

DSC-T30

SERVICE MANUAL

LEVEL 2

Ver 1.0 2006.03

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
Brazilian 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-149 Board

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

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

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 (58 MB) “Memory Stick Duo”
Flash	Recommended distance (ISO set to Auto): approx. 0.1 to 3.4 m (4 to 133 7/8 inches) (W)/approx. 0.25 to 2.7 m (9 7/8 to 106 3/8 inches) (T)

[Input and Output connectors]

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

[LCD screen]

LCD panel	7.5 cm (3.0 type) TFT drive
Total number of dots	230 400 (960×240) dots

[Power, general]

Power	Rechargeable battery pack NPFR1, 3.6 V AC-LS5K AC Adaptor (not supplied), 4.2 V
Power consumption (during shooting)	1.1 W
Operating temperature	0 to 40°C (32 to 104°F)
Storage temperature	–20 to +60°C (–4 to +140°F)

Dimensions	95×56.5×23.3 mm (3 3/4×2 1/4×15/16 inches) (W/H/D, excluding protrusions)
Mass	Approx. 169 g (6.0 oz) (including NP-FR1 battery pack and wrist strap, etc.)

Microphone	Electret condenser microphone
Speaker	Dynamic speaker
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 5/8×29/32×3 5/8 inches) (W/H/D)
Mass	Approx. 70 g (2.7 oz)

Rechargeable battery pack NP-FR1

Used battery	Lithium-ion battery
Maximum voltage	DC 4.2 V
Nominal voltage	DC 3.6 V
Capacity	4.4 Wh (1 220 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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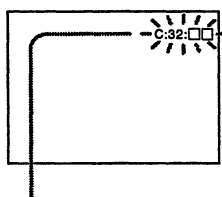
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1. SERVICE NOTE

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.

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.

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-149 board, erase the data in internal memory of the board before replacement.

Note 2: When replacing the SY-149 board or the IC401 on the SY-149 board, execute formatting and initialize the internal memory after replacement.

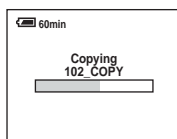
Method for Copying the Data in Internal Memory

Copy

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

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

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



- 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 the [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.
The default settings are marked with ✓.

Format

Formats the internal memory.

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

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

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

Method for Formatting the Music

Format Music

If you cannot 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].

The message “All data will be erased Ready?” appears.

<input type="checkbox"/>	OK	Formats the Music files. All data other than Music files remain as it is.
<input checked="" type="checkbox"/>	Cancel	Cancels the formatting.

1-4. PRECAUTION ON REPLACING THE SY-149 BOARD

VIDEO OUT Default Data Check

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

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

VIDEO OUT Default Data

Page	Address	Data	
		NTSC	PAL
4F	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 Data Check

If the SY-149 board was replaced, initial language setting may be changed. Accordingly, change the following data so as to set same initial language as that of the set distributing in each region.

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

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

Initial Language Data

Page	Address	Data	Language	GP1	GP2	GP3	GP4
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:

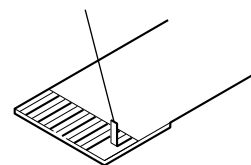
- 1) Select page: 00, address: 01 and set data: 01.
- 2) Select page: 4F, address: 8C, and set the Initial Language Data.
- 3) Select page: 40, address: 38, and set data: 00.
- 4) Click **Save** on the SEUS screen.
- 5) Select page: 80, address: 34, and check that the data is "00".
- 6) Select page: 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.

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-135 FLEXIBLE BOARD'S CHARGING CAPACITOR (C901)

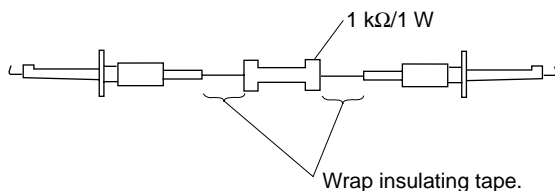
The charging capacitor (C901) of the ST-135 flexible board is charged up to the maximum 330 V potential.

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).

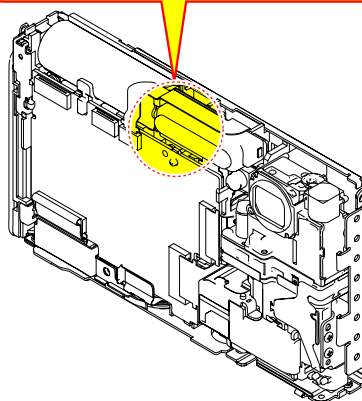
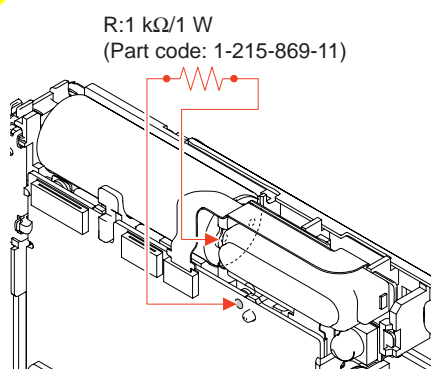
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



Note: High-voltage cautions

Discharging the Capacitor

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



2-1. DISASSEMBLY

EXPLODED VIEW

HARDWARE LIST

2-1-1. CABINET AND LENS SECTION

Follow the disassembly in the numerical order given.

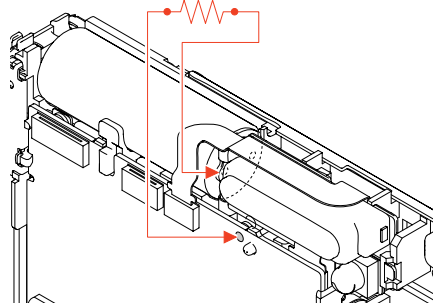
- ① Cabinet (Front) Assy (①-1 to ①-3)
- ② Cabinet (Rear) Block (②-1 to ②-4)
- ③ Lens Block (③-1 to ③-2)

Note: High-voltage cautions

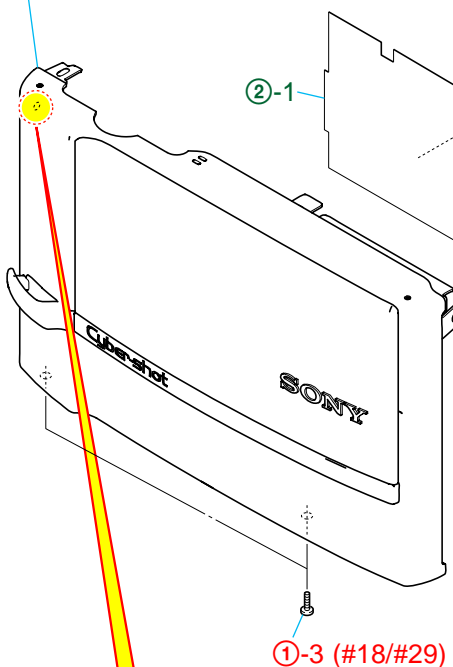
Discharging the Capacitor

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)

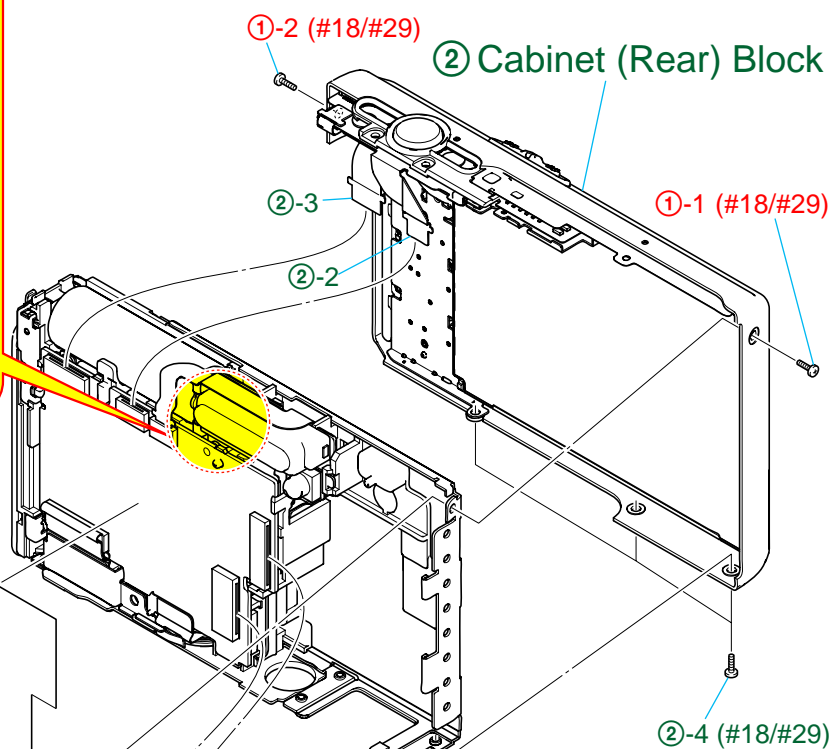


① Cabinet (Front) Assy

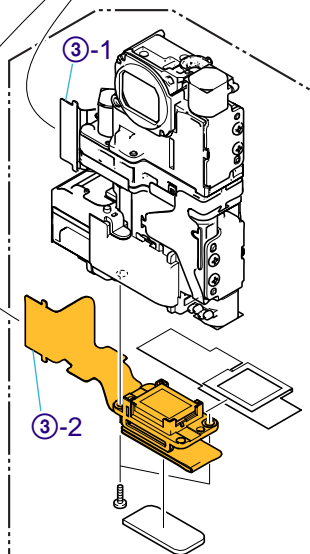


Note: When the cabinet is removed, the screw installed in here unrelated. Do not detach it.

② Cabinet (Rear) Block



③ Lens Block



2-1-2. BATTERY HOLDER BLOCK

Follow the disassembly in the numerical order given.

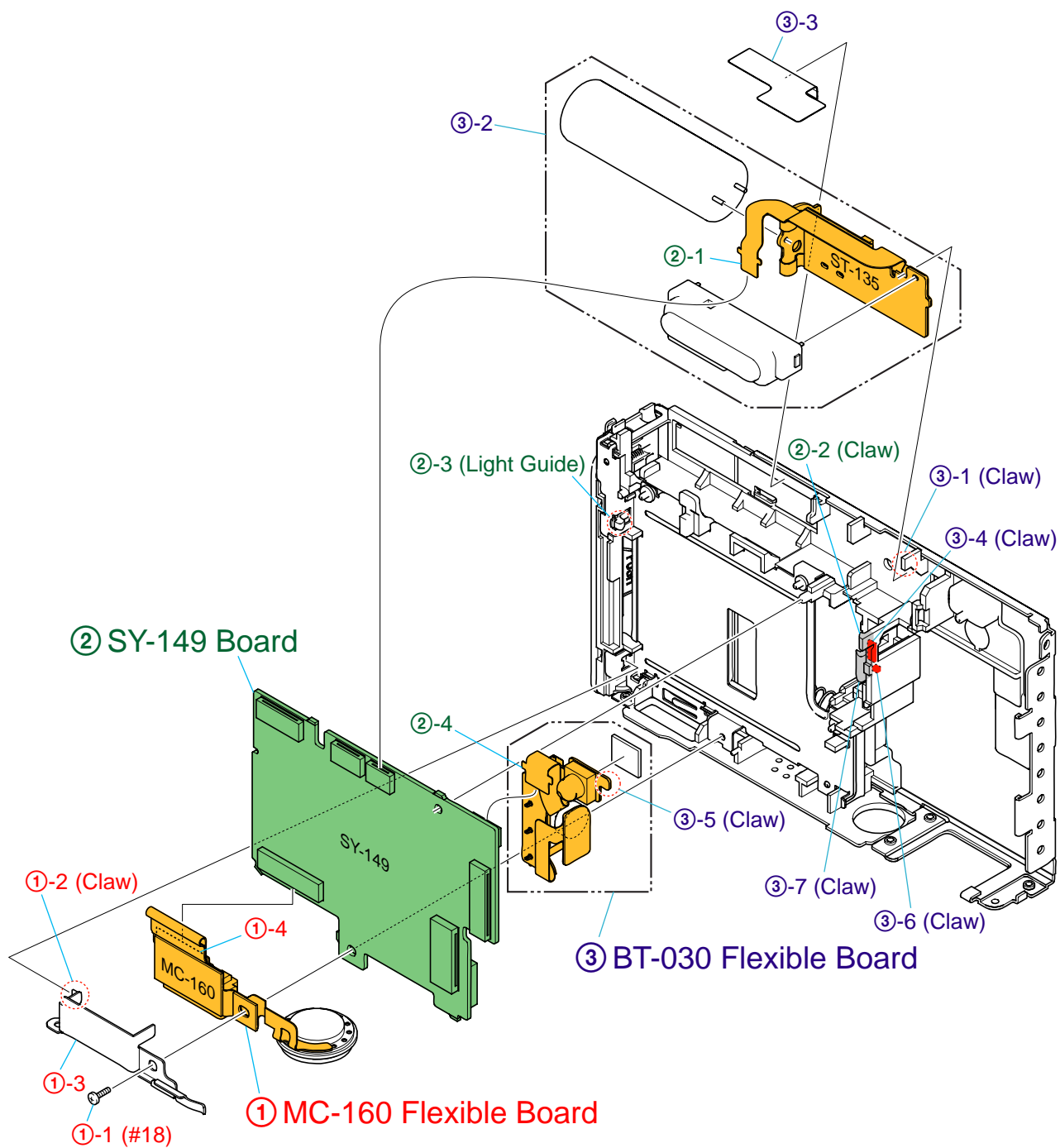
① MC-160 Flexible Board (①-1 to ①-4)

② SY-149 Board (②-1 to ②-4)

③ BT-030 Flexible Board (③-1 to ③-7)

EXPLODED VIEW

HARDWARE LIST



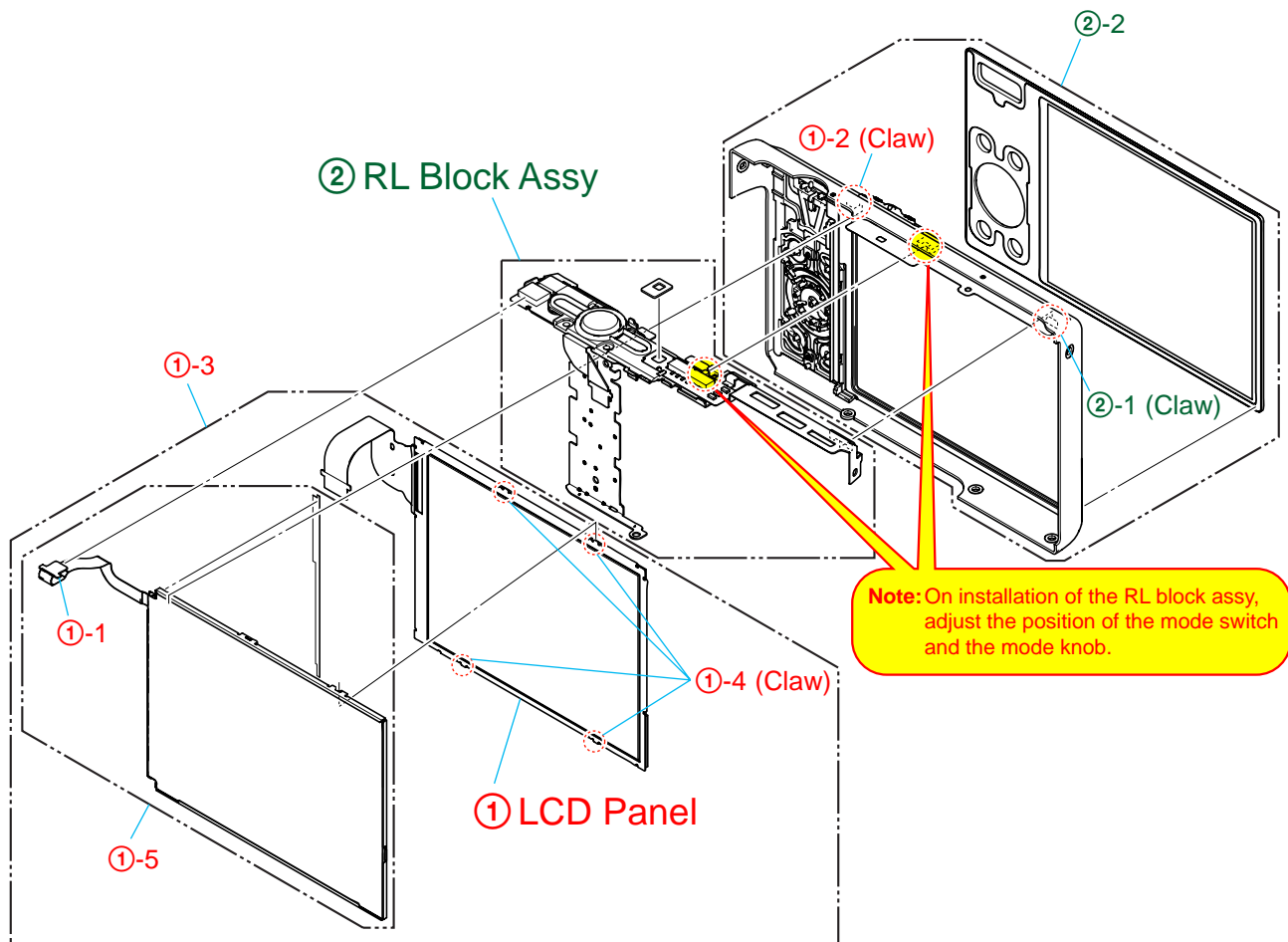
2-1-3. CABINET (REAR) BLOCK

Follow the disassembly in the numerical order given.

① LCD Panel (①-1 to ①-5)

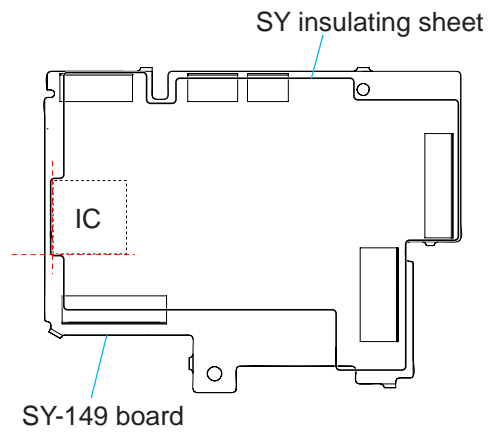
② RL Block Assy (②-1 to ②-2)

EXPLODED VIEW



HELP

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



3. BLOCK DIAGRAMS

Link

• OVERALL BLOCK DIAGRAM (1/2)

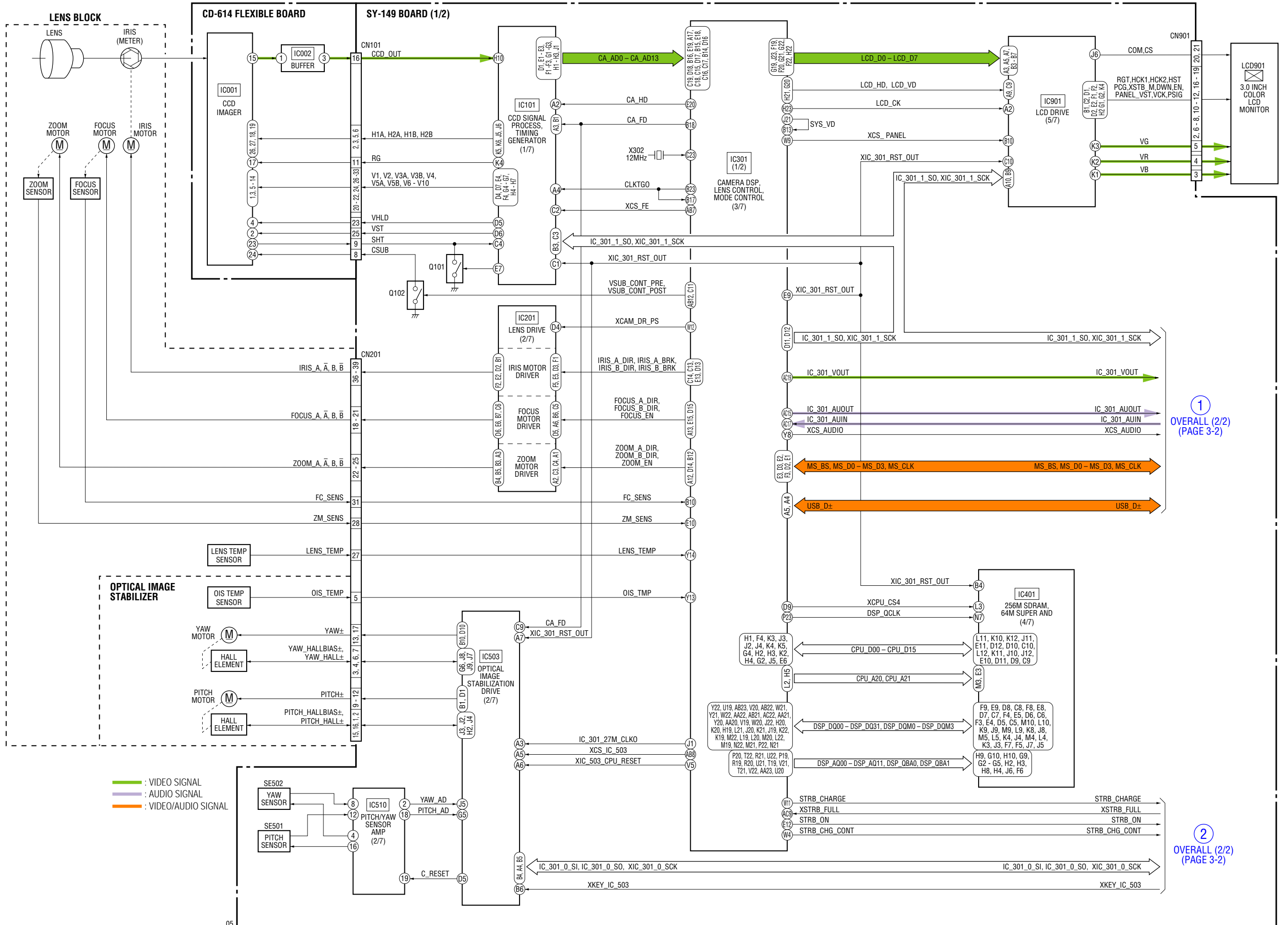
• POWER BLOCK DIAGRAM

• OVERALL BLOCK DIAGRAM (2/2)

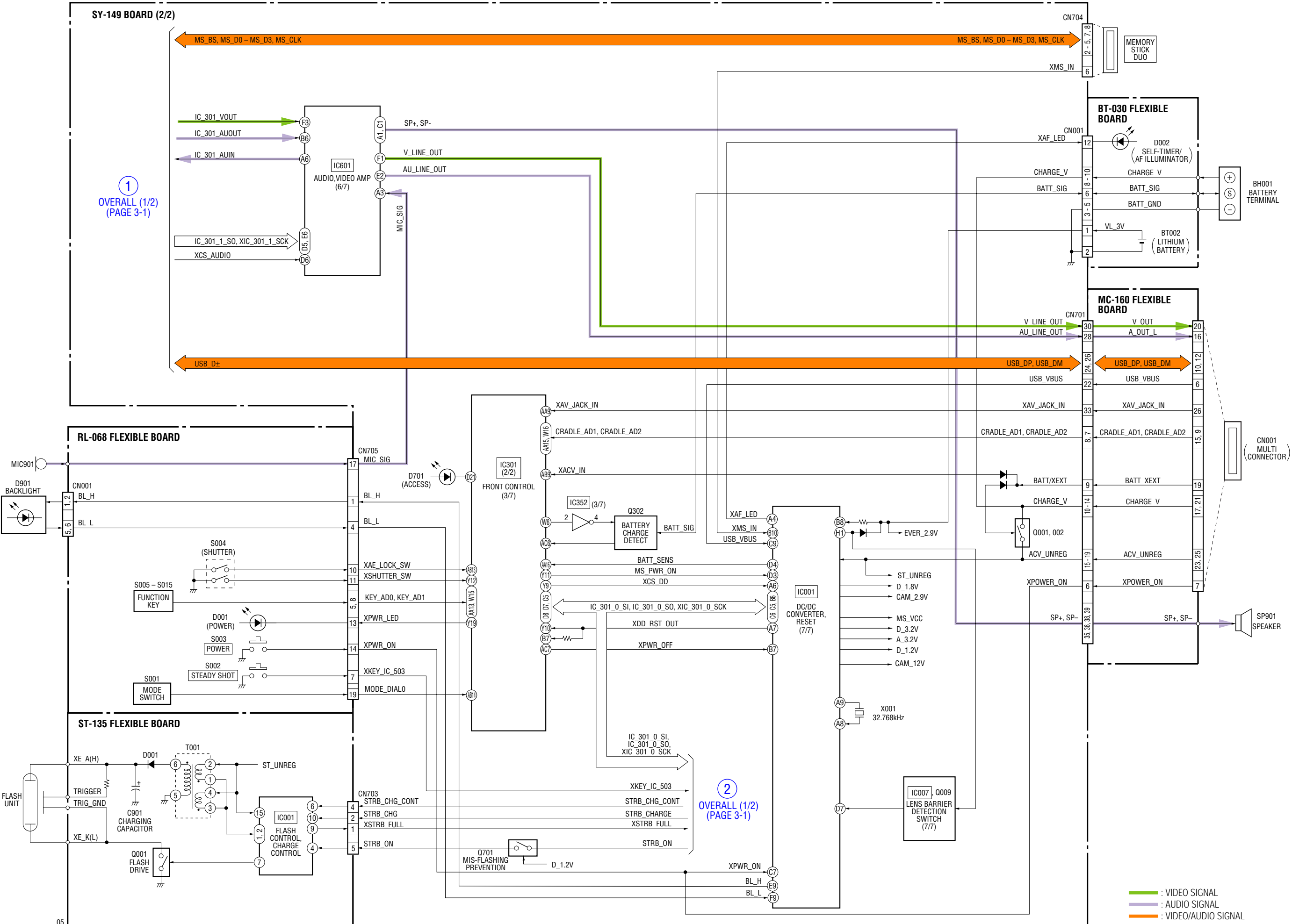
3. BLOCK DIAGRAMS

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

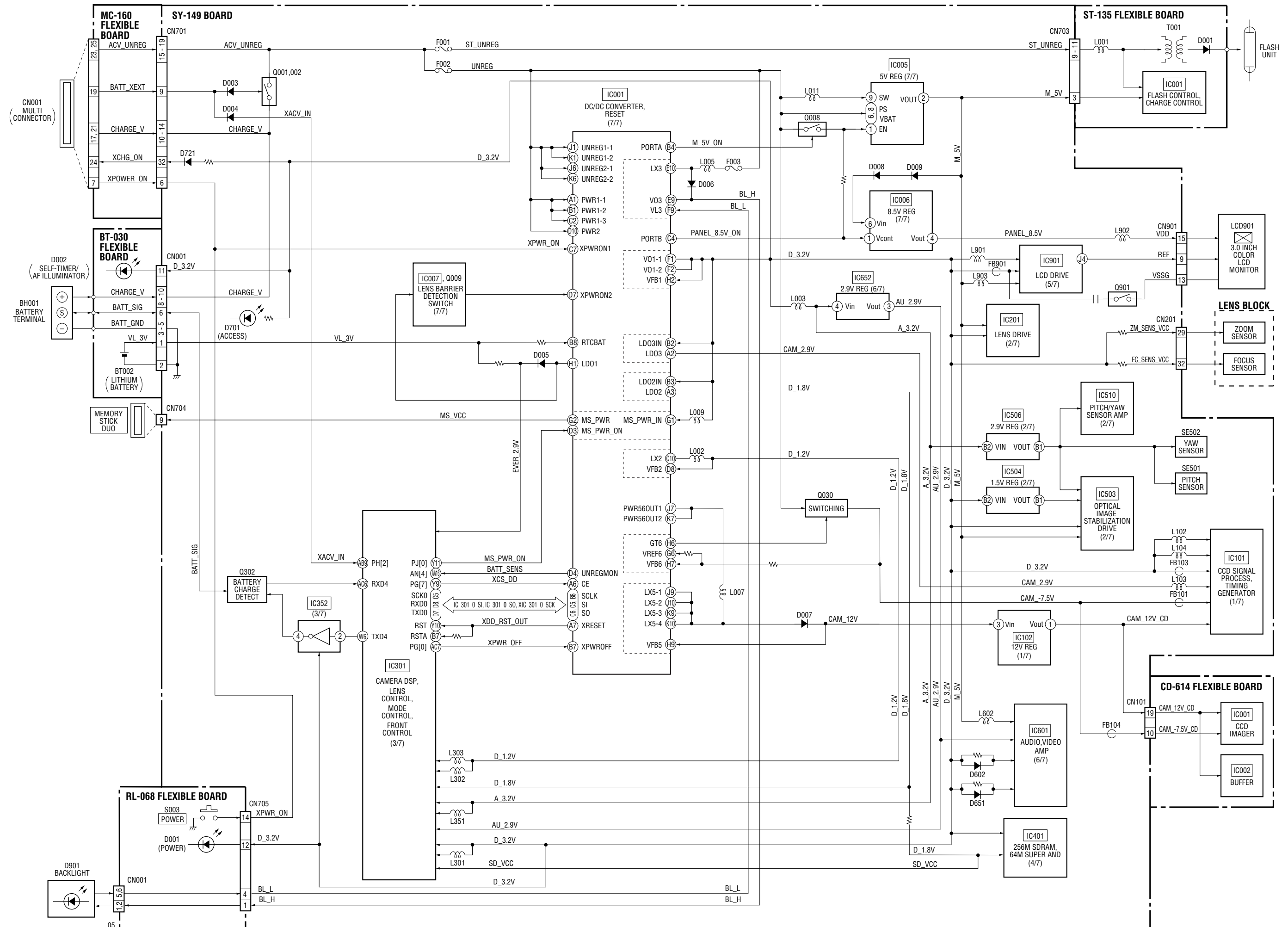
() : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



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

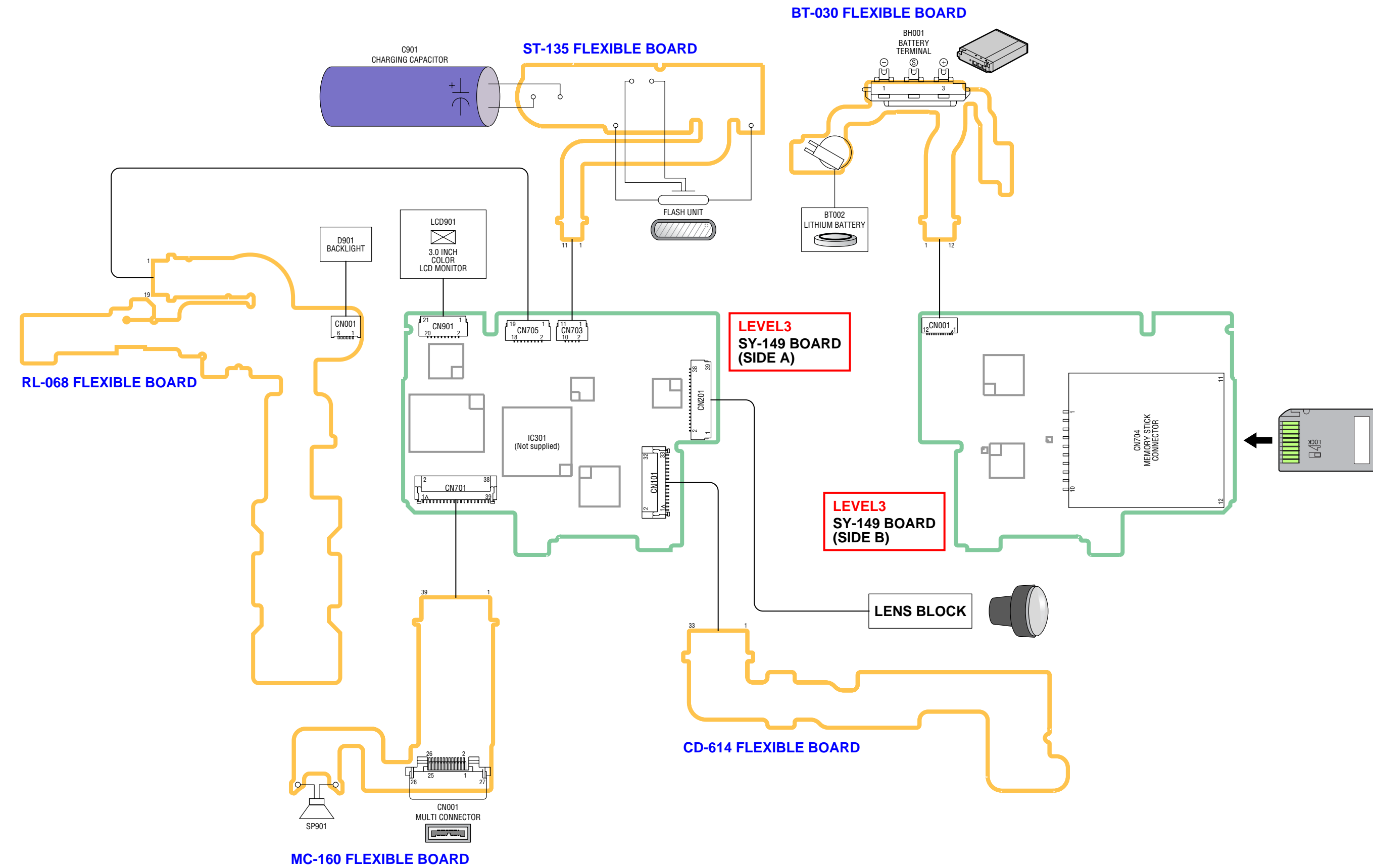


3-3. POWER BLOCK DIAGRAM () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



4-2. SCHEMATIC DIAGRAMS

Link

• CD-614 FLEXIBLE BOARD (CCD IMAGER)

• BT-030 FLEXIBLE BOARD (BATTERY IN)

• ST-135 FLEXIBLE BOARD (FLASH DRIVE)

• RL-068 FLEXIBLE BOARD
(CONTROL SWITCH)

• MC-160 FLEXIBLE BOARD
(MULTI CONNECTOR)

• COMMON NOTE FOR SCHEMATIC DIAGRAMS

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

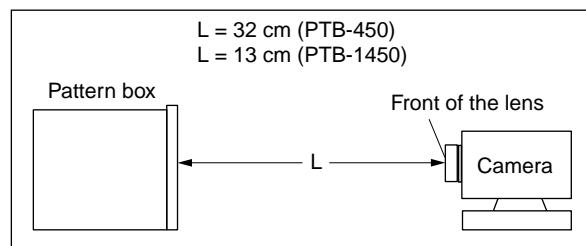
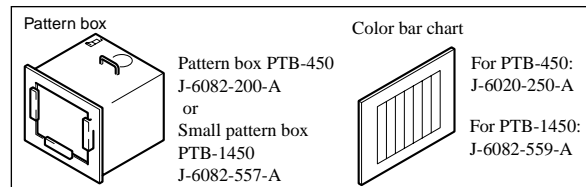
(Measuring conditions voltage and waveform)

- 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.

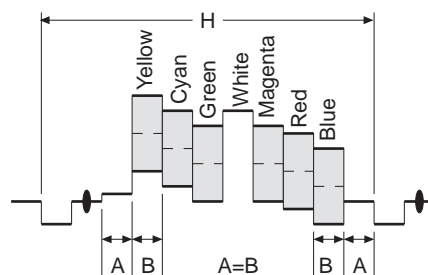


Fig. a (Video output terminal output waveform)

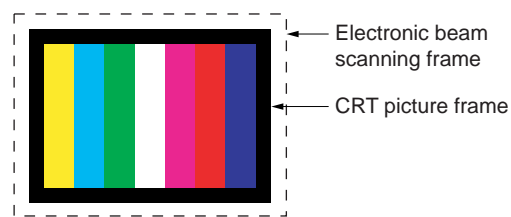


Fig.b (Picture on monitor TV)

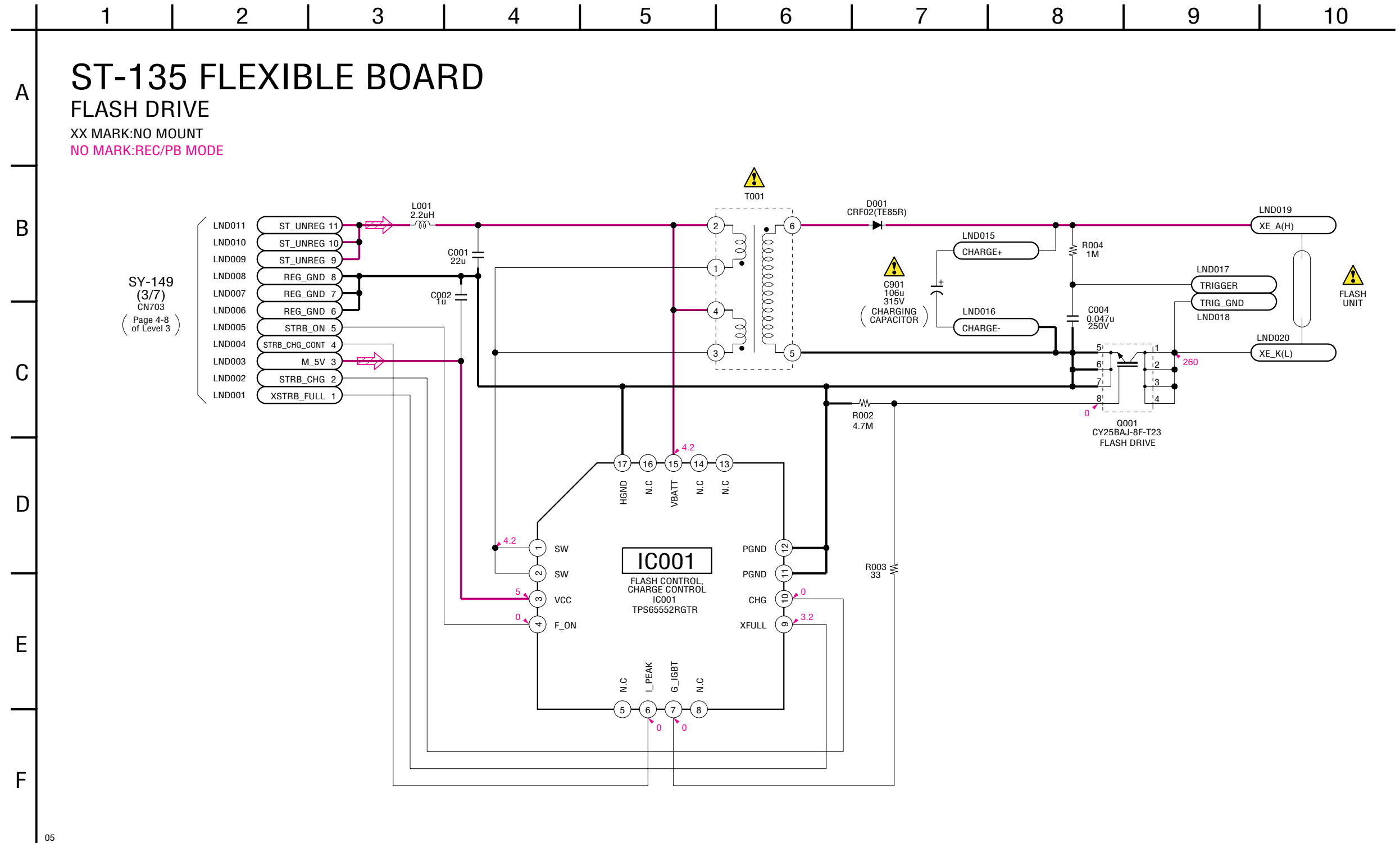
When indicating parts by reference number, please include the board name.

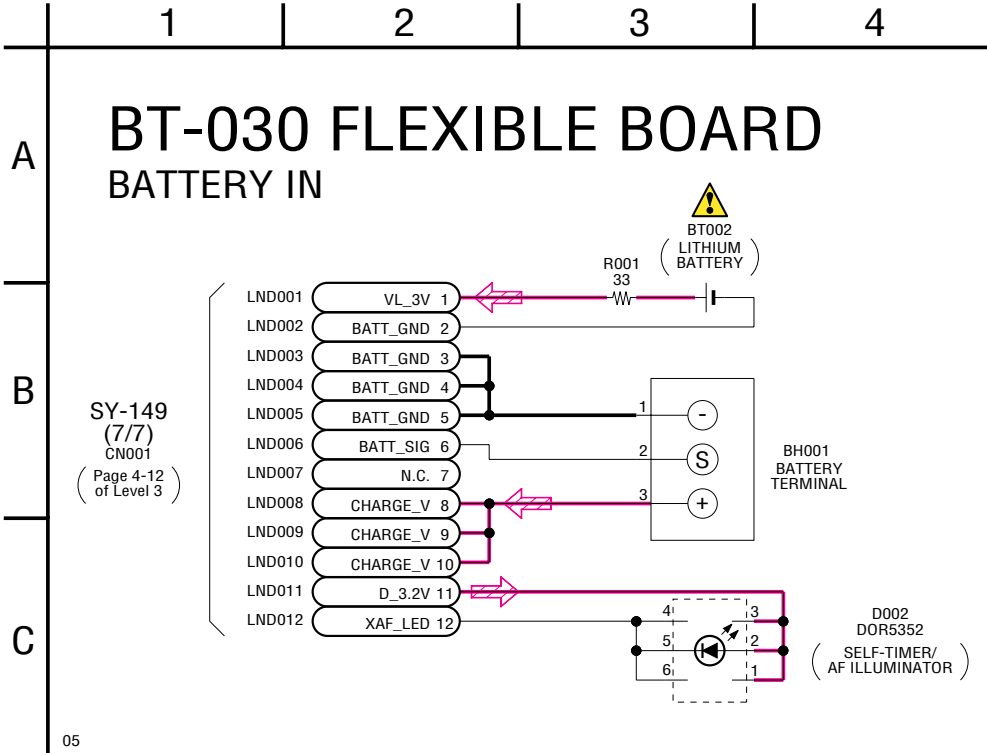
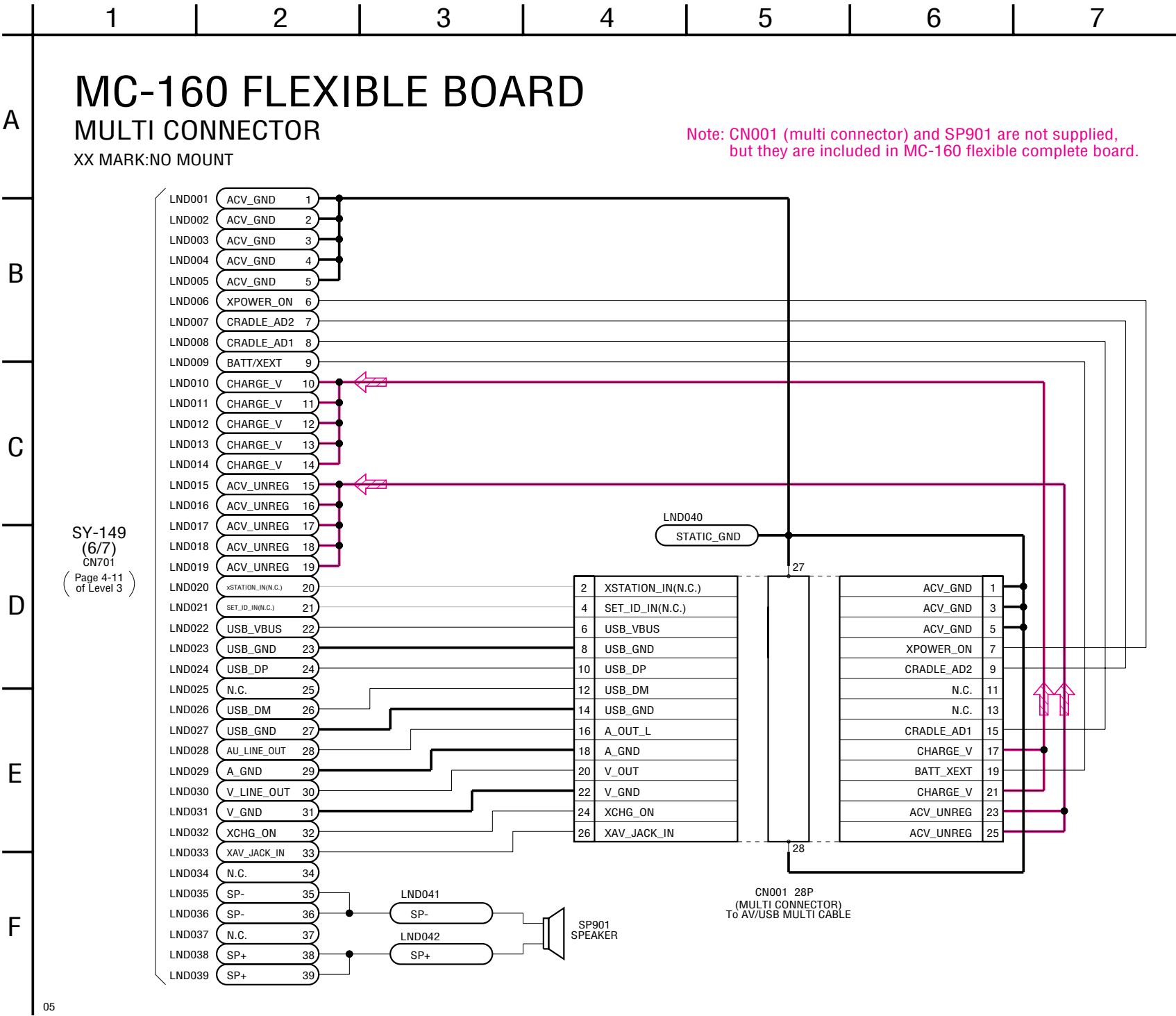
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

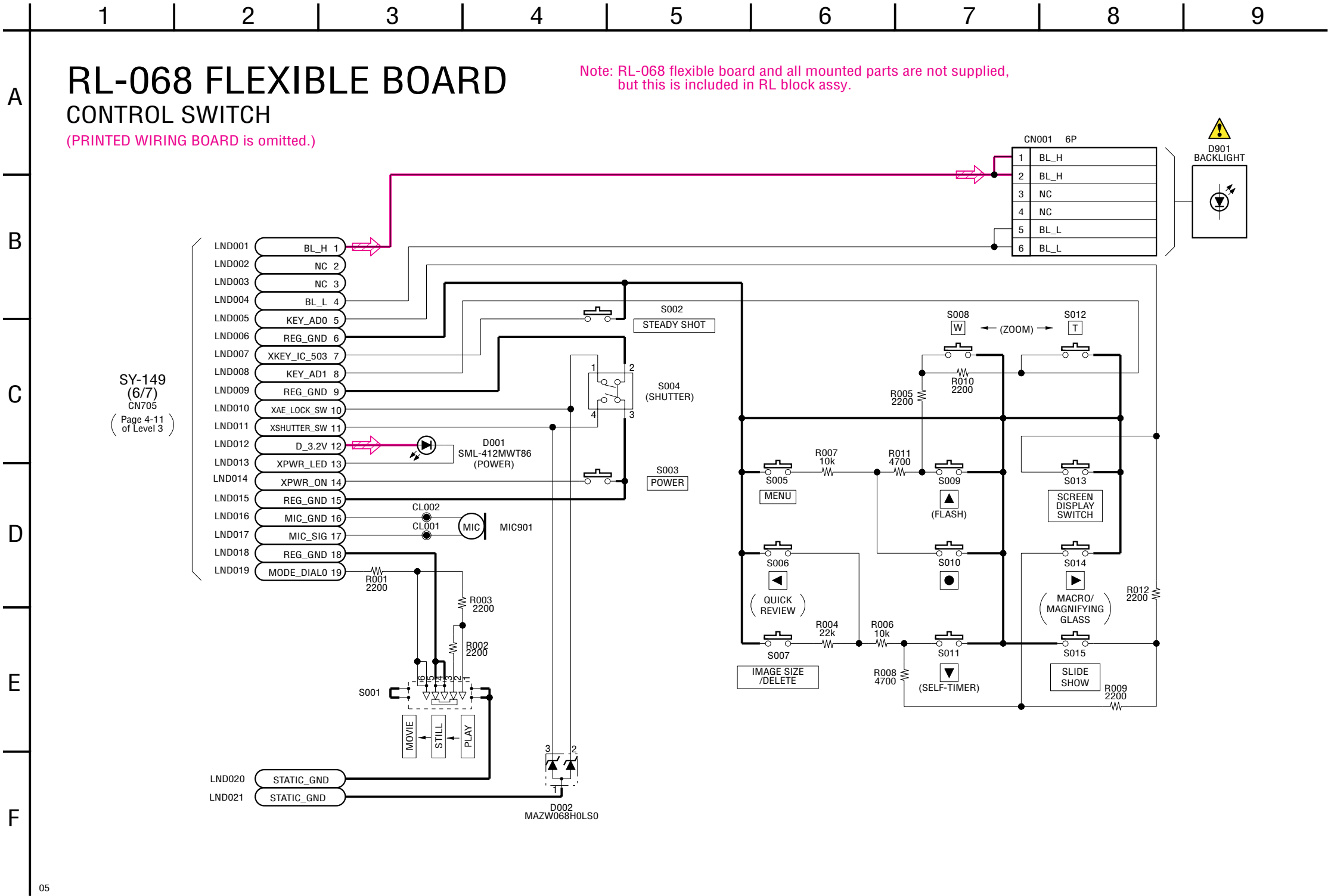
Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CD-614

Schematic diagrams of the SY-149 board are not shown.
Pages from 4-6 to 4-12 are not shown.







4-3. PRINTED WIRING BOARDS

Link

• [CD-614 FLEXIBLE BOARD](#)

• [MC-160 FLEXIBLE BOARD](#)

• [ST-135 FLEXIBLE BOARD](#)







• [BT-030 FLEXIBLE BOARD](#)

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

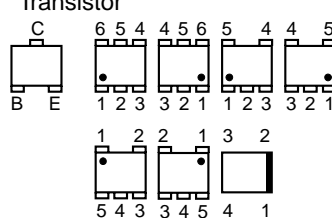
4-3. PRINTED WIRING BOARDS

4-3. PRINTED WIRING BOARDS

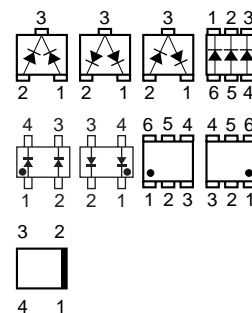
THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

-  : 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

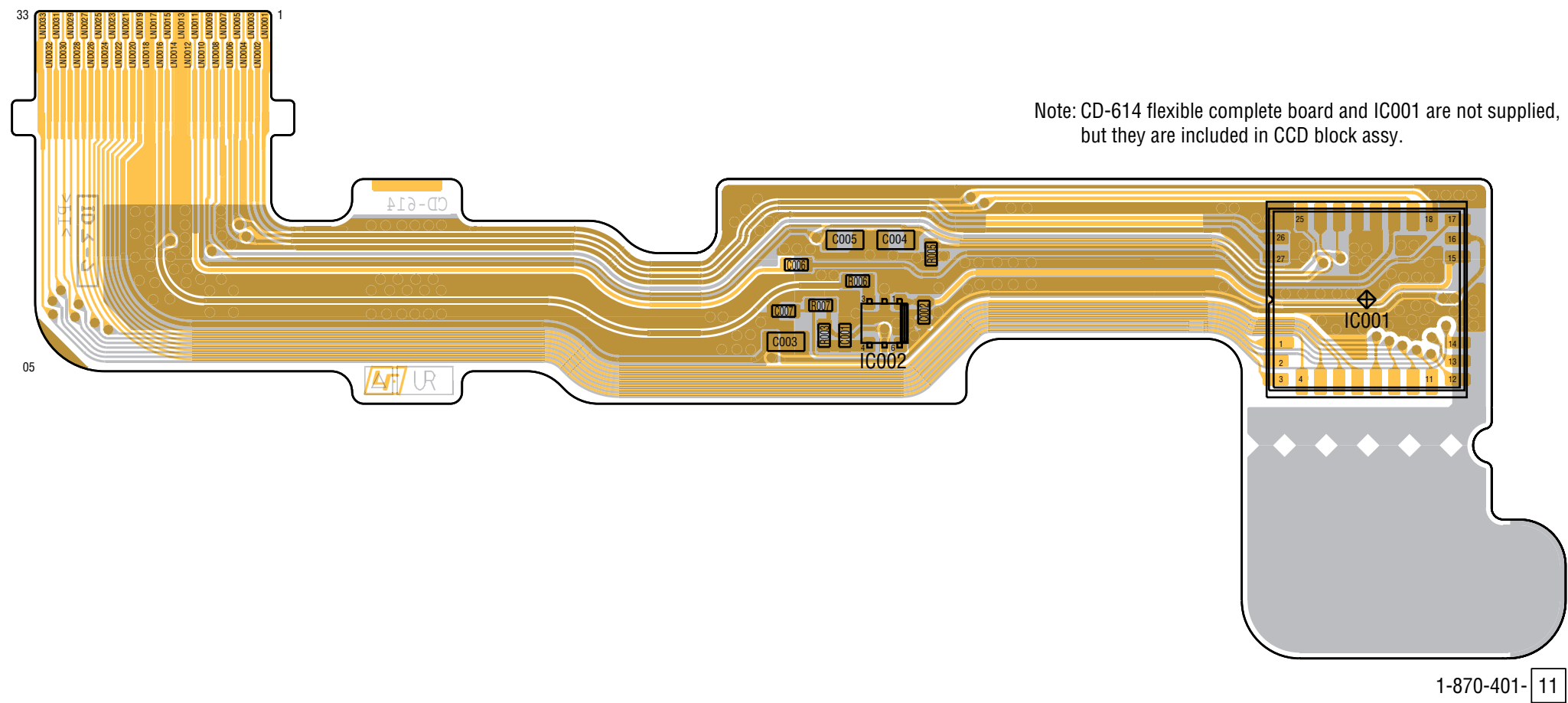
- Chip parts.



Diode

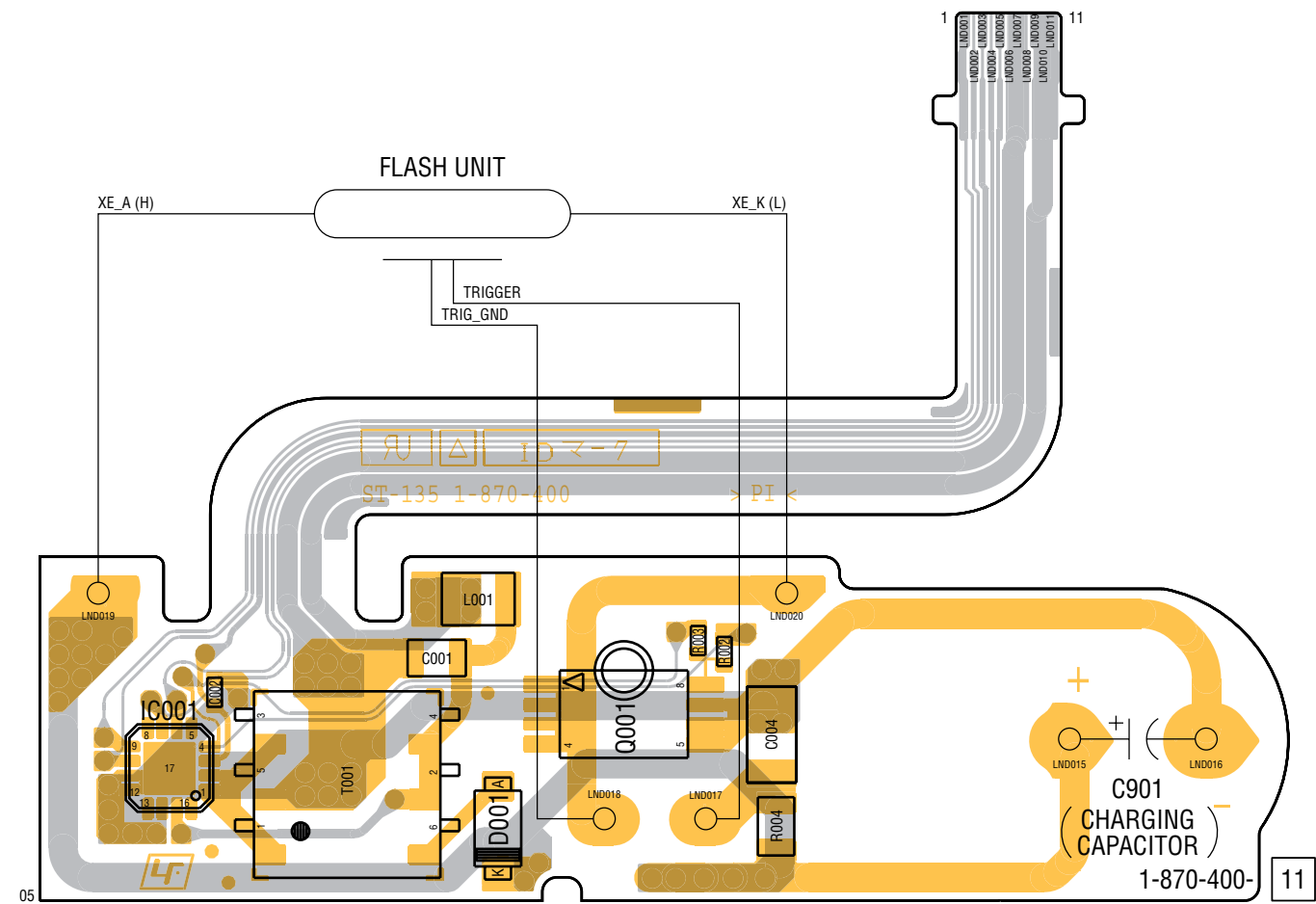


CD-614 FLEXIBLE BOARD

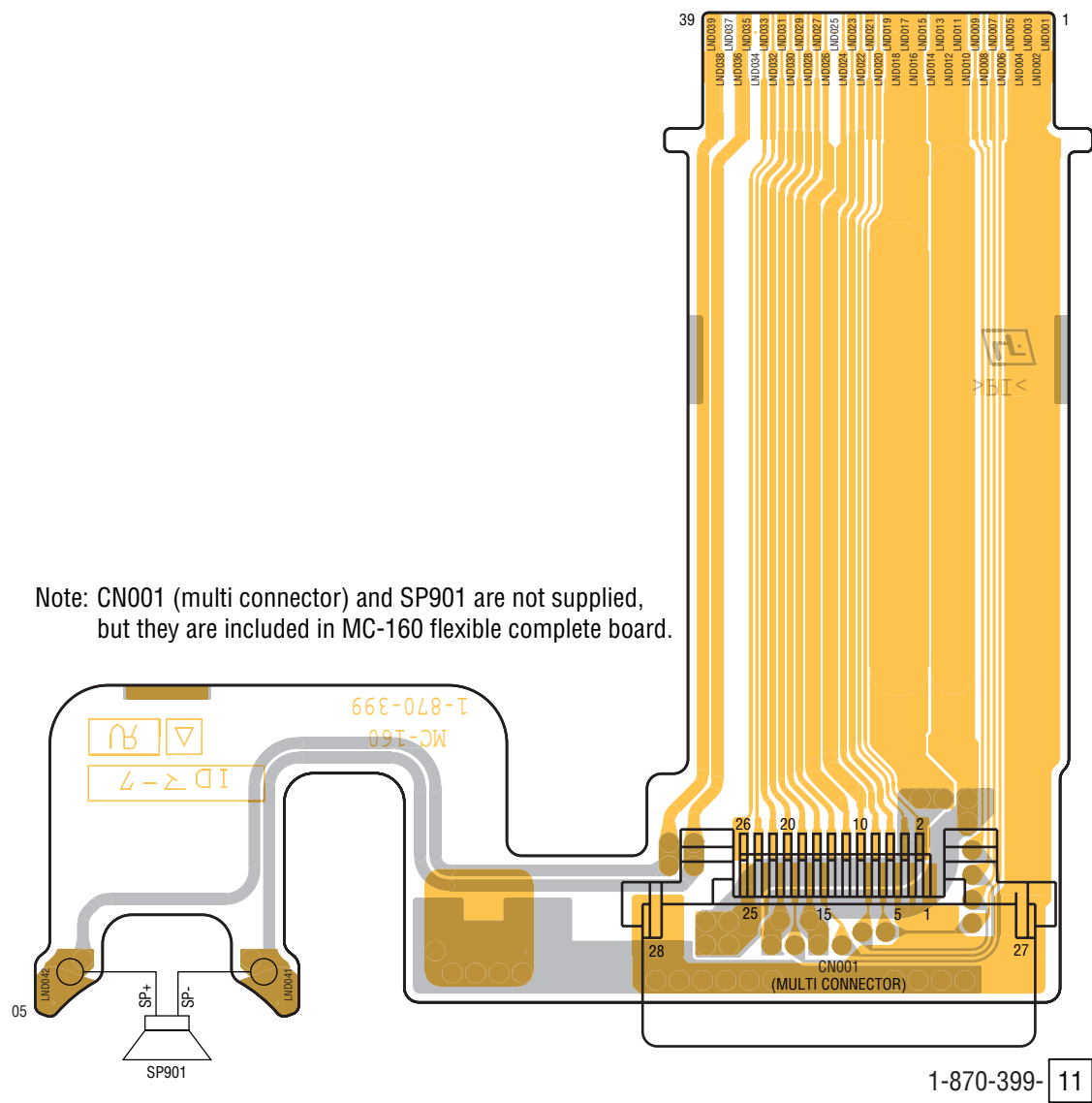


Printed wiring boards of the SY-149 board are not shown.
Pages 4-20 and 4-21 are not shown.

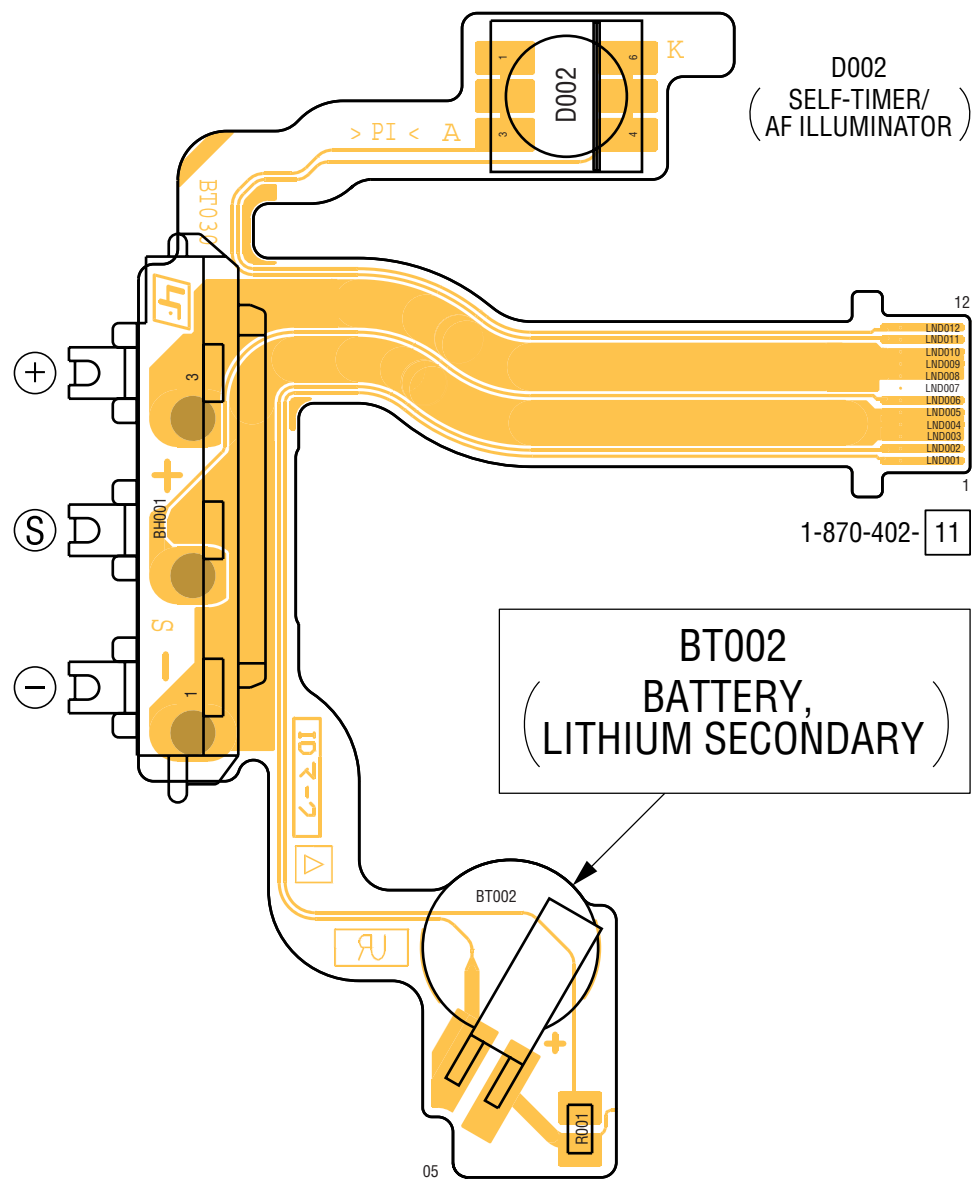
ST-135 FLEXIBLE BOARD



MC-160 FLEXIBLE BOARD



BT-030 FLEXIBLE BOARD



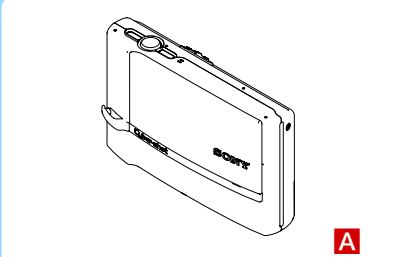
CAUTION
 Danger of explosion if battery is incorrectly replaced.
 Replace only with the same or equivalent type.

Mounted parts location of the SY-149 board is not shown.
Page 4-25 is not shown.

5. REPAIR PARTS LIST

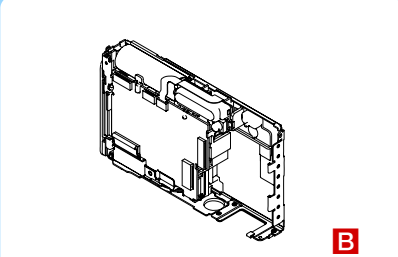
NOTE: Characters **A** to **Z** of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link

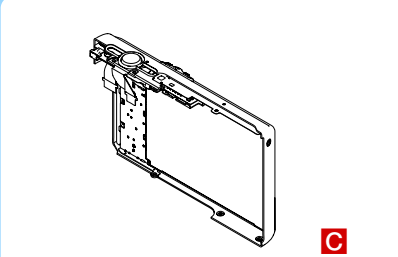
**A**

CABINET AND LENS SECTION

EXPLODED VIEWS

**B**

BATTERY HOLDER BLOCK

**C**

CABINET (REAR) BLOCK

Link

ELECTRICAL PARTS LIST

ACCESSORIES

BT-030 FLEXIBLE BOARD B	MC-160 FLEXIBLE BOARD B	ST-135 FLEXIBLE BOARD B
CD-614 FLEXIBLE BOARD A	RL-068 FLEXIBLE 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
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 about SY-149 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		●			●		●	●	●	●				●							●	●

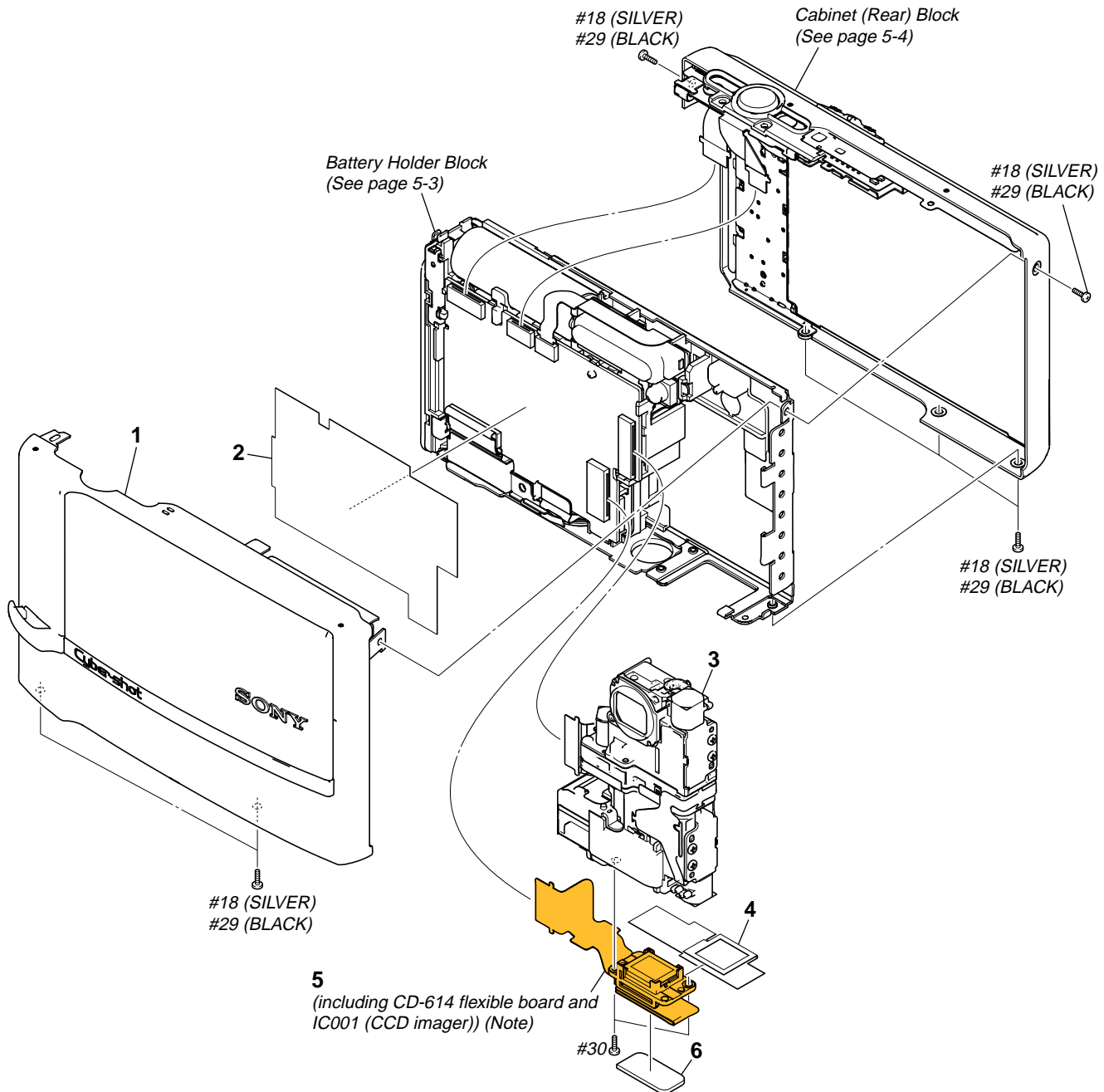
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1. EXPLODED VIEWS

5-1-1. CABINET AND LENS SECTION



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

Ref. No.	Part No.	Description
1	X-2109-426-1	CABINET (FRONT) ASSY (SILVER)
1	X-2109-427-1	CABINET (FRONT) ASSY (BLACK)
* 2	2-679-556-01	SHEET, SY INSULATING
3	A-1167-020-A	LSV-1110A (SERVICE USE)
* 4	2-679-560-01	SHEET, LENS INSULATING
5	A-1182-721-A	CCD BLOCK ASSY (including CD-614 flexible board and IC001 (CCD imager)) (Note)

Ref. No.	Part No.	Description
* 6	2-683-865-01	CUSHION, CD
#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)

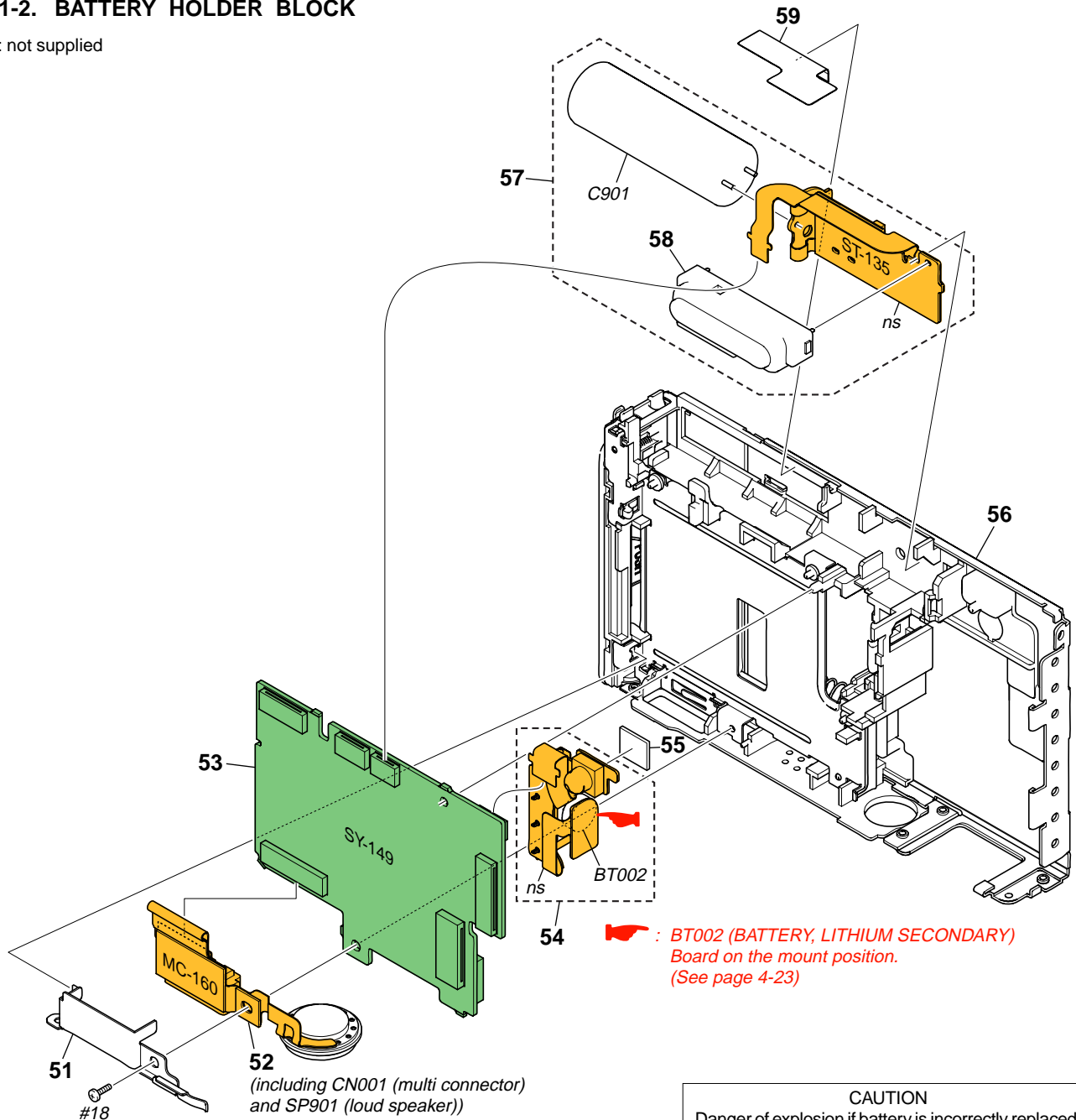
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-2. BATTERY HOLDER BLOCK

ns: not supplied



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

* Refer to the table of page 5-1 about language of SY-149 board.

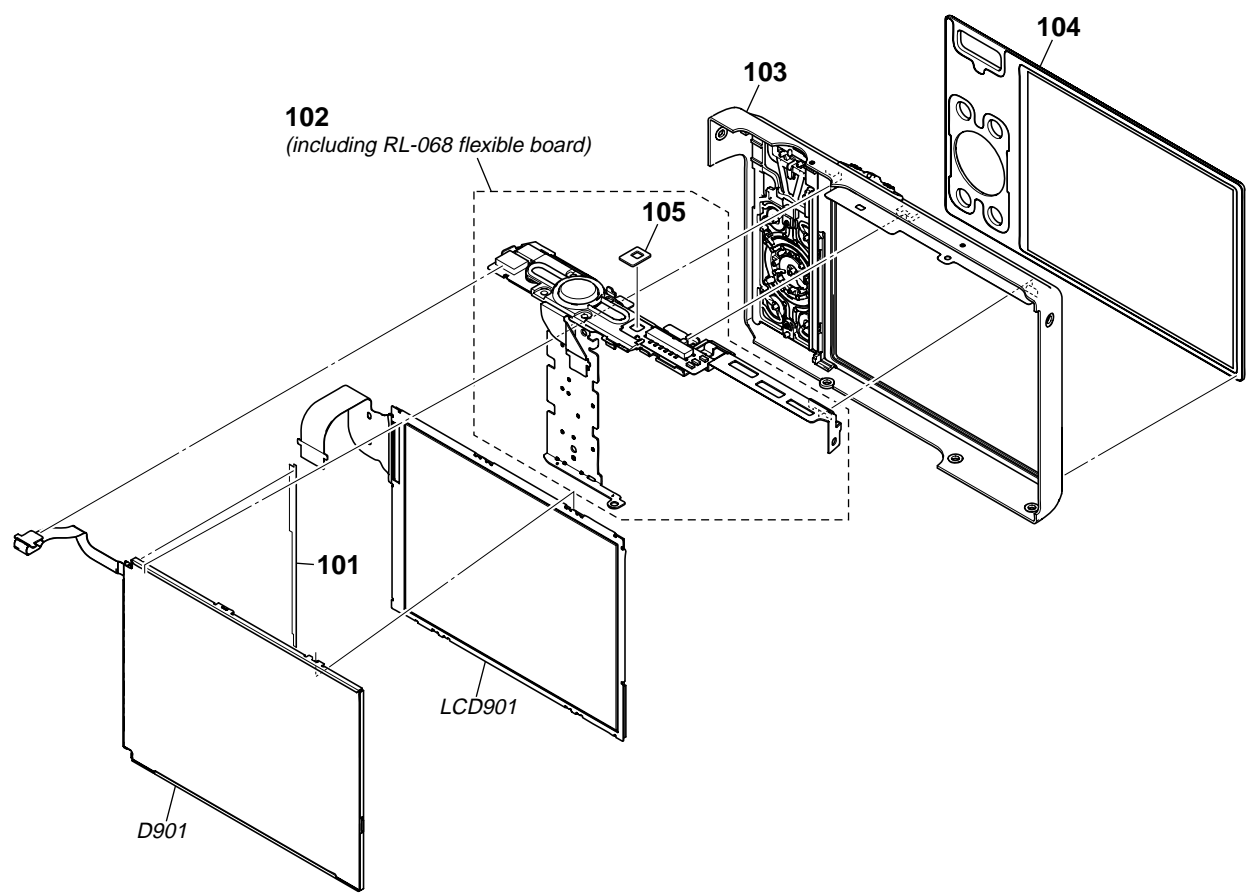
• Refer to page 5-1 for mark ▲.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
* 51	2-679-558-01	PLATE, MC	56	X-2109-419-1	HOLDER ASSY, BATTERY (SILVER)
52	A-1181-186-A	MC-160 FLEXIBLE BOARD, COMPLETE (including CN001 (multi connector) and SP901 (loud speaker))	56	X-2109-420-1	HOLDER ASSY, BATTERY (BLACK)
53	A-1192-560-A	SY-149 BOARD, COMPLETE (SERVICE) (GP1)	57	A-1181-185-A	ST-135 FLEXIBLE BOARD, COMPLETE
53	A-1192-561-A	SY-149 BOARD, COMPLETE (SERVICE) (GP2)	▲ 58	1-478-621-11	FLASH UNIT
53	A-1192-562-A	SY-149 BOARD, COMPLETE (SERVICE) (GP3)	* 59	2-679-554-01	SHEET, ST
53	A-1192-563-A	SY-149 BOARD, COMPLETE (SERVICE) (GP4)	▲* BT002	1-756-566-11	BATTERY, LITHIUM SECONDARY
54	A-1181-188-A	BT-030 FLEXIBLE BOARD, COMPLETE	▲* C901	1-114-138-11	ELECT 106uF 315V
* 55	2-679-561-01	CUSHION, AF	#18	2-635-591-21	SCREW (M1.4), NEW TRUSTAR P2 (Silver)

5. REPAIR PARTS LIST

DISASSEMBLY

5-1-3. CABINET (REAR) BLOCK



• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
* 101	2-679-557-01	SHEET (PANEL), INTERCEPTION
102	A-1182-734-A	RL BLOCK ASSY (including RL-068 flexible board)
103	X-2109-430-1	CABINET (REAR) ASSY (SILVER)
103	X-2109-431-1	CABINET (REAR) ASSY (BLACK)

Ref. No.	Part No.	Description
104	2-679-566-01	WINDOW, LCD
105	2-683-864-01	CUSHION, MIC
△ D901	1-479-700-11	BLOCK, LIGHT GUIDE PLATE (3.0)
LCD901	8-753-259-72	ACX548AK-1

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1181-188-A	BT-030 FLEXIBLE BOARD, COMPLETE *****
		< BATTERY TERMINAL >
BH001	1-780-061-11	BATTERY TERMINAL BOARD
		< BATTERY >
△* BT002	1-756-566-11	BATTERY, LITHIUM SECONDARY
		< DIODE >
* D002	6-501-364-01	DIODE DOR5352 (SELF-TIMER/AF ILLUMINATOR)
		< RESISTOR >
R001	1-216-803-11	METAL CHIP 33 5% 1/10W
		< CAPACITOR >
	A-1182-721-A	CCD BLOCK ASSY (Note)
	(Not supplied)	CD-614 FLEXIBLE BOARD, COMPLETE ***** (CD-614 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
		< CONNECTOR >
CN001	(Not supplied)	CONNECTOR, MULTIPLE (SOCKET)
		< SPEAKER >
SP901	(Not supplied)	LOUD SPEAKER (1.3CM)

A-1181-186-A MC-160 FLEXIBLE BOARD, COMPLETE

(CN001 (multi connector) and SP901 are not supplied,
but they are included in MC-160 flexible complete board.)

< CONNECTOR >

CN001 (Not supplied) CONNECTOR, MULTIPLE (SOCKET)

< SPEAKER >

SP901 (Not supplied) LOUD SPEAKER (1.3CM)

CAUTION

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

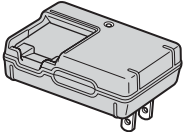
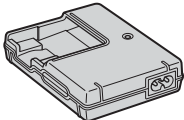
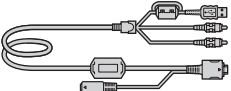

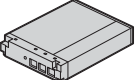
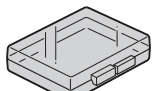

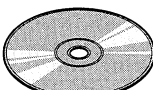


Note: Be sure to read "Precautions for Replacement of Imager" on page 4-3 when changing the imager.

Ref. No.	Part No.	Description
	A-1182-734-A	RL BLOCK ASSY
	(Not supplied)	RL-068 FLEXIBLE BOARD ***** (RL-068 flexible board and all mounted parts are not supplied, but this is included in RL block assy.)
		< CAPACITOR >
	A-1181-185-A	ST-135 FLEXIBLE BOARD, COMPLETE *****
△	1-478-621-11	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	1-114-138-11	ELECT 106uF 315V
		< DIODE >
D001	6-501-096-01	DIODE CRF02 (TE85R)
		< IC >
IC001	6-707-555-01	IC TPS65552RGTR
		< COIL >
* L001	1-400-820-11	INDUCTOR 2.2uH
		< TRANSISTOR >
Q001	6-550-656-01	TRANSISTOR CY25BAJ-8F-T23
		< RESISTOR >
R002	1-243-975-11	METAL CHIP 4.7M 5% 1/16W
R003	1-208-647-11	METAL CHIP 33 0.5% 1/16W
R004	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-149 board is
not shown.
Pages 5-6 to 5-9 are not shown.

• Refer to page 5-1 for mark △.

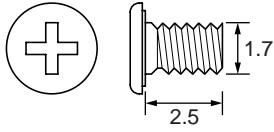
Checking supplied accessories.

		Other accessories	
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, BR, J)	2-675-569-01 INSTRUCTION (READ THIS FIRST) (JAPANESE) (J) 2-675-569-11 INSTRUCTION (READ THIS FIRST) (ENGLISH) (AEP, UK, E, HK, AUS, JE) 2-675-569-21 INSTRUCTION (READ THIS FIRST) (FRENCH, ITALIAN) (AEP) 2-675-569-31 INSTRUCTION (READ THIS FIRST) (SPANISH, PORTUGUESE) (AEP, E, JE) 2-675-569-41 INSTRUCTION (READ THIS FIRST) (GERMAN, DUTCH) (AEP)	
 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) ▲ 1-792-549-31 (JE) ▲ 1-823-947-51 (KR) ▲ 1-824-910-31 (AEP, E) ▲ 1-827-269-22 (UK)	2-675-569-51 INSTRUCTION (READ THIS FIRST) (TRADITIONAL CHINESE, SIMPLIFIED CHINESE) (E, HK, CH, JE) 2-675-569-61 INSTRUCTION (READ THIS FIRST) (RUSSIAN) (AEP) 2-675-569-71 INSTRUCTION (READ THIS FIRST) (ARABIC, PERSIAN) (E) 2-675-569-81 INSTRUCTION (READ THIS FIRST) (KOREAN) (KR, JE) 2-675-569-91 INSTRUCTION (READ THIS FIRST) (CZECH, POLISH) (AEP)	
 Rechargeable Battery Pack NP-FR1 (not supplied)	 Battery Case (not supplied)	2-675-570-11 INSTRUCTION (READ THIS FIRST) (HUNGARIAN, SLOVAK) (AEP) 2-675-570-21 INSTRUCTION (READ THIS FIRST) (SWEDISH, FINNISH) (AEP) 2-675-570-31 INSTRUCTION (READ THIS FIRST) (NORWEGIAN, DANISH) (AEP) 2-675-571-11 INSTRUCTION (READ THIS FIRST) (ENGLISH) (US, CND) 2-675-571-21 INSTRUCTION (READ THIS FIRST) (FRENCH, ITALIAN) (CND)	
 Wrist Strap 2-050-981-11	 CD-ROM (Cyber-shot Application Software) 2-679-617-01	2-675-572-01 INSTRUCTION (USER'S GUIDE) (JAPANESE) (J) 2-675-572-11 INSTRUCTION (USER'S GUIDE) (ENGLISH) (EXCEPT KR, CH) 2-675-572-21 INSTRUCTION (USER'S GUIDE) (FRENCH, ITALIAN) (CND, AEP) 2-675-572-31 INSTRUCTION (USER'S GUIDE) (SPANISH, PORTUGUESE) (AEP, E, JE) 2-675-572-41 INSTRUCTION (USER'S GUIDE) (GERMAN, DUTCH) (AEP)	
 Conversion (2P) Adaptor ▲ 1-569-007-12 (JE)	 Conversion (2P) Adaptor ▲ 1-569-008-12 (E)	2-675-572-51 INSTRUCTION (USER'S GUIDE) (TRADITIONAL CHINESE, SIMPLIFIED CHINESE) (E, HK, CH, JE) 2-675-572-61 INSTRUCTION (USER'S GUIDE) (RUSSIAN) (AEP) 2-675-572-71 INSTRUCTION (USER'S GUIDE) (ARABIC, PERSIAN) (E) 2-675-572-81 INSTRUCTION (USER'S GUIDE) (KOREAN) (KR, JE) 2-675-572-91 INSTRUCTION (USER'S GUIDE) (CZECH, POLISH) (AEP) 2-675-573-11 INSTRUCTION (USER'S GUIDE) (HUNGARIAN, SLOVAK) (AEP) 2-675-573-21 INSTRUCTION (USER'S GUIDE) (SWEDISH, FINNISH) (AEP) 2-675-573-31 INSTRUCTION (USER'S GUIDE) (NORWEGIAN, DANISH) (AEP)	

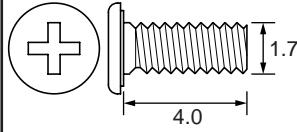
• Refer to the page 5-1 for mark ▲.

HARDWARE LIST (1/2)

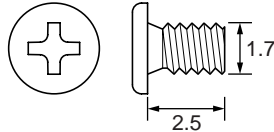
#1: M1.7 X 2.5
(Black)
2-635-562-11



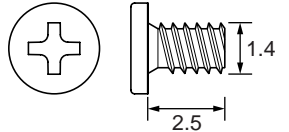
#2: M1.7 X 4.0
(Black)
2-635-562-31



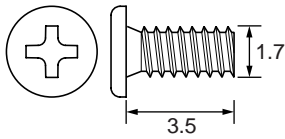
#3: M1.7 X 2.5
(Red)
2-660-401-01



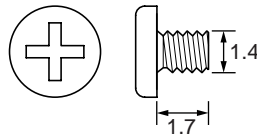
#4: M1.4 X 2.5 (Tapping)
(Dark Silver)
3-348-998-81



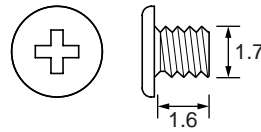
#5: M1.7 X 3.5 (Tapping)
(Black)
3-080-204-01



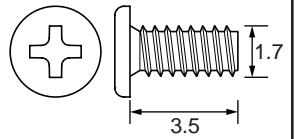
#6: M1.4 X 1.7
(Silver)
2-598-474-01



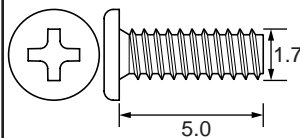
#7: M1.7 X 1.6
(Black)
7-627-552-18



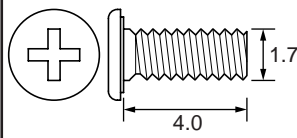
#8: M1.7 X 3.5 (Tapping)
(Silver)
3-078-890-01



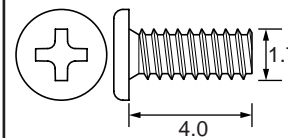
#9: M1.7 X 5.0 (Tapping)
(Silver)
3-078-890-21



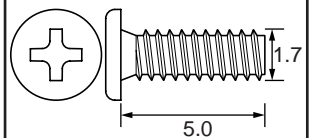
#10: M1.7 X 4.0
(Silver)
2-599-475-31



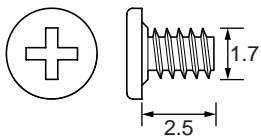
#11: M1.7 X 4.0 (Tapping)
(Silver)
3-078-890-11



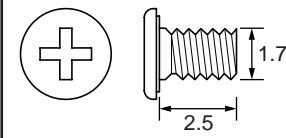
#12: M1.7 X 5.0 (Tapping)
(Black)
3-080-204-21



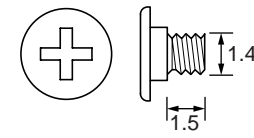
#13: M1.7 X 2.5 (Tapping)
(Silver)
3-085-397-01



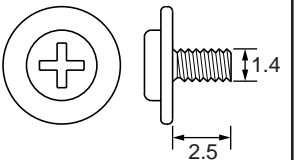
#14: M1.7 X 2.5
(Silver)
2-599-475-11



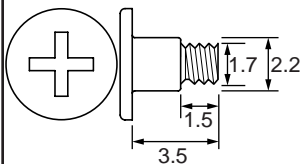
#15: M1.4 X 1.5
(Silver)
3-062-214-01



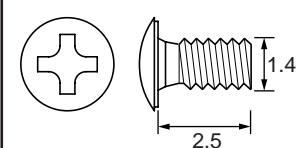
#16: M1.4 X 2.5
(Silver)
2-586-337-01



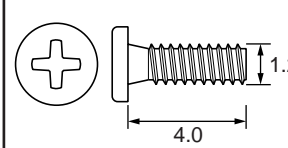
#17: M1.7 X 1.5
(Silver)
2-586-389-01



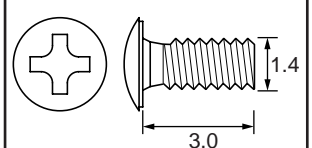
#18: M1.4 X 2.5
(Silver)
2-635-591-21



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

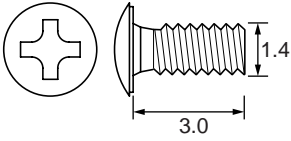


#20: M1.4 X 3.0
(Silver)
2-635-591-31

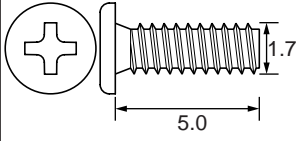


HARDWARE LIST (2/2)

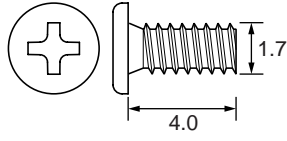
#21: M1.4 X 3.0
(Black)
2-662-396-21



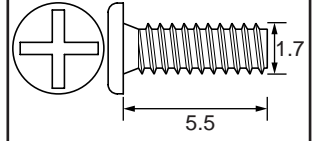
#22: M1.7 X 5.0 (Tapping)
(Silver)
3-083-261-01



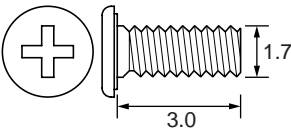
#23: M1.7 X 4.0 (Tapping)
(Black)
3-080-204-11



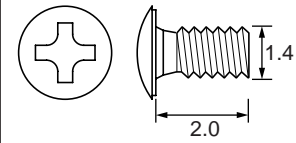
#24: B1.7 X 5.5 (Tapping)
(Black)
4-679-805-11



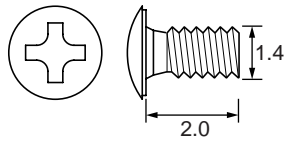
#25: M1.7 X 3.0
(Black)
2-635-562-21



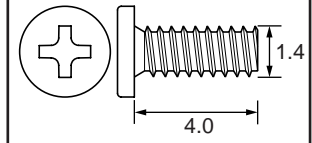
#26: M1.4 X 2.0
(Silver)
2-635-591-11



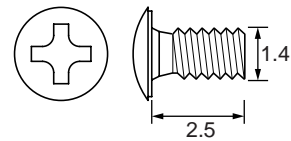
#27: M1.4 X 2.0
(Black)
2-662-396-11



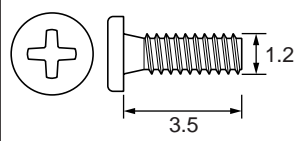
#28: M1.4 X 4.0 (Tapping)
(Dark Silver)
3-348-998-61



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




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




[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:

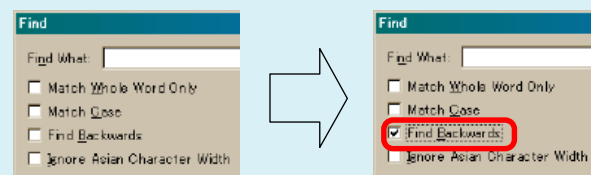
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

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.

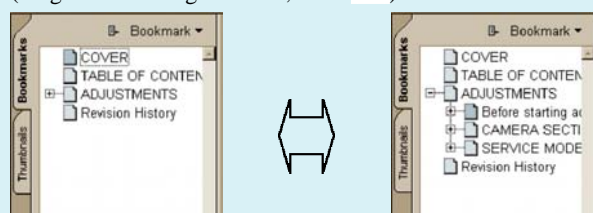
Moving with link

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:

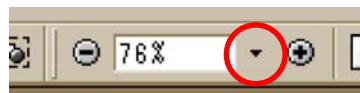
Click an item (text) on the bookmark pallet. and you can move to the link destination. Also, clicking  can display the hidden items.

(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	2006.03	Official Release	—	—