

DSC-H50

RMT-DSC2

SONY®

LEVEL 2

SERVICE MANUAL

Ver. 1.2 2008.09

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

SUPPLEMENT-1

File this supplement with the service manual previously issued.
(DI08-234)

- Change of Repair Parts

2. DISASSEMBLY

2-2. DISASSEMBLY

: Changed portion.

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5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

: Changed portion.

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5-7	<p>5-1-6. LCD SECTION</p> <p>254</p> <p>255</p> <p>256</p> <p>#14</p> <p>257</p>	<p>5-1-6. LCD SECTION</p> <p>254</p> <p>255</p> <p>256</p> <p>#1</p> <p>257</p>

SONY®

SERVICE MANUAL

Ver. 1.3 2009.06

LEVEL 3

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

SUPPLEMENT-2


File this supplement with the service manual.
 (DI09-081)

Subject

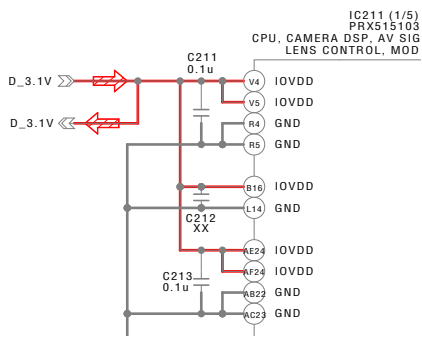
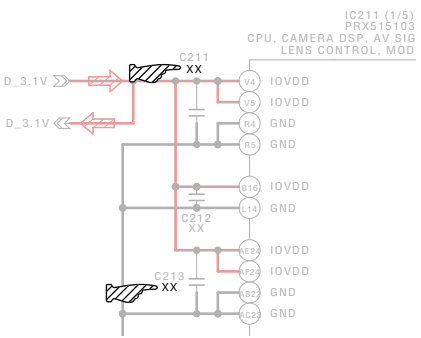
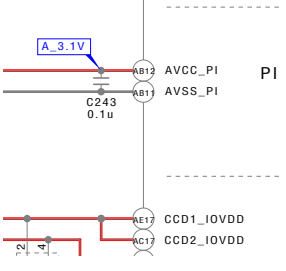
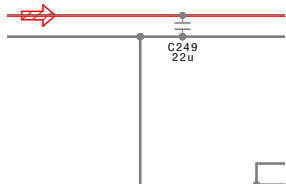
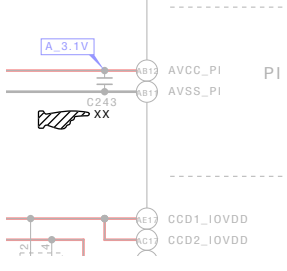
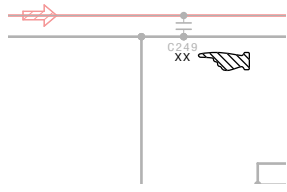
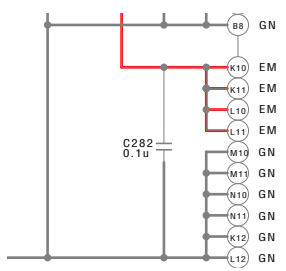
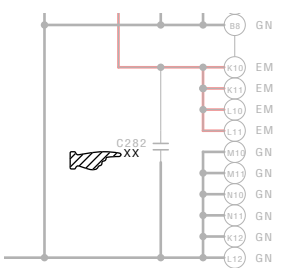
- Change of Schematic Diagrams
- Change of Electrical Parts List

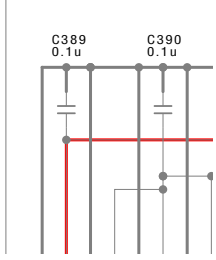
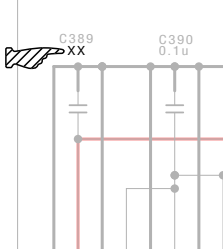
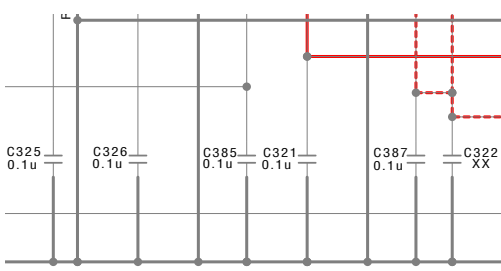
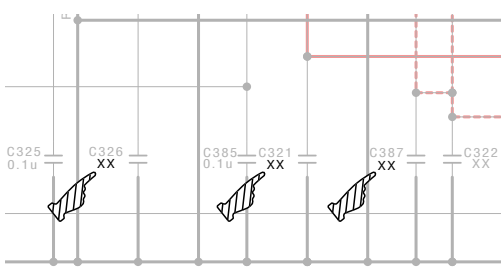
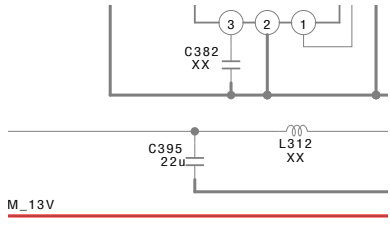
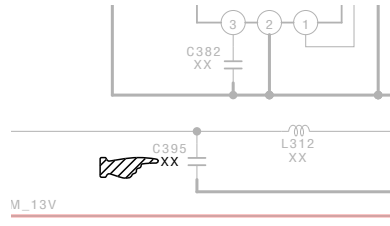
4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

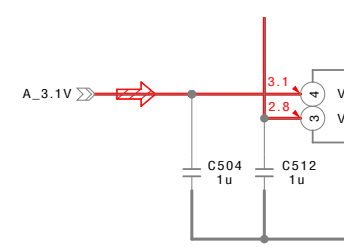
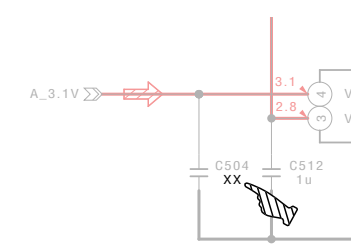
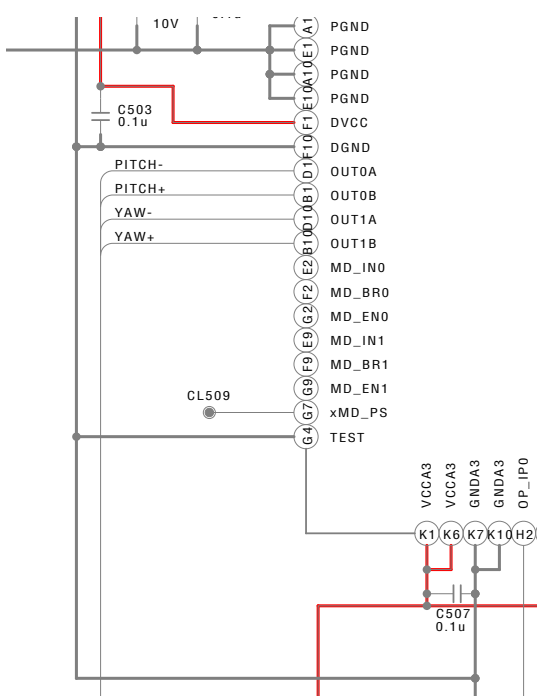
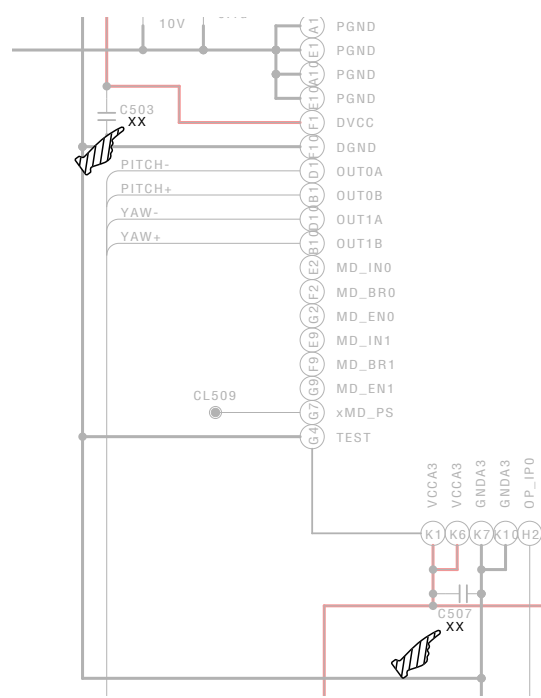
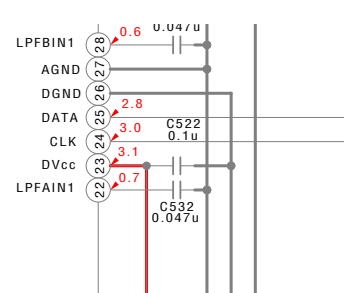
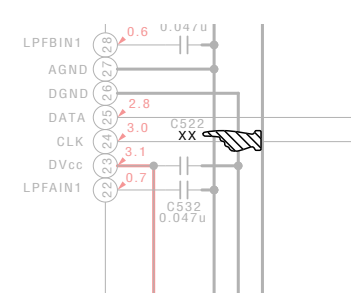
4-2. SCHEMATIC DIAGRAMS

 : Points changed portion

Page	Before Change	After Change
4-5	<p>SY-201 BOARD (1/10) (Location: F-7 to G-9)</p>	<p>SY-201 BOARD (1/10) (Location: F-7 to G-9)</p>
4-6	<p>SY-201 BOARD (2/10) (Location: C-2 to C-3)</p>	<p>SY-201 BOARD (2/10) (Location: C-2 to C-3)</p>

Page	Before Change	After Change
4-7	<p>SY-201 BOARD (3/10) (Location: A-2 to B-3)</p>  <p>IC211 (1/5) PRX515103 CPU, CAMERA DSP, AV SIG LENS CONTROL, MOD</p>	<p>SY-201 BOARD (3/10) (Location: A-2 to B-3)</p>  <p>IC211 (1/5) PRX515103 CPU, CAMERA DSP, AV SIG LENS CONTROL, MOD</p>
4-8	<p>SY-201 BOARD (4/10) (Location: C-3)</p>  <p>SY-201 BOARD (4/10) (Location: B-7)</p> 	<p>SY-201 BOARD (4/10) (Location: C-3)</p>  <p>SY-201 BOARD (4/10) (Location: B-7)</p> 
4-9	<p>SY-201 BOARD (5/10) (Location: C-6)</p> 	<p>SY-201 BOARD (5/10) (Location: C-6)</p> 

Page	Before Change	After Change
4-10	<p>SY-201 BOARD (6/10) (Location: A-6 to B-7)</p> 	<p>SY-201 BOARD (6/10) (Location: A-6 to B-7)</p> 
	<p>SY-201 BOARD (6/10) (Location: F-6 to G-7)</p> 	<p>SY-201 BOARD (6/10) (Location: F-6 to G-7)</p> 
	<p>SY-201 BOARD (6/10) (Location: E-10 to F-11)</p> 	<p>SY-201 BOARD (6/10) (Location: E-10 to F-11)</p> 

Page	Before Change	After Change
4-12	<p>SY-201 BOARD (8/10) (Location: F-2 to F-3)</p> 	<p>SY-201 BOARD (8/10) (Location: F-2 to F-3)</p> 
	<p>SY-201 BOARD (8/10) (Location: C-4 to E-5)</p> 	<p>SY-201 BOARD (8/10) (Location: C-4 to E-5)</p> 
	<p>SY-201 BOARD (8/10) (Location: D-10 to D-11)</p> 	<p>SY-201 BOARD (8/10) (Location: D-10 to D-11)</p> 

✂ : Points changed portion

Page	Before Change	After Change
4-13	<p>SY-201 BOARD (9/10) (Location: C-2 to C-3)</p>	<p>SY-201 BOARD (9/10) (Location: C-2 to C-3)</p>
	<p>SY-201 BOARD (9/10) (Location: D-2 to E-3)</p>	<p>SY-201 BOARD (9/10) (Location: D-2 to E-3)</p>

5. REPAIR PARTS LIST

5-2. ELECTRICAL PARTS LIST

✂ : Points deleted portion

Page	Before change	After change																																																																								
5-12	<p>SY-201 BOARD</p> <table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">< CAPACITOR ></td> </tr> <tr> <td>C044</td> <td>1-100-611-91</td> <td>CERAMIC CHIP 22uF 20% 6.3V</td> </tr> <tr> <td>C064</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>C209</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>C211</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>C213</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>C243</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>C249</td> <td>1-100-611-91</td> <td>CERAMIC CHIP 22uF 20% 6.3V</td> </tr> <tr> <td>C282</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> <tr> <td>* C321</td> <td>1-114-582-11</td> <td>CERAMIC CHIP 0.1uF 10% 16V</td> </tr> <tr> <td>C326</td> <td>1-125-777-11</td> <td>CERAMIC CHIP 0.1uF 10% 10V</td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	< CAPACITOR >			C044	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V	C064	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C209	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C211	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C213	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C243	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C249	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V	C282	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	* C321	1-114-582-11	CERAMIC CHIP 0.1uF 10% 16V	C326	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	<p>SY-201 BOARD</p> <table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
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DSC-H50

RMT-DSC2

SERVICE MANUAL

LEVEL 2

Ver. 1.4 2009.08

Revision History

Internal memory
ON BOARD

Revised-3

Replace the previously issued
SERVICE MANUAL 9-852-286-33
with this Manual.



Photo: Black

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Argentine Model
Brazilian Model
Thai 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-201 Board

The components identified by
mark \triangle or dotted line with
mark \triangle are critical for safety.
Replace only with part num-
ber 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: 7.70 mm (1/2.3 type) color CCD, Primary color filter
• Only 7.30mm (1/2.5type equivalent) area is used in the camera.

Total pixel number of camera: Approx. 10.3 Megapixels

Effective pixel number of camera: Approx. 9.1 Megapixels

Lens: Carl Zeiss Vario-Tessar 15Å~ zoom lens

f = 5.2 - 78 mm (31 - 465 mm (35 mm film equivalent))

F2.7(W) - 4.5(T)

Exposure control: Automatic exposure, Shutter speed priority, Aperture priority, Manual exposure, Scene Selection (10 modes)

White balance: Automatic, Daylight, Cloudy, Fluorescent 1,2,3, Incandescent, Flash, One push

File format (DCF compliant):

Still images: Exif Ver. 2.21 JPEG compliant, DPOF compatible

Movies: MPEG1 compliant (Monaural)

Recording media: Internal Memory (approx. 15MB), "Memory Stick Duo"

Flash: Flash range (ISO sensitivity

(Recommended exposure Index) set to Auto):

Approx. 0.2 to 9.1m (77/8inches to 29feet 103/8inches) (W)/

approx. 1.2 to 5.5m (3feet 111/4inches to 18feet 5/8inches) (T)

Viewfinder: Electric view finder (color)

[Input and Output connectors]

Multi connector: Video output

Audio output (Monaural)

USB communication

USB communication: Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel: 7.5cm (3.0type) TFT drive

Total number of dots: 230 400 (960 Å~ 240) dots

[Finder]

Panel: 0.5cm (0.2type) color

Total number of dots: Approx. 200 000 dots equivalent

[Power, general]

Power: Rechargeable battery pack

NP-BG1, 3.6V

NP-FG1 (not supplied), 3.6V

AC-LS5K AC Adaptor (not supplied), 4.2V

Power consumption (during shooting, LCD screen on): 1.1 W

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: -20 to +60°C (-4 to +140°F)

Dimensions: 116.1 × 81.4 × 86.0mm

(45/8 × 31/4 × 31/2inches) (W/H/D, excluding protrusions)

Mass: Approx. 547g (1lb 3.3oz)

(including NP-BG1 battery pack, strap, etc.)

Microphone: Monaural

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III: Compatible

PictBridge: Compatible

BC-CSGB/BC-CSGC battery charger

Power requirements: AC 100V to 240V, 50/60Hz, 2.6W (BC-CSGB)/2W (BC-CSGC)

Output voltage: DC 4.2V, 0.25A

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: -20 to +60°C (-4 to +140°F)

Dimensions: Approx. 62 × 24 × 91mm

(2 1/2 × 31/32 × 35/8 inches) (W/H/D)

Mass: Approx. 75g (2.7oz)

Rechargeable battery pack NP-BG1

Used battery: Lithium-ion battery

Maximum voltage: DC 4.2V

Nominal voltage: DC 3.6V

Capacity: 3.4Wh (960mAh)

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.

1-1. PRECAUTION ON REPLACING THE SY-201 BOARD

DESTINATION DATA

When you replace to the repairing board, the written destination data of repairing board also might be changed to original setting. Refer to Service Manual ADJ, and perform "DESTINATION DATA WRITE".

USB SERIAL No.

The set is shipped with a unique ID (USB Serial No.) written in it.

This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.

Refer to Service Manual ADJ, and perform "USB SERIAL No. INPUT".

1-2. SELF-DIAGNOSIS FUNCTION

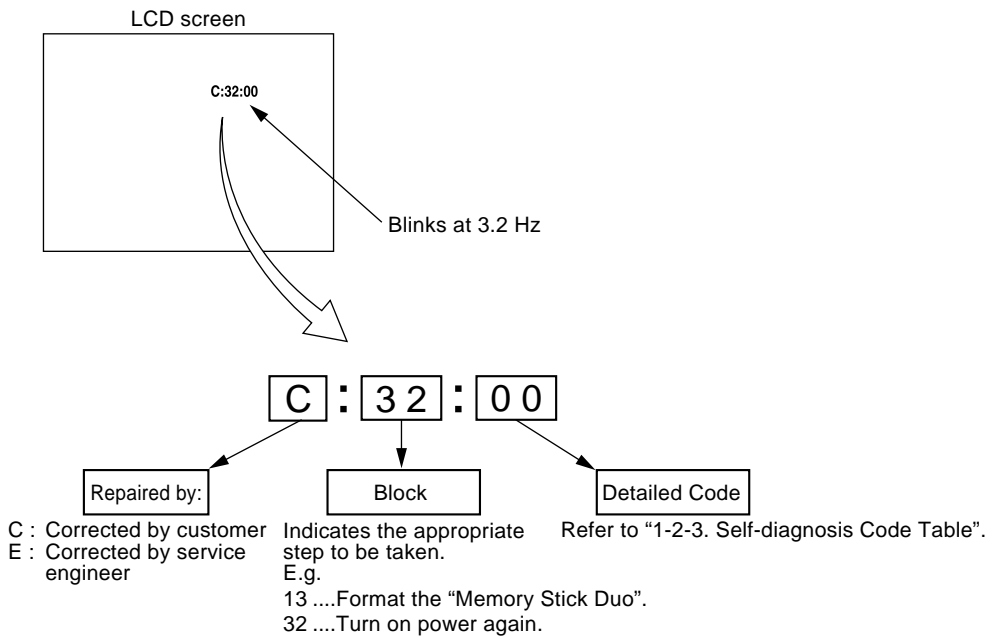
1-2-1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the LCD screen what to do.

Details of the self-diagnosis functions are provided in the Instruction manual.

1-2-2. Self-diagnosis Display

When problems occur while the unit is operating, the LCD screen shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the "repaired by:", "block" in which the problem occurred, and "detailed code" of the problem.



1-2-3. Self-diagnosis Code Table

Self-diagnosis Code			Symptom/State	Correction
Repaired by:	Block Function	Detailed Code		
C	1 3	0 1	The internal memory has experienced a format error.	Format the internal memory.
			“Memory Stick Duo” is unformatted.	Format the “Memory Stick Duo”.
			“Memory Stick Duo” is broken.	Insert a new “Memory Stick Duo”.
			“Memory Stick Duo” type error	Insert a supported “Memory Stick Duo”.
			The camera cannot read or write data on the “Memory Stick Duo”.	Turn the power off and on again, or taking out and inserting the “Memory Stick Duo” several times.
C	3 2	0 1	Trouble with hardware	Turn the power off and on again.
E	6 1	0 0	Difficult to adjust focus (Cannot initialize focus)	Retry turn the power on by the power switch. If it does not recover, check the focus reset sensor of lens block (pin ⑳ of CN401 on the SY-201 board). If it is OK, check the focus motor drive IC (IC401 on the SY-201 board).
E	6 1	1 0	Zoom operations fault (Cannot initialize zoom lens.)	Retry turn the power on by the power switch. Check the zoom reset sensor of lens block (pin ㉑ of CN401 on the SY-201 board), if zooming is performed when the zoom button is operated. If it is OK, check the zoom motor drive IC (IC401 on the SY-201 board).
E	6 2	0 2	Abnormality of IC for steadyspot.	Check or replacement of the IC for steadyspot (IC503 on the SY-201 board).
E	6 2	1 0	Lens initializing failure.	Check or replacement of the IC for steadyspot (IC503 on the SY-201 board).
E	6 2	1 1	Lens overheating (PITCH).	Check the HALL element (PITCH) of optical image stabilizer (pin ㉓, ㉔ of CN401 on the SY-201 board). If it is OK, check PITCH/YAW angular velocity sensor (SE502 on the SY-201 board) peripheral circuits.
E	6 2	1 2	Lens overheating (YAW).	Check the HALL element (YAW) of optical image stabilizer (pin ㉕, ㉖ of CN401 on the SY-201 board). If it is OK, check PITCH/YAW angular velocity sensor (SE501 on the SY-201 board) peripheral circuits.
E	6 2	2 0	Abnormality of thermistor.	Replacement of lens block.
E	9 1	0 1	Abnormality when flash is being charged.	Checking of flash unit or replacement of flash unit. (Note)
E	9 2	0 0	Non-standard battery is used.	Use the compatible battery only.

Note: After repair, be sure to perform “1-3. PROCESS AFTER FIXING FLASH ERROR”.

1-3. PROCESS AFTER FIXING FLASH ERROR

When “FLASH error” (Self-diagnosis Code E : 91 : 01) 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 HOME screen.

Method for Initializing the Flash Error Code

Initialize

Initializes the setting to the default setting. Even if you execute this function, the images stored in the internal memory are retained.

- ① Select [Initialize] with ▲/▼ on the control button, then press ●.
The message “Initialize all settings” appears.
- ② Select [OK] with ▲, then press ●.
The settings are reset to the default setting.

To cancel initializing

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

- Be sure not to power off the camera while initializing.

1-4. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

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

Note 1: When replacing the SY-201 board, erase the data in internal memory of the board before replacement.

Note 2: When replacing the SY-201 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 sufficient free capacity.
- ② Select [Copy] with ▲/▼ on the control button, then press ●.
The message “All data in internal memory will be copied” appears.
- ③ Select [OK] with ▲, then press ●.
Copying starts.

To cancel copying

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

- Use a fully charged battery pack. 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 select images to copy.
- 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 format the internal memory ([Format] in [Internal Memory Tool]).
- A new folder is created on the “Memory Stick Duo” and all the data will be copied to it. You cannot choose a specific folder and copy images to it.
- The DPOF (Print order) marks on the images are 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 permanently erases all data in the internal memory, including even protected images.
- ① Select [Format] with ▲/▼ on the control button, then press ●.
The message “All data in internal memory will be erased” appears.
 - ② Select [OK] with ▲, then press ●.
Formatting starts.

To cancel formatting

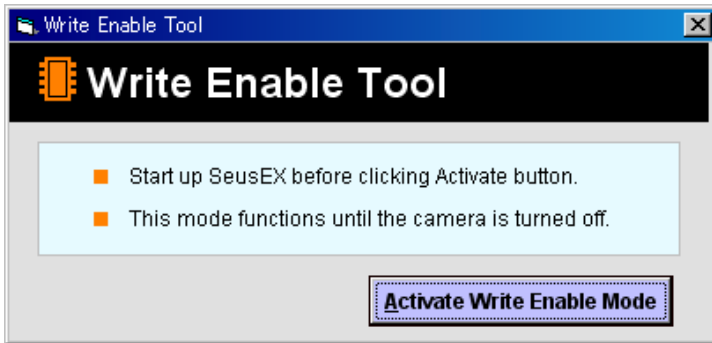
Select [Cancel] in step ②, then press ●.

1-5. HOW TO WRITE DATA TO INTERNAL MEMORY

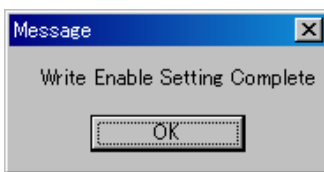
Usually, the camera has been set so as to disable the data writing from the PC to the internal memory of the camera. This setting must be changed temporarily when the data is to be written to the internal memory such as a case after the board replacement. To change the setting, use the write enable tool “WriteEnableTool.exe”.

Data writing method

- 1) Connect the PC to the camera (USB mode: Mass Storage), and switch the driver to the “Sony Seus USB Driver”.
- 2) Start the Write Enable Tool and the SeusEX.
- 3) Click the Activate Write Enable Mode button of the Write Enable Tool.



- 4) Upon completion of the setting change, the following message will be displayed.



- 5) Return the driver to the original one, and connect the PC to the camera (USB mode: Mass Storage).
- 6) Write the data read out into the PC to the internal memory of the camera.
- 7) Disconnect the PC from the camera, and turn off the camera.

Note: By turning off the camera, the write enable setting is reset.

1 - S 基板交換時の注意

仕向けデータ

補修用基板と交換する時、補修用基板に書かれている仕向けデータは元の設定と違う場合があります。ADJ編を参照して、「IE」を行ってください。

LSリアル№

セットは、1台毎に異なる固有のI(ℒ)を書き込んだ後、出荷されています。新品の補修用基板には、このℒが書き込まれていないので、基板交換後にℒを入力する必要があります。ADJ編を参照して、「ℒ」を行ってください。

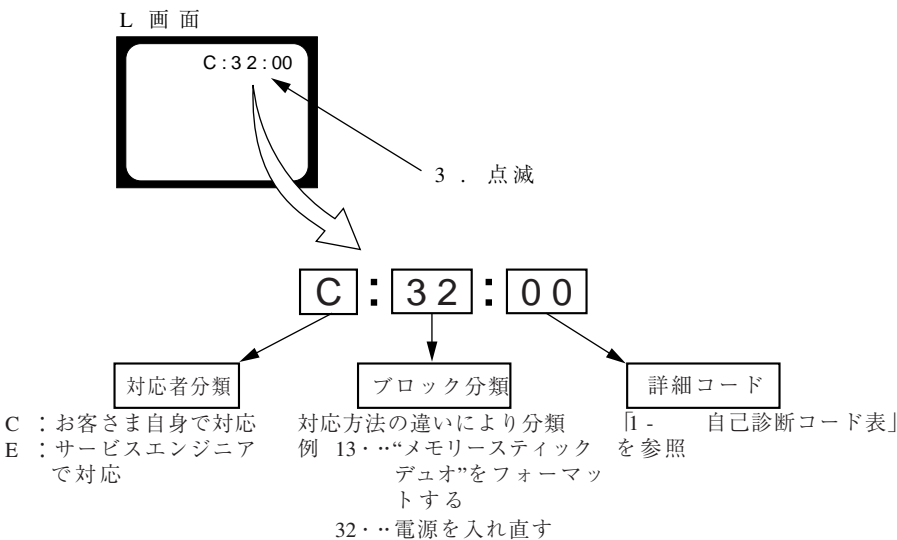
1 - 自己診断機能

1 - 自己診断機能について

本機の動作に不具合が生じたとき、自己診断機能が働き、L画面に、どう処置したらよいか判断できる表示を行います。自己診断機能については取扱説明書にも掲載されています。

1 - 自己診断表示

本機の動作に不具合が生じたとき、L画面にアルファベットと4桁の数字が表示され、3.で点滅します。この5文字の表示によって対応者分類および不具合の生じたブロックの分類、不具合の詳細コードを示します。



1 - 自己診断コード表

自己診断コード			症状／状態	対応／方法
対応者	ブロック機能	詳細コード		
C	1 3	0 1	内蔵メモリにフォーマットエラーがあった。	内蔵メモリをフォーマットする。
			フォーマットしていない“メモリースティックデュオ”を入れた。	“メモリースティックデュオ”をフォーマットする。
			“メモリースティックデュオ”が壊れている。	新しい“メモリースティックデュオ”に交換する。
			“メモリースティックデュオ”のタイプエラーを検出した。	規格内の“メモリースティックデュオ”を挿入する。
			“メモリースティックデュオ”が読み／書きできない。	電源の入れ直し、または“メモリースティックデュオ”の挿し／外しを数回試す。
C	3 2	0 1	ハードウェアトラブルを検出した。	電源を入れ直す。
E	6 1	0 0	フォーカスが合いにくい。 (フォーカスの初期化ができない)	操作スイッチの電源を入れ直す。 復帰しない場合はレンズブロックのフォーカスリセットセンサ (S 基板 0 1 ⑳ピン) を点検する。異常なければフォーカスマータ駆動I (S 基板 I) を点検する。
E	6 1	1 0	ズーム動作の異常。 (ズームレンズの初期化ができない)	操作スイッチの電源を入れ直す。 ズームボタンを操作したときにズーム動作をすればレンズブロックのズームリセットセンサ (S 基板 0 1 ⑰ピン) を点検する。異常なければズームモータ駆動I (S 基板 I) を点検する。
E	6 2	0 2	手振れ補正用の異常。	手振れ補正用I (S 基板 I) を点検または交換する。
E	6 2	1 0	手振れ補正用の異常。 (レンズ初期化異常)	手振れ補正用I (S 基板 I) を点検または交換する。
E	6 2	1 1	レンズオーバーヒート (P)	光学手振れ補正ブロックのホール素子 (P) (S 基板 0 1 ㉓, ㉔ピン) を点検する。異常なければP角速度センサ (S 基板 S) 周辺の回路を点検する。
E	6 2	1 2	レンズオーバーヒート (W)	光学手振れ補正ブロックのホール素子 (W) (S 基板 0 1 ㉕, ㉖ピン) を点検する。異常なければP角速度センサ (S 基板 S) 周辺の回路を点検する。
E	6 2	2 0	サーミスタの異常。	レンズブロックを交換する。
E	9 1	0 1	フラッシュの充電異常。	フラッシュユニットを点検または交換する。(N)t
E	9 2	0 0	規定外の充電電池が使用された。	規定の充電電池を使用する。

(N)t : 交換後は、必ず「1 フラッシュエラー発生時の対処法」を行って下さい。

1 - フラッシュエラー発生時の対処法

本機はフラッシュエラー（自己診断コードE 91 :0 1）が発生した場合、高電圧による異常を防止するために自動的にフラッシュ充電および発光禁止の設定になります。

フラッシュエラー発生後はエラーの解除を行う必要があります。エラーの解除はホーム画面から初期化操作を実行することにより行います。

設定リセット

お買い上げ時の設定に戻します。

[設定リセット]を実行しても、内蔵メモリーに記録されている画像は削除されません。

- ① コントロールボタンの▲ /▼で[設定リセット]を選び、中央の●を押す。
「全ての設定内容をリセットします」というメッセージが表示される。
- ② ▲で[実行]を選び、中央の●を押す。
設定リセットが実行される。

設定リセットを中止するには

手順②で、[キャンセル]を選び、中央の●を押す。

- 設定リセット中は電源が切れないようにご注意ください。

1 - 内蔵メモリーのデータコピーおよび消去方法

内蔵メモリーのデータコピーまたは消去はホーム画面の操作から実行可能です。（消去する場合は内蔵メモリーの初期化を行います。）

ℵ t : S 基板交換の際は、基板交換前に内蔵メモリーのデータを消去して下さい。

ℵ t : S 基板交換の際は、基板交換後に内蔵メモリーのフォーマットおよび初期化を実行して下さい。

内蔵メモリーのコピー方法

コピー

内蔵メモリーに記録した画像を、“メモリースティック デュオ”に一括コピーします。

- ① 十分な空き容量のある“メモリースティック デュオ”を本体に入れる。
- ② コントロールボタンの▲ /▼で[コピー]を選び、中央の●を押す。
「内蔵メモリーのデータがすべてコピーされます」というメッセージが表示される。
- ③ ▲で[実行]を選び、中央の●を押す。
コピーが実行される。

コピーを中止するには

手順③で、[キャンセル]を選び、中央の●を押す。

- 十分に充電したバッテリーをご使用ください。残量の少ないバッテリーを使用して画像ファイルのコピーすると、バッテリー切れのためデータを転送できなかったり、データを破損するおそれがあります。
- 画像ごとのコピーはできません。
- データをコピーしても、内蔵メモリー内のデータは削除されません。内蔵メモリーの内容を消去するには、コピー後に“メモリースティック デュオ”を本体から取りはずし、[内蔵メモリーツール]の[フォーマット]を行ってください。
- データをコピーすると“メモリースティック デュオ”内に新しいフォルダが作成されます。コピー先のフォルダを指定することはできません。
- データのコピーを行っても、**DPOF**(プリント予約)マークの設定はコピーされません。

内蔵メモリーのフォーマット方法

“メモリースティック デュオ”が本機に入っている場合は表示されません。

フォーマット

内蔵メモリーの管理領域をフォーマット(初期化)します。

- フォーマットすると、プロテクトしてある画像も含めて、すべてのデータが消去され、元に戻せません。
- ① コントロールボタンの▲ /▼で[フォーマット]を選び、中央の●を押す。
「内蔵メモリーのデータがすべて消去されます」というメッセージが表示される。
- ② ▲で[実行]を選び、中央の●を押す。
フォーマットが実行される。

フォーマットを中止するには

手順②で、[キャンセル]を選び、中央の●を押す。

1 - 内蔵メモリヘデータを書き戻す方法

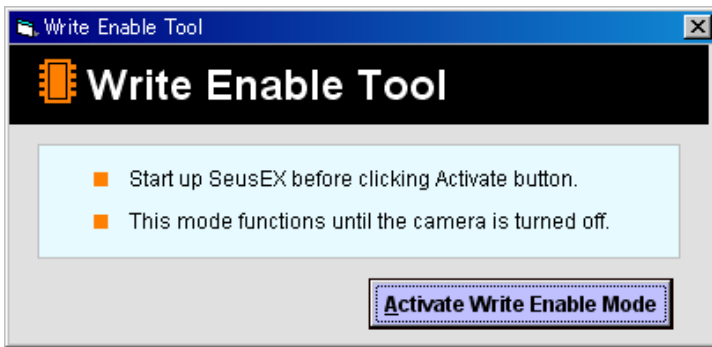
通常は、からカメラの内蔵メモリヘデータを書き込むことはできない設定になっています。

基板交換後などに、内蔵メモリヘデータを書き戻す場合には、この設定を一時的に変更する必要があります。

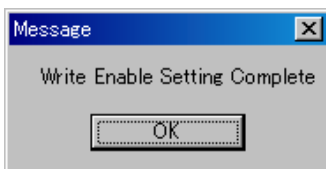
設定の変更には、書き込み許可ツール（**W**）を使用します。

書き戻し方法

- 1) カメラと **PC** マスストレージ接続し、ドライバを“S”に切り替える。
- 2) 書き込み許可ツールとS を起動する。
- 3) 書き込み許可ツールの **Activate Write Enable Mode** ボタンをクリックする。



- 4) 設定の変更が終了すると、次のメッセージが表示されます。



- 5) ドライバを元に戻して、カメラと **PC** マスストレージ接続する。
- 6) に読み出しておいたデータをカメラの内蔵メモリに書き込む。
- 7) カメラと **PC** 接続を解除し、カメラの電源を **OFF** する。

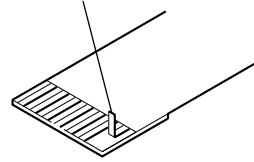
注意: カメラの電源を **OFF** することにより、書き込み許可の設定が解除されます。

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-194 BOARD'S CHARGING CAPACITOR (C205)

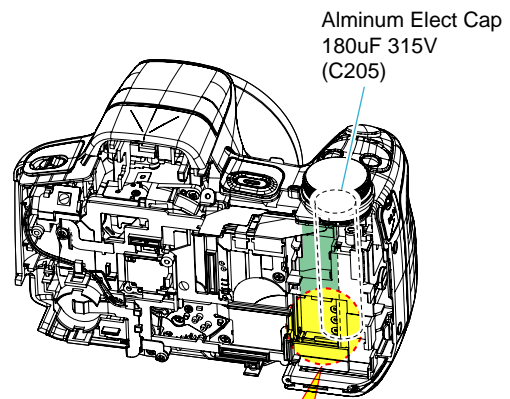
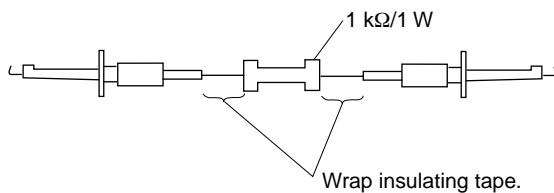
The charging capacitor (C205) of the ST-194 board is charged up to the maximum 315 V potential.

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.

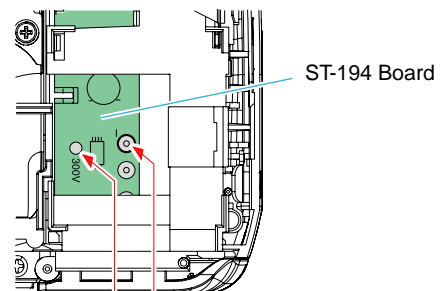


Note: High-voltage cautions

Discharging the Capacitor

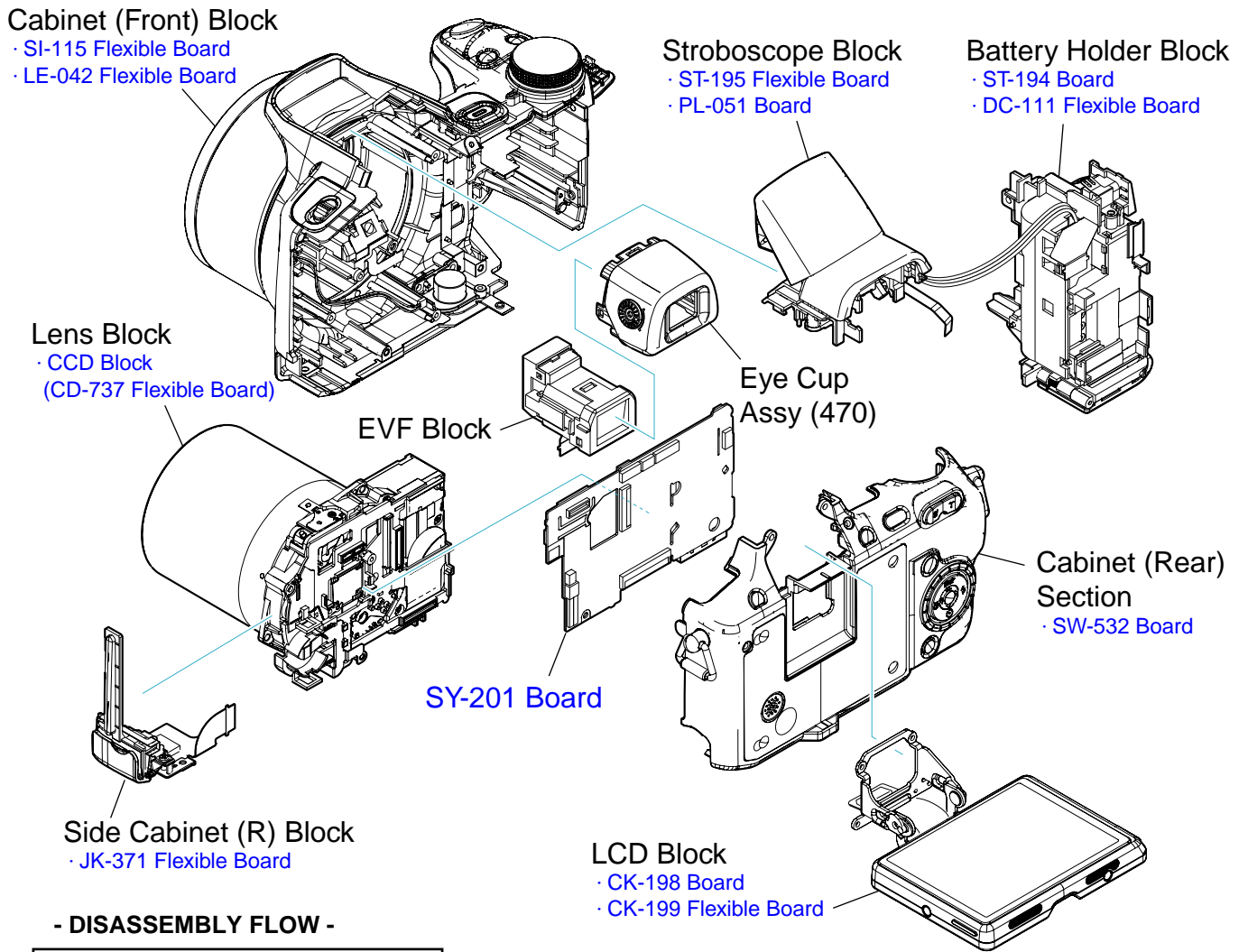
Short-circuit between the two points with the short jig about 10 seconds.

To avoid the spark with the metal plate, wrap the short jig with the insulation tape.

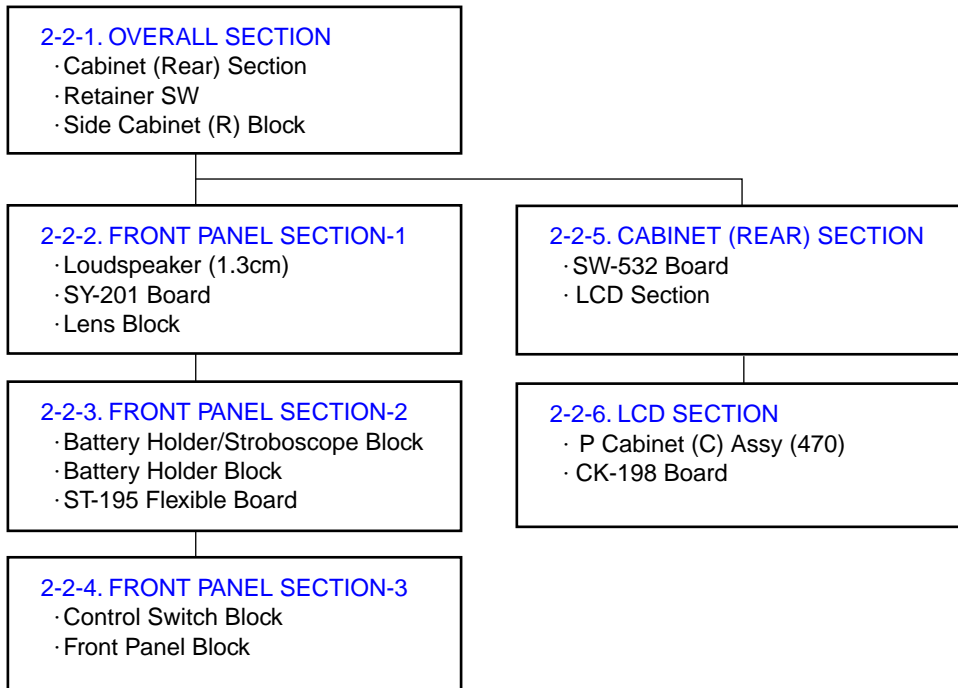


R: 1 k Ω / 1 W
(Part code: 1-215-869-11)

2-1. IDENTIFYING PARTS



- DISASSEMBLY FLOW -



2-2. DISASSEMBLY

EXPLODED VIEW

HARDWARE LIST

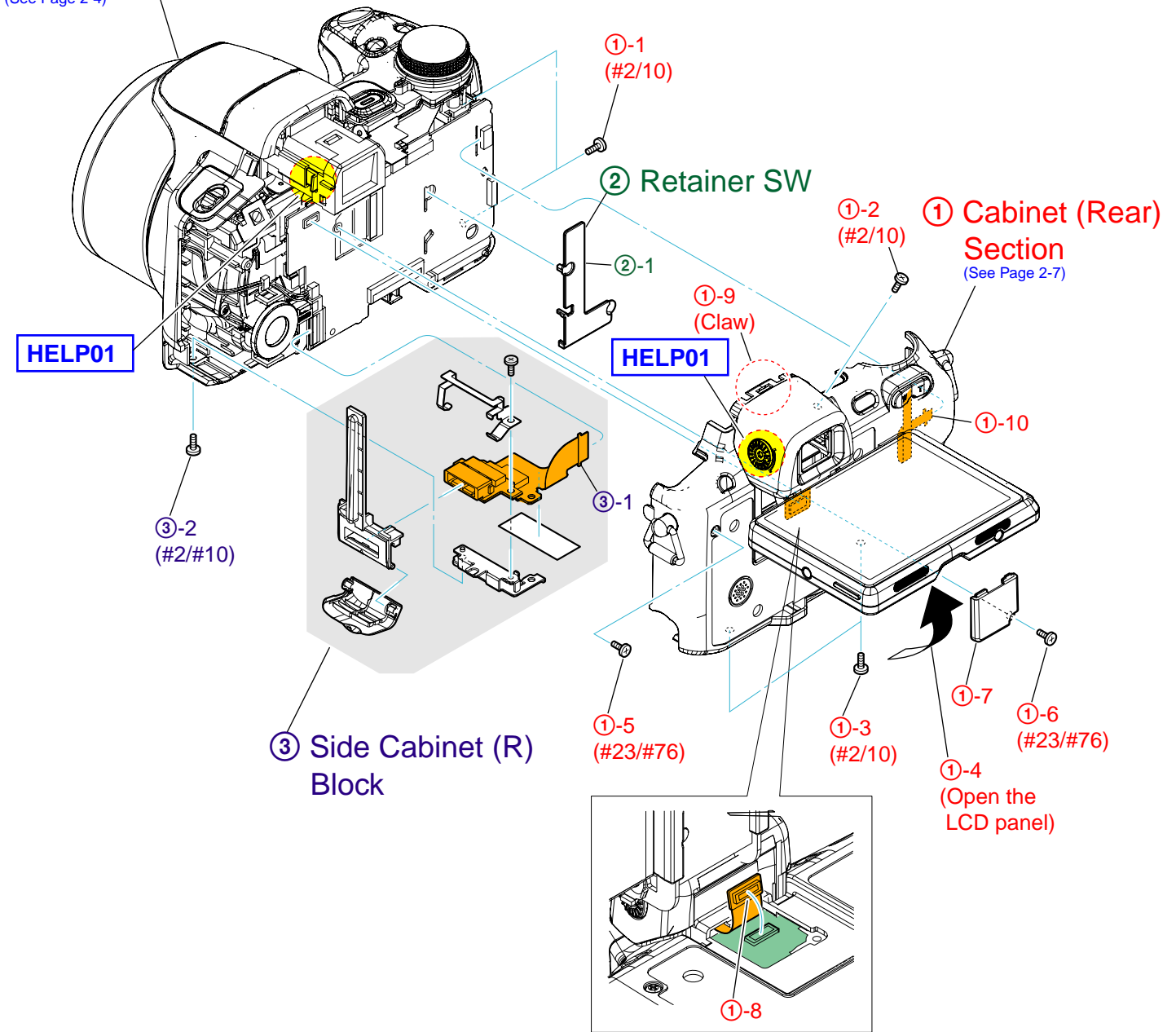
2-2-1. OVERALL SECTION

Follow the disassembly in the numerical order given.

- ① Cabinet (Rear) Section (①-1 to ①-10)
- ② Retainer SW (②-1)
- ③ Side Cabinet (R) Block (③-1 to ③-2)

Front Panel Section-1

(See Page 2-4)



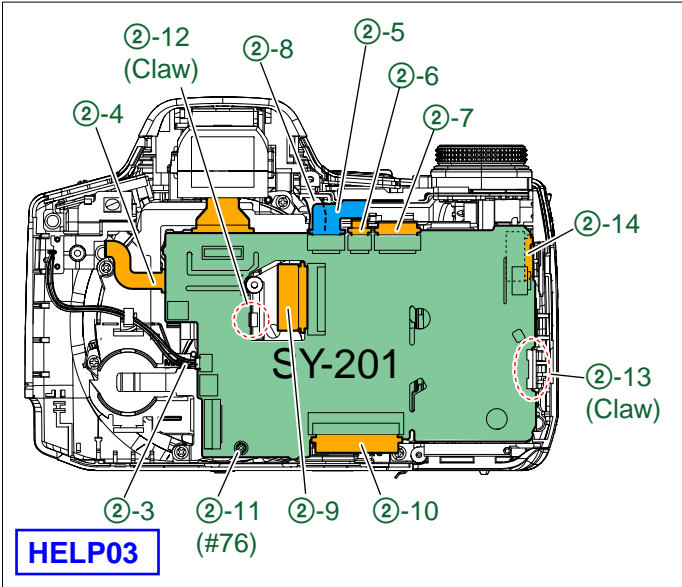
2-2-2. FRONT PANEL SECTION-1

Follow the disassembly in the numerical order given.

- ① Loudspeaker (1.3cm) (①-1 to ①-3)
- ② SY-201 Board (②-1 to ②-16)
- ③ Lens Block (③-1 to ③-3)

EXPLODED VIEW

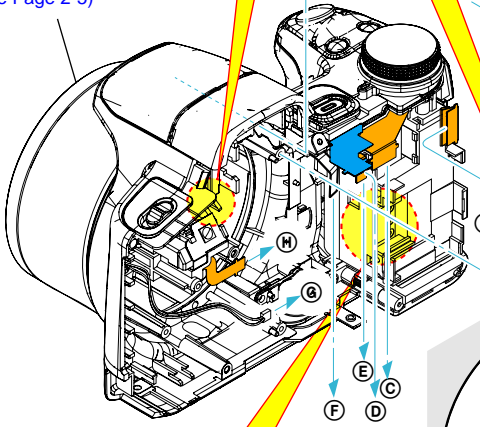
HARDWARE LIST



Note: On installation of the lens block, adjust the position of the night shot switch.

Front Panel Section-2

(See Page 2-5)

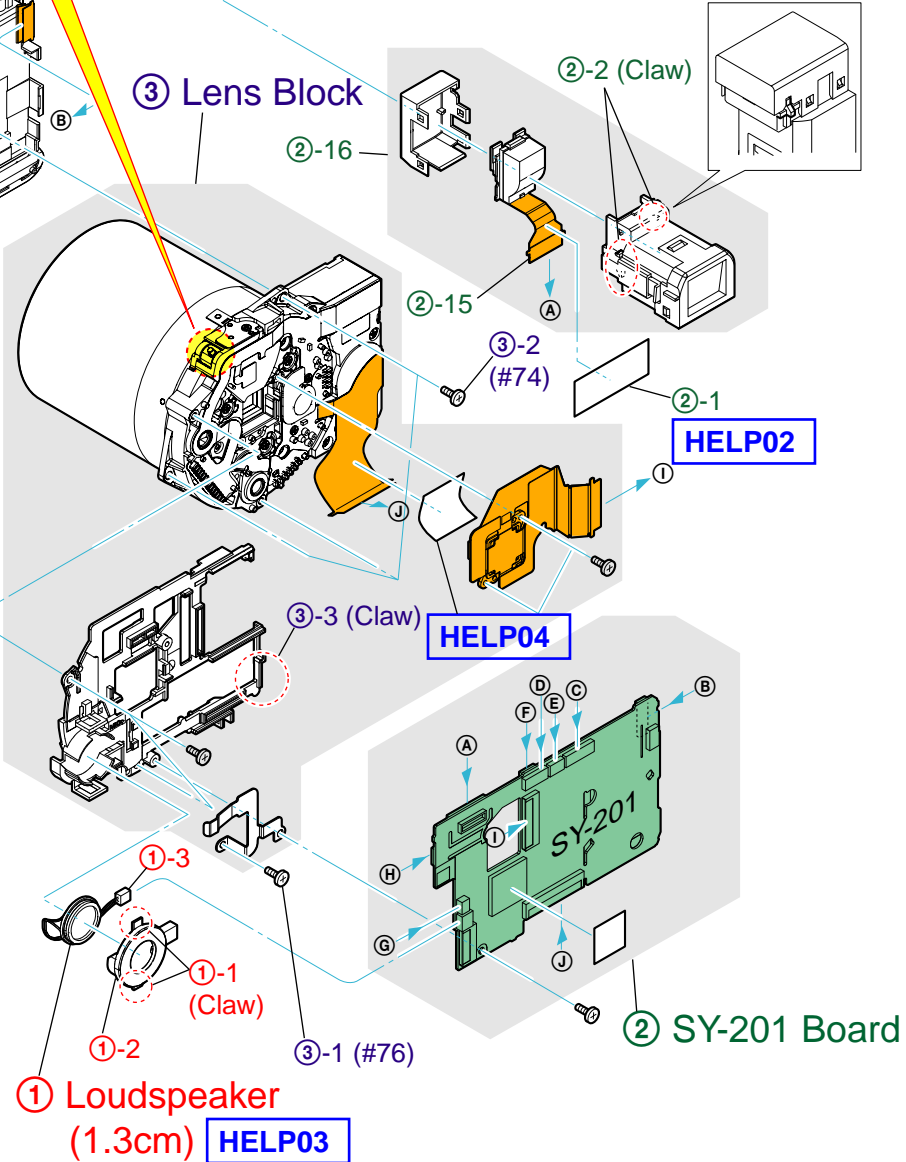


Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between the two points with the short jig about 10 seconds.
To avoid the spark with the metal plate, wrap the short jig with the insulation tape.

ST-194 Board

R: 1 kΩ/1 W
(Part code: 1-215-869-11)



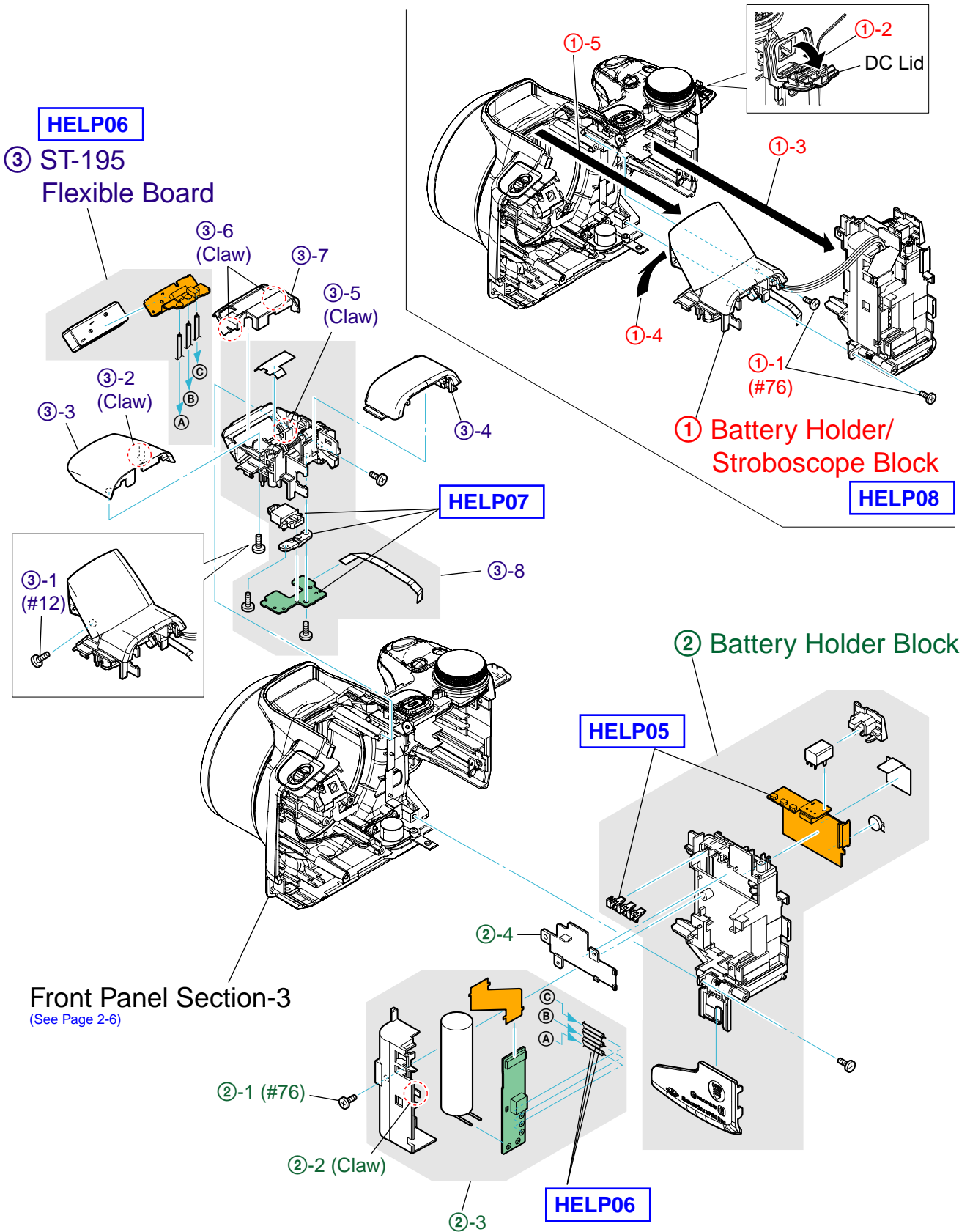
2-2-3. FRONT PANEL SECTION-2

Follow the disassembly in the numerical order given.

- ① Battery Holder/Stroboscope Block (①-1 to ①-5)
- ② Battery Holder Block (②-1 to ②-4)
- ③ ST-195 Flexible Board (③-1 to ③-8)

EXPLODED VIEW

HARDWARE LIST



2-2-4. FRONT PANEL SECTION-3

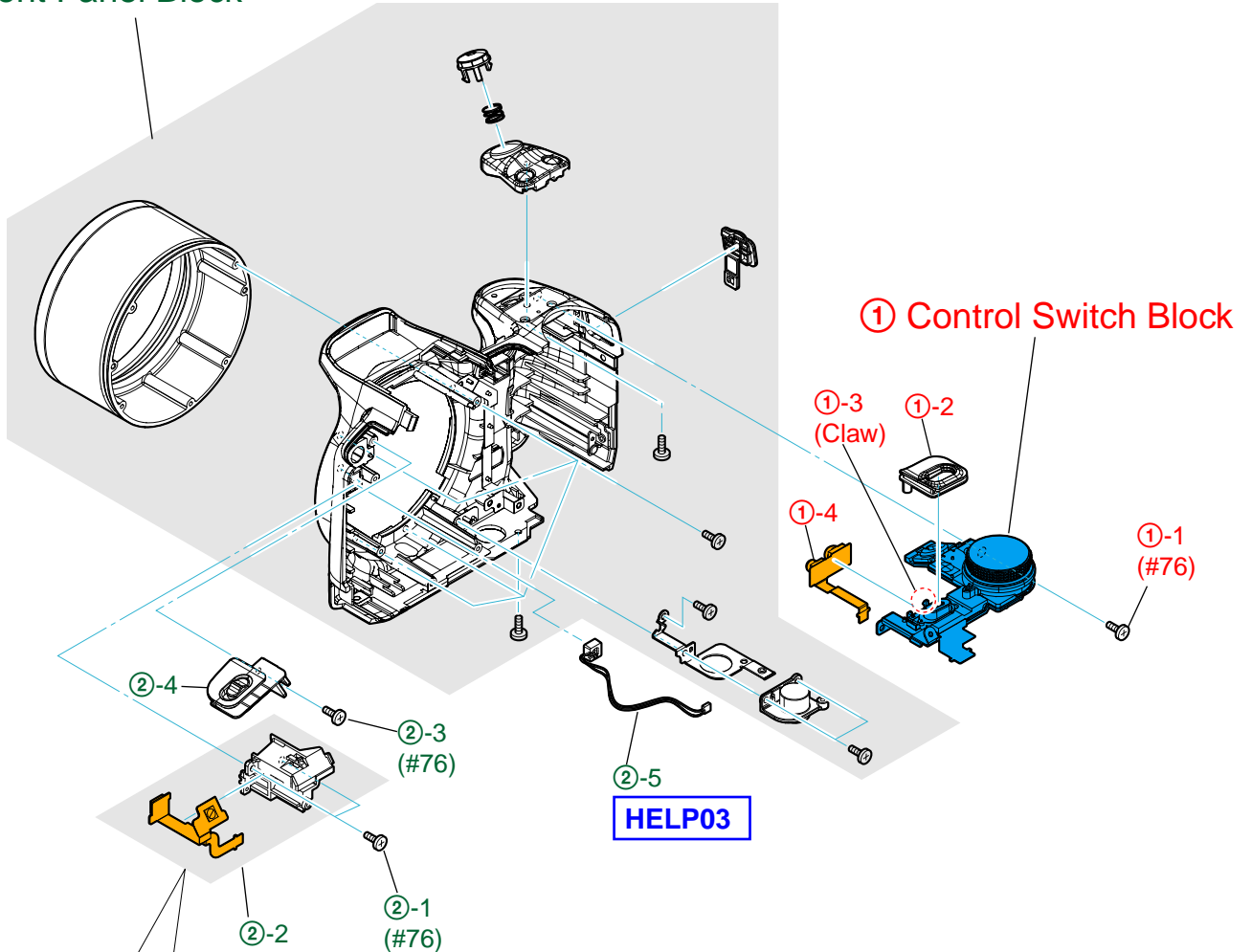
Follow the disassembly in the numerical order given.

- ① Control Switch Block (①-1 to ①-4)
- ② Front Panel Block (②-1 to ②-5)

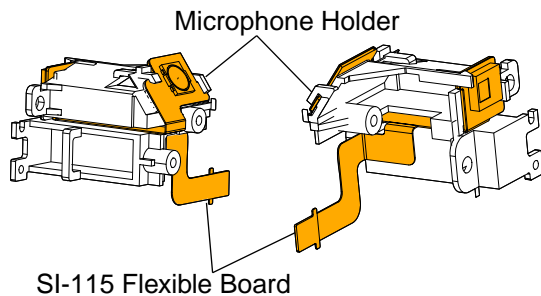
EXPLODED VIEW

HARDWARE LIST

② Front Panel Block



Attach SI-115 flexible board to microphone holder as shown in the figure.



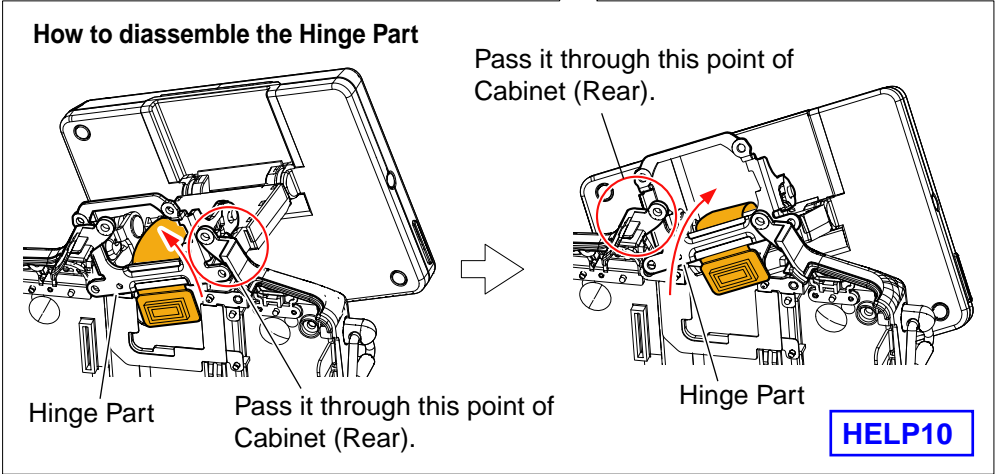
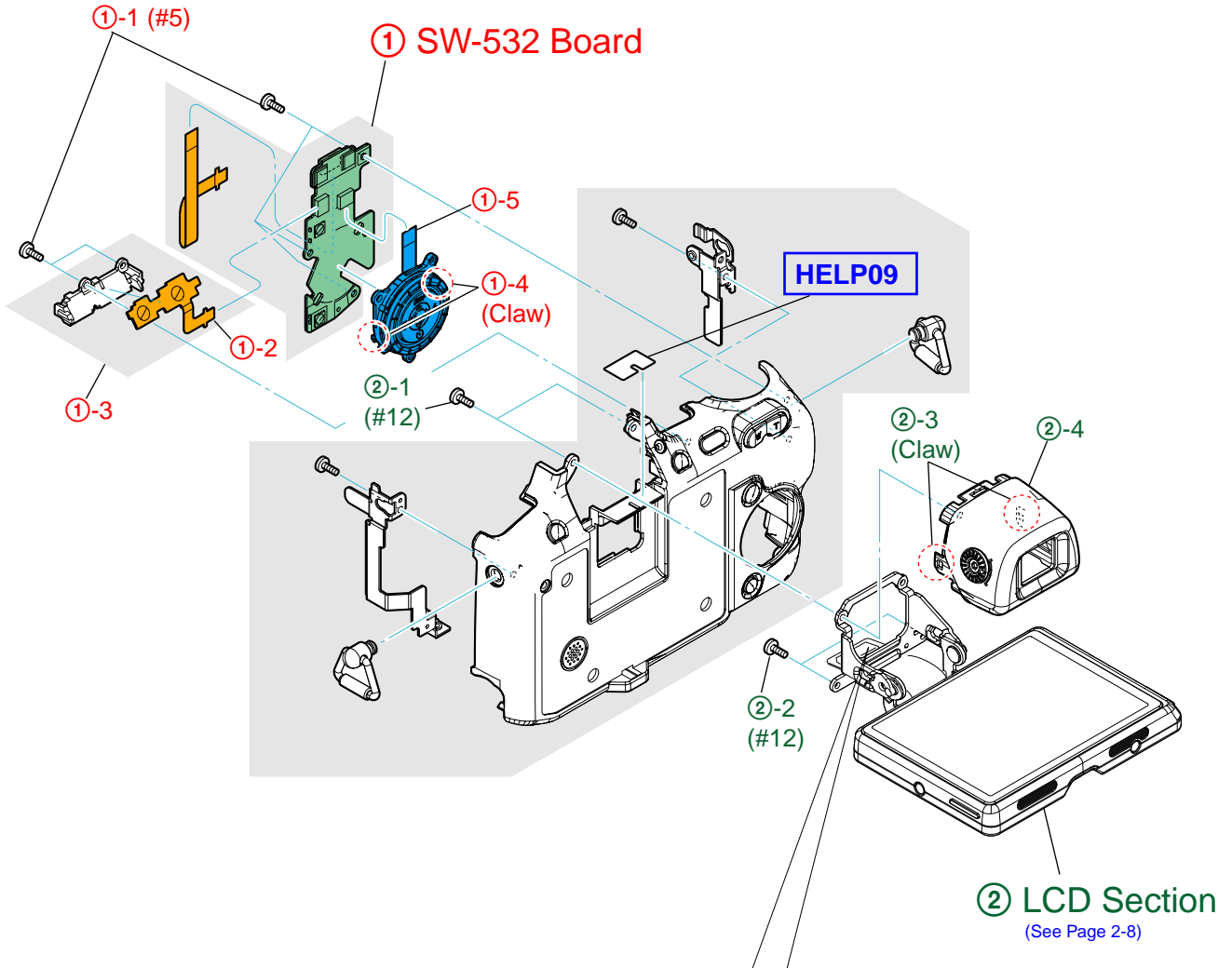
2-2-5. CABINET (REAR) SECTION

Follow the disassembly in the numerical order given.

- ① SW-532 Board (①-1 to ①-5)
- ② LCD Section (②-1 to ②-4)

EXPLODED VIEW

HARDWARE LIST



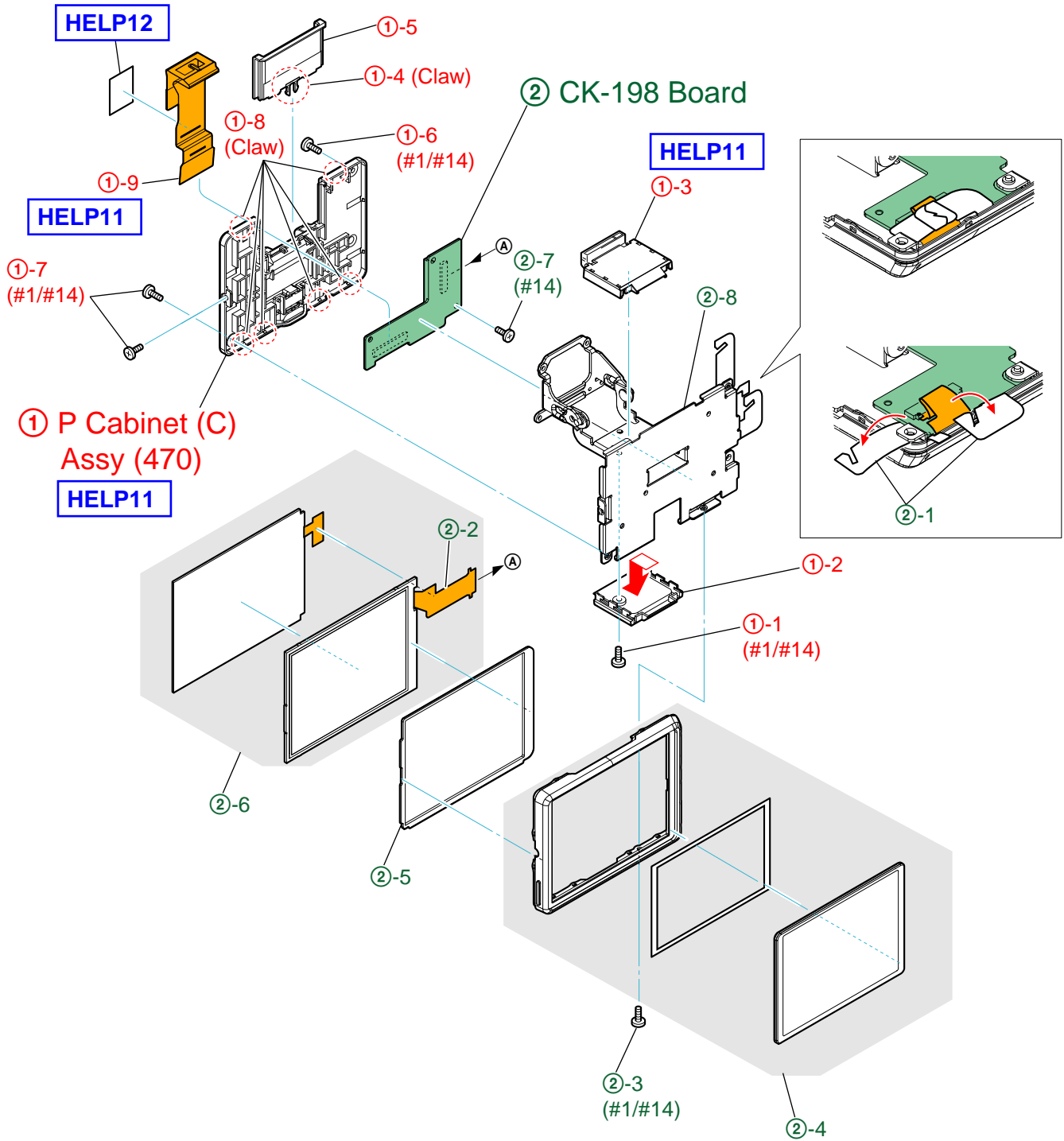
2-2-6. LCD SECTION

Follow the disassembly in the numerical order given.

- ① P Cabinet (C) Assy (470) (①-1 to ①-9)
- ② CK-198 Board (②-1 to ②-8)

EXPLODED VIEW

HARDWARE LIST

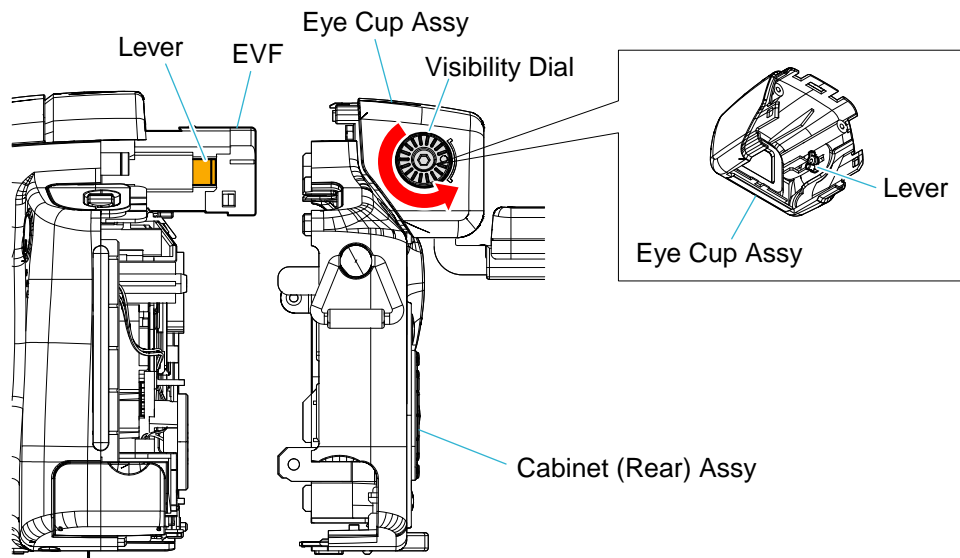


HELP

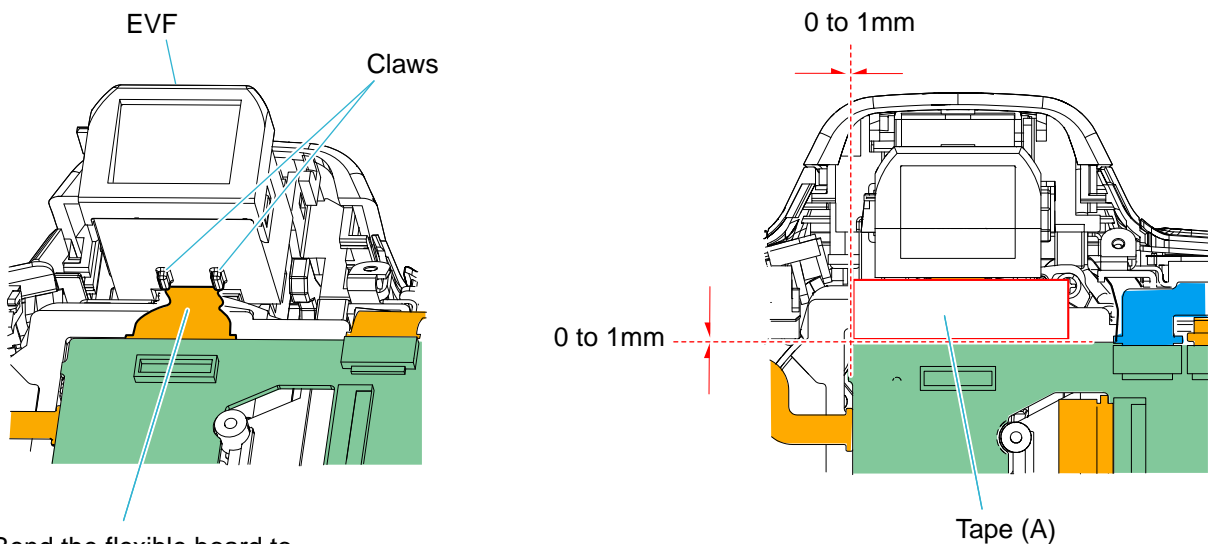
Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

HELP01

In case of assembling the cabinet (rear) assy, attach it after turning fully counterclockwise the visibility dial. Be careful about the lever inside of the eye cup assy doesn't go over the EVF lever.

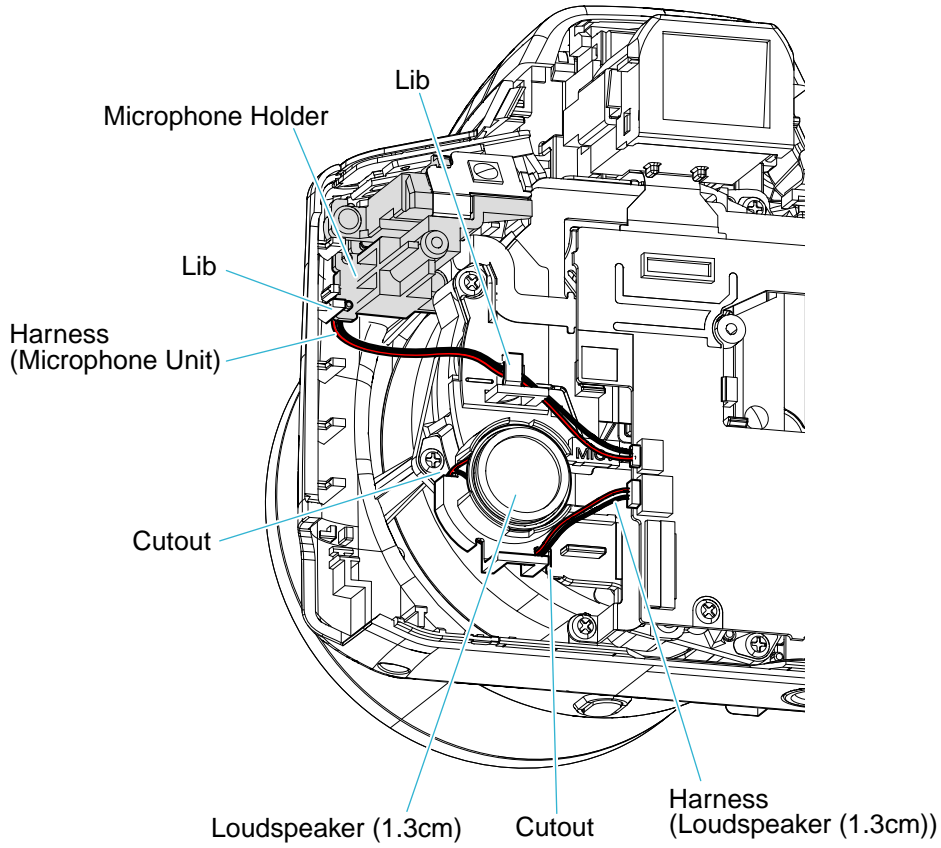


HELP02

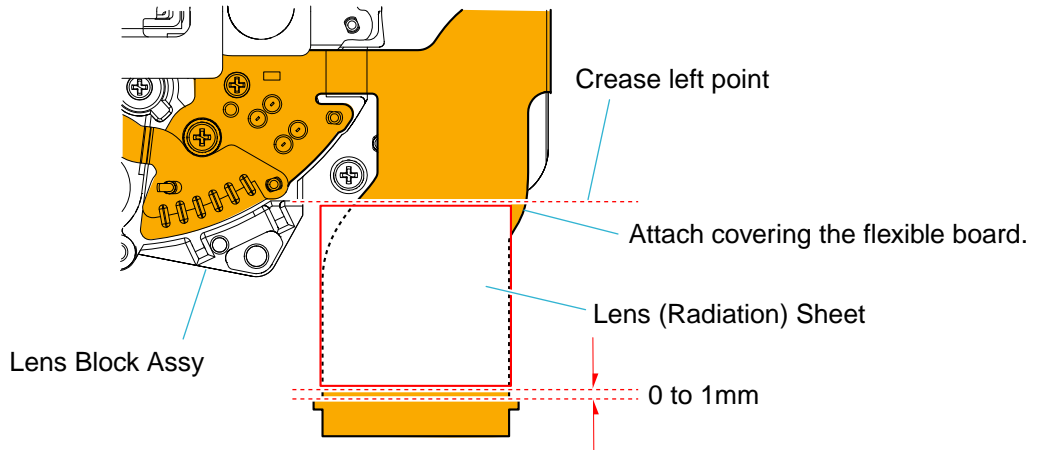


Bend the flexible board to the main body side at claws.

HELP03



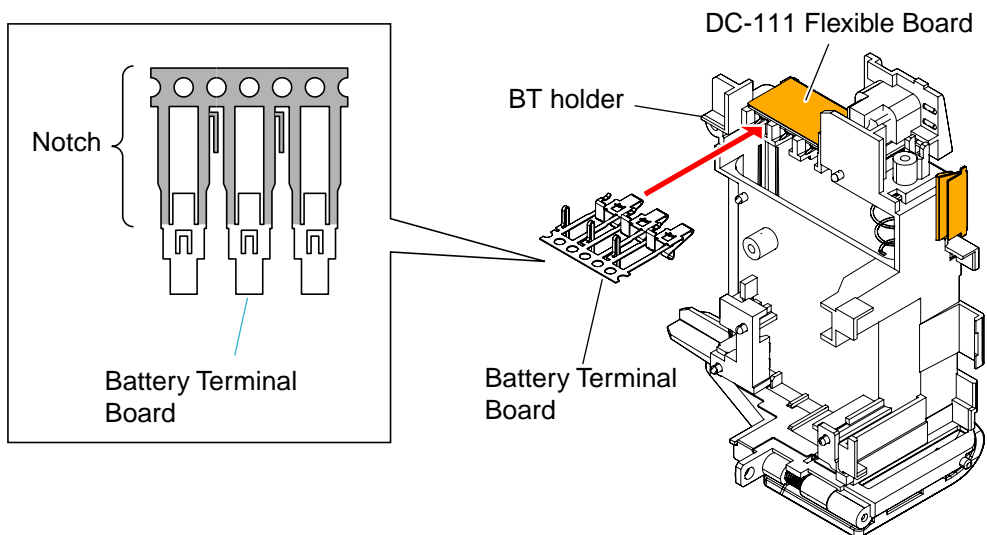
HELP04



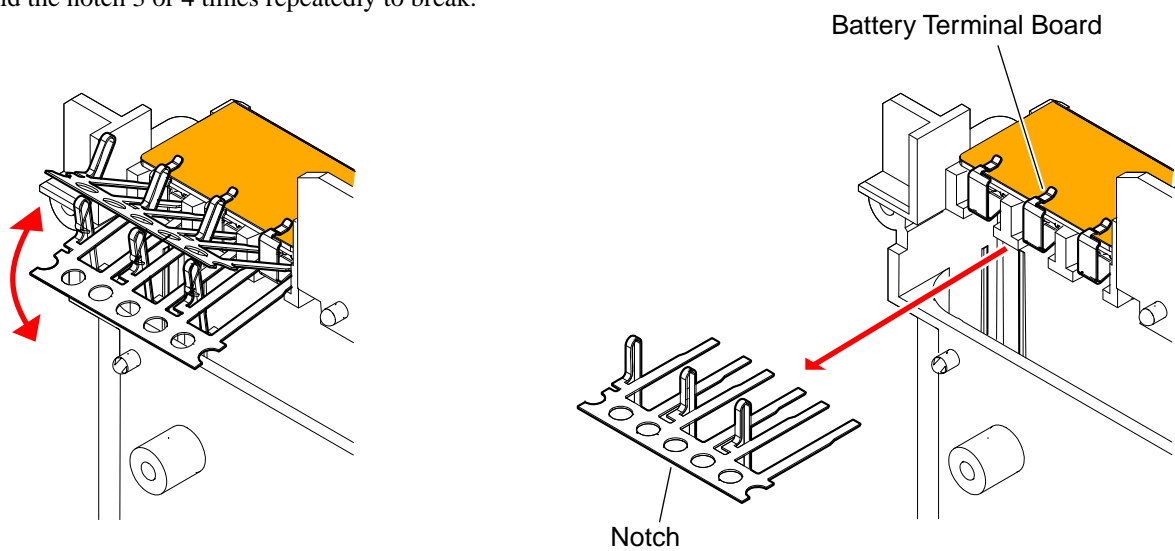
HELP05

INSTALLATION METHOD OF THE BATTERY TERMINAL BOARD

- ① Insert the battery terminal board into a slit in the BT holder to install.
The battery terminal holder are attached with the notch for installation.



- ② Fold the notch 3 or 4 times repeatedly to break.

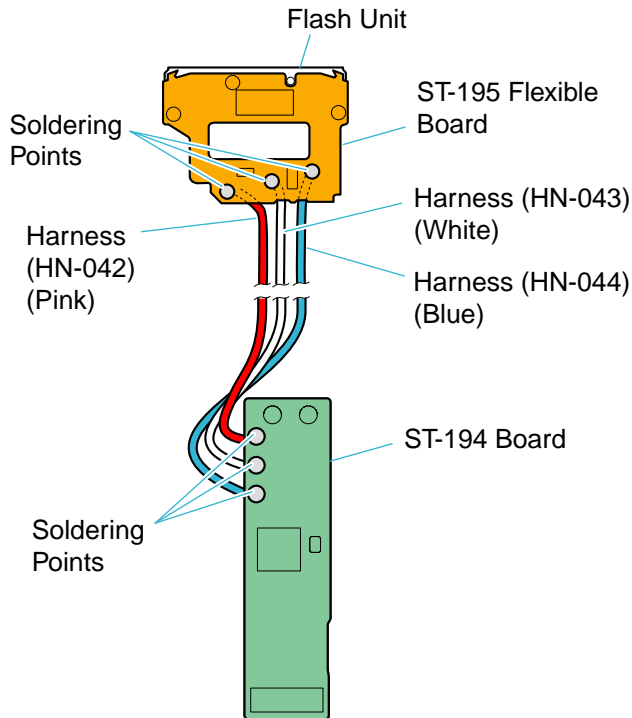


HELP06

THE METHOD OF ATTACHMENT OF HARNESS (HN-042 to HN-044)

- ① Solder three harnesses to ST-195 flexible board and ST-194 board.

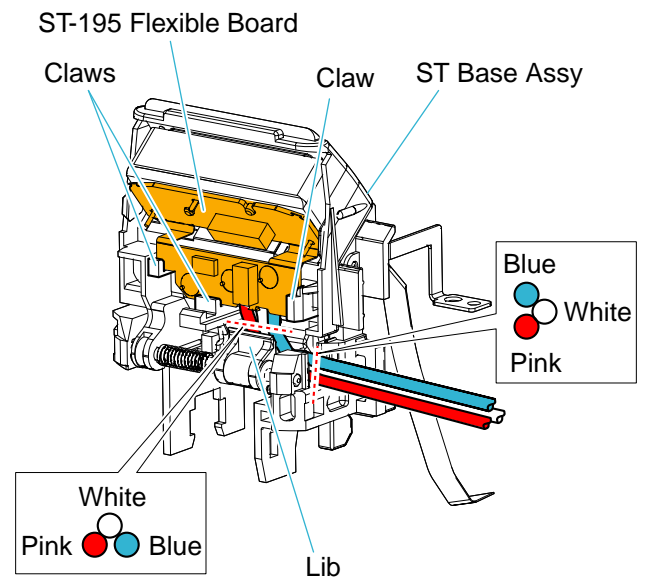
Note: Be careful about the colors of harnesses.



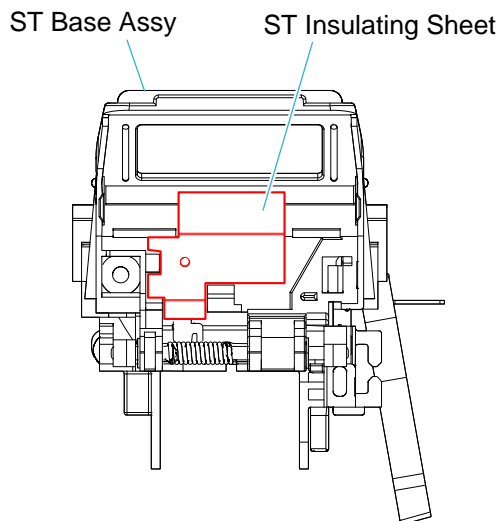
- ③ Attach ST-195 flexible board to ST base assy and insert three harnesses to lib deeply.

Note: Be careful about the overlaps of harnesses.

Note: Be careful not to damage the covering of harnesses.

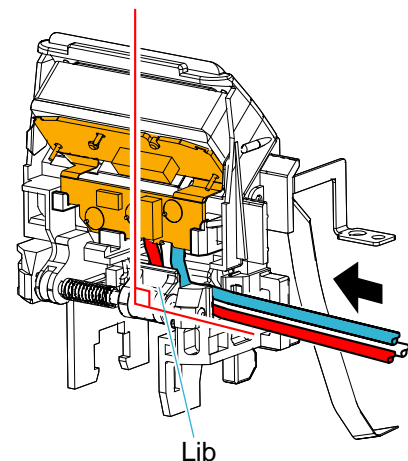


- ② Attach ST insulating sheet to ST base assy.

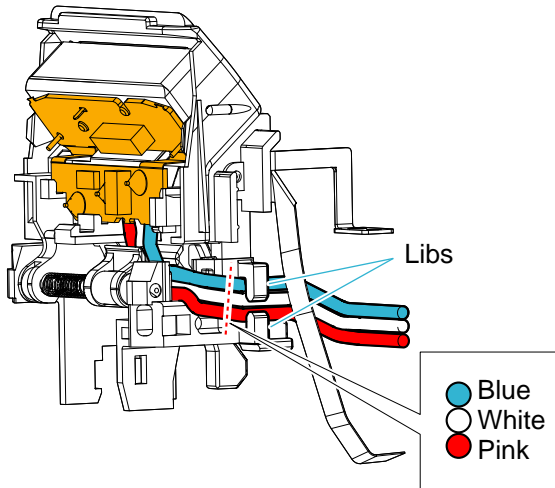


- ④ Insert the harnesses in the arrow direction so that the harnesses go to right angle in lib.

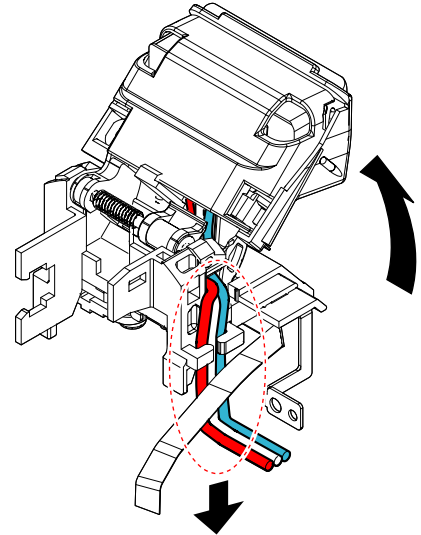
Note: Be sure to perform it under the popping up is closed.



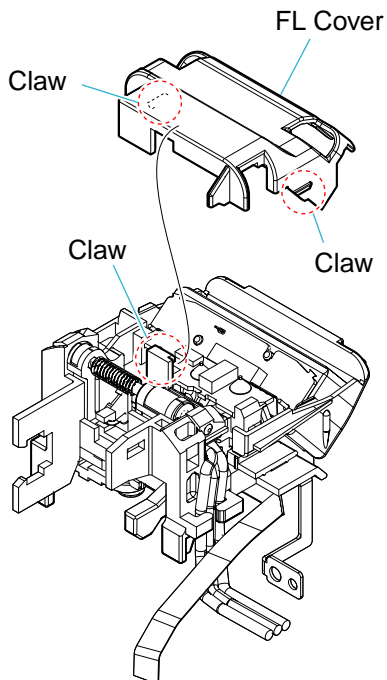
- ⑤ Pass three harnesses in lib.
Note: Be careful about the overlaps of harnesses.



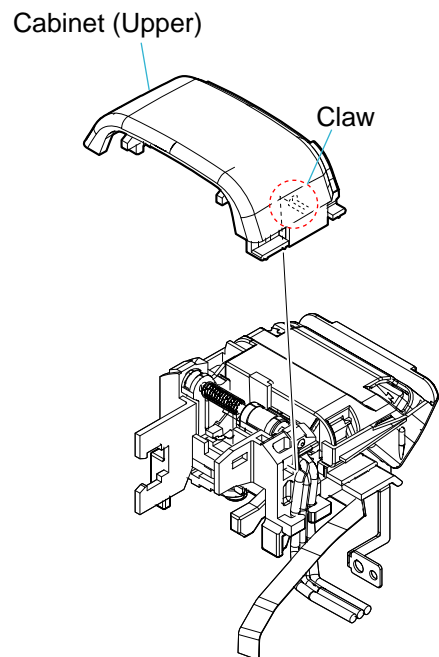
- ⑦ Pull up the popping up and straighten three harnesses.



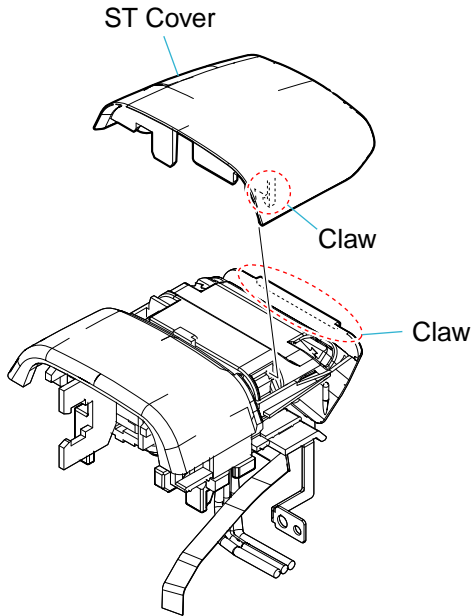
- ⑥ Attach FL cover.



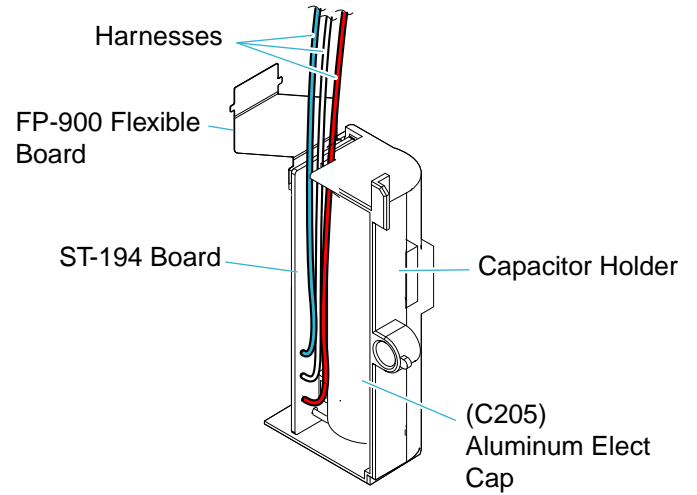
- ⑧ Attach Cabinet (Upper).



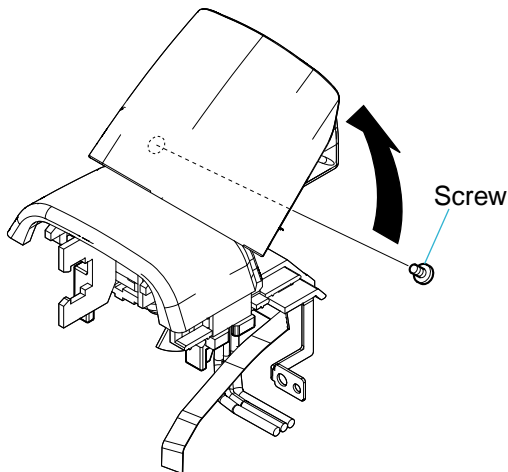
⑨ Attach ST cover.



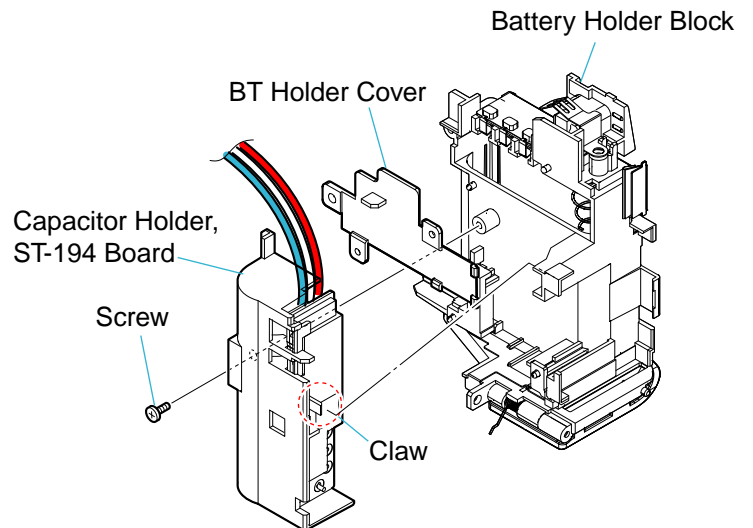
⑪ Attach Capacitor holder and arrange three harnesses as shown in the figure.



⑩ Pull up the popping up and secure a screw.



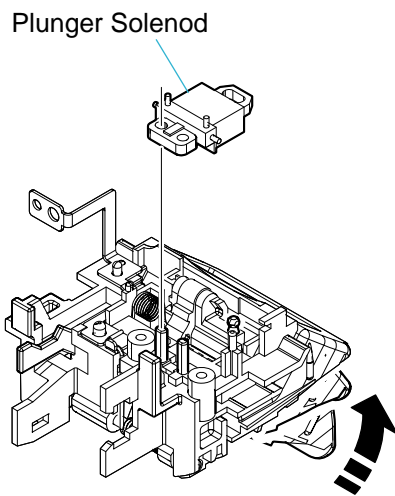
⑫ Assemble Capacitor holder and BT holder cover with ST-194 board to Battery holder block and secure them with a screw.



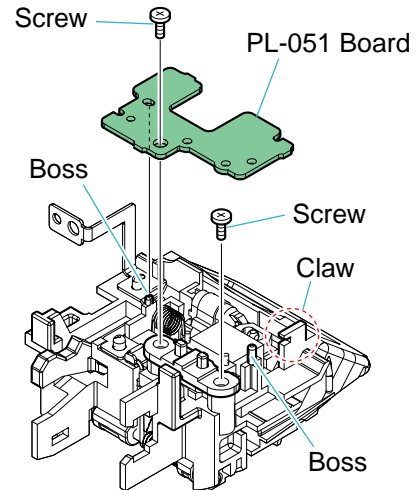
HELP07

THE METHOD OF ATTACHMENT OF PLUNGER SOLENOID

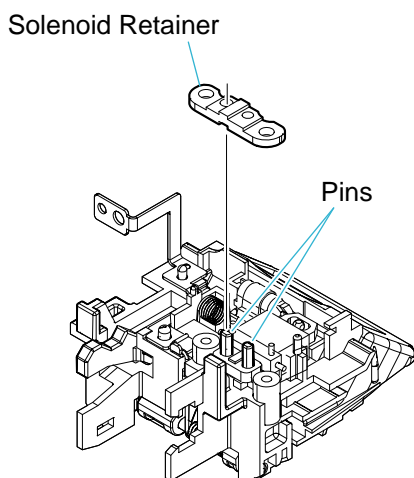
- ① Attach Plunger solenoid to three pins while closing the popping up.
Note : Be sure not to touch the copper leads or contacts.



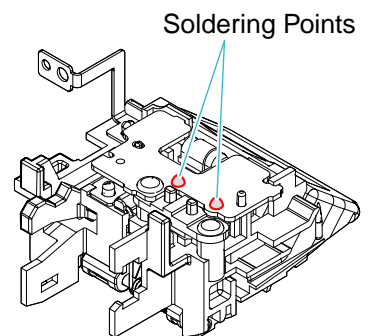
- ③ Attach PL-051 board while positioning to two bosses and secure it with two screws.



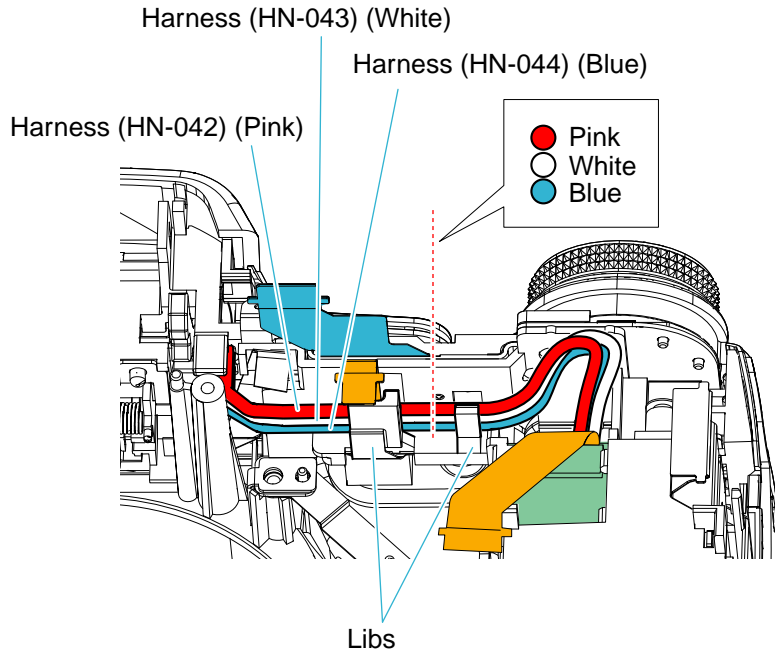
- ② Attach Solenoid retainer to two pins and secure it with a screw.



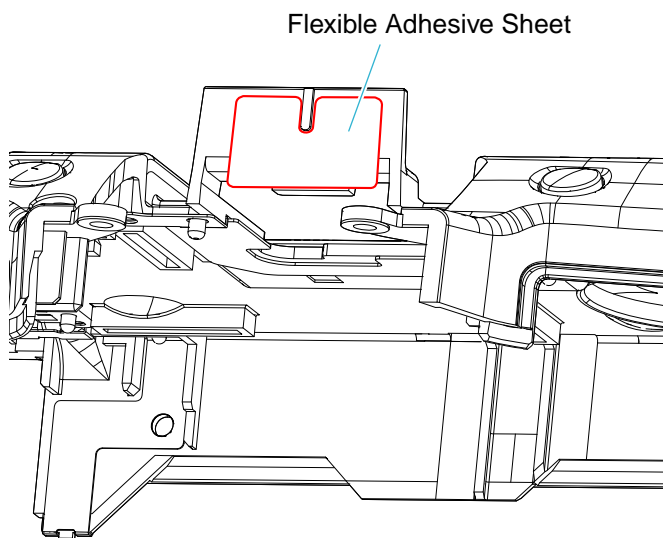
- ④ Solder two points.



HELP08



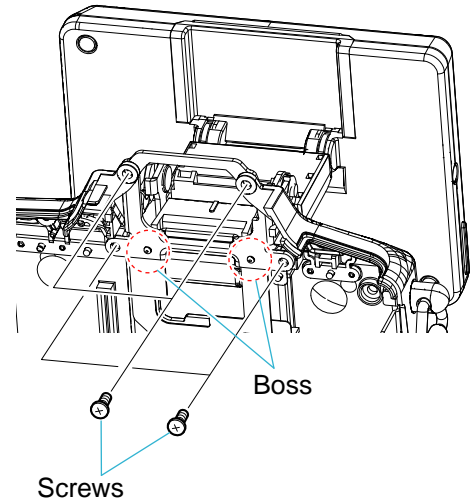
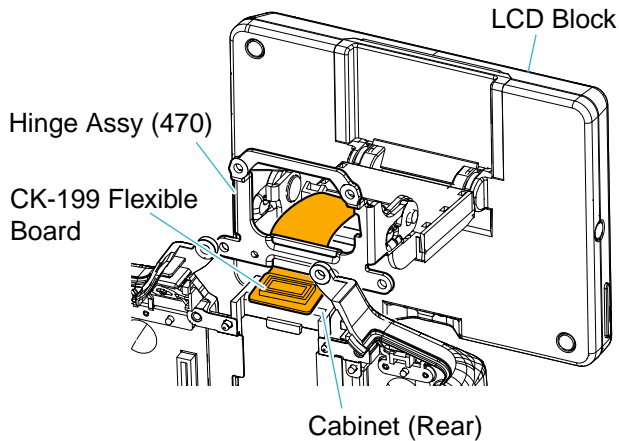
HELP09



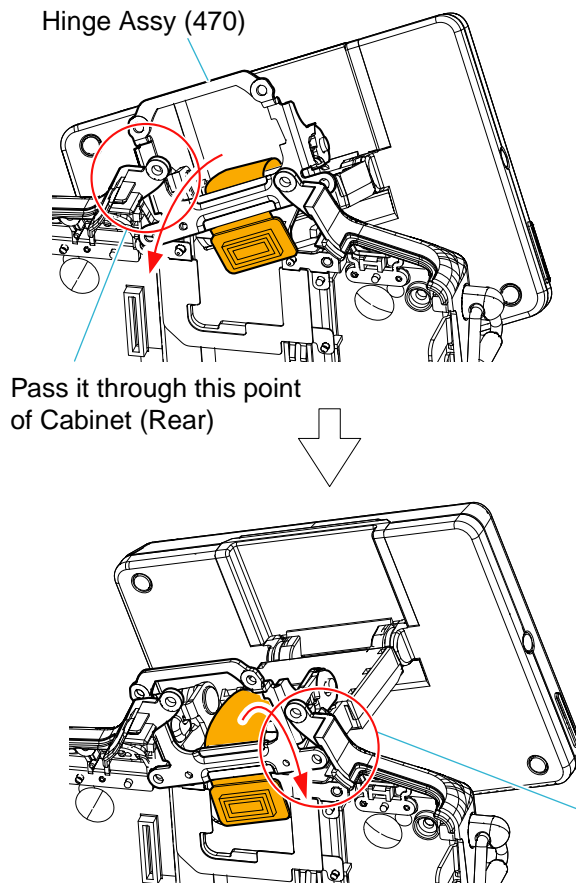
HELP10

THE METHOD OF INSTALLATION OF LCD BLOCK

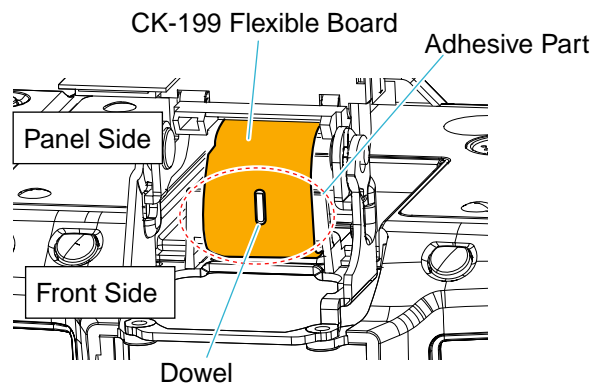
- ① Pull out CK-199 flexible board from the underneath of hinge assy (470) and put it on the cabinet (rear).
- ③ Position hinge assy to two bosses and secure it with four screws.



- ② Insert hinge assy (470) to cabinet (rear) as shown in the figure.

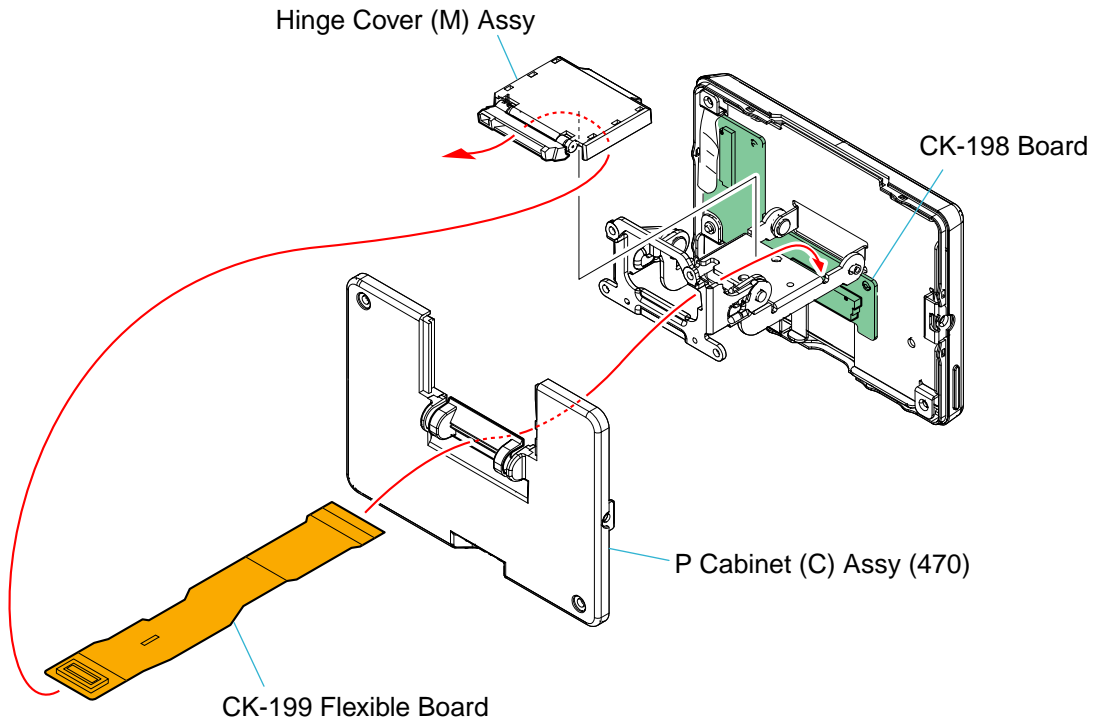


- ④ Position CK-199 flexible board to the dowel and attach it to adhesive portion. At this time, make the free space to the panel side and no space to the front side.

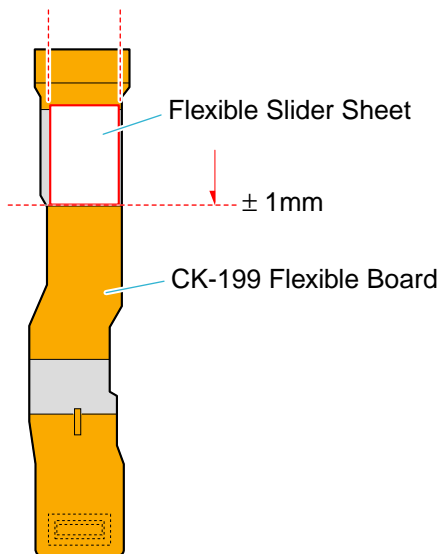


HELP11

CK-199 FLEXIBLE BOARD ARRANGEMENT



HELP12



3. BLOCK DIAGRAMS

Link

• [OVERALL BLOCK DIAGRAM \(1/2\)](#)

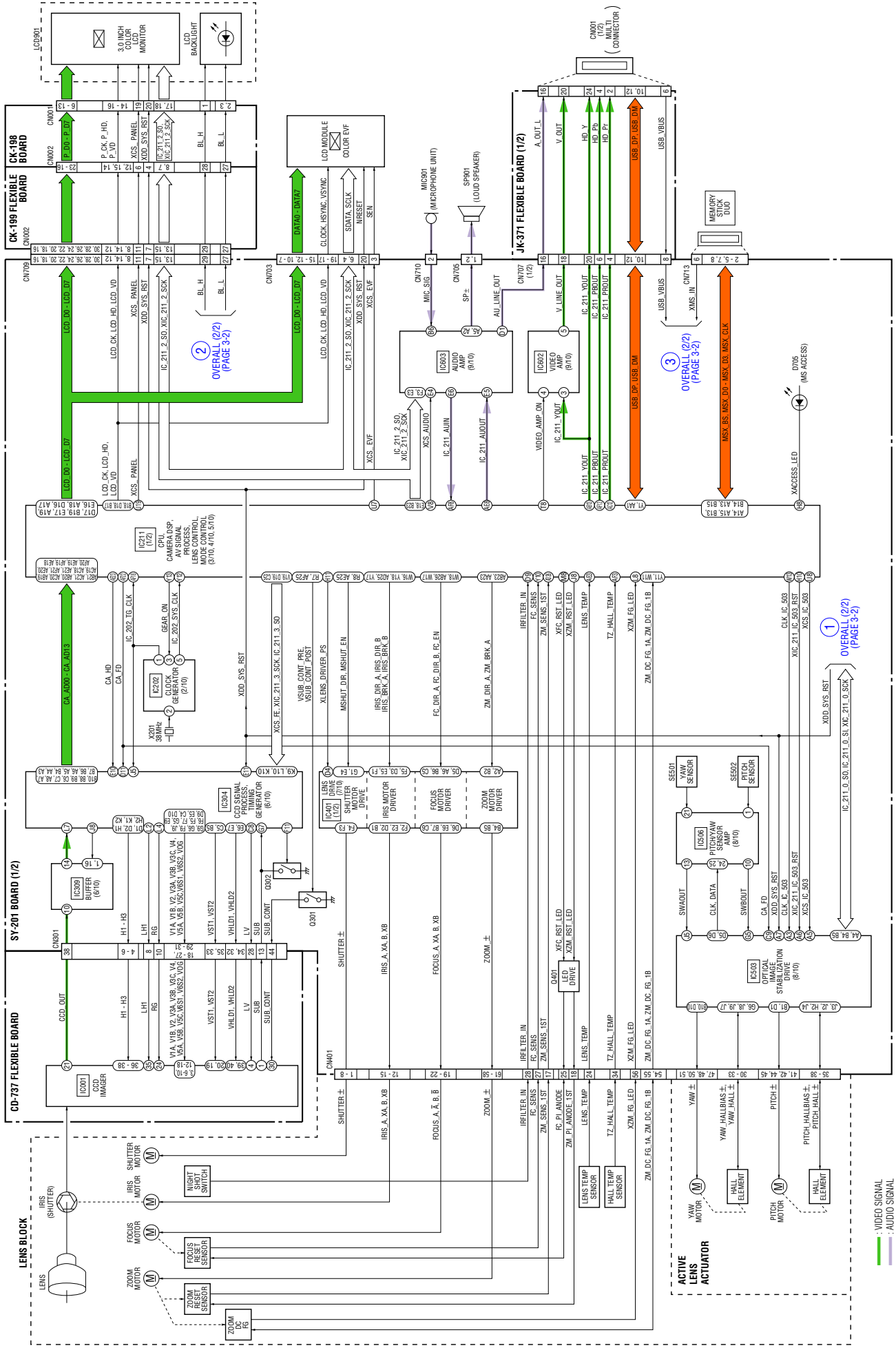
• [POWER BLOCK DIAGRAM \(1/2\)](#)

• [OVERALL BLOCK DIAGRAM \(2/2\)](#)

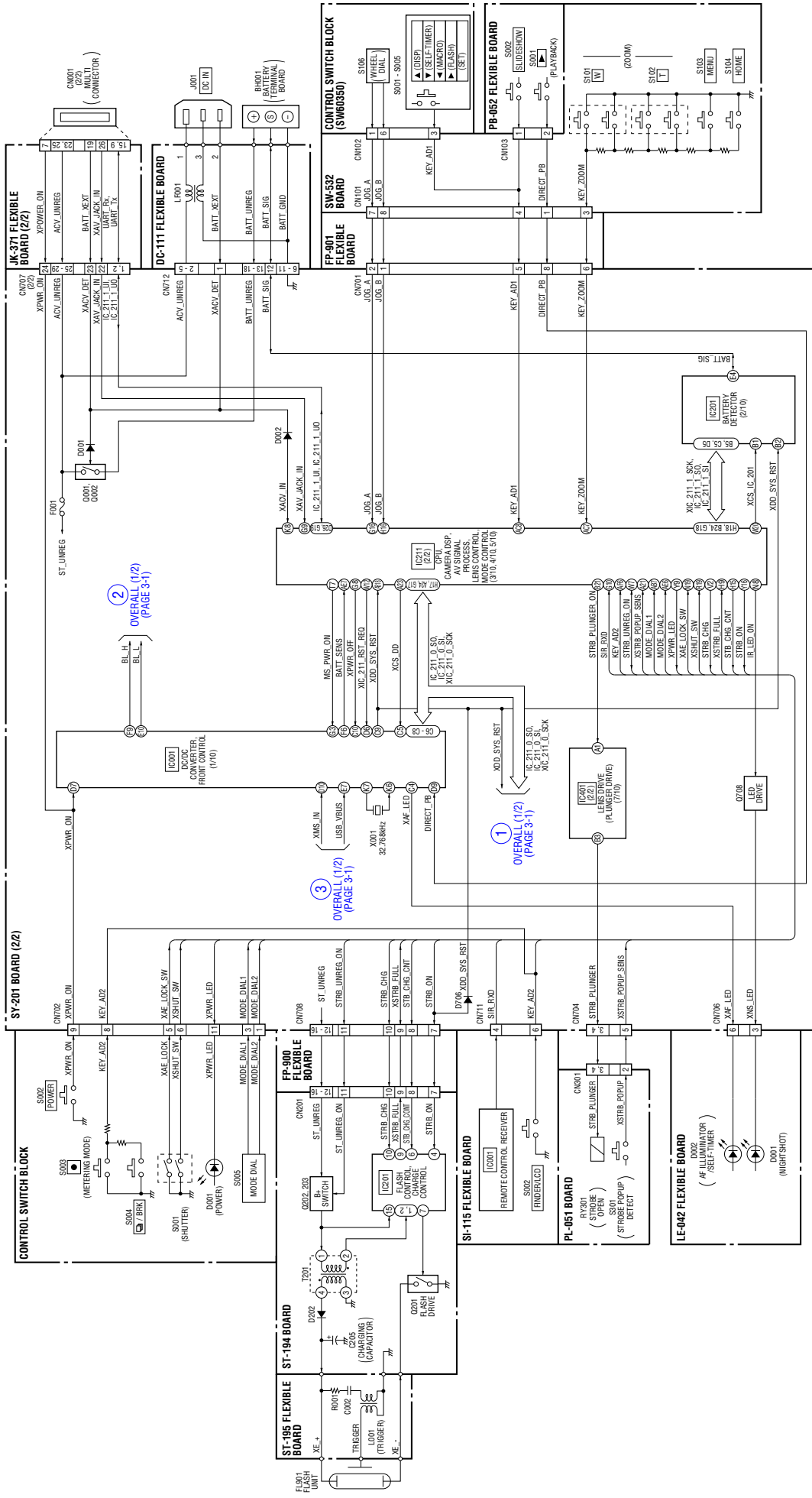
• [POWER BLOCK DIAGRAM \(2/2\)](#)

3. BLOCK DIAGRAMS

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

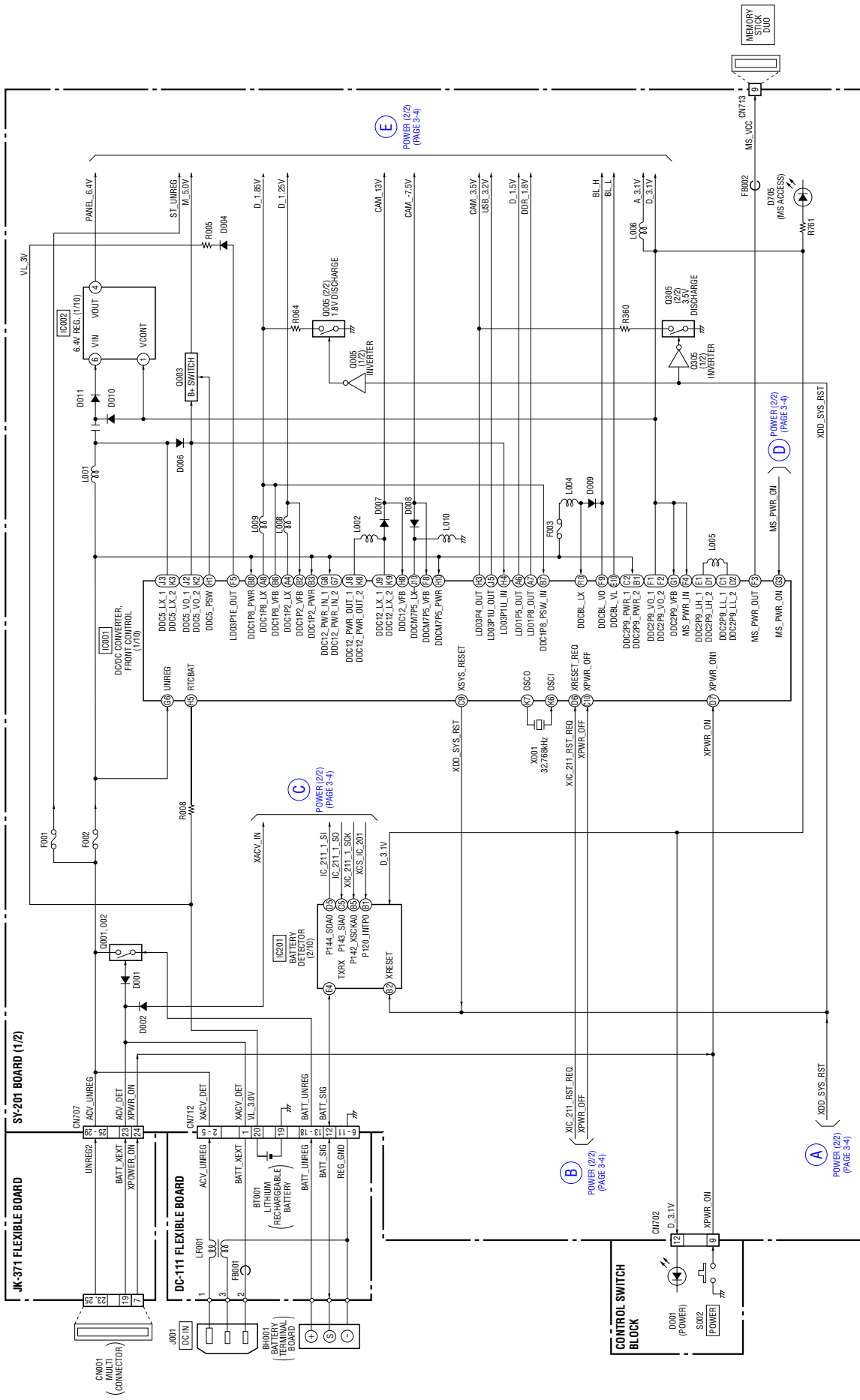


3-2. OVERALL BLOCK DIAGRAM (2/2) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



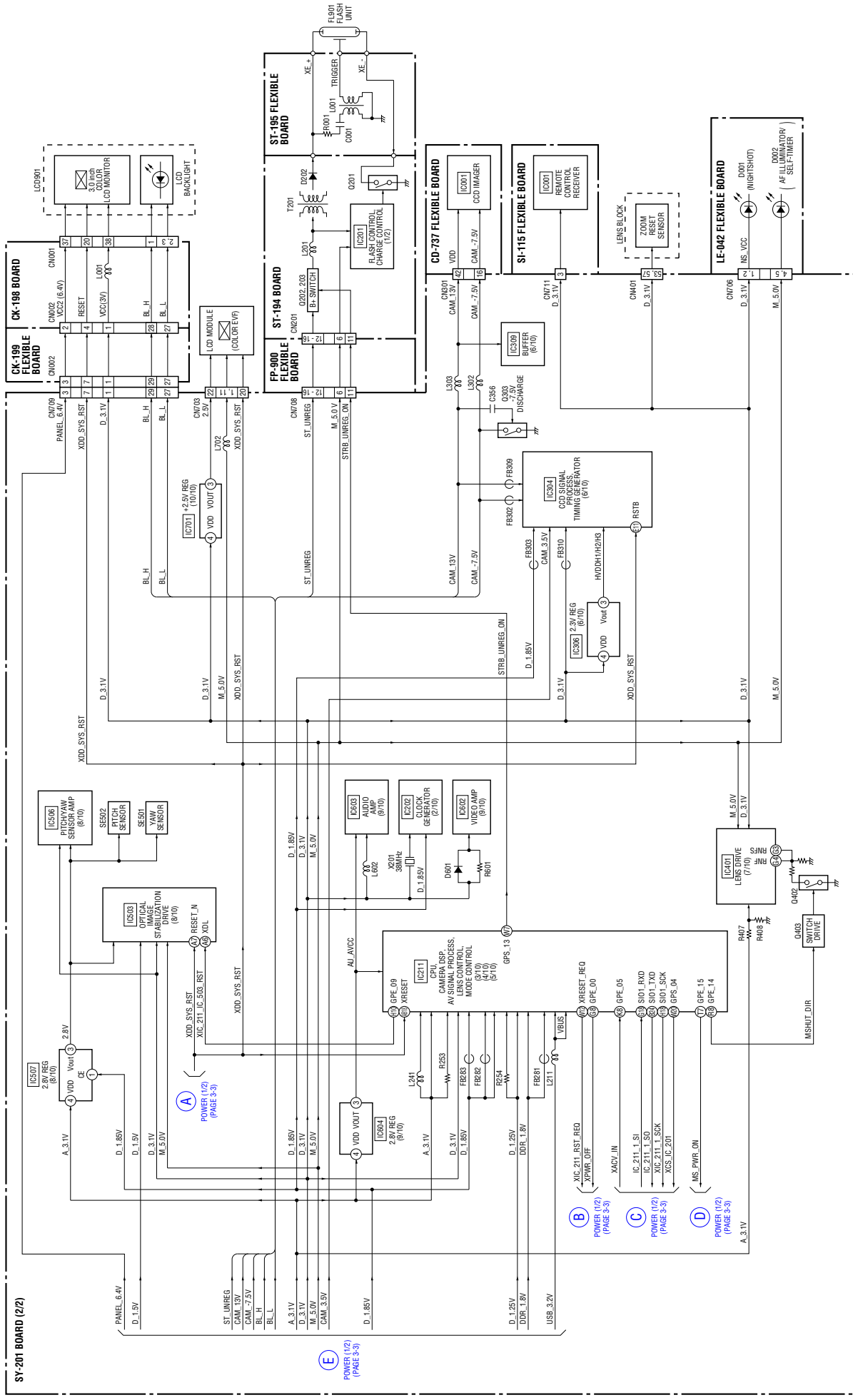
3-3. POWER BLOCK DIAGRAM (1/2)

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



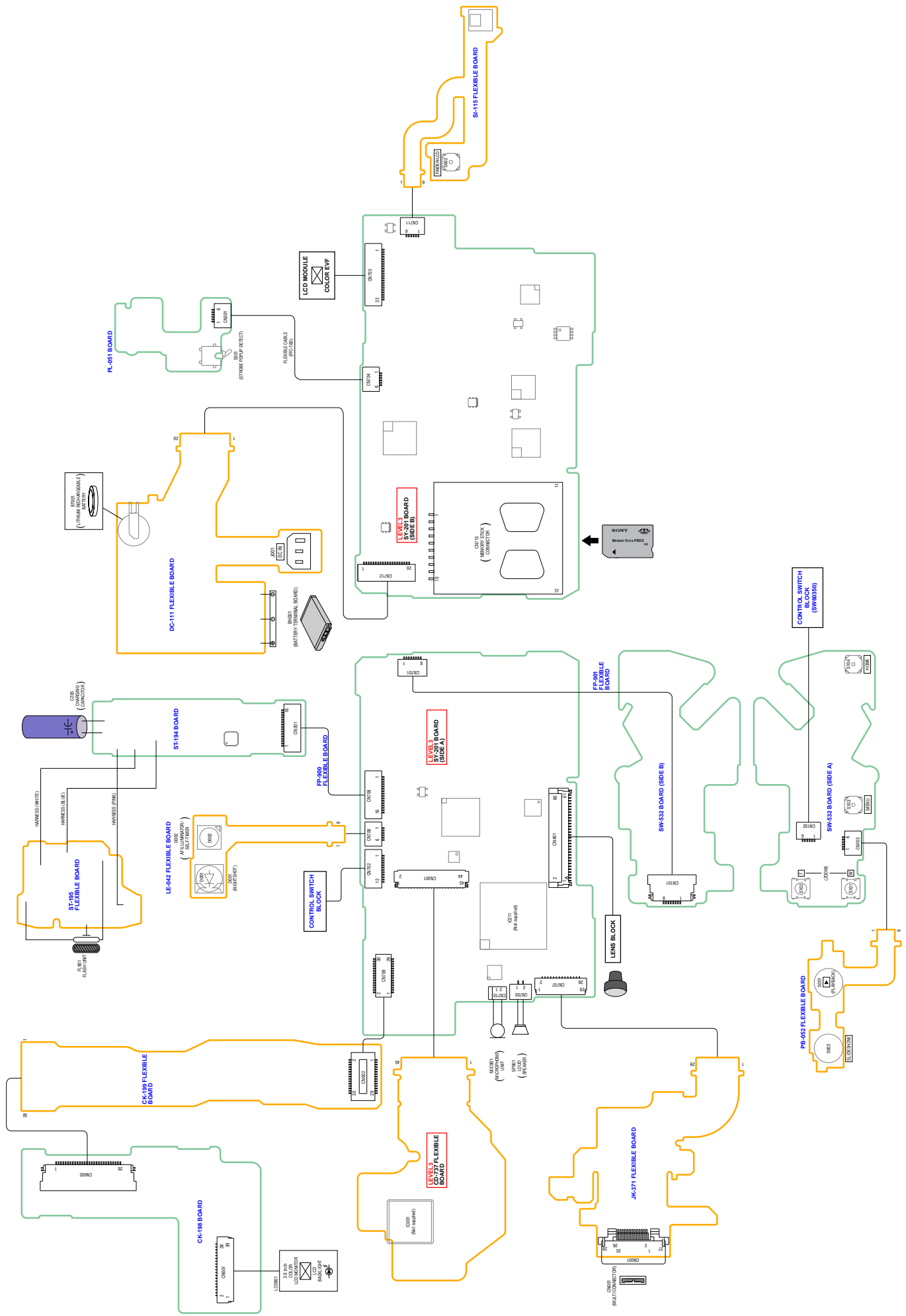
3-4. POWER BLOCK DIAGRAM (2/2)

() : 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"> CK-198 BOARD (LCD CONNECTION) 	<ul style="list-style-type: none"> FP-900 FLEXIBLE BOARD (SY-ST CONNECTION)
<ul style="list-style-type: none"> CK-199 FLEXIBLE BOARD (SY-CK CONNECTION) 	<ul style="list-style-type: none"> FP-901 FLEXIBLE BOARD (SY-SW CONNECTION)
<ul style="list-style-type: none"> JK-371 FLEXIBLE BOARD (MULTI CONNECTOR) 	<ul style="list-style-type: none"> SI-115 FLEXIBLE BOARD (REMOTE CONTROL RECEIVER)
<ul style="list-style-type: none"> ST-194 BOARD (FLASH DRIVE) 	<ul style="list-style-type: none"> PB-052 FLEXIBLE BOARD (PLAYBACK, SLIDESHOW SWITCH)
<ul style="list-style-type: none"> ST-195 FLEXIBLE BOARD (FLASH UNIT) 	<ul style="list-style-type: none"> SW-532 BOARD (ZOOM SWITCH)
<ul style="list-style-type: none"> DC-111 FLEXIBLE BOARD (BATTERY IN, DC IN) 	<ul style="list-style-type: none"> CONTROL SWITCH BLOCK (SW60350)
<ul style="list-style-type: none"> PL-051 BOARD (STROBE PLUNGER) 	<ul style="list-style-type: none"> CONTROL SWITCH BLOCK
<ul style="list-style-type: none"> LE-042 FLEXIBLE BOARD (NIGHTSHOT, AF ILLUMINATOR) 	

• COMMON NOTE FOR SCHEMATIC DIAGRAMS

(JAPANESE)

回路図共通ノート

(他に必要なノートは各ブロックに記載してあります)

【回路図ノート】

- ・ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものはその耐圧を省略。単位はすべて μF (p は p F)。
- ・チップ抵抗で指示のないものは、1 / 10 Ω 以下。
 $1k = 1000 \Omega$, $1M = 1000 \Omega$
- ・チップ部品交換時の注意
 取り外した部品は再使用せず、未使用の部品をご使用ください。
 タンタルコンデンサのマイナス側は熱に弱いので注意してください。
- ・チップ部品には下記のように表示したものがああります。

例	C	L
	22U	10H
	T	520
	↑	↑
種類	ケースサイズ	外形寸法 (mm)

- ・抵抗、コンデンサ、など定数に X があるものは、使用していない事を示しています。このため、使用していない回路が記載されている事があります。
- ・★印のある部品は、機種などにより異なりますので機能別マウント一覧表を参照してください。
- ・可変抵抗と半固定抵抗で、 δ 性の表示を省略。
- ・信号名表記について、下記のような場合があります。
 $X \rightarrow \overline{E}$ $P \rightarrow \overline{P}$
- ・ は不燃性抵抗。
- ・ はヒューズ抵抗。
- ・ はパネル表示名称。
- ・ はE-ライン。
- ・ はB-ライン。
- ・ はEイン (+, -) の入出力方向を示す。
- ・ は調整名称。

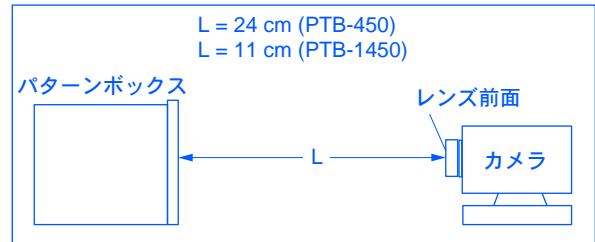
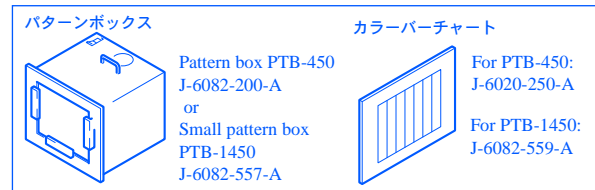
【電圧・波形測定条件ノート】

- ・電圧値及び信号波形はパターンボックスのカラーバーチャートを被写体としたときの測定点对アース間の参考値。
 (デジタルマルチメータ; 入力インピーダンス ∞ 0 Ω 使用)
- ・使用テストの入力インピーダンスにより電圧値が多少異なります。

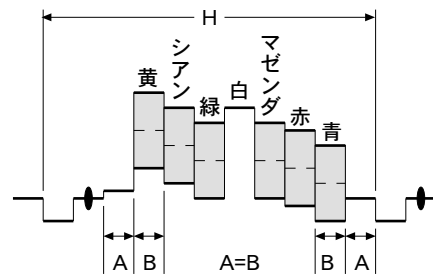
イメージ交換時の注意

- ・イメージを交換した場合は、カメラ部の全調整を行ってください。
- ・イメージは構造上、静電気により破壊される恐れがあるため、MOS と同様に注意して取り扱ってください。
 また、受光部にはゴミの付着、および強い光がはいることのないように注意してください。

1 接続図

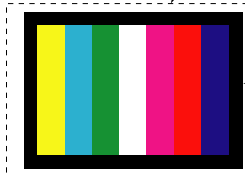


2 図a 及び図b の波形が得られるように画枠調整して下さい。



図a (映像入出力端子出力波形)

電子ビーム走査線



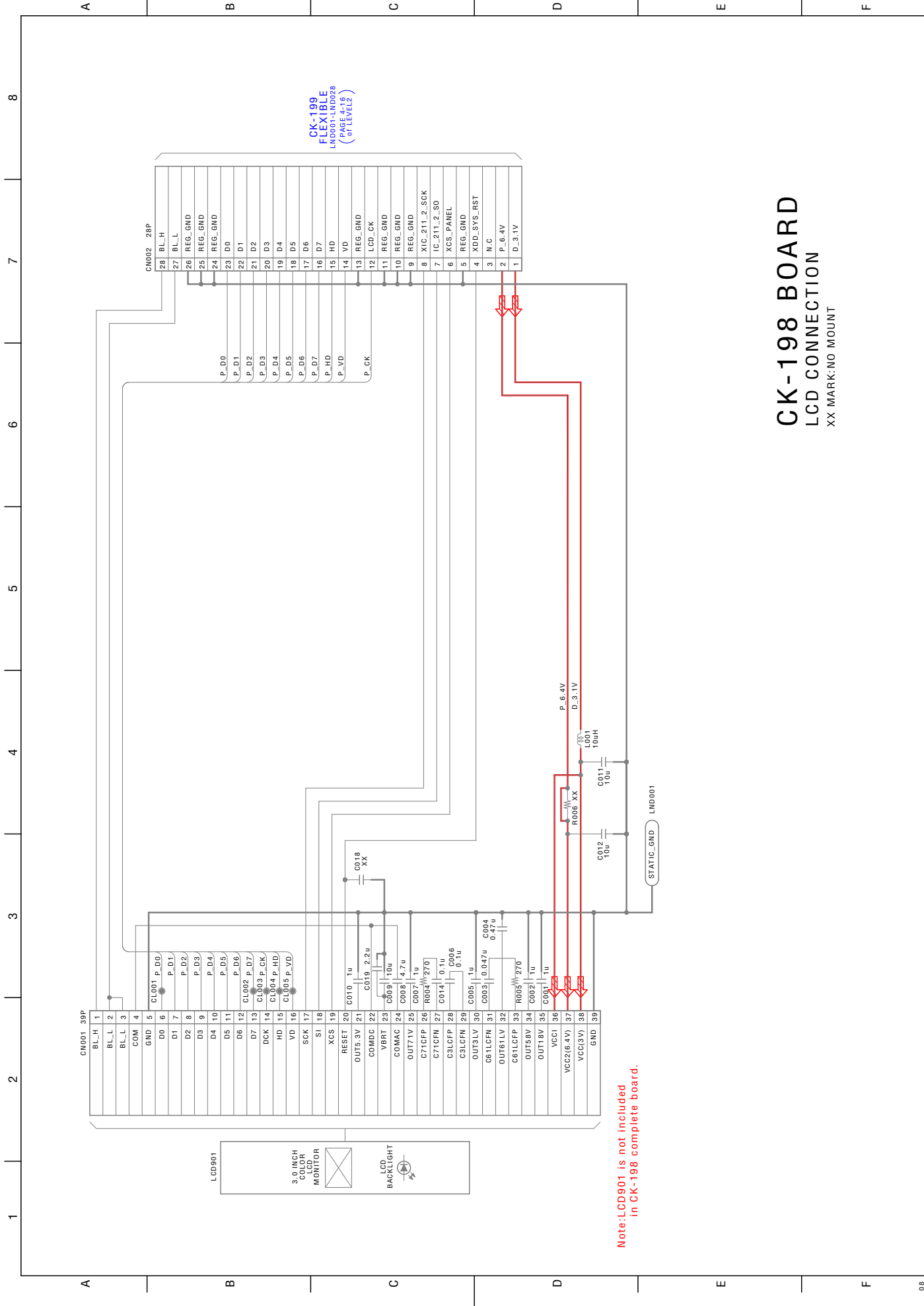
図b (テレビモニタの映像)

△印の部品、または△印付きの点線で囲まれた部品は、安全性を維持するために重要な部品です。従って交換時は、必ず指定の部品を使用して下さい。

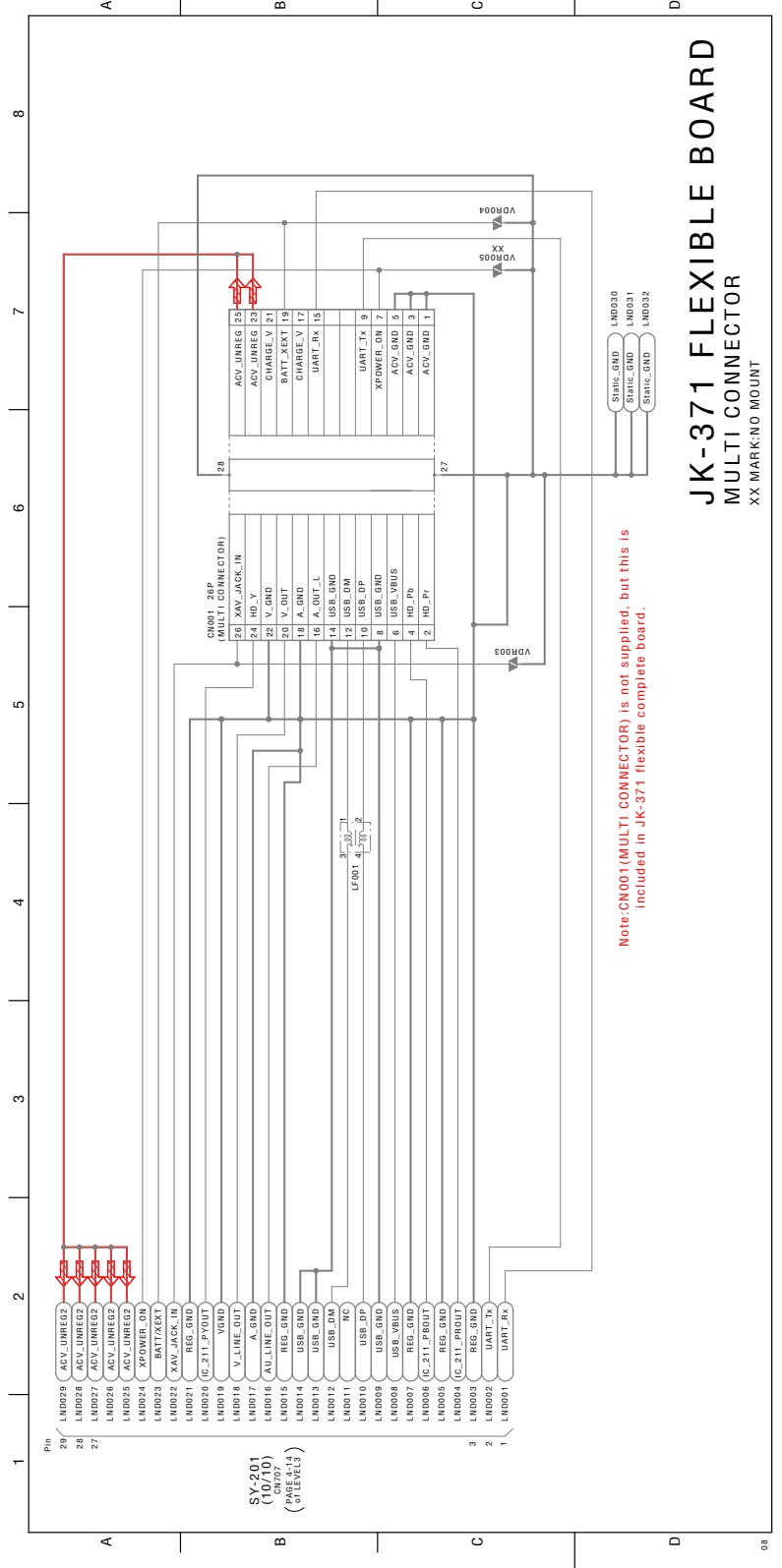
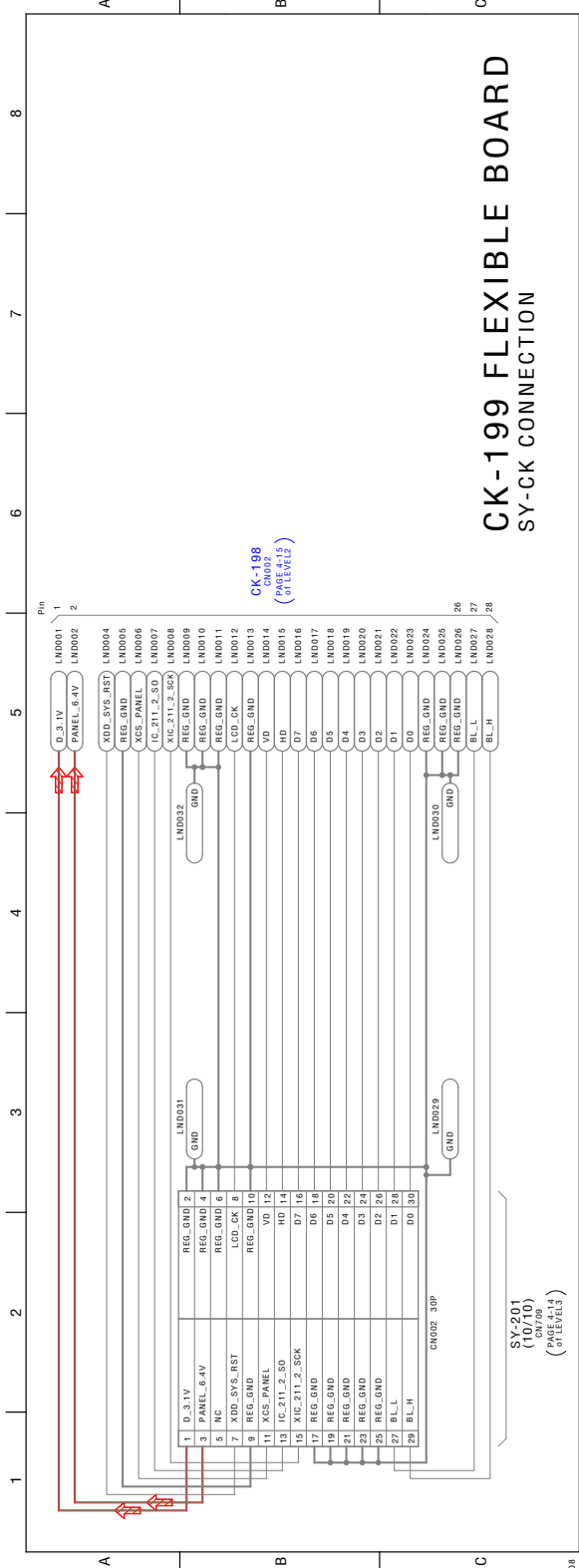
お願い

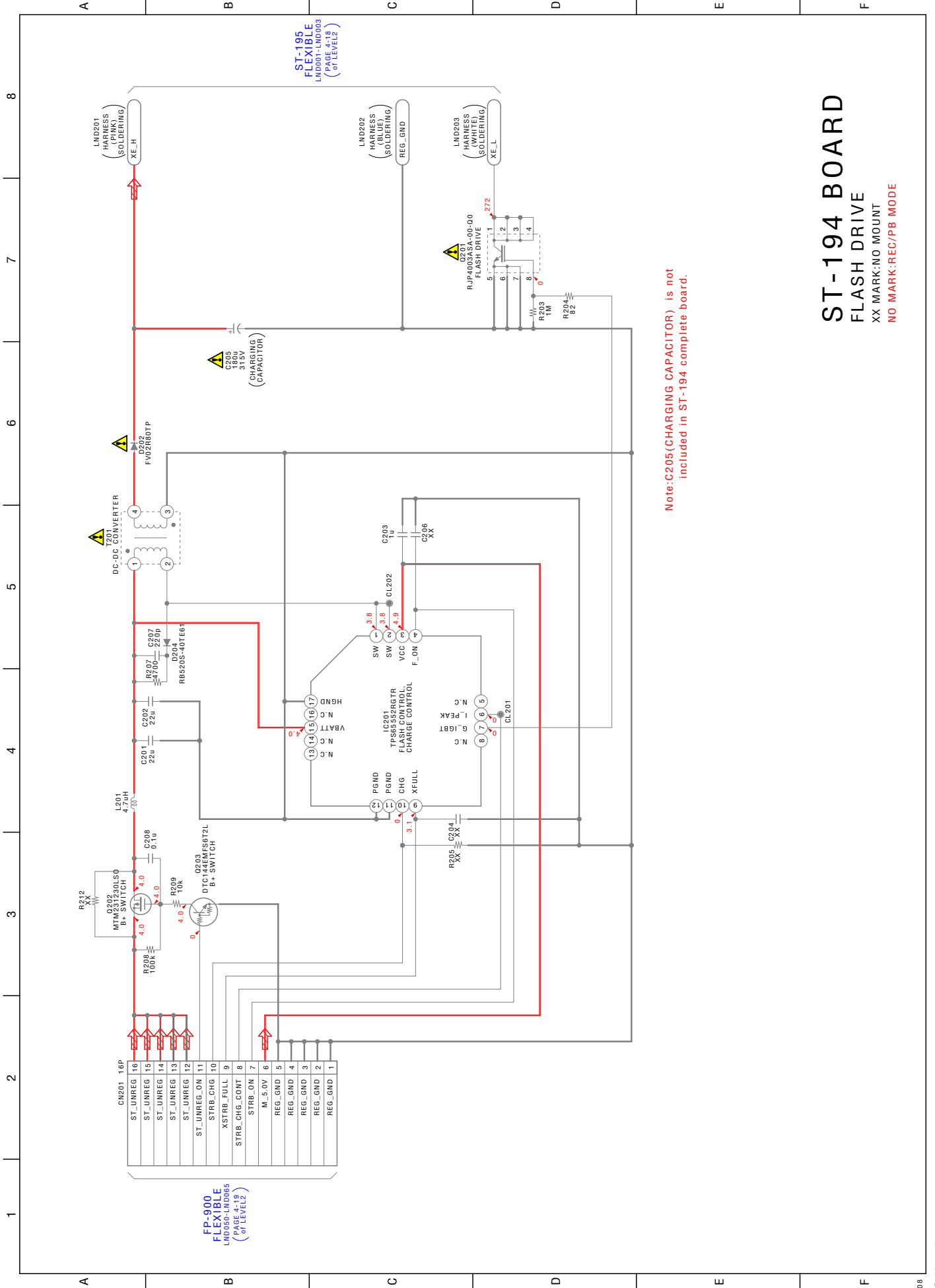
図面番号で部品を指定するときは基板名又はブロックを併せて指定して下さい。

Schematic diagrams of the CD-737 flexible board and SY201 board are not shown.
Pages from 4-4 to 4-14 are not shown.



CK-199
FLEXIBLE
LIND001-LIND028
(AT LEVEL 2)

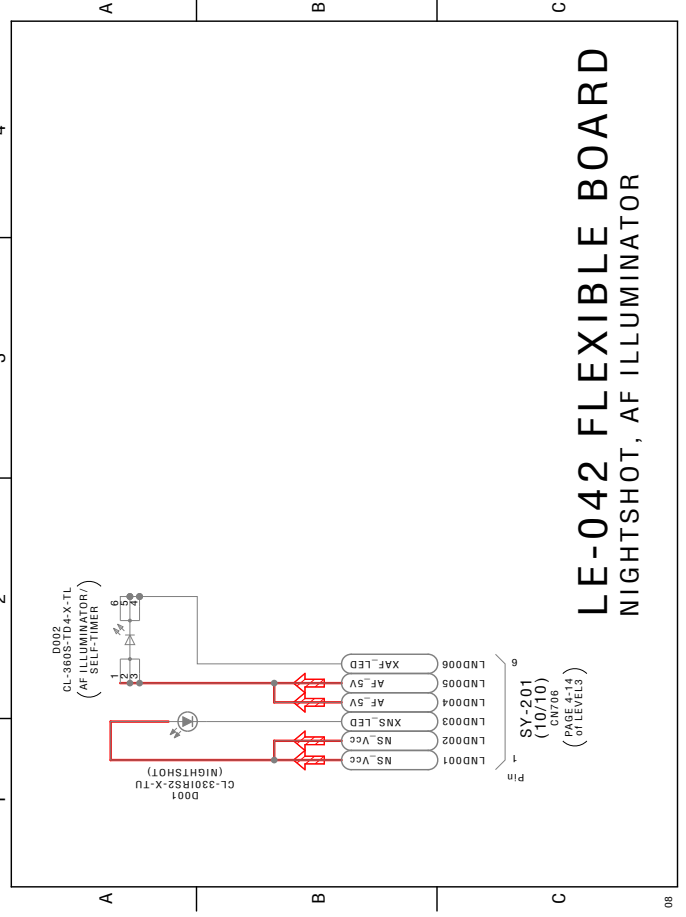
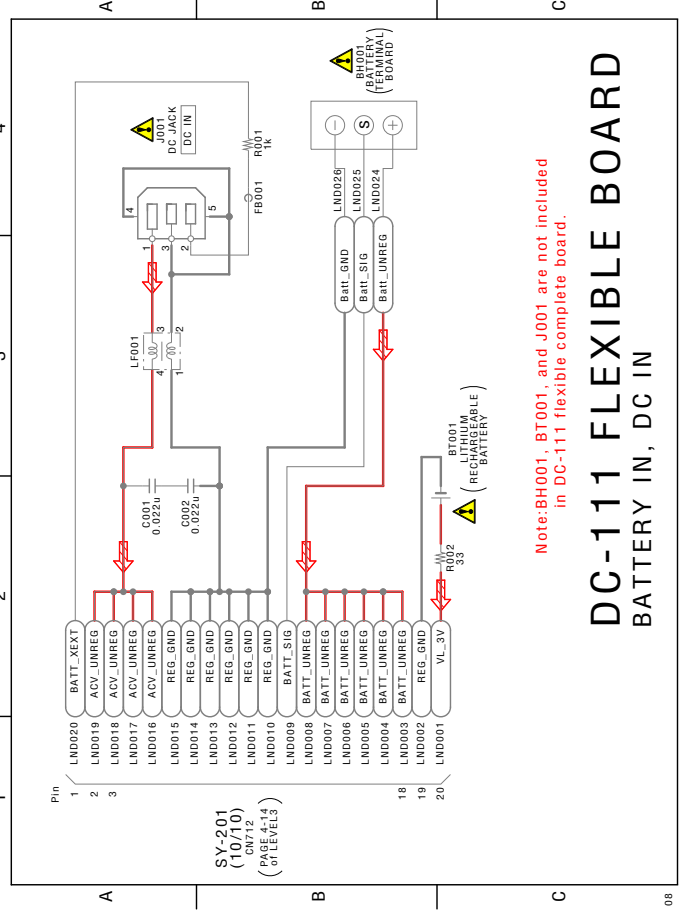
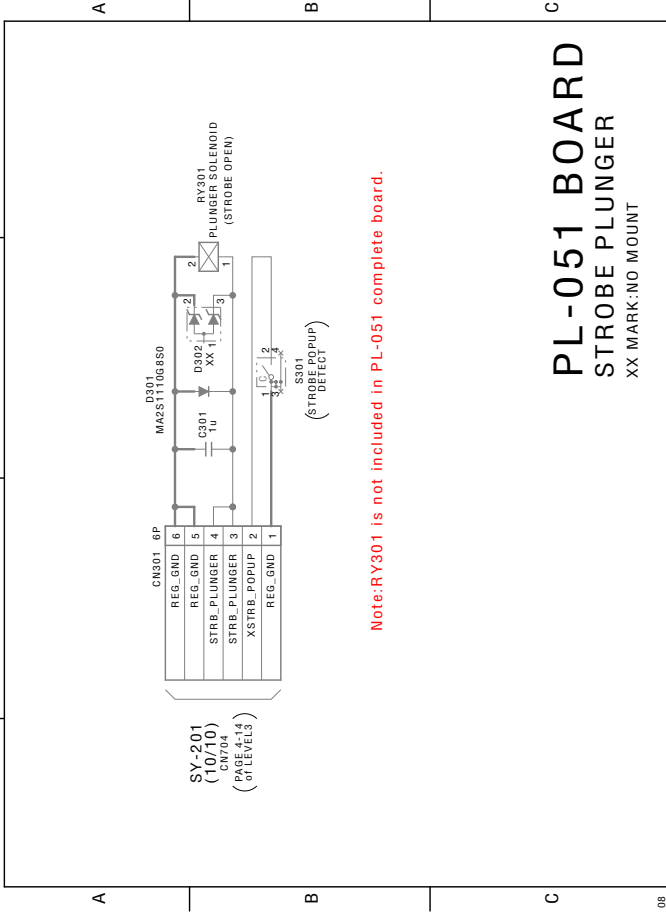
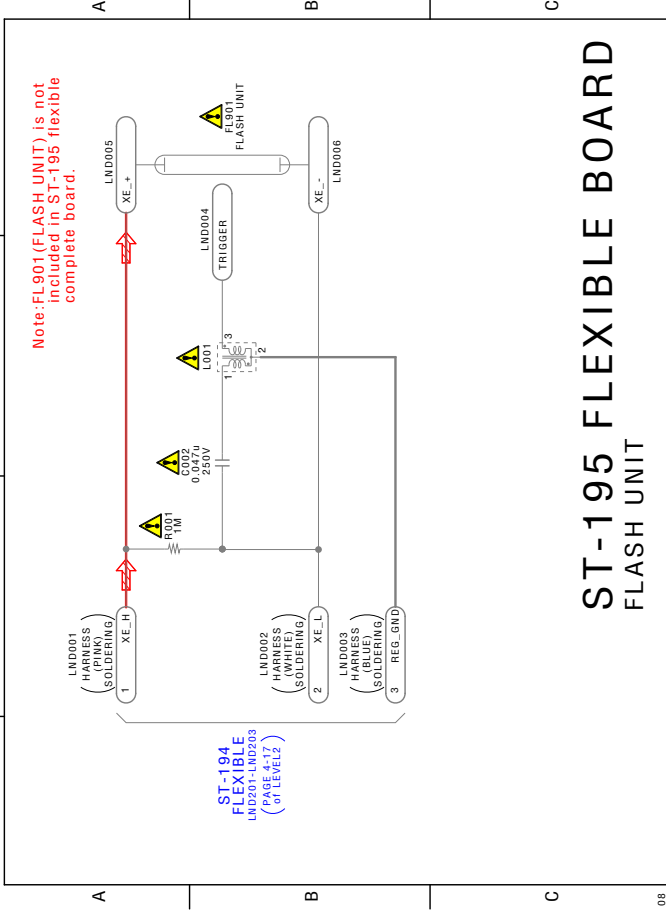


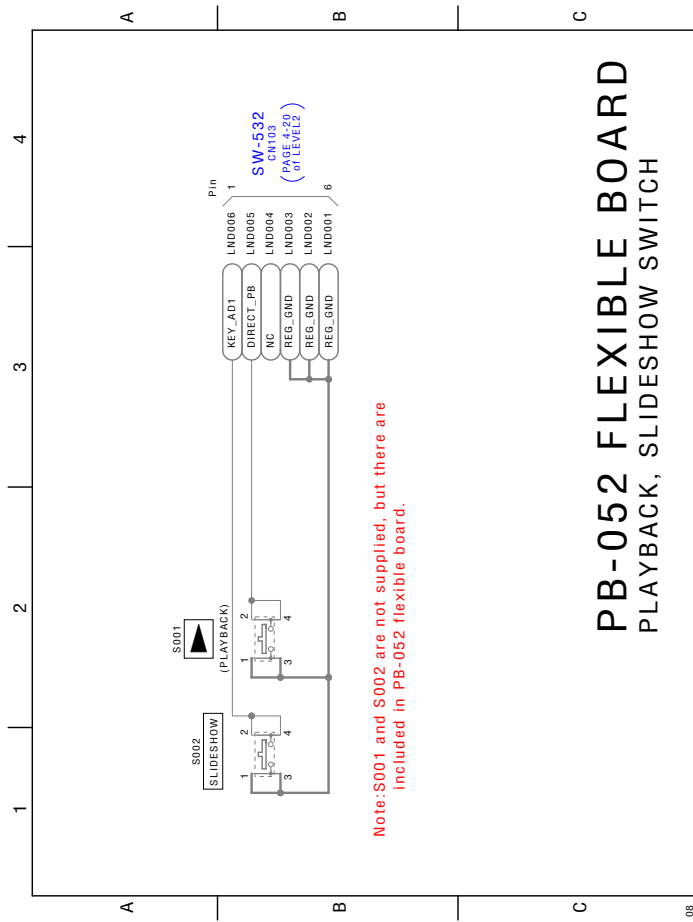
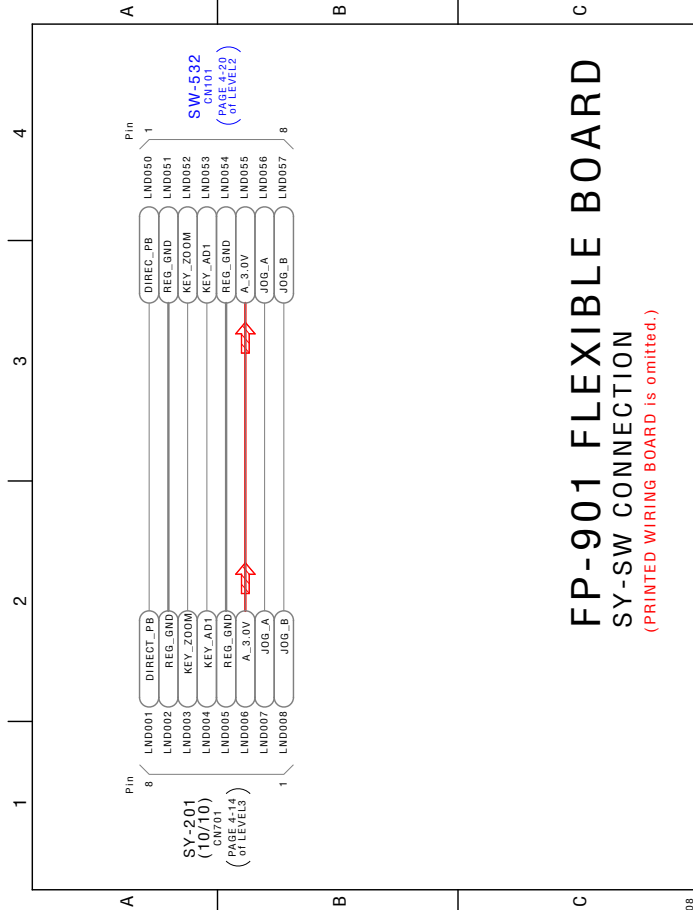
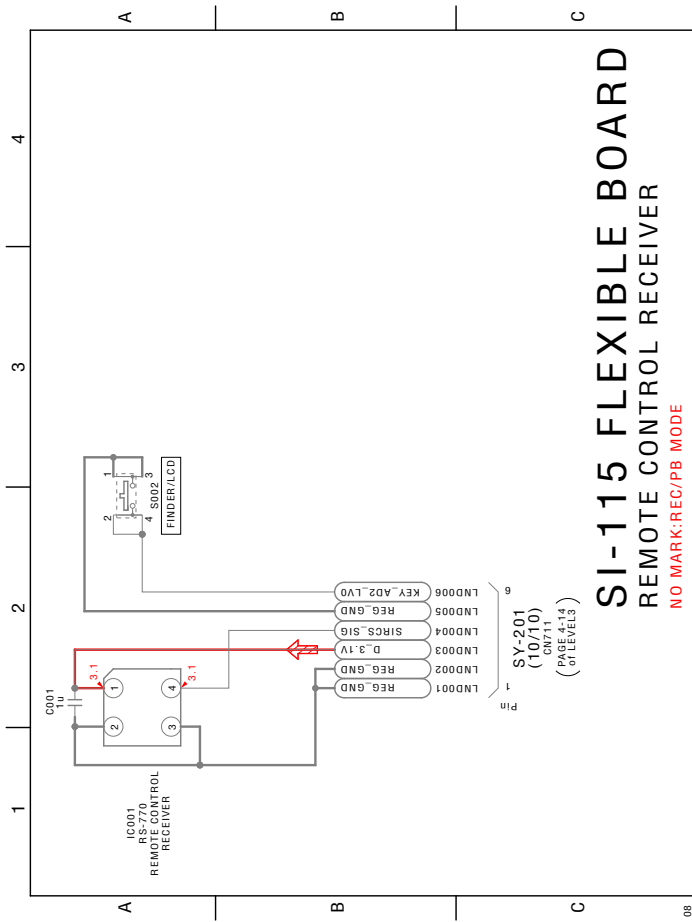
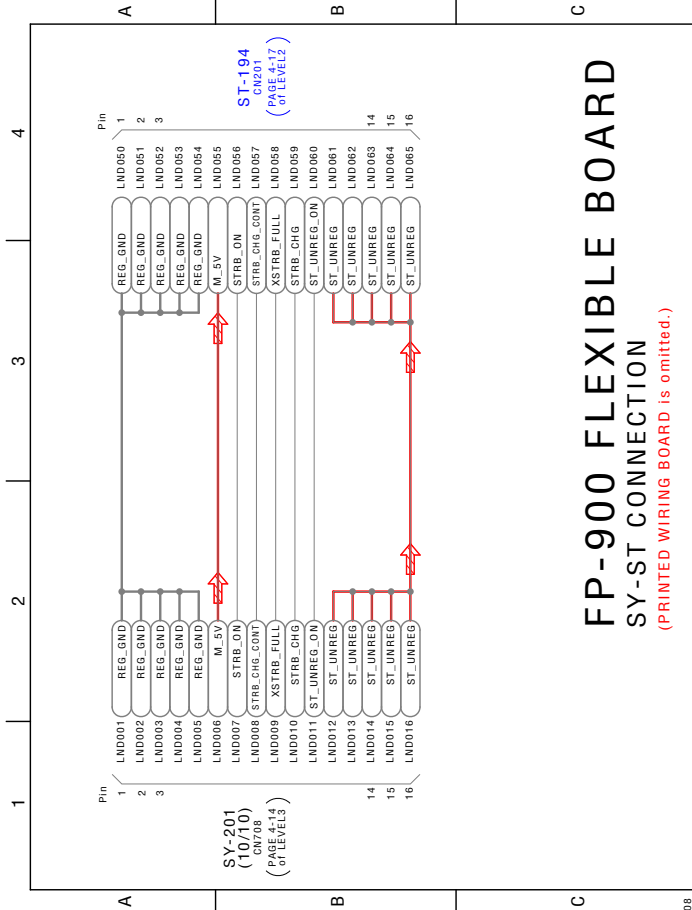


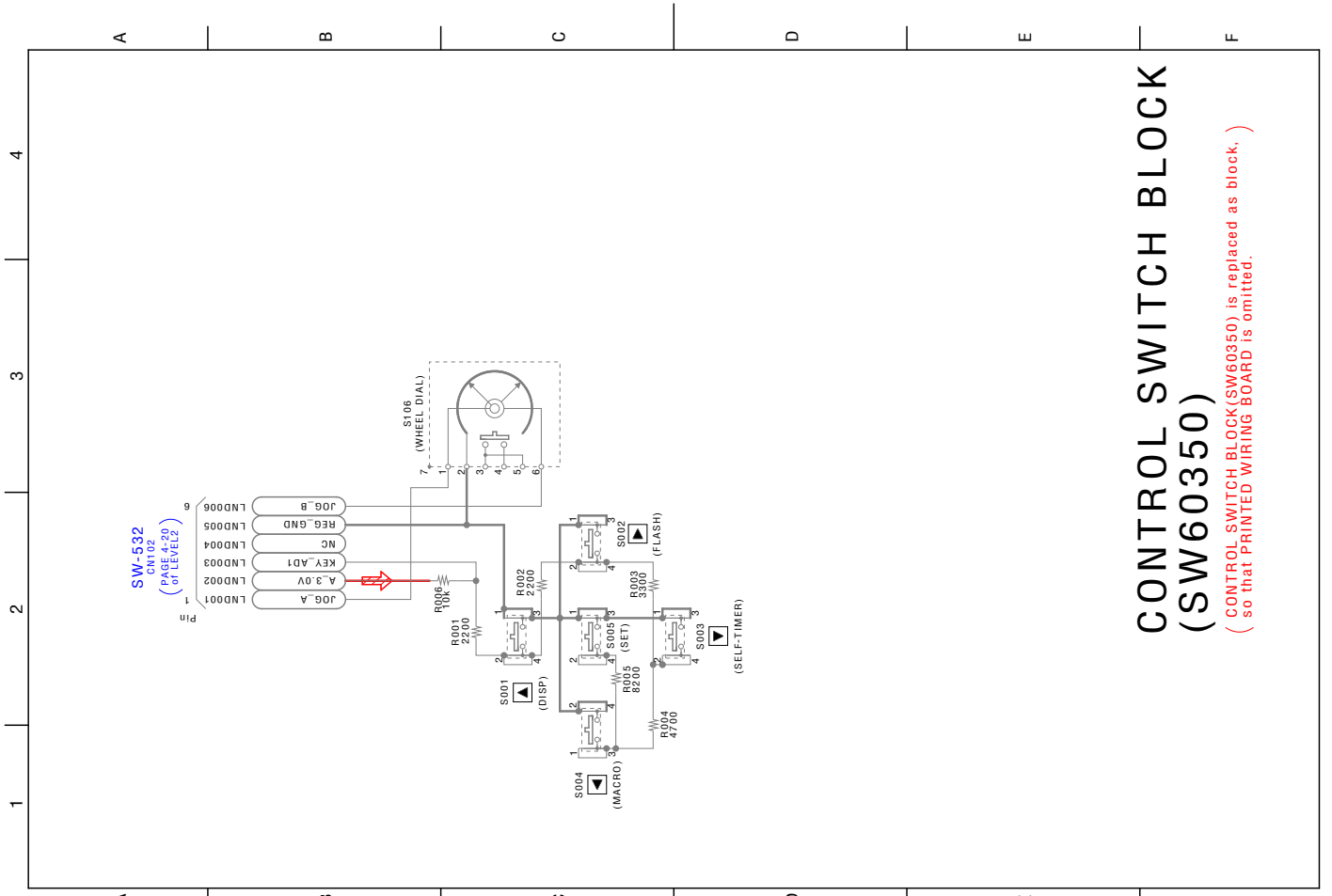
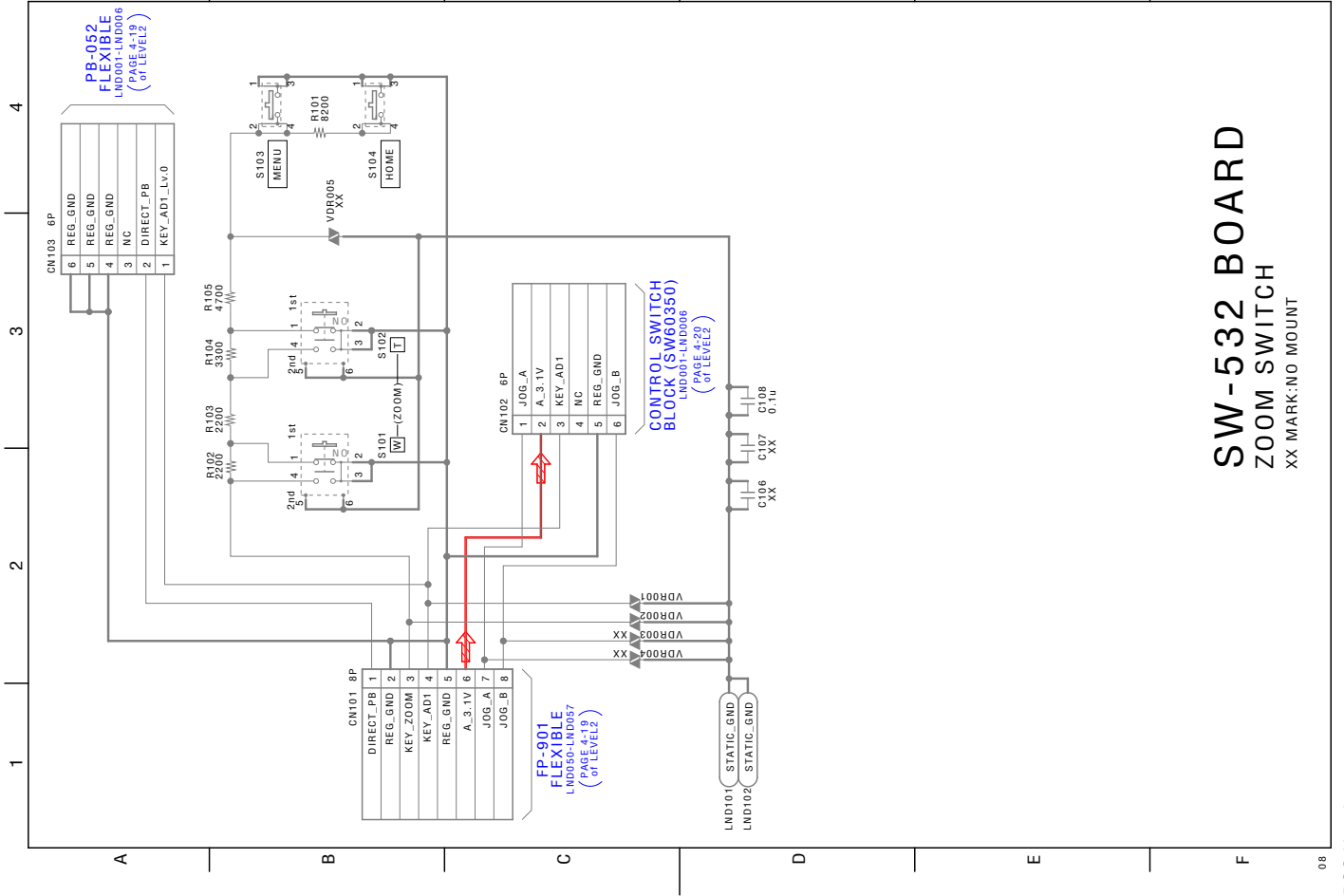
ST-194 BOARD

FLASH DRIVE

XX MARK:NO MOUNT
NO MARK:REC/PB MODE







4-3. PRINTED WIRING BOARDS

Link

• CK-198 BOARD	• DC-111 FLEXIBLE BOARD
• CK-199 FLEXIBLE BOARD	• PL-051 BOARD
• JK-371 FLEXIBLE BOARD	• PB-052 FLEXIBLE BOARD
• ST-194 BOARD	• SI-115 FLEXIBLE BOARD
• ST-195 FLEXIBLE BOARD	• SW-532 BOARD
• LE-042 FLEXIBLE BOARD	

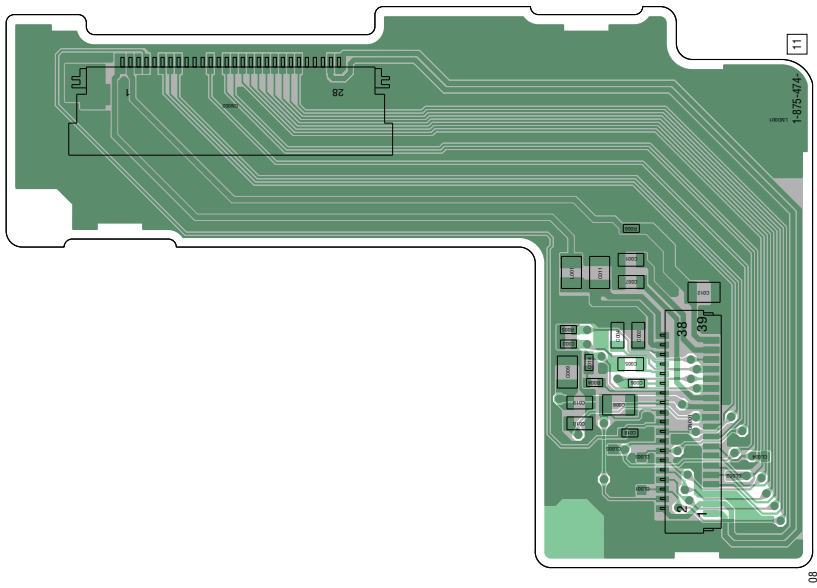
[• COMMON NOTE FOR PRINTED WIRING BOARDS](#)

Printed wiring boards of the CD-737 flexible board and SY-201 board are not shown.
Pages from 4-23 to 4-25 are not shown.

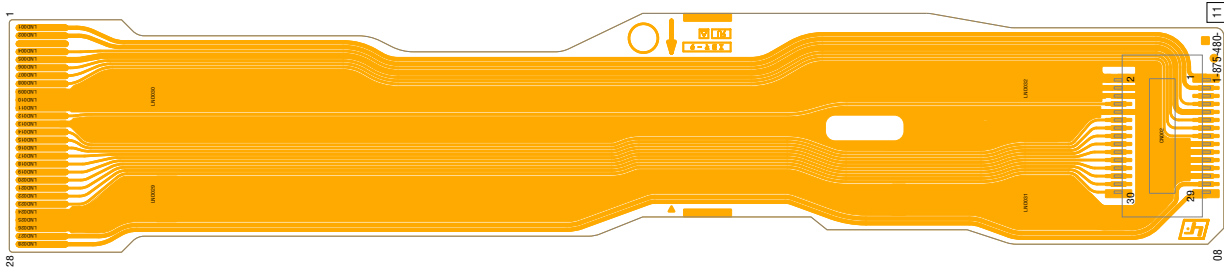
CK-198 (2 layers), CK-199 (1 layer), JK-371 (2 layers)

 : Uses unleaded solder.

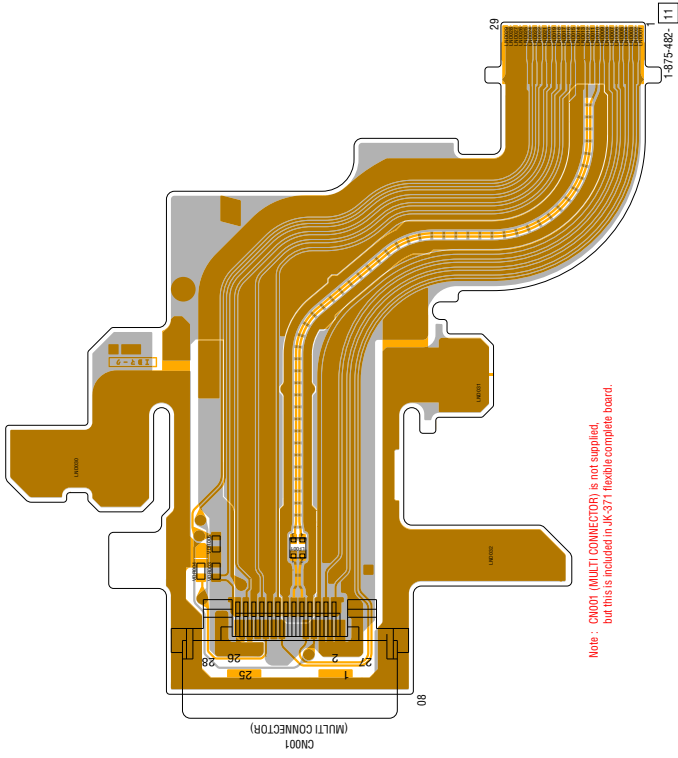
CK-198 BOARD



CK-199 FLEXIBLE BOARD



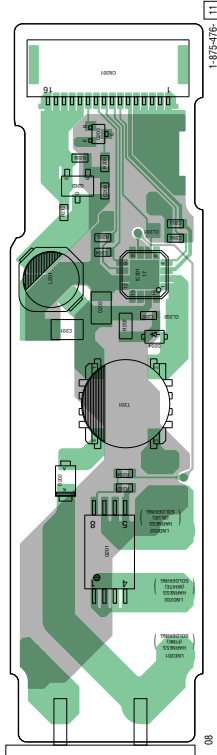
JK-371 FLEXIBLE BOARD



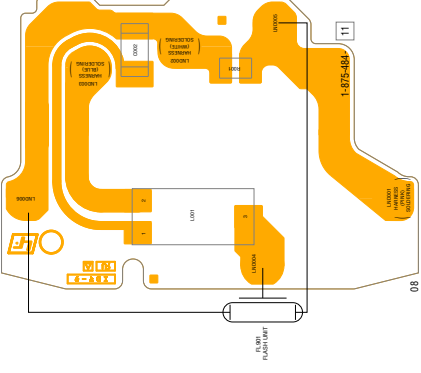
Note : CN001 (MULTI CONNECTOR) is not supplied, but this is included in JK-371 flexible complete board.

 : Uses unleaded solder.

ST-194 BOARD

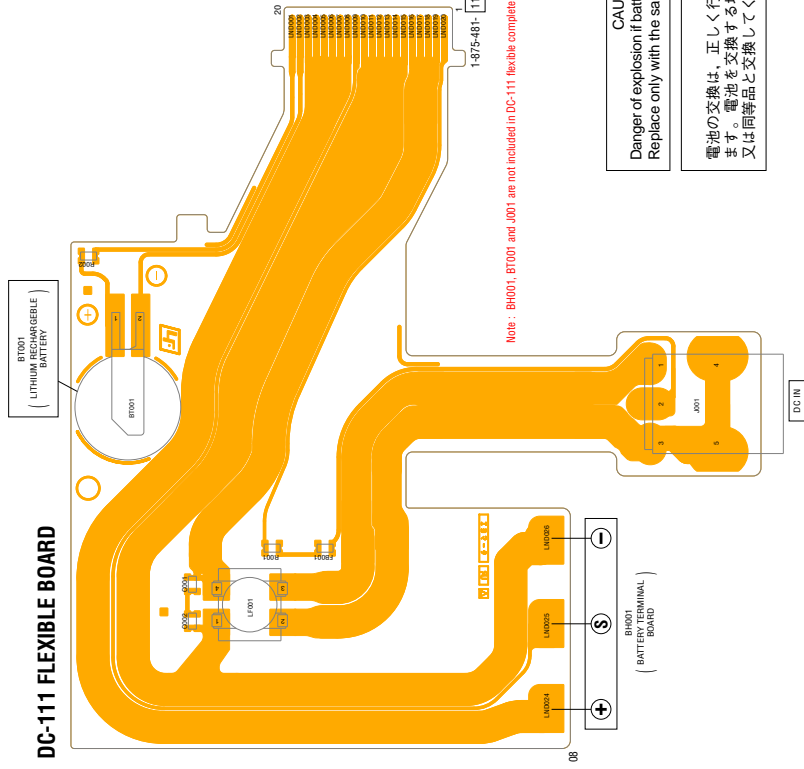


ST-195 FLEXIBLE BOARD



Note : FL001 (FLASH UNIT) is not included in ST-195 flexible complete board.

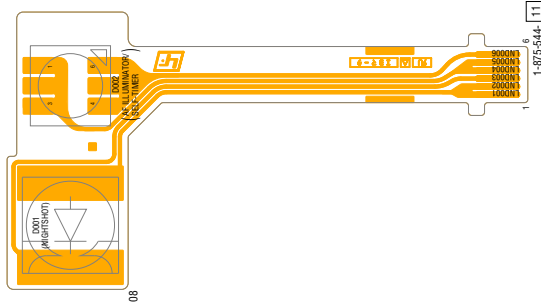
DC-111 FLEXIBLE BOARD



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

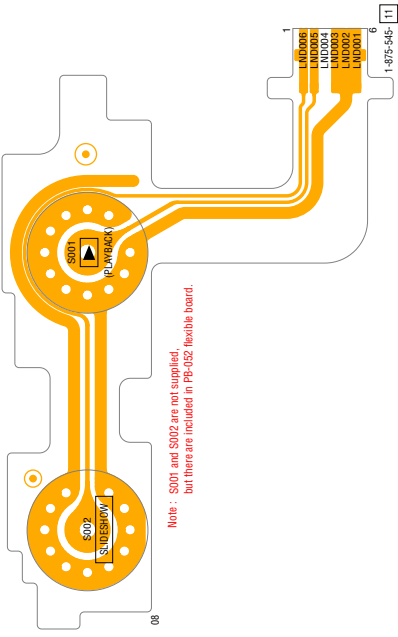
注意
電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

LE-042 FLEXIBLE BOARD

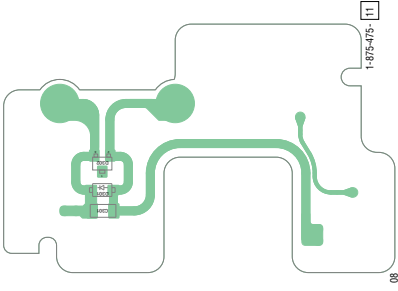


 : Uses unleaded solder.

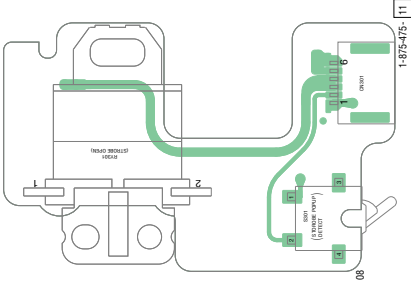
PB-052 FLEXIBLE BOARD



PL-051 BOARD (SIDE B)

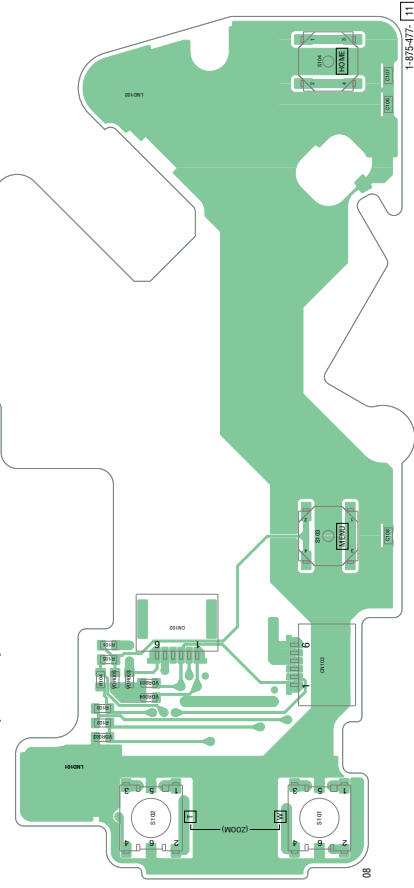


PL-051 BOARD (SIDE A)

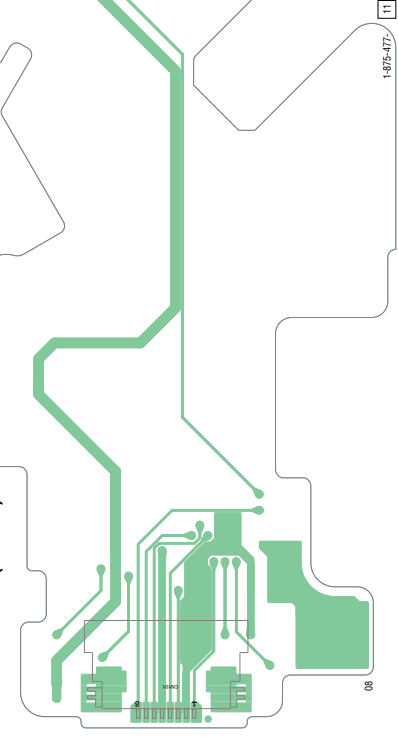


Note : RV301 is not included in PL-051 complete board.

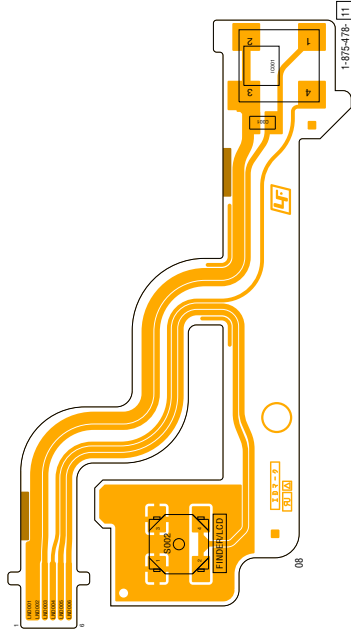
SW-532 BOARD (SIDE A)



SW-532 BOARD (SIDE B)

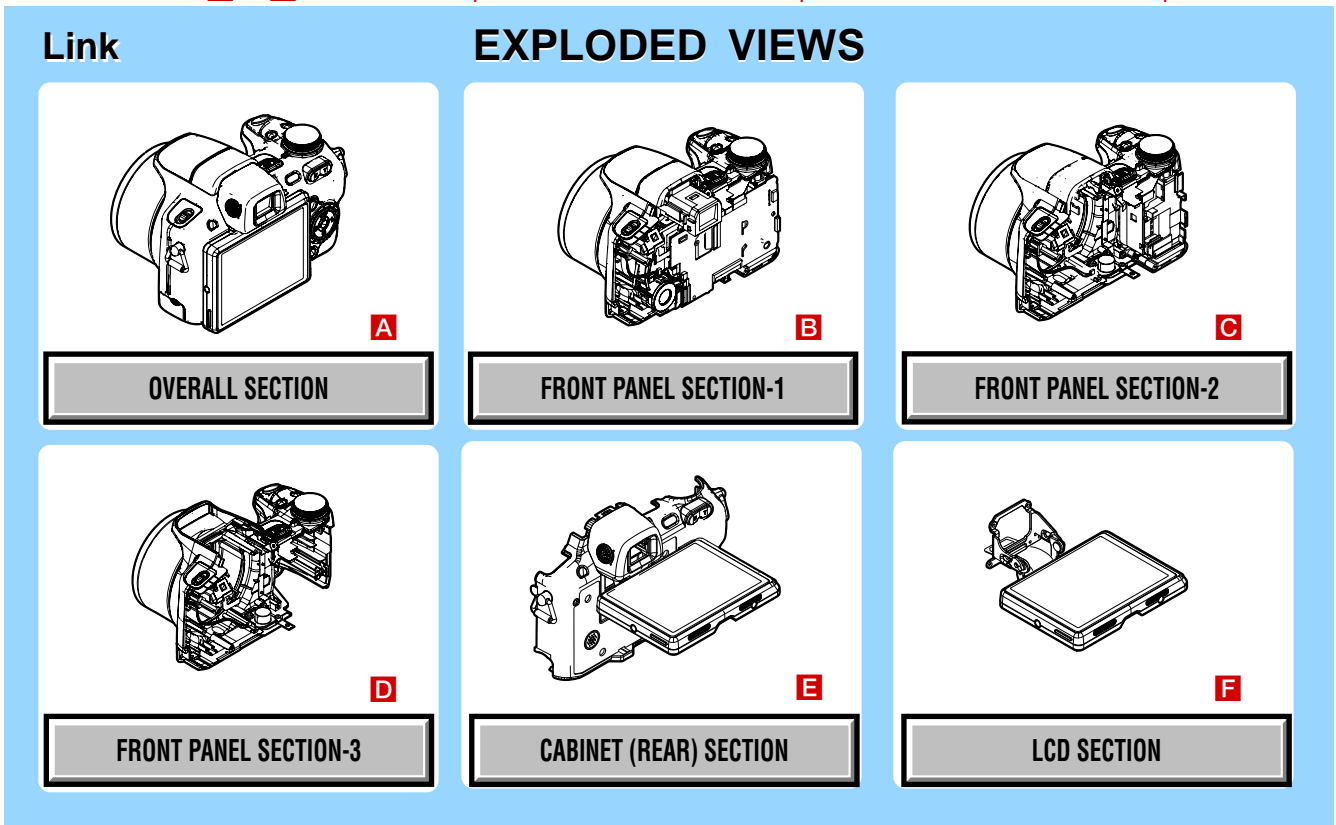


SI-115 FLEXIBLE BOARD



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	ELECTRICAL PARTS LIST		ACCESSORIES
• CK-198 BOARD F	• JK-371 FLEXIBLE BOARD A	• SI-115 FLEXIBLE BOARD D	
• CK-199 FLEXIBLE BOARD F	• LE-042 FLEXIBLE BOARD D	• ST-194 BOARD C	
• DC-111 FLEXIBLE BOARD C	• PB-052 FLEXIBLE BOARD E	• ST-195 FLEXIBLE BOARD C	
• FP-900 FLEXIBLE BOARD C	• PL-051 BOARD C	• SW-532 BOARD E	
• FP-901 FLEXIBLE BOARD E			

5. REPAIR PARTS LIST

5. REPAIR PARTS LIST

(ENGLISH)

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...

(JAPANESE)

【使用上の注意】

- ここに記載されている部品は補修用部品であるため回路図及びセットに付いている部品と異なる場合があります。
- - は標準化部品のためセットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でu μ μ を示します。
- 抵抗の単位 Ω は省略してあります。
金 被：金属被膜抵抗。
サンキン：酸化金属被膜抵抗。
- インダクタの単位でu μ μ を示します。
- 半導体の名称でuuA P P等それぞれ
A μ P μ P μ P μ P を示します。

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

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

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

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

お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

Δ 印の部品、または Δ 印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

- 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

5. REPAIR PARTS LIST

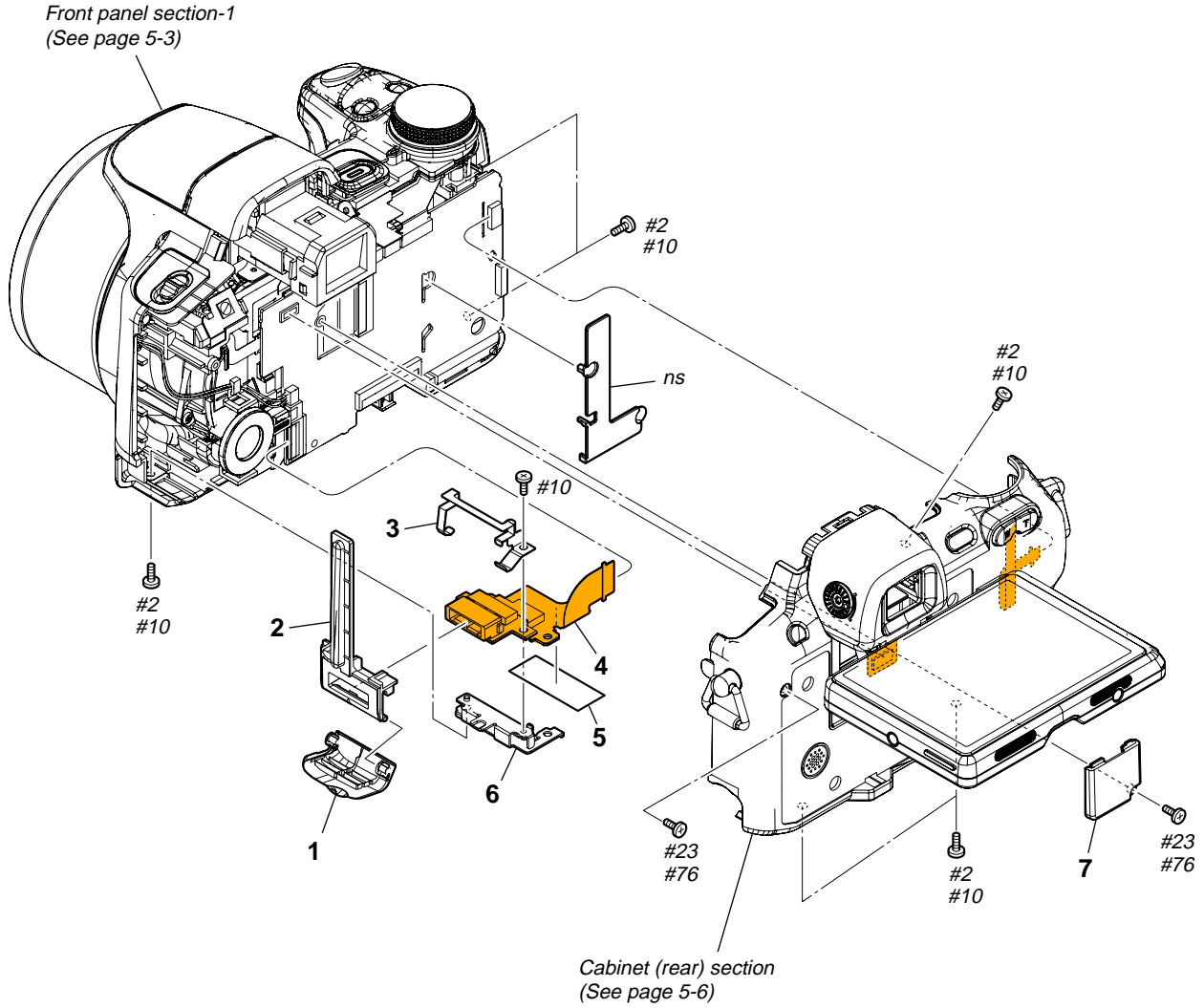
DISASSEMBLY

HARDWARE LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION

ns: not supplied



Ref. No.	Part No.	Description
1	3-452-720-01	LID, MULTI (BLACK)
1	3-452-720-11	LID, MULTI (SILVER)
2	3-452-721-01	CABINET (R), SIDE (BLACK)
2	3-452-721-11	CABINET (R), SIDE (SILVER)
* 3	3-452-723-01	SPRING, MULTI LID CLICK
4	A-1519-825-A	JK-371 FLEXIBLE BOARD, COMPLETE
5	3-080-272-01	TAPE (A)
* 6	3-452-722-01	PLATE, MULTI FIXED

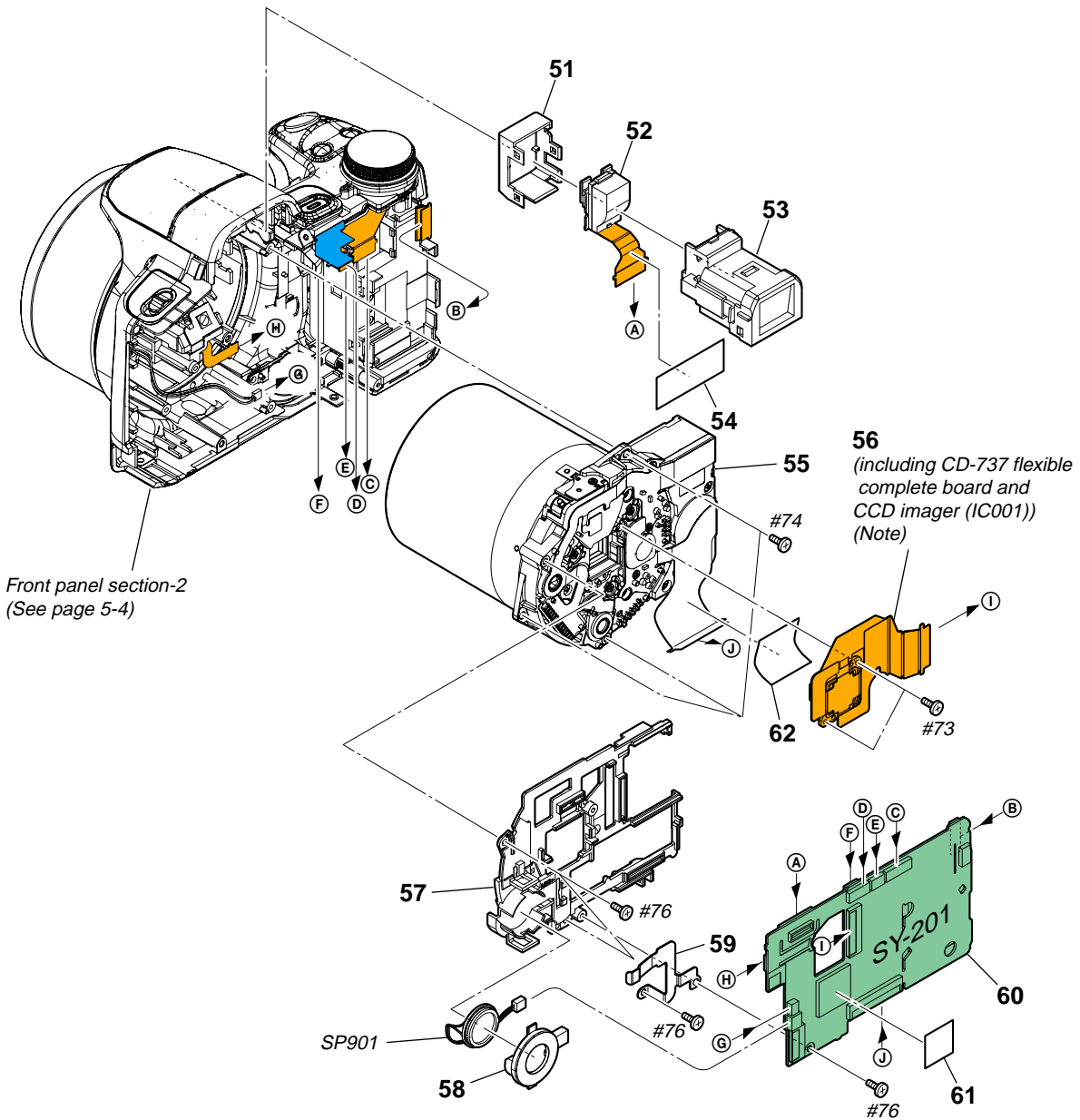
Ref. No.	Part No.	Description
7	3-452-729-01	DRIVING, SY MECHANICAL (BLACK)
7	3-452-729-11	DRIVING, SY MECHANICAL (SILVER)
#2	2-635-562-31	SCREW (M1.7) (Black)
#10	2-599-475-31	SCREW (M1.7) (Silver)
#23	3-080-204-11	SCREW, TAPPING, P2 (Black)
#76	2-666-551-11	SCREW, TAPPING, P2 (Silver)

5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-2. FRONT PANEL SECTION-1



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

Note: イメージャの交換時は4 - ページの“イメージャ交換時の注意”を必ずお読みください。

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
51	3-452-711-01	RETAINER, MODULE	* 59	3-452-726-01	PLATE, SY GROUND
52	1-802-033-31	LCD MODULE	60	A-1519-829-A	SY-201 BOARD, COMPLETE (SERVICE)
53	X-2190-274-1	VF ASSY (470)	* 61	4-000-555-01	SHEET (470), SY RADIATION
54	3-080-272-01	TAPE (A)	* 62	4-000-556-01	SHEET, LENS (RADIATION)
55	A-1530-428-A	LENS BLOCK ASSY (SERVICE)	SP901	1-825-945-51	LOUDSPEAKER (1.3CM)
56	A-1539-809-A	CCD BLOCK ASSY (including CD-737 flexible complete board and CCD imager (IC001).) (Note)	#73	3-086-156-61	SCREW B1.2 (Black)
* 57	3-452-725-01	FRAME, SY	#74	2-666-551-31	SCREW, TAPPING, P2 (Silver)
* 58	3-452-724-01	HOLDER, SP	#76	2-666-551-11	SCREW, TAPPING, P2 (Silver)

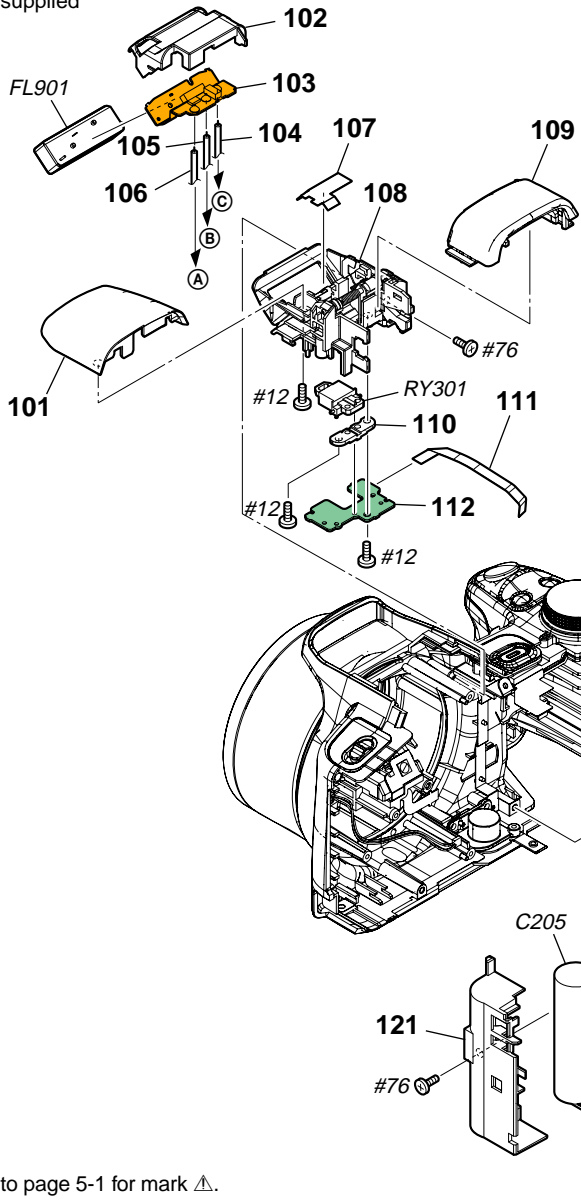
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-3. FRONT PANEL SECTION-2

ns: not supplied

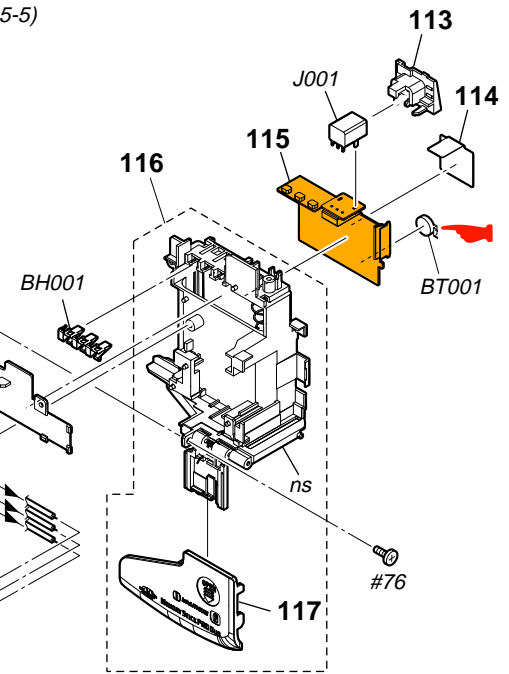


注意
電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

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

: BT001 (LITHIUM RECHARGEABLE BATTERY)
Board on the mount position.
(See page 4-27.)

Front panel section-3
(See page 5-5)



• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
101	3-452-701-01	COVER, ST (BLACK)
101	3-452-701-11	COVER, ST (SILVER)
* 102	3-452-704-01	COVER, FL
103	A-1519-828-A	ST-195 FLEXIBLE BOARD, COMPLETE
* 104	1-965-160-21	HARNESS (HN-044) (BLUE)
* 105	1-965-159-21	HARNESS (HN-043) (WHITE)
* 106	1-965-158-21	HARNESS (HN-042) (PINK)
* 107	3-452-705-01	SHEET, ST INSULATING
108	X-2190-272-1	BASE ASSY (470), ST (BLACK)
108	X-2190-273-1	BASE ASSY (470D), ST (SILVER)
109	3-452-702-01	CABINET (UPPER) (BLACK)
109	3-452-702-11	CABINET (UPPER) (SILVER)
* 110	3-452-703-01	RETAINER, SOLENOID
111	1-835-133-11	FLEXIBLE FLAT CABLE (FFC-160)
112	A-1519-819-A	PL-051 BOARD, COMPLETE
* 113	3-452-595-01	HOLDER, DC (BLACK)
* 113	3-452-595-11	HOLDER, DC (SILVER)
* 114	3-452-597-01	SHEET, DC INSULATING

Ref. No.	Part No.	Description
115	A-1519-824-A	DC-111 FLEXIBLE BOARD, COMPLETE
116	X-2190-256-1	HOLDER ASSY, BATTERY (BLACK)
116	X-2190-257-1	HOLDER ASSY, BATTERY (SILVER)
117	3-452-586-01	LID, BT (BLACK)
117	3-452-586-11	LID, BT (SILVER)
* 118	3-452-598-01	COVER, BT HOLDER
119	1-875-749-11	FP-900 FLEXIBLE BOARD
120	A-1519-820-A	ST-194 BOARD, COMPLETE
* 121	3-452-596-01	HOLDER, CAPACITOR
△ BH001	1-780-456-11	TERMINAL BOARD, BATTERY
△ BT001	1-756-711-11	LITHIUM RECHARGEABLE BATTERY
△ C205	1-114-341-21	CAP, ALUMINUM ELECT 180uF 99% 315V
△ FL901	1-480-062-21	FLASH UNIT
△ J001	1-817-331-11	DC JACK 5P (DC IN)
* RY301	1-455-056-11	SOLENOID, PLUNGER (STROBE OPEN)
#12	3-080-204-21	SCREW, TAPPING, P2 (Black)
#76	2-666-551-11	SCREW, TAPPING, P2 (Silver)

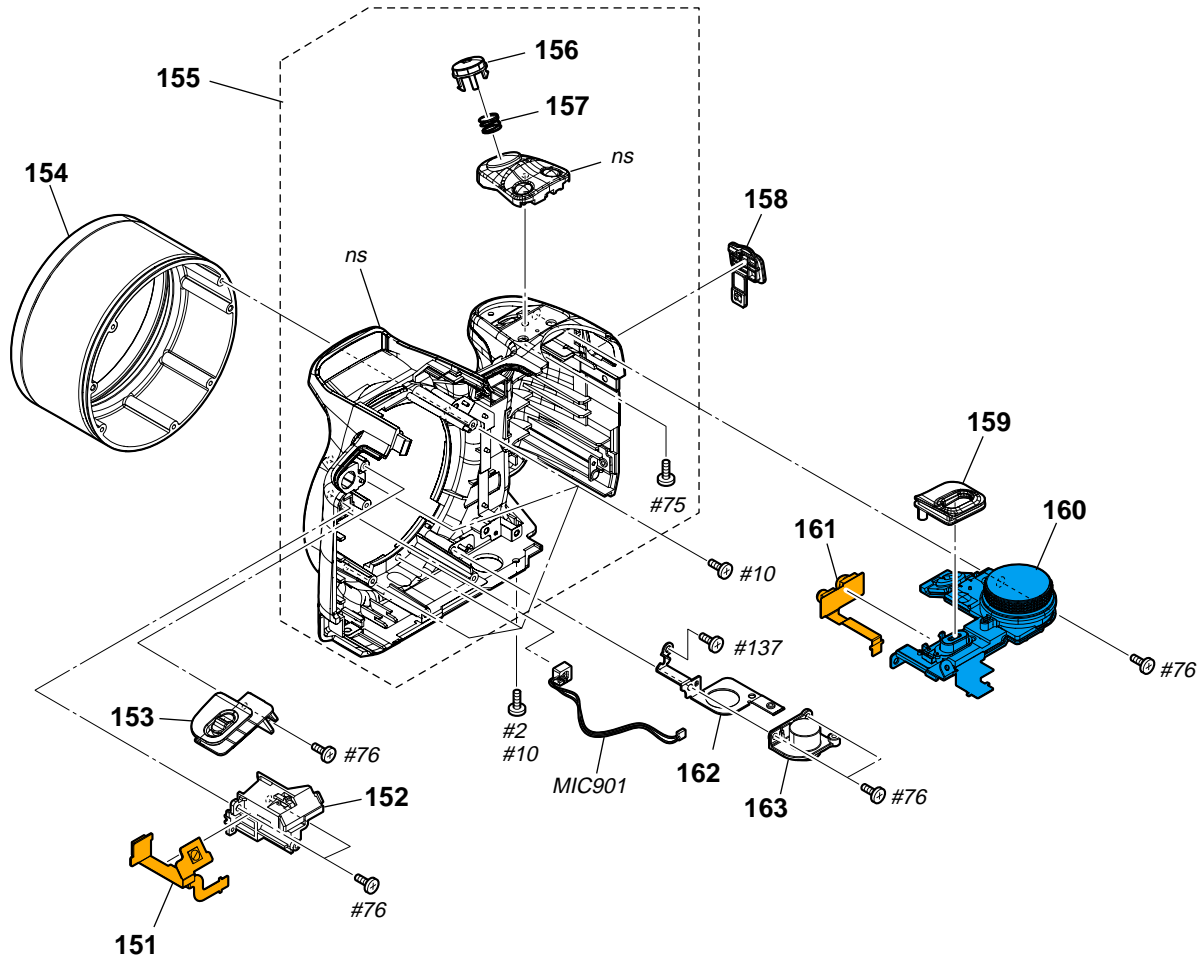
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-4. FRONT PANEL SECTION-3

ns: not supplied



Ref. No.	Part No.	Description
151	A-1519-827-A	SI-115 FLEXIBLE BOARD, COMPLETE
* 152	3-452-682-01	HOLDER, MICROPHONE
153	X-2190-268-1	CABINET (UPPER (R)) ASSY (BLACK)
153	X-2190-269-1	CABINET (UPPER (R)) ASSY (SILVER)
154	3-452-680-11	RING, LENS (SILVER)
154	3-452-680-21	RING, LENS (BLACK)
155	X-2190-264-1	CABINET (FRONT) ASSY (BLACK)
155	X-2190-265-1	CABINET (FRONT) ASSY (SILVER)
156	X-2190-288-1	SERVICE, RELEASE BUTTON ASSY (BLACK)
156	X-2190-289-1	SERVICE, RELEASE BUTTON ASSY (SILVER)
157	3-106-745-01	SPRING (350), RELEASE
158	3-452-728-01	LID, DC (BLACK)
158	3-452-728-11	LID, DC (SILVER)

Ref. No.	Part No.	Description
159	3-452-679-01	CABINET (UPPER (L)) (BLACK)
159	3-452-679-11	CABINET (UPPER (L)) (SILVER)
160	1-479-699-31	SWITCH BLOCK, CONTROL (BLACK)
160	1-479-699-41	SWITCH BLOCK, CONTROL (SILVER)
161	A-1519-826-A	LE-042 FLEXIBLE BOARD, COMPLETE
* 162	3-452-681-01	FRAME, TRIPOD
163	3-106-766-01	SCREW, TRIPOD
MIC901	1-542-757-21	MICROPHONE UNIT
#2	2-635-562-31	SCREW (M1.7) (Black)
#10	2-599-475-31	SCREW (M1.7) (Silver)
#75	2-666-551-01	SCREW, TAPPING, P2 (Silver)
#76	2-666-551-11	SCREW, TAPPING, P2 (Silver)
#137	3-090-976-62	ACE, LOCK M1.7 (Black)

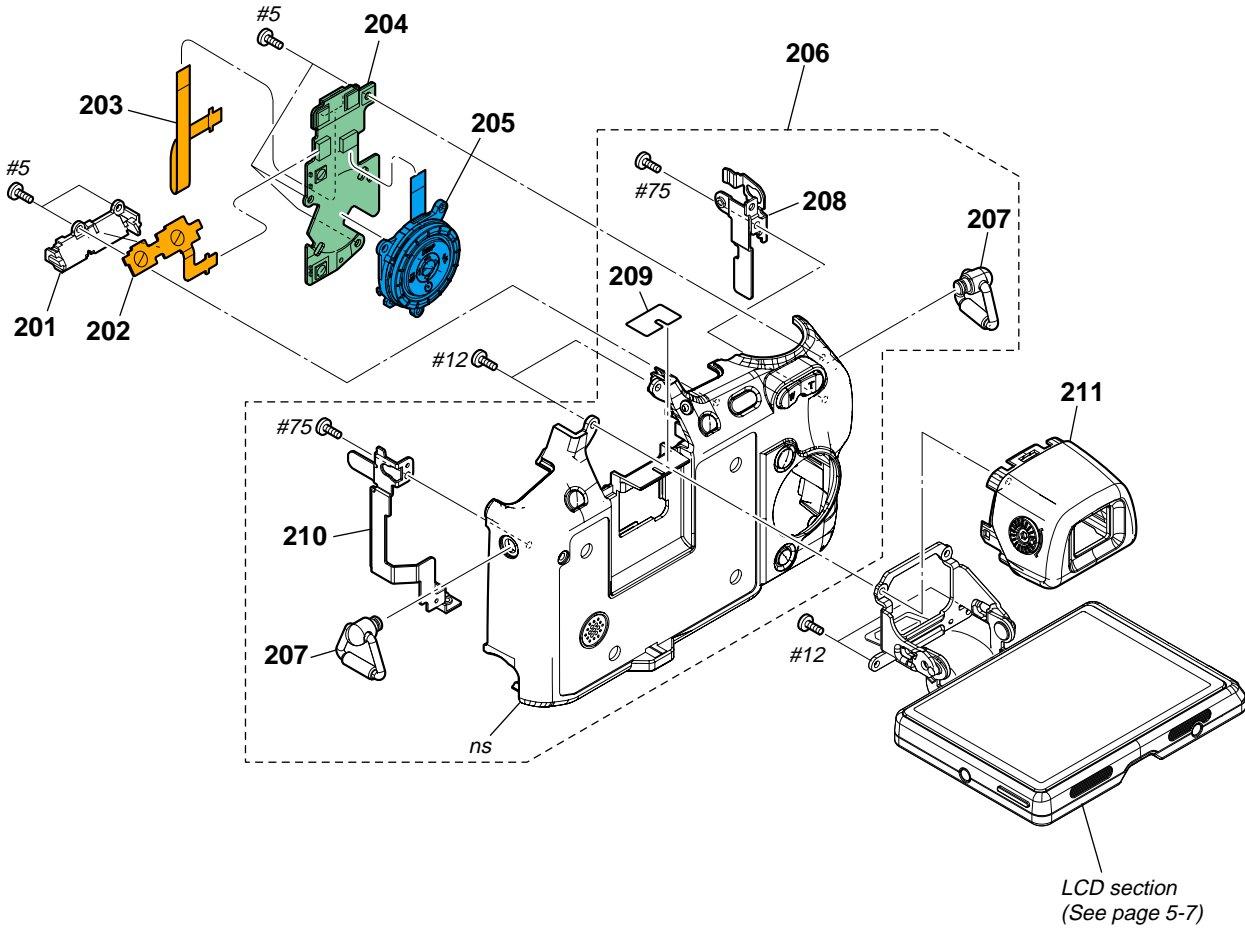
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-5. CABINET (REAR) SECTION

ns: not supplied



Ref. No.	Part No.	Description
* 201	3-452-694-01	RETAINER, FL
202	1-875-545-11	PB-052 FLEXIBLE BOARD
203	1-875-750-11	FP-901 FLEXIBLE BOARD
204	A-1519-821-A	SW-532 BOARD, COMPLETE
205	1-480-173-31	SWITCH BLOCK, CONTROL (SW60350)
		(BLACK)
205	1-480-173-41	SWITCH BLOCK, CONTROL (SW60350)
		(SILVER)
206	X-2190-270-1	CABINET (REAR) ASSY (470) (BLACK)

Ref. No.	Part No.	Description
206	X-2190-271-1	CABINET (REAR) ASSY (470) (SILVER)
* 207	3-106-615-01	BRACKET (350), STRAP
* 208	3-452-689-01	SHEET METAL (L), STRAP
209	3-877-749-01	SHEET, FLEXIBLE ADHESIVE
* 210	3-452-690-01	SHEET METAL (R), STRAP
211	X-2190-275-1	EYE CUP ASSY (470) (BLACK)
211	X-2190-277-1	EYE CUP ASSY (470) (SILVER)
#5	3-080-204-01	SCREW, TAPPING, P2 (Black)
#12	3-080-204-21	SCREW, TAPPING, P2 (Black)
#75	2-666-551-01	SCREW, TAPPING, P2 (Silver)

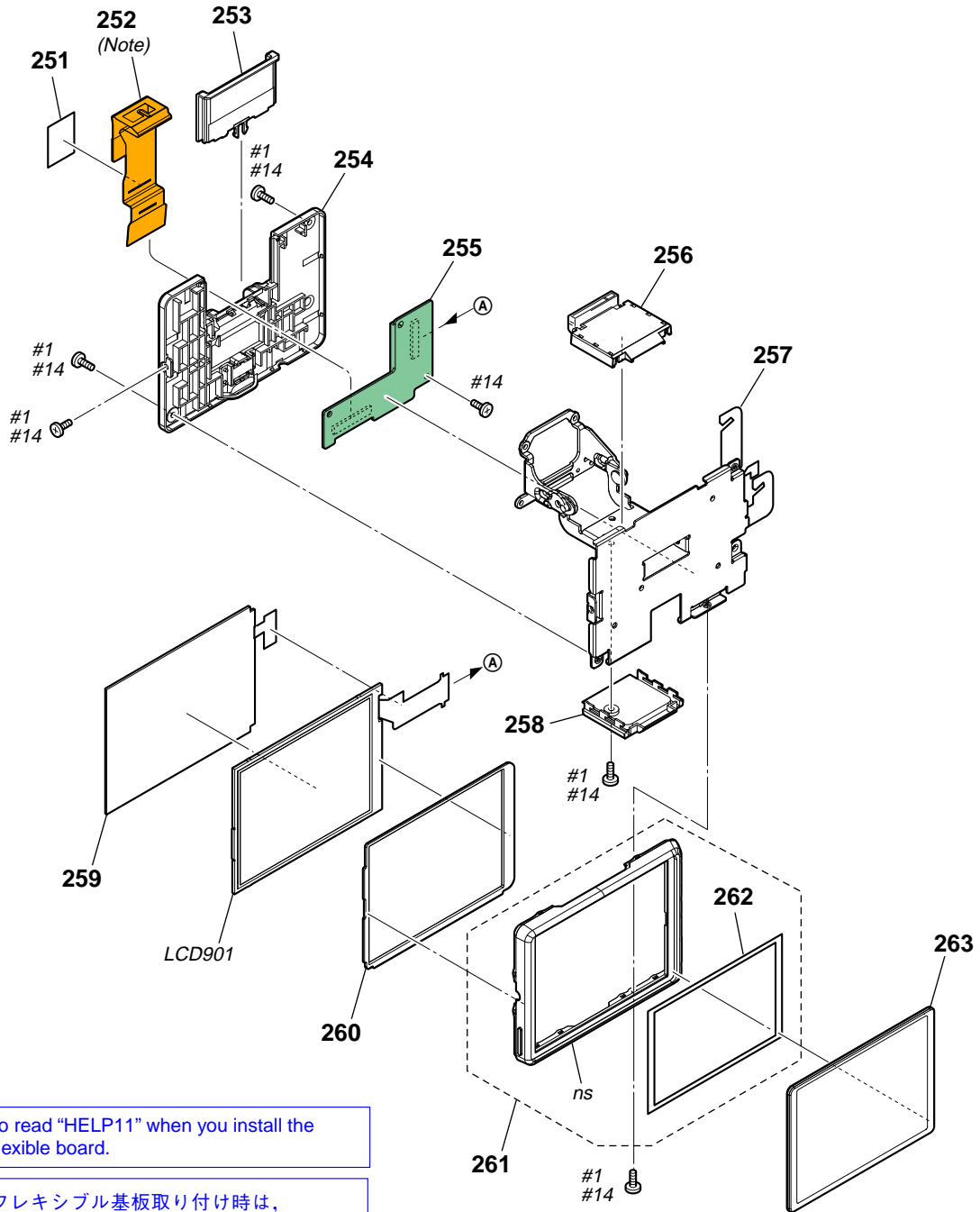
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-6. LCD SECTION

ns: not supplied



Note: Be sure to read "HELP11" when you install the CK-199 flexible board.

Note: フレキシブル基板取り付け時は、必ずお読みください。

Ref. No.	Part No.	Description
* 251	3-213-424-01	SHEET, FLEXIBLE SLIDER
252	A-1519-823-A	CK-199 FLEXIBLE BOARD, COMPLETE (Note)
253	3-452-579-01	PLATE, BLIND (BLACK)
253	3-452-579-11	PLATE, BLIND (SILVER)
254	X-2190-250-1	CABINET (C) ASSY (470), P (BLACK)
254	X-2190-251-1	CABINET (C) ASSY (470), P (SILVER)
255	A-1519-818-A	CK-198 BOARD, COMPLETE
256	X-2190-254-1	COVER (M) ASSY (470), HINGE (BLACK)
256	X-2190-255-1	COVER (M) ASSY (470), HINGE (SILVER)
257	X-2190-249-1	HINGE ASSY (470)
258	3-452-580-01	COVER (C), HINGE (BLACK)

Ref. No.	Part No.	Description
258	3-452-580-11	COVER (C), HINGE (SILVER)
259	1-480-592-11	BLOCK, LIGHT GUIDE PLATE (3.0)
260	3-452-583-01	CUSHION LCD (470)
261	X-2190-252-1	CABINET (M) ASSY (470), P (BLACK)
261	X-2190-253-1	CABINET (M) ASSY (470), P (SILVER)
262	3-452-575-01	SHEET, LCD WINDOW ADHESIVE
263	3-452-730-01	WINDOW LCD (470)
LCD901	8-753-316-51	ACX555BKA-1
#1	2-635-562-11	SCREW (M1.7) (Black)
#14	2-599-475-11	SCREW (M1.7) (Silver)

Electrical parts list of the CD-737 flexible board is not shown.
Page 5-8 is not shown.

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1519-818-A	CK-198 BOARD, COMPLETE *****
		< CAPACITOR >
C001	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C002	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C003	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V
C004	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V
C005	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C006	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C007	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C008	1-112-300-91	CERAMIC CHIP 4.7uF 10% 10V
C009	1-100-966-91	CERAMIC CHIP 10uF 20% 10V
C010	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C011	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C012	1-100-966-91	CERAMIC CHIP 10uF 20% 10V
C014	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C019	1-100-742-91	CERAMIC CHIP 2.2uF 20% 10V
		< CONNECTOR >
* CN001	1-817-942-81	CONNECTOR, FPC (ZIF) 39P
* CN002	1-816-959-51	FFC/FPC CONNECTOR (ZIF) 28P
		< COIL >
L001	1-400-588-11	INDUCTOR 10uH
		< RESISTOR >
R004	1-208-873-11	RES-CHIP 270 0.50% 1/16W
R005	1-208-873-11	RES-CHIP 270 0.50% 1/16W
	A-1519-823-A	CK-199 FLEXIBLE BOARD, COMPLETE *****
		< CONNECTOR >
CN002	1-778-596-21	CONNECTOR, BOARD TO BOARD 30P
	A-1519-824-A	DC-111 FLEXIBLE BOARD, COMPLETE *****
		(BH001, BT001 and J001 are not included in DC-111 flexible complete board.)
		< BATTERY TERMINAL BOARD >
△ BH001	1-780-456-11	TERMINAL BOARD, BATTERY
		< LITHIUM RECHARGEABLE BATTERY >
△ BT001	1-756-711-11	LITHIUM RECHARGEABLE BATTERY
		< CAPACITOR >
C001	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V
C002	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V
		< FERRITE BEAD >
FB001	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)

• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
		< JACK >
△ J001	1-817-331-11	DC JACK 5P (DC IN)
		< LINE FILTER >
* LF001	1-457-217-21	COMMON MODE CHOKE COIL
		< RESISTOR >
R001	1-218-953-11	RES-CHIP 1K 5% 1/16W
R002	1-218-935-11	RES-CHIP 33 5% 1/16W
	1-875-749-11	FP-900 FLEXIBLE BOARD *****
		(There isn't mounted electrical parts in FP-900 flexible board.)
	1-875-750-11	FP-901 FLEXIBLE BOARD *****
		(There isn't mounted electrical parts in FP-901 flexible board.)
	A-1519-825-A	JK-371 FLEXIBLE BOARD, COMPLETE *****
		(CN001 (MULTI CONNECTOR) is not supplied, but this is included in JK-371 flexible complete board.)
		< CONNECTOR >
CN001	(Not supplied)	CONNECTOR, MULTIPLE (SOCKET)
		< LINE FILTER >
LF001	1-456-583-11	COMMON MODE CHOKE COIL
		< VARISTOR >
* VDR003	1-802-279-11	VARISTOR (SMD)
* VDR004	1-802-279-11	VARISTOR (SMD)
	A-1519-826-A	LE-042 FLEXIBLE BOARD, COMPLETE *****
		< DIODE >
D001	6-500-512-01	DIODE CL-330IRS-X-TU (NIGHTSHOT)
* D002	6-501-861-01	DIODE CL-360S-TD4-X-TL (AF ILLUMINATOR/SELF-TIMER)

CAUTION

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

注意

電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Ref. No.	Part No.	Description
	1-875-545-11	PB-052 FLEXIBLE BOARD *****
(S001 and S002 are not supplied, but there are included in PB-052 flexible board.)		
< SWITCH >		
S001	(not supplied)	SWITCH (PLAYBACK)
S002	(not supplied)	SWITCH (SLIDESHOW)
A-1519-819-A PL-051 BOARD, COMPLETE *****		
(RY301 is not included in PL-051 complete board.)		
< CAPACITOR >		
C301	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
< CONNECTOR >		
* CN301	1-817-554-51	CONNECTOR, FFC/FPC 6P
< DIODE >		
* D301	6-501-947-01	DIODE MA2S1110G8S0
< SWITCH >		
S301	1-786-179-31	SWITCH, PUSH (1KEY) (STORBE POPUP DETECT)
< PLUNGER SOLENOID >		
* RY301	1-455-056-11	SOLENOID, PLUNGER (STROBE OPEN)
A-1519-827-A SI-115 FLEXIBLE BOARD, COMPLETE *****		
< CAPACITOR >		
C001	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
< IC >		
IC001	6-600-163-01	IC RS-770
< SWITCH >		
* S002	1-786-914-31	SWITCH, TACTILE (FINDER/LCD)
A-1519-820-A ST-194 BOARD, COMPLETE *****		
(C205 (CHARGING CAPACITOR) is not included in ST-194 complete board.)		
< CAPACITOR >		
C201	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C202	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V
C203	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V
△C205	1-114-341-21	CAP, ALUMINUM ELECT 180uF 99% 315V
C207	1-164-933-11	CERAMIC CHIP 220PF 10% 50V
C208	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
< CONNECTOR >		
* CN201	1-816-646-51	FFC/CONNECTOR, FPC (LIF) 16P

• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
		< DIODE >
△*D202	6-502-219-01	DIODE FV02R80TP
D204	6-500-619-01	DIODE RB520S-40TE61
< IC >		
IC201	6-707-555-01	IC TPS65552RGTR
< COIL >		
L201	1-456-499-11	INDUCTOR 4.7uH
< TRANSISTOR >		
△*Q201	6-551-702-01	TRANSISTOR RJP4003ASA-00-Q0
Q202	6-551-304-01	TRANSISTOR MTM231230LSO
Q203	6-550-119-01	TRANSISTOR DTC144EMFS6T2L
< RESISTOR >		
R203	1-218-989-11	RES-CHIP 1M 5% 1/16W
R204	1-218-940-11	RES-CHIP 82 5% 1/16W
R207	1-216-829-11	METAL CHIP 4.7K 5% 1/10W
R208	1-218-977-11	RES-CHIP 100K 5% 1/16W
R209	1-208-911-11	METAL CHIP 10K 0.5% 1/16W
< TRANSFORMER >		
△ T201	1-445-108-21	TRANSFORMER, D.C-D.C CONVERTER
A-1519-828-A ST-195 FLEXIBLE BOARD, COMPLETE *****		
(FL901 (FLASH UNIT) is not included in ST-195 flexible complete board.)		
< CAPACITOR >		
△ C002	1-100-758-11	CERAMIC CHIP 0.047uF 10% 250V
< FLASH UNIT >		
△ FL901	1-480-062-21	FLASH UNIT
< COIL >		
△*L001	1-457-498-21	TRIGGER COIL
< RESISTOR >		
△ R001	1-216-121-00	RES-CHIP 1M 5% 1/10W
A-1519-821-A SW-532 BOARD, COMPLETE *****		
< CAPACITOR >		
C108	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
< CONNECTOR >		
* CN101	1-816-684-51	CONNECTOR, FFC/FPC (ZIF) 8P
* CN102	1-816-659-51	FFC/FPC CONNECTOR (LIF) 6P
* CN103	1-816-659-51	FFC/FPC CONNECTOR (LIF) 6P
< RESISTOR >		
R101	1-218-964-11	RES-CHIP 8.2K 5% 1/16W

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			
R102	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R103	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R104	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R105	1-218-961-11	RES-CHIP	4.7K	5%	1/16W

< SWITCH >

* S101	1-798-136-11	SWITCH, TACTILE (W/ZOOM)
* S102	1-798-136-11	SWITCH, TACTILE (T/ZOOM)
* S103	1-786-914-31	SWITCH, TACTILE (MENU)
* S104	1-786-914-31	SWITCH, TACTILE (HOME)

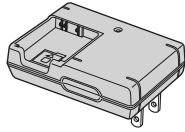
< VARISTOR >

* VDR001	1-802-279-11	VARISTOR (SMD)
* VDR002	1-802-279-11	VARISTOR (SMD)

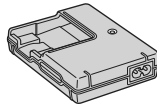
Electrical parts list of the SY-201 board is not shown.
Pages 5-12 to 5-16 are not shown.

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-CSGB/BC-CSGC)
▲ 1-480-175-11 (J)
▲ 1-480-175-21 (US, CND)



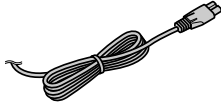
Battery charger
(BC-CSGB/BC-CSGC)
▲ 1-480-175-31
(EXCEPT US, CND, J)



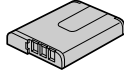
Lens hood
3-452-734-01



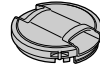
Adaptor ring



Power cord (mains lead)
(EXCEPT US, CND, BR, J)
▲ 1-555-074-91 (AUS)
▲ 1-783-952-61 (AR)
▲ 1-792-549-41 (JE)
▲ 1-827-269-12 (UK, HK)
▲ 1-832-121-31 (CH)
▲ 1-833-892-21 (KR)
▲ 1-834-482-31 (AEP, E)
▲ 1-835-434-11 (TH)



Rechargeable battery pack
(NP-BG1)
(Including Battery Case)
A-1137-161-A (J)
A-1567-198-A (US, CND)
A-1641-431-A (EXCEPT US, CND, J)



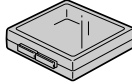
Lens Cap
X-2177-459-1



Lens Cap Strap
3-979-194-31



Instruction Manual
3-295-472-01 (JAPANESE) (J)
3-295-472-11 (ENGLISH) (CND, AEP, UK, E, HK, AUS, JE, TH)
3-295-472-21 (FRENCH, ITALIAN) (CND, AEP)
3-295-472-31 (SPANISH, PORTUGUESE)
(AEP, E, AR, JE)
3-295-472-41 (GERMAN, DUTCH) (AEP)
3-295-472-51 (TRADITIONAL CHINESE, SIMPLIFIED CHINESE)
(E, HK, JE)
3-295-472-61 (RUSSIAN, UKRAINIAN) (AEP)
3-295-472-71 (ARABIC, PERSIAN) (E)
3-295-472-81 (KOREAN) (KR, JE)
3-295-472-91 (POLISH, CZECH) (AEP)
3-295-473-11 (HUNGARIAN, SLOVAK) (AEP)
3-295-473-21 (SWEDISH, FINNISH) (AEP)
3-295-473-31 (NORWEGIAN, DANISH) (AEP)
3-295-473-41 (THAI, MALAY) (E)
3-295-473-51 (TURKISH, GREEK) (AEP)
3-295-473-61 (ENGLISH, SPANISH) (US)
3-295-473-71 (SIMPLIFIED CHINESE) (CH)
3-295-473-81 (THAI) (TH)



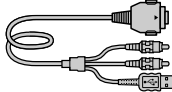
Battery case
(Note 1)



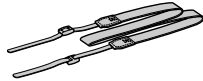
Conversion (2P) Adaptor
▲ 1-569-007-12 (JE)



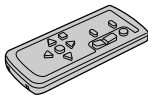
Conversion (2P) Adaptor
▲ 1-569-008-12
(E (EXCEPT Middle East))



USB, A/V cable for multi-use terminal
1-834-813-11



Shoulder strap
2-629-892-11



Remote Control (RMT-DSC2)
1-478-655-91



Cyber-shot Handbook (PDF)

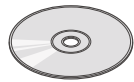
The CD-ROM supplied contains all of language version of the Instruction Manual in pdf (Cyber-shot Handbook.pdf) for printing.

- The printed matter is not supplied. If required, please order it with the part number below.

- (Only for destination Japanese model)

日本国内については日本語のみが印刷での部品供給可能です。

CD-ROM
(Cyber-shot application software /
"Cyber-shot Handbook" /
"Cyber-shot Step-up Guide")
3-295-459-02



- | | |
|--------------------------------------|----------------------------|
| 3-295-460-01 (JAPANESE) | * 3-295-461-51 (POLISH) |
| * 3-295-460-11 (ENGLISH) | * 3-295-461-61 (CZECH) |
| * 3-295-460-21 (FRENCH) | * 3-295-461-71 (HUNGARIAN) |
| * 3-295-460-31 (ITALIAN) | * 3-295-461-81 (SLOVAK) |
| * 3-295-460-41 (SPANISH) | * 3-295-461-91 (SWEDISH) |
| * 3-295-460-51 (PORTUGUESE) | * 3-295-462-11 (FINNISH) |
| * 3-295-460-61 (GERMAN) | * 3-295-462-21 (NORWEGIAN) |
| * 3-295-460-71 (DUTCH) | * 3-295-462-31 (DANISH) |
| * 3-295-460-82 (TRADITIONAL CHINESE) | * 3-295-462-41 (THAI) |
| * 3-295-460-91 (SIMPLIFIED CHINESE) | * 3-295-462-52 (MALAY) |
| * 3-295-461-11 (RUSSIAN) | * 3-295-462-61 (TURKISH) |
| * 3-295-461-21 (ARABIC) | * 3-295-462-71 (GREEK) |
| * 3-295-461-31 (PERSIAN) | * 3-295-462-81 (UKRAINIAN) |
| * 3-295-461-41 (KOREAN) | |

• Refer to page 5-1 for mark ▲.

HARDWARE LIST (1/7)

#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

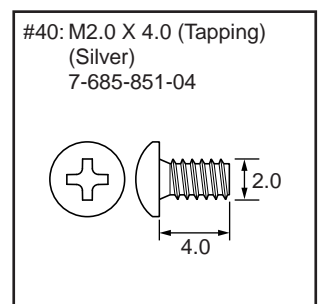
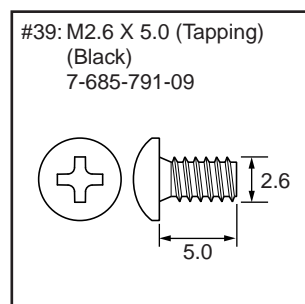
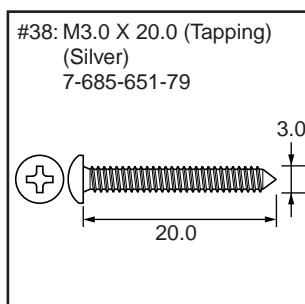
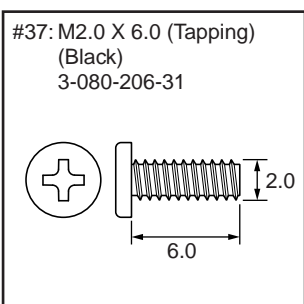
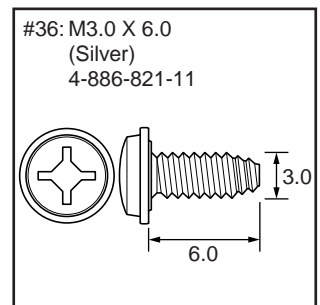
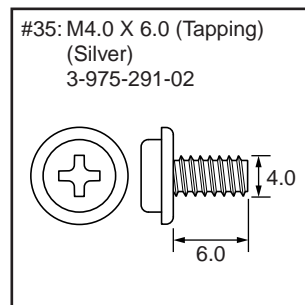
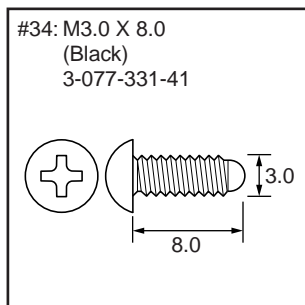
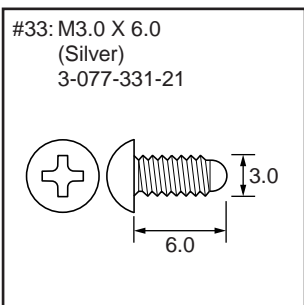
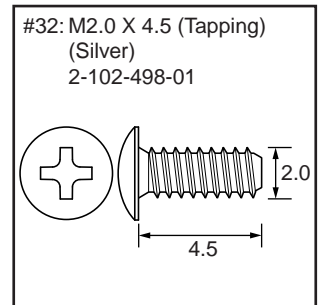
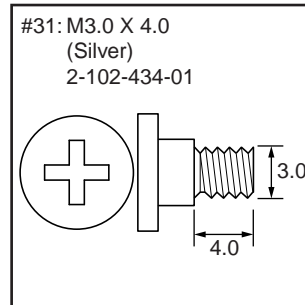
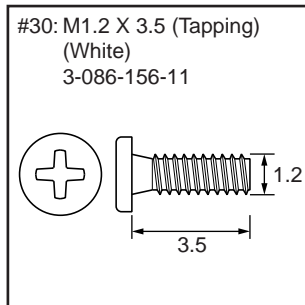
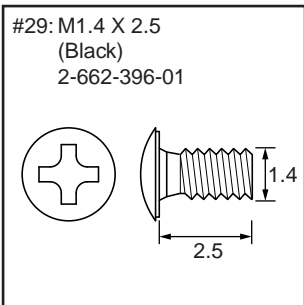
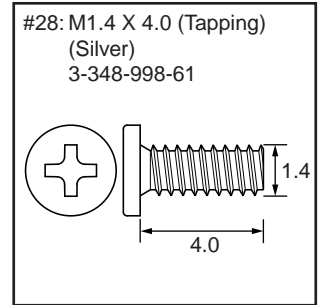
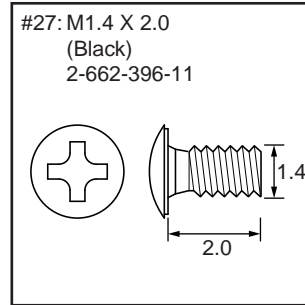
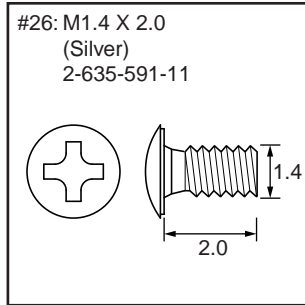
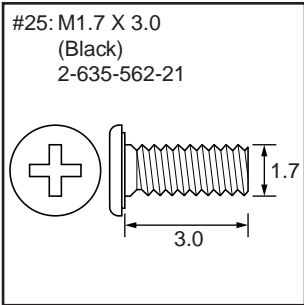
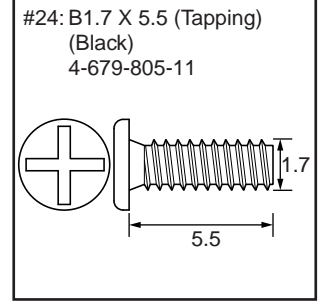
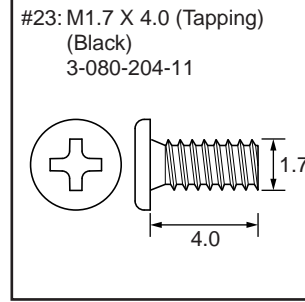
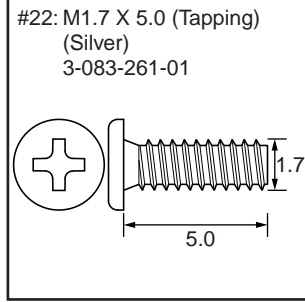
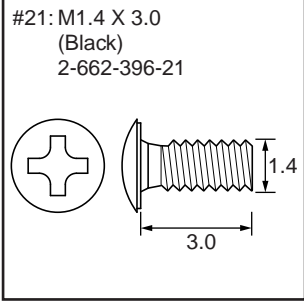
#17: M1.7 X 1.5
(Silver)
2-586-389-01

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

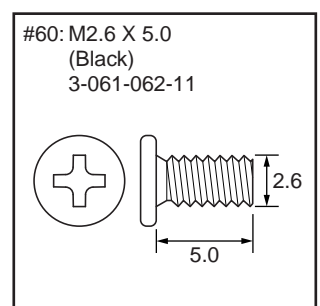
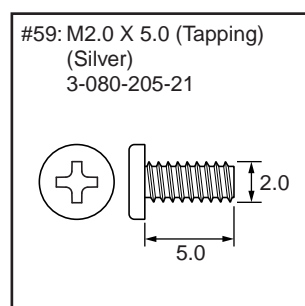
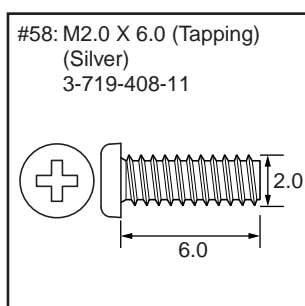
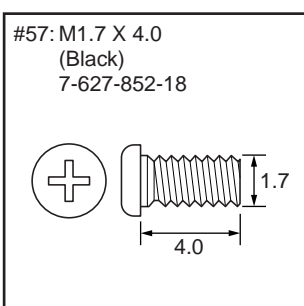
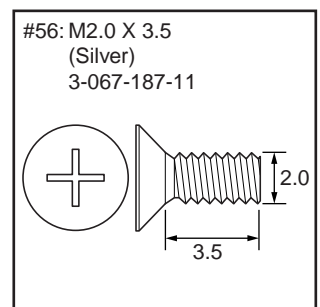
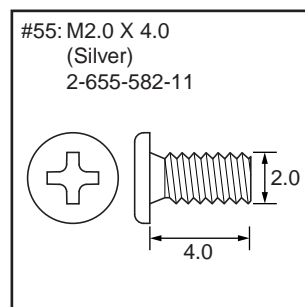
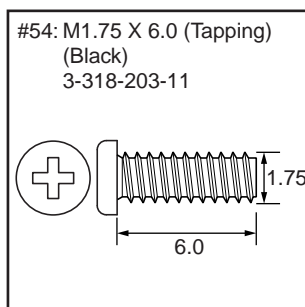
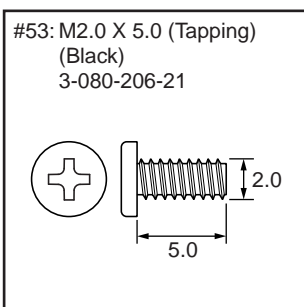
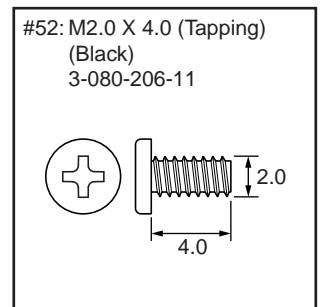
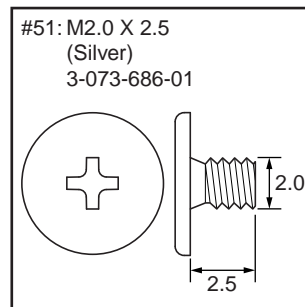
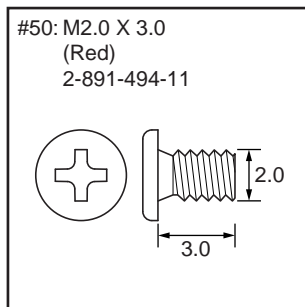
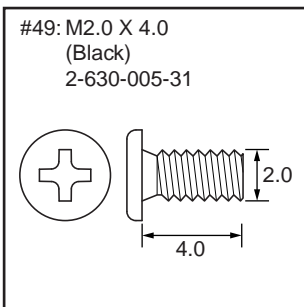
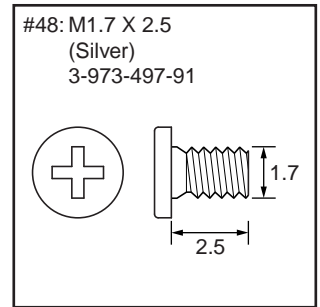
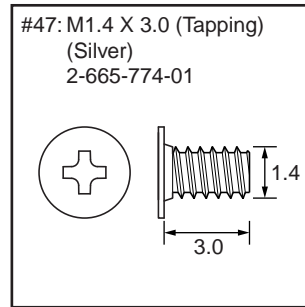
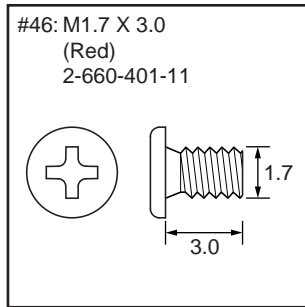
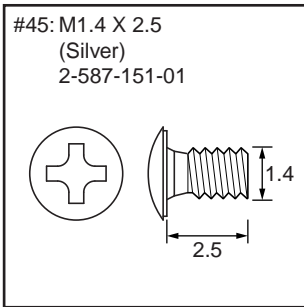
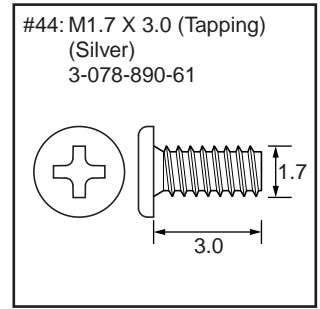
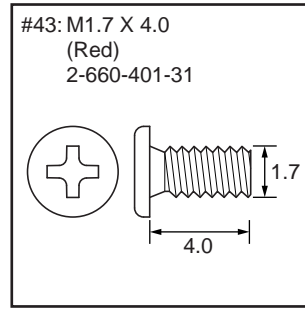
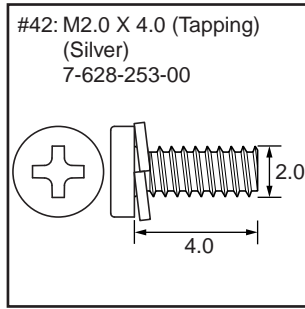
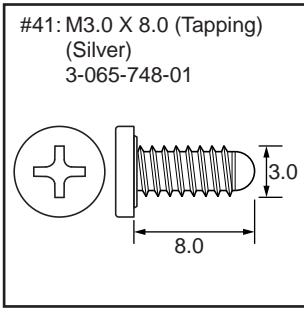
#19: M1.2 X 4.0 (Tapping)
(Red)
3-086-156-21

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

HARDWARE LIST (2/7)



HARDWARE LIST (3/7)



HARDWARE LIST (4/7)

#61: M3.0 X 10.0
(Black)
7-682-549-09

#62: M2.0 X 3.0
(Silver)
3-080-202-21

#63: M5.0 X 12.5
(Black)
3-060-811-21

#64: M1.7 X 5.0 (Tapping)
(Silver)
2-666-551-21

#65: M1.4 X 3.5
(Silver)
2-635-591-01

#66: M1.4 X 1.4
(Silver)
2-635-591-41

#67: M1.4 X 2.0
(Silver)
3-389-523-16

#68: M1.7 X 4.0
(Silver)
2-655-581-01

#69: M1.7 X 3.0
(Silver)
2-599-475-21

#70: M1.7 X 5.0
(Silver)
2-599-475-41

#71: M1.4 X 2.0
(Red)
3-208-537-01

#72: M1.4 X 2.0
(Silver)
4-663-621-41

#73: M1.2 X 4.0 (Tapping)
(Black)
3-086-156-61

#74: M1.7 X 6.0 (Tapping)
(Silver)
2-666-551-31

#75: M1.7 X 3.5 (Tapping)
(Silver)
2-666-551-01

#76: M1.7 X 4.0 (Tapping)
(Silver)
2-666-551-11

#77: M1.2 X 5.0 (Tapping)
(Silver)
3-086-156-31

#78: M1.4 X 3.5
(Red)
3-208-537-11

#79: M1.4 X 2.0
(Silver)
2-587-151-11

#80: M1.4 X 2.0
(Black)
3-279-411-01

HARDWARE LIST (5/7)

#81: M1.7 X 2.5
(Silver)
2-515-756-01

#82: M1.4 X 1.4
(Silver)
3-272-251-01

#83: M1.7 X 7.0 (Tapping)
(Black)
3-080-204-41

#84: M2.0 X 3.0
(Silver)
3-072-453-11

#85: M1.7 X 2.5
(Black)
2-515-483-11

#86: M1.7 X 4.0 (Tapping)
(Silver)
2-695-434-21

#87: M1.6 X 5.3
(Black)
2-689-328-01

#88: M1.6 X 5.9 (Tapping)
(Silver)
2-689-015-01

#89: M2.0 X 5.5 (Tapping)
(Silver)
2-695-575-01

#90: M1.7 X 3.0
(Silver)
3-271-395-01

#91: M1.7 X 3.0 (Tapping)
(Silver)
2-695-434-11

#92: M2.0 X 3.9
(Black)
3-268-954-01

#93: M1.7 X 3.5 (Tapping)
(Silver)
3-254-082-01

#94: M1.7 X 4.0
(Black)
2-515-483-31

#95: M3.0 X 8.0 (Tapping)
(Black)
7-685-646-79

#96: M1.4 X 2.5
(Silver)
2-587-151-21

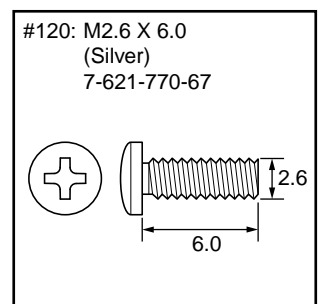
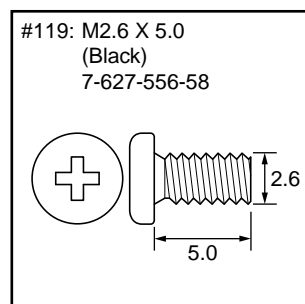
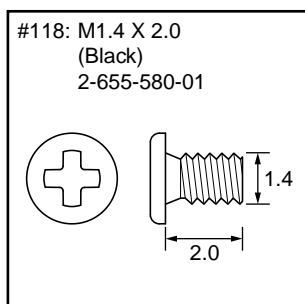
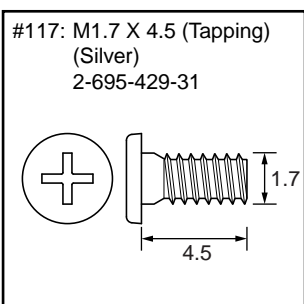
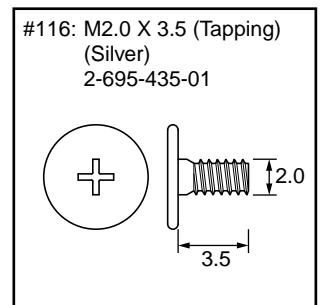
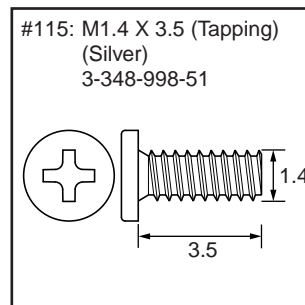
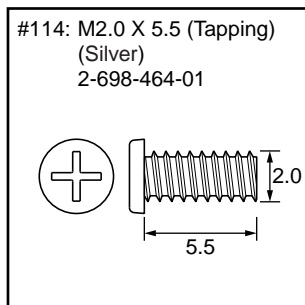
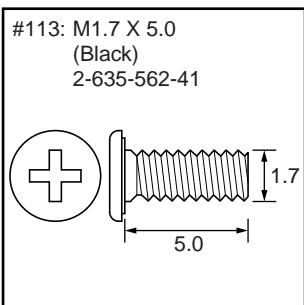
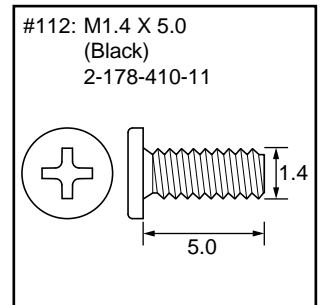
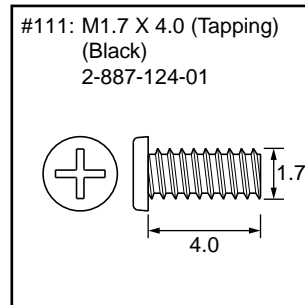
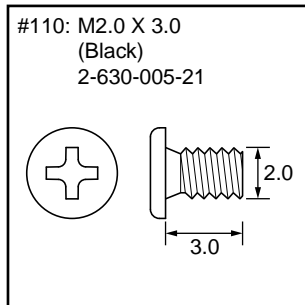
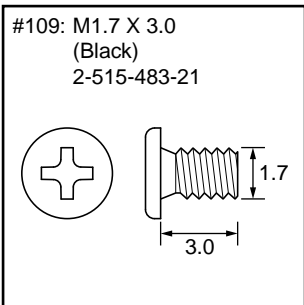
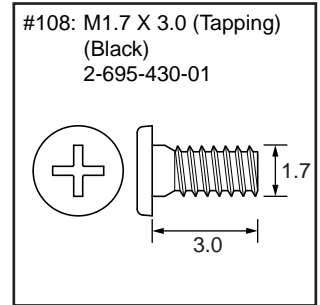
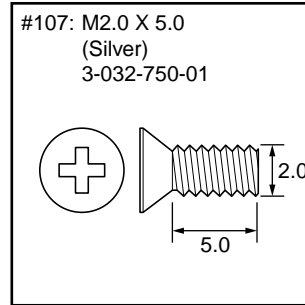
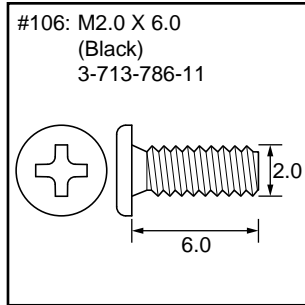
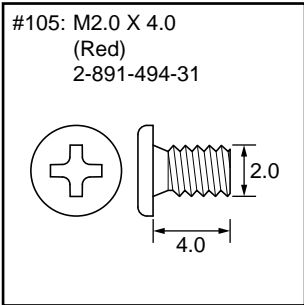
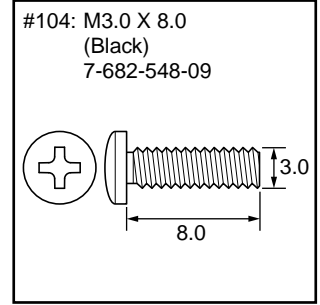
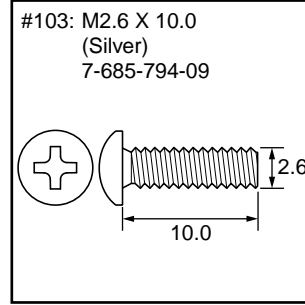
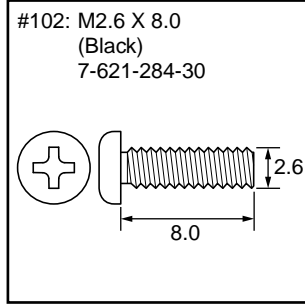
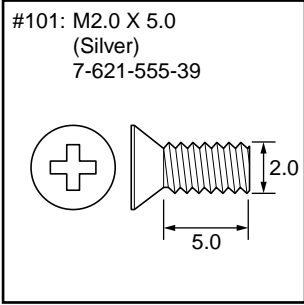
#97: M1.4 X 2.5
(Black)
2-662-396-31

#98: M3.0 X 8.0
(Silver)
3-077-331-01

#99: M2.5 X 6.0 (Tapping)
(Silver)
3-776-750-02

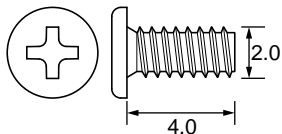
#100: M2.0 X 6.0
(Black)
3-080-203-51

HARDWARE LIST (6/7)

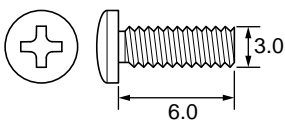


HARDWARE LIST (7/7)

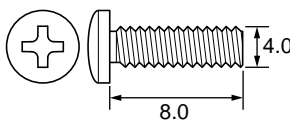
#121: M2.0 X 4.0 (Tapping)
(Silver)
3-080-205-11



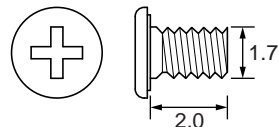
#122: M3.0 X 6.0
(Black)
7-682-547-09



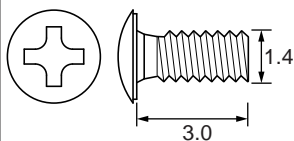
#123: M4.0 X 8.0
(Black)
7-682-561-09



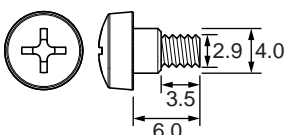
#124: M1.7 X 2.0
(Silver)
2-599-475-01



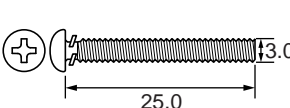
#125: M1.4 X 3.0
(Black)
3-291-847-01



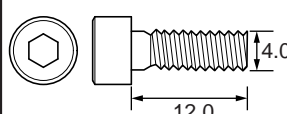
#126: M2.9 X 3.5
(Black)
3-292-616-01



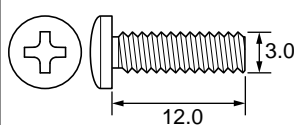
#127: M3.0 X 25.0
(Black)
7-682-654-09



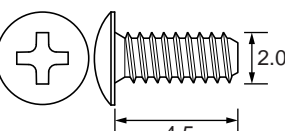
#128: M4.0 X 12.0
(Black)
3-452-472-01



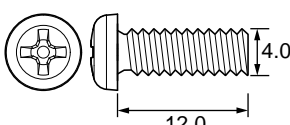
#129: M3.0 X 12.0
(Black)
7-682-550-09



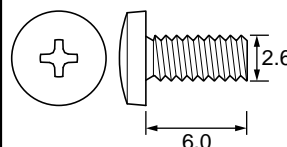
#130: M2.0 X 4.5 (Tapping)
(Silver)
3-732-817-11



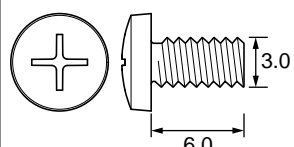
#131: M4.0 X 12.0
(Silver)
3-452-471-01



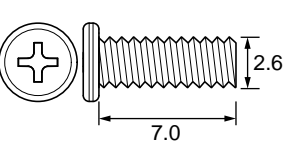
#132: M2.6 X 6.0
(Black)
4-673-655-01



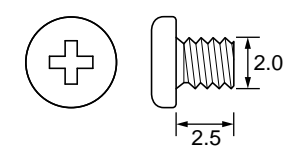
#133: M3.0 X 6.0
(Black)
3-452-484-01



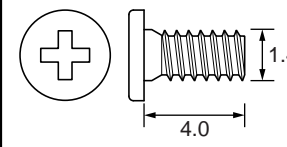
#134: M2.6 X 7.0
(Black)
3-299-572-01



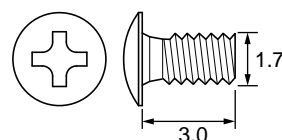
#135: M2.0 X 2.5
(Black)
7-627-553-28



#136: M1.4 X 4.0 (Tapping)
(Black)
3-065-509-11



#137: M1.7 X 3.0
(Black)
3-090-976-62



DSC-H50

RMT-DSC2

SONY®

SERVICE MANUAL

Ver. 1.2 2008.09

LEVEL 2

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

SUPPLEMENT-1

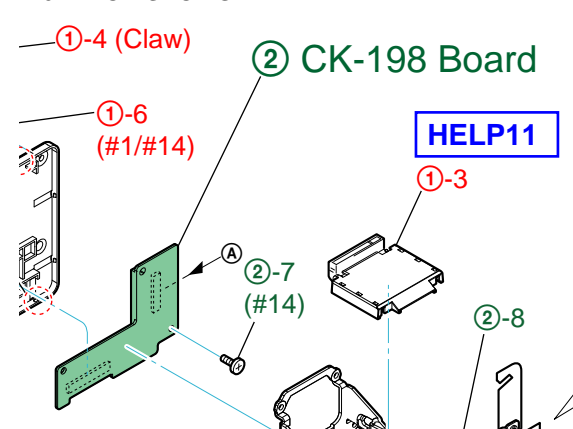
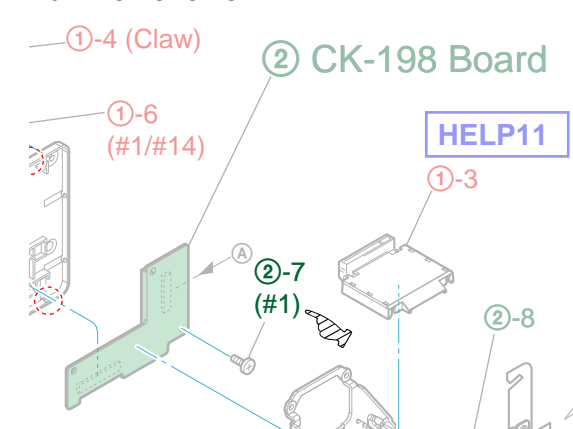
File this supplement with the service manual previously issued.
(DI08-234)

- Change of Repair Parts

2. DISASSEMBLY

2-2. DISASSEMBLY

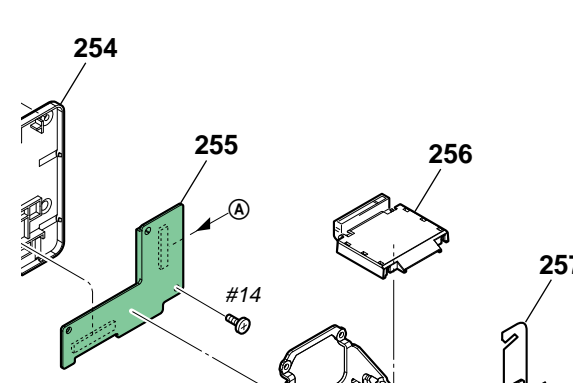
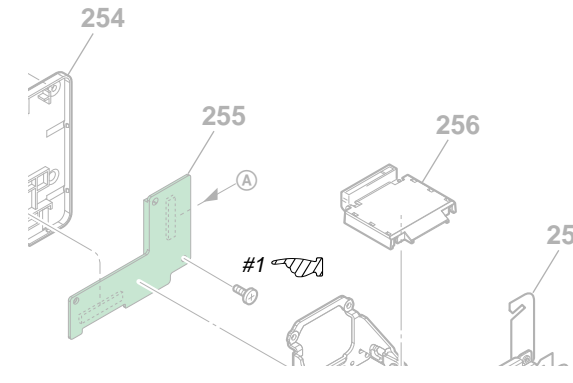
 : Changed portion.

Page	Before change	After change
2-8	<p>2-2-6. LCD SECTION</p> 	<p>2-2-6. LCD SECTION</p> 

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

 : Changed portion.

Page	Before change	After change
5-7	<p>5-1-6. LCD SECTION</p> 	<p>5-1-6. LCD SECTION</p> 

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2008.04	Official Release	—	—
1.1	2008.05	Revised-1	<ul style="list-style-type: none"> • Correction of Note for Schematic Diagrams • Correction of EXPLODED VIEWS • Change of Service Classification S. M. Revised: Page 4-3 , 5-4 , 5-17	Yes
1.2	2008.09	Supplement-1 (DI08-234)	<ul style="list-style-type: none"> • Change of Repair Parts 	No
1.3	2009.06	Revised-2 (A2 09-084)	<ul style="list-style-type: none"> • Change of Accessories S. M. Revised: Page 5-17	Yes
1.4	2009.08	Revised-3 (A3 09-171)	<ul style="list-style-type: none"> • Correction of EXPLODED VIEWS S.M. Revised: Page 5-7	Yes

DSC-H50

RMT-DSC2

SERVICE MANUAL

LEVEL 3

Ver. 1.3 2009.06

Revision History

Internal memory
ON BOARD

Revised-1

Replace the previously issued
SERVICE MANUAL 9-852-286-12
with this Manual.



Photo: Black

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

Link

• SERVICE NOTE

• PRINTED WIRING BOARDS

• REPAIR PARTS LIST

• SCHEMATIC DIAGRAMS

The components identified by
mark \triangle or dotted line with
mark \triangle are critical for safety.
Replace only with part num-
ber 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®

CAUTION

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

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!**

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES 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.

1-4. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

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

Note 1: When replacing the SY-201 board, erase the data in internal memory of the board before replacement.

Note 2: When replacing the SY-201 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 sufficient free capacity.
- ② Select [Copy] with ▲/▼ on the control button, then press ●.
The message "All data in internal memory will be copied" appears.
- ③ Select [OK] with ▲, then press ●.
Copying starts.

To cancel copying

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

- Use a fully charged battery pack. 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 select images to copy.
- 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 format the internal memory ([Format] in [Internal Memory Tool]).
- A new folder is created on the "Memory Stick Duo" and all the data will be copied to it. You cannot choose a specific folder and copy images to it.
- The **DPOF** (Print order) marks on the images are 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 permanently erases all data in the internal memory, including even protected images.
- ① Select [Format] with ▲/▼ on the control button, then press ●.
The message "All data in internal memory will be erased" appears.
 - ② Select [OK] with ▲, then press ●.
Formatting starts.

To cancel formatting

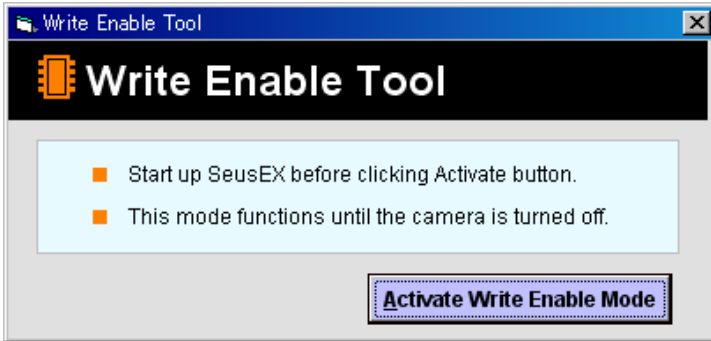
Select [Cancel] in step ②, then press ●.

1-5. HOW TO WRITE DATA TO INTERNAL MEMORY

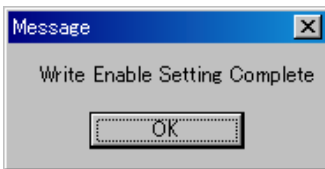
Usually, the camera has been set so as to disable the data writing from the PC to the internal memory of the camera. This setting must be changed temporarily when the data is to be written to the internal memory such as a case after the board replacement. To change the setting, use the write enable tool “WriteEnableTool.exe”.

Data writing method

- 1) Connect the PC to the camera (USB mode: Mass Storage), and switch the driver to the “Sony Seus USB Driver”.
- 2) Start the Write Enable Tool and the SeusEX.
- 3) Click the Activate Write Enable Mode button of the Write Enable Tool.



- 4) Upon completion of the setting change, the following message will be displayed.



- 5) Return the driver to the original one, and connect the PC to the camera (USB mode: Mass Storage).
- 6) Write the data read out into the PC to the internal memory of the camera.
- 7) Disconnect the PC from the camera, and turn off the camera.

Note: By turning off the camera, the write enable setting is reset.

1 - 内蔵メモリのデータコピーおよび消去方法

内蔵メモリのデータコピーまたは消去はホーム画面の操作から実行可能です。（消去する場合は内蔵メモリの初期化を行います。）

N t : S 基板交換の際は、基板交換前に内蔵メモリのデータを消去して下さい。

N t : S 基板交換の際は、基板交換後に内蔵メモリのフォーマットおよび初期化を実行して下さい。

内蔵メモリのコピー方法

コピー

内蔵メモリーに記録した画像を、“メモリースティック デュオ”に一括コピーします。

- ① 十分な空き容量のある“メモリースティック デュオ”を本体に入れる。
- ② コントロールボタンの▲/▼で[コピー]を選び、中央の●を押す。
「内蔵メモリーのデータがすべてコピーされます」というメッセージが表示される。
- ③ ▲で[実行]を選び、中央の●を押す。
コピーが実行される。

コピーを中止するには

手順②で、[キャンセル]を選び、中央の●を押す。

- 十分に充電したバッテリーをご使用ください。残量の少ないバッテリーを使用して画像ファイルをコピーすると、バッテリー切れのためデータを転送できなかったり、データを破損するおそれがあります。
- 画像ごとのコピーはできません。
- データをコピーしても、内蔵メモリー内のデータは削除されません。内蔵メモリーの内容を消去するには、コピー後に“メモリースティック デュオ”を本体から取りはずし、[内蔵メモリーツール]の[フォーマット]を行ってください。
- データをコピーすると“メモリースティック デュオ”内に新しいフォルダが作成されます。コピー先のフォルダを指定することはできません。
- データのコピーを行っても、DPOF(プリント予約)マークの設定はコピーされません。

内蔵メモリのフォーマット方法

“メモリースティック デュオ”が本機に入っている場合は表示されません。

フォーマット

内蔵メモリーの管理領域をフォーマット(初期化)します。

- フォーマットすると、プロテクトしてある画像も含めて、すべてのデータが消去され、元に戻せません。
- ① コントロールボタンの▲/▼で[フォーマット]を選び、中央の●を押す。
「内蔵メモリーのデータがすべて消去されます」というメッセージが表示される。
 - ② ▲で[実行]を選び、中央の●を押す。
フォーマットが実行される。

フォーマットを中止するには

手順②で、[キャンセル]を選び、中央の●を押す。

1 - 内蔵メモリヘデータを書き戻す方法

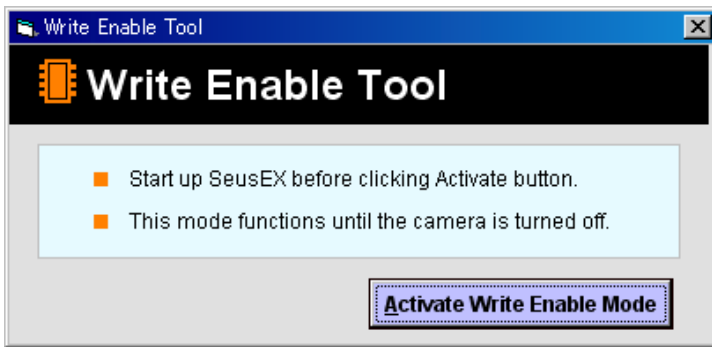
通常は、からカメラの内蔵メモリヘデータを書き込むことはできない設定になっています。

基板交換後などに、内蔵メモリヘデータを書き戻す場合には、この設定を一時的に変更する必要があります。

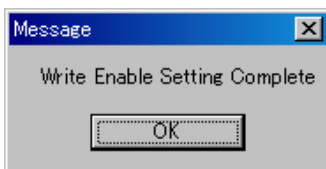
設定の変更には、書き込み許可ツール（**W**）を使用します。

書き戻し方法

- 1) カメラと **Ⓢ** マスストレージ接続し、ドライバを“S” に切り替える。
- 2) 書き込み許可ツールと **S** を起動する。
- 3) 書き込み許可ツールの **Activate Write Enable Mode** ボタンをクリックする。



- 4) 設定の変更が終了すると、次のメッセージが表示されます。



- 5) ドライバを元に戻して、カメラと **Ⓢ** マスストレージ接続する。
- 6) に読み出しておいたデータをカメラの内蔵メモリに書き込む。
- 7) カメラと **Ⓢ** 接続を解除し、カメラの電源を **Ⓢ** する。

注意: カメラの電源を **Ⓢ** することにより、書き込み許可の設定が解除されます。

4-2. SCHEMATIC DIAGRAMS

Link

<ul style="list-style-type: none">CD-737 FLEXIBLE BOARD (CCD IMAGER)	<ul style="list-style-type: none">SY-201 BOARD(6/10) (CCD SIGNAL PROCESS)
<ul style="list-style-type: none">SY-201 BOARD(1/10) (DC/DC CONVERTER)	<ul style="list-style-type: none">SY-201 BOARD(7/10) (LENS DRIVE)
<ul style="list-style-type: none">SY-201 BOARD(2/10) (BATTERY DETECTOR, CLOCK GENERATOR)	<ul style="list-style-type: none">SY-201 BOARD(8/10) (OIS DRIVE)
<ul style="list-style-type: none">SY-201 BOARD(3/10) (CPU, CAMERA DSP, AV SIGNAL PROCESS, LENS CONTROL, MODE CONTROL)	<ul style="list-style-type: none">SY-201 BOARD(9/10) (AUDIO/VIDEO AMP)
<ul style="list-style-type: none">SY-201 BOARD(4/10) (CPU, CAMERA DSP, AV SIGNAL PROCESS, LENS CONTROL, MODE CONTROL)	<ul style="list-style-type: none">SY-201 BOARD(10/10) (CONNECTOR)
<ul style="list-style-type: none">SY-201 BOARD(5/10) (CPU, CAMERA DSP, AV SIGNAL PROCESS, LENS CONTROL, MODE CONTROL)	

- COMMON NOTE FOR SCHEMATIC DIAGRAMS

(JAPANESE)








回路図共通ノート

(他に必要なノートは各ブロックに記載してあります)

【回路図ノート】

- ・ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものはその耐圧を省略。単位はすべて μF (p は p F)。
- ・チップ抵抗で指示のないものは、1 / 1 0 Ω 以下。
 $1k = 1000 \Omega$, $1M = 1000 \Omega$
- ・チップ部品交換時の注意
取り外した部品は再使用せず、未使用の部品をご使用ください。
- ・タンタルコンデンサのマイナス側は熱に弱いため注意してください。
- ・チップ部品には下記のように表示したものがああります。

例	C	L
	22U	10H
	T	520
	↑	↑
種類	ケースサイズ	外形寸法 (mm)

- ・抵抗、コンデンサ、など定数に X があるものは、使用していない事を示しています。このため、使用していない回路が記載されている事があります。
- ・★印のある部品は、機種などにより異なりますので機能別マウント一覧表を参照してください。
- ・可変抵抗と半固定抵抗で、 Δ 性の表示を省略。
- ・信号名表記について、下記のような場合があります。
X → E P → P
- ・ は不燃性抵抗。
- ・ はヒューズ抵抗。
- ・ はパネル表示名称。
- ・ はE-ライン。
- ・ はB-ライン。
- ・ はEイン (+, -) の入出力方向を示す。
- ・ は調整名称。

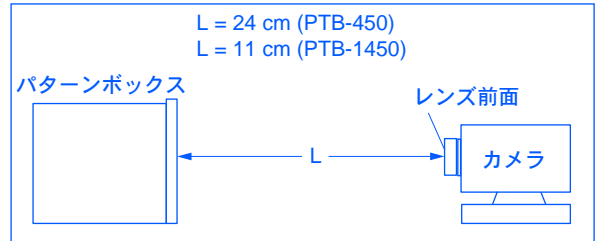
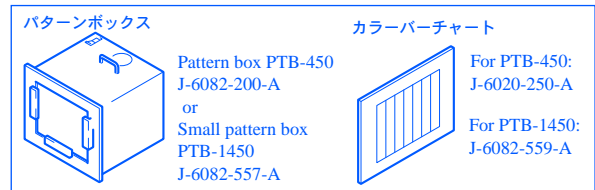
【電圧・波形測定条件ノート】

- ・電圧値及び信号波形はパターンボックスのカラーバーチャートを被写体としたときの測定点对アース間の参考値。
(デジタルマルチメータ; 入力インピーダンス $\geq 10 M\Omega$ 使用)
- ・使用テスタの入力インピーダンスにより電圧値が多少異なります。

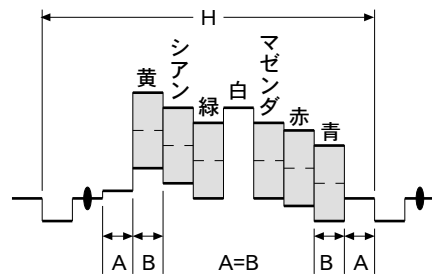
イメージ交換時の注意

- ・イメージを交換した場合は、カメラ部の全調整を行ってください。
- ・イメージは構造上、静電気により破壊される恐れがあるため、MOS と同様に注意して取り扱ってください。
- ・また、受光部にはゴミの付着、および強い光が入ることのないように注意してください。

1 接続図

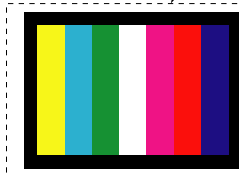


2 図a 及び図b の波形が得られるように画枠調整して下さい。



図a (映像入出力端子出力波形)

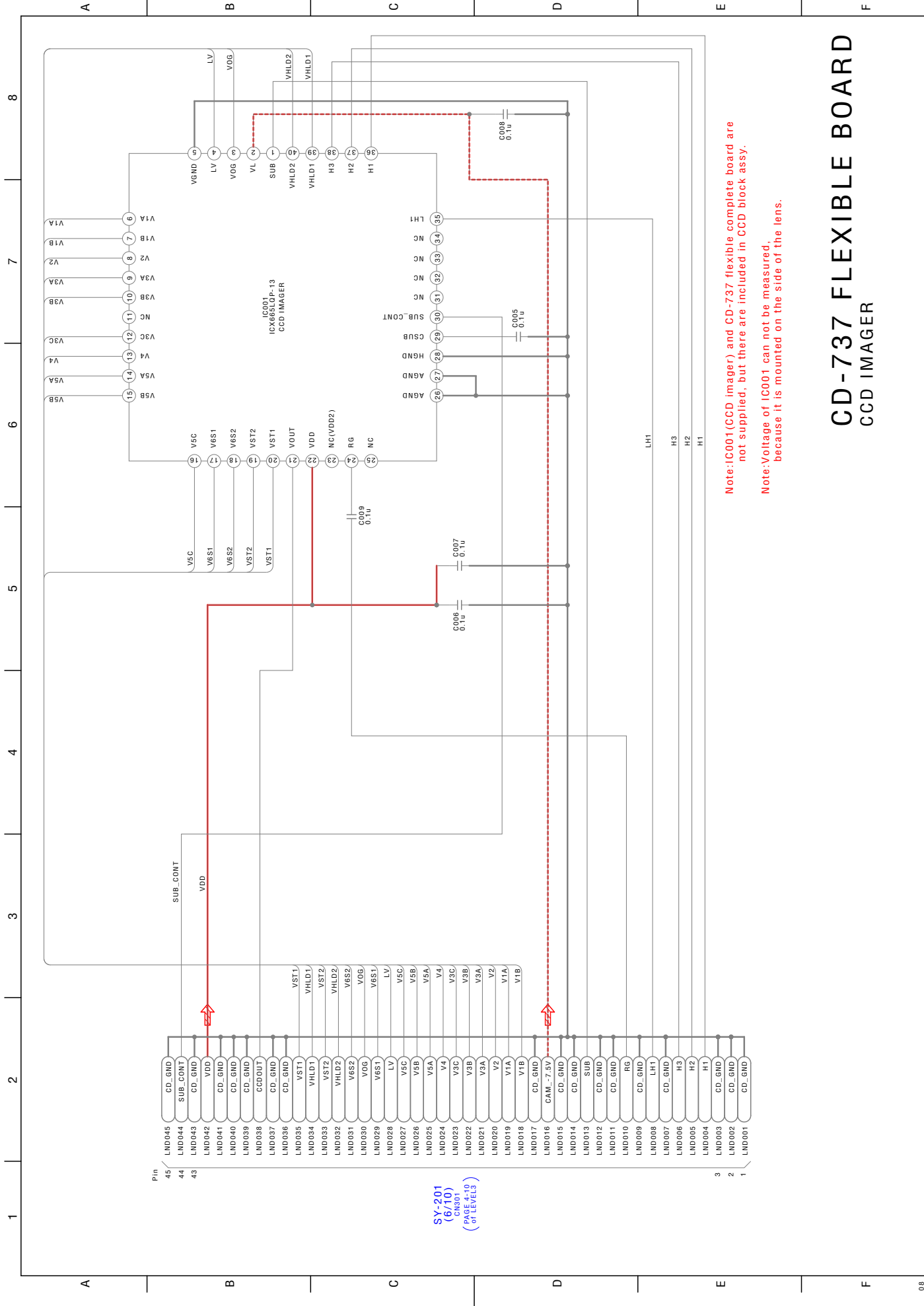
電子ビーム走査線



図b (テレビモニタの映像)

Δ 印の部品、または Δ 印付きの点線で囲まれた部品は、安全性を維持するために重要な部品です。従って交換時は、必ず指定の部品を使用して下さい。

お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定して下さい。



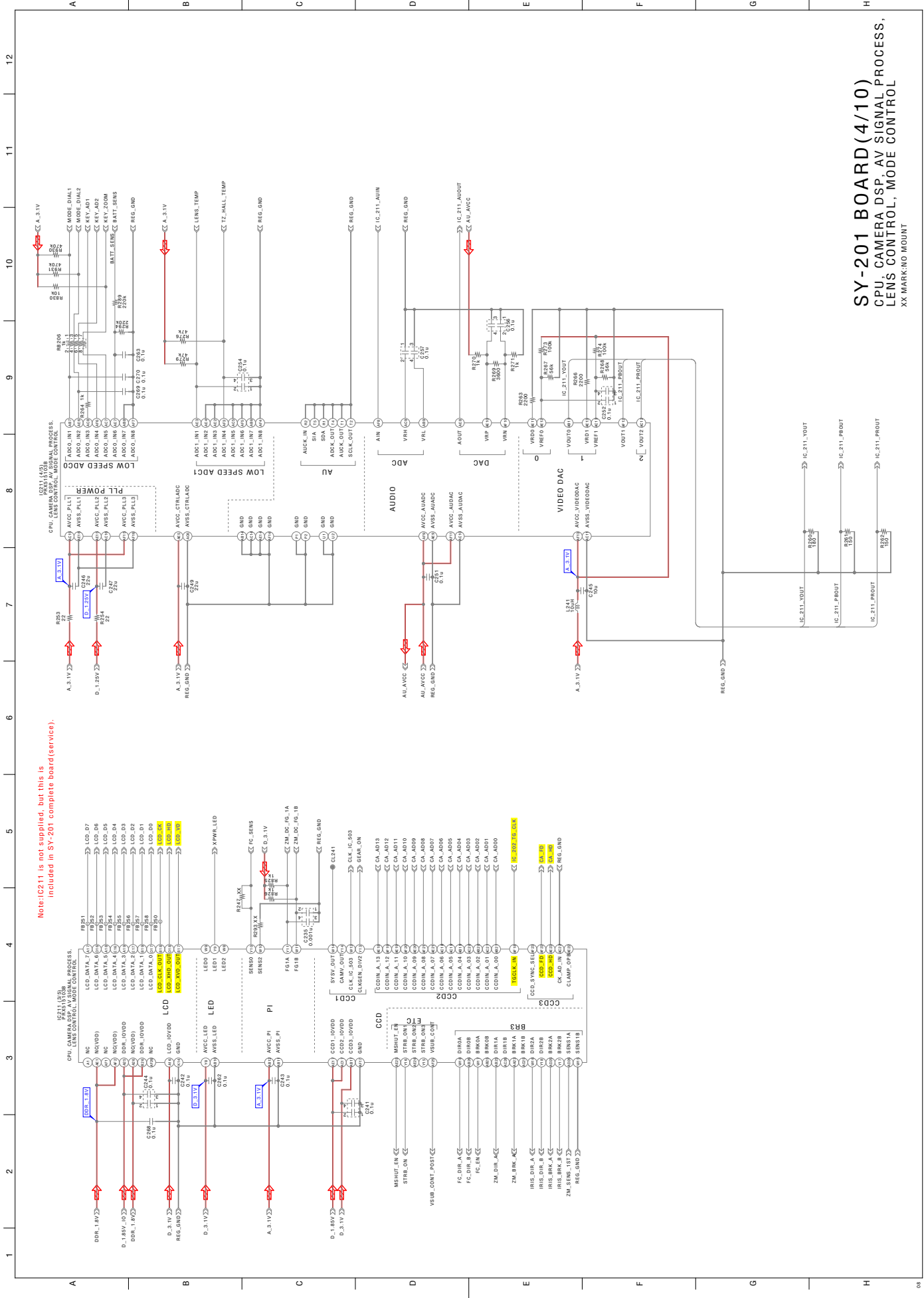
Note: IC001 (CCD imager) and CD-737 flexible complete board are not supplied, but there are included in CCD block assy.

Note: Voltage of IC001 can not be measured, because it is mounted on the side of the lens.

CD-737 FLEXIBLE BOARD

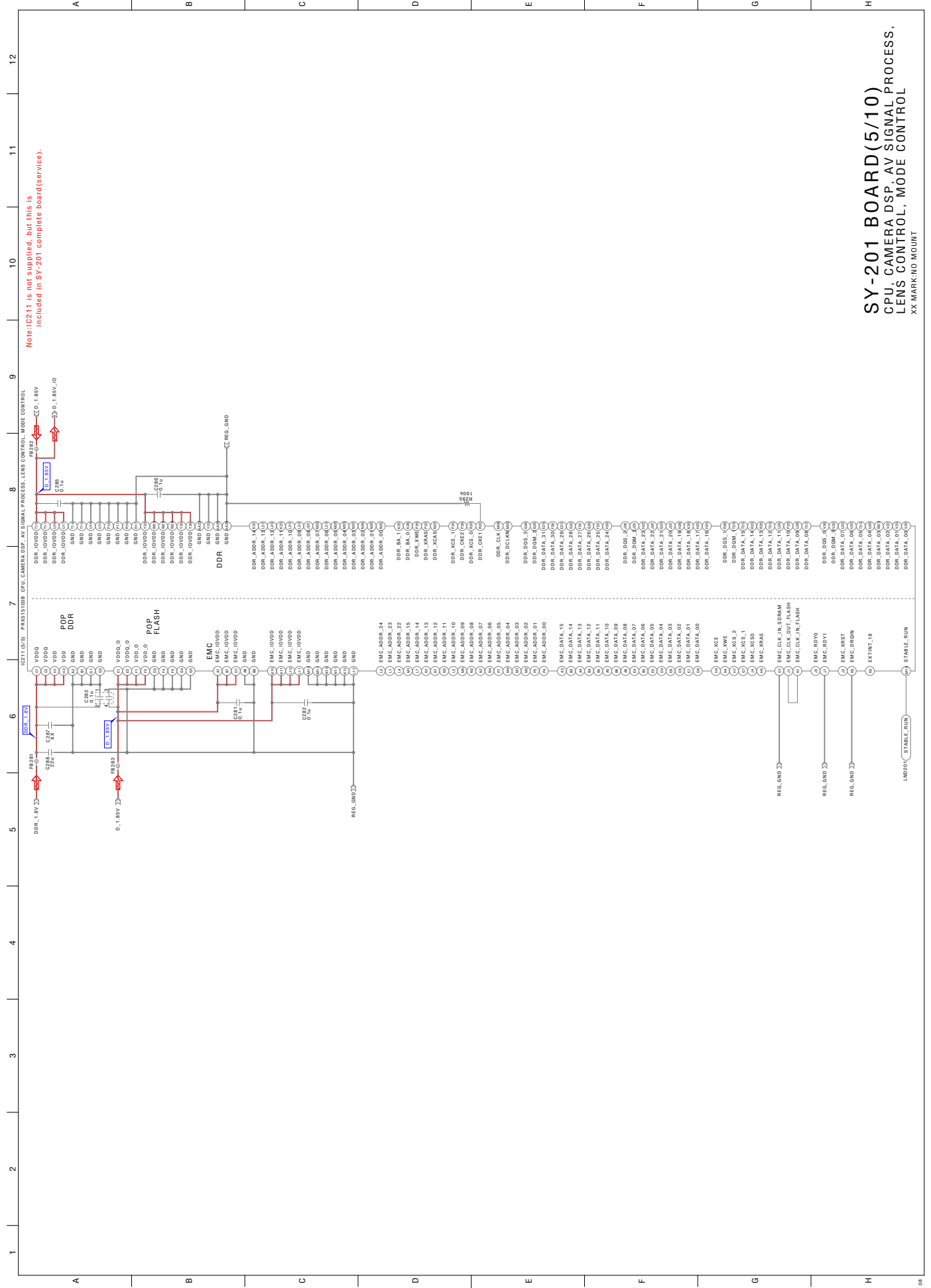
CCD IMAGER

SY-201
(6/1/00)
(PAGE 4-13)

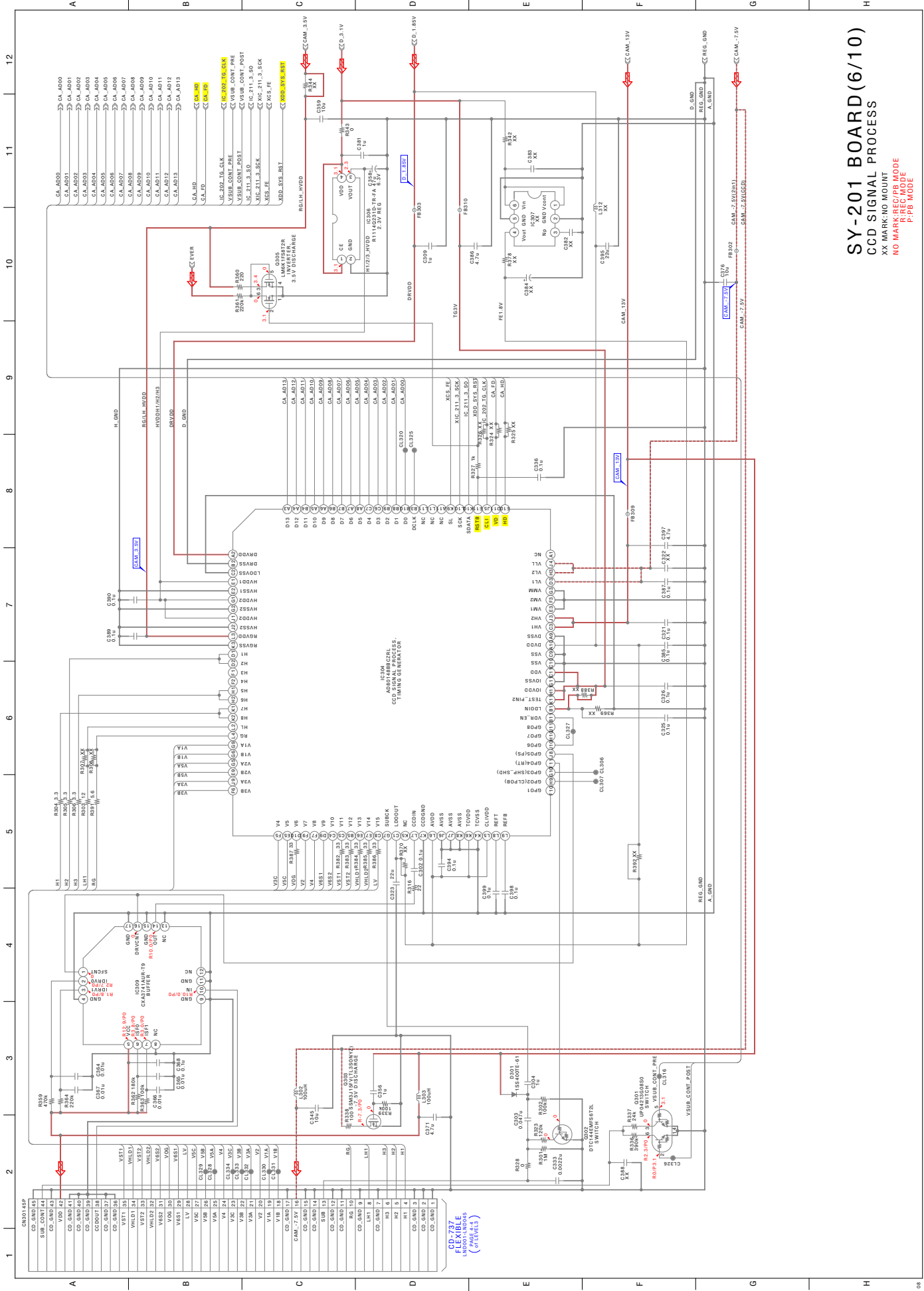


Note: IC211 is not supplied, but this is included in SY-201 complete board(service).

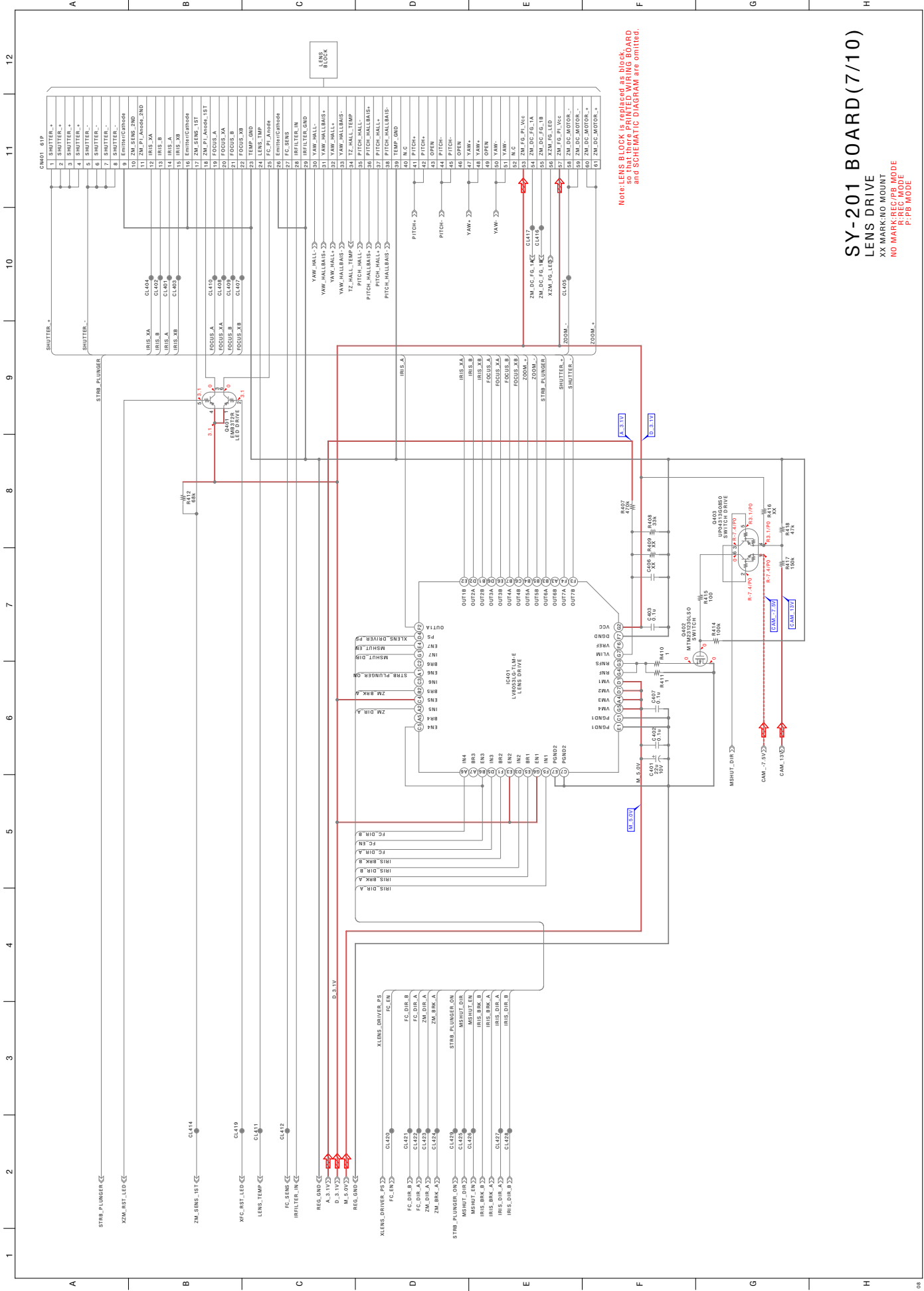
SY-201 BOARD(4/10)
 CPU, CAMERA DSP, AV SIGNAL PROCESS,
 LENS CONTROL, MODE CONTROL
 XX MARK:NO MOUNT



SY-201 BOARD (5/10)
 CPU, CAMERA DSP, AV SIGNAL PROCESSOR,
 LENS CONTROL, MODE CONTROL
 XX MARK: NO MOUNT



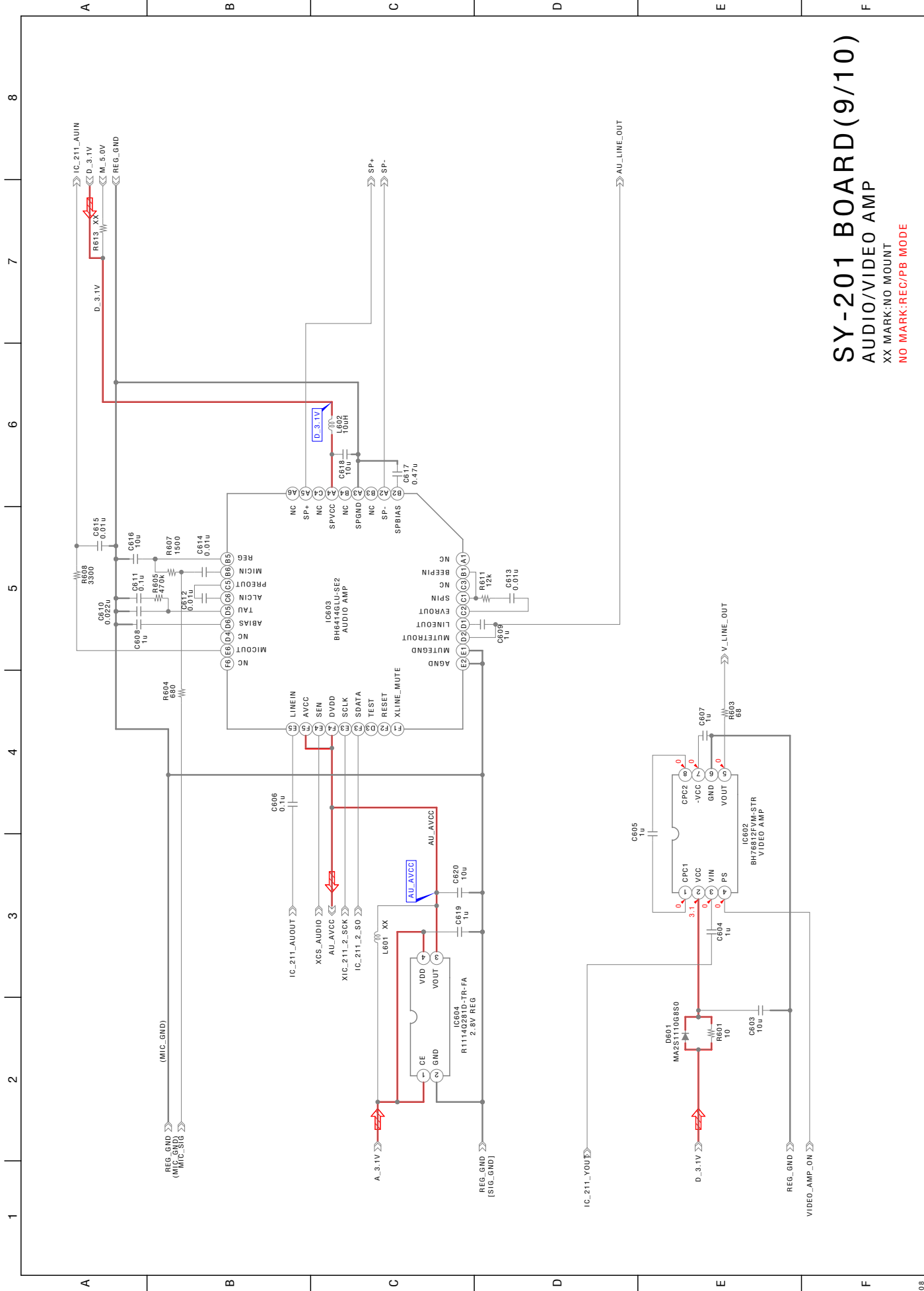
SY-201 BOARD (6/10)
 CCD SIGNAL PROCESS
 NO MARK: REC/PB MODE
 XX MARK: REC/PB MODE
 P: PB MODE



Note: LENS BLOCK is replaced as block, and SCHEMATIC DIAGRAM are omitted.

SY-201 BOARD(7/10)

LENS DRIVE
XX MARKING MOUNT
NO MARKING MODE
R REC MODE
P PE MODE



SY-201 BOARD (9/10)

AUDIO/VIDEO AMP
 XX MARK: NO MOUNT
 NO MARK: REC/PB MODE

4-3. PRINTED WIRING BOARDS

Link

• [CD-737 FLEXIBLE BOARD](#)

• [SY-201 BOARD \(SIDE B\)](#)

• [SY-201 BOARD \(SIDE A\)](#)






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

4-3. PRINTED WIRING BOARDS

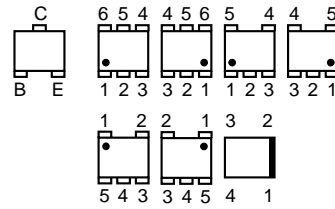
4-3. PRINTED WIRING BOARDS

(ENGLISH)

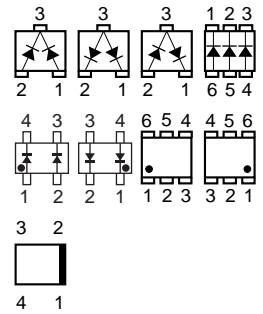
THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

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

- Chip parts.
Transistor








- Diode



(JAPANESE)

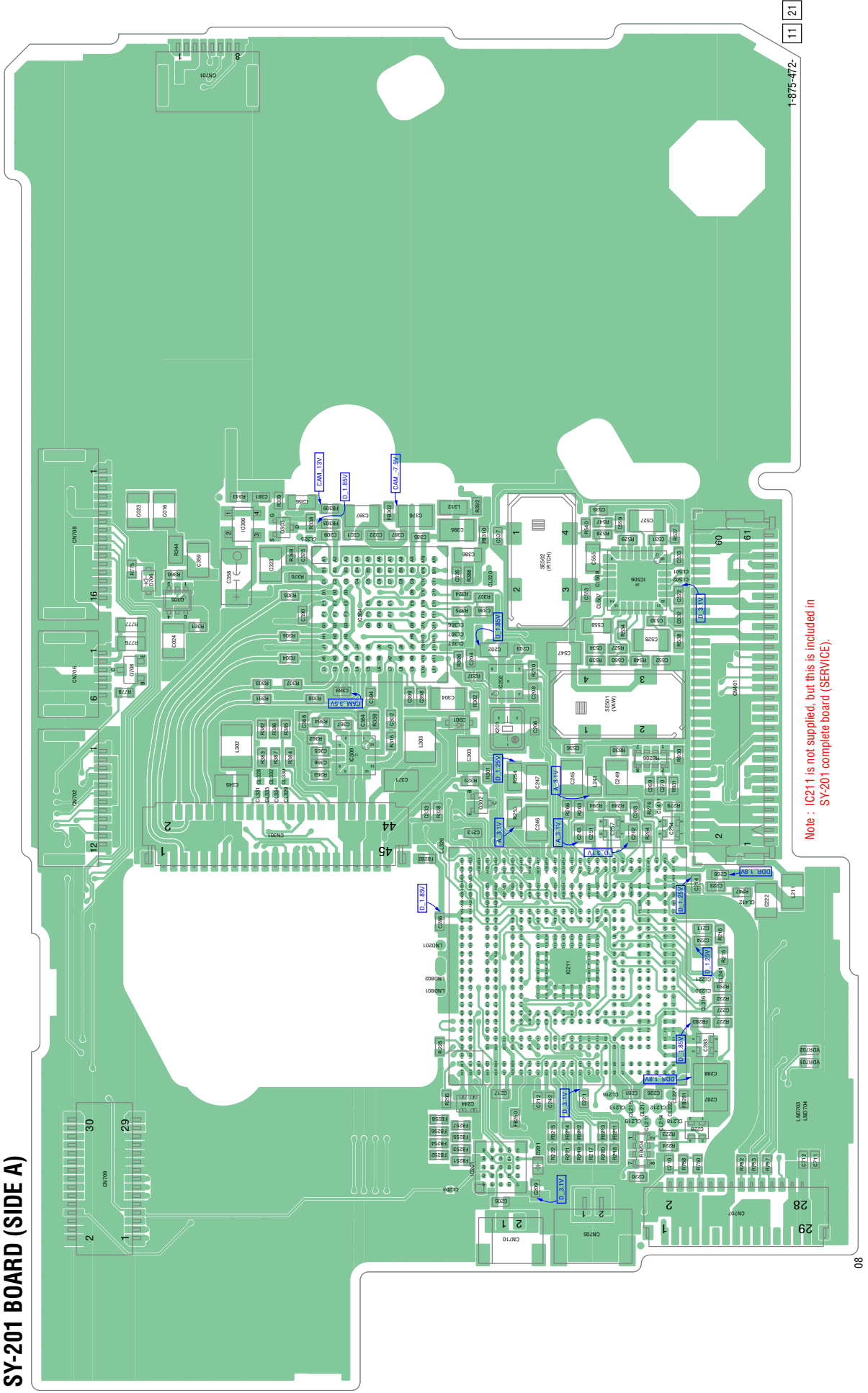
プリント図共通ノート

【プリント図ノート】

-  : 無鉛半田を使用しています。
-  : 基板
-  : フレキシブル配線板
見ている面側のパターン。
-  : 裏側のパターン
(他のパターンについては表示されていません)
- スルーホールは省略。
- プリント図には、本機で使用していない部品が記載されている場合があります。
-  はパネル表示名称。

 : Uses unleaded solder.

SY-201 BOARD (SIDE A)



Note : IC211 is not supplied, but this is included in SY-201 complete board (SERVICE).

5. REPAIR PARTS LIST

(ENGLISH)

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...

(JAPANESE)

【使用上の注意】

- ここに記載されている部品は補修用部品であるため、回路図及びセットに付いている部品と異なる場合があります。
- - は標準化部品のため、セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でu は μ Fを示します。
- 抵抗の単位 Ω は省略してあります。
金 被：金属被膜抵抗。
サンキン：酸化金属被膜抵抗。
- インダクタの単位でu は μ Hを示します。
- 半導体の名称でu A . D等はそれぞれ μ A μ P μ P μ P μ P を示します。

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

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

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

- Color Indication of Appearance Parts

Example:

(SILVER): Cabinet's Color

(Silver) : Parts Color

お願い

図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

Δ 印の部品、または Δ 印付の点線で囲まれた部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

- 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

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1539-809-A	CCD BLOCK ASSY
	(not supplied)	CD-737 FLEXIBLE BOARD

(IC001 (CCD imager) and CD-737 flexible complete board are not supplied, but there are included in CCD block assy.)

< CAPACITOR >

* C005	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C006	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C007	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C008	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C009	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V

< IC >

IC001 (Not supplied) ICX665LQP-13
(IC001 is supplied including in CCD BLOCK ASSY.)


Note: イメージャの交換時は4 - ページの“イメージャ交換時の注意”を必ずお読みください。

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

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description						
	A-1519-829-A	SY-201 BOARD, COMPLETE (SERVICE)	C209	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V			
		*****	C211	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V			
(IC211 is not supplied, but this is included in SY-201 complete board (SERVICE).)			C213	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V			
		< CAPACITOR >	C214	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V			
C001	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C215	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
* C002	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	C217	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C003	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	C218	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C004	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C220	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C005	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C221	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C007	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C222	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
* C008	1-112-662-91	TANTAL. CHIP	47uF	20%	10V	C223	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C009	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C224	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C010	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	C225	1-164-933-11	CERAMIC CHIP	220PF	10%	50V
C011	1-164-852-11	CERAMIC CHIP	12PF	5%	50V	C228	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C013	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V	C235	1-100-246-11	CERAMIC CHIP	0.001uF	10%	50V
C014	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	C241	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C016	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C242	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C017	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V	C243	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C018	1-164-933-11	CERAMIC CHIP	220PF	10%	50V	C244	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C019	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C245	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
* C020	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	C246	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C021	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V	C247	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C022	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C249	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C023	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C251	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C024	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C252	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C025	1-100-671-11	CERAMIC CHIP	4.7uF	20%	25V	C254	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C026	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C256	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C027	1-100-671-11	CERAMIC CHIP	4.7uF	20%	25V	C257	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C029	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C262	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
* C031	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	C263	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C034	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C268	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C035	1-164-874-11	CERAMIC CHIP	100PF	5%	50V	C269	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C038	1-164-874-11	CERAMIC CHIP	100PF	5%	50V	C270	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C040	1-164-933-11	CERAMIC CHIP	220PF	10%	50V	C281	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C041	1-164-933-11	CERAMIC CHIP	220PF	10%	50V	C282	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
* C042	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	C283	1-100-252-11	CERAMIC CHIP	0.1uF	10%	6.3V
C044	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C285	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C046	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C286	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C047	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V	C288	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C050	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	* C302	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
* C051	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	C303	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C053	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C304	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C054	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C309	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C057	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	* C321	1-114-582-11	CERAMIC CHIP	0.1uF	10%	16V
C058	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	C323	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C059	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V	C325	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C060	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C326	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C061	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V	C333	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C064	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	C336	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C066	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C345	1-100-966-91	CERAMIC CHIP	10uF	20%	10V
* C202	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V	* C356	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
C203	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	C358	1-100-539-91	TANTAL. CHIP	47uF	20%	6.3V
C204	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	C359	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C205	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C364	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C206	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	C365	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C208	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V	C366	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
						C367	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description				
		< FERRITE BEAD >							
FB002	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	L602	1-400-588-11	INDUCTOR	10uH			
FB003	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	L702	1-400-588-11	INDUCTOR	10uH			
FB004	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)			< TRANSISTOR >				
FB005	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	Q001	6-551-346-01	TRANSISTOR	LSK3541FS8T2L			
FB006	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	Q002	6-550-844-01	TRANSISTOR	FDW2508P/GNL			
FB215	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	Q003	8-729-055-89	TRANSISTOR	MCH3306-TL-E-S			
* FB250	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q005	6-551-202-01	TRANSISTOR	LM6K1FS8T2R			
* FB251	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	* Q301	6-551-868-01	TRANSISTOR	UP04213G08S0			
* FB252	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q302	6-550-119-01	TRANSISTOR	DTC144EMFS6T2L			
* FB253	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q303	6-550-791-01	TRANSISTOR	SSM3J15FV (TL3SONYZ)			
* FB254	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q305	6-551-202-01	TRANSISTOR	LM6K1FS8T2R			
* FB255	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q401	8-729-054-51	TRANSISTOR	UP04116008S0			
* FB256	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	Q402	6-551-304-01	TRANSISTOR	MTM231230LSO			
* FB257	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	* Q403	6-551-852-01	TRANSISTOR	UP04313G08S0			
FB258	1-481-250-11	INDUCTOR, FERRITE BEAD (1005)	* Q708	6-551-877-01	TRANSISTOR	2SC6054GR8S0			
FB281	1-469-081-21	INDUCTOR, FERRITE BEAD (1005)			< RESISTOR >				
FB282	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	R001	1-218-985-11	RES-CHIP	470K	5%	1/16W	
FB283	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	R002	1-218-989-11	RES-CHIP	1M	5%	1/16W	
FB302	1-400-331-11	FERRITE, EMI (SMD) (1005)	R004	1-218-985-11	RES-CHIP	470K	5%	1/16W	
FB303	1-400-331-11	FERRITE, EMI (SMD) (1005)	R005	1-218-949-11	RES-CHIP	470	5%	1/16W	
FB309	1-400-331-11	FERRITE, EMI (SMD) (1005)	R008	1-218-961-11	RES-CHIP	4.7K	5%	1/16W	
FB310	1-400-331-11	FERRITE, EMI (SMD) (1005)	R009	1-218-971-11	RES-CHIP	33K	5%	1/16W	
		< IC >	R013	1-218-989-11	RES-CHIP	1M	5%	1/16W	
* IC001	6-712-285-01	IC SC901572AVOR2	R015	1-208-947-11	RES-CHIP	330K	0.50%	1/16W	
* IC002	6-710-846-01	IC TK70664HCL-G	R016	1-245-604-11	METAL CHIP	10M	5%	1/16W	
* IC201	6-807-572-01	IC uPD79F0043FC-402-2N1-E2-A	R024	1-218-989-11	RES-CHIP	1M	5%	1/16W	
* IC202	6-710-919-01	IC ICS620AN-29LFT	R025	1-218-973-11	RES-CHIP	47K	5%	1/16W	
IC211	(Not supplied)	IC PRX515103B	R029	1-208-635-11	METAL CHIP	10	0.5%	1/16W	
(IC211 is supplied including in SY-201 complete board (service).)			R031	1-218-953-11	RES-CHIP	1K	5%	1/16W	
* IC304	6-710-767-01	IC AD80148BBCZRL	R032	1-218-953-11	RES-CHIP	1K	5%	1/16W	
* IC306	6-708-462-01	IC R1114Q231D-TR-FA	R035	1-208-911-11	METAL CHIP	10K	0.5%	1/16W	
* IC309	8-753-294-89	IC CXA3741AUR-T9	R040	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	
* IC401	6-708-988-01	IC LV8053LG-TLM-E	R063	1-218-981-91	RES-CHIP	220K	5%	1/16W	
* IC503	6-709-026-01	IC R2J30500LG	R064	1-218-939-11	RES-CHIP	68	5%	1/16W	
* IC506	8-753-284-38	IC CXA3739AER-T2	R080	1-218-929-11	RES-CHIP	10	5%	1/16W	
* IC507	6-708-444-01	IC R1114Q281D-TR-FA	R207	1-218-935-11	RES-CHIP	33	5%	1/16W	
IC602	6-707-834-01	IC BH76812FVM-STR	R210	1-218-935-11	RES-CHIP	33	5%	1/16W	
IC603	6-707-336-01	IC BH6414GLU-SE2	R213	1-218-953-11	RES-CHIP	1K	5%	1/16W	
* IC604	6-708-444-01	IC R1114Q281D-TR-FA	R214	1-218-953-11	RES-CHIP	1K	5%	1/16W	
* IC701	6-708-464-01	IC R1114Q251D-TR-FA	R215	1-218-941-11	RES-CHIP	100	5%	1/16W	
		< COIL >	R216	1-220-180-11	RES-CHIP	620	5%	1/16W	
* L001	1-457-522-21	INDUCTOR	4.7uH	R217	1-218-938-11	RES-CHIP	56	5%	1/16W
L002	1-456-500-11	INDUCTOR	10uH	R222	1-218-940-11	RES-CHIP	82	5%	1/16W
L004	1-456-500-11	INDUCTOR	10uH	R223	1-218-953-11	RES-CHIP	1K	5%	1/16W
L005	1-456-500-11	INDUCTOR	10uH	R224	1-218-953-11	RES-CHIP	1K	5%	1/16W
L006	1-400-676-11	INDUCTOR	22uH	R225	1-218-953-11	RES-CHIP	1K	5%	1/16W
L008	1-456-500-11	INDUCTOR	10uH	R227	1-218-953-11	RES-CHIP	1K	5%	1/16W
L009	1-456-500-11	INDUCTOR	10uH	R231	1-218-953-11	RES-CHIP	1K	5%	1/16W
L010	1-456-499-11	INDUCTOR	4.7uH	R253	1-216-801-11	METAL CHIP	22	5%	1/10W
L211	1-469-757-21	INDUCTOR	10uH	R254	1-216-801-11	METAL CHIP	22	5%	1/10W
* L241	1-481-102-21	INDUCTOR	10uH	R260	1-208-869-11	METAL CHIP	180	0.5%	1/16W
L302	1-400-317-21	INDUCTOR	100uH	R261	1-208-663-11	METAL CHIP	150	0.5%	1/16W
L303	1-400-317-21	INDUCTOR	100uH	R262	1-208-663-11	METAL CHIP	150	0.5%	1/16W
				R263	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
				R264	1-218-953-11	RES-CHIP	1K	5%	1/16W

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
		< VARISTOR >
* VDR701	1-802-279-11	VARISTOR (SMD)
* VDR702	1-802-279-11	VARISTOR (SMD)
		< VIBRATOR >
X001	1-781-525-11	VIBRATOR, CRYSTAL (32.768kHz)
* X201	1-813-904-21	QUARTZ CRYSTAL OSCILLATOR (38MHz)



Ver. 1.4 2009.06

Revision History

SECTION 6 ADJUSTMENTS

Auto-ADJ

Link

• Before starting adjustments

• Adjusting items when replacing main parts and boards

• List of service tools

• CAMERA SECTION ADJUSTMENTS

• PREPARATIONS BEFORE ADJUSTMENTS

• ADJUSTMENT PROGRAM

• DESTINATION DATA WRITE

• USB SERIAL No. INPUT

• VIDEO SYSTEM ADJUSTMENTS

• CAMERA SYSTEM ADJUSTMENTS

• LCD SYSTEM ADJUSTMENTS

• ERROR

• SERVICE MODE

• APPLICATION FOR ADJUSTMENT (SeusEX)

• SERVICE MODE

• DATA BACKUP

- Use this Service Manual together with the Automatic Adjustment Program (DSC-H50 Auto-Adj Ver_1.4r05.exe).

SONY®

SECTION 6 ADJUSTMENTS

Before starting adjustments

1-1. Adjusting items when replacing main parts and boards

When replacing main parts and boards, adjust the items indicated by ● in the following table.

Note: When replacing the SY-201 board, erase the data in internal memory of the board before replacement.

Adjusting item	Adjustment	Replaced parts																								
		Block replacement			Mounted parts replacement				Board replacement																	
		Lens block	CCD block assy (Including CD-737 flexible board and CCD imager)	Flash unit	LCD block	LCD901	LCD unit	LE-042 board	D002	(AF illumination LED)	SY-201 board	IC304	(Timing gen., CCD signal process)	SY-201 board	IC602	(Video amp.)	SY-201 board	SE502, SE501	(PITCH, YAW sensor)	LE-042 board	(COMPLETE)	ST-195 board	(COMPLETE)	SY-201 board	(COMPLETE) (Note)	
Destination Data Write	Destination data write																								●	
USB Serial No. Input	USB serial No. input																									●
Composite video level adjustment	Composite video level adj.													●											●	
Component video level adjustment	Component out Y level adj.														●										●	
	Component out Pb level adj.														●										●	
	Component out Pr level adj.																								●	
CAMERA adjustment 1	Hall adj.	●																							●	
CAMERA adjustment 2	Wide limit adj.	●																							●	
CAMERA adjustment 3	Flange back adj.	●	●																						●	
CAMERA adjustment 4	Flange back check	●	●																						●	
CAMERA adjustment 5	Light falloff balance adj.	●	●																							
CAMERA adjustment 6	F No. compensation																									
	Measure gain, LV adj.	●	●										●												●	
	Mechanical shutter adj.																									
CAMERA adjustment 7	AWB 3200K-5800K standard data input																									
	AWB 3200K-5800K check																									
	Color reproduction adj. & check					●							●												●	
	CCD white defect compensation check																									
	CCD black defect compensation check																									
CAMERA adjustment 8	Strobe adj.			●	●							●											●	●		
CAMERA adjustment 9	Auto focus illumination check											●										●		●		
CAMERA adjustment 10	Angular velocity sensor sensitivity adj.	●																				●		●		
LCD adjustment	V-COM adj.																								●	
	White Balance adj.					●																			●	

Table 6-1-1

1-2. List of service tools

- Oscilloscope
- Color monitor

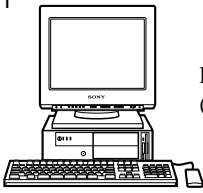

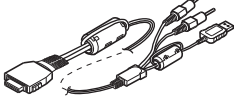
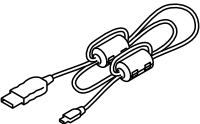
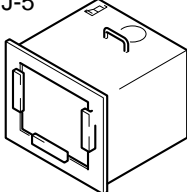
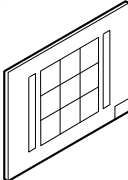
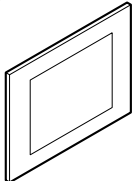
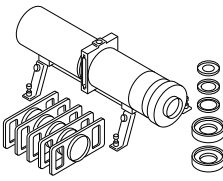
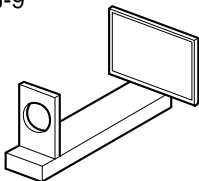
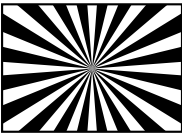
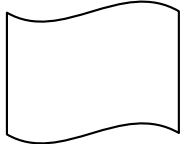
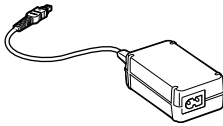
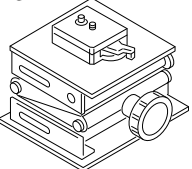
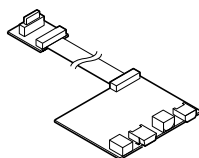
<p>J-1</p>  <p>Personal computer (Note 1)</p>	<p>J-2</p>  <p>HASP key and application for adjustment (SeusEX)</p> <p>Contact our service headquarters of each area how to get the application for adjustment (SeusEX) and HASP key.</p>	<p>J-3</p>  <p>USB, A/V cable for multi-use terminal 1-834-813-11</p>
<p>J-4</p>  <p>USB cable 1-829-868-41</p>	<p>J-5</p>  <p>Pattern box PTB-450 J-6082-200-A or Small pattern box PTB-1450 J-6082-557-A</p>	<p>J-6</p>  <p>9 colors chart (Note 2)</p> <p>For PTB-1450: J-6082-562-A</p>
<p>J-7</p>  <p>Clear chart</p> <p>For PTB-450: J-6080-621-A</p> <p>For PTB-1450: J-6082-560-A</p>	<p>J-8</p>  <p>Minipattern box J-6082-353-B</p>	<p>J-9</p>  <p>Flange back adjustment jig J-6082-563-A</p>
<p>J-10</p>  <p>Siemens star chart J-6080-875-A</p>	<p>J-11</p>  <p>Background paper J-2501-130-A</p>	<p>J-12</p>  <p>AC power adaptor AC-LS5 1-479-284-51</p>
<p>J-13</p>  <p>Camera table J-6082-384-A</p>	<p>J-14</p>  <p>Component video out jig J-6082-659-A</p>	

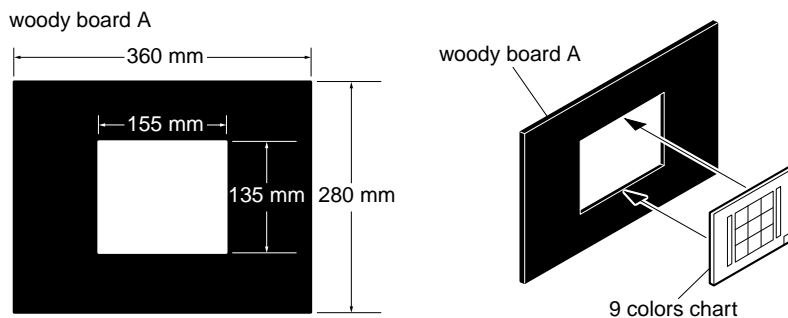
Fig. 6-1-1

Note 1: Personal computer

- OS: Windows 2000/XP/Vista
- RAM: 256 MB or more recommended
- USB: 2.0 recommended (also compatible with 1.1)
- Two connectors are required.

Note 2: In using the 9 colors chart on the pattern box PTB-450, adjust the chart size through the procedure shown below so that it matches to the pattern box PTB-450.

- 1) Prepare a woody board A of the thickness 5 mm, and paint it mat-black.
- 2) Fit the 9 colors chart in the woody board A, and secure the chart with a black tape, etc. to shield the light.



6-1. CAMERA SECTION ADJUSTMENTS

1-1. PREPARATIONS BEFORE ADJUSTMENTS

1-1-1. Preparations

- 1) Connect the equipment for adjustments according to Fig. 6-1-2.
- 2) Start up the application for adjustment (SeusEX).

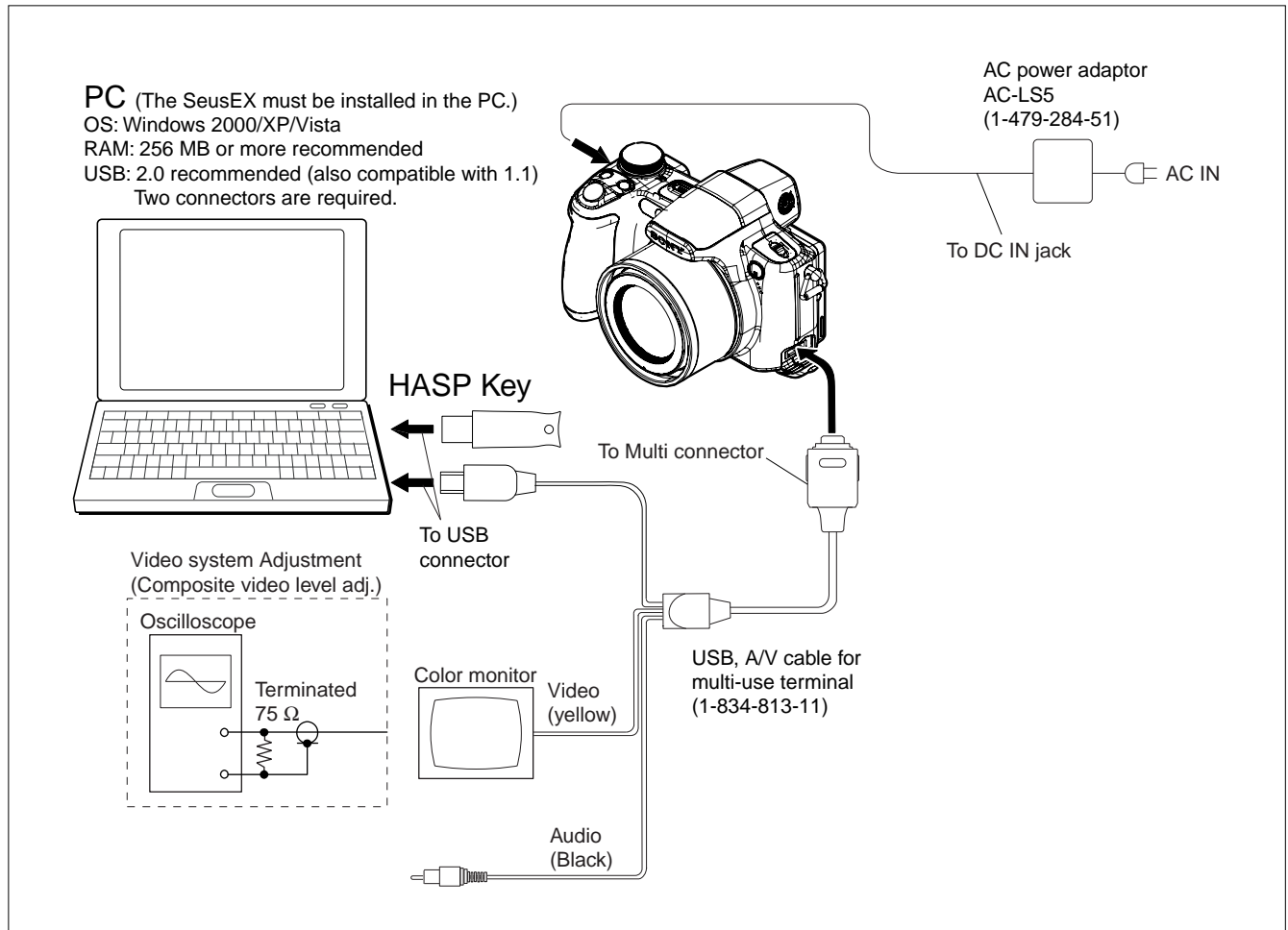


Fig. 6-1-2

Note: The set must be connected to the Component video out jig when performing the “Component out (Y, Pb, Pr) level adjustment” in the “Video System Adjustment”.

- Connection diagram when “Component out (Y, Pb, Pr) level adjustment” in “Video System Adjustment” is performed.

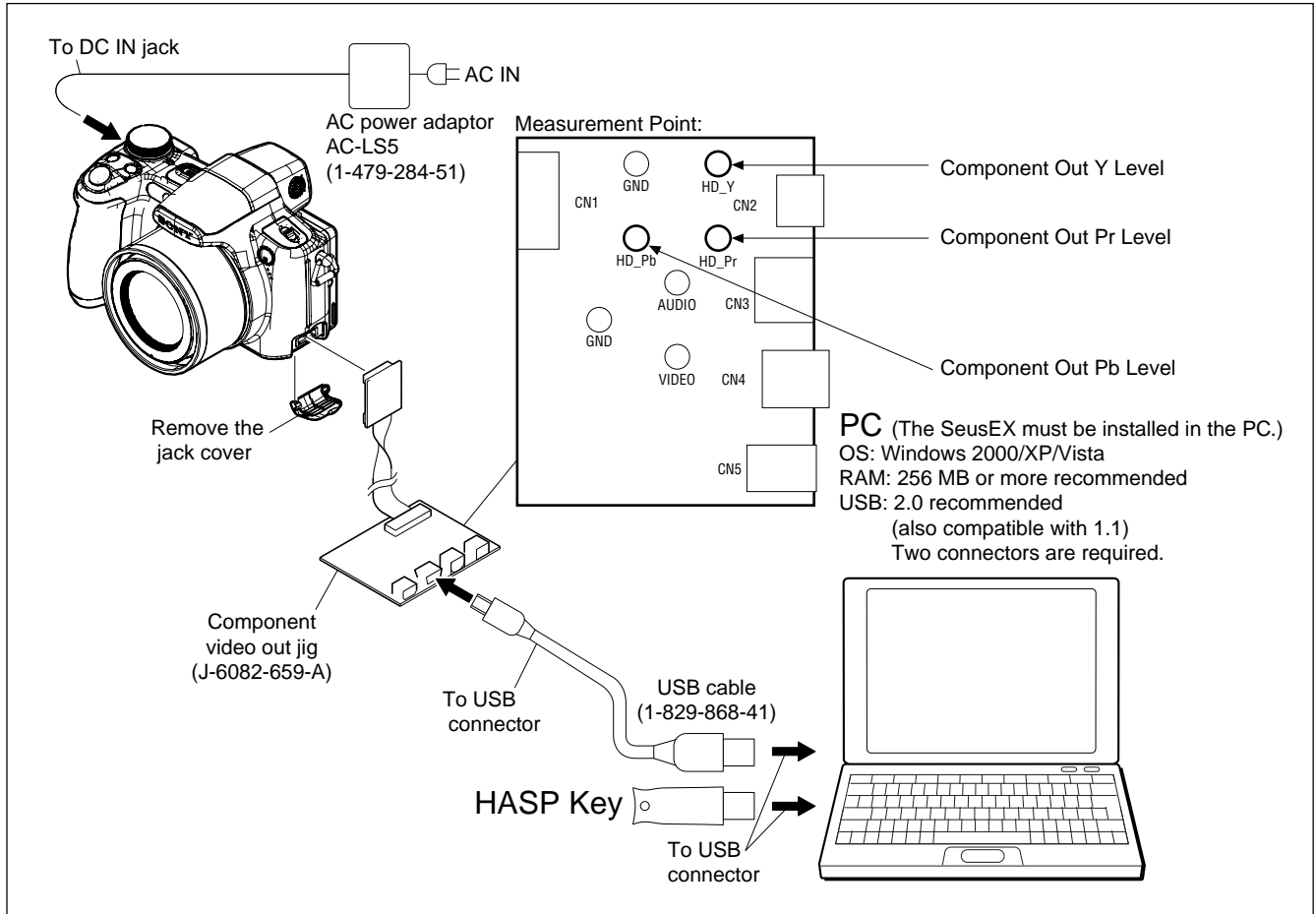


Fig. 6-1-3

1-1-2. Precautions

1. Setting the Switch

Unless otherwise specified, set the switches as follows and perform adjustments.

1. Mode dial Auto Adjustment
2. W/T (Zoom) button WIDE end
3. Digital Zoom
(Settings – Shooting Settings – Shooting Settings 1) Off
4. Conversion Lens
(Settings – Shooting Settings – Shooting Settings 1) Off
5. NIGHTSHOT switch Off

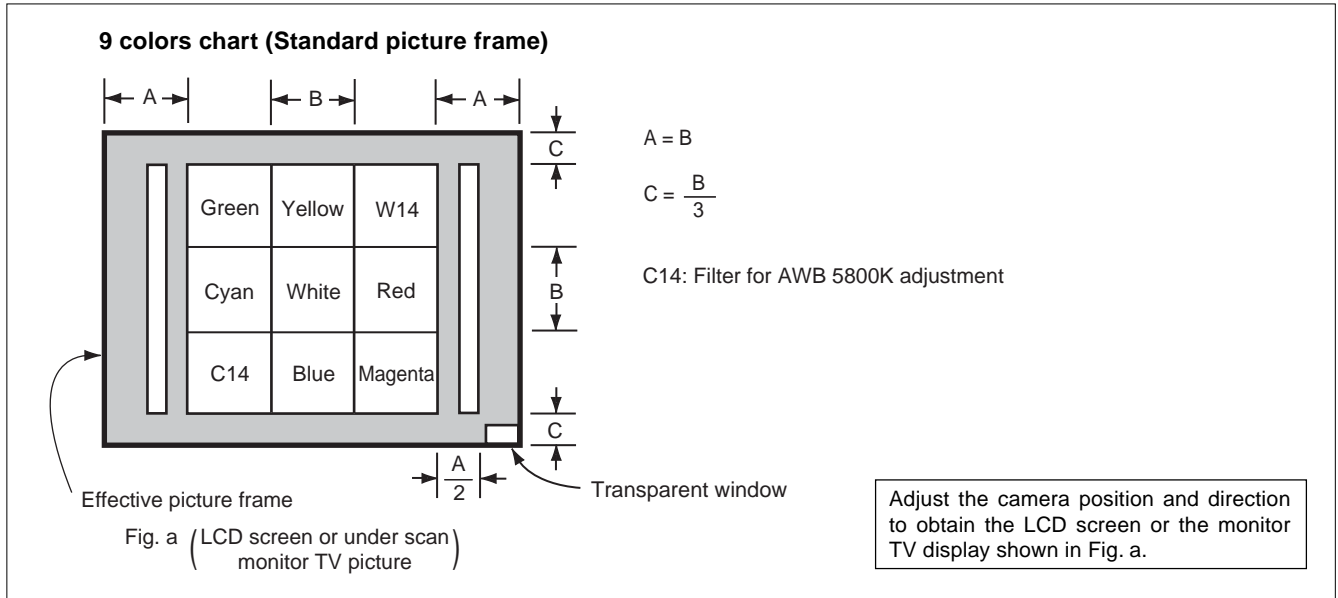


Fig. 6-1-4

2. Subjects

- 1) 9 colors chart (Standard picture frame).
When performing adjustments using the 9 colors chart, adjust the picture frame as shown in Fig. 6-1-4. (Standard picture frame)
- 2) Clear chart (Standard picture frame)
Remove the 9 colors chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time)

3. Setting Distance between Pattern Box and Camera

Set the distance from the front of the lens to the pattern box as shown in Fig. 6-1-5.

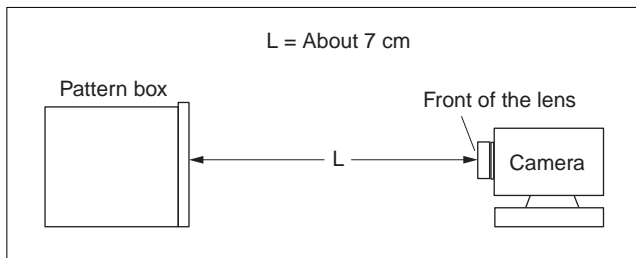


Fig. 6-1-5

4. Precautions When Using Pattern Box

- 1) It takes about 30 minutes for pattern box to stabilize its brightness.
Turn on the pattern box 30 minutes before the adjustment starts.
- 2) Make arrangement so that the outside light does not enter the chart surface in the pattern box.
Also, place a board between chart and camera, and make a hole at the lens part of the board so that the camera is not reflected in the shot image screen.

(Adjustment may not be performed correctly due to the influence of outside light.)

Example 1: Place a box to block a section between pattern box and camera.

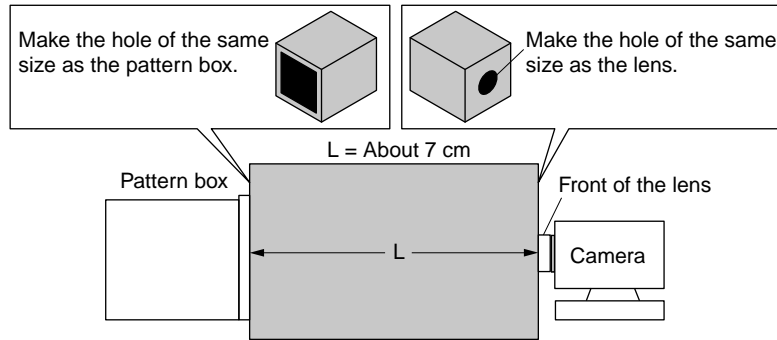


Fig. 6-1-6

Example 2: Place a board having a hole in front of the camera and cover the pattern box and camera with a blackout curtain

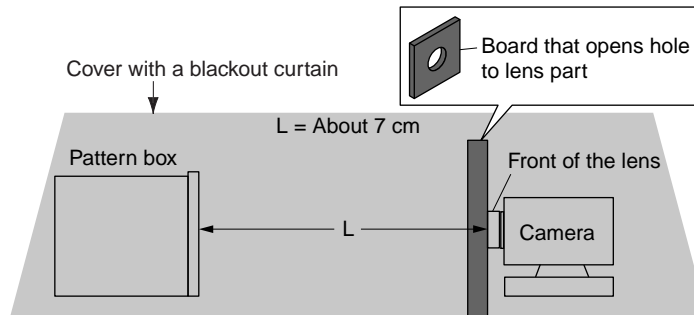


Fig. 6-1-7

- 3) Control of color chart
The color chart will fade if it is exposed to direct sunlight or strong light.
Since the fading of color chart progresses even with the light in the pattern box, remove and store the color chart when it is not used.
Remove the color chart and store it.
Store the color chart in a place not exposed to direct light, avoiding high temperature and humidity.
Use the color chart for about three years, and afterward replace it with a new chart.

5. Preparing the Flash Adjustment Box

A dark room is required to provide an accurate flash adjustment. If it is not available, prepare the flash adjustment box as given below;

- 1) Provide woody board A, B, C and D of 15 mm thickness.

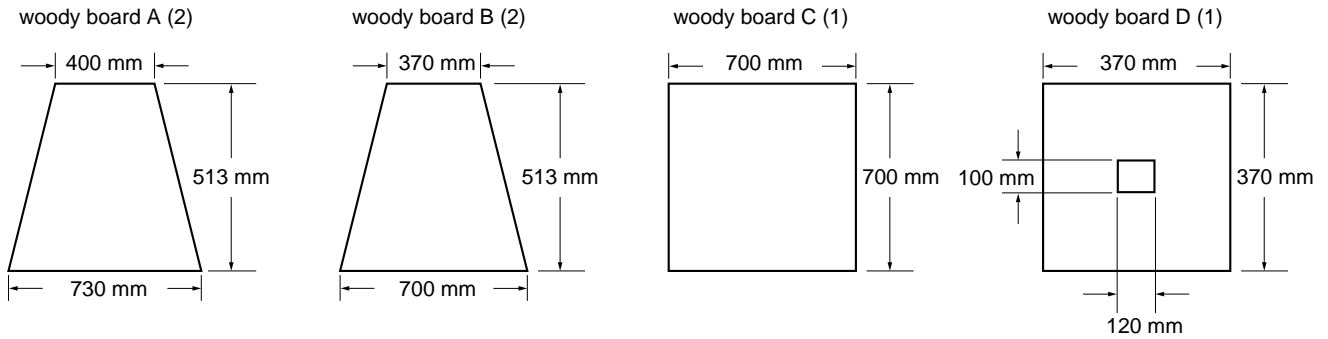


Fig. 6-1-8

- 2) Apply black mat paint to one side of woody board A, B and D.
- 3) Attach background paper (J-2501-130-A) to woody board C.
- 4) Assemble so that the black sides and the background paper side of woody board A, B, C and D are internal. (Fig. 6-1-9)

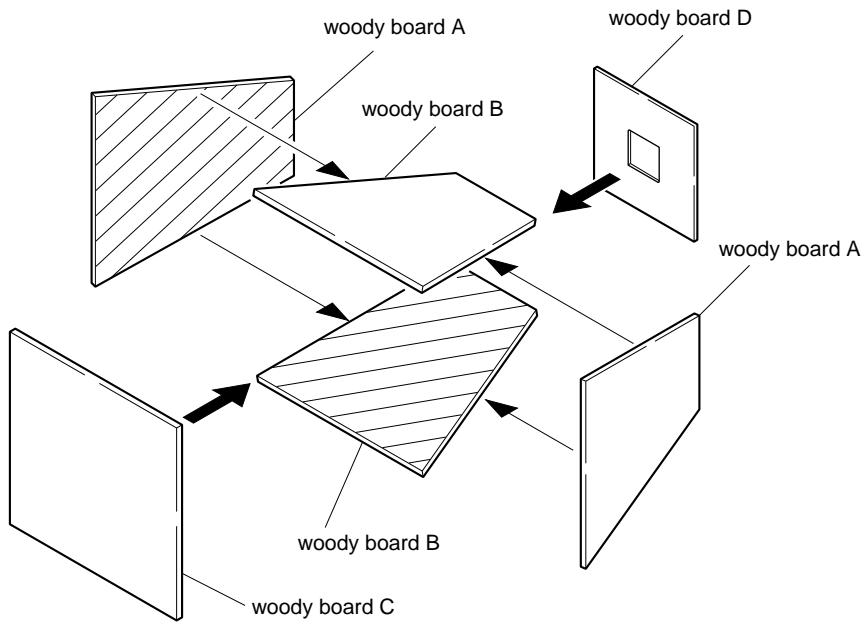


Fig. 6-1-9

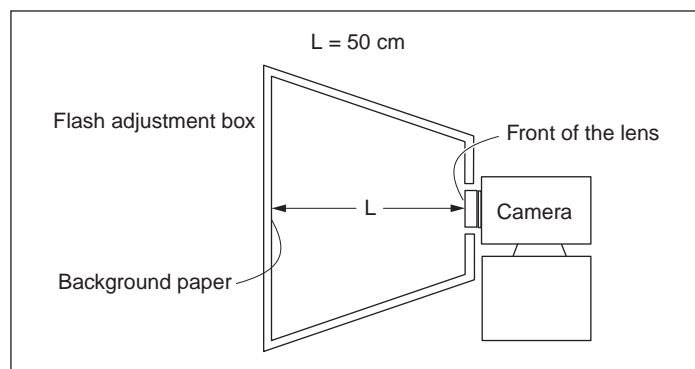


Fig. 6-1-10

1-2. ADJUSTMENT PROGRAM

The DSC-H50 is adjusted by the Automatic Adjustment Program. The Automatic Adjustment Program enters automatically via the SeusEX the adjustment operations that were formerly entered manually by the adjustment remote commander (some items may be adjusted by manual operation on the operation screen of the SeusEX).

1. Precautions When Using Automatic Adjustment Program

- 1) The Automatic Adjustment Program writes the adjustment results such as EVR data to the set through two-way communication with the camera via the SeusEX. Accordingly, the Automatic Adjustment Program must be used in the environment where the SeusEX operates.
- 2) The Automatic Adjustment Program cannot be used when the SEUS or the SeusCam is running. Exit the SEUS or the SeusCam before using the Automatic Adjustment Program.
- 3) The SeusEX must be already started on the PC when using the Automatic Adjustment Program. With the SeusEX not started, some adjustment items will take time in adjustment.
- 4) The program run time may vary depending on the environment of the personal computer used.

2. Start of Automatic Adjustment Program

Double-click the application file (DSC-H50 Auto-Adj Ver_1.4r05.exe), and the Automatic Adjustment Program will start.

3. Function of Each Button on Main Menu Screen

When the Automatic Adjustment Program started, the Main Menu screen in Fig. 6-1-11 will appear. On this screen, select each adjustment section.

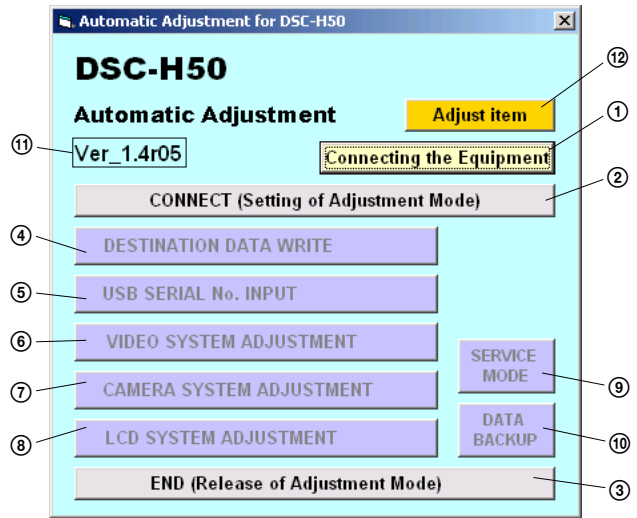


Fig. 6-1-11

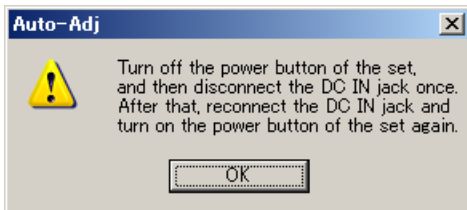
- ① **Connecting the Equipment** button
A connection diagram of the equipment is displayed.
- ② **CONNECT** button
The mode of Camera is switched to the Adjustment Mode. When the Adjustment Mode has switched normally, the operation of the buttons ④ – ⑩ is enabled.
- ③ **END** button
The mode of Camera is switched to the normal mode. When the normal mode has switched correctly, the Automatic Adjustment Program is finished.
- ④ **DESTINATION DATA WRITE** button
The “DESTINATION DATA WRITE” screen appears.
- ⑤ **USB SERIAL NO. INPUT** button
The “USB SERIAL No. INPUT” screen appears.
- ⑥ **VIDEO SYSTEM ADJUSTMENT** button
The “VIDEO SYSTEM ADJUSTMENT” screen appears.
- ⑦ **CAMERA SYSTEM ADJUSTMENT** button
The “CAMERA SYSTEM ADJUSTMENT” screen appears.
- ⑧ **LCD SYSTEM ADJUSTMENT** button
The “LCD SYSTEM ADJUSTMENT” screen appears.
- ⑨ **SERVICE MODE** button
The “SERVICE MODE” screen appears.
- ⑩ **DATA BACKUP** button
The “DATA BACKUP” screen appears.
- ⑪ This part indicates the version of Automatic Adjustment Program.
- ⑫ **Adjust item** button
“Adjusting items when replacing main parts and boards” table is displayed.

4. Setting of Adjustment Mode

Before performing the adjustment, "Setting of Adjustment Mode" is required.

[Setting method]

- 1) Connect the Camera to the PC with a USB cable, and turn on the power switch.
- 2) Start the Automatic Adjustment Program, and click the **Connect** button on the Main Menu screen.
- 3) Turn off the power button of the set when the following message is displayed.



- 4) Once turn off a set completely by pulling a "DC In Jack".
- 5) Connect a "DC In Jack" again and turn on a set by the power button of a body.
Click the **OK** button on the message screen when the set started.
- 6) Upon successful completion of the settings in the Adjustment Mode, the operation of each button on the Main Menu screen is enabled.

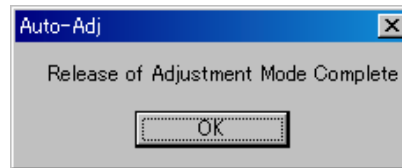
5. Release of Adjustment Mode

To finish the adjustment, be sure to perform "Release of Adjustment Mode".

[Releasing method]

- 1) Click the **END** button on the Main Menu screen.
- 2) When the following message is displayed, releasing of adjustment mode has completed. Click the **OK** button in the message window to exit the Automatic Adjustment Program.

Note: The Camera switches to the normal mode by turning off and on the power switch. After the adjustment finished, turn off and on again the power switch of the Camera to confirm that the USB mode screen is displayed.



1-3. DESTINATION DATA WRITE

Note: The DESTINATION DATA WRITE cannot be set with other than the Service board.

1. Function of Each Button on Destination Data Write Screen

Click the [DESTINATION DATA WRITE] button on the Main Menu screen, and the “DESTINATION DATA WRITE” screen in Fig. 6-1-12 will appear.

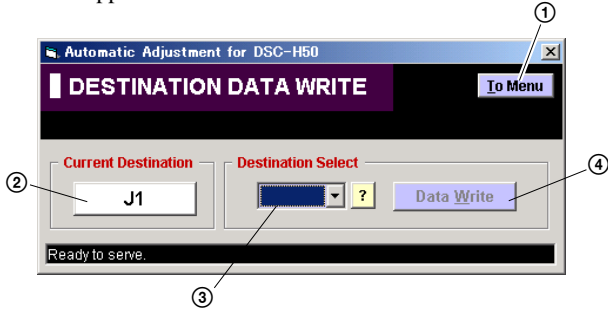


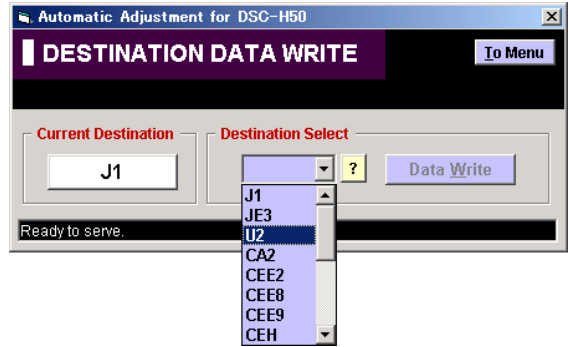
Fig. 6-1-12

- ① [To Menu] button
Return to the main menu.
- ② Destination Check button
Current destination setting checked when the “DESTINATION DATA WRITE” screen started is displayed.
When this button is clicked, the destination is checked and the display is updated.
- ③ Destination List
Select the written destination.
- ④ [Data Write] button
Write the destination data to the camera.

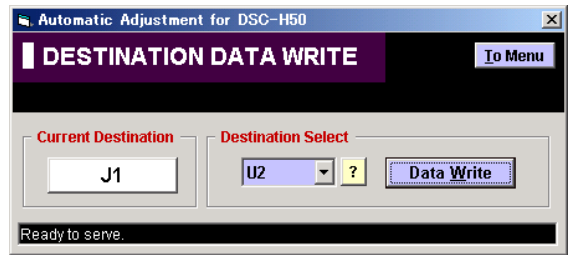
2. Destination Data Write

[Writing method]

- 1) Select the written destination with the Destination List.



- 2) Click the [Data Write] button.



- 3) Following message will be appeared after completing data writing.



- 4) After the destination data writing completed, click the Destination Check button to check the destination

3. Selectable Language Table

DESTINATION	AREA	SELECTABLE LANGUAGE																				VIDEO OUT Default						
		Japanese	English	French	German	Spanish	Italian	Portuguese	Simplified Chinese	Traditional Chinese	Dutch	Russian	Korean	Persian	Arabic	Thai	Melayu	Swedish	Norwegian	Danish	Finnish		Polish	Czech	Hungarian	Turkish	Greek	
J1	J	●																										NTSC
JE3	JE		●			○		○	○			○	○	○	○	○												PAL
U2	US		●	○		○	○	○	○																			NTSC
CA2	CND		●	○		○	○	○	○																			NTSC
CEE2	AEP		○	○	○	○	○	○			○	●					○	○	○	○	○	○	○	○	○	○	○	PAL
CEE8			●	○	○	○	○	○			○	○					○	○	○	○	○	○	○	○	○	○	○	PAL
CEE9			●	○	○	○	○	○			○	○					○	○	○	○	○	○	○	○	○	○	○	PAL
CEH	UK		●	○	○	○	○	○			○						○	○	○	○	○	○	○	○	○	○	○	PAL
E15	E		●			○		○	○				○	○	○	○												PAL
E32			●			○		○	○				○	○	○	○												PAL
E33				○			●		○	○				○	○	○	○											NTSC
TH6	Thai		○			○		○	○				○	○	○	●	○											PAL
AU2	AUS		●	○		○	○	○	○																			PAL
HK1	HK		●			○		○	○				○	○	○	○	○											PAL
CN2	CH		○			○		○	○			●	○	○	○	○	○											PAL
KR2	KR		○			○		○	○			●	○	○	○	○	○											NTSC
AR2	AR		○			●		○	○				○	○	○	○	○											NTSC
BR1	BR		○			○		●	○	○			○	○	○	○	○											NTSC

●: INITIAL LANGUAGE

Table 6-1-2

1-4. USB SERIAL No. INPUT

The set is shipped with a unique ID (USB Serial No.) written in it. This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.

If original ID can be read from the board before replacement, read it from the board before replacement using the “SERIAL READ/WRITE” screen, and then write it after replacement.

If original ID cannot be read from the board before replacement, write the ID for service using the “MANUAL WRITE” screen. (The ID for service is different from the ID written when the set is shipped.) Enter the PRODUCT ID (last 5 characters of model name) and SERIAL No. into the screen and write them.

1. Function of Each Button on USB Serial No. Input Screen

Click the **USB SERIAL No. INPUT** button on the Main Menu screen, and “USB SERIAL No. INPUT” screen in Fig. 6-1-13 will appear.

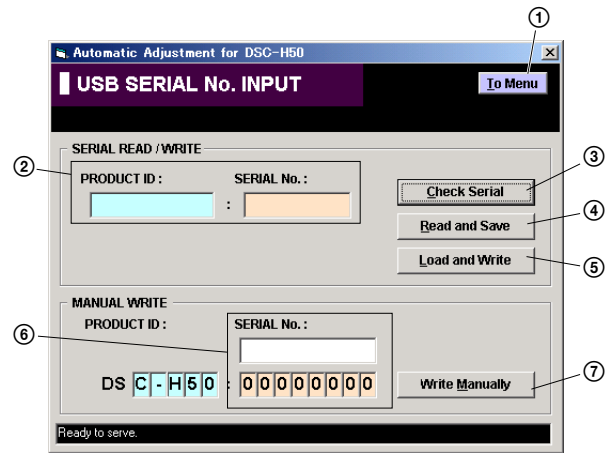


Fig. 6-1-13

- ① **To Menu** button
Return to the main menu.
- ② Display area
The “PRODUCT ID” and “SERIAL No.” are displayed.
- ③ **Check Serial** button
The USB SERIAL No. data is read from the camera and displayed in the display area.
- ④ **Read and Save** button
The USB SERIAL No. data is read from the camera and saved in PC as a file.
Default file name is as follows:
DSC-H50_SERIAL_ xxxxxxxx_yyyymmdd.dat

		Date
		USB serial number
		Data name
- ⑤ **Load and Write** button
The USB SERIAL No. data is loaded from the file saved in PC and written to the camera.
- ⑥ Input area
Enter “PRODUCT ID” and “SERIAL No.” when writing the ID for service.
The “PRODUCT ID” is set from the last 5 characters of model name if the model name is selected.
For the “SERIAL No.”, read it from the label on the camera body and enter it.
- ⑦ **Write Manually** button
The USB SERIAL No. data entered in the input area is written to the camera.

1-5. VIDEO SYSTEM ADJUSTMENTS

1-5-1. Function of Each Button on Video System Adjustment Screen

Click the **VIDEO SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “VIDEO SYSTEM ADJUSTMENT” screen in Fig. 6-1-14 will appear.

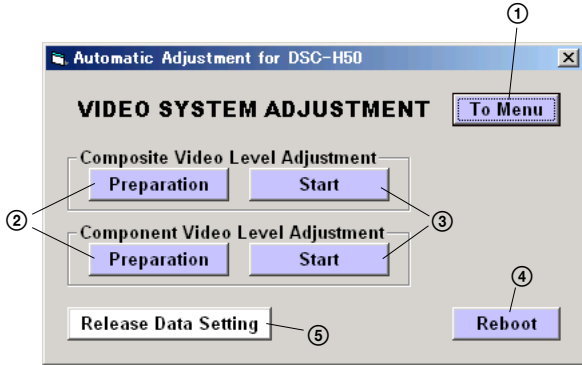


Fig. 6-1-14

- ① **To Menu** button
Return to the main menu.
- ② **Preparation** button
Notes for adjustment or jigs used are displayed.
- ③ **Start** button
Each adjustment “Composite Video Level Adjustment” or “Component Video Level Adjustment” starts.
- ④ **Reboot** button
When this button is clicked, the camera is rebooted.
- ⑤ **Release Data Setting** button
The data setting at the adjustment is cancelled.
During the data setting, the button color changes from “white” to “red”. When the data setting is cancelled, the button color returns to “white”.
(Use this button when an error occurred in the video adjustment. If the adjustment completed successfully, the data setting is automatically cancelled and the button color returns to “white”.)

1-5-2. Adjustment Items of VIDEO System Adjustment

The adjustment items of video system adjustment are as listed in Table 6-1-3. The Automatic Adjustment Program executes the adjustment items if the VIDEO Adjustment Start button is clicked.

Button Name	Adjustment	Measurement Point	Measuring Instrument	Adjusting Address		
				Block	Page	Address
Composite Video Level Adjustment	Composite Video Level Adj.	VIDEO terminal of USB, A/V cable for multi-use terminal (75 ohm terminated)	Oscilloscope	11	60	06B8
Component Video Level Adjustment	Component Out Y Level Adj.	Land of HD_Y (Component video out jig)	Oscilloscope	11	60	0680
	Component Out Pb Level Adj.	Land of HD_Pb (Component video out jig)	Oscilloscope	11	60	0681
	Component Out Pr Level Adj.	Land of HD_Pr (Component video out jig)	Oscilloscope	11	60	0682

Table 6-1-3

1-5-3. Adjusting Method

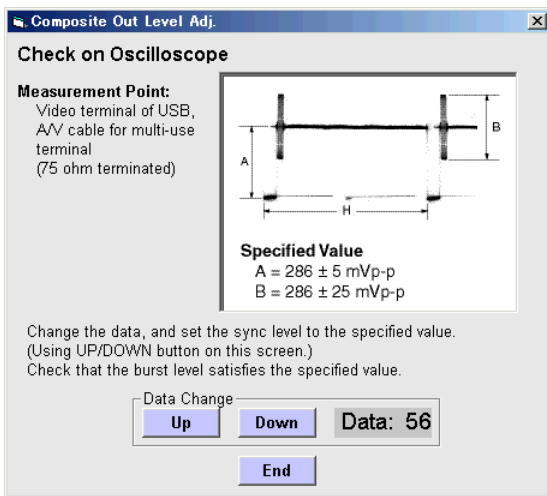
1. Composite Video Level Adjustment

[Automatic Adjustment Program execution items and sequence]

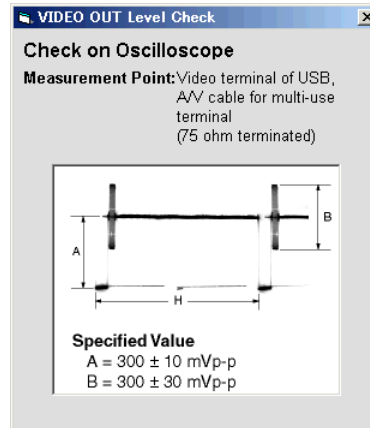
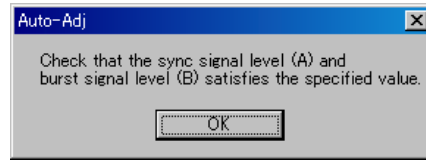
1. Data Setting during Video Adj.
2. Composite Video Level Adj.
3. Release of Data Setting during Video Adj.

[Adjusting method]

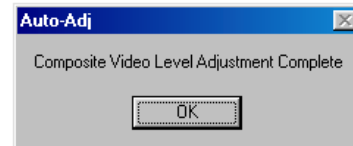
- 1) Click the **[Start]** button of the Composite Video Level Adj.
- 2) The Automatic Adjustment Program executes the “1. Data Setting during Video Adj.”
- 3) If “1. Data Setting during Video Adj.” completed successfully, the following screen is displayed during the execution of “2. Composite Video Level Adj.”. Using the **[Up]**/**[Down]** button on the screen, adjust so that the sync level of the video signals satisfies the specified value. After the adjustment, click the **[End]** button in the screen.



- 4) If the **[End]** button is clicked, the following message and screen are displayed. Check that the sync signal level and burst level of the video signals satisfies the specified value, and click the **[OK]** button in the message.



- 5) If the **[OK]** button is clicked, “3. Release of Data Setting during Video Adj.” will be executed.
- 6) Upon successful completion of all item the Composite Video Level Adjustment, the following message is displayed. Click the **[OK]** button.



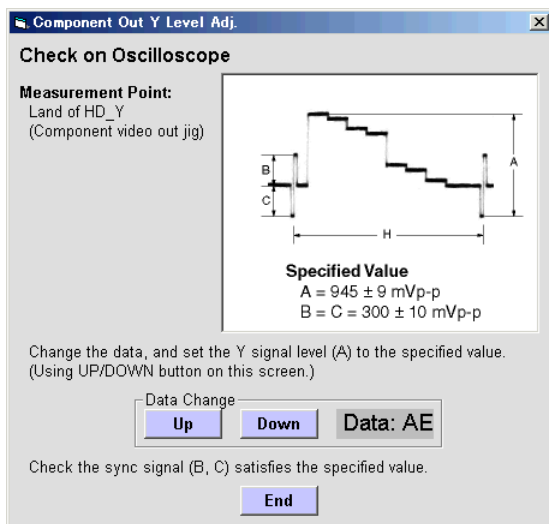
2. Component Video Level Adjustment

[Automatic Adjustment Program execution items and sequence]

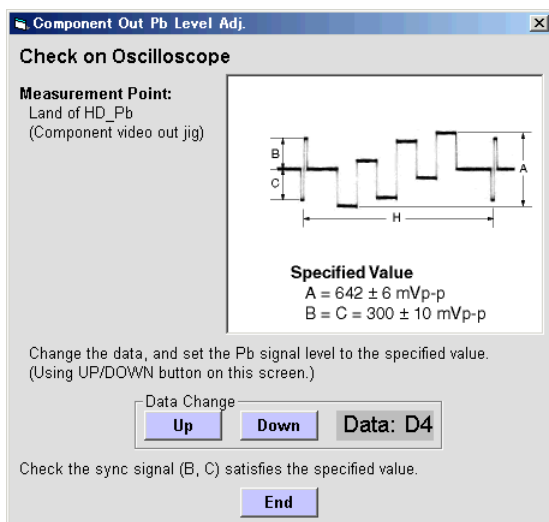
1. Data Setting during Video Adj.
2. Component Out Y Level Adj.
3. Component Out Pb Level Adj.
4. Component Out Pr Level Adj.
5. Release of Data Setting during Video Adj.

[Adjusting method]

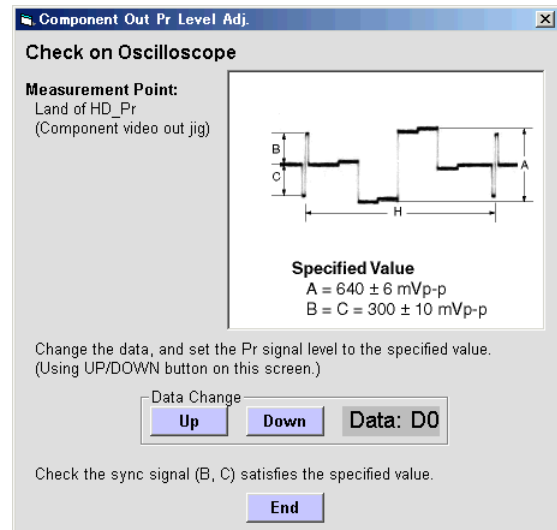
- 1) Click the **[Start]** button of the Component Video Level Adjustment.
- 2) The Automatic Adjustment Program executes the "1. Data Setting during Video Adj."
- 3) If "1. Data Setting during Video Adj." completed successfully, the following screen is displayed during the execution of "2. Component Out Y Level Adj.". Using the **[Up]**/**[Down]** button on the screen, adjust so that the Y signal level satisfies the specified value. After the adjustment, check that the sync level of the Y signals satisfies the specified value, and click the **[End]** button in the screen.



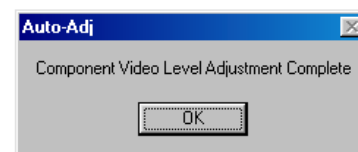
- 4) After that, the following screen is displayed during the execution of "3. Component Out Pb Level Adj.". Using the **[Up]**/**[Down]** button on the screen, adjust so that the Pb signal level satisfies the specified value. After the adjustment, check that the sync level of the Pb signals satisfies the specified value, and click the **[End]** button in the screen.



- 5) After that, the following screen is displayed during the execution of "4. Component Out Pr Level Adj.". Using the **[Up]**/**[Down]** button on the screen, adjust so that the Pr signal level satisfies the specified value. After the adjustment, check that the sync level of the Pr signals satisfies the specified value, and click the **[End]** button in the screen.



- 6) If the **[End]** button is clicked, "5. Release of Data Setting during Video Adj." will be executed.
- 7) Upon successful completion of all item the Component Video Level Adjustment, the following message is displayed. Click the **[OK]** button.



1-6. CAMERA SYSTEM ADJUSTMENTS

1-6-1. Function of Each Button on Camera System Adjustment Screen

Click the **CAMERA SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “CAMERA SYSTEM ADJUSTMENT” screen in Fig. 6-1-15 will appear.

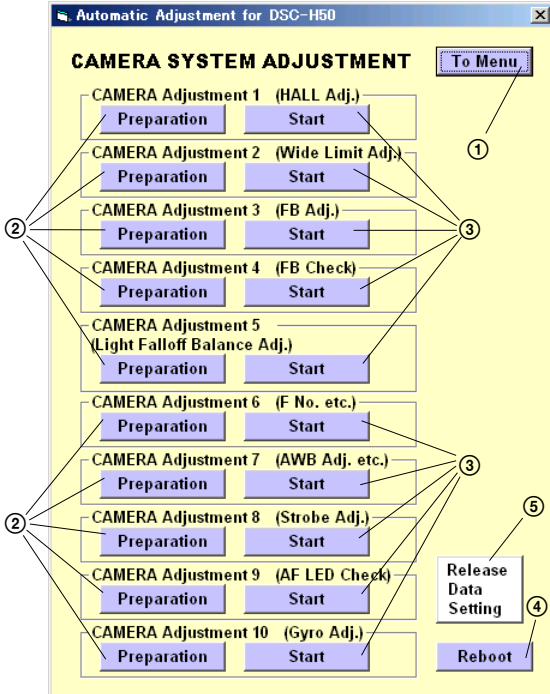


Fig. 6-1-15

- ① **To Menu** button
Return to the main menu.
- ② **Preparation** button
Notes for adjustment or jigs used are displayed.
- ③ **Start** button
Each adjustment from “Camera Adjustment 1” to “Camera Adjustment 10” starts.
- ④ **Reboot** button
When this button is clicked, the camera is rebooted.
- ⑤ **Release Data Setting** button
The data setting at the adjustment is cancelled.
During the data setting, the button color changes from “white” to “red”. When the data setting is cancelled, the button color returns to “white”.
(Use this button when an error occurred in the camera adjustment. If the adjustment completed successfully, the data setting is automatically cancelled and the button color returns to “white”.)

1-6-2. Adjustment Items of Camera System Adjustment

The adjustment items of camera system adjustment are as listed in Table 6-1-4. The Automatic Adjustment Program divides the adjustment items into tens, camera adjustment 1-10. Clicking either CAMERA Adjustment Start button allows the adjustment item which corresponds to that button to be executed.

The adjustment conditions of the subject and filter vary depending on which item is adjusted. The Adjustment Program displays an instruction for the subject and filter as a message during the adjustment.

Button Name	Adjustment	Subject	Adjusting Address		
			Block	Page	Address
CAMERA Adjustment 1	Hall Adj.	Not required	11	61	0E00 to 0E06, 0E08, 0E09
	Auto Orientation Adj.		11	61	0E0A to 0E0D
CAMERA Adjustment 2	Wide Limit Adj.	Not required	11	61	0F18, 0F19
CAMERA Adjustment 3	Flange Back Adj.	Siemens star chart with ND filter for minipattern box (Note) or Flange back adjustment jig	11	61	069C to 069F, 06CC, 06D8 to 06DF, 06E8 to 06EF, 0794 to 079D, 0F1C to 0F1D, 0F20, 0F24, 0F26 to 0F53
CAMERA Adjustment 4	Flange Back Check	Siemens star (1.0m from front the lens) (Illuminance: 200 to 400 lux)	-	-	-
CAMERA Adjustment 5	Light Falloff Balance Adj.	Not required	11	61	0E12 to 0E15
CAMERA Adjustment 6	F No. Compensation	Clear chart (Standard picture frame)	11	61	0A4D to 0A4F, 0ABD to 0ABF, 0ACB
	Measure Gain, LV Adj.		11	61	0961 to 0968
	Mechanical Shutter Adj.		11	61	0980 to 09AD
CAMERA Adjustment 7	AWB 3200K-5800K Standard Data Input	9 colors chart (Standard picture frame)	11	61	0C00 to 0C21, 0C24 to 0C49
	AWB 3200K-5800K Check		-	-	-
	Color Reproduction Adj. & Check		11	61	0C50 to 0C57
	CCD White Defect Compensation Check	Clear chart (Standard picture frame)	11	61	0200 to 03FF
	CCD Black Defect Compensation Check	Clear chart (Standard picture frame)	11	61	0000 to 01FF
CAMERA Adjustment 8	Strobe Adj.	Flash adjustment box (50 cm)	11	61	0C72 to 0C75, 09C0 to 09DD
CAMERA Adjustment 9	Auto Focus Illumination Check	Flash adjustment box (50 cm)	11	61	0F10 to 0F15
CAMERA Adjustment 10	Angular Velocity Sensor Sensitivity Adj.	Not required	11	61	0E10, 0E11

Note: Dark Siemens star chart.

Table 6-1-4

1-6-3. Adjusting Method

1. CAMERA Adjustment 1

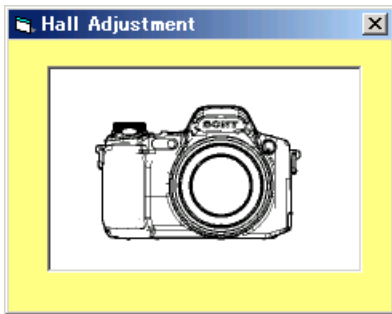
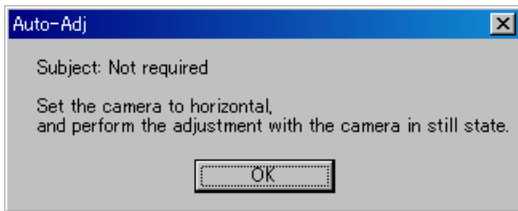
Note: There is no magnetic substance within around 8 cm of the camera.

[Automatic Adjustment Program execution items and sequence]

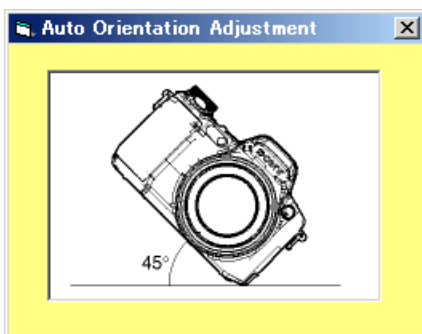
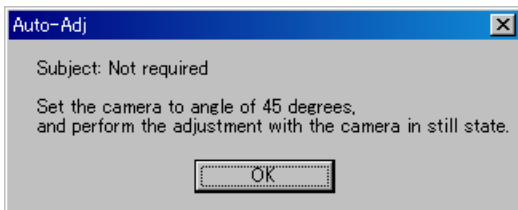
1. Data Setting during Camera Adj.
2. Hall Adj.
3. Auto Orientation Adj.
4. Release of Data Setting during Camera Adj.

[Adjusting method]

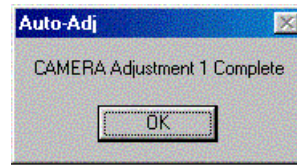
- 1) Click the **[Start]** button of CAMERA Adjustment 1.
- 2) The Automatic Adjustment Program executes the “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of “1. Data Setting during Camera Adj.”, the following message and screen are displayed. Set the camera in accordance with the message.



- 4) If the **[OK]** button is clicked, “2. Hall Adj.” will be executed.
- 5) Upon successful completion of “2. Hall Adj.”, the following message and screen are displayed. Set the camera in accordance with the message.



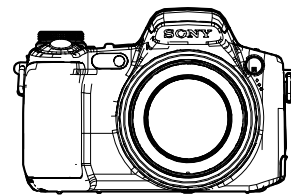
- 6) If the **[OK]** button is clicked, “3. Auto Orientation Adj.” and “4. Release of Data Setting during Camera Adj.” will be executed.
- 7) Upon successful completion of all items of the CAMERA Adjustment 1, the following message is displayed. Click the **[OK]** button.



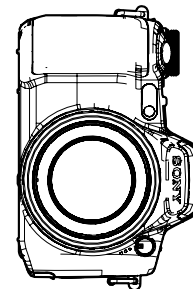
Processing after Completing Adjustment:

[Checking method]

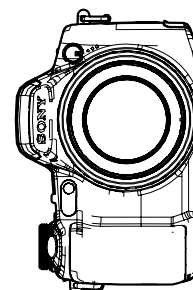
- 1) [HOME screen] → [Settings] → [Shooting Settings] → [Shooting Settings 2] → Select [Auto Orientation] to “ON”.
- 2) Shoot with the set in respective positions (a) to (c) shown below.
- 3) Check the pictures in the Playback mode to confirm that the pictures are rotated correctly.



(a)



(b)



(c)

Fig. 6-1-16

2. CAMERA Adjustment 2

Perform this adjustment only when replacing the lens block or SY-201 board.

Adjustment Block	11
Adjustment Page	61
Adjustment Address	0F18, 0F19

2-1. Preparation when the lens is replaced

When replacing the lens, write down the wide limit data given on the data sheet of the replacement lens for service.

Note: The wide limit data of lens is written only repair parts.

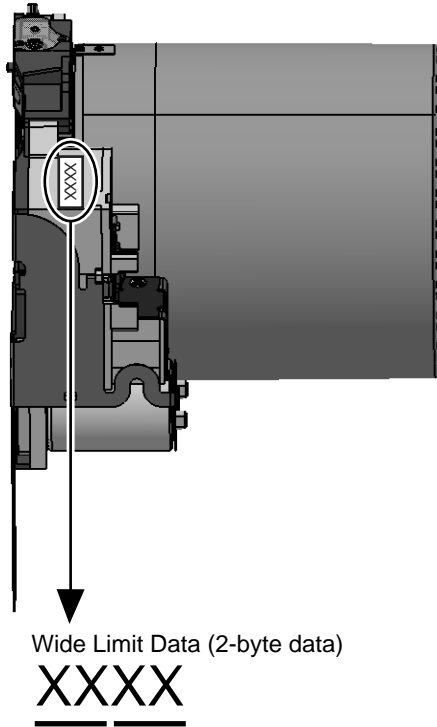


Fig. 6-1-17

2-2. Preparation when the SY-201 board is replaced

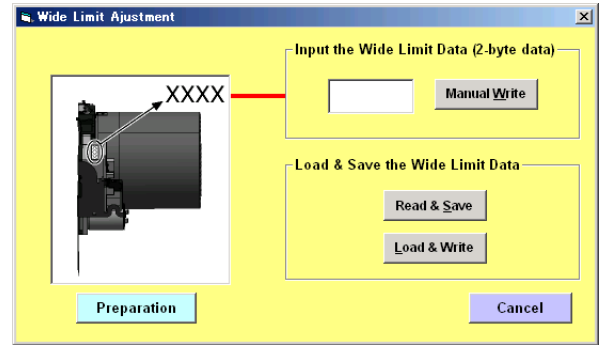
Read out the previous data by using the **Save** button of the auto adjustment program.

Note: If correct data reading failed, replace the lens together with the SY-201 board.

2-3. Wide Limit Adjustment

[Adjusting method]

- 1) Click the **Start** button of Camera Adjustment 2, and the following screen will appear.

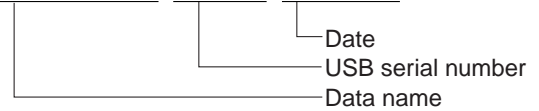


The buttons on this screen provide the following functions.

Read & Save button

- Saves the wide limit data (2-byte data) read out from the set into a file.
- Displays a “Wrong Data Error” message if the data value is not correct.
- Default file name is as follows:

DSC-H50_WLIMIT_XXXXXXXX_YYYYMMDD.dat



Load & Write button

- Writes the wide limit data (2-byte data) read out from the file into the camera memory.
- Displays a “Wrong Data Error” message if the value read out from the file is not correct.

Manual Write button

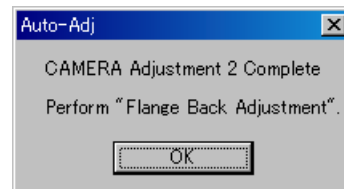
- Writes the entered wide limit data (2-byte data) into the camera memory.
- Displays a “Wrong Data Error” message if the input value is not correct.

- 2) When the lens was replaced, enter the wide limit data given on the data sheet of the replacement lens for service into the screen, and press the **Manual Write** button.

- 3) When the SY-201 board was replaced, press the **Load & Write** button.

- 4) Upon successful completion of the data writing, the following screen will appear.

Perform the Flange Back Adjustment.



3. CAMERA Adjustment 3

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Flange Back Adj.
3. Release of Data Setting during Camera Adj.

Preparation of Flange Back Adj.

(Using the minipattern box)

- 1) The minipattern box is installed as shown in the following figure.

Note 1: The attachment lenses are not used.

- 2) Install the minipattern box so that the distance between it and the front of lens of camera is less than 3 cm.
- 3) Make the height of minipattern box and the camera equal.
- 4) Check the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
- 5) Check that the center of Siemens star chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

Specified voltage: The specified voltage varies according to the minipattern box, so adjustment the power supply output voltage to the specified voltage written on the sheet which is supplied with the minipattern box.

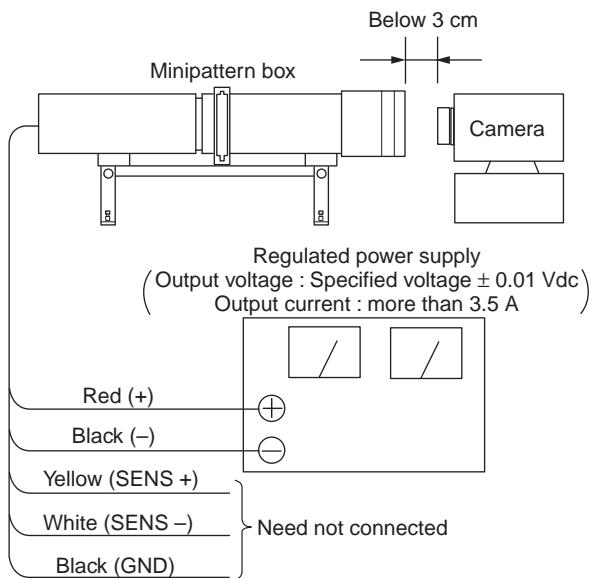


Fig. 6-1-18

Preparation of Flange Back Adj.

(Using the flange back adjustment jig)

(Illuminance: about 300 lux)

Note 2: When using the flange back adjustment jig, take care of the following points:

- For the illumination, use a light source such as an incandescent lamp or inverter type fluorescent light free from flickering.
- Do not make an adjustment in the environment where fluorescent lamp flickering occurs even if the illuminance can be ensured with the room illumination only. Use an incandescent lamp or inverter type fluorescent light at a place free from the influence of room illumination.

- 1) Install the flange back adjustment jig so that the distance between it and the front of lens of camera is less than 3 cm.
- 2) Make the height of flange back adjustment jig and the camera equal.
- 3) Check that the center of chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

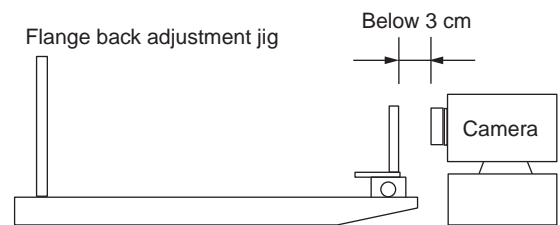
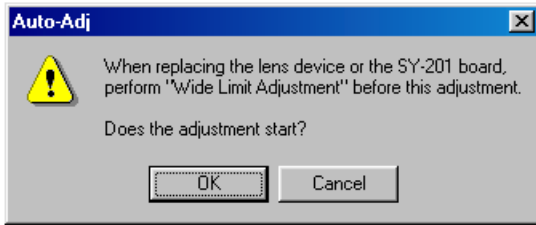


Fig. 6-1-19

[Adjusting method]

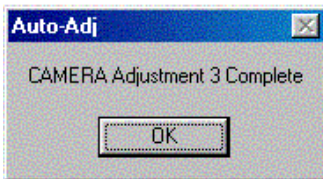
- 1) If the **[Start]** button of the CAMERA Adjustment 3 is clicked, the following message is displayed.
If “Wide Limit Adjustment” is necessary, click the **[Cancel]** button to interrupt the Adjustment Program, and perform “2-3. Wide Limit Adjustment”.



- 2) If the **[OK]** button is clicked, the Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation of Flange Back Adj.”.



- 4) If the **[OK]** button is clicked, “2. Flange Back Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 5) Upon successful completion of all items of the CAMERA Adjustment 3, the following message is displayed. Click the **[OK]** button.



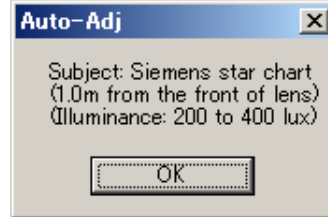
4. CAMERA Adjustment 4

[Automatic Adjustment Program execution items and sequence]

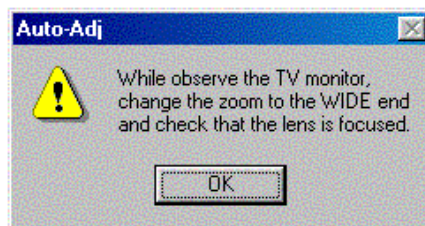
1. Data Setting during Camera Adj.
2. Flange Back Check
3. Release of Data Setting during Camera Adj.

[Adjusting method]

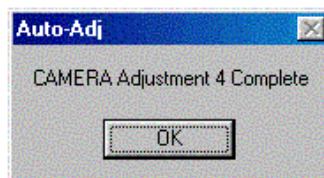
- 1) Click the **[Start]** button of the CAMERA Adjustment 4.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject in accordance with the message.



- 4) Click the **[OK]** button is clicked, “2. Flange Back Check” is executed. The following messages are displayed, and then operate the camera to make a check in accordance with the messages.



- 5) Upon completion of “2. Flange Back Check”, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 4, the following message is displayed. Click the **[OK]** button.



5. CAMERA Adjustment 5

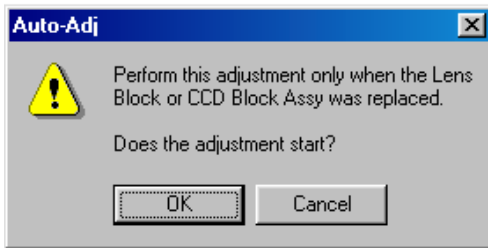
Note: Perform this adjustment only when the Lens Block or CCD Block Assy was replaced.

[Automatic Adjustment Program execution items and sequence]

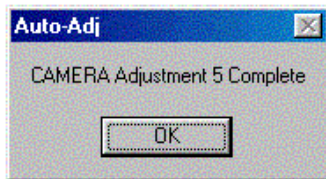
1. Light Falloff Balance Adj.

[Adjusting method]

- 1) If the **[Start]** button of the CAMERA Adjustment 5 is clicked, the following message is displayed.



- 2) Press the **[OK]** button, and the "1. Light Falloff Balance Adj." will be executed.
- 3) Upon successful completion of all items of the CAMERA Adjustment 5, the following message is displayed. Click the **[OK]** button.



6. Picture Frame Setting (Standard Picture Frame)

In the "CAMERA Adjustment 6 and CAMERA Adjustment 7", set the picture frame so as to attain the positions shown in the following figure when shooting the 9 colors chart.

Check on the oscilloscope

Measurement Point: Video terminal of USB, A/V cable for multi-use terminal (75 Ω terminated)

1. Horizontal period

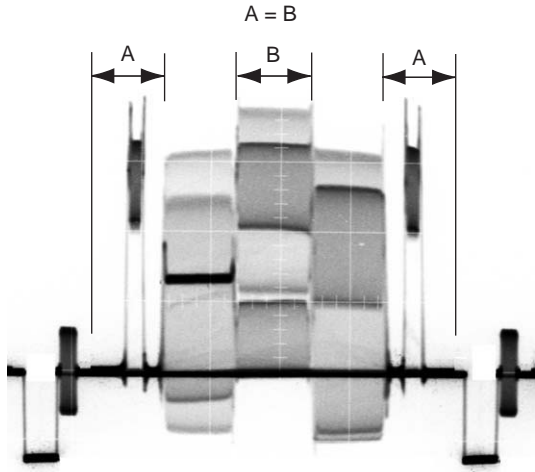


Fig. 6-1-20

2. Vertical period

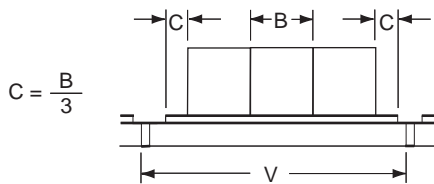


Fig. 6-1-21

Check on the monitor TV or the LCD screen

$$A = B \quad C = \frac{B}{3}$$

C14: Filter for AWB 5800K adjustment

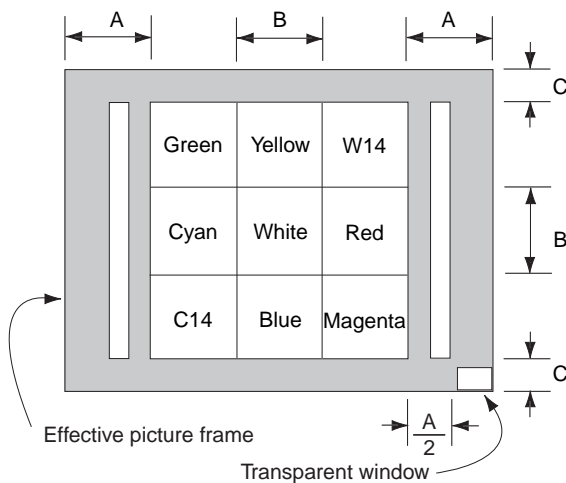


Fig. 6-1-22

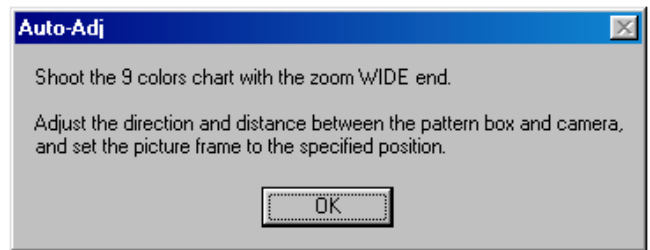
7. CAMERA Adjustment 6

[Automatic Adjustment Program execution items and sequence]

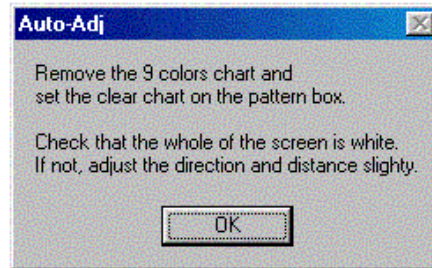
1. Data Setting during Camera Adj.
2. Picture Frame Setting
3. F No. Compensation
4. Measure Gain, LV Adj.
5. Mechanical Shutter Adj.
6. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 6.
- 2) The Automatic Adjustment Program executes the "1. Data Setting during Camera Adj."
- 3) Upon successful completion of "1. Data Setting during Camera Adj.", "2. Picture Frame Setting" is executed. The following message is displayed, and then referring to Fig. 6-1-20 to Fig. 6-1-22, set the subject and click the **[OK]** button.

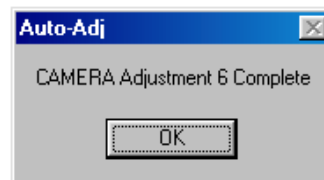


After that, the next message is displayed. Then, change the chart in accordance with the message.



- 4) Click the **[OK]** button, and the items from "3. F No. Compensation" to "6. Release of Data Setting during Camera Adj." will be executed.

- 5) Upon successful completion of all items of the CAMERA Adjustment 6, the following message is displayed. Click the **[OK]** button.



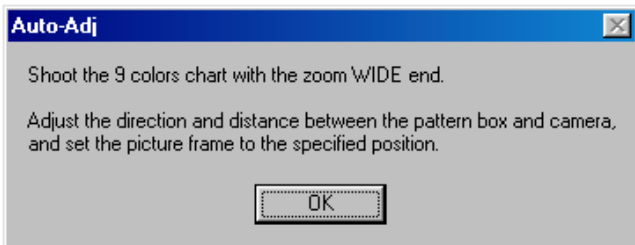
8. CAMERA Adjustment 7

[Automatic Adjustment Program execution items and sequence]

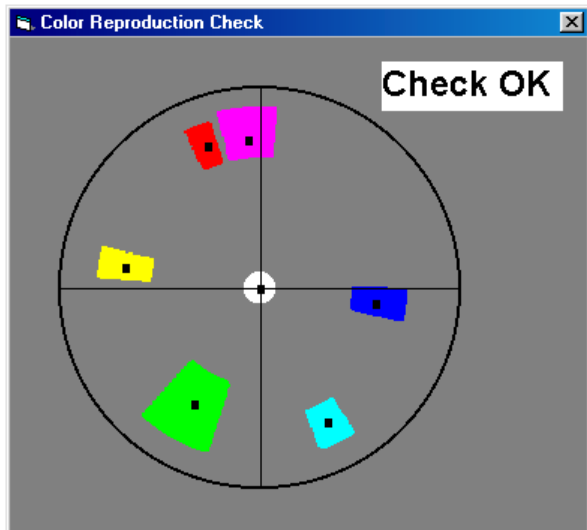
1. Data Setting during Camera Adj.
2. Picture Frame Setting
3. AWB 3200K-5800K Standard Data Input
4. AWB 3200K-5800K Check
5. Color Reproduction Adj. & Check
6. CCD White Defect Compensation Check
7. CCD Black Defect Compensation Check
8. Release of Data Setting during Camera Adj.

[Adjusting method]

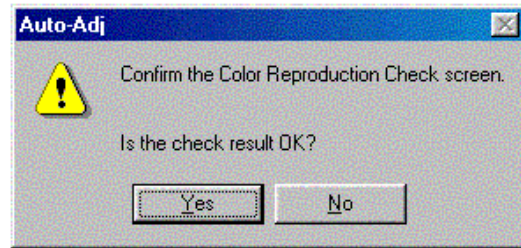
- 1) Click the **[Start]** button of the CAMERA Adjustment 7.
- 2) The Automatic Adjustment Program executes the "1. Data Setting during Camera Adj.", "2. Picture Frame Setting".
- 3) Upon successful completion of "1. Data Setting during Camera Adj.", "2. Picture Frame Setting" is executed. The following message is displayed, and then referring to Fig. 6-1-20 to Fig. 6-1-22, set the subject and click the **[OK]** button.



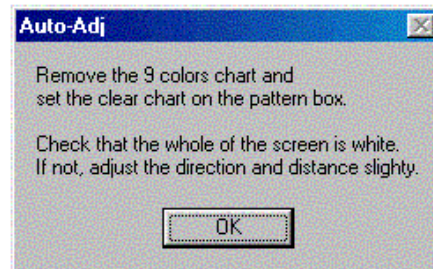
- 4) Click the **[OK]** button, and the "3. AWB 3200K-5800K Standard Data Input" and "4. AWB 3200K-5800K Check" will be executed.
- 5) After that, "5. Color Reproduction Adj. & Check" will be executed. Upon completion of adjustment, the check result is displayed on the Color Reproduction Check screen.



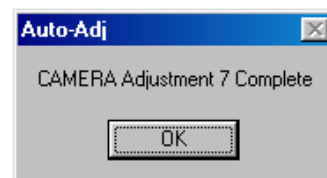
At this time, the following message is displayed, and click the **[Yes]** button if the check result display at the upper right of Color Reproduction Check screen is OK, or the **[No]** button if NG.



- 6) Upon successful completion of "5. Color Reproduction Adj. & Check", the following message is displayed. Change the chart in accordance with the message.



- 7) Click the **[OK]** button, and the items from "6. CCD White Defect Compensation Check" to "8. Release of Data Setting during Camera Adj." will be executed.
- 8) Upon successful completion of all items of the CAMERA Adjustment 7, the following message is displayed. Click the **[OK]** button.



9. CAMERA Adjustment 8

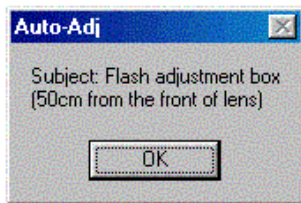
Note: “CAMERA Adjustment 8” is available only once after the power is turned on. If the adjustment is retried, turn off the power and turn on again.

[Automatic Adjustment Program execution items and sequence]

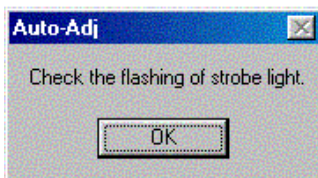
1. Data Setting during Camera Adj.
2. Strobe Adj.
3. Release of Data Setting during Camera Adj.

[Adjusting method]

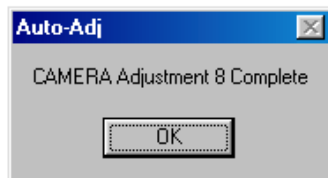
- 1) Click the **[Start]** button of CAMERA Adjustment 8.
- 2) The Automatic Adjustment Program executes the “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject in accordance with the message.
(For the Flash adjustment box, refer to “5. Preparing the Flash Adjustment Box” (see page 6-7).)



- 4) Press the **[OK]** button, and the “2. Strobe Adj.” will be executed.
- 5) During execution of “2. Strobe Adj.”, the following message is displayed. After checking the flashing of strobe light, click the **[OK]** button. (This message is displayed 2 times during execution of adjustment.)



- 6) Upon successful completion of “2. Strobe Adj.”, “3. Release of Data Setting during CAMERA Adj.” is executed.
- 7) Upon successful completion of all items of the CAMERA Adjustment 8, the following message is displayed. Click the **[OK]** button.



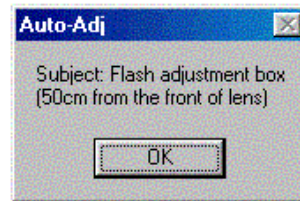
10. CAMERA Adjustment 9

[Automatic Adjustment Program execution items and sequence]

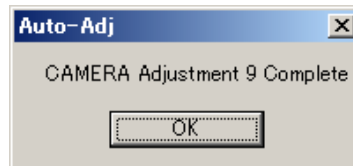
1. Data Setting during Camera Adj.
2. Auto Focus Illumination Check
3. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of CAMERA Adjustment 9.
- 2) The Automatic Adjustment Program executes the “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject in accordance with the message.
(For the Flash adjustment box, refer to “5. Preparing the Flash Adjustment Box” (see page 6-7).)



- 4) Press the **[OK]** button, and the “2. Auto Focus Illumination Check” will be executed.
- 5) Upon successful completion of the “2. Auto Focus Illumination Check”, the “3. Release of Data Setting during Camera Adj.” will be executed successively.
- 6) Upon successful completion of all items of the CAMERA Adjustment 9, the following message is displayed. Click the **[OK]** button.



11. CAMERA Adjustment 10

Perform this adjustment only when replacing the angular velocity sensor or lens block. When the microprocessor, circuit etc. is damaged, don't perform this adjustment but check the operations only.

11-1. Precaution before adjustment

Before adjustment, read the following data and record them. When the SY-201 board is replaced, read out the data before the replacement, and record them.

Reading out method:

- 1) Read out the data in Block:11, Page:61, Address:0E10, and name this as Dp.
- 2) Read out the data in Block:11, Page:61, Address:0E11, and name this as Dy.

Note: The previous data (Dp, Dy) can be read from the SY-201 board and it can be saved in the PC as a file by using the Automatic Adjustment Program. (Refer to "11-4. Angular Velocity Sensor Sensitivity Adjustment")

11-2. Preparation when the angular velocity sensor or the SY-201 board is replaced

Note down the sensitivity displayed on the angular velocity sensor of the repair parts. At this time, note down also to which board it was attached to.

Be sure to check because if attached incorrectly, the screen will vibrate up and down or left and right during the steady shot operations.

Precautions on the Parts Replacement

The PITCH sensor and the YAW sensor are different parts.

Precautions on Angular Velocity Sensor

The sensor incorporates a precision oscillator. Handle it with care as if it dropped, the balance of oscillator will be disrupted and operations will not be performed properly.

Adjustment Block	11
Adjustment Page	61
Adjustment Address	0E10, 0E11

Note: The sensor sensitivity of SE501 and SE502 of the SY-201 board is written only repair parts.

Preparation:

- 1) Read the PITCH sensor (SY-201 board SE502) sensitivity written on repair parts, and named this as S₅₀₂.
- 2) Read the YAW sensor (SY-201 board SE501) sensitivity written on repair parts, and named this as S₅₀₁.

SY-201 BOARD (SIDE A)

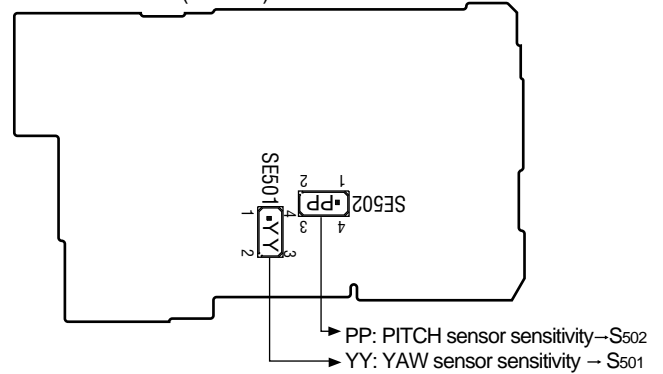


Fig. 6-1-23

How to read the sensitivity data of angular velocity sensor

With the pins 1 and 2 of angular velocity sensor placed in the lower position, read the data value.

Description example :

For the sensor sensitivity value 60

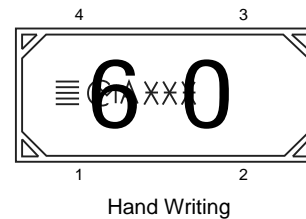


Fig. 6-1-24

11-3. Preparation when the lens is replaced

Note down the PITCH/YAW data on the replacement lens for repair.

Adjustment Block	11
Adjustment Page	61
Adjustment Address	0E10, 0E11

Note: The PITCH/YAW data of lens is written only repair parts.

Preparation:

- 1) Read the PITCH data written on repair parts, and named this as L₁.
- 2) Read the YAW data written on repair parts, and named this as L₂.

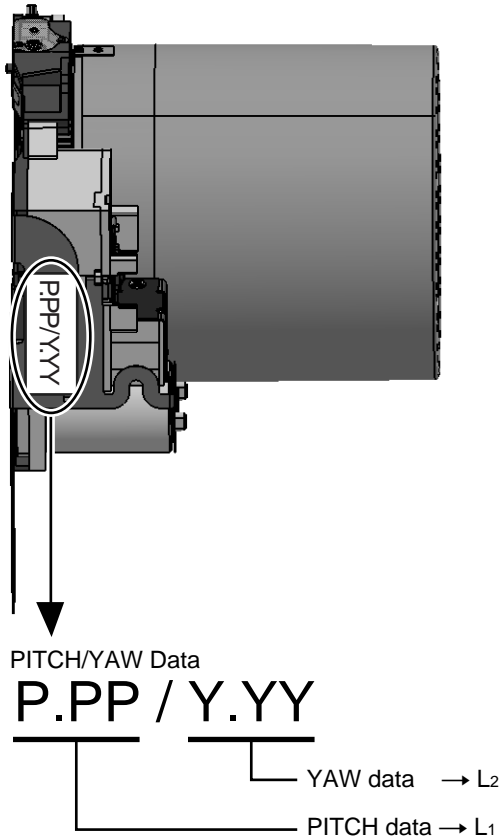
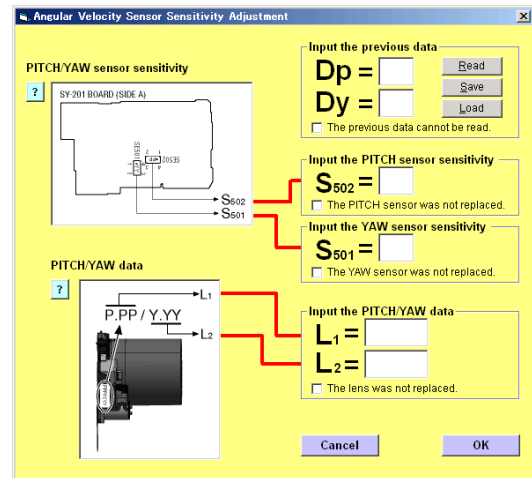


Fig. 6-1-25

11-4. Angular Velocity Sensor Sensitivity Adjustment

[Adjusting method]

- 1) Click the **[Start]** button of Camera Adjustment 9, and the following screen will appear.

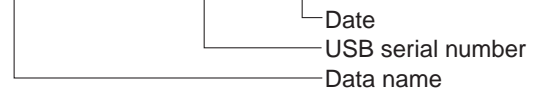


The buttons on this screen provide the following functions.

- [Read]** button: Reads and displays the previous data (Dp, Dy) from the SY-201 board.
- [Save]** button: Saves the previous data (Dp, Dy) in the PC as a file.
- [Load]** button: Loads and displays the previous data (Dp, Dy) from the file saved in the PC.

- Default file name is as follows:

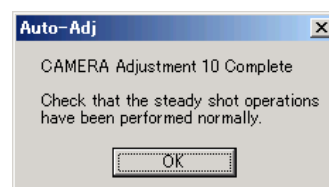
DSC-H50_DpDyDT_XXXXXXXX_YYYYMMDD.dat



- 2) Input the previous data (Dp, Dy) into screen. If the previous data cannot be read, give a check to the checkbox at lower left of screen.
- 3) Input the sensitivity of respective sensors (S₅₀₁, S₅₀₂) read at "Preparation" into the screen. If only either sensor was replaced, give a check to the checkbox for the sensor not replaced at the lower left of the screen.
- 4) Input the PITCH/YAW data of lens (L₁, L₂) read at "Preparation" into the screen. If the lens was not replaced, give a check to the checkbox at the lower left of the screen.

Note: In order to get the correct value for the adjustment, it is necessary to input a decimal point ("period" or "comma") as same format as windows setting because "Numeric Value Format" depend on the language. (F:123 456 789,00, GB:123,456,789.00, D:123.456.789,00) "Numeric Value Format" setting is available in "Control Panel"->"Regional and Language Options".

- 5) Click the **[OK]** button, and the adjustment data is then calculated from the sensor sensitivity value and the calculation result is written to the memory in the camera.
- 6) Upon successful completion of the data writing, the following screen will appear. Check that the steady shot function operates normally.



1-7. LCD SYSTEM ADJUSTMENTS

1-7-1. Function of Each Button on LCD System Adjustment Screen

Click the **LCD SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “LCD SYSTEM ADJUSTMENT” screen in Fig. 6-1-26 will appear.

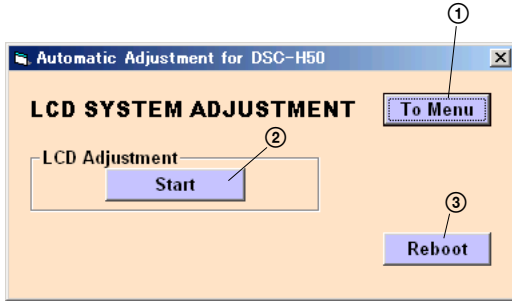


Fig. 6-1-26

- ① **To Menu** button
Return to the main menu.
- ② **Start** button
“LCD Adjustment” starts.
- ③ **Reboot** button
When this button is clicked, the camera is rebooted.

1-7-2. Adjustment Items of LCD System Adjustment

The adjustment items of LCD system adjustment are as listed in Table 6-1-5. The Automatic Adjustment Program executes the adjustment items if the LCD Adjustment Start button is clicked.

Button Name	Adjustment	Adjusting Address		
		Block	Page	Address
LCD Adjustment	V-COM Adj.	11	60	0401
	White Balance Adj.	11	60	0409, 040A

Note: The adjustment data cannot be read or written the SeusEX.

Table 6-1-5

1-7-3. Adjusting Method

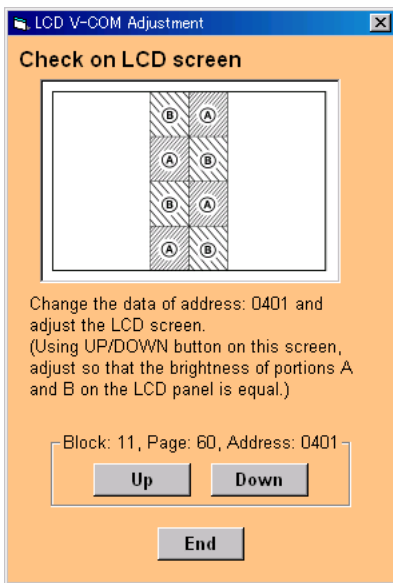
1. LCD Adjustment

[Automatic Adjustment Program execution items and sequence]

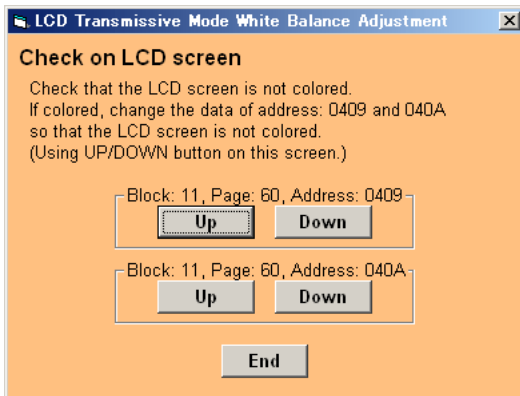
1. Data Setting during LCD Adj.
2. V-COM Adj.
3. White Balance Adj.

[Adjusting method]

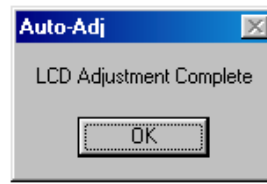
- 1) Click the **[Start]** button of the LCD Adjustment.
- 2) The Automatic Adjustment Program executes “1. Data Setting during LCD Adj.”.
- 3) Upon successful completion of the “1. Data Setting during LCD Adj.”, the following screen is displayed during the execution of “2. V-COM Adj.”. Using the **[Up]**/**[Down]** button on the screen, adjust so that the brightness of portions A and B on the LCD panel is equal. After the adjustment, click the **[End]** button in the screen.



- 4) If the **[End]** button is clicked, the following screen is displayed during the execution of “3. White Balance Adj.”. Check that the LCD screen is not colored. If colored, using the **[Up]**/**[Down]** button on the screen, adjust so that the LCD screen is not colored. After the adjustment, click the **[End]** button in the screen.



- 5) Upon successful completion of all item the LCD Adjustment, the following message is displayed. Click the **[OK]** button.



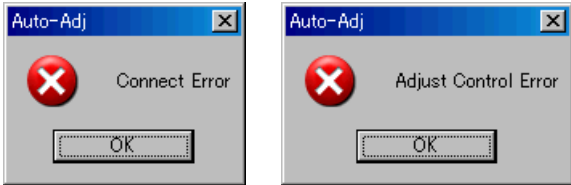
1-8. ERROR

In the case of an error during the execution of adjustment, the Automatic Adjustment Program interrupts the processing at that point, and displays an error message, and then terminates the program execution there.

1-8-1. Error Message

When an error message is displayed, perform the remedy given below, and then retry adjustment. If the error message is displayed though the remedy was performed, the circuits will be faulty.

1. Connect Error, Adjust Control Error



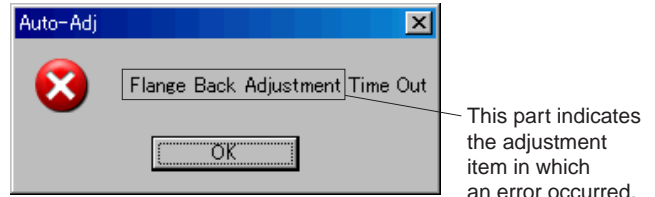
Symptom	USB communication with the set is abnormal.
Cause	<ul style="list-style-type: none"> • USB cable is not inserted tightly. • Power supply is not installed correctly. • Communication with SeusEX is abnormal.
Remedy	<ul style="list-style-type: none"> • Disconnect the USB cable once, and then re-connect it tightly and check that the set is in "USB Mode". • Install the power supply correctly. • Start the SeusEX and click the [Connect] to check that the connection state is established.

2. RESET the CAMERA and Try Again



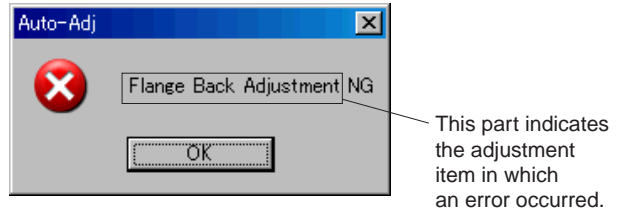
Symptom	The camera is not ready for adjustment.
Cause	Data error exists in the camera.
Remedy	Reset the camera.

3. Adjustment Time Out



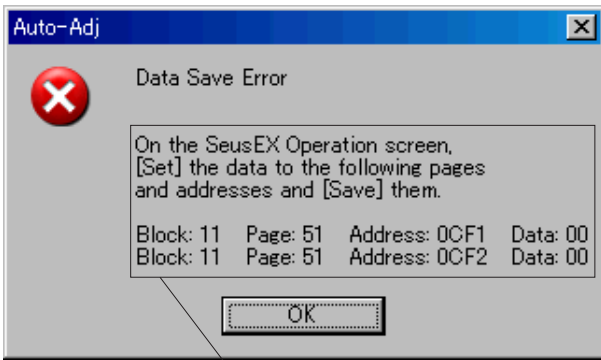
Symptom	Adjustment does not finish within the specified time.
Cause	<ul style="list-style-type: none"> • Adjustment conditions are wrong. • Data error exists in the camera.
Remedy	<ul style="list-style-type: none"> • Check that the conditions such as a subject are correct. • Reset the camera.

4. Adjustment NG



Symptom	The adjusted data does not become the specified value.
Cause	<ul style="list-style-type: none"> • Adjustment conditions are wrong. • Data error exists in the camera.
Remedy	<ul style="list-style-type: none"> • Check that the conditions such as a subject are correct. • Reset the camera.

5. Data Save Error



How to cancel the data setting during adjustment is display here.

Symptom	data cannot be saved normally. (The data setting during adjustment cannot be cancelled)
Cause	<ul style="list-style-type: none"> • Data writing to the flash memory failed. • Connection is faulty. • Power supply is not installed correctly.
Remedy	<ul style="list-style-type: none"> • On the SeusEX Operation screen, [Set] the data to the pages and addresses displayed in the message, and [Save] them. (Cancel manually the data setting during adjustment.) • Check the connection. • Install the power supply correctly.

1-8-2. Precautions When an Error Occurred

The Automatic Adjustment Program sets the data for adjustment before the adjustment starts. Accordingly, if the adjustment terminates by an error, the data during the adjustment may be left in the camera.

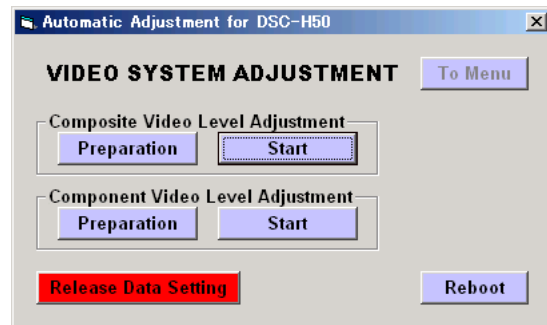
Note 1: With this data left in the camera, the camera will not operate normally.

In this case, the [Release Data Setting] button is displayed in “red” on the screen as shown figures below. Click the [Release Data Setting] button to cancel the data setting. When the data setting is cancelled, the button color becomes “white”.

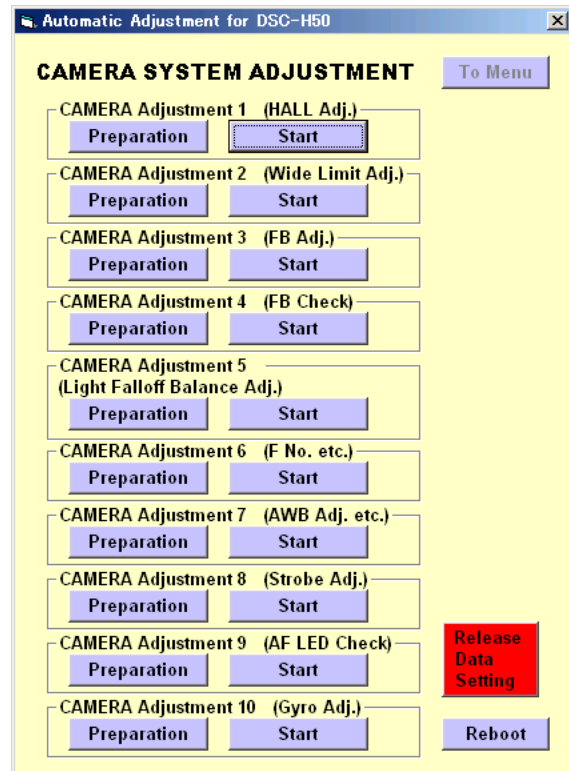
Note 2: When “Data Save Error” occurred, the [Release Data Setting] button is displayed in “white”.

To cancel the data setting, perform it on the SeusEX Operation screen. How to cancel the data setting is displayed in the error message.

Video System Adjustment screen



Camera System Adjustment screen



6-2. SERVICE MODE

2-1. APPLICATION FOR ADJUSTMENT (SeusEX)

The adjustment software (SeusEX) can change operational coefficients of signal processing, EVR data, etc. same as the adjustment remote commander. The SeusEX performs two-way communication between PC and camera using the USB terminal. The two-way communication result data can be written in the nonvolatile memory.

1. Connection

- 1) Connect the HASP key to the USB terminal of the PC.
- 2) Connect the PC and camera with the USB cable.
- 3) Start the SeusEX on the PC.
- 4) Click **[Connect]** on the SeusEX screen. If the connection is normal, the SeusEX screen will be as shown in Fig. 6-2-1, indicating the “connected” state.

Note: The SeusEX will go in “disconnect” state, if the camera is turned off (for instance, by resetting the set). In such a case, click **[Connect]** on the SeusEX screen to restore the “connected” state.

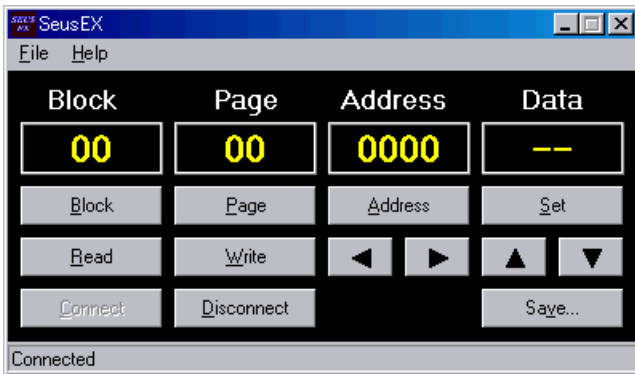


Fig. 6-2-1

2. Operation

- Block change
To change the block, click **[Block]** on the SeusEX screen and enter the block to be changed. The block is displayed in hexadecimal notation.
- Page change
To change the page, click **[Page]** on the SeusEX screen and enter the page to be changed. The page is displayed in hexadecimal notation.
- Address change
To change the address, click **[Address]** on the SeusEX screen and enter the address to be changed. The address is displayed in hexadecimal notation.
- Data change
To change the data, click **[Set]** on the SeusEX screen and enter the data. The data is displayed in hexadecimal notation. This operation does not write the data to the nonvolatile memory.
- Data writing
To write the data to the EEPROM, click **[Write]** on the SeusEX screen and enter the data value to be written. To write the data to the flash memory, change the data value using the **[Set]** on the SeusEX screen and then click **[Save]** to save the data.
- Data reading
The data displayed on the SeusEX screen are the data values at the time when the pages and addresses were set, and they are not updated automatically. To check the data change, click **[Read]** on the SeusEX screen and update the displayed data.

2-2. SERVICE MODE

1. Function of Each Button on Service Mode Screen

Click the **SERVICE MODE** button on the Main Menu screen, and the “SERVICE MODE” screen in Fig. 6-2-2 will appear.

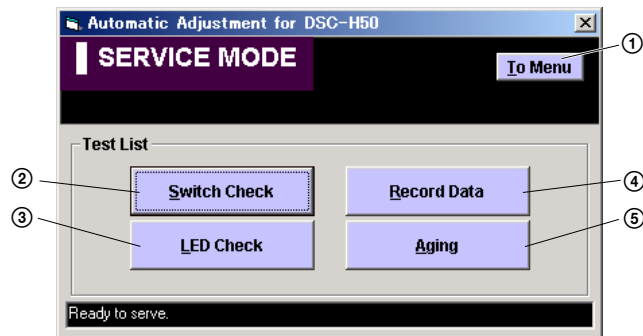
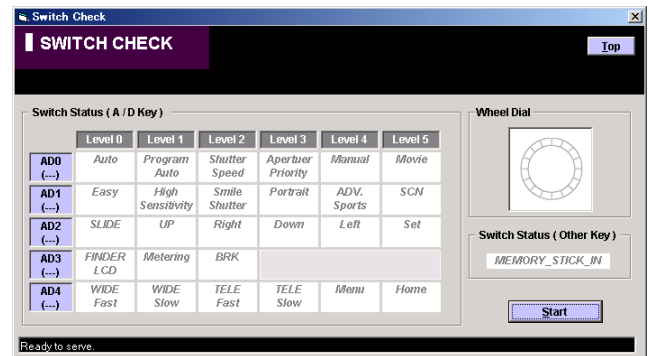


Fig. 6-2-2

- ① **To Menu** button
Return to the main menu.
- ② **Switch Check** button
“SWITCH CHECK” screen appears.
- ③ **LED Check** button
“LED CHECK” screen appears.
- ④ **Record Data** button
“RECORD DATA” screen appears.
- ⑤ **Aging** button
“AGING” screen appears.

2. Switch Check

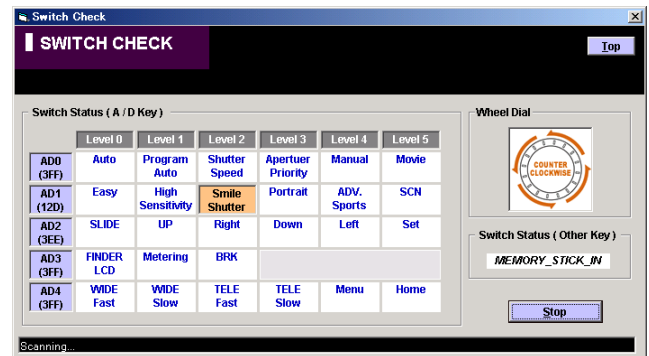
Click the **Switch Check** button on the SERVICE MODE screen, and the “SWITCH CHECK” screen will appear.



Using method:

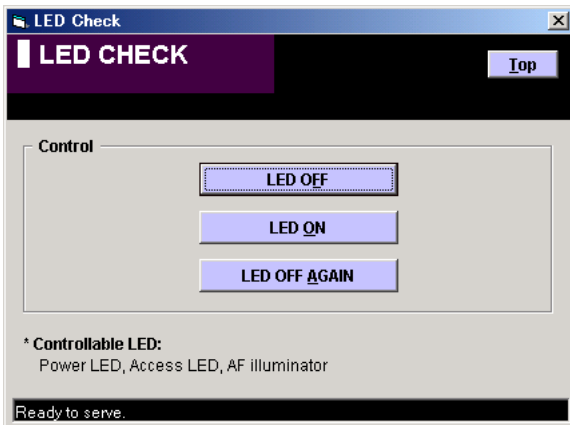
Click the **Start** button, and the switch check will start.

During execution of switch check, the pressed switch is displayed in orange. Also, once the switch was pressed, its name characters change to blue in color.



3. LED Check

Click the **LED Check** button on the SERVICE MODE screen, and the “LED CHECK” screen will appear.

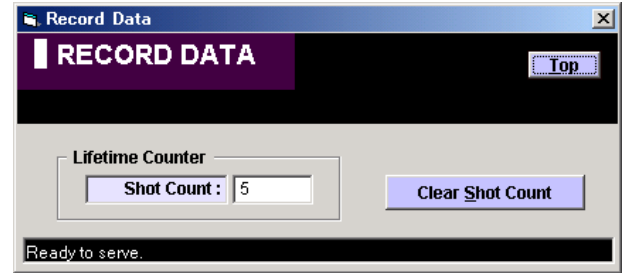


Using method:

LED ON or OFF can be controlled with **LED ON** or **LED OFF** button on the screen.

4. Record Data

Click the **Record Data** button on the SERVICE MODE screen, and the “RECORD DATA” screen will appear.



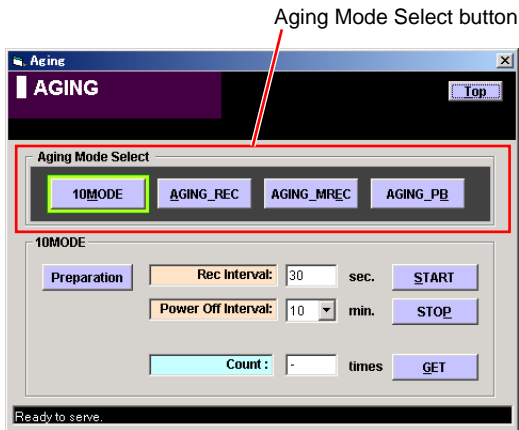
The record data such as Lifetime counter is displayed.

Initializing method:

Click the **Clear Shot Count** button on the screen, and the Lifetime Count data will be initialized.

5. Aging

On the AGING screen, various types of aging can be executed. Select the type of aging to be executed with the Aging Mode Select buttons.



Supply the power not from an AC adapter but from the fully charged battery and execute the aging until the battery end, so that its battery use time and how many pictures the camera can record/play back can be checked.

During the execution of aging, the camera automatically repeats recording/playback.

During the recording, if the recording memory capacity becomes full, its memory is automatically formatted.

Accordingly, when executing the aging, insert the Memory Stick into the camera.

[Preparation]

For the aging, set the camera as follows:

Switch Setting:

- 1) Mode Dial Auto Adjustment
- 2) Flash button Auto

Home Items

- 1) AF Mode
(Settings – Shooting Settings – Shooting Settings 1).... Single

Menu Items

- 1) REC Mode Normal

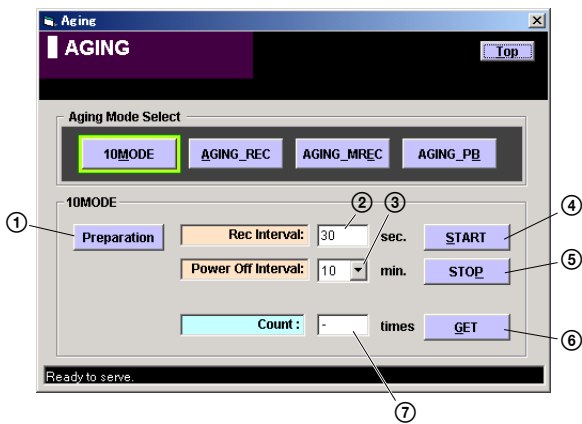
(1) 10MODE

In the 10MODE, perform continuous recording in accordance with the CIPA Standard. When the 10MODE starts, the following operation is repeated until the battery end.

- 1) The zoom moves to the TELE end.
- 2) The camera records a still picture with a strobe light flashed at the maximum level.
- 3) The camera stands by for the time (sec.) set to the “Rec Interval”.
- 4) The zoom moves to the WIDE end.
- 5) The camera records a still picture without flashing a strobe light.
- 6) The camera stands by for the time (sec.) set to the “Rec Interval”.
- 7) Each time 10 still pictures are recorded, the power is turned off, and after the time (min.) set to the “Power Off Interval”, the power is turned on again.

At the start of 10MODE, the counter in the camera is initialized. This counter counts the number of recording times during the execution of 10MODE, and it holds the counts even during the power off.

10MODE screen and functions of each item



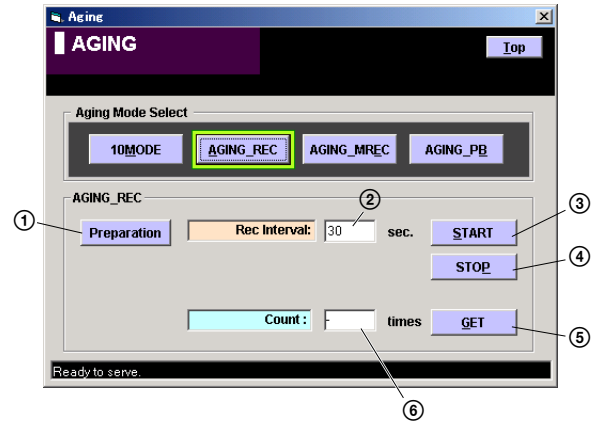
- ① **Preparation** button
Notes for aging is displayed.
- ② **Rec Interval** setting and display
The setting of recording interval (sec.) is displayed. The setting can be changed by entering a numeric value in this field.
- ③ **Power Off Interval** setting and display
The setting of power off interval (min.) is displayed. The setting can be changed by entering a numeric value in this field.
- ④ **START** button
The settings of parameters specified by the Rec Interval and Power Off Interval for execution of 10MODE are sent to the camera.
The 10MODE starts when the camera power is turned off once and then on again.
The settings for execution of 10MODE are held until the camera detects the battery end. They cannot be reset by the power off or RESET button. To interrupt the 10MODE, use the **STOP** button.
- ⑤ **STOP** button
The settings for execution of 10MODE are reset.
- ⑥ **GET** button
After the 10MODE was executed, the number of recording times is got from the counter in the camera. The result is displayed in the “Count” display field.
- ⑦ **Count** display
The number of recording times got by the **GET** button is displayed.

(2) AGING_REC

In the AGING_REC mode, still pictures are continuously recorded at the interval (sec.) set to the “Rec Interval”.

At the start of AGING_REC, the counter in the camera is initialized. This counter counts the number of recording times during the execution of AGING_REC, and it holds the counts even during the power off.

AGING_REC screen and functions of each item



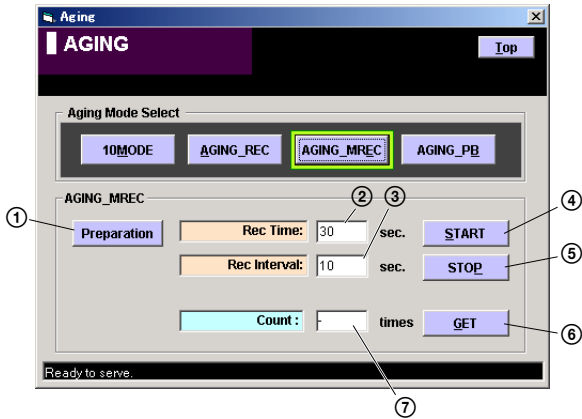
- ① **Preparation** button
Notes for aging is displayed.
- ② **Rec Interval** setting and display
The setting of recording interval (sec.) is displayed. The setting can be changed by entering a numeric value in this field.
- ③ **START** button
The AGING_REC starts. In the AGING_REC mode, the aging starts immediately when the **START** button is clicked.
At the battery end, the AGING_REC stops. To interrupt the AGING_REC, use the **STOP** button, though the AGING_REC stops also by the power off or RESET button.
- ④ **STOP** button
The AGING_REC stops.
- ⑤ **GET** button
After the AGING_REC was executed, the number of recording times is got from the counter in the camera. The result is displayed in the “Count” display field.
- ⑥ **Count** display
The number of recording times got by the **GET** button is displayed.

(3) AGING_MREC

In the AGING_MREC mode, motion pictures are continuously recorded for the time (sec.) set to the “Rec Time” at the interval (sec.) set to the “Rec Interval”.

At the start of AGING_MREC, the counter in the camera is initialized. This counter counts the number of recording times during the execution of AGING_MREC, and it holds the counts even during the power off.

AGING_MREC screen and functions of each item



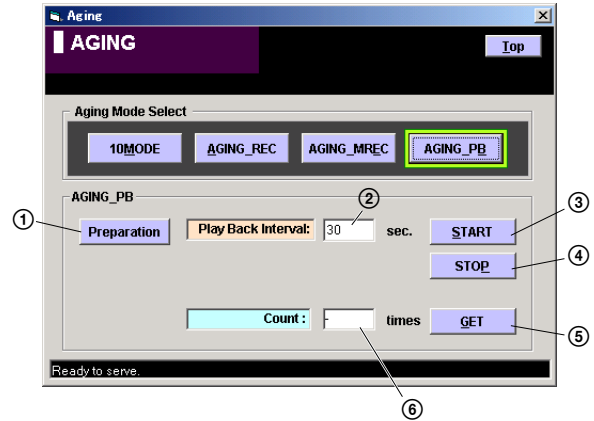
- ① **Preparation** button
Notes for aging is displayed.
- ② **Rec Time** setting and display
The setting of recording time (sec.) is displayed. The setting can be changed by entering a numeric value in this field.
- ③ **Rec Interval** setting and display
The setting of recording interval (sec.) is displayed. The setting can be changed by entering a numeric value in this field.
- ④ **START** button
The AGING_MREC starts. In the AGING_MREC mode, the aging starts immediately when the **START** button is clicked. At the battery end, the AGING_MREC stops. To interrupt the AGING_MREC, use the **STOP** button, though the AGING_MREC stops also by the power off or RESET button.
- ⑤ **STOP** button
The AGING_MREC stops.
- ⑥ **GET** button
After the AGING_MREC was executed, the number of recording times is got from the counter in the camera. The result is displayed in the “Count” display field.
- ⑦ **Count** display
The number of recording times got by the **GET** button is displayed.

(4) AGING_PB

In the AGING_PB mode, pictures are continuously played back at the interval (sec.) set to the “Play Back Interval”.

At the start of AGING_PB, the counter in the camera is initialized. This counter counts the number of play back times during the execution of AGING_PB, and it holds the counts even during the power off.

AGING_PB screen and functions of each item



- ① **Preparation** button
Notes for aging is displayed.
- ② **Play Back Interval** setting and display
The setting of play back interval (sec.) is displayed. The setting can be changed by entering a numeric value in this field.
- ③ **START** button
The AGING_PB starts. In the AGING_PB mode, the aging starts immediately when the **START** button is clicked. At the battery end, the AGING_PB stops. To interrupt the AGING_PB, use the **STOP** button, though the AGING_PB stops also by the power off or RESET button.
- ④ **STOP** button
The AGING_PB stops.
- ⑤ **GET** button
After the AGING_PB was executed, the number of play back times is got from the counter in the camera. The result is displayed in the “Count” display field.
- ⑥ **Count** display
The number of play back times got by the **GET** button is displayed.

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2008.04	Official Release	—	—
1.1	2008.05	Revised-1 (A1 DI08-054)	<p>Replacement of the previously issued SERVICE MANUAL 9-852-286-51 with this Manual.</p> <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.0r01 to Ver_1.1r02. • Addition of Thai Model <p>S.M. revised: Page 6-8, Page 6-10</p>	Yes
1.2	2008.06	Revised-2 (A2 DI08-108)	<p>Replacement of the previously issued SERVICE MANUAL 9-852-286-52 with this Manual.</p> <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.1r02 to Ver_1.2r03. • Correction of Destination Data Write <p>S.M. revised: Page 6-8</p>	Yes
1.3	2008.09	Revised-3 (A3 DI08-258)	<p>Replacement of the previously issued SERVICE MANUAL 9-852-286-53 with this Manual.</p> <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.2r03 to Ver_1.3r04. • Correction of the “Setting of Adjustment Mode” <p>S.M. revised: Page 6-8, Page 6-9</p>	Yes
1.4	2009.06	Revised-4 (A4 09-078)	<p>Replacement of the previously issued SERVICE MANUAL 9-852-286-54 with this Manual.</p> <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.3r04 to Ver_1.4r05. • Automatic Adjustment Program compatibility on Windows Vista <p>S.M. revised: Page 6-2, Page 6-3, Page 6-4, Page 6-8</p>	Yes