

DSC-T10

SERVICE MANUAL

LEVEL 2

Ver 1.0 2006.07

Revision History

How to use
Acrobat Reader

Internal memory
ON BOARD



Photo: Silver

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

Link

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

• Precaution on Replacing the SY-163 Board

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.

DIGITAL STILL CAMERA

SONY®



Cyber-shot



SPECIFICATIONS

Camera

[System]

Image device: 7.20 mm (1/2.5 type) color CCD,
Primary color filter
Total pixel number of camera:
Approx. 7 410 000 pixels
Effective pixel number of camera:
Approx. 7 201 000 pixels
Lens: Carl Zeiss Vario-Tessar 3× zoom lens $f =$
6.33 – 19.0 mm (38 – 114 mm when
converted to a 35 mm still camera) F3.5 – 4.3
Exposure control: Automatic exposure, Scene
Selection (9 modes)
White balance: Automatic, Daylight, Cloudy,
Fluorescent, Incandescent, Flash
File format (DCF compliant):
Still images: Exif Ver. 2.21 JPEG compliant,
DPOF compatible
Movies: MPEG1 compliant (Monaural)
Recording media: Internal Memory (approx.
56 MB), “Memory Stick Duo”
Flash: Recommended distance (ISO set to Auto):
approx. 0.1 to 2.8 m (4 inches to 9 feet 2 1/4
inches) (W)/approx. 0.25 to 2.3 m (9 7/8
inches to 7 feet 6 5/8 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: 230 400 (960×240) dots

[Power, general]

Power: Rechargeable battery pack NP-FT1, 3.6 V
AC-LS5K AC Adaptor (not supplied), 4.2 V
Power consumption (during shooting): 1.0 W
Operating temperature: 0 to 40°C (32 to 104°F)
Storage temperature: –20 to +60°C (–4 to +140°F)
Dimensions: 89.7×54.9×20.6 mm (3 5/8×
2 1/4×13/16 inches) (W/H/D, excluding
protrusions)
Mass: Approx. 165 g (5.8 oz) (including NP-FT1
battery pack and wrist strap, etc.)
Microphone: Monaural
Speaker: Monaural
Exif Print: Compatible
PRINT Image Matching III: Compatible
PictBridge: Compatible

BC-CS3 battery charger

Power requirements: AC 100 to 240 V, 50/60 Hz,
3.2 W
Output voltage: DC 4.2 V, 500 mA
Operating temperature: 0 to 40°C (32 to 104°F)
Storage temperature: –20 to +60°C (–4 to +140°F)
Dimensions: Approx. 66×23×91 mm (2 5/8×
2 9/32×3 5/8 inches) (W/H/D)
Mass: Approx. 70 g (2.7 oz)

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.

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 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.

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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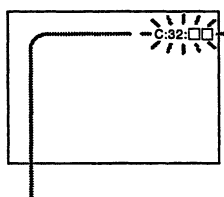
<u>Section</u>	<u>Title</u>	<u>Page</u>
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1. SERVICE NOTE

1-1. 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:62:□□	Inspect angular velocity sensor Peripheral circuits.	Steady shot function does not work well.	
E:91:□□	Checking of flash unit or replacement of flash unit. (Note)	Abnormality when flash is being charged.	

Note: After repair, be sure to perform "1-2. PROCESS AFTER FIXING FLASH ERROR".

1-2. 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.

- 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.

To cancel the resetting

Select [Cancel] in step ① or ②, then press ●.

- Make sure that the power is not disconnected during resetting.

1-3. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY (INTERNAL MEMORY/MUSIC)

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-163 board, erase the data in internal memory of the board before replacement.

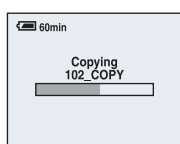
Note 2: When replacing the SY-163 board or the IC401 on the SY-163 board, execute formatting and initialize the internal memory after replacement.

Method for Copying the Data in Internal Memory

Copy

Copies all images in the internal memory to a “Memory Stick Duo”.

- 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 internal memory will be copied Ready?” appears.
- ③ Select [OK] with ▲, then press ●.
Copying starts.



To cancel the copying

Select [Cancel] in step ② or ③, then press ●.

- Use a fully charged battery pack or the AC Adaptor (not supplied). If you attempt to copy image files using a battery pack with little remaining charge, the battery pack 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 Duo” after copying, then execute the [Format] command in (Internal Memory Tool).
- You cannot select a folder copied on a “Memory Stick Duo”.
- Even if you copy data, a (Print order) mark is not copied.

Method for Formatting the Internal Memory

This item does not appear when a “Memory Stick Duo” is inserted in the camera.

Format

Formats the internal memory.

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

- 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.

To cancel the formatting

Select [Cancel] in step ① or ②, then press ●.

Method for Formatting the Music

Format Music

If you cannot play back a Music file for the Slide Show, the Music file might be corrupted. If this happens, perform [Format Music].

When [Format Music] is performed, all the Music files are erased. Use the supplied software “Music Transfer” to activate [Download Music].

- 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 ●.
All the Music files are erased.

To cancel the formatting

Select [Cancel] in step ① or ②, then press ●.

1-4. PRECAUTION ON REPLACING THE SY-163 BOARD

VIDEO OUT Default Data Check

If the SY-163 board is replaced, the broadcast system data setting (NTSC/PAL) might be changed. 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	8D	00	01

Writing Method:

- 1) Select page: 00, address: 01, and set data: 01.
- 2) Select page: 4F, address: 8D, and set data: 00 (NTSC) or data: 01 (PAL).
- 3) Select page: 40, address: 38, and set data: 00.
- 4) Click **Save** on the SEUS screen.
- 5) Select page: 80, address: 34, and check that the data is "00".
- 6) Select page: 80, address: 30, and check that the data is "00".
- 7) Select page: 00, address: 01, and set data: 00.

INITIAL LANGUAGE Default Data Check

If the SY-163 board is replaced, initial language setting may be changed. Check the default data of INITIAL LANGUAGE if destination code is right. If not, rewrite to the right value.

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 Default Data

Page	Address	Data	Language	GP1	GP2	GP3	GP4
4F	8C	00	English		●	●	●
		01	Japanese	●			
		04	Spanish			●	●
		06	Portugal				●
		08	Simplified Chinese				●
		0B	Russian			●	
		0D	Korean				●

Note: GP1 is fixed to Japanese.
GP2 is fixed to English.
GP3 is either English, Spanish, or Russian.
GP4 is either English, Spanish, Portugal, Simplified Chinese, or Korean.

Writing Method:

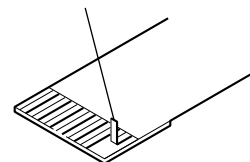
- 1) Select page: 00, address: 01 and set data: 01.
- 2) Select page: 4F, address: 8C, and set the Initial Language Data.
- 3) Select page: 40, address: 38, and set data: 00.
- 4) Click **Save** on the SEUS screen.
- 5) Select page: 80, address: 34, and check that the data is "00".
- 6) Select page: 80, address: 30, and check that the data is "00".
- 7) Select page: 00, address: 01, and set data: 00.
- 8) Turn off the camera.
- 9) Turn on the camera. Execute "Initialize" of Setup screen.
- 10) Check the language displayed when the camera starts.

2. DISASSEMBLY

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.
- 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.
- Do not apply excessive load to the gilded flexible board.

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



DISCHARGING OF THE ST-131 BOARD'S CHARGING CAPACITOR (C328)

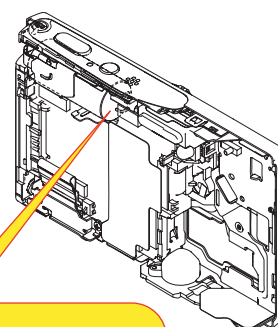
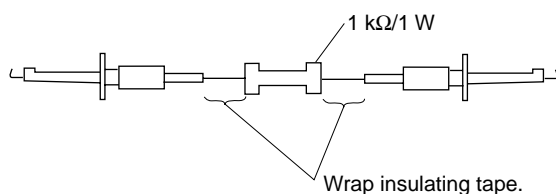
The charging capacitor (C328) of the ST-131 board is charged up to the maximum 300 V potential.

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).

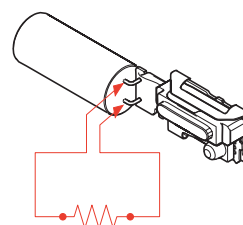
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



Note: High-voltage cautions

Discharging the Capacitor

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



R:1 k Ω /1 W
(Part code: 1-215-869-11)

2-1. DISASSEMBLY

EXPLODED VIEW

HARDWARE LIST

2-1-1. OVERALL SECTION

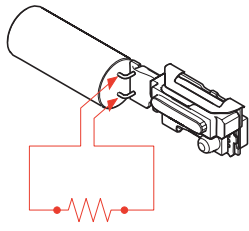
Follow the disassembly in the numerical order given.

- ① Cabinet (Front) Assy (①-1 to ①-4)
- ② Lens Block (②-1 to ②-3)
- ③ Control Switch Block (③-1 to ③-6)

Note: High-voltage cautions

Discharging the Capacitor

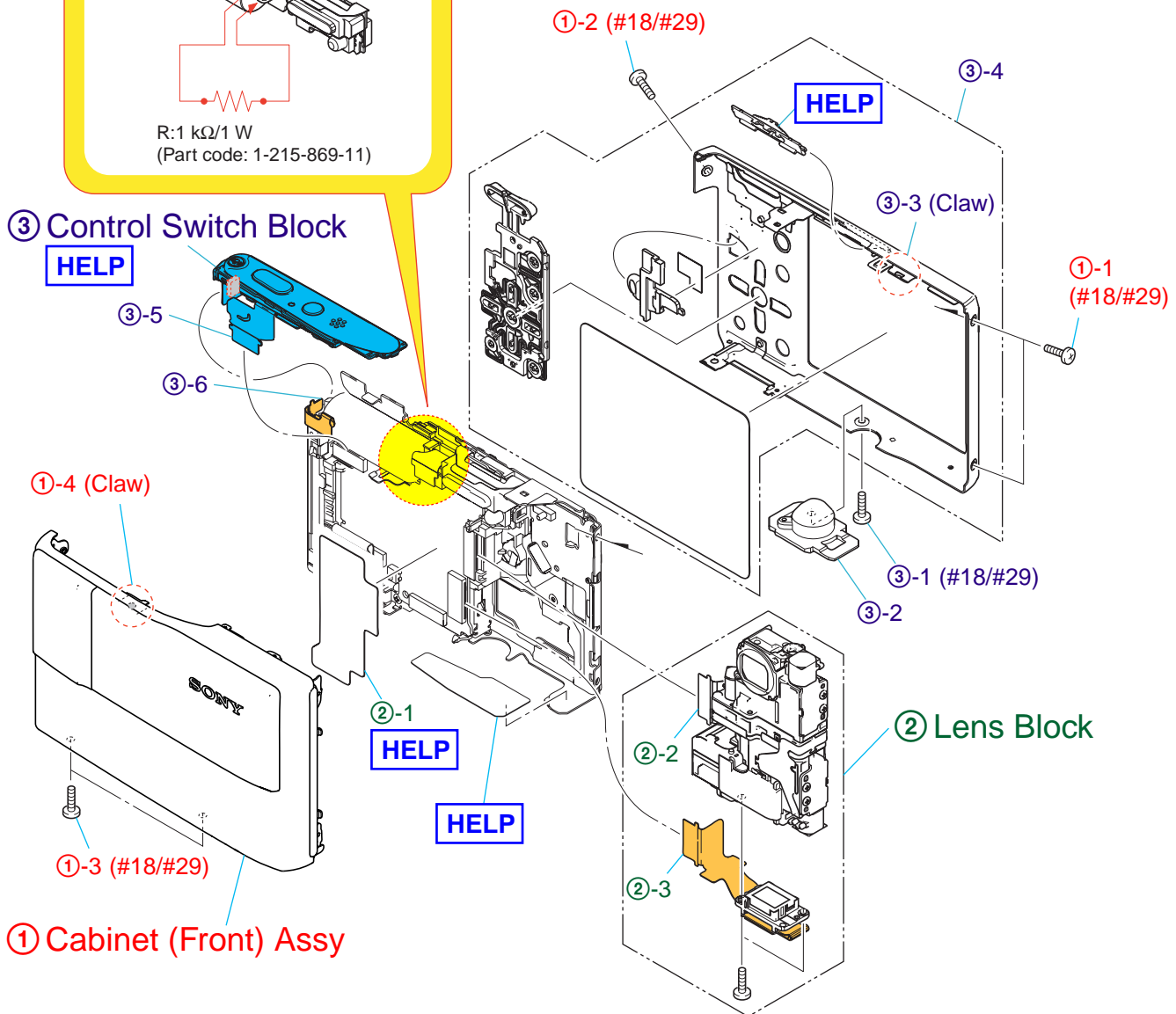
Short-circuit between the two points with the short jig about 10 seconds.



R:1 kΩ/1 W
(Part code: 1-215-869-11)

③ Control Switch Block

HELP



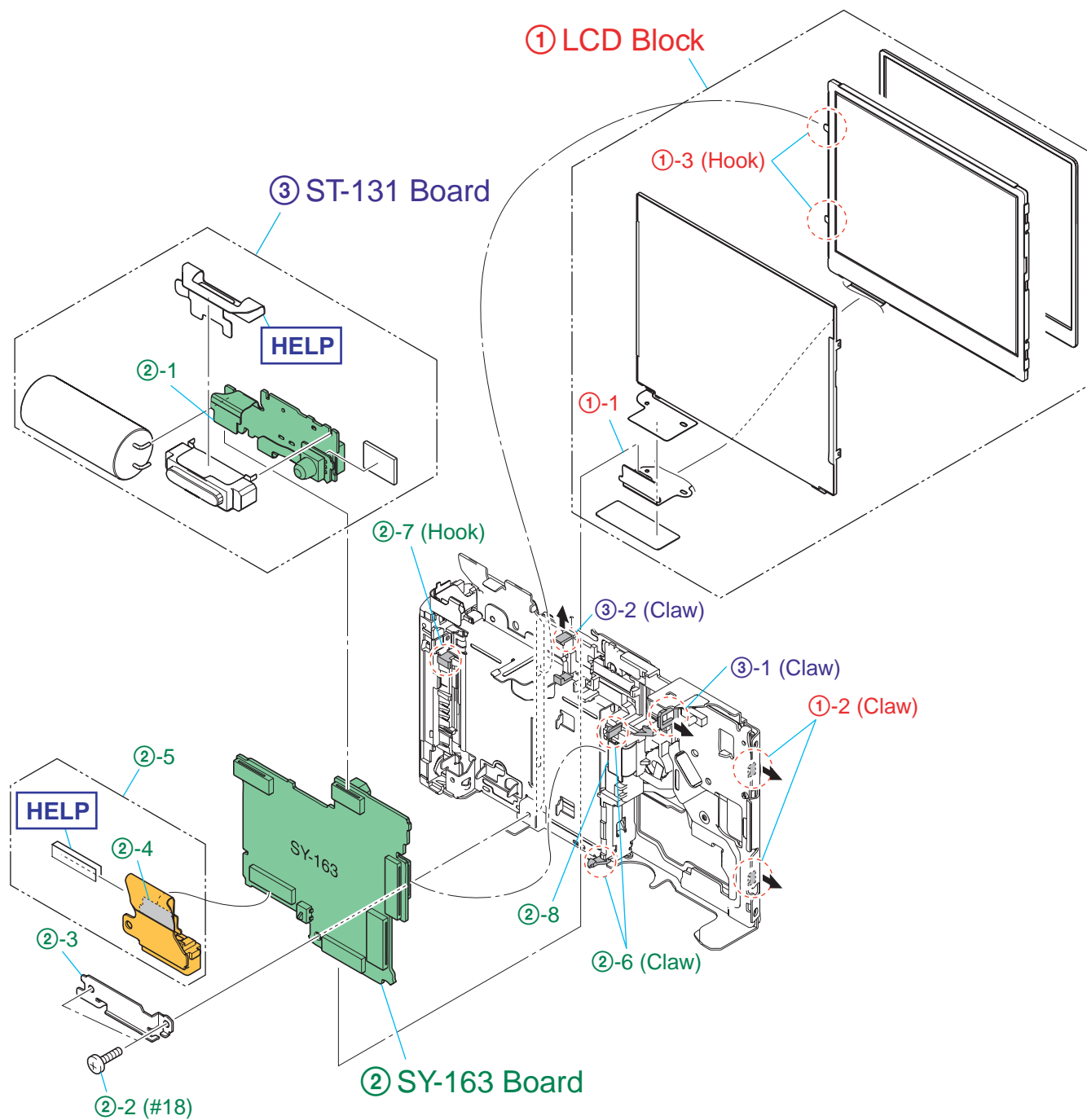
2-1-2. SY BOARD SECTION

Follow the disassembly in the numerical order given.

- ① LCD Block (①-1 to ①-3)
- ② SY-163 Board (②-1 to ②-8)
- ③ ST-131 Board (③-1 to ③-2)

EXPLODED VIEW

HARDWARE LIST



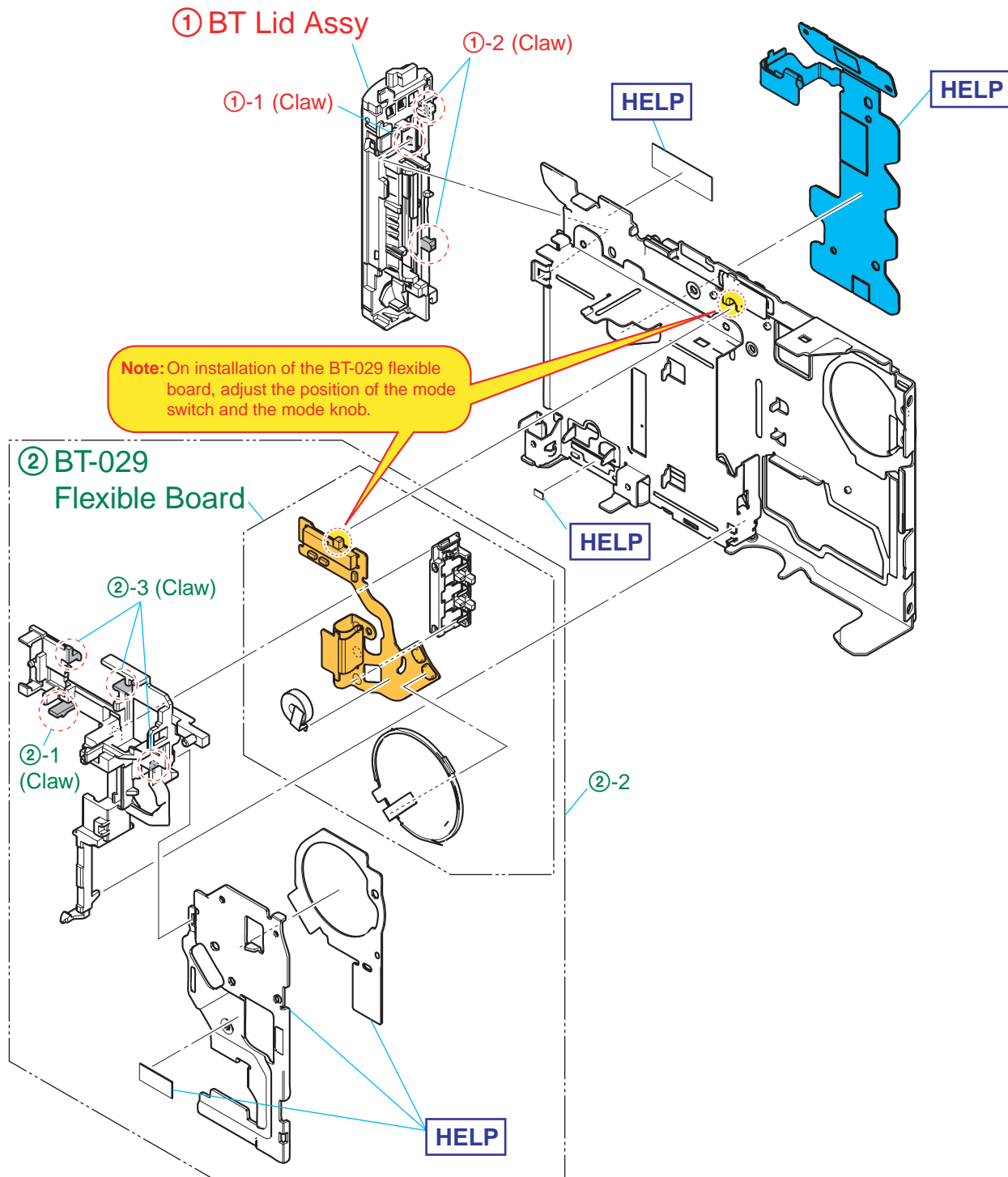
2-1-3. FRAME SECTION

Follow the disassembly in the numerical order given.

① BT Lid Assy (①-1 to ①-2)

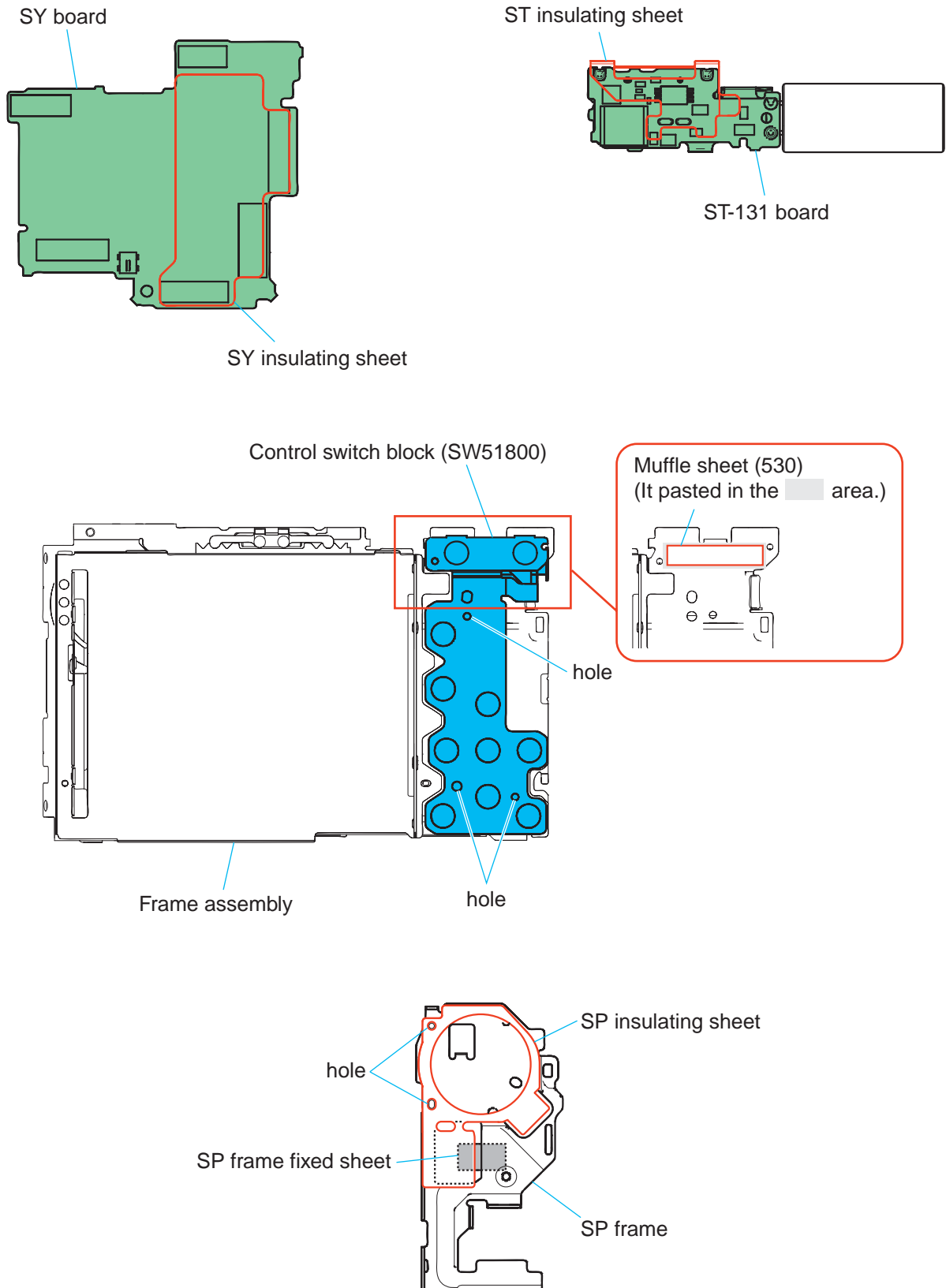
② BT-029 Flexible Board (②-1 to ②-3)

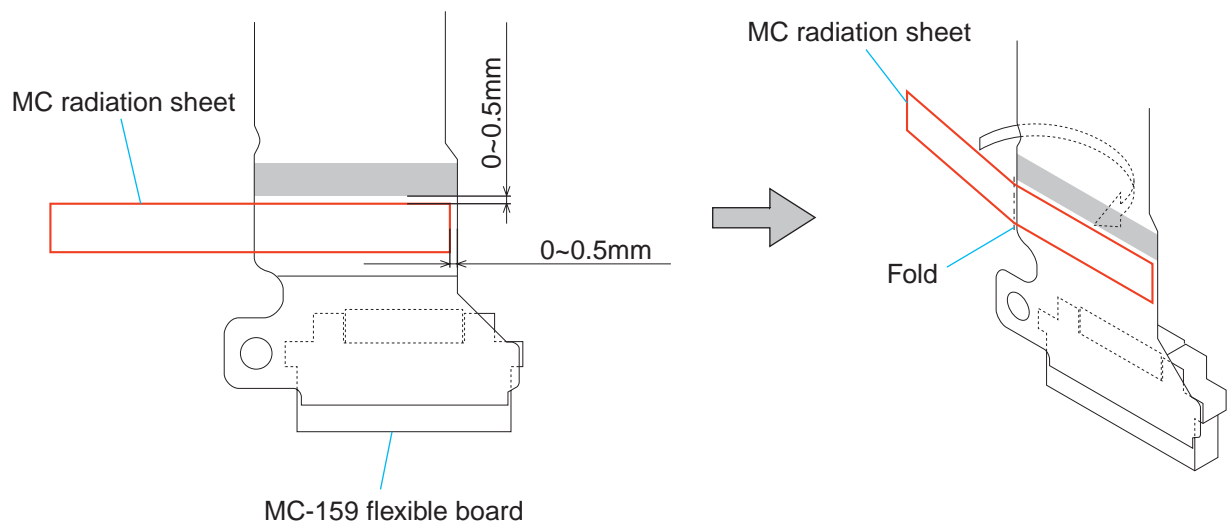
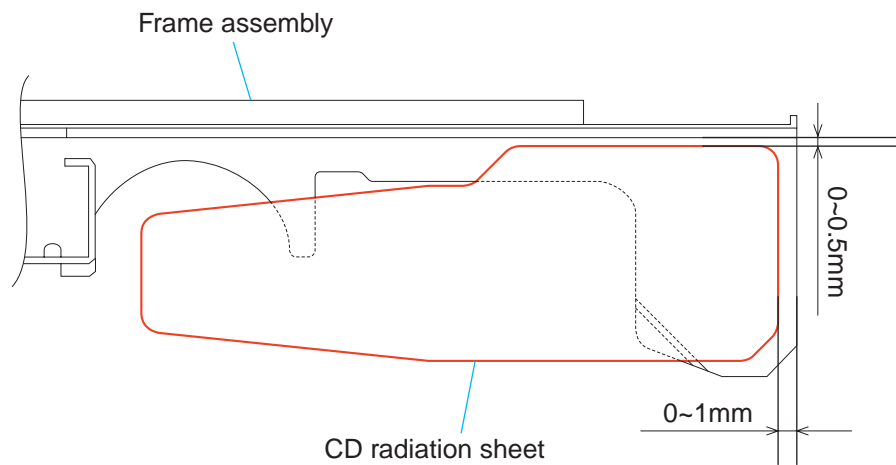
EXPLODED VIEW

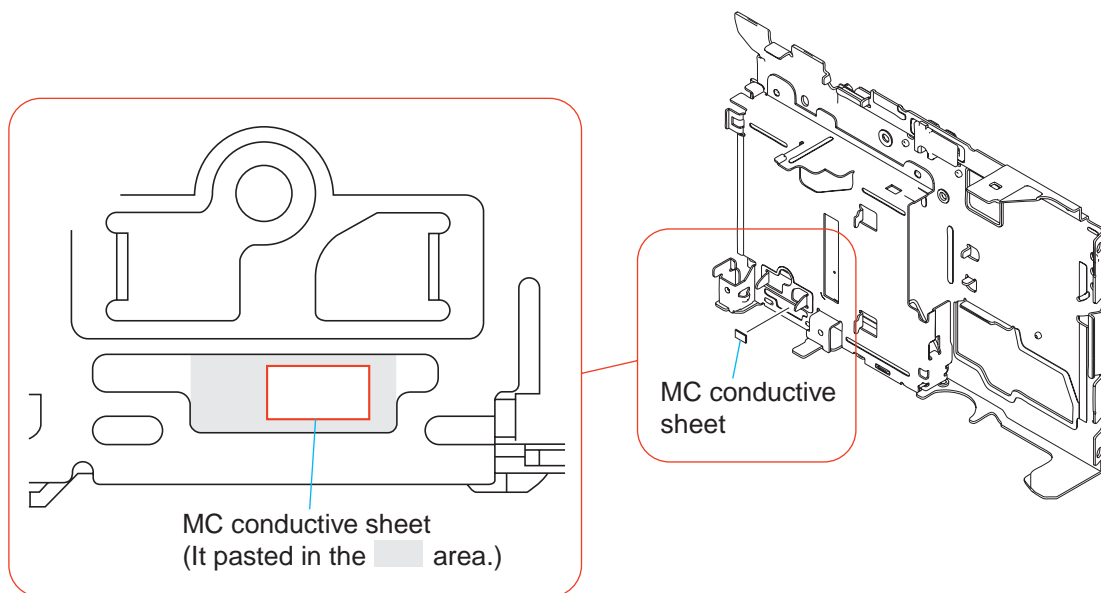


HELP

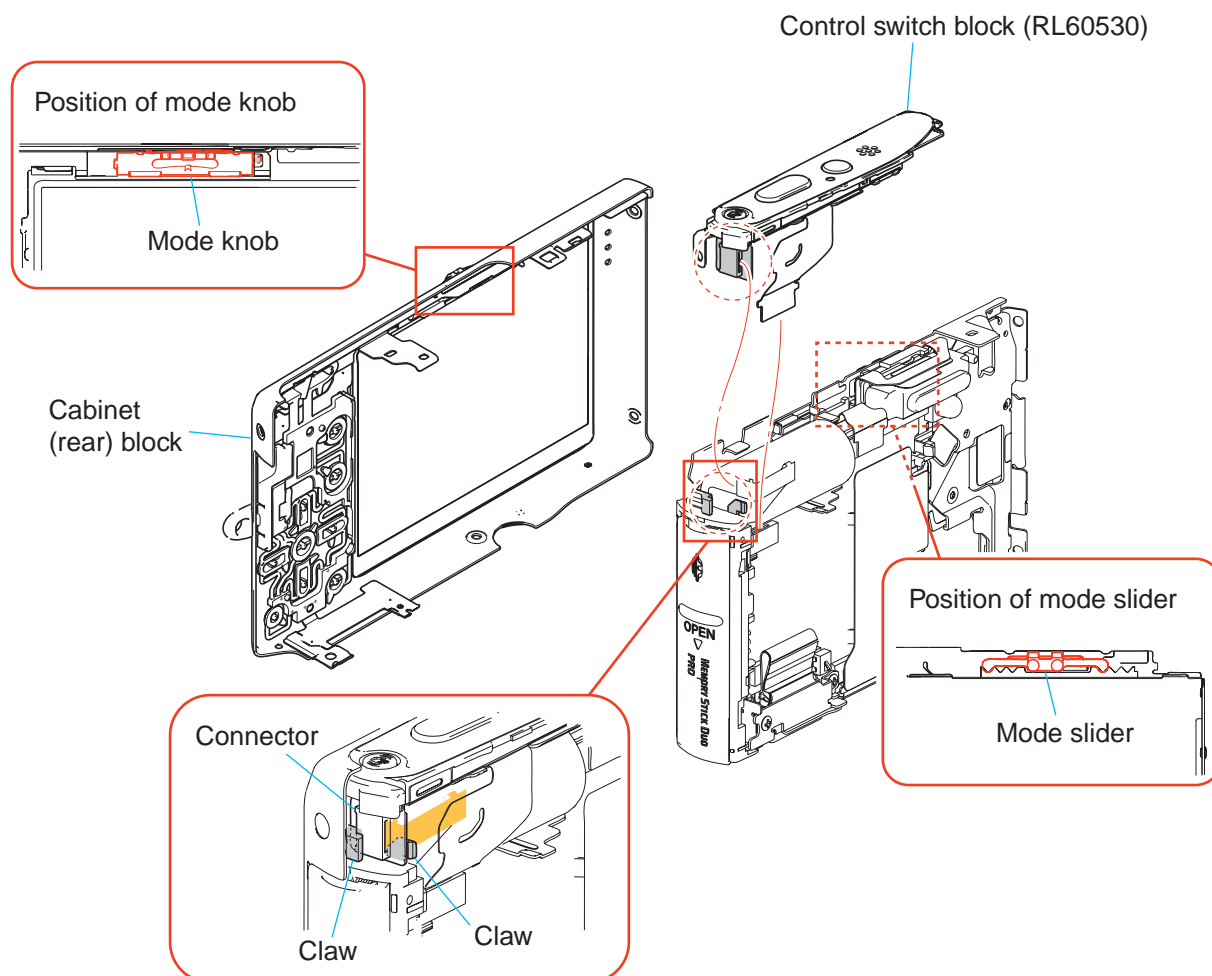
Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.







Note for installation of Control switch block (RL60530) and Cabinet (rear) block.



3. BLOCK DIAGRAMS

Link

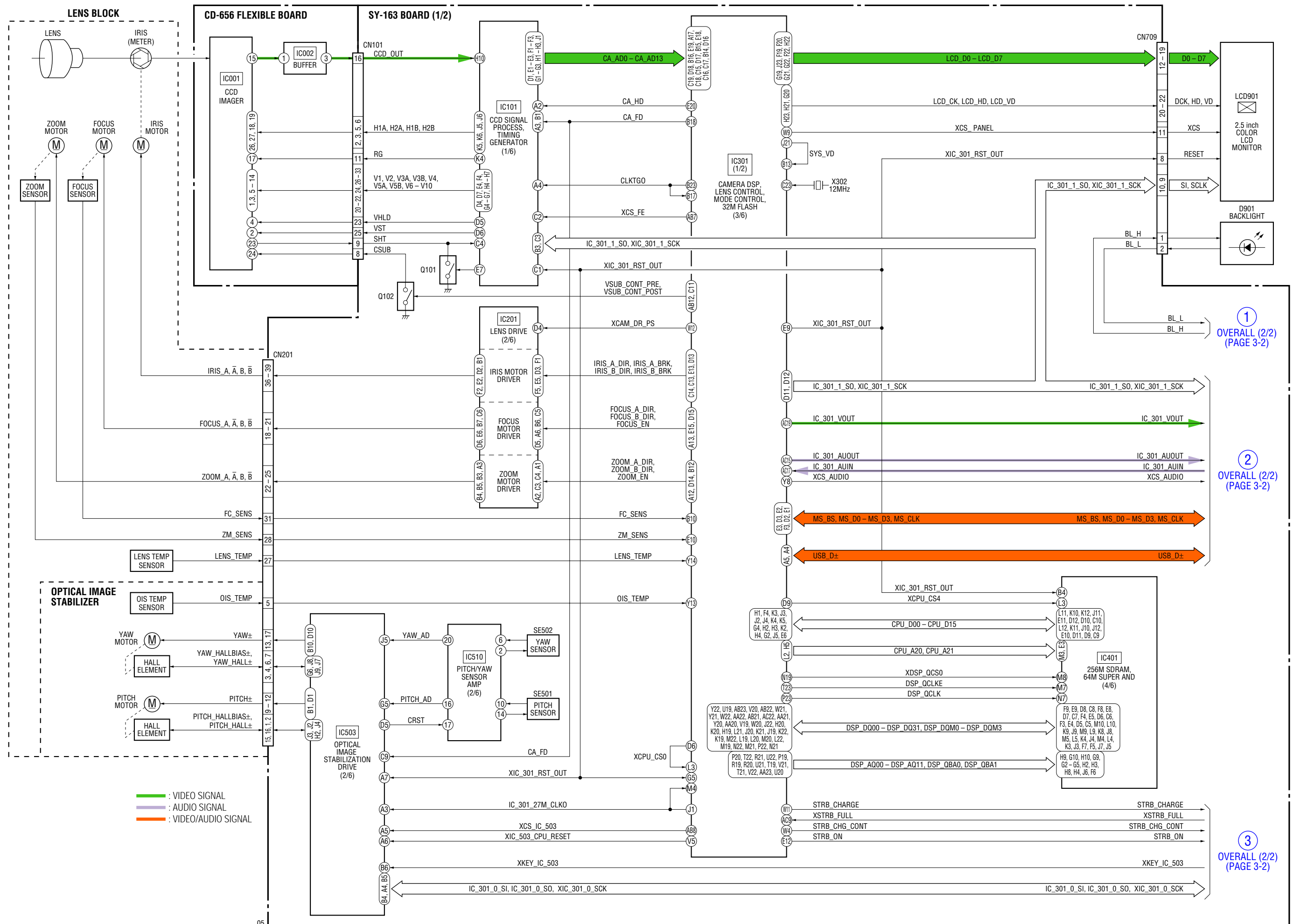
• OVERALL BLOCK DIAGRAM (1/2)

• POWER BLOCK DIAGRAM

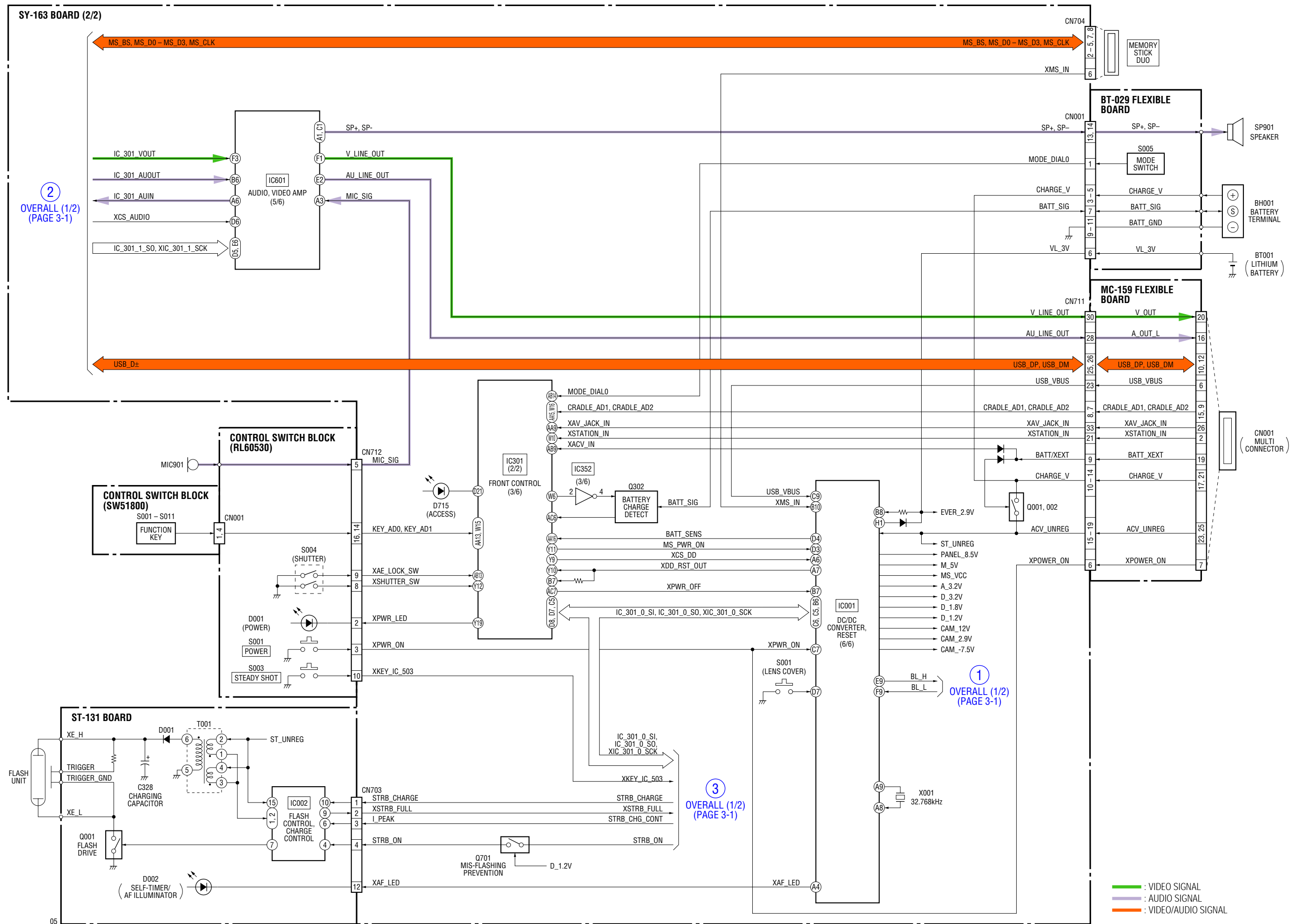
• OVERALL BLOCK DIAGRAM (2/2)

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.

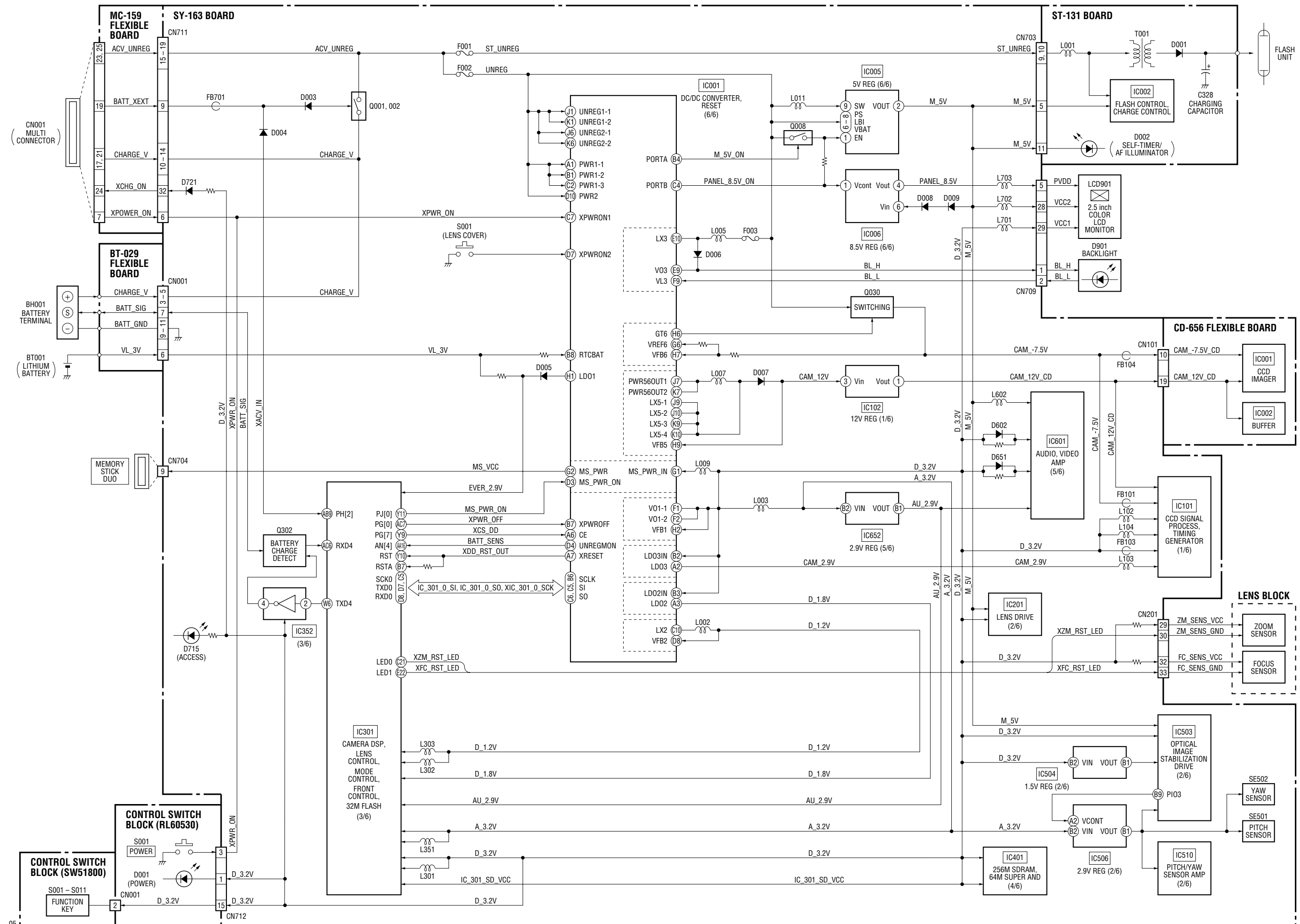


3-2. OVERALL BLOCK DIAGRAM (2/2)



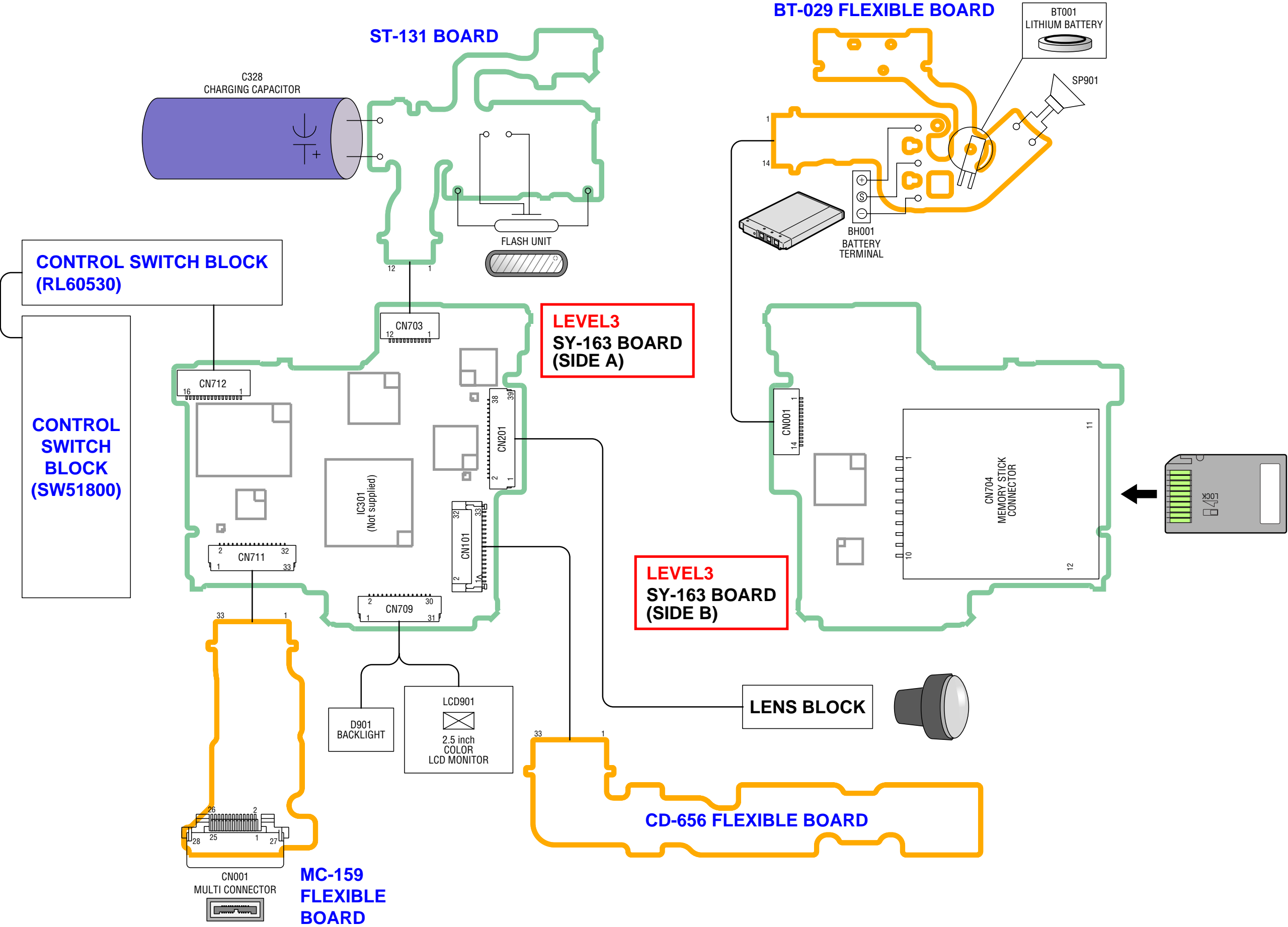
3-3. POWER BLOCK DIAGRAM

() : 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

<ul style="list-style-type: none">CD-656 FLEXIBLE BOARD (CCD IMAGER)	<ul style="list-style-type: none">BT-029 FLEXIBLE BOARD (BATTERY IN, MODE SWITCH)
<ul style="list-style-type: none">ST-131 BOARD (FLASH DRIVE)	<ul style="list-style-type: none">CONTROL SWITCH BLOCK (RL60530, SW51800)
<ul style="list-style-type: none">MC-159 FLEXIBLE BOARD (MULTI CONNECTOR)	

<ul style="list-style-type: none">COMMON NOTE FOR SCHEMATIC DIAGRAMS
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4-2. 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. $\text{pF} : \mu\text{F}$. 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.

Example	C541	L452
	22U	10UH
	TA A	2520
	TA	A
Kinds of capacitor	External dimensions (mm)	Case size

- 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 → EDIT PB/XREC → PB/REC
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B- Line
- : IN/OUT direction of (+,-) B LINE.
- : adjustment for repair.
- : not use circuit

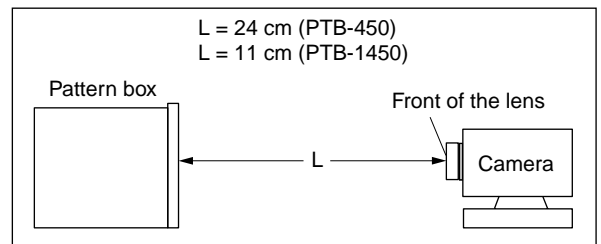
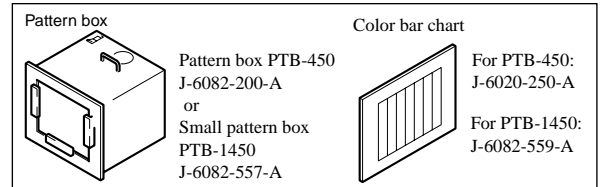
(Measuring conditions voltage and waveform)

- 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 $\text{M}\Omega$ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions for Replacement of Imager

- If the imager has been replaced, carry out all the adjustments for the camera section.
- As the 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



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

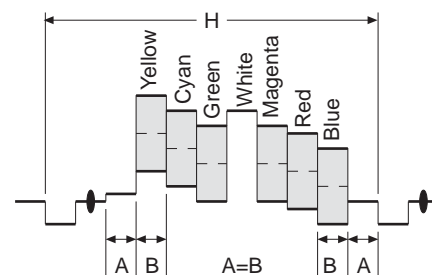


Fig. a (Video output terminal output waveform)

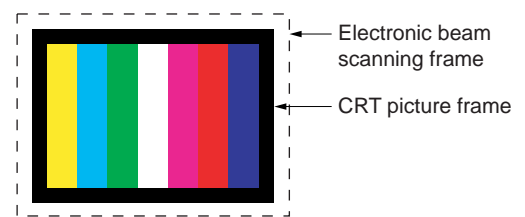


Fig.b (Picture on monitor TV)

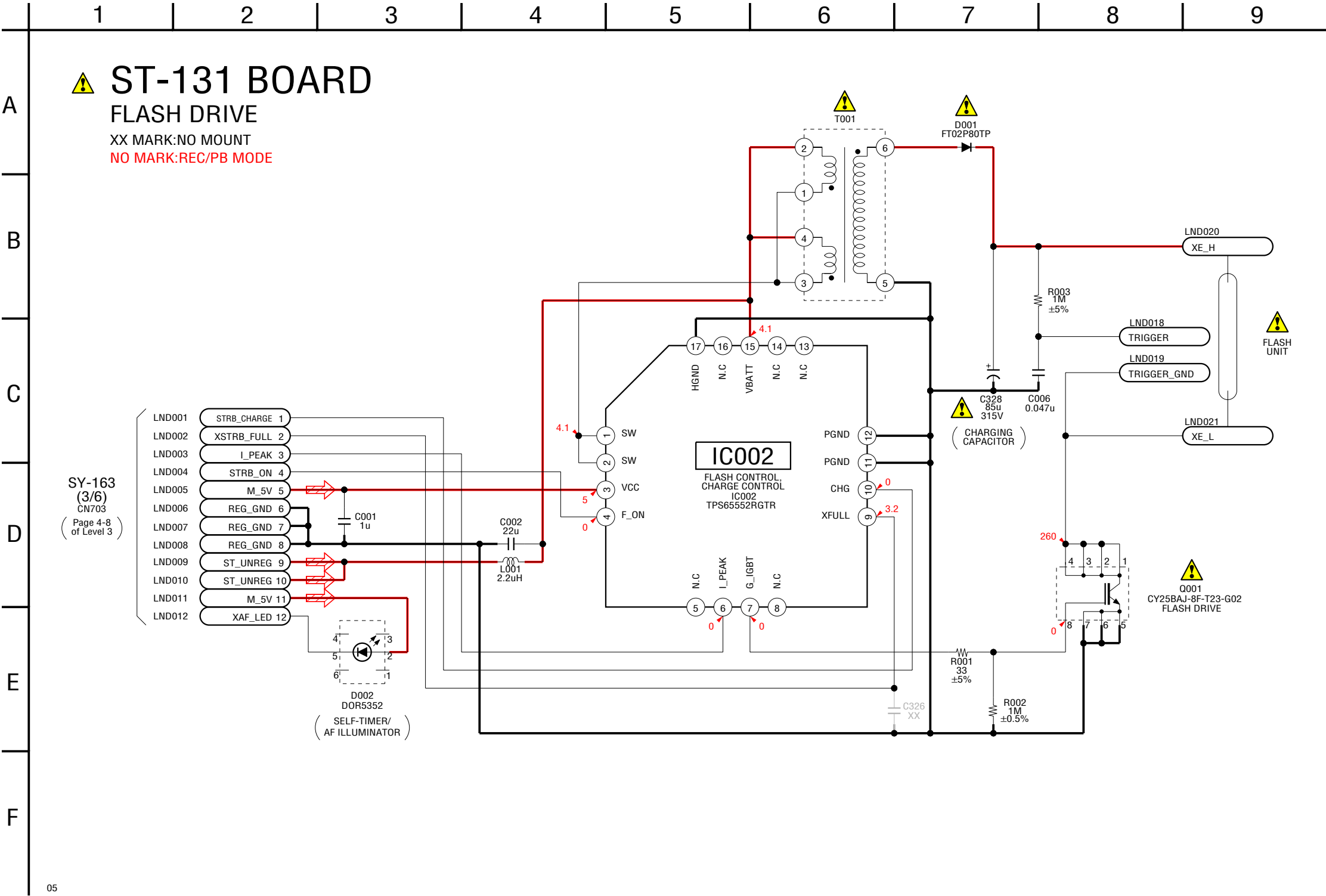
When indicating parts by reference number, please include the board name.

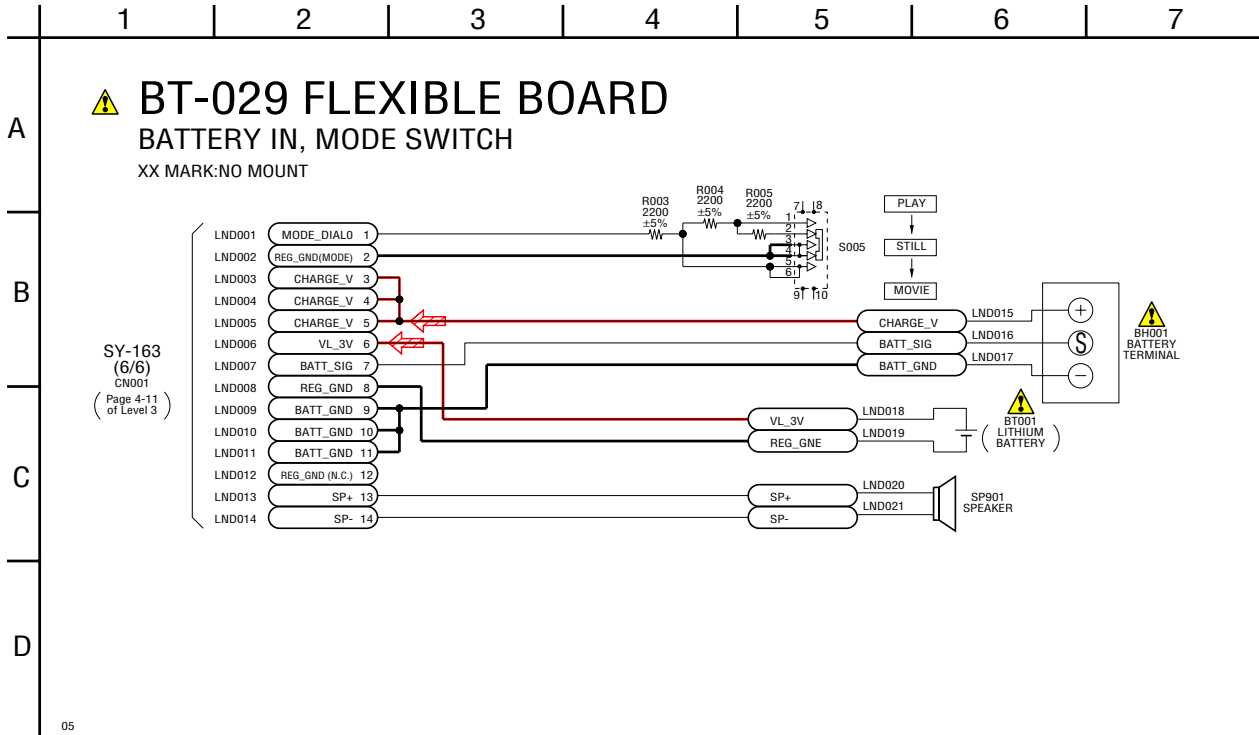
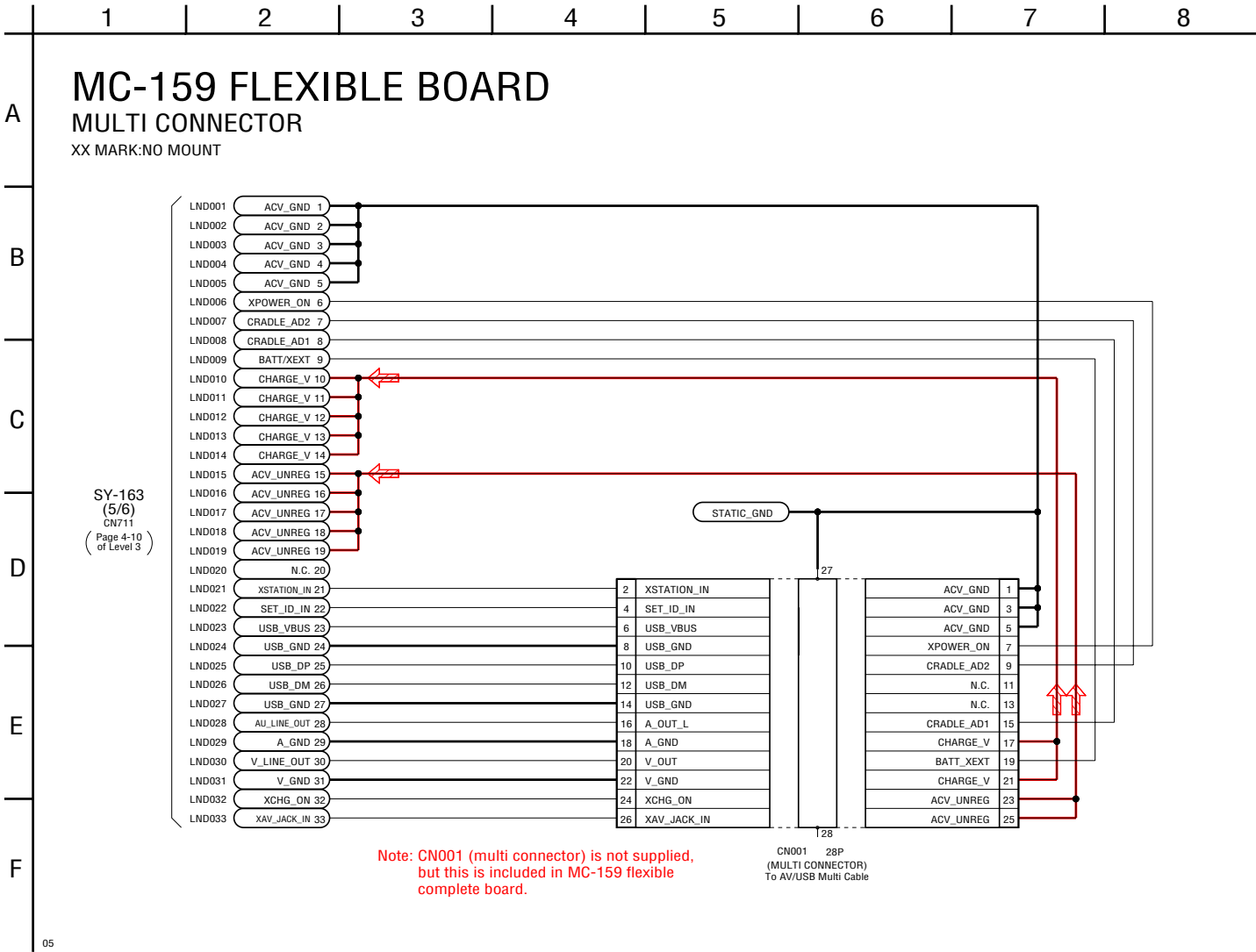
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

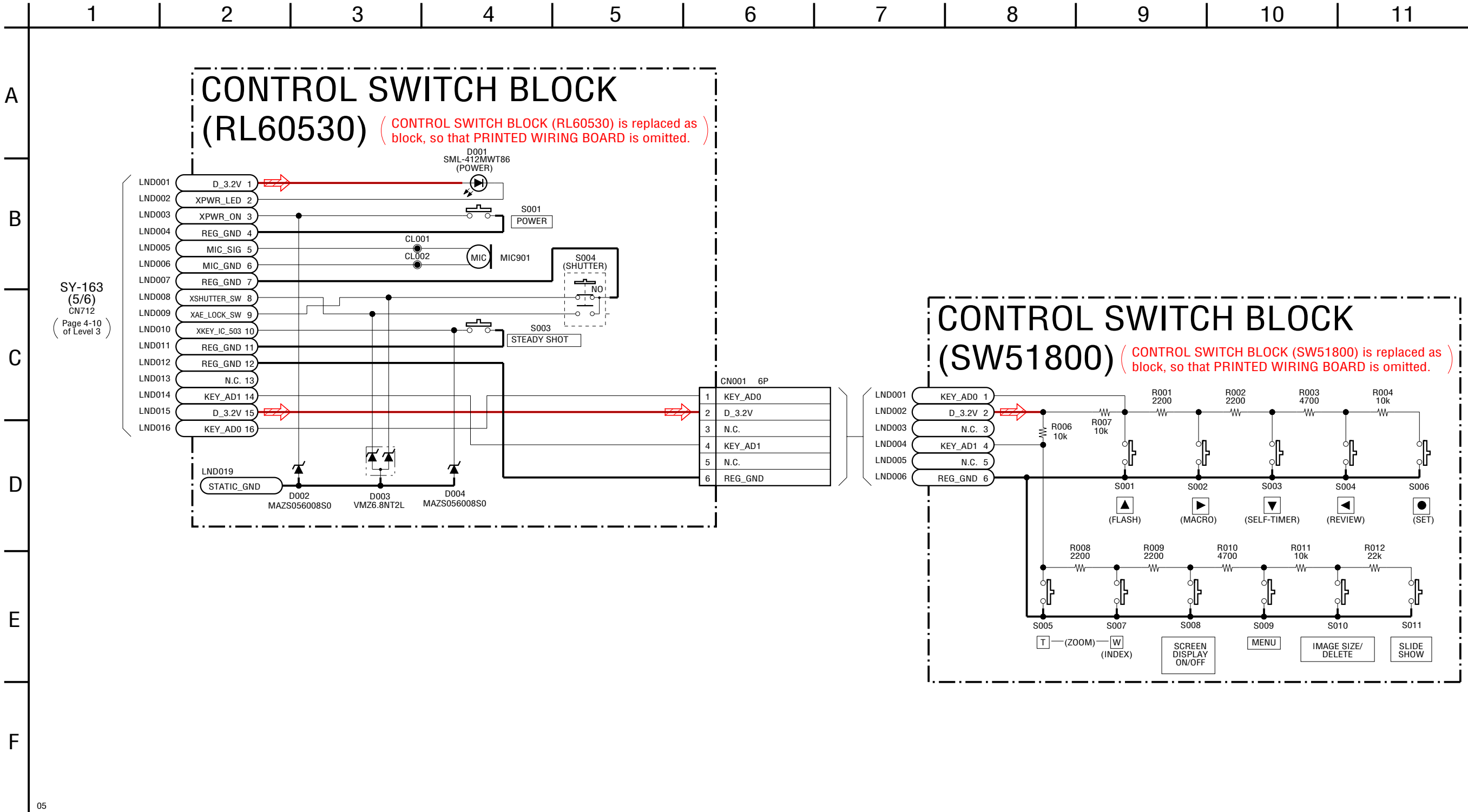
Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CD-656

Schematic diagrams of the SY-163 board are not shown.
Pages from 4-6 to 4-11 are not shown.







4-3. PRINTED WIRING BOARDS

Link

• [CD-656 FLEXIBLE BOARD](#)

• [MC-159 FLEXIBLE BOARD](#)

• [ST-131 BOARD](#)






• [BT-029 FLEXIBLE BOARD](#)

• [COMMON NOTE FOR PRINTED WIRING BOARDS](#)

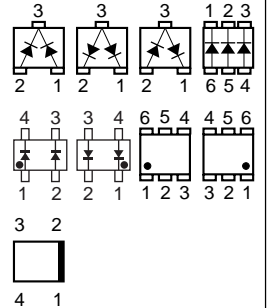
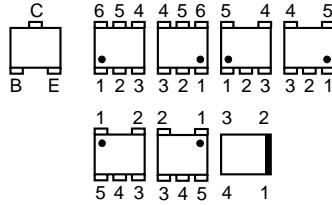
4-3. PRINTED WIRING BOARDS

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

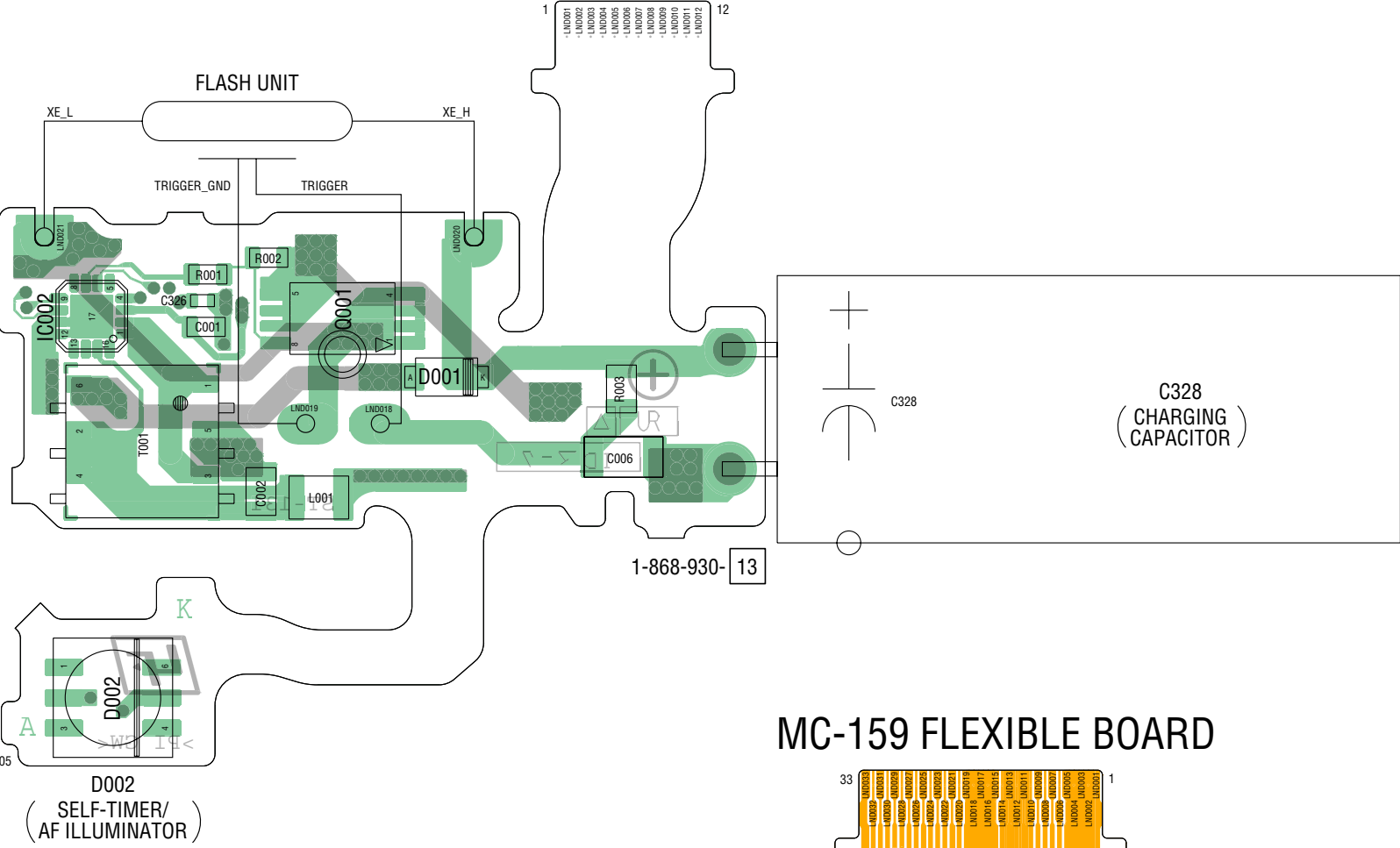


1-871-425-11

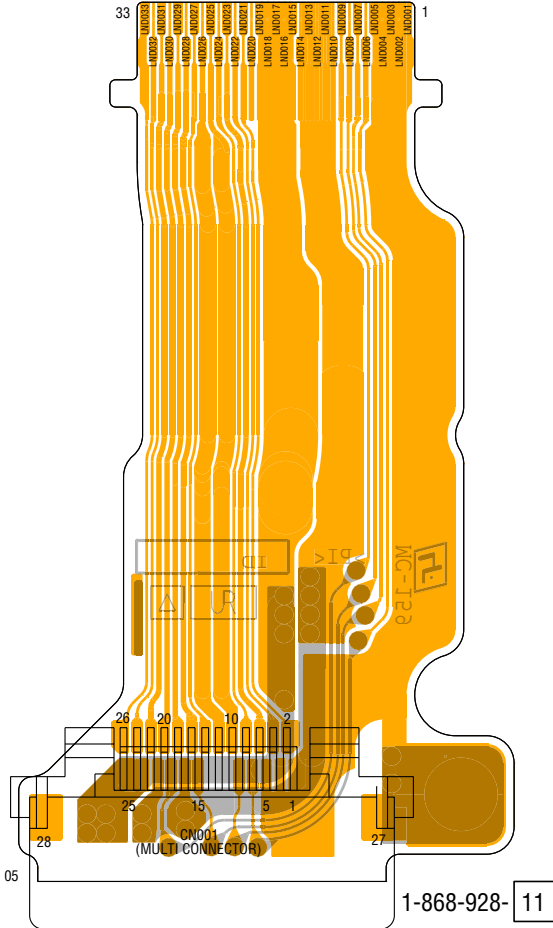
Printed wiring boards of the SY-163 board are not shown.
Pages 4-18 and 4-19 are not shown.

 : Uses unleaded solder.

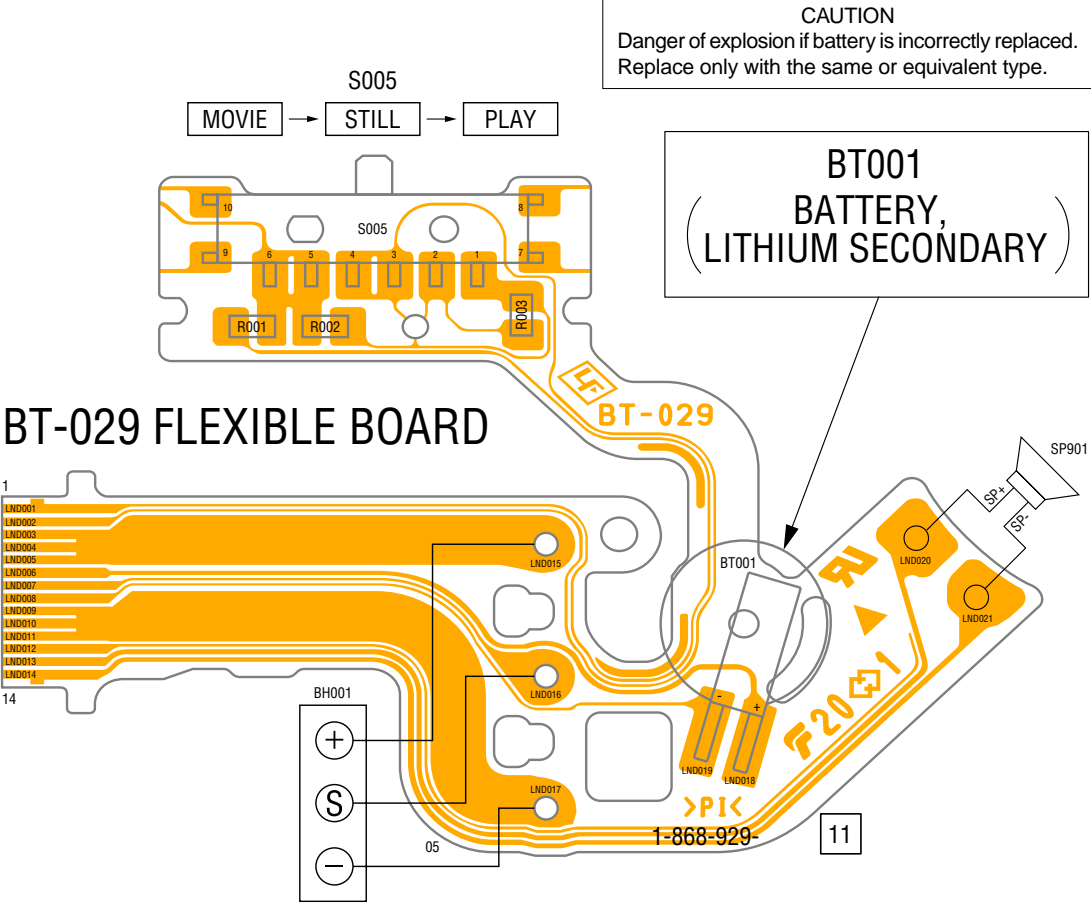
ST-131 BOARD



MC-159 FLEXIBLE BOARD



BT-029 FLEXIBLE BOARD

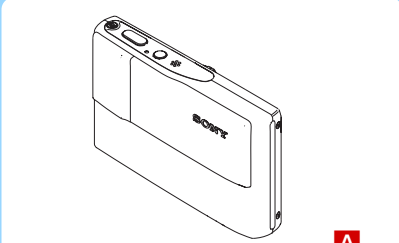


Mounted parts location of the SY-163 board is not shown.
Page 4-21 is not shown.

5. REPAIR PARTS LIST

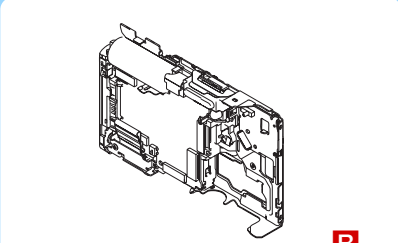
NOTE: Characters **A** to **Z** of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link

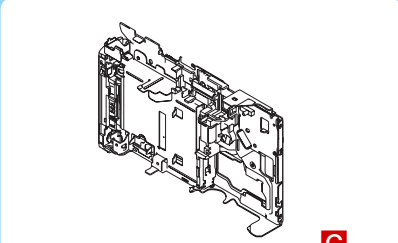


A

EXPLODED VIEWS



B



C

OVERALL SECTION

SY BOARD SECTION

FRAME SECTION

Link	ELECTRICAL PARTS LIST		ACCESSORIES
BT-029 FLEXIBLE BOARD C	MC-159 FLEXIBLE BOARD B	ST-131 BOARD B	
CD-656 FLEXIBLE BOARD A			

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
AR : Argentine model
AUS : Australian model
BR : Brazilian model
CH : Chinese model
CND : Canadian model
EE : East European model
HK : Hong Kong model
J : Japanese model
JE : Tourist model
KR : Korea model
NE : North European model
TW : Taiwan 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.

- Color Indication of Appearance Parts
Example:
(SILVER) : Cabinet's Color
(Silver) : Parts Color

• Language that can be selected (SY-163 board)

	Area	Japanese	English	French	German	Spanish	Italian	Portugal	Simplified Chinese	Traditional Chinese	Arabic	Dutch	Russian	Swedish	Korean	Norwegian	Danish	Finnish	Polish	Hungarian	Czech	Persian	Thai
GP1	J	●																					
GP2	US CND AUS Vietnam		●	●		●	●		●	●													
GP3	AEP UK		●	●	●	●	●	●				●	●	●		●	●	●	●	●	●		
GP4	E AR BR TW JE HK CH KR		●			●		●	●	●	●				●							●	●

5. REPAIR PARTS LIST

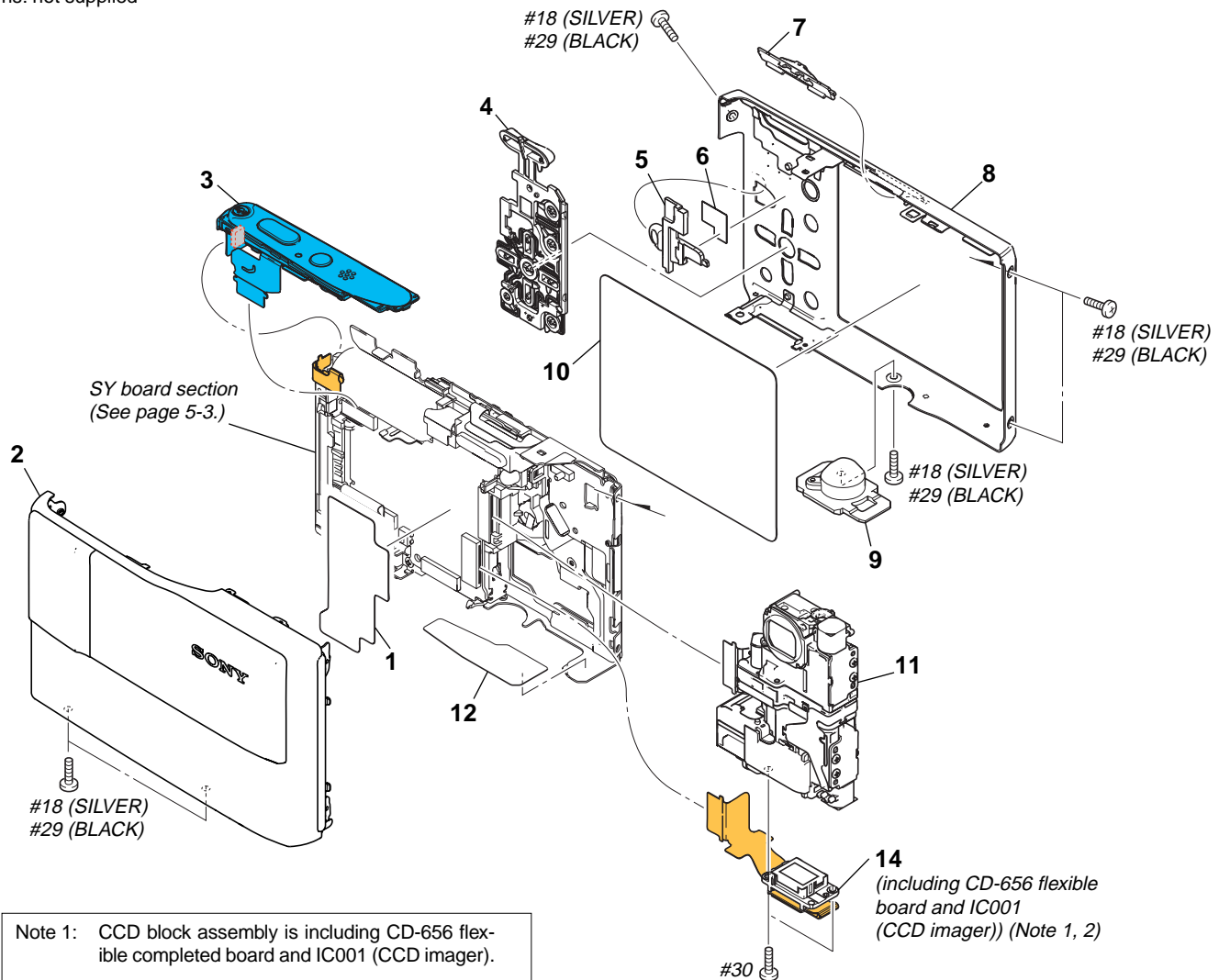
DISASSEMBLY

HARDWARE LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION

ns: not supplied



Note 1: CCD block assembly is including CD-656 flexible completed board and IC001 (CCD imager).

Note 2: Be sure to read "Precautions for Replacement of Imager" on page 4-3 when changing the imager.

Ref. No.	Part No.	Description
* 1	2-658-623-11	SHEET, SY INSULATING
2	X-2148-264-1	CABINET (FRONT (S)) ASSY (SILVER)
2	X-2148-400-1	CABINET (FRONT (B)) ASSY (BLACK)
2	X-2148-401-1	CABINET (FRONT (W)) ASSY (WHITE)
2	X-2148-402-1	CABINET (FRONT (P)) ASSY (PINK)
3	1-479-523-31	SWITCH BLOCK, CONTROL (RL60530) (SILVER)
3	1-479-523-41	SWITCH BLOCK, CONTROL (RL60530) (BLACK)
3	1-479-523-51	SWITCH BLOCK, CONTROL (RL60530) (WHITE)
3	1-479-523-61	SWITCH BLOCK, CONTROL (RL60530) (PINK)
4	2-658-610-01	BUTTON, F
5	2-658-613-01	STRAP
* 6	2-658-620-02	SHEET, F BUTTON ADHESIVE
7	2-658-611-11	KNOB, MODE (BLACK)
7	2-658-611-21	KNOB, MODE (SILVER, WHITE, PINK)

Ref. No.	Part No.	Description
8	X-2148-265-1	CABINET (REAR (S)) ASSY (SILVER)
8	X-2148-403-1	CABINET (REAR (B)) ASSY (BLACK)
8	X-2148-404-1	CABINET (REAR (W)) ASSY (WHITE)
8	X-2148-405-1	CABINET (REAR (P)) ASSY (PINK)
9	2-658-612-01	SCREW, TRIPOD
10	2-697-413-01	WINDOW (530), LCD
11	A-1167-020-A	LSV-1110A (SERVICE)
* 12	2-658-616-11	SHEET, CCD RADIATION
14	A-1202-206-A	CCD BLOCK ASSY (including CD-656 flexible board and IC001 (CCD imager)) (Note 1,2)
#18	2-635-591-21	SCREW (M1.4), NEW TRUSTAR P2 (Silver)
#29	2-662-396-01	SCREW (M1.4), NEW, TRUSTAR, P2 (Black)
#30	3-086-156-11	SCREW B1.2 (White)

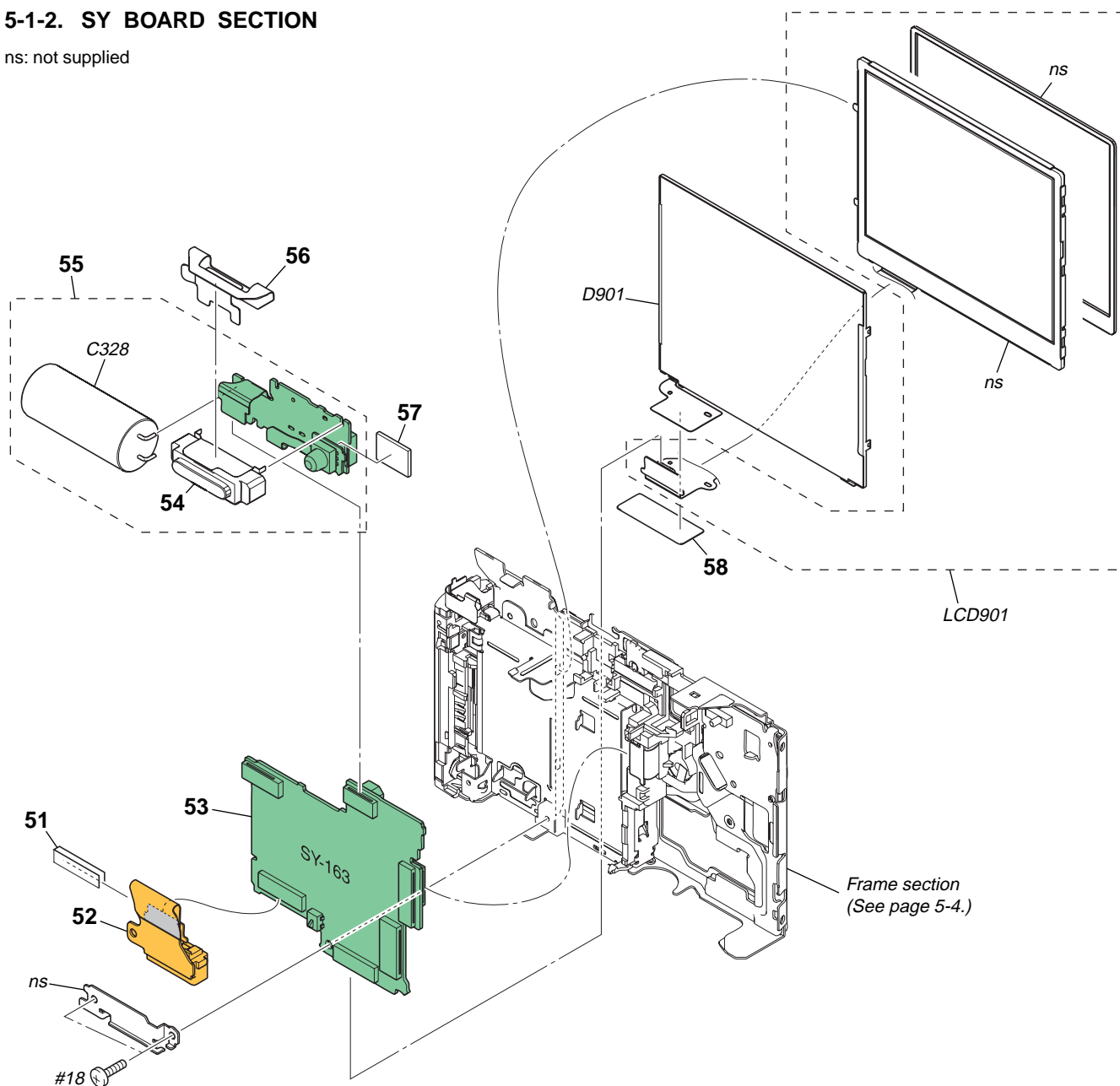
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-2. SY BOARD SECTION

ns: not supplied



* Refer to the table of page 5-1 about language of SY-163 board.

• Refer to page 5-1 for mark ▲.

Ref. No.	Part No.	Description
* 51	2-664-515-01	SHEET, MC RADIATION
52	A-1151-831-A	MC-159 FLEXIBLE BOARD, COMPLETE
53	A-1202-375-A	SY-163 BOARD, COMPLETE (SERVICE) (GP1)
53	A-1202-376-A	SY-163 BOARD, COMPLETE (SERVICE) (GP2)
53	A-1202-377-A	SY-163 BOARD, COMPLETE (SERVICE) (GP3)
53	A-1202-378-A	SY-163 BOARD, COMPLETE (SERVICE) (GP4)
▲ 54	1-478-972-11	FLASH UNIT
▲ 55	A-1151-830-A	ST-131 BOARD, COMPLETE

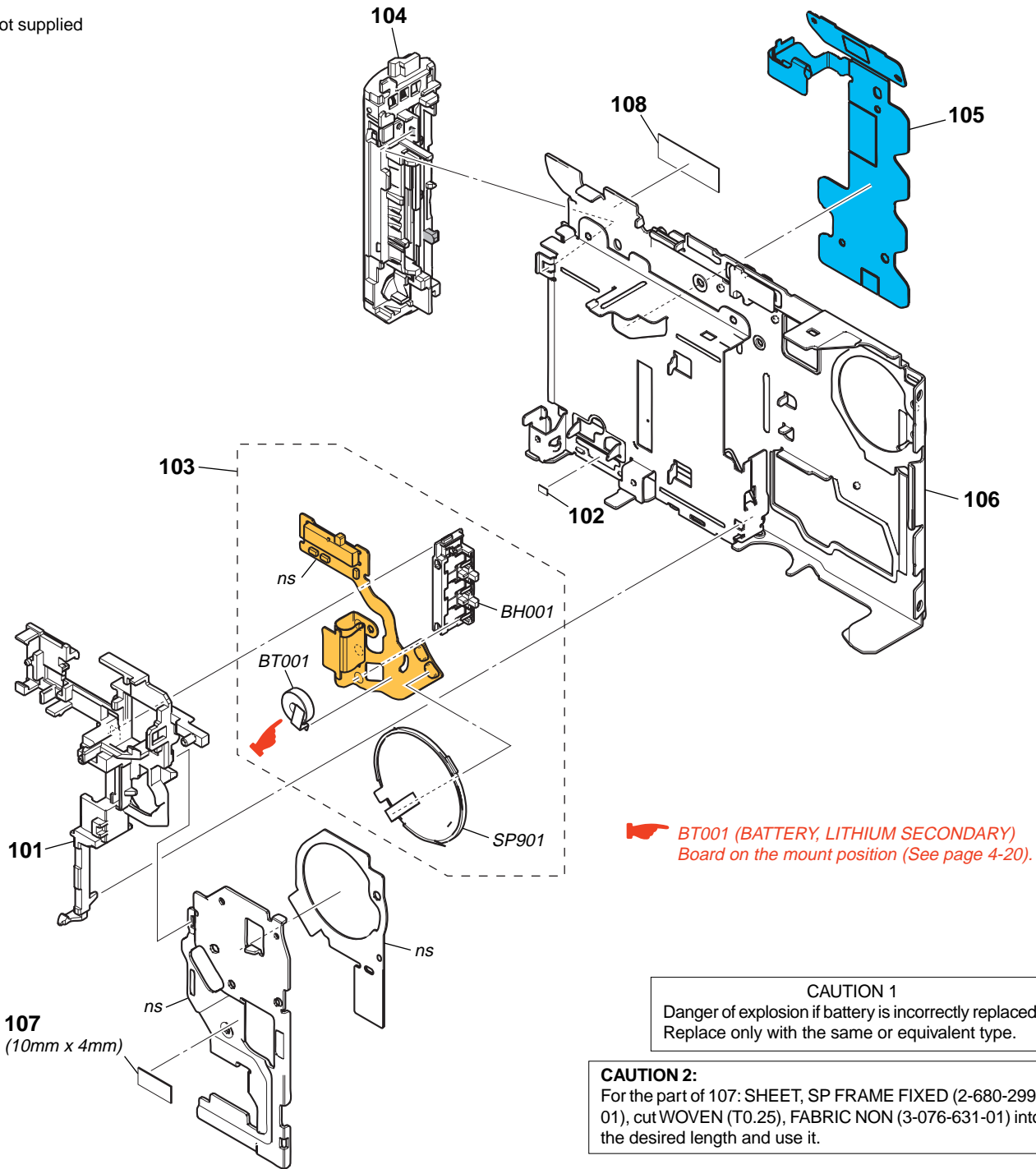
Ref. No.	Part No.	Description
* 56	2-658-617-01	SHEET, ST INSULATING
* 57	2-658-619-01	CUSHION, AF
* 58	2-658-622-01	SHEET, LCD INSULATING
▲*C328	1-100-936-21	ELECT 85uF 315V
D901	1-479-439-11	BLOCK, LIGHT GUIDE PLATE (2.5)
LCD901	A-1203-210-A	SERVICE, LCD BLOCK ASSY
#18	2-635-591-21	SCREW (M1.4), NEW TRUSTAR P2 (Silver)

5. REPAIR PARTS LIST

DISASSEMBLY

5-1-3. FRAME SECTION

ns: not supplied



• Refer to page 5-1 for mark \triangle .

Ref. No.	Part No.	Description
* 101	2-658-618-01	HOLDER, TERMINAL
* 102	2-665-144-01	SHEET, MC CONDUCTIVE
\triangle 103	A-1153-114-A	BT-029 FLEXIBLE BOARD, COMPLETE
104	X-2148-269-1	LID (S) ASSY, BT (SILVER)
104	X-2148-407-1	LID (B) ASSY, BT (BLACK)
104	X-2148-408-1	LID (W) ASSY, BT (WHITE)
104	X-2148-409-1	LID (P) ASSY, BT (PINK)

Ref. No.	Part No.	Description
105	1-479-578-11	SWITCH BLOCK, CONTROL (SW51800)
106	X-2102-896-1	FRAME ASSY
107	CAUTION 2	SHEET, SP FRAME FIXED
108	2-890-549-01	SHEET (530), MUFFLE
\triangle BH001	1-780-196-21	TERMINAL BOARD, BATTERY
\triangle *BT001	1-756-566-11	BATTERY, LITHIUM SECONDARY
SP901	1-825-644-21	BUZZER, PIEZOELECTRIC

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
△	A-1153-114-A	BT-029 FLEXIBLE BOARD, COMPLETE *****
		< BATTERY TERMINAL >
△ BH001	1-780-196-21	TERMINAL BOARD, BATTERY
		< BATTERY >
△* BT001	1-756-566-11	BATTERY, LITHIUM SECONDARY
		< SPEAKER >
SP901	1-825-644-21	BUZZER, PIEZOELECTRIC
A-1202-206-A	CCD BLOCK ASSY (Note)	
(Not supplied)	CD-656 FLEXIBLE BOARD, COMPLETE	

	(CD-656 flexible complete board and IC001 are not supplied, but they are included in CCD block assy.)	
		< CAPACITOR >
C001	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V
C003	1-127-715-91	CERAMIC CHIP 0.22uF 10% 16V
C004	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C005	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V
C006	1-100-505-91	CERAMIC CHIP 0.1uF 20% 16V
C007	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V
		< IC >
IC001	(Not supplied)	ICX629EQZ-13 (Note)
IC002	8-753-230-85	IC CXA3691EN-T9
		< RESISTOR >
R003	1-218-981-11	RES-CHIP 220K 5% 1/16W
R006	1-218-990-81	SHORT CHIP 0
R007	1-218-976-11	RES-CHIP 82K 5% 1/16W
A-1151-831-A	MC-159 FLEXIBLE BOARD, COMPLETE	

	(CN001 (multi connector) is not supplied, but this is included in MC-159 flexible complete board.)	
		< CONNECTOR >
CN001	(Not supplied)	CONNECTOR, MULTIPLE (SOCKET)
△	A-1151-830-A	ST-131 BOARD, COMPLETE *****
△	1-478-972-11	FLASH UNIT
		< CAPACITOR >
C001	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C002	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C006	1-100-758-11	CERAMIC CHIP 0.047uF 10% 250V
△* C328	1-100-936-21	ELECT 85uF 315V

• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
		< DIODE >
△ D001	6-501-141-01	DIODE FT02P80TP
* D002	6-501-364-01	DIODE DOR5352
		< IC >
IC002	6-707-555-01	IC TPS65552RGTR
		< COIL >
* L001	1-400-820-11	INDUCTOR 2.2uH
		< TRANSISTOR >
△* Q001	6-551-452-01	TRANSISTOR CY25BAJ-8F-T23-G02
		< RESISTOR >
R001	1-216-803-11	METAL CHIP 33 5% 1/10W
R002	1-216-857-11	METAL CHIP 1M 5% 1/10W
R003	1-216-121-11	RES-CHIP 1M 5% 1/10W
		< TRANSFORMER >
△ T001	1-443-880-11	TRANSFORMER, D.C.-D.C.CONVERTER

Electrical parts list of the SY-163 board is not shown.
Pages 5-6 to 5-9 are not shown.

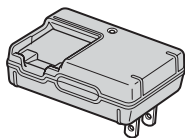
CAUTION

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

Note: Be sure to read "Precautions for Replacement of Imager" on page 4-3 when changing the imager.

Checking supplied accessories.

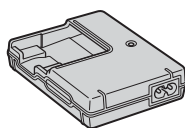
Note 1: This item is supplied with the unit as an accessory, but is not prepared as a service part.



Battery Charger
BC-CS3

△ 1-479-140-11 (J)

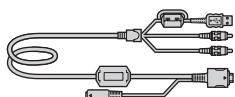
△ 1-479-140-21 (US, CND)



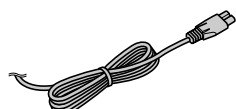
Battery Charger
BC-CS3

△ 1-479-140-31

(EXCEPT US, CND, J)



USB, A/V, DC IN Cable for
Multi-use Terminal
1-830-848-11



Power Cord

△ 1-555-074-71 (AUS)

△ 1-782-476-41 (CH)

△ 1-783-374-22 (HK)

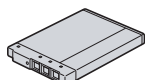
△ 1-783-952-51 (AR)

△ 1-792-549-31 (JE)

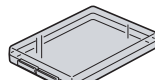
△ 1-823-947-51 (KR)

△ 1-824-910-31 (AEP, E)

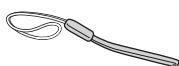
△ 1-827-269-22 (UK)



Rechargeable Battery Pack
NP-FT1
(Note 1)



Battery Case
(Note 1)



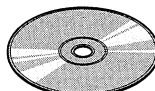
Wrist Strap

2-685-882-01

(SILVER, WHITE, PINK)

2-685-882-11

(BLACK)



CD-ROM

(Cyber-shot Application Software)

(including Handbook PDF)

2-691-402-01 (EXCEPT US)

2-887-831-01 (US)



Conversion (2P) Adaptor

△ 1-569-007-12 (JE)



Conversion (2P) Adaptor

△ 1-569-008-12 (E)

Other accessories

2-691-401-01 MANUAL, INSTRUCTION (JAPANESE) (J)

2-691-401-11 MANUAL, INSTRUCTION (ENGLISH)

(EXCEPT KR, CH, AR, J)

2-691-401-21 MANUAL, INSTRUCTION (FRENCH, ITALIAN) (CND, AEP)

2-691-401-31 MANUAL, INSTRUCTION (SPANISH, PORTUGUESE)

(AEP, E, AR, JE)

2-691-401-41 MANUAL, INSTRUCTION (GERMAN, DUTCH) (AEP)

2-691-401-51 MANUAL, INSTRUCTION (TRADITIONAL CHINESE,
SIMPLIFIED CHINESE) (E, HK, CH, JE)

2-691-401-61 MANUAL, INSTRUCTION (RUSSIAN) (AEP)

2-691-401-71 MANUAL, INSTRUCTION (ARABIC, PERSIAN) (E)

2-691-401-81 MANUAL, INSTRUCTION (KOREAN) (KR, JE)

2-691-401-91 MANUAL, INSTRUCTION (POLISH, CZECH) (AEP)

2-691-406-11 MANUAL, INSTRUCTION (HUNGARIAN, SLOVAK) (AEP)

2-691-406-21 MANUAL, INSTRUCTION (SWEDISH, FINNISH) (AEP)

2-691-406-31 MANUAL, INSTRUCTION (NORWEGIAN, DANISH) (AEP)

2-698-135-01 HANDBOOK (PDF) (JAPANESE) (Note 2)

2-698-135-11 HANDBOOK (PDF) (ENGLISH) (Note 2)

2-698-135-21 HANDBOOK (PDF) (FRENCH) (Note 2)

2-698-135-31 HANDBOOK (PDF) (ITALIAN) (Note 2)

2-698-135-41 HANDBOOK (PDF) (SPANISH) (Note 2)

2-698-135-51 HANDBOOK (PDF) (PORTUGUESE) (Note 2)

2-698-135-61 HANDBOOK (PDF) (GERMAN) (Note 2)

2-698-135-71 HANDBOOK (PDF) (DUTCH) (Note 2)

2-698-135-81 HANDBOOK (PDF) (TRADITIONAL CHINESE) (Note 2)

2-698-135-91 HANDBOOK (PDF) (SIMPLIFIED CHINESE) (Note 2)

2-698-137-11 HANDBOOK (PDF) (RUSSIAN) (Note 2)

2-698-137-21 HANDBOOK (PDF) (ARABIC) (Note 2)

2-698-137-31 HANDBOOK (PDF) (PERSIAN) (Note 2)

2-698-137-41 HANDBOOK (PDF) (KOREAN) (Note 2)

2-698-137-51 HANDBOOK (PDF) (POLISH) (Note 2)

2-698-137-61 HANDBOOK (PDF) (CZECH) (Note 2)

2-698-137-71 HANDBOOK (PDF) (HUNGARIAN) (Note 2)

2-698-137-81 HANDBOOK (PDF) (SLOVAK) (Note 2)

2-698-137-91 HANDBOOK (PDF) (SWEDISH) (Note 2)

2-698-138-11 HANDBOOK (PDF) (FINNISH) (Note 2)

2-698-138-21 HANDBOOK (PDF) (NORWEGIAN) (Note 2)

2-698-138-31 HANDBOOK (PDF) (DANISH) (Note 2)

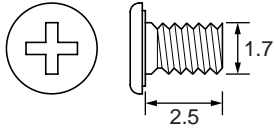
2-698-138-41 HANDBOOK (PDF) (THAI) (Note 2)

Note 2: Handbooks (PDF) of each language are included in
CD-ROM (Cyber-shot Application Software).

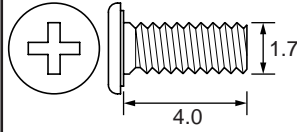
• Refer to the page 5-1 for mark △.

HARDWARE LIST (1/3)

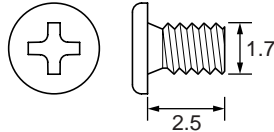
#1: M1.7 X 2.5
(Black)
2-635-562-11



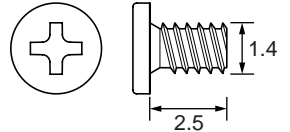
#2: M1.7 X 4.0
(Black)
2-635-562-31



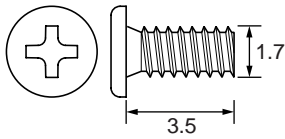
#3: M1.7 X 2.5
(Red)
2-660-401-01



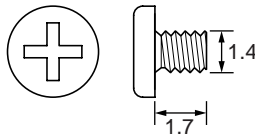
#4: M1.4 X 2.5 (Tapping)
(Dark Silver)
3-348-998-81



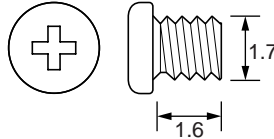
#5: M1.7 X 3.5 (Tapping)
(Black)
3-080-204-01



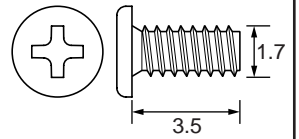
#6: M1.4 X 1.7
(Silver)
2-598-474-01



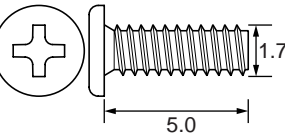
#7: M1.7 X 1.6
(Black)
7-627-552-18



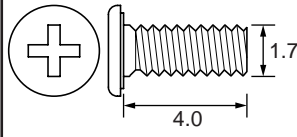
#8: M1.7 X 3.5 (Tapping)
(Silver)
3-078-890-01



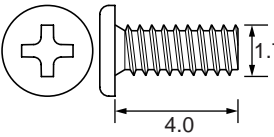
#9: M1.7 X 5.0 (Tapping)
(Silver)
3-078-890-21



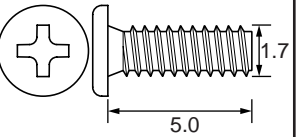
#10: M1.7 X 4.0
(Silver)
2-599-475-31



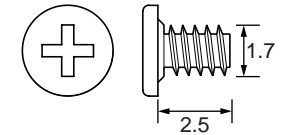
#11: M1.7 X 4.0 (Tapping)
(Silver)
3-078-890-11



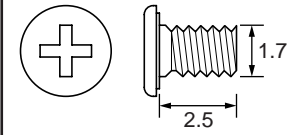
#12: M1.7 X 5.0 (Tapping)
(Black)
3-080-204-21



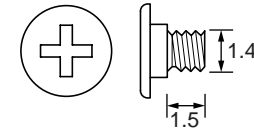
#13: M1.7 X 2.5 (Tapping)
(Silver)
3-085-397-01



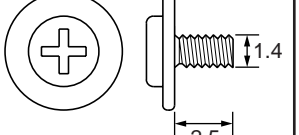
#14: M1.7 X 2.5
(Silver)
2-599-475-11



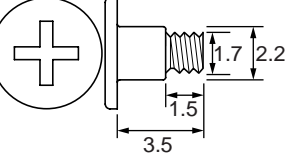
#15: M1.4 X 1.5
(Silver)
3-062-214-01



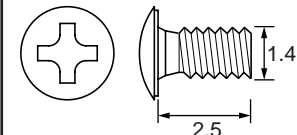
#16: M1.4 X 2.5
(Silver)
2-586-337-01



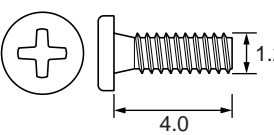
#17: M1.7 X 1.5
(Silver)
2-586-389-01



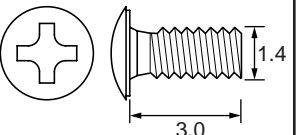
#18: M1.4 X 2.5
(Silver)
2-635-591-21



#19: M1.2 X 4.0 (Tapping)
(Red)
3-086-156-21

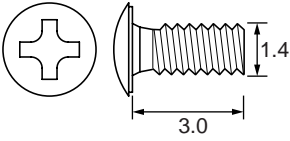


#20: M1.4 X 3.0
(Silver)
2-635-591-31

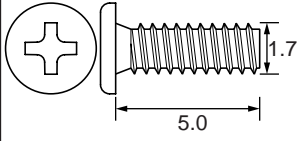


HARDWARE LIST (2/3)

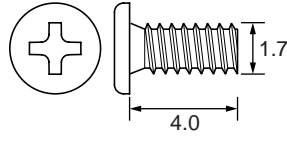
#21: M1.4 X 3.0
(Black)
2-662-396-21



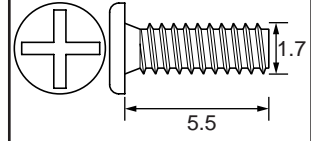
#22: M1.7 X 5.0 (Tapping)
(Silver)
3-083-261-01



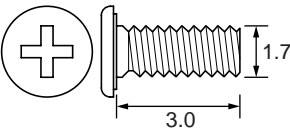
#23: M1.7 X 4.0 (Tapping)
(Black)
3-080-204-11



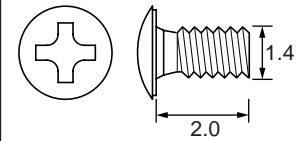
#24: B1.7 X 5.5 (Tapping)
(Black)
4-679-805-11



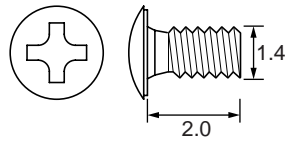
#25: M1.7 X 3.0
(Black)
2-635-562-21



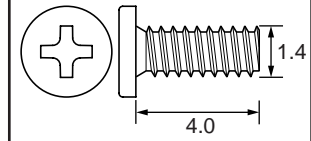
#26: M1.4 X 2.0
(Silver)
2-635-591-11



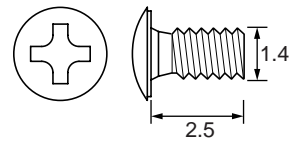
#27: M1.4 X 2.0
(Black)
2-662-396-11



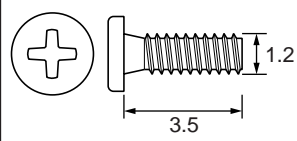
#28: M1.4 X 4.0 (Tapping)
(Dark Silver)
3-348-998-61



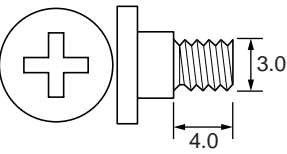
#29: M1.4 X 2.5
(Black)
2-662-396-01



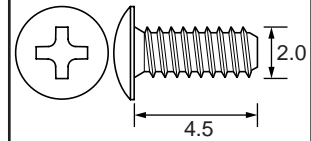
#30: M1.2 X 4.0 (Tapping)
(White)
3-086-156-11



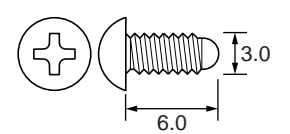
#31: M3.0 X 4.0
(Silver)
2-102-434-01



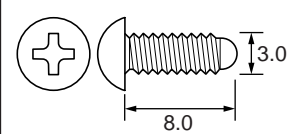
#32: M2.0 X 4.5 (Tapping)
(Silver)
2-102-498-01



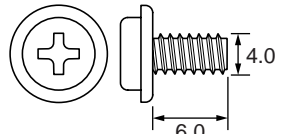
#33: M3.0 X 6.0
(Silver)
3-077-331-21



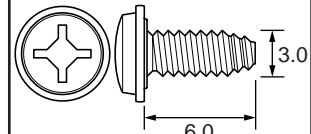
#34: M3.0 X 8.0
(Black)
3-077-331-41



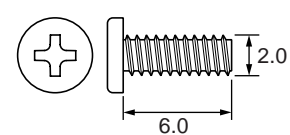
#35: M4.0 X 6.0 (Tapping)
(Silver)
3-975-291-02



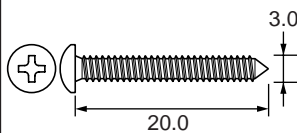
#36: M3.0 X 6.0
(Silver)
4-886-821-11



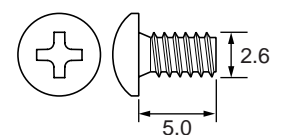
#37: M2.0 X 6.0 (Tapping)
(Black)
3-080-206-31



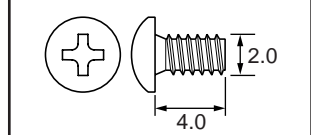
#38: M3.0 X 20.0 (Tapping)
(Silver)
7-685-651-79



#39: M2.6 X 5.0 (Tapping)
(Black)
7-685-791-09

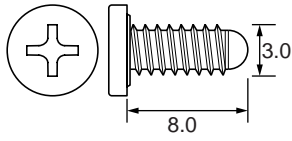


#40: M2.0 X 4.0 (Tapping)
(Silver)
7-685-851-04

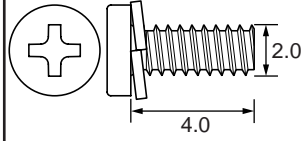


HARDWARE LIST (3/3)

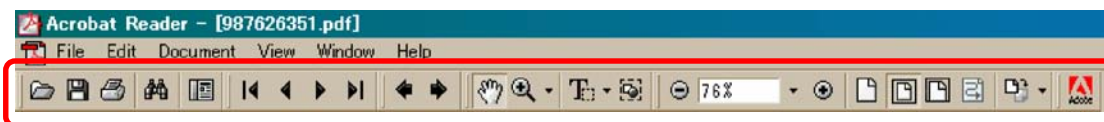
#41: M3.0 X 8.0 (Tapping)
(Silver)
3-065-748-01




#42: M2.0 X 4.0 (Tapping)
(Silver)
7-628-253-00




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





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:

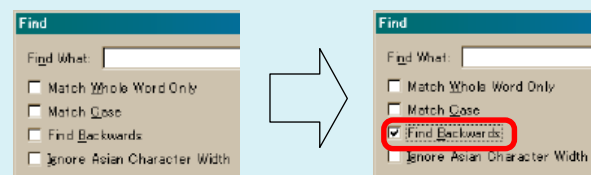
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

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.

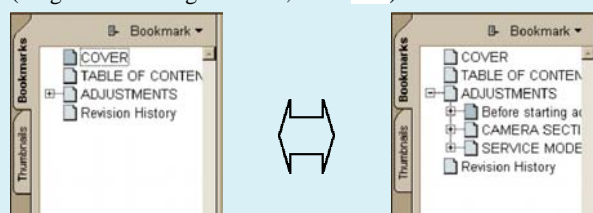
Moving with link

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 .

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2006.07	Official Release	—	—