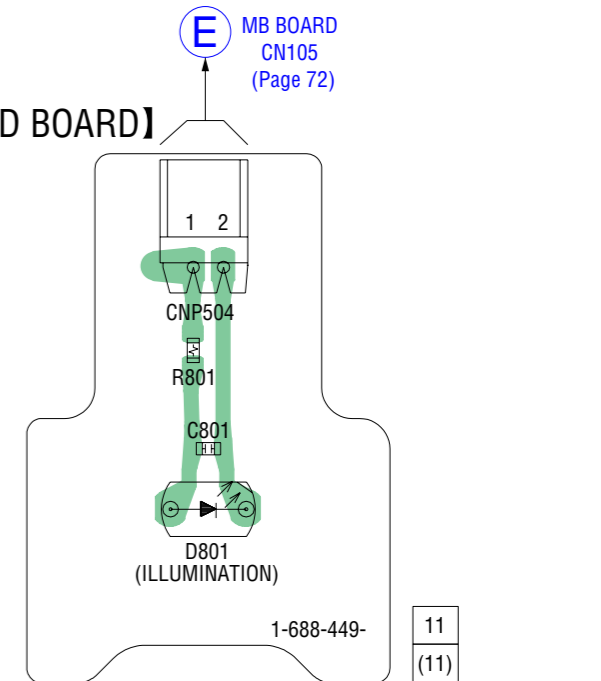
 PANEL-L BOARD  
CN1102  
(Page 86)

【KEY BOARD】

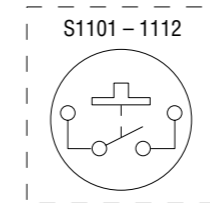


 PANEL-L BOARD  
CN1103  
(Page 87)

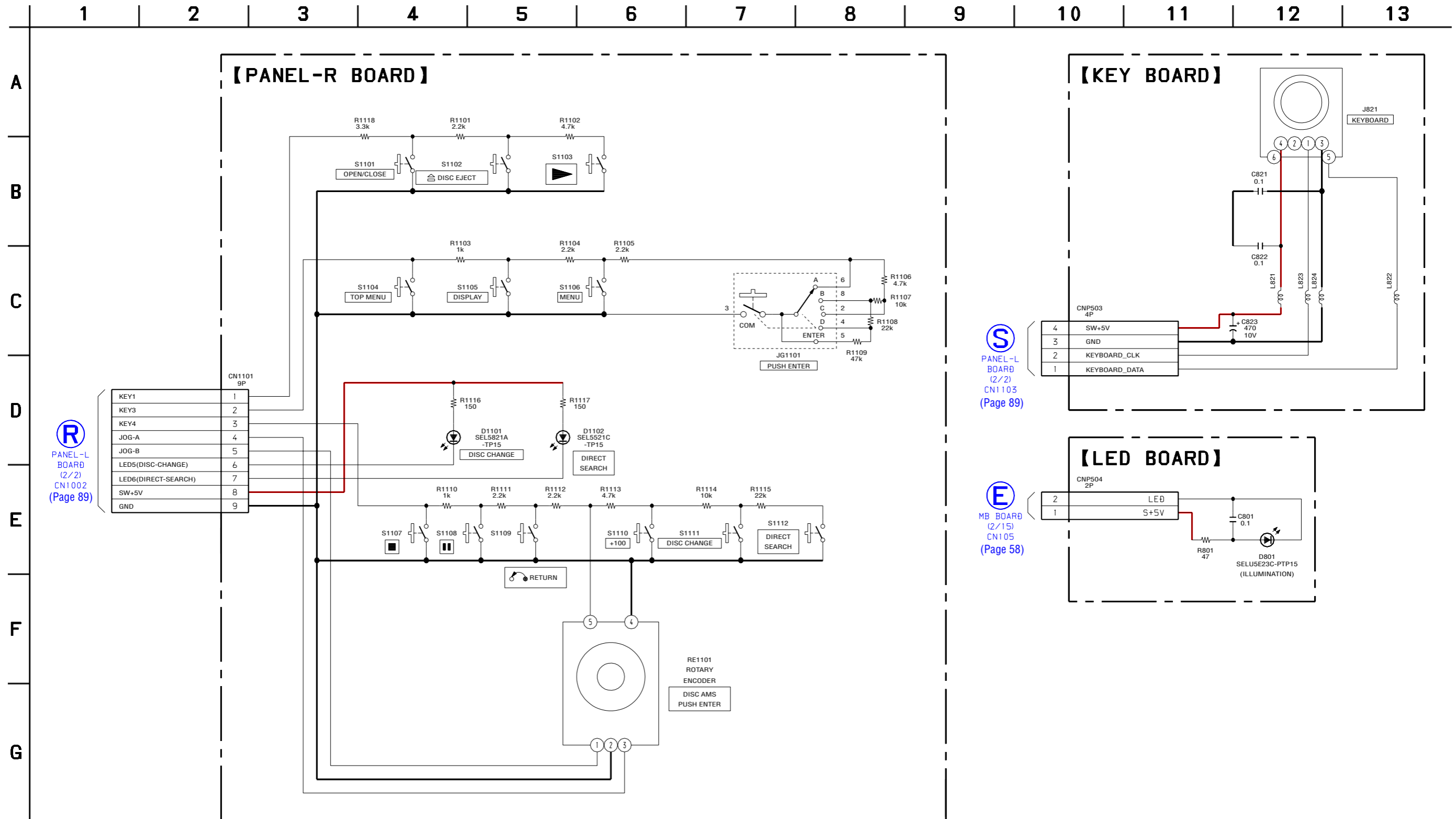
【LED BOARD】



 MB BOARD  
CN1105  
(Page 72)



7-41. SCHEMATIC DIAGRAM – PANEL Section –



**R**  
PANEL-L BOARD (2/2) CN1002 (Page 89)

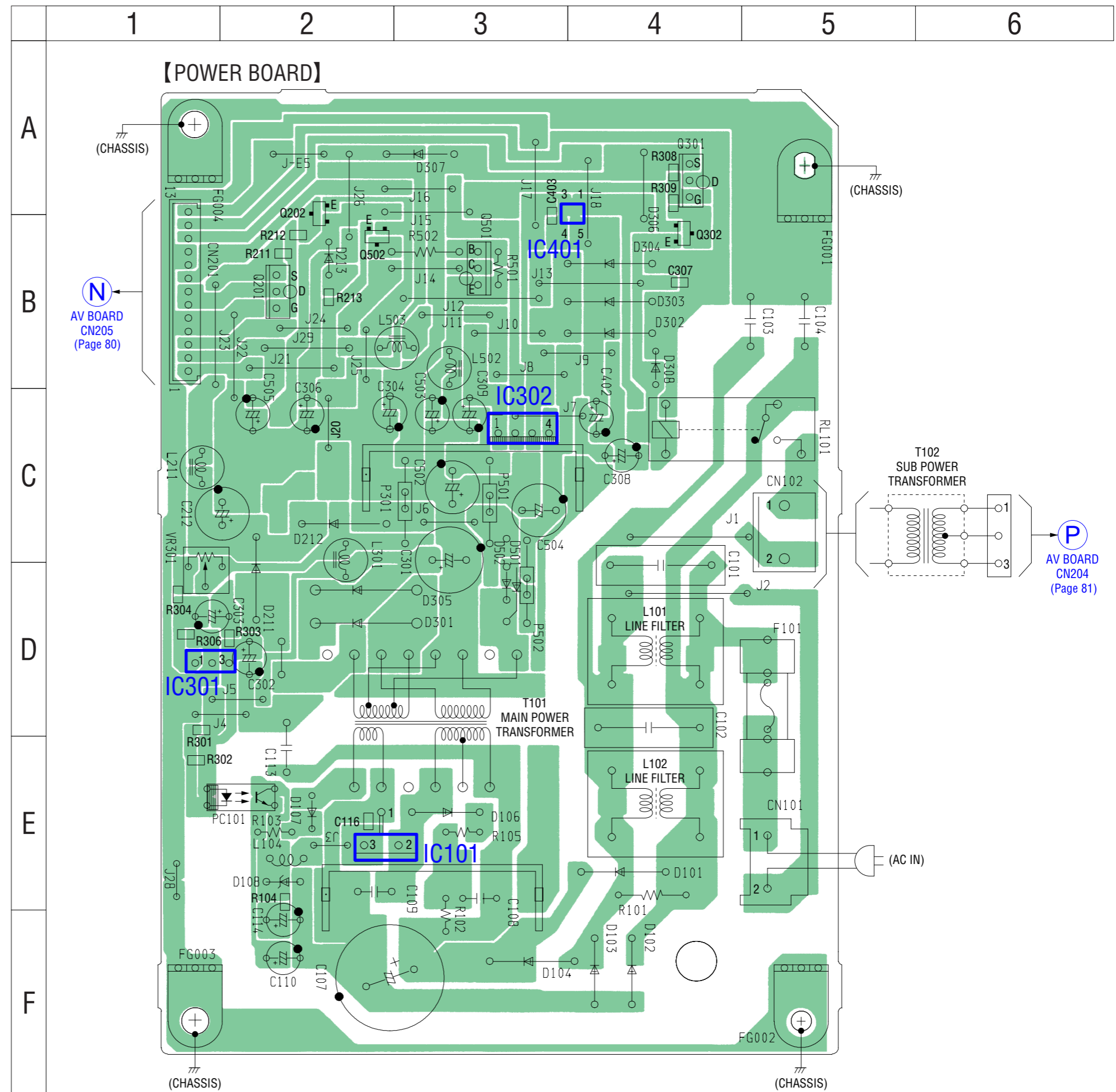
**S**  
PANEL-L BOARD (2/2) CN1103 (Page 89)

**E**  
MB BOARD (2/15) CN105 (Page 58)

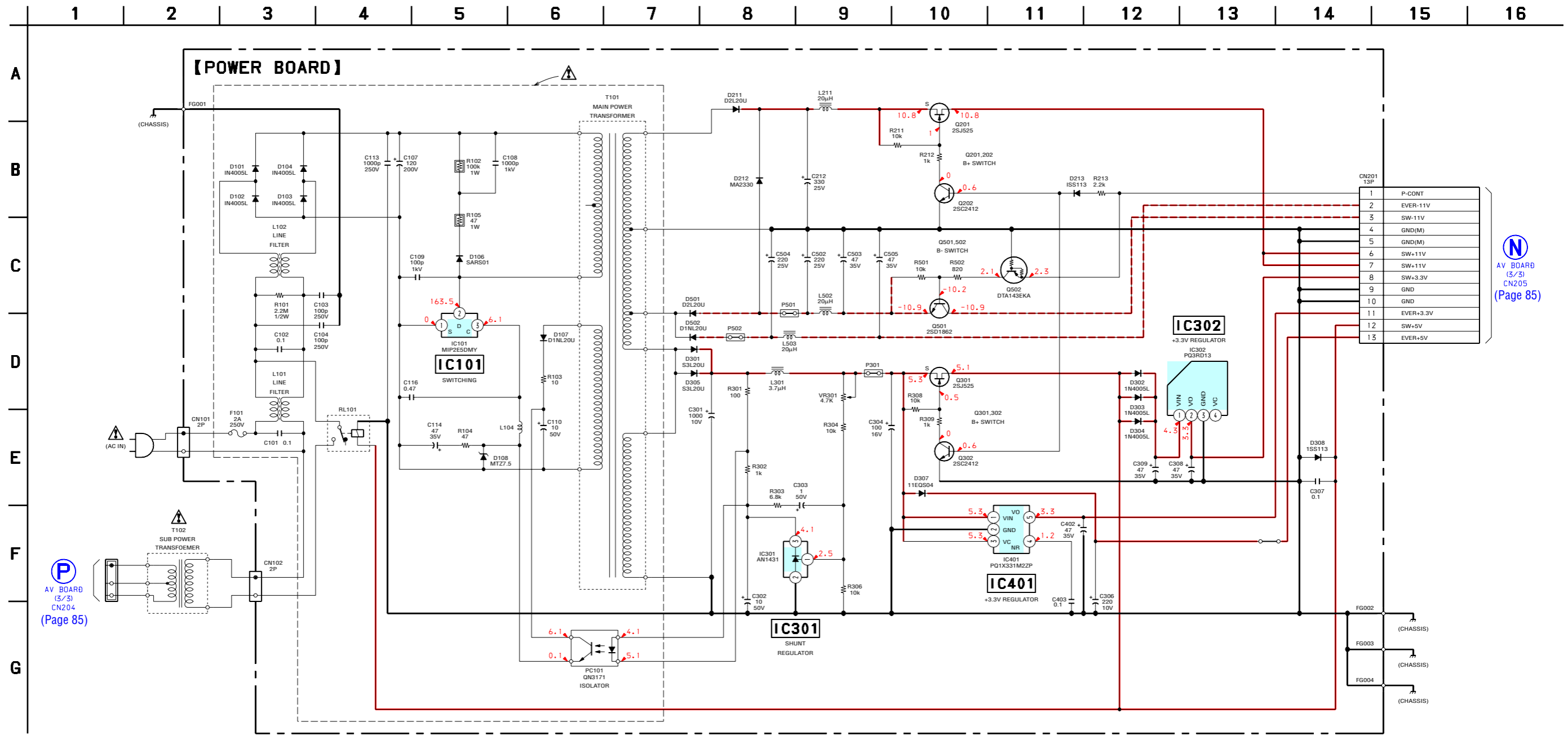
7-42. PRINTED WIRING BOARD – POWER Board – • See page 56 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location
D101	E-4
D102	F-4
D103	F-4
D104	F-3
D106	E-3
D107	E-2
D108	E-2
D211	D-2
D212	C-2
D213	B-2
D301	D-2
D302	B-4
D303	B-4
D304	B-4
D305	D-2
D307	A-3
D308	B-4
D501	D-3
D502	D-3
IC101	E-2
IC301	D-1
IC302	C-3
IC401	A-4
PC101	E-2
Q201	B-2
Q202	B-2
Q301	A-4
Q302	B-4
Q501	B-3
Q502	B-2



7-43. SCHEMATIC DIAGRAM – POWER Board –

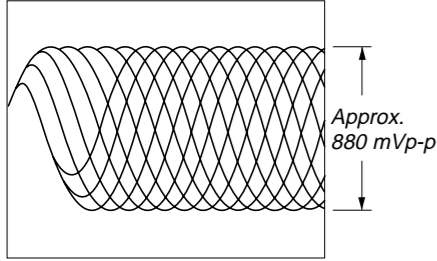


The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

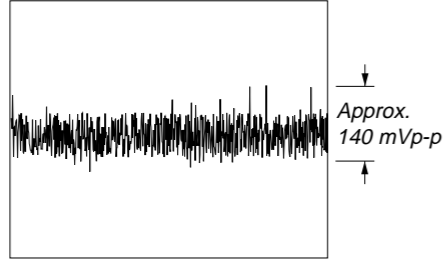
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Waveforms  
– MB Board –

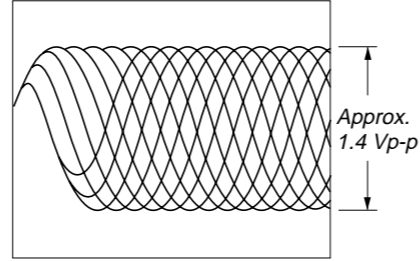
① IC201 ① (RFIP) (DVD Play Mode)



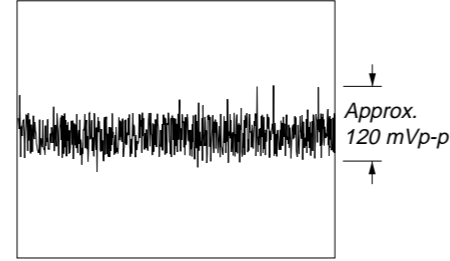
③ IC201 ② (FE) (DVD Play Mode)



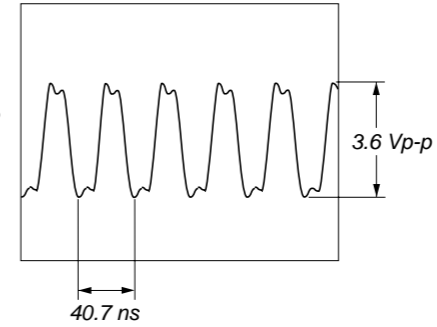
⑤ IC301 ⑩ (RFIN1) (DVD Play Mode)



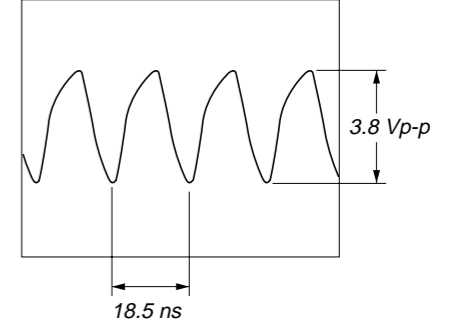
⑥ IC301 ⑪ (ADC1) (DVD Play Mode)



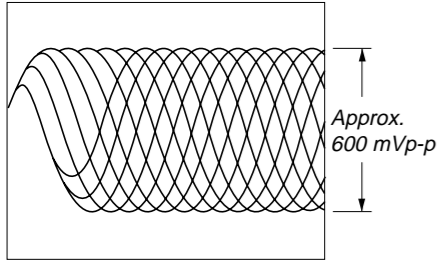
⑫ IC103 ⑨ (512-2OUT), ⑩ (512-1OUT) (DVD Play Mode)



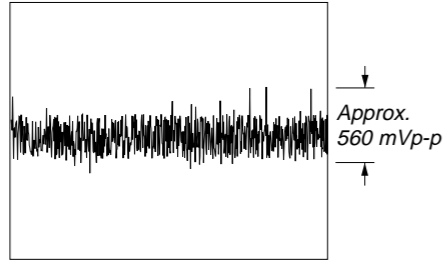
⑬ IC602 ⑮ (MCLK)



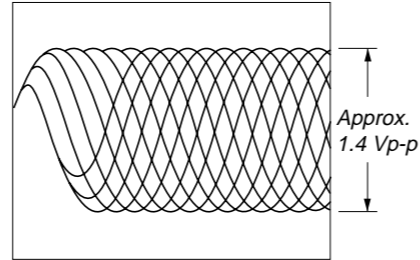
① IC201 ① (RFIP) (CD Play Mode)



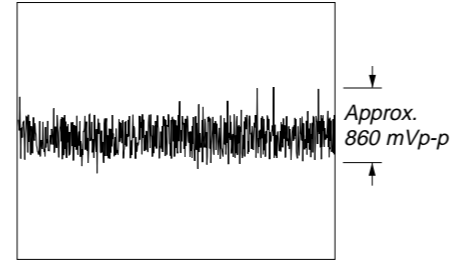
③ IC201 ② (FE) (CD Play Mode)



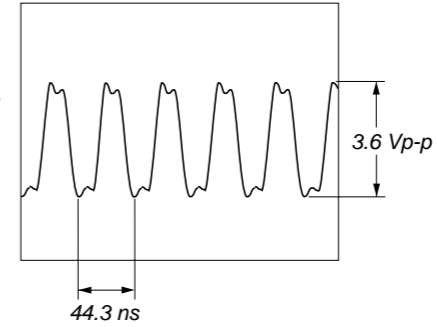
⑤ IC301 ⑩ (RFIN2) (CD Play Mode)



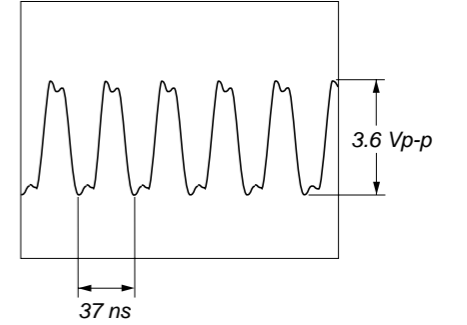
⑥ IC301 ⑪ (ADC1) (CD Play Mode)



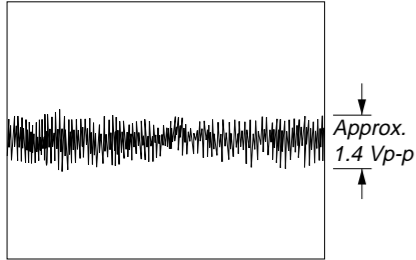
⑫ IC103 ⑨ (512-2OUT), ⑩ (512-1OUT) (CD Play Mode)



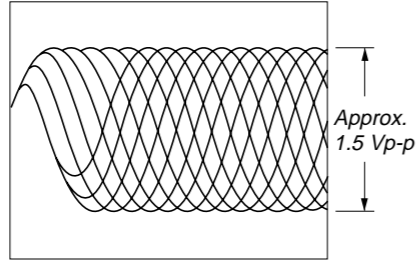
⑬ IC604 ⑳ (CLKIN)



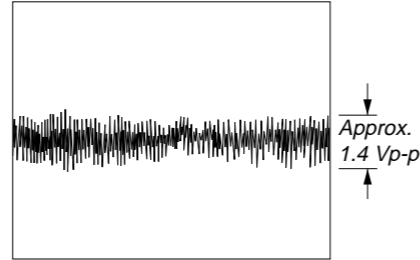
② IC201 ④ (TE) (DVD Play Mode)



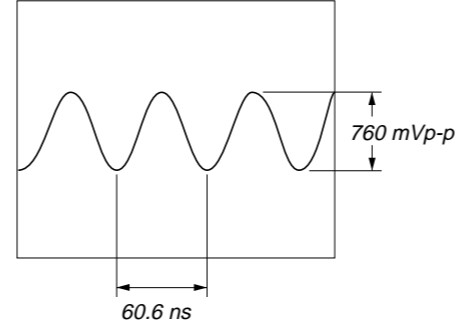
④ IC201 ⑤ (SIGO) (DVD Play Mode)



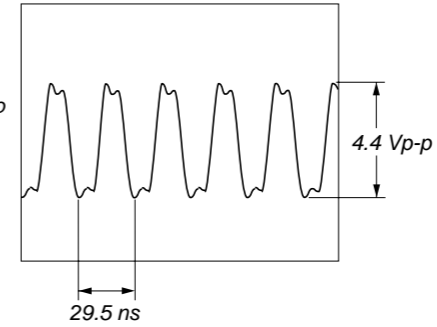
⑦ IC301 ⑫ (ADC0) (DVD Play Mode)



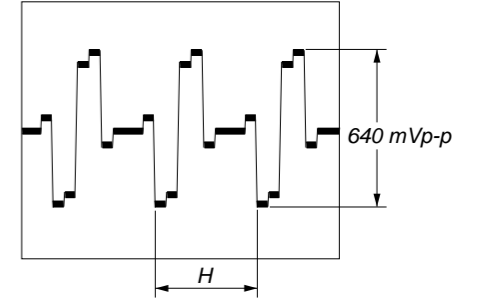
⑧ IC104 ⑬ (X1)



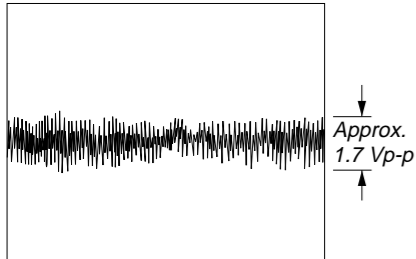
⑬ IC103 ⑬ (33-2OUT), ⑭ (33-1OUT)



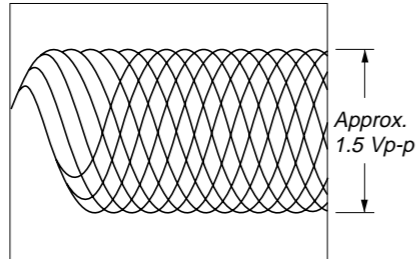
⑭ IC604 ⑳ (CR/B) (Color Bars Play Mode)



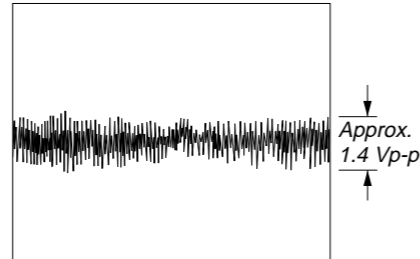
② IC201 ④ (TE) (CD Play Mode)



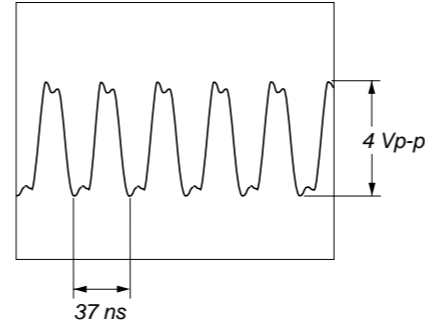
④ IC201 ⑤ (SIGO) (CD Play Mode)



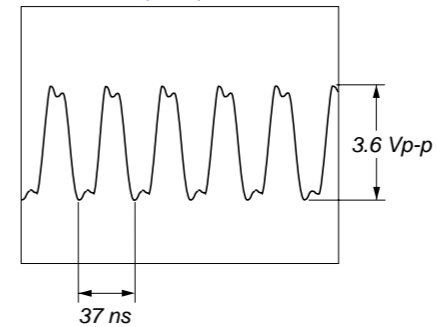
⑦ IC301 ⑫ (ADC0) (CD Play Mode)



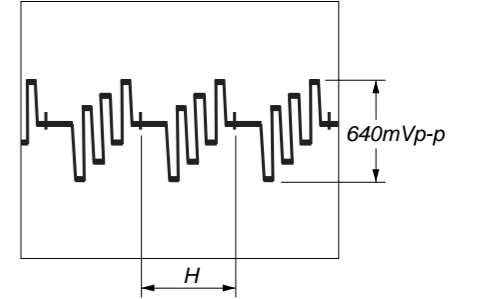
⑩ IC103 ③ (27-1OUT), ④ (27-2OUT)



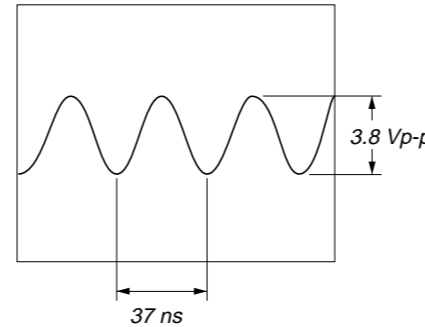
⑭ IC602 ② (CLKI)



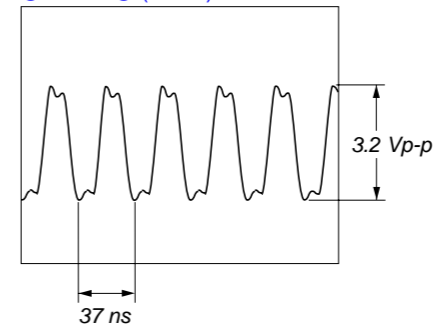
⑮ IC604 ⑳ (CB/R) (Color Bars Play Mode)



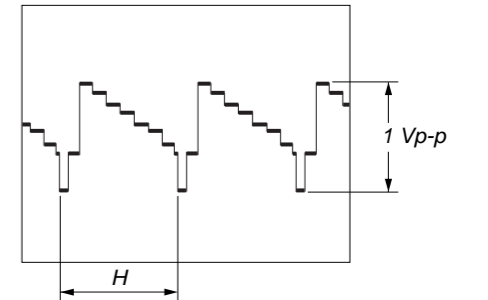
⑪ IC103 ⑧ (XTO)



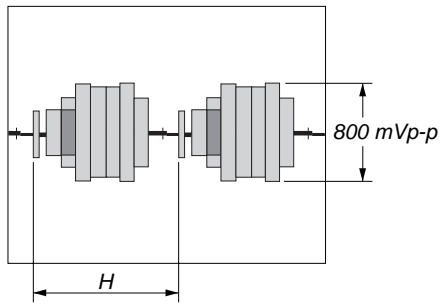
⑮ IC602 ④ (CLKO)



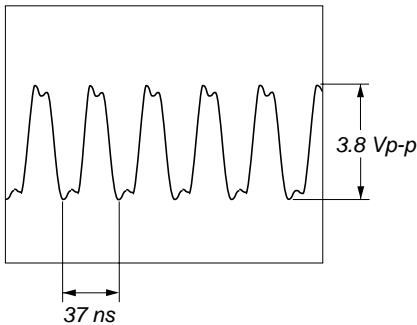
⑯ IC604 ⑳ (Y/G) (Color Bars Play Mode)



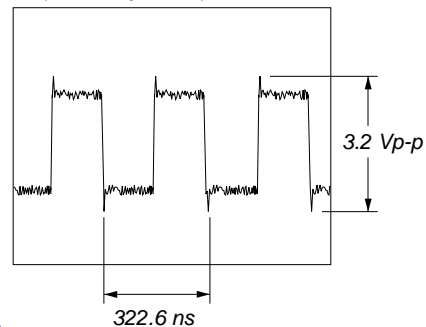
⑳ IC604 ㉔ (C) Color Bars Play Mode



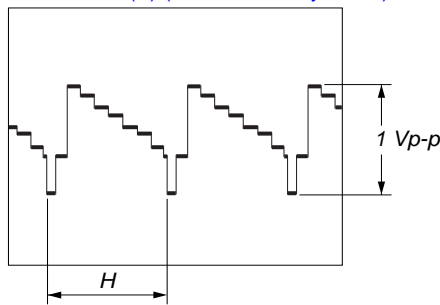
㉕ IC501 ㉔ (SCLKI)



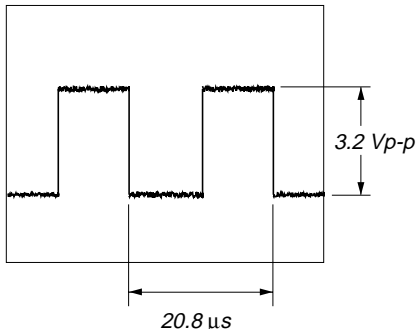
㉘ IC501 ㉙ (DSP2BCKI), ㉚ (DSP1BCKI) (DVD Play Mode)



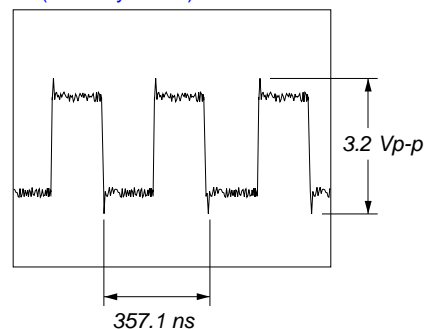
㉑ IC604 ㉓ (Y) (Color Bars Play Mode)



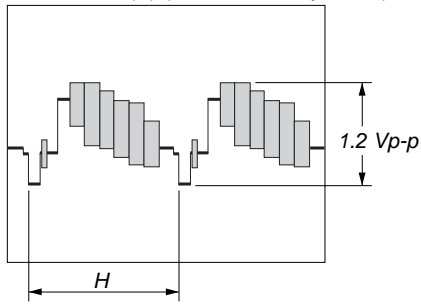
㉖ IC501 ㉔ (DSP2LRCKO) (DVD Play Mode)



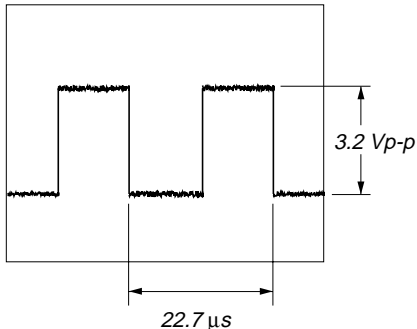
㉘ IC501 ㉙ (DSP2BCKI), ㉚ (DSP1BCKI) (CD Play Mode)



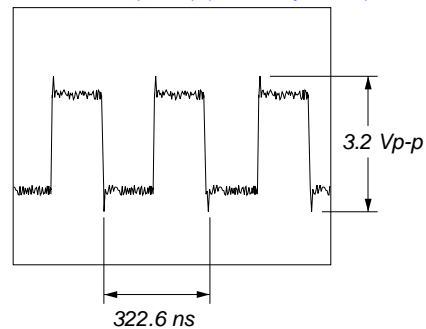
㉒ IC604 ㉔ (V) (Color Bars Play Mode)



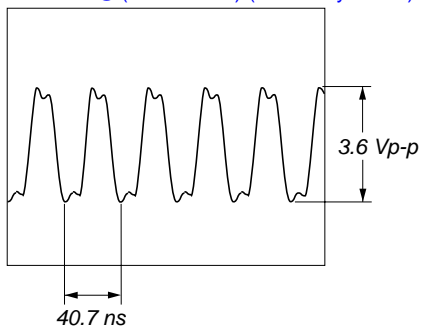
㉖ IC501 ㉔ (DSP2LRCKO) (CD Play Mode)



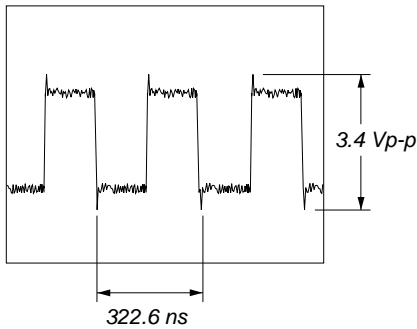
㉙ IC502 ㉙ (BICK) (DVD Play Mode)



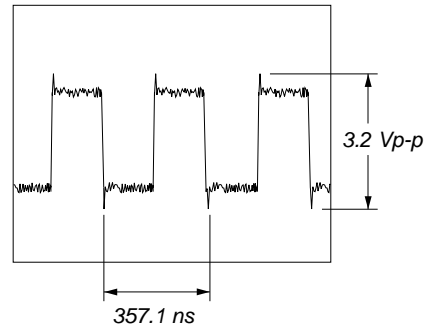
㉔ IC501 ㉘ (DSP1DIACKI), ㉙ (DSP2DIACKI), ㉚ (DSP2ACKI), ㉛ (DSP1ACKI) (DVD Play Mode)



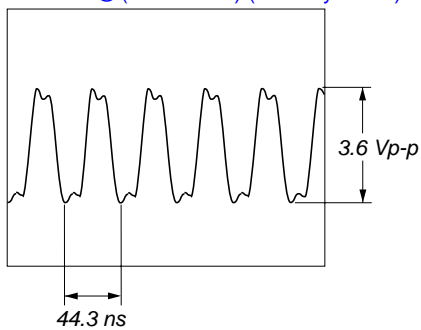
㉗ IC501 ㉓ (DSP2BCKO) (DVD Play Mode)



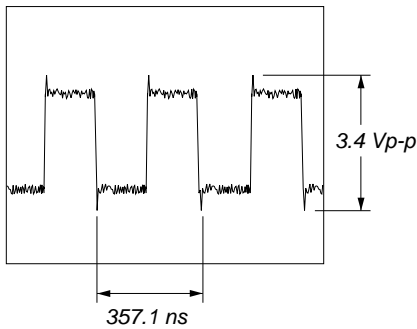
㉙ IC502 ㉙ (BICK) (CD Play Mode)



㉔ IC501 ㉘ (DSP1DIACKI), ㉙ (DSP2DIACKI), ㉚ (DSP2ACKI), ㉛ (DSP1ACKI) (CD Play Mode)

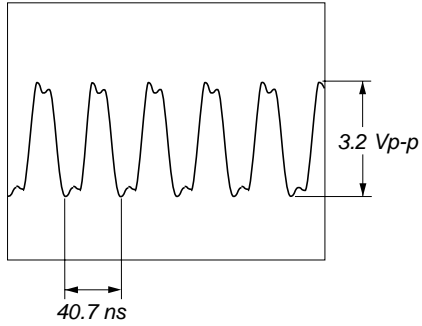


㉗ IC501 ㉓ (DSP2BCKO) (CD Play Mode)

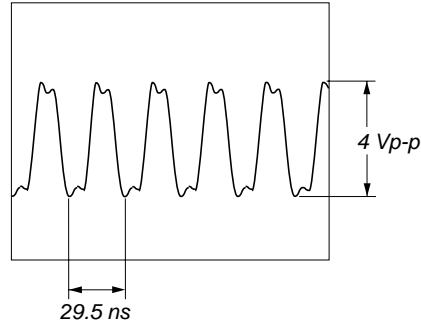




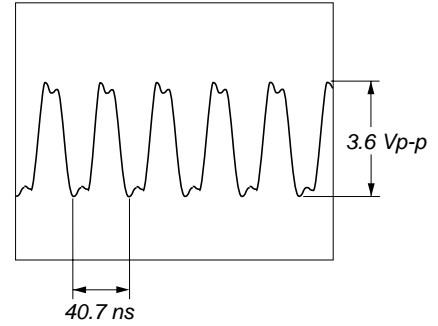
⑩ IC502 ⑩ (MCLK) (DVD Play Mode)



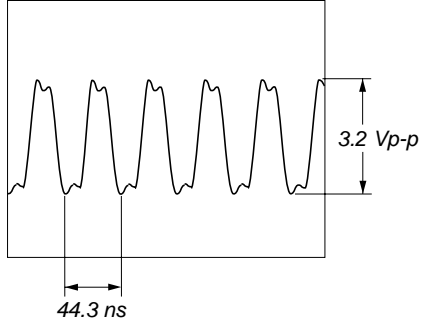
⑪ IC905 ⑪ (MCKI)



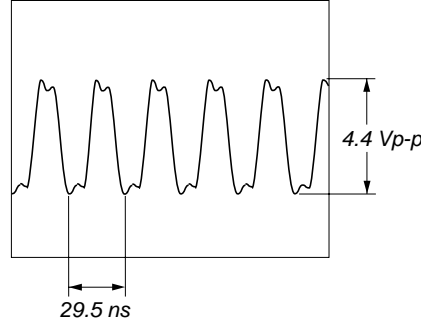
⑮ IC801 ⑮ (CKE) (DVD Play Mode)



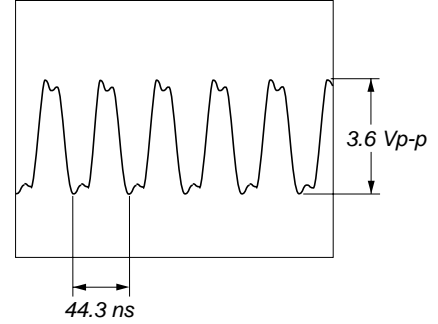
⑩ IC502 ⑩ (MCLK) (CD Play Mode)



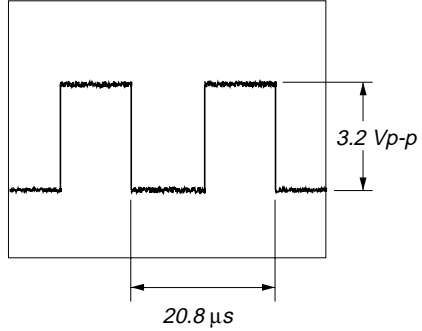
⑭ IC905 ⑭ (DCLK)



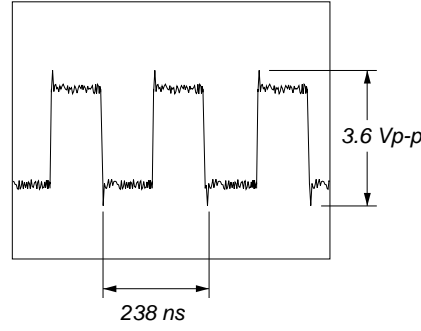
⑮ IC801 ⑮ (CKE) (CD Play Mode)



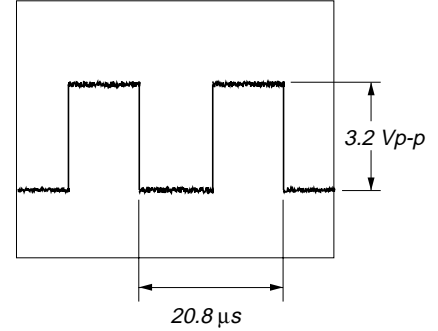
⑰ IC502 ⑰ (LRCK) (DVD Play Mode)



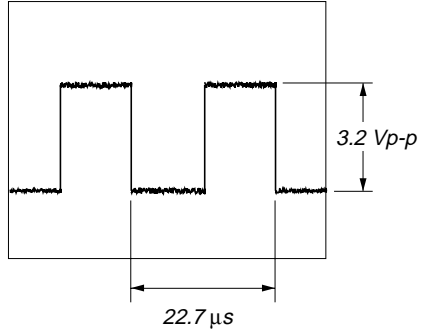
⑯ IC905 ⑯ (SDCK)



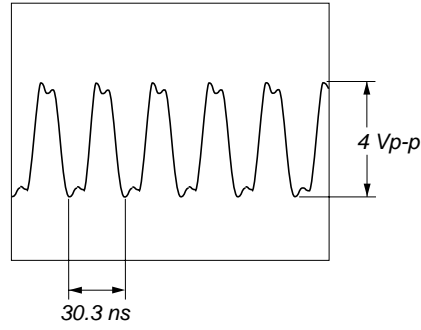
⑲ IC801 ⑲ (LRCKI) (DVD Play Mode)



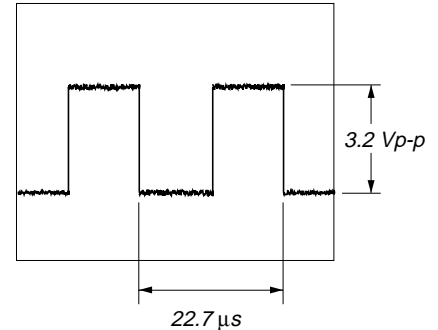
⑰ IC502 ⑰ (LRCK) (CD Play Mode)



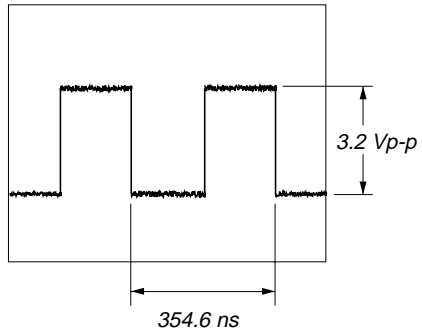
⑳ IC701 ⑳ (CPUCK)



⑲ IC801 ⑲ (LRCKI) (CD Play Mode)

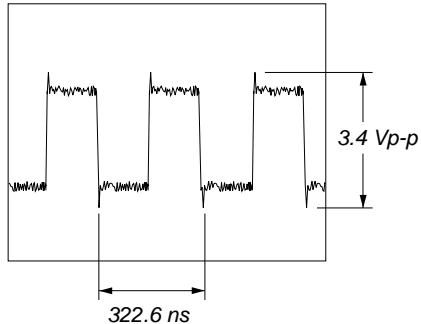


㉑ IC502 ㉑ (DCLK)

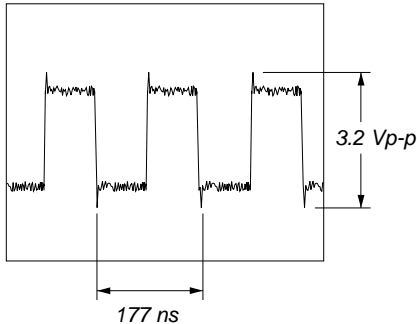




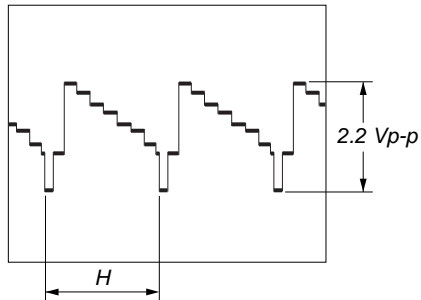
③⑨ IC801 ⑥① (BCKI) (DVD Play Mode)



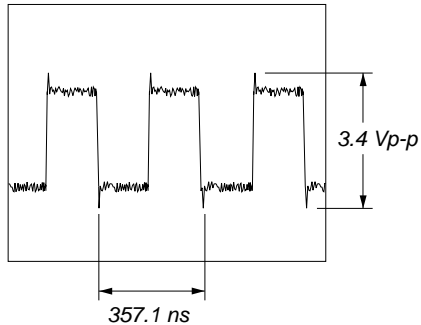
④② IC801 ⑥① (BCKAI)



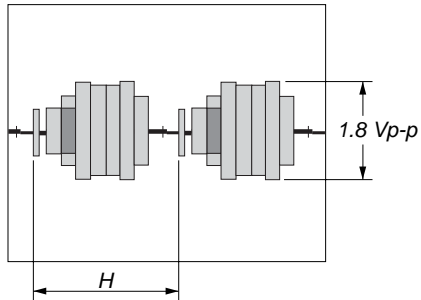
④⑥ IC102 ②⑨ (Y\_OUT) (Color Bars Play Mode)



③⑨ IC801 ⑥① (BCKI) (CD Play Mode)

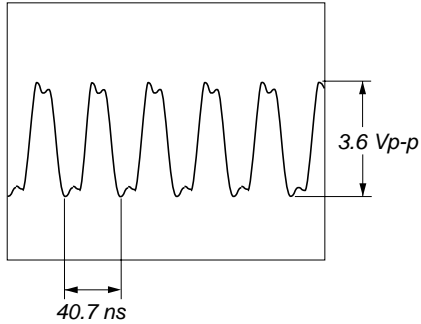


④⑦ IC102 ③① (C\_OUT) (Color Bars Play Mode)

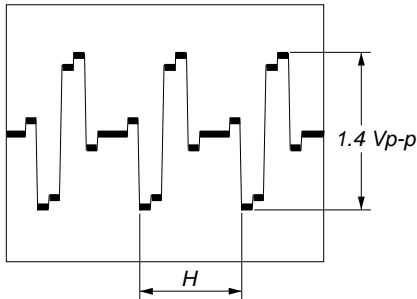


– AV Board –

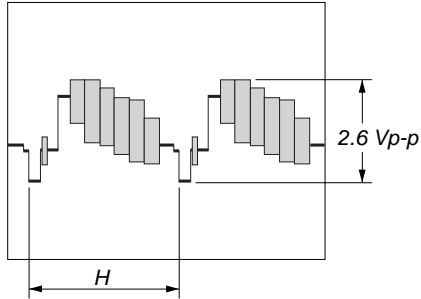
④① IC801 ⑥⑧ (CLK512) (DVD Play Mode)



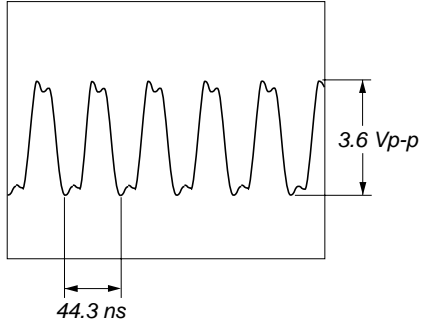
④③ IC102 ②① (CR\_OUT) (Color Bars Play Mode)



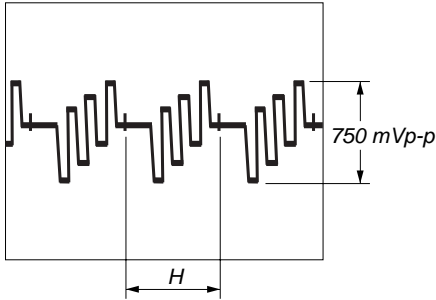
④⑧ IC102 ③③ (VIDEO) (Color Bars Play Mode)



④① IC801 ⑥⑧ (CLK512) (CD Play Mode)

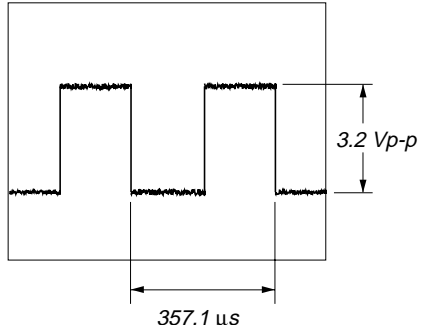


④④ IC102 ②② (CB\_OUT) (Color Bars Play Mode)

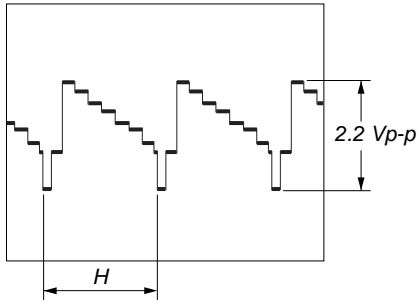


– PANEL-L Board –

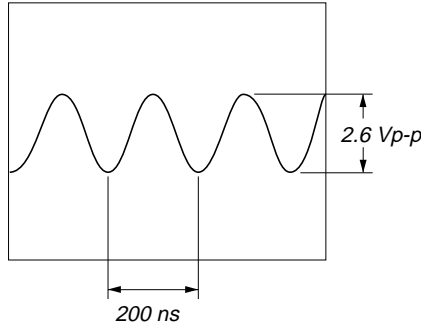
④① IC801 ⑥① (PHAI)



④⑤ IC102 ②④ (Y\_OUT) (Color Bars Play Mode)



④⑨ IC1003 ①⑤ (X2)



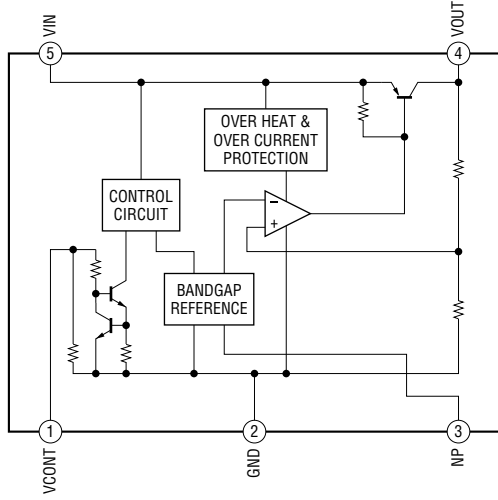
# DVP-CX777ES

## • IC Block Diagrams – MB Board –

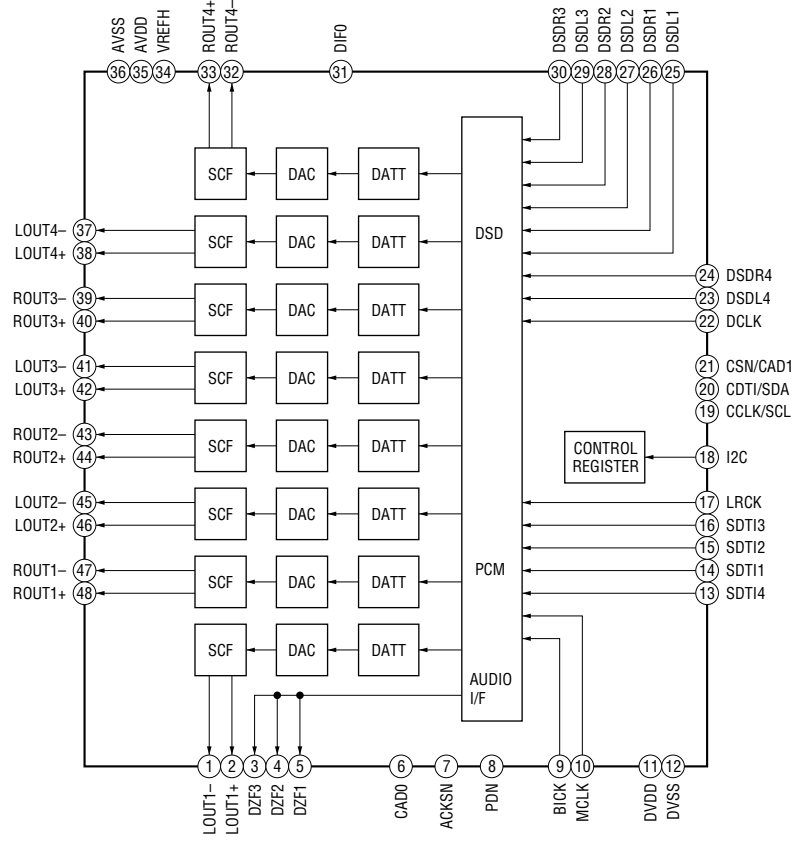
IC102, 302, 803 TK11133CSCL-G

IC401 TK11118CSCL-G

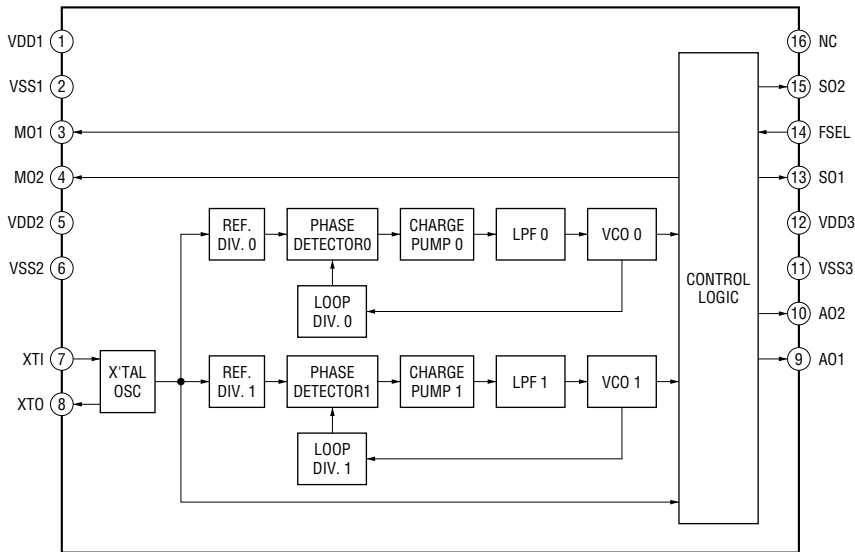
IC601, 605 TK11125CSCL-G



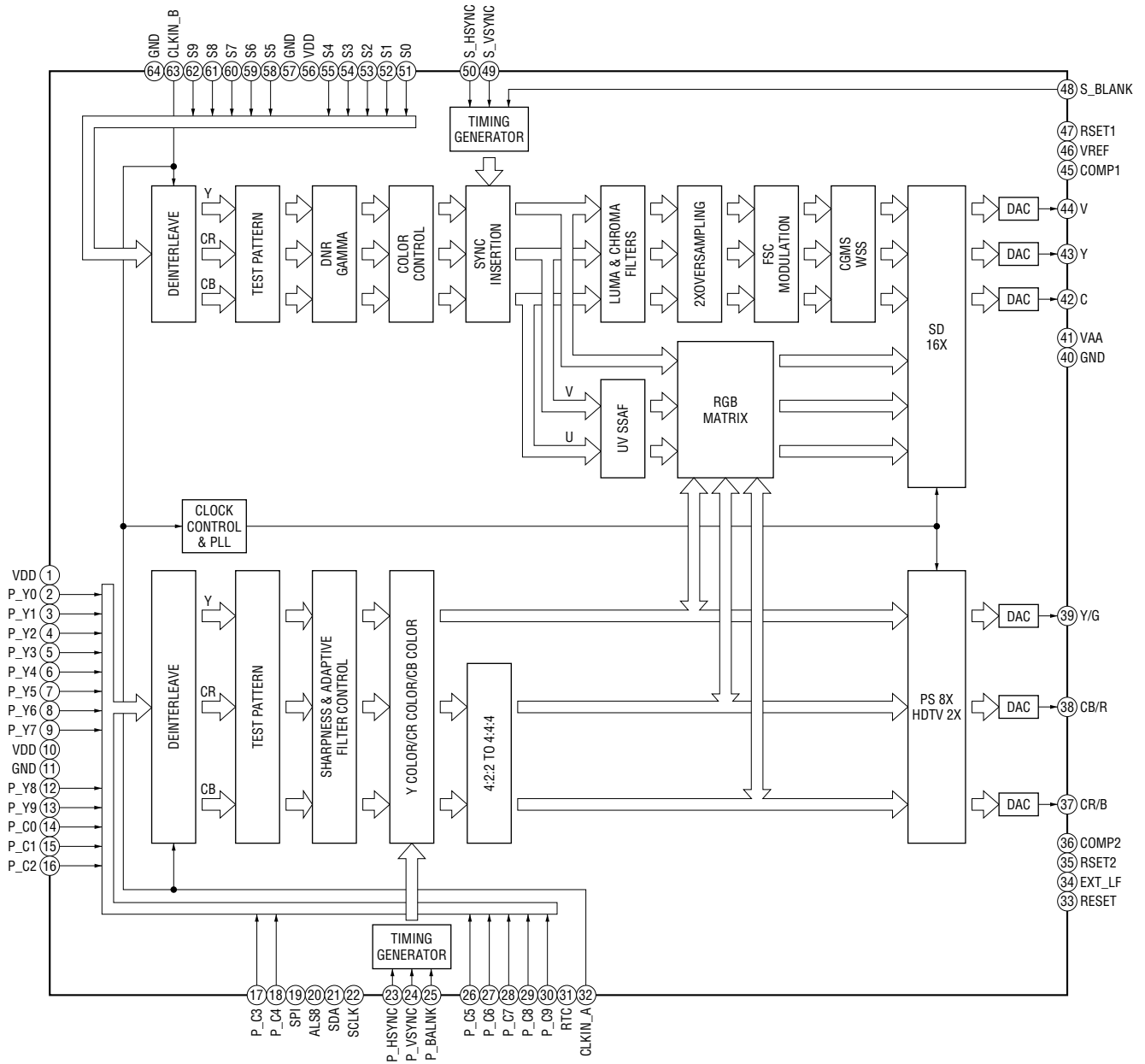
IC502 AK4358VQ-L



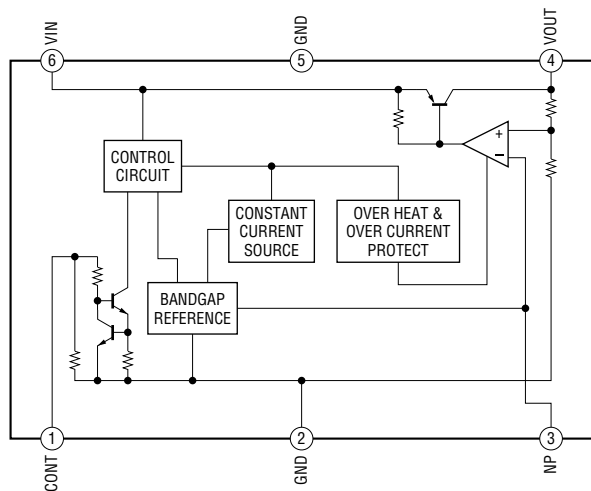
IC103 SM8707EV-G-E2



IC604 ADV7310KST



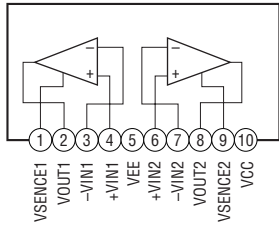
IC901 TK11225CMCL-G



# DVP-CX777ES

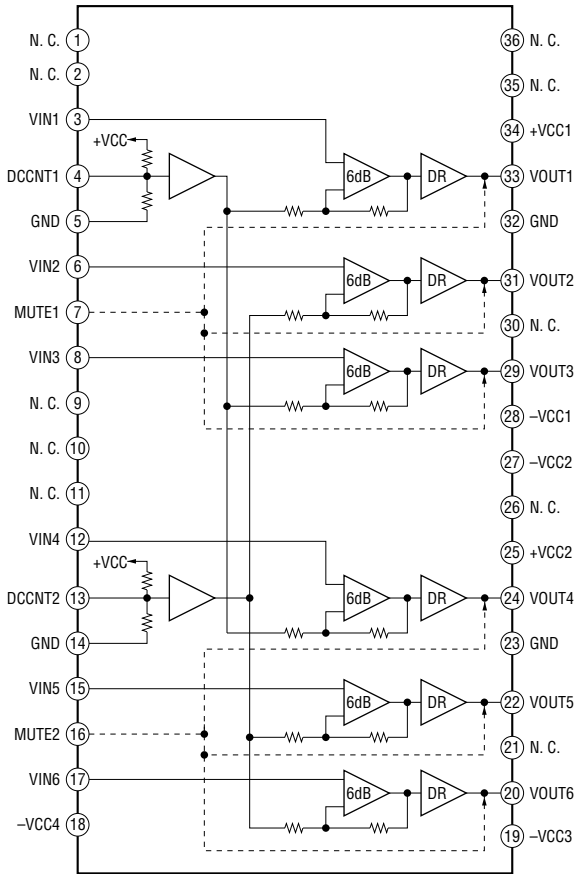
## - DRIVER Board -

IC941, 961 LA6510



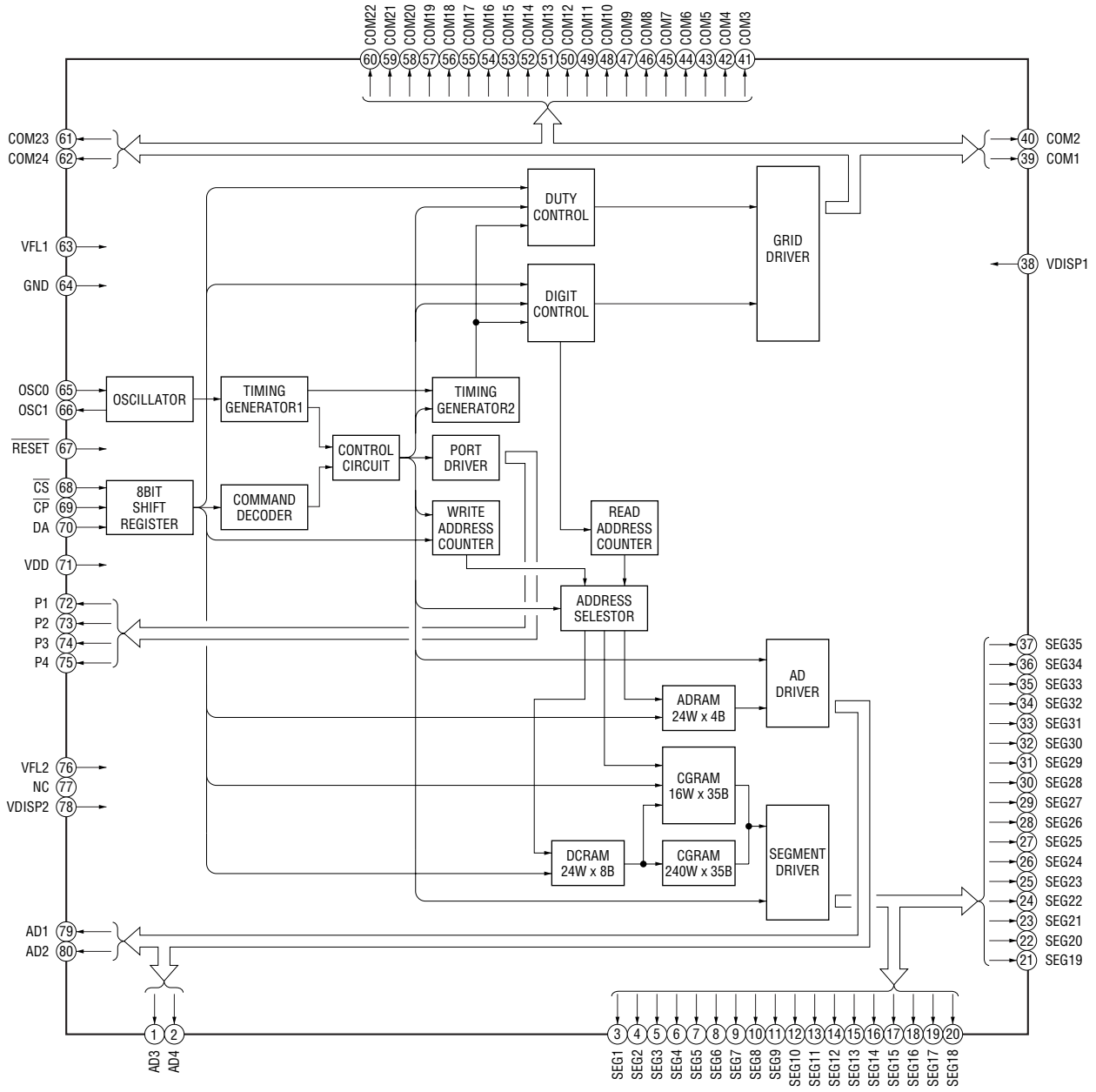
## - AV Board -

IC102 LA73053-TLM-E



- PANEL-L Board -

IC1007 MSM9201-04GS-K



7-44. IC PIN FUNCTION DESCRIPTION

• MB BOARD IC104 MB91307RPFV-G-BND-E1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 5	HA17 to HA21	O	Address signal output terminal
6	(NOT_USED)	O	Not used
7	WP	O	Write protect signal output to the EEPROM
8	XSACS	O	Chip select signal output to the DSD decoder
9	AVCC	—	Power supply terminal (+3.3V)
10	AVRH	—	Reference voltage input (+3.3V) terminal
11	AVSS	—	Ground terminal
12	DISC_AD	I	Disc detect sensor input terminal
13, 14	MOD_SET1, MOD_SET2	I	Mode setting input terminal
15	IPSW	I	Scan select switch input terminal
16	XAVDECINT	I	Interrupt signal input from the AV decoder
17	XARPINT	I	Interrupt signal input from the DSP
18	XSDSPINT	I	Interrupt signal input from the DSP
19	XGAINT	I	Interrupt signal input from the mechanism controller
20	XIFINT	I	Interrupt signal input from the interface controller
21	XADSPINT0	I	Interrupt signal input from the audio DSP
22	XADSPINT1	I	Interrupt signal input terminal Not used
23	XSARDY	I	Ready signal input from the DSD decoder
24	VCC	—	Power supply terminal (+3.3V)
25	IFSI	I	Serial data input from the interface controller
26	IFSO	O	Serial data output to the interface controller
27	IFSC	O	Serial clock signal output to the interface controller
28	SIN1	I	Serial data input from the audio DSP, digital audio processor and DSD decoder
29	SOUT1	O	Serial data output to the audio DSP, D/A converter, digital audio processor and DSD decoder
30	SCK1	O	Serial clock signal output to the audio DSP, D/A converter, digital audio processor and DSD decoder
31	RX	I	Serial data input terminal (for check)
32	TX	O	Serial data output terminal (for check)
33	XDVD/SACD	O	DVD/SACD selection signal output terminal Not used
34	VSS	—	Ground terminal
35	XRSTO	O	Reset signal output to the DSP, AV decoder, audio DSP, D/A converter, mechanism controller and digital audio processor “L”: reset
36	WIDE	O	Wide control signal output terminal
37	(RGBSEL)	O	Not used
38	SDA	I/O	Two-way data bus with EEPROM, I/P converter and D/A converter
39	SCL	O	Serial clock signal output to the EEPROM, I/P converter and D/A converter
40	XSARST	O	Reset signal output to the DSD decoder “L”: reset
41	(EUROY/V)	O	Not used
42	(ISEL)	O	Not used
43	MODE_SELECT0	I	Mode selection signal input terminal (Fixed at “H” in this set)
44, 45	MODE_SELECT1, MODE_SELECT2	I	Mode selection signal input terminal (Fixed at “L” in this set)
46	AVDREQ0	I	Request signal input from the AV decoder
47	AVDDACK0	O	Acknowledge signal output to the AV decoder
48	XDRVMUTE	O	Drive muting signal output to the motor/coil driver

Pin No.	Pin Name	I/O	Description
49	AVDREQ1	I	Request signal input from the AV decoder
50	AVDDACK1	O	Acknowledge signal output to the AV decoder
51	XIFCS	O	Chip select signal output to the interface controller
52	VSS	—	Ground terminal
53	X1	O	System clock output terminal (16.5 MHz)
54	X0	I	System clock input terminal (16.5 MHz)
55	VCC	—	Power supply terminal (+3.3V)
56	(CKSW1)	O	Not used
57	(OCSW1)	O	Not used
58	XROMCS	O	Chip select signal output to the flash memory
59	XRAMCS	O	Chip select signal output to the S-RAM
60, 61	XAVCS0, XAVCS1	O	Chip select signal output to the AV decoder
62	XARPCS	O	Chip select signal output to the DSP
63	XSDSPCS	O	Chip select signal output to the DSP
64	VCCI	—	Power supply terminal (+1.8V)
65	XGACS	O	Chip select signal output to the mechanism controller
66	(NC)	O	Not used
67	XWAIT	I	Wait signal input from the DSP and AV decoder
68	TEST (H)	I	Input terminal for the test (normally: fixed at "H")
69	TEST	I	Input terminal for the test
70	XRD	O	Read enable signal output to the flash memory, S-RAM, DSP, AV decoder and mechanism controller
71	XWRH	O	High byte write enable signal output to the flash memory, S-RAM, DSP, AV decoder and mechanism controller
72	XWRL	O	Low byte write enable signal output to the S-RAM
73	XNMI	I	Not used
74	VCCI	—	Power supply terminal (+1.8V)
75	VSS	—	Ground terminal
76	XRESET	I	Reset signal input from the interface controller "L": reset
77	CPUCK	O	Master clock (33 MHz) signal output to the mechanism controller
78	SMUTE	O	Soft muting control signal output to the DSD decoder
79	XDACS	O	Chip select signal output to the D/A converter
80	XADSPCS	O	Chip select signal output to the audio DSP
81	48/44.1K	O	PLL frequency control signal output to the clock generator
82	XLDON	O	Laser diode control signal output to the RF amplifier
83	MAMUTE	O	Audio muting control signal output terminal
84	XSRWE	O	Write enable signal to the S-RAM
85 to 100	HD0 to HD15	I/O	Two-way data bus terminal
101	VSS	—	Ground terminal
102 to 109	HA0 to HA7	O	Address signal output terminal
110	VCC	—	Power supply terminal (+3.3V)
111 to 118	HA8 to HA15	O	Address signal output terminal
119	VSS	—	Ground terminal
120	HA16	O	Address signal output terminal

• MB BOARD IC201 SP3726A (CD/DVD/SACD RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1, 2	RFIP, RFIN	I	RF signal input from the optical pick-up block
3	CP	—	Tracking low-pass filter terminal
4	WIN	I	Wobble detection signal input terminal Not used
5	WPP	O	Wobble push-pull signal output terminal Not used
6	CN	—	Tracking low-pass filter terminal
7 to 10	A2 to D2	I	Photo detector interface input from the optical pick-up block (AC coupled input for the DPD and wobble)
11 to 14	D to A	I	Photo detector interface input from the optical pick-up block (main)
15, 16	E, F	I	Photo detector interface input from the optical pick-up block (sub)
17	SIGDET B	O	Signal detection signal output to the DSP
18	INTR	I	Interruption control signal input from the DSP
19	VC	O	Reference voltage (+2.5V) output to the optical pick-up block
20	VPB	—	Power supply terminal (+5V) ( for servo block)
21	PGSELO	O	PDIC gain selection signal output to the optical pick-up block
22	PD	I	Automatic power control signal input from the optical pick-up block
23	VNB	—	Ground terminal (for servo block)
24	LDSELO	O	Automatic power control laser diode selection signal output to the optical pick-up block
25	DVDLD	O	DVD automatic power control signal output terminal
26	CDLD	O	CD automatic power control signal output terminal
27	LDONB	I	Laser diode output control signal input from the system controller
28	MEVO	O	Envelope signal output terminal for mirror
29	MIN	I	RF signal input terminal for mirror
30	MP	—	Mirror top hold terminal
31	MB	—	Mirror bottom hold terminal
32	MLPF	—	Mirror low-pass filter terminal
33	MIRR	O	Mirror signal output to the DSP
34	BYP2	—	Servo AGC gain control terminal
35	PII	I	Pull-in signal input terminal
36	PI	O	Pull-in signal output to the DSP
37	TZC	O	Tracking zero crossing signal output to the DSP
38	DFT	O	Defect signal output to the DSP
39	VCI	I	Reference voltage input from the motor/coil driver
40	TZIN	I	Tracking zero crossing signal input terminal
41	TE	O	Tracking error signal output to the DSP
42	FE	O	Focusing error signal output to the DSP
43	TPH	—	Pull-in top hold terminal
44	MON	O	Monitor signal output to the DSP
45	SRD	O	Serial data output to the DSP
46	SWD	I	Serial data input from the DSP
47	SCLK	I	Serial clock signal input from the DSP
48	SDEN	I	Serial data enable signal input from the DSP
49	V33	—	Power supply terminal (+3.3V) (for CMOS output buffers)
50	RX	I	Reference resistor input terminal
51	TPA	—	RF top hold terminal
52	MEV	—	RF bottom envelope terminal



Pin No.	Pin Name	I/O	Description
53	VNA	—	Ground terminal (for RF block and serial port)
54, 55	FNN, FNP	O	Differential filter normal signal output terminal
56, 57	DIP, DIN	I	Analog signal input terminal for RF single buffer
58	BYP	—	RF AGC gain control terminal
59	SIGO	O	Single-ended RF signal output to the DSP and DSD decoder
60	VPA	—	Power supply terminal (+5V) (for RF block and serial port)
61, 62	AIP, AIN	I	AGC amplifier signal input terminal
63, 64	ATON, ATOP	O	Differential attenuator signal output terminal

• MB BOARD IC301 CXD9703R (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal (for digital system)
2 to 9	A0 to A7	I	Address signal input terminal
10	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
11	XINT	O	Interrupt signal output to the system controller
12	HCS	I	Chip select signal input from the system controller
13	TESTK0	I	Input terminal for the test (normally: fixed at “L”)
14	VSS	—	Ground terminal (for digital system)
15	PDM0	O	Tracking coil drive signal output terminal
16	TESTK1	I	Input terminal for the test (normally: fixed at “L”)
17	PDM1	O	Tracking coil drive signal output terminal
18	TESTK2	I	Input terminal for the test (normally: fixed at “L”)
19	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
20	PDM2	O	Focus coil drive signal output terminal
21	TESTK3	I	Input terminal for the test (normally: fixed at “L”)
22	PDM3	O	Focus coil drive signal output terminal
23	VSS	—	Ground terminal (for digital system)
24	XWR	I	Write enable signal input from the system controller
25	XRD	I	Read enable signal input from the system controller
26	XINT	O	Interrupt signal output to the system controller
27	XCS	I	Chip select signal input from the system controller
28	XWAIT	O	Wait signal output to the system controller
29	XMWR	O	Write enable signal output to the D-RAM
30	XCAS	O	Column address strobe signal output to the D-RAM
31	XRAS	O	Row address signal output to the D-RAM
32, 33	MDS0, MDS1	O	Spindle motor drive signal output terminal
34	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
35	VSS	—	Ground terminal (for digital system)
36 to 43	MD0 to MD7	I/O	Two-way data bus with the D-RAM
44	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
45	VSS	—	Ground terminal (for digital system)
46 to 53	MD8 to MD15	I/O	Two-way data bus with the D-RAM
54	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
55	LOCK	O	EFM lock detection signal output terminal Not used
56	DOUT	O	Digital audio data output to the AV decoder and audio DSP
57	SDCK	O	Stream data bus clock signal output to the AV decoder and DSD decoder
58	XSHD	O	Stream data bus header flag signal output to the AV decoder and DSD decoder
59	XSRQ	I	Stream data bus request signal input from the AV decoder and DSD decoder
60	VSS	—	Ground terminal (for digital system)
61	XRESET	I	Reset signal input from the system controller “L”: reset
62	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
63	XSAK	O	Stream data bus acknowledge signal output to the AV decoder and DSD decoder
64	SDEF	O	Stream data bus error flag signal output to the AV decoder and DSD decoder
65 to 74	MA0 to MA9	O	Address signal output to the D-RAM
75	VSS	—	Ground terminal (for digital system)
76	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)

Pin No.	Pin Name	I/O	Description
77 to 84	SD0 to SD7	O	Stream data output to the AV decoder and DSD decoder
85	JITPWM	O	Jitter PWM signal output terminal Not used
86	RFD	I/O	RF binary data input/output terminal Not used
87	PLCKO	O	Operation clock signal output for PSP physical disc mark detection to the DSD decoder
88	VSS	—	Ground terminal (for digital system)
89	VSSA0	—	Ground terminal (for analog system)
90	VCO	I	VCO control signal input terminal
91, 92	R1, R2	I	VCO external resistor connection terminal
93	VDDA0 3.3V	—	Power supply terminal (+3.3V) (for analog system)
94	VSSA1	—	Ground terminal (for digital system)
95	INM	I	OP amplifier negative input terminal
96	INP	I	OP amplifier positive input terminal
97 to 99	FR1 to FR3	I	Feedback resistor selection terminal
100	Y	O	OP amplifier output terminal
101	VDDA1 3.3V	—	Power supply terminal (+3.3V) (for analog system)
102	IREF	I	D/A converter reference current input terminal
103	AOUT	O	D/A converter output terminal
104	VSSA2	—	Ground terminal (for analog system)
105	VDDA2 3.3V	—	Power supply terminal (+3.3V) (for analog system)
106	BIAS	I	D/A converter bias input terminal
107	VREF	I	D/A converter reference voltage input terminal
108	VSSD0	—	Ground terminal (for A/D converter)
109	VDDD0 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
110	VRT	I	A/D converter reference input terminal
111	RFIN1	I	RF signal input from the RF amplifier (for DVD)
112	VDDA3 3.3V	—	Power supply terminal (+3.3V) (for analog system)
113	RFIN2	I	RF signal input from the RF amplifier (for CD)
114	VSSA3	—	Ground terminal (for analog system)
115	VRB	I	A/D converter reference input terminal
116	VSSD1	—	Ground terminal (for A/D converter)
117	VDDD1 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
118	VSSD2	—	Ground terminal (for A/D converter)
119	VDDD2 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
120	VRBA	I	A/D converter reference input terminal
121	VSSA4	—	Ground terminal (for analog system)
122	VDDA4 3.3V	—	Power supply terminal (+3.3V) (for analog system)
123	VRTA	I	A/D converter reference input terminal
124	ADC0	I	Tracking error signal input from the RF amplifier
125	ADC1	I	Focusing error signal input from the RF amplifier
126	ADC2	I	Pull-in signal input from the RF amplifier
127	ADC3	I	Tracking coil drive signal input terminal
128	ADC4	I	Spindle motor drive signal input terminal
129, 130	ADC5, ADC6	I	Reference voltage input from the motor/coil driver
131	ADC7	I	Monitor signal input from the RF amplifier
132	VSSA5	—	Ground terminal (for analog system)
133	VDDA5 3.3V	—	Power supply terminal (+3.3V) (for analog system)

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Pin No.	Pin Name	I/O	Description
134 to 141	D0 to D7	I/O	Two-way data bus terminal
142	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
143, 144	PWM0, PWM1	O	Sled motor drive signal output terminal
145	VSS	—	Ground terminal (for digital system)
146	PWM2	O	PWM signal output terminal
147	DFCT	I	Defect signal input from the RF amplifier
148	MIRR	I	Mirror signal input from the RF amplifier
149	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
150	CLKIN	I	Clock signal input from the clock generator
151	VSS	—	Ground terminal (for digital system)
152	TZC	I	Tracking zero crossing signal input from the RF amplifier
153	GIO0/INT2	I	Limit in detect switch input terminal
154	GIO1/INT3	O	Spindle motor drive control signal output terminal
155	GIO2/INT4	O	Thermal shut down signal output to the motor/coil driver
156	GIO3/INT5	I/O	Not used
157	GIO4/PGREF	I/O	Not used
158	GIO5/PGIN	I	Signal detection signal input from the RF amplifier
159	GIO6/SDI	I	Serial data input from the RF amplifier
160	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
161	GIO7/SDO	O	Serial data output to the RF amplifier
162	GIO8/SCK	O	Serial clock signal output to the RF amplifier
163	GIO9/FGREF	I/O	Not used
164	GIO10/FGIN	I/O	Not used
165	GIO11/TMC2	O	Interruption control signal output to the RF amplifier
166	GIO12	I/O	Not used
167	GIO13	O	Serial data enable signal output to the RF amplifier
168	VSS	—	Ground terminal (for digital system)
169	DATA/EMU1	O	Serial data output to the AV decoder
170	BCLK/EMU1	O	Bit clock signal output to the AV decoder
171	TRST	I	Reset signal input from the interface controller
172	TMS	I	Mode selection signal input terminal
173	TDI	I	Serial data input from the mechanism controller
174	TCK	I	Clock signal input terminal
175	LRCK/TDO	O	L/R sampling clock signal output to the AV decoder and serial data output to the DSD decoder
176	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)

• MB BOARD IC403 CXD1935Q (AV DECODER)

Pin No.	Pin Name	I/O	Description
1	IOVDD00	—	Power supply terminal (+3.3V) (for digital system)
2 to 5	HDATA0 to HDATA3	I/O	Two-way data bus terminal
6	CVS00	—	Ground terminal (for digital system)
7 to 10	HDATA4 to HDATA7	I/O	Two-way data bus terminal
11	CVD00	—	Power supply terminal (+1.8V) (for digital system)
12 to 15	HDATA8 to HDATA11	I/O	Two-way data bus terminal
16	IOVSS00	—	Ground terminal (for digital system)
17 to 20	HDATA12 to HDATA15	I/O	Two-way data bus terminal
21	CVS01	—	Ground terminal (for digital system)
22	ACLK	I	Audio clock signal input from the clock generator
23	CVD01	—	Power supply terminal (+1.8V) (for digital system)
24	ACH12O	O	Audio data (for front) output to the audio DSP
25	ACH34O	O	Audio data (for rear) output to the audio DSP
26	ACH56O	O	Audio data (for center and woofer) output to the audio DSP
27	IOVDD01	—	Power supply terminal (+3.3V) (for digital system)
28	LRCKO	O	L/R sampling clock output to the audio DSP
29	BCKO	O	Bit clock output to the audio DSP
30	DO	O	Serial data output terminal Not used
31	CDIN2I	I	Digital audio data input from the DSP
32	CDIN1I	I	Serial data input from the DSP
33	IOVSS01	—	Ground terminal (for digital system)
34	CDBCKI	I	Bit clock input from the DSP
35	CDLRKI	I	L/R sampling clock input from the DSP
36	CVS02	—	Ground terminal (for digital system)
37 to 40	DT0I to DT3I	I	Stream data input from the DSP
41	IOVDD02	—	Power supply terminal (+3.3V) (for digital system)
42 to 45	DT4I to DT7I	I	Stream data input from the DSP
46	CVD02	—	Power supply terminal (+1.8V) (for digital system)
47	ICLKI	I	Stream data bus clock signal input from the DSP
48	IERRIN	I	Stream data bus error flag signal input from the DSP
49	ISTARTIN	I	Stream data bus header signal input from the DSP
50	IVALIN	I	Stream data bus acknowledge signal input from the DSP
51	IREQON	O	Stream data bus request signal output to the DSP
52	IOVSS02	—	Ground terminal (for digital system)
53	IOAVSS00	—	Ground terminal (for analog system)
54	AVDD00	—	Power supply terminal (+3.3V) (for analog system)
55	YOUT	O	Y (luminance) analog video signal output terminal Not used
56	AVSS00	—	Ground terminal (for analog system)
57	GOUT	O	Green analog video signal output terminal Not used
58	AVDD01	—	Power supply terminal (+3.3V) (for analog system)
59	ROUT	O	Red analog video signal output terminal Not used
60	AVSS01	—	Ground terminal (for analog system)

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Pin No.	Pin Name	I/O	Description
61	BOUT	O	Blue analog video signal output terminal Not used
62	AVDD02	—	Power supply terminal (+3.3V) (for analog system)
63	COOUT	O	C (chroma) analog video signal output terminal Not used
64	AVSS02	—	Ground terminal (for analog system)
65	COMPOUT	O	Composite analog video signal output terminal Not used
66	DVSS33	—	Ground terminal (for digital system)
67	DVDD33	—	Power supply terminal (+3.3V) (for digital system)
68	VGO	I	Connected to the power supply (+3.3V) with capacitor
69	IOAVDD00	—	Power supply terminal (+3.3V) (for analog system)
70, 71	VREF	I	D/A converter reference voltage input terminal
72	IOVDD03	—	Power supply terminal (+3.3V) (for digital system)
73	FLEDO	O	Field ID output terminal Not used
74	HSYNCO	O	Horizontal sync signal terminal Not used
75	CVS03	—	Ground terminal (for digital system)
76, 77	DSPACK0, DSPACK1	I	Acknowledge signal input from the audio DSP
78	CVD03	—	Power supply terminal (+1.8V) (for digital system)
79	IOVSS03	—	Ground terminal (for digital system)
80	I2C_CLK	—	Not used
81	CVS04	—	Ground terminal (for digital system)
82	I2C_DATA	—	Not used
83	IOVDD04	—	Power supply terminal (+3.3V) (for digital system)
84 to 87	DVO0 to DVO3	O	Digital video signal output to the I/P converter
88	CVD04	—	Power supply terminal (+1.8V) (for digital system)
89 to 92	DVO4 to DVO7	O	Digital video signal output to the I/P converter
93	BF_ID	O	Blending factor exist ID output terminal Not used
94	NC	—	Not used
95	D1CLKO	O	Digital video clock (27 MHz) output to the I/P converter
96	IOVSS04	—	Ground terminal (for digital system)
97	TDI	I	Serial data input from the I/P converter
98	TDO	O	Serial data output terminal
99	TCK	I	Clock signal input terminal
100	IOVDD05	—	Power supply terminal (+3.3V) (for digital system)
101	TMS	I	Mode selection signal input terminal
102	TRST	I	Reset signal input from the interface controller “L”: reset
103	CVS05	—	Ground terminal (for digital system)
104	IOVSS05	—	Ground terminal (for digital system)
105 to 108	SDAD20 to SDAD50	O	Address signal output to the SD-RAM
109	CVD05	—	Power supply terminal (+1.8V) (for digital system)
110 to 113	SDAD00, SDAD10, SDAD60, SDAD70	O	Address signal output to the SD-RAM
114	IOVDD06	—	Power supply terminal (+3.3V) (for digital system)
115, 116	SDAD80, SDAD100	O	Address signal output to the SD-RAM
117	SDAD120	O	Address signal output terminal Not used
118	SDAD90	O	Address signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
119	IOVSS06	—	Ground terminal (for digital system)
120	SDAD110	O	Address signal output to the SD-RAM
121, 122	SDCS00N, SDCS10N	O	Chip select signal output to the SD-RAM
123	IOVDD07	—	Power supply terminal (+3.3V) (for digital system)
124	SDCKEO	O	Clock enable signal output to the SD-RAM
125	SDRASON	O	Row address strobe signal output to the SD-RAM
126	IOVSS07	—	Ground terminal (for digital system)
127	SDCLKO	O	Clock (108 MHz) signal output to the SD-RAM
128	IOVDD08	—	Power supply terminal (+3.3V) (for digital system)
129	SDCASON	O	Column address strobe signal output to the SD-RAM
130	SDWEON	O	Write enable signal output to the SD-RAM
131	CVS06	—	Ground terminal (for digital system)
132, 133	SDDQM00, SDDQM10	O	DQM signal output to the SD-RAM
134	IOVSS08	—	Ground terminal (for digital system)
135 to 138	SDDQ6 to SDDQ9	I/O	Two-way data bus with the SD-RAM
139	CVD06	—	Power supply terminal (+1.8V) (for digital system)
140 to 143	SDDQ4, SDDQ5, SDDQ10, SDDQ11	I/O	Two-way data bus with the SD-RAM
144	IOVDD09	—	Power supply terminal (+3.3V) (for digital system)
145 to 148	SDDQ2, SDDQ5, SDDQ12, SDDQ13	I/O	Two-way data bus with the SD-RAM
149	IOVSS09	—	Ground terminal (for digital system)
150, 151	SDDQ1, SDDQ14	I/O	Two-way data bus with the SD-RAM
152	IOVDD10	—	Power supply terminal (+3.3V) (for digital system)
153, 154	SDDQ0, SDDQ15	I/O	Two-way data bus with the SD-RAM
155	IOVSS10	—	Ground terminal (for digital system)
156	CRPCLKI	I	Not used
157	TESTI	I	Input terminal for the test (normally: fixed at "H")
158	CLKI	I	Clock (27 MHz) signal input from the clock generator
159	PAVDD18P	—	Power supply terminal (+3.3V) (for analog system)
160	SCLKI	I	System clock (27 MHz) signal input from the clock generator
161	PAVSS18G	I	Ground terminal (for analog system)
162	MBIST_EN	I	Not used
163	SCAN_MOD	I	Not used
164	SCAN_EN	I	Not used
165	IOVDD11	—	Power supply terminal (+3.3V) (for digital system)
166, 167	HAD22I, HAD23I	I	Chip select signal input from the system controller
168, 169	HAD20I, HAD21I	I	Address signal input terminal
170	CVS07	—	Ground terminal (for digital system)
171 to 174	HAD16I to HAD19I	I	Address signal input terminal
175	IOVSS11	—	Ground terminal (for digital system)
176 to 179	HAD12I to HAD15I	I	Address signal input terminal
180	CVD07	—	Power supply terminal (+1.8V) (for digital system)
181 to 184	HAD8I to HAD11I	I	Address signal input terminal
185	IOVDD12	—	Power supply terminal (+3.3V) (for digital system)

Pin No.	Pin Name	I/O	Description
186 to 189	HAD4I to HAD7I	I	Address signal input terminal
190	CVS08	—	Ground terminal (for digital system)
191 to 194	HAD3I to HAD0I	I	Address signal input terminal
195	IOVSS12	—	Ground terminal (for digital system)
196	HCSN	I	Read enable signal input from the system controller
197	HRWN	I	Write enable signal input from the system controller
198	HCPUMDI	I	CPU mode selection signal input terminal
199	HIRQON	O	Interrupt signal output to the system controller
200	HWAITON	O	Wait signal output to the system controller
201	CVD08	—	Power supply terminal (+1.8V) (for digital system)
202	DMACK1IN	I	Acknowledge signal input from the system controller
203	DMARQ1ON	O	Request signal input from the system controller
204	DMACK0IN	I	Acknowledge signal input from the system controller
205	DMARQ0ON	O	Request signal input from the system controller
206	IOVDD13	—	Power supply terminal (+3.3V) (for digital system)
207	RSTN	I	Reset signal input from the system controller "L": reset
208	IOVSS13	—	Ground terminal (for digital system)



• MB BOARD IC501 CXD1938AR (AUDIO DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	CVD00	—	Power supply terminal (+1.8V) (digital system)
2	DSP1ACKO2	O	Acknowledge signal output terminal Not used
3, 4	DSP1ACKO0, DSP1ACKO1	O	Acknowledge signal output to the AV decoder
5	GND00	—	Ground terminal (digital system)
6	RESET_NI	I	Reset signal input from the system controller “L”: reset
7	GND01	—	Ground terminal (digital system)
8	DSP1DIACKI	I	Audio clock signal input terminal Not used
9	GND02	—	Ground terminal (digital system)
10	DSP1DII	I	Digital audio data input from the DSP
11	IOVDD0	—	Power supply terminal (+3.3V) (digital system)
12	GND03	—	Ground terminal (digital system)
13	CVD01	—	Power supply terminal (+1.8V) (digital system)
14	PLL27_CLNI	I	PLL clock divider reset signal input terminal Not used
15	PLL_ENNI	I	PLL enable signal input terminal Not used
16	PLL_CLNI	I	PLL clock divider reset signal input terminal Not used
17	GND04	—	Ground terminal (digital system)
18	PLL_CLKO	O	PLL clock signal output terminal Not used
19	IOVDD1	—	Power supply terminal (+3.3V) (digital system)
20	PLL_AVDD	O	Power supply terminal (+3.3V) (analog system)
21	GND05	—	Ground terminal (digital system)
22	SCLKI	I	Clock (27 MHz) signal input from the clock generator
23	GND06	—	Ground terminal (digital system)
24	PLL_TST1I	I	Input terminal for the test (normally: fixed at “L”)
25, 26	PLL_TST2I, PLL_TST3I	I	Input terminal for the test (normally: fixed at “H”)
27	PLL_TST4I	I	Input terminal for the test (normally: fixed at “L”)
28	PLL_AVSS	—	Ground terminal (analog system)
29	IOVDD2	—	Power supply terminal (+3.3V) (digital system)
30	GND07	—	Ground terminal (digital system)
31	CVD02	—	Power supply terminal (+1.8V) (digital system)
32	DSP2DII	I	Digital audio data input from the DSP
33	GND08	—	Ground terminal (digital system)
34	DSP2DIACKI	I	Audio clock signal input terminal Not used
35	GND09	—	Ground terminal (digital system)
36 to 38	DSP2ACKO0 to DSP2ACKO2	O	Acknowledge signal output terminal Not used
39	IOVDD3	—	Power supply terminal (+3.3V) (digital system)
40	GND10	—	Ground terminal (digital system)
41	CVD03	—	Power supply terminal (+1.8V) (digital system)
42	DSP2LRCKO	O	L/R sampling clock output to the D/A converter and digital audio processor
43	DSP2BCKO	O	Bit clock output to the D/A converter and digital audio processor
44	DSP2EMPO	O	Emphasis control signal output terminal Not used
45	DSP2DO	O	Digital audio data output to the digital audio processor
46	IOVDD4	—	Power supply terminal (+3.3V) (digital system)
47	GND11	—	Ground terminal (digital system)

Pin No.	Pin Name	I/O	Description
48	DSP2CH12O	O	Audio data (for front) output to the digital audio processor
49	DSP2CH34O	O	Audio data (for rear) output to the digital audio processor
50	DSP2CH56O	O	Audio data (for center and woofer) output to the digital audio processor
51	DSP2CH78O	O	Audio data output to the digital audio processor
52	CVD04	—	Power supply terminal (+1.8V) (digital system)
53	GND12	—	Ground terminal (digital system)
54	IOVDD5	—	Power supply terminal (+3.3V) (digital system)
55	DSP2LRCKI	I	L/R sampling clock input from the AV decoder
56	DSP2CH12I	I	Audio data (for front) input from the AV decoder
57	DSP2CH34I	I	Audio data (for rear) input from the AV decoder
58	DSP2CH56I	I	Audio data (for center and woofer) input from the AV decoder
59	DSP2EMPI	I	Emphasis control signal input terminal Not used
60	IOVDD6	—	Power supply terminal (+3.3V) (digital system)
61	GND13	—	Ground terminal (digital system)
62	CVD05	—	Power supply terminal (+1.8V) (digital system)
63	DSP2REQUI	I	Request signal input terminal Not used
64	GND14	—	Ground terminal (digital system)
65	DSP2NMII	I	Non-maskable interrupt signal input terminal Not used
66	GND15	—	Ground terminal (digital system)
67	DSP2ACKI	I	Audio clock signal input from the clock generator
68	GND16	—	Ground terminal (digital system)
69	DSP2BCKI	I	Bit clock input from the AV decoder
70	GND17	—	Ground terminal (digital system)
71	IOVDD7	—	Power supply terminal (+3.3V) (digital system)
72	GND18	—	Ground terminal (digital system)
73	CVD06	—	Power supply terminal (+1.8V) (digital system)
74 to 77	ADDR015 to ADDR018	—	Address signal output terminal Not used
78	IOVDD8	—	Power supply terminal (+3.3V) (digital system)
79	GND19	—	Ground terminal (digital system)
80 to 83	ADDR011 to ADDR014	—	Address signal output terminal Not used
84	IOVDD9	—	Power supply terminal (+3.3V) (digital system)
85	GND20	—	Ground terminal (digital system)
86	CVD07	—	Power supply terminal (+1.8V) (digital system)
87 to 90	ADDR07 to ADDR010	—	Address signal output terminal Not used
91	IOVDD10	—	Power supply terminal (+3.3V) (digital system)
92	GND21	—	Ground terminal (digital system)
93 to 96	ADDR03 to ADDR06	—	Address signal output terminal Not used
97	IOVDD11	—	Power supply terminal (+3.3V) (digital system)
98	GND22	—	Ground terminal (digital system)
99	CVD08	—	Power supply terminal (+1.8V) (digital system)
100 to 102	ADDR00 to ADDR02	—	Address signal output terminal Not used
103	SRM_RDNO	O	Read enable signal output terminal Not used

Pin No.	Pin Name	I/O	Description
104	IOVDD12	—	Power supply terminal (+3.3V) (digital system)
105	GND23	—	Ground terminal (digital system)
106	SRM_WRNO	O	Write enable signal output terminal Not used
107	CMD_ACKNO	O	Interrupt signal output to the system controller
108	CMD_REQNO	O	Request signal output terminal Not used
109	DMA_ACKNO	O	Acknowledge signal output terminal Not used
110	IOVDD13	—	Power supply terminal (+3.3V) (digital system)
111	GND24	—	Ground terminal (digital system)
112	CVD09	—	Power supply terminal (+1.8V) (digital system)
113	STC_CLKI	I	System clock signal input terminal Not used
114	GND25	—	Ground terminal (digital system)
115	SH_CLKI	I	Serial clock input from the system controller
116	GND26	—	Ground terminal (digital system)
117	SH_SII	I	Serial data input from the system controller
118	SH_CSNI	I	Chip select signal input from the system controller
119	SH_SOO	O	Serial data output to the system controller
120	IOVDD14	—	Power supply terminal (+3.3V) (digital system)
121	GND27	—	Ground terminal (digital system)
122	CVD10	—	Power supply terminal (+1.8V) (digital system)
123, 124	DATAI00, DATAI01	I/O	Two-way data bus terminal Not used
125	GND28	—	Ground terminal (digital system)
126, 127	DATAI02, DATAI03	I/O	Two-way data bus terminal Not used
128	IOVDD15	—	Power supply terminal (+3.3V) (digital system)
129	GND29	—	Ground terminal (digital system)
130, 131	DATAI04, DATAI05	I/O	Two-way data bus terminal Not used
132	GND30	—	Ground terminal (digital system)
133, 134	DATAI06, DATAI07	I/O	Two-way data bus terminal Not used
135	IOVDD16	—	Power supply terminal (+3.3V) (digital system)
136	GND31	—	Ground terminal (digital system)
137	CVD11	—	Power supply terminal (+1.8V) (digital system)
138	XSCAN	I	Scan mode signal input terminal Not used
139	TDO	O	Serial data output to the AV decoder
140	TDI	I	Serial data input from the digital audio processor
141	TMS	I	Mode selection signal input terminal
142	TRST	I	Reset signal input from the interface controller “L”: reset
143	TCK	I	Clock signal input terminal
144	IOVDD17	—	Power supply terminal (+3.3V) (digital system)
145	GND32	—	Ground terminal (digital system)
146	CVD12	—	Power supply terminal (+1.8V) (digital system)
147	DSP1BCKI	I	Bit clock signal input from the AV decoder
148	GND33	—	Ground terminal (digital system)
149	DSP1ACKI	I	Audio clock signal input from the clock generator
150	GND34	—	Ground terminal (digital system)

Pin No.	Pin Name	I/O	Description
151	DSP1NMII	I	Non-maskable interrupt signal input terminal Not used
152	GND35	—	Ground terminal (digital system)
153	DSP1REQI	I	Request signal input terminal Not used
154	IOVDD18	—	Power supply terminal (+3.3V) (digital system)
155	GND36	—	Ground terminal (digital system)
156	CVD13	—	Power supply terminal (+1.8V) (digital system)
157	DSP1EMPI	I	Emphasis control signal input terminal Not used
158	DSP1CH56I	I	Audio data (for center and woofer) input from the AV decoder
159	DSP1CH34I	I	Audio data (for rear) input from the AV decoder
160	DSP1CH12I	I	Audio data (for front) input from the AV decoder
161	DSP1LRCKI	I	L/R sampling clock signal input from the AV decoder
162	IOVDD19	—	Power supply terminal (+3.3V) (digital system)
163	GND37	—	Ground terminal (digital system)
164	CVD14	—	Power supply terminal (+1.8V) (digital system)
165	DSP1CH78O	O	Audio data output terminal Not used
166	DSP1CH56O	O	Audio data (for center and woofer) output terminal Not used
167	DSP1CH34O	O	Audio data (for rear) output terminal Not used
168	DSP1CH12O	O	Audio data (for front) output terminal Not used
169	IOVDD20	—	Power supply terminal (+3.3V) (digital system)
170	GND38	—	Ground terminal (digital system)
171	DSP1DO	O	Digital audio data output terminal Not used
172	DSP1EMPO	O	Emphasis control signal output terminal Not used
173	DSP1BCKO	O	Bit clock signal output terminal Not used
174	DSP1LRCKO	O	L/R sampling clock signal output terminal Not used
175	IOVDD21	—	Power supply terminal (+3.3V) (digital system)
176	GND39	—	Ground terminal (digital system)

• MB BOARD IC602 CXD9698R (INTERLACE/PROGRESSIVE CONVERTER)

Pin No.	Pin Name	I/O	Description
1	OVDD	—	Power supply terminal (+3.3V)
2	CLKI	I	Digital video clock signal (27 MHz) input from the AV decoder
3	PLL_TEST	I	Input terminal for the test (normally: fixed at “L”)
4	PLL_EN	I	PLL enable signal input terminal Not used
5, 6	PI0, PI1	I	Digital video signal input terminal Not used
7 to 14	PI2 to PI9	I	Digital video signal input from the AV decoder
15	NHSI	I	Horizontal sync signal input terminal Not used
16	NVSI	I	Vertical sync signal input terminal Not used
17	OVSS	—	Ground terminal (for digital system)
18	IVSS	—	Ground terminal (for digital system)
19	CVSS	—	Ground terminal (for digital system)
20	NVSO	O	Vertical sync signal output terminal Not used
21	NHSI	O	Horizontal sync signal output terminal Not used
22 to 25	PO9 to PO6	O	Digital video signal output to the D/A converter
26	OVDD	—	Power supply terminal (+3.3V)
27	OVSS	—	Ground terminal (for digital system)
28 to 31	PO5 to PO2	O	Digital video signal output to the D/A converter
32, 33	PO1, PO0	O	Digital video signal output terminal Not used
34	TEST0	I	Input terminal for the test (normally: fixed at “L”)
35	OVSS	—	Ground terminal (for digital system)
36	OVDD	—	Power supply terminal (+3.3V)
37	CVDD	—	Power supply terminal (+2.5V)
38, 39	TEST1, TEST2	I	Input terminal for the test (normally: fixed at “L”)
40	CLKO	I	Clock signal (27 MHz) output to the D/A converter
41 to 45	YO9 to YO5	O	Y (luminance) digital video signal output to the D/A converter
46	OVDD	—	Power supply terminal (+3.3V)
47	OVSS	—	Ground terminal (for digital system)
48 to 52	YO4 to YO0	O	Y (luminance) digital video signal output to the D/A converter
53	OVDD	—	Power supply terminal (+3.3V)
54	CVSS	—	Ground terminal (for digital system)
55	OVSS	—	Ground terminal (for digital system)
56 to 60	CO0 to CO4	O	C (chroma) digital video signal output to the D/A converter
61	OVDD	—	Power supply terminal (+3.3V)
62	OVSS	—	Ground terminal (for digital system)
63 to 67	CO5 to CO9	O	C (chroma) digital video signal output to the D/A converter
68	FILM	O	Film detection flag output terminal Not used
69	W3IF	I	MPU interface communication protocol selection signal input terminal Not used
70	OVSS	—	Ground terminal (for digital system)
71	CVDD	—	Power supply terminal (+2.5V)
72	IVDD	—	Power supply terminal (+3.3V)
73	OVDD	—	Power supply terminal (+3.3V)
74 to 77	MD19 to MD16	I/O	Two-way data bus terminal Not used
78	OVDD	—	Power supply terminal (+3.3V)
79	OVSS	—	Ground terminal (for digital system)
80 to 83	MA2 to MA5	O	Address signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
84	OVDD	—	Power supply terminal (+3.3V)
85	OVSS	—	Ground terminal (for digital system)
86 to 89	MA0, MA1, MA6, MA7	O	Address signal output to the SD-RAM
90	OVSS	—	Ground terminal (for digital system)
91	IVSS	—	Ground terminal (for digital system)
92	CVSS	—	Ground terminal (for digital system)
93	OVDD	—	Power supply terminal (+3.3V)
94 to 97	MA8 to MA11	O	Address signal output to the SD-RAM
98	OVDD	—	Power supply terminal (+3.3V)
99	OVSS	—	Ground terminal (for digital system)
100	RAS	O	Row address strobe signal output to the SD-RAM
101	CKE	O	Clock enable signal output terminal Not used
102	CAS	O	Column address strobe signal output to the SD-RAM
103	MCLK	O	Clock signal (54 MHz) output to the SD-RAM
104	WE	O	Write enable signal output to the SD-RAM
105, 106	TEST3, TEST4	I	Input terminal for the test (normally: fixed at “L”)
107	OVSS	—	Ground terminal (for digital system)
108	OVDD	—	Power supply terminal (+3.3V)
109	CVDD	—	Power supply terminal (+2.5V)
110 to 113	MD7 to MD9	I/O	Two-way data bus with the SD-RAM
114	OVDD	—	Power supply terminal (+3.3V)
115	OVSS	—	Ground terminal (for digital system)
116 to 119	MD4, MD5, MD10, MD11	I/O	Two-way data bus with the SD-RAM
120	OVDD	—	Power supply terminal (+3.3V)
121	OVSS	—	Ground terminal (for digital system)
122 to 125	MD2, MD3, MD12, MD13	I/O	Two-way data bus with the SD-RAM
126	OVSS	—	Ground terminal (for digital system)
127	CVSS	—	Ground terminal (for digital system)
128	OVDD	—	Power supply terminal (+3.3V)
129 to 132	MD0, MD1, MD14, MD15	I/O	Two-way data bus with the SD-RAM
133	SLV	I	MPU interface slave address selection signal input terminal Not used
134	CSB	I	MPU interface chip select signal input terminal Not used
135	SDA	I/O	Two-way data bus with the EEPROM, system controller and D/A converter
136	SCL	I	Clock signal input from the system controller
137	SRN	I	Reset signal input from the system controller “L”: reset
138	OVSS	—	Ground terminal (for digital system)
139	CVDD	—	Power supply terminal (+2.5V)
140	PLL_VDD	—	Power supply terminal (+2.5V) (for PLL)
141	CPOUT	O	PLL charge pump output terminal
142	VCOIN	I	PLL external loop filter input terminal
143	PLL_GND	—	Ground terminal (for PLL)
144	IVDD	—	Power supply terminal (+3.3V)

• MB BOARD IC701 CXD9705R (MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	HD15	I/O	Two-way data bus terminal
2	VSS	—	Ground terminal
3 to 9	HD14 to HD8	I/O	Two-way data bus terminal
10, 11	HA19, HA4	O	Address signal output terminal
12	VSS	—	Ground terminal
13 to 16	HA3 to HA0	O	Address signal output terminal
17	XGAIT	O	Interrupt signal output to the system controller
18	XWR	I	Write enable signal input from the system controller
19	XRD	I	Read enable signal input from the system controller
20	XGACS	I	Chip select signal input from the system controller
21	WOBBLE	I	Not used
22	ADVDD	—	Power supply terminal (+3.3V)
23	VSS	—	Ground terminal
24	CPUCK	I	Master clock (33 MHz) input from the system controller
25	TSSENS2	I	Table position sensor 2 input terminal
26	TSSENS4	I	Table position sensor 4 input terminal
27	LD_IN	I	Loading detect switch input terminal “L”: loading in
28	LD_OUT	I	Loading detect switch input terminal “L”: loading out
29	LOCK	I	Lock detect switch input terminal “L”: lock
30	TSSENS3	I	Table position sensor 3 input terminal
31	TSSENS1	I	Table position sensor 1 input terminal
32	(NC)	I	Not used
33	VDD	—	Power supply terminal (+3.3V)
34	XRST	I	Reset signal input from the system controller “L”: reset
35	VPD	—	Not used
36	POPUP	I	Pop detect switch input terminal “L”: pop up
37	POPDOWN	I	Pop detect switch input terminal “L”: pop down
38	DR_OP	I	Door detect switch input terminal “L”: door open
39	DR_CLS	I	Door detect switch input terminal “L”: door close
40	ADVDD2	—	Power supply terminal (+3.3V)
41	TRST	I	Reset signal input from the interface controller “L”: reset
42	VSS	—	Ground terminal
43	TCK	I	Clock signal input terminal
44	TMS	I	Mode selection signal input terminal
45	TDI	I	Serial data input terminal
46	NFBUSY	I	Busy signal input from the nand flash memory
47	ADVDD3	—	Power supply terminal (+3.3V)
48	NFCE	O	Chip enable signal output to the nand flash memory
49	NFCLE	O	Command latch enable signal output to the nand flash memory
50	NFALE	O	Address latch enable signal output to the nand flash memory
51	NFWP	O	Write protect signal output to the nand flash memory
52	VSS	—	Ground terminal
53	NFRE	O	Read enable signal output to the nand flash memory
54	NFWE	O	Write enable signal output to the nand flash memory
55	NFTEST	O	Test mode selection signal output to the nand flash memory

**DVP-CX777ES**

Pin No.	Pin Name	I/O	Description
56	(NC)	O	Not used
57	XADYCS	O	Chip select signal output to the digital audio processor
58	XESCS	O	Chip select signal output terminal Not used
59, 60	(NC)	O	Not used
61	TESTI	I	Input terminal for the test (normally: fixed at “L”)
62	TESTO5	O	Output terminal for the test
63	VSS	—	Ground terminal
64 to 68	TESTO4 to TESTO0	O	Output terminal for the test
69	LDM+	O	Loading motor drive signal output terminal
70	LDM-	O	Loading motor drive signal output terminal
71	DRM+	O	Door motor drive signal output terminal
72	DRM-	O	Door motor drive signal output terminal
73	VDD	—	Power supply terminal (+3.3V)
74	DIMMO	O	LED drive signal output for the illumination “H”: LED on
75	DSEN_OUT	O	Not used
76	HH_OUT	O	Not used
77	TRM-	O	Table motor drive signal output terminal
78	TRM+	O	Table motor drive signal output terminal
79	TDO	O	Serial data output to the DSP
80	ADVDD4	—	Power supply terminal (+3.3V)



• MB BOARD IC801 CXD9722ATQ (DIGITAL AUDIO PROCESSOR)

Pin No.	Pin Name	I/O	Description
1 to 5	D1 to D5	I/O	Two-way data bus with the SD-RAM
6	VDD	—	Power supply terminal (+3.3V)
7, 8	D6, D7	I/O	Two-way data bus with the SD-RAM
9	VSS	—	Ground terminal
10	WE	O	Write enable signal output to the SD-RAM
11	CAS	O	Column address strobe signal output to the SD-RAM
12	RAS	O	Row address strobe signal output to the SD-RAM
13	CS	O	Chip select signal output to the SD-RAM
14	CLK	O	Clock signal output to the SD-RAM
15	CKE	O	Clock enable signal output to the SD-RAM
16	VDD	—	Power supply terminal (+3.3V)
17 to 22	A11, A10, A0 to A3	O	Address signal output to the SD-RAM
23	VSS	—	Ground terminal
24 to 29	A9 to A4	O	Address signal output to the SD-RAM
30	VSS	—	Ground terminal
31	DRSO	O	DSD data (for rear R-ch) output to the D/A converter
32	DLSO	O	DSD data (for rear L-ch) output to the D/A converter
33	DEXRO	O	Not used
34	DLFEO	O	DSD data (for woofer) output to the D/A converter
35	DCO	O	DSD data (for center) output to the D/A converter
36	VDD	—	Power supply terminal (+3.3V)
37	DRO	O	DSD data (for front R-ch) output to the D/A converter
38	DLO	O	DSD data (for front L-ch) output to the D/A converter
39	VSS	—	Ground terminal
40	DMRO	O	DSD data output for R-ch down mix to the D/A converter
41	DMLO	O	DSD data output for L-ch down mix to the D/A converter
42	VSS	—	Ground terminal
43	VDD	—	Power supply terminal (+3.3V)
44	DLDRO	O	Audio data output to the D/A converter
45	CSWO	O	Audio data (for center and woofer) output to the D/A converter
46	SLSRO	O	Audio data (for rear) output to the D/A converter
47	FLFRO	O	Audio data (for front) output to the D/A converter
48	VSS	—	Ground terminal
49	SPDIFO	O	Digital audio data output terminal
50	TEST1	I	Input terminal for the test
51	TRST	I	Reset signal input from the interface controller "L": reset
52	TMS	I	Mode selection signal input terminal
53	TCK	I	Clock signal input terminal
54	TDI	I	Serial data signal input from the DSD decoder
55	TDO	O	Serial data signal output to the audio DSP
56	TEST2	I	Input terminal for the test
57	SPDIFI	I	Digital audio data input from the audio DSP
58	VSS	—	Ground terminal
59	LRCKI	I	L/R sampling clock signal input from the audio DSP
60	BCKI	I	Bit clock signal input from the audio DSP

Pin No.	Pin Name	I/O	Description
61	VDD	—	Power supply terminal (+3.3V)
62	VSS	—	Ground terminal
63	DLDR1	I	Audio data input from the audio DSP
64	CSWI	I	Audio data (for center and woofer) input from the audio DSP
65	SLSRI	I	Audio data (for rear) input from the audio DSP
66	FLFRI	I	Audio data (for front) input from the audio DSP
67	TEST3	I	Input terminal for the test
68	CLK512	I	Master clock (27 MHz) input from the clock generator
69	VSS	—	Ground terminal
70	XRST	I	Reset signal input from the system controller “L”: reset
71	VDD	—	Power supply terminal (+3.3V)
72	SCLK	I	Serial clock signal input from the system controller
73	XCS	I	Chip select signal input from the mechanism controller
74	SI	I	Serial data input from the system controller
75	SO	O	Serial data output to the system controller
76	DEXRI	I	Not used
77	DMLI	I	DSD data input for L-ch down mix to the DSD decoder
78	DMRI	I	DSD data input for R-ch down mix to the DSD decoder
79	VSS	—	Ground terminal
80	PHAI	I	Clock signal input from DSD decoder
81	BCKAI	I	Bit clock signal input for DSD data output from DSD decoder
82	DQM	O	Not used
83	DLI	I	DSD data (for front L-ch) input from DSD decoder
84	DRI	O	DSD data (for front R-ch) input from DSD decoder
85	DCI	O	DSD data (for center) input from DSD decoder
86	DLFEI	O	DSD data (for woofer) input from DSD decoder
87	DLSI	O	DSD data (for rear L-ch) input from DSD decoder
88	DRSI	O	DSD data (for rear R-ch) input from DSD decoder
89	VSS	—	Ground terminal
90 to 95	D15 to D10	I/O	Two-way data bus with the SD-RAM
96	VDD	—	Power supply terminal (+3.3V)
97, 98	D9, D8	I/O	Two-way data bus with the SD-RAM
99	GND	—	Ground terminal
100	D0	I/O	Two-way data bus with the SD-RAM

• MB BOARD IC905 CXD2753R (DSD DECODER)

Pin No.	Pin Name	I/O	Description
1	VSC	—	Ground terminal (for core)
2	XMSLAT	I	Chip select signal input from the system controller
3	MSCK	I	Serial clock signal input from the system controller
4	MSDATI	I	Serial data input from the system controller
5	VDC	—	Power supply terminal (+2.5V) (for core)
6	MSDATO	O	Serial data output to the system controller
7	MSREADY	O	Ready signal output to the system controller
8	XMSDOE	O	Serial data output enable signal output terminal Not used
9	XRST	I	Reset signal input from the system controller “L”: reset
10	SMUTE	I	Soft muting control signal input from the system controller
11	MCKI	I	Master clock signal (33.8688 MHz) input from the clock generator
12	VSIO	—	Ground terminal (for I/O)
13, 14	EXCKO1, EXCKO2	O	External clock signal output terminal Not used
15	LRCK	O	L/R sampling clock signal output terminal Not used
16	FRAME	O	Not used
17	VDIO	—	Power supply terminal (+3.3V) (for I/O)
18 to 21	MNT0 to MNT7	O	Monitor signal output terminal Not used
22 to 25	TEST0	I	Input terminal for the test (normally: fixed at “L”)
26	TCK	I	Clock signal input terminal
27	TDI	I	Serial data input from the DSP
28	VSC	—	Ground terminal (for core)
29	TDO	O	Serial data output to the digital audio processor
30	TMS	I	Selection signal input terminal
31	TRST	I	Reset signal input from the interface controller “L”: reset
32 to 34	TEST1 to TEST3	I	Input terminal for the test (normally: fixed at “L”)
35	VDC	—	Power supply terminal (+2.5V) (for core)
36	TESTO	O	Output terminal for the test
37	XBIT	O	Not used
38 to 41	SUPDT0 to SUPDT3	O	Supplementary data output terminal Not used
42	VSIO	—	Ground terminal (for I/O)
43, 44	SUPDT4, SUPDT5	O	Supplementary data output terminal Not used
45	VDIO	—	Power supply terminal (+3.3V) (for I/O)
46, 47	SUPDT6, SUPDT7	O	Supplementary data output terminal Not used
48	XSUPAK	O	Supplementary data acknowledge signal output terminal Not used
49	VSC	—	Ground terminal (for core)
50	DSAEXR	O	Not used
51, 52	TESTI	I	Input terminal for the test (normally: fixed at “L”)
53	TESTO	O	Output terminal for the test
54	VDC	—	Power supply terminal (+2.5V) (for core)
55	DSADML	O	DSD data output for L-ch down mix to the digital audio processor
56	DSADMR	O	DSD data output for R-ch down mix to the digital audio processor
57	BCKASL	I	Input/output selection signal input terminal of bit clock signal for DSD data output “L”: input (slave), “H”: output (master) Fixed at “H” in this set

Pin No.	Pin Name	I/O	Description
58	VSDSD	—	Ground terminal (for DSD data output)
59	BCKAI	I	Bit clock signal input terminal for DSD data output Not used
60	BCKAO	O	Bit clock signal output for DSD data output to the digital audio processor
61	PHREFI	I	Clock signal input terminal for DSD data output Not used
62	PHREFO	O	Clock signal output to the D/A converter and digital audio processor
63	ZDFL	O	Zero data flag (for front L-ch) detection signal output terminal Not used
64	DSAL	O	DSD data (for front L-ch) output to the digital audio processor
65	ZDFR	O	Zero data flag (for front R-ch) detection signal output terminal Not used
66	DSAR	O	DSD data (for front R-ch) output to the digital audio processor
67	VDDSD	—	Power supply terminal (+3.3V) (for DSD data output)
68	ZDFC	O	Zero data flag (for center) detection signal output terminal Not used
69	DSAC	O	DSD data (for center) output to the digital audio processor
70	ZDFLFE	O	Zero data (for woofer) flag detection signal output terminal Not used
71	DSASW	O	DSD data (for woofer) output to the digital audio processor
72	VSDSD	—	Ground terminal (for DSD data output)
73	ZDFLS	O	Zero data flag (for rear L-ch) detection signal output terminal Not used
74	DSALS	O	DSD data (for rear L-ch) output to the digital audio processor
75	ZDFRS	O	Zero data flag (for rear R-ch) detection signal output terminal Not used
76	DSARS	O	DSD data (for rear R-ch) output to the digital audio processor
77	VDDSD	—	Power supply terminal (+3.3V) (For DSD data output)
78, 79	TESTO	O	Output terminal for the test
80	VSC	—	Ground terminal (for core)
81, 82	TESTO	O	Output terminal for the test
83	VDC	—	Power supply terminal (+2.5V) (for core)
84, 85	TESTO	O	Output terminal for the test
86	VSIO	—	Ground terminal (for I/O)
87	TESTO	O	Output terminal for the test
88, 89	TESTI	I	Input terminal for the test (normally: fixed at “L”)
90	VDIO	—	Power supply terminal (+3.3V) (for I/O)
91 to 93	TESTO	O	Output terminal for the test
94	TESTI	I	Input terminal for the test (normally: fixed at “H”)
95	TESTI	I	Input terminal for the test (normally: fixed at “L”)
96	TESTI	I	Input terminal for the test (normally: fixed at “H”)
97	TESTO	O	Output terminal for the test
98	IHOLD	O	Not used
99	VDC	—	Power supply terminal (+2.5V) (for core)
100 to 105	TESTI	I	Input terminal for the test (normally: fixed at “L”)
106	VSIO	—	Ground terminal (for I/O)
107 to 109	TESTI	I	Input terminal for the test (normally: fixed at “L”)
110	VDIO	—	Power supply terminal (+3.3V) (for I/O)
111 to 114	WAD0 to WAD3	I	External A/D data input terminal for PSP physical disc mark detection Not used
115	VSIO	—	Ground terminal (for I/O)
116	VSC	—	Ground terminal (for core)
117 to 120	WAD4 to WAD7	I	External A/D data input terminal for PSP physical disc mark detection Not used
121	VDC	—	Power supply terminal (+2.5V) (for core)
122	TESTI	I	Input terminal for the test (normally: fixed at “L”)

Pin No.	Pin Name	I/O	Description
123	WCK	I	Operation clock signal input for PSP physical disc mark detection from the DSP
124, 125	WAVDD0, WAVDD1	—	A/D power supply terminal (+2.5V) (for PSP physical disc mark detection)
126	WARFI	I	Analog RF signal input for PSP physical disc mark detection from the RF amplifier
127	WAVRB	I	A/D bottom reference terminal for PSP physical disc mark detection
128, 129	WAVSS0, WAVSS1	—	A/D ground terminal (for PSP physical disc mark detection)
130	VSIO	—	Ground terminal (for I/O)
131 to 134	DQ7 to DQ4	I/O	Two-way data bus with the SD-RAM
135	VDIO	—	Power supply terminal (+3.3V) (for I/O)
136 to 139	DQ3 to DQ0	I/O	Two-way data bus with the SD-RAM
140	VSIOA3	—	Ground terminal (for I/O)
141	DCLK	O	Clock signal output to the SD-RAM
142	DCKE	O	Clock enable signal output to the SD-RAM
143	XWE	O	Write enable signal output to the SD-RAM
144	XCAS	O	Column address strobe signal output to the SD-RAM
145	XRAS	O	Row address strobe signal output to the SD-RAM
146	VDIO	—	Power supply terminal (+3.3V) (for I/O)
147	TESTO	O	Output terminal for the test
148, 149	A11, A10	O	Address signal output to the SD-RAM
150	VSC	—	Ground terminal (for core)
151, 152	A9, A8	O	Address signal output to the SD-RAM
153	VDC	—	Power supply terminal (+2.5V) (for core)
154 to 157	A7 to A4	O	Address signal output to the SD-RAM
158	VSIO	—	Ground terminal (for I/O)
159 to 162	A3 to A0	O	Address signal output to the SD-RAM
163	VDIO	—	Power supply terminal (+3.3V) (for I/O)
164	XSRQ	O	Stream data bus request signal output to the DSP
165	XSHD	I	Stream data bus header flag signal input from the DSP
166	SDCK	I	Stream data bus clock signal input from the DSP
167	XSAK	I	Stream data bus acknowledge signal input from the DSP
168	SDEF	I	Stream data bus error flag signal input from the DSP
169 to 176	SD0 to SD7	I	Stream data signal input from the DSP

**• PANEL-L BOARD IC1003  $\mu$ PD70F3259YGF-S05-JBT-A (INTERFACE CONTROLLER)**

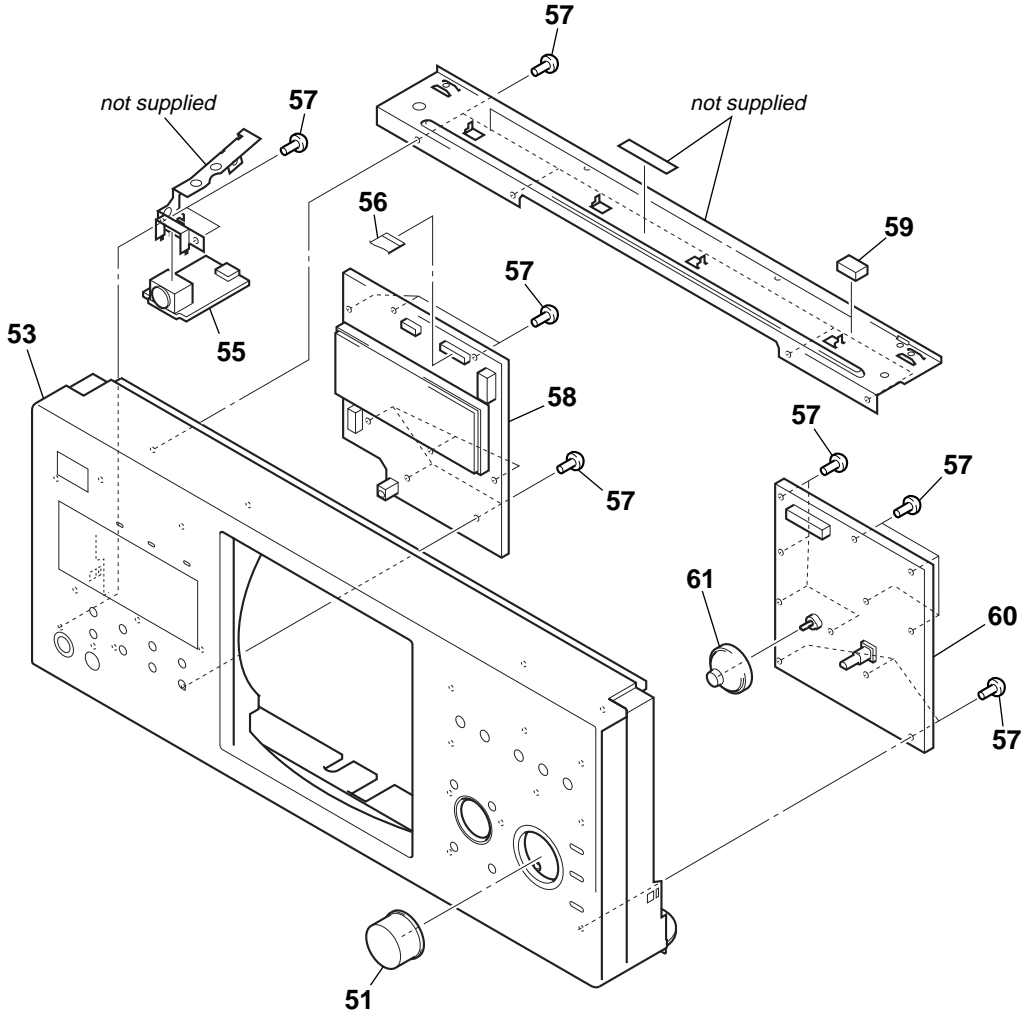
Pin No.	Pin Name	I/O	Description
1, 2	KEY1, KEY0	I	Front panel key input terminal (A/D input)
3	AVDD	—	Power supply terminal (+3.3V)
4	AVSS	—	Ground terminal
5, 6	NC	—	Not used
7	AVREF	I	Reference voltage (+3.3V) input terminal
8	JOG A	I	Jog dial pulse input from the rotary encoder (DISC AMS, PUSH ENTER) (A phase input)
9	JOG B	I	Jog dial pulse input from the rotary encoder (DISC AMS, PUSH ENTER) (B phase input)
10	FLMD0	—	Flash write terminal
11	VDD	—	Power supply terminal (+3.3V)
12	REGC	—	Connected to the capacitor for the regulator
13	VSS	—	Ground terminal
14	X1	I	Main system clock input terminal (5 MHz)
15	X2	O	Main system clock output terminal (5 MHz)
16	RESET	I	System reset signal input from the reset signal generator “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
17	X1	I	Sub system clock input terminal Not used
18	X2	O	Sub system clock output terminal Not used
19	NC	—	Not used
20	KEY_INT	I	Wake up signal input terminal for front panel key
21	232C_INT	I	Wake up signal input terminal for RS-232C
22	DBUGRST	—	Not used
23	SYSCONCS	I	Chip select signal input from the system controller
24	SYSCONSIN	I	Serial data input from the system controller
25	SYSCONSOUT	O	Serial data output to the system controller
26	SYSCONCLK	I	Serial clock signal input from the system controller
27	232COUT	O	Serial data output to the RS-232C
28	232CIN	I	Serial data input from the RS-232C
29, 30	NC	—	Not used
31	SIRCS	I	Remote control signal input terminal
32	CONTROL_S	O	S-LINK and CONTROL S output terminal
33	SYSCONBUSY	O	Interrupt signal output to the system controller
34	SYSCONRST	O	Reset signal output to the system controller, DSP, AV decoder, audio DSP, mechanism controller, digital audio processor and DSD decoder “L”: reset
35	EVSS	—	Ground terminal
36	EVDD	—	Power supply terminal (+3.3V)
37 to 54	NC	—	Not used
55	VIDEO_OFF	O	Video power supply on/off control signal output terminal
56	FLDSDATA	O	Serial data output to the fluorescent indicator tube driver
57	FLDSCLK	O	Serial clock signal output to the fluorescent indicator tube driver
58	KBCIN	I	Serial clock signal input from the KEYBOARD
59	KBDIN	I	Serial data input from the KEYBOARD
60	SIRCS-WAKE	I	Wake up signal input terminal for SIRCS
61	FLDRST	O	Reset signal output to the fluorescent indicator tube driver “L”: reset
62	FLDCS	O	Chip select signal output to the fluorescent indicator tube driver
63	FLHS	—	Flash write terminal

Pin No.	Pin Name	I/O	Description
64	CLKOUT	O	Clock signal output terminal Not used
65	NC	—	Not used
66	KBCOUT	O	Serial clock signal input stop signal output to the KEYBOARD
67	KBDOUT	O	Serial data input stop signal output to the KEYBOARD
68	AMUTE	O	Audio muting control signal output terminal
69	VMUTE	O	Video muting control signal output to the video amplifier
70	P_CONT	O	Power supply on/off control signal output terminal “H”: power on
71	BVSS	—	Ground terminal
72	BVDD	—	Power supply terminal (+3.3V)
73	LED0	O	LED drive signal output of the PROGRESSIVE indicator “H”: LED on
74	LED1	O	LED drive signal output of the SACD indicator “H”: LED on
75	LED2	O	LED drive signal output of the MULTI CHANNEL indicator “H”: LED on
76	LED3	O	LED drive signal output of the FL OFF indicator “H”: LED on
77	LED4	O	LED drive signal output of the VIDEO OFF indicator “H”: LED on
78	FLMD1	—	Flash write terminal
79, 80	NC	—	Not used
81	FL_CTRL	O	FLMOD (pin ⑧) control signal output terminal at the flash write
82 to 88	NC	—	Not used
89	LED4	O	LED drive signal output of the DISC CHANGE indicator “H”: LED on
90	LED6	O	LED drive signal output of the DIRECT SEARCH indicator “H”: LED on
91, 92	NC	—	Not used
93	SIRCS_MODE	I	COMMAND MODE switch input terminal
94	NO_USE	—	Not used
95	PON_CHECK	I	Power supply voltage input terminal
96	MODEL_SEL	I	Model selection signal input terminal
97	SELF_CHECK	I	Self-diagnosis mode selection signal input terminal
98 to 100	KEY4 to KEY2	I	Front panel key input terminal (A/D input)



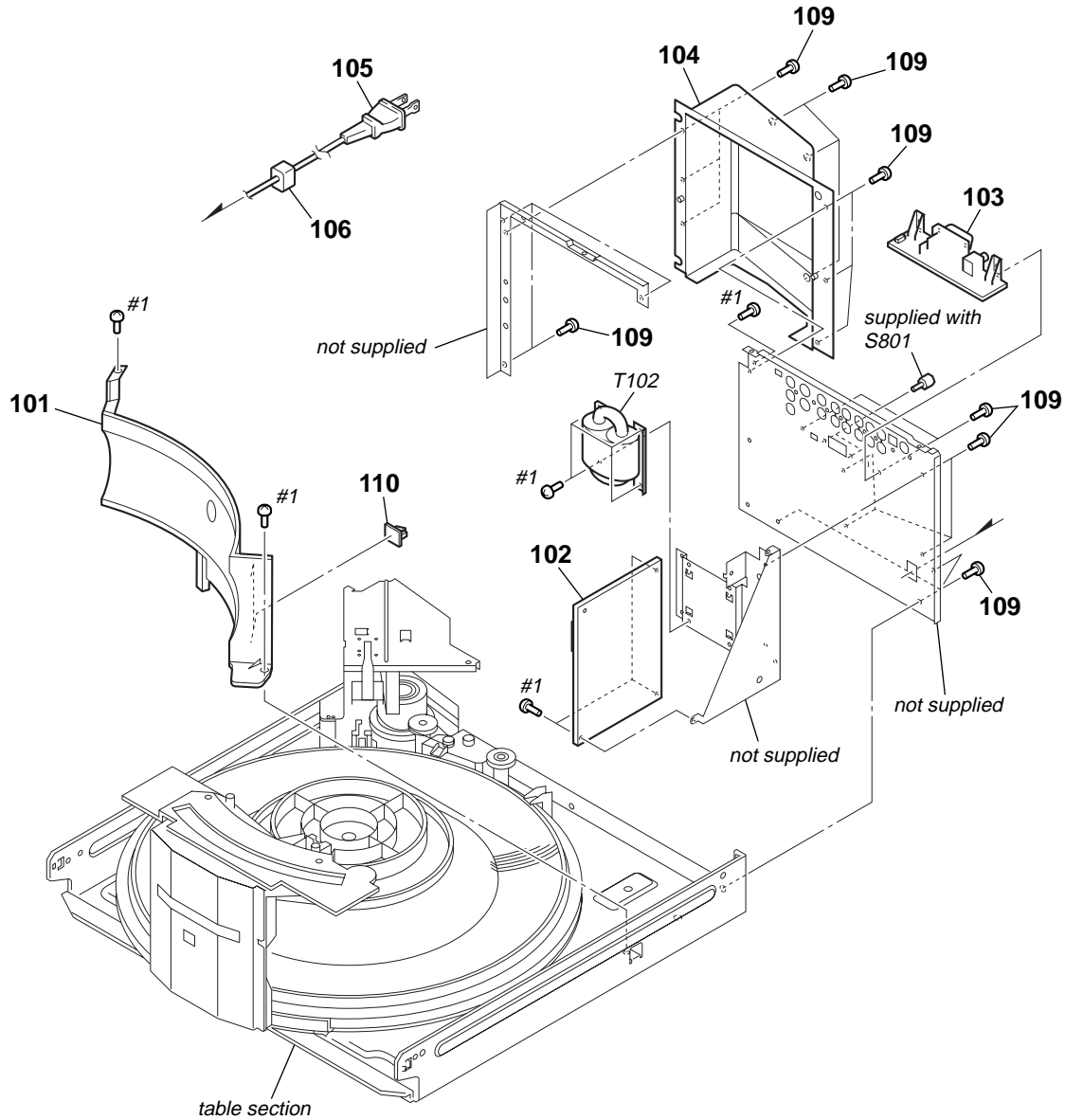


8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-4955-695-1	KNOB (R28) ASSY		58	A-4733-701-A	PANEL-L BOARD, COMPLETE	
53	A-4738-462-A	PANEL ASSY, FRONT		59	4-985-553-21	CUSHION	
55	1-688-454-11	KEY BOARD		60	A-4733-713-A	PANEL-R BOARD, COMPLETE	
56	1-827-576-11	WIRE (FLAT TYPE) (19 CORE)		61	4-246-980-12	KNOB (CURSOR)	
57	4-951-620-01	SCREW (2.6X8), +BVTP					

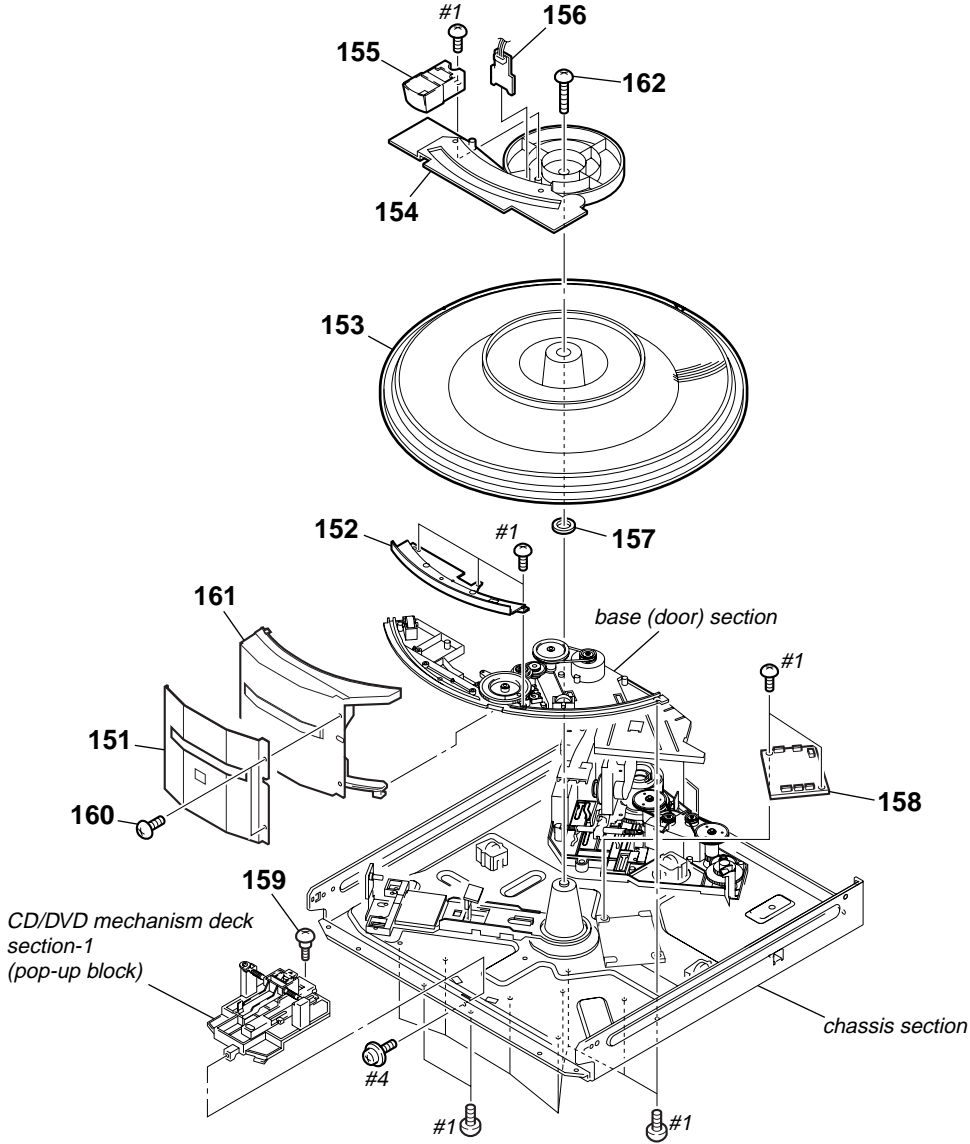
8-3. POWER BLOCK SECTION



<p>The components identified by mark <math>\triangle</math> or dotted line with mark <math>\triangle</math> are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque <math>\triangle</math> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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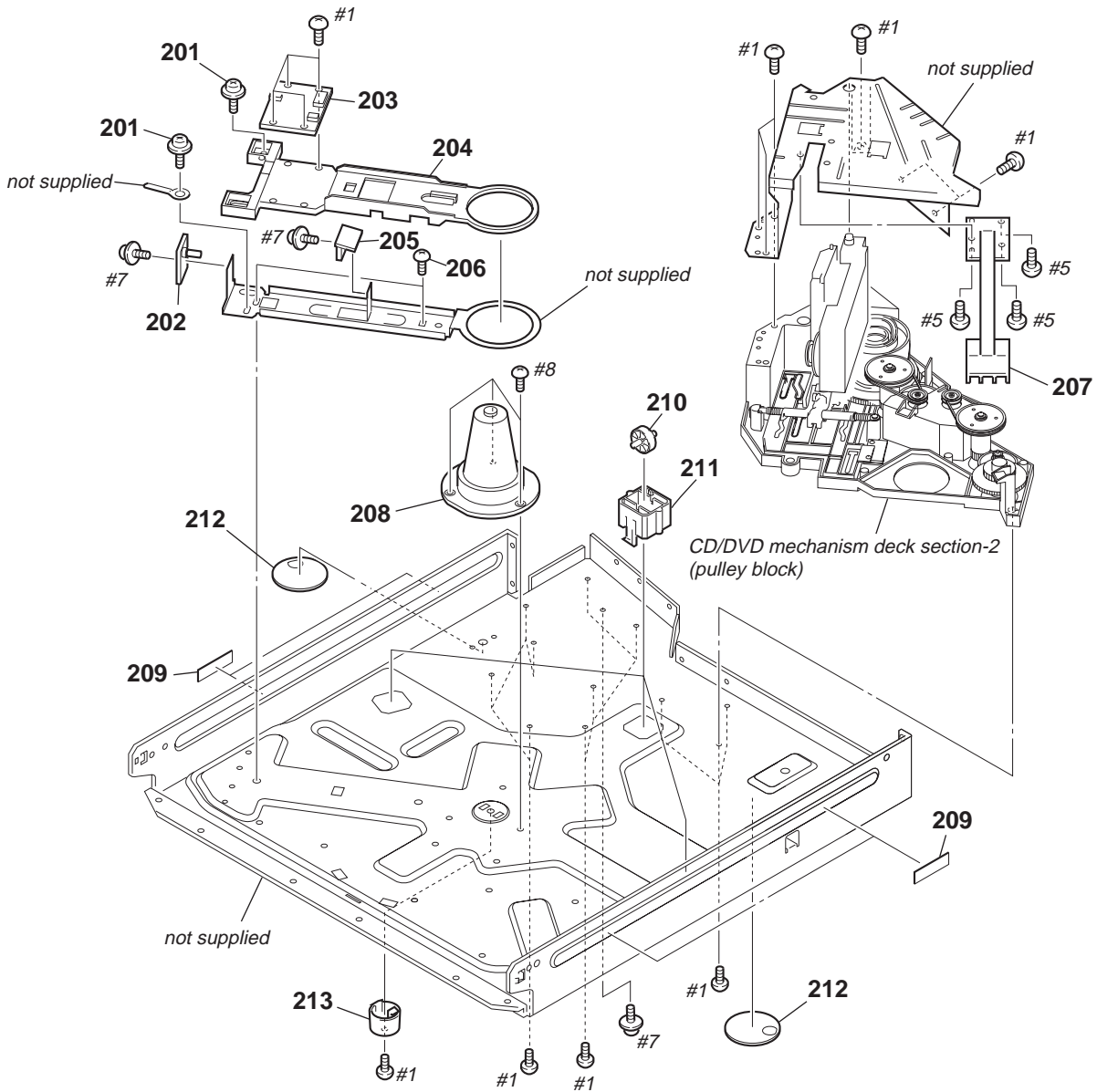
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-226-841-02	COVER (PT)		* 106	3-703-244-00	BUSHING (2104), CORD	
102	1-477-957-11	POWER BLOCK (Including POWER BOARD)		109	3-704-515-21	SCREW (BV/RING)	
103	A-4733-703-A	RS-232C BOARD, COMPLETE		110	4-250-786-01	LOCKING WIRE SADDLE	
104	4-226-876-21	COVER (CDM)		$\triangle$ T102	1-437-496-21	TRANSFORMER, POWER	
$\triangle$ 105	1-783-531-32	CORD, POWER		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

8-4. TABLE SECTION



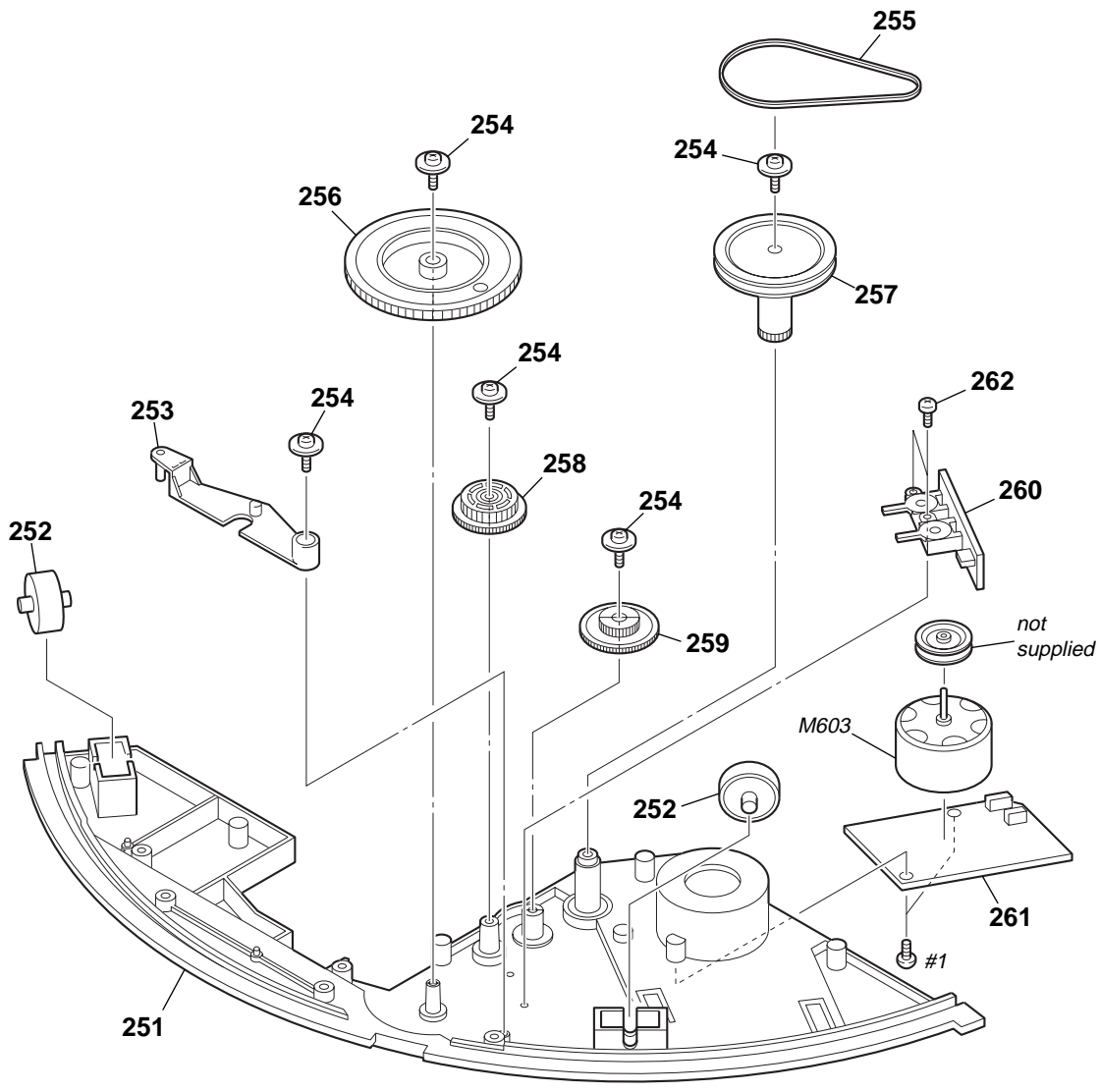
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-4955-915-1	PANEL (DOOR) ASSY		158	A-4733-705-A	DRIVER BOARD, COMPLETE	
152	4-226-834-01	COVER (TABLE)		159	3-356-601-11	SCREW, STEP	
153	X-4952-500-2	TABLE (400) ASSY		160	4-951-620-01	SCREW (2.6X8), +BVTP	
154	4-226-833-05	GUIDE (DOOR)		161	X-4955-689-1	DOOR ASSY	
155	4-215-968-01	WINDOW (INTERNAL ILLUMINATION)		162	3-703-136-31	SCREW (M3X14)	
156	A-4733-717-A	LED BOARD, COMPLETE		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
157	3-701-447-21	WASHER, 10		#4	7-685-903-11	SCREW +PTPWH 3X6 (TYPE2)	

8-5. CHASSIS SECTION



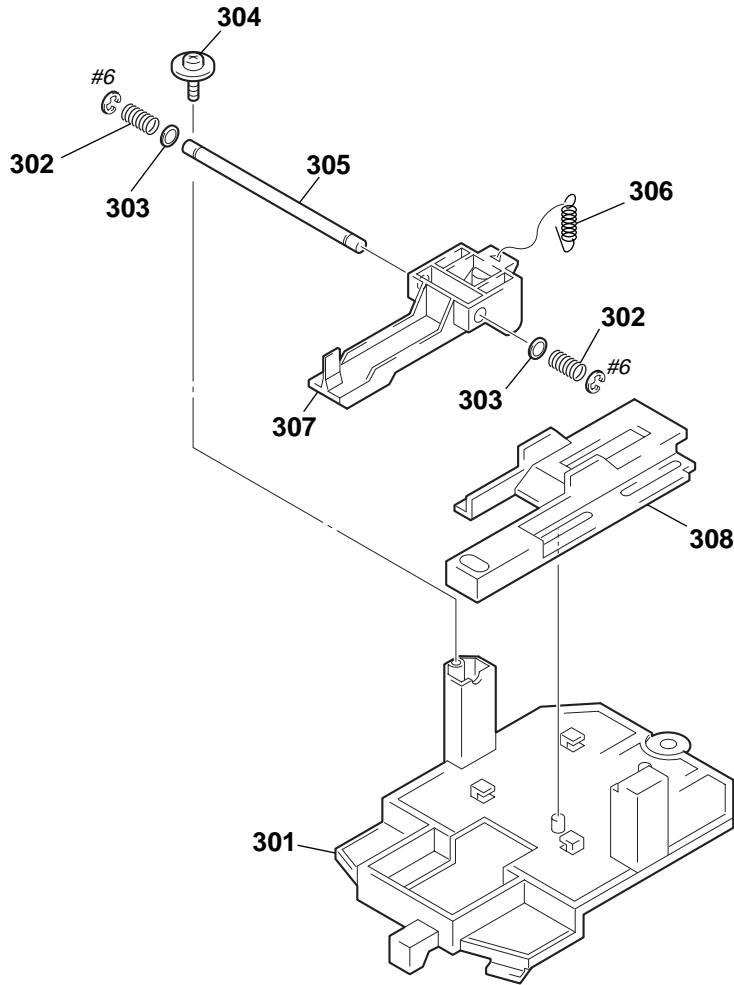
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6		210	4-216-093-01	ROLLER	
202	1-688-453-11	D. SENS OUT BOARD		211	4-216-092-03	HOLDER (ROLLER)	
203	A-4733-707-A	SENSOR BOARD, COMPLETE		212	4-219-325-11	CUSHION (FOOT-L)	
204	4-225-873-01	HOLDER (TABLE SENSOR 400)		213	4-931-169-01	FOOT	
205	1-688-452-11	D. SENS IN BOARD		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
206	4-216-096-01	SCREW (T1), STEP		#5	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
207	4-216-088-02	GUIDE (DISC)		#7	7-682-948-01	SCREW +PSW 3X8	
208	4-216-089-02	SHAFT (CENTER)		#8	7-685-871-01	SCREW +BVTT 3X6	
* 209	3-378-400-01	CUSHION, SARANET					

8-6. BASE (DOOR) SECTION



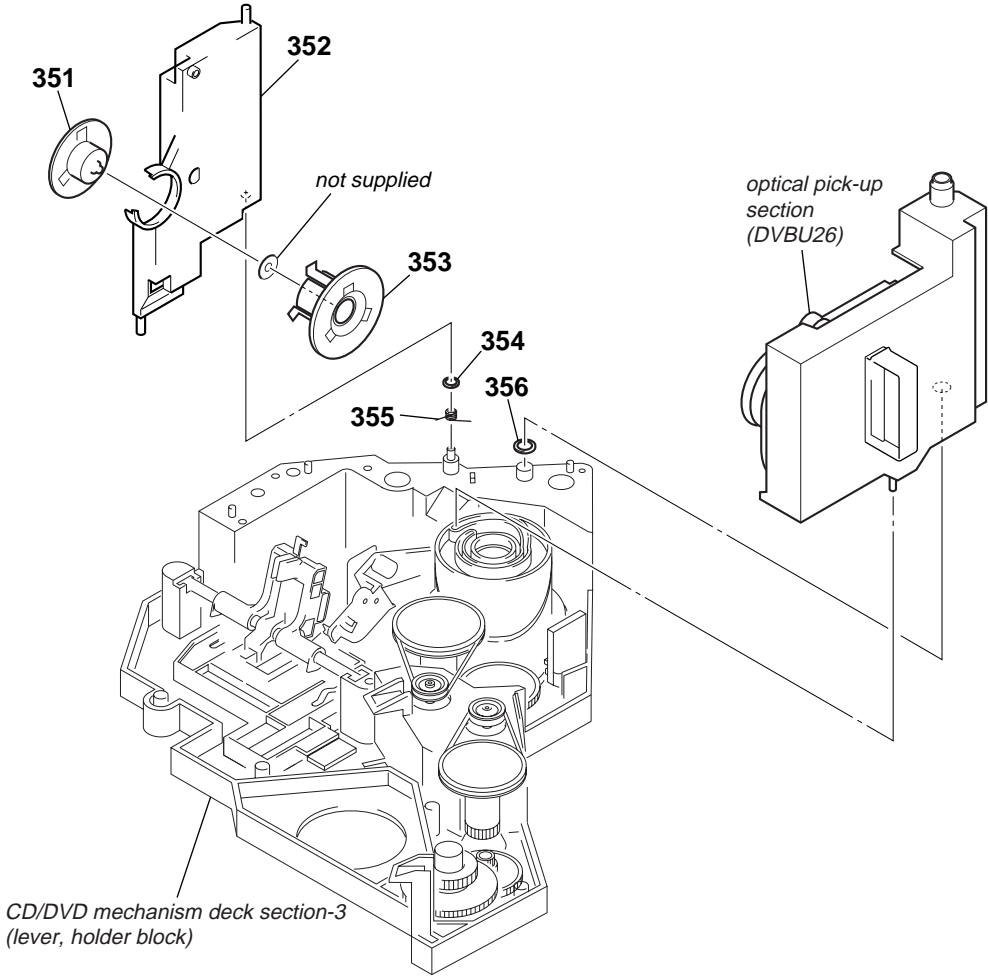
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-226-827-02	BASE (DOOR DRIVING)		258	4-226-831-01	GEAR (B)	
252	4-216-093-01	ROLLER		259	4-226-830-01	GEAR (A)	
253	4-226-832-01	LEVER (PU JOINT)		260	1-688-450-11	DOOR SW BOARD	
254	4-933-134-11	SCREW (+PTPWH M2.6X8)		261	1-688-451-11	DOOR MOTOR BOARD	
255	4-219-326-01	BELT (DIA. 42X1.2)		262	4-951-620-01	SCREW (2.6X8), +BVTP	
256	4-226-828-02	GEAR (CAM)		M603	1-541-632-12	MOTOR, DC (DOOR)	
257	4-226-829-01	GEAR (PULLEY)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

8-7. CD/DVD MECHANISM DECK SECTION-1  
(POP-UP BLOCK)



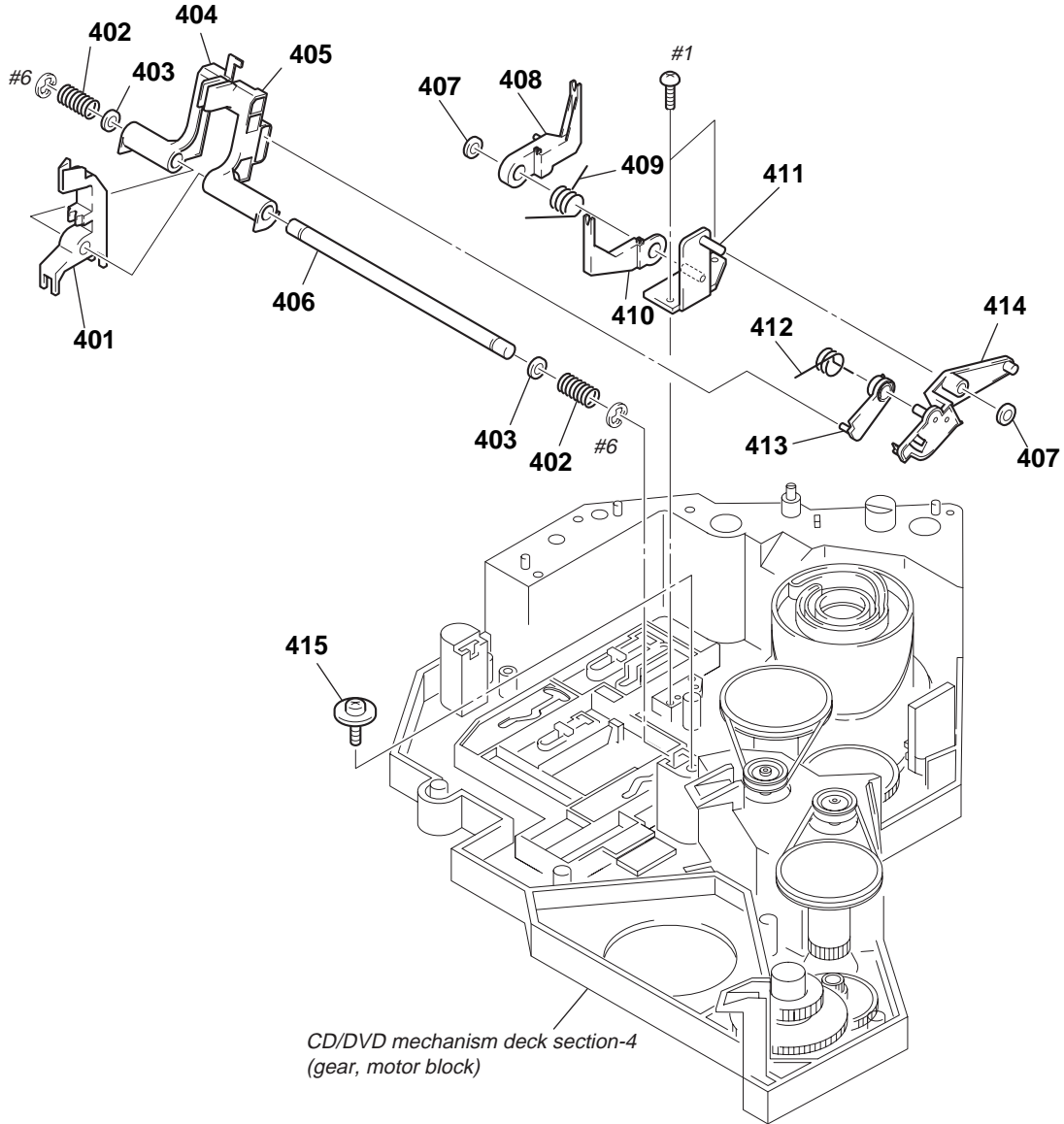
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301	4-216-100-02	HOLDER (POP-UP)		306	4-216-104-01	SPRING (POP-UP), TENSION	
302	4-216-103-01	SPRING (POP-UP), COMPRESSION		307	4-228-352-01	LEVER (POP-UP 400)	
303	3-701-441-21	WASHER		308	4-216-099-02	SLIDER (POP-UP)	
304	4-998-716-01	SCREW, BU FITTING		#6	7-624-106-04	STOP RING 3.0, TYPE -E	
305	4-216-102-01	SHAFT (POP-UP FULCRUM)					

8-8. CD/DVD MECHANISM DECK SECTION-2  
(PULLEY BLOCK)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-245-983-01	PULLEY (A)		354	3-701-441-21	WASHER	
352	4-216-082-11	HOLDER (MAGNET), TORSION		355	4-216-081-01	SPRING (MG), TORSION	
353	4-245-984-01	PULLEY (B)		356	3-701-446-21	WASHER, 8	

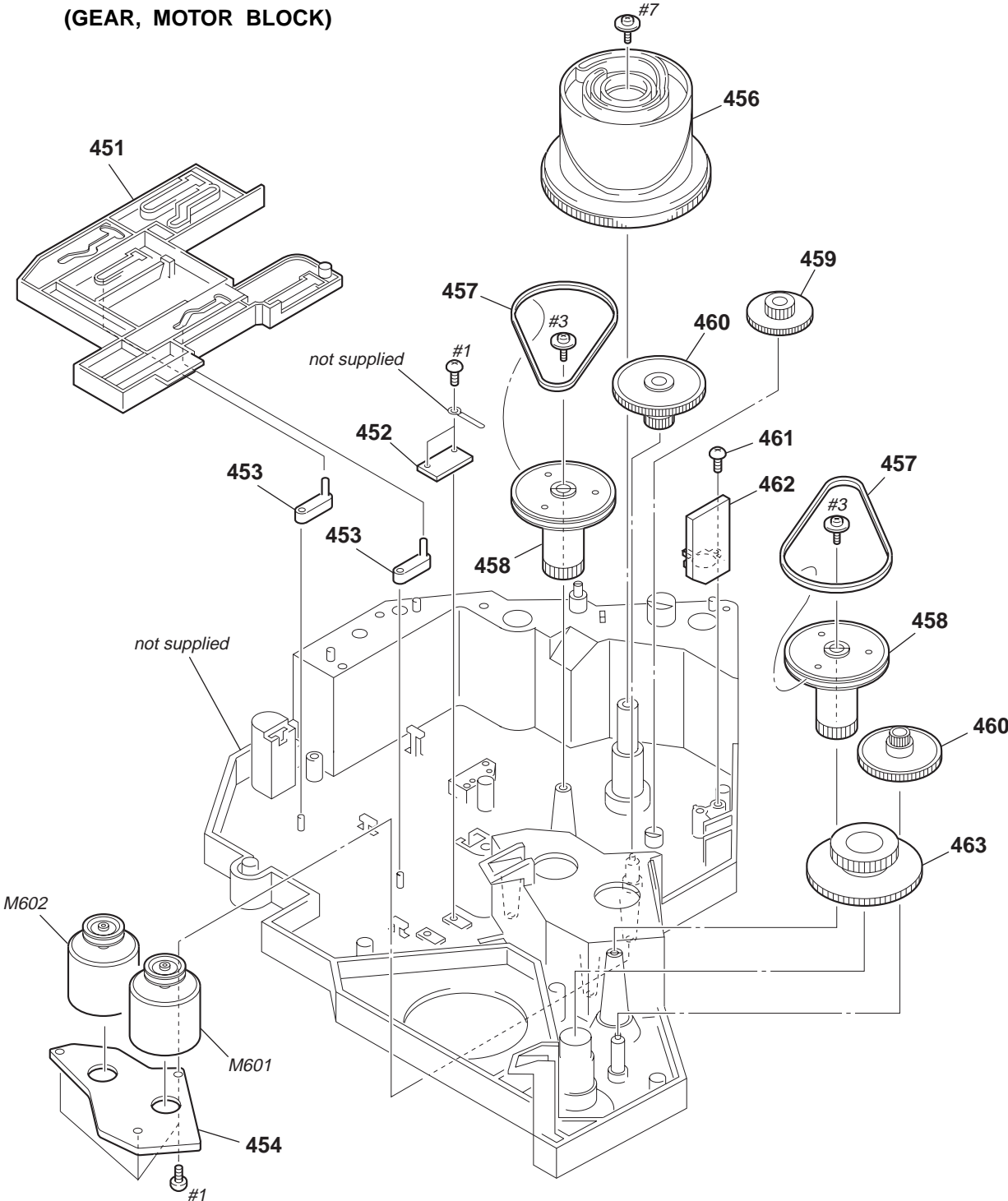
8-9. CD/DVD MECHANISM DECK SECTION-3  
(LEVER, HOLDER BLOCK)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
401	X-4952-499-1	LEVER (LOCK 400) ASSY		410	4-225-871-03	HOLDER (F400)	
402	4-216-067-01	SPRING (CLAMP), COMPRESSION		411	X-4950-900-1	BRACKET (LEVER) ASSY	
403	3-701-441-21	WASHER		412	4-216-080-01	SPRING (LIMITTER), TORSION	
404	X-4952-501-1	HOLDER (DISC L400) ASSY		413	4-216-079-02	LIMITTER (LEVER)	
405	X-4952-502-1	HOLDER (DISC R400) ASSY		414	4-216-078-01	LEVER (LOADING)	
406	4-225-868-01	SHAFT (CLAMP 400)		415	4-998-716-01	SCREW, BU FITTING	
407	3-325-697-21	WASHER		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
408	4-216-076-11	HOLDER (R)		#6	7-624-106-04	STOP RING 3.0, TYPE -E	
409	4-216-077-01	SPRING (HOLDER FR), TORSION					

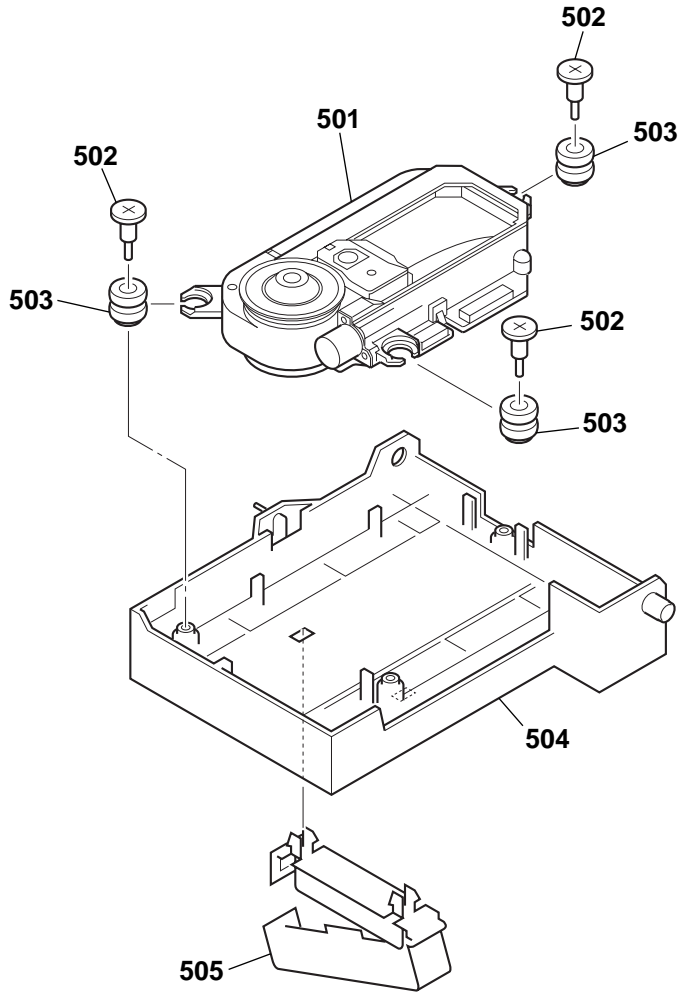


8-10. CD/DVD MECHANISM DECK SECTION-4  
(GEAR, MOTOR BLOCK)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
451	4-225-865-01	SLIDER (400)		461	4-951-620-01	SCREW (2.6X8), +BVTP	
452	1-688-448-11	LOCK SW BOARD		462	1-688-446-11	LOADING SW BOARD	
453	X-4952-503-1	LEVER (FULCRUM 400) ASSY		463	4-225-869-01	GEAR (TABLE 400)	
454	1-688-447-11	LAODING MOTOR BOARD		M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
456	A-4672-676-B	CAM ASSY		M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
457	4-225-876-01	BELT (400)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
458	4-225-870-01	PULLEY (400)		#3	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
459	4-216-057-01	GEAR (CENTER 2)		#7	7-682-948-01	SCREW +PSW 3X8	
460	4-216-058-01	GEAR (CENTER)					

8-11. OPTICAL PICK-UP SECTION  
(DVBU26)



<p>The components identified by mark <math>\triangle</math> or dotted line with mark <math>\triangle</math> are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque <math>\triangle</math> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
$\triangle$ 501	A-6061-908-A	OPTICAL PICK-UP KHM-290AAA	(SERVICE ASSY)	503	3-053-847-11	INSULATOR	
502	4-981-923-01	SCREW (M), STEP		504	X-4955-513-1	HOLDER (BU) ASSY	
				505	3-074-747-01	CLAMP (FFC)	

## SECTION 9 ELECTRICAL PARTS LIST

AV

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **SEMICONDUCTORS**  
In each case, u:  $\mu$ , for example:  
uA. . . :  $\mu$ A. . .      uPA. . . :  $\mu$ PA. . .  
uPB. . . :  $\mu$ PB. . .    uPC. . . :  $\mu$ PC. . .  
uPD. . . :  $\mu$ PD. . .
- **CAPACITORS**  
uF:  $\mu$ F
- **COILS**  
uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4733-699-A	AV BOARD, COMPLETE *****		C234	1-136-818-11	FILM      0.0047uF 5%	100V
				C235	1-136-811-11	FILM      330PF 5%	100V
				C236	1-136-818-11	FILM      0.0047uF 5%	100V
*	3-309-144-21	HEAT SINK		C237	1-136-811-11	FILM      330PF 5%	100V
	7-685-871-01	SCREW +BVTT 3X6 (S)		C238	1-136-818-11	FILM      0.0047uF 5%	100V
		< CAPACITOR >		C239	1-136-811-11	FILM      330PF 5%	100V
C102	1-126-204-11	ELECT CHIP      47uF      20%	16V	C240	1-136-811-11	FILM      330PF 5%	100V
C103	1-126-204-11	ELECT CHIP      47uF      20%	16V	C241	1-136-811-11	FILM      330PF 5%	100V
C104	1-126-204-11	ELECT CHIP      47uF      20%	16V	C242	1-136-811-11	FILM      330PF 5%	100V
C105	1-165-176-11	CERAMIC CHIP    0.047uF    10%	16V	C243	1-127-694-11	ELECT      47uF      20%	25V
C106	1-126-204-11	ELECT CHIP      47uF      20%	16V	C244	1-127-694-11	ELECT      47uF      20%	25V
C107	1-164-004-11	CERAMIC CHIP    0.1uF      10%	25V	C245	1-127-694-11	ELECT      47uF      20%	25V
C108	1-126-204-11	ELECT CHIP      47uF      20%	16V	C246	1-127-694-11	ELECT      47uF      20%	25V
C109	1-164-004-11	CERAMIC CHIP    0.1uF      10%	25V	C247	1-127-694-11	ELECT      47uF      20%	25V
C201	1-127-694-11	ELECT            47uF      20%	25V	C248	1-127-694-11	ELECT      47uF      20%	25V
C204	1-126-767-11	ELECT            1000uF    20%	16V	C249	1-127-694-11	ELECT      47uF      20%	25V
C205	1-126-193-11	ELECT CHIP      1uF        20%	50V	C250	1-127-694-11	ELECT      47uF      20%	25V
C206	1-126-193-11	ELECT CHIP      1uF        20%	50V	C251	1-136-850-11	MYLAR      0.1uF      5%	63V
C209	1-126-193-11	ELECT CHIP      1uF        20%	50V	C252	1-128-200-11	ELECT      47uF      20%	50V
C210	1-162-970-11	CERAMIC CHIP    0.01uF     10%	25V	C253	1-136-850-11	MYLAR      0.1uF      5%	63V
C211	1-164-004-11	CERAMIC CHIP    0.1uF      10%	25V	C254	1-128-200-11	ELECT      47uF      20%	50V
C212	1-127-694-11	ELECT            47uF      20%	25V	C255	1-136-850-11	MYLAR      0.1uF      5%	63V
C213	1-130-478-00	MYLAR            0.0039uF    5%	50V	C256	1-128-200-11	ELECT      47uF      20%	50V
C214	1-130-478-00	MYLAR            0.0039uF    5%	50V	C257	1-128-200-11	ELECT      47uF      20%	50V
C215	1-130-478-00	MYLAR            0.0039uF    5%	50V	C258	1-136-850-11	MYLAR      0.1uF      5%	63V
C216	1-130-478-00	MYLAR            0.0039uF    5%	50V	C259	1-128-200-11	ELECT      47uF      20%	50V
C217	1-130-478-00	MYLAR            0.0039uF    5%	50V	C260	1-136-850-11	MYLAR      0.1uF      5%	63V
C218	1-130-478-00	MYLAR            0.0039uF    5%	50V	C261	1-128-200-11	ELECT      47uF      20%	50V
C219	1-130-478-00	MYLAR            0.0039uF    5%	50V	C262	1-136-850-11	MYLAR      0.1uF      5%	63V
C220	1-136-811-11	FILM            330PF      5%	100V	C263	1-128-200-11	ELECT      47uF      20%	50V
C221	1-136-811-11	FILM            330PF      5%	100V	C264	1-136-850-11	MYLAR      0.1uF      5%	63V
C222	1-136-356-11	FILM            470PF      5%	100V	C265	1-136-850-11	MYLAR      0.1uF      5%	63V
C223	1-136-811-11	FILM            330PF      5%	100V	C266	1-128-200-11	ELECT      47uF      20%	50V
C224	1-136-811-11	FILM            330PF      5%	100V	C267	1-137-605-11	MYLAR      0.00022uF 5%	50V
C225	1-136-811-11	FILM            330PF      5%	100V	C268	1-137-605-11	MYLAR      0.00022uF 5%	50V
C226	1-136-811-11	FILM            330PF      5%	100V	C269	1-137-605-11	MYLAR      0.00022uF 5%	50V
C227	1-136-811-11	FILM            330PF      5%	100V	C270	1-137-605-11	MYLAR      0.00022uF 5%	50V
C228	1-136-818-11	FILM            0.0047uF    5%	100V	C271	1-137-605-11	MYLAR      0.00022uF 5%	50V
C229	1-136-818-11	FILM            0.0047uF    5%	100V	C272	1-137-605-11	MYLAR      0.00022uF 5%	50V
C230	1-136-818-11	FILM            0.0047uF    5%	100V	C273	1-137-605-11	MYLAR      0.00022uF 5%	50V
C231	1-136-356-11	FILM            470PF      5%	100V	C274	1-137-605-11	MYLAR      0.00022uF 5%	50V
C232	1-136-818-11	FILM            0.0047uF    5%	100V	C279	1-126-947-11	ELECT      47uF      20%	16V
C233	1-136-811-11	FILM            330PF      5%	100V	C280	1-126-947-11	ELECT      47uF      20%	16V



Ref. No.	Part No.	Description	Remark
C281	1-126-947-11	ELECT 47uF 20%	16V
C283	1-136-817-11	FILM 0.0033uF 5%	100V
C301	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C303	1-119-800-11	ELECT 100uF 20%	10V
C304	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C305	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C306	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C307	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C308	1-136-850-11	MYLAR 0.1uF 5%	63V
C309	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C310	1-119-800-11	ELECT 100uF 20%	10V
C311	1-135-781-51	ELECT 2200uF	35V
C313	1-119-800-11	ELECT 100uF 20%	10V
C314	1-135-748-11	ELECT 4700uF	35V
C316	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C319	1-119-800-11	ELECT 100uF 20%	25V
C320	1-119-800-11	ELECT 100uF 20%	10V
C321	1-100-398-21	ELECT 270uF 20%	10V
C322	1-127-694-11	ELECT 47uF 20%	25V
C323	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C324	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C325	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C326	1-136-814-11	FILM 0.001uF 5%	100V
C327	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C328	1-136-850-11	MYLAR 0.1uF 5%	63V
C329	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C330	1-100-398-21	ELECT 270uF 20%	10V
C331	1-127-694-11	ELECT 47uF 20%	25V
C332	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C333	1-136-850-11	MYLAR 0.1uF 5%	63V
C334	1-135-667-11	ELECT 220uF	10V
C335	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
C336	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C337	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C338	1-136-850-11	MYLAR 0.1uF 5%	63V
C339	1-126-204-11	ELECT CHIP 47uF 20%	16V
C340	1-127-694-11	ELECT 47uF 20%	25V
C341	1-117-681-11	ELECT CHIP 100uF 20%	16V
C342	1-117-681-11	ELECT CHIP 100uF 20%	16V
C343	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C344	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
< CONNECTOR >			
CN201	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P	
CN202	1-784-834-21	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
CN203	1-784-835-21	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	
CN204	1-785-101-11	PIN, CONNECTOR (3.96mm PITCH) 3P	
CN205	1-815-954-21	PIN, CONNECTOR (PC BOARD) 13P	
CN206	1-764-177-11	PIN, CONNECTOR (SMD) (1.5mm) 7P	
CN207	1-794-509-11	PIN, CONNECTOR (PC BOARD) (3P)	
CN208	1-785-728-21	PIN (PC BOARD) , CONNECTOR 7P	
< DIODE >			
D101	8-719-053-18	DIODE 1SR154-400TE-25	
D102	8-719-053-18	DIODE 1SR154-400TE-25	
D103	8-719-071-15	DIODE HZM6.8ZWA1TL	
D104	8-719-071-15	DIODE HZM6.8ZWA1TL	
D105	8-719-071-15	DIODE HZM6.8ZWA1TL	

Ref. No.	Part No.	Description	Remark
D106	8-719-071-15	DIODE HZM6.8ZWA1TL	
D201	8-719-914-43	DIODE DAN202K	
D301	8-719-210-39	DIODE EC10QS-04	
D302	8-719-210-39	DIODE EC10QS-04	
D303	8-719-210-39	DIODE EC10QS-04	
D304	8-719-210-39	DIODE EC10QS-04	
D305	8-719-988-61	DIODE 1SS355TE-17	
D306	8-719-988-61	DIODE 1SS355TE-17	
D307	8-719-914-44	DIODE DAP202K	
D308	8-719-988-61	DIODE 1SS355TE-17	
D309	8-719-988-61	DIODE 1SS355TE-17	
D310	8-719-025-29	DIODE 02CZ5.1-TE85L	
D311	8-719-025-47	DIODE 02CZ12-TE85L	
< EARTH TERMINAL >			
* G201	1-537-738-21	TERMINAL, EARTH	
* G301	1-537-738-21	TERMINAL, EARTH	
< IC >			
IC102	6-701-820-01	IC LA73053-TLM-E	
IC201	8-759-052-52	IC L78M05T-FA	
IC202	8-759-447-30	IC NJM2114M-TE2	
IC203	8-759-447-30	IC NJM2114M-TE2	
IC204	8-759-447-30	IC NJM2114M-TE2	
IC205	8-759-447-30	IC NJM2114M-TE2	
IC206	6-600-011-01	IC TOTX179L (DIGITAL OUT PCM/DTS/DOLBY DIGITAL OPTICAL)	
IC301	6-700-398-01	IC uPC2918T-E1	
IC302	8-759-711-85	IC NJM4580E-D	
IC303	8-759-711-85	IC NJM4580E-D	
< JACK >			
J101	1-694-484-11	TERMINAL, S (2P.V) (S VIDEO OUT)	
J102	1-817-553-11	JACK, PIN 3P (COMPONENT VIDEO OUT)	
J103	1-793-475-11	JACK, PIN 2P (LINE OUT VIDEO)	
J104	1-793-344-21	JACK, PIN 4P (LINE OUT AUDIO)	
J201	1-793-524-11	JACK, PIN 4P (5.1CH OUTPUT FRONT/REAR)	
J202	1-785-795-11	JACK, PIN 2P (5.1CH OUTPUT CENTER/WOOFER)	
J301	1-784-432-11	JACK, PIN 1P (DIGITAL OUT PCM/DTS/DOLBY DIGITAL COAXIAL)	
< COIL >			
L101	1-412-060-11	INDUCTOR 22uH	
L102	1-412-060-11	INDUCTOR 22uH	
L201	1-419-387-21	INDUCTOR 100uH	
< IC LINK >			
PS302	1-532-637-00	LINK, IC	
< TRANSISTOR >			
Q104	8-729-421-19	TRANSISTOR UN2213	
Q105	8-729-424-08	TRANSISTOR UN2111	
Q204	8-729-421-19	TRANSISTOR UN2213	
Q205	8-729-421-19	TRANSISTOR UN2213	
Q206	8-729-421-19	TRANSISTOR UN2213	
Q207	8-729-027-53	TRANSISTOR DTC124TKA-T146	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q208	8-729-027-53	TRANSISTOR	DTC124TKA-T146				
Q209	8-729-027-53	TRANSISTOR	DTC124TKA-T146	R152	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q210	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R153	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q211	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R154	1-216-864-11	SHORT CHIP	0
				R155	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q212	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R156	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q213	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R157	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q214	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R158	1-216-864-11	SHORT CHIP	0
Q215	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R160	1-208-785-11	METAL CHIP	1.3K 0.5% 1/10W
Q216	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R161	1-208-785-11	METAL CHIP	1.3K 0.5% 1/10W
				R162	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q217	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO				
Q218	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R163	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q219	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R164	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q220	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO	R165	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q221	8-729-230-49	TRANSISTOR	2SC2712-YG	R166	1-216-649-11	METAL CHIP	820 0.5% 1/10W
				R167	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q301	6-550-543-01	TRANSISTOR	2SD1766FT100QR				
Q302	8-729-424-08	TRANSISTOR	UN2111	R168	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q303	8-729-052-94	TRANSISTOR	2SA1930	R169	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q304	8-729-052-94	TRANSISTOR	2SA1930	R170	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q305	8-729-052-95	TRANSISTOR	2SC5171	R171	1-216-649-11	METAL CHIP	820 0.5% 1/10W
				R172	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q306	8-729-052-95	TRANSISTOR	2SC5171				
Q307	8-729-421-19	TRANSISTOR	UN2213	R173	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q308	8-729-230-49	TRANSISTOR	2SC2712-YG	R174	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q309	8-729-421-19	TRANSISTOR	UN2213	R175	1-216-649-11	METAL CHIP	820 0.5% 1/10W
Q310	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R176	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
				R177	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
Q311	8-729-224-62	FET	2SK246-GR				
Q312	8-729-224-62	FET	2SK246-GR	R178	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
		< RESISTOR >		R179	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R101	1-216-864-11	SHORT CHIP	0	R180	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R103	1-216-864-11	SHORT CHIP	0	R181	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R106	1-216-864-11	SHORT CHIP	0	R182	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R108	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	R183	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R109	1-216-864-11	SHORT CHIP	0	R184	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
				R185	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R110	1-216-833-11	METAL CHIP	10K 5% 1/10W	R186	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R111	1-216-021-00	METAL CHIP	68 5% 1/10W	R187	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R112	1-216-021-00	METAL CHIP	68 5% 1/10W				
R113	1-216-021-00	METAL CHIP	68 5% 1/10W	R188	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
R114	1-216-021-00	METAL CHIP	68 5% 1/10W	R189	1-208-782-11	METAL CHIP	1K 0.5% 1/10W
				R190	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R115	1-216-021-00	METAL CHIP	68 5% 1/10W	R191	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R116	1-216-021-00	METAL CHIP	68 5% 1/10W	R192	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R117	1-216-021-00	METAL CHIP	68 5% 1/10W				
R118	1-216-021-00	METAL CHIP	68 5% 1/10W	R193	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R119	1-216-021-00	METAL CHIP	68 5% 1/10W	R194	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
				R195	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W
R129	1-216-821-11	METAL CHIP	1K 5% 1/10W	R196	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R130	1-216-821-11	METAL CHIP	1K 5% 1/10W	R197	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W
R131	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R132	1-216-864-11	SHORT CHIP	0	R198	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R133	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R199	1-216-649-11	METAL CHIP	820 0.5% 1/10W
				R200	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R134	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R201	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R135	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R202	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R142	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R143	1-216-833-11	METAL CHIP	10K 5% 1/10W	R203	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R144	1-216-833-11	METAL CHIP	10K 5% 1/10W	R204	1-216-649-11	METAL CHIP	820 0.5% 1/10W
				R205	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R145	1-216-864-11	SHORT CHIP	0	R206	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R148	1-216-841-11	METAL CHIP	47K 5% 1/10W	R207	1-216-649-11	METAL CHIP	820 0.5% 1/10W
R149	1-216-833-11	METAL CHIP	10K 5% 1/10W				
R150	1-216-841-11	METAL CHIP	47K 5% 1/10W	R208	1-208-800-11	METAL CHIP	5.6K 0.5% 1/10W
R151	1-216-833-11	METAL CHIP	10K 5% 1/10W	R209	1-216-649-11	METAL CHIP	820 0.5% 1/10W

DVP-CX777ES

<b>AV</b>	<b>D.SENS IN</b>	<b>D.SENS OUT</b>	<b>DOOR MOTOR</b>	<b>DOOR SW</b>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R210	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R271	1-208-822-11	METAL CHIP	47K 0.5% 1/10W
R211	1-216-649-11	METAL CHIP	820 0.5% 1/10W	R273	1-208-822-11	METAL CHIP	47K 0.5% 1/10W
R212	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R274	1-216-025-11	RES-CHIP	100 5% 1/10W
R213	1-216-649-11	METAL CHIP	820 0.5% 1/10W	R275	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W
R214	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R276	1-208-758-11	METAL CHIP	100 0.5% 1/10W
R215	1-216-649-11	METAL CHIP	820 0.5% 1/10W	R277	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W
R216	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R278	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W
R217	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R279	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W
R218	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R280	1-216-821-11	METAL CHIP	1K 5% 1/10W
R219	1-208-790-11	METAL CHIP	2.2K 0.5% 1/10W	R281	1-216-833-11	METAL CHIP	10K 5% 1/10W
R220	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R282	1-216-025-11	RES-CHIP	100 5% 1/10W
R221	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R283	1-208-758-11	METAL CHIP	100 0.5% 1/10W
R222	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R284	1-216-839-11	METAL CHIP	33K 5% 1/10W
R223	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R285	1-216-837-11	METAL CHIP	22K 5% 1/10W
R224	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R287	1-216-841-11	METAL CHIP	47K 5% 1/10W
R225	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R288	1-216-025-11	RES-CHIP	100 5% 1/10W
R226	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R289	1-208-758-11	METAL CHIP	100 0.5% 1/10W
R227	1-208-822-11	METAL CHIP	47K 0.5% 1/10W	R290	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R228	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R291	1-216-840-11	METAL CHIP	39K 5% 1/10W
R229	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R292	1-208-820-11	METAL CHIP	39K 0.5% 1/10W
R230	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R293	1-208-788-11	METAL CHIP	1.8K 0.5% 1/10W
R231	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R294	1-208-788-11	METAL CHIP	1.8K 0.5% 1/10W
R232	1-208-774-11	METAL CHIP	470 0.5% 1/10W	R295	1-216-864-11	SHORT CHIP	0
R233	1-208-774-11	METAL CHIP	470 0.5% 1/10W	< SWITCH >			
R234	1-208-774-11	METAL CHIP	470 0.5% 1/10W	S101	1-692-989-11	SWITCH, SLIDE (SCAN SELECT)	
R235	1-208-774-11	METAL CHIP	470 0.5% 1/10W	*****			
R236	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	1-688-452-11	D.SENS IN BOARD		
R237	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	*****			
R238	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	*	4-985-300-01	HOLDER (P-T)	
R239	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	< PHOTO TRANSISTOR >			
R240	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	Q81	8-729-921-53	PHOTO TRANSISTOR PT483F1	
R241	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	*****			
R242	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	1-688-453-11	D.SENS OUT BOARD		
R243	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	*****			
R244	1-216-845-11	METAL CHIP	100K 5% 1/10W	*	4-976-473-01	HOLDER (LED-S)	
R245	1-216-845-11	METAL CHIP	100K 5% 1/10W	< LED >			
R246	1-216-845-11	METAL CHIP	100K 5% 1/10W	D81	8-719-055-84	LED GL528VS1 (DISC DTETCT SENSOR)	
R247	1-208-758-11	METAL CHIP	100 0.5% 1/10W	*****			
R248	1-208-758-11	METAL CHIP	100 0.5% 1/10W	1-688-451-11	DOOR MOTOR BOARD		
R249	1-208-758-11	METAL CHIP	100 0.5% 1/10W	*****			
R250	1-208-758-11	METAL CHIP	100 0.5% 1/10W	*****			
R251	1-208-758-11	METAL CHIP	100 0.5% 1/10W	1-688-450-11	DOOR SW BOARD		
R252	1-208-758-11	METAL CHIP	100 0.5% 1/10W	*****			
R253	1-208-758-11	METAL CHIP	100 0.5% 1/10W	< SWITCH >			
R254	1-208-758-11	METAL CHIP	100 0.5% 1/10W	S611	1-786-154-11	SWITCH, ROTARY (DOOR)	
R255	1-208-758-11	METAL CHIP	100 0.5% 1/10W	S612	1-786-154-11	SWITCH, ROTARY (POP)	
R256	1-208-758-11	METAL CHIP	100 0.5% 1/10W	*****			
R257	1-216-821-11	METAL CHIP	1K 5% 1/10W	*****			
R258	1-216-821-11	METAL CHIP	1K 5% 1/10W	*****			
R259	1-216-821-11	METAL CHIP	1K 5% 1/10W	*****			
R260	1-216-033-00	METAL CHIP	220 5% 1/10W	*****			
R261	1-216-021-00	METAL CHIP	68 5% 1/10W	*****			
R262	1-216-833-11	METAL CHIP	10K 5% 1/10W	*****			
R264	1-216-833-11	METAL CHIP	10K 5% 1/10W	*****			
R265	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W	*****			
R266	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W	*****			
R267	1-208-794-11	METAL CHIP	3.3K 0.5% 1/10W	*****			
R269	1-216-864-11	SHORT CHIP	0	*****			

DRIVER

KEY

LED

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4733-705-A	DRIVER BOARD, COMPLETE *****		R913	1-216-848-11	METAL CHIP 180K 5%	1/10W
				R914	1-216-848-11	METAL CHIP 180K 5%	1/10W
				R915	1-218-291-11	METAL CHIP 16K 5%	1/10W
		< CAPACITOR >		R916	1-216-849-11	METAL CHIP 220K 5%	1/10W
C901	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R917	1-216-845-11	METAL CHIP 100K 5%	1/10W
C902	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R918	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
C903	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R919	1-240-915-11	RES, CHIP 1 1%	1/10W
C904	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R920	1-240-915-11	RES, CHIP 1 1%	1/10W
C905	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V				
C906	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	R921	1-216-847-11	METAL CHIP 150K 5%	1/10W
C907	1-109-953-11	ELECT 2.2uF 20%	50V	R922	1-216-845-11	METAL CHIP 100K 5%	1/10W
C908	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R923	1-216-821-11	METAL CHIP 1K 5%	1/10W
C909	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R924	1-216-809-11	METAL CHIP 100 5%	1/10W
C910	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R925	1-216-821-11	METAL CHIP 1K 5%	1/10W
C911	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R926	1-216-845-11	METAL CHIP 100K 5%	1/10W
C913	1-165-319-11	CERAMIC CHIP 0.1uF	50V	R927	1-216-847-11	METAL CHIP 150K 5%	1/10W
C914	1-126-947-11	ELECT 47uF 20%	25V	R928	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
C915	1-126-947-11	ELECT 47uF 20%	25V	R929	1-240-915-11	RES, CHIP 1 1%	1/10W
		< CONNECTOR >		R930	1-240-915-11	RES, CHIP 1 1%	1/10W
CN901	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P		R931	1-216-845-11	METAL CHIP 100K 5%	1/10W
* CN902	1-691-591-11	PIN, CONNECTOR (1.5mm) (SMD) 8P		R932	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
CN903	1-778-063-11	PIN, CONNECTOR (PC BOARD) 4P		R933	1-216-809-11	METAL CHIP 100 5%	1/10W
CN904	1-770-215-11	PIN, CONNECTOR (PC BOARD) 7P		R934	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
CN905	1-778-063-41	PIN, CONNECTOR (PC BOARD) 4P		R935	1-216-809-11	METAL CHIP 100 5%	1/10W
CN906	1-794-509-11	PIN, CONNECTOR (PC BOARD) (3P)		R936	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
		< DIODE >		R937	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
D935	8-719-025-49	DIODE 02CZ15-TE85L			1-688-454-11	KEY BOARD *****	
		< EARTH TERMINAL >				< CAPACITOR >	
* G901	1-537-738-21	TERMINAL, EARTH		C821	1-164-156-11	CERAMIC CHIP 0.1uF	25V
		< IC >		C822	1-164-156-11	CERAMIC CHIP 0.1uF	25V
IC941	8-759-822-38	IC LA6510		C823	1-126-935-11	ELECT 470uF 20%	10V
IC961	8-759-822-38	IC LA6510				< CONNECTOR >	
		< TRANSISTOR >		* CNP503	1-568-942-11	PIN, CONNECTOR 4P	
Q931	8-729-230-49	TRANSISTOR 2SC2712-YG		J821	1-785-945-11	CONNECTOR, DIN (KEYBOARD)	
Q941	8-729-424-18	TRANSISTOR UN2113				< COIL >	
Q942	8-729-421-19	TRANSISTOR UN2213		L821	1-424-122-11	FILTER, NOISE	
Q951	8-729-424-18	TRANSISTOR UN2113		L822	1-424-122-11	FILTER, NOISE	
Q952	8-729-421-19	TRANSISTOR UN2213		L823	1-424-122-11	FILTER, NOISE	
		< RESISTOR >		L824	1-424-122-11	FILTER, NOISE	
R901	1-216-797-11	METAL CHIP 10 5%	1/10W			*****	
R902	1-240-915-11	RES, CHIP 1 1%	1/10W	A-4733-717-A	LED BOARD, COMPLETE *****		
R903	1-240-915-11	RES, CHIP 1 1%	1/10W			< CAPACITOR >	
R904	1-216-797-11	METAL CHIP 10 5%	1/10W	C801	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R905	1-240-915-11	RES, CHIP 1 1%	1/10W			< CONNECTOR >	
R906	1-216-835-11	METAL CHIP 15K 5%	1/10W	CNP504	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P	
R907	1-240-915-11	RES, CHIP 1 1%	1/10W			< LED >	
R908	1-216-835-11	METAL CHIP 15K 5%	1/10W	D801	6-500-329-01	LED SELU5E23C-PTP15 (ILLUMINATION)	
R909	1-216-848-11	METAL CHIP 180K 5%	1/10W				
R910	1-218-291-11	METAL CHIP 16K 5%	1/10W				
R911	1-216-847-11	METAL CHIP 150K 5%	1/10W				
R912	1-216-847-11	METAL CHIP 150K 5%	1/10W				

# DVP-CX777ES

<b>LED</b>	<b>LOADING MOTOR</b>	<b>LOADING SW</b>	<b>LOCK SW</b>	<b>MB</b>
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Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
		< RESISTOR >			C216	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	
R801	1-216-805-11	METAL CHIP	47	5%	1/10W	C218	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
		*****									
	1-688-447-11	LOADING MOTOR BOARD				C219	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		*****									
	1-688-446-11	LOADING SW BOARD				C220	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		*****									
		< SWITCH >				C221	1-124-779-00	ELECT CHIP	10uF	20%	16V
S621	1-786-154-11	SWITCH, ROTARY (LOADING)				C225	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		*****									
	1-688-448-11	LOCK SW BOARD				C226	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
		*****									
		< SWITCH >				C228	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
S622	1-771-604-11	SWITCH, DETECTION (LOCK)				C229	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		*****									
	A-4733-709-A	MB BOARD, COMPLETE				C230	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
		*****									
		< CAPACITOR >				C232	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C233	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C234	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C103	1-126-209-11	ELECT CHIP	100uF	20%	4V	C235	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C236	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C238	1-124-779-00	ELECT CHIP	10uF	20%	16V
C106	1-162-914-11	CERAMIC CHIP	9PF	0.5PF	50V	C240	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C107	1-162-914-11	CERAMIC CHIP	9PF	0.5PF	50V	C241	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C242	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C109	1-126-209-11	ELECT CHIP	100uF	20%	4V	C243	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C244	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C245	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C246	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C118	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	C247	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C248	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C249	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C251	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	C252	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C125	1-126-607-11	ELECT CHIP	47uF	20%	4V	C253	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C126	1-126-204-11	ELECT CHIP	47uF	20%	16V	C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C127	1-126-246-11	ELECT CHIP	220uF	20%	4V	C255	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C128	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C256	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C257	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C258	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C132	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	C259	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C260	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C261	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C210	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C262	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C211	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C263	1-124-779-00	ELECT CHIP	10uF	20%	16V
C212	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C264	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C213	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C214	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	C266	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C215	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C270	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C271	1-126-204-11	ELECT CHIP	47uF	20%	16V
						C272	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
						C302	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
						C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
						C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C305	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
						C308	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
						C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C310	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
						C311	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C312	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
						C313	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
						C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C316	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V



Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C450	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C501	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C319	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C321	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C509	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C512	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C514	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C330	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C332	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C517	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C518	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C335	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C520	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C521	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C522	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C525	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C528	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C344	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C532	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C401	1-126-193-11	ELECT CHIP	1uF	20%	50V	C535	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C404	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C543	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C405	1-124-779-00	ELECT CHIP	10uF	20%	16V	C601	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C407	1-124-779-00	ELECT CHIP	10uF	20%	16V	C602	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C408	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C411	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C607	1-126-209-11	ELECT CHIP	100uF	20%	4V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C609	1-126-607-11	ELECT CHIP	47uF	20%	4V
C417	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C610	1-126-607-11	ELECT CHIP	47uF	20%	4V
C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C611	1-126-607-11	ELECT CHIP	47uF	20%	4V
C419	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C612	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C420	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C613	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C423	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C614	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C424	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C615	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C426	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C616	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C427	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C617	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C429	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C618	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C430	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C619	1-126-607-11	ELECT CHIP	47uF	20%	4V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C621	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C622	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C436	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C623	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C437	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C624	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C438	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C625	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C439	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C626	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C440	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C627	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C441	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C628	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C442	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C629	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C443	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C630	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V
C448	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C631	1-127-956-21	FILM CHIP	0.1uF	5%	16V
						C632	1-127-956-21	FILM CHIP	0.1uF	5%	16V

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Ref. No.	Part No.	Description	Remark
C633	1-164-733-11	CERAMIC CHIP 820PF	10% 50V
C634	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C635	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C636	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C637	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C638	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C639	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C640	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C701	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C702	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C705	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C707	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C709	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C710	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C711	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C712	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C713	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C714	1-126-607-11	ELECT CHIP 47uF	20% 4V
C801	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C802	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C803	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C805	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C806	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C807	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C808	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C809	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C810	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C811	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C812	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C813	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C814	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C816	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C817	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C901	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C902	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C903	1-124-779-00	ELECT CHIP 10uF	20% 16V
C904	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C905	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C909	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C910	1-126-209-11	ELECT CHIP 100uF	20% 4V
C912	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C913	1-126-209-11	ELECT CHIP 100uF	20% 4V
C914	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C915	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C916	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C917	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C919	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C920	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C921	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C922	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C923	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C924	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C926	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C927	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C928	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C929	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C930	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V

Ref. No.	Part No.	Description	Remark
C931	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C932	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C933	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C934	1-164-677-11	CERAMIC CHIP 0.033uF	10% 16V
C935	1-164-677-11	CERAMIC CHIP 0.033uF	10% 16V
C936	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
< CONNECTOR >			
CN101	1-785-728-21	PIN (PC BOARD) , CONNECTOR 7P	
CN102	1-784-871-21	CONNECTOR, FFC (LIF (NON-ZIF)) 19P	
* CN103	1-580-789-21	PIN, CONNECTOR (SMD) 6P	
* CN104	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P	
* CN105	1-760-388-11	CONNECTOR PIN (SMD) 9P	
* CN106	1-691-551-11	PIN, CONNECTOR (SMD) 8P	
CN107	1-766-382-21	PIN, CONNECTOR (1.5mm) (SMD) 10P	
CN203	1-573-366-21	CONNECTOR, FFC/FPC 26P	
CN204	1-817-201-21	CONNECTOR, FFC/FPC 9P	
CN501	1-784-835-21	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	
CN601	1-784-834-21	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
CN701	1-691-550-11	PIN, CONNECTOR (1.5mm) (SMD) 3P	
< DIODE >			
D101	8-719-049-09	DIODE 1SS367-T3SONY	
D501	8-719-914-44	DIODE DAP202K	
D502	8-719-914-44	DIODE DAP202K	
D503	8-719-914-44	DIODE DAP202K	
< FERRITE BEAD/SHORT >			
FB104	1-469-324-21	FERRITE	0uH
FB105	1-469-324-21	FERRITE	0uH
FB106	1-469-324-21	FERRITE	0uH
FB107	1-469-324-21	FERRITE	0uH
FB108	1-469-324-21	FERRITE	0uH
FB109	1-469-324-21	FERRITE	0uH
FB110	1-469-324-21	FERRITE	0uH
FB111	1-469-324-21	FERRITE	0uH
FB112	1-469-784-11	FERRITE	0uH
FB121	1-216-864-11	SHORT CHIP	0
FB122	1-216-864-11	SHORT CHIP	0
FB123	1-500-284-21	FERRITE	0uH
FB124	1-216-864-11	SHORT CHIP	0
FB125	1-500-283-11	FERRITE	0uH
FB126	1-500-283-11	FERRITE	0uH
FB127	1-500-284-21	FERRITE	0uH
FB401	1-216-864-11	SHORT CHIP	0
FB501	1-469-784-11	FERRITE	0uH
FB502	1-469-784-11	FERRITE	0uH
FB601	1-216-864-11	SHORT CHIP	0
< FILTER >			
FL102	1-234-177-21	FILTER, CHIP EMI	
FL103	1-234-177-21	FILTER, CHIP EMI	
FL104	1-234-177-21	FILTER, CHIP EMI	
FL105	1-234-177-21	FILTER, CHIP EMI	
FL106	1-234-177-21	FILTER, CHIP EMI	
FL107	1-233-893-21	FILTER, CHIP EMI	
FL108	1-234-177-21	FILTER, CHIP EMI	
FL109	1-234-177-21	FILTER, CHIP EMI	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
FL201	1-234-177-21	FILTER, CHIP EMI				< RESISTOR >	
FL402	1-234-177-21	FILTER, CHIP EMI					
FL403	1-234-177-21	FILTER, CHIP EMI		R021	1-216-833-11	METAL CHIP 10K	5% 1/10W
FL404	1-234-177-21	FILTER, CHIP EMI		R022	1-216-864-11	SHORT CHIP 0	
FL501	1-234-177-21	FILTER, CHIP EMI		R101	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
FL502	1-234-177-21	FILTER, CHIP EMI		R102	1-216-833-11	METAL CHIP 10K	5% 1/10W
FL701	1-234-177-21	FILTER, CHIP EMI		R103	1-216-864-11	SHORT CHIP 0	
FL901	1-234-177-21	FILTER, CHIP EMI		R105	1-216-864-11	SHORT CHIP 0	
FL902	1-234-177-21	FILTER, CHIP EMI		R106	1-216-821-11	METAL CHIP 1K	5% 1/10W
FL903	1-234-177-21	FILTER, CHIP EMI		R107	1-216-837-11	METAL CHIP 22K	5% 1/10W
FL905	1-234-177-21	FILTER, CHIP EMI		R108	1-216-864-11	SHORT CHIP 0	
				R109	1-216-805-11	METAL CHIP 47	5% 1/10W
		< IC >		R110	1-216-805-11	METAL CHIP 47	5% 1/10W
IC101	8-759-640-40	IC BR24C04F-WE2		R111	1-216-821-11	METAL CHIP 1K	5% 1/10W
IC102	6-702-302-01	IC TK11133CSCL-G		R112	1-216-845-11	METAL CHIP 100K	5% 1/10W
IC103	6-701-877-01	IC SM8707EV-G-E2		R113	1-216-845-11	METAL CHIP 100K	5% 1/10W
IC104	6-701-837-01	IC MB91307RPFV-G-BND-E1		R114	1-216-821-11	METAL CHIP 1K	5% 1/10W
IC106	6-803-477-01	IC MBM29DL324BE90TN-E11572		R115	1-216-821-11	METAL CHIP 1K	5% 1/10W
IC108	6-701-874-01	IC IDT71V016SA15PH8 (SCD2994)		R117	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC201	6-703-445-01	IC SP3726A		R118	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC202	6-701-878-01	IC FAN8034L		R119	1-216-813-11	METAL CHIP 220	5% 1/10W
IC301	6-701-876-01	IC CXD9703R		R120	1-216-797-11	METAL CHIP 10	5% 1/10W
IC302	6-702-302-01	IC TK11133CSCL-G		R121	1-216-805-11	METAL CHIP 47	5% 1/10W
IC303	6-702-020-01	IC MSM151V18160F-60T47M1		R122	1-216-809-11	METAL CHIP 100	5% 1/10W
IC401	6-702-300-01	IC TK11118CSCL-G		R123	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
IC403	8-752-416-45	IC CXD1935Q		R124	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
IC404	6-703-842-01	IC GLT5160L16P-7TCT		R125	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC405	6-703-842-01	IC GLT5160L16P-7TCT		R126	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC501	8-752-418-21	IC CXD1938AR		R129	1-216-797-11	METAL CHIP 10	5% 1/10W
IC502	6-704-222-01	IC AK4358VQ-L		R133	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC601	6-702-301-01	IC TK11125CSCL-G		R138	1-216-809-11	METAL CHIP 100	5% 1/10W
IC602	6-701-814-01	IC CXD9698R		R139	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC603	6-703-842-01	IC GLT5160L16P-7TCT		R141	1-216-797-11	METAL CHIP 10	5% 1/10W
IC604	6-704-646-01	IC ADV7310KST		R142	1-216-797-11	METAL CHIP 10	5% 1/10W
IC605	6-702-301-01	IC TK11125CSCL-G		R144	1-216-797-11	METAL CHIP 10	5% 1/10W
IC701	6-702-287-01	IC CXD9705R		R146	1-216-797-11	METAL CHIP 10	5% 1/10W
IC702	6-702-439-01	IC K9F6408U0C-TCBOT		R147	1-216-805-11	METAL CHIP 47	5% 1/10W
IC703	8-759-548-99	IC SN74LV08APWR		R148	1-216-809-11	METAL CHIP 100	5% 1/10W
IC801	6-705-008-11	IC CXD9722ATQ		R150	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
IC802	6-703-842-01	IC GLT5160L16P-7TCT		R151	1-216-809-11	METAL CHIP 100	5% 1/10W
IC803	6-702-302-01	IC TK11133CSCL-G		R152	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC901	6-704-261-01	IC TK11225CMCL-G		R154	1-216-809-11	METAL CHIP 100	5% 1/10W
IC903	6-703-842-01	IC GLT5160L16P-7TCT		R157	1-216-809-11	METAL CHIP 100	5% 1/10W
IC905	8-752-416-77	IC CXD2753R		R159	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC906	6-702-231-01	IC LMH6642MFX/NOPB		R160	1-216-809-11	METAL CHIP 100	5% 1/10W
		< COIL >		R163	1-216-809-11	METAL CHIP 100	5% 1/10W
L101	1-414-410-21	INDUCTOR CHIP 10uH		R165	1-216-833-11	METAL CHIP 10K	5% 1/10W
L201	1-412-031-11	INDUCTOR CHIP 47uH		R166	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
L202	1-412-031-11	INDUCTOR CHIP 47uH		R167	1-216-809-11	METAL CHIP 100	5% 1/10W
		< TRANSISTOR >		R168	1-216-864-11	SHORT CHIP 0	
Q001	8-729-027-38	TRANSISTOR DTA144EKA-T146		R170	1-414-226-21	FERRITE 0uH	
Q002	8-729-027-38	TRANSISTOR DTA144EKA-T146		R171	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q201	8-729-903-46	TRANSISTOR 2SB1132-P		R172	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q202	8-729-903-46	TRANSISTOR 2SB1132-P		R173	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q701	8-729-900-53	TRANSISTOR DTC114EK		R175	1-216-864-11	SHORT CHIP 0	
				R176	1-216-809-11	METAL CHIP 100	5% 1/10W
				R177	1-216-809-11	METAL CHIP 100	5% 1/10W
				R178	1-216-809-11	METAL CHIP 100	5% 1/10W

# DVP-CX777ES

**MB**

Ref. No.	Part No.	Description	Quantity	Unit	Remark	Ref. No.	Part No.	Description	Quantity	Unit	Remark
R179	1-216-809-11	METAL CHIP	100		5% 1/10W	R256	1-216-809-11	METAL CHIP	100		5% 1/10W
R180	1-216-809-11	METAL CHIP	100		5% 1/10W	R259	1-216-833-11	METAL CHIP	10K		5% 1/10W
R181	1-216-801-11	METAL CHIP	22		5% 1/10W	R260	1-216-834-11	METAL CHIP	12K		5% 1/10W
R182	1-216-801-11	METAL CHIP	22		5% 1/10W	R261	1-216-833-11	METAL CHIP	10K		5% 1/10W
R183	1-216-809-11	METAL CHIP	100		5% 1/10W	R262	1-216-815-11	METAL CHIP	330		5% 1/10W
R184	1-216-864-11	SHORT CHIP	0			R263	1-216-861-11	METAL CHIP	2.2M		5% 1/10W
R185	1-216-864-11	SHORT CHIP	0			R264	1-216-845-11	METAL CHIP	100K		5% 1/10W
R187	1-216-809-11	METAL CHIP	100		5% 1/10W	R265	1-216-838-11	METAL CHIP	27K		5% 1/10W
R188	1-216-809-11	METAL CHIP	100		5% 1/10W	R269	1-216-833-11	METAL CHIP	10K		5% 1/10W
R189	1-216-809-11	METAL CHIP	100		5% 1/10W	R273	1-216-864-11	SHORT CHIP	0		
R190	1-216-809-11	METAL CHIP	100		5% 1/10W	R274	1-216-833-11	METAL CHIP	10K		5% 1/10W
R191	1-216-805-11	METAL CHIP	47		5% 1/10W	R281	1-216-864-11	SHORT CHIP	0		
R192	1-216-864-11	SHORT CHIP	0			R282	1-216-864-11	SHORT CHIP	0		
R193	1-216-809-11	METAL CHIP	100		5% 1/10W	R301	1-216-295-00	SHORT CHIP	0		
R194	1-216-864-11	SHORT CHIP	0			R302	1-216-295-00	SHORT CHIP	0		
R195	1-216-809-11	METAL CHIP	100		5% 1/10W	R310	1-216-821-11	METAL CHIP	1K		5% 1/10W
R196	1-216-809-11	METAL CHIP	100		5% 1/10W	R311	1-216-809-11	METAL CHIP	100		5% 1/10W
R197	1-216-809-11	METAL CHIP	100		5% 1/10W	R312	1-218-831-11	METAL CHIP	220		0.5% 1/10W
R198	1-216-809-11	METAL CHIP	100		5% 1/10W	R313	1-216-817-11	METAL CHIP	470		5% 1/10W
R199	1-216-809-11	METAL CHIP	100		5% 1/10W	R314	1-216-817-11	METAL CHIP	470		5% 1/10W
R206	1-216-829-11	METAL CHIP	4.7K		5% 1/10W	R315	1-216-817-11	METAL CHIP	470		5% 1/10W
R210	1-216-815-11	METAL CHIP	330		5% 1/10W	R316	1-216-829-11	METAL CHIP	4.7K		5% 1/10W
R211	1-216-809-11	METAL CHIP	100		5% 1/10W	R317	1-216-833-11	METAL CHIP	10K		5% 1/10W
R212	1-216-809-11	METAL CHIP	100		5% 1/10W	R318	1-216-817-11	METAL CHIP	470		5% 1/10W
R218	1-216-846-11	METAL CHIP	120K		5% 1/10W	R319	1-218-871-11	METAL CHIP	10K		0.5% 1/10W
R219	1-216-846-11	METAL CHIP	120K		5% 1/10W	R320	1-218-883-11	METAL CHIP	33K		0.5% 1/10W
R220	1-216-847-11	METAL CHIP	150K		5% 1/10W	R321	1-218-879-11	METAL CHIP	22K		0.5% 1/10W
R221	1-216-847-11	METAL CHIP	150K		5% 1/10W	R322	1-218-847-11	METAL CHIP	1K		0.5% 1/10W
R222	1-216-842-11	METAL CHIP	56K		5% 1/10W	R323	1-218-855-11	METAL CHIP	2.2K		0.5% 1/10W
R223	1-216-842-11	METAL CHIP	56K		5% 1/10W	R324	1-216-833-11	METAL CHIP	10K		5% 1/10W
R224	1-216-850-11	METAL CHIP	270K		5% 1/10W	R325	1-218-867-11	METAL CHIP	6.8K		5% 1/10W
R225	1-216-833-11	METAL CHIP	10K		5% 1/10W	R326	1-216-833-11	METAL CHIP	10K		5% 1/10W
R226	1-216-853-11	METAL CHIP	470K		5% 1/10W	R327	1-218-871-11	METAL CHIP	10K		0.5% 1/10W
R227	1-216-846-11	METAL CHIP	120K		5% 1/10W	R328	1-216-838-11	METAL CHIP	27K		5% 1/10W
R229	1-216-833-11	METAL CHIP	10K		5% 1/10W	R329	1-216-825-11	METAL CHIP	2.2K		5% 1/10W
R230	1-216-839-11	METAL CHIP	33K		5% 1/10W	R330	1-216-825-11	METAL CHIP	2.2K		5% 1/10W
R231	1-216-855-11	METAL CHIP	680K		5% 1/10W	R331	1-216-825-11	METAL CHIP	2.2K		5% 1/10W
R232	1-216-839-11	METAL CHIP	33K		5% 1/10W	R332	1-216-825-11	METAL CHIP	2.2K		5% 1/10W
R233	1-216-853-11	METAL CHIP	470K		5% 1/10W	R333	1-216-847-11	METAL CHIP	150K		5% 1/10W
R234	1-211-981-11	METAL CHIP	33		0.5% 1/10W	R334	1-218-853-11	METAL CHIP	1.8K		0.5% 1/10W
R235	1-216-809-11	METAL CHIP	100		5% 1/10W	R335	1-216-829-11	METAL CHIP	4.7K		5% 1/10W
R236	1-211-981-11	METAL CHIP	33		0.5% 1/10W	R336	1-216-833-11	METAL CHIP	10K		5% 1/10W
R238	1-216-839-11	METAL CHIP	33K		5% 1/10W	R337	1-216-833-11	METAL CHIP	10K		5% 1/10W
R239	1-216-839-11	METAL CHIP	33K		5% 1/10W	R338	1-216-801-11	METAL CHIP	22		5% 1/10W
R240	1-216-839-11	METAL CHIP	33K		5% 1/10W	R349	1-216-833-11	METAL CHIP	10K		5% 1/10W
R241	1-216-839-11	METAL CHIP	33K		5% 1/10W	R351	1-216-295-00	SHORT CHIP	0		
R242	1-216-849-11	METAL CHIP	220K		5% 1/10W	R352	1-216-295-00	SHORT CHIP	0		
R243	1-216-853-11	METAL CHIP	470K		5% 1/10W	R358	1-216-833-11	METAL CHIP	10K		5% 1/10W
R244	1-216-821-11	METAL CHIP	1K		5% 1/10W	R359	1-216-833-11	METAL CHIP	10K		5% 1/10W
R245	1-216-841-11	METAL CHIP	47K		5% 1/10W	R360	1-216-809-11	METAL CHIP	100		5% 1/10W
R246	1-216-809-11	METAL CHIP	100		5% 1/10W	R366	1-216-801-11	METAL CHIP	22		5% 1/10W
R248	1-216-803-11	METAL CHIP	33		5% 1/10W	R402	1-216-295-00	SHORT CHIP	0		
R249	1-216-803-11	METAL CHIP	33		5% 1/10W	R407	1-216-809-11	METAL CHIP	100		5% 1/10W
R250	1-218-895-11	METAL CHIP	100K		0.5% 1/10W	R414	1-216-833-11	METAL CHIP	10K		5% 1/10W
R251	1-216-841-11	METAL CHIP	47K		5% 1/10W	R416	1-218-867-11	METAL CHIP	6.8K		5% 1/10W
R253	1-218-889-11	METAL CHIP	56K		0.5% 1/10W	R418	1-216-822-11	METAL CHIP	1.2K		5% 1/10W
R254	1-218-895-11	METAL CHIP	100K		0.5% 1/10W	R419	1-216-797-11	METAL CHIP	10		5% 1/10W
R255	1-218-889-11	METAL CHIP	56K		0.5% 1/10W						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R426	1-216-833-11	METAL CHIP	10K	5%	1/10W	R701	1-216-833-11	METAL CHIP	10K	5%	1/10W
R430	1-216-833-11	METAL CHIP	10K	5%	1/10W	R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-797-11	METAL CHIP	10	5%	1/10W	R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R506	1-216-864-11	SHORT CHIP	0			R706	1-216-864-11	SHORT CHIP	0		
R509	1-216-864-11	SHORT CHIP	0			R712	1-216-833-11	METAL CHIP	10K	5%	1/10W
R511	1-216-864-11	SHORT CHIP	0			R713	1-216-295-00	SHORT CHIP	0		
R520	1-216-809-11	METAL CHIP	100	5%	1/10W	R716	1-216-833-11	METAL CHIP	10K	5%	1/10W
R524	1-216-864-11	SHORT CHIP	0			R717	1-216-833-11	METAL CHIP	10K	5%	1/10W
R525	1-216-833-11	METAL CHIP	10K	5%	1/10W	R719	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-833-11	METAL CHIP	10K	5%	1/10W	R720	1-216-833-11	METAL CHIP	10K	5%	1/10W
R528	1-216-864-11	SHORT CHIP	0			R722	1-216-833-11	METAL CHIP	10K	5%	1/10W
R530	1-216-833-11	METAL CHIP	10K	5%	1/10W	R728	1-216-809-11	METAL CHIP	100	5%	1/10W
R531	1-216-833-11	METAL CHIP	10K	5%	1/10W	R729	1-216-809-11	METAL CHIP	100	5%	1/10W
R532	1-216-833-11	METAL CHIP	10K	5%	1/10W	R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R536	1-216-864-11	SHORT CHIP	0			R735	1-216-809-11	METAL CHIP	100	5%	1/10W
R539	1-216-864-11	SHORT CHIP	0			R738	1-216-833-11	METAL CHIP	10K	5%	1/10W
R541	1-216-864-11	SHORT CHIP	0			R791	1-216-809-11	METAL CHIP	100	5%	1/10W
R544	1-216-864-11	SHORT CHIP	0			R814	1-216-809-11	METAL CHIP	100	5%	1/10W
R546	1-216-864-11	SHORT CHIP	0			R817	1-216-864-11	SHORT CHIP	0		
R547	1-216-833-11	METAL CHIP	10K	5%	1/10W	R902	1-216-864-11	SHORT CHIP	0		
R549	1-216-864-11	SHORT CHIP	0			R907	1-216-864-11	SHORT CHIP	0		
R551	1-216-864-11	SHORT CHIP	0			R909	1-216-834-11	METAL CHIP	12K	5%	1/10W
R552	1-216-864-11	SHORT CHIP	0			R910	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R556	1-216-864-11	SHORT CHIP	0			R913	1-216-803-11	METAL CHIP	33	5%	1/10W
R557	1-216-864-11	SHORT CHIP	0			R915	1-216-821-11	METAL CHIP	1K	5%	1/10W
R566	1-216-864-11	SHORT CHIP	0			R916	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R588	1-216-864-11	SHORT CHIP	0			R917	1-216-864-11	SHORT CHIP	0		
R589	1-216-864-11	SHORT CHIP	0			R919	1-216-809-11	METAL CHIP	100	5%	1/10W
R590	1-216-797-11	METAL CHIP	10	5%	1/10W	R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R592	1-216-864-11	SHORT CHIP	0			R922	1-216-833-11	METAL CHIP	10K	5%	1/10W
R593	1-216-864-11	SHORT CHIP	0			R931	1-216-833-11	METAL CHIP	10K	5%	1/10W
R601	1-216-864-11	SHORT CHIP	0			R955	1-216-809-11	METAL CHIP	100	5%	1/10W
R603	1-216-809-11	METAL CHIP	100	5%	1/10W	R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W	R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R614	1-216-864-11	SHORT CHIP	0			R958	1-216-809-11	METAL CHIP	100	5%	1/10W
R615	1-218-285-11	METAL CHIP	75	5%	1/10W	R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R617	1-218-292-11	METAL CHIP	20K	5%	1/10W	R960	1-216-809-11	METAL CHIP	100	5%	1/10W
R618	1-216-864-11	SHORT CHIP	0			R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R620	1-216-864-11	SHORT CHIP	0			R962	1-216-809-11	METAL CHIP	100	5%	1/10W
R639	1-216-864-11	SHORT CHIP	0			R963	1-216-809-11	METAL CHIP	100	5%	1/10W
R640	1-216-789-11	METAL CHIP	2.2	5%	1/10W	R964	1-216-809-11	METAL CHIP	100	5%	1/10W
R663	1-216-864-11	SHORT CHIP	0			< COMPOSITION CIRCUIT BLOCK >					
R664	1-216-864-11	SHORT CHIP	0			RB102	1-233-270-11	NETWORK, RES (8 GANG)	10K		
R665	1-216-864-11	SHORT CHIP	0			RB103	1-233-576-11	RES, CHIP NETWORK	100		
R674	1-216-819-11	METAL CHIP	680	5%	1/10W	RB104	1-233-576-11	RES, CHIP NETWORK	100		
R675	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	RB105	1-233-576-11	RES, CHIP NETWORK	100		
R676	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	RB106	1-233-576-11	RES, CHIP NETWORK	100		
R677	1-216-809-11	METAL CHIP	100	5%	1/10W	RB107	1-233-576-11	RES, CHIP NETWORK	100		
R678	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB108	1-233-576-11	RES, CHIP NETWORK	100		
R679	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB109	1-233-576-11	RES, CHIP NETWORK	100		
R680	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB110	1-233-576-11	RES, CHIP NETWORK	100		
R681	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB111	1-233-576-11	RES, CHIP NETWORK	100		
R682	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB901	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
R683	1-218-834-11	METAL CHIP	300	0.5%	1/10W	RB902	1-236-908-11	RES, CHIP NETWORK	10K (3216)		
R686	1-216-809-11	METAL CHIP	100	5%	1/10W						
R687	1-216-809-11	METAL CHIP	100	5%	1/10W						
R697	1-216-864-11	SHORT CHIP	0								
R698	1-216-864-11	SHORT CHIP	0								

# DVP-CX777ES

**MB** **PANEL-L**

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV101	1-223-587-11	RES, ADJ, CARBON 22K	
RV601	1-223-583-41	RES, ADJ, CARBON (3 TYPE) 1K	
RV602	1-223-583-41	RES, ADJ, CARBON (3 TYPE) 1K	
< VIBRATOR >			
X101	1-795-174-11	VIBRATOR, CERAMIC (16.5MHz)	
X102	1-781-867-21	VIBRATOR, CRYSTAL (27MHz)	
*****			
A-4733-701-A PANEL-L BOARD, COMPLETE			
*****			
4-246-508-01	HOLDER (FL)		
4-949-935-41	CUSHION (FL)		
< CAPACITOR >			
C1002	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1003	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C1004	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C1005	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1009	1-115-156-11	CERAMIC CHIP	1uF 10V
C1011	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1014	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1015	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1016	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C1017	1-124-589-11	ELECT	47uF 20% 16V
C1019	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1031	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1032	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1033	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1034	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1035	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1036	1-162-922-11	CERAMIC CHIP	39PF 5% 50V
C1041	1-124-589-11	ELECT	47uF 20% 16V
C1042	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C1052	1-124-589-11	ELECT	47uF 20% 16V
C1081	1-128-131-11	ELECT	22uF 20% 50V
C1082	1-137-150-11	FILM	0.01uF 5% 100V
C1083	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
C1085	1-128-131-11	ELECT	22uF 20% 50V
C1086	1-128-131-11	ELECT	22uF 20% 50V
C1087	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
C1088	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
C1089	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
< CONNECTOR >			
CN1001	1-764-177-11	PIN, CONNECTOR (SMD) (1.5mm) 7P	
CN1002	1-790-669-21	PIN, CONNECTOR (PC BOARD) 9P	
* CN1004	1-566-970-11	HOUSING, CONNECTOR (PC BOARD) 8P	
CN1005	1-778-691-11	CONNECTOR, FFC/FPC 19P	
< DIODE >			
D1002	8-719-992-02	DIODE RB705D-T146	
D1011	6-500-329-01	LED SELU5E23C-PTP15 (PROGRESSIVE)	
D1012	6-500-324-01	LED CL-191WA-D-T (SACD)	
D1013	6-500-329-01	LED SELU5E23C-PTP15 (MULTI CHANNEL)	
D1014	8-719-046-39	LED SEL5821A-TP15 (FL OFF)	

Ref. No.	Part No.	Description	Remark
D1015	8-719-046-39	LED SEL5821A-TP15 (VIDEO OFF)	
D1081	8-719-041-97	DIODE MA113-(TX)	
D1082	8-719-041-97	DIODE MA113-(TX)	
D1083	8-719-041-97	DIODE MA113-(TX)	
D1084	8-719-041-97	DIODE MA113-(TX)	
D1085	8-719-083-71	DIODE UdzSTE-1730B	
D1086	8-719-069-56	DIODE UdzSTE-176.2B	
< SHORT >			
FB1001	1-216-295-00	SHORT CHIP	0
< FLUORESCENT INDICATOR TUBE >			
FL1001	1-518-904-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC1003	6-803-267-01	IC uPD70F3259YGF-S05-JBT-A	
IC1004	8-759-826-34	IC NJL74H400A (REMOTE CONTROL RECEIVER)	
IC1005	8-759-710-82	IC NJM2406F	
IC1006	6-704-158-01	IC S-80827CNUA-B8PT2G	
IC1007	8-759-680-17	IC MSM9201-04GS-K	
IC1008	8-759-350-42	IC PST9127NL	
IC1009	8-759-350-42	IC PST9127NL	
< COIL >			
L1081	1-400-096-21	INDUCTOR	47uH
L1082	1-400-096-21	INDUCTOR	47uH
< TRANSISTOR >			
Q1001	8-729-900-53	TRANSISTOR	DTC114EK
Q1002	8-729-900-53	TRANSISTOR	DTC114EK
Q1005	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q1006	8-729-027-38	TRANSISTOR	DTC114EK
Q1011	8-729-900-53	TRANSISTOR	DTC114EK
Q1012	8-729-900-53	TRANSISTOR	DTC114EK
Q1013	8-729-900-53	TRANSISTOR	DTC114EK
Q1014	8-729-900-53	TRANSISTOR	DTC114EK
Q1015	8-729-900-53	TRANSISTOR	DTC114EK
Q1016	8-729-900-53	TRANSISTOR	DTC114EK
Q1017	8-729-900-53	TRANSISTOR	DTC114EK
Q1071	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q1081	8-729-808-01	TRANSISTOR	2SD1622-S
Q1082	8-729-808-01	TRANSISTOR	2SD1622-S
Q1083	8-729-804-41	TRANSISTOR	2SB1122-S
< RESISTOR/CAPACITOR >			
R1001	1-216-841-11	METAL CHIP	47K 5% 1/10W
R1002	1-216-295-00	SHORT CHIP	0
R1003	1-216-837-11	METAL CHIP	22K 5% 1/10W
R1004	1-216-837-11	METAL CHIP	22K 5% 1/10W
R1005	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1006	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1007	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R1009	1-216-845-11	METAL CHIP	100K 5% 1/10W
R1010	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R1011	1-216-295-00	SHORT CHIP	0
R1012	1-216-295-00	SHORT CHIP	0

PANEL-L

PANEL-R

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R1013	1-216-295-00	SHORT CHIP	0	R1084	1-216-833-11	METAL CHIP 10K 5%	1/10W
R1014	1-216-833-11	METAL CHIP	10K 5%	R1085	1-216-801-11	METAL CHIP 22 5%	1/10W
R1015	1-216-809-11	METAL CHIP	100 5%	R1086	1-216-801-11	METAL CHIP 22 5%	1/10W
R1016	1-216-809-11	METAL CHIP	100 5%	R1087	1-216-801-11	METAL CHIP 22 5%	1/10W
R1017	1-216-295-00	SHORT CHIP	0	R1088	1-216-801-11	METAL CHIP 22 5%	1/10W
R1018	1-216-809-11	METAL CHIP	100 5%	R1089	1-216-801-11	METAL CHIP 22 5%	1/10W
R1019	1-216-809-11	METAL CHIP	100 5%	R1090	1-216-801-11	METAL CHIP 22 5%	1/10W
R1020	1-216-833-11	METAL CHIP	10K 5%	R1091	1-216-801-11	METAL CHIP 22 5%	1/10W
R1021	1-216-805-11	METAL CHIP	47 5%	R1092	1-216-801-11	METAL CHIP 22 5%	1/10W
R1022	1-216-295-00	SHORT CHIP	0	R1093	1-216-801-11	METAL CHIP 22 5%	1/10W
R1023	1-216-833-11	METAL CHIP	10K 5%	R1094	1-216-801-11	METAL CHIP 22 5%	1/10W
R1024	1-216-833-11	METAL CHIP	10K 5%	R1095	1-216-801-11	METAL CHIP 22 5%	1/10W
R1025	1-216-833-11	METAL CHIP	10K 5%	R1096	1-216-801-11	METAL CHIP 22 5%	1/10W
R1026	1-216-833-11	METAL CHIP	10K 5%	R1097	1-216-801-11	METAL CHIP 22 5%	1/10W
R1028	1-216-801-11	METAL CHIP	22 5%	R1098	1-216-801-11	METAL CHIP 22 5%	1/10W
R1029	1-216-801-11	METAL CHIP	22 5%	R1099	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
R1031	1-216-833-11	METAL CHIP	10K 5%			< SWITCH >	
R1032	1-216-833-11	METAL CHIP	10K 5%	S1001	1-771-410-21	SWITCH, TACTILE (FL OFF)	
R1035	1-216-833-11	METAL CHIP	10K 5%	S1002	1-771-410-21	SWITCH, TACTILE (TIME/TEXT)	
R1036	1-216-833-11	METAL CHIP	10K 5%	S1003	1-771-410-21	SWITCH, TACTILE (VIDEO CONTROL)	
R1037	1-216-833-11	METAL CHIP	10K 5%	S1004	1-771-410-21	SWITCH, TACTILE (SURROUND)	
R1038	1-216-833-11	METAL CHIP	10K 5%	S1005	1-771-410-21	SWITCH, TACTILE (VIDEO OFF)	
R1039	1-216-833-11	METAL CHIP	10K 5%			< TRANSFORMER >	
R1040	1-216-833-11	METAL CHIP	10K 5%	S1006	1-771-410-21	SWITCH, TACTILE (FOLDER)	
R1041	1-115-156-11	CERAMIC CHIP	1uF	S1007	1-771-410-21	SWITCH, TACTILE (1/ALL DISC)	
R1043	1-216-295-00	SHORT CHIP	0	S1008	1-771-410-21	SWITCH, TACTILE (I/Ⓢ)	
R1044	1-216-810-11	METAL CHIP	120 5%	S1009	1-771-410-21	SWITCH, TACTILE (LOAD)	
R1045	1-216-803-11	METAL CHIP	33 5%			< TRANSFORMER >	
R1046	1-216-829-11	METAL CHIP	4.7K 5%	T1081	1-437-887-11	TRANSFORMER, DC-DC CONVERTER	
R1047	1-216-829-11	METAL CHIP	4.7K 5%			< VIBRATOR >	
R1050	1-216-295-00	SHORT CHIP	0	X1001	1-795-058-21	VIBRATOR, CERAMIC (5MHz)	
R1051	1-216-821-11	METAL CHIP	1K 5%			*****	
R1052	1-216-825-11	METAL CHIP	2.2K 5%			A-4733-713-A	PANEL-R BOARD, COMPLETE
R1053	1-216-825-11	METAL CHIP	2.2K 5%				*****
R1054	1-216-829-11	METAL CHIP	4.7K 5%				< LED >
R1055	1-216-833-11	METAL CHIP	10K 5%	D1101	8-719-046-39	LED SEL5821A-TP15 (DISC CHANGE)	
R1056	1-216-837-11	METAL CHIP	22K 5%	D1102	8-719-046-41	LED SEL5521C-TP15 (DITECT SERACH)	
R1057	1-216-825-11	METAL CHIP	2.2K 5%			< SWITCH >	
R1058	1-216-833-11	METAL CHIP	10K 5%	JG1101	1-786-546-11	SWITCH, TACTILE (PUSH ENTER)	
R1060	1-216-295-00	SHORT CHIP	0			< RESISTOR >	
R1061	1-216-809-11	METAL CHIP	100 5%	R1101	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R1062	1-216-818-11	METAL CHIP	560 5%	R1102	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R1063	1-216-809-11	METAL CHIP	100 5%	R1103	1-216-821-11	METAL CHIP 1K 5%	1/10W
R1064	1-216-811-11	METAL CHIP	150 5%	R1104	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R1065	1-216-811-11	METAL CHIP	150 5%	R1105	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R1067	1-216-827-11	METAL CHIP	3.3K 5%	R1106	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R1069	1-216-295-00	SHORT CHIP	0	R1107	1-216-833-11	METAL CHIP 10K 5%	1/10W
R1071	1-216-809-11	METAL CHIP	100 5%	R1108	1-216-837-11	METAL CHIP 22K 5%	1/10W
R1073	1-216-841-11	METAL CHIP	47K 5%	R1109	1-216-841-11	METAL CHIP 47K 5%	1/10W
R1074	1-216-809-11	METAL CHIP	100 5%	R1110	1-216-821-11	METAL CHIP 1K 5%	1/10W
R1076	1-216-841-11	METAL CHIP	47K 5%	R1111	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R1077	1-216-809-11	METAL CHIP	100 5%				
R1078	1-216-801-11	METAL CHIP	22 5%				
R1079	1-216-801-11	METAL CHIP	22 5%				
R1080	1-216-845-11	METAL CHIP	100K 5%				
R1081	1-218-867-11	METAL CHIP	6.8K 5%				
R1082	1-218-867-11	METAL CHIP	6.8K 5%				
R1083	1-216-828-11	METAL CHIP	3.9K 5%				

# DVP-CX777ES

## PANEL-R

## POWER

Ref. No.	Part No.	Description	Remark
R1112	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R1113	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R1114	1-216-833-11	METAL CHIP 10K 5%	1/10W
R1115	1-216-837-11	METAL CHIP 22K 5%	1/10W
R1116	1-216-811-11	METAL CHIP 150 5%	1/10W
R1117	1-216-811-11	METAL CHIP 150 5%	1/10W
R1118	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
< ROTARY ENCODER >			
RE1101	1-475-543-11	ENCODER, ROTARY (DIASC AMS, PUSH ENTER)	
< SWITCH >			
S1101	1-771-410-21	SWITCH, TACTILE (OPEN/CLOSE)	
S1102	1-771-410-21	SWITCH, TACTILE (≡ DISC EJECT)	
S1103	1-771-410-21	SWITCH, TACTILE (▶)	
S1104	1-771-410-21	SWITCH, TACTILE (TOP MENU)	
S1105	1-771-410-21	SWITCH, TACTILE (DISPLAY)	
S1106	1-771-410-21	SWITCH, TACTILE (MENU)	
S1107	1-771-410-21	SWITCH, TACTILE (■)	
S1108	1-771-410-21	SWITCH, TACTILE (▣)	
S1109	1-771-410-21	SWITCH, TACTILE (↩ RETURN)	
S1110	1-771-410-21	SWITCH, TACTILE (+100)	
S1111	1-771-410-21	SWITCH, TACTILE (DISC CHANGE)	
S1112	1-771-410-21	SWITCH, TACTILE (DIRECT SERACH)	
*****			
	1-477-957-11	POWER BLOCK (Including POWER BOARD)	*****
< CAPACITOR >			
△C101	1-165-528-11	FILM 0.1uF 10%	275V
△C102	1-165-528-11	FILM 0.1uF 10%	275V
△C103	1-113-928-11	CERAMIC 100PF 10%	125V
△C104	1-113-928-11	CERAMIC 100PF 10%	125V
△C107	9-885-036-09	ELECT 120uF	
△C110	1-126-964-11	ELECT 10uF 20%	50V
△C114	1-126-947-11	ELECT 47uF 20%	35V
C212	9-885-036-15	ELECT 330uF	
C301	9-885-036-16	ELECT 1000uF	
C302	1-126-964-11	ELECT 10uF 20%	50V
C303	1-126-960-11	ELECT 1uF 20%	50V
C304	1-126-933-11	ELECT 100uF 20%	16V
C306	1-126-923-11	ELECT 220uF 20%	10V
C308	1-126-947-11	ELECT 47uF 20%	35V
C309	1-126-947-11	ELECT 47uF 20%	35V
C402	1-126-947-11	ELECT 47uF 20%	35V
C502	9-885-020-98	ELECT 220uF	25V
C503	1-126-947-11	ELECT 47uF 20%	35V
C504	9-885-020-98	ELECT 220uF	25V
C505	1-126-947-11	ELECT 47uF 20%	35V
< CONNECTOR >			
* CN101	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	
* CN102	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P	
* CN201	1-564-715-11	PIN, CONNECTOR (SMALL TYPE) 13P	

Ref. No.	Part No.	Description	Remark
< DIODE >			
△D101	9-885-020-72	DIODE 1N4005L	
△D102	9-885-020-72	DIODE 1N4005L	
△D103	9-885-020-72	DIODE 1N4005L	
△D104	9-885-020-72	DIODE 1N4005L	
△D106	8-719-081-77	DIODE SARS01	
△D107	8-719-063-70	DIODE D1NL20U	
△D108	8-719-921-63	DIODE MTZJ7.5	
D211	9-885-036-10	DIODE D2L20U	
D213	8-719-901-33	DIODE 1SS133	
D301	8-719-510-73	DIODE S3L20U	
D302	9-885-020-72	DIODE 1N4005L	
D303	9-885-020-72	DIODE 1N4005L	
D304	9-885-020-72	DIODE 1N4005L	
D305	8-719-510-73	DIODE S3L20U	
D308	8-719-901-33	DIODE 1SS133	
D501	9-885-036-10	DIODE D2L20U	
D502	8-719-063-70	DIODE D1NL20U	
< FUSE >			
△F101	9-885-020-67	FUSE (2A/125V)	
< TERMINAL EARTH >			
* FG001	1-537-738-21	TERMINAL, EARTH	
* FG002	1-537-738-21	TERMINAL, EARTH	
* FG003	1-537-738-21	TERMINAL, EARTH	
* FG004	1-537-738-21	TERMINAL, EARTH	
< IC >			
△IC101	9-885-036-08	IC MIP2E5DMY	
IC301	8-759-420-19	IC AN1431	
IC302		(Not supplied)	
IC401		(Not supplied)	
< COIL >			
△L101	9-885-020-69	FILTER, LINE	
△L102	9-885-020-69	FILTER, LINE	
△L104	9-885-020-70	CORE, BEAD	
< IC LINK >			
P301	9-885-036-14	LINK, IC	
P502	9-885-024-65	LINK, IC	
< PHOTO COUPLER >			
△PC101	8-749-924-35	PHOTO COUPLER ON3171	
< TRANSISTOR >			
Q201	9-885-021-04	FET 2SJ525	
Q202	8-729-901-78	TRANSISTOR 2SC2412K-R	
Q301	9-885-021-04	FET 2SJ525	
Q302	8-729-901-78	TRANSISTOR 2SC2412K-R	
Q501	9-885-022-75	TRANSISTOR 2SD1862	
Q502	8-729-027-34	TRANSISTOR DTA143EKA-T146	
< RESISTOR >			
△R104	1-216-805-11	METAL CHIP 47 5%	1/10W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



**POWER**

**RS-232C**

**SENSOR**

Ref. No.	Part No.	Description	Remark
R211	1-216-833-11	METAL CHIP 10K 5%	1/10W
R212	1-216-821-11	METAL CHIP 1K 5%	1/10W
R213	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R301	1-216-809-11	METAL CHIP 100 5%	1/10W
R302	1-216-821-11	METAL CHIP 1K 5%	1/10W
R303	1-216-831-11	METAL CHIP 6.8K 5%	1/10W
R304	1-216-833-11	METAL CHIP 10K 5%	1/10W
R306	1-216-833-11	METAL CHIP 10K 5%	1/10W
R308	1-216-833-11	METAL CHIP 10K 5%	1/10W
R309	1-216-821-11	METAL CHIP 1K 5%	1/10W

When any part on the POWER board except the ones listed above needs to be replaced, replace the entire mounted board.

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A-4733-703-A RS-232C BOARD, COMPLETE

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< CAPACITOR >

C801	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C807	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C808	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C809	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C810	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V

C811	1-124-779-00	ELECT CHIP 10uF 20%	16V
C812	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C813	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C814	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C815	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V

< CONNECTOR >

CN801	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P
CNP801	1-815-737-11	CONNECTOR, (D) SUB 9P (RS232C)

< DIODE >

D802	8-719-071-15	DIODE HZM6.8ZWA1TL
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< FERRITE BEAD >

FB801	1-469-784-11	FERRITE 0uH
FB802	1-469-784-11	FERRITE 0uH

< FILTER >

FL801	1-234-177-21	FILTER, CHIP EMI
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< IC >

IC804	8-759-441-98	IC MAX3232CSE
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< JACK >

* J801	1-764-188-11	JACK (SMALL TYPE) (DIA. 3.5) (S-LINK, CONTROL S IN)
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< RESISTOR >

R806	1-216-864-11	SHORT CHIP 0
R808	1-216-864-11	SHORT CHIP 0
R809	1-216-864-11	SHORT CHIP 0
R811	1-216-864-11	SHORT CHIP 0
R814	1-216-864-11	SHORT CHIP 0

Ref. No.	Part No.	Description	Remark
R815	1-216-801-11	METAL CHIP 22 5%	1/10W
R816	1-216-809-11	METAL CHIP 100 5%	1/10W
R817	1-216-809-11	METAL CHIP 100 5%	1/10W
R818	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R819	1-216-821-11	METAL CHIP 1K 5%	1/10W

R820	1-208-782-11	METAL CHIP 1K 0.5%	1/10W
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< SWITCH >

S801	1-692-989-11	SWITCH, SLIDE (COMMAND MODE)
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A-4733-707-A SENSOR BOARD, COMPLETE

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< CAPACITOR >

C81	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
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< CONNECTOR >

* CN81	1-506-486-11	PIN, CONNECTOR 7P
CN82	1-506-481-11	PIN, CONNECTOR 2P
CN83	1-506-481-11	PIN, CONNECTOR 2P

< PHOTO INTERRUPTER >

IC81	8-749-924-18	PHOTO INTERRUPTER RPI-1391
IC82	8-749-924-18	PHOTO INTERRUPTER RPI-1391
IC83	8-749-924-18	PHOTO INTERRUPTER RPI-1391
IC84	8-749-924-18	PHOTO INTERRUPTER RPI-1391

< RESISTOR >

R81	1-216-649-11	METAL CHIP 820 0.5%	1/10W
R82	1-216-649-11	METAL CHIP 820 0.5%	1/10W
R83	1-216-649-11	METAL CHIP 820 0.5%	1/10W
R84	1-216-649-11	METAL CHIP 820 0.5%	1/10W
R85	1-208-778-11	METAL CHIP 680 0.5%	1/10W

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MISCELLANEOUS

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2	1-827-575-11	WIRE (FLAT TYPE) (9 CORE)
3	1-827-583-11	WIRE (FLAT TYPE) (26 CORE)
4	1-827-585-11	WIRE (FLAT TYPE) (23 CORE)
5	1-827-584-11	WIRE (FLAT TYPE) (27 CORE)
56	1-827-576-11	WIRE (FLAT TYPE) (19 CORE)

△ 105	1-783-531-32	CORD, POWER
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△ 501	A-6061-908-A	OPTICAL PICK-UP KHM-290AAA (SERVICE ASSY)
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M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)
M603	1-541-632-12	MOTOR, DC (DOOR)

△ T102	1-437-496-21	TRANSFORMER, POWER
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ACCESSORIES

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1-477-979-11	COMMANDER, STANDARD (RM-DX700)
1-823-364-21	CORD, CONNECTION (AUDIO/VIDEO)
3-073-096-01	LID, BATTERY CASE (for RM-DX700)
4-249-720-12	MANUAL, INSTRUCTION (ENGLISH)
4-249-720-22	MANUAL, INSTRUCTION (FRENCH)

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

