

# HCD-F200/F500

## SERVICE MANUAL



Ver. 1.1 2008.08



Photo: HCD-F500

Canadian Model  
 E Model  
 Australian Model  
 Russian Model  
 HCD-F500  
 AEP Model  
 UK Model  
 HCD-F200  
 Singapore Model  
 Thai Model  
 HCD-F200/F500

- HCD-F200 is the DVD system, USB, tuner and video section in DAV-F200.
- HCD-F500 is the DVD system, USB, tuner and video section in DAV-F500.

### Note:

- In this set, repair in the state of having connected with SA-WSF200.
- In this set, repair in the state of having connected with SA-WSF500.

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This system incorporates with Dolby\* Digital and Dolby Pro Logic (II) adaptive matrix surround decoder and the DTS\*\* Digital Surround System.

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This system incorporates High-Definition Multimedia Interface (HDMI™) technology.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

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Inputs (Analog)  
 TV (AUDIO IN) Sensitivity: 450/250 mV  
 Inputs (Digital) SAT/CABLE (COAXIAL)  
 Impedance: 75 ohms  
 Output (Digital) (HCD-F200)  
 Impedance: 75 ohms

### DVD System

Laser Semiconductor laser  
 (DVD:  $\lambda = 650 \text{ nm}$ )  
 (CD:  $\lambda = 790 \text{ nm}$ )  
 Emission duration: continuous

Signal format system  
 Canadian and Latin American models:  
 NTSC  
 Other models: NTSC/PAL

### USB Section

Supported bit rate  
 MP3 (MPEG 1 Audio Layer-3):  
 32 kbps - 320 kbps  
 WMA: 48 kbps - 192 kbps  
 AAC: 48 kbps - 320 kbps  
 Sampling frequencies  
 MP3 (MPEG 1 Audio Layer-3):  
 32/44.1/48 kHz  
 WMA: 44.1 kHz  
 AAC: 44.1 kHz  
 (USB) port:  
 Maximum current: 500 mA

## SPECIFICATIONS

### Tuner Section

System PLL quartz-locked digital synthesizer  
 FM tuner section  
 Tuning range  
 Canadian models: 87.5 MHz - 108.0 MHz (100 kHz step)  
 Other models: 87.5 MHz - 108.0 MHz (50 kHz step)  
 Antenna (aerial) FM wire antenna (aerial)  
 Antenna (aerial) terminals 75 ohms, unbalanced  
 Intermediate frequency 10.7 MHz

### Video Section

Outputs VIDEO: 1 Vp-p 75 ohms  
 COMPONENT:  
 Y: 1 Vp-p 75 ohms  
 Pb/Cb, Pr/Cr: 0.7 Vp-p 75 ohms  
 HDMI OUT: Type A (19 pin)

Model Name Using Similar Mechanism	NEW
DVD Mechanism Type	CDM86-DVBU101
Optical Pick-up Block Name	KHM-313CAB

– Continued on next page –

## DVD RECEIVER

9-889-150-02  
 2008H05-1  
 © 2008.08

**Sony Corporation**  
 Audio&Video Business Group  
 Published by Sony Techno Create Corporation

# SONY®

## Control unit (HCD-F200)

Output voltage (DIGITAL MEDIA PORT)	DC 5 V
Output current (DIGITAL MEDIA PORT)	700 mA
Dimensions (approx.)	434 mm × 185 mm × 78 mm (w/h/d)
	434 mm × 214 mm × 124 mm (w/h/d) with stand
Mass (approx.)	3.6 kg 3.7 kg with stand

## Control unit (HCD-F500)

Output voltage (DIGITAL MEDIA PORT)	DC 5 V
Output current (DIGITAL MEDIA PORT)	700 mA
Dimensions (approx.)	434 mm × 185 mm × 78 mm (w/h/d)
	434 mm × 214 mm × 124 mm (w/h/d) with stand
Mass (approx.)	3.6 kg 3.7 kg with stand

Design and specifications are subject to change without notice.

## NOTES ON CHIP COMPONENT REPLACEMENT

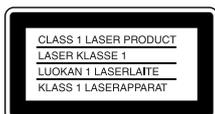
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

## FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of 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.

### CAUTION

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

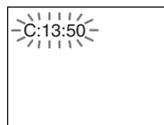


This appliance is classified as a CLASS 1 LASER product. This marking is located on the bottom exterior.

## Self-diagnosis Function

*(When letters/numbers appear in the display)*

When the self-diagnosis function is activated to prevent the system from malfunctioning, a 5-character service number (e.g., C 13 50) with a combination of a letter and 4 digits appears on the TV screen or front panel display. In this case, check the following table.



First 3 characters of the service number	Cause and/or corrective action
C 13	<ul style="list-style-type: none"> <li>• The disc is dirty. ➔ Clean the disc with a soft cloth.</li> <li>• The disc is a format that the system cannot play.</li> </ul>
C 31	<p>The disc is not inserted correctly.</p> <p>➔ Restart the system, then re-insert the disc correctly.</p>
E XX (XX is a number)	<p>To prevent a malfunction, the system has performed the self-diagnosis function.</p> <p>➔ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10</p>

### When displaying the version number on the TV screen

When you turn on the system, the version number [VER.X.XX] (X is a number) may appear on the TV screen. Although this is not a malfunction and for Sony service use only, normal system operation will not be possible. Turn off the system, and then turn on the system again to operate.



### 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.

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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 pickup block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

**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.

**BEGIN IT BEFORE THE REPAIR (HCD-F200)**

When the HCD-F200 is checked, connect to SA-WSF200 (for active speaker of DAV-F200).

Be sure in advance the SA-WSF200 is prepared.

**BEGIN IT BEFORE THE REPAIR (HCD-F500)**

When the HCD-F500 is checked, cannot to SA-WSF500 (for active speaker of DAV-F500).

Be sure in advance the SA-WSF500 is prepared.

**RELEASING THE DISC SLOT LOCK**

The disc slot lock function for the antitheft of an demonstration disc in the store is equipped.

**Releasing Procedure:**

1. Press the [I/⏻] button to turn on the system.
2. Press the [FUNCTION] button on the remote commander to select “DVD”.
3. Press the [■] and [▲] button on the set simultaneously and hold down until “UNLOCKED” displayed on the fluorescent indicator tube (around 5 seconds).

**Note:** When “LOCKED” is displayed, the disc slot lock is not released by turning power on/off with the [I/⏻] button.

**RELEASING THE DEMO PLAY LOCK**

**Releasing Procedure :**

1. Press the [I/⏻] button to turn on the system.
2. Press the [FUNCTION] button on the remote commander to select “DVD”.
3. Press the [■] and [▶] button on the set simultaneously and hold down until “DEMO OFF” displayed on the fluorescent indicator tube (around 5 seconds).

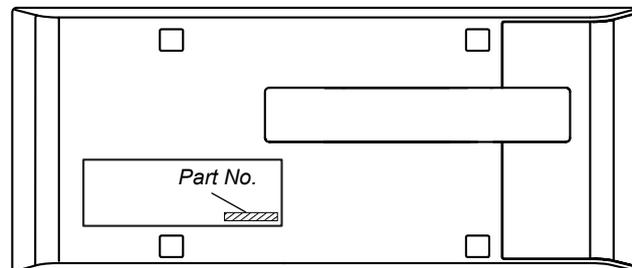
**Note:** When “DEMO PLAY” is displayed, the DEMO play lock is not released by turning power on/off with the [I/⏻] button.

**NOTE OF REPLACING THE IC102 AND IC103 ON THE DMB-FIT BOARD**

IC102 and IC103 on the DMB-FIT board cannot exchange with single. When IC102 and IC103 on the DMB-FIT board is damaged, exchange the entire mounted board.

**MODEL IDENTIFICATION**

– Rear View –



Model	Part No.
F200: AEP and UK models	3-294-269-0□
F200: Singapore model	3-294-270-0□
F500: Canadian model	3-294-272-0□
F500: Russian model	3-294-274-0□
F500: Singapore model	3-294-275-0□
F500: 240V AC area in E model	3-294-276-0□
F500: Korean and Thai models	3-294-277-0□
F500: Australian model	3-294-279-0□
F500: Latin American model (110 – 240V AC area)	3-294-281-0□
F500: Mexican model	3-294-282-0□
F500: Taiwan model	3-294-283-0□
F200: Thai model	3-452-613-0□
F500: Iranian model	3-876-712-0□
F500: Saudi Arabia model	4-114-165-0□

## Playable Discs

Type	Disc logo	Characteristics	Icon
DVD VIDEO	     	<ul style="list-style-type: none"> <li>DVD VIDEO</li> <li>DVD-R/DVD-RW in DVD VIDEO format or video mode</li> <li>DVD+R/DVD+RW in DVD VIDEO format</li> </ul>	
VR (Video Recording) mode	 	<ul style="list-style-type: none"> <li>DVD-R/DVD-RW in VR (Video Recording) mode (except for DVD-R DL)</li> </ul>	
VIDEO CD		<ul style="list-style-type: none"> <li>VIDEO CD (Ver. 1.1 and 2.0 discs)</li> <li>Super VCD</li> <li>CD-R/CD-RW/CD-ROM in video CD format or Super VCD format</li> </ul>	
CD		<ul style="list-style-type: none"> <li>Audio CD</li> <li>CD-R/CD-RW in audio CD format</li> </ul>	
DATA CD	-	<ul style="list-style-type: none"> <li>CD-R/CD-RW/CD-ROM in DATA CD format, containing MP3 files<sup>1)</sup>, JPEG image files<sup>2)</sup>, and DivX video files<sup>3)4)5)</sup>, and conforming to ISO 9660<sup>6)</sup> Level 1/ Level 2, or Joliet (extended format)</li> </ul>	
DATA DVD	-	<ul style="list-style-type: none"> <li>DVD-ROM/DVD-R/DVD-RW/DVD+R/DVD+RW in DATA DVD format, containing MP3 files<sup>1)</sup>, JPEG image files<sup>2)</sup>, and DivX video files<sup>3)4)5)</sup>, and conforming to UDF (Universal Disk Format)</li> </ul>	

<sup>1)</sup>MP3 (MPEG1 Audio Layer 3) is a standard format defined by ISO/MPEG which compresses audio data. MP3 files must be in MPEG1 Audio Layer 3 format.

<sup>2)</sup>JPEG image files must conform to the DCF image file format. (DCF "Design rule for Camera File system": Image standards for digital cameras regulated by Japan Electronics and Information Technology Industries Association (JEITA).)

<sup>3)</sup>Except for North American models.

<sup>4)</sup>DivX<sup>®</sup> is a video file compression technology, developed by DivX, Inc.

<sup>5)</sup>DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

<sup>6)</sup>A logical format of files and folders on CD-ROMs, defined by ISO (International Organization for Standardization).

"DVD-RW," "DVD+RW," "DVD+R," "DVD VIDEO," and the "CD" logos are trademarks.

### Example of discs that the system cannot play

The system cannot play the following discs:

- CD-ROM/CD-R/CD-RW other than those recorded in the formats listed
- CD-ROM recorded in PHOTO CD format
- Data part of CD-Extra
- CD Graphics disc
- DVD Audio
- DATA DVD that does not contain MP3 files, JPEG image files, or DivX video files\*
- \* Except for North American models.
- DVD-RAM
- Super Audio CD

Also, the system cannot play the following discs:

- A DVD VIDEO with a different region code
- 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

### Note about CD-R/CD-RW/DVD-R/DVD-RW/DVD+R/DVD+RW

In some cases, CD-R/CD-RW/DVD-R/DVD-RW/DVD+R/DVD+RW cannot be played on this system due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software.

The disc will not play if it has not been correctly finalized. For more information, refer to the operating instructions for the recording device.

Note that some playback functions may not work with some DVD+RWs/DVD+Rs, even if they have been correctly finalized. In this case, view the disc by normal playback. Also some DATA CDs/DATA DVDs created in Packet Write format cannot be played.

### Music discs encoded with copyright protection technologies

This product is designed to play back 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 DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

### About Multi Session CD

- This system can play a Multi Session CD when an MP3 file is contained in the first session. Any subsequent MP3 files recorded in later sessions can also be played back.
- This system can play a Multi Session CD when a JPEG image file is contained in the first session. Any subsequent JPEG image files recorded in later sessions can also be played back.
- If MP3 files and JPEG image files in music CD format or video CD format are recorded in the first session, only the first session will be played back.

### Region code

Your system has a region code printed on the rear of the control unit and will only play a DVD labeled with the same region code.

A DVD VIDEO labeled  will also play on this system.

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 given even though playing the DVD VIDEO is prohibited by area restrictions.

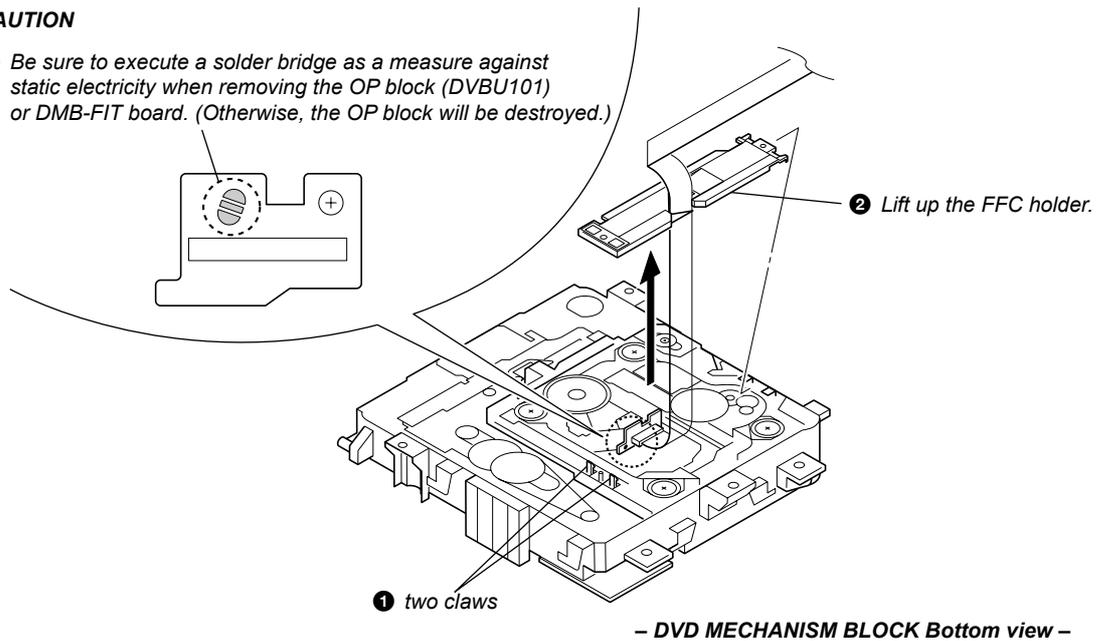
### Note about playback operations of a DVD or VIDEO CD

Some playback operations on a DVD or VIDEO CD may be intentionally set by software producers. Since this system will play a DVD or VIDEO CD according to the disc contents the software producers designed, some playback features may not be available. Be sure to read the operating instructions supplied with the DVD or VIDEO CD.

## PRECAUTION WHEN REMOVING OPTICAL PICK-UP BLOCK OR DMB-FIT BOARD

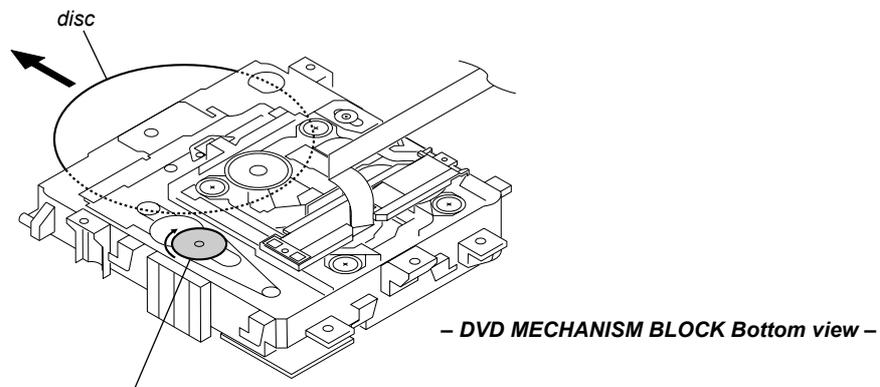
### CAUTION

- ③ Be sure to execute a solder bridge as a measure against static electricity when removing the OP block (DVBU101) or DMB-FIT board. (Otherwise, the OP block will be destroyed.)



## HOW TO EJECT THE DISC WHEN POWER SWITCH TURNS OFF

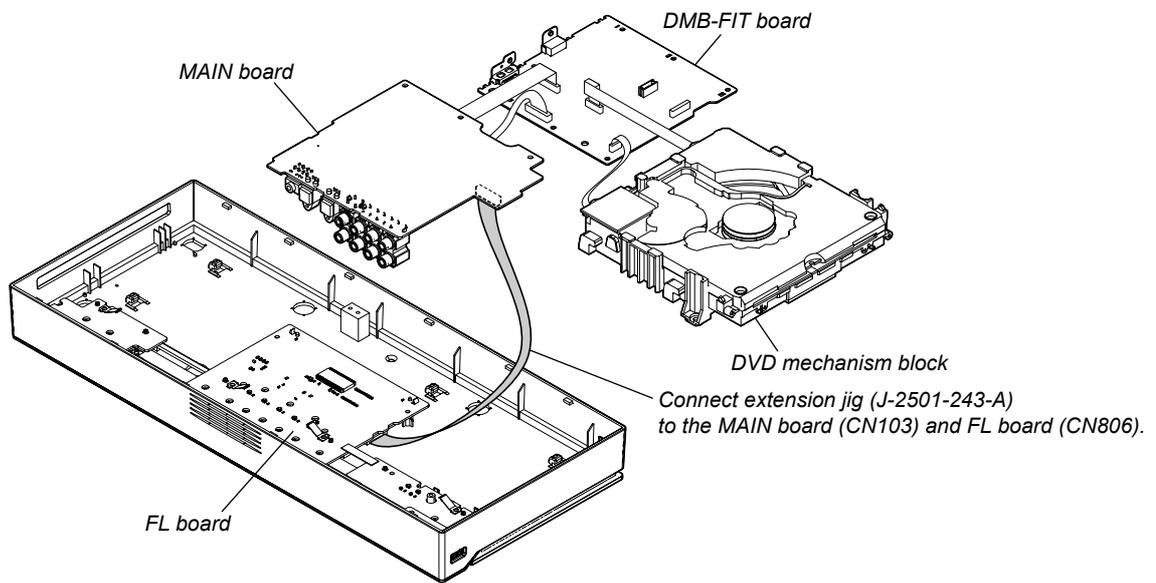
*Note: Please take out the DVD mechanism block from a set.*



*Please rotate the pulley in the direction of the arrow after removing mechanism deck, and eject the disc.*

**MAIN BOARD SERVICE POSITION**

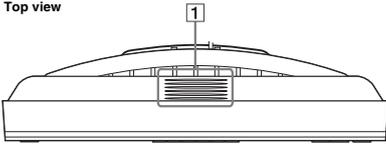
- In checking the MAIN board, prepare extension jig (Part No. J-2501-243-A: 1.00 mm pitch, 17 cores, length 300 mm).  
**Note:** Please connect it after taking out MAIN board, DMB-FIT board and DVD mechanism block of the set referring to Section 3 Disassembly (page 10)



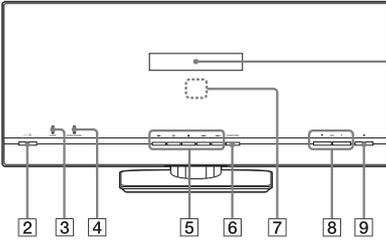
This section is extracted from instruction manual.

Control unit

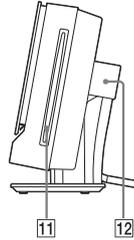
HCD-F200  
Top view



Front view

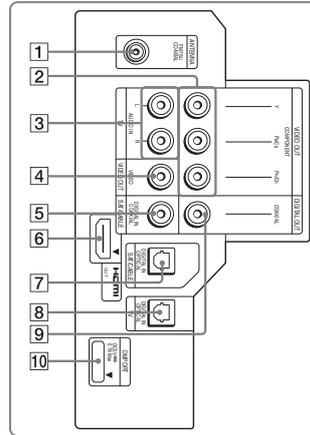


Right side view

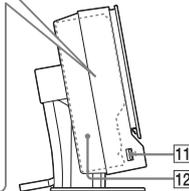


- 1 Ventilation slots
- 2 I/⏻ (on/standby) button
- 3 AUTO (Decoding mode) indicator
- 4 WIDE STAGE indicator
- 5 Play operation buttons/Illumination
- 6 FUNCTION button
- 7 Remote sensor
- 8 VOL +/- buttons
- 9 ▲ (eject) button
- 10 Front panel display
- 11 Disc slot
- 12 Stand cover

Connector panel

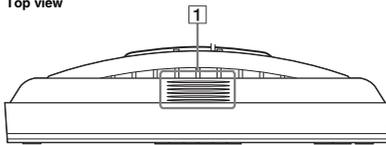


Left side view

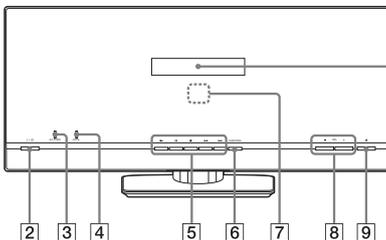


- 1 ANTENNA (FM75Ω COAXIAL) jack
- 2 VIDEO OUT (COMPONENT) jacks
- 3 TV (AUDIO IN R/L) jacks
- 4 VIDEO OUT (VIDEO) jack
- 5 SAT/CABLE (DIGITAL IN COAXIAL) jack
- 6 HDMI OUT jack
- 7 SAT/CABLE (DIGITAL IN OPTICAL) jack
- 8 TV (DIGITAL IN OPTICAL) jack
- 9 DIGITAL OUT (COAXIAL) (DVD function only) jack
- 10 DMPORT jack
- 11 ← (USB) port
- 12 Panel cover

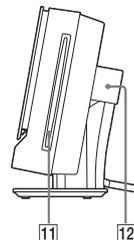
HCD-F500  
Top view



Front view

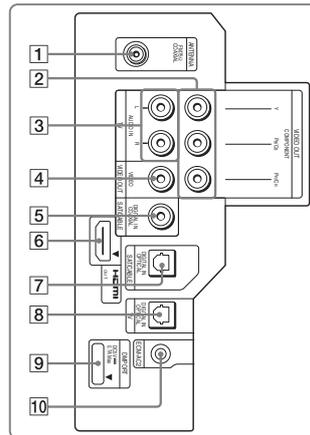


Right side view

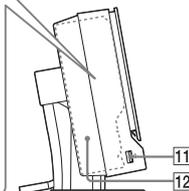


- 1 Ventilation slots
- 2 I/⏻ (on/standby) button
- 3 A.F.D. STD indicator
- 4 D.C.S. indicator
- 5 Play operation buttons/Illumination
- 6 FUNCTION button
- 7 Remote sensor
- 8 VOL +/- buttons
- 9 ▲ (eject) button
- 10 Front panel display
- 11 Disc slot
- 12 Stand cover

Connector panel



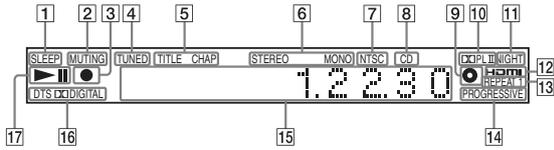
Left side view



- 1 ANTENNA (FM75Ω COAXIAL) jack
- 2 VIDEO OUT (COMPONENT) jacks
- 3 TV (AUDIO IN R/L) jacks
- 4 VIDEO OUT (VIDEO) jack
- 5 SAT/CABLE (DIGITAL IN COAXIAL) jack
- 6 HDMI OUT jack
- 7 SAT/CABLE (DIGITAL IN OPTICAL) jack
- 8 TV (DIGITAL IN OPTICAL) jack
- 9 DMPORT jack
- 10 ECM-AC2 jack
- 11 ← (USB) port
- 12 Panel cover

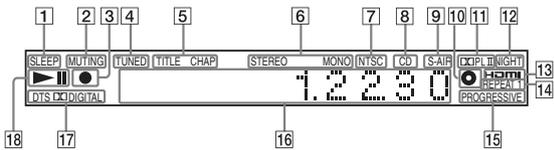
## Front panel display

### HCD-F200



- 1 Lights up when the sleep timer is set.
- 2 Lights up when the sound of the system is muted.
- 3 Displays the USB status
- 4 Lights up when a station is received. (Radio only)
- 5 Lights up when the time information of a title or chapter appears in the front panel display. (DVD only)
- 6 Stereo/Monaural effect (Radio only)
- 7 Lights up when an NTSC disc is loaded.
- 8 Lights up when a CD or a DATA CD is loaded.
- 9 Lights up when a disc is loaded.
- 10 Current surround format (except for JPEG image file)
- 11 Lights up when the night mode is on.
- 12 Lights up when the HDMI OUT jack is correctly connected to HDCP (Highbandwidth Digital Content Protection) compliant device with HDMI or DVI (Digital Visual Interface) input.
- 13 Current repeat mode
- 14 Lights up when the system outputs progressive signals (DVD/USB function only).
- 15 Displays system's status such as chapter, title, or track number, time information, radio frequency, playing status, decoding mode, etc.
- 16 Current surround format (except for JPEG image file)
- 17 Playing status

### HCD-F500

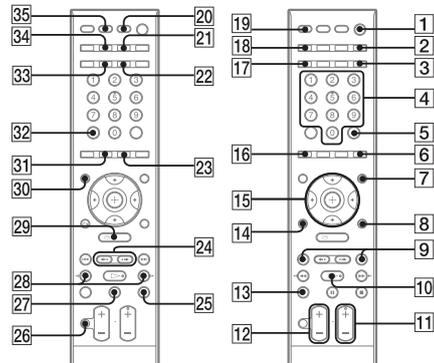


- 1 Flashes when the sleep timer is set.
- 2 Lights up when the sound of the system is muted.
- 3 Displays the USB status.
- 4 Lights up when a station is received. (Radio only)
- 5 Lights up when the time information of a title or chapter appears in the front panel display. (DVD only)
- 6 Stereo/Monaural effect (Radio only)
- 7 Lights up when the color system is set to NTSC. (Asian, Australian, and Middle Eastern models only)  
Lights up when an NTSC disc is loaded. (CIS models only)
- 8 Lights up when a CD or a DATA CD is loaded.
- 9 Lights up when the S-AIR transceiver is inserted in the control unit and the system transmits the sound.
- 10 Lights up when a disc is loaded.
- 11 Current surround format (except for JPEG image file)
- 12 Lights up when the night mode is on.
- 13 Lights up when the HDMI OUT jack is correctly connected to HDCP (Highbandwidth Digital Content Protection) compliant device with HDMI or DVI (Digital Visual Interface) input.
- 14 Current repeat mode
- 15 Lights up when the system outputs progressive signals (DVD/USB function only).
- 16 Displays system's status such as chapter, title, or track number, time information, radio frequency, playing status, decoding mode, etc.
- 17 Current surround format (except for JPEG image file)
- 18 Playing status

## Remote control

### HCD-F200

ALPHABETICAL ORDER		BUTTON DESCRIPTIONS
<b>A - L</b>	<b>M - Z</b>	Number buttons [4]
ANALOG [22]	MENU/HOME [29]	I/⏻ (on/standby) [1]
ANGLE [6]	MUTING [26]	TV I/⏻ (on/standby) [20]
AUDIO [31]	NIGHT [33]	⏪/⏩/⏴/⏵/⏶/⏷/⏸ [15]
CLEAR [32]	ONE-TOUCH PLAY [35]	⏪/⏩/⏴/⏵ [24]
D.TUNING [23]	PICTURE NAVI [16]	⏪/⏩/⏴/⏵ [9]
DIGITAL [3]	PRESET +/- [9]	⏪/⏩/⏴/⏵ [28]
DIMMER [22]	PROG +/- [11]	⏪/⏩/⏴/⏵ [28]
DISPLAY [21]	REPEAT [3]	▶ (play) [10]
DVD MENU [7]	SLEEP [34]	■ (stop) [25]
DVD TOP MENU [30]	SOUND MODE +/- [11]	⏪ (pause) [27]
ENTER* [5]	SUBTITLE [23]	⏻ DISPLAY** [29]
FUNCTION [2]	SYSTEM MENU [8]	⏴ RETURN [14]
	THEATER/THEATRE [19]	⏴ (eject) [18]
	TOOL/OPTIONS [8]	-/- [5]
	TONE [17]	⏴/? [21]
	TOOLS/OPTIONS [8]	⏴ [32]
	TUNING +/- [28]	⏴ [30]
	TV [13]	⏴/⏵ [7]
	TV VOL +/- [12]	⏴/⏵ [11]
	VOLUME +/- [12]	

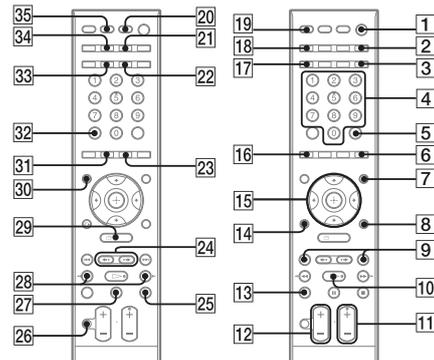


\* The ENTER button has the same function as the ⏻ button. When you operate the TV, the ENTER button is used for selecting a channel, and the ⏻ button is used for selecting menu items.

\*\* This button is available for the "DVD" or "DMPORT" function. Depending on the DIGITAL MEDIA PORT adapter, this button may not work.

### HCD-F500

ALPHABETICAL ORDER		BUTTON DESCRIPTIONS
<b>A - L</b>	<b>M - Z</b>	Number buttons [4]
ANALOG [22]	MENU/HOME [29]	I/⏻ (on/standby) [1]
ANGLE [6]	MUTING [26]	TV I/⏻ (on/standby) [20]
AUDIO [31]	NIGHT [33]	⏪/⏩/⏴/⏵/⏶/⏷/⏸ [15]
CC [31]	ONE-TOUCH PLAY [35]	⏪/⏩/⏴/⏵ [24]
CLEAR [32]	PICTURE NAVI [16]	⏪/⏩/⏴/⏵ [9]
D.TUNING [23]	PRESET +/- [9]	⏪/⏩/⏴/⏵ [28]
DIGITAL [3]	PROG +/- [11]	⏪/⏩/⏴/⏵ [28]
DIMMER [22]	REPEAT [3]	▶ (play) [10]
DISPLAY [21]	SLEEP [34]	■ (stop) [25]
DVD MENU [7]	SOUND MODE +/- [11]	⏪ (pause) [27]
DVD TOP MENU [30]	SUBTITLE [23]	⏻ DISPLAY** [29]
ENTER* [5]	SYSTEM MENU [8]	⏴ RETURN [14]
FAVORITES [16]	THEATER/THEATRE [19]	⏴ (eject) [18]
FUNCTION [2]	TOOL/OPTIONS [8]	-/- [5]
GUIDE [30]	TONE [17]	⏴/? [21]
INPUT [7]	TOOLS/OPTIONS [8]	⏴ [32]
	TUNING +/- [28]	⏴ [30]
	TV [13]	⏴/⏵ [7]
	TV CH +/- [11]	⏴/⏵ [11]
	TV VOL +/- [12]	
	VOLUME +/- [12]	



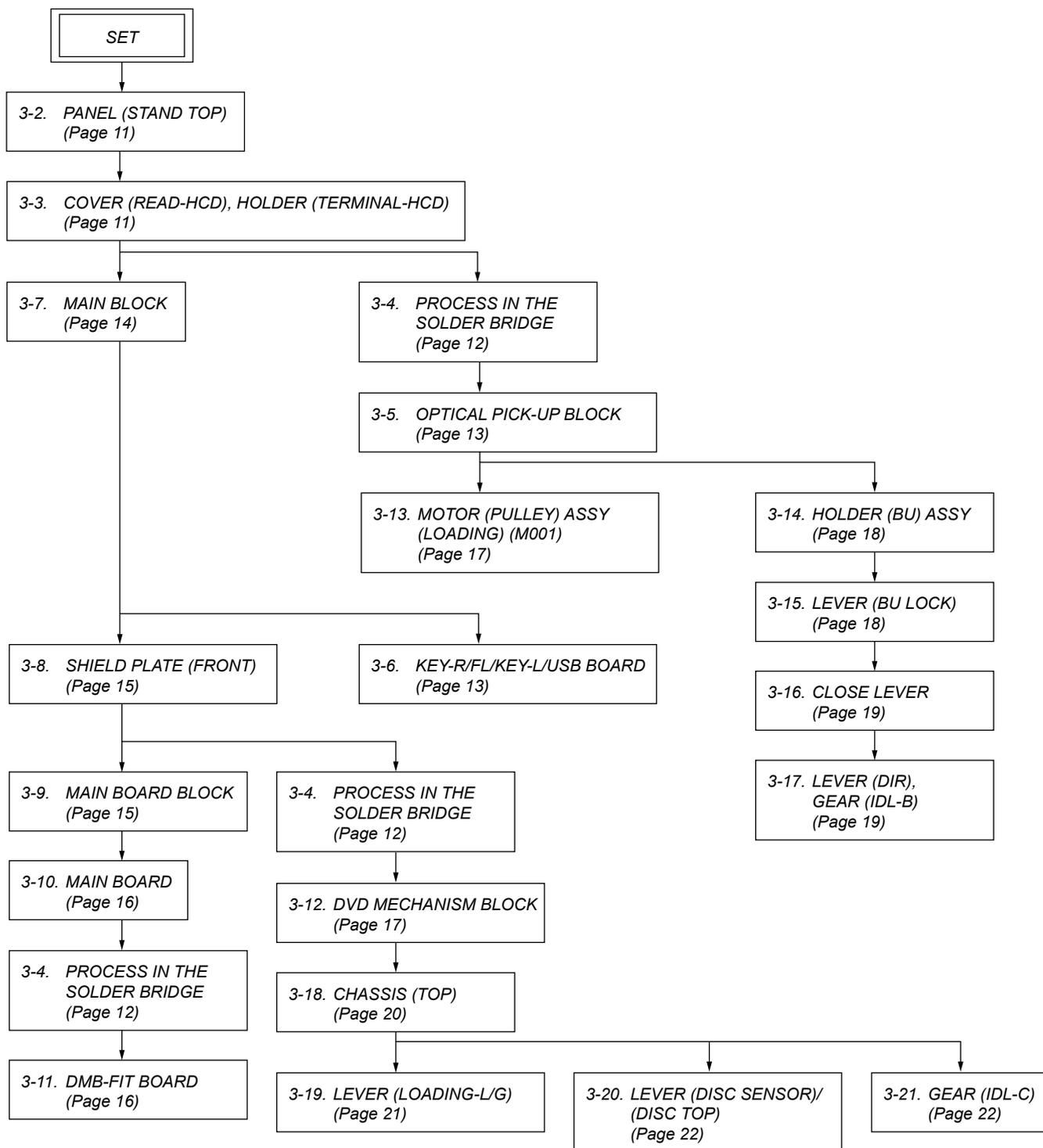
\* The ENTER button has the same function as the ⏻ button. When you operate the TV, the ENTER button is used for selecting a channel, and the ⏻ button is used for selecting menu items.

\*\* This button is available for the "DVD" or "DMPORT" function. Depending on the DIGITAL MEDIA PORT adapter, this button may not work.

## SECTION 3 DISASSEMBLY

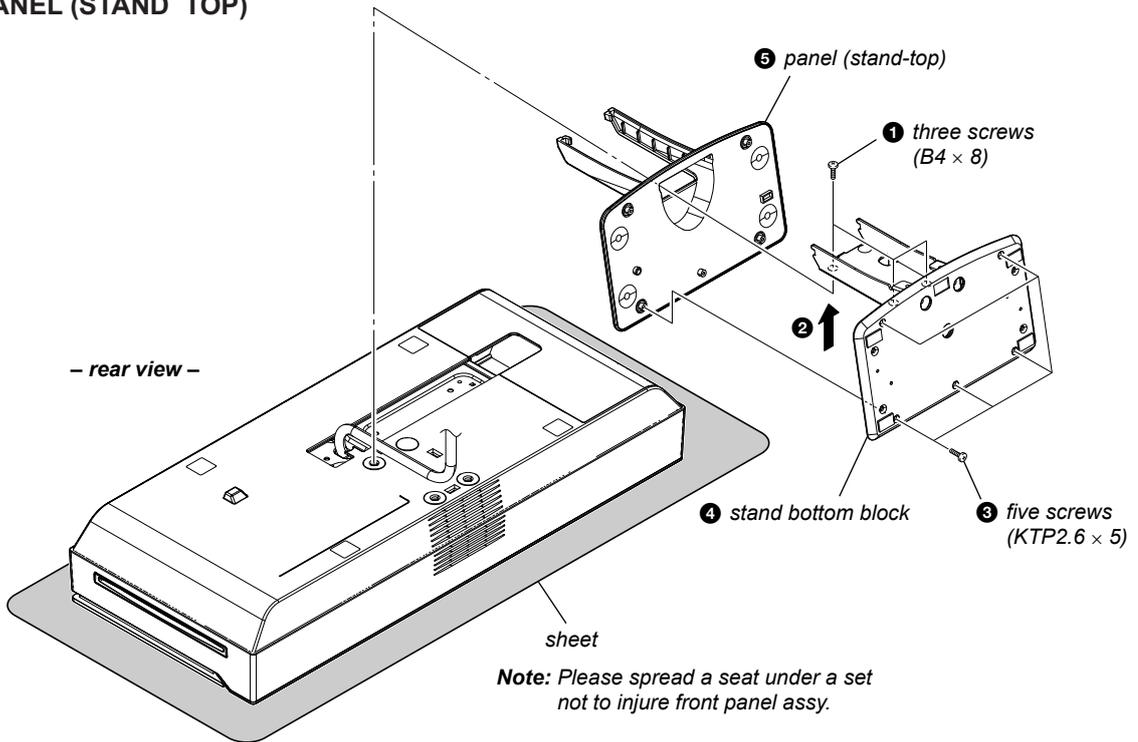
- This set can be disassembled in the order shown below.

### 3-1. DISASSEMBLY FLOW

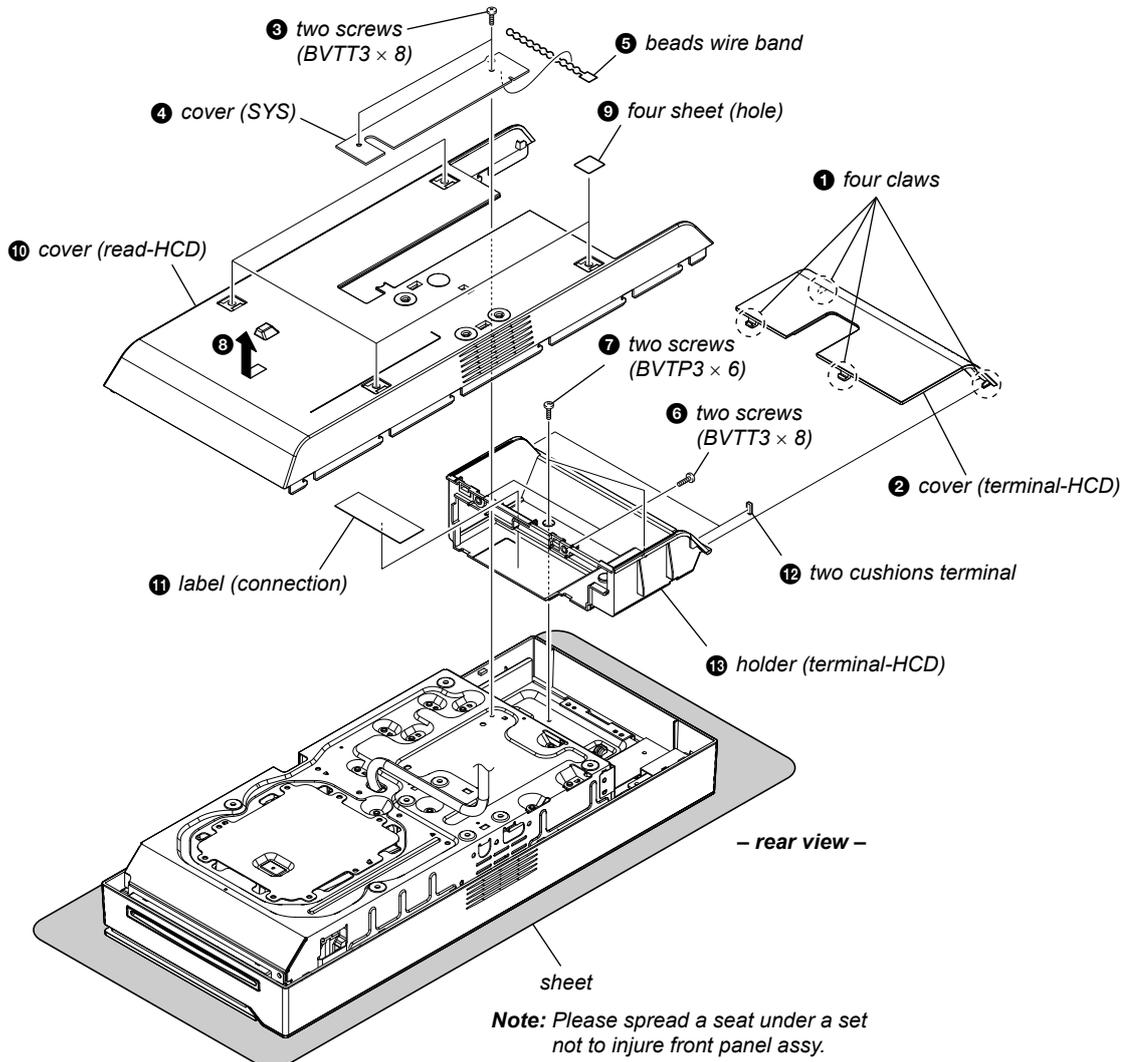


**Note:** Follow the disassembly procedure in the numerical order given.

**3-2. PANEL (STAND TOP)**

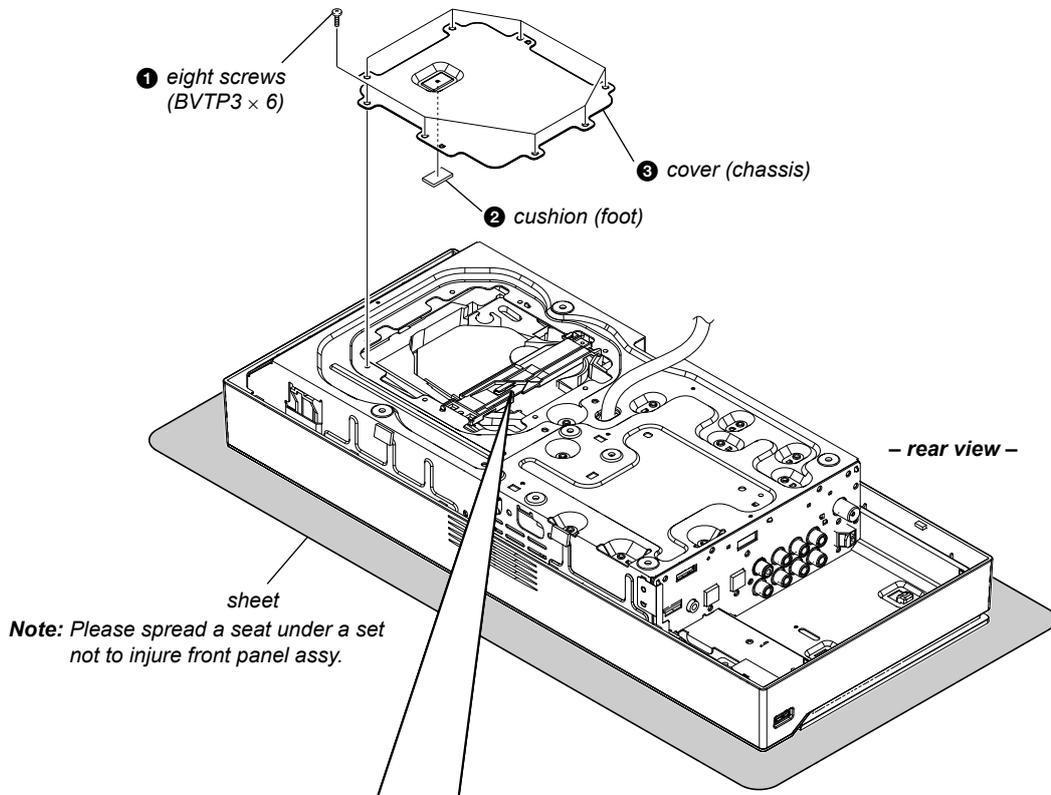


**3-3. COVER (READ-HCD), HOLDER (TERMINAL-HCD)**



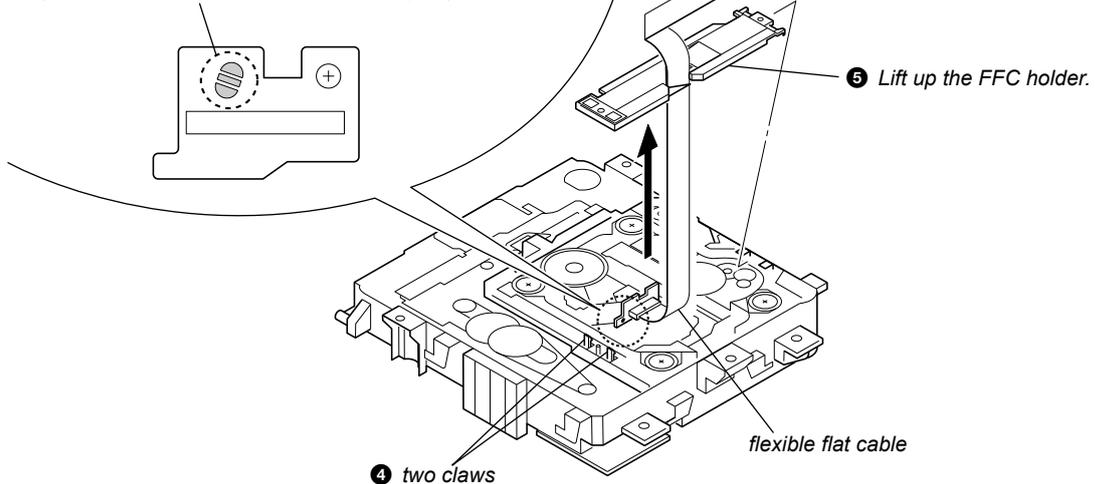
## 3-4. PROCESS IN THE SOLDER BRIDGE

**Note:** The process in the solder bridge is necessary before optical pick-up or DMB-FIT board is removed.  
When this process is neglected, optical pick-up is damaged.

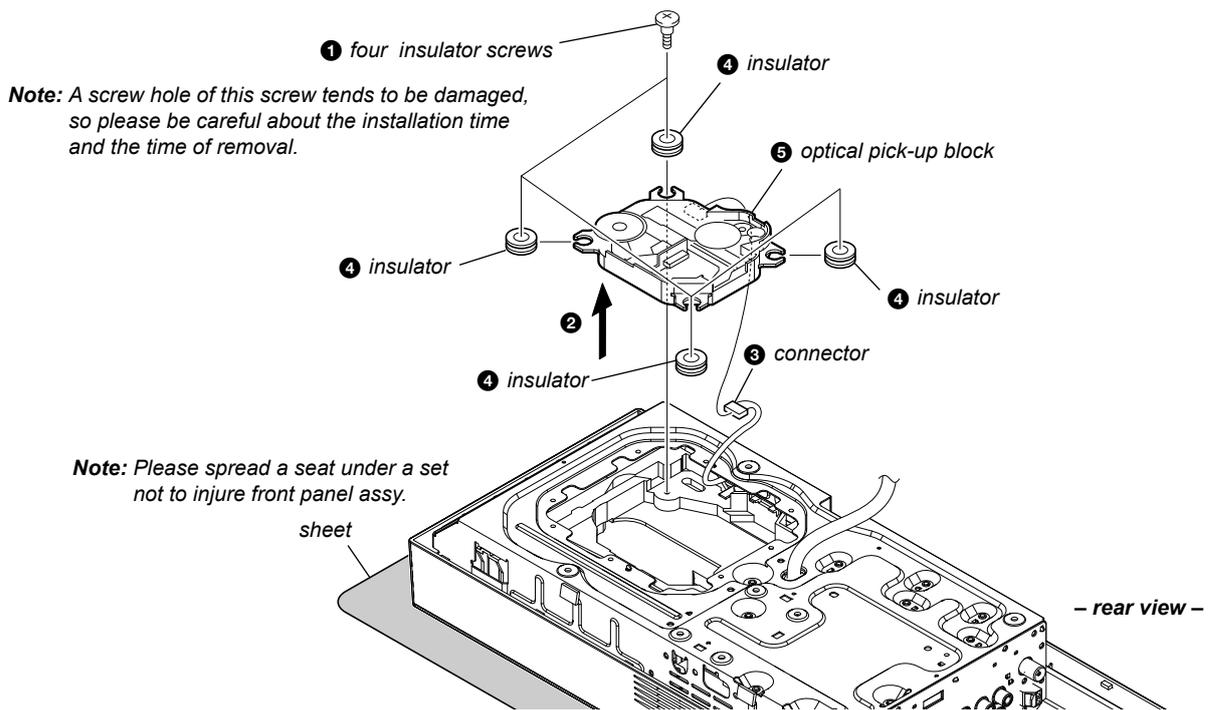


### CAUTION

- 6 Be sure to execute a solder bridge as a measure against static electricity when removing the optical pick-up or DMB-FIT board.  
(Otherwise, the OP block will be destroyed.)

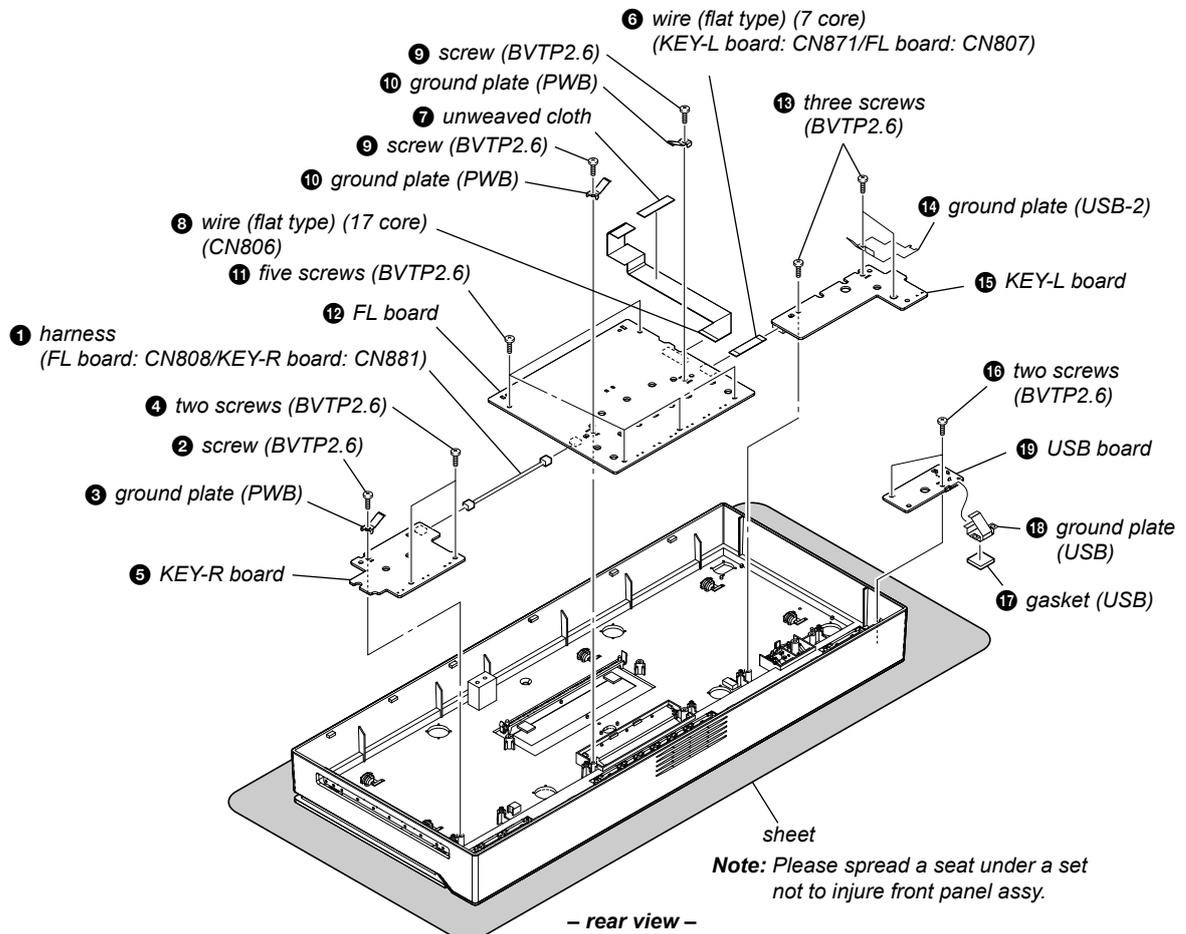


### 3-5. OPTICAL PICK-UP BLOCK



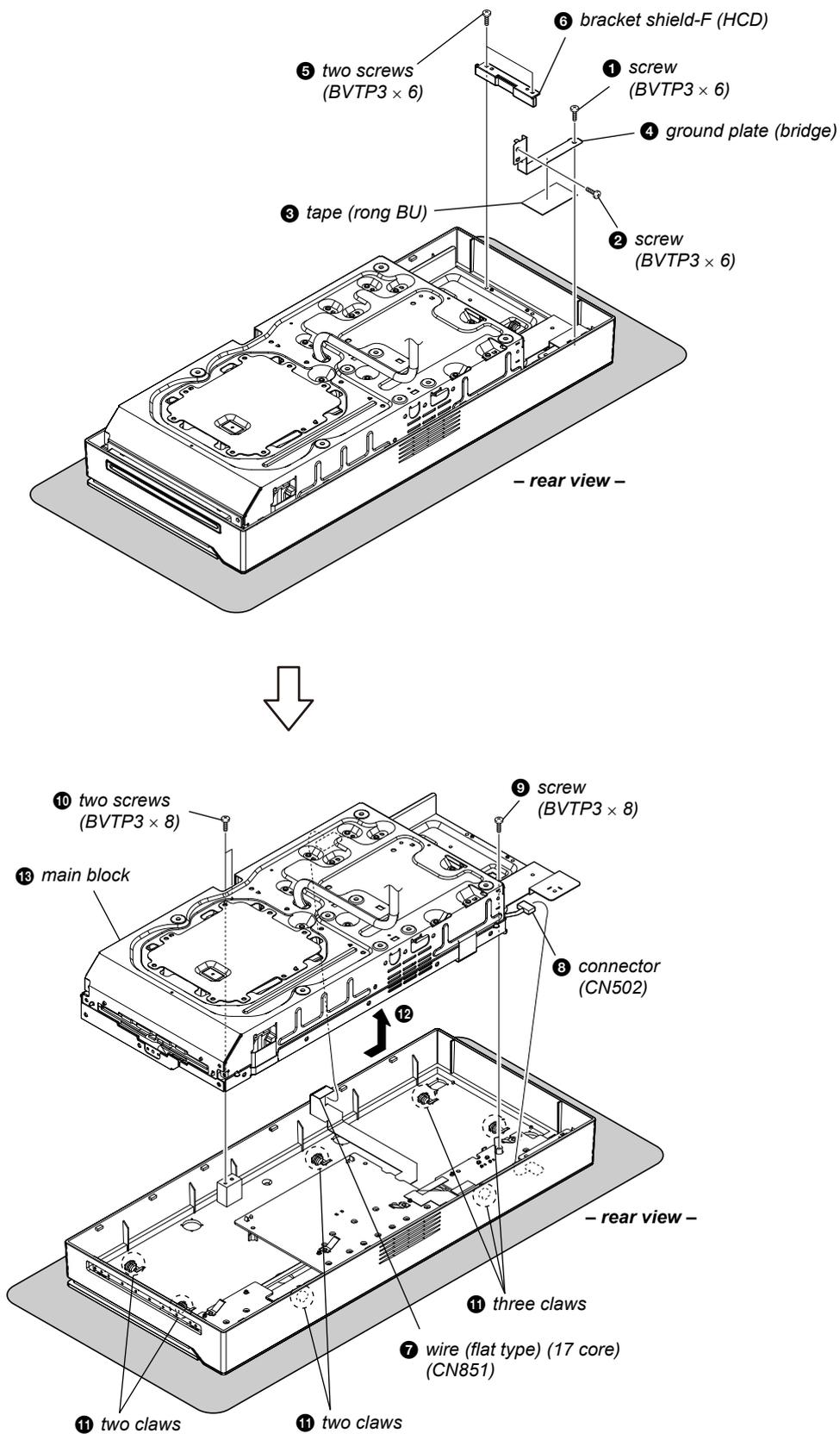
### 3-6. KEY-R/FL/KEY-L/USB BOARD

**Note:** These boards can be in any order removed.

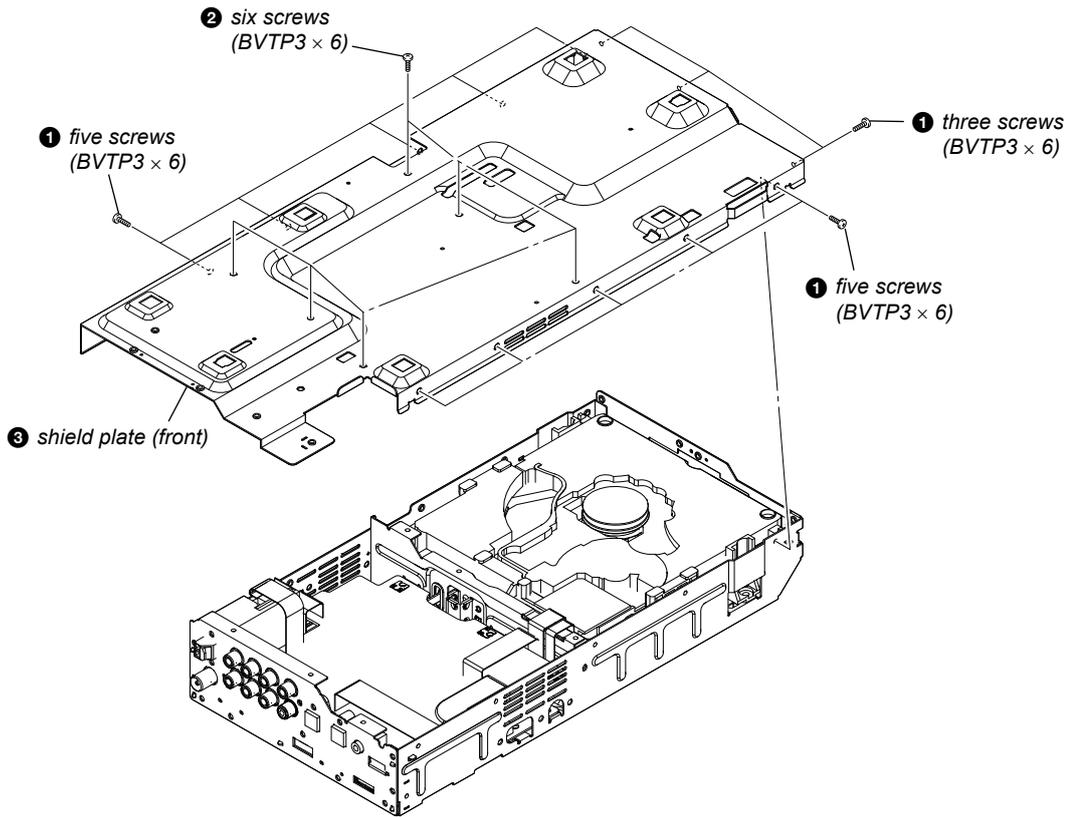


## 3-7. MAIN BLOCK

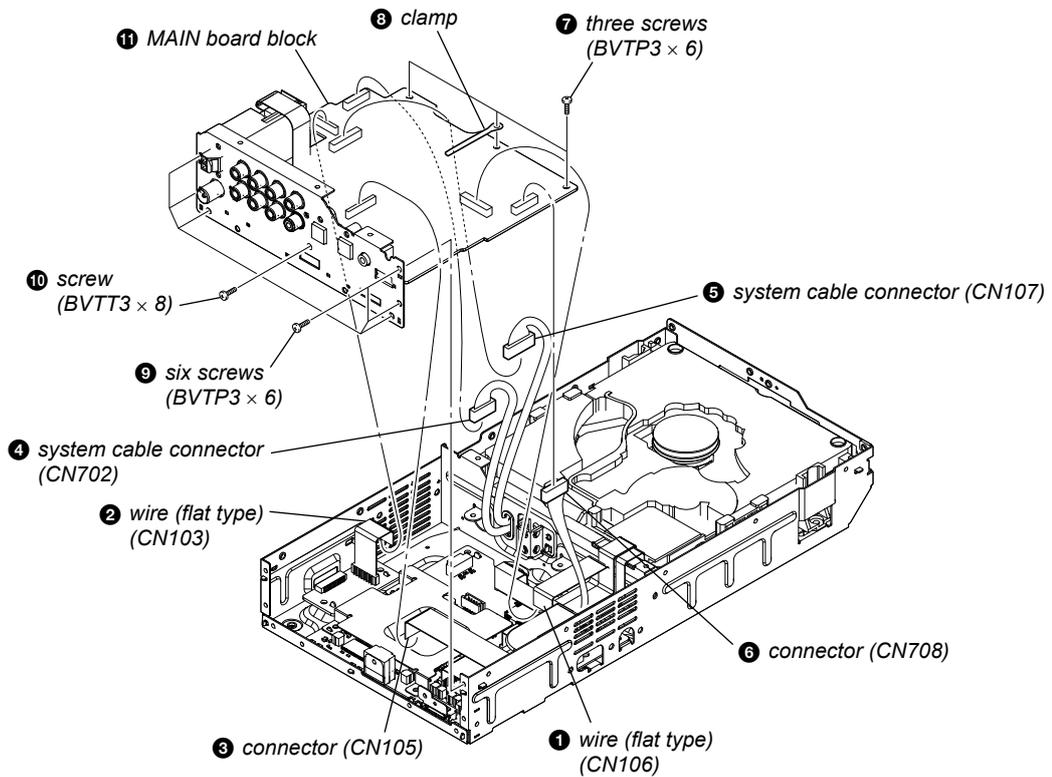
*Note: Please spread a seat under a set not to injure front panel assy.*



3-8. SHIELD PLATE (FRONT)

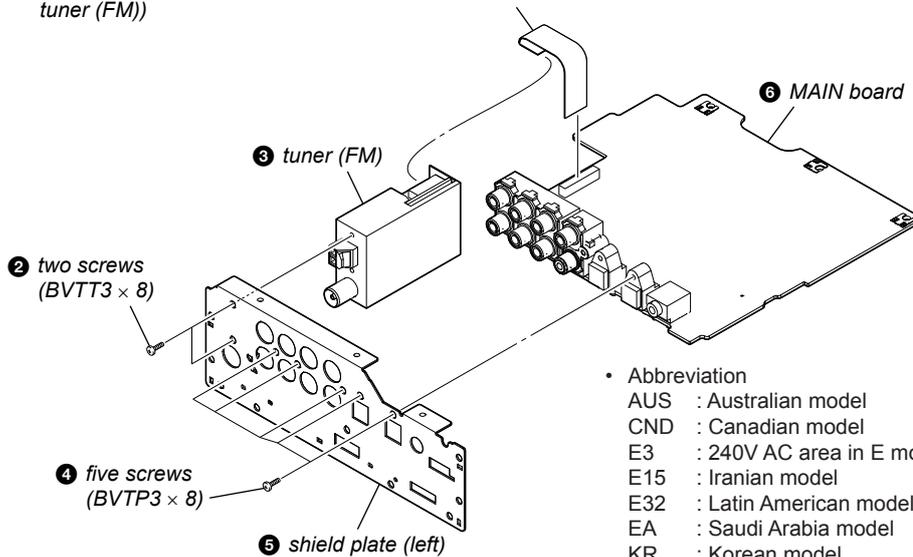


3-9. MAIN BOARD BLOCK



## 3-10. MAIN BOARD

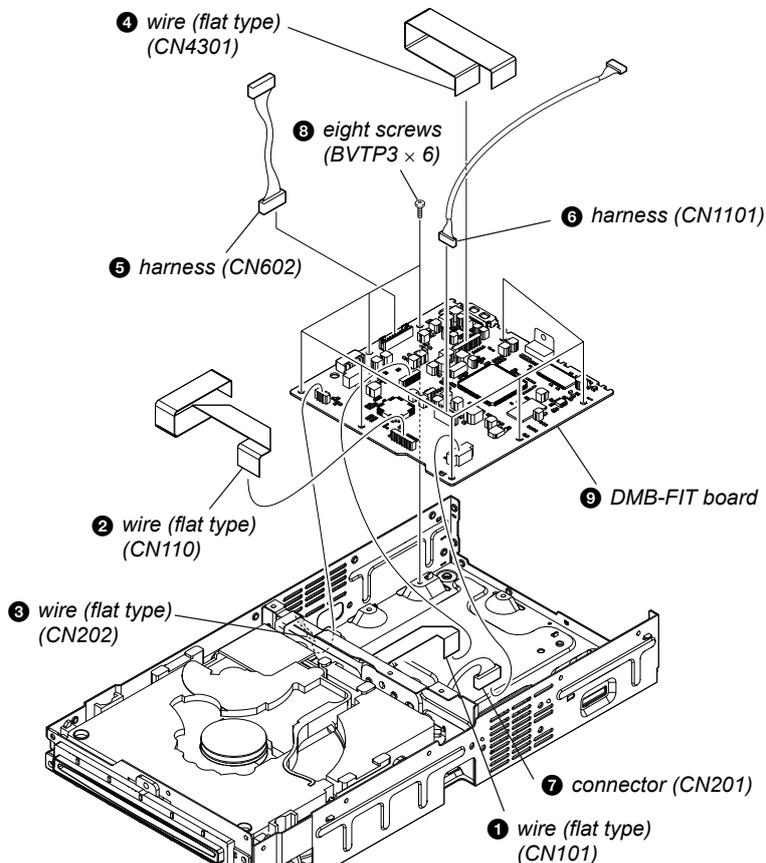
- ① wire (flat type)  
(MAIN board:  
CN101 (F200: AEP, UK/F500: RU)/  
CN102 (F200: SP, TH/F500: CND, E3, E15, E32, EA, MX, SP, TW, KR, TH, AUS),  
tuner (FM))



• Abbreviation

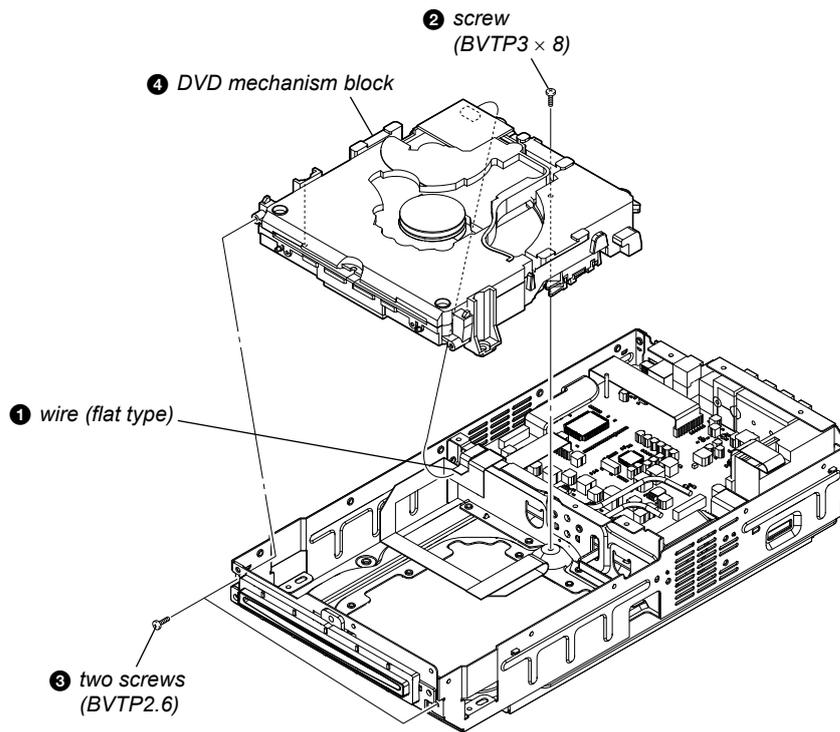
- AUS : Australian model
- CND : Canadian model
- E3 : 240V AC area in E model
- E15 : Iranian model
- E32 : Latin American model (110 – 240V AC area)
- EA : Saudi Arabia model
- KR : Korean model
- MX : Mexican model
- RU : Russian model
- SP : Singapore model
- TH : Thai model
- TW : Taiwan model

## 3-11. DMB-FIT BOARD

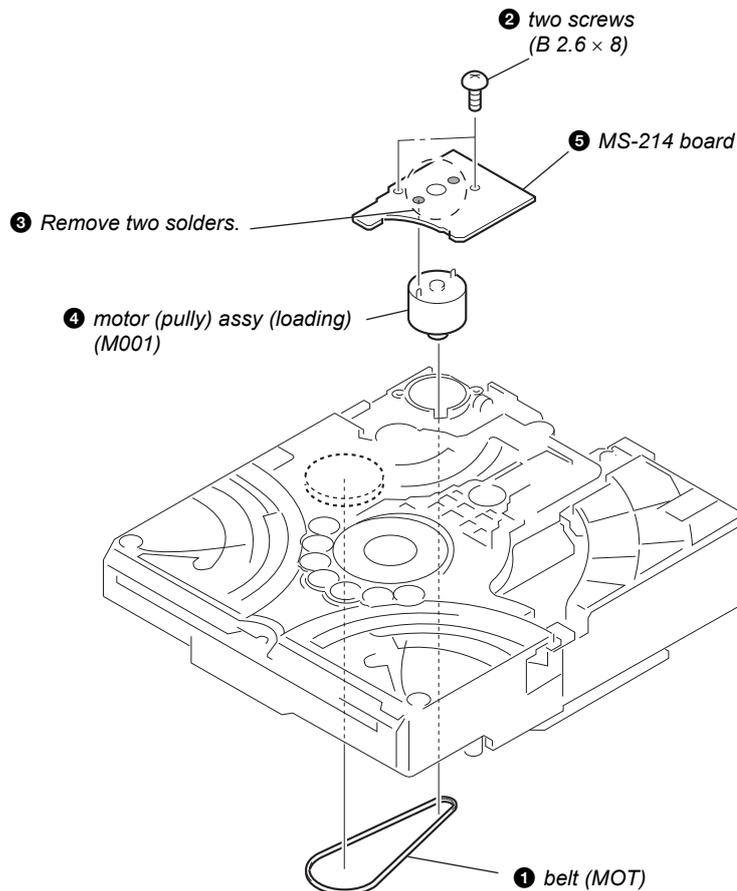


**Note:** Be sure to execute a solder bridge as a measure against static electricity when removing the flexible flat cable (24 core). (Otherwise, the OP block will be destroyed.) (Refer to 3-4. Process in the Solder Bridge)

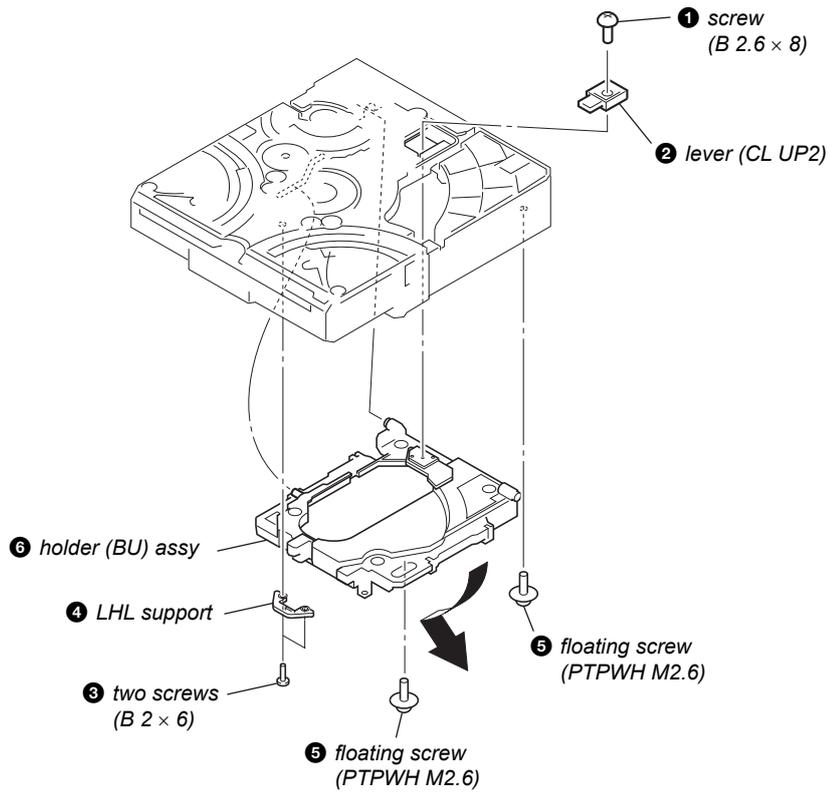
3-12. DVD MECHANISM BLOCK



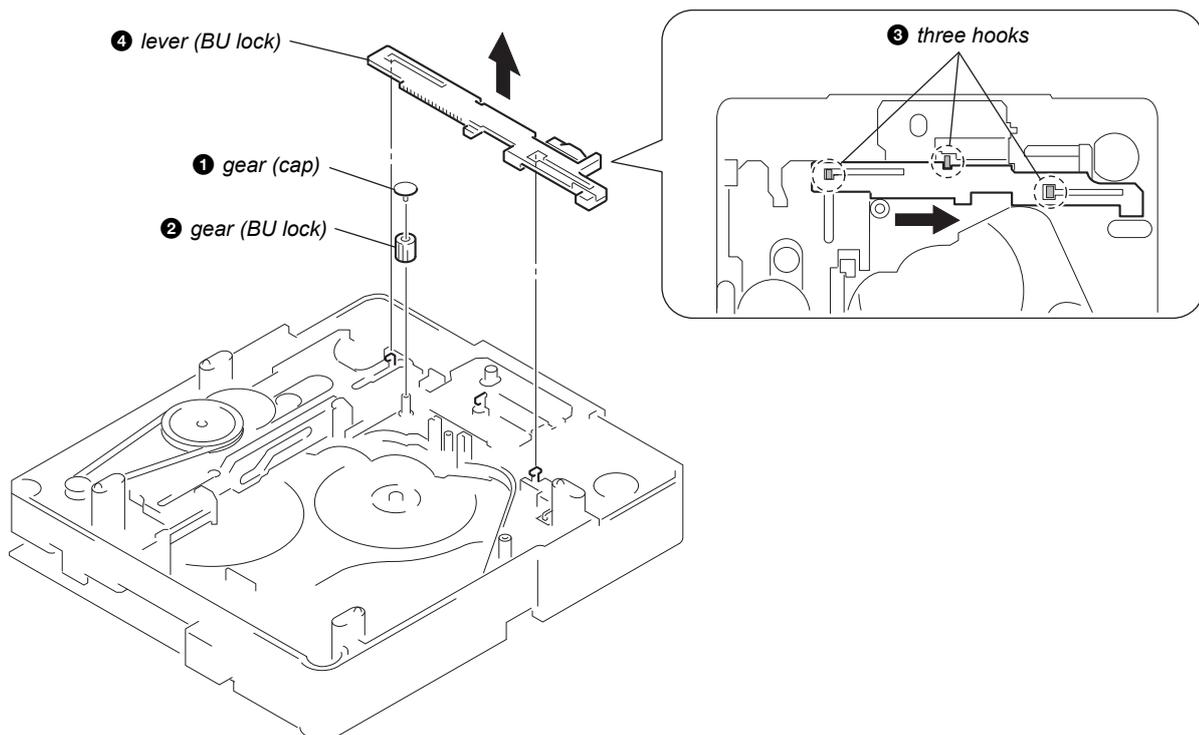
3-13. MOTOR (PULLY) ASSY (LOADING) (M001)



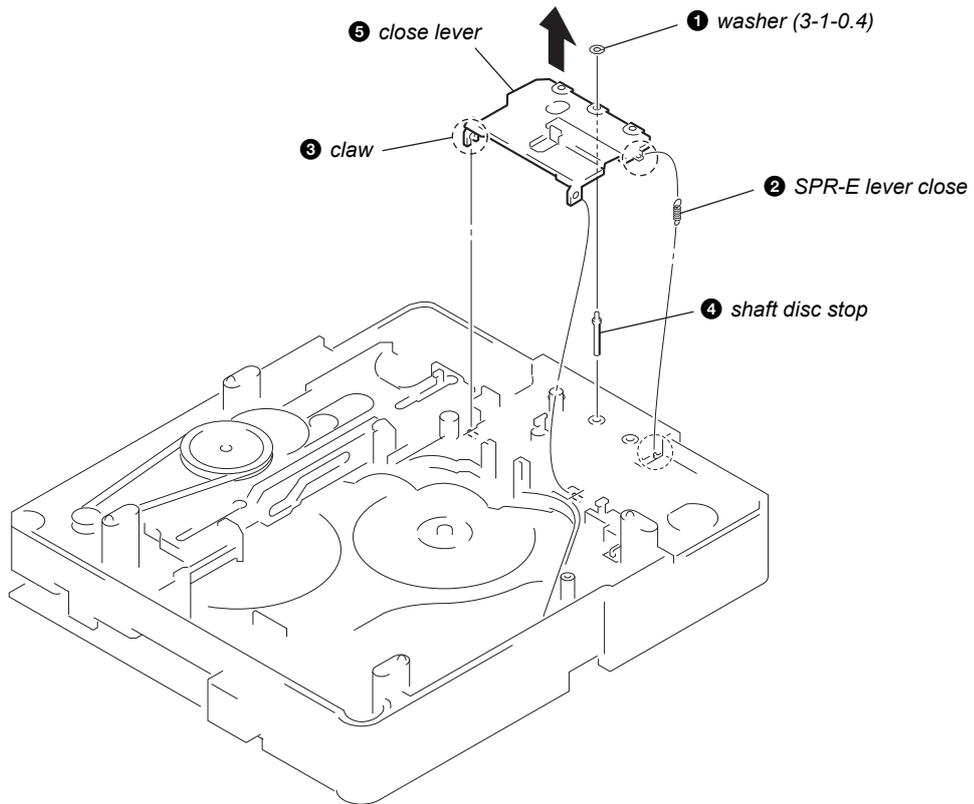
## 3-14. HOLDER (BU) ASSY



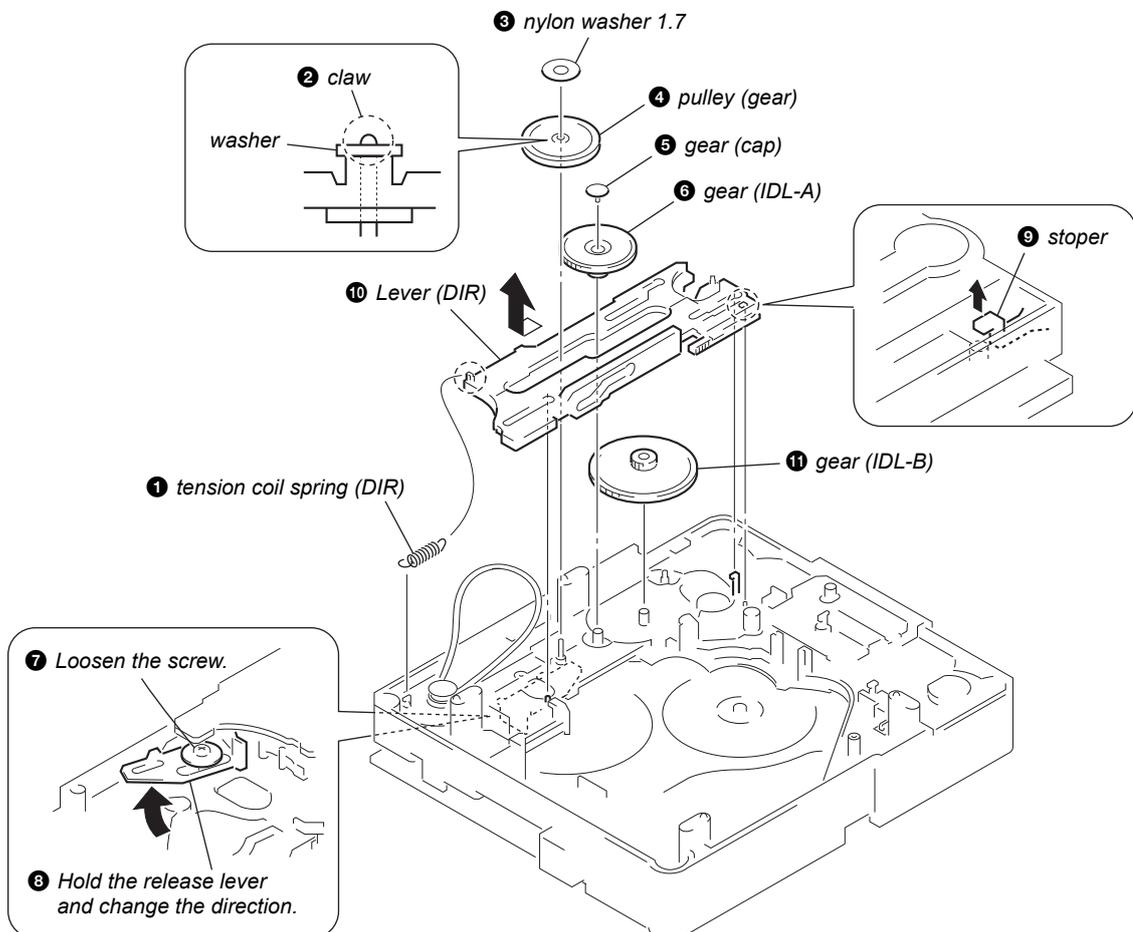
## 3-15. LEVER (BU LOCK)



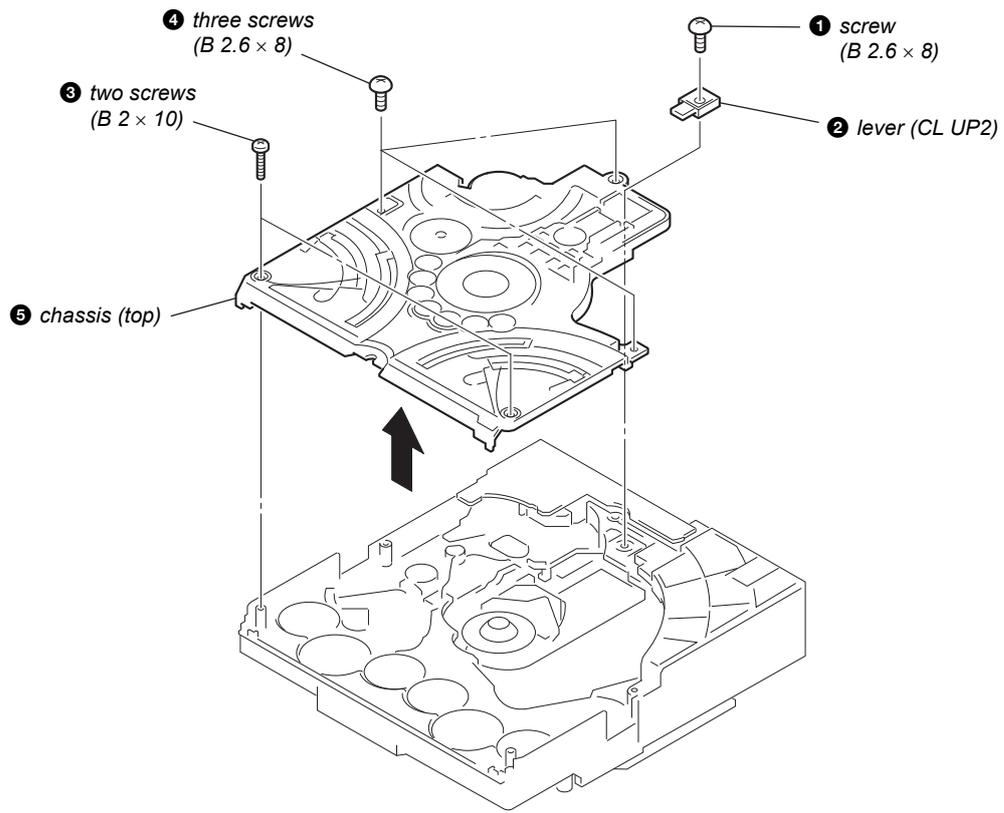
3-16. CLOSE LEVER



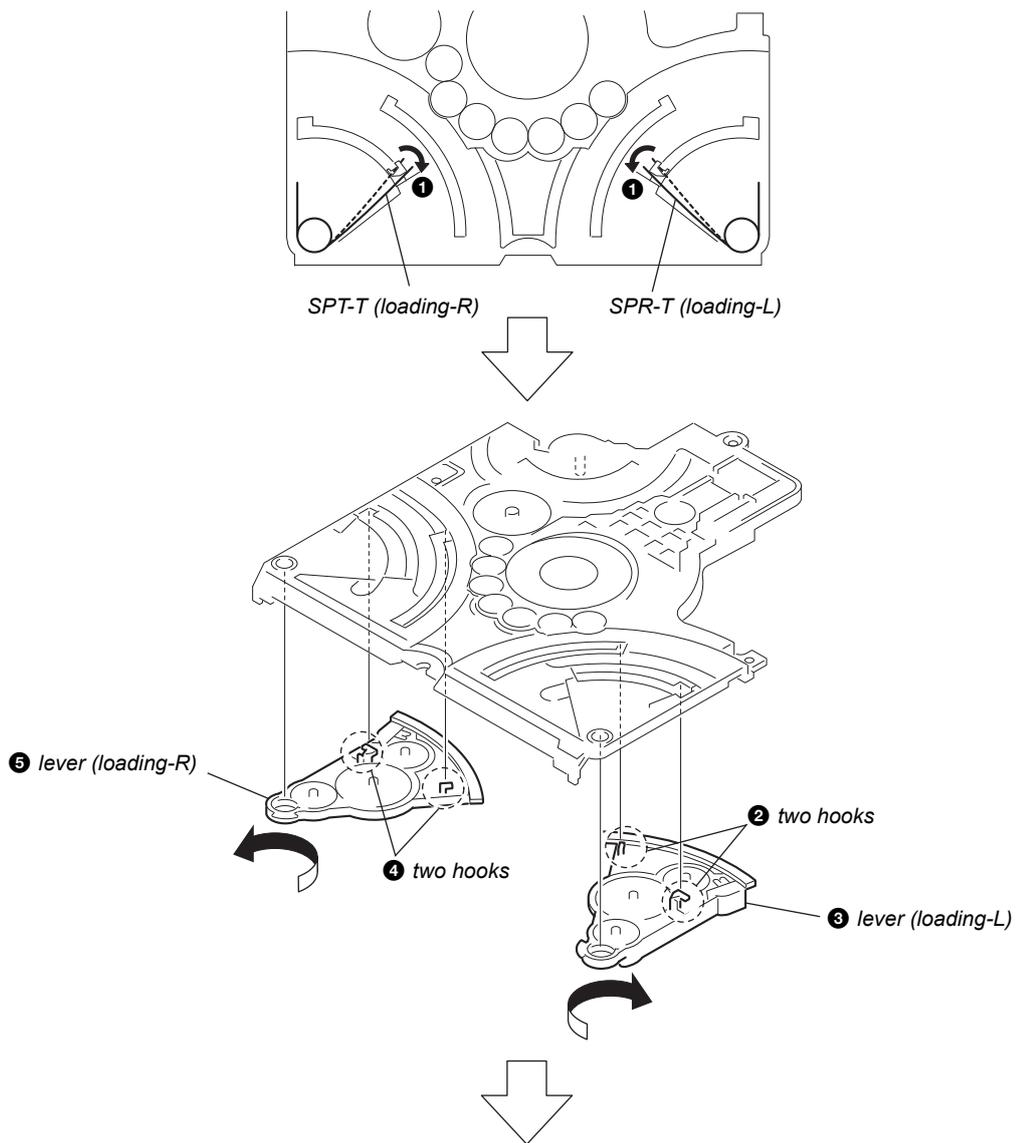
3-17. LEVER (DIR), GEAR (IDL-B)



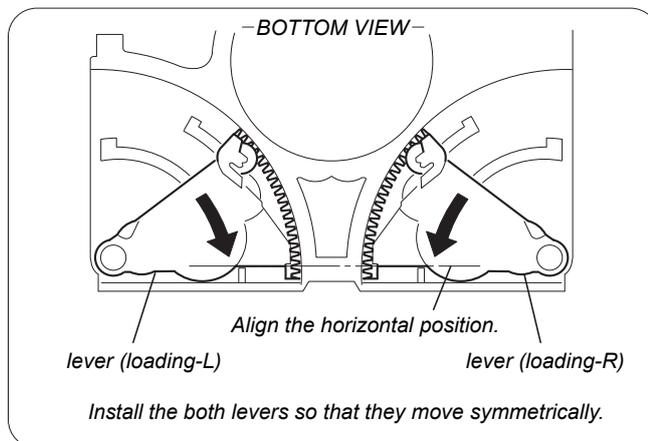
## 3-18. CHASSIS (TOP)



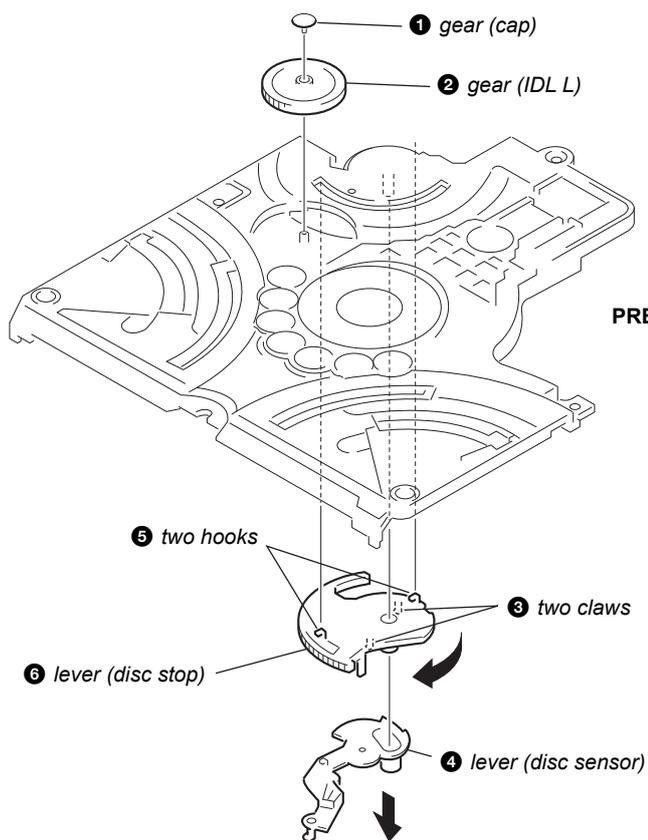
3-19. LEVER (LOADING-L/R)



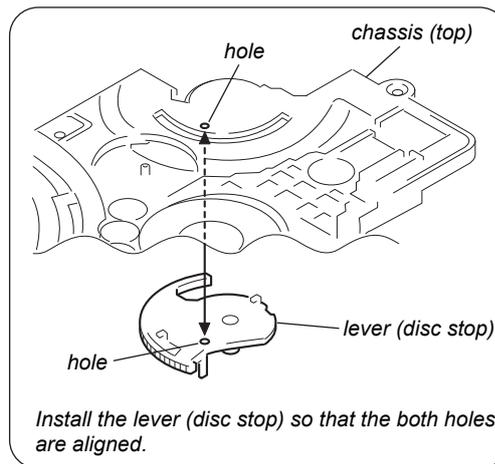
**PRECAUTION DURING LEVER (LOADING R/L) INSTALLATION**



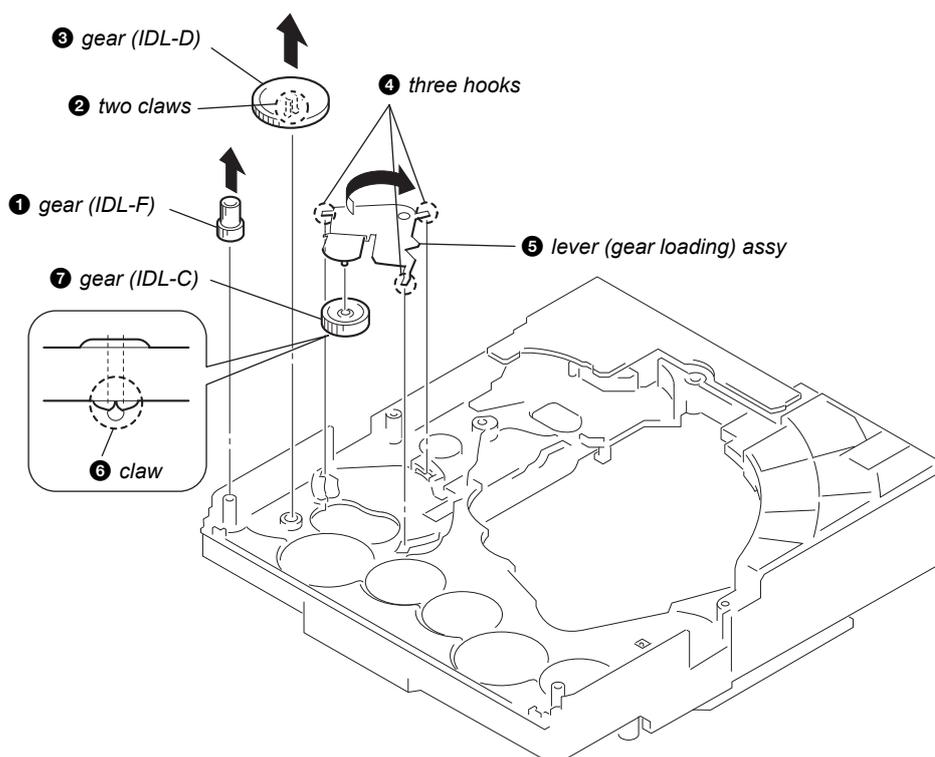
3-20. LEVER (DISC SENSOR)/(DISC STOP)



PRECAUTION DURING DISC STOP LEVER INSTALLATION



3-21. GEAR (IDL-C)



## SECTION 4 TEST MODE

### 1. TEST MODES OTHER THAN THE TEST MENU

These are executable test mode even if not entering the test menu.

#### 1-1. Cold Reset

The cold reset clears data except DVD data stored in the RAM to initial conditions. Execute this mode when returning the set to the customers.

##### Procedure:

1. In the standby state, the [I/⏻] button on the set is pressed for 5 seconds or more.
2. The messages "MEMORY CLR" and "PUSH POWER" are displayed on the fluorescent indicator tube.
3. When the [I/⏻] button is pressed in the state of step 2, the messages "CLEARING" → "CLEARED!" are displayed, then becomes standby states.

#### 1-2. DVD Version View

##### Procedure:

1. Connect the set with the TV screen.
2. In the standby state, press the button in order of the [⏻] DISPLAY] → [ENTER] → [I/⏻] on the remote commander, the DVD version appears on the TV screen.
3. To release from this mode, press the [I/⏻] button.

#### 1-3. Color System Change (Except Canadian, AEP, UK and Russian models)

This mode let you change the color system of the video output from PAL to NTSC or vice versa.

##### Procedure:

1. Connect the set with the TV screen.
2. In the standby state, press the [I/⏻] and [VOL -] button on the set simultaneously.
3. The messages "PAL" or "NTSC" are displayed on the fluorescent indicator tube when the color system is set to "PAL" or "NTSC".

#### 1-4. Disc Slot Lock

This mode let you lock the disc slot. When this mode is activated, the disc will not eject when the [▲] button is pressed. The message "LOCKED" will be displayed on the fluorescent indicator tube.

##### Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button on the remote commander to select the "DVD".
3. Press the [■] and [▲] button on the set simultaneously and hold down until "LOCKED" or "UNLOCKED" displayed on the fluorescent indicator tube (around 5 seconds).

#### 1-5. Demo Disc Play

Mode to prevent theft of the demonstration disc.

##### Setting Procedure:

It automatically enters the mode when the demonstration disc is inserted.

##### Releasing Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button on the remote commander to select the "DVD".
3. Press the [■] and [▶] button on the set simultaneously and hold down until "DEMO OFF" displayed on the fluorescent indicator tube (around 5 seconds).

#### 1-6. S-AIR ID Select (F500 only)

When shifting to the ID selection mode of S-AIR, this mode is used.

##### Procedure:

1. Connect EZW-RT10 (P/N: A-1368-101-A) (Canadian model), (P/N: A-1512-377-A) (Australian model) and (P/N: A-1512-377-A) (240V AC area E, Iranian, Singapore and Russian models) with the EZW-RT10 connector (CN701) on the AMP-DSP board from SA-WSF500.
2. Press the [I/⏻] button to turn the power on.
3. Press the [▶], [FUNCTION] and [VOL -] button on the set simultaneously.
4. The message "S-AIR ID X" displayed on the fluorescent indicator tube. (X is A or B or C)

#### 1-7. S-AIR PEARING

Not used for the servicing.

## 2. TEST MODES IN THE TEST MENU

These are the test modes done in the test menu.

### Setting method of the test menu:

1. Press the [I/⏻] button to turn the power on.
2. Press the button in order of the [CLEAR] → [ENTER] → [0] → [1] → [0] → [ANGLE] on the remote commander. (Make the interval when each button is pressed within two seconds.)
3. The message “TEST MENU” appears on the fluorescent indicator tube and enter the test menu.

### 2-1. Panel Test

#### Procedure:

1. Enter the test menu.
2. Press the [↑] [↓] button on the remote commander to select the “PANEL TEST”, and press the [ENTER] button on the remote commander.
3. All segments and all LEDs turn on. And half segment and except front panel illumination LEDs turn on. then other half segment front panel illumination LEDs turn on.
4. When all segments in fluorescent indicator tube are lighted up in the state of step 3, press the [VOLUME +] button on the remote commander and model information is displayed on the fluorescent indicator tube.  
Each time the [VOLUME +] button on the remote commander is pressed, the display changes from destination information, MC version, SUB version in this order, and returns to the model information display.  
Each time the [VOLUME -] button on the remote commander is pressed, the version and date are switched.
5. In the state of step 3, press the [FUNCTION] button on the remote commander and “K 0” is displayed on the fluorescent indicator tube.  
“K 0” value increases whenever a button on the set is pressed. However, once a button has been pressed, it is no longer taken into account.  
All buttons on the set are pressed, “OK” and “K 10” are alternately displayed on the fluorescent indicator tube.
6. To release from this mode, press the [I/⏻] button.

### 2-2. AMP Test

#### Procedure:

1. Enter the test menu.
2. Press the [↑] [↓] button on the remote commander to select the “AMP TEST”, and press the [ENTER] button on the remote commander.
3. The message “MEASURE” appears on the fluorescent indicator tube and enter the AMP test mode.
4. Press the [SUBTITLE] button on the remote commander, the message “VACS ON” or “VACS OFF” appears on the fluorescent indicator tube and thus the VACS on/off are changed.
5. To release from this mode, press the [I/⏻] button.

### 2-3. Cold Reset

The cold reset clears data except DVD data stored in the RAM to initial conditions. Execute this mode when returning the set to the customers.

#### Procedure:

1. Enter the test menu.
2. Press the [↑] [↓] button on the remote commander to select the “COLD RESET”, and press the [ENTER] button on the remote commander.
3. The message “COLD RESET.” appears on the fluorescent indicator tube, then becomes standby states.

### 2-4. Product Out

#### Procedure:

1. Enter the test menu.
2. Press the [↑] [↓] button on the remote commander to select the “PRODUCTOUT”, and press the [ENTER] button on the remote commander.
3. After the “STANDBY” blinking display finishes, the message “MECHA LOCK” ↔ “UNPLUG” appears on the fluorescent indicator tube and the ship mode is set.
4. To release from this mode, pull out the power code.

### 2-5. DVD Service

This mode describes details in “3. DVD SERVICE MODE” (page 25).

### 2-6. Tuner Factory Preset

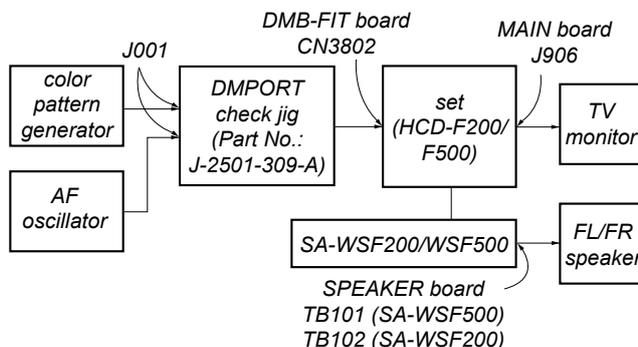
Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

### 2-7. Digital Media Port Test

#### Procedure:

1. Connect the DMPORT check jig (P/N: J-2501-309-A) with the DMPORT jack (CN3802) on the DMB-FIT board.
2. Press the [I/⏻] button to turn the power on.
3. Confirm that both LEDs of the DMPORT check jig lights. (Confirmation the power supply line)
4. Press the [FUNCTION] button on the remote commander to select the “DMPORT”.
5. Enter the test menu.
6. Press the [↑] [↓] button on the remote commander to select the “DMPORT CHK”, and press the [ENTER] button on the remote commander.
7. The message “DMPORT OK.” appears on the fluorescent indicator tube and enter the digital media port test mode. (Confirmation of communication line)  
When “NO DETECT.” and “UART .TO” are displayed on the fluorescent indicator tube, confirm the connection of the DMPORT check jig, and enter the mode again.  
Each time the [▶▶▶] button on the remote commander is pressed, the connect check and adaptor version check are switched.  
Press the [◀◀◀] button on the remote commander, connected confirmation of the DMPORT check jig is done again.
8. To a pinjack of the DMPORT check jig input information relevant to audio signal (sine-wave 1.0V rms) and composite video signal (white 100% 1.0Vp-p, color bar, etc.).
9. Confirm the output of speakers and monitor TV. (Confirmation of analog signal)
10. To release from this mode, press the [I/⏻] button.



**2-8. VACS Display**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-9. VACS On/off**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-10. DSP Halt Mode**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-11. DSP Status Display**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-12. A.CAL Test Disp**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-13. Demo Disc Play**

Mode to prevent theft of the demonstration disc.

**Setting Procedure:**

It automatically enters the mode when the demonstration disc is inserted.

**Releasing Procedure:**

1. Enter the test menu.
2. Press the [↑] [↓] button on the remote commander to select the "DEMO PLAY", and press the [ENTER] button on the remote commander.
3. "DEMO OFF" displayed on the fluorescent indicator tube.

**2-14. DVD Debug**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-15. Sircs Disable**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-16. DMPort Device Test**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**2-17. S-AIR ID Select (F500 only)**

When shifting to the ID selection mode of S-AIR, this mode is used.

**Procedure:**

1. Connect EZW-RT10 (P/N: A-1368-101-A) (Canadian model), (P/N: A-1512-377-A) (Australian model) and (P/N: A-1512-377-A) (240V AC area E, Iranian, Singapore and Russian models) with the EZW-RT10 connector (CN701) on the AMP-DSP board from SA-WSF500.
2. Enter the test menu.
3. Press the [↑] [↓] button on the remote commander to select the "S-AIR ID", and press the [ENTER] button on the remote commander.

**2-18. S-AIR pearing**

Not used for the servicing.

Press the [I/⏻] button if having entered this mode.

**3. DVD SERVICE MODE****3-1. DVD Service Mode General Description**

This mode let you make diagnosis and adjustment easily by using the remote commander and the TV screen. The instructions, diagnostic results, etc. are given on the on-screen display.

Be sure to execute the IOP measurement when a base unit is replaced.

**3-2. Enterring DVD Service Mode****Procedure:**

1. Press the [I/⏻] button to turn the power on.
2. Press the [FUNCTION] button on the remote commander to select the "DVD".
3. Press the button in order of the [CLEAR] → [ENTER] → [0] → [1] → [0] → [ANGLE] → [0] → [6] on the remote commander. (Make the interval when each button is pressed within two seconds.)
4. The message "SERVICE IN" appears on the fluorescent indicator tube and top menu of the Remocon Diagnosis Menu appears on the on-screen display on the TV screen as follows. The model name, IF-con version and Syscon version are displayed at the bottom of the on-screen display.

```

Remocon Diagnosis Menu

0. External Chip Check
1. Servo Parameter Check
2. Drive Manual Operation
3. Emergency History
4. Version Information

Model Name :xxxx_xx
IF-con:Ver.xx.xx (xxxx)
Syscon:Ver.x.xxx

```

5. To execute each function, press its number by using numeric button on the remote commander.
6. To release from this mode, press the [I/⏻] button.

**3-3. Executing IOP Measurement**

In order to execute IOP measurement, the following standard procedures must be followed.

**Procedure:**

1. From the top menu of Remocon Diagnosis Menu, select "2 Drive Manual Operation" by pressing the [2] button on the remote commander. The following screen appears on the on-screen display

```

Drive Manual Operation

1. Servo Control
2. Track/Layer Jump
3. Manual Adjustment
4. Tray Aging mode
5. MIRR time Adjust
0. Return to Top Menu

```

2. Select "3. Manual Adjustment" by pressing the [3] button on the remote commander. The following screen appears on the on-screen display.

```

Manual Adjust
1. Track Balance Adjust:
2. Track Gain Adjust:
3. Focus Balance Adjust:
4. Focus Gain Adjust:
5. Eq Boost Adjust:
6. Iop:
7. TRV. Level:
8. S curve(FE) Level:
9. RFL(PI) Level:
0. MIRR Time:
[▲][▼] Change Value
[RETURN]Return to previous menu
    
```

3. Select "6. Iop:" by pressing [6] button on the remote commander.
4. Wait until a hexadecimal number appear in the on-screen display as below.

```

Manual Adjust
1. Track Balance Adjust:
2. Track Gain Adjust:
3. Focus Balance Adjust:
4. Focus Gain Adjust:
5. Eq Boost Adjust:
6. Iop: xx
7. TRV. Level:
8. S curve(FE) Level:
9. RFL(PI) Level:
0. MIRR Time:
[▲][▼] Change Value
[RETURN]Return to previous menu
    
```

5. Convert data from hexadecimal to decimal by using conversion table.
6. If the value is smaller than 93 (decimal), then it is OK. However if the value is higher than 93, then BU (base unit) is defective and need to be change.
7. Press the [↶ RETURN] button on the remote commander to return to previous menu.
8. Press the [0] button on the remote commander to return to the top menu of Remocon Diagnosis Menu.
9. Press the [I/⏻] button to turn off the system.

### 3-4. Checking Emergency History

To check the emergency history, please follow the following procedure.

#### Procedure:

1. From the top menu of Remocon Diagnosis Menu, select "3. Emergency History" by pressing the [3] button on the remote commander. The following screen appears on the on-screen display.

```

Emg. History Check
Laser Hours      CD   999h  59min
                  DVD  999h  59min

01. 01 05 04 04      00 92 46 00
      00 00 00 00      00 00 23 45

02. 02 02 01 01      00 A9 4B 00
      00 00 00 00      00 00 23 45

[Next]Next page [Prev]Prev page
[0]Return to Top Menu
    
```

2. You can check the total time when the laser is turned on during playback of DVD and CD from the above menu. The maximum time, which can be displayed are 999h 59min.
3. You can check the error code of latest 10 emergency history from the above menu. To view the previous or next page of emergency history, press the [◀◀] or [▶▶] button on the remote commander. The error code consists of three kinds of error codes.

#### A. Error code

```

Example of Error code

01. 01 05 04 04      00 92 46 00
      00 00 00 00      00 00 23 45
    
```

#### The meaning of error code is as below:

- 01: Communication error (No reply from syscon)
- 02: Syscon hung up
- 03: Power OFF request when syscon hung up
- 19: Thermal shutdown
- 24: MoveSledHome error
- 25: Mechanical move error (5 changer)
- 26: Mechanical move stack error
- 30: DC motor adjustment error
- 31: DPD offset adjustment error
- 32: TE balance adjustment error
- 33: TE sensor adjustment error
- 34: TE loop gain adjustment error
- 35: FE loop gain adjustment error
- 36: Bad jitter after adjustment
- 40: Focus NG
- 42: Focus layer jump NG
- 51: Spindle stop error
- 52: Open kick spindle error
- 60: Focus on error
- 61: Seek fail error
- 62: Read Q data/ID error
- 70: Lead in data read fail
- 71: TOC read time out (CD)
- 80: Can't buffering
- 81: Unknown media type

**B. Parameter of error code**

This is the detail of error code.

Example of Error code							
01.	01	05	04	04	00	92	46 00
		00	00	00 00			23 45

**C. Time of error code**

This is the laser time when an error occurred.

Example of Error code							
01.	01	05	04	04	00	92	46 00
		00	00	00 00	00	00	23 45

**To Clear the Laser Hour**

Press the [DISPLAY] button on the remote commander and then press the [CLEAR] button on the remote commander. The data for both CD and DVD data are reset.

Emg. History Check							
Laser Hours		CD	0h	0min			
		DVD	0h	0min			
01.	01	05	04	04	00	92	46 00
		00	00	00 00	00	00	23 45
02.	02	02	01	01	00	A9	4B 00
		00	00	00 00	00	00	23 45

[Next]Next page [Prev]Prev page  
[0]Return to Top Menu

**To Clear the Emergency History**

Press the [DVD TOP MENU] button on the remote commander and then press the [CLEAR] button on the remote commander. The error code for all emergency history would be reset.

Emg. History Check							
Laser Hours		CD	999h	59min			
		DVD	999h	59min			
01.	00	00	00	00	00	00	00 00
		00	00	00 00	00	00	00 00
02.	00	00	00	00	00	00	00 00
		00	00	00 00	00	00	00 00

[Next]Next page [Prev]Prev page  
[0]Return to Top Menu

**To Execute the Initialize Setup Data****Procedure:**

1. Press the [DVD MENU] button on the remote commander and then press the [CLEAR] button on the remote commander. The following screen appears on the on-screen display.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
Initialize setup data...			
[Next]Next page [Prev]Prev page [0]Return to Top Menu			

2. The screen after a while returns to former display.

**To Return to the Top Menu of Remocon Diagnosis Menu**

Press the [0] button on the remote commander.

**3-5. Checking Version Information**

To check the version information, please follow the following procedure.

**Procedure:**

1. From the top menu of Remocon Diagnosis Menu, select "4. Version Information" by pressing the [4] button on the remote commander. The following screen appears on the on-screen display.

Version information
Firm(Main): Ver. X.XXXX
Firm(Sub): XX.XX
RISC: XXXXXX
8032: XXXXXX
Audio DSP: XX.XX.XX.XX
Servo DSP: XX.XX.XX.XX
[0]Return to Top Menu

2. To return to the top menu of Remocon Diagnosis Menu, press the [0] on the remote commander.

## SECTION 5 ELECTRICAL ADJUSTMENTS

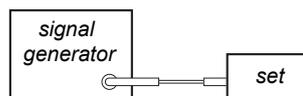
### DVD SECTION

When the base unit is replaced, perform the adjustment and the measurement as shown below in this order.

EXECUTING IOP MEASUREMENT (See page 25)

### TUNER SECTION

#### FM TUNE LEVEL CHECK



#### Procedure:

1. Turn on the set.
2. Input the following signal from signal generator to FM antenna input directly.

Carrier frequency : A = 87.5 MHz, B = 98 MHz, C = 108 MHz

Deviation : 75 kHz

Modulation : 1 kHz

ANT input : 35 dBu (EMF)

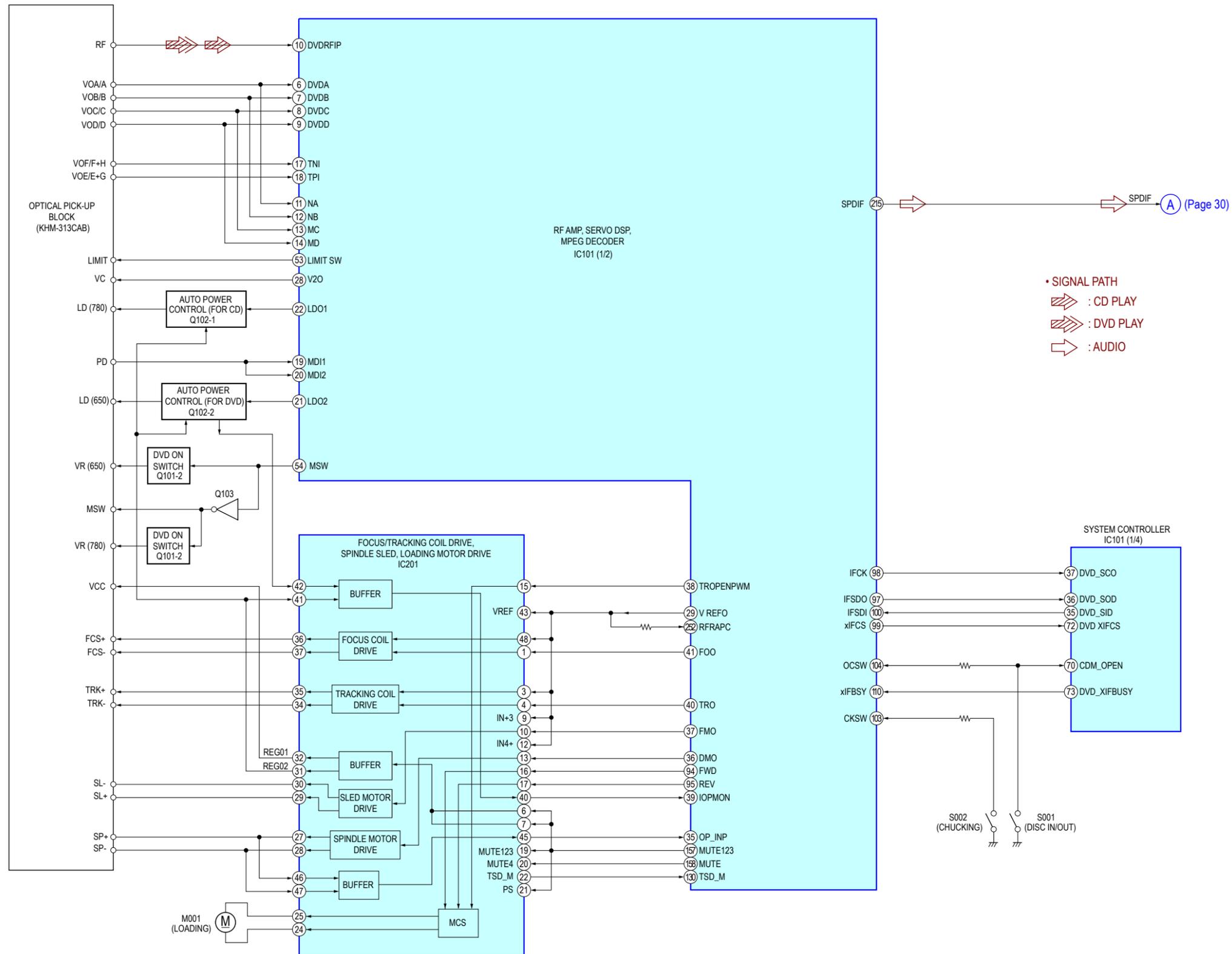
**Note:** Use 75 ohm coaxial cable to connect signal generator and the set.  
You cannot use video cable for checking.  
Use signal generator whose output impedance is 75 ohm.

3. Set to FM tuner function and tune A, B and C signals.
4. Confirm "TUNED" is lit on the display for A, B and C signals.

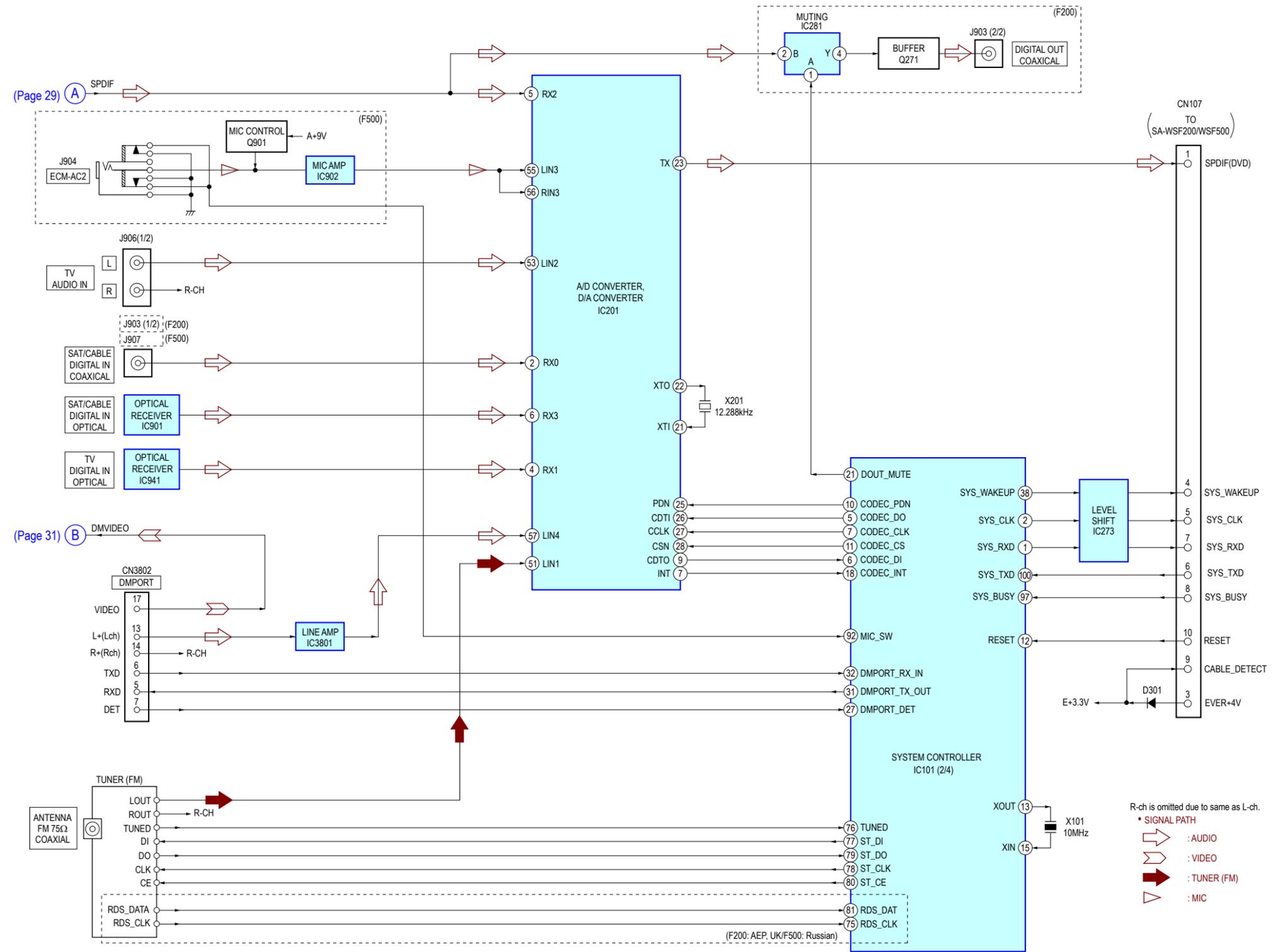
When the selected station signal is received in good condition, "TUNED" is displayed.

SECTION 6  
DIAGRAMS

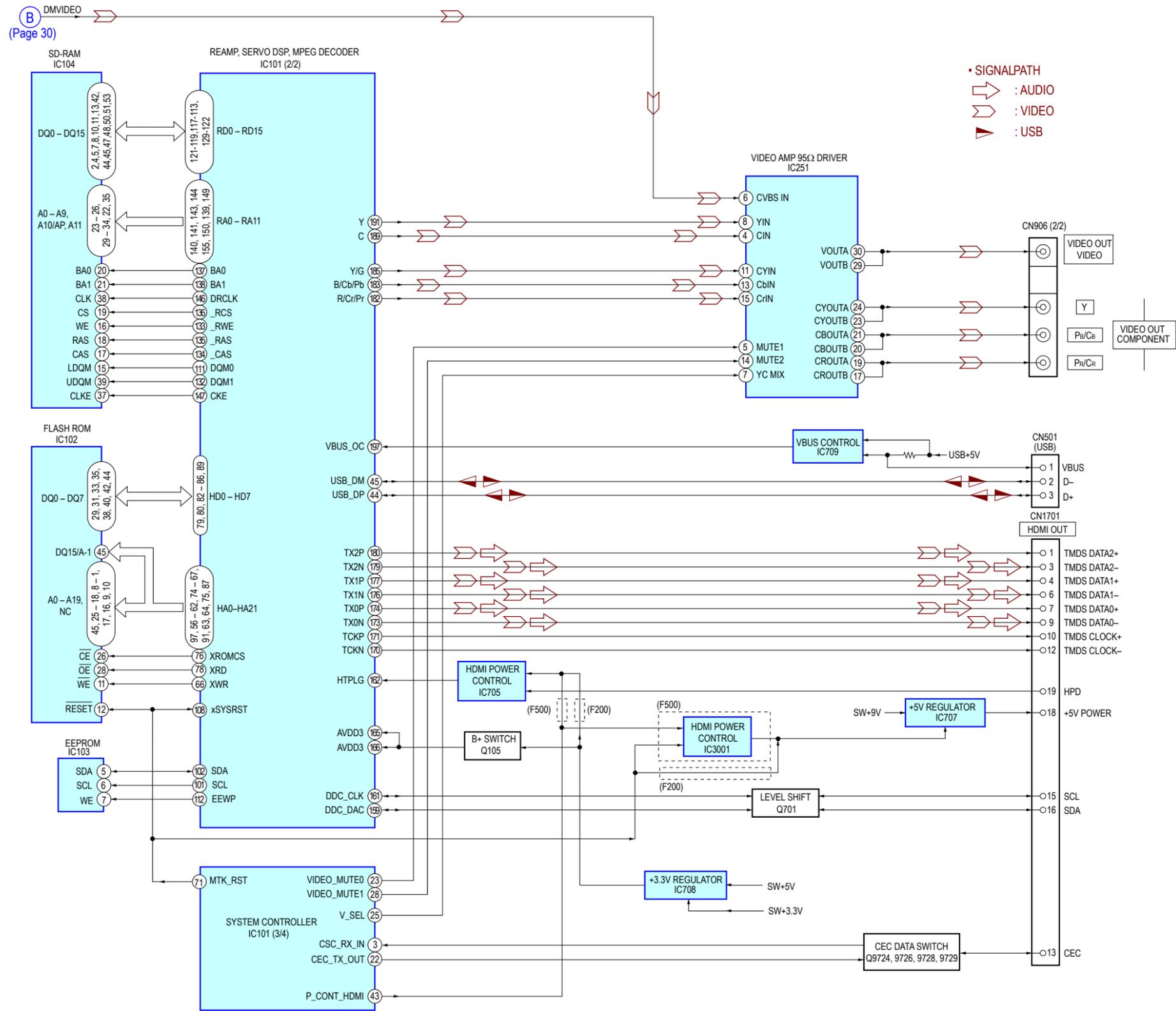
6-1. BLOCK DIAGRAM - DVD SERVO Section -



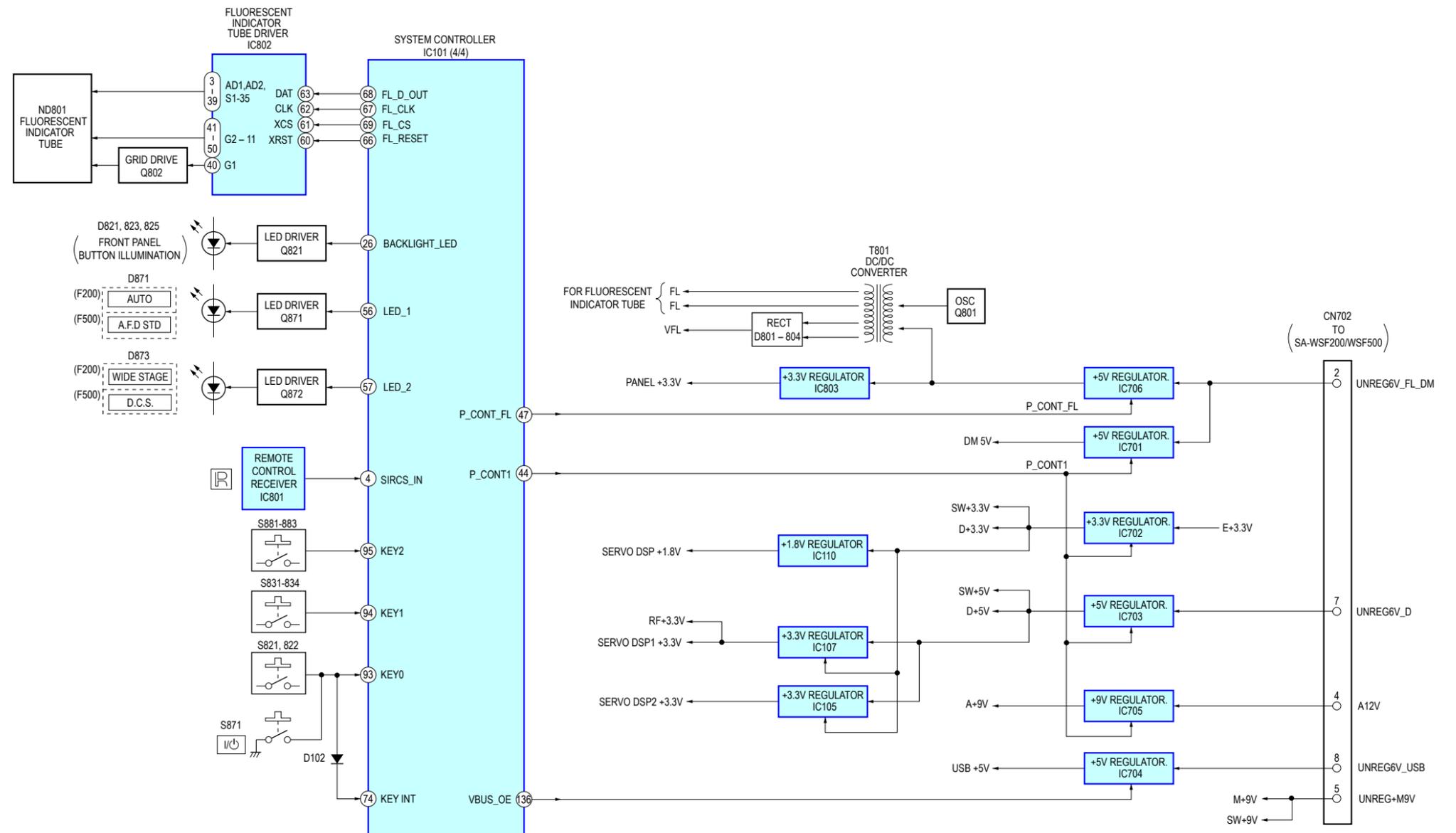
6-2. BLOCK DIAGRAM - MAIN Section -



6-3. BLOCK DIAGRAM - HDMI, VIDEO Section -



6-4. BLOCK DIAGRAM - PANEL, POWER SUPPLY Section -



**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

**For Printed Wiring Boards.**

**Note:**

- : 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.)

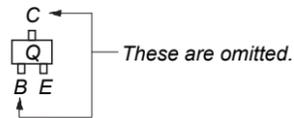
**Caution:**

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

**Caution:**

Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.  
(SIDE B)  
Parts face side: Parts on the parts face side seen from the parts face are indicated.  
(SIDE A)

- DMB-FIT board is multi-layer printed board. However, the patterns of intermediate layers have not been included in diagrams.
- Indication of transistor.



**For Schematic Diagrams.**

**Note:**

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

**Note:**

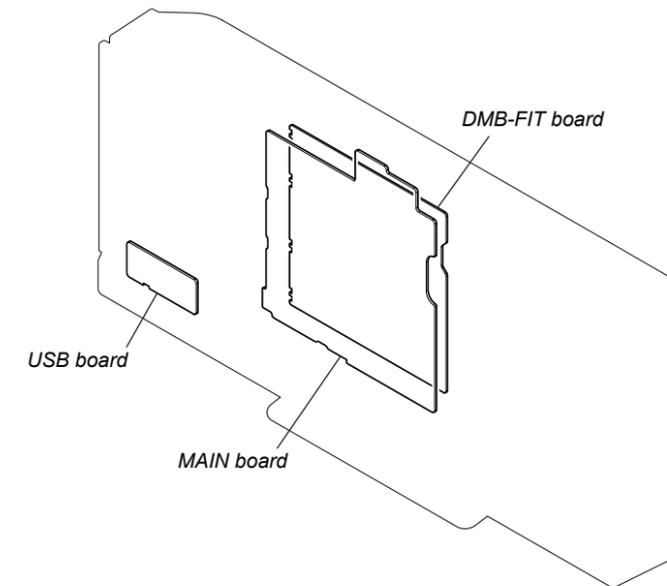
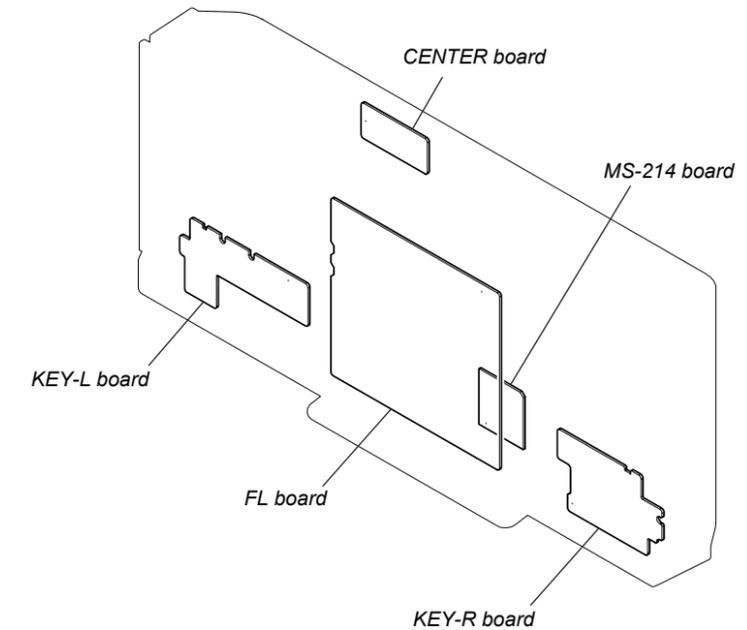
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

**Note:**

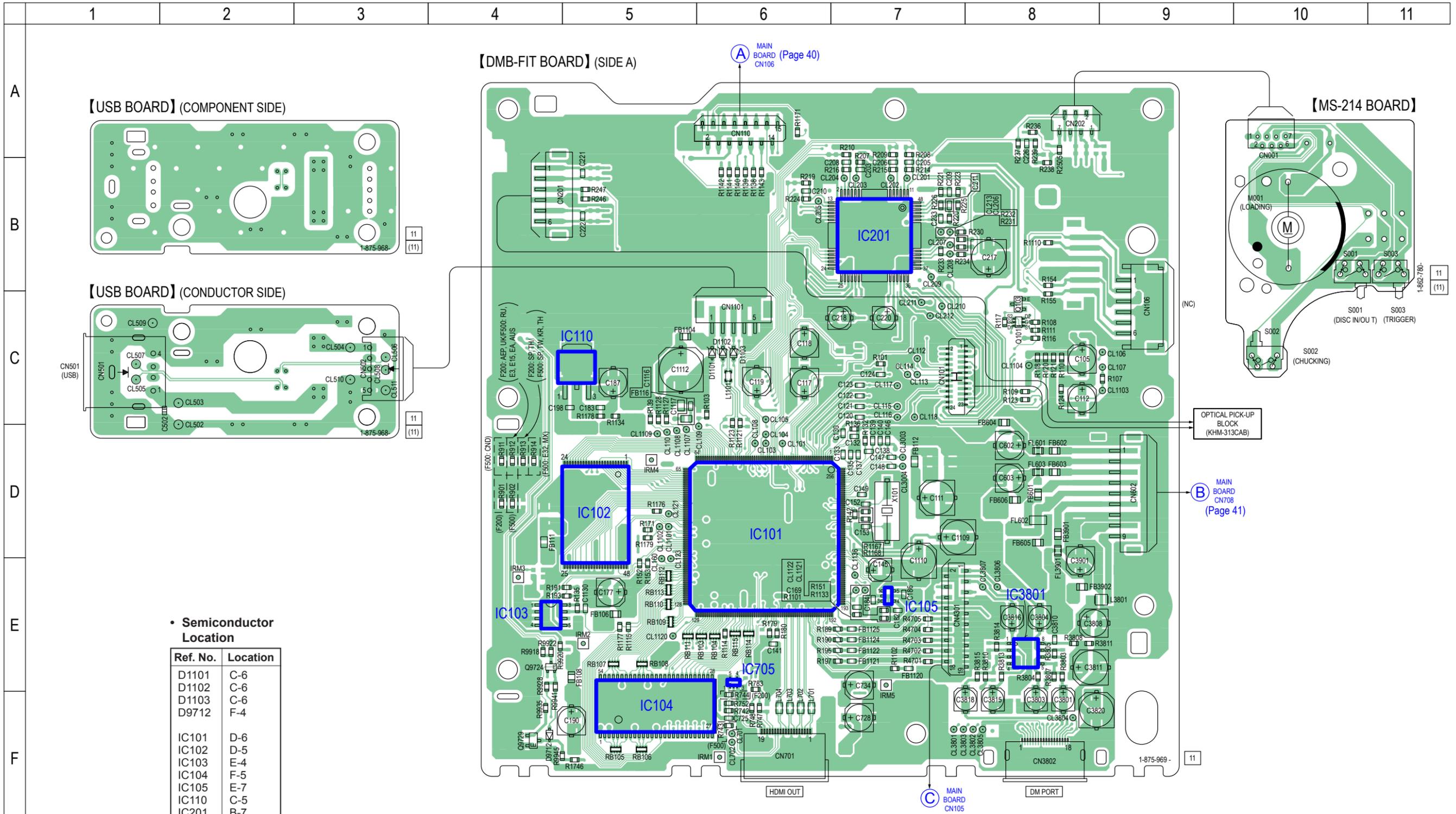
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- - -: B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- DMB-FIT Board -  
no mark: DVD PLAY
- Other Boards -  
no mark: TUNER (FM)  
( ): DVD PLAY
- Voltages are taken with 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
  - ⇒: AUDIO
  - ⇒: VIDEO
  - ⇒: TUNER (FM)
  - △: MIC
  - △: USB
- Abbreviation
  - AUS: Australian model
  - CND: Canadian model
  - E3: 240V AC area in E model
  - E15: Iranian model
  - E32: Latin American model (110 – 240V AC area)
  - EA: Saudi Arabia model
  - KR: Korean model
  - MX: Mexican model
  - RU: Russian model
  - SP: Singapore model
  - TH: Thai model
  - TW: Taiwan model

• Circuit Boards Location



6-5. PRINTED WIRING BOARDS - DMB-FIT Section (1/2) - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.

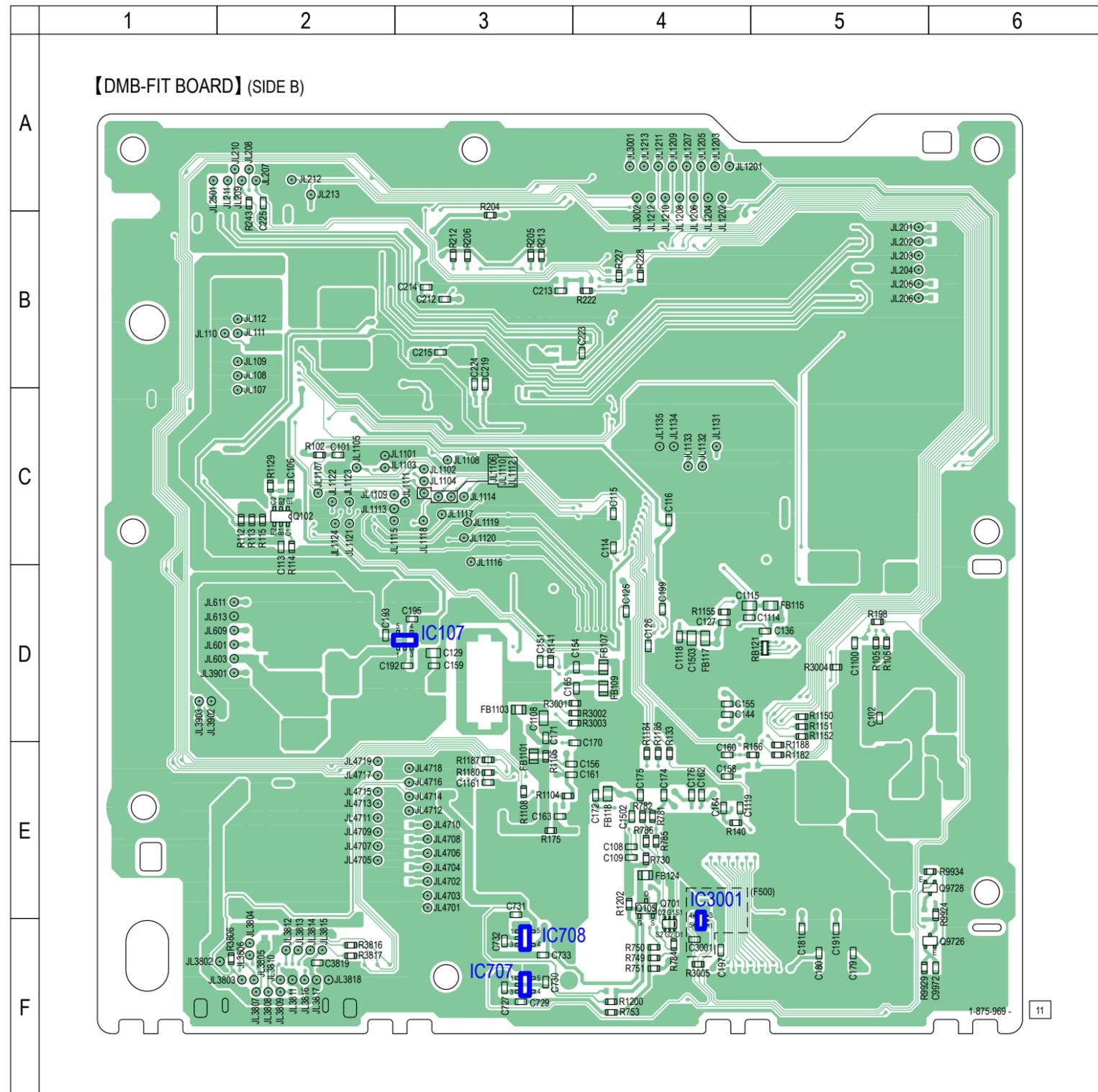


• Semiconductor Location

Ref. No.	Location
D1101	C-6
D1102	C-6
D1103	C-6
D9712	F-4
IC101	D-6
IC102	D-5
IC103	E-4
IC104	F-5
IC105	E-7
IC110	C-5
IC201	B-7
IC705	E-6
IC3801	E-8
Q101	C-8
Q103	C-8
Q9724	E-4
Q9729	F-4

Note: IC102 and IC103 cannot exchange with single. When IC102 and IC103 are damaged, exchange the entire mounted board.

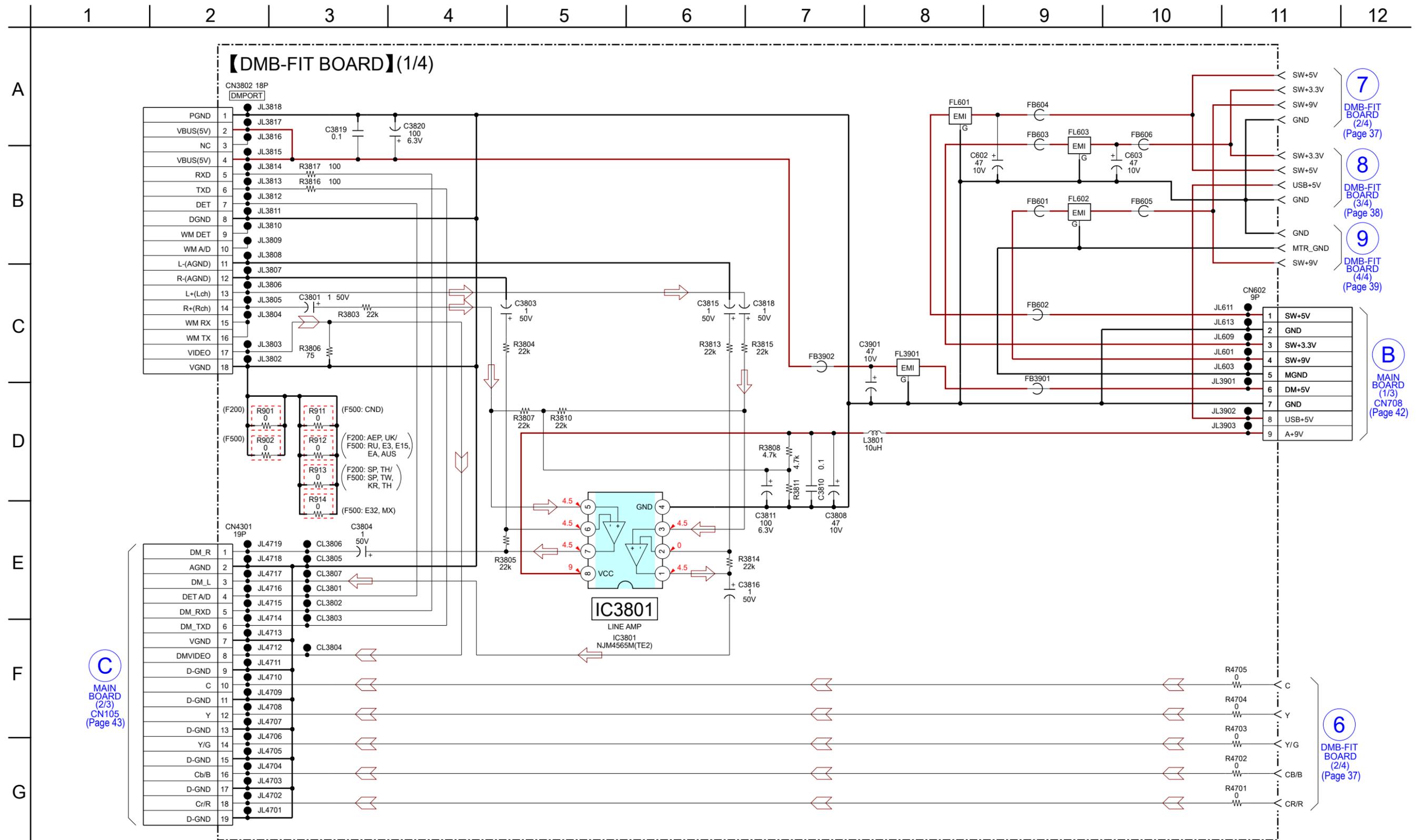
6-6. PRINTED WIRING BOARDS - DMB-FIT Section (2/2) - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.



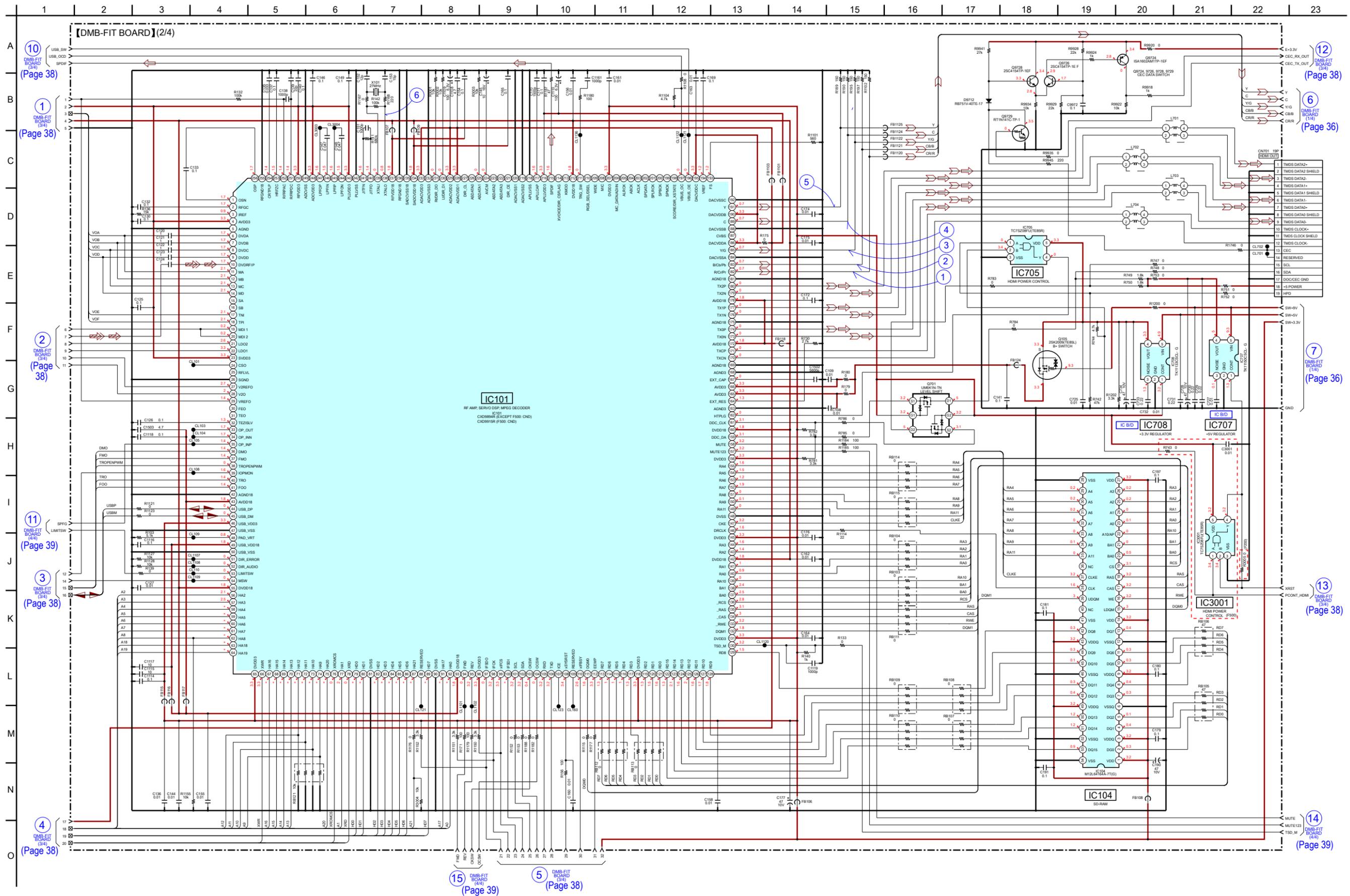
• Semiconductor Location

Ref. No.	Location
IC107	D-3
IC707	F-3
IC708	F-3
IC3001	F-4
Q102	C-2
Q105	E-4
Q701	F-4
Q9726	F-6
Q9728	E-6

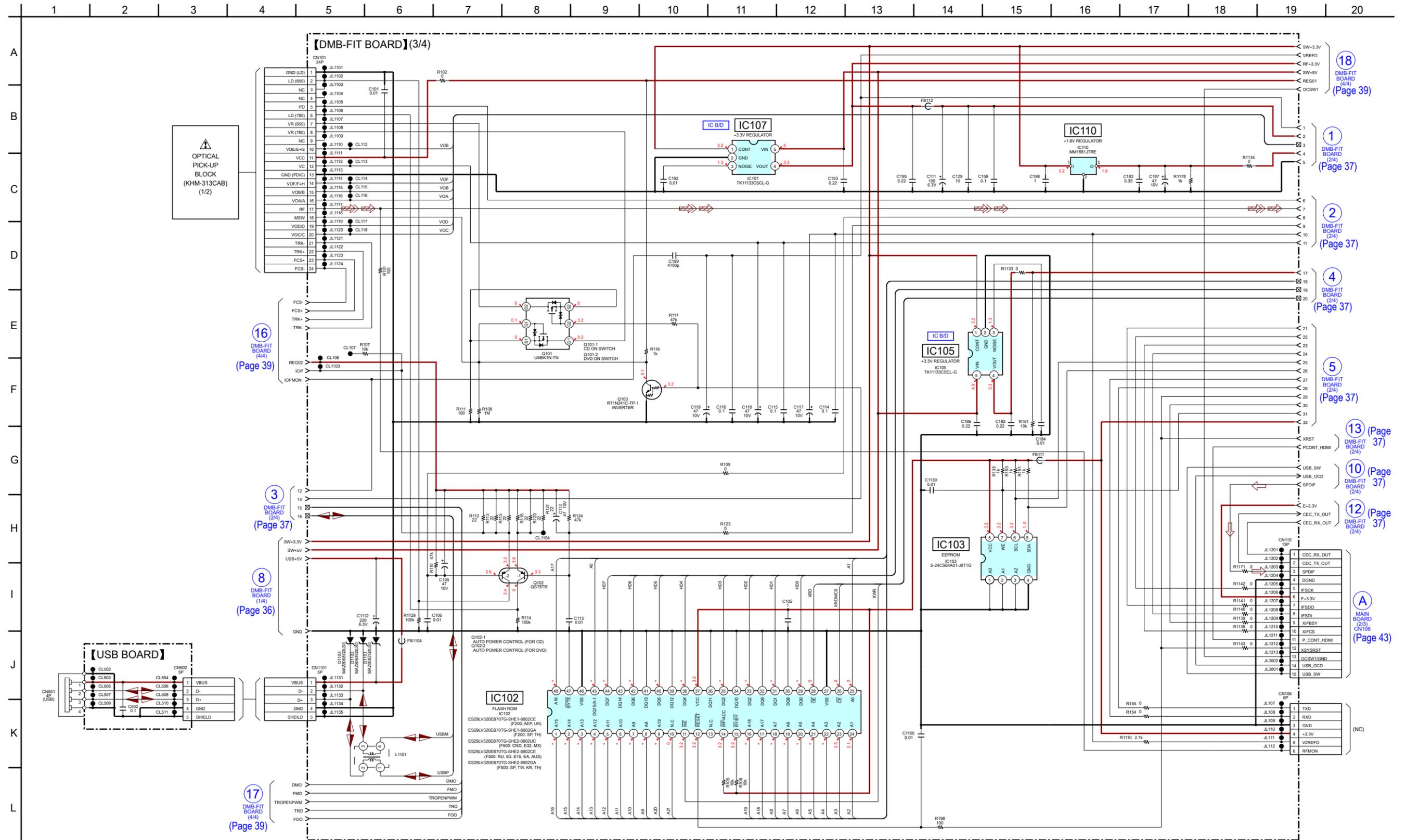
6-7. SCHEMATIC DIAGRAM - DMB-FIT Section (1/4) -



6-8. SCHEMATIC DIAGRAM - DMB-FIT Section (2/4) - See page 49 for Waveforms. See page 50 for IC Block Diagrams. See page 52 for IC Pin Function Description.

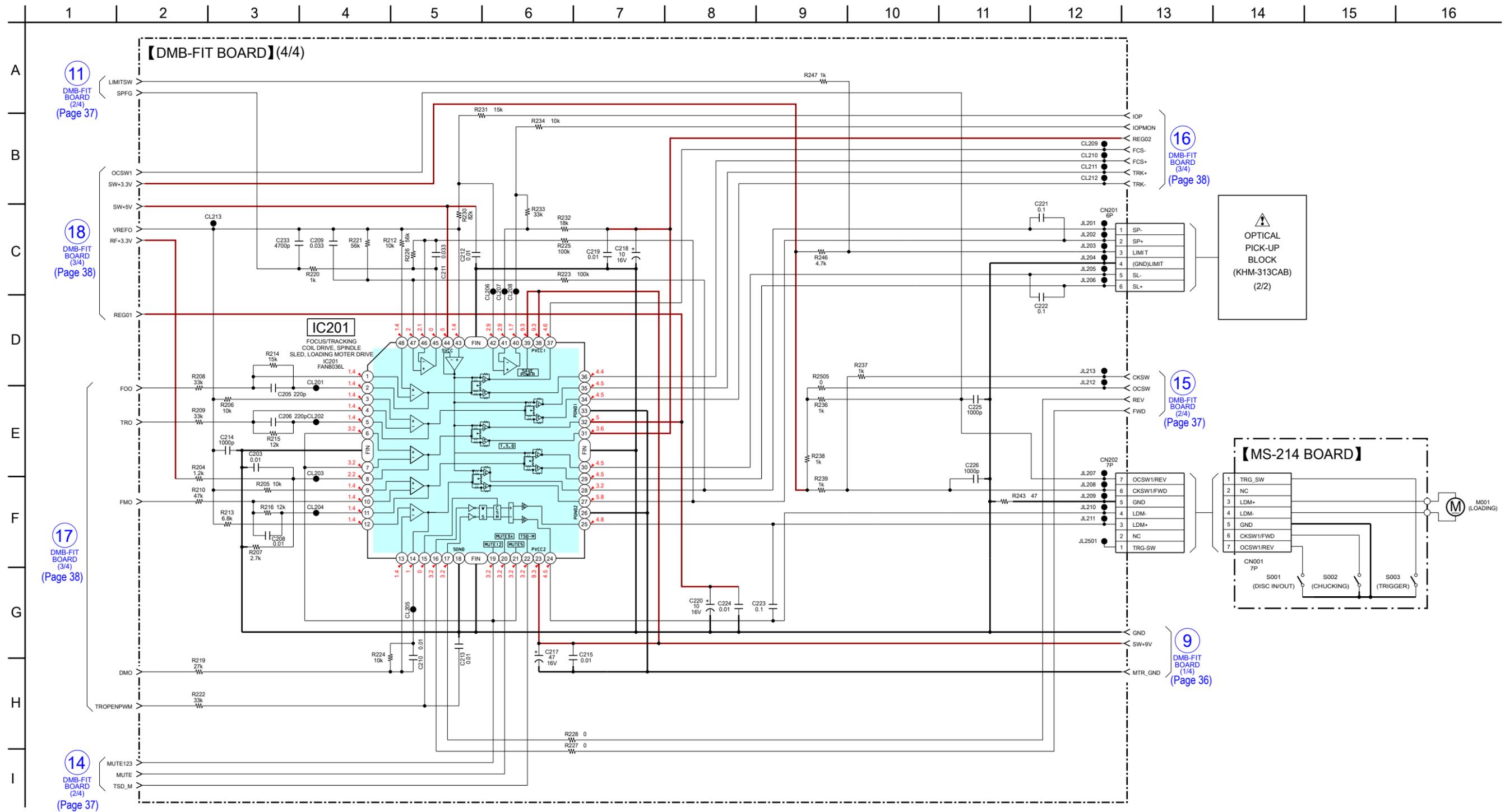


6-9. SCHEMATIC DIAGRAM - DMB-FIT Section (3/4) - See page 50 for IC Block Diagrams.



Note: IC102 and IC103 cannot exchange with single. When IC102 and IC103 are damaged, exchange the entire mounted board.

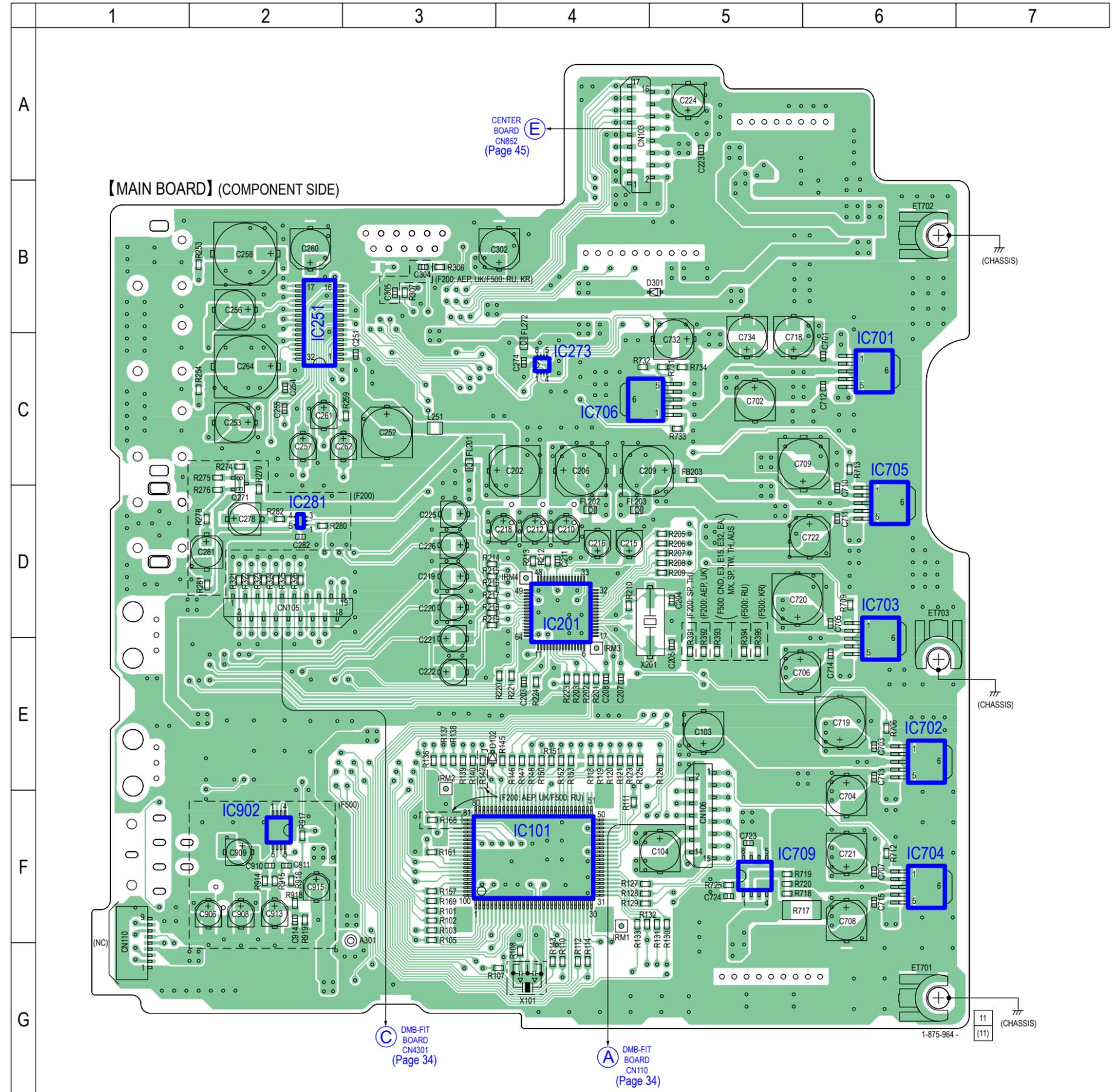
6-10. SCHEMATIC DIAGRAM - DMB-FIT Section (4/4) -



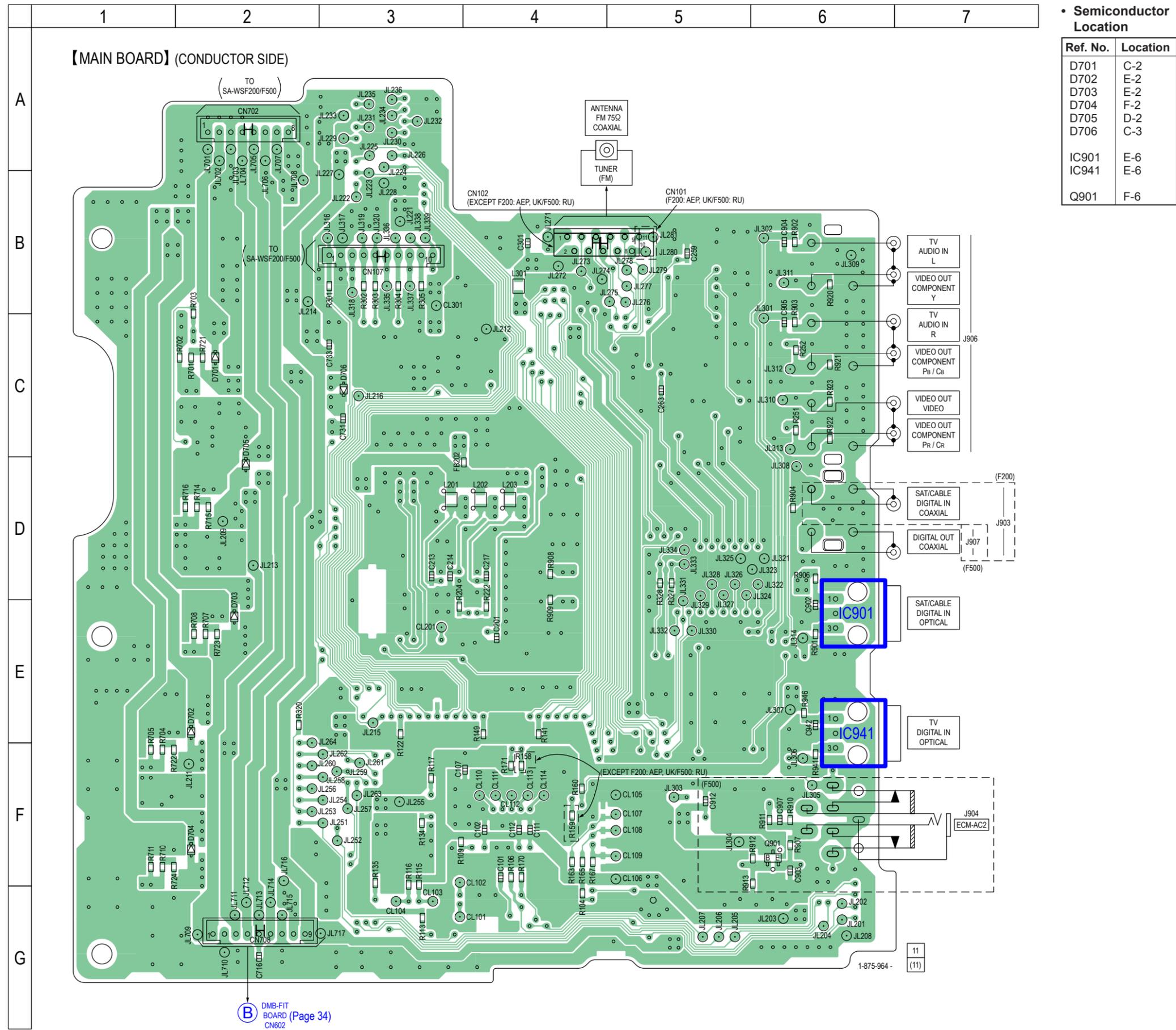
6-11. PRINTED WIRING BOARD - MAIN Board (Component Side) - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D102	E-3
D301	B-5
IC101	F-4
IC201	D-4
IC251	B-2
IC273	C-4
IC281	D-2
IC701	C-6
IC702	E-6
IC703	E-6
IC704	F-6
IC705	D-6
IC706	C-4
IC709	F-5
IC902	F-2
Q271	D-2



6-12. PRINTED WIRING BOARD - MAIN Board (Conductor Side) - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.

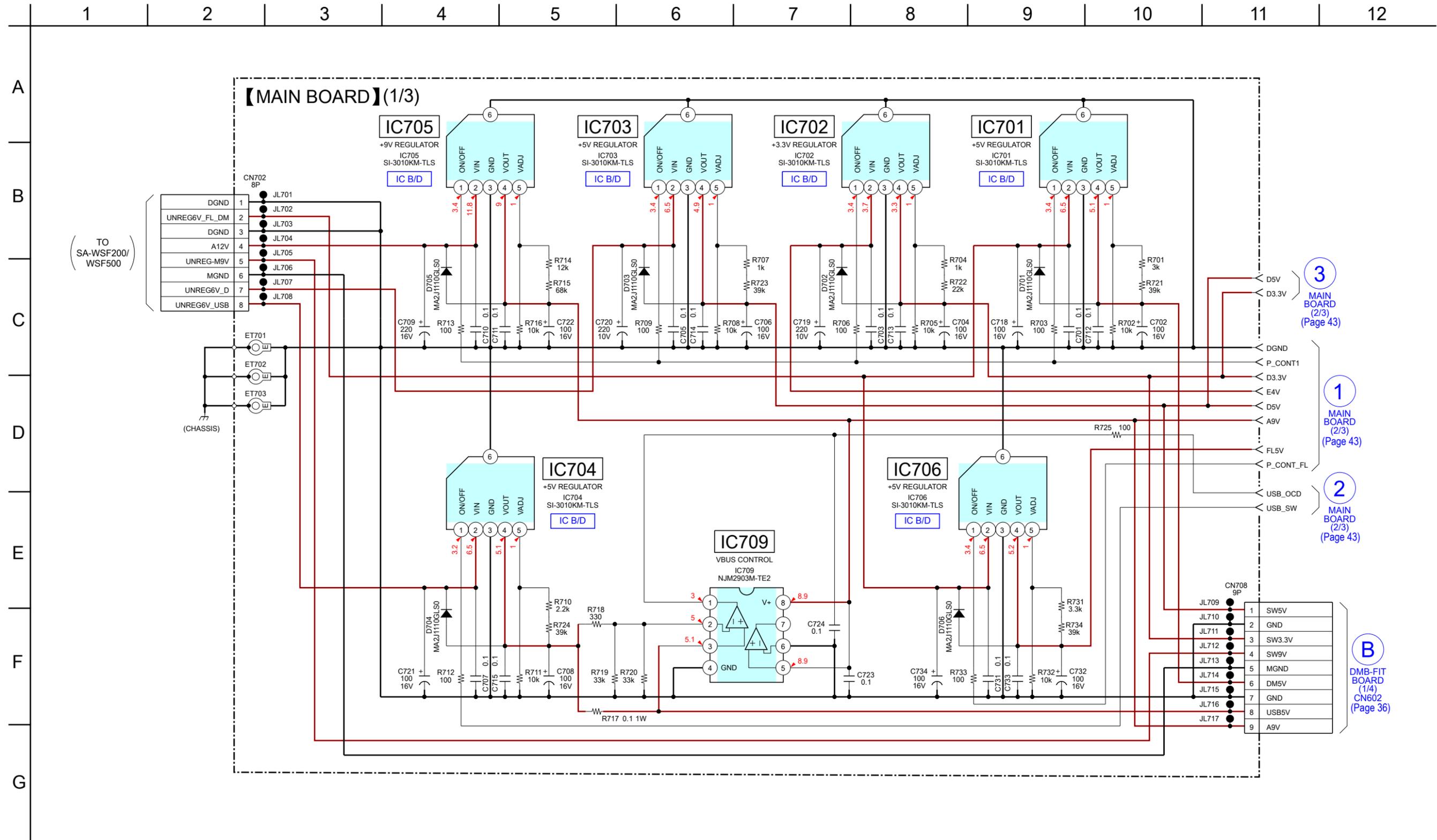


• Semiconductor Location

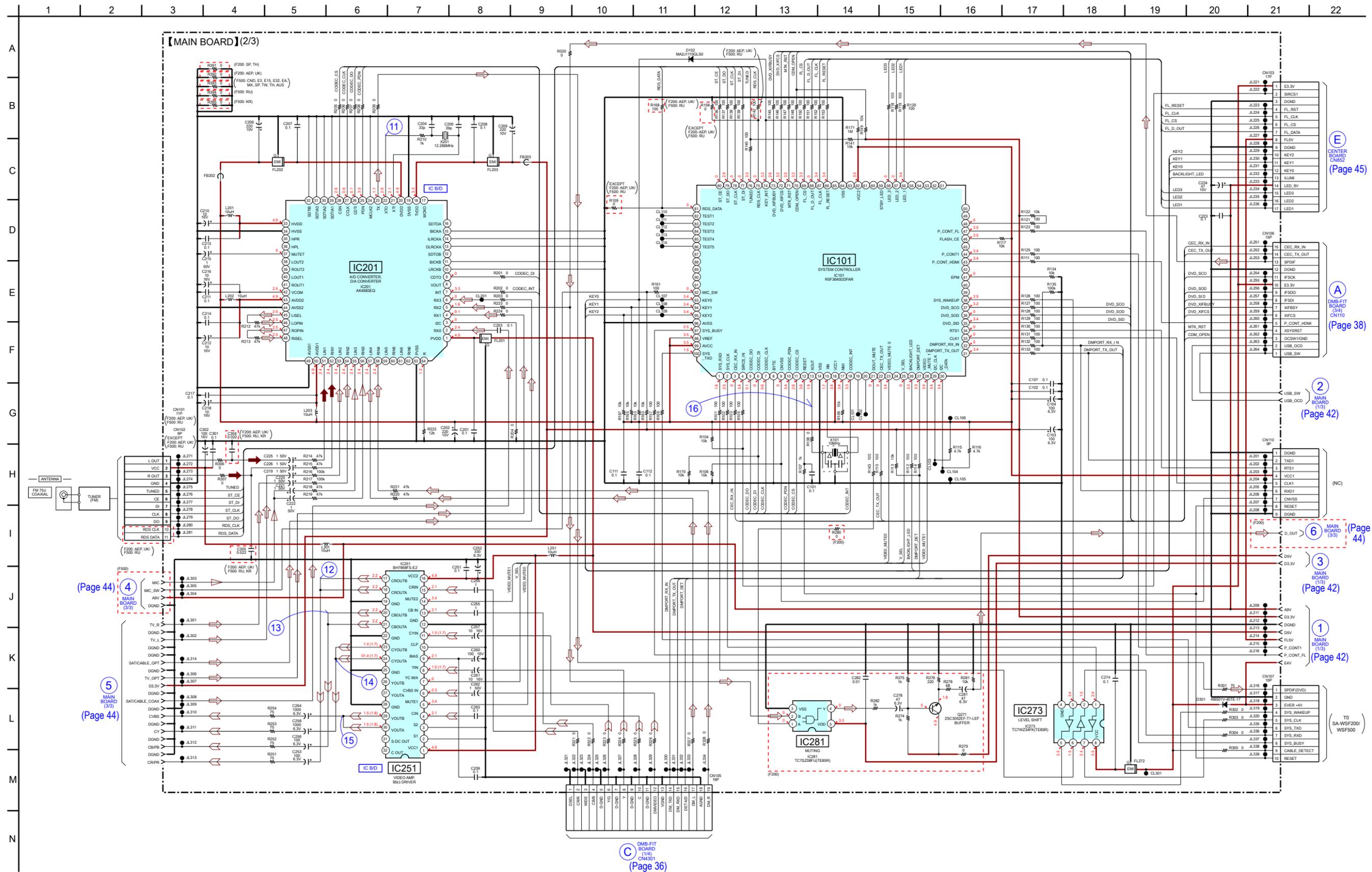
Ref. No.	Location
D701	C-2
D702	E-2
D703	E-2
D704	F-2
D705	D-2
D706	C-3
IC901	E-6
IC941	E-6
Q901	F-6

 DMB-FIT BOARD (Page 34)  
CN602

6-13. SCHEMATIC DIAGRAM - MAIN Board (1/3) - • See page 50 for IC Block Diagrams.



6-14. SCHEMATIC DIAGRAM - MAIN Board (2/3) - • See page 49 for Waveforms. • See page 50 for IC Block Diagrams. • See page 52 for IC Pin Function Description.



(E) CENTER BOARD (CN502) (Page 45)

(A) DMB-FTT BOARD (CN110) (Page 38)

(2) MAIN BOARD (1/3) (Page 42)

(6) MAIN BOARD (3/3) (Page 44)

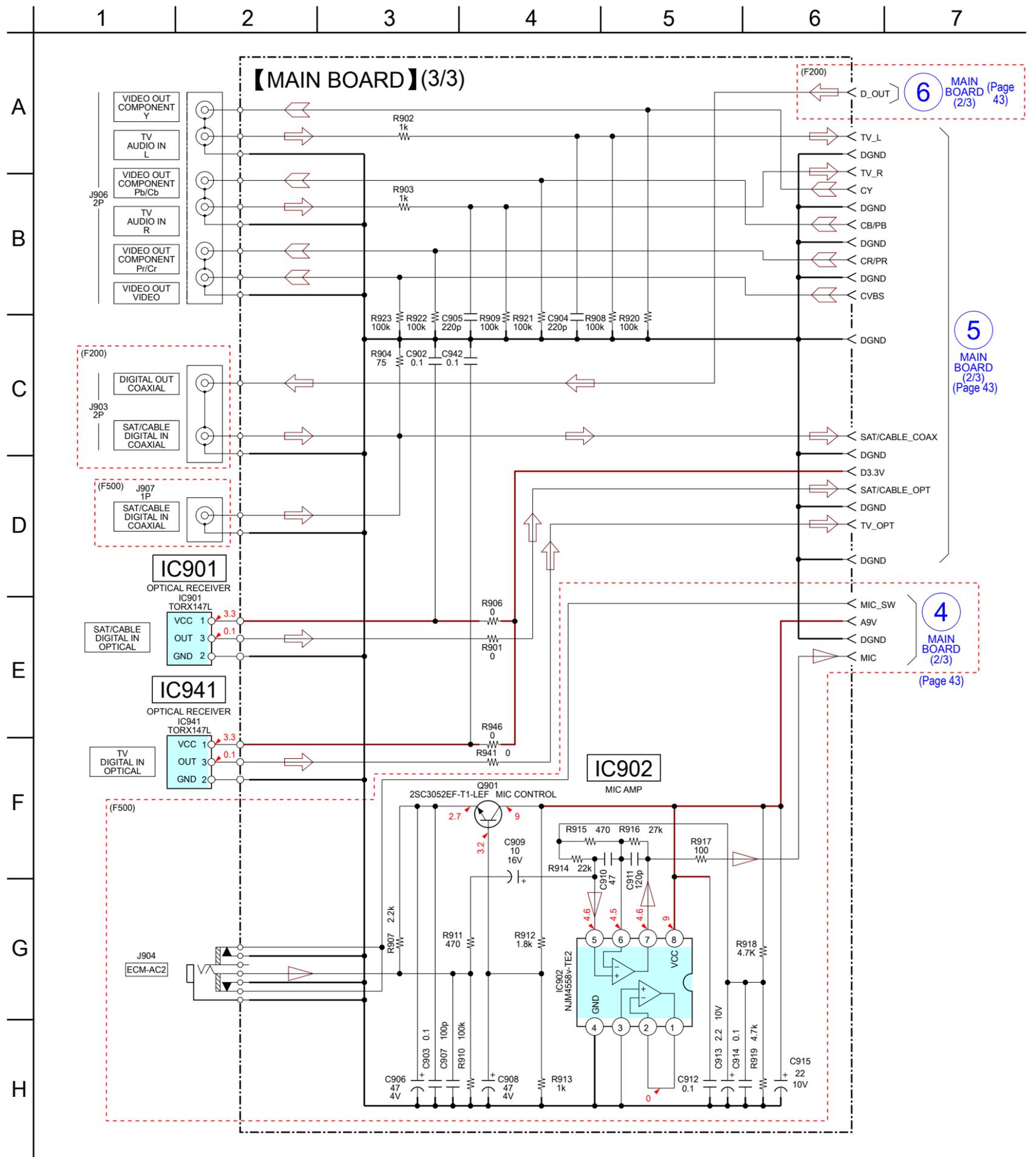
(3) MAIN BOARD (1/3) (Page 42)

(1) MAIN BOARD (1/3) (Page 42)

(TO SA-WSF200/WSF500)

(C) DMB-FTT BOARD (1/4) (Page 36)

6-15. SCHEMATIC DIAGRAM - MAIN Board (3/3) -



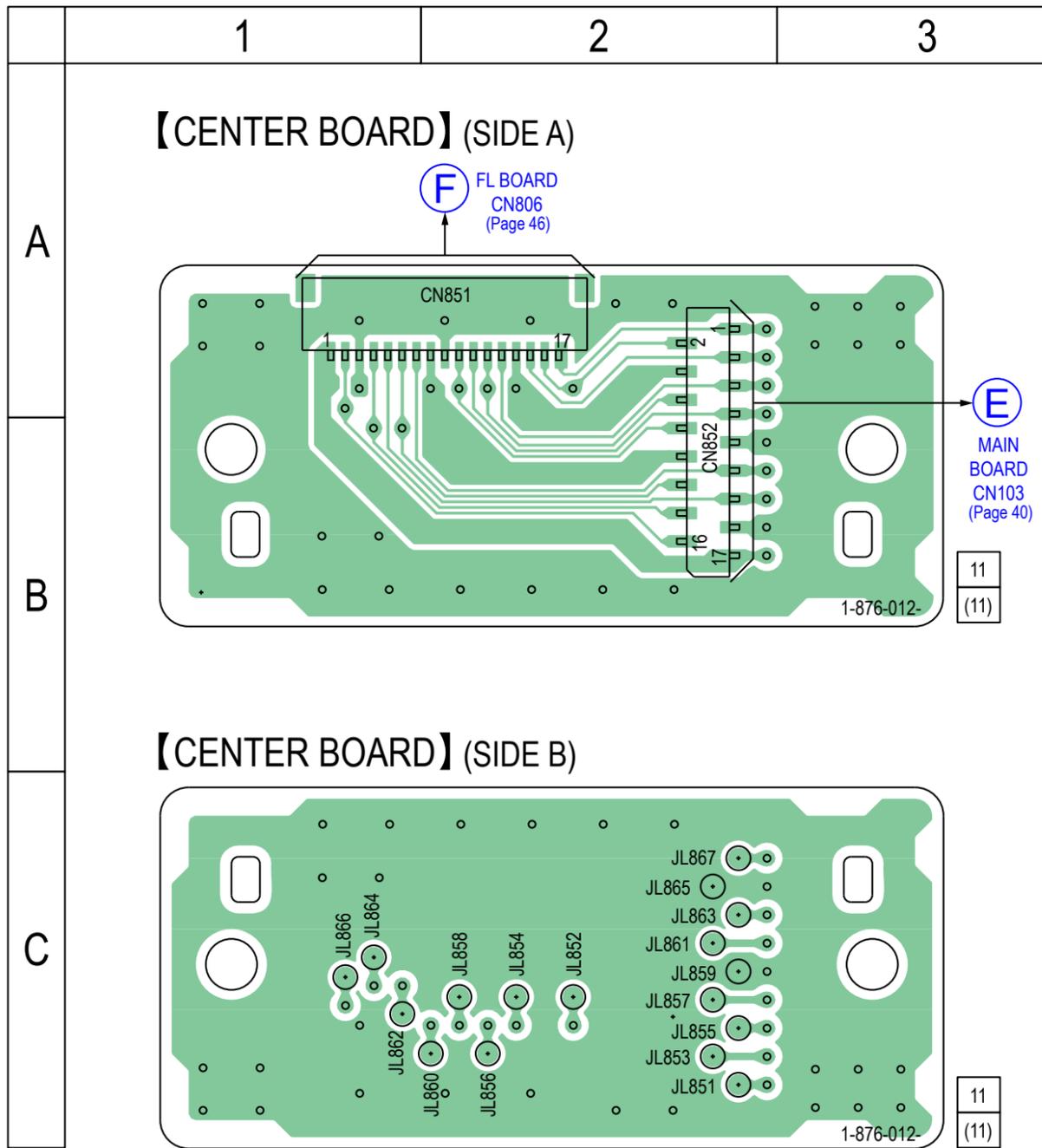
6 MAIN BOARD (2/3) (Page 43)

5 MAIN BOARD (2/3) (Page 43)

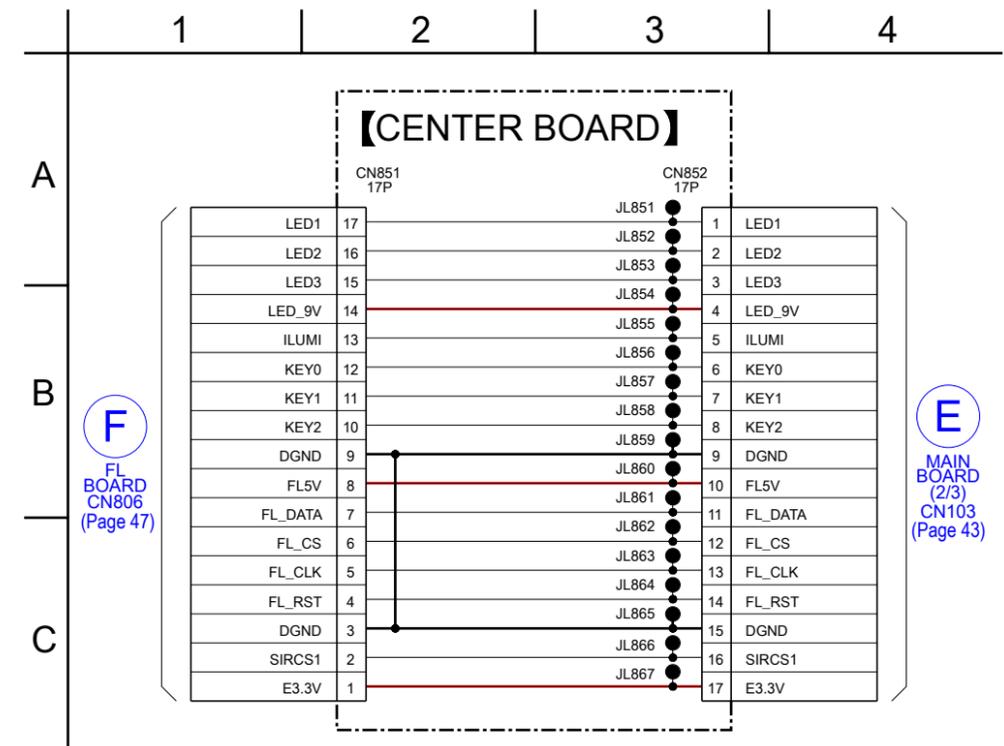
4 MAIN BOARD (2/3) (Page 43)

6-16. PRINTED WIRING BOARD - CENTER Board -

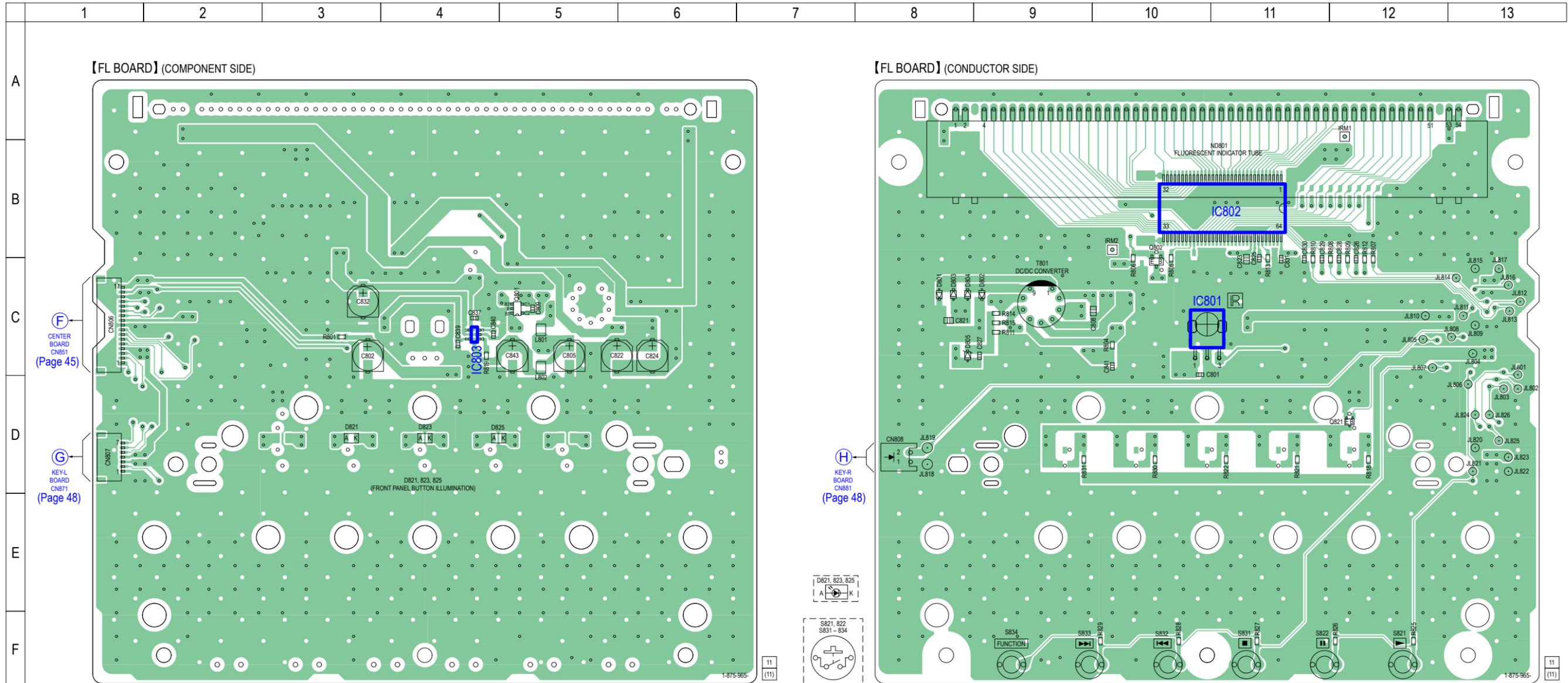
• See page 33 for Circuit Boards Location. •  : Uses unleaded solder.



6-17. SCHEMATIC DIAGRAM - CENTER Board -



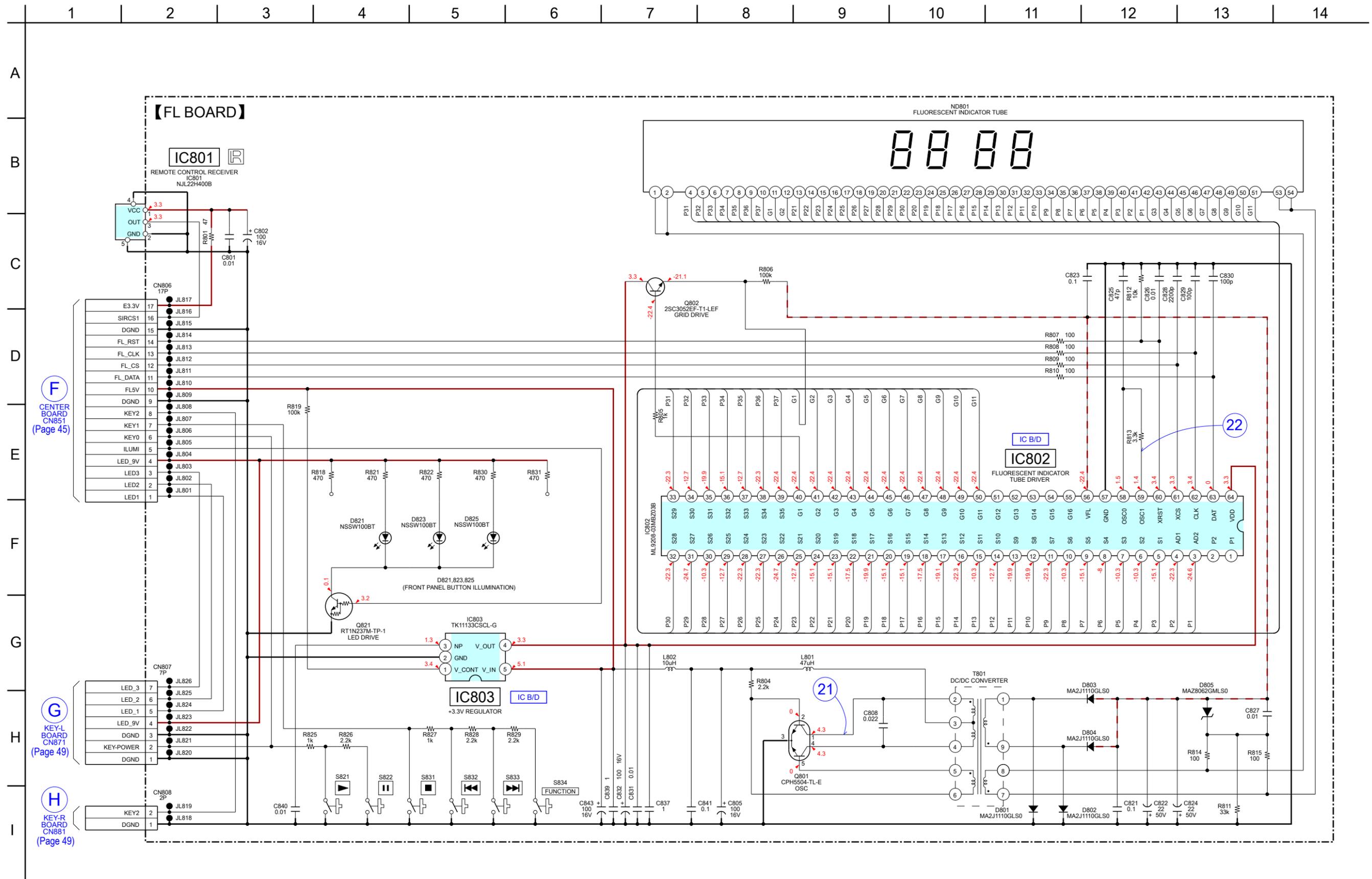
6-18. PRINTED WIRING BOARD - FL Board - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.



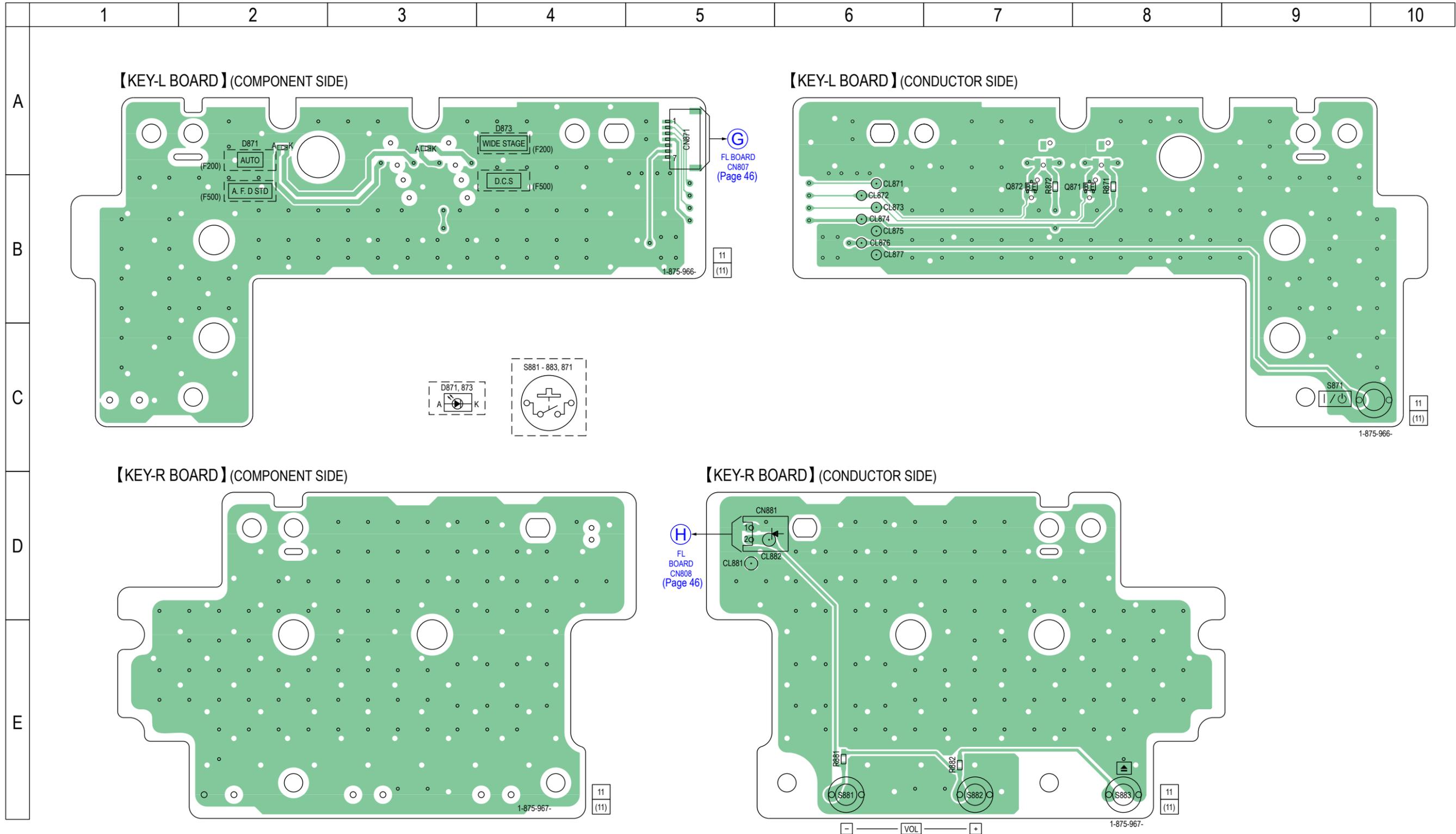
• Semiconductor Location

Ref. No.	Location
D801	C-8
D802	C-9
D803	C-8
D804	C-8
D805	C-8
D821	D-3
D823	D-4
D825	D-4
IC801	C-10
IC802	B-11
IC803	C-4
Q801	C-5
Q802	C-10
Q821	D-12

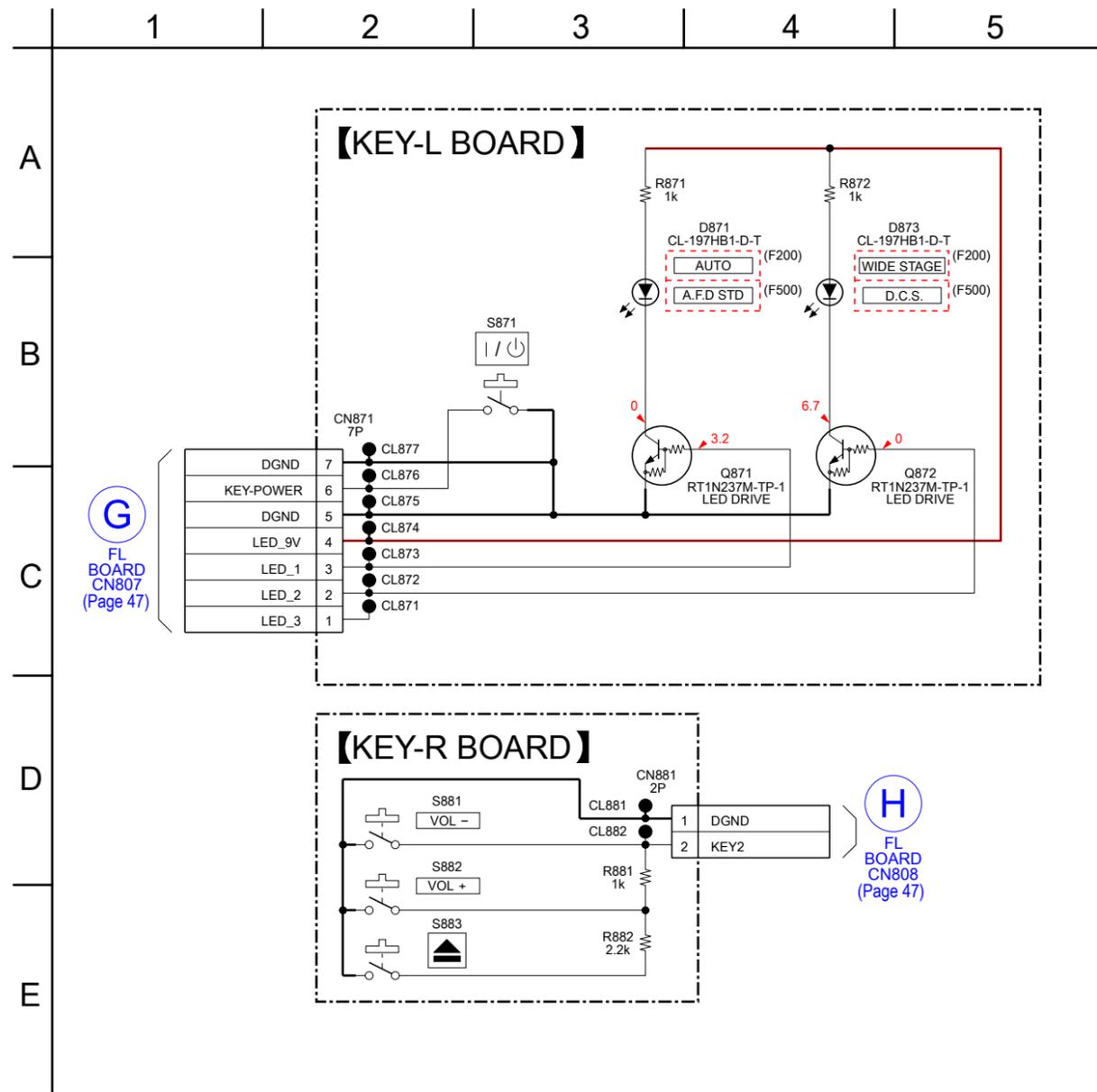
6-19. SCHEMATIC DIAGRAM - FL Board - • See page 49 for Waveforms. • See page 50 for IC Block Diagrams.



6-20. PRINTED WIRING BOARDS - KEY Section - • See page 33 for Circuit Boards Location. •  : Uses unleaded solder.

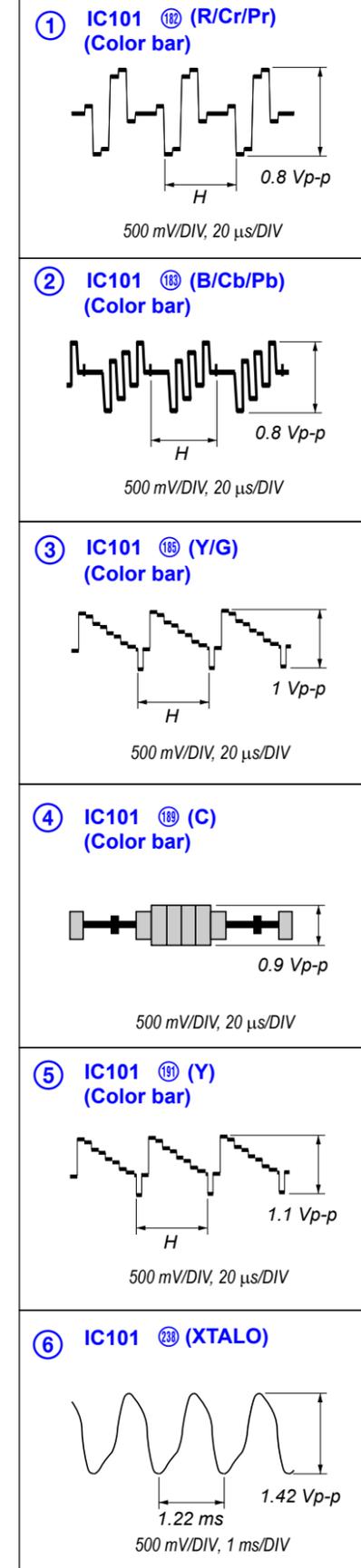


6-21. SCHEMATIC DIAGRAM - KEY Section -

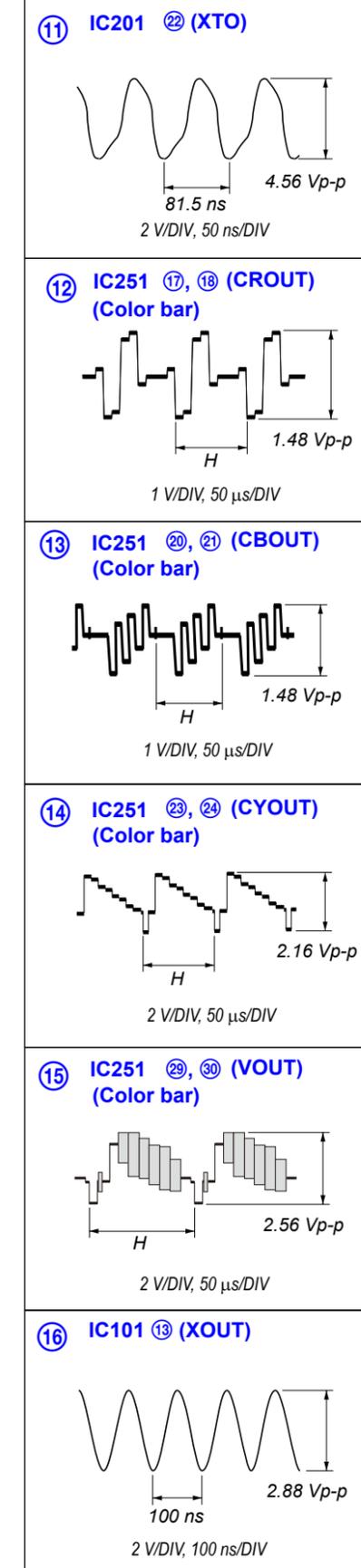


• Waveforms

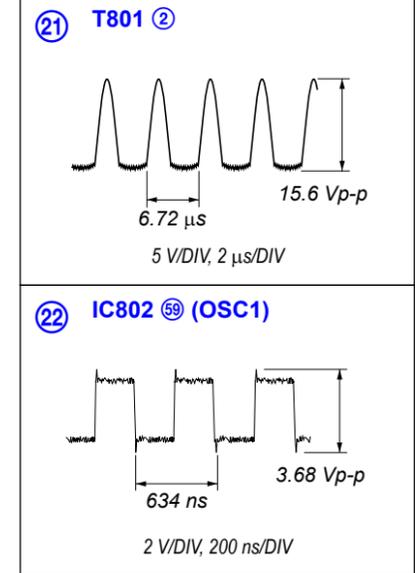
- DMB-FIT Board -



- MAIN Board -



- FL Board -

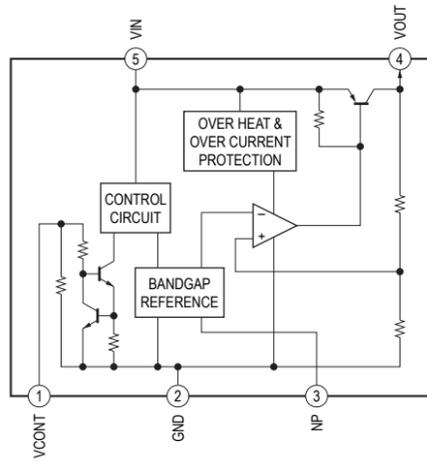


G  
FL BOARD  
CN807  
(Page 47)

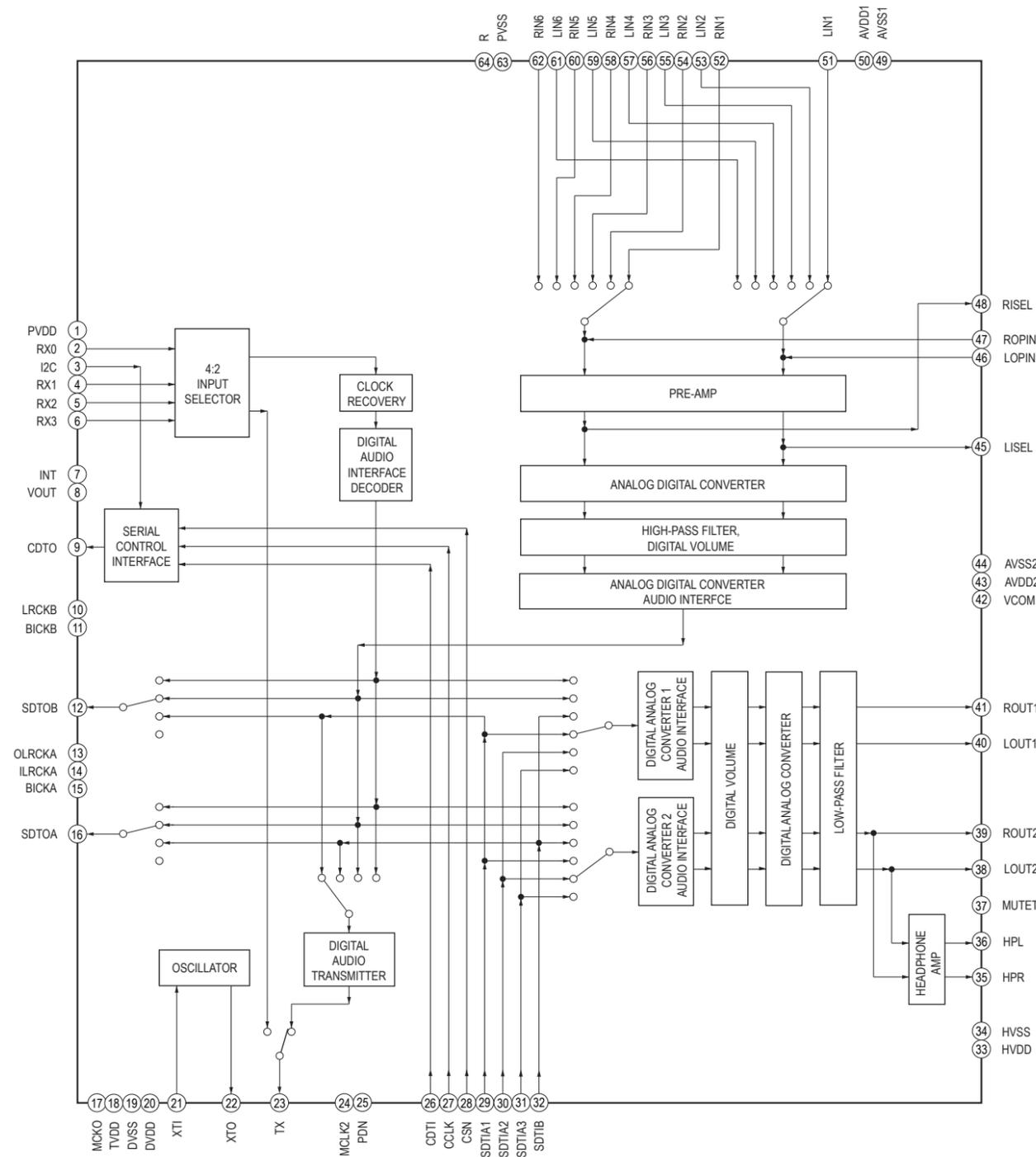
H  
FL BOARD  
CN808  
(Page 47)

• IC Block Diagrams

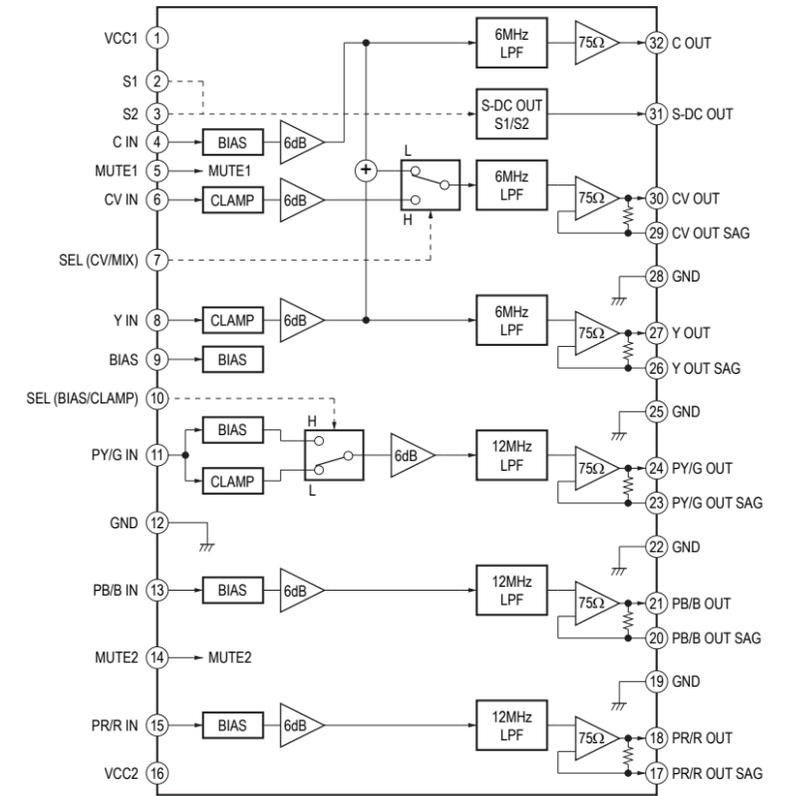
– DMB-FIT Board –  
 IC105, 107, 708 TK11133CSCL-G  
 IC707 TK11150CSCL-G



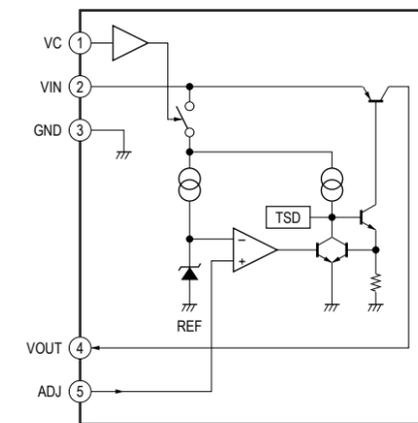
– MAIN Board –  
 IC201 AK4683EQ



IC251 BH7868FS-E2

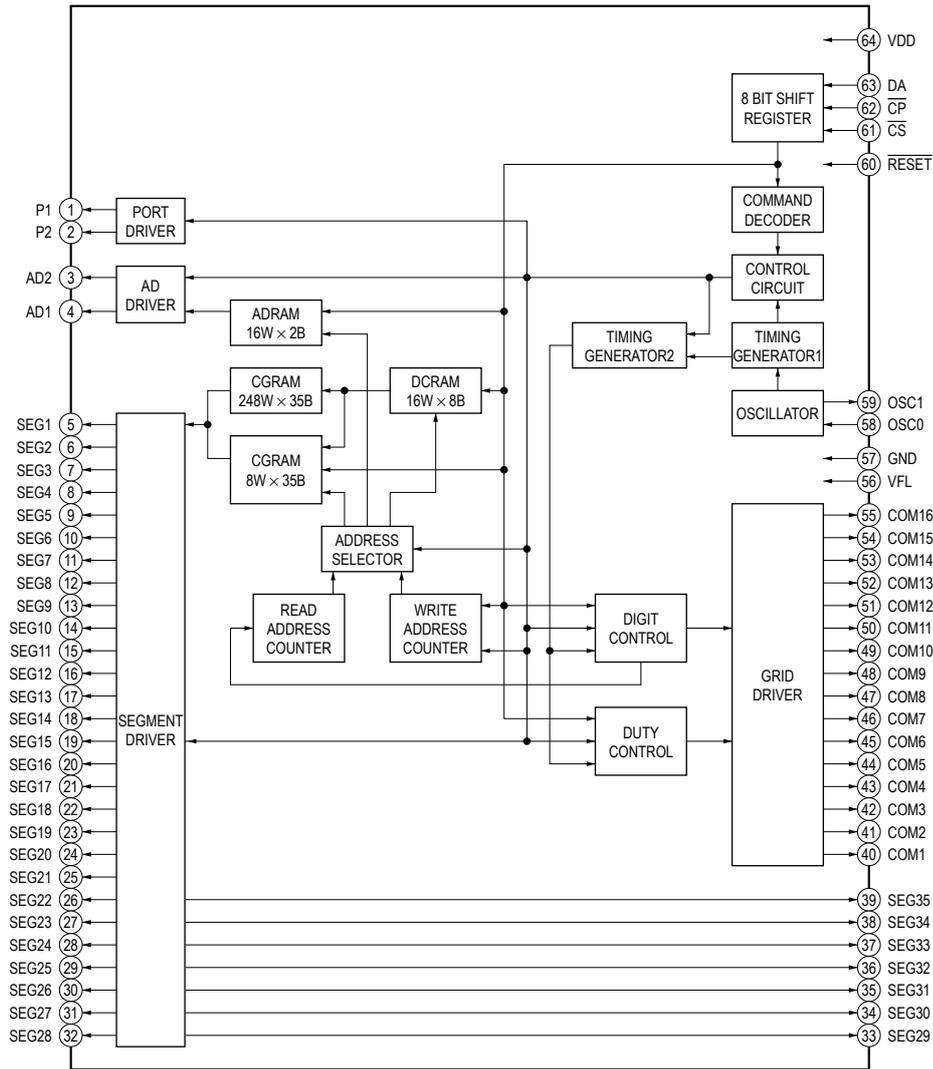


IC701 – 706 SI-3010KM-TLS

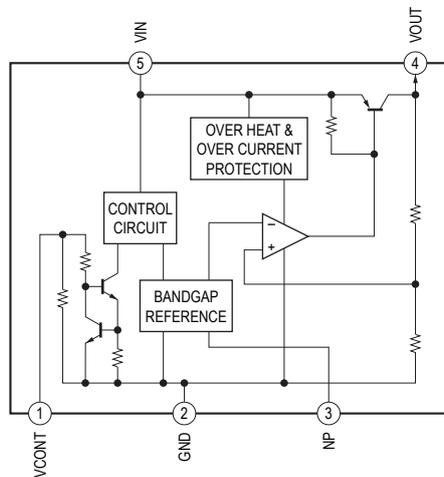


- FL Board -

IC802 ML9208-03MBZ03B



IC803 TK11133CSCL-G



# HCD-F200/F500

## • IC Pin Function Description

### MAIN BOARD IC101 R5F3640DDFAR (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	SYS_RXD	O	Serial data output to the SYSTEM CONTROL connector (SA-WSF200/F500)
2	SYS_CLK	O	Serial data transfer clock signal output to the SYSTEM CONTROL connector (SA-WSF200/F500)
3	CEC_RX_IN	I	CEC serial data input from the HDMI OUT connector
4	SIRCS_IN	I	SIRCS signal input from the remote control receiver
5	CODEC_DO	O	Serial data output to the A/D, D/A converter
6	CODEC_DI	I	Serial data input from the A/D, D/A converter
7	CODEC_CLK	O	Serial data transfer clock signal output to the A/D converter, D/A converter
8	BYTE	I	External data bus width selection signal input terminal Fixed at "L" in this set
9	CNVSS	I	Processor mode switch input terminal
10	CODEC_PDN	O	Reset signal output to the A/D, D/A converter "L": reset
11	CODEC_CS	O	Chip select signal output to the A/D, D/A converter
12	RESET	I	System reset signal input from the SYSTEM CONTROL connector (SA-WSF200/F500) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it change to "H"
13	XOUT	O	Main system clock output terminal (10 MHz)
14	VSS	-	Ground terminal
15	XIN	I	Main system clock input terminal (10 MHz)
16	VCC1	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt input terminal Fixed at "H" in this set
18	CODEC_INT	I	Interrupt signal input from the A/D, D/A converter
19, 20	-	-	Not used
21	DOUT_MUTE	O	Digital signal on/off control signal output terminal (F200)
22	CEC_TX_OUT	O	CEC serial data output to the HDMI OUT connector
23	VIDEO_MUTE 0	O	Video signal input selection signal output terminal
24	-	-	Not used
25	V_SEL	O	Video signal input selection signal output terminal
26	BACKLIGHT_LED	O	LED drive signal output terminal
27	DMPORT_DET	I	Connect detection signal input from the DMPORT jack
28	VIDEO_MUTE1	O	Video signal input selection signal output terminal
29	I2C_CLK	I/O	Two-way I2C clock bus terminal Not used
30	I2C_DATA	I/O	Two-way I2C data bus terminal Not used
31	DMPORT_TX_OUT	O	Serial data output to the DMPORT connector
32	DMPORT_RX_IN	I	Serial data input from the DMPORT connector
33	CLK1	-	Not used
34	RTS1	-	Not used
35	DVD_SID	O	Serial data output to the servo DSP
36	DVD_SOD	I	Serial data input from the servo DSP
37	DVD_SCO	I	Serial data transfer clock signal input from the servo DSP
38	SYS_WAKEUP	O	System wake up signal output to the SYSTEM CONTROL connector (SA-WSF200/F500)
39, 40	-	-	Not used
41	EPM	-	Not used
42	-	-	Not used
43	P_CONT_HDMI	O	HDMI control signal output terminal (F500)
44	P_CONT1	O	Power on/off control signal output terminal "H": power on
45	-	-	Not used
46	FLASH_CE	-	Not used
47	P_CONT_FL	O	Power on/off control signal output terminal for the front panel section "H": power on
48 to 55	-	-	Not used
56	LED_1	O	LED drive signal output terminal
57	LED_2	O	LED drive signal output terminal
58	LED_3	O	LED drive signal output terminal Not used
59	STBY_LED	O	LED drive signal output terminal Not used
60, 61	-	-	Not used

Pin No.	Pin Name	I/O	Description
62	VCC2	-	Power supply terminal (+3.3V)
63	-	-	Not used
64	VSS	-	Ground terminal
65	-	-	Not used
66	FL_RESET	O	Reset signal output to the fluorescent indicator tube driver "L": reset
67	FL_CLK	O	Serial data transfer clock signal output to the fluorescent indicator tube driver
68	FL_D_OUT	O	Serial data output to the LED driver and fluorescent indicator tube driver
69	FL_CS	O	Chip select signal output to the fluorescent indicator tube driver
70	CDM_OPEN	I	Disc insert (8/12cm) detect switch input terminal "L": disc insert
71	MTK_RST	O	Reset signal output to the servo DSP and flash ROM "L": reset
72	DVD_XIFCS	I	Chip select signal input from the servo DSP
73	DVD_XIFBUSY	O	Busy signal output to the servo DSP
74	KEY_INT	I	Power key wakeup signal input terminal
75	RDS_CLK	I	RDS serial data transfer clock signal input from the tuner (FM) (F200: AEP and UK models/F500: Russian model)
76	TUNED	I	Tuning detection signal input from the tuner (FM) "L": tuned
77	ST_DI	O	Serial data output to the tuner (FM)
78	ST_CLK	O	Serial data transfer clock signal output to the tuner (FM)
79	ST_DO	I	Serial data input from the tuner (FM)
80	ST_CE	O	Serial chip enable signal output to the tuner (FM)
81	RDS_DATA	I	RDS serial data input from the tuner (FM) (F200: AEP and UK models/F500: Russian model)
82 to 86	TEST1 to TEST5	-	Not used
87 to 91	-	-	Not used
92	MIC_SW	I	Audio code detection signal input from the ECM-AC2 jack
93 to 95	KEY0 to KEY2	I	Front panel key input terminal (A/D input)
96	AVSS	-	Ground terminal
97	SYS_BUSY	I	Busy signal input from the SYSTEM CONTROL connector (SA-WSF200/F500)
98	VREF	I	Reference voltage (+3.3V) input terminal
99	AVCC	-	Power supply terminal (+3.3V)
100	SYS_TXD	I	Serial data input from the SYSTEM CONTROL connector (SA-WSF200/F500)

# HCD-F200/F500

## DMB-FIT BOARD IC101 CXD9894R (EXCEPT F500: Canadian model), CXD9915R (F500: Canadian model) (RF AMP, SERVO DSP, MPEG DECODER)

Pin No.	Pin Name	I/O	Description
1	OSC	O	RF offset cancellation capacitor connecting terminal
2	RFGC	O	RF AGC loop capacitor connecting for DVD-ROM
3	IREF	I	Reference current input terminal
4	AVDD3	-	Power supply terminal (+3.3V)
5	AGND	-	Ground terminal
6	DVDA	I	AC coupled input path A
7	DVDB	I	AC coupled input path B
8	DVDC	I	AC coupled input path C
9	DVDD	I	AC coupled input path D
10	DVDRF IP	I	AC coupled DVD RF signal input from the optical pick-up block
11	MA	I	DC coupled main-beam RF signal input A
12	MB	I	DC coupled main-beam RF signal input B
13	MC	I	DC coupled main-beam RF signal input C
14	MD	I	DC coupled main-beam RF signal input D
15	SA	I	DC coupled sub-beam RF signal input A Not used
16	SB	I	DC coupled sub-beam RF signal input B Not used
17	TNI	I	3 beam satellite PD signal negative input from the optical pick-up block
18	TPI	I	3 beam satellite PD signal positive input from the optical pick-up block
19, 20	MDI1, MDI2	I	Laser power monitor input from the optical pick-up block
21	LDO2	O	Laser diode drive signal output to the optical pick-up block (for DVD)
22	LDO1	O	Laser diode drive signal output to the optical pick-up block (for CD)
23	SVDD3	-	Power supply terminal (+3.3V)
24	CSO	O	Central servo signal output terminal Not used
25	RFLVL	O	RFRP low pass output terminal Not used
26	SGND	-	Ground terminal
27	V2REFO	O	Reference voltage (+2.8V) output terminal
28	V2O	O	Reference voltage (+2V) output to the optical pick-up block
29	VREFO	O	Reference voltage (+1.4V) output terminal
30	FEO	O	Focus error monitor output terminal Not used
31	TEO	O	Tracking error monitor output terminal Not used
32	TEZISLV	O	Slice level of tracking error signal output terminal Not used
33	OPOUT	O	Output from the internal operational amplifier Not used
34	OP_INN	I	Negative input to the internal operational amplifier Not used
35	OP_INP	I	Positive input to the internal operational amplifier Not used
36	DMO	O	Spindle motor control signal output to the motor driver
37	FMO	O	Sled motor control signal output to the motor driver
38	TROPENPWM	O	Loading motor control signal output to the motor driver
39	IOPMON	I	Power monitor terminal
40	TRO	O	Tracking coil control signal output to the coil driver
41	FOO	O	Focus coil control signal output to the coil driver
42	AGND18	-	Ground terminal
43	AVDD18	-	Power supply terminal (+1.8V)
44	USB_DP	I/O	Two-way data (positive) bus from the USB connector
45	USB_DM	I/O	Two-way data (negative) bus from the USB connector
46	USB_VDD3	-	Power supply terminal (+3.3V)
47	USB_VSS	-	Ground terminal
48	PAD_VRT	-	Not used
49	USB_VDD18	-	Power supply terminal (+1.8V)
50	USB_VSS	-	Ground terminal
51	DIR_ERROR	O	PLL lock error signal and data error flag output terminal Not used
52	DIR_AUDIO	O	PCM audio data output terminal Not used
53	LIMITSW	I	Limit detection switch input terminal
54	MSW	O	CD/DVD selection signal output terminal "L": CD, "H": DVD

Pin No.	Pin Name	I/O	Description
55	DVDD18	-	Power supply terminal (+1.8V)
56 to 64	HA2 to HA8, HA18, HA19	O	Address signal output to the flash ROM
65	DVDD3	-	Power supply terminal (+3.3V)
66	XWR	O	Write enable signal output to the flash ROM
67 to 75	HA16 to HA9, HA20	O	Address signal output to the flash ROM
76	XROMCS	O	Chip select signal output to the flash ROM
77	HA1	O	Address signal output to the flash ROM
78	XRD	O	Read enable signal output to the flash ROM
79, 80	HD0, HD1	I/O	Two-way data bus terminal with the flash ROM
81	DVSS	-	Ground terminal
82 to 86	HD2 to HD6	I/O	Two-way data bus terminal with the flash ROM
87	HA21	O	Address signal output to the flash ROM
88	RESERVED	-	Not used
89	HD7	I/O	Two-way data bus terminal with the flash ROM
90	DVSS	-	Ground terminal
91, 92	HA17, HA0	O	Address signal output to the flash ROM
93	DVDD18	-	Power supply terminal (+1.8V)
94	FWD	O	Loading motor drive signal output terminal (forward direction)
95	REV	O	Loading motor drive signal output terminal (reverse direction)
96	DVDD3	-	Power supply terminal (+3.3V)
97	IFSDO	O	Serial data output to the system controller
98	IFCK	O	Serial data transfer clock signal output to the system controller
99	xIFCS	O	Chip select signal output to the system controller
100	IFSDI	I	Serial data input from the system controller
101	SCL	O	Serial data transfer clock signal output to the EEPROM
102	SDA	I/O	Two-way data bus with the EEPROM
103	CKSW	I	Chucking detection switch input terminal
104	OCSW	I	Disc table open/close detection switch input terminal
105	RXD	I	Receive data input terminal for UART communication when data writing to flash memory
106	TXD	O	Transmit data output terminal for UART communication when data writing to flash memory
107	ICE	I	ICE mode enable signal input terminal Not used
108	xSYSRST	I	Reset signal input from the system controller "L": reset
109	RESERVED	-	Not used
110	xIFBSY	I	Busy signal input from the system controller
111	DQM0	O	Data mask signal output to the SD-RAM
112	EEWP	O	Write protect signal output to the EEPROM
113 to 117	RD7 to RD3	I/O	Two-way data bus with the SD-RAM
118	DVDD3	-	Power supply terminal (+3.3V)
119 to 129	RD2 to RD0, RD15 to RD8	I/O	Two-way data bus with the SD-RAM
130	TSD_M	O	Thermal shut down signal output to the motor/coil driver
131	DVDD3	-	Power supply terminal (+3.3V)
132	DQM1	O	Data mask signal output to the SD-RAM
133	RWE	O	Write enable signal output to the SD-RAM
134	CAS	O	Column address strobe signal output to the SD-RAM
135	RAS	O	Row address strobe signal output to the SD-RAM
136	RCS	O	Chip select signal output to the SD-RAM
137, 138	BA0, BA1	O	Bank address signal output to the SD-RAM
139 to 141	RA10, RA0, RA1	O	Address signal output to the SD-RAM
142	DVDD18	-	Power supply terminal (+1.8V)
143, 144	RA2, RA3	O	Address signal output to the SD-RAM
145	DVDD3	-	Power supply terminal (+3.3V)
146	DRCLK	O	Serial data transfer clock signal output to the SD-RAM
147	CKE	O	Clock enable signal output to the SD-RAM
148	DVSS	-	Ground terminal

# HCD-F200/F500

Pin No.	Pin Name	I/O	Description
149 to 155	RA11, RA9 to RA4	O	Address signal output to the SD-RAM
156	DVDD3	-	Power supply terminal (+3.3V)
157	MUTE123	O	Muting signal output to the motor/coil driver
158	MUTE	O	Muting signal output to the motor/coil driver
159	DDC_DA	O	Serial data transfer clock signal output terminal
160	DVDD18	-	Power supply terminal (+1.8V)
161	DDC_CLK	I/O	Two-way data bus with terminal
162	HTPLG	I	HDMI hot-plug detection signal input terminal
163	AGND3	-	Ground terminal
164	EXT_RES	-	Not used
165, 166	AVDD3	-	Power supply terminal (+3.3V)
167	EXT_CAP	-	Not used
168, 169	AGND3, AGND18	-	Ground terminal
170	TXCN	O	TMDS clock signal (negative) output to the HDMI OUT connector
171	TXCP	O	TMDS clock signal (positive) output to the HDMI OUT connector
172	DVDD18	-	Power supply terminal (+1.8V)
173	TX0N	O	TMDS data (negative) output to the HDMI OUT connector
174	TX0P	O	TMDS data (positive) output to the HDMI OUT connector
175	DVDD18	-	Power supply terminal (+1.8V)
176	TX1N	O	TMDS data (negative) output to the HDMI OUT connector
177	TX1P	O	TMDS data (positive) output to the HDMI OUT connector
178	DVDD18	-	Power supply terminal (+1.8V)
179	TX2N	O	TMDS data (negative) output to the HDMI OUT connector
180	TX2P	O	TMDS data (positive) output to the HDMI OUT connector
181	AGND18	-	Ground terminal
182, 183	R/Cr/Pr, B/Cb/Pb	O	Component video signal output to the video amplifier
184	DACVSSA	-	Ground terminal
185	Y/G	O	Component video signal output to the video amplifier
186	DACVDDA	-	Power supply terminal (+3.3V)
187	CVBS	O	Video signal output to the video amplifier Not used
188	DACVSSB	-	Ground terminal
189	C	O	Chroma signal output to the video amplifier
190	DACVddb	-	Power supply terminal (+3.3V)
191	Y	O	Y signal output to the video amplifier
192	DACVSSC	-	Ground terminal
193	FS	-	Full scale adjustment terminal
194	VREF	-	For reference voltage terminal
195	DACVDDC	-	Power supply terminal (+3.3V)
196	VBUS_OE	O	VBUS control signal output terminal
197	VBUS_OC	I	VBUS control signal input terminal
198	SCORE/DIR_XSTATE	I	Source clock switching monitor input terminal Not used
199	SPMCK	O	Master clock signal output terminal Not used
200	SPBCK	O	Bit clock signal output terminal Not used
201	SPLRCK	O	L/R sampling clock signal output terminal Not used
202	SPDATA	I	Audio serial data input terminal Not used
203	ACLK	O	Master clock signal output terminal Not used
204	ABCK	O	Bit clock signal output terminal Not used
205	ALRCK	O	L/R sampling clock signal output terminal Not used
206	MC_DATA/ADIN	I	Audio serial data input terminal Not used
207	DVDD3	-	Power supply terminal (+3.3V)
208	MIC	-	Not used
209	WIDE	O	Normal/squeeze selection signal output terminal Not used
210	REG_SEL/DSEL	-	Not used
211	TRG_SW	I	Trigger detection switch input terminal Not used
212	DVDD18	-	Power supply terminal (+1.8V)
213	KMOD	-	Not used

Pin No.	Pin Name	I/O	Description
214	XVOICE/DIR_CSFCAG	I	Detection of MIC signal input terminal Not used
215	SPDIF	O	SPDIF digital audio signal output to the A/D converter, D/A converter
216	APLLVDD3	-	Power supply terminal (+3.3V)
217	APLLCAP	-	Connection terminal for an external capacitor
218	APLLVSS	-	Ground terminal
219, 220	ADACVSS2, ADACVSS1	-	Ground terminal
221	DIR_CE	-	Not used
222, 223	ASDATA3, ASDATA2	O	Audio serial data output terminal Not used
224	AVCM	-	Not used
225, 226	ASDATA1, ASDATA0	O	Audio serial data output terminal Not used
227	DIR_CL	-	Not used
228, 229	ADACVDD1, ADACVDD2	-	Power supply terminal (+3.3V)
230	LI/DIR_DI	I	Serial data input terminal Not used
231	RI/DIR_DO	O	Serial data output terminal Not used
232	ADACVSS1	-	Ground terminal
233	ADACVDD1	-	Power supply terminal (+3.3V)
234	SADCVDD18	-	Power supply terminal (+1.8V)
235	SADCVSS18	-	Ground terminal
236	RFVDD18	-	Ground terminal
237	RFVDD18	-	Power supply terminal (+1.8V)
238	XTALO	O	System clock output terminal (27 MHz)
239	XTALI	I	System clock input terminal (27 MHz)
240	JITFO	O	Output terminal of the RF jitter meter
241	JITFN	I	Input terminal of the RF jitter meter
242	PLLVSS	-	Ground terminal
243	PLLVDD3	-	Power supply terminal (+3.3V)
244	LPFON	O	Data PLL loop filter output terminal
245	LPFIP	I	Data PLL loop filter input terminal
246	LPFIN	I	Data PLL loop filter input terminal
247	LPFOP	O	Data PLL loop filter output terminal
248	ADCVDD3	-	Power supply terminal (+3.3V)
249	ADCVSS	-	Ground terminal
250	RFVDD3	-	Power supply terminal (+3.3V)
251	RFRPDC	O	RF ripple detect output terminal
252	RFRPAC	I	RF ripple detect input terminal
253	HRFZC	I	High frequency RF ripple zero crossing terminal
254	CRTPLP	O	Defect level filter capacitor connecting terminal
255	RFVDD18	-	Ground terminal
256	OSP	O	RF offset cancellation capacitor connecting terminal

## SECTION 7 EXPLODED VIEWS

**Note:**

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:  
 KNOB, BALANCE (WHITE) . . . (RED)  
 ↑                                    ↑  
 Parts Color    Cabinet's Color

- Abbreviation
- AUS : Australian model
- CND : Canadian model
- E3 : 240V AC area in E model
- E15 : Iranian model
- E32 : Latin American model (110 – 240V AC area)
- EA : Saudi Arabia model
- KR : Korean model
- MX : Mexican model
- RU : Russian model
- SP : Singapore model
- TH : Thai model
- TW : Taiwan model

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

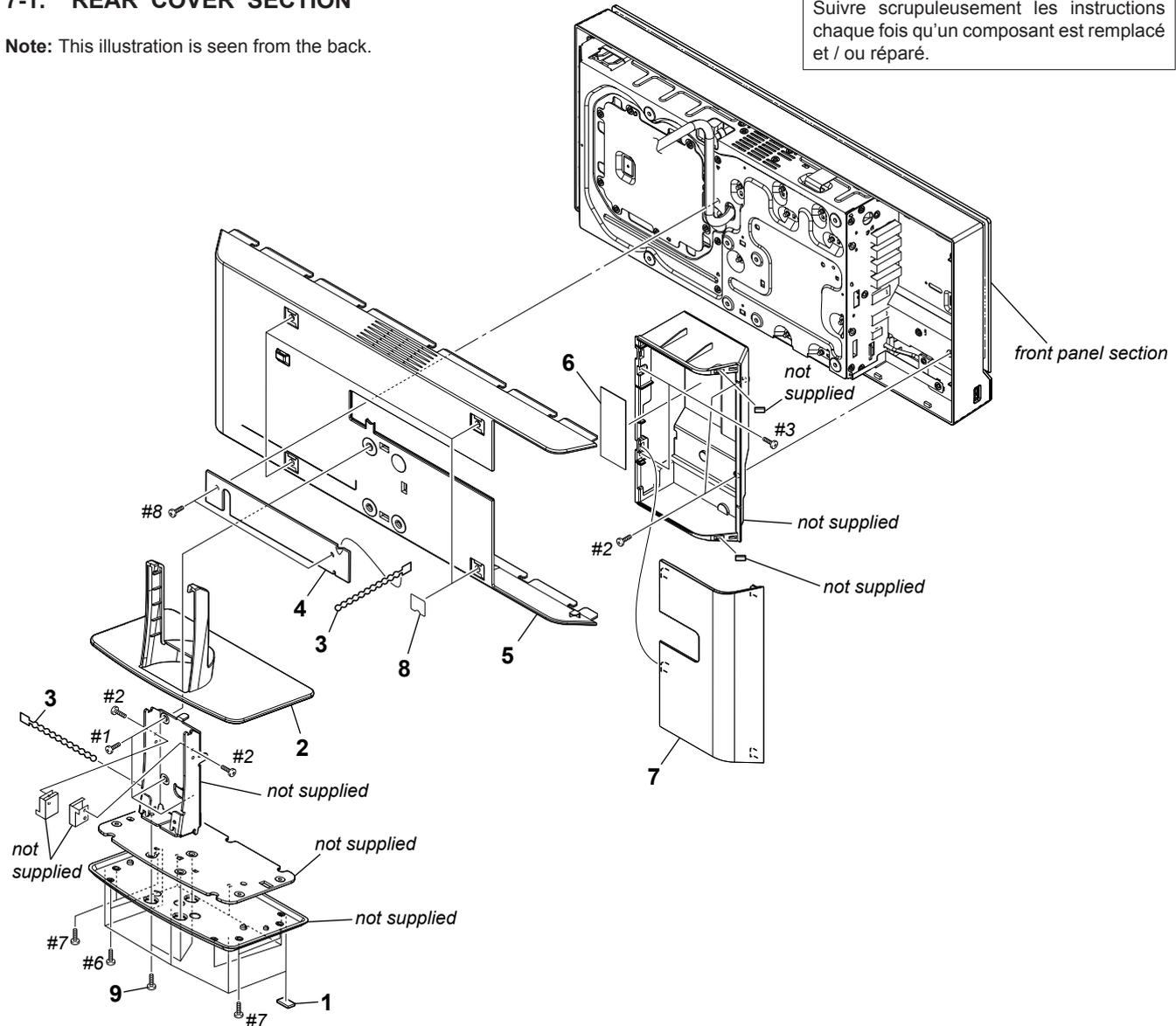
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by mark  $\triangle$  contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque  $\triangle$  contiennent des informations confidentielles. Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

### 7-1. REAR COVER SECTION

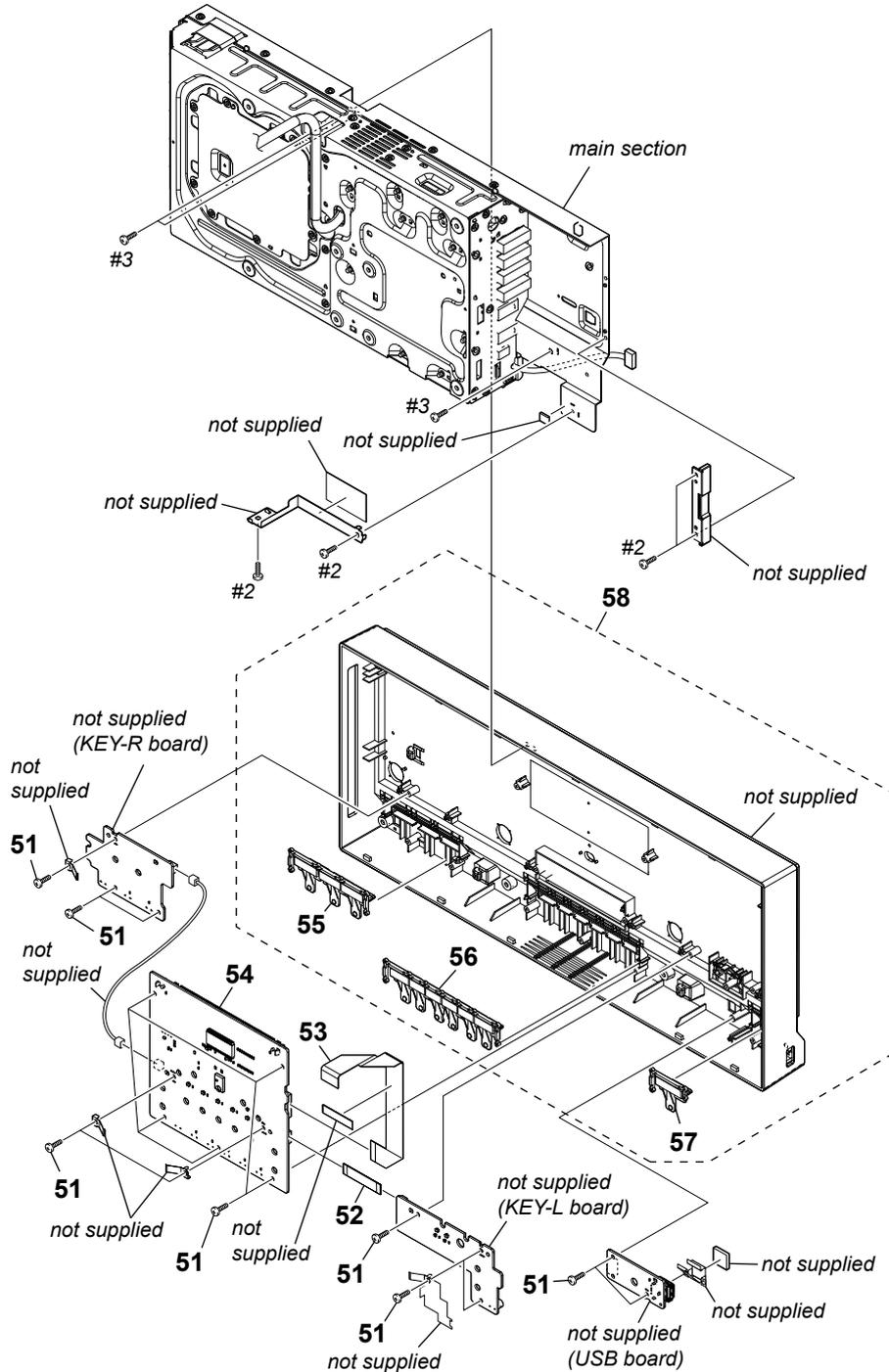
**Note:** This illustration is seen from the back.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-225-252-01	CUSHION (FOOT)		9	4-900-386-01	SCREW	
2	3-291-160-01	PANEL (STAND-TOP)		#1	7-682-561-09	SCREW +B 4X8	
3	4-302-555-01	BAND, BEADS WIRE		#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
4	3-291-137-02	COVER (SYS)		#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
5	3-291-136-02	COVER (REAR-HCD)		#6	7-685-232-19	SCREW +KTP 2.6X5 TYPE2 NON-SLIT	
6	3-294-314-01	LABEL (CONNECTION) (F200)		#7	7-682-247-09	SCREW +K 3X6	
6	3-294-315-01	LABEL (CONNECTION) (F500)		#8	7-685-872-09	SCREW +BVTT 3X8 (S)	
7	3-291-138-01	COVER (TERMINAL-HCD)					
8	3-291-159-01	SHEET (HOLE)					

## 7-2. FRONT PANEL SECTION

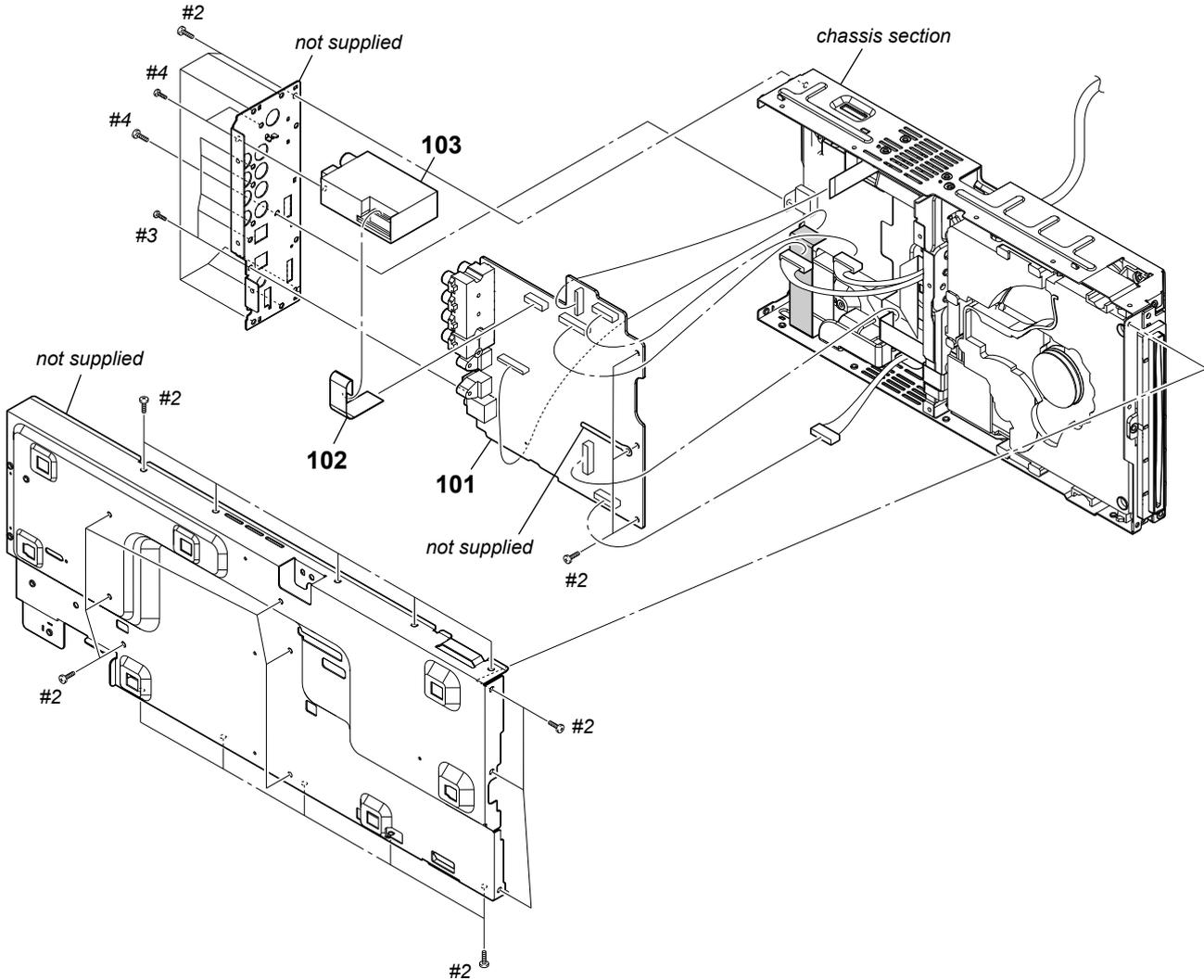
**Note:** This illustration is seen from the back.



**Note:** If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-087-053-01	+BVTP2.6 (3CR)		58	A-1547-635-A	FRONT PANEL ASSY (SERVICE) (F200)	
52	1-828-295-11	WIRE (FLAT TYPE) (7 CORE)		58	A-1547-647-A	PANEL ASSY, FRONT (SERVICE) (F500: CND)	
53	1-828-002-11	WIRE (FLAT TYPE) (17 CORE)		58	A-1547-648-A	PANEL ASSY, FRONT (SERVICE) (F500: RU, E3, E15, E32, EA, MX, SP, TW, KR, TH, AUS)	
54	A-1497-847-A	FL BOARD, COMPLETE		#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
55	3-291-132-01	BUTTON (EJECT)		#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
56	3-291-130-01	BUTTON (PLAY)					
57	3-291-131-01	BUTTON (POWER)					

## 7-3. MAIN SECTION

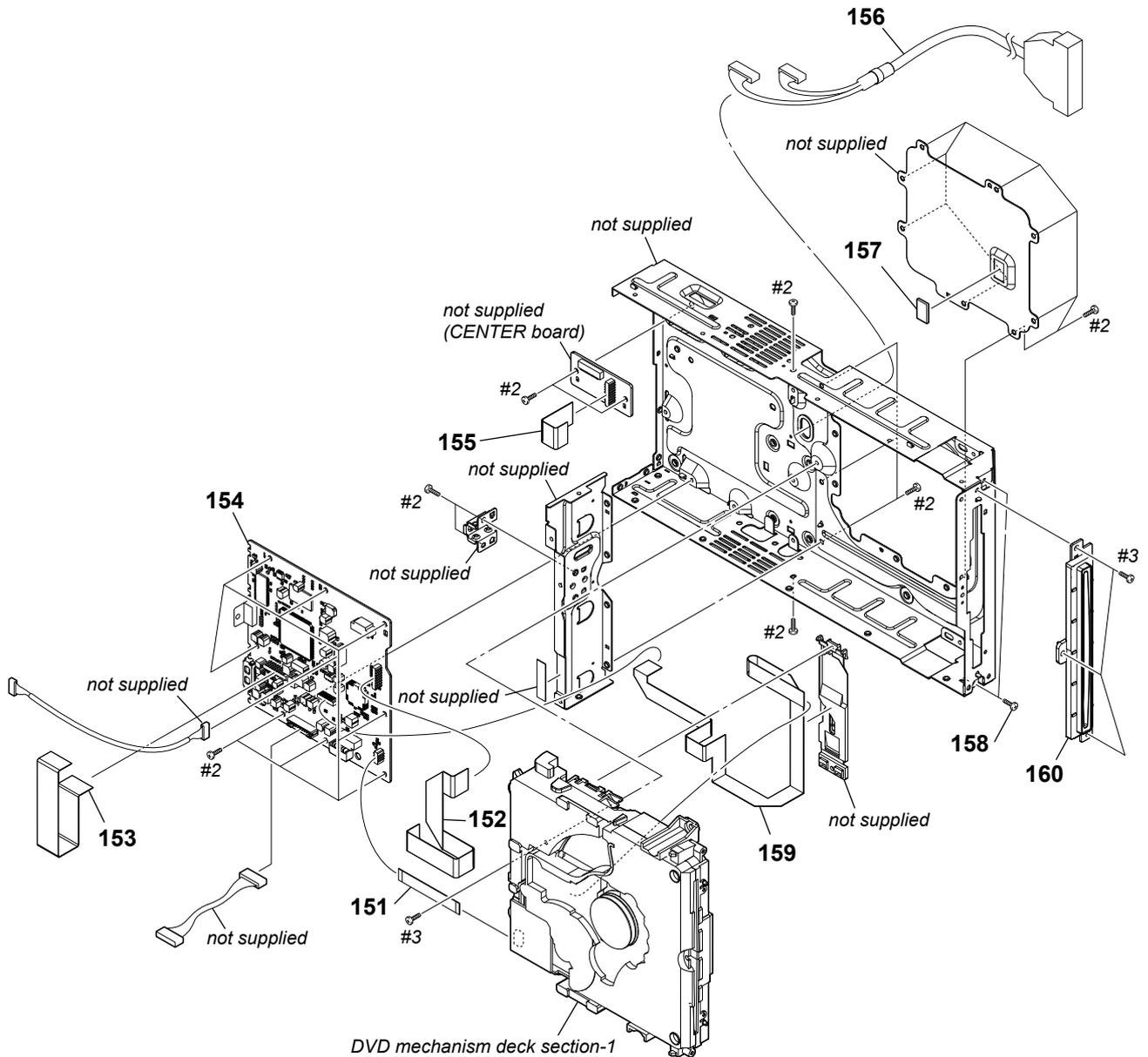


**Note:** If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
101	A-1497-844-A	MAIN BOARD, COMPLETE (F200: AEP, UK)	
101	A-1497-860-A	MAIN BOARD, COMPLETE (F200: SP, TH)	
101	A-1497-869-A	MAIN BOARD, COMPLETE (F500: RU)	
101	A-1497-875-A	MAIN BOARD, COMPLETE (F500: CND, E3, E15, E32, EA, MX, SP, TW, TH, AUS)	
101	A-1498-991-A	MAIN BOARD, COMPLETE (F500: KR)	
102	1-828-954-11	WIRE (FLAT TYPE) (9 CORE) (F200: SP, TH/F500: CND, E3, E15, E32, EA, MX, SP, TW, KR, TH, AUS)	
102	1-828-964-11	WIRE (FLAT TYPE) (11 CORE) (F200: AEP, UK/F500: RU)	

Ref. No.	Part No.	Description	Remark
103	1-693-768-11	TUNER (FM) (F200: AEP, UK/F500: RU)	
103	1-693-769-11	TUNER (FM) (F200: SP, TH/F500: E3, E15, E32, EA, MX, SP, TW, TH, AUS)	
103	1-693-770-11	TUNER (FM) (F500: CND)	
103	1-693-771-11	TUNER (FM) (F500: KR)	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#4	7-685-872-01	SCREW +BVTT 3X8 (S)	

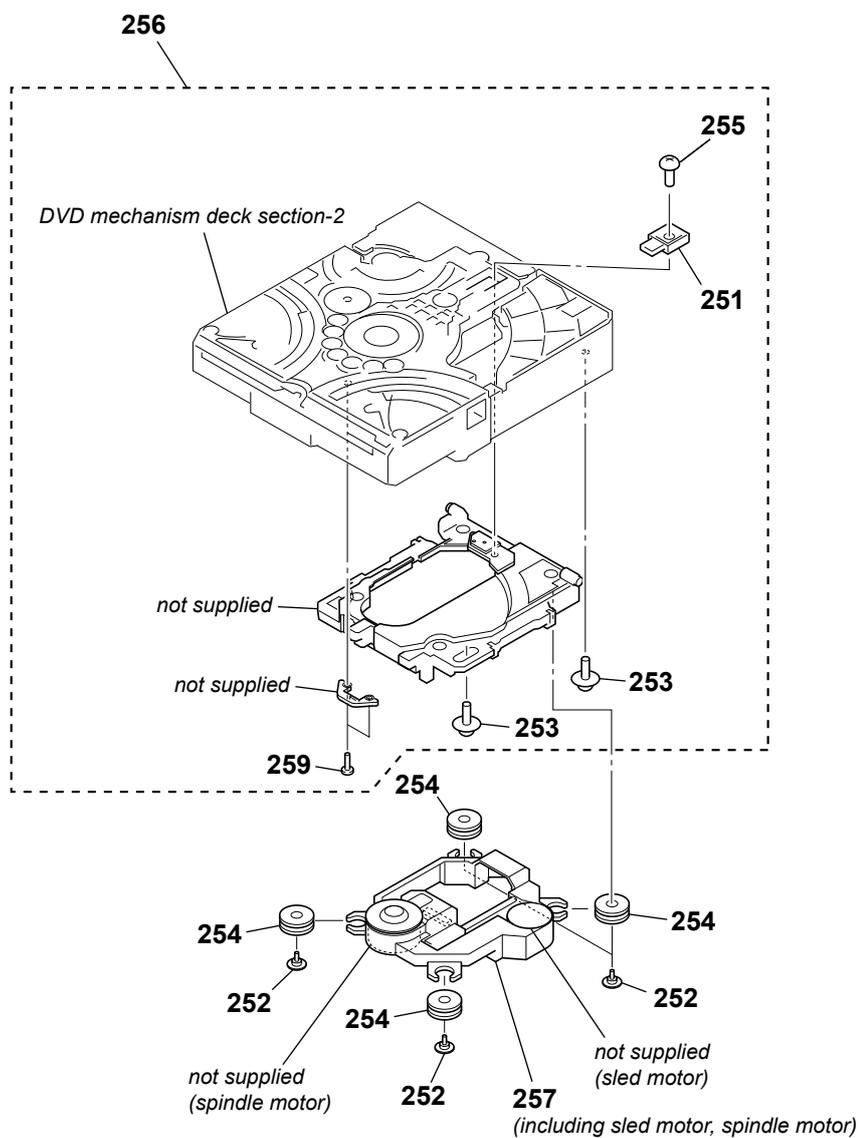
7-4. CHASSIS SECTION



**Note:** If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

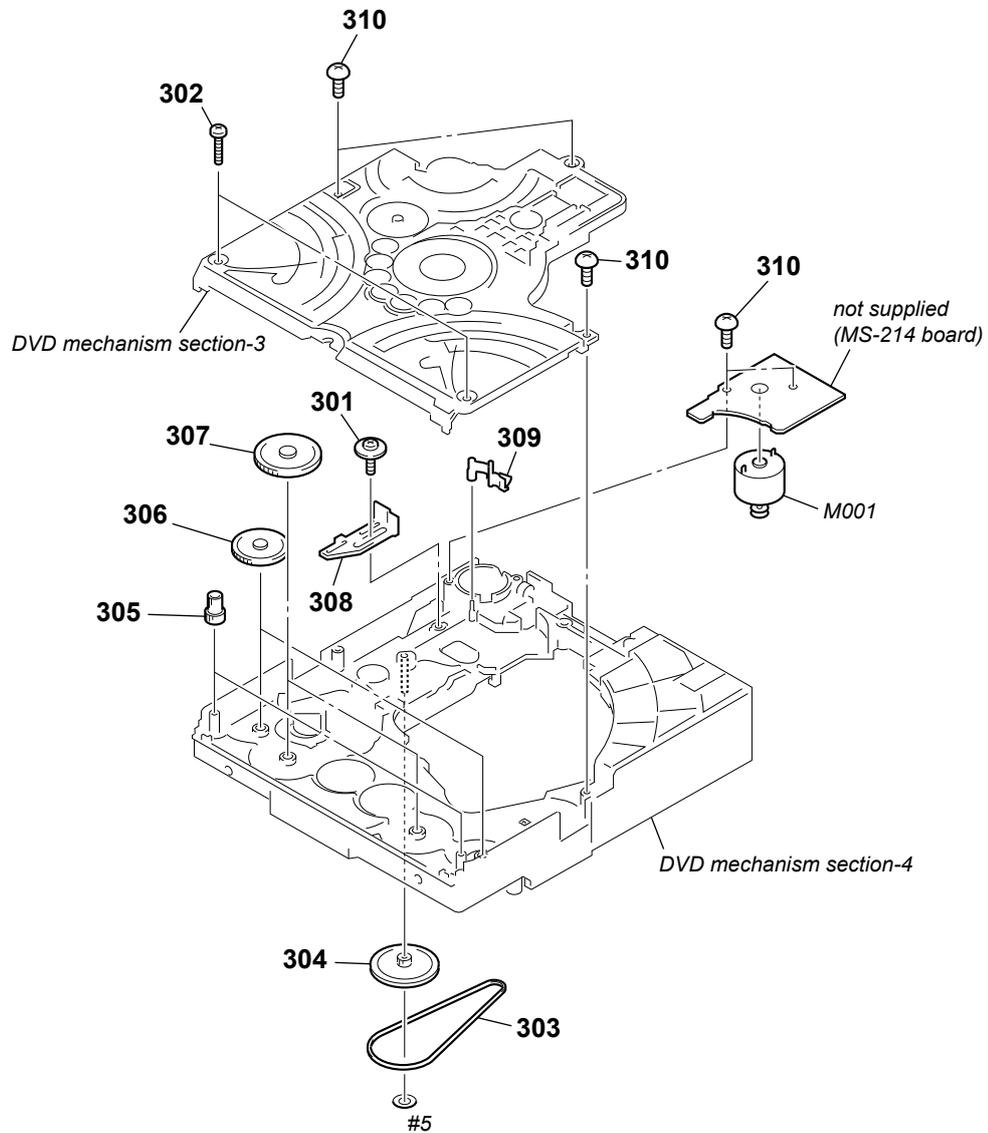
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	1-828-298-11	WIRE (FLAT TYPE) (7 CORE)		154	A-1545-122-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: AUS)
152	1-828-341-11	WIRE (FLAT TYPE) (15 CORE)		154	A-1545-123-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: E32)
153	1-828-360-11	WIRE (FLAT TYPE) (19 CORE)		154	A-1545-124-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: MX)
154	A-1545-114-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F200: AEP, UK)	155	1-828-347-11	WIRE (FLAT TYPE) (17 CORE)	
154	A-1545-115-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F200: SP, TH)	156	1-833-994-21	CABLE, SYSTEM	
154	A-1545-116-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: RU)	157	4-225-252-01	CUSHION (FOOT)	
154	A-1545-117-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: CND)	158	3-087-053-01	+BVTP2.6 (3CR)	
154	A-1545-118-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: SP, TW, TH)	159	1-828-253-51	WIRE (FLAT TYPE) (24 CORE)	
154	A-1545-120-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: KR)	160	A-1547-636-A	PANEL (SLOT) ASSY (SERVICE)	
154	A-1545-121-A	DMB-FIT BOARD, COMPLETE (for SERVICE)	(F500: E3, E15, EA)	#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
				#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

## 7-5. DVD MECHANISM DECK SECTION-1 (CDM86-DVBU101)



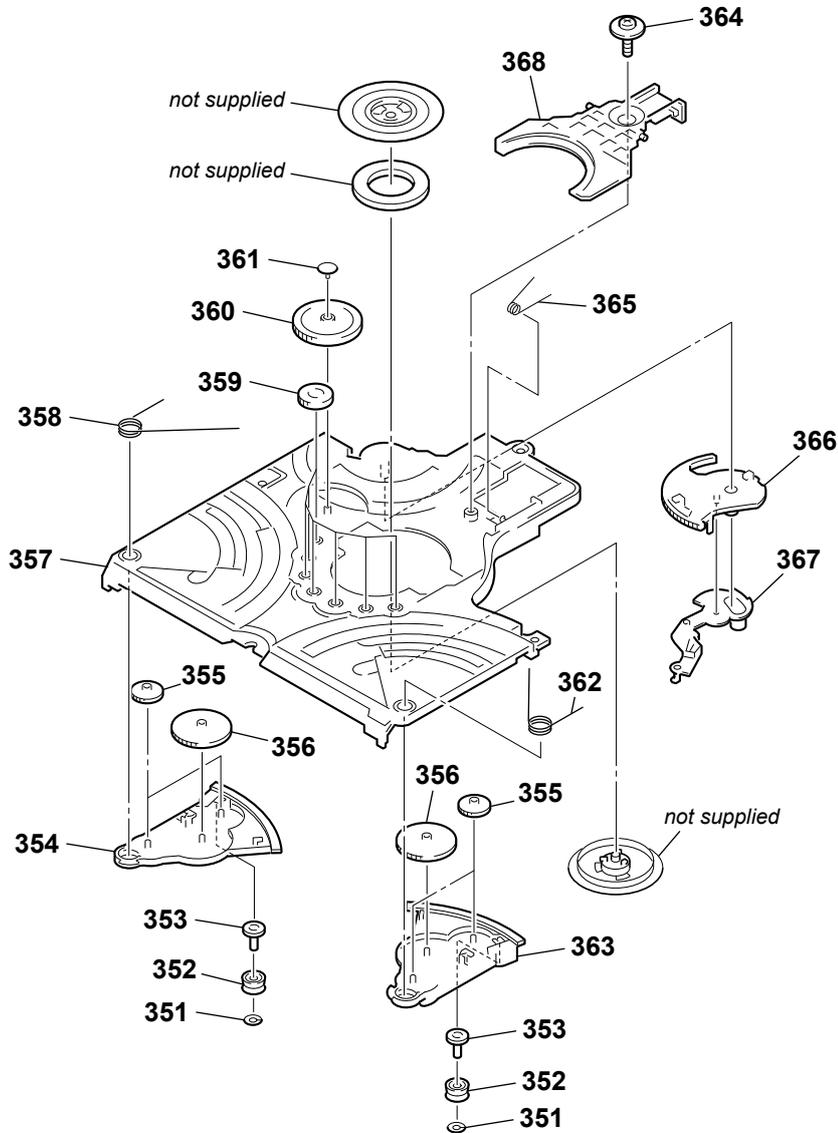
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-245-639-01	LEVER (CL UP2)		256	A-1114-646-A	MD (AU) ASSY	
252	3-087-599-01	INSULATOR SCREW		△ 257	8-820-322-04	OPTICAL PICK-UP BLOCK (KHM-313CAB/C2RP)	
253	3-088-752-01	FLOATING SCREW (+PTPWH M2.6)				(Including sled motor, spindle motor)	
254	2-634-618-01	INSULATOR		259	2-023-066-01	TAPPING +B 2X6	
255	2-023-068-01	TAPPING +B 2.6X8					

7-6. DVD MECHANISM DECK SECTION-2  
(CDM86-DVBU101)



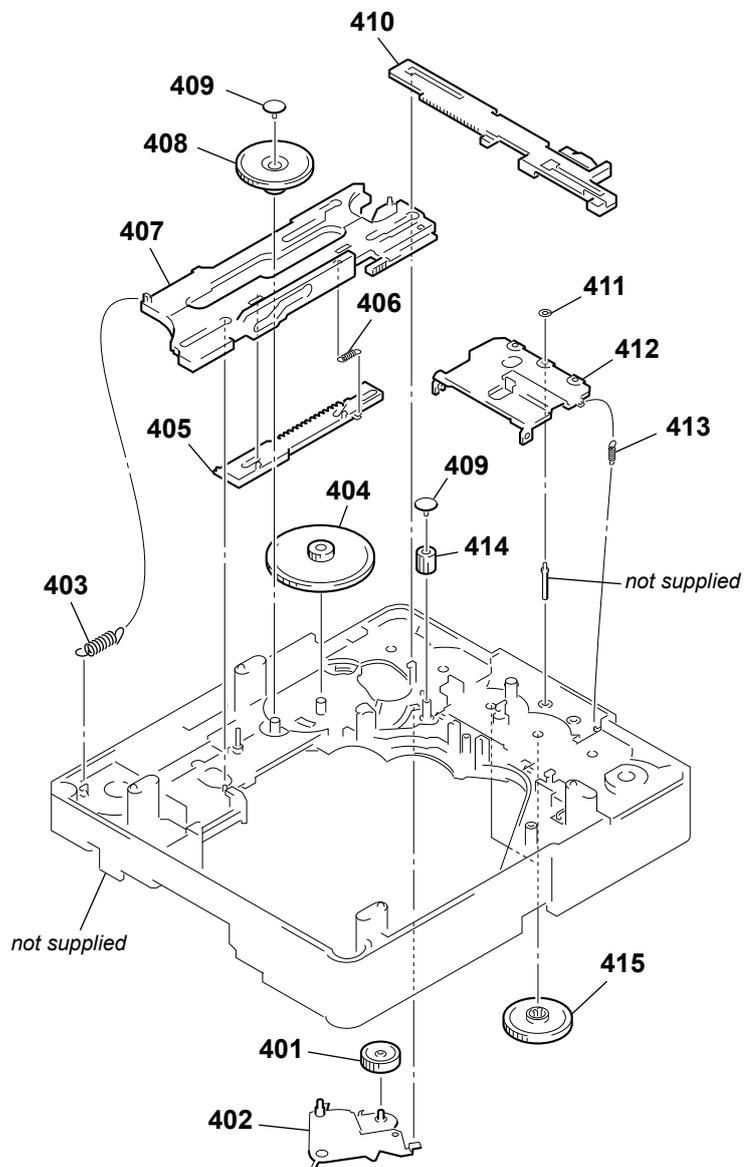
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	3-088-752-01	FLOATING SCREW (+PTPWH M2.6)		307	4-245-645-01	GEAR (IDL-E)	
302	2-023-648-01	TAPPING +B 2X10		308	4-246-203-01	LEVER (RELEASE)	
303	4-245-653-01	BELT (MOT)		309	4-245-630-01	LEVER (SW)	
304	4-245-662-02	PULLEY (GEAR)		310	2-023-068-01	TAPPING +B 2.6X8	
305	4-245-646-01	GEAR (IDL-F)		M001	X-4955-496-1	MOTOR (PULLEY) ASSY (LOADING)	
306	4-245-644-01	GEAR (IDL-D)		#5	7-623-921-01	WASHER 1.7, NYLON	

7-7. DVD MECHANISM DECK SECTION-3  
(CDM86-DVBU101)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-245-627-01	WASHER (6-2.7-0.4)		361	4-245-640-01	GEAR (CAP)	
352	4-245-637-11	ROLLER, RUBBER		362	4-245-632-11	SPR-T (LOADING-L)	
353	4-245-649-01	GEAR (IDL-I)		363	4-245-656-11	LEVER (LOADING-L)	
354	4-245-657-11	LEVER (LOADING-R)		364	3-088-752-01	FLOATING SCREW (+PTPWH M2.6)	
355	4-245-647-01	GEAR (IDL-G)		365	4-245-636-01	SPR-T CL DOWN	
356	4-245-648-01	GEAR (IDL-H)		366	4-245-658-11	LEVER (DISC STOP)	
357	4-245-655-01	CHASSIS (TOP)		367	4-245-659-11	LEVER (DISC SENSOR)	
358	4-245-631-11	SPT-T (LOADING-R)		368	2-023-065-02	LEVER, CL UP 1	
359	4-245-650-01	GEAR (IDL-J)					
360	4-245-651-11	GEAR (IDL-L)					

7-8. DVD MECHANISM DECK SECTION-4  
(CDM86-DVBU101)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
401	4-245-643-01	GEAR (IDL-C)		409	4-245-640-01	GEAR (CAP)	
402	X-4955-483-1	LEVER (GEAR LOADING) ASSY		410	4-245-628-01	LEVER (BU LOCK)	
403	2-515-536-01	SPRING (DIR), TENSION COIL		411	4-248-206-01	WASHER (3-1-0.4)	
404	4-245-642-01	GEAR (IDL-B)		412	4-245-624-01	LEVER, CLOSE	
405	4-245-814-01	LEVER (DIR FIRST)		413	4-245-635-01	SPR-E LEVER CLOSE	
406	2-515-534-01	SPRING (DIR BACK), TENSION COIL		414	4-245-629-01	GEAR (BU LOCK)	
407	4-245-660-11	LEVER (DIR)		415	4-245-644-01	GEAR (IDL-D)	
408	4-245-641-01	GEAR (IDL-A)					

SECTION 8  
ELECTRICAL PARTS LIST

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.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS  
uF: μF
- COILS  
uH: μH
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- SEMICONDUCTORS  
In each case, u: μ, for example:  
uA. . . : μA. . . , uPA. . . , μPA. . . ,  
uPB. . . : μPB. . . , uPC. . . , μPC. . . ,  
uPD. . . : μPD. . .
- Abbreviation  
AUS : Australian model  
CND : Canadian model  
E3 : 240V AC area in E model  
E15 : Iranian model  
E32 : Latin American model  
(110 – 240V AC area)  
EA : Saudi Arabia model  
KR : Korean model  
MX : Mexican model  
RU : Russian model  
SP : Singapore model  
TH : Thai model  
TW : Taiwan model

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

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.

The components identified by mark □ contain confidential information.  
Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque □ contiennent des informations confidentielles.  
Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		CENTER BOARD *****		C117	1-128-994-21	ELECT CHIP 47uF 20% 10V	
		< CONNECTOR >		C118	1-128-994-21	ELECT CHIP 47uF 20% 10V	
CN851	1-784-869-51	CONNECTOR, FFC (LIF (NON-ZIF)) 17P		C119	1-128-994-21	ELECT CHIP 47uF 20% 10V	
CN852	1-784-376-51	CONNECTOR, FFC/FPC 17P					
*****							
△	A-1545-114-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F200: AEP, UK)		C120	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
△	A-1545-115-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F200: SP, TH)		C121	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
△	A-1545-116-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: RU)		C122	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
△	A-1545-117-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: CND)		C123	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
△	A-1545-118-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: SP, TW, TH)		C124	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
△	A-1545-120-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: KR)		C125	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
△	A-1545-121-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: E3, E15)		C126	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
△	A-1545-122-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: AUS)		C127	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
△	A-1545-123-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: E32)		C129	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V	
△	A-1545-124-A	DMB-FIT BOARD, COMPLETE (for SERVICE) (F500: MX)		C130	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
		*****		C132	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
		< CAPACITOR >		C133	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C101	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C135	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V	
C102	1-165-908-11	CERAMIC CHIP 1uF 10% 10V		C136	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C105	1-128-994-21	ELECT CHIP 47uF 20% 10V		C137	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C106	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C138	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C108	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C139	1-162-919-11	CERAMIC CHIP 22PF 5% 50V	
C109	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C140	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C111	1-126-206-11	ELECT CHIP 100uF 20% 6.3V		C141	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C112	1-128-994-21	ELECT CHIP 47uF 20% 10V		C144	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C113	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C145	1-124-779-00	ELECT CHIP 10uF 20% 16V	
C114	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C146	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C115	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C147	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C116	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C148	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
				C149	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C151	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
				C152	1-162-916-11	CERAMIC CHIP 12PF 5% 50V	
				C153	1-162-917-11	CERAMIC CHIP 15PF 5% 50V	
				C154	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C155	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C156	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C158	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C159	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
				C160	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C161	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C162	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
				C163	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C164	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C1108	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C165	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1109	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C169	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1110	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C170	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	C1112	1-128-414-21	ELECT CHIP	220uF	20%	6.3V
C171	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1114	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C172	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1115	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C174	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C1116	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C175	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C1117	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C176	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C1118	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C177	1-128-994-21	ELECT CHIP	47uF	20%	10V	C1119	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C179	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C180	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1161	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C181	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C1502	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C182	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	C1503	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C183	1-128-934-11	CERAMIC CHIP	0.33uF	20%	10V	C3001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C184	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V						(F500)
C186	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	C3801	1-126-193-11	ELECT CHIP	1uF	20%	50V
C187	1-128-994-21	ELECT CHIP	47uF	20%	10V	C3803	1-126-193-11	ELECT CHIP	1uF	20%	50V
C190	1-128-994-21	ELECT CHIP	47uF	20%	10V	C3804	1-126-193-11	ELECT CHIP	1uF	20%	50V
C191	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3808	1-128-994-21	ELECT CHIP	47uF	20%	10V
C192	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C3810	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C193	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	C3811	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C195	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	C3815	1-126-193-11	ELECT CHIP	1uF	20%	50V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3816	1-126-193-11	ELECT CHIP	1uF	20%	50V
C198	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3818	1-126-193-11	ELECT CHIP	1uF	20%	50V
C199	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C3819	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C3820	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C205	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	C3901	1-128-994-21	ELECT CHIP	47uF	20%	10V
C206	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	C9972	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V			< CONNECTOR >			
C209	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	CN101	1-815-763-32	CONNECTOR, FFC/FPC 24P			
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN106	1-770-161-21	PIN, CONNECTOR (PC BOARD) 6P			
C211	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	CN110	1-784-374-51	CONNECTOR, FFC/FPC 15P			
C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	* CN201	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P			
C213	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN202	1-784-366-51	CONNECTOR, FFC/FPC 7P			
C214	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V						
C215	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN602	1-816-296-21	PIN, CONNECTOR (PC BOARD) 9P			
C217	1-126-204-11	ELECT CHIP	47uF	20%	16V	CN701	1-820-735-31	HDMI CONNECTOR (HDMI OUT)			
C218	1-124-779-00	ELECT CHIP	10uF	20%	16V	CN1101	1-779-993-11	PIN, CONNECTOR (PWB) 5P			
C219	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	CN3802	1-817-615-21	CONNECTOR, SQUARE TYPE (RECE) (DMPORT)			
C220	1-124-779-00	ELECT CHIP	10uF	20%	16V	CN4301	1-778-691-51	CONNECTOR, FFC/FPC 19P			
C221	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V			< DIODE >			
C222	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V						
C223	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D1101	6-501-749-01	DIODE MAZ8082G0LS0			
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D1102	6-501-740-01	DIODE MAZ8068G0LS0			
C225	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D1103	6-501-740-01	DIODE MAZ8068G0LS0			
C226	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D9712	8-719-060-48	DIODE RB751V-40TE-17			
C233	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V			< FERRITE BEAD >			
C602	1-128-994-21	ELECT CHIP	47uF	20%	10V	FB106	1-469-324-21	FERRITE, EMI (SMD) (2012)			
C603	1-128-994-21	ELECT CHIP	47uF	20%	10V	FB107	1-469-324-21	FERRITE, EMI (SMD) (2012)			
C725	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB108	1-469-324-21	FERRITE, EMI (SMD) (2012)			
C727	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB109	1-469-324-21	FERRITE, EMI (SMD) (2012)			
C728	1-128-994-21	ELECT CHIP	47uF	20%	10V	FB111	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C729	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	FB112	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C730	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	FB115	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C731	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	FB116	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C732	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB117	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C733	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V	FB118	1-469-670-21	FERRITE, EMI (SMD) (2012)			
C734	1-128-994-21	ELECT CHIP	47uF	20%	10V	FB124	1-469-324-21	FERRITE, EMI (SMD) (2012)			
C1100	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB601	1-469-324-21	FERRITE, EMI (SMD) (2012)			

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DMB-FIT

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
FB602	1-469-324-21	FERRITE, EMI (SMD) (2012)		Q9724	6-551-699-01	TRANSISTOR	ISA1602AM1TP-1EF
FB603	1-469-324-21	FERRITE, EMI (SMD) (2012)		Q9726	8-729-620-13	TRANSISTOR	2SC4154TP-1EF
FB604	1-469-324-21	FERRITE, EMI (SMD) (2012)		Q9728	8-729-620-13	TRANSISTOR	2SC4154TP-1EF
FB605	1-469-324-21	FERRITE, EMI (SMD) (2012)		Q9729	8-729-027-43	TRANSISTOR	DTC114EKA-T146
FB606	1-469-324-21	FERRITE, EMI (SMD) (2012)		< RESISTOR >			
FB1101	1-469-324-21	FERRITE, EMI (SMD) (2012)		R101	1-216-809-11	METAL CHIP	100 5% 1/10W
FB1103	1-469-324-21	FERRITE, EMI (SMD) (2012)		R102	1-216-864-11	SHORT CHIP	0
FB1104	1-469-379-11	FERRITE, EMI (SMD) (2012)		R103	1-218-864-11	METAL CHIP	5.1K 0.5% 1/10W
FB1120	1-469-118-21	FERRITE, EMI (SMD) (1608)		R105	1-216-833-11	METAL CHIP	10K 5% 1/10W
FB1121	1-469-118-21	FERRITE, EMI (SMD) (1608)		R106	1-216-833-11	METAL CHIP	10K 5% 1/10W
FB1122	1-469-118-21	FERRITE, EMI (SMD) (1608)		R107	1-216-833-11	METAL CHIP	10K 5% 1/10W
FB1124	1-469-118-21	FERRITE, EMI (SMD) (1608)		R108	1-216-857-11	METAL CHIP	1M 5% 1/10W
FB1125	1-469-118-21	FERRITE, EMI (SMD) (1608)		R109	1-216-864-11	SHORT CHIP	0
FB3901	1-469-324-21	FERRITE, EMI (SMD) (2012)		R110	1-216-841-11	METAL CHIP	47K 5% 1/10W
FB3902	1-469-324-21	FERRITE, EMI (SMD) (2012)		R111	1-216-809-11	METAL CHIP	100 5% 1/10W
< FILTER >				R112	1-211-977-11	METAL CHIP	22 0.5% 1/10W
FL601	1-234-494-21	FILTER, EMI REMOVAL (SMD)		R113	1-211-977-11	METAL CHIP	22 0.5% 1/10W
FL602	1-233-893-21	FILTER, CHIP EMI		R114	1-216-845-11	METAL CHIP	100K 5% 1/10W
FL603	1-234-494-21	FILTER, EMI REMOVAL (SMD)		R115	1-211-977-11	METAL CHIP	22 0.5% 1/10W
FL3901	1-234-494-21	FILTER, EMI REMOVAL (SMD)		R116	1-216-821-11	METAL CHIP	1K 5% 1/10W
< IC >				R117	1-216-841-11	METAL CHIP	47K 5% 1/10W
IC101	6-711-269-01	IC CXD9894R (EXCEPT F500: CND)		R118	1-216-801-11	METAL CHIP	22 5% 1/10W
IC101	6-711-557-01	IC CXD9915R (F500: CND)		R120	1-216-801-11	METAL CHIP	22 5% 1/10W
IC102	(Not supplied)	IC ES29LV320EB70TG-SHE1-0802CE (F200: AEP, UK)		R121	1-216-801-11	METAL CHIP	22 5% 1/10W
IC102	(Not supplied)	IC ES29LV320EB70TG-SHE1-0802GA (F200: SP, TH)		R123	1-216-864-11	SHORT CHIP	0
IC102	(Not supplied)	IC ES29LV320EB70TG-SHE2-0802UC (F500: CND, E32, MX)		R124	1-216-841-11	METAL CHIP	47K 5% 1/10W
IC102	(Not supplied)	IC ES29LV320EB70TG-SHE2-0802CE (F500: RU, E3, E15, EA, AUS)		R132	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC102	(Not supplied)	IC ES29LV320EB70TG-SHE2-0802GA (F500: SP, TW, KR, TH)		R133	1-216-864-11	SHORT CHIP	0
IC103	(Not supplied)	IC S-24CS64A01-J8T1G		R135	1-216-821-11	METAL CHIP	1K 5% 1/10W
IC104	6-709-737-01	IC M12L64164A-7T (G)		R136	1-216-835-11	METAL CHIP	15K 5% 1/10W
IC105	6-702-302-01	IC TK11133CSCL-G		R139	1-216-864-11	SHORT CHIP	0
IC107	6-702-302-01	IC TK11133CSCL-G		R140	1-216-821-11	METAL CHIP	1K 5% 1/10W
IC110	6-707-739-01	IC MM1661JTR		R141	1-216-855-11	METAL CHIP	680K 5% 1/10W
IC201	6-704-524-01	IC FAN8036L		R142	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC705	8-759-592-47	IC TC7SZ08FU (TE85R)		R151	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC707	6-705-337-01	IC TK11150CSCL-G		R152	1-216-864-11	SHORT CHIP	0
IC708	6-702-302-01	IC TK11133CSCL-G		R153	1-216-864-11	SHORT CHIP	0
IC3001	8-759-592-47	IC TC7SZ08FU (TE85R) (F500)		R154	1-216-864-11	SHORT CHIP	0
IC3801	8-759-710-97	IC NJM4565M-D		R155	1-216-864-11	SHORT CHIP	0
< COIL >				R156	1-216-809-11	METAL CHIP	100 5% 1/10W
* L701	1-813-308-11	COMMON MODE CHOKE		R171	1-216-809-11	METAL CHIP	100 5% 1/10W
* L702	1-813-308-11	COMMON MODE CHOKE		R175	1-216-864-11	SHORT CHIP	0
* L703	1-813-308-11	COMMON MODE CHOKE		R179	1-216-864-11	SHORT CHIP	0
* L704	1-813-308-11	COMMON MODE CHOKE		R180	1-216-864-11	SHORT CHIP	0
L1101	1-456-799-11	COIL, COMMON MODE CHOKE		R189	1-218-827-11	METAL CHIP	150 0.5% 1/10W
L3801	1-469-525-91	INDUCTOR 10uH		R190	1-218-827-11	METAL CHIP	150 0.5% 1/10W
< TRANSISTOR >				R191	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q101	6-550-008-01	FET UM6K1N-TN		R193	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q102	6-550-653-01	TRANSISTOR QST8TR		R195	1-218-827-11	METAL CHIP	150 0.5% 1/10W
Q103	8-729-027-52	TRANSISTOR DTC124EKA-T146		R197	1-218-827-11	METAL CHIP	150 0.5% 1/10W
Q105	8-729-028-27	FET 2SK2009 (TE85L)		R198	1-216-809-11	METAL CHIP	100 5% 1/10W
Q701	6-550-008-01	FET UM6K1N-TN		R204	1-216-822-11	METAL CHIP	1.2K 5% 1/10W
				R205	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R206	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R207	1-216-826-11	METAL CHIP	2.7K 5% 1/10W
				R208	1-216-839-11	METAL CHIP	33K 5% 1/10W
				R209	1-216-839-11	METAL CHIP	33K 5% 1/10W
				R210	1-216-841-11	METAL CHIP	47K 5% 1/10W
				R212	1-216-833-11	METAL CHIP	10K 5% 1/10W

**Note:** IC102 and IC103 cannot exchange with single. When IC102 and IC103 are damaged, exchange the entire mounted board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R213	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R1123	1-216-864-11	SHORT CHIP	0
R214	1-216-835-11	METAL CHIP	15K 5% 1/10W	R1127	1-216-833-11	METAL CHIP	10K 5% 1/10W
R215	1-216-834-11	METAL CHIP	12K 5% 1/10W	R1128	1-216-833-11	METAL CHIP	10K 5% 1/10W
R216	1-216-834-11	METAL CHIP	12K 5% 1/10W	R1129	1-216-845-11	METAL CHIP	100K 5% 1/10W
R219	1-216-838-11	METAL CHIP	27K 5% 1/10W	R1133	1-216-864-11	SHORT CHIP	0
R220	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1134	1-216-864-11	SHORT CHIP	0
R221	1-218-889-11	METAL CHIP	56K 0.5% 1/10W	R1138	1-216-864-11	SHORT CHIP	0
R222	1-216-839-11	METAL CHIP	33K 5% 1/10W	R1139	1-216-864-11	SHORT CHIP	0
R223	1-218-895-11	METAL CHIP	100K 0.5% 1/10W	R1140	1-216-864-11	SHORT CHIP	0
R224	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1141	1-216-864-11	SHORT CHIP	0
R225	1-218-895-11	METAL CHIP	100K 0.5% 1/10W	R1142	1-216-864-11	SHORT CHIP	0
R226	1-218-889-11	METAL CHIP	56K 0.5% 1/10W	R1143	1-216-864-11	SHORT CHIP	0
R227	1-216-864-11	SHORT CHIP	0	R1150	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R228	1-216-864-11	SHORT CHIP	0	R1151	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R230	1-218-893-11	METAL CHIP	82K 0.5% 1/10W	R1152	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R231	1-218-875-11	METAL CHIP	15K 0.5% 1/10W	R1155	1-216-833-11	METAL CHIP	10K 5% 1/10W
R232	1-218-877-11	METAL CHIP	18K 0.5% 1/10W	R1167	1-216-864-11	SHORT CHIP	0
R233	1-218-883-11	METAL CHIP	33K 0.5% 1/10W	R1168	1-216-813-11	METAL CHIP	220 5% 1/10W
R234	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1171	1-216-864-11	SHORT CHIP	0
R236	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1176	1-216-864-11	SHORT CHIP	0
R237	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1177	1-216-864-11	SHORT CHIP	0
R238	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1178	1-216-821-11	METAL CHIP	1K 5% 1/10W
R239	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1179	1-216-809-11	METAL CHIP	100 5% 1/10W
R243	1-216-805-11	METAL CHIP	47 5% 1/10W	R1180	1-216-809-11	METAL CHIP	100 5% 1/10W
R246	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R1182	1-216-864-11	SHORT CHIP	0
R247	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1184	1-216-809-11	METAL CHIP	100 5% 1/10W
R730	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	R1185	1-216-809-11	METAL CHIP	100 5% 1/10W
R742	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1187	1-216-805-11	METAL CHIP	47 5% 1/10W
R743	1-216-864-11	SHORT CHIP	0 (F500)	R1188	1-216-864-11	SHORT CHIP	0
R744	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R1200	1-216-864-11	SHORT CHIP	0
R747	1-216-864-11	SHORT CHIP	0	R1202	1-218-859-11	METAL CHIP	3.3K 0.5% 1/10W
R748	1-216-864-11	SHORT CHIP	0	R1746	1-216-864-11	SHORT CHIP	0
R749	1-216-824-11	METAL CHIP	1.8K 5% 1/10W	R2505	1-216-864-11	SHORT CHIP	0
R750	1-216-824-11	METAL CHIP	1.8K 5% 1/10W	R3001	1-216-833-11	METAL CHIP	10K 5% 1/10W
R751	1-216-864-11	SHORT CHIP	0	R3002	1-216-833-11	METAL CHIP	10K 5% 1/10W
R752	1-216-864-11	SHORT CHIP	0	R3003	1-216-833-11	METAL CHIP	10K 5% 1/10W
R753	1-216-864-11	SHORT CHIP	0	R3004	1-216-833-11	METAL CHIP	10K 5% 1/10W
R781	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	R3005	1-216-864-11	SHORT CHIP	0 (F200)
R782	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	R3803	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R783	1-216-864-11	SHORT CHIP	0	R3804	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R784	1-216-864-11	SHORT CHIP	0	R3805	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R785	1-216-864-11	SHORT CHIP	0	R3806	1-218-285-11	METAL CHIP	75 5% 1/10W
R786	1-216-864-11	SHORT CHIP	0	R3807	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R901	1-216-864-11	SHORT CHIP	0 (F200)	R3808	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R902	1-216-864-11	SHORT CHIP	0 (F500)	R3810	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R911	1-216-864-11	SHORT CHIP	0 (F500: CND)	R3811	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R912	1-216-864-11	SHORT CHIP	0	R3813	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R913	1-216-864-11	SHORT CHIP	0	R3814	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R914	1-216-864-11	SHORT CHIP	0 (F500: E32, MX)	R3815	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R1101	1-218-841-11	METAL CHIP	560 0.5% 1/10W	R3816	1-216-809-11	METAL CHIP	100 5% 1/10W
R1102	1-218-827-11	METAL CHIP	150 0.5% 1/10W	R3817	1-216-809-11	METAL CHIP	100 5% 1/10W
R1104	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R4701	1-216-864-11	SHORT CHIP	0
R1108	1-216-864-11	SHORT CHIP	0	R4702	1-216-864-11	SHORT CHIP	0
R1110	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	R4703	1-216-864-11	SHORT CHIP	0
R1114	1-216-801-11	METAL CHIP	22 5% 1/10W	R4704	1-216-864-11	SHORT CHIP	0
R1115	1-216-864-11	SHORT CHIP	0	R4705	1-216-864-11	SHORT CHIP	0
R1121	1-216-864-11	SHORT CHIP	0	R9918	1-216-821-11	METAL CHIP	1K 5% 1/10W
				R9920	1-216-864-11	SHORT CHIP	0
				R9922	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R9924	1-216-821-11	METAL CHIP	1K 5% 1/10W

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DMB-FIT FL

Ref. No.	Part No.	Description	Remark
R9928	1-216-837-11	METAL CHIP 22K 5%	1/10W
R9929	1-216-837-11	METAL CHIP 22K 5%	1/10W
R9934	1-216-833-11	METAL CHIP 10K 5%	1/10W
R9935	1-216-864-11	SHORT CHIP 0	
R9941	1-216-838-11	METAL CHIP 27K 5%	1/10W
R9945	1-216-813-11	METAL CHIP 220 5%	1/10W
< COMPOSITION CIRCUIT BLOCK >			
RB103	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB104	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB105	1-234-944-21	RES, NETWORK 47 (1005X4)	
RB106	1-234-944-21	RES, NETWORK 47 (1005X4)	
RB107	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB108	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB109	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB110	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB111	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB112	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB113	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB114	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB115	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB121	1-234-378-11	RES, NETWORK 10K (1005X4)	
< VIBRATOR >			
X101	1-814-103-21	VIBRATOR, CRYSTAL (27MHz)	
*****			
A-1497-874-A	FL BOARD, COMPLETE	*****	
< CAPACITOR >			
C801	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C802	1-117-681-11	ELECT CHIP 100uF 20%	16V
C805	1-117-681-11	ELECT CHIP 100uF 20%	16V
C808	1-163-037-11	CERAMIC CHIP 0.022uF 10%	50V
C821	1-115-339-11	CERAMIC CHIP 0.1uF 10%	50V
C822	1-128-405-11	ELECT CHIP 22uF 20%	50V
C823	1-115-339-11	CERAMIC CHIP 0.1uF 10%	50V
C824	1-128-405-11	ELECT CHIP 22uF 20%	50V
C825	1-162-923-11	CERAMIC CHIP 47PF 5%	50V
C826	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C827	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C828	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
C829	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C830	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C831	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C832	1-117-681-11	ELECT CHIP 100uF 20%	16V
C837	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
C839	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
C840	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C841	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C843	1-117-681-11	ELECT CHIP 100uF 20%	16V
< CONNECTOR >			
CN806	1-784-869-51	CONNECTOR, FFC (LIF (NON-ZIF)) 17P	
CN807	1-784-859-51	CONNECTOR, FFC (LIF (NON-ZIF)) 7P	
CN808	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
< DIODE >			
D801	6-501-817-01	DIODE MA2J1110GLS0	

Ref. No.	Part No.	Description	Remark
D802	6-501-817-01	DIODE MA2J1110GLS0	
D803	6-501-817-01	DIODE MA2J1110GLS0	
D804	6-501-817-01	DIODE MA2J1110GLS0	
D805	6-501-738-01	DIODE MAZ8062GMLS0	
D821	6-501-534-01	LED NSSW100BT (FRONT PAMEL BUTTON ILLUMINATION)	
D823	6-501-534-01	LED NSSW100BT (FRONT PAMEL BUTTON ILLUMINATION)	
D825	6-501-534-01	LED NSSW100BT (FRONT PAMEL BUTTON ILLUMINATION)	
< IC >			
IC801	6-600-684-01	IC NJL22H400B	
IC802	6-705-899-01	IC ML9208-03MBZ03B	
IC803	6-702-302-01	IC TK11133CSCL-G	
< COIL >			
L801	1-469-527-91	INDUCTOR 47uH	
L802	1-414-754-11	INDUCTOR 10uH	
< FLUORESCENT INDICATOR TUBE >			
ND801	1-519-996-11	INDICATOR TUBE, FLUORESCENT	
< TRANSISTOR >			
Q801	6-550-065-01	TRANSISTOR CPH5504-TL-E	
Q802	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q821	6-550-260-01	TRANSISTOR RT1N237M-TP-1	
< RESISTOR >			
R801	1-216-805-11	METAL CHIP 47 5%	1/10W
R804	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R805	1-216-821-11	METAL CHIP 1K 5%	1/10W
R806	1-216-845-11	METAL CHIP 100K 5%	1/10W
R807	1-216-809-11	METAL CHIP 100 5%	1/10W
R808	1-216-809-11	METAL CHIP 100 5%	1/10W
R809	1-216-809-11	METAL CHIP 100 5%	1/10W
R810	1-216-809-11	METAL CHIP 100 5%	1/10W
R811	1-216-839-11	METAL CHIP 33K 5%	1/10W
R812	1-216-833-11	METAL CHIP 10K 5%	1/10W
R813	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
R814	1-216-809-11	METAL CHIP 100 5%	1/10W
R815	1-216-809-11	METAL CHIP 100 5%	1/10W
R818	1-216-817-11	METAL CHIP 470 5%	1/10W
R819	1-216-845-11	METAL CHIP 100K 5%	1/10W
R821	1-216-817-11	METAL CHIP 470 5%	1/10W
R822	1-216-817-11	METAL CHIP 470 5%	1/10W
R825	1-216-821-11	METAL CHIP 1K 5%	1/10W
R826	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R827	1-216-821-11	METAL CHIP 1K 5%	1/10W
R828	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R829	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R830	1-216-817-11	METAL CHIP 470 5%	1/10W
R831	1-216-817-11	METAL CHIP 470 5%	1/10W
< SWITCH >			
S821	1-762-875-21	SWITCH, KEYBOARD (▶)	
S822	1-762-875-21	SWITCH, KEYBOARD (▣)	
S831	1-762-875-21	SWITCH, KEYBOARD (■)	
S832	1-762-875-21	SWITCH, KEYBOARD (◀◀)	
S833	1-762-875-21	SWITCH, KEYBOARD (▶▶)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S834	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)		C104	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
		< TRANSFORMER >		C107	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
T801	1-445-231-11	TRANSFORMER, DC-DC CONVERTER		C111	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
*****				C112	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
		KEY-L BOARD		C201	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
		*****		C202	1-128-394-11	ELECT CHIP 220uF 20%	10V
		< CONNECTOR >		C203	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
CN871	1-784-859-51	CONNECTOR, FFC (LIF (NON-ZIF)) 7P		C204	1-162-921-11	CERAMIC CHIP 33PF 5%	50V
		< LED >		C205	1-162-922-11	CERAMIC CHIP 39PF 5%	50V
D871	6-501-052-02	LED CL-197HB1-D-T (AUTO) (F200)		C206	1-128-394-11	ELECT CHIP 220uF 20%	10V
D871	6-501-052-02	LED CL-197HB1-D-T (A.F.D STD) (F500)		C207	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
D873	6-501-052-02	LED CL-197HB1-D-T (WIDE STAGE) (F200)		C208	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
D873	6-501-052-02	LED CL-197HB1-D-T (D.C.S.) (F500)		C209	1-128-394-11	ELECT CHIP 220uF 20%	10V
		< TRANSISTOR >		C210	1-124-779-00	ELECT CHIP 10uF 20%	16V
Q871	6-550-260-01	TRANSISTOR RT1N237M-TP-1		C211	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
Q872	6-550-260-01	TRANSISTOR RT1N237M-TP-1		C212	1-124-779-00	ELECT CHIP 10uF 20%	16V
		< RESISTOR >		C213	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R871	1-216-821-11	METAL CHIP 1K 5% 1/10W		C214	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R872	1-216-821-11	METAL CHIP 1K 5% 1/10W		C215	1-126-193-11	ELECT CHIP 1uF 20%	50V
		< SWITCH >		C216	1-124-779-00	ELECT CHIP 10uF 20%	16V
S871	1-762-875-21	SWITCH, KEYBOARD (I/C)		C217	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
*****				C218	1-124-779-00	ELECT CHIP 10uF 20%	16V
		KEY-R BOARD		C219	1-126-193-11	ELECT CHIP 1uF 20%	50V
		*****		C220	1-126-193-11	ELECT CHIP 1uF 20%	50V
		< CONNECTOR >		C221	1-126-193-11	ELECT CHIP 1uF 20%	50V
CN881	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P		C222	1-126-193-11	ELECT CHIP 1uF 20%	50V
		< RESISTOR >		C223	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
R881	1-216-821-11	METAL CHIP 1K 5% 1/10W		C224	1-128-994-21	ELECT CHIP 47uF 20%	10V
R882	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		C225	1-126-193-11	ELECT CHIP 1uF 20%	50V
		< SWITCH >		C226	1-126-193-11	ELECT CHIP 1uF 20%	50V
S881	1-762-875-21	SWITCH, KEYBOARD (VOL -)		C251	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
S882	1-762-875-21	SWITCH, KEYBOARD (VOL +)		C252	1-135-474-21	ELECT CHIP 330uF 20%	6.3V
S883	1-762-875-21	SWITCH, KEYBOARD (▲)		C253	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
*****				C254	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
A-1497-844-A		MAIN BOARD, COMPLETE (F200: AEP, UK)		C255	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
A-1497-860-A		MAIN BOARD, COMPLETE (F200: SP, TH)		C256	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
A-1497-869-A		MAIN BOARD, COMPLETE (F500: RU)		C257	1-124-779-00	ELECT CHIP 10uF 20%	16V
A-1497-875-A		MAIN BOARD, COMPLETE (F500: CND, E3, E15, E32, EA, MX, SP, TW, TH, AUS)		C258	1-110-530-11	ELECT CHIP 1000uF 20%	6.3V
A-1498-991-A		MAIN BOARD, COMPLETE (F500: KR)		C259	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
*****				C260	1-117-681-11	ELECT CHIP 100uF 20%	16V
		< LEAD >		C261	1-124-779-00	ELECT CHIP 10uF 20%	16V
A301	1-537-584-11	PIN, LEAD		C262	1-126-193-11	ELECT CHIP 1uF 20%	50V
		< CAPACITOR >		C263	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C101	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C264	1-110-530-11	ELECT CHIP 1000uF 20%	6.3V
C102	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C274	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C103	1-126-206-11	ELECT CHIP 100uF 20% 6.3V		C278	1-126-205-11	ELECT CHIP 47uF 20%	6.3V
				C281	1-126-205-11	ELECT CHIP 47uF 20%	6.3V
							(F200)
				C282	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
							(F200)
				C301	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C302	1-117-681-11	ELECT CHIP 100uF 20%	16V
				C304	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
							(F200: AEP, UK/F500: RU, KR)
				C305	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
							(F200: AEP, UK/F500: RU, KR)
				C701	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C702	1-117-681-11	ELECT CHIP 100uF 20%	16V
				C703	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C704	1-117-681-11	ELECT CHIP 100uF 20%	16V

# HCD-F200/F500

Ver. 1.1

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C705	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< DIODE >	
C706	1-117-681-11	ELECT CHIP 100uF 20%	16V	D102	6-501-817-01	DIODE MA2J1110GLS0	
C707	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D301	8-719-058-24	DIODE RB501V-40TE-17	
C708	1-117-681-11	ELECT CHIP 100uF 20%	16V	D701	6-501-817-01	DIODE MA2J1110GLS0	
C709	1-128-398-11	ELECT CHIP 220uF 20%	16V	D702	6-501-817-01	DIODE MA2J1110GLS0	
C710	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D703	6-501-817-01	DIODE MA2J1110GLS0	
C711	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D704	6-501-817-01	DIODE MA2J1110GLS0	
C712	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D705	6-501-817-01	DIODE MA2J1110GLS0	
C713	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	D706	6-501-817-01	DIODE MA2J1110GLS0	
C714	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< TERMINAL >	
C715	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V				
C718	1-117-681-11	ELECT CHIP 100uF 20%	16V	* ET701	1-780-408-11	TERMINAL	
C719	1-128-394-11	ELECT CHIP 220uF 20%	10V	* ET702	1-780-408-11	TERMINAL	
C720	1-128-394-11	ELECT CHIP 220uF 20%	10V	* ET703	1-780-408-11	TERMINAL	
C721	1-117-681-11	ELECT CHIP 100uF 20%	16V			< FERRITE BEAD >	
C722	1-117-681-11	ELECT CHIP 100uF 20%	16V				
C723	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FB202	1-414-760-21	FERRITE, EMI (SMD) (1608)	
C724	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FB203	1-414-760-21	FERRITE, EMI (SMD) (1608)	
C731	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< FILTER >	
C732	1-117-681-11	ELECT CHIP 100uF 20%	16V				
C733	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FL201	1-234-177-21	FILTER, CHIP EMI	
C734	1-117-681-11	ELECT CHIP 100uF 20%	16V	FL202	1-234-177-21	FILTER, CHIP EMI	
C902	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FL203	1-234-177-21	FILTER, CHIP EMI	
C903	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FL272	1-234-177-21	FILTER, CHIP EMI	
			(F500)			< IC >	
C904	1-164-230-11	CERAMIC CHIP 220PF 5%	50V	IC101	A-1545-113-A	IC R5F3640DDFAR (for SERVICE) (F200)	
C905	1-164-230-11	CERAMIC CHIP 220PF 5%	50V	IC101	A-1545-194-A	IC R5F3640DDFAR (for SERVICE) (F500)	
C906	1-126-208-21	ELECT CHIP 47uF 20%	4V	IC201	6-710-804-01	IC AK4683EQ	
			(F500)	IC251	6-707-489-01	IC BH7868FS-E2	
C907	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	IC273	6-703-238-01	IC TC7WZ34FK (TE85R)	
			(F500)	IC281	8-759-592-47	IC TC7SZ08FU (TE85R) (F200)	
C908	1-126-208-21	ELECT CHIP 47uF 20%	4V	IC701	6-712-613-01	IC SI-3010KM-TLS	
			(F500)	IC702	6-712-613-01	IC SI-3010KM-TLS	
C909	1-124-779-00	ELECT CHIP 10uF 20%	16V	IC703	6-712-613-01	IC SI-3010KM-TLS	
			(F500)	IC704	6-712-613-01	IC SI-3010KM-TLS	
C910	1-162-923-11	CERAMIC CHIP 47PF 5%	50V	IC705	6-712-613-01	IC SI-3010KM-TLS	
			(F500)	IC706	6-712-613-01	IC SI-3010KM-TLS	
C911	1-162-928-11	CERAMIC CHIP 120PF 5%	50V	IC709	8-759-700-07	IC NJM2903M	
			(F500)	IC901	6-600-466-01	IC TORX147L (SONY) (SAT/CABLE DIGITAL IN OPTICAL)	
C912	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC902	8-759-278-58	IC NJM4558V-TE2 (F500)	
			(F500)	IC941	6-600-466-01	IC TORX147L (SONY) (TV DIGITAL IN OPTICAL)	
C913	1-128-993-21	ELECT CHIP 22uF 20%	10V			< JACK >	
			(F500)	J903	1-820-390-11	JACK, PIN 2P (F200) (SAT/CABLE DIGITAL IN COAXIAL/DIGITAL OUT COAXIAL)	
C914	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	J904	1-785-448-21	JACK (F500) (ECM-AC2)	
			(F500)	J906	1-821-749-11	JACK, PIN 6P (VIDEO OUT COMPONENT Y/PB/ CB/PR/CR/VIDEO OUT VIDEO/TV AUDIO IN L/R)	
C915	1-128-993-21	ELECT CHIP 22uF 20%	10V	J907	1-784-431-11	JACK, PIN 1P (F500) (DIGITAL OUT COAXIAL)	
			(F500)			< COIL >	
C942	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	L201	1-469-525-91	INDUCTOR 10uH	
		< CONNECTOR >		L202	1-469-525-91	INDUCTOR 10uH	
CN101	1-568-830-11	CONNECTOR, FFC 11P (F200: AEP, UK/F500: RU)		L203	1-469-525-91	INDUCTOR 10uH	
CN102	1-784-770-11	CONNECTOR, FFC 9P (EXCEPT F200: AEP, UK/F500: RU)		L251	1-469-525-91	INDUCTOR 10uH	
CN103	1-784-376-51	CONNECTOR, FFC/FPC 17P		L301	1-469-525-91	INDUCTOR 10uH	
CN105	1-778-691-51	CONNECTOR, FFC/FPC 19P					
CN106	1-784-374-51	CONNECTOR, FFC/FPC 15P					
* CN107	1-564-712-11	PIN, CONNECTOR (SMALL TYPE) 10P					
CN110	1-784-861-51	CONNECTOR, FFC (LIF (NON-ZIF)) 9P					
* CN702	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P					
* CN708	1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >		R159	1-216-864-11	SHORT CHIP	0 (EXCEPT F200: AEP, UK/F500: RU)
Q271	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF (F200)	R160	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q901	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF (F500)	R161	1-216-809-11	METAL CHIP	100 5% 1/10W
		< RESISTOR >		R163	1-216-833-11	METAL CHIP	10K 5% 1/10W
R101	1-216-809-11	METAL CHIP	100 5% 1/10W	R165	1-216-833-11	METAL CHIP	10K 5% 1/10W
R102	1-216-809-11	METAL CHIP	100 5% 1/10W	R167	1-216-833-11	METAL CHIP	10K 5% 1/10W
R103	1-216-809-11	METAL CHIP	100 5% 1/10W	R168	1-216-809-11	METAL CHIP	100 5% 1/10W (F200: AEP, UK/F500: RU)
R104	1-216-833-11	METAL CHIP	10K 5% 1/10W	R169	1-216-809-11	METAL CHIP	100 5% 1/10W
R105	1-216-809-11	METAL CHIP	100 5% 1/10W	R170	1-216-833-11	METAL CHIP	10K 5% 1/10W
R106	1-216-833-11	METAL CHIP	10K 5% 1/10W	R171	1-216-857-11	METAL CHIP	1M 5% 1/10W
R107	1-216-821-11	METAL CHIP	1K 5% 1/10W	R201	1-216-864-11	SHORT CHIP	0
R108	1-216-864-11	SHORT CHIP	0	R202	1-216-864-11	SHORT CHIP	0
R109	1-216-833-11	METAL CHIP	10K 5% 1/10W	R203	1-216-864-11	SHORT CHIP	0
R110	1-216-809-11	METAL CHIP	100 5% 1/10W	R204	1-216-864-11	SHORT CHIP	0
R111	1-216-809-11	METAL CHIP	100 5% 1/10W	R205	1-216-864-11	SHORT CHIP	0
R112	1-216-809-11	METAL CHIP	100 5% 1/10W	R206	1-216-864-11	SHORT CHIP	0
R113	1-216-833-11	METAL CHIP	10K 5% 1/10W	R207	1-216-864-11	SHORT CHIP	0
R114	1-216-809-11	METAL CHIP	100 5% 1/10W	R208	1-216-864-11	SHORT CHIP	0
R115	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R209	1-216-864-11	SHORT CHIP	0
R116	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R210	1-216-821-11	METAL CHIP	1K 5% 1/10W
R117	1-216-833-11	METAL CHIP	10K 5% 1/10W	R212	1-216-841-11	METAL CHIP	47K 5% 1/10W
R118	1-216-809-11	METAL CHIP	100 5% 1/10W	R213	1-216-841-11	METAL CHIP	47K 5% 1/10W
R119	1-216-809-11	METAL CHIP	100 5% 1/10W	R214	1-216-841-11	METAL CHIP	47K 5% 1/10W
R120	1-216-809-11	METAL CHIP	100 5% 1/10W	R215	1-216-841-11	METAL CHIP	47K 5% 1/10W
R121	1-216-809-11	METAL CHIP	100 5% 1/10W	R216	1-216-845-11	METAL CHIP	100K 5% 1/10W
R122	1-216-833-11	METAL CHIP	10K 5% 1/10W	R217	1-216-845-11	METAL CHIP	100K 5% 1/10W
R123	1-216-809-11	METAL CHIP	100 5% 1/10W	R218	1-216-841-11	METAL CHIP	47K 5% 1/10W
R125	1-216-809-11	METAL CHIP	100 5% 1/10W	R219	1-216-841-11	METAL CHIP	47K 5% 1/10W
R126	1-216-809-11	METAL CHIP	100 5% 1/10W	R220	1-216-841-11	METAL CHIP	47K 5% 1/10W
R127	1-216-809-11	METAL CHIP	100 5% 1/10W	R221	1-216-841-11	METAL CHIP	47K 5% 1/10W
R128	1-216-809-11	METAL CHIP	100 5% 1/10W	R222	1-218-873-11	METAL CHIP	12K 0.5% 1/10W
R129	1-216-809-11	METAL CHIP	100 5% 1/10W	R223	1-216-864-11	SHORT CHIP	0
R130	1-216-809-11	METAL CHIP	100 5% 1/10W	R224	1-216-864-11	SHORT CHIP	0
R131	1-216-809-11	METAL CHIP	100 5% 1/10W	R251	1-218-285-11	METAL CHIP	75 5% 1/10W
R132	1-216-809-11	METAL CHIP	100 5% 1/10W	R252	1-218-285-11	METAL CHIP	75 5% 1/10W
R133	1-216-809-11	METAL CHIP	100 5% 1/10W	R253	1-218-285-11	METAL CHIP	75 5% 1/10W
R134	1-216-833-11	METAL CHIP	10K 5% 1/10W	R254	1-218-285-11	METAL CHIP	75 5% 1/10W
R135	1-216-845-11	METAL CHIP	100K 5% 1/10W	R274	1-216-821-11	METAL CHIP	1K 5% 1/10W (F200)
R136	1-216-809-11	METAL CHIP	100 5% 1/10W	R275	1-216-821-11	METAL CHIP	1K 5% 1/10W (F200)
R137	1-216-809-11	METAL CHIP	100 5% 1/10W	R276	1-216-813-11	METAL CHIP	220 5% 1/10W (F200)
R138	1-216-809-11	METAL CHIP	100 5% 1/10W	R278	1-216-807-11	METAL CHIP	68 5% 1/10W (F200)
R139	1-216-809-11	METAL CHIP	100 5% 1/10W	R279	1-216-864-11	SHORT CHIP	0 (F200)
R140	1-216-809-11	METAL CHIP	100 5% 1/10W	R280	1-216-864-11	SHORT CHIP	0 (F200)
R141	1-216-833-11	METAL CHIP	10K 5% 1/10W	R281	1-216-833-11	METAL CHIP	10K 5% 1/10W (F200)
R142	1-216-809-11	METAL CHIP	100 5% 1/10W (F200: AEP, UK/F500: RU)	R282	1-216-821-11	METAL CHIP	1K 5% 1/10W (F200)
R143	1-216-809-11	METAL CHIP	100 5% 1/10W	R301	1-218-285-11	METAL CHIP	75 5% 1/10W
R145	1-216-809-11	METAL CHIP	100 5% 1/10W	R302	1-216-864-11	SHORT CHIP	0
R146	1-216-809-11	METAL CHIP	100 5% 1/10W	R303	1-216-864-11	SHORT CHIP	0
R147	1-216-809-11	METAL CHIP	100 5% 1/10W	R304	1-216-864-11	SHORT CHIP	0
R148	1-216-809-11	METAL CHIP	100 5% 1/10W	R305	1-216-864-11	SHORT CHIP	0
R149	1-216-833-11	METAL CHIP	10K 5% 1/10W	R306	1-216-864-11	SHORT CHIP	0
R150	1-216-809-11	METAL CHIP	100 5% 1/10W	R307	1-216-864-11	SHORT CHIP	0
R151	1-216-809-11	METAL CHIP	100 5% 1/10W	R320	1-216-864-11	SHORT CHIP	0
R152	1-216-809-11	METAL CHIP	100 5% 1/10W				
R153	1-216-809-11	METAL CHIP	100 5% 1/10W				
R157	1-216-809-11	METAL CHIP	100 5% 1/10W				
R158	1-216-864-11	SHORT CHIP	0 (EXCEPT F200: AEP, UK/F500: RU)				

# HCD-F200/F500

Ver. 1.1

**MAIN**   **MS-214**   **USB**

Ref. No.	Part No.	Description	Remark
R321	1-216-864-11	SHORT CHIP	0
R322	1-216-864-11	SHORT CHIP	0
R323	1-216-864-11	SHORT CHIP	0
R324	1-216-864-11	SHORT CHIP	0
R325	1-216-864-11	SHORT CHIP	0
R326	1-216-864-11	SHORT CHIP	0
R327	1-216-864-11	SHORT CHIP	0
R328	1-216-864-11	SHORT CHIP	0
R391	1-216-864-11	SHORT CHIP	0 (F200: SP, TH)
R392	1-216-864-11	SHORT CHIP	0 (F200: AEP, UK)
R393	1-216-864-11	SHORT CHIP	0 (F500: CND, E3, E15, E32, EA, MX, SP, TW, TH, AUS)
R394	1-216-864-11	SHORT CHIP	0 (F500: RU)
R395	1-216-864-11	SHORT CHIP	0 (F500: KR)
R701	1-218-858-11	METAL CHIP	3K    0.5%    1/10W
R702	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R703	1-216-809-11	METAL CHIP	100    5%    1/10W
R704	1-218-847-11	METAL CHIP	1K    0.5%    1/10W
R705	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R706	1-216-809-11	METAL CHIP	100    5%    1/10W
R707	1-218-847-11	METAL CHIP	1K    0.5%    1/10W
R708	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R709	1-216-809-11	METAL CHIP	100    5%    1/10W
R710	1-218-855-11	METAL CHIP	2.2K    0.5%    1/10W
R711	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R712	1-216-809-11	METAL CHIP	100    5%    1/10W
R713	1-216-809-11	METAL CHIP	100    5%    1/10W
R714	1-218-873-11	METAL CHIP	12K    0.5%    1/10W
R715	1-218-891-11	METAL CHIP	68K    0.5%    1/10W
R716	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R717	1-245-287-91	METAL CHIP	0.1    1%    1W
R718	1-216-815-11	METAL CHIP	330    5%    1/10W
R719	1-216-839-11	METAL CHIP	33K    5%    1/10W
R720	1-216-839-11	METAL CHIP	33K    5%    1/10W
R721	1-218-885-11	METAL CHIP	39K    0.5%    1/10W
R722	1-218-879-11	METAL CHIP	22K    0.5%    1/10W
R723	1-218-885-11	METAL CHIP	39K    0.5%    1/10W
R724	1-218-885-11	METAL CHIP	39K    0.5%    1/10W
R725	1-216-809-11	METAL CHIP	100    5%    1/10W
R731	1-218-859-11	METAL CHIP	3.3K    0.5%    1/10W
R732	1-218-871-11	METAL CHIP	10K    0.5%    1/10W
R733	1-216-809-11	METAL CHIP	100    5%    1/10W
R734	1-218-885-11	METAL CHIP	39K    0.5%    1/10W
R901	1-216-864-11	SHORT CHIP	0
R902	1-216-821-11	METAL CHIP	1K    5%    1/10W
R903	1-216-821-11	METAL CHIP	1K    5%    1/10W
R904	1-218-285-11	METAL CHIP	75    5%    1/10W
R906	1-216-864-11	SHORT CHIP	0
R907	1-216-825-11	METAL CHIP	2.2K    5%    1/10W (F500)
R908	1-216-845-11	METAL CHIP	100K    5%    1/10W
R909	1-216-845-11	METAL CHIP	100K    5%    1/10W
R910	1-216-845-11	METAL CHIP	100K    5%    1/10W (F500)
R911	1-216-817-11	METAL CHIP	470    5%    1/10W (F500)
R912	1-216-824-11	METAL CHIP	1.8K    5%    1/10W (F500)
R913	1-216-821-11	METAL CHIP	1K    5%    1/10W (F500)

Ref. No.	Part No.	Description	Remark
R914	1-216-837-11	METAL CHIP	22K    5%    1/10W (F500)
R915	1-216-817-11	METAL CHIP	470    5%    1/10W (F500)
R916	1-216-838-11	METAL CHIP	27K    5%    1/10W (F500)
R917	1-216-809-11	METAL CHIP	100    5%    1/10W (F500)
R918	1-216-829-11	METAL CHIP	4.7K    5%    1/10W (F500)
R919	1-216-829-11	METAL CHIP	4.7K    5%    1/10W (F500)
R920	1-216-845-11	METAL CHIP	100K    5%    1/10W
R921	1-216-845-11	METAL CHIP	100K    5%    1/10W
R922	1-216-845-11	METAL CHIP	100K    5%    1/10W
R923	1-216-845-11	METAL CHIP	100K    5%    1/10W
R941	1-216-864-11	SHORT CHIP	0
R946	1-216-864-11	SHORT CHIP	0
< VIBRATOR >			
X101	1-813-562-21	VIBRATOR, CERAMIC (10MHz)	
X201	1-781-465-21	VIBRATOR, CRYSTAL (12.288MHz)	
*****			
MS-214 BOARD			
*****			
< CONNECTOR >			
CN001	1-815-569-11	CONNECTOR, FFC/FPC 7P	
< SWITCH >			
S001	1-762-951-13	SWITCH, PUSH (DISC IN/OUT)	
S002	1-762-951-13	SWITCH, PUSH (CHUCKING)	
S003	1-762-951-13	SWITCH, PUSH (TRIGGER)	
*****			
USB BOARD			
*****			
< CAPACITOR >			
C502	1-107-826-11	CERAMIC CHIP	0.1uF    10%    16V
< CONNECTOR >			
CN501	1-794-548-21	CONNECTOR, USB (A) (USB)	
CN502	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P	
*****			

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		MISCELLANEOUS *****	
52	1-828-295-11	WIRE (FLAT TYPE) (7 CORE)	
53	1-828-002-11	WIRE (FLAT TYPE) (17 CORE)	
102	1-828-954-11	WIRE (FLAT TYPE) (9 CORE) (F200: SP, TH/F500: CND, E3, E15, E32, MX, SP, TW, KR, TH, AUS)	
102	1-828-964-11	WIRE (FLAT TYPE) (11 CORE) (F200: AEP, UK/F500: RU)	
103	1-693-768-11	TUNER (FM) (F200: AEP, UK/F500: RU)	
103	1-693-769-11	TUNER (FM) (F200: SP, TH/F500: E3, E15, E32, EA, MX, SP, TW, TH, AUS)	
103	1-693-770-11	TUNER (FM) (F500: CND)	
103	1-693-771-11	TUNER (FM) (F500: KR)	
151	1-828-298-11	WIRE (FLAT TYPE) (7 CORE)	
152	1-828-341-11	WIRE (FLAT TYPE) (15 CORE)	
153	1-828-360-11	WIRE (FLAT TYPE) (19 CORE)	
155	1-828-347-11	WIRE (FLAT TYPE) (17 CORE)	
156	1-833-994-21	CABLE, SYSTEM	
159	1-828-253-51	WIRE (FLAT TYPE) (24 CORE)	
256	A-1114-646-A	MD (AU) ASSY	
△ 257	8-820-322-04	OPTICAL PICK-UP BLOCK (KHM-313CAB/C2RP) (Including sled motor, spindle motor)	
M001	X-4955-496-1	MOTOR (PULLEY) ASSY (LOADING)	

**Note:** If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

