

DSC-M2

SERVICE MANUAL

LEVEL 2

Ver 1.0 2005.10

Revision History

How to use
Acrobat Reader

Internal memory
ON BOARD



DSC-M2

US Model
Canadian Model
AEP Model
UK Model
E Model
Korea Model
Chinese Model
Hong Kong Model
Tourist Model
Japanese Model

Link

SPECIFICATIONS	BLOCK DIAGRAMS	PRINTED WIRING BOARDS
SERVICE NOTE	FRAME SCHEMATIC DIAGRAMS	REPAIR PARTS LIST
DISASSEMBLY	SCHEMATIC DIAGRAMS	

- For ADJUSTMENTS (SECTION 6), refer to SERVICE MANUAL, ADJ (9-876-897-51).
- For INSTRUCTION MANUAL, refer to SERVICE MANUAL, LEVEL 1 (9-876-897-41).
- [Reference number search on printed wiring boards is available.](#)
- [Precaution on Replacing the SY-133 board](#)

On the PM-046 and SY-133 board

This service manual provides the information that is premised the circuit board replacement service and not intended repair inside the PM-046 and SY-133 board.

Therefore, schematic diagram, printed wiring board, waveforms, mounted parts location and electrical parts list of the PM-046 and SY-133 board are not shown.

The following pages are not shown.

Schematic diagram	Pages 4-23 to 4-48	Mounted parts location	Pages 4-69 to 4-70
Printed wiring board	Pages 4-59 to 4-64	Electrical parts list	Pages 5-11 to 5-17
Waveforms	Pages 4-65		

DIGITAL STILL CAMERA

SONY®



SPECIFICATIONS

Camera

[System]

Image device	7.17 mm (1/2.5 type) color CCD, Primary color filter
Total pixel number of camera	Approx. 5 255 000 pixels
Effective pixel number of camera	Approx. 5 090 000 pixels
Lens	Carl Zeiss Vario-Tessar 3x zoom lens f = 6.33 – 19.0 mm (38 – 114 mm when converted to a 35 mm still camera) F3.5 – 4.4
Exposure control	Automatic exposure, Scene Selection (9 modes)
White balance	Automatic, Daylight, Cloudy, Fluorescent, Incandescent, Flash
File format (DCF compliant)	Still images: Exif Ver. 2.2 JPEG compliant, DPOF compatible Movies: MPEG-4 compliant (Stereo)
Recording media	“Memory Stick Duo”
Flash	Recommended distance (ISO set to Auto): approx. 0.1 m to 2.6 m (3 15/16 inches to 8 feet 6 3/8 inches) (W)/ approx. 0.5 m to 2.1 m (1 feet 7 11/16 inches to 6 feet 10 11/16 inches) (T)

[Input and Output connectors]

Multi connector	
USB communication	Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel	6.2 cm (2.5 type) TFT drive
Total number of dots	123 200 (560x220) dots

[Power, general]

Battery pack used	Rechargeable battery pack NP-FT1
Power requirements	3.6 V
Power consumption (during shooting)	1.2 W
Operating temperature	0°C to +40°C (+32°F to +104°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Dimensions	51.2x123.1x32.4 mm (2 1/8x4 7/8x1 5/16 inches) (W/H/D, excluding protrusions)
Mass	Approx. 210 g (7.4 oz) (including NP-FT1 battery pack, “Memory Stick Duo” and wrist strap, etc.)
Microphone	Electret condenser microphone
Speaker	Dynamic speaker
Exif Print	Compatible
PRINT Image Matching III	Compatible
PictBridge	Compatible

Cyber-shot Station UC-MB

[Input and Output connectors]

A/V OUT (STEREO) jack (Stereo)	Minijack Video: 1 Vp-p, 75Ω, unbalanced, sync negative Audio: 327 mV (at a 47 kΩ load) Output impedance 1 kΩ
USB jack	mini-B
USB connection	High-Speed USB (USB 2.0 High-Speed compatible)
DC IN jack	
Camera connector	

AC Adaptor AC-LS5

Input rating	100 V to 240 V AC, 50/60 Hz, 11 W
Output rating	4.2 V DC*
	* See the label on the AC Adaptor for other specifications.
Operating temperature	0°C to +40°C (+32°F to +104°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Dimensions	Approx. 48x29x81 mm (1 15/16x1 3/16x3 1/4 inches) (W/H/D, excluding projecting parts)
Mass	Approx. 130 g (5.0 oz) excluding power cord (mains lead)

Rechargeable battery pack NP-FT1

Used battery	Lithium-ion battery
Maximum voltage	DC 4.2 V
Nominal voltage	DC 3.6 V
Capacity	2.4 Wh (680 mAh)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-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.

CAUTION :

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

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.)



: 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.

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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Printed wiring board of the PM-046 and SY-133 board are not shown.
Pages from 4-59 to 4-64 are not shown.

Waveforms of the PM-046 and SY-133 board is not shown.
Page 4-65 is not shown.

Mounted parts location of the PM-046 and SY-133 board is not shown.
Pages from 4-69 to 4-70 are not shown.

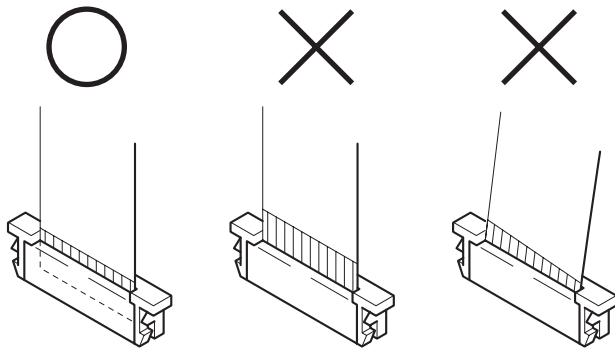
Schematic diagram of the PM-046 and SY-133 board are not shown.
Pages from 4-23 to 4-48 are not shown.

Electrical parts list of the PM-046 and SY-133 board are not shown.
Pages from 5-11 to 5-17 are not shown.

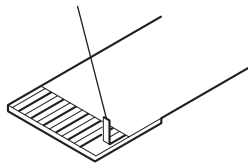
1. SERVICE NOTE

• NOTE FOR REPAIR

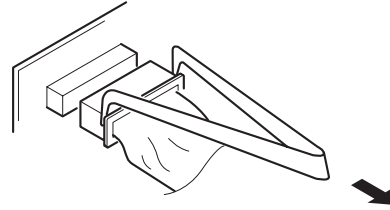
Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



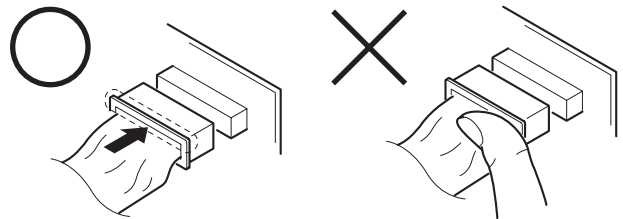
Cut and remove the part of gilt which comes off at the point.
(Take care that there are some pieces of gilt left inside)



When remove a connector, don't pull at wire of connector.
Be in danger of the snapping of a wire.



When installing a connector, don't press down at wire of connector.
Be in danger of the snapping of a wire.



[Discharging of the FLASH unit's charging capacitor]

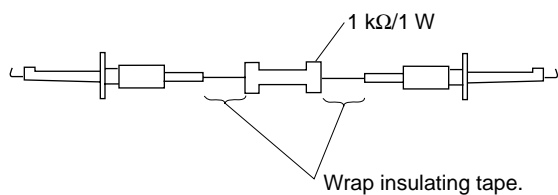
The charging capacitor of the FLASH unit is charged up to the maximum 300 V potential.

There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the DSC-M2 is simply turned off. Therefore, the remaining voltage must be discharged as described below.

Preparing the Short Jig

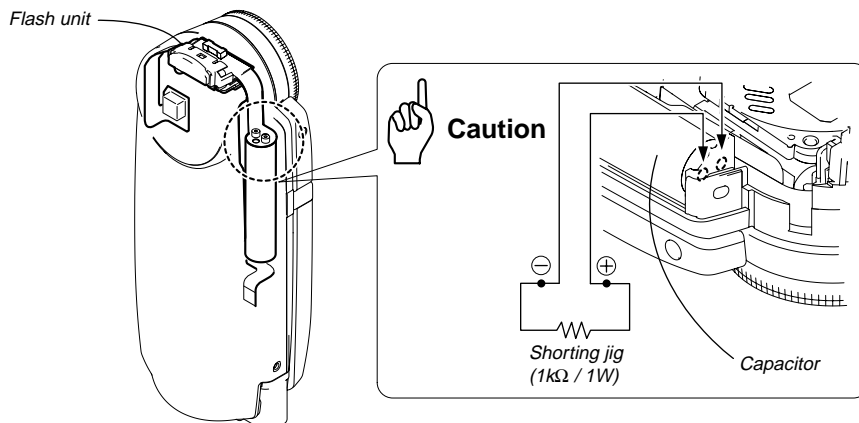
To preparing the short jig, a small clip is attached to each end of a resistor of 1 k Ω / 1 W (1-215-869-11)

Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



Discharging the Capacitor

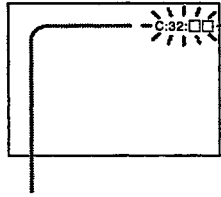
Short circuits between the positive and the negative terminals of charged capacitor with the short jig about 10 seconds.



[Description on Self-diagnosis Display]

Self-diagnosis display

The camera has a self-diagnosis display. This function displays the camera condition with five-digits (a combination of a letter and figures) on the LCD screen. If this occurs check the following code chart. The five-digits display informs you of the camera's current condition. The last two digits (indicated by □□) will differ depending on the state of the camera.



Self-diagnosis display

- C: □□: □□
The contents which can be handled by customer, are displayed.
- E: □□: □□
The contents which can be handled by engineer, are displayed.

Display Code	Countermeasure	Cause	Caution Display During Error
C:32:□□	Turn the power off and on again.	Trouble with hardware.	SYSTEM ERROR
C:13:□□	Format the "Memory Stick Duo".	Unformatted "Memory Stick Duo" is inserted.	FORMAT ERROR
	Execute [Format Album] (page 1-3). Insert a new "Memory Stick Duo".	A format error on Album has occurred. "Memory Stick Duo" is broken.	
C:91:□□	Execute [Format Music] (page 1-3). When you execute [Format Music] all your stored Music files will be erased. Transfer the Music files using the supplied application again.	When transferring Music files from your computer an error occurred due to USB disconnection or other problem.	—
E:61:□□	Checking of lens drive circuit.	When failed in the focus and zoom initialization.	—
E:91:□□	Checking of flash unit or replacement of flash unit.	Abnormality when flash is being charged.	

Method for Copying or Erasing the Data in Internal Memory (Album or Music)

The data can be copied/erased by the operations on the Setup screen. (When erasing the data, execute formatting the internal memory (album or music).)

Note 1: When replacing the SY-133 board, erase the data in internal memory (album or music) of the board before replacement.

Note 2: When replacing the SY-133 board or the IC901 on the SY-133 board, execute formatting and initialize the internal memory (album and music) after replacement.

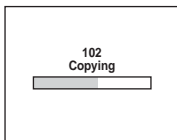
Method for copying the data in Album

Copy

Copies all images in Album to a "Memory Stick Duo". When using the battery pack, this menu is not displayed. When you want to copy images, use the AC Adaptor (supplied).

<input type="checkbox"/>	OK	See the following procedure.
<input checked="" type="checkbox"/>	Cancel	Cancels the copying.

- ① Insert a "Memory Stick Duo" having 64 MB or larger capacity.
- ② Select [OK] with ▲ on the control button, then press ●.
The message "All data in album will be copied Ready?" appears.
- ③ Select [OK] with ▲, then press ●.
Copying starts.



- You cannot copy individual images.
- You cannot select a folder copied on a "Memory Stick Duo".
- You can copy the images saved on Album to the "Memory Stick Duo" without deleting the images saved on Album.
- After shooting images, you cannot copy the images in the recording folder/playback folder to Album.
- When playing back images in Album, the order of images displayed on the screen may be different from that of images copied on the "Memory Stick Duo".

Method for formatting the Album

Format

Formats Album.

- Note that formatting irrevocably erases all data in Album, including even protected images.

<input type="checkbox"/>	OK	See the following procedure.
<input checked="" type="checkbox"/>	Cancel	Cancels the formatting.

- ① Select [OK] with ▲ on the control button, then press ●.
The message "All data in album will be erased Ready?" appears.
- ② Select [OK] with ▲, then press ●.
The format is complete.

Method for formatting the Music

Format Music

If you cannot playback Music with Slide Show, the Music file may be damaged. In this case, format the write-in-area for Music files first. Remove the "Memory Stick Duo," then connect the camera to your computer through the USB connection. Then transfer the desired music using the supplied application, "Music Transfer" again.

- Once you format the write-in-area of Music files, all data in the area will be erased, and you cannot get it back.

<input type="checkbox"/>	OK	See the following procedure.
<input checked="" type="checkbox"/>	Cancel	Cancels the formatting.

- ① Select [OK] with ▲ on the control button, then press ●.
The message "All data will be erased Ready?" appears.
- ② Select [OK] with ▲, then press ●.
The format is complete.

Precaution on Replacing the SY-133 board

VIDEO OUT Default Data Check

When you replace to the repairing board, the written data of repairing board also might be changed to original setting because of broadcast system (NTSC/PAL).

When the data has changed because of board replacing etc, check the default data of VIDEO OUT if destination code is right. If not, rewrite to the right value.

VIDEO OUT Default Data

Page	Address	Data	
		NTSC	PAL
4F	A1	00	01

Writing Method:

- 1) Select page: 00, address: 01 and set data: 01.
- 2) Select page: 4F, address: A1, and set data: 00 (NTSC) or data: 01 (PAL).
- 3) Click **Save** on the SEUS screen.
- 4) Select page: 80, address: 34, and check that the data is "00".
- 5) Select page: 80, address: 30, and check that the data is "00".
- 6) Select page: 00, address: 01, and set data: 00.

Initial Language Data Check

If the SY-133 board was replaced, initial language setting may be changed. Accordingly, change the following data so as to set same initial language as that of the set distributing in each region.

Initial language: Language displayed at the next starting if the setting of Setup menu was reset.

It is different from the language setting selectable with the menu.

Initial Language Data

Page	Address	Data	Language	GP1	GP2	GP3	GP4	GP5
4F	88	00	English		●	●	●	●
		01	Japanese	●				
		04	Spanish			●		
		08	Simplified Chinese					●
		0A	Korean					●

Note: GP1 is fixed to Japanese.

GP2 is fixed English.

GP3 is either English, or Spanish.

GP4 is fixed English.

GP5 is either English, Simplified Chinese, or Korean.

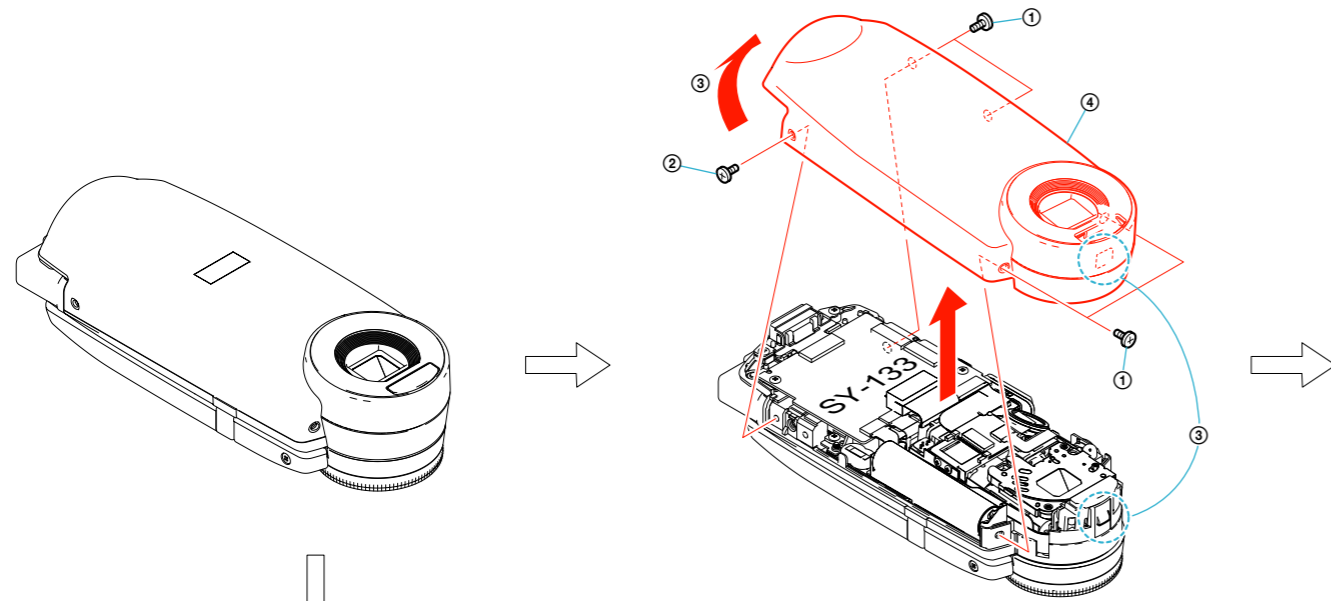
Writing Method:

- 1) Select page: 00, address: 01 and set data: 01.
- 2) Select page: 4F, address: 88, and set the Initial Language Data.
- 3) Click **Save** on the SEUS screen.
- 4) Select page: 80, address: 34, and check that the data is "00".
- 5) Select page: 80, address: 30, and check that the data is "00".
- 6) Select page: 00, address: 01, and set data: 00.
- 7) Press the RESET button, then turn on the camera.
- 8) Check the language displayed when the camera starts.

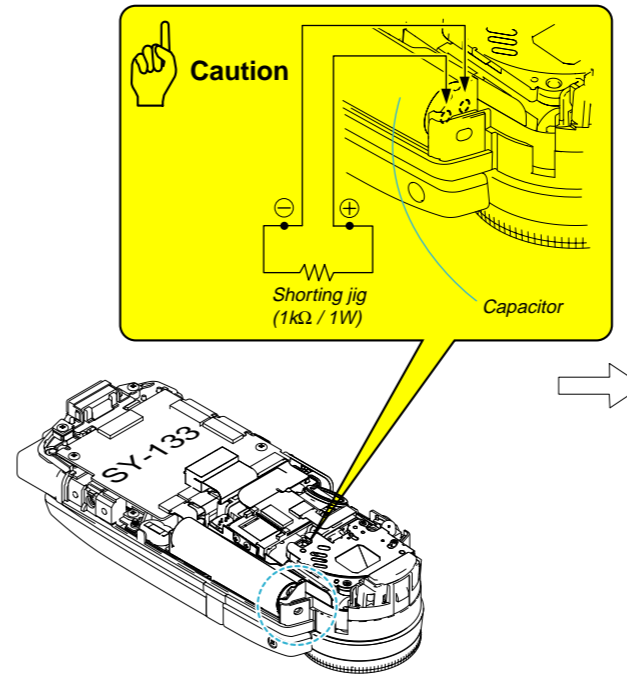
2. DISASSEMBLY

The following flow chart shows the disassembly procedure.

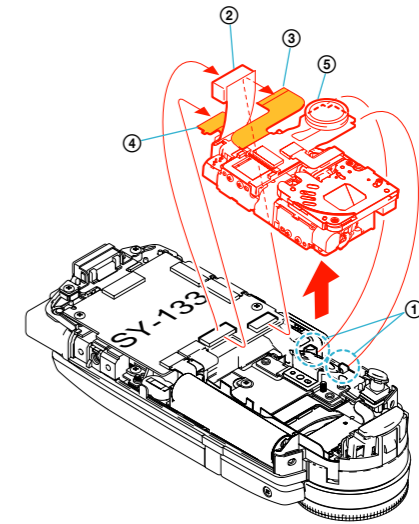
2-1. DISASSEMBLY



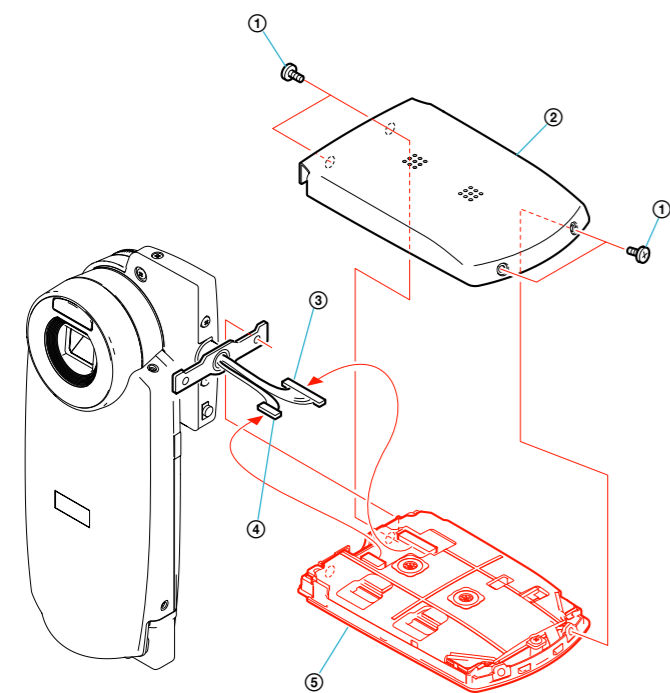
- ① Four screws (M1.7x3)
- ② Screw (M1.7x4)
- ③ Raise the multi connector side of the cabinet (front) assembly in the direction of the arrow, and remove the claw.
- ④ Cabinet (front) assembly



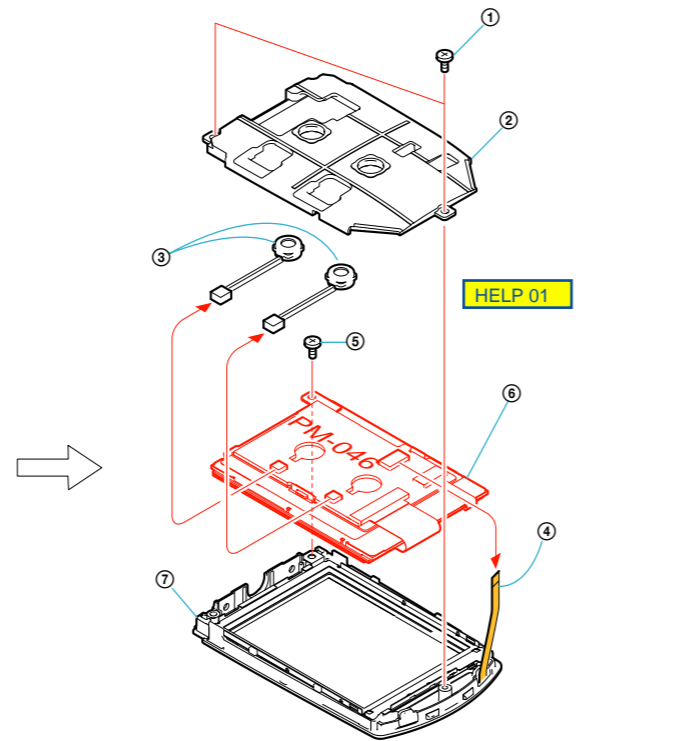
- ① Discharging the capacitor



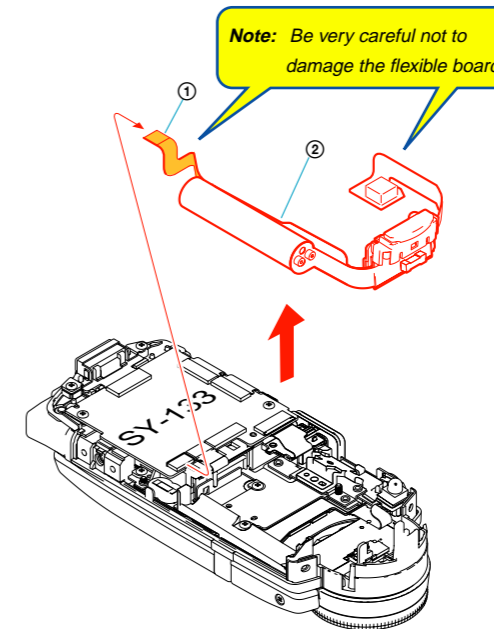
- ① Remove the speaker from the two claws.
- ② Peel off the CD electric heat sheet.
- ③ FP-305 flexible board
- ④ Flexible board (from the FP-299 flexible board)
- ⑤ Lens section



- ① Four screws (M1.7x3)
- ② P cabinet (C) assembly
- ③ Harness (PD-135)
- ④ Harness (MA-155)
- ⑤ P cabinet (M) assembly



- ① Two screws (M1.7x3)
- ② Microphone holder
- ③ Two Microphones (MIC901, MIC902)
- ④ Control switch block (PB80100)
- ⑤ Screw (M1.7x3)
- ⑥ LCD unit, PM-046 board
- ⑦ P cabinet (M) assembly

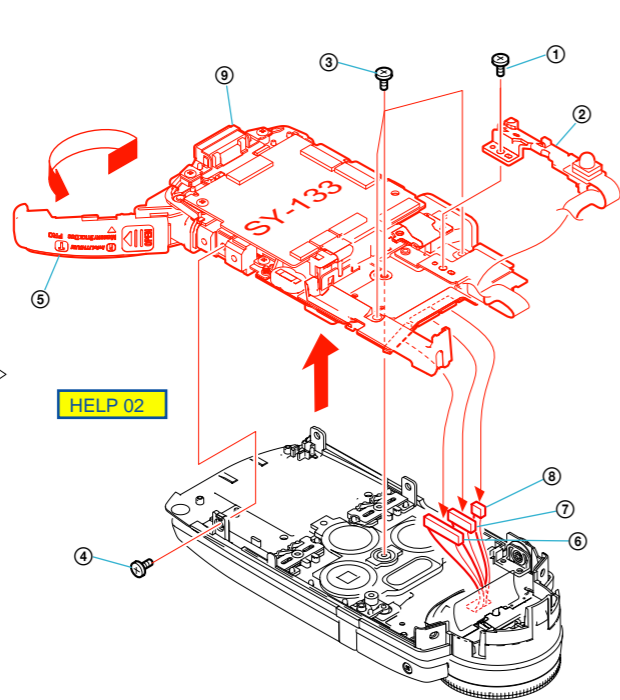


- ① Connector
- ② Flash unit (FL80100)

→ A (See page 2-3)

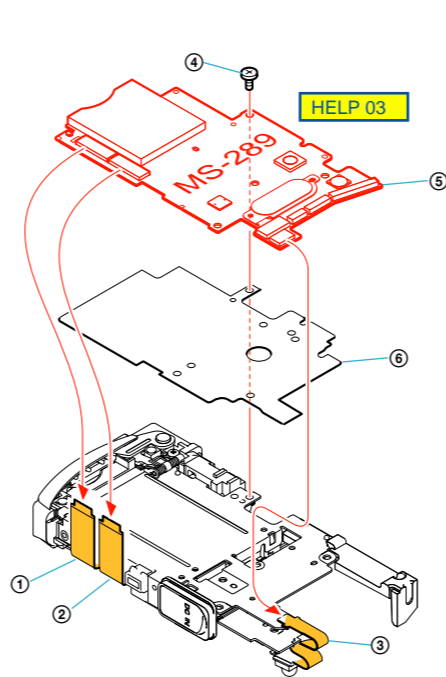
2. DISASSEMBLY

(See page 2-2) A →



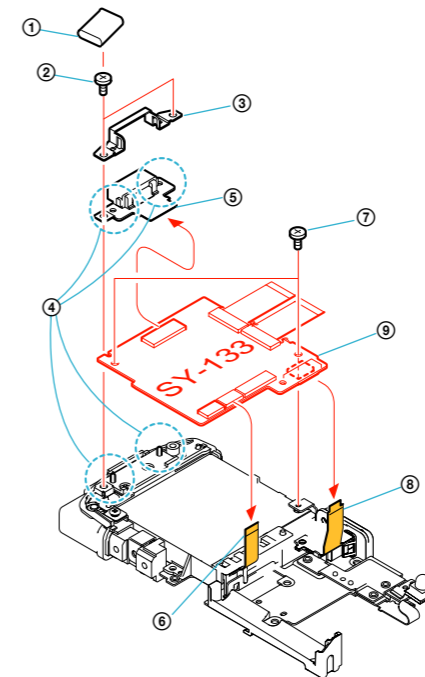
HELP 02

- | | |
|---------------------------------|---------------------|
| ① Screw (M1.7x3) | ⑥ Harness (PD-135) |
| ② SP holder | ⑦ Harness (MA-155) |
| ③ Three tapping screws (M1.7x3) | ⑧ Harness (FK-061) |
| ④ Screw (M1.7x4) | ⑨ BT holder section |
| ⑤ Open the BT cover. | |

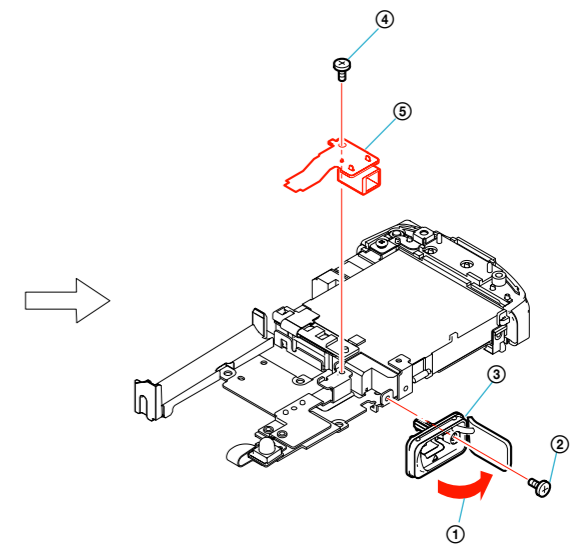


HELP 03

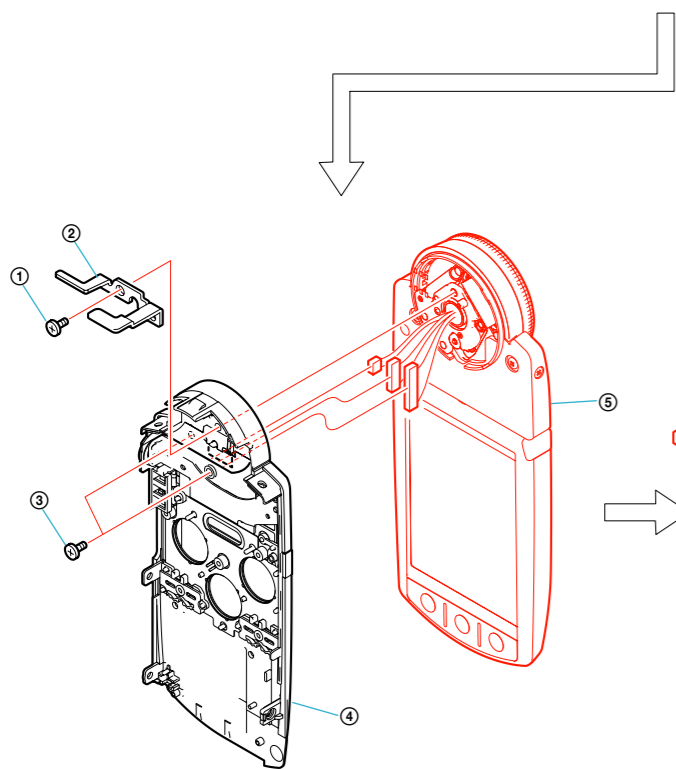
- | | |
|-------------------------|-------------------------|
| ① FP-302 flexible board | ④ Screw (M1.7x3) |
| ② FP-302 flexible board | ⑤ MS-289 board |
| ③ FP-304 flexible board | ⑥ Insulating sheet (MS) |



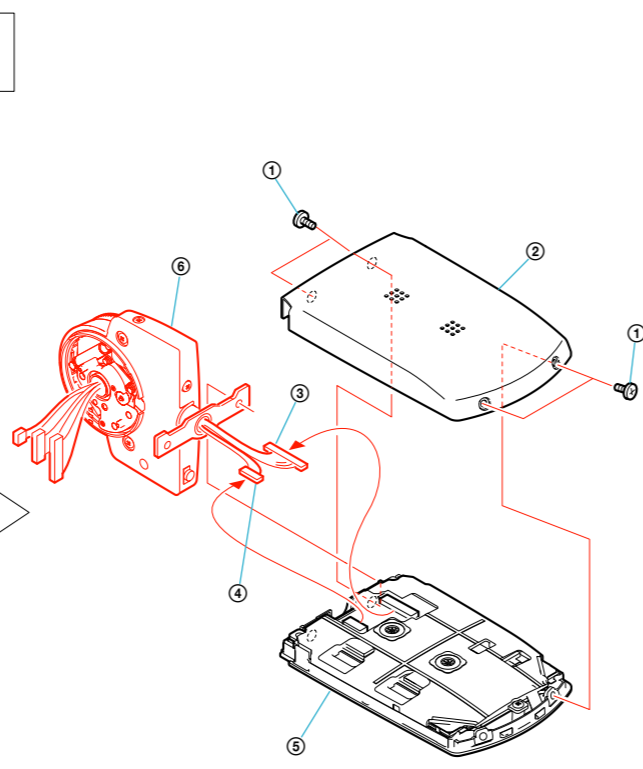
- | | |
|-------------------------------|-------------------------|
| ① Multi cushion | ⑥ FP-300 flexible board |
| ② Two tapping screws (M1.7x3) | ⑦ Two screws (M1.7x3) |
| ③ Multi retainer sheet metal | ⑧ FP-307 flexible board |
| ④ Two dowels | ⑨ SY-133 board. |
| ⑤ FP-301 flexible board | |



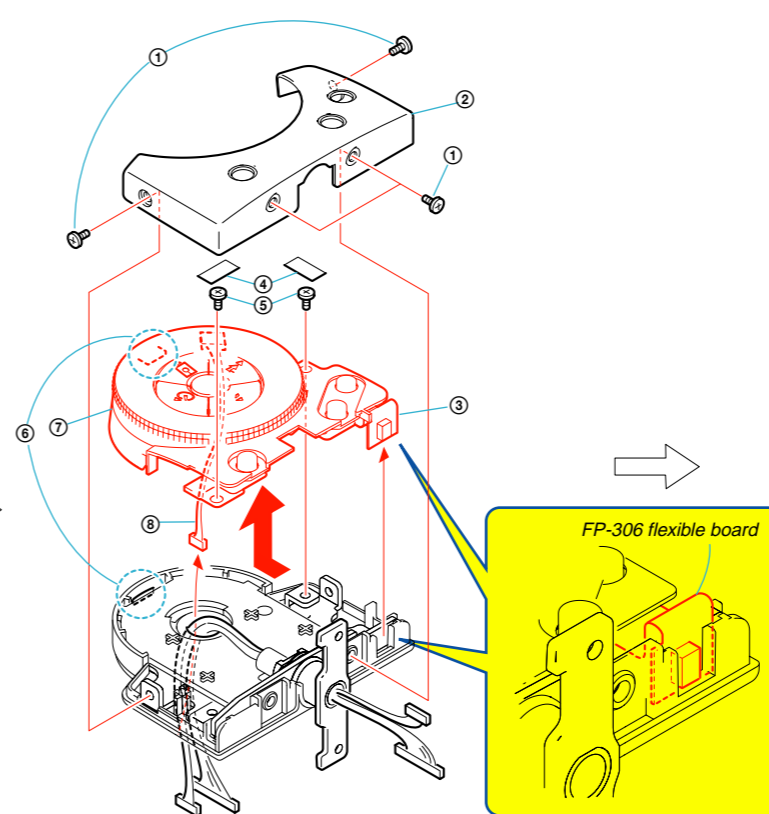
- | |
|-------------------------|
| ① Open the jack cover. |
| ② Screw (M1.7x3) |
| ③ DC holder assembly |
| ④ Screw (M1.7x2) |
| ⑤ FP-307 flexible board |



- | |
|---------------------------|
| ① Screw (M2x3) |
| ② ST sheet metal |
| ③ Two screws (M2x3) |
| ④ Cabinet (rear) assembly |
| ⑤ LCD hinge section |

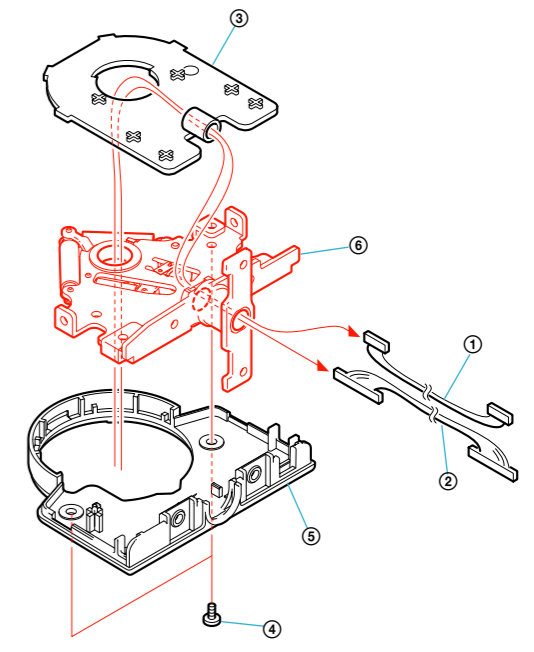


- | | |
|--------------------------|--------------------------|
| ① Four screws (M1.7x3) | ④ Harness (MA-155) |
| ② P cabinet (C) assembly | ⑤ P cabinet (M) assembly |
| ③ Harness (PD-135) | ⑥ Hinge section |



FP-306 flexible board

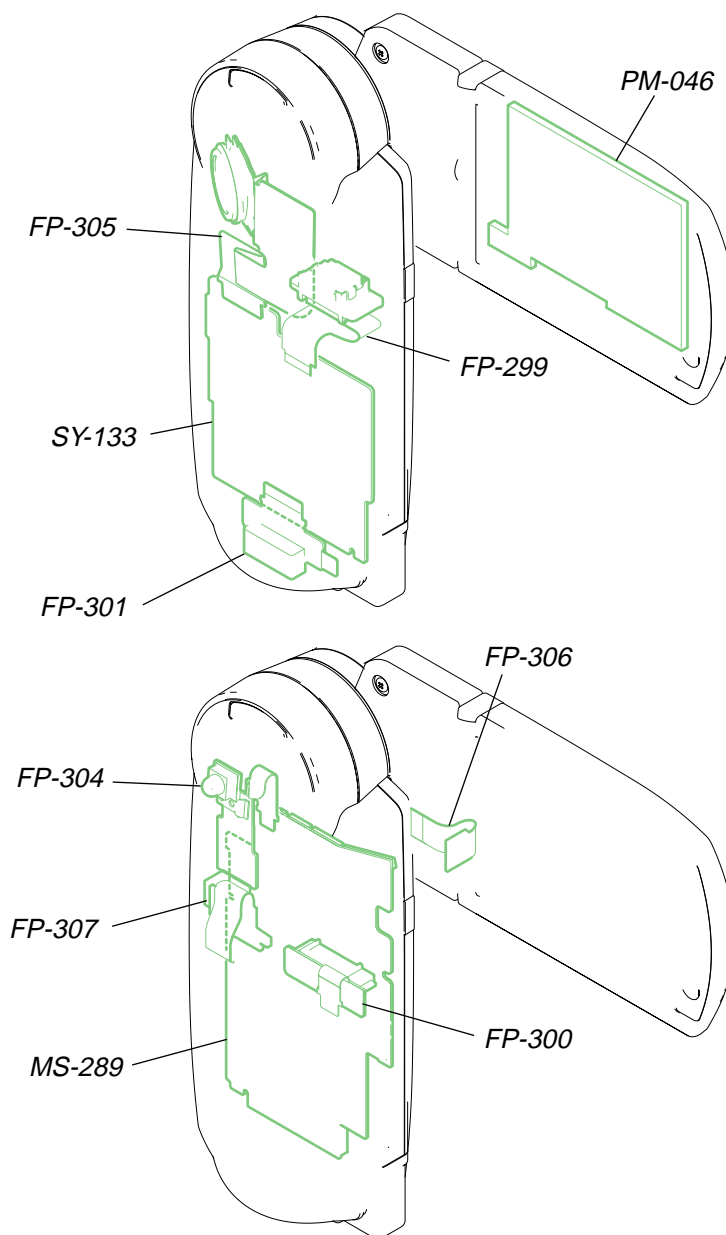
- | | |
|---------------------------------------|----------------------------------|
| ① Four screws (M1.7x3) | ⑤ Two screws (M1.7x3) |
| ② Hinge cover assembly | ⑥ Claw |
| ③ FP-306 flexible board | ⑦ Control switch block (FK80100) |
| ④ Two shuttle screw protection sheets | ⑧ Harness (FK-061) |



- | | |
|--------------------|-----------------------|
| ① Harness (MA-155) | ④ Two screws (M1.7x3) |
| ② Harness (PD-135) | ⑤ Hinge cabinet |
| ③ Harness holder | ⑥ LCD hinge |

2. DISASSEMBLY

2-2. CIRCUIT BOARDS LOCATION

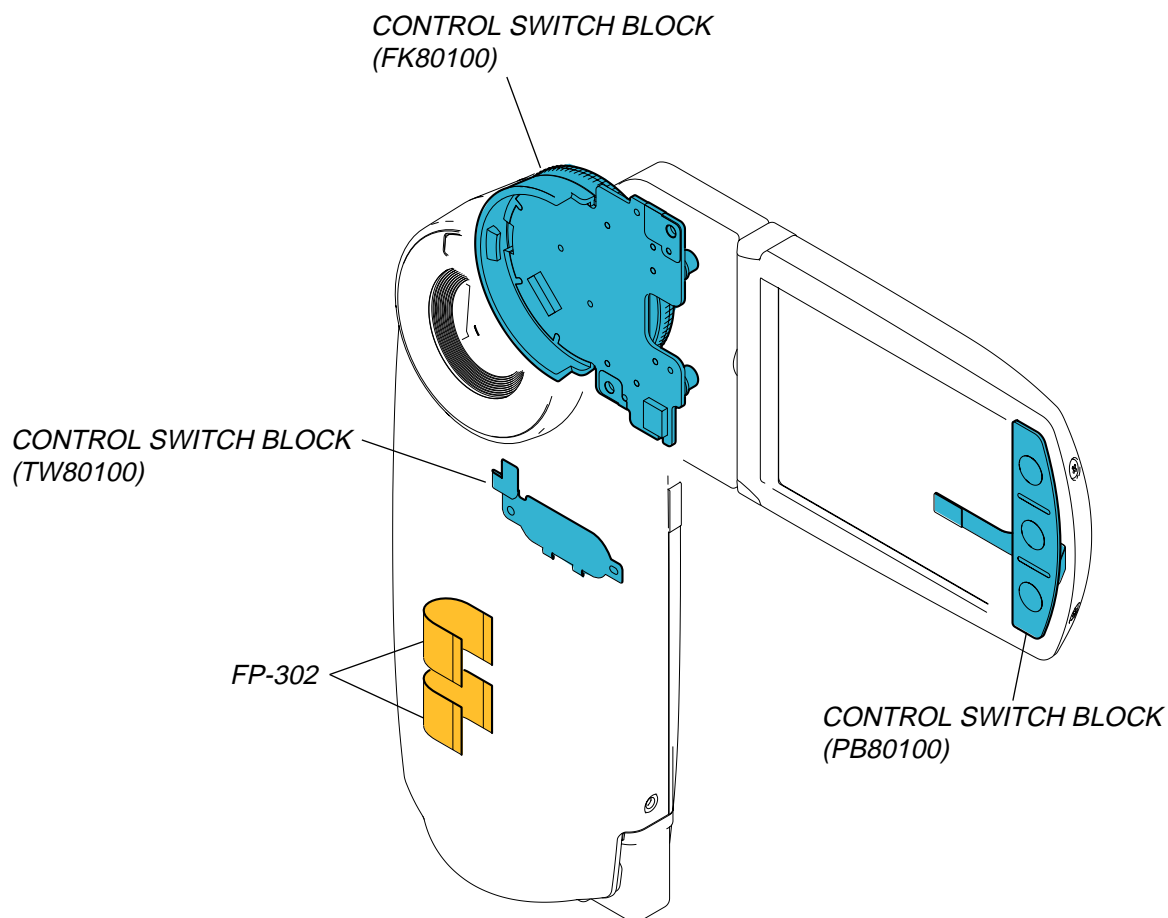


NAME	FUNCTION
FP-299	CCD IMAGER
FP-300	BATTERY TERMINAL
FP-301	MULTI CONNECTOR
FP-302	MS(CN004) - SY(CN751) RELAY / MS(CN006) - SY(CN752) RELAY
FP-304	POWER SW
FP-305	SY-LD RELAY, SP
FP-306	HALL IC
FP-307	DC JACK
MS-289	MS I/O, CONNECTOR, FUNCTION KEY, CONNECTOR
PM-046	LCD PANEL DRIVE, MIC AMP
SY-133	CAMERA A/D CONV. TIMING GENERATOR, LENS DRIVE, CAMERA DSP, LENS CONTROL, CAMERA SYSTEM CONTROL, DIGITAL SIGNAL PROCESS, SUPER AND FLASH MEMORY, SDRAM, HI CONTROL, AUDIO AMP, SPEAKER AMP, CONNECTOR, DC/DC CONVERTER

2. DISASSEMBLY

2-3. FLEXIBLE BOARDS LOCATION

The flexible boards contained in the lens block and flash unit(FL80100) are not shown.



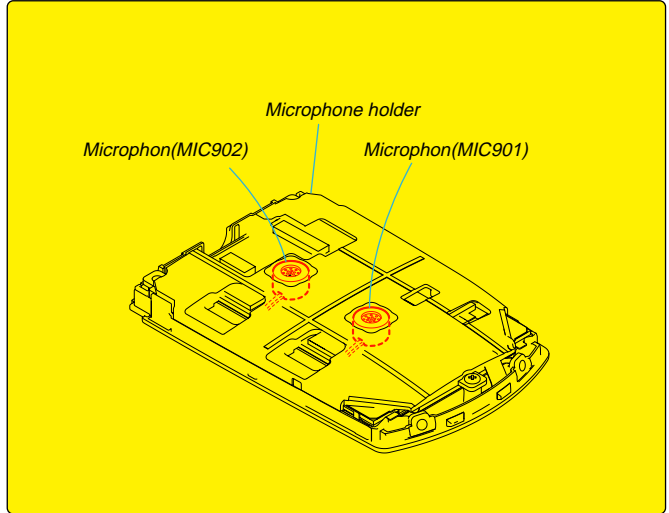
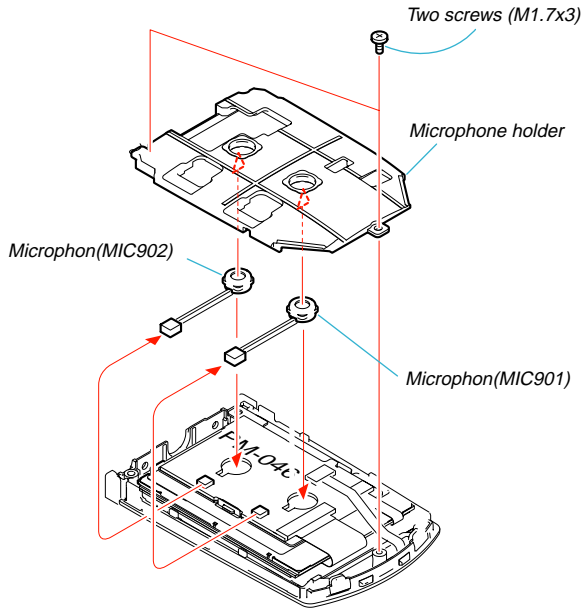
NAME	FUNCTION
FP-299	CCD IMAGER
FP-300	BATTERY TERMINAL
FP-301	MULTI CONNECTOR
FP-302	MS(CN004) - SY(CN751) RELAY / MS(CN006) - SY(CN752) RELAY
FP-304	POWER SW
FP-305	SY-LD RELAY, SP
FP-306	HALL IC
FP-307	DC JACK
MS-289	MS I/O, CONNECTOR, FUNCTION KEY, CONNECTOR
PM-046	LCD PANEL DRIVE, MIC AMP
SY-133	CAMERA A/D CONV. TIMING GENERATOR, LENS DRIVE, CAMERA DSP, LENS CONTROL, CAMERA SYSTEM CONTROL, DIGITAL SIGNAL PROCESS, SUPER AND FLASH MEMORY, SDRAM, HI CONTROL, AUDIO AMP, SPEAKER AMP, CONNECTOR, DC/DC CONVERTER

HELP

Disassembling and assembling procedures that require attention are described here.

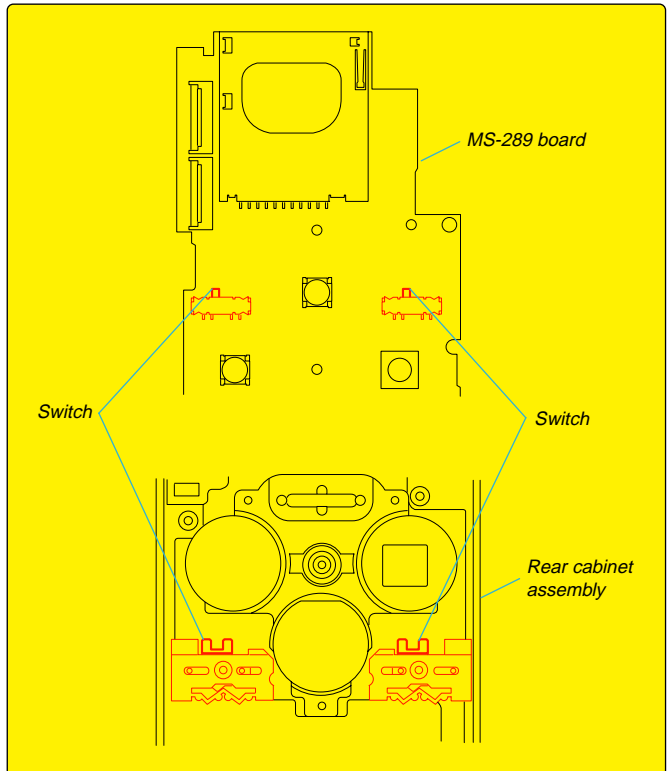
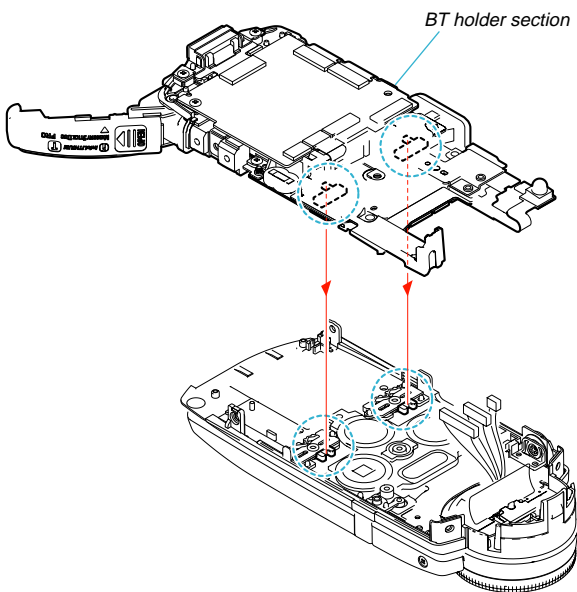
HELP 01

When installing the microphones, be sure to embed them horizontally in the dents.



HELP 02

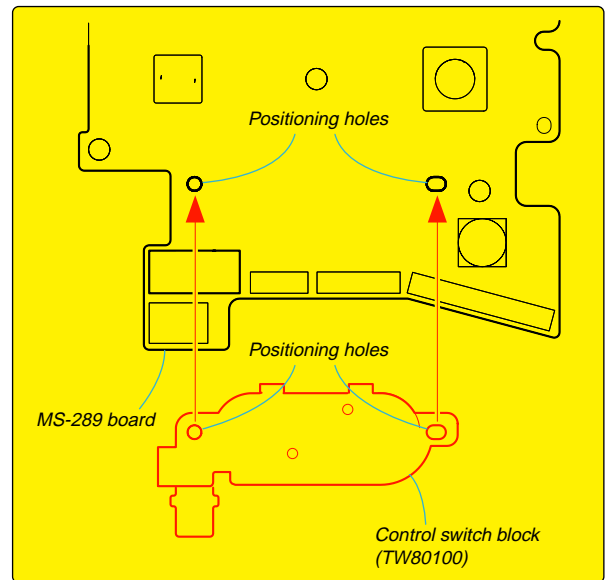
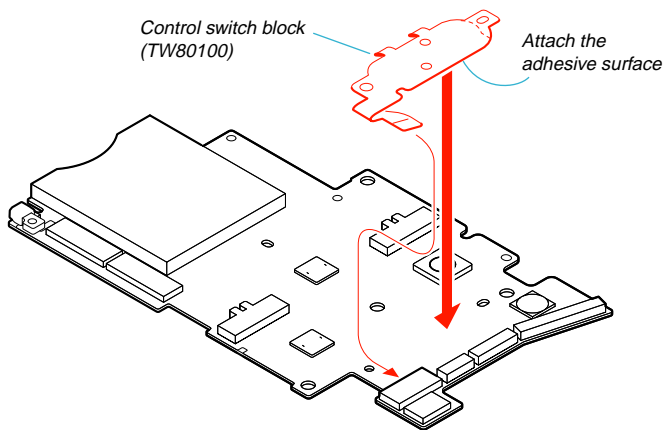
When installing the BT holder section, install it while aligning the two switches of the MS-289 board with the two switches of the rear cabinet assembly.



HELP 03

Installation procedure

1. Insert the control switch block (TW80100) into the connector of the MS-289 board. (Lock the connector.)
2. Remove the release paper from the back of the control switch block (TW80100).
3. Fold the control switch block (TW80100) and align the positioning holes of the control switch block (TW80100) with the positioning holes of the MS-289 board.
4. Adhere the control switch block (TW80100) to the MS-289 board in that state.



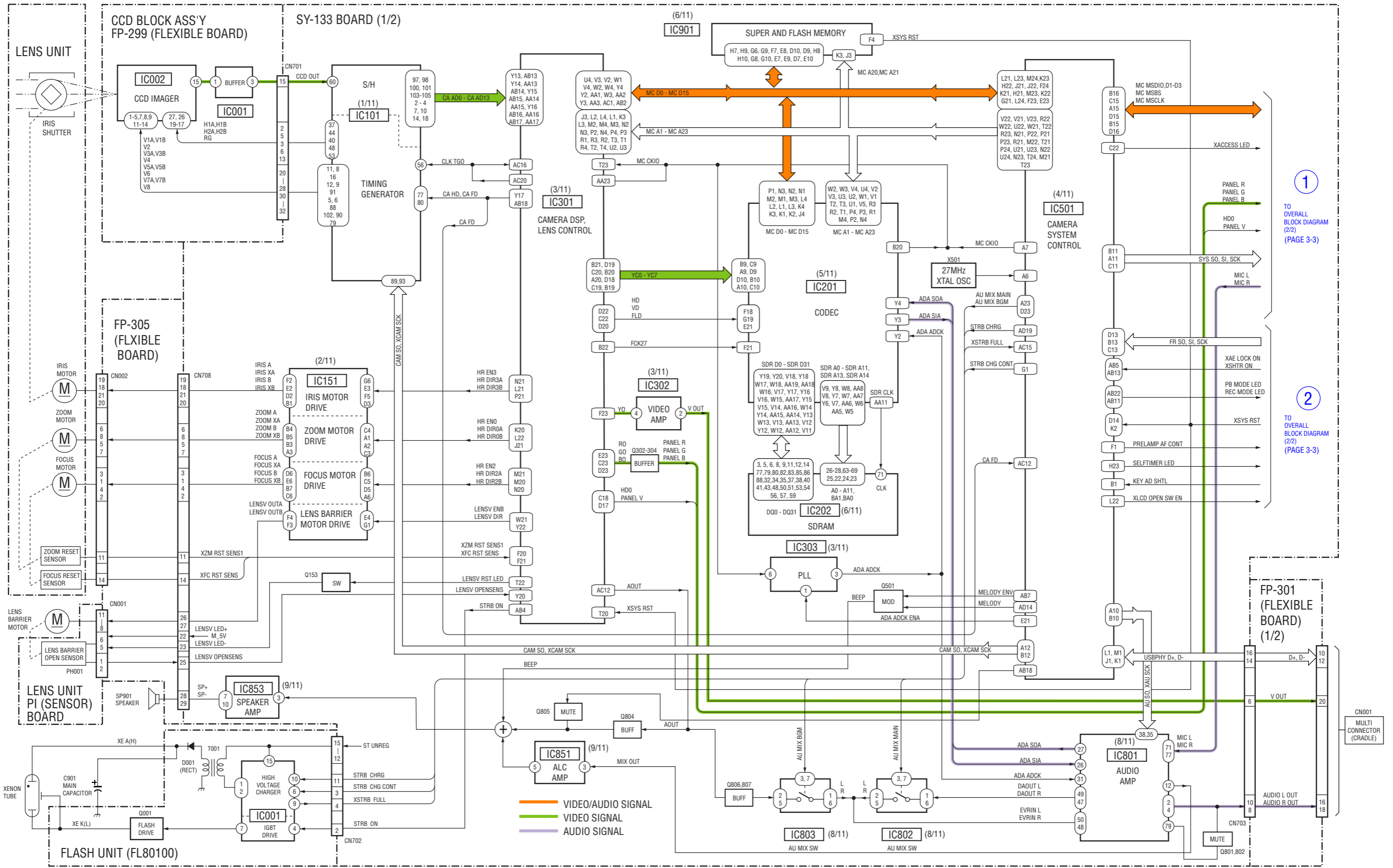
3. BLOCK DIAGRAMS

Link

OVERALL BLOCK DIAGRAM (1/2)	POWER BLOCK DIAGRAM (1/2)
OVERALL BLOCK DIAGRAM (2/2)	POWER BLOCK DIAGRAM (2/2)

3. BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM (1/2) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



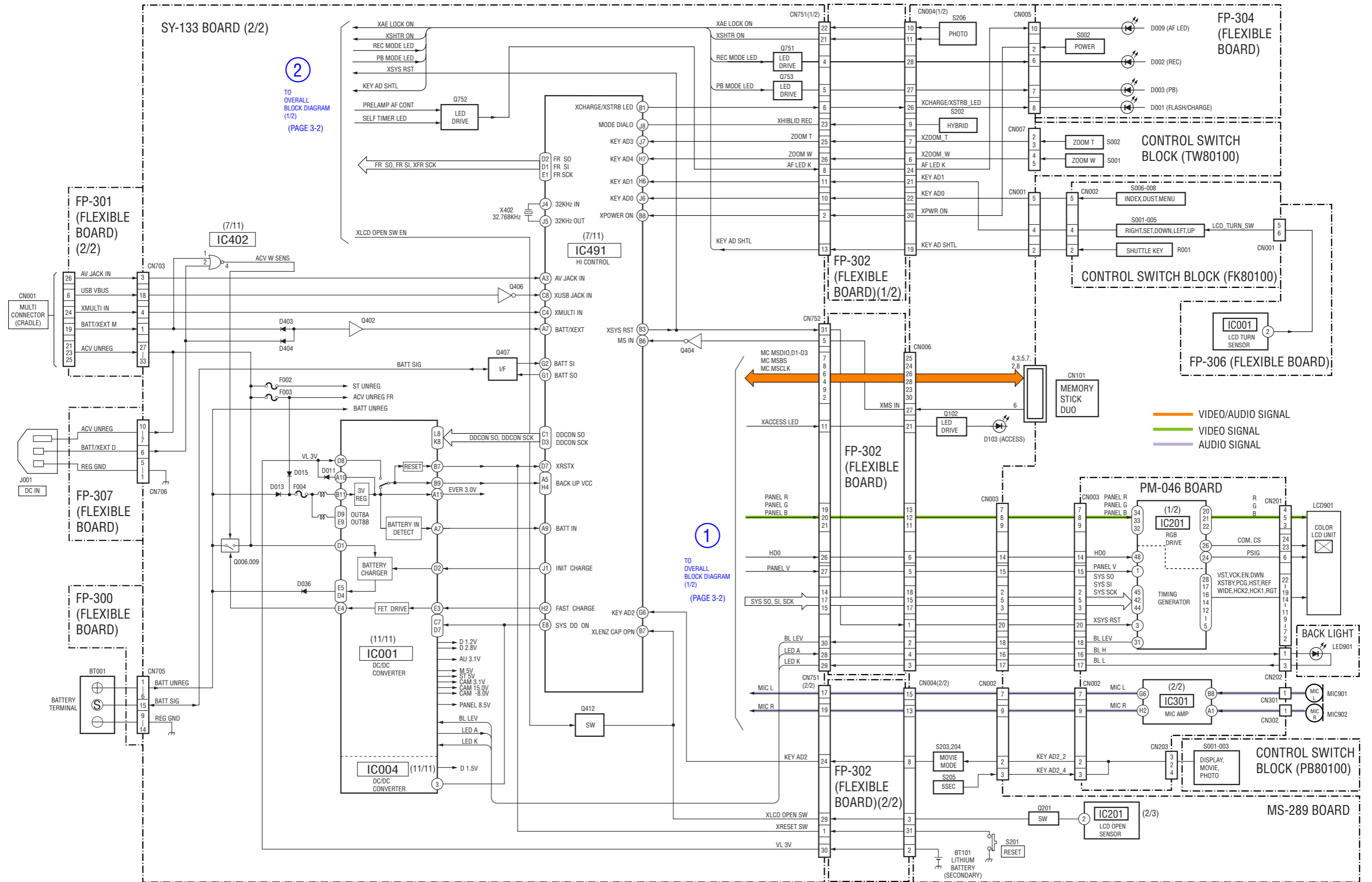
1

TO OVERALL BLOCK DIAGRAM (2/2) (PAGE 3-3)

2

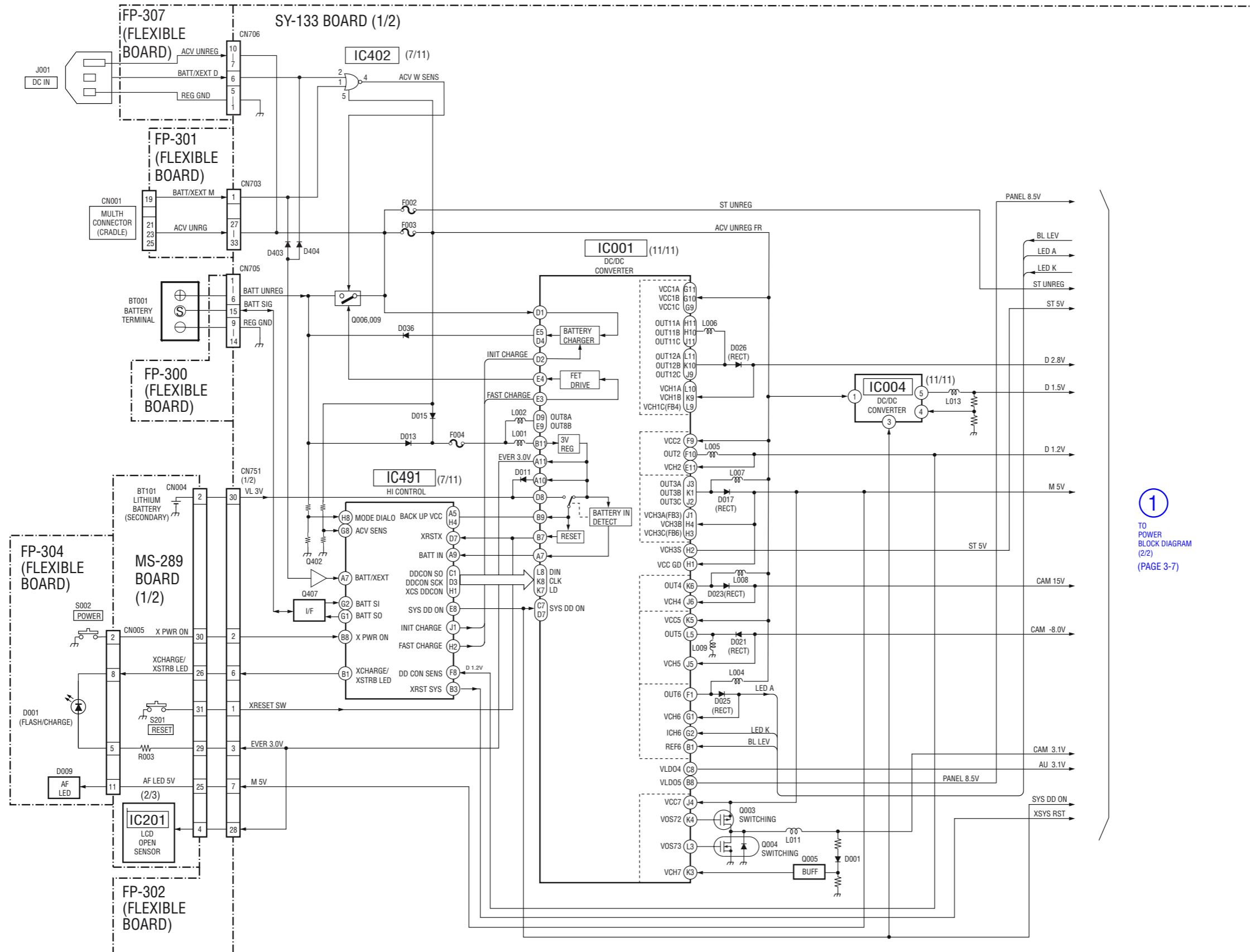
TO OVERALL BLOCK DIAGRAM (2/2) (PAGE 3-3)

3-2. OVERALL BLOCK DIAGRAM (2/2) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



3-3. POWER BLOCK DIAGRAM (1/2)

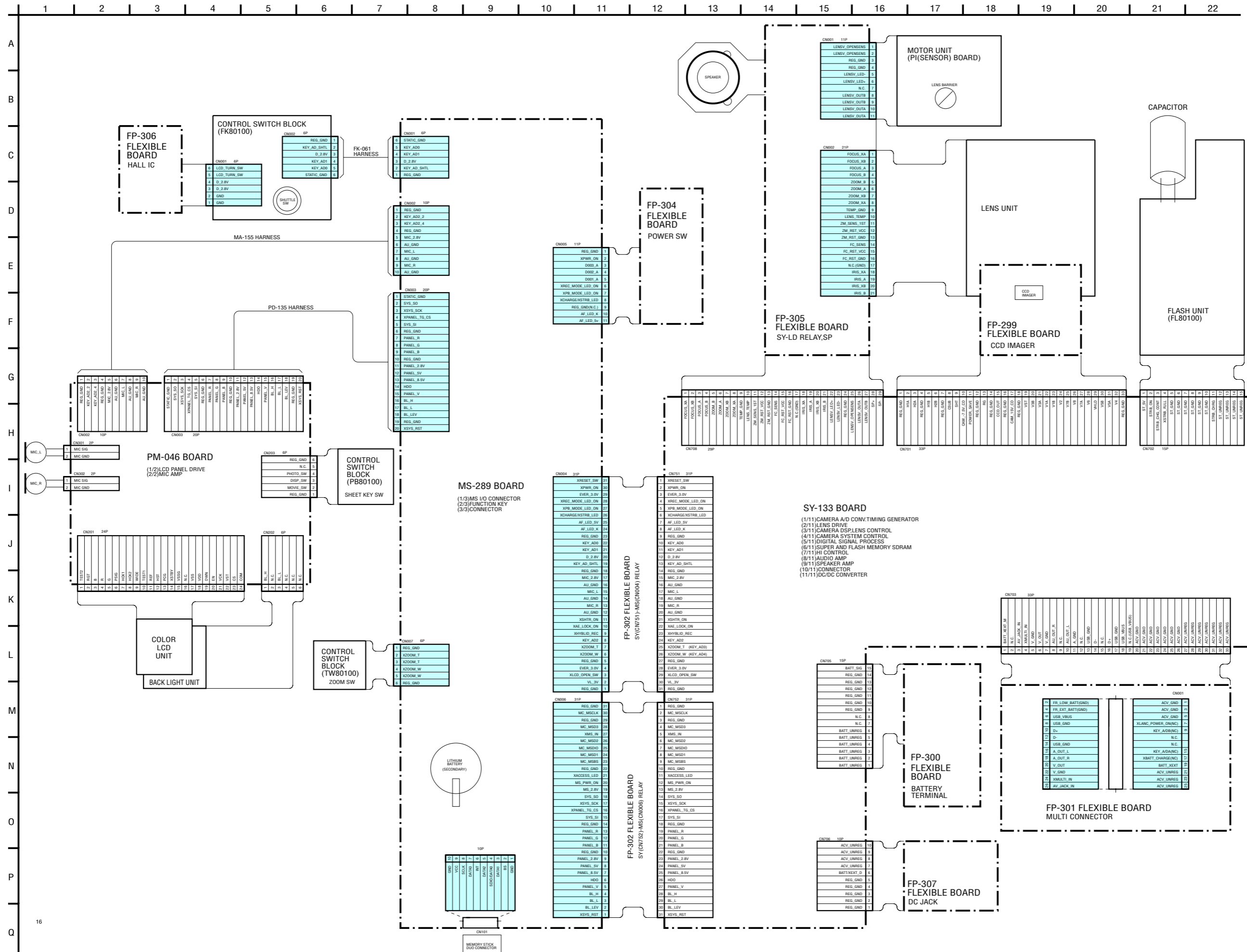
() : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



1
TO
POWER
BLOCK DIAGRAM
(2/2)
(PAGE 3-7)

4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



4-2. SCHEMATIC DIAGRAMS

Link

<ul style="list-style-type: none">• MS-289 BOARD (1/3) (MS I/O, CONNECTOR)	<ul style="list-style-type: none">• FP-299 FLEXIBLE BOARD (CCD IMAGER)
<ul style="list-style-type: none">• MS-289 BOARD (2/3) (FUNCTION KEY)	<ul style="list-style-type: none">• FP-300 FLEXIBLE BOARD (BATTERY TERMINAL)
<ul style="list-style-type: none">• MS-289 BOARD (3/3) (CONNECTOR)	<ul style="list-style-type: none">• FP-301 FLEXIBLE BOARD (MULTI CONNECTOR)
<ul style="list-style-type: none">• CONTROL SWITCH BLOCK (FK80100) (SHUTTL SW)	<ul style="list-style-type: none">• FP-302 FLEXIBLE BOARD (SY(CN751/CN752)-MS(CN004/CN006) RELAY)
<ul style="list-style-type: none">• CONTROL SWITCH BLOCK (PB80100) (SHEET KEY SW)	<ul style="list-style-type: none">• FP-304 FLEXIBLE BOARD (POWER SW)
<ul style="list-style-type: none">• CONTROL SWITCH BLOCK (TW80100) (ZOOM SW)	<ul style="list-style-type: none">• FP-305 FLEXIBLE BOARD (SY-LD RELAY, SP)
<ul style="list-style-type: none">• FLASH UNIT (FL80100) (FLASH)	<ul style="list-style-type: none">• FP-306 FLEXIBLE BOARD (HALL IC)
<ul style="list-style-type: none">• MOTOR UNIT (PI (SENSOR) BOARD)	<ul style="list-style-type: none">• FP-307 FLEXIBLE BOARD (DC JACK)

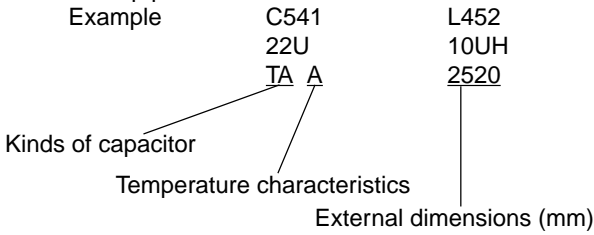
- COMMON NOTE FOR SCHEMATIC DIAGRAMS

4-2. SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. pF : μF . 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. $\text{k}\Omega=1000 \Omega$, $\text{M}\Omega=1000 \text{k}\Omega$.
- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.



- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
In such cases, the unused circuits may be indicated.
- Parts with * differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
XEDIT → $\overline{\text{EDIT}}$ PB/XREC → $\overline{\text{PB/REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B- Line
- : IN/OUT direction of (+,-) B LINE.
- : adjustment for repair.
- Circled numbers refer to waveforms.

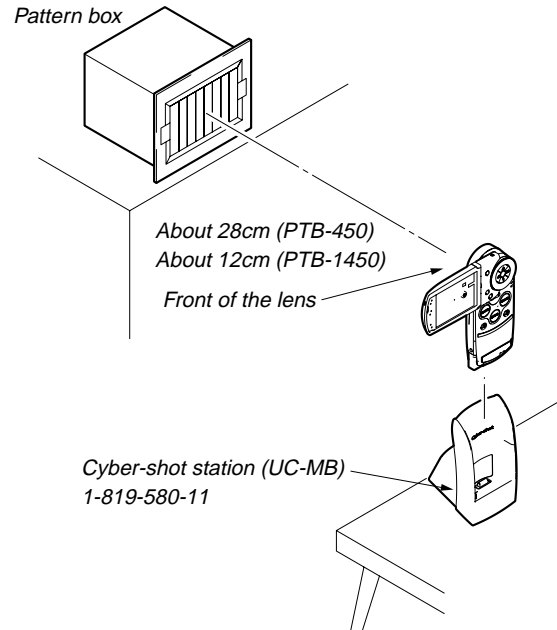
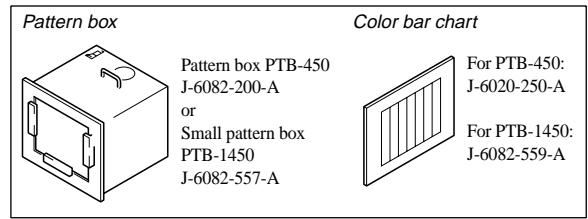
(Measuring conditions voltage and waveform)

- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms.
(VOM of DC 10 M Ω input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions Upon Replacing CCD imager

- The FP-299 flexible board mounted as a repair part is not equipped with a CCD imager.
When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

1. Connection



2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

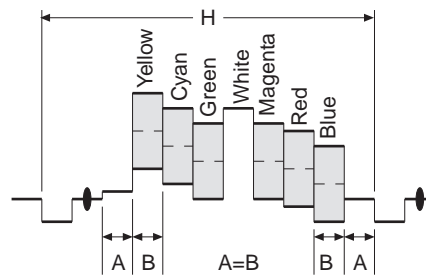


Fig. a (Video output terminal output waveform)

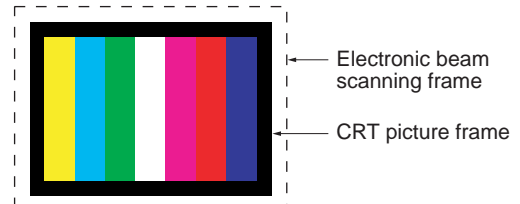


Fig. b (Picture on monitor TV)

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

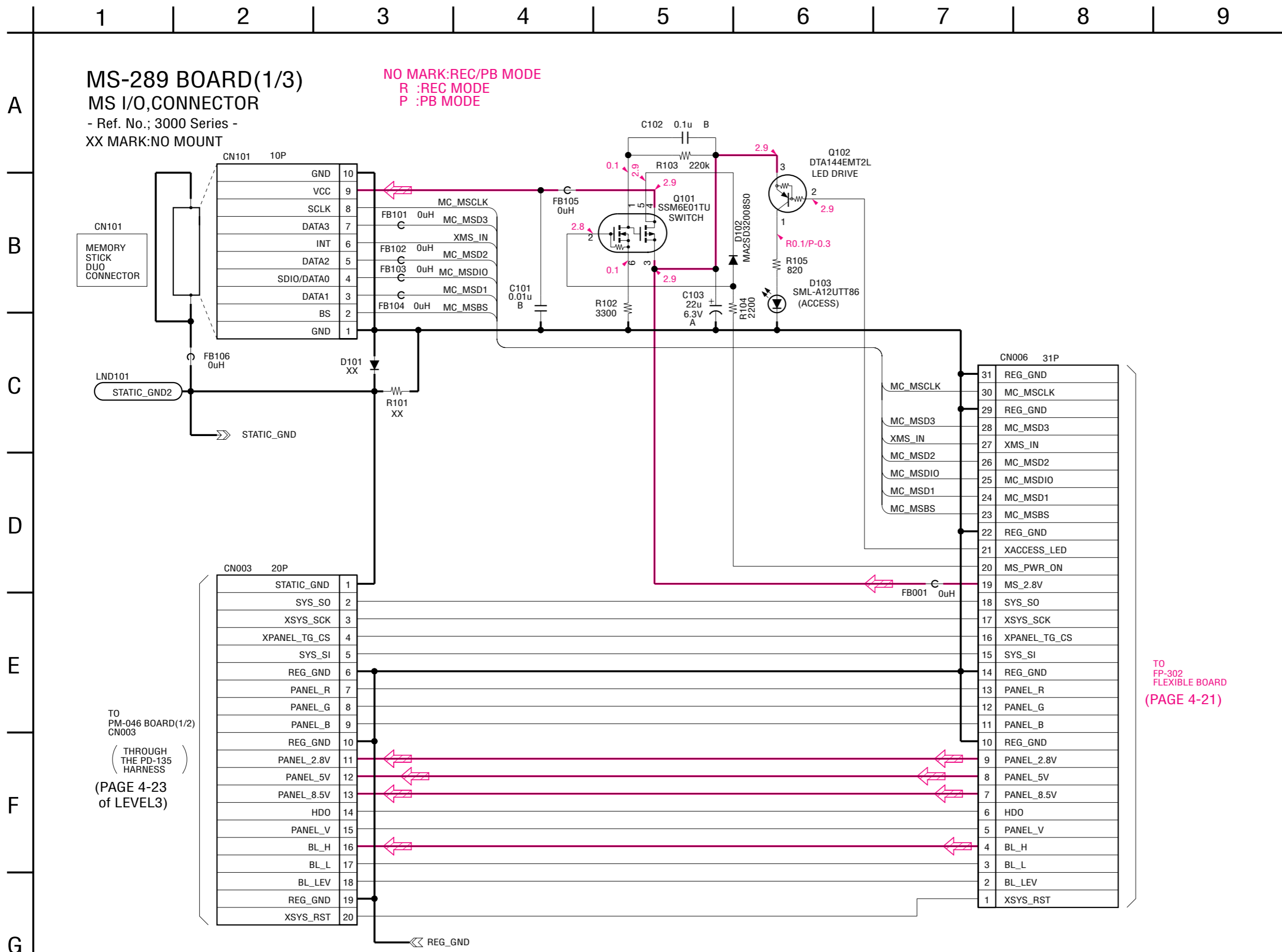
Note :
 The components identified by mark Δ or dotted line with mark Δ are critical for safety.
 Replace only with part number specified.

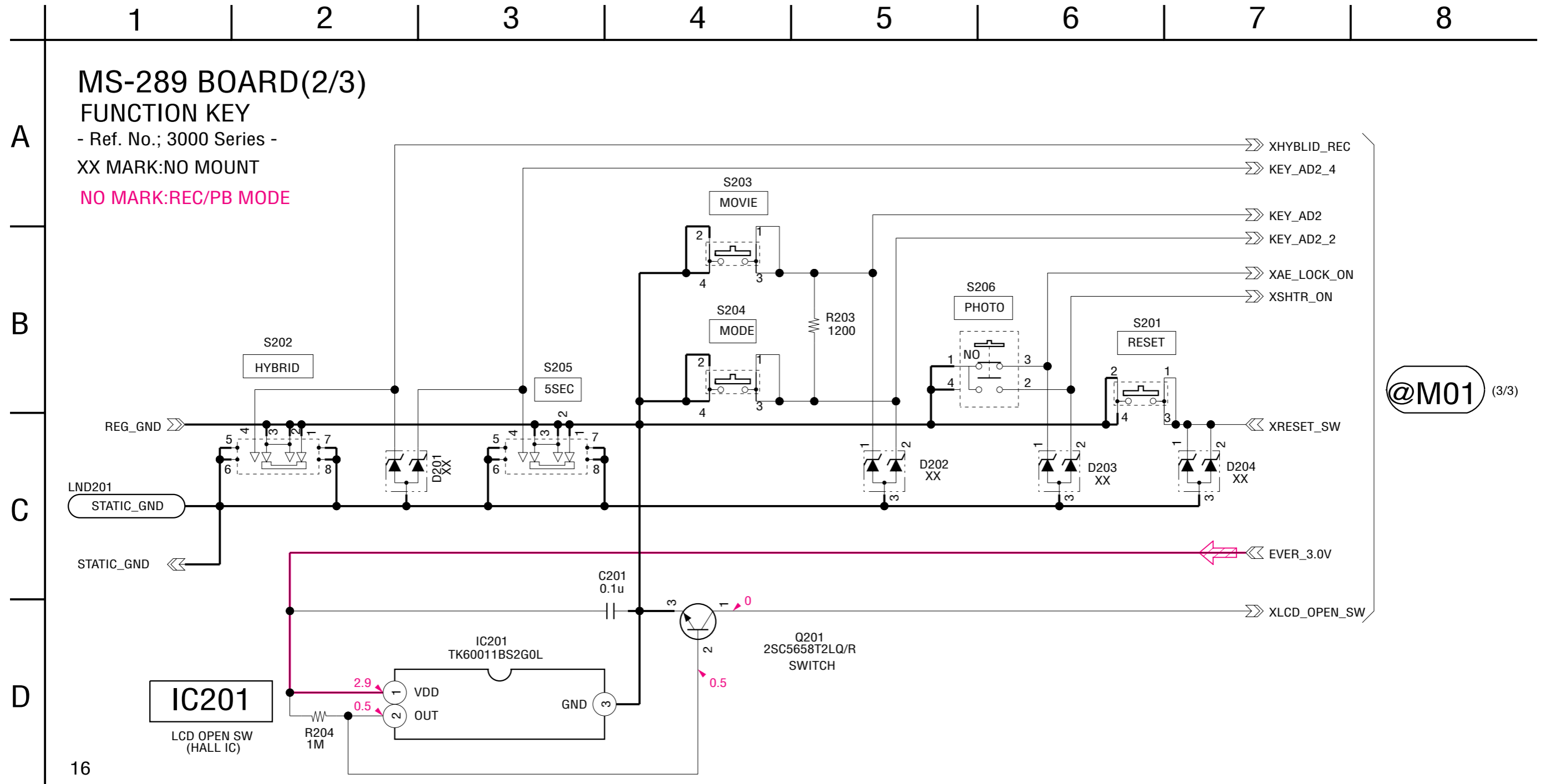
Note :
 Les composants identifiés par une marque Δ sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

4-2. SCHEMATIC DIAGRAMS

For Schematic Diagram

• Refer to page 4-51 for printed wiring board.





16

For Schematic Diagram

• Refer to page 4-51 for printed wiring board.



MS-289 BOARD(3/3) CONNECTOR

- Ref. No.; 3000 Series -
XX MARK:NO MOUNT

A

B

C

D

E

F

G

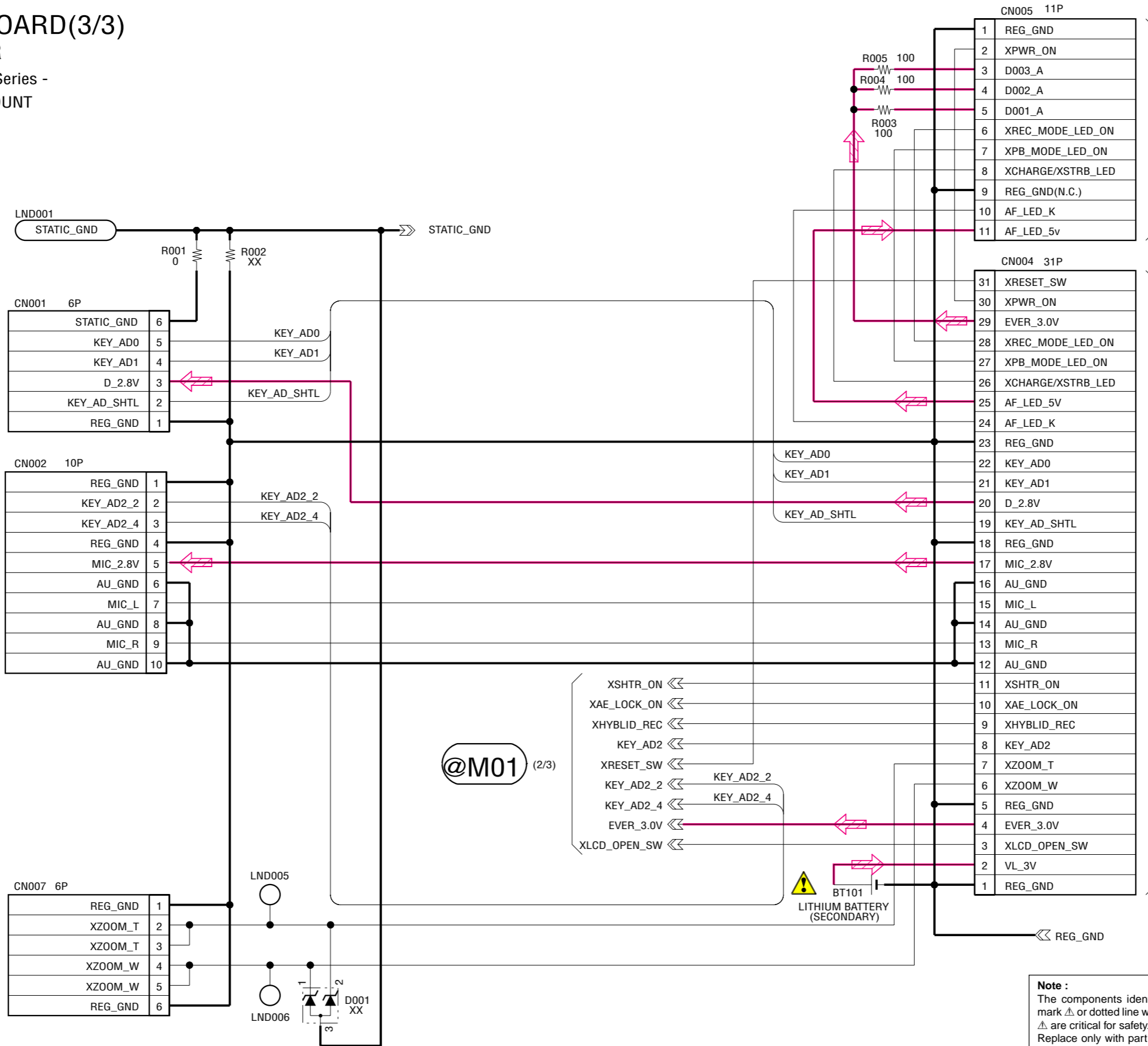
TO
CONTROL SWITCH
BLOCK(FK80100)
CN002
(THROUGH THE
FK-061 HARNESS)
(PAGE 4-11)

TO
PM-046 BOARD(1/2)
CN002
(THROUGH THE
MA-155 HARNESS)
(PAGE 4-23
of LEVEL3)

TO
CONTROL SWITCH
BLOCK(TW80100)
(PAGE 4-12)

TO
FP-304
FLEXIBLE BOARD
(PAGE 4-22)

TO
FP-302
FLEXIBLE BOARD
(PAGE 4-21)

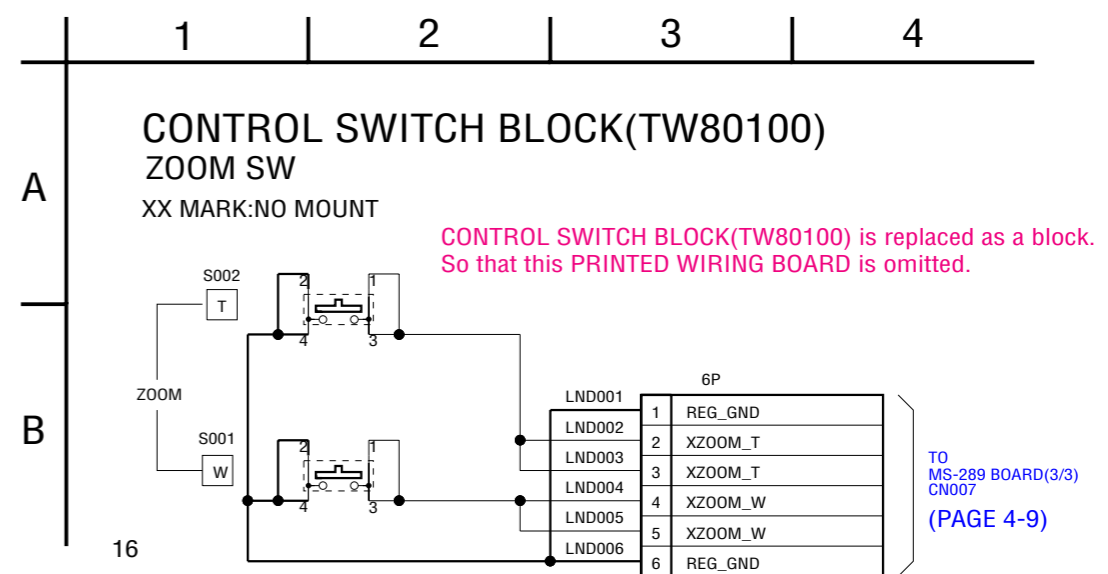
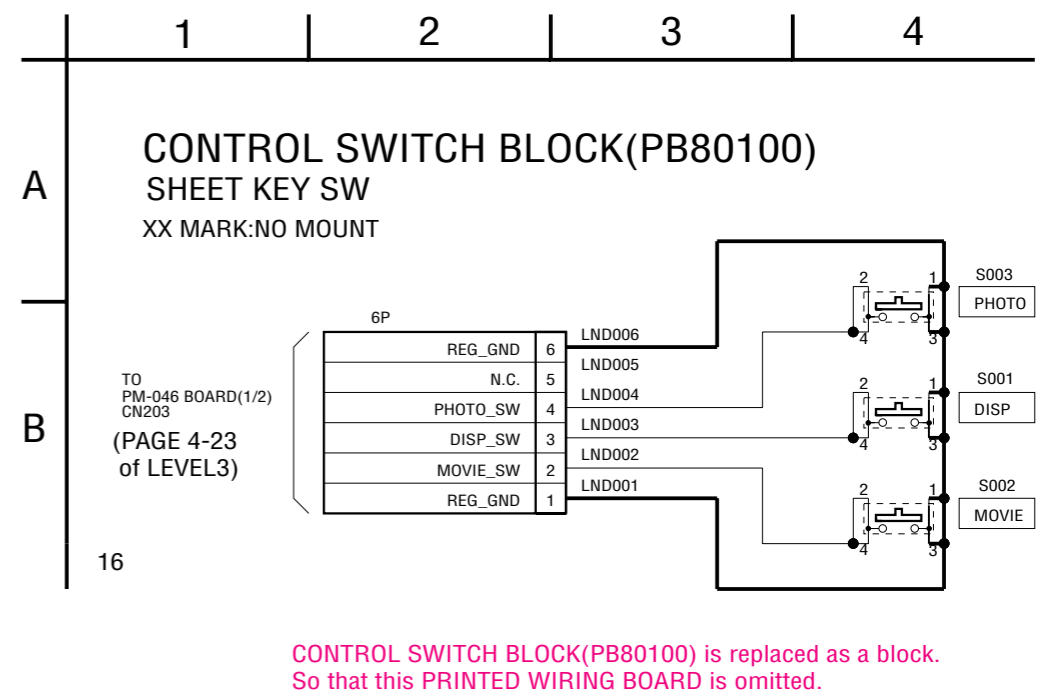
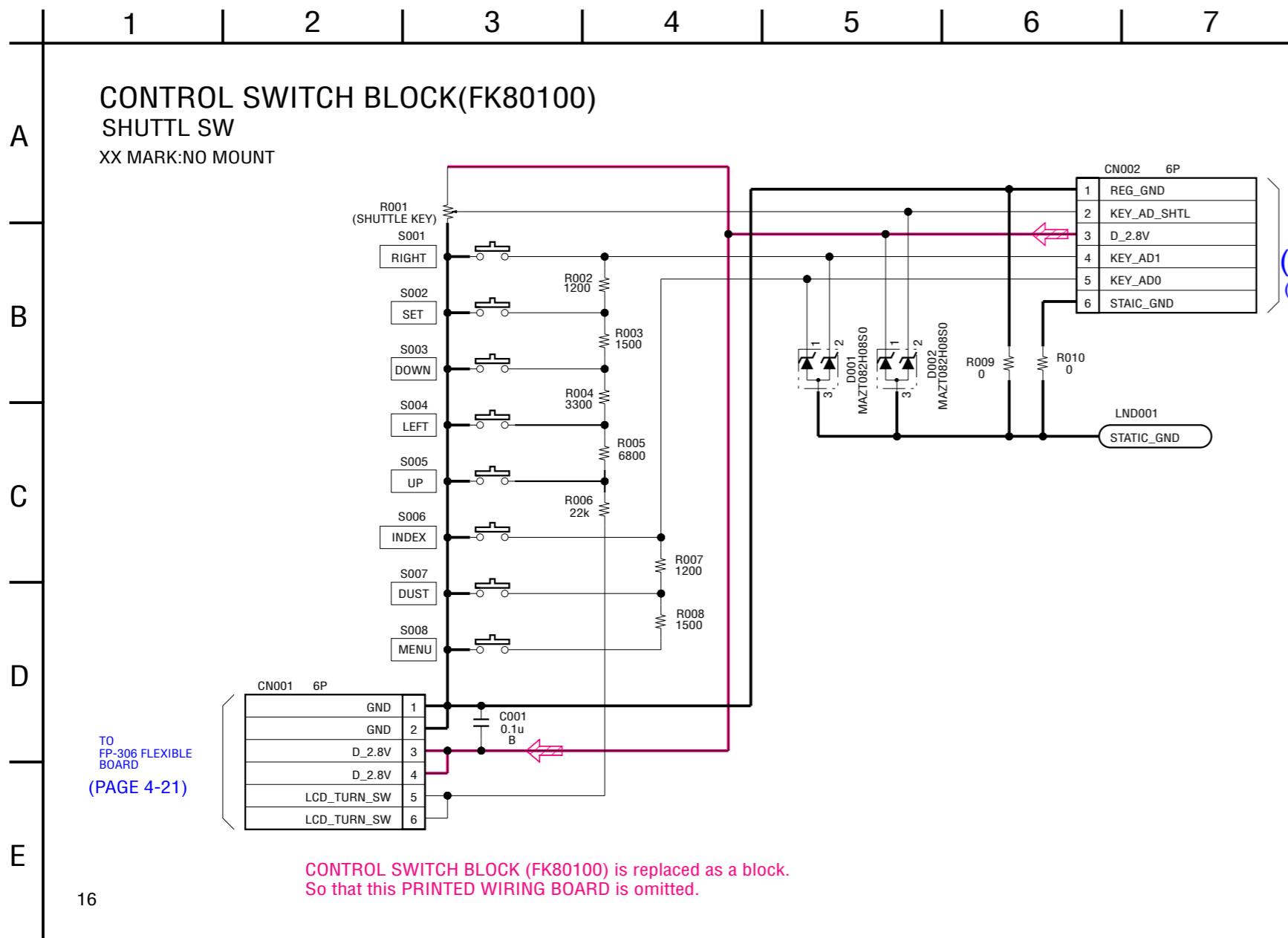


@M01 (2/3)

BT101
LITHIUM BATTERY
(SECONDARY)

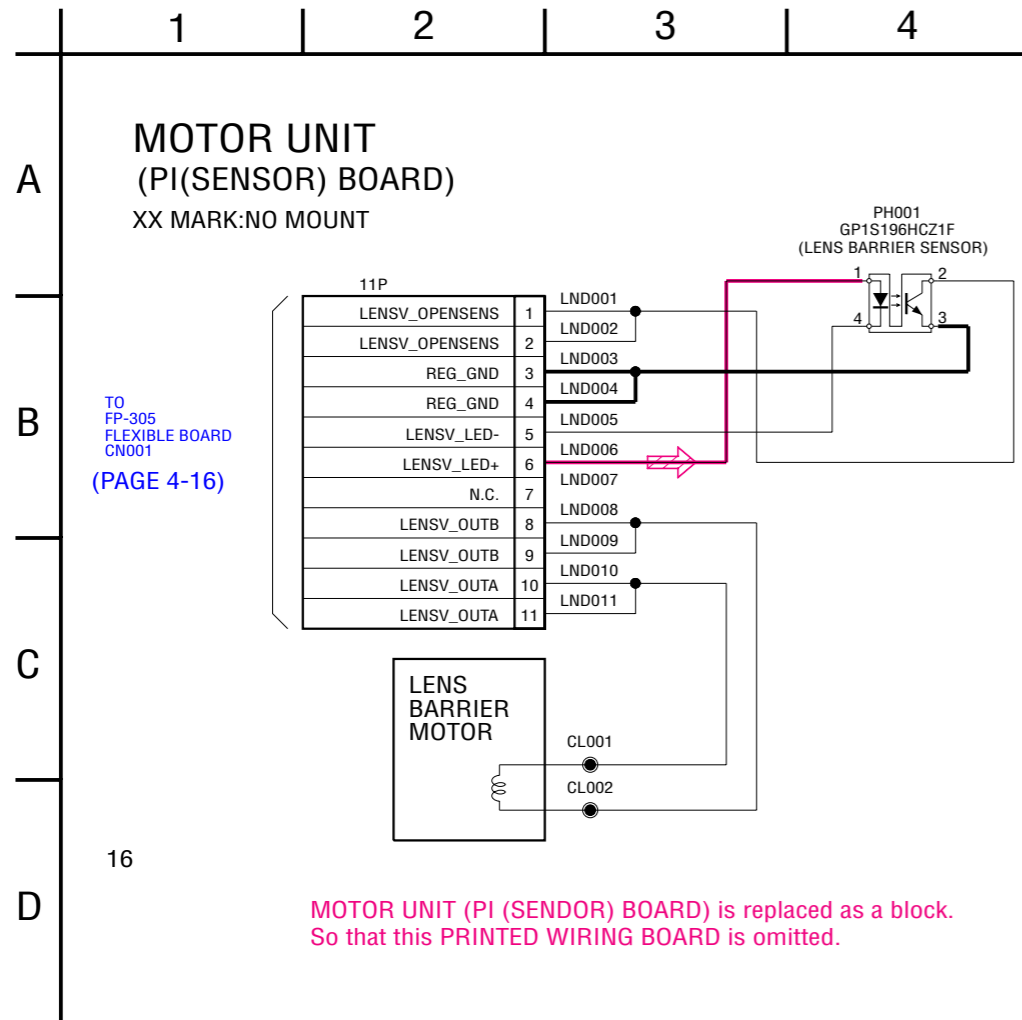
Note :
The components identified by
mark Δ or dotted line with mark
 Δ are critical for safety.
Replace only with part number
specified.

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

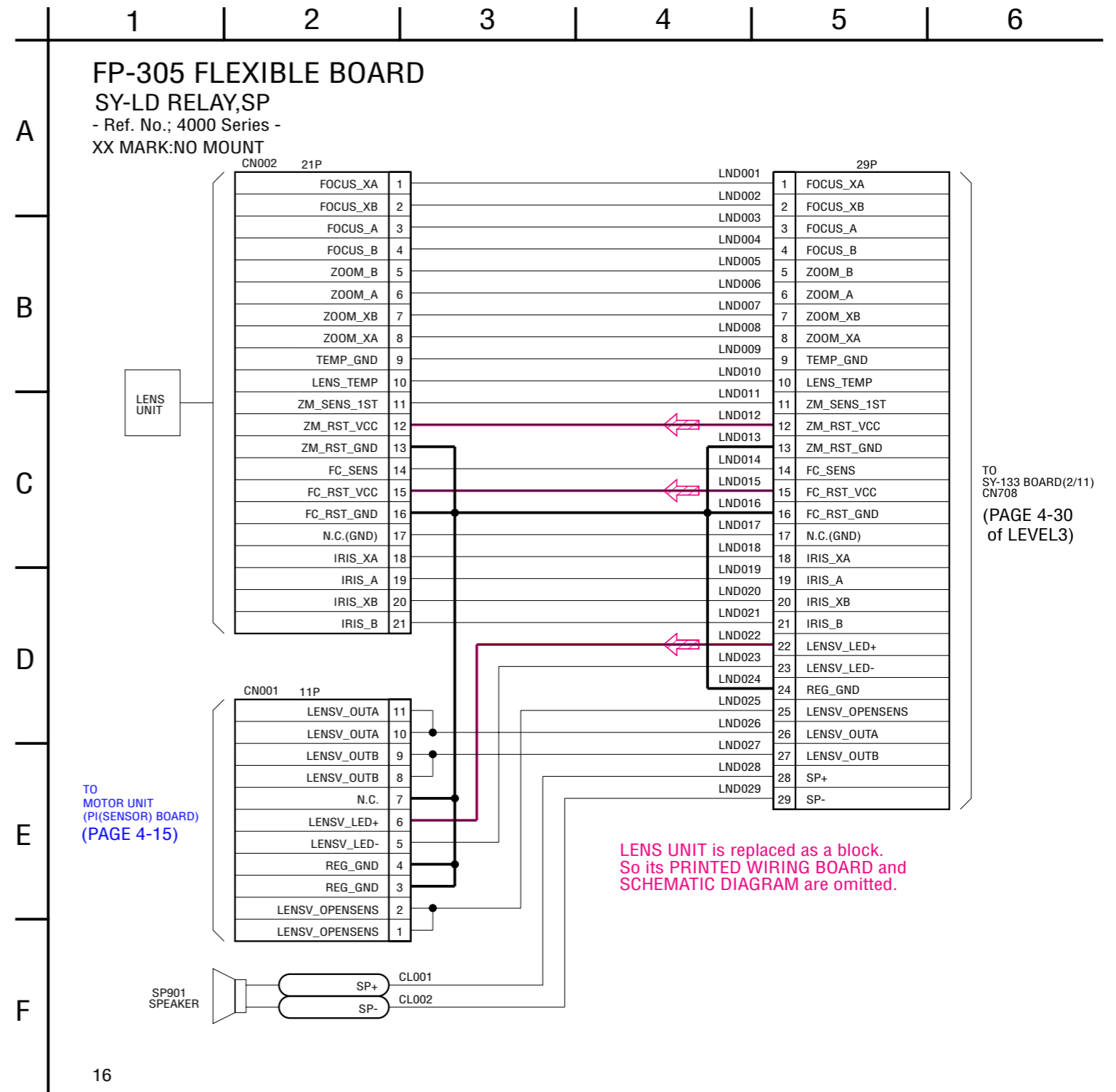
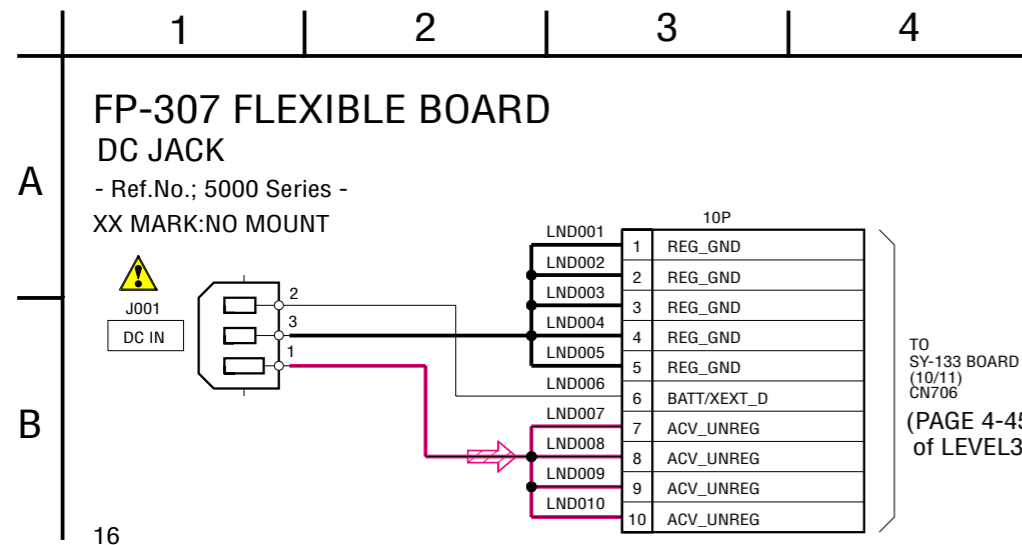


For Schematic Diagram

• Refer FP-305 and FP307 to page 4-58 for printed wiring board.



MOTOR UNIT (PI (SENDOR) BOARD) is replaced as a block. So that this PRINTED WIRING BOARD is omitted.



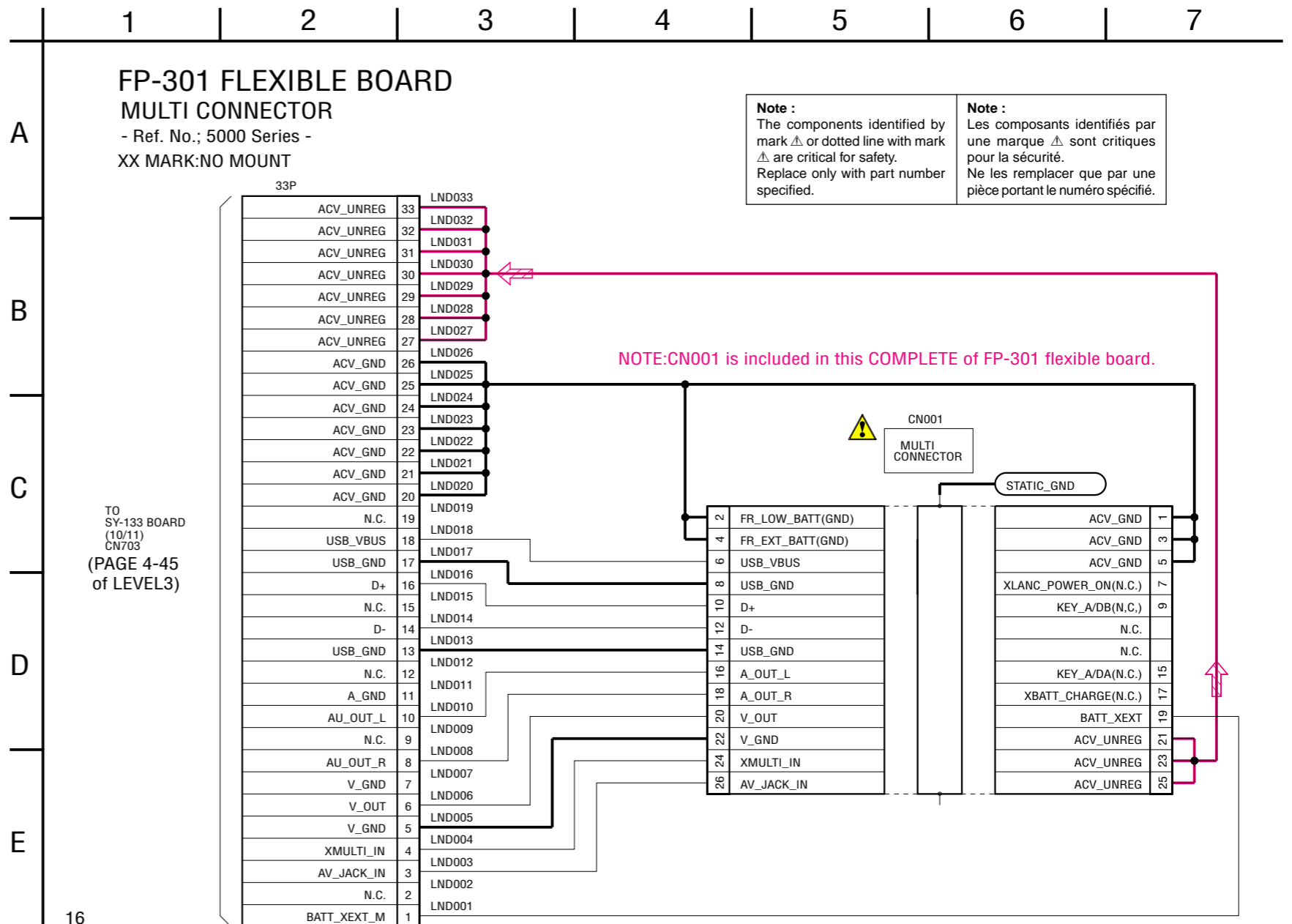
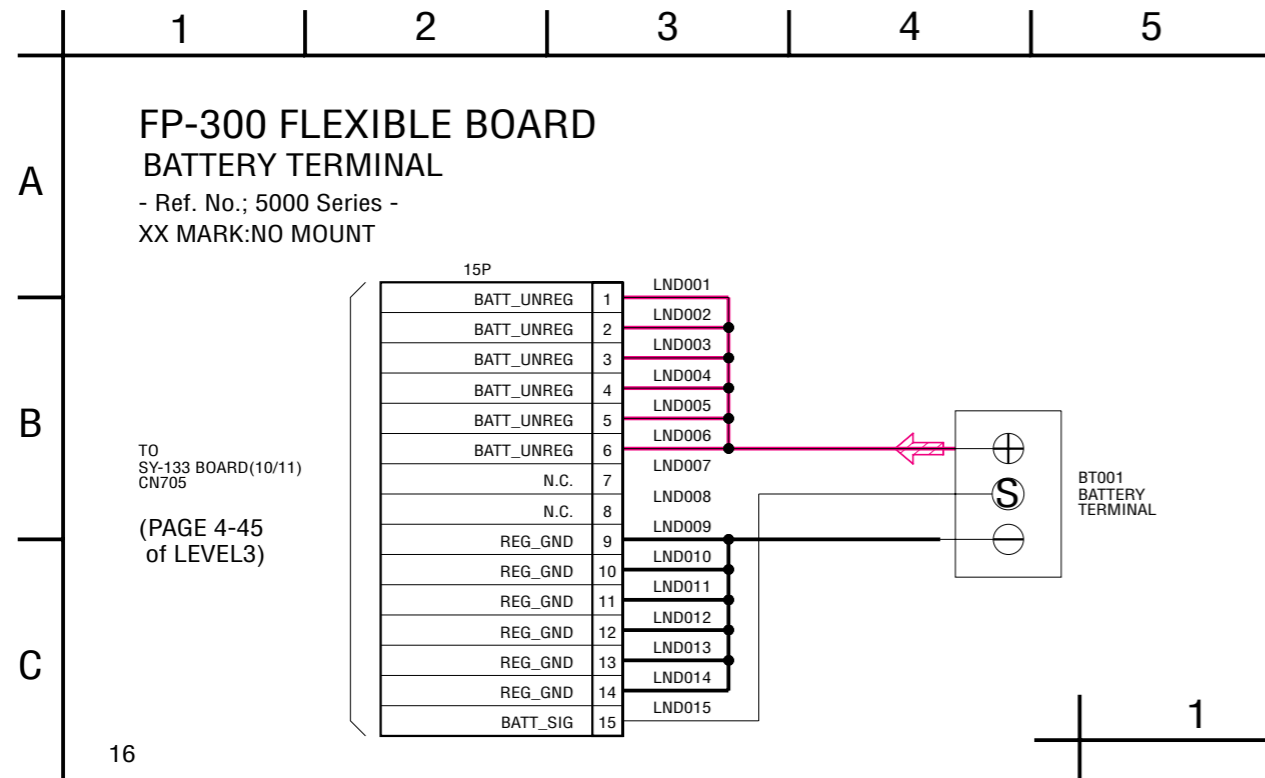
LENS UNIT is replaced as a block. So its PRINTED WIRING BOARD and SCHEMATIC DIAGRAM are omitted.

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

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

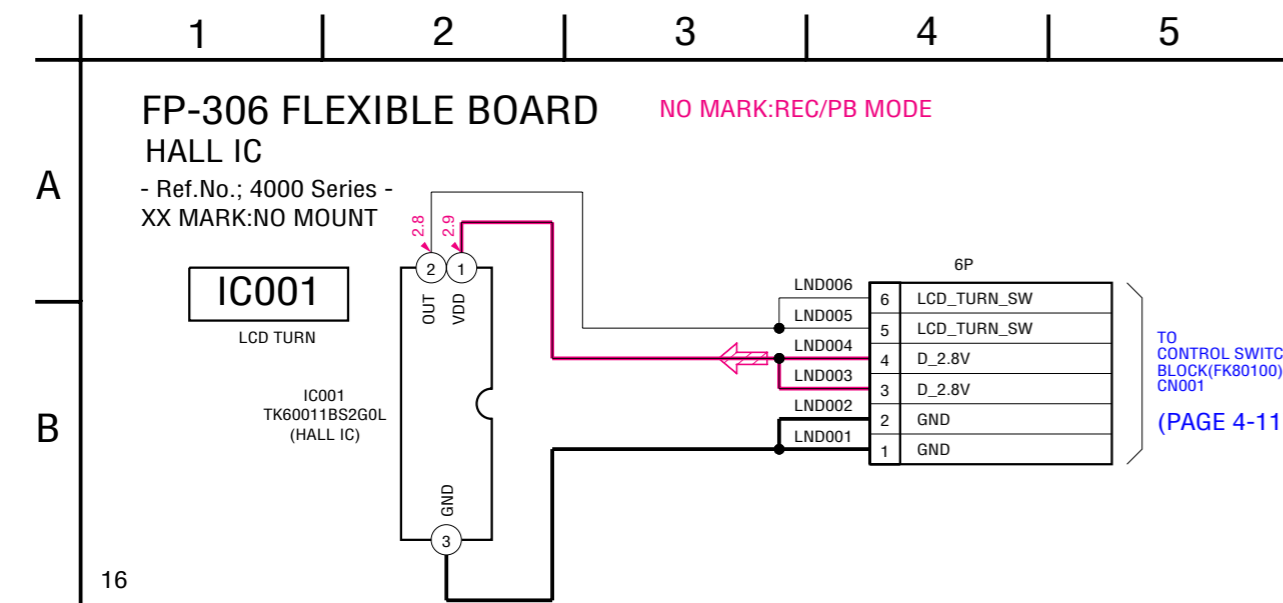
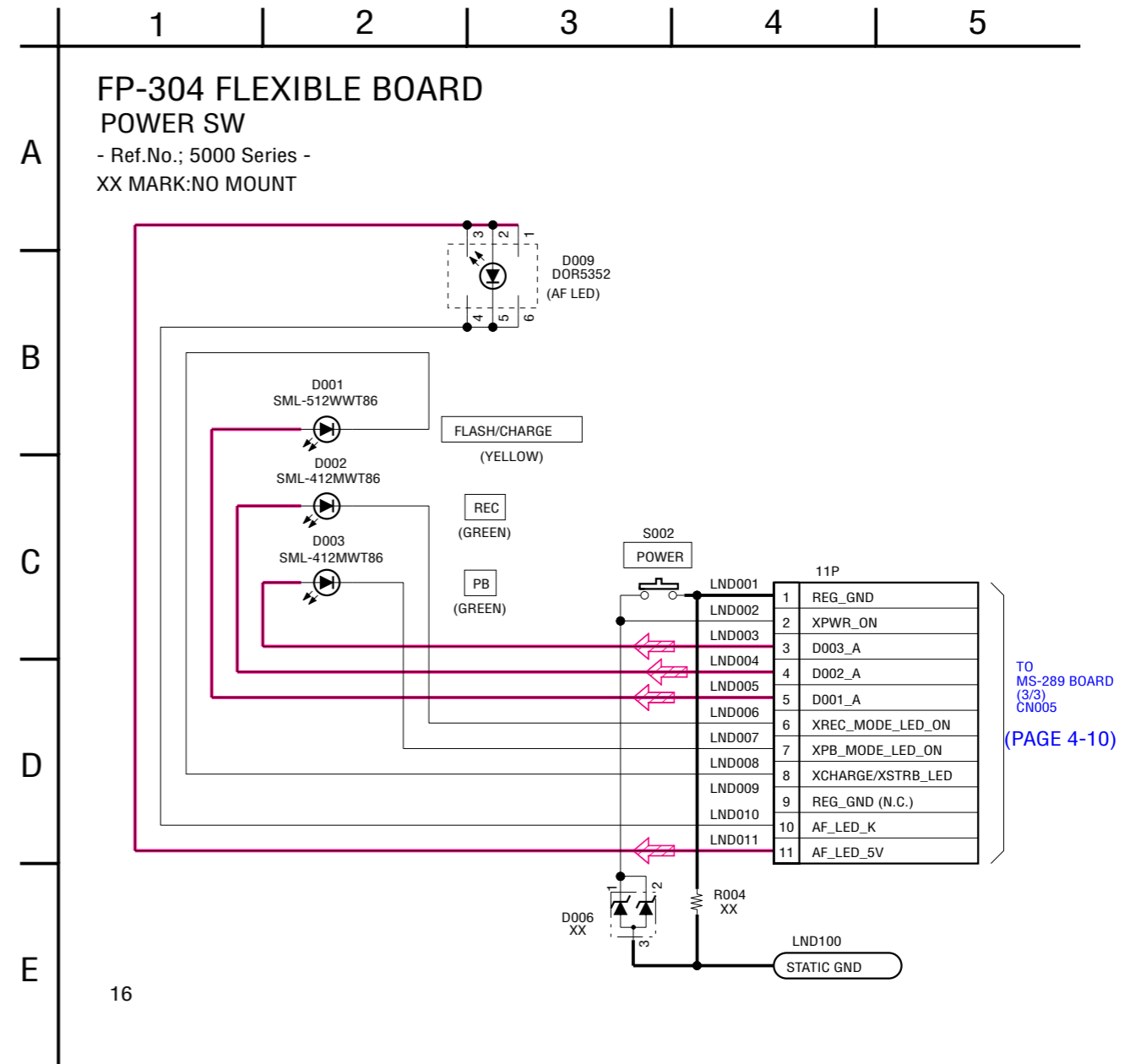
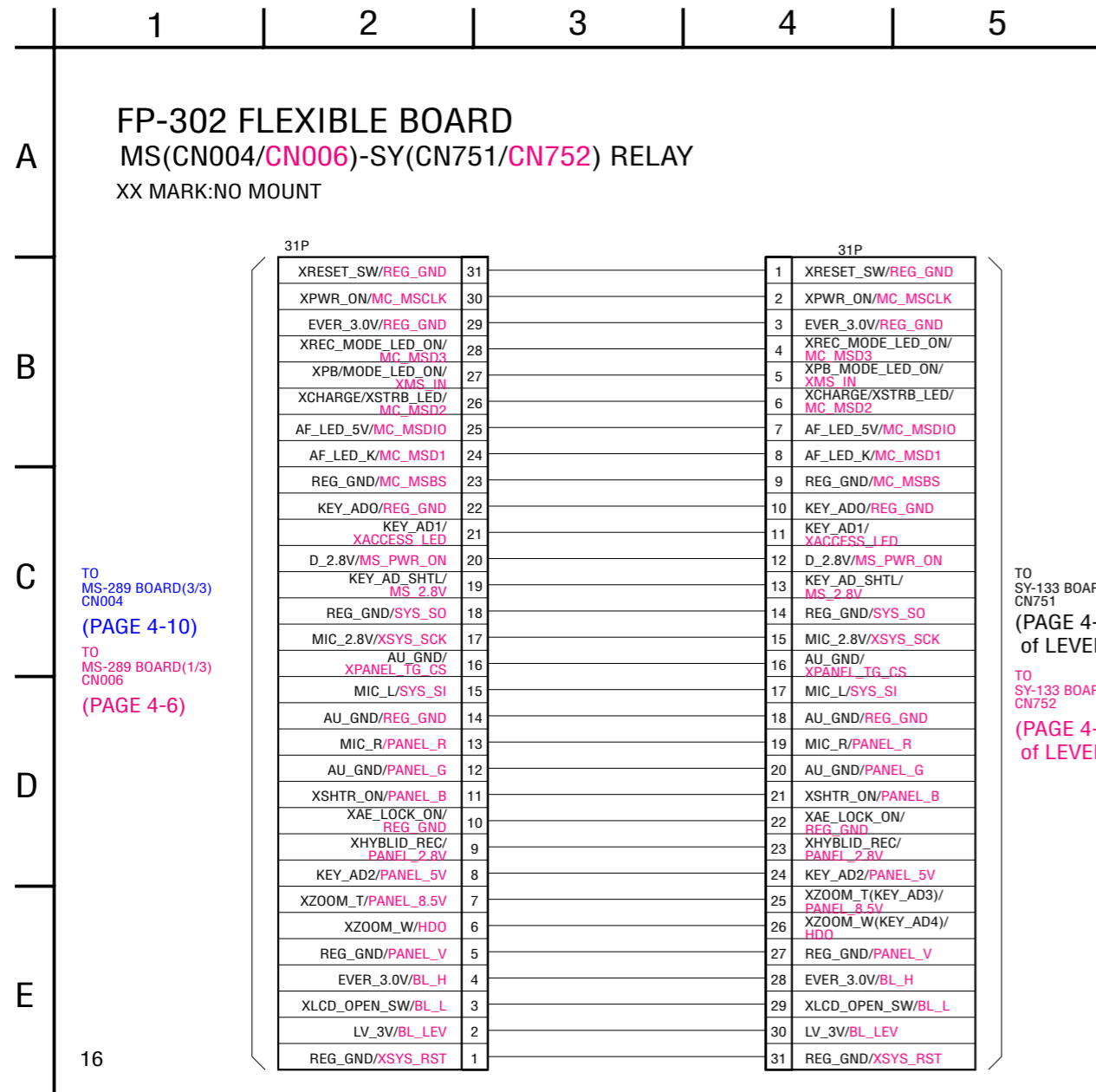
For Schematic Diagram

- Refer FP-300 to page 4-56 for printed wiring board.
- Refer FP-301 to page 4-55 for printed wiring board.



For Schematic Diagram

- Refer FP-302 to page 4-56 for printed wiring board.
- Refer FP-304 and FP-306 to page 4-57 for printed wiring board.



Schematic diagram of the PM-046 and SY-133 board are not shown.
Pages from 4-23 to 4-48 are not shown.

4-3. PRINTED WIRING BOARDS

Link

• FP-299 FLEXIBLE BOARD	• FP-305 FLEXIBLE BOARD
• FP-300 FLEXIBLE BOARD	• FP-306 FLEXIBLE BOARD
• FP-301 FLEXIBLE BOARD	• FP-307 FLEXIBLE BOARD
• FP-302 FLEXIBLE BOARD	• MS-289 BOARD (SIDE A)
• FP-304 FLEXIBLE BOARD	• MS-289 BOARD (SIDE B)

• COMMON NOTE FOR PRINTED WIRING BOARDS		
• MOUNTED PARTS LOCATION	• CIRCUIT BOARDS LOCATION	• FLEXIBLE BOARDS LOCATION

NAME	FUNCTION
FP-299	CCD IMAGER
FP-300	BATTERY TERMINAL
FP-301	MULTI CONNECTOR
FP-302	MS(CN004/CN006) - SY(CN751/CN752) RELAY
FP-304	POWER SW
FP-305	SY-LD RELAY, SP
FP-306	HALL IC
FP-307	DC JACK
MS-289	MS I/O, CONNECTOR, FUNCTION KEY, CONNECTOR
PM-046	LCD PANEL DRIVE, MIC AMP
SY-133	CAMERA A/D CONV. TIMING GENERATOR, LES DRIVE, CAMERA DSP, LENS CONTROL, CAMERA SYSTEM CONTROL, DIGITAL SIGNAL PROCESS, SUPER AND FLASH MEMORY, SDRAM, HI CONTROL, AUDIO AMP, SPEAKER AMP, CONNECTOR, DC/DC CONVERTER

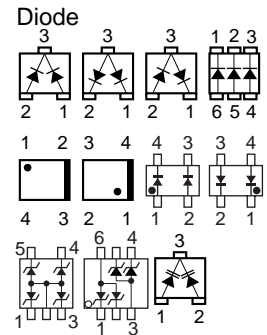
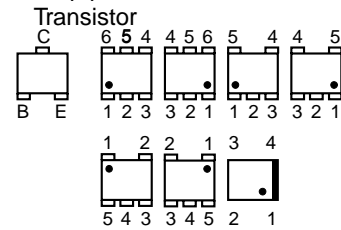
4-3. PRINTED WIRING BOARDS

THIS NOTE IS COMMON FOR WIRING BOARDS
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)

- : Uses unleaded solder.
- : Pattern from the side which enables seeing.
 (The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are a few cases that the part printed on diagram isn't mounted in this model.
- : panel designation

• Chip parts.



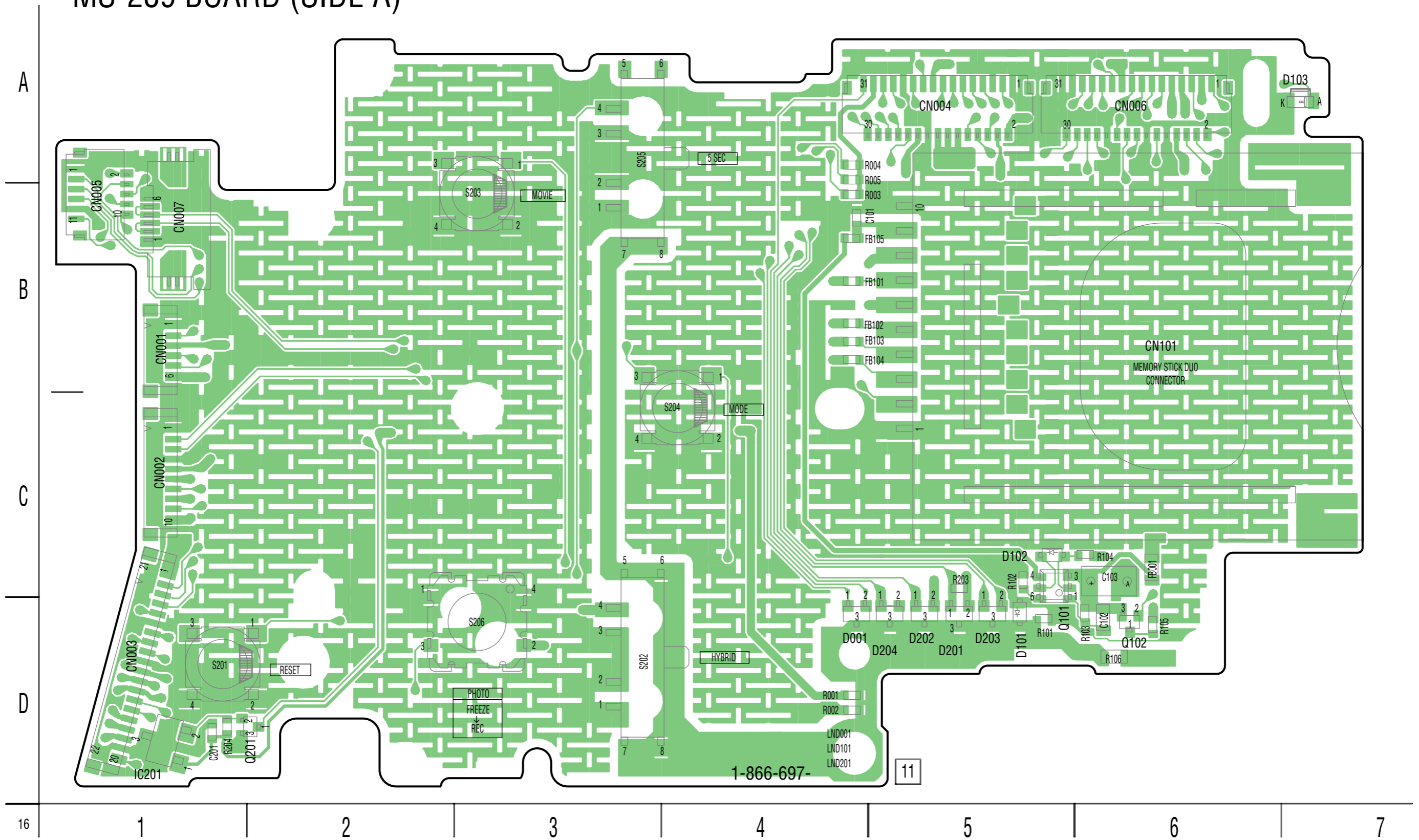
BOARD INFORMATION

board name	waveforms (shown on page)	parts location (shown on page)	pattern	
			number of layers	layers not shown
FP-299	—	4-67	2	—
FP-300	—	—	1	—
FP-301	—	—	2	—
FP-302	—	—	1	—
FP-304	—	—	2	—
FP-305	—	—	2	—
FP-306	—	—	1	—
FP-307	—	—	1	—
MS-289	—	4-67	2	—
PM-046	4-65	4-69	4	2 to 3
SY-133	4-65	4-69	8	2 to 7

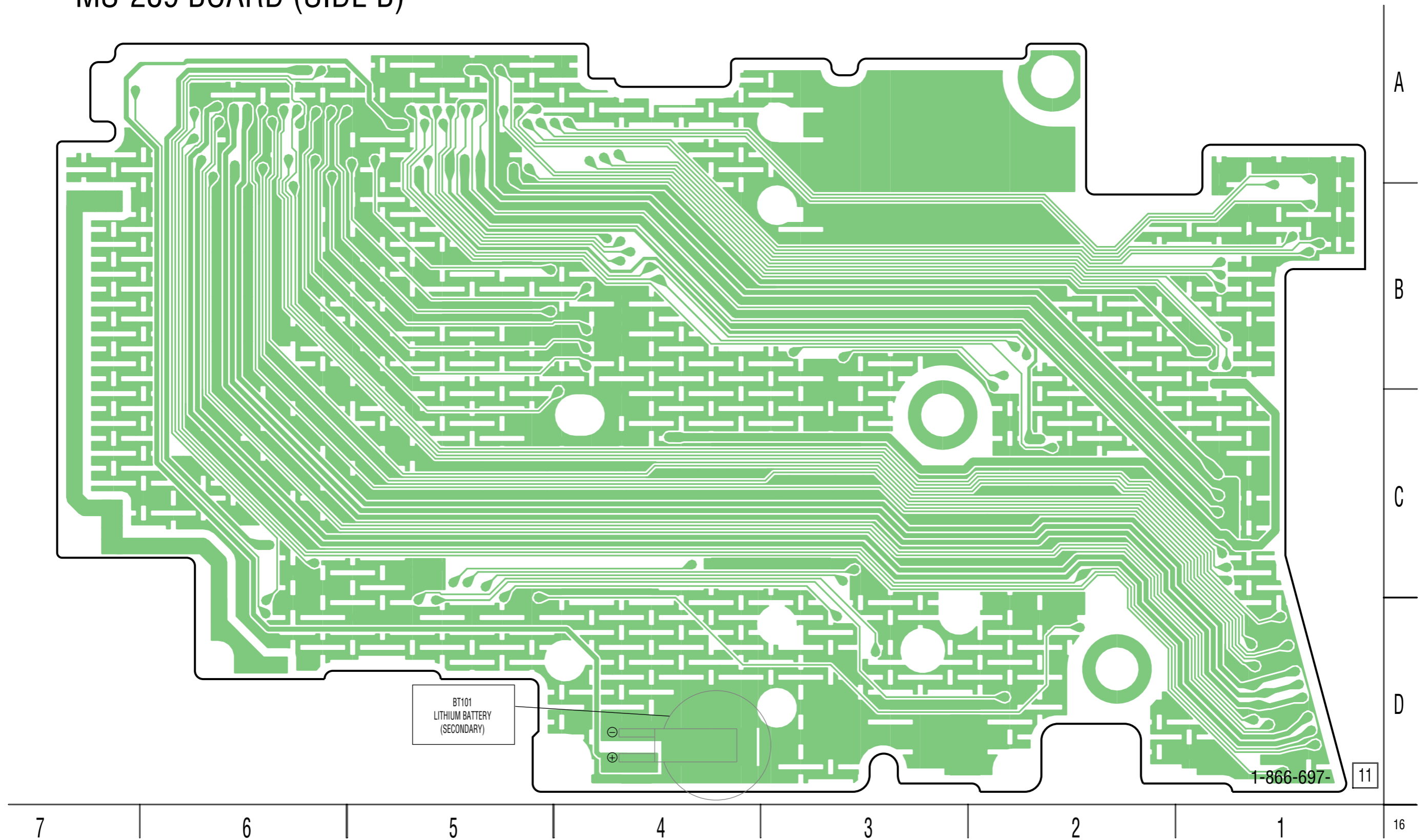
4-3. PRINTED WIRING BOARDS

• Refer to page 4-49 for common note for printed wiring board. •  : Uses unleaded solder. • Ref. No.; 1,000 Series.


MS-289 BOARD (SIDE A)



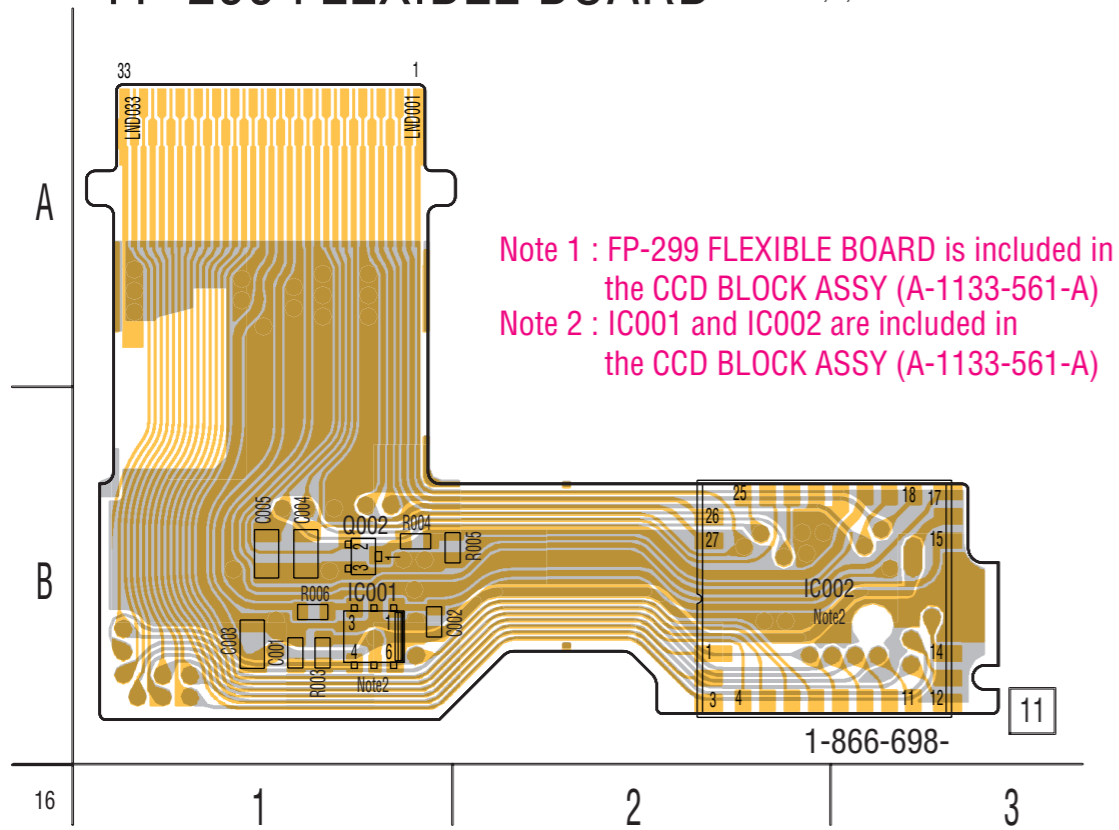
MS-289 BOARD (SIDE B)



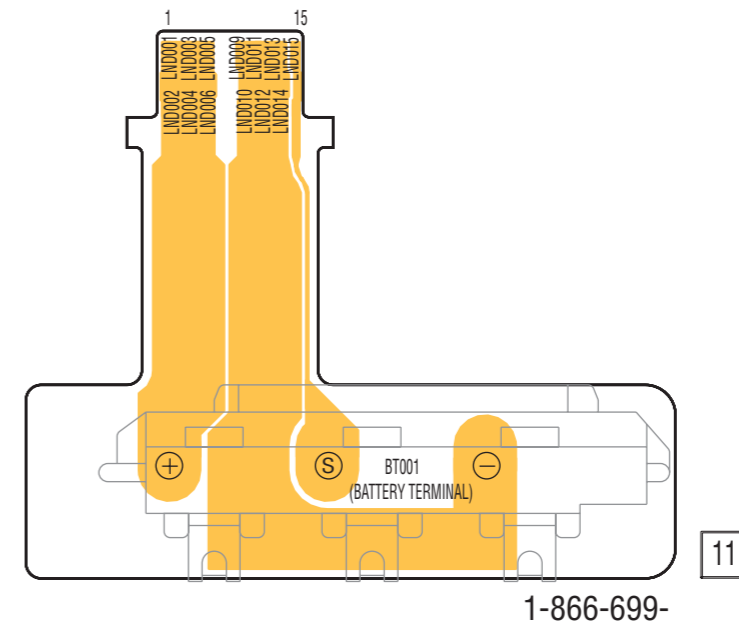
CAUTION :
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

• Refer to page 4-49 for common note for printed wiring board. •  : Uses unleaded solder.

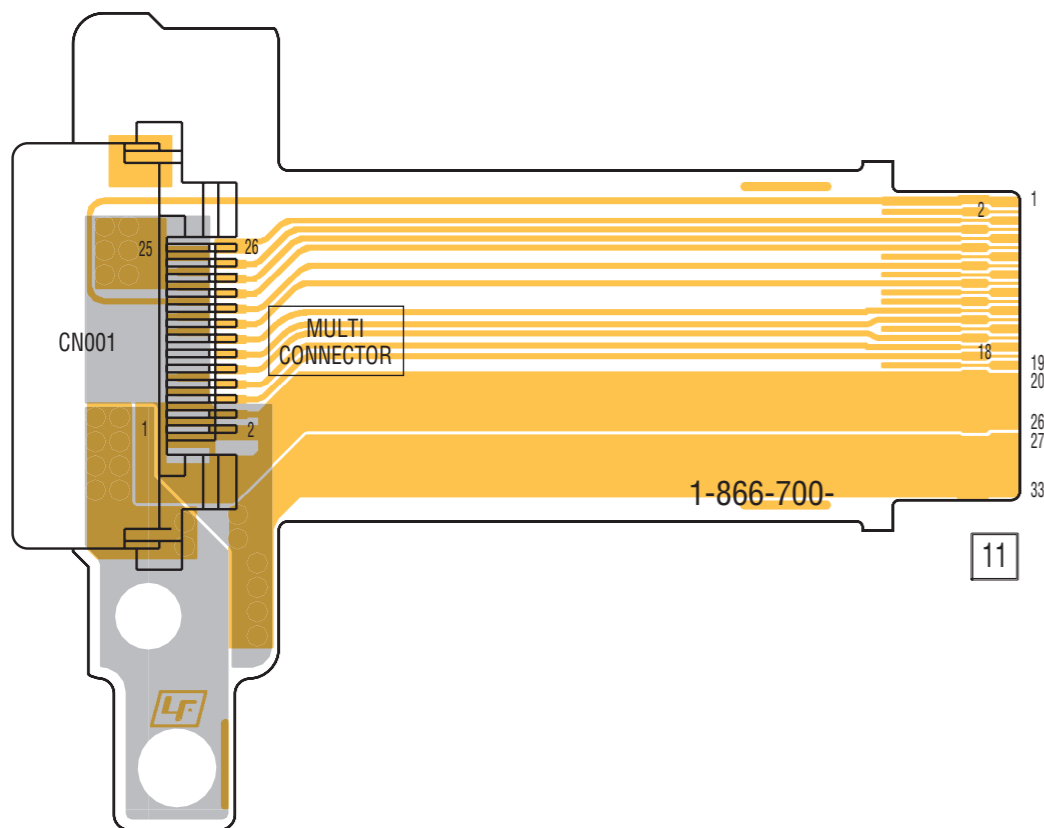
FP-299 FLEXIBLE BOARD • Ref. No.; 5,000 Series.



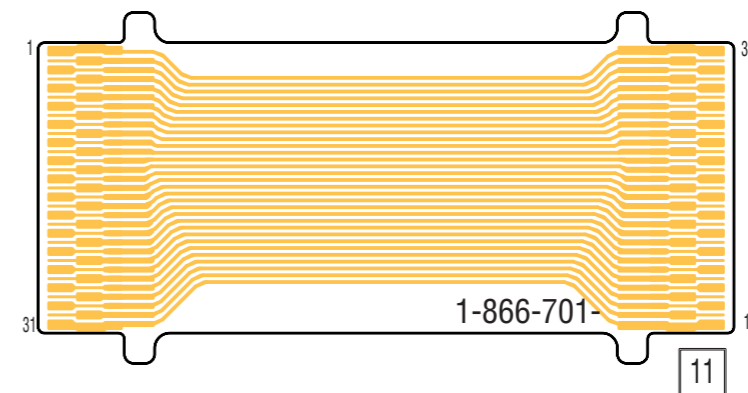
FP-300 FLEXIBLE BOARD • Ref. No.; 5,000 Series.




FP-301 FLEXIBLE BOARD • Ref. No.; 5,000 Series.

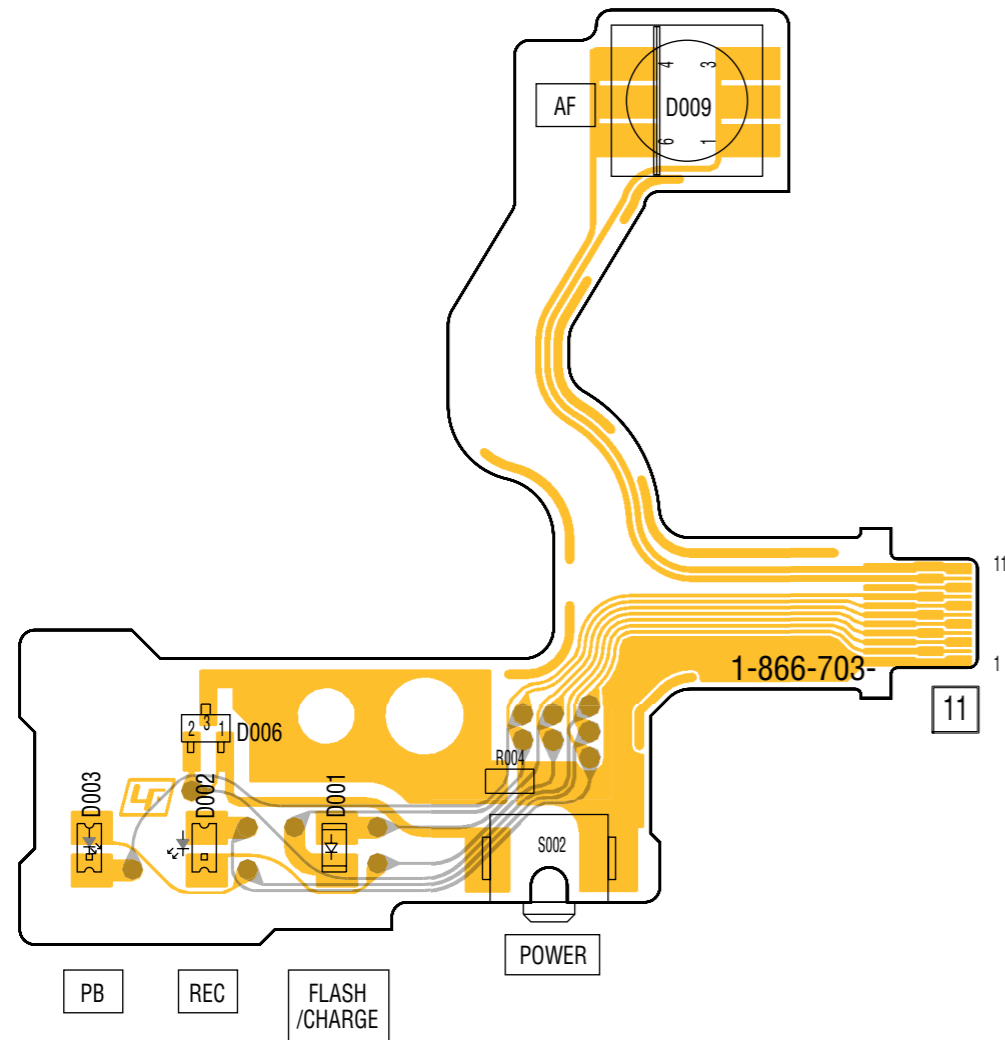


FP-302 FLEXIBLE BOARD



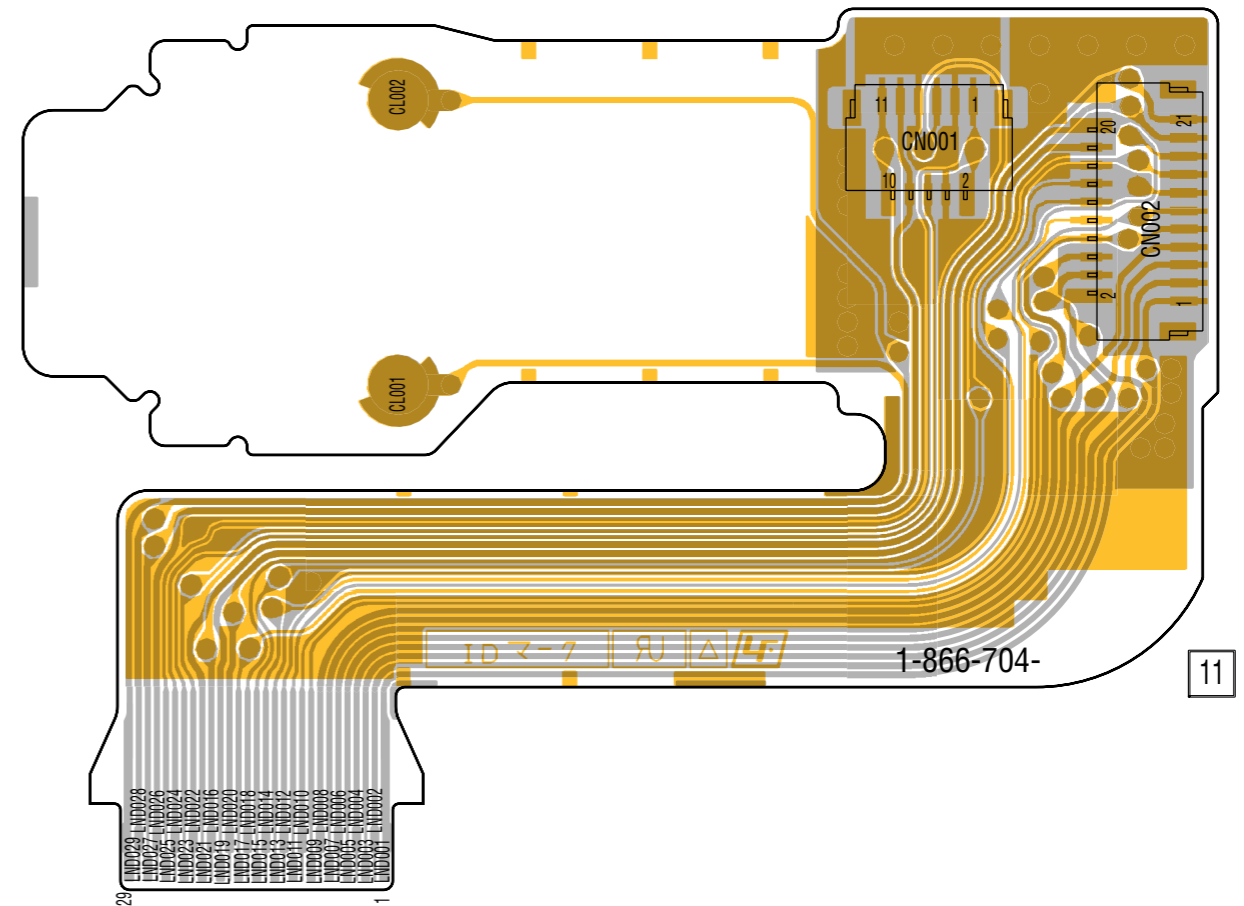
• Refer to page 4-49 for common note for printed wiring board. •  : Uses unleaded solder.

FP-304 FLEXIBLE BOARD • Ref. No.; 5,000 Series.

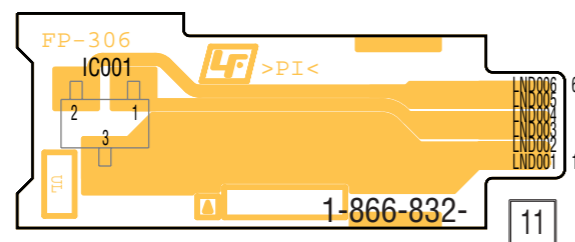


FP-305 FLEXIBLE BOARD

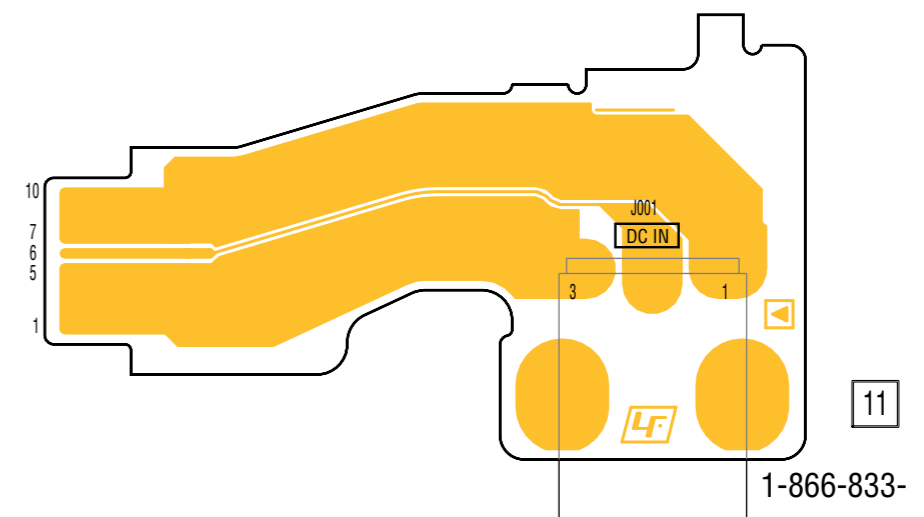
• Ref. No.; 4,000 Series.



FP-306 FLEXIBLE BOARD • Ref. No.; 4,000 Series.



FP-307 FLEXIBLE BOARD • Ref. No.; 5,000 Series.



Printed wiring board of the PM-046 and SY-133 board are not shown. Pages from 4-59 to 4-64 are not shown.

Waveforms of the PM-046 and SY-133 board are not shown. Pages 4-65 is not shown.

4-3. PRINTED WIRING BOARDS

4-5. MOUNTED PARTS LOCATION

no mark : side A

* mark : side B

MS-289 BOARD

* BT101
C101 B-5
C102 D-6
C103 C-6
C201 D-1
CN001 B-1
CN002 C-1
CN003 D-1
CN004 A-5
CN005 B-1
CN006 A-6
CN007 B-1
CN101 B-6
D001 D-4
D101 D-5
D102 C-5
D103 A-7
D201 D-5
D202 D-5
D203 D-5
D204 D-5
FB001 C-6
FB101 B-5
FB102 B-5
FB103 B-5
FB104 B-5
FB105 B-5
IC201 D-1
LND001 D-4
LND101 D-4
LND201 D-4
Q101 D-5
Q102 D-6
Q201 D-2
R001 D-4
R002 D-4
R003 B-5
R004 A-5
R005 A-5
R101 D-5
R102 C-5
R103 D-6
R104 C-6
R105 D-6
R106 D-6
R203 C-5
R204 D-1
S201 D-1
S202 D-3
S203 B-3
S204 C-4
S205 A-3
S206 D-3

FP-299 FLEXIBLE BOARD

C001 B-1
C002 B-1
C003 B-1
C004 B-1
C005 B-1
IC001 B-1
IC002 B-2
LND001 A-1
LND033 A-1
Q002 B-1
R003 B-1
R004 B-1
R005 B-2
R006 B-1

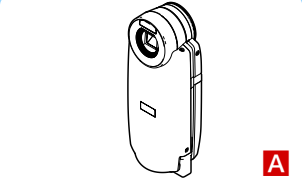
Mounted parts location of the PM-046 and SY-133 board are not shown.

Pages from 4-69 to 4-70 are not shown.

5. REPAIR PARTS LIST

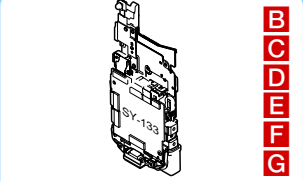
NOTE: Characters **A** to **J** of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link **EXPLODED VIEWS**



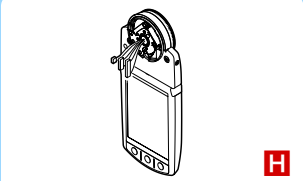
A

OVERALL SECTION



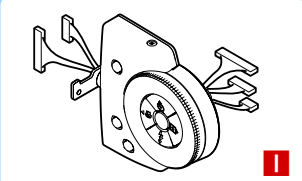
B
C
D
E
F
G

BT HOLDER SECTION



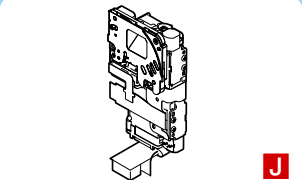
H

LCD SECTION



I

HINGE SECTION



J

LENS SECTION

Link **ELECTRICAL PARTS LIST** **ACCESSORIES**

• FP-299 FLEXIBLE BOARD J	• FP-300 FLEXIBLE BOARD B	• FP-301 FLEXIBLE BOARD C
• FP-304 FLEXIBLE BOARD D	• FP-305 FLEXIBLE BOARD A	• FP-306 FLEXIBLE BOARD I
• FP-307 FLEXIBLE BOARD E	• MS-289 BOARD F	• PM-046 BOARD H
• SY-133 BOARD G		

5. REPAIR PARTS LIST

NOTE:

- -XX, -X mean standardized parts, so they may have some differences 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.
- 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.
- CAPACITORS:
uF: μ F
- COILS
uH: μ H
- 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...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

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

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

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

- Abbreviation
CND : Canadian model
KR : Korea model
TW : Taiwan model
CH : Chinese model
HK : Hong Kong model
JE : Tourist model
J : Japanese model

Language that can be selected about SY-133 board

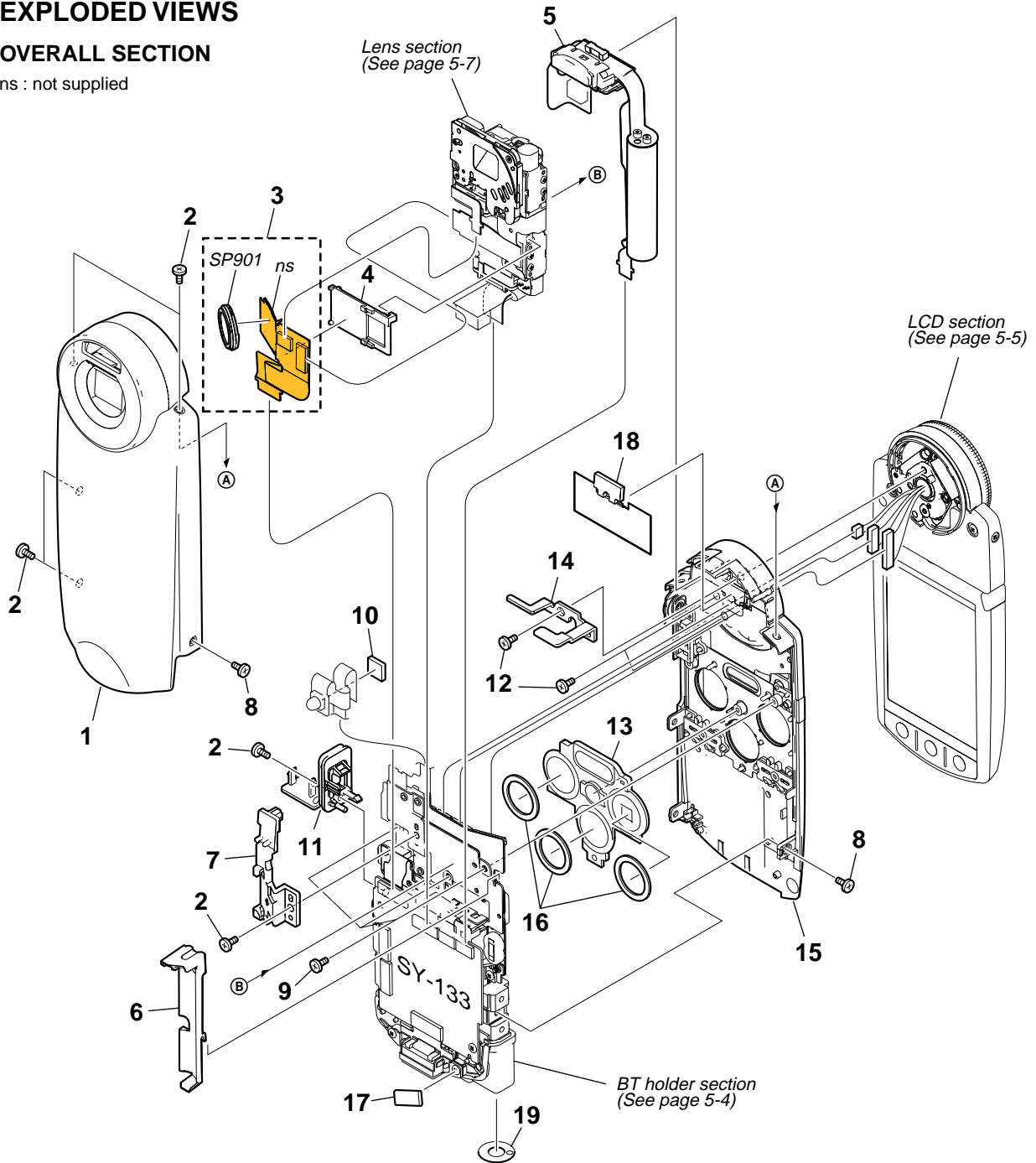
	Area	Japanese	English	French	German	Spanish	Italian	Portugal	Simplified Chinese	Traditional Chinese	Arabic	Korean
GP1	J	●										
GP2	US CND		●	●		●	●		●	●		
GP3	AEP UK		●	●	●	●	●	●				
GP4	E		●			●		●	●	●	●	
GP5	TW JE HK CH KR		●			●		●	●	●		●

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION

ns : not supplied



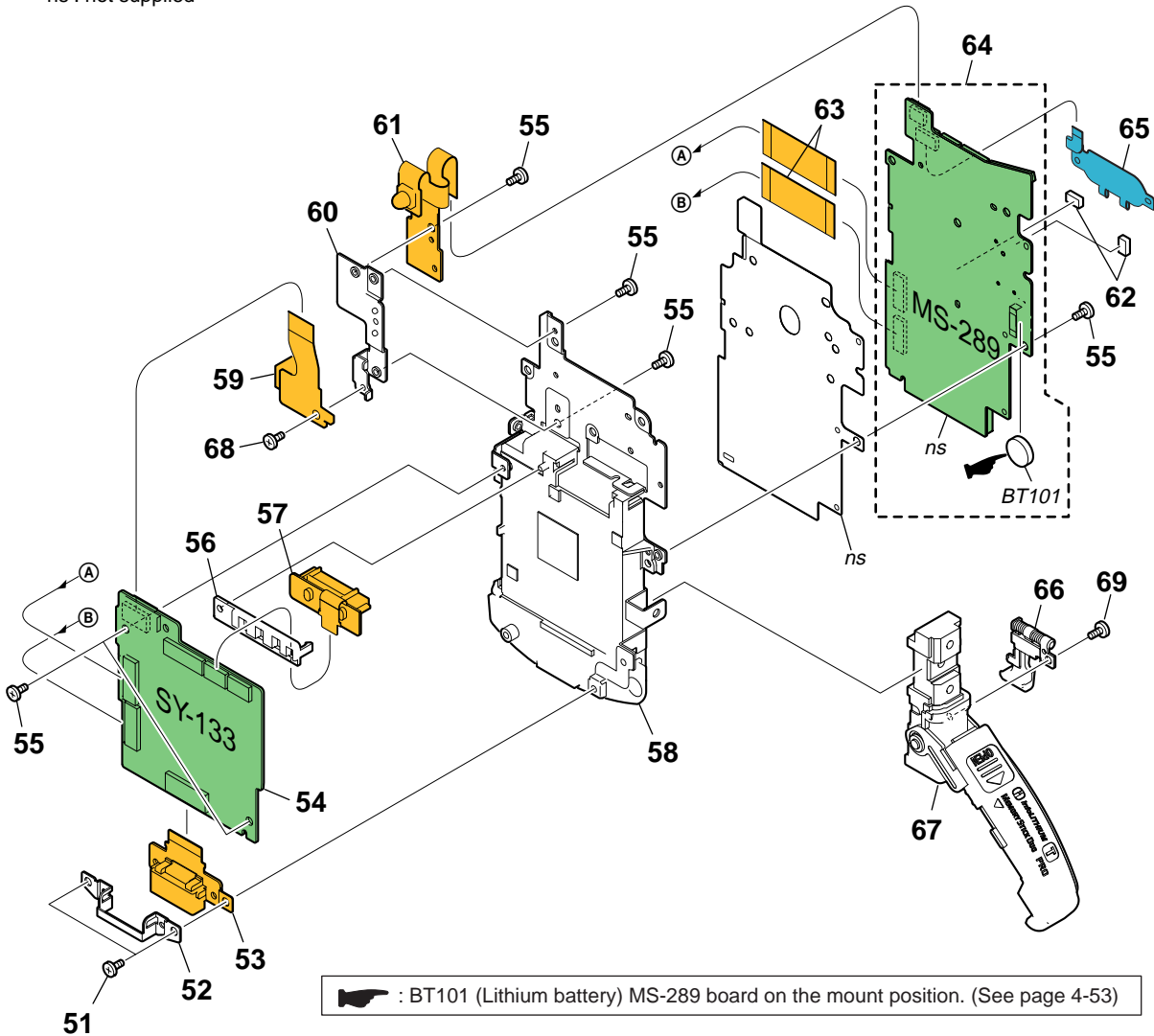
Ref. No.	Part No.	Description
1	X-2067-722-1	CABINET (FRONT) ASSY (SILVER)
1	X-2102-602-1	CABINET (FRONT) ASSY (WHITE)
1	X-2102-603-1	CABINET (FRONT) ASSY (PINK)
2	2-599-475-21	SCREW (M1.7)
3	A-1133-564-A	FP-305 FLEXIBLE BOARD
* 4	2-649-532-01	HOLDER, LENS FLEXIBLE
5	1-479-377-11	FLASH UNIT (FL80100)
* 6	2-649-534-01	HOLDER, CAPACITOR
* 7	2-649-530-01	HOLDER, SP
8	2-666-622-01	SCREW (M1.7), NYLOK, P2
9	3-355-424-01	SCREW, TAPPING
* 10	2-649-538-01	CUSHION (AF)

Ref. No.	Part No.	Description
11	X-2067-723-1	HOLDER ASSY, DC
12	3-724-455-41	SCREW
13	2-649-536-11	BLOCK, MAIN KEY
* 14	2-649-542-01	SHEET METAL, ST
15	X-2067-721-1	CABINET (REAR) ASSY (SILVER)
15	X-2102-600-1	CABINET (REAR) ASSY (WHITE)
15	X-2102-601-1	CABINET (REAR) ASSY (PINK)
16	2-665-465-02	RING
* 17	2-659-567-01	CUSHION, MULTI
* 18	2-649-533-01	CUSHION, LENS
19	2-546-143-01	SHEET METAL (SERVICE EXCLUSIVE)
SP901	1-825-945-21	LOUDSPEAKER (1.3CM)

5. REPAIR PARTS LIST

5-1-2. BT HOLDER SECTION

ns : not supplied



CAUTION :
 Danger of explosion if battery is incorrectly replaced.
 Replace only with the same or equivalent type.

Ref. No.	Part No.	Description
51	3-355-424-01	SCREW, TAPPING
* 52	2-649-529-01	SHEET METAL, MULTI RETAINER
53	A-1133-556-A	FP-301 FLEXIBLE BOARD
54	A-1143-422-A	SY-133 BOARD COMPLETE (SERVICE) (GP1)
54	A-1147-773-A	SY-133 BOARD COMPLETE (SERVICE) (GP2)
54	A-1147-774-A	SY-133 BOARD COMPLETE (SERVICE) (GP3)
54	A-1147-775-A	SY-133 BOARD COMPLETE (SERVICE) (GP4)
54	A-1154-135-A	SY-133 BOARD COMPLETE (SERVICE) (GP5)
55	2-660-401-11	SCREW (M1.7), NEW TRU-STAR, P2
* 56	2-649-526-01	GUARD, BT TERMINAL
57	A-1133-555-A	FP-300 FLEXIBLE BOARD
58	X-2067-715-1	HOLDER ASSY, BT (SILVER/WHITE)
58	X-2102-672-1	HOLDER ASSY, BT (PINK)
59	A-1133-559-A	FP-307 FLEXIBLE BOARD
* 60	2-649-535-01	FRAME, DC

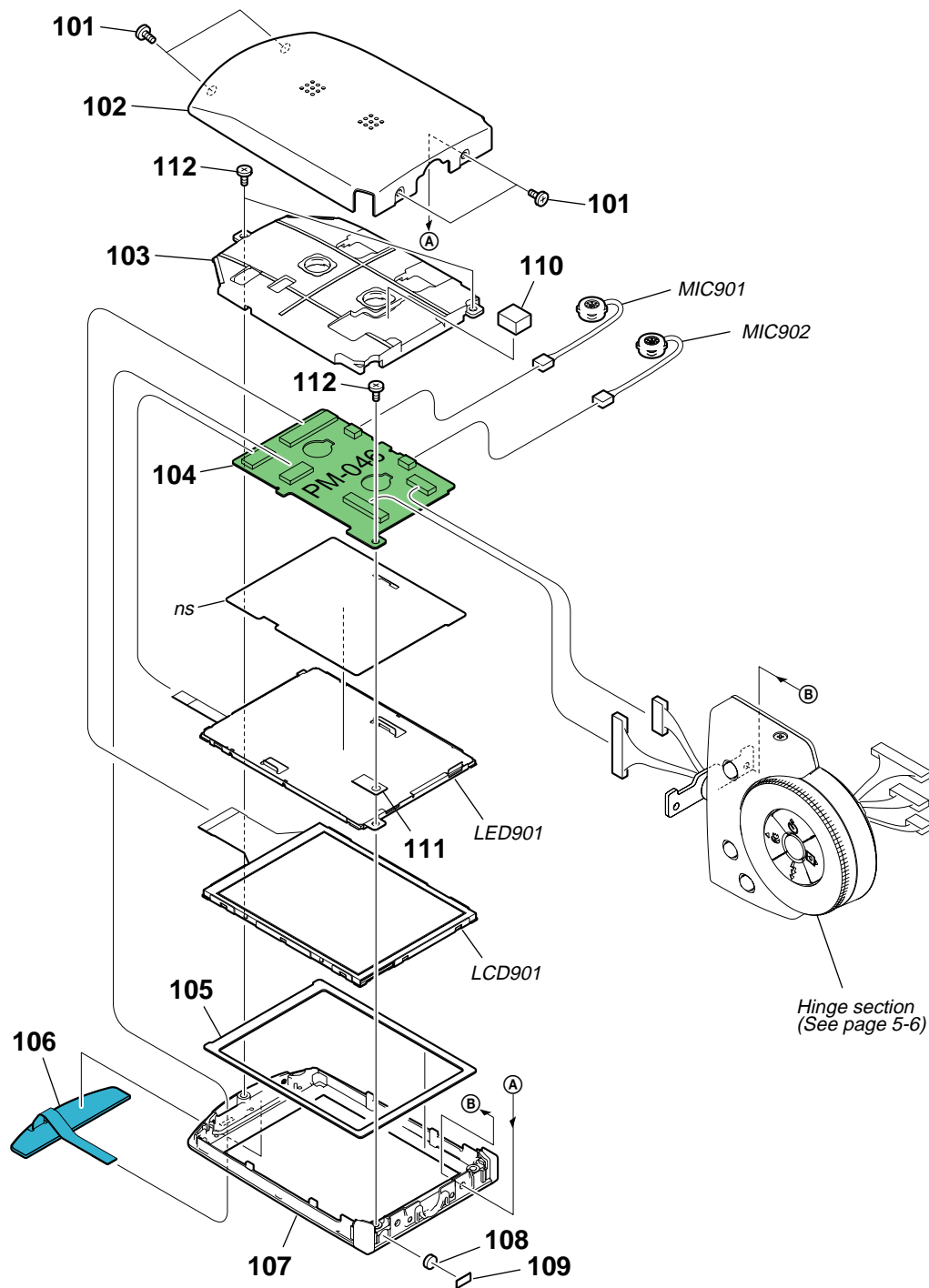
Ref. No.	Part No.	Description
61	A-1133-558-A	FP-304 FLEXIBLE BOARD
* 62	2-664-644-01	SPONGE, ASSIST
63	1-866-701-11	FP-302 FLEXIBLE BOARD
64	A-1133-554-A	MS-289 BOARD, COMPLETE
65	1-479-371-11	SWITCH BLOCK, CONTROL (TW80100)
66	X-2067-719-1	LOCK ASSY, BT
67	X-2067-716-1	COVER ASSY, BT (SILVER)
67	X-2102-597-1	COVER ASSY, BT (WHITE)
67	X-2102-598-1	COVER ASSY, BT (PINK)
68	3-078-889-01	SCREW (M1.7)
69	2-666-622-01	SCREW (M1.7), NYLOCK, P2
△ BT101	1-528-999-61	BATTERY, LIHIUM SECONDARY

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

5. REPAIR PARTS LIST

5-1-3. LCD SECTION

ns : not supplied

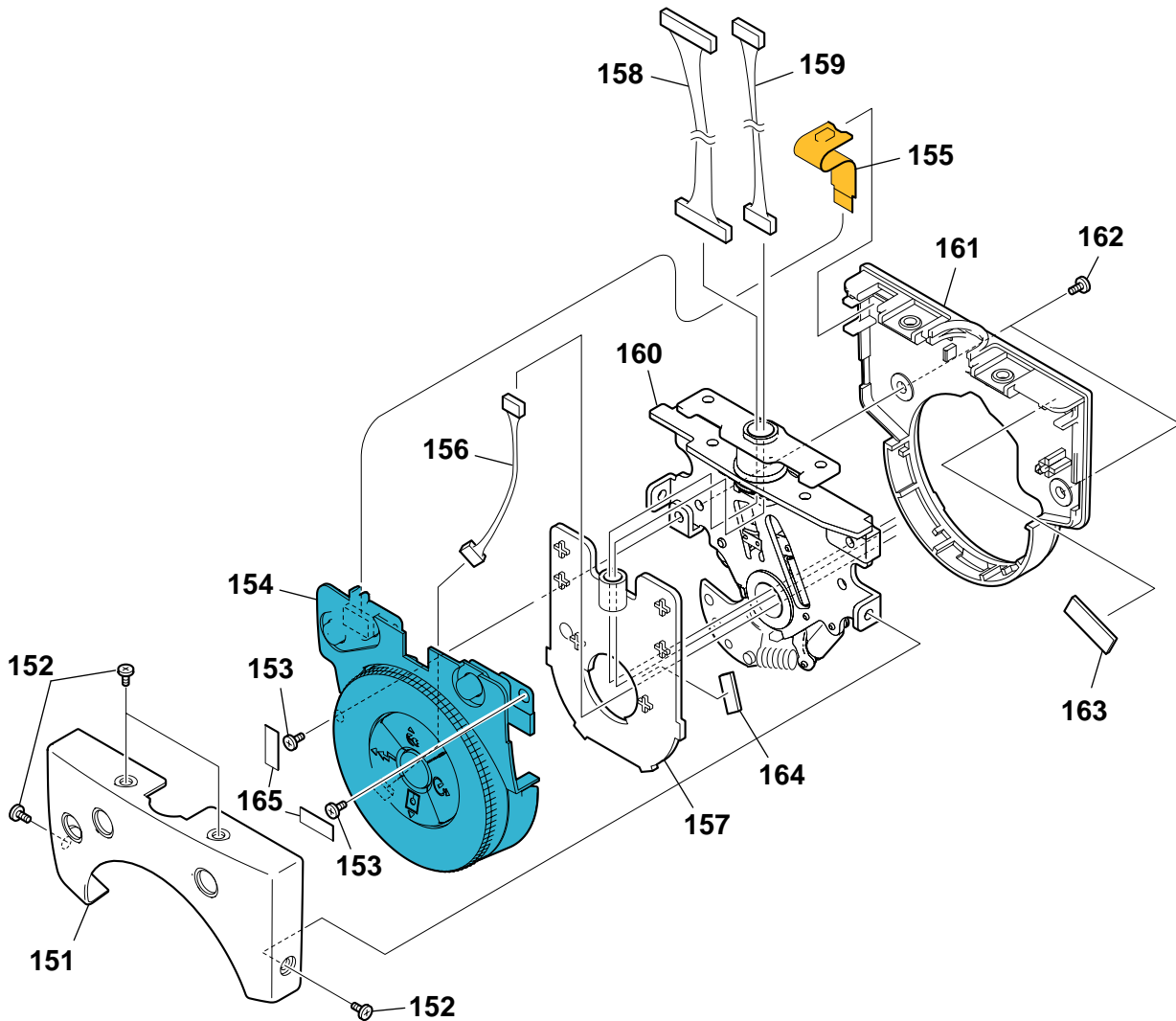


Ref. No.	Part No.	Description
101	2-599-475-21	SCREW (M1.7)
102	X-2067-718-1	CABINET (C) ASSY, P (SILVER)
102	X-2102-608-1	CABINET (C) ASSY, P (WHITE)
102	X-2102-609-1	CABINET (C) ASSY, P (PINK)
* 103	2-649-620-01	HOLDER, MICROPHONE
104	A-1133-724-A	PM-046 BOARD, COMPLETE
* 105	2-649-581-01	CUSHION, LCD
106	1-479-306-11	SWITCH BLOCK, CONTROL (PB80100) (SILVER)
106	1-479-306-21	SWITCH BLOCK, CONTROL (PB80100) (WHITE/PINK)
107	X-2067-717-1	CABINET (M) ASSY, P (SILVER)

Ref. No.	Part No.	Description
107	X-2102-606-1	CABINET (M) ASSY, P (WHITE)
107	X-2102-607-1	CABINET (M) ASSY, P (PINK)
* 108	1-471-365-11	MAGNET
* 109	2-649-621-01	SHEET (M), ADHESIVE
* 110	2-664-276-01	CUSHION (P)
* 111	2-655-528-01	BL GROUND SHEET
112	2-660-401-11	SCREW (M1.7), NEW TRU-STAR, P2
LCD901	8-753-210-98	ACX528AK-J
LED901	1-479-067-21	BLOCK, LIGHT GUIDE PLATE (2.5)
MIC901	1-542-656-11	MICROPHONE
MIC902	1-542-656-11	MICROPHONE

5. REPAIR PARTS LIST

5-1-4. HINGE SECTION

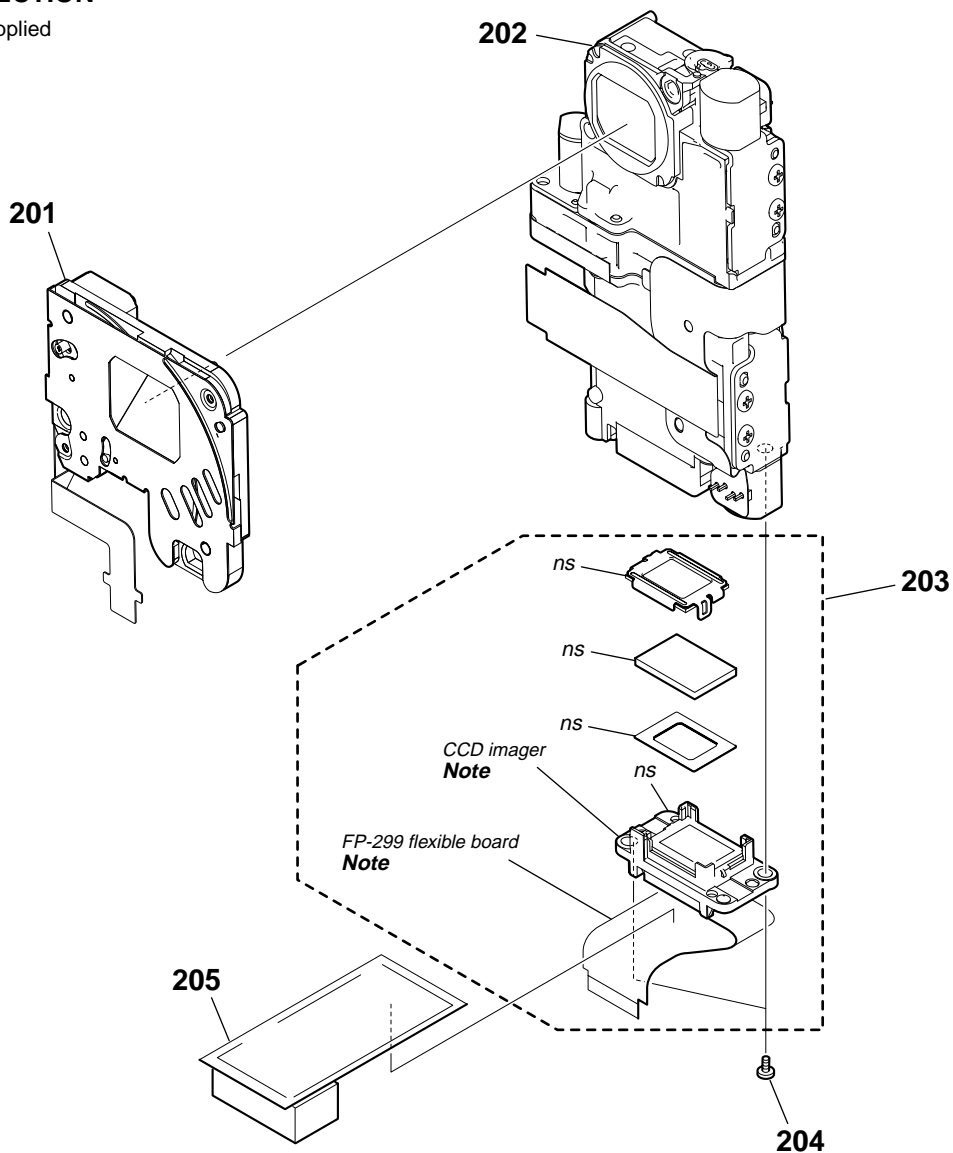


Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
151	X-2067-724-1	COVER ASSY, HINGE (SILVER)	* 157	2-649-622-01	HOLDER, HARNESS
151	X-2102-604-1	COVER ASSY, HINGE (WHITE)	158	1-963-804-11	HARNESS (PD-135)
151	X-2102-605-1	COVER ASSY, HINGE (PINK)	159	1-963-805-11	HARNESS (MA-155)
152	2-599-475-21	SCREW (M1.7)	160	2-649-623-01	HINGE, LCD
153	2-660-401-11	SCREW (M1.7), NEW TRU-STAR, P2	161	2-649-618-01	CABINET, HINGE (SILVER)
154	1-479-345-11	SWITCH BLOCK, CONTROL (FK80100) (SILVER)	161	2-649-618-11	CABINET, HINGE (WHITE)
154	1-479-345-21	SWITCH BLOCK, CONTROL (FK80100) (WHITE)	161	2-649-618-21	CABINET, HINGE (PINK)
154	1-479-345-31	SWITCH BLOCK, CONTROL (FK80100) (PINK)	162	2-599-475-21	SCREW (M1.7), NEW TRU-STAR, P2 (WHITE/PINK)
155	A-1133-738-A	FP-306 FLEXIBLE BOARD	162	2-635-562-21	SCREW (M1.7) (SILVER)
156	1-963-806-11	HARNESS (FK-061)	163	1-471-278-11	MAGNET
			* 164	2-661-014-01	SPACER, B
			* 165	2-665-574-01	SHEET, SHUTTLE SCREW PROTECTION

5. REPAIR PARTS LIST

5-1-5. LENS SECTION

ns : not supplied



Note : IC001, IC002 (CCD imager) and the FP-299 flexible board are not supplied as an independent part.
They are supplied as the CCD block assembly (A-1133-561-A).

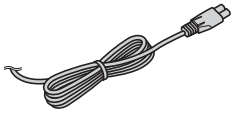
Be sure to read "Precautions upon replacing CCD imager" on page 4-3 when changing the CCD imager.

Ref. No.	Part No.	Description
201	1-787-362-11	MOTOR UNIT (LENS BARRIER)
202	A-1118-808-A	LENS ASSY (SERVICE USE)
203	A-1133-561-A	CCD BLOCK ASSY
204	3-086-156-11	SCREW B1.2
* 205	2-649-595-01	SHEET, CD ELECTRIC HEAT

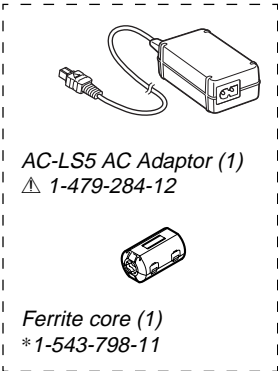
5. REPAIR PARTS LIST

Checking supplied accessories.

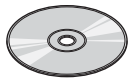
Make sure that the following accessories are supplied with your camcorder.



- Power cord (Main lead) (1)
(E model)
△ 1-769-608-31
- Power cord (Main lead) (1)
(CH model)
△ 1-782-476-51
- Power cord (Main lead) (1)
(UK/HK model)
△ 1-783-374-11
- Power cord (Main lead) (1)
(US/CND model)
△ 1-790-107-42
- Power cord (Main lead) (1)
(JE model)
△ 1-790-732-71
- Power cord (Main lead) (1)
(J model)
△ 1-791-637-13
- Power cord (Main lead) (1)
(KR model)
△ 1-823-947-12
- Power cord (Main lead) (1)
(TW model)
△ 1-830-518-11
- Power cord (Main lead) (1)
(AEP model)
△ 1-823-946-12



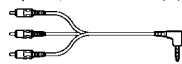
- AC-LS5 AC Adaptor (1)
△ 1-479-284-12
- Ferrite core (1)
*1-543-798-11



- CD-ROM
(Picture Package for DSC-M2) (1)
2-645-841-01
(Nero Vision Express 3) (1)
2-653-111-01



- Cyber-shot station (UC-MB) (1)
1-819-580-11



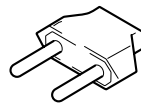
- A/V connecting cable (1)
1-824-097-11



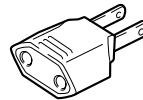
- USB cable (1)
1-829-579-31



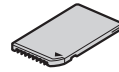
- Wrist strap (1)
2-050-981-01



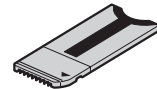
- 2-pin conversion adaptor (1)
(JE model)
1-569-007-12



- 2-pin conversion adaptor (1)
(E model)
1-569-008-21



- "Memory Stick Duo" (32MB)(1)
(not supplied)



- Memory Stick Duo adaptor(1)
(not supplied)

- Rechargeable battery pack
(NP-FT1)(1)
(not supplied)

- Battery case (1)
(not supplied)

- Abbreviation
- CND : Canadian model
- KR : Korea model
- TW : Taiwan model
- CH : Chinese model
- HK : Hong Kong model
- JE : Tourist model
- J : Japanese model

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.

Note:
•Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Other accessories

- | | |
|---|---|
| <ul style="list-style-type: none"> 2-638-429-01 INSTRUCTION (READ THIS FIRST)(JAPANESE)(J) 2-638-429-11 INSTRUCTION (READ THIS FIRST)(ENGLISH)
(US,CND,AEP,UK,E,HK,TW,JE) 2-638-429-21 INSTRUCTION (READ THIS FIRST)(FRENCH/ITALIAN)
(AEP, CND) 2-638-429-31 INSTRUCTION (READ THIS FIRST)
(SPANISH/PORTUGUESE)(AEP,JE) 2-638-429-41 INSTRUCTION (READ THIS FIRST)(GERMAN, DUTCH)
(AEP) 2-638-429-51 INSTRUCTION (READ THIS FIRST)
(SIMPLIFIED CHINESE/TRADITIONAL CHINESE)(E,HK,TW,CH,JE) 2-638-429-61 INSTRUCTION (READ THIS FIRST)(KOREAN)(KR,JE) 2-638-429-81 INSTRUCTION (READ THIS FIRST)(RUSSIAN)(AEP) | <ul style="list-style-type: none"> 2-638-430-01 INSTRUCTION (USERS GUIDE)(JAPANESE)(J) 2-638-430-11 INSTRUCTION (USERS GUIDE)(ENGLISH)
(US,CND,AEP,UK,E,HK,TW,JE) 2-638-430-21 INSTRUCTION (USERS GUIDE)(FRENCH/ITALIAN)
(AEP, CND) 2-638-430-31 INSTRUCTION (USERS GUIDE)
(SPANISH/PORTUGUESE)(AEP,JE) 2-638-430-41 INSTRUCTION (USERS GUIDE)(GERMAN, DUTCH)
(AEP) 2-638-430-51 INSTRUCTION (USERS GUIDE)
(SIMPLIFIED CHINESE/TRADITIONAL CHINESE)(E,HK,TW,CH,JE) 2-638-430-61 INSTRUCTION (USERS GUIDE)(KOREAN)(KR,JE) 2-638-430-81 INSTRUCTION (USERS GUIDE)(RUSSIAN)(AEP) |
|---|---|

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1133-561-A	CCD BLOCK ASSY *****
Not supplied	FP-299	FLEXIBLE BOARD, COMPLETE ***** (FP-299 flexible board is included in this CCD BLOCK ASSY.) (IC001 and IC002 are included in this CCD BLOCK ASSY.) (Ref.No.:5,000 Series)
		< CAPACITOR >
C001	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V
C003	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C004	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C005	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
		< IC >
IC001	Not supplied	IC CXA3691EN-T9 (IC001 is included in this CCD BLOCK ASSY.)
IC002	Not supplied	IC ICX495CQZ-13 (CCD IMAGER) (IC002 is included in this CCD BLOCK ASSY.)
		< TRANSISTOR >
Q002	6-550-119-01	TRANSISTOR DTC144EMT2L
		< RESISTOR >
R003	1-218-981-11	RES-CHIP 220K 5% 1/16W
R004	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
R005	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R006	1-218-990-81	SHORT CHIP 0
	A-1133-555-A	FP-300 BOARD, COMPLETE ***** (Ref.No.:5,000 Series)
		< TERMINAL >
BT001	1-780-061-11	BATTERY TERMINAL BOARD
	A-1133-556-A	FP-301 BOARD, COMPLETE ***** (CN001 is included in this COMPLETE board.) (Ref.No.:5,000 Series)
		< CONNECTOR >
△ CN001	Not supplied	CONNECTOR, MULTIPLE (SOCKET) (CN001 is included in this COMPLETE of FP-301 board.)
	A-1133-558-A	FP-304 BOARD, COMPLETE ***** (Ref.No.:5,000 Series)
		< DIODE >
D001	6-500-252-01	DIODE SML-512WWT86 (STROBO/CHARGE)
D002	6-501-030-01	DIODE SML-412MWT86 (REC)
D003	6-501-030-01	DIODE SML-412MWT86 (PB)
* D009	6-501-364-01	DIODE DOR5352 (AF LED)
		< SWITCH >
S002	1-786-293-21	SWITCH, TACTILE (POWER)

Ref. No.	Part No.	Description
	A-1133-564-A	FP-305 BOARD, COMPLETE ***** (Ref.No.:4,000 Series)
		< SPEAKER >
SP901	1-825-945-21	LOUDSPEAKER (1.3CM)
		< CONNECTOR >
* CN001	1-817-389-51	CONNECTOR, FPC (ZIF) 11P
* CN002	1-817-698-51	CONNECTOR, FPC (ZIF) 21P
	A-1133-738-A	FP-306 BOARD, COMPLETE ***** (Ref.No.:4,000 Series)
		< IC >
* IC001	6-600-471-01	IC TK60011BS2G0L
	A-1133-559-A	FP-307 BOARD, COMPLETE ***** (Ref.No.:5,000 Series)
		< JACK >
△ J001	1-817-331-11	DC JACK 5P (DC IN)
	A-1133-554-A	MS-289 BOARD, COMPLETE ***** (Ref.No.:3,000 Series)
		< BATTERY >
△ BT101	1-528-999-61	BATTERY, LITHIUM SECONDARY
		< CAPACITOR >
C101	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V
C102	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C103	1-119-750-11	TANTAL. CHIP 22uF 20% 6.3V
C201	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
		< CONNECTOR >
* CN001	1-819-451-21	PIN, CONNECTOR (PRINT PWB) 6P
* CN002	1-819-450-21	PIN, CONNECTOR (PRINT PWB) 10P
* CN003	1-819-449-21	PIN, CONNECTOR (PRINT PWB) 20P
* CN004	1-817-391-51	CONNECTOR, FPC (ZIF) 31P
* CN005	1-817-389-51	CONNECTOR, FPC (ZIF) 11P
* CN006	1-817-391-51	CONNECTOR, FPC (ZIF) 31P
* CN007	1-818-246-51	CONNECTOR, FFC/FPC (ZIF) 6P
CN101	1-817-913-41	MEMORY STICK DUO CONNECTOR

Be sure to read "Precautions upon replacing CCD imager" on page 4-3 when changing the CCD imager.

<p>Note : The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Note : Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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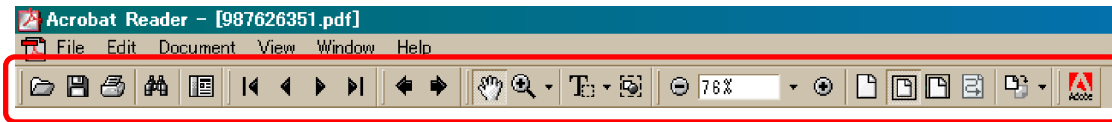
Ref. No.	Part No.	Description
		< DIODE >
D102	6-500-813-01	DIODE MA2SD32008S0
D103	6-500-851-01	DIODE SML-A12UTT86 (ACCESS)
		< FERRITE BEAD >
FB001	1-469-981-21	INDUCTOR, FERRITE BEAD
FB101	1-469-581-21	INDUCTOR, FERRITE BEAD (1005)
FB102	1-469-581-21	INDUCTOR, FERRITE BEAD (1005)
FB103	1-469-581-21	INDUCTOR, FERRITE BEAD (1005)
FB104	1-469-581-21	INDUCTOR, FERRITE BEAD (1005)
FB105	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)
FB106	1-469-667-21	FERRITE, EMI (SMD) (1608)
		< IC >
* IC201	6-600-471-01	IC TK60011BS2G0L
		< TRANSISTOR >
Q101	6-550-576-01	TRANSISTOR SSM6E01TU
Q102	6-550-239-01	TRANSISTOR DTA144EMT2L
Q201	6-550-237-01	TRANSISTOR 2SC5658T2LQ/R
		< RESISTOR >
R001	1-218-990-81	SHORT CHIP 0
R003	1-218-941-81	RES-CHIP 100 5% 1/16W
R004	1-218-941-81	RES-CHIP 100 5% 1/16W
R005	1-218-941-81	RES-CHIP 100 5% 1/16W
R102	1-218-959-11	RES-CHIP 3.3K 5% 1/16W
R103	1-218-981-11	RES-CHIP 220K 5% 1/16W
R104	1-218-957-11	RES-CHIP 2.2K 5% 1/16W
R105	1-218-952-11	RES-CHIP 820 5% 1/16W
R203	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R204	1-218-989-11	RES-CHIP 1M 5% 1/16W
		< SWITCH >
S201	1-771-138-82	SWITCH, KEY BOARD (RESET)
S202	1-771-731-21	SWITCH, SLIDE (HYBRID)
S203	1-771-138-82	SWITCH, KEY BOARD (MOVIE)
S204	1-771-138-82	SWITCH, KEY BOARD (MODE)
S205	1-771-731-21	SWITCH, SLIDE (5SEC)
S206	1-786-602-11	SWITCH, TACTILE (PHOTO(FREEZE/REC))

PM-046 BOARD, COMPLETE

SY-133 BOARD, COMPLETE


Electrical parts list of the PM-046 and SY-133 board is not shown.
Pages from 5-11 to 5-17 are not shown.

[Description of main button functions on toolbar of the Adobe Acrobat Reader Ver5.0 (for Windows)]




Toolbar



Printing a text

1. Click the Print button .
2. Specify a printer, print range, number of copies, and other options, and then click [OK].

Application of printing:

To set a range to be printed within a page, select the graphic selection tool  and drag on the page to enclose a range to be printed, and then click the Print button.


Reversing the screens displayed once

- To reverse the previous screens (operation) one by one, click the .
- To advance the reversed screens (operation) one by one, click the .

Application to the Service Manual:

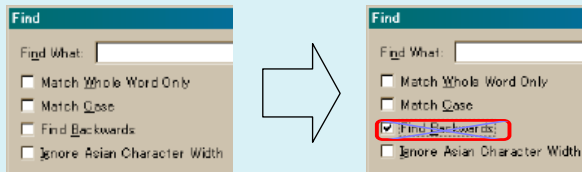
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

Finding a text

1. Click the Find button .
2. Enter a character string to be found into a text box, and click the [Find]. (Specify the find options as necessary)

Application to the Service Manual:

To execute “find” from current page toward the previous pages, select the check box “Find Backwards” and then click the “Find”.








3. Open the find dialog box again, and click the [Find Again] and you can find the matched character strings displayed next. (Character strings entered previously are displayed as they are in the text box.)

Application to the Service Manual:


The parts on the drawing pages (block diagrams, circuit diagrams, printed circuit boards) and parts list pages in a text can be found using this find function. For example, find a Ref. No. of IC on the block diagram, and click the [Find Again] continuously, so that you can move to the Ref. No. of IC on the circuit diagram or printed circuit board diagram successively.


Note: The find function may not be applied to the Service Manual depending on the date of issue.

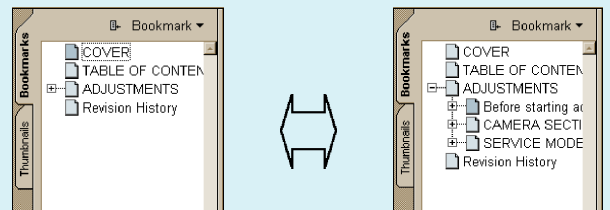
Moving with link

1. Select either palm tool , zoom tool , text selection tool , or graphic selection tool .
2. Place the pointer in the position in a text where the link exists (such as a button on cover and the table of contents page, or blue characters on the removal flowchart page or drawing page), and the pointer will change to the forefinger form .
3. Then, click the link. (You will go to the link destination.)

Moving with bookmark:



Click an item (text) on the bookmark pallet. and you can move to the link destination. Also, clicking  can display the hidden items.

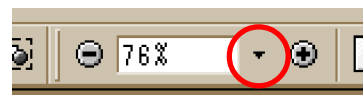
(To go back to original state, click )




Zooming or rotating the screen display

“Zoom in/out”

- Click the triangle button in the zoom control box to select the display magnification. Or, you may click  or  for zooming in or out.







“Rotate”

- Click rotate tool , and the page then rotates 90 degrees each.

Application to the Service Manual:

The printed circuit board diagram you see now can be changed to the same direction as the set.

Switching a page

- To move to the first page, click the .
- To move to the last page, click the .
- To move to the previous page, click the .
- To move to the next page, click the .

