

DSC-S40

SERVICE MANUAL

LEVEL 2

Ver 1.0 2005.03

Revision History

How to use
Acrobat Reader



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

Link

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

- For ADJUSTMENTS (SECTION 6), refer to SERVICE MANUAL, ADJ (9-876-868-51).
- For INSTRUCTION MANUAL, refer to SERVICE MANUAL, LEVEL 1 (9-876-868-41).
- **This service manual contains information for Japanese model as well.**
- **Reference No. search on printed wiring boards is available.**
- The Cautions at the Time of Lens Block handling
- Method for Copying or Erasing the Data in Internal Memory.
- The Method of Attachment of FP-176 Flexible Board.
- **HELP:** Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

On the CH-169 and SY-116 boards

This service manual provides the information that is premised the circuit board replacement service and not intended repair inside the CH-169 and SY-116 boards.

Therefore, schematic diagram, printed wiring board and electrical parts list of the CH-169 and SY-116 boards are not shown.

The following pages are not shown.

Schematic diagrams	Pages 4-9 to 4-26
Printed wiring boards	Pages 4-37 to 4-40
Waveforms	Pages 4-49
Mounted parts location	Pages 4-50
Electrical parts list	Pages 5-6 and 5-8 to 5-11

The above-described information is shown in service manual Level 3.

DIGITAL STILL CAMERA

SONY®



Cyber-shot



SPECIFICATIONS

Camera

[System]

Image device	6.85 mm (1/2.7 type) color CCD, Primary color filter
Total pixel number of camera	Approx. 4 231 000 pixels
Effective pixel number of camera	Approx. 4 065 000 pixels
Lens	Carl Zeiss Vario-Tessar 3× zoom lens f = 5.1 - 15.3 mm (32 - 96 mm when converted to a 35 mm still camera) F2.8 - 5.1 Automatic ND filter switching
Exposure control	Automatic exposure, Scene Selection (7 modes)
White balance	Automatic, Daylight, Cloudy, Fluorescent, Incandescent
File format (DCF compliant)	Still images: Exif Ver. 2.2 JPEG compliant, DPOF compatible Movies: MPEG1 compliant (Monaural)
Recording media	Internal memory 32 MB “Memory Stick”
Flash	Recommended distance (ISO set to Auto): 0.2 m to 3.8 m (7 7/8 inches to 12 feet 5 19/32 inches) (W)/0.5 m to 2.1 m (19 11/16 inches to 6 feet 10 11/16 inches) (T)

[Input and Output connectors]

USB jack	mini-B
USB communication	Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel	3.8 cm (1.5 type) TFT drive
Total number of dots	76 800 (320×240) dots

[Power, general]

Power	R6 (size AA) Alkaline batteries (2), 3 V HR 15/51:HR6 (size AA) Nickel-Metal Hydride batteries (2, not supplied), 2.4 V ZR6 (size AA) Oxy Nickel Primary Battery (2, not supplied), 3 V AC-LS5K AC Adaptor (not supplied), 4.2 V
Power consumption (during shooting with the LCD screen on)	0.9 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	99×51.7×34.2 mm (4×2 1/8×1 3/8 inches) (W/H/D, excluding maximum protrusions)
Mass	Approx. 180 g (6.4 oz) (including two batteries and wrist strap)
Microphone	Electret condenser microphone
Speaker	Dynamic speaker
Exif Print	Compatible
PRINT Image Matching III	Compatible
PictBridge	Compatible

Design and specifications are subject to change without notice.

CAUTION

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

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 IDENTIFÉS 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.

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.

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.

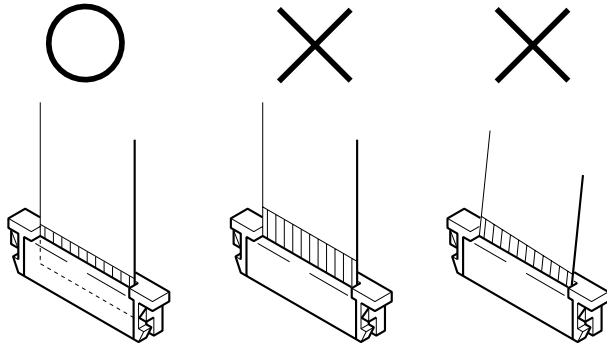
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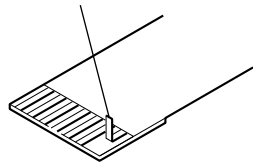
1. SERVICE NOTE

1-1. NOTE FOR REPAIR

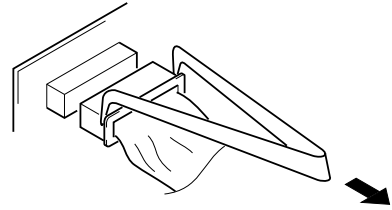
Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



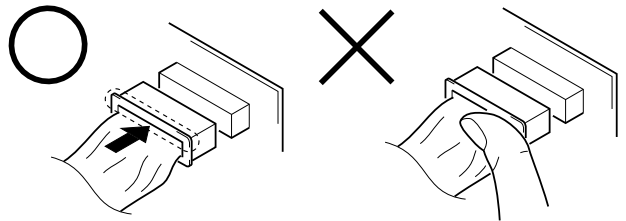
Cut and remove the part of gilt which comes off at the point.
(Be careful or some pieces of gilt may be left inside)



When remove a connector, don't pull at wire of connector.
It is possible that a wire is snapped.



When installing a connector, don't press down at wire of connector.
It is possible that a wire is snapped.



1-2. DISCHARGING OF THE ST-116 BOARD'S CHARGING CAPACITOR (C901)

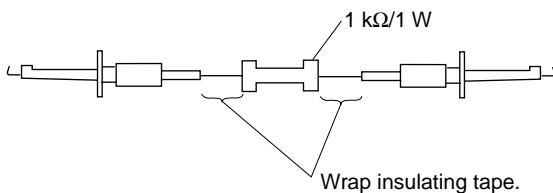
The charging capacitor (C901) of ST-116 board is charged up to the maximum 300 V potential.

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 unit is simply turned off. Therefore, the remaining voltage must be discharged as described below.

Preparing the Short Jig

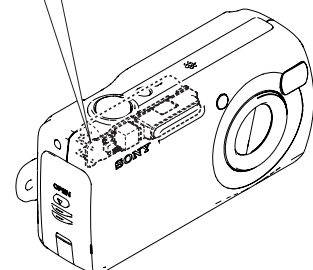
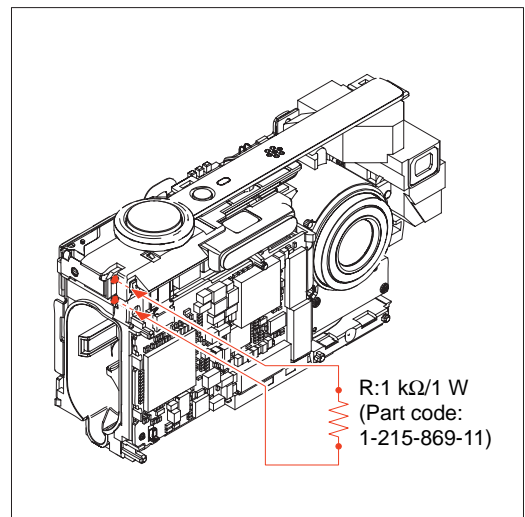
To preparing the short jig, a small clip is attached to each end of a resistor of 1 k Ω / 1 W (1-215-869-11).

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



Discharging the Capacitor

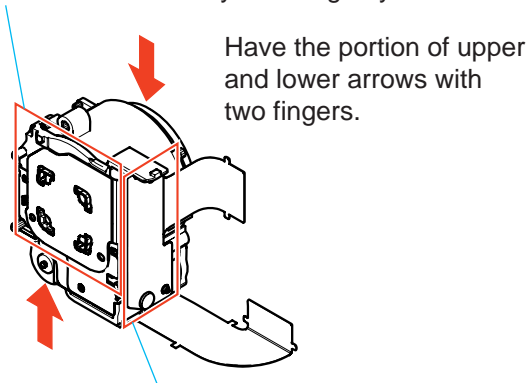
Short-circuit between the positive and the negative terminals of charged capacitor with the short jig about 10 seconds.



1-3. THE CAUTIONS AT THE TIME OF LENS BLOCK HANDLING

In case you deal with a lens block, be careful of the following things.

CD-575 flexible board is integrated with the lens block.
Do not touch or separate the CD board.
CD-575 flexible board becomes only exchange by lens block.

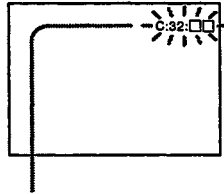


Touch the flexible board of motor side recklessly or don't bend it., because the mounted chip parts could be peeled if the flexible board is curved.

1-4. 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: □□: □□
You can reverse the camera malfunction yourself. (However, contact your Sony dealer or local authorized Sony service facility when you cannot recover from the camera malfunction.)
- E: □□: □□
Contact your Sony dealer or local authorized Sony service facility.

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" or internal memory.	"Memory Stick" or internal memory is unformatted.	FORMAT ERROR
	Insert a new "Memory Stick".	"Memory Stick" is broken.	MEMORY STICK ERROR
	Turn the power off and on again.	Trouble with internal memory.	INTERNAL MEMORY ERROR
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. (Note)	Abnormality when flash is being charged.	
E:92:□□	Insert batteries correctly.	Batteries are not inserted correctly.	

Note: After repair, be sure to perform "1-6. PROCESS AFTER FIXING FLASH ERROR".

1-5. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

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

Note: 1 When replacing the SY-116 board, erase the data in internal memory of the board before replacement.

Note: 2 When replacing the SY-116 board or the IC1401 on the SY-116 board, execute formatting and initialize the internal memory after replacement.

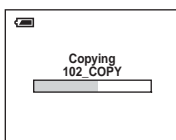
Method for Copying the Data in Internal Memory


Copy

Copies all images in the internal memory to a "Memory Stick".

	OK	See the following procedure.
✓	Cancel	Cancels the copying.

- ① Insert a "Memory Stick" having 32 MB or larger capacity.
- ② Select [OK] with ▲ on the control button, then press ●.
The message "All data in internal memory will be copied Ready?" appears.
- ③ Select [OK] with ▲, then press ●.
Copying starts.



- Use batteries with enough capacity or the AC Adaptor (not supplied). If you attempt to copy image files using batteries with little remaining capacity, the batteries may run out, causing copying to fail or possibly corrupting the data.
- You cannot copy individual images.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the "Memory Stick" after copying, then execute the [Format] command in Internal Memory Tool.
- You cannot select a folder copied on a "Memory Stick".
- The setting of  (Print order) marks is not copied even when you copy data.

Method for Formatting the Internal Memory

Format

Formats the internal memory.

- Note that formatting irrevocably erases all data in the internal memory, including even protected images.

	OK	See the following procedure.
✓	Cancel	Cancels the formatting.

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

1-6. PROCESS AFTER FIXING FLASH ERROR

When "FLASH error" (Self-diagnosis Code E : 91 : **) occurs, to prevent any abnormal situation caused by high voltage, setting of the flash is changed automatically to disabling charge and flash setting.

After fixing, this setting needs to be deactivated. Flash error code can be initialized by the operations on the Setup screen.

Method for Initializing the Flash Error Code

Initialize

Initializes the setting to the default setting.

	OK	See the following procedure.
✓	Cancel	Cancels the resetting.

- ① Select [OK] with ▲ on the control button, then press ●.
The message "Initialize all settings Ready?" appears.
 - ② Select [OK] with ▲, then press ●.
The settings are reset to the default setting.
- Make sure that the power is not disconnected during resetting.

2. DISASSEMBLY

Link

• DISASSEMBLY	• SERVICE POSITION
• THE METHOD OF ATTACHMENT OF FP-176 FLEXIBLE BOARD	
• CIRCUIT BOARDS LOCATION	• HELP

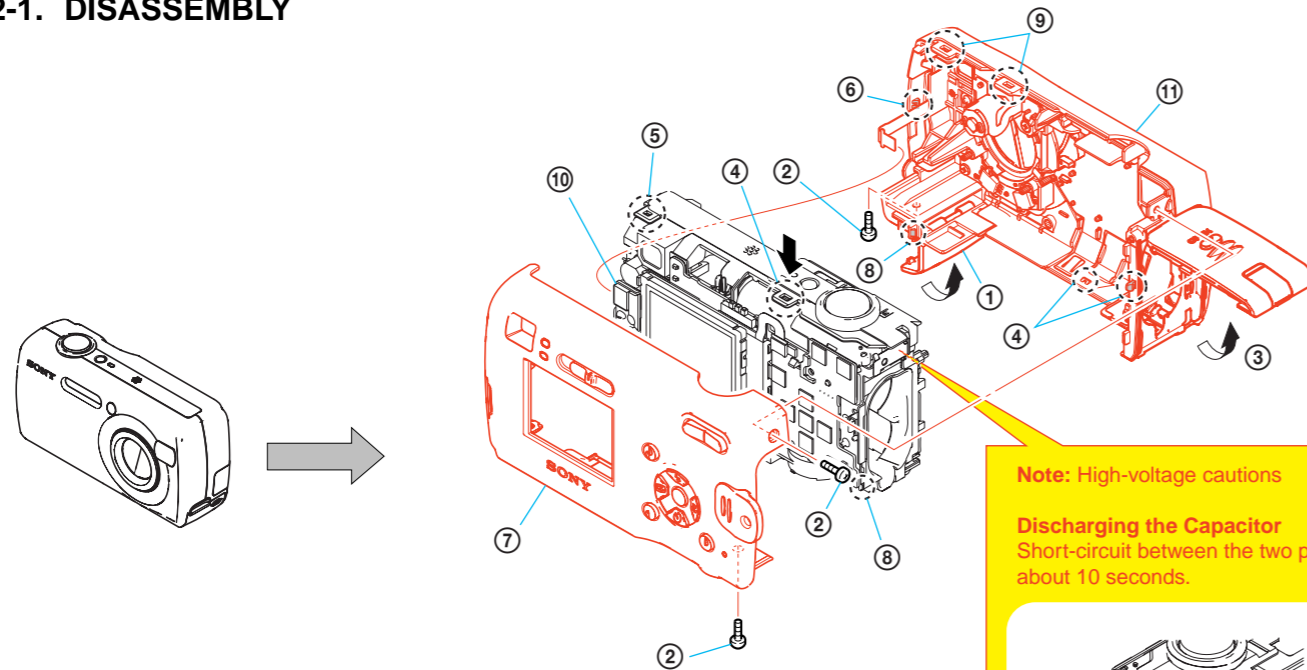
2. DISASSEMBLY

2. DISASSEMBLY

HELP

The following flow chart shows the disassembly procedure.

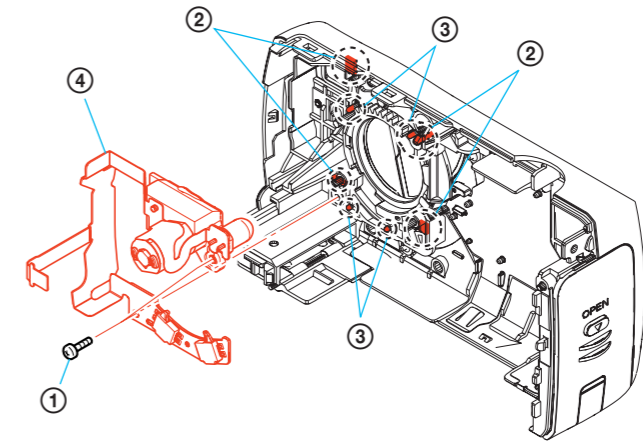
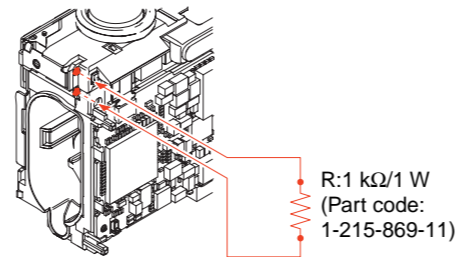
2-1. DISASSEMBLY



- ① Open the MS lid.
- ② Screw x3
- ③ Open the BT lid.
- ④ Claw x3
- ⑤ Claw x1
- ⑥ Claw x1
- ⑦ Cabinet (rear) block
- ⑧ Claw x2
- ⑨ Claw x2
- ⑩ Connector: CN003
- ⑪ Cabinet (front) block

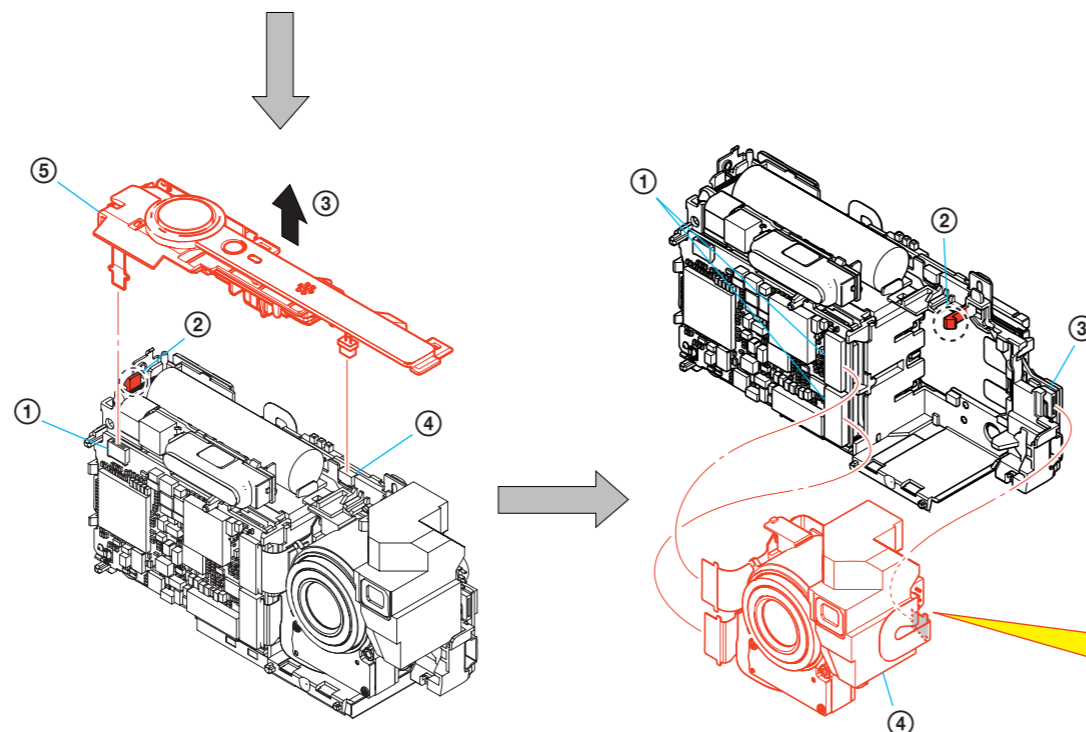
Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between the two points with the short jig about 10 seconds.



- ① Screw x2
- ② Claw x4
- ③ Boss x4
- ④ FP-176 flexible board

When you disassemble the FP-176 flexible board, assemble with refer to page 2-7 "The method of attachment of FP-176 flexible board".



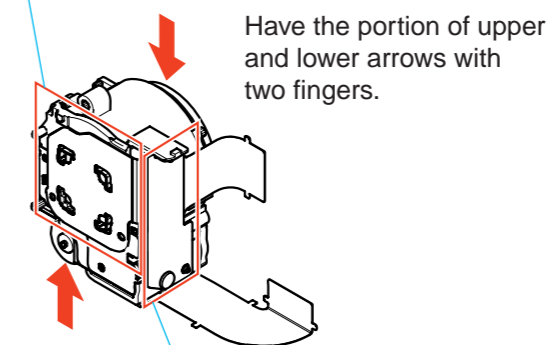
- ① Connector: CN501
- ② Claw x1
- ③ Rifting up the cabinet (upper) block.
- ④ Connector: CN004
- ⑤ Cabinet (upper) block

- ① Connector x2: CN201, 401
- ② Claw x1
- ③ Connector: CN002
- ④ Lens block

Note: The cautions at the time of lens block handling

In case you deal with a lens block, be careful of the following things.

CD-575 flexible board is integrated with the lens block. Do not touch or separate the CD board. CD-575 flexible board becomes only exchange by lens block.

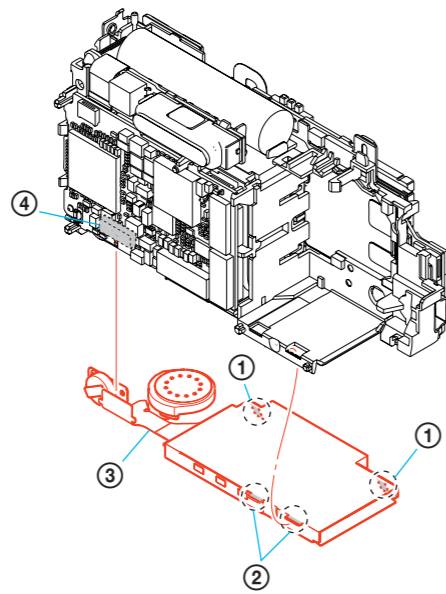


Have the portion of upper and lower arrows with two fingers.
Touch the flexible board of motor side recklessly or don't bend it., because the mounted chip parts could be peeled if the flexible board is curved.

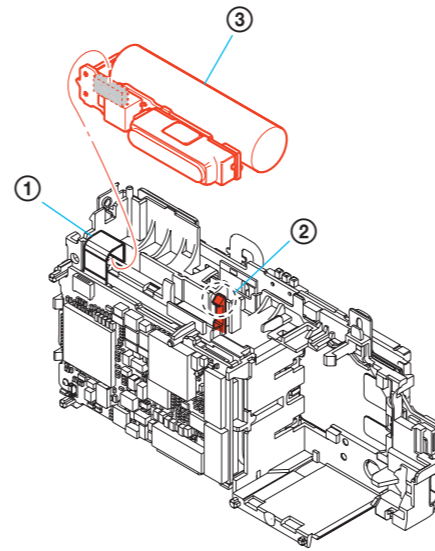
to Page 2-3

2. DISASSEMBLY

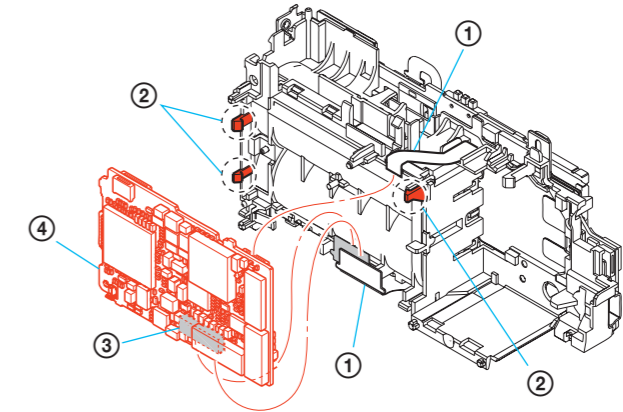
from Page 2-2



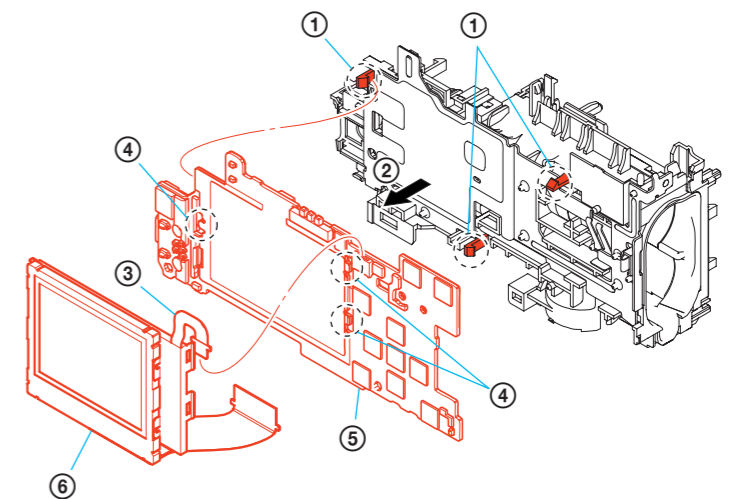
- ① Claw x2
- ② Hook x2
- ③ Memory stick connector
- ④ Connector: CN505



- ① Flexible board: CN506
- ② Claw x1
- ③ ST-116 board



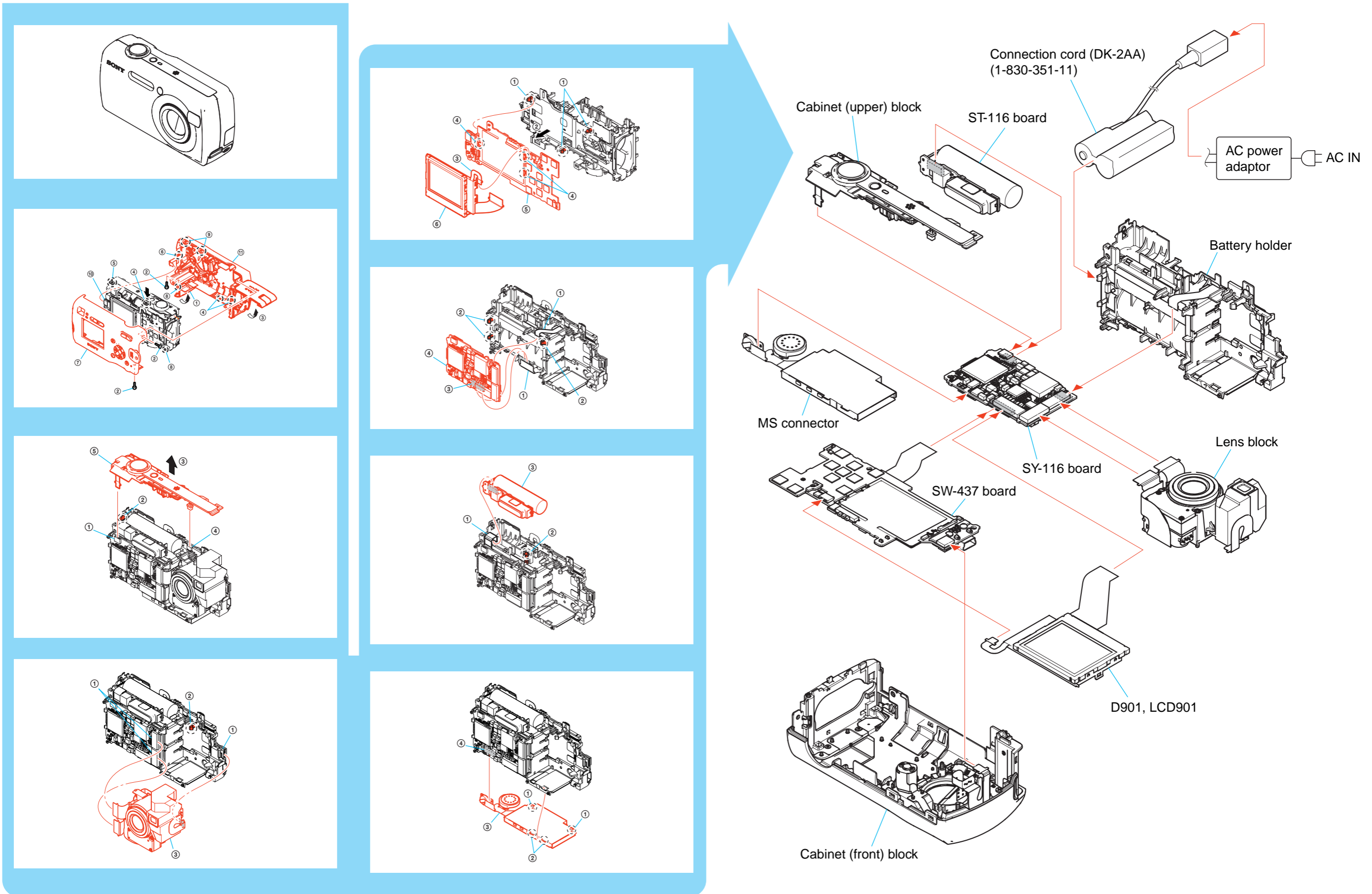
- ① Flexible board x2: CN502, 503
- ② Claw x3
- ③ Connector: CN504
- ④ SY-116 board



- ① Claw x3
- ② Remove the SW board section.
- ③ Flexible board: CN006
- ④ Claw x3
- ⑤ SW-437 board
- ⑥ D901, LCD901

2. DISASSEMBLY

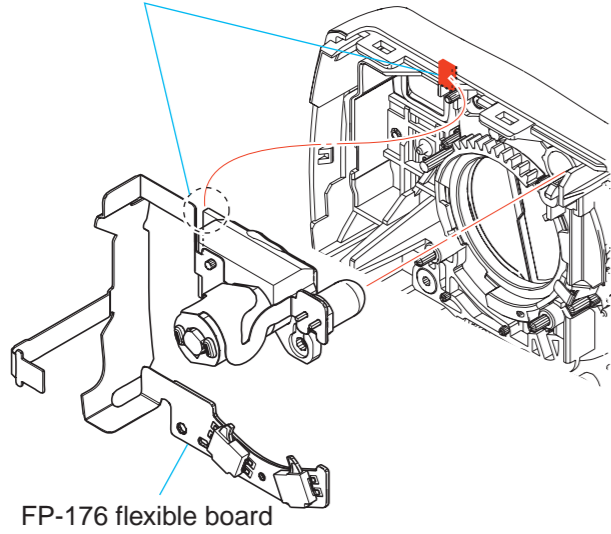
2-2. SY-116 BOARD SERVICE POSITION



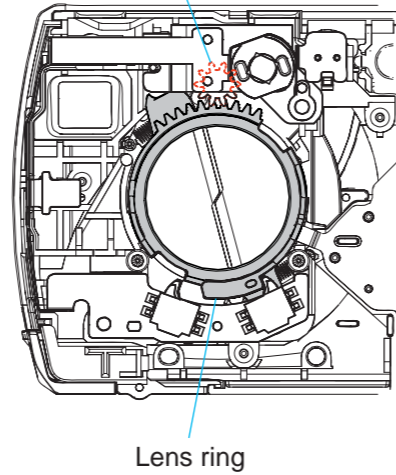
2. DISASSEMBLY

2-3. THE METHOD OF ATTACHMENT OF FP-176 FLEXIBLE BOARD

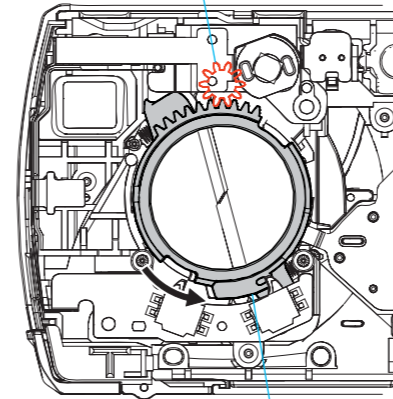
- ① Insert the plate of lens cover motor in the slot on the front cabinet.



- ② Insert the gear of lens cover motor, as you don't collide with the gear of lens cover.

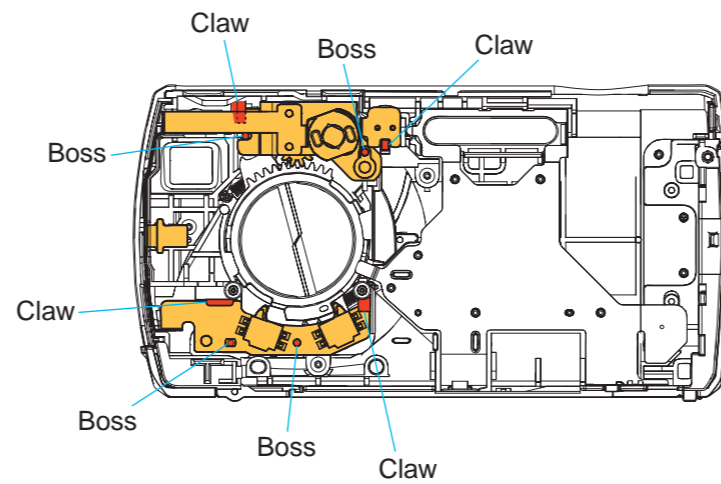
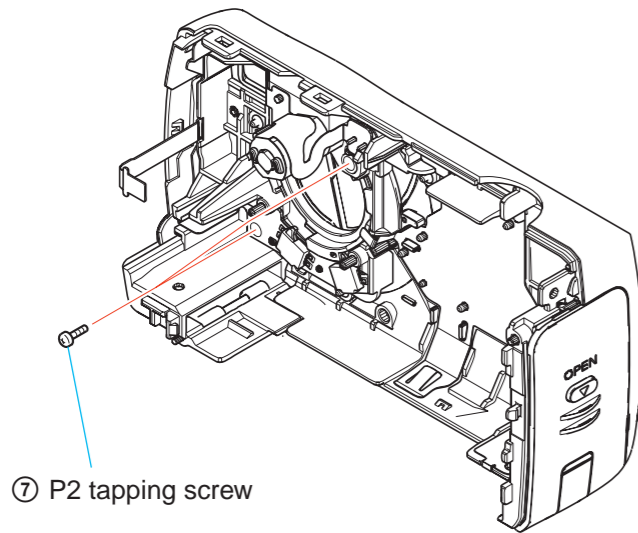
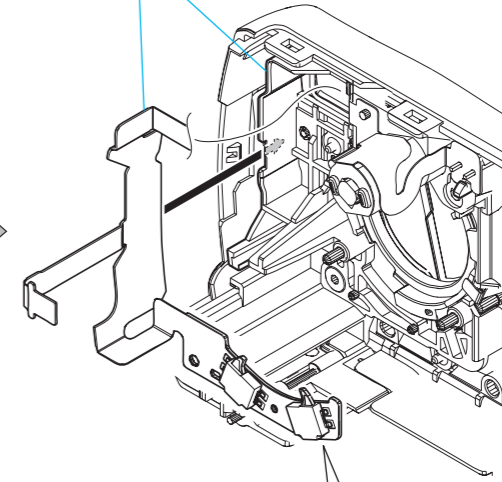


Gear (lens cover motor)

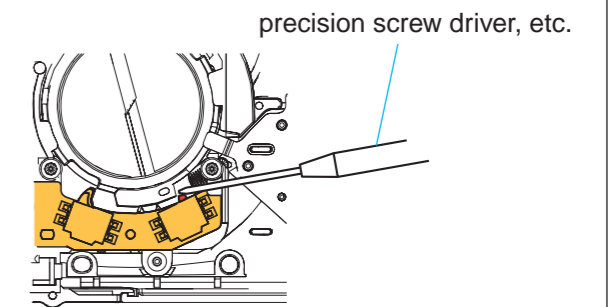
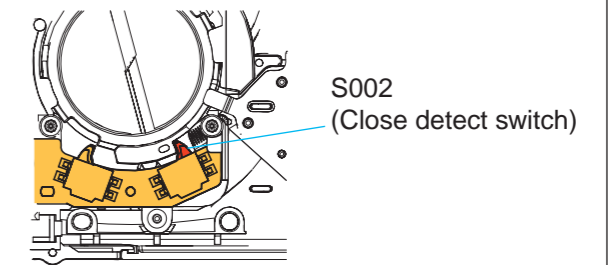


- ③ As you make the rotate the lens ring in the direction of arrow, engage with the gear of lens cover motor.

- ④ Insert the flexible board in the slot on the front cabinet.



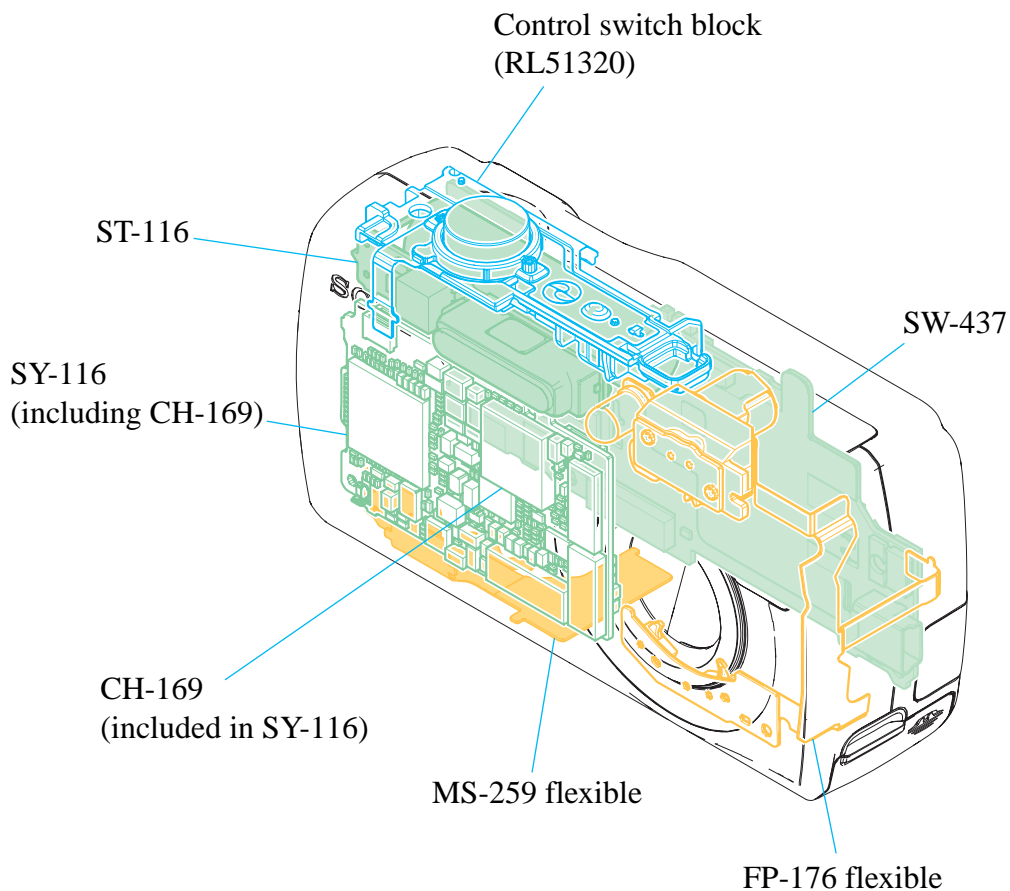
- ⑥ Check that the FP-176 flexible board has fitted into four claws and four bosses exactly.



- ⑤ Assemble after pushing up the S002 of FP-176 flexible board upwards. If it assembles then, the tip of S002 will break.

2. DISASSEMBLY

2-4. CIRCUIT BOARDS LOCATION



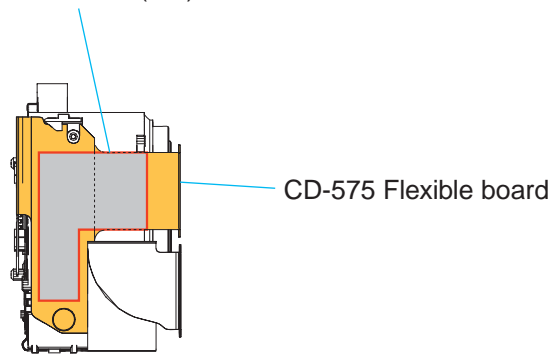
Board Name	Function
CH-169 (included in SY-116)	CCD SIGNAL PROCESS
FP-176 flexible	LENS COVER MOTOR
MS-259 flexible	MEMORY STICK CONNECTOR
ST-116	FLASH DRIVE
SW-437	CONTROL SWITCH
SY-116 (CH-169 board))	CAMERA MODULE, CAMERA DSP, CPU, LENS DRIVE, BURST FLASH, SDRAM, AND FLASH, AUDIO, DC/DC CONVERTER, CONNECTOR, LCD PANEL

HELP

Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

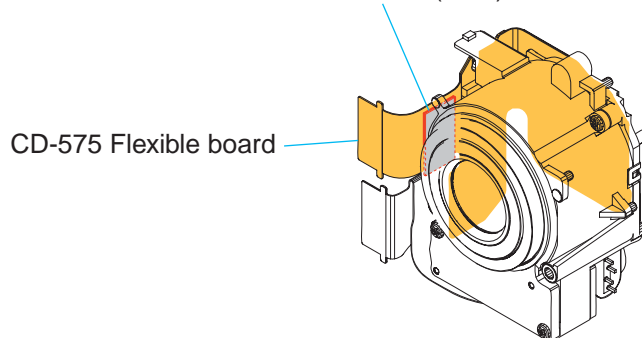
When affixing the radiation sheet (CD), take care not to apply excessive force to the sheet (CD) because the chip parts mounted on the CD-575 flexible board could be peeled off.

Radiation sheet (CD)



When turning over the CD-575 flexible board to affix the radiation sheet (CDL), take care not to turn it over strongly because the chip parts mounted on the CD-575 flexible board could be peeled off.

Radiation sheet (CDL)



3. BLOCK DIAGRAMS

Link

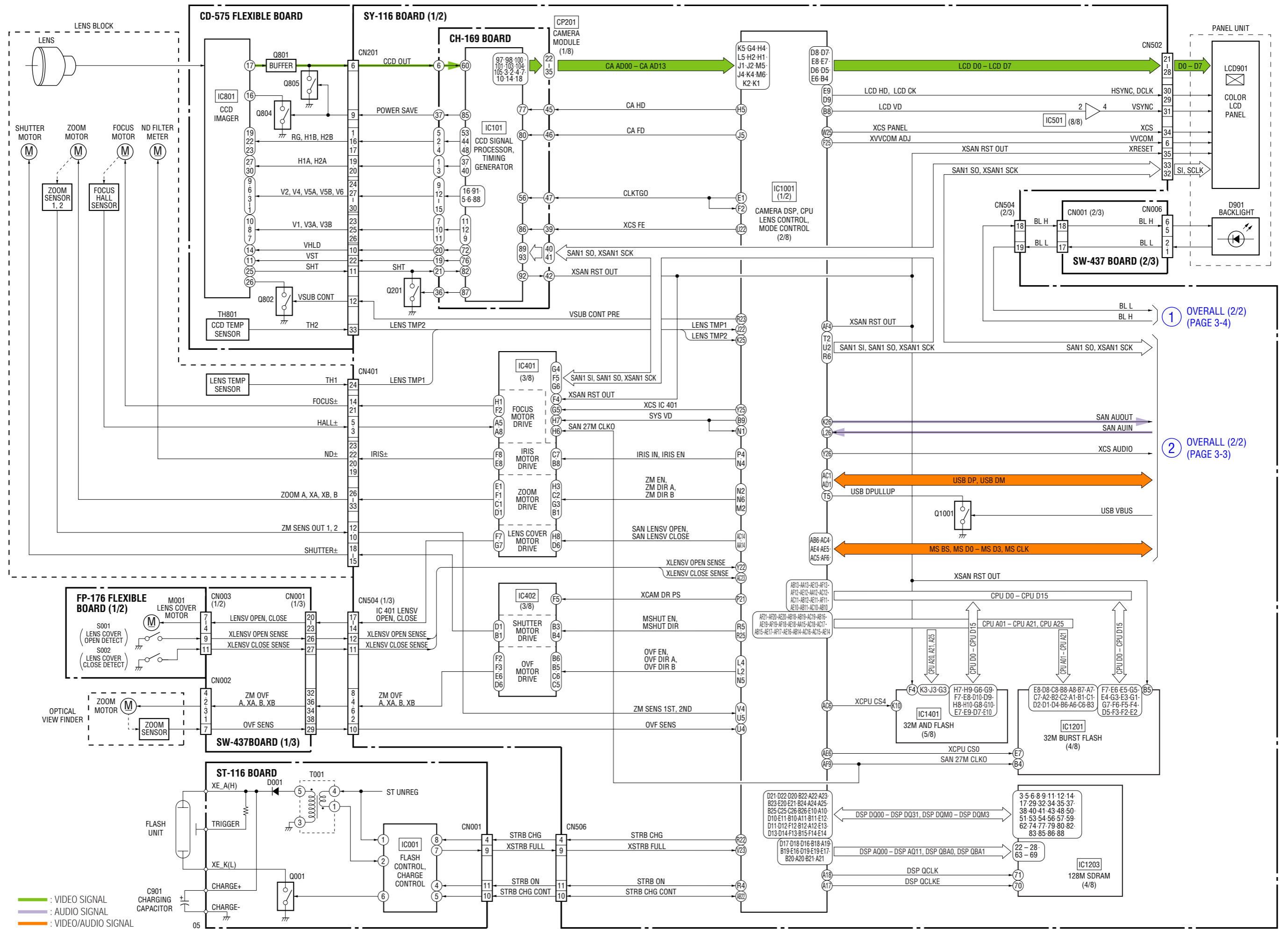
• OVERALL BLOCK DIAGRAM (1/2)

• POWER BLOCK DIAGRAM

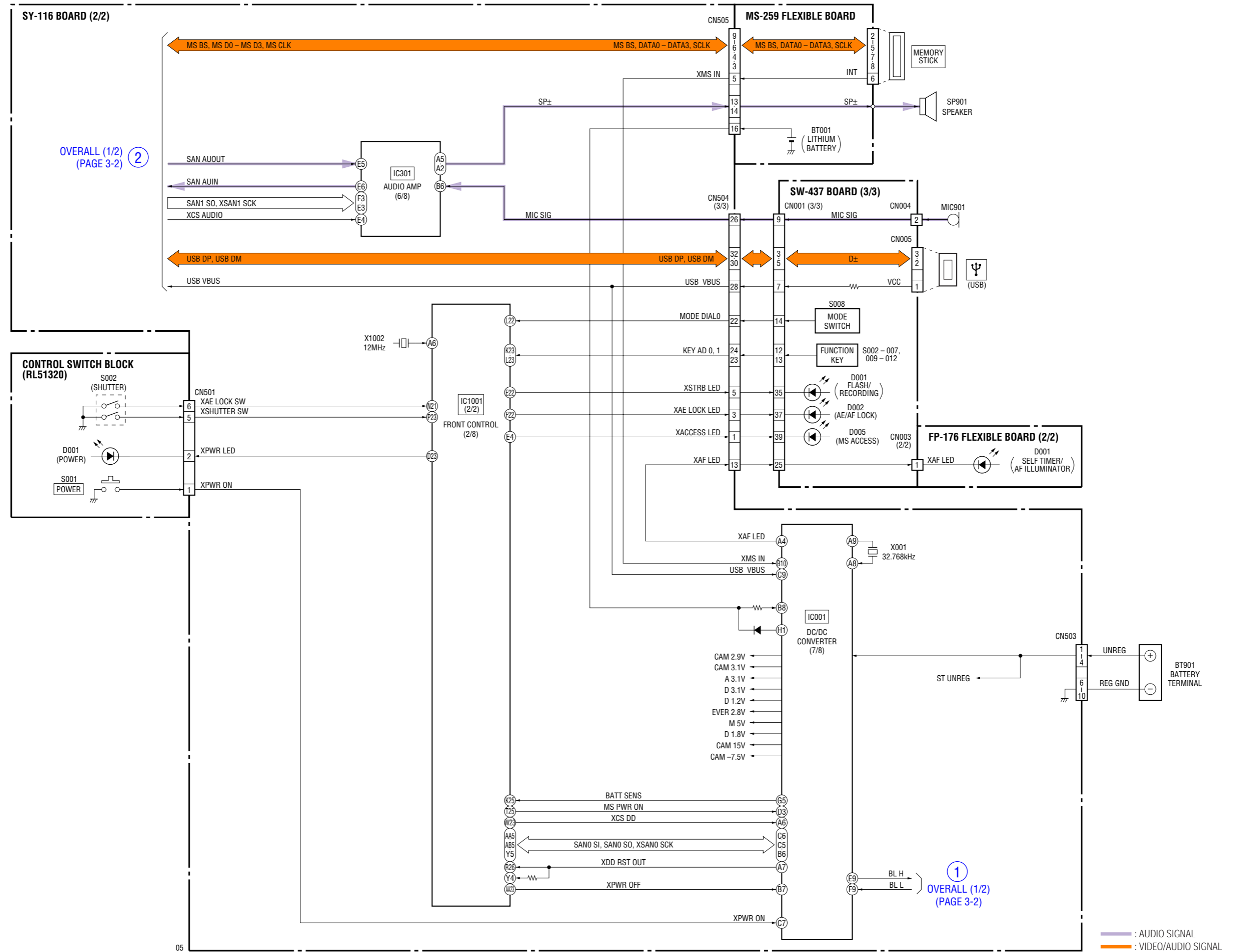
• OVERALL BLOCK DIAGRAM (2/2)

3. BLOCK DIAGRAMS

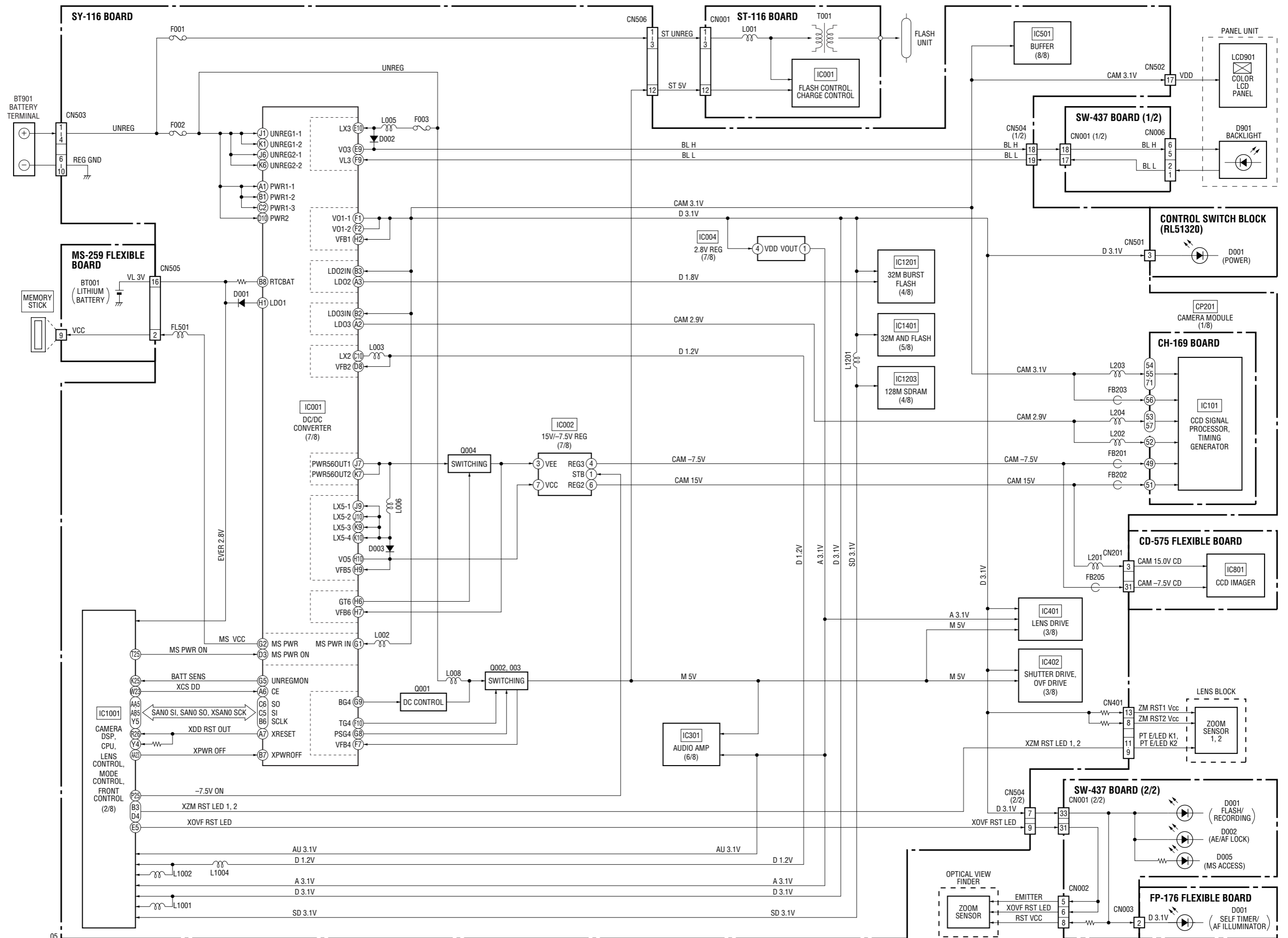
3-1. OVERALL BLOCK DIAGRAM (1/2) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



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

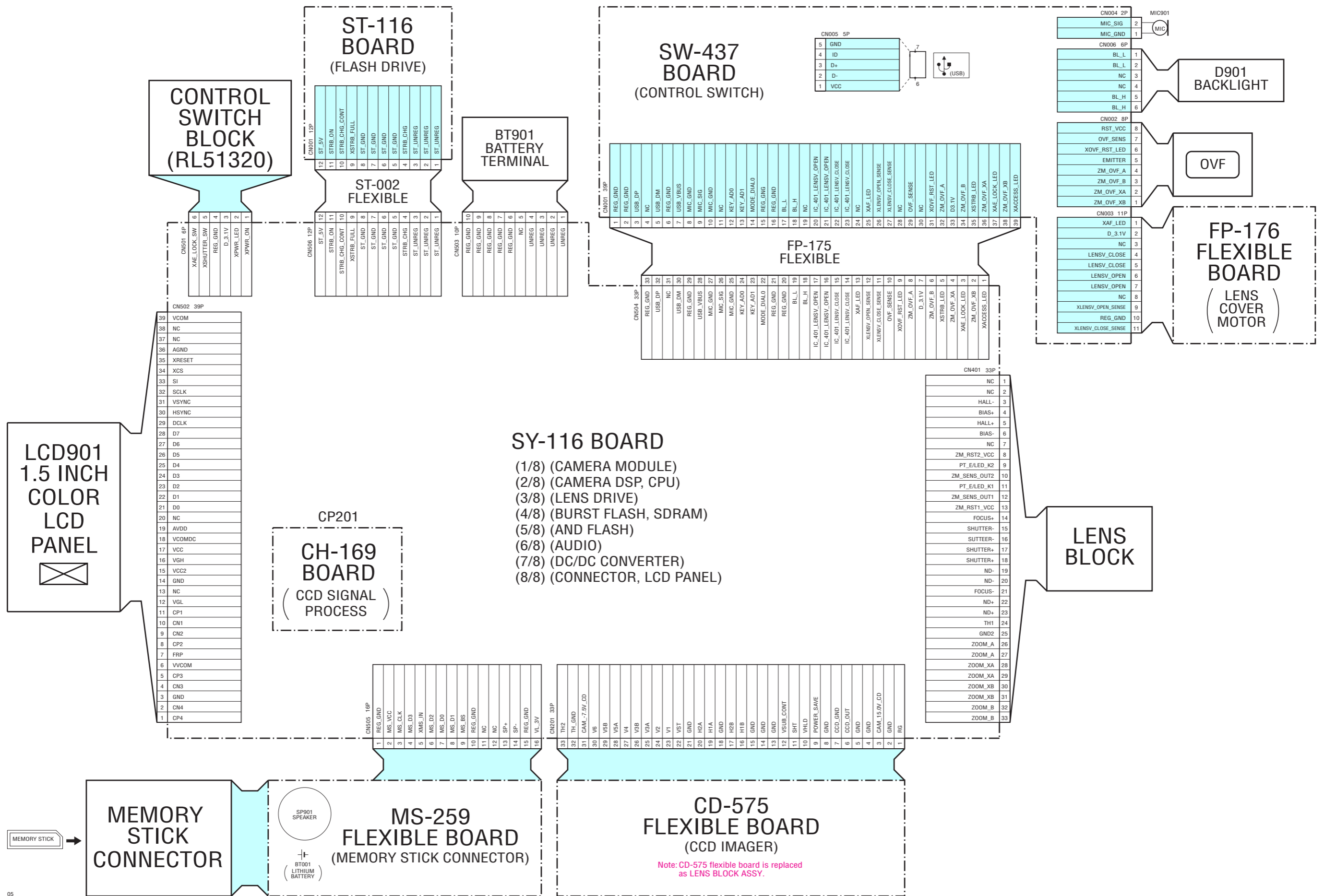


3-3. POWER BLOCK DIAGRAM () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



4-2. SCHEMATIC DIAGRAMS

Link

• CD-575 FLEXIBLE BOARD (CCD IMAGER)

• MS-259 FLEXIBLE
(MEMORY STICK CONNECTOR)

• SW-437 BOARD (CONTROL SWITCH)

• FP-176 FLEXIBLE BOARD
(LENS COVER MOTOR)

• ST-116 BOARD (FLASH DRIVE)

• CONTROL SWITCH BLOCK (RL51320)

• COMMON NOTE FOR SCHEMATIC DIAGRAMS

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

CD-575 FLEXIBLE BOARD

CCD IMAGER

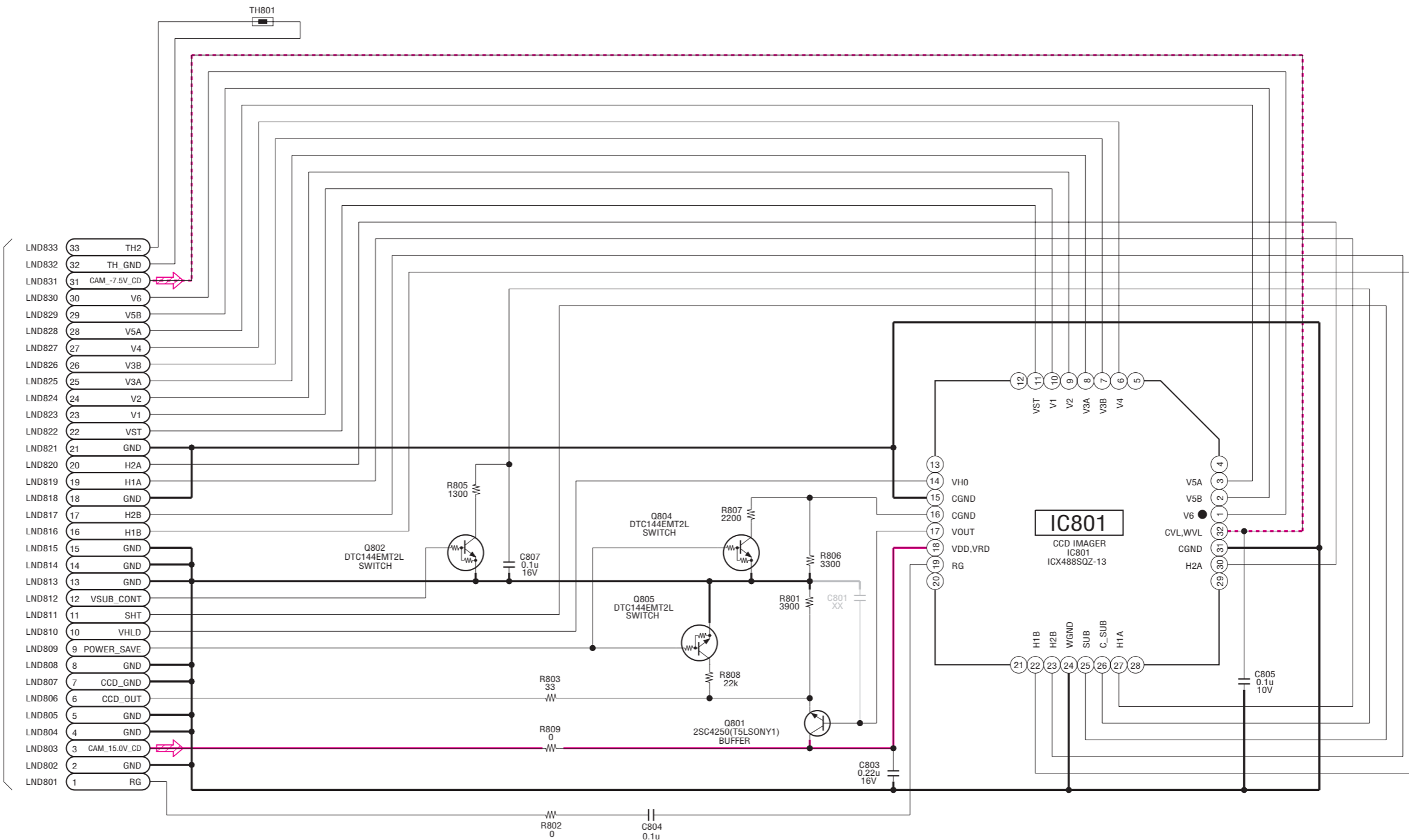
XX MARK:NO MOUNT

Note: CD-575 flexible board is replaced as LENS BLOCK ASSY, so that PRINTED WIRING BOARD is omitted.

Note: Voltage and Waveform of mounted parts on CD-575 flexible board can not be measured, because adhesion of a lens block and CD-575 flexible board may separate.

A
B
C
D
E
F
G

SY-116
(1/8)
CN201
(PAGE 4-11
of LEVEL3)



Note: Be sure to read "Precautions for Replacement of Lens Block (CCD Imager)" on page 4-5, when changing the Lens Block (CCD imager).

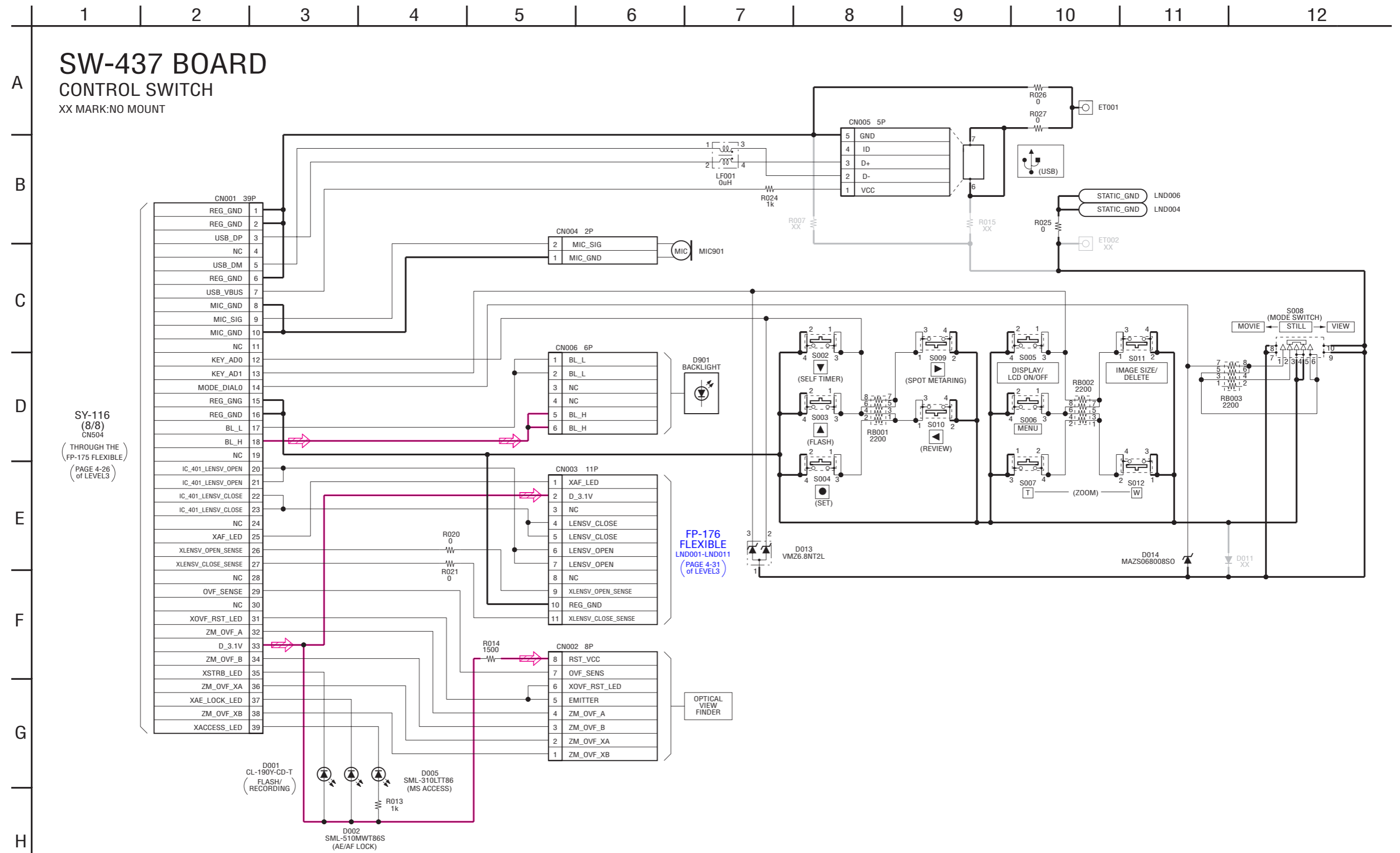
Note: Cautions are required for the handling of lens block. Refer to "THE CAUTIONS AT THE TIME OF LENS BLOCK HANDLING" on page 1-2, when you exchange.

05

Schematic diagrams of the CH-169 and SY-116 boards are not shown.
Pages from 4-9 to 4-26 are not shown.

For Schematic Diagram

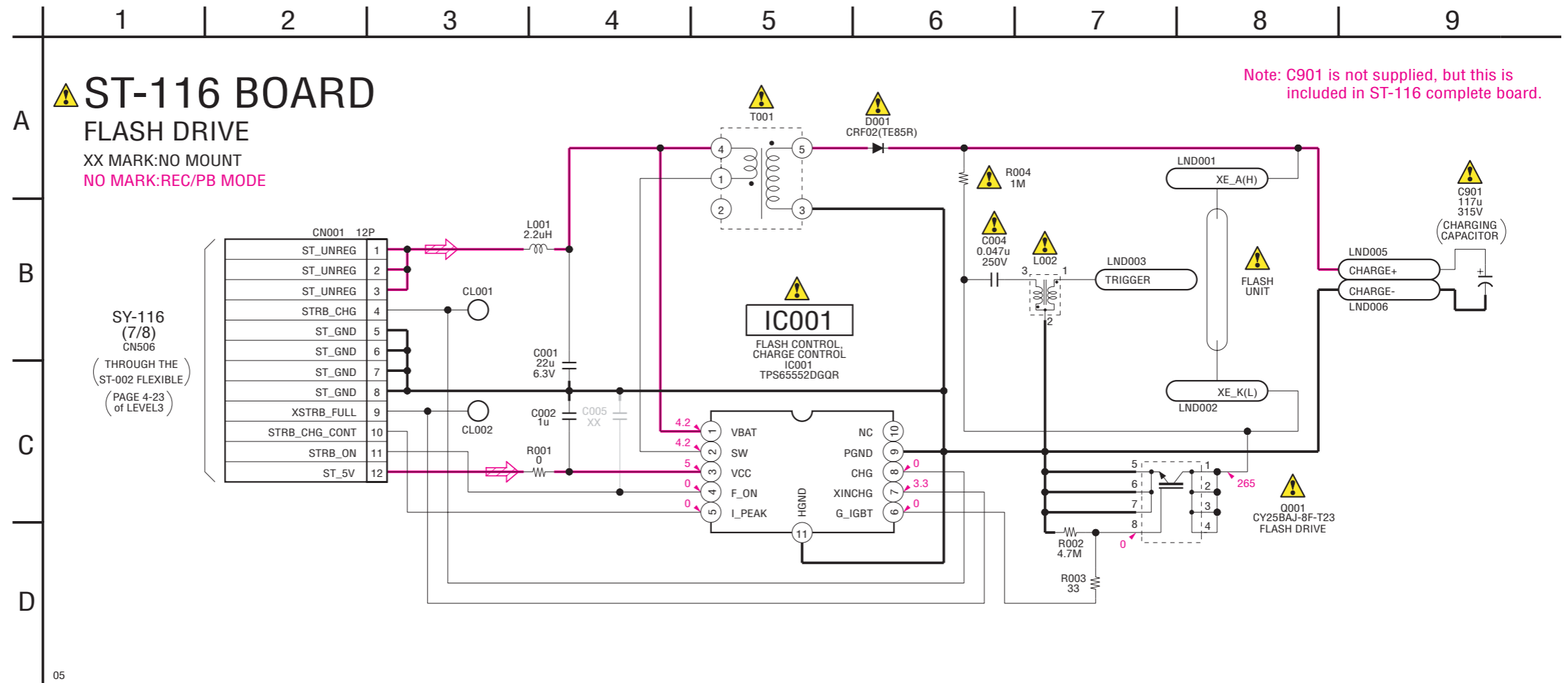
• Refer to page 4-41 or 4-44 for printed wiring board.



05

For Schematic Diagram

• Refer to page 4-45 for printed wiring board.



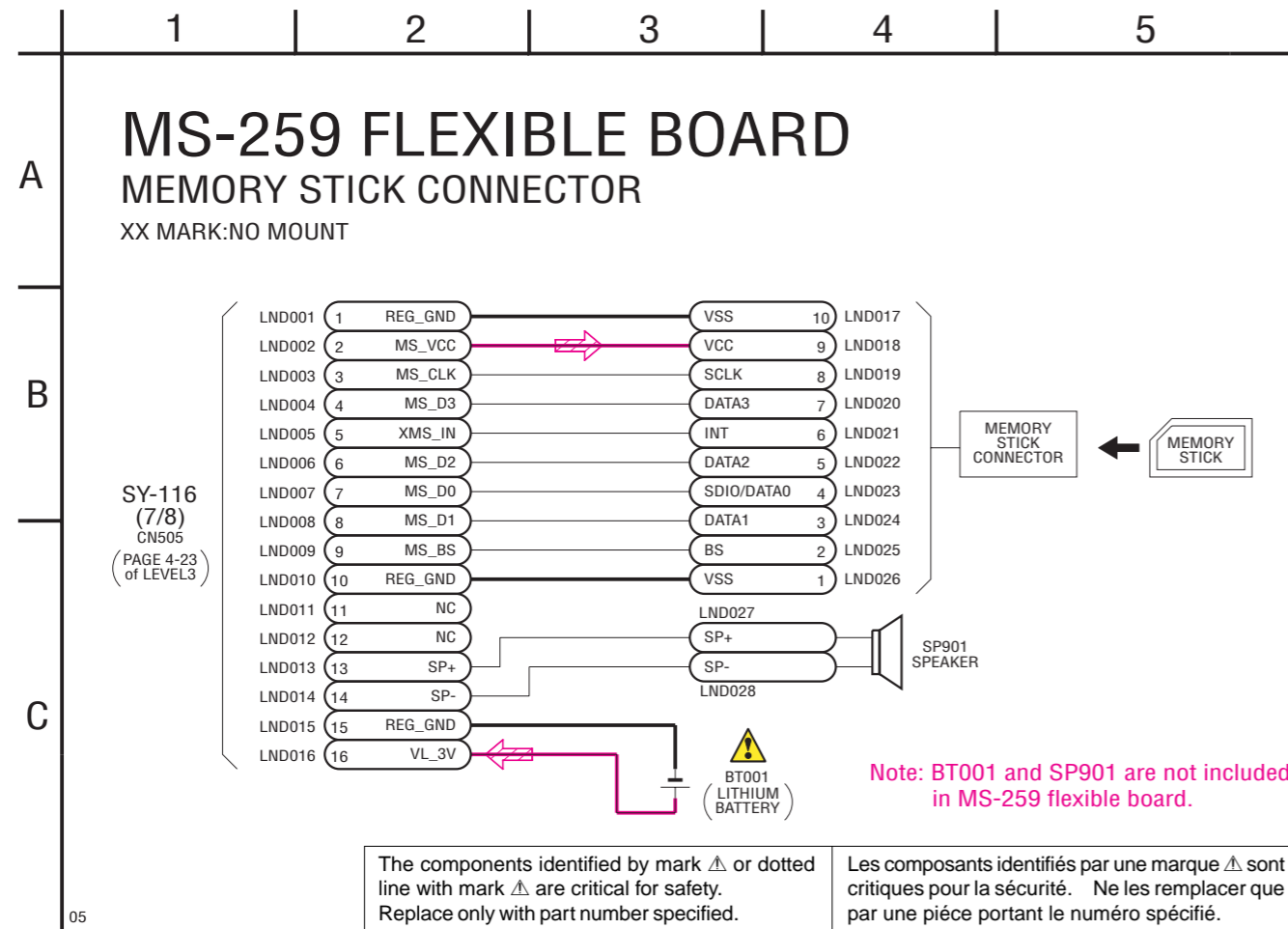
05

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.

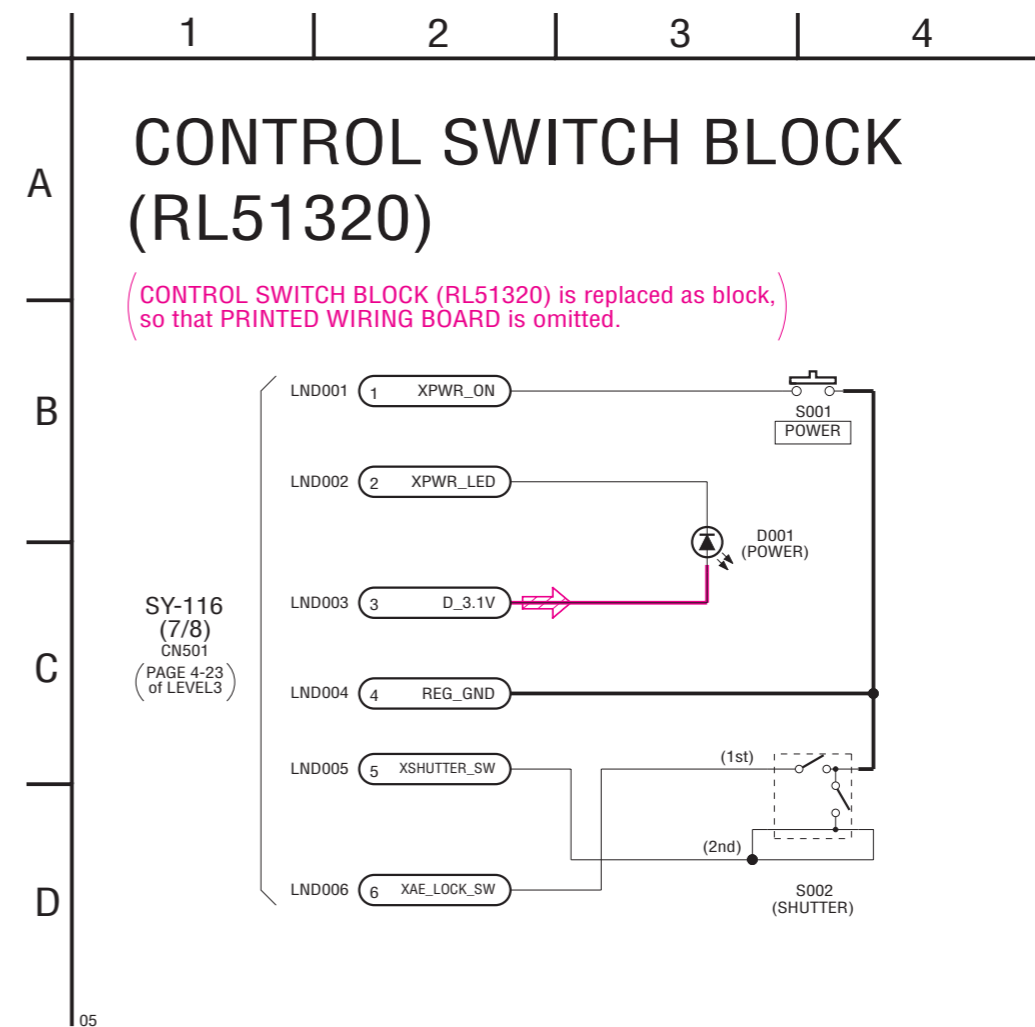
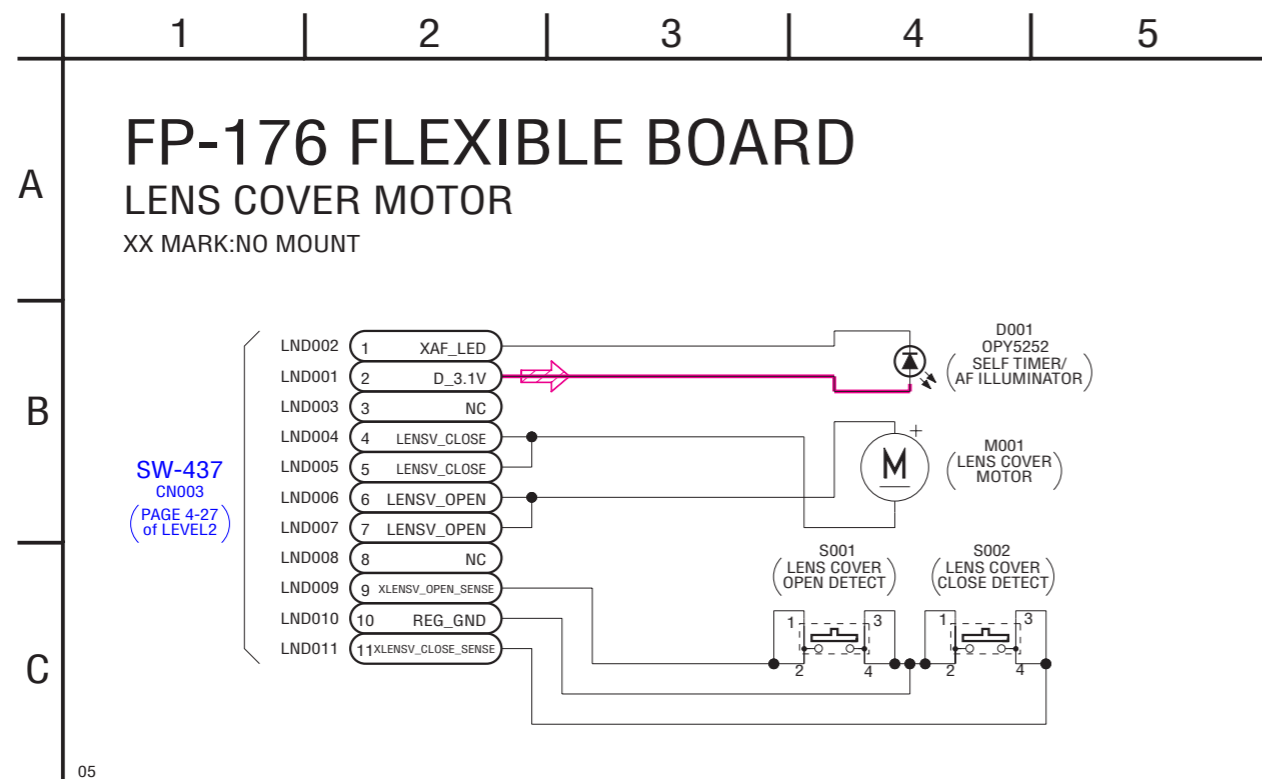
For Schematic Diagram

• Refer to page 4-46 for printed wiring board.



For Schematic Diagram

• Refer to page 4-47 for printed wiring board.



4-3. PRINTED WIRING BOARDS

Link

• SW-437 BOARD

• MS-259 FLEXIBLE BOARD

• ST-116 BOARD

• FP-176 FLEXIBLE BOARD

• COMMON NOTE FOR PRINTED WIRING BOARDS

• MOUNTED PARTS LOCATION

• CIRCUIT BOARDS LOCATION

Board Name	Function
SW-437	CONTROL SWITCH
ST-116	FLASH DRIVE
MS-259 FLEXIBLE	MEMORY STICK CONNECTOR
FP-176 FLEXIBLE	LENS COVER MOTOR

4-3. PRINTED WIRING BOARDS

4-3. PRINTED WIRING BOARDS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

- : Uses unleaded solder.
- : Circuit board
- : Flexible board
- : Pattern from the side which enables seeing.
- : pattern of the rear side
(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.

Transistor

Diode

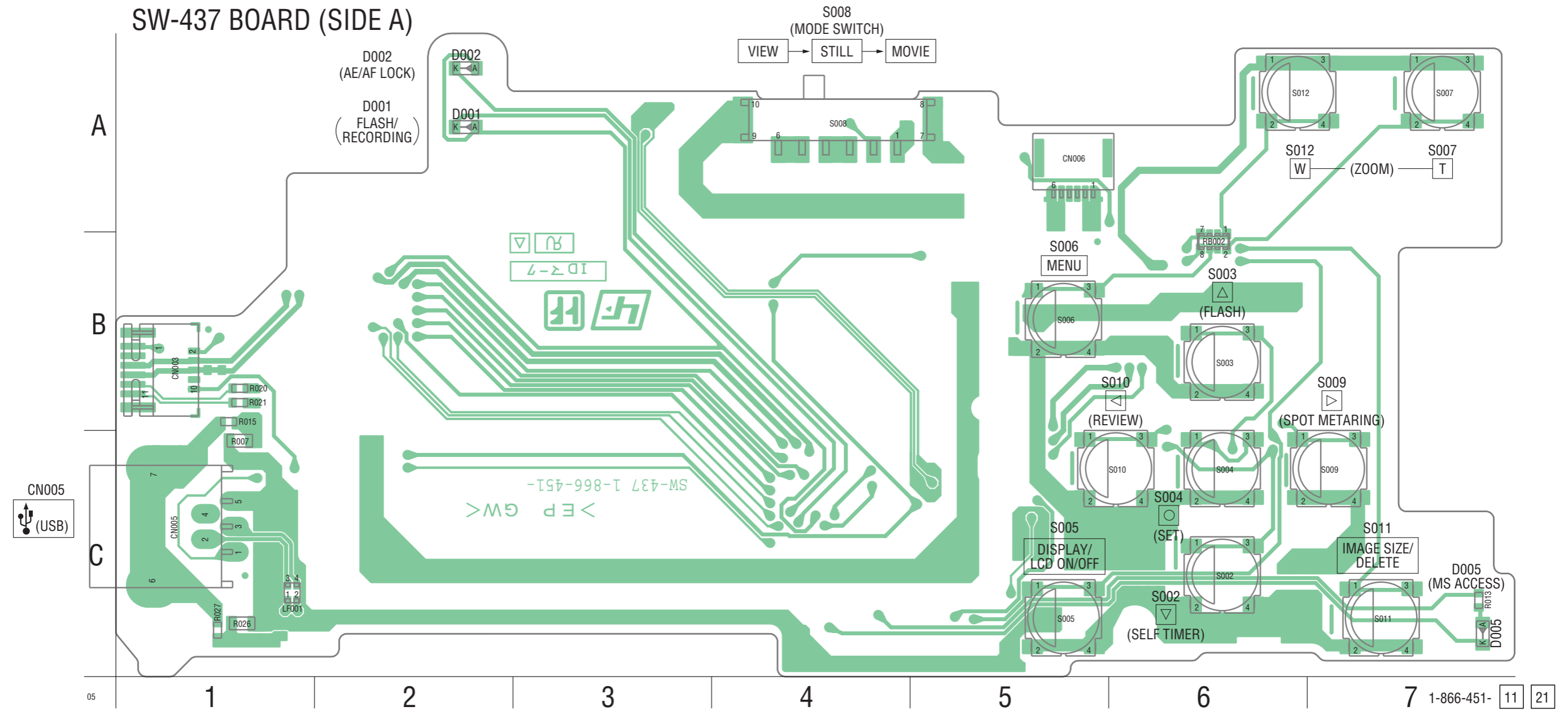
Board Name	Parts Location (Shown on Page)	Pattern	
		Total Number of Layers	Layers Not Indicated
SW-437	4-51	2 layers	–
ST-116	4-51	2 layers	–
MS-259 flexible	–	1 layer	–
FP-176 flexible	–	1 layer	–

Printed wiring boards of the CH-169 and SY-116 boards are not shown.
Pages from 4-37 to 4-40 are not shown.

Note for Printed Wiring Board (See page 4-35).

 : Uses unleaded solder.

SW-437 BOARD (SIDE A)

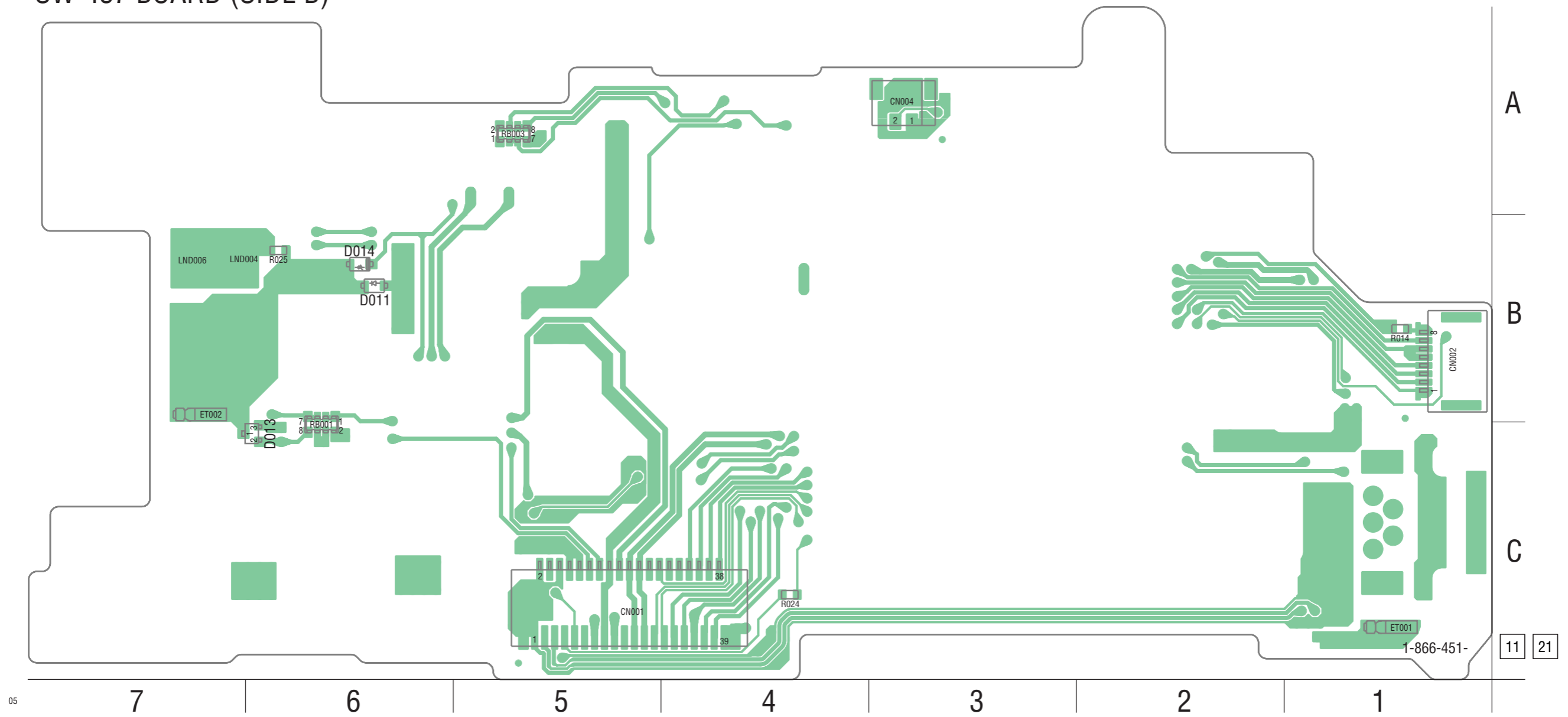


SW-437

Note for Printed Wiring Board (See page 4-35).

 : Uses unleaded solder.

SW-437 BOARD (SIDE B)

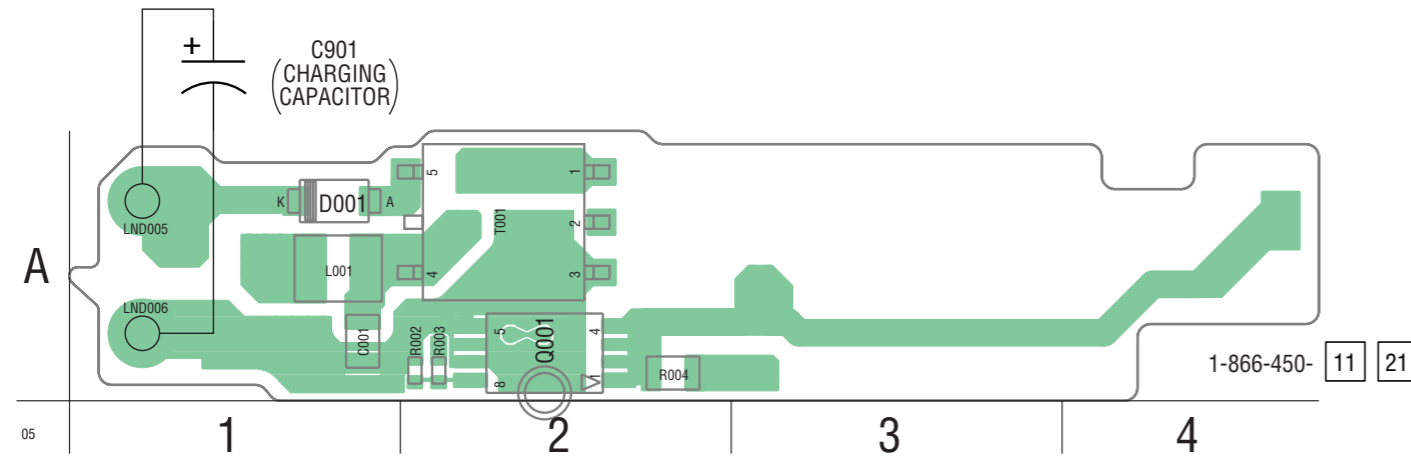


ST-116

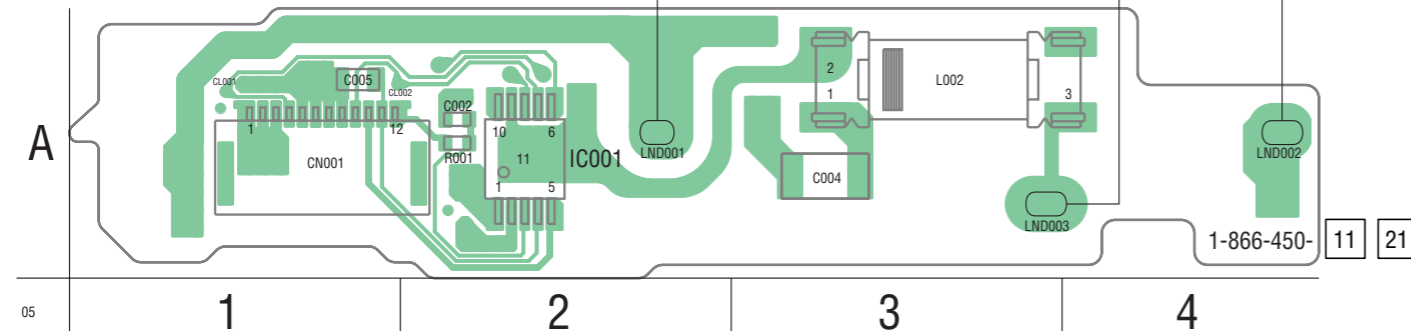
Note for Printed Wiring Board (See page 4-35).

 : Uses unleaded solder.

ST-116 BOARD (SIDE A)




ST-116 BOARD (SIDE B)

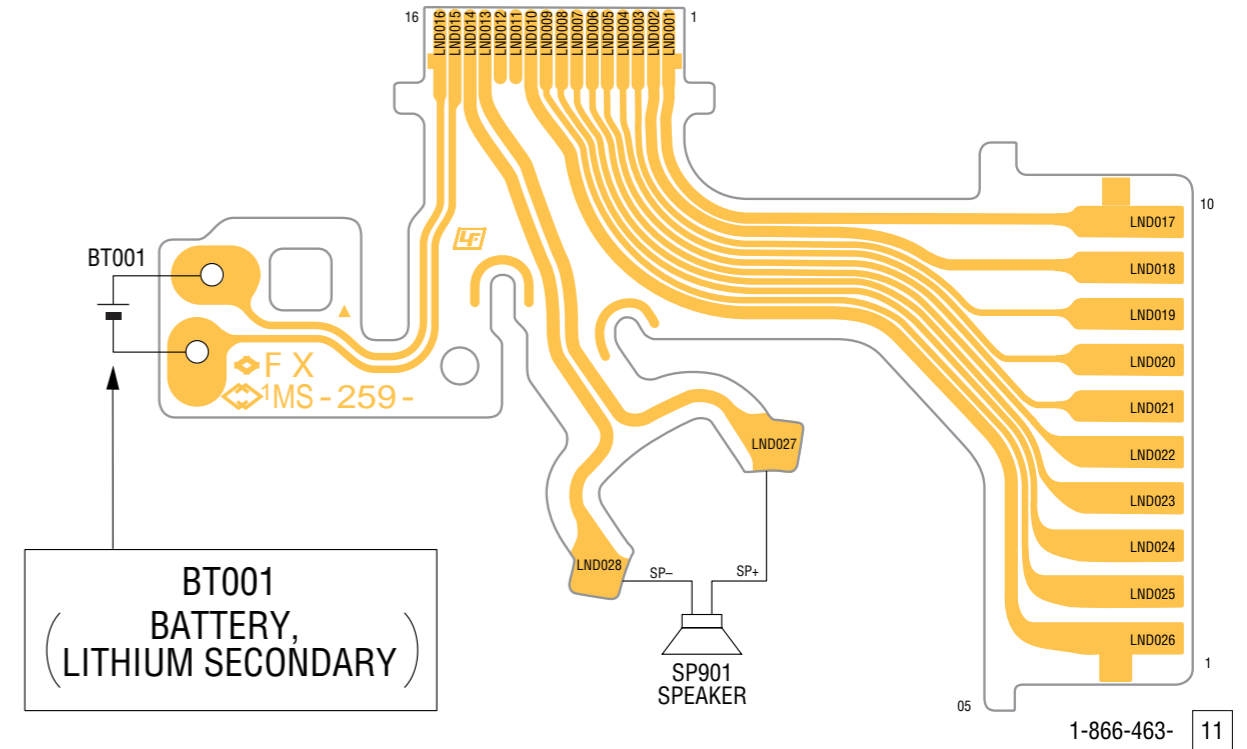


MS-259 FLEXIBLE

Note for Printed Wiring Board (See page 4-35).

 : Uses unleaded solder.

MS-259 FLEXIBLE BOARD

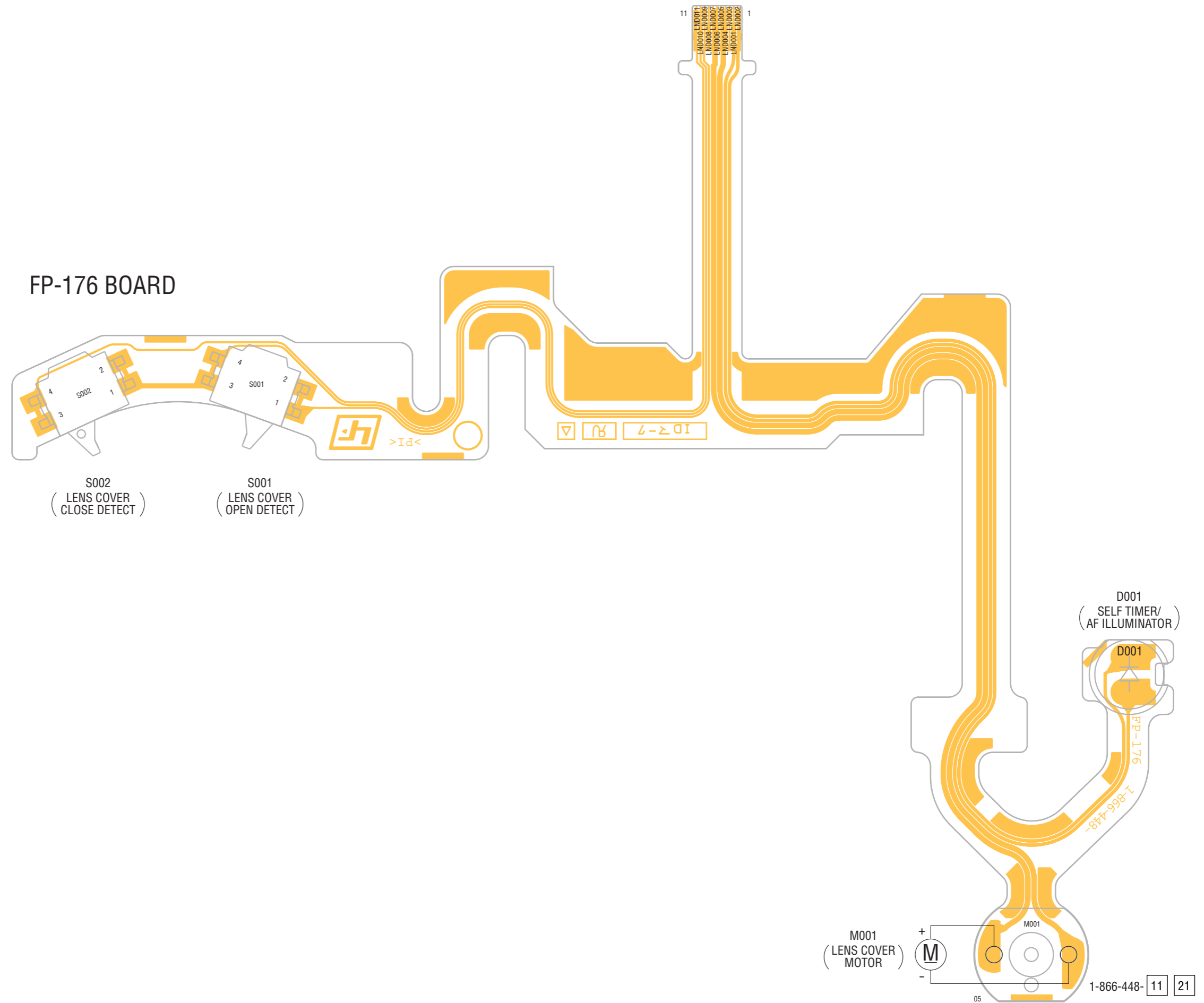


Note: BT001 and SP901 are not included in MS-259 flexible board.

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

FP-176 FLEXIBLE

 : Uses unleaded solder.



Waveforms of the SY-116 board are not shown.
Pages 4-49 is not shown.

Mounted parts location of the SY-116 board is not shown.
Pages 4-50 is not shown.

4-3. PRINTED WIRING BOARDS

4-5. MOUNTED PARTS LOCATION

no mark : side A
* mark : side B

SW-437 BOARD

* CN001 C-5
* CN002 B-1
CN003 B-1
* CN004 A-3
CN005 C-1
CN006 A-5

D001 A-2
D002 A-2
D005 C-7
* D013 B-6
* D014 B-6

* ET001 C-1

LF001 C-1

R013 C-7
* R014 B-1
R020 B-1
R021 B-1
* R024 C-4
* R025 B-6
R026 C-1
R027 C-1

* RB001 B-6
RB002 B-6
* RB003 A-5

S002 C-6
S003 B-6
S004 C-6
S005 C-5
S006 B-5
S007 A-7
S008 A-4
S009 C-7
S010 C-5
S011 C-7
S012 A-6

ST-116 BOARD

C001 A-1
* C002 A-2
* C004 A-3
C901 A-1

* CN001 A-1

D001 A-1

* IC001 A-2

L001 A-1
* L002 A-3

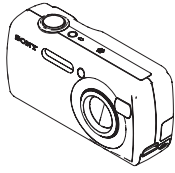
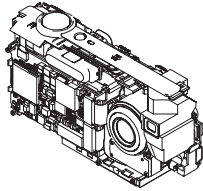
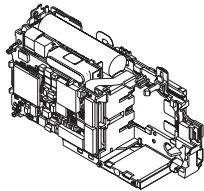
Q001 A-2

* R001 A-2
R002 A-2
R003 A-2
R004 A-2

T001 A-2

5. REPAIR PARTS LIST

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

Link	EXPLODED VIEWS		
			
A	B	C	
OVERALL ASSEMBLY	BT HOLDER BLOCK	BATTERY HOLDER SECTION	

Link	ELECTRICAL PARTS LIST		ACCESSORIES
• CD-575 FLEXIBLE BOARD B	• MS-259 FLEXIBLE BOARD B	• SW-437 BOARD C	
• FP-176 FLEXIBLE BOARD A	• ST-116 BOARD C		

5. REPAIR PARTS LIST

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... , μ PC... , μ PC... ,
uPD... , μ PD...
- Abbreviation
AUS : Australian model
CH : Chinese model
CND : Canadian model
HK : Hong Kong model
J : Jpanese model
JE : Tourist model
KR : Korean model

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

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

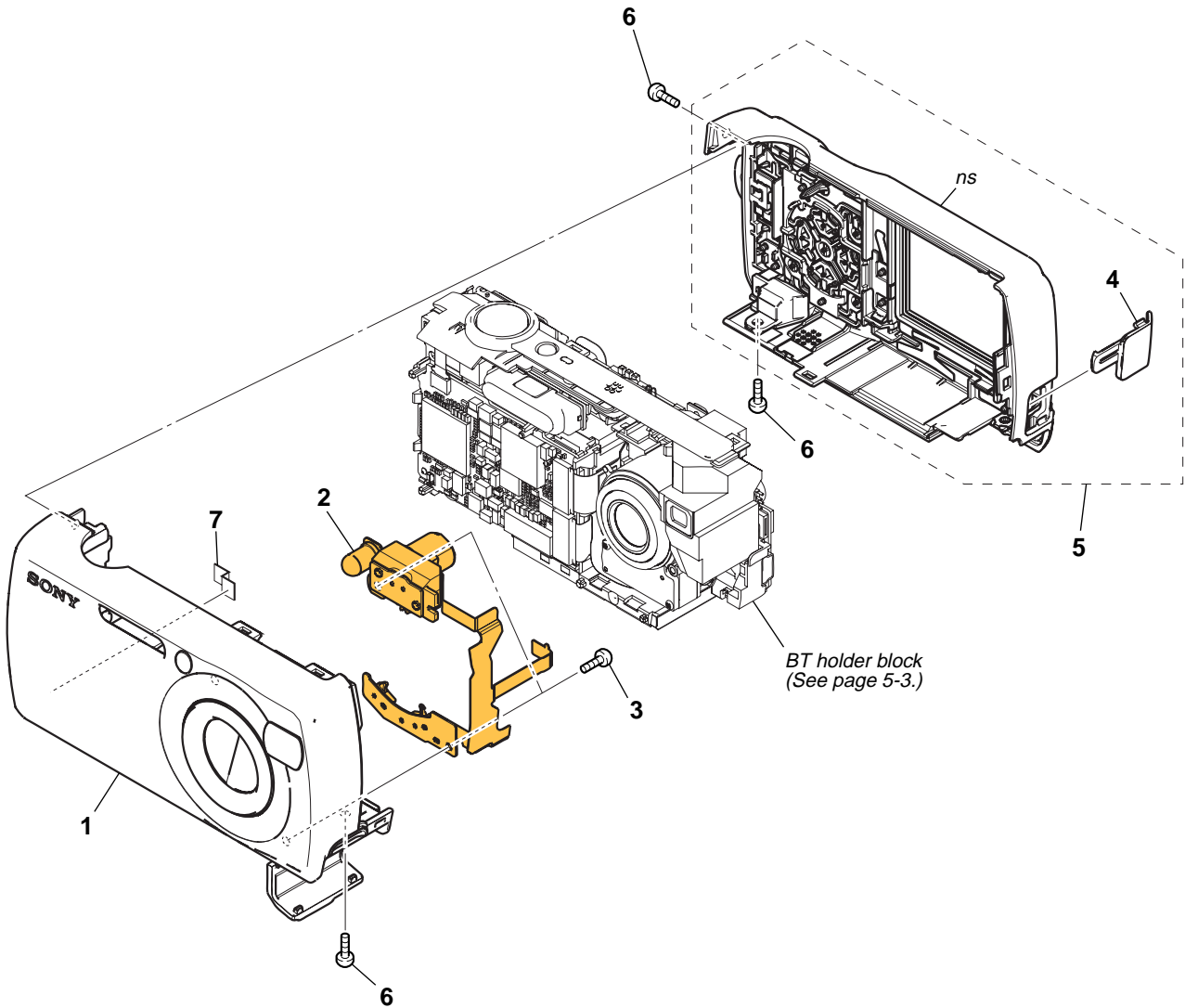
Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL ASSEMBLY

ns: not supplied

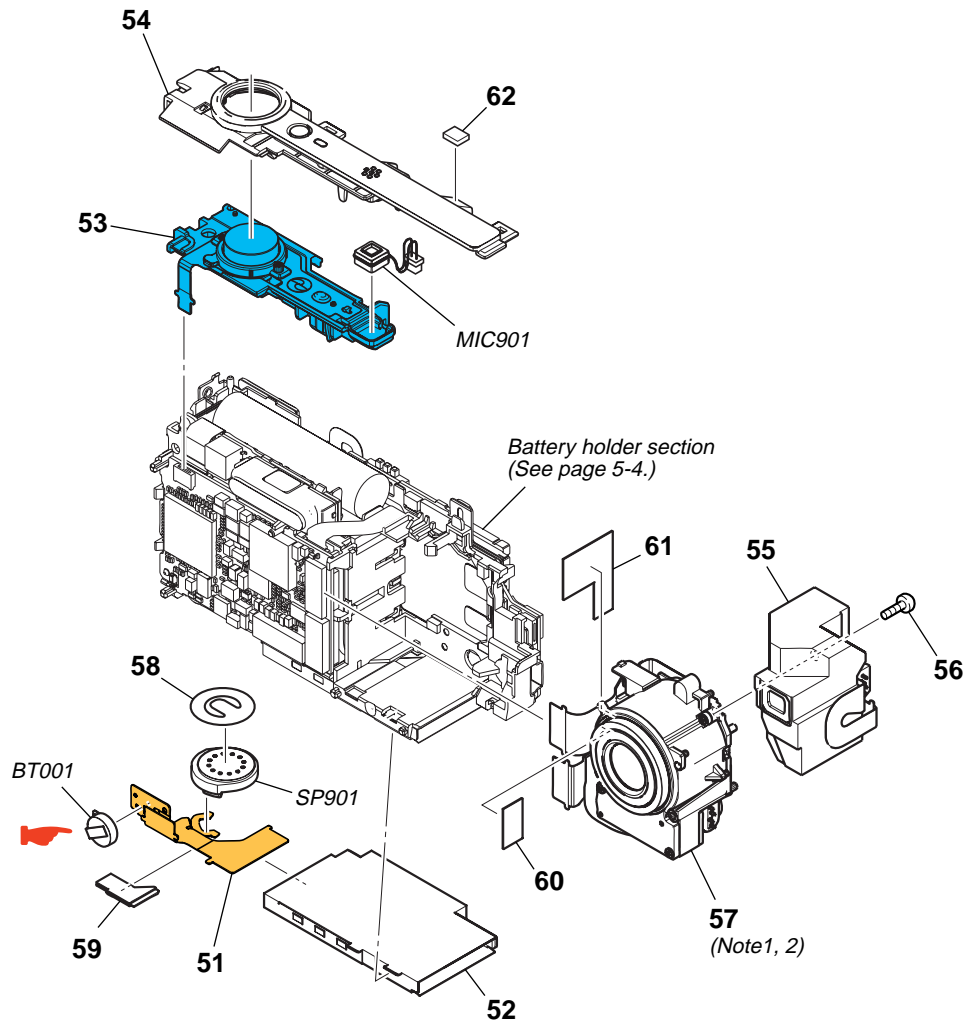


Ref. No.	Part No.	Description
1	X-2055-104-1	CABINET (FRONT) ASSY
2	A-1106-332-A	FP-176 FLEXIBLE BOARD, COMPLETE
3	3-080-204-11	SCREW, TAPPING, P2
4	2-591-764-01	COVER, USB

Ref. No.	Part No.	Description
5	X-2055-105-1	CABINET (REAR) ASSY
6	2-599-475-31	SCREW (M1.7)
7	2-631-076-01	SHEET (SY), INSULATING

5. REPAIR PARTS LIST

5-1-2. BT HOLDER BLOCK



BT001 (BATTERY, LITHIUM SECONDARY)
Board on the mount position (See page 4-46).

Note 1: Be sure to read "Precautions for Replacement of Lens Block (CCD Imager)" on page 4-5, when changing the Lens Block (CCD Imager).

Note 2: Cautions are required for the handling of lens block. Refer to "THE CAUTIONS AT THE TIME OF LENS BLOCK HANDLING" on page 1-2, when you exchange.

CAUTION

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

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.
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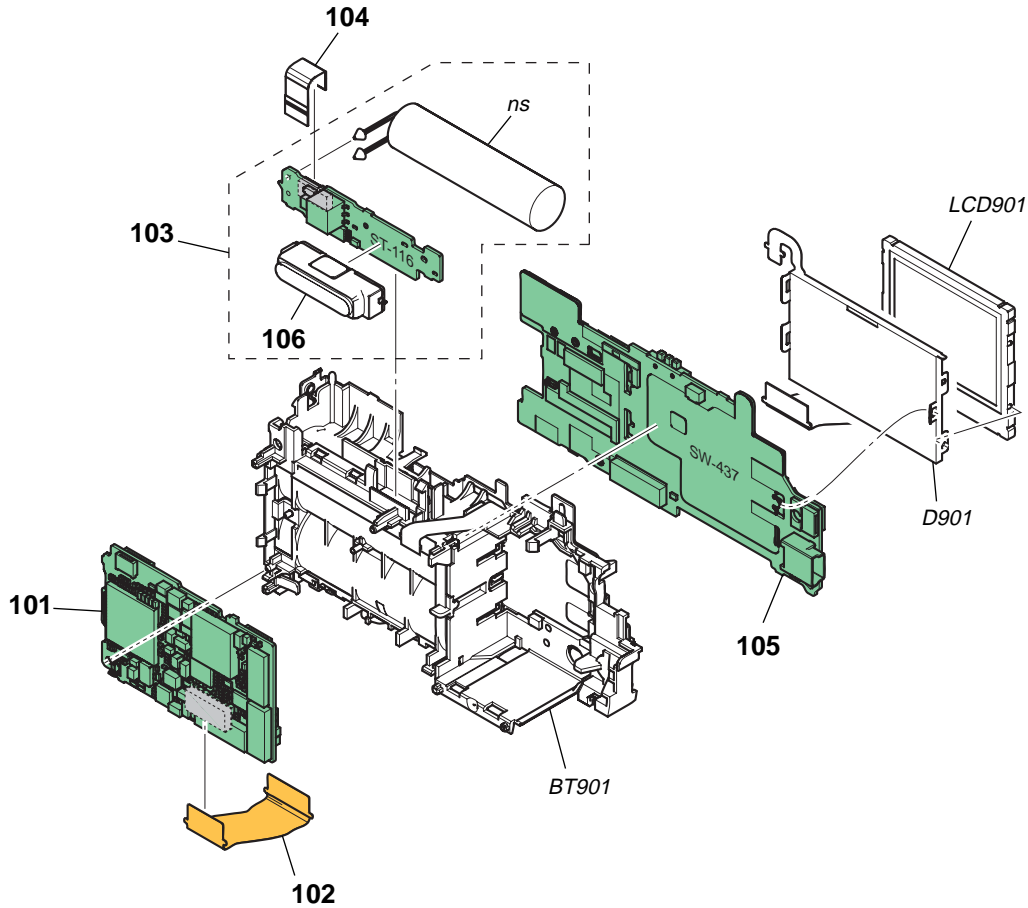
Ref. No.	Part No.	Description
51	1-866-463-11	MS-259 FLEXIBLE BOARD
52	1-815-853-41	MEMORY STICK CONNECTOR
53	1-479-093-11	SWITCH BLOCK, CONTROL (RL51320)
54	X-2055-127-1	CABINET (UPPER) ASSY
55	1-788-228-11	UNIT, OPTICAL (G177)
56	3-078-890-11	SCREW, TAPPING
57	A-1107-919-A	LENS BLOCK ASSY (950B (J1)) (Including CD-575 flexible board) (Note 1, 2)

Ref. No.	Part No.	Description
58	2-595-727-01	SHEET, SP ADHESIVE (SERVICE)
59	2-596-849-01	SHEET (MS), RADIATION
60	2-596-850-01	SHEET (CDL), RADIATION
61	2-630-433-01	SHEET (CD), RADIATION
62	2-631-075-01	CUSHION (UPPER)
\triangle BT001	1-756-539-11	BATTERY, LITHIUM SECONDARY
MIC901	1-542-600-21	MICROPHONE UNIT
SP901	1-825-665-11	SPEAKER (1.3CM)

5. REPAIR PARTS LIST

5-1-3. BATTERY HOLDER SECTION

ns: not supplied



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

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
101	A-1114-614-A	SY-116 BOARD, COMPLETE (SERVICE) (GP1) (J)	102	1-866-461-11	FP-175 FLEXIBLE BOARD
101	A-1114-615-A	SY-116 BOARD, COMPLETE (SERVICE) (GP2) (US, CND, AUS)	\triangle 103	A-1106-330-A	ST-116 BOARD, COMPLETE
101	A-1114-616-A	SY-116 BOARD, COMPLETE (SERVICE) (GP3) (AEP, UK)	104	1-830-572-11	CABLE, FLEXIBLE FLAT (ST-002)
101	A-1114-617-A	SY-116 BOARD, COMPLETE (SERVICE) (GP4) (E)	105	A-1106-327-A	SW-437 BOARD, COMPLETE
101	A-1114-618-A	SY-116 BOARD, COMPLETE (SERVICE) (GP5) (HK, KR, CH, JE)	\triangle 106	1-479-089-11	FLASH UNIT
			\triangle BT901	1-756-526-11	HOLDER, BATTERY (WITH TERMINAL)
			D901	1-479-130-11	BLOCK, LIGHT GUIDE PLATE (1.5)
			LCD901	1-805-720-11	INDICATOR MODULE, LIQUID CRYSTAL

5-2. ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
	A-1107-919-A	LENS BLOCK ASSY (950B (J1)) (Note)
	(Not supplied)	CD-575 FLEXIBLE BOARD, COMPLETE (Note)

		(Lens block assy (950B (J1)) is including CD-575 flexible board.)

Note 1: Be sure to read "Precautions for Replacement of Lens Block (CCD Imager)" on page 4-5, when changing the Lens Block (CCD Imager).

Note 2: Cautions are required for the handling of lens block. Refer to "THE CAUTIONS AT THE TIME OF LENS BLOCK HANDLING" on page 1-2, when you exchange.

Electrical parts list of the CH-169 board is not shown.
Page 5-6 is not shown.

Ref. No.	Part No.	Description
	A-1106-332-A	FP-176 FLEXIBLE BOARD, COMPLETE *****
		< DIODE >
D001	6-500-505-01	DIODE OPY5052 (AF ILLUMINATOR/SELF TIMER)
		< MOTOR >
M001	1-763-818-51	DC MOTOR 8C-036G55 (LENS COVER MOTOR)
		< SWITCH >
S001	1-771-483-61	SWITCH, PUSH (1 KEY) (LENS COVER OPEN DETECT)
S002	1-771-483-71	SWITCH, PUSH (1 KEY) (LENS COVER CLOSE DETECT)
	1-866-463-11	MS-259 FLEXIBLE BOARD ***** (BT001 and SP901 are not included in MS-259 flexible board.)
△ BT001	1-756-539-11	BATTERY, LITHIUM SECONDARY
SP901	1-825-665-11	SPEAKER (1.3CM)
△	A-1106-330-A	ST-116 BOARD, COMPLETE *****
△	1-479-089-11	FLASH UNIT < CAPACITOR >
C001	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C002	1-100-506-91	CERAMIC CHIP 1uF 20% 6.3V
△ C004	1-100-758-11	CERAMIC CHIP 0.047uF 10% 250V
△ C901	(Not supplied)	CAP, ELECT 117uF 315V
		< CONNECTOR >
CN001	1-816-644-31	FFC/CONNECTOR, FPC (LIF) 12P
		< DIODE >
△ D001	6-501-096-01	DIODE CRF02 (TE85R)
		< IC >
△ IC001	6-707-554-01	IC TPS65552DGQR
		< COIL >
L001	1-412-027-11	INDUCTOR 2.2uH
△ L002	1-456-193-11	COIL, TRIGGER
		< TRANSISTOR >
△ Q001	6-550-656-01	TRANSISTOR CY25BAJ-8F-T23
		< RESISTOR >
R001	1-218-990-11	SHORT CHIP 0
R002	1-243-975-81	METAL CHIP 4.7M 5% 1/16W
R003	1-218-935-11	RES-CHIP 33 5% 1/16W
△ R004	1-216-121-11	RES-CHIP 1M 5% 1/10W

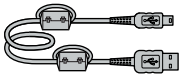
Ref. No.	Part No.	Description
		< TRANSFORMER >
△ T001	1-443-648-21	DC-DC CONVERTER TRANSFORMER
	A-1106-327-A	SW-437 BOARD, COMPLETE *****
		< CONNECTOR >
CN001	1-784-423-21	FFC/CONNECTOR, FPC (ZIF) 39P
CN002	1-817-549-11	CONNECTOR, FPC (LIF (NON-ZIF)) 8P
CN003	1-815-329-11	CONNECTOR, FPC (ZIF) 11P
CN004	1-794-375-21	PIN, CONNECTOR 2P
CN005	1-794-962-11	CONNECTOR, SQUARE TYPE (USB 5P)
CN006	1-816-654-31	FFC/CONNECTOR, FPC (LIF) 6P
		< DIODE >
D001	8-719-038-03	DIODE CL-190Y-CD-T (FLASH/RECORDING)
D002	8-719-075-29	DIODE SML-510MWT86S (AE/AF LOCK)
D005	8-719-064-07	DIODE SML-310LTT86 (MS ACCESS)
D013	6-500-776-01	DIODE MAZW068H0LS0
D014	8-719-056-54	DIODE MAZS068008S0
		< EARTH TERMINAL >
ET001	1-694-955-11	TERMINAL (ON BOARD CONTACT)
		< LINE FILTER >
LF001	1-456-583-11	COMMON MODE CHOKE COIL
		< RESISTOR >
R013	1-218-953-11	RES-CHIP 1K 5% 1/16W
R014	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
R020	1-218-990-11	SHORT CHIP 0
R021	1-218-990-11	SHORT CHIP 0
R024	1-218-953-11	RES-CHIP 1K 5% 1/16W
R025	1-218-990-11	SHORT CHIP 0
R026	1-216-864-11	SHORT CHIP 0
R027	1-218-990-11	SHORT CHIP 0
		< COMPOSITION CIRCUIT BLOCK >
RB001	1-234-376-21	RES, NETWORK 2.2K (1005 x4)
RB002	1-234-376-21	RES, NETWORK 2.2K (1005 x4)
RB003	1-234-376-21	RES, NETWORK 2.2K (1005 x4)
		< SWITCH >
S002	1-786-157-11	SWITCH, TACTILE (▽ (SELF TIMER))
S003	1-786-157-11	SWITCH, TACTILE (△ (FLASH))
S004	1-786-157-11	SWITCH, TACTILE (○ (SET))
S005	1-786-157-11	SWITCH, TACTILE (DISPLAY / LCD ON/OFF)
S006	1-786-157-11	SWITCH, TACTILE (MENU)
S007	1-786-157-11	SWITCH, TACTILE (T (ZOOM))
S008	1-771-487-21	SWITCH, SLIDE (MODE SWITCH)
S009	1-786-157-11	SWITCH, TACTILE (▷ (SPOT METARING))
S010	1-786-157-11	SWITCH, TACTILE (◁ (REVIEW))
S011	1-786-157-11	SWITCH, TACTILE (IMAGE SIZE/DELETE)
S012	1-786-157-11	SWITCH, TACTILE (W (ZOOM))

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

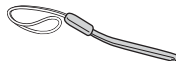
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Electrical parts list of the SY-116 board is not shown.
Pages 5-8 to 5-11 are not shown.

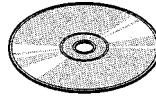
Checking supplied accessories.



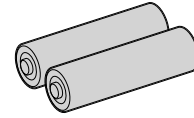
USB cable (1)
(USB 5P)
1-829-579-21



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



CD-ROM
(Cyber-shot application software) (1)
2-583-852-11 (US, J)
2-583-853-01 (EXCEPT US, J)



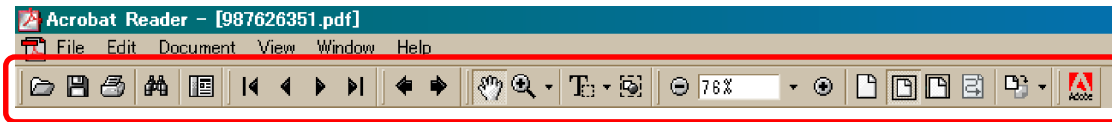
Alkaline manganese
battery (LR6) (2)
(not supplied)

Other accessories

- 2-589-974-01 INSTRUCTION (READ THIS FIRST) (JAPANESE) (J)
- 2-589-974-11 INSTRUCTION (READ THIS FIRST) (ENGLISH)
(EXCEPT AEP, KR, J, CH)
- 2-589-974-21 INSTRUCTION (READ THIS FIRST)
(FRENCH, ITALIAN) (CND, AEP)
- 2-589-974-31 INSTRUCTION (READ THIS FIRST)
(SPANISH, PORTUGUESE) (AEP, E, JE)
- 2-589-974-41 INSTRUCTION (READ THIS FIRST)
(GERMAN, DUTCH) (AEP)
- 2-589-974-51 INSTRUCTION (READ THIS FIRST)
(TRADITIONAL CHINESE, SIMPLIFIED CHINESE)
(E, HK, CH, JE)
- 2-589-974-61 INSTRUCTION (READ THIS FIRST)
(RUSSIAN, SWEDISH) (AEP)
- 2-589-974-71 INSTRUCTION (READ THIS FIRST)
(ARABIC, PERSIAN) (E)
- 2-589-974-81 INSTRUCTION (READ THIS FIRST) (KOREAN)
(KR, JE)
- 2-589-974-91 INSTRUCTION (READ THIS FIRST) (CZECH, POLISH)
(AEP)
- 2-589-975-11 INSTRUCTION (READ THIS FIRST)
(HUNGARIAN, SLOVAK) (AEP)


- 2-589-978-01 INSTRUCTION (USER'S GUIDE) (JAPANESE) (J)
- 2-589-978-11 INSTRUCTION (USER'S GUIDE) (ENGLISH)
(EXCEPT AEP, KR, J, CH)
- 2-589-978-21 INSTRUCTION (USER'S GUIDE) (FRENCH, ITALIAN)
(CND, AEP)
- 2-589-978-31 INSTRUCTION (USER'S GUIDE)
(SPANISH, PORTUGUESE) (AEP, E, JE)
- 2-589-978-41 INSTRUCTION (USER'S GUIDE) (GERMAN, DUTCH)
(AEP)
- 2-589-978-51 INSTRUCTION (USER'S GUIDE)
(TRADITIONAL CHINESE, SIMPLIFIED CHINESE)
(E, HK, CH, JE)
- 2-589-978-61 INSTRUCTION (USER'S GUIDE)
(RUSSIAN, SWEDISH) (AEP)
- 2-589-978-71 INSTRUCTION (USER'S GUIDE) (ARABIC, PERSIAN)
(E)
- 2-589-978-81 INSTRUCTION (USER'S GUIDE) (KOREAN) (KR, JE)
- 2-589-978-91 INSTRUCTION (USER'S GUIDE)
(PORTUGUESE, CZECH) (AEP)
- 2-590-503-11 INSTRUCTION (USER'S GUIDE)
(HUNGARIAN, SLOVAK) (AEP)

[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:

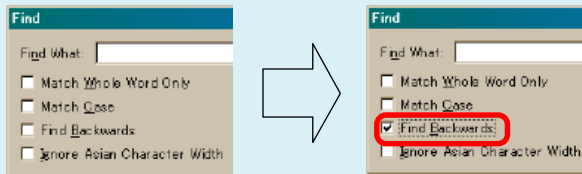
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

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 Backward” 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.

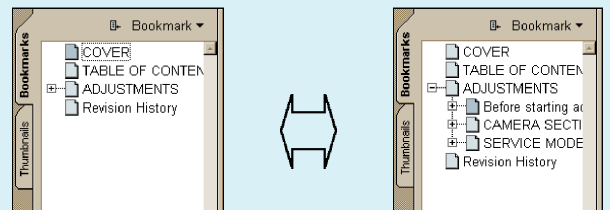
Moving with link

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.

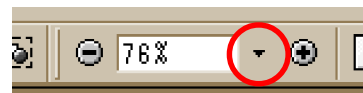
(To go back to original state, click )




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 .

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2005.03	Official Release	—	—