

DSC-S30/S50

SERVICE MANUAL

Level 2

Ver 1.3 2004. 07

Self Diagnosis
Supported model

Cyber-shot
Digital Still Camera

InfoLITHIUM **M**

MEMORY STICK



Photo: DSC-S30

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

This service manual contains information for Japanese model as well.

On the SY-58 board

This service manual provides the information that is premised the circuit board replacement service and not intended repair inside the SY-58 board.

Therefore, schematic diagram, printed wiring board and electrical parts list of the SY-58 board are not shown.

The following pages are not shown.

SY-58 board

Schematic diagram Pages 4-15 to 4-30
Printed wiring board Pages 4-11 to 4-14
Electrical parts list Pages 6-11 to 6-15

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

SPECIFICATIONS

System

Image device

1/2.7 type color CCD

Lens

3× zoom lens

f = 6.1 – 18.3 mm

(39 – 117 mm when converted into a 35 mm still camera)

F = 2.8 – 2.9

Exposure control

Automatic exposure

White balance

Automatic, Indoor, Outdoor, Hold

Data system

Still: JPEG, GIF (in TEXT mode), TIFF

Movie (DSC-S50 only):

MPEG1

Audio with still image

(DSC-S50 only):

MPEG1 (Monaural)

Recording medium

“Memory Stick”

Flash

Recommended recording distance:

11 7/8 inches to 8 1/4 feet

(0.3 m to 2.5 m)

Output connector

A/V OUT (Monaural) (DSC-S50 only)

Minijack

Video: 1 Vp-p, 75 ohms, unbalanced, sync negative

Audio: 327 mV (at a 47 kilohm load)

Output impedance:

2.2 kilohms

VIDEO OUT

(DSC-S30 only)

Minijack

Digital I/O (USB)

Special minijack

LCD screen

Used LCD panel

2 type TFT (Thin Film Transistor active matrix) drive

Total number of dots

123 200 (560×220) dots

General

Used battery pack

NP-FM50

Power requirements

8.4 V

Power consumption (during recording)

2.9 W

Operation temperature

32°F to 104°F

(0°C to 40°C)

Storage temperature

–4°F to +140°F

(–20°C to +60°C)

Maximum dimensions

4 1/2×2 3/4×2 3/4 inches

(113×68×69 mm) (w/h/d)

Mass

Approx. 13 oz (370 g)

(including battery pack NP-FM50, “Memory Stick”, wrist strap and lens cap etc.)

Built-in microphone (DSC-S50 only)

Electret condenser microphone

Built-in speaker

(DSC-S50 only)

Dynamic speaker

AC-L10 AC power adaptor

Power requirements

100 to 240 V AC, 50/60 Hz

Rated output voltage

DC 8.4 V, 1.5 A in operating mode

Operation temperature

32°F to 104°F (0°C to 40°C)

Storage temperature

–4°F to +140°F

(–20°C to +60°C)

Maximum dimensions

5×1 9/16×2 1/2 inches

(125×39×62 mm) (w/h/d)

Mass

Approx. 10 oz (280 g)

NP-FM50 battery pack

Used battery

Lithium ion battery

Maximum voltage

DC 8.4 V

Nominal voltage

DC 7.2 V

Capacity

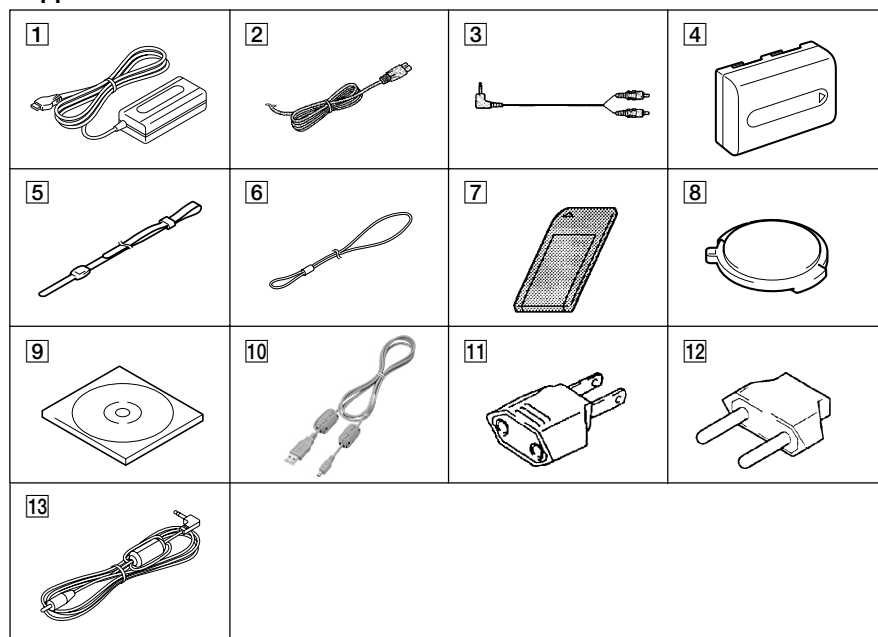
8.5 Wh (1 180mAh)

Design and specifications are subject to change without notice.

DIGITAL STILL CAMERA

SONY®

Supplied accessories



- 1 AC-L10 AC power adaptor**
- 2 Power cord (1)**
- 3 A/V connecting cable (DSC-S50) (1)**
- 4 NP-FM50 Battery pack (1)**
- 5 Wrist strap (1)**
- 6 Lens cap strap (1)**
- 7 Memory Stick (4MB) (1)**
- 8 Lens cap (1)**
- 9 Bundle soft (2000) (1)**
(Compact Disk)
- 10 USB cable (1)**
- 11 2-pin conversion adaptor (1)**
E model
- 12 2-pin conversion adaptor (1)**
Tourist model
- 13 VIDEO connecting cable (DSC-S30) (1)**

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, though 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.

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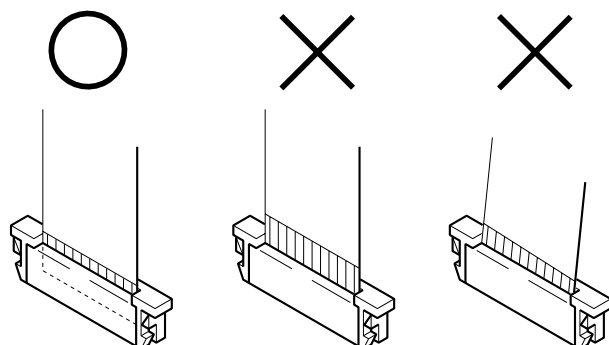
* The color reproduction frame is shown on page 117.

SERVICE NOTE

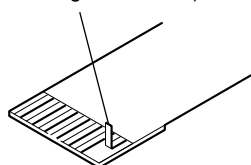
• NOTE FOR REPAIR

Make sure that the flat cable and flexible board are not cracked or bent at the terminal.

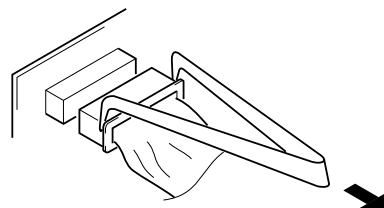
Do not insert the cable insufficiently nor crookedly.



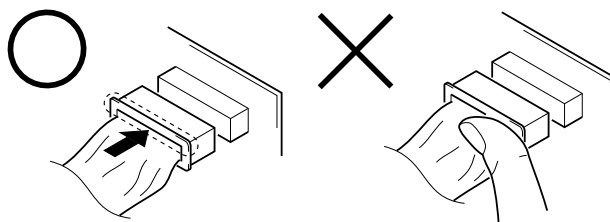
Cut and remove the part of gilt which comes off at the point.
(Take care that there are some pieces of gilt left inside)



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



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



[Discharging of the FLASH unit's charging capacitor]

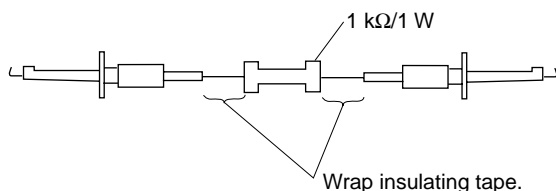
The charging capacitor of the FLASH unit is charged up to the maximum 300 V potential.

There is a danger of electric shock by this high voltage when the battery is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the MVC-FD71 is simply turned off. Therefore, the remaining voltage must be discharged as described below.

Preparing the Short Jig

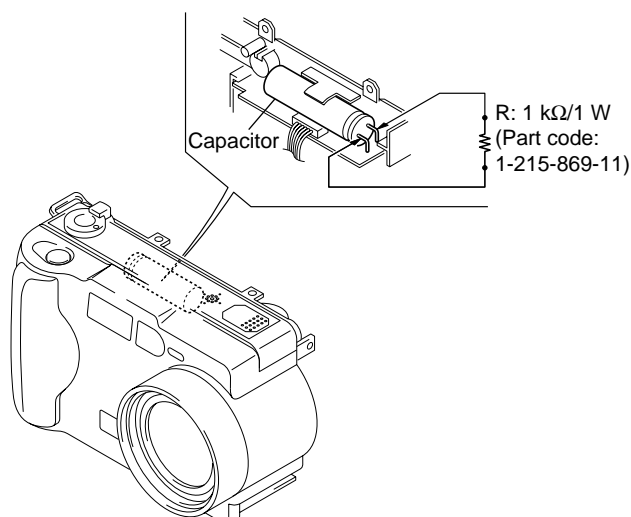
To preparing the short jig, a small clip is attached to each end of a resistor of 1 k Ω / 1 W (1-215-869-11).

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



Discharging the Capacitor

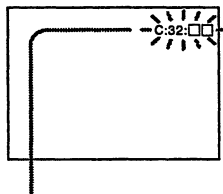
Short-circuit between the positive and the negative terminals of charged capacitor with the short jig about 10 seconds.



[Description on Self-diagnosis Display]

Self-diagnosis display

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



Self-diagnosis display

• C: □□

You can reverse the camera malfunction yourself. (However, contact your Sony dealer or local authorized Sony service facility when you cannot recover from the camera malfunction.)

• E: □□

Contact your Sony dealer or local authorized Sony service facility.

| Display Code | Countermeasure | Cause | Caution Display During Error |
|---------------|--|---|------------------------------|
| C:32:□□ | Turn the power off and on again. | Trouble with hardware. | SYSTEM ERROR |
| C:13:□□ | Format the "Memory stick". | Unformatted memory stick is inserted. | FORMAT ERROR |
| | Insert a new "Memory Stick". | Memory stick is broken. | MEMORY STICK ERROR |
| E:61:□□ *1 | Checking of lens drive circuit. | When failed in the focus and zoom initialization. | — |
| E:91:□□ | Checking of flash unit or replacement of flash unit. | Abnormality when flash is being charged. *2 | |

Note: The error code is cleared if the battery is removed, except defective flash, unit.

*1: The error display is given in two ways.

*2: When the flash charging failed, Page : D, Address: 67. Data: 04 are written.

After repair, be sure to write Page: D, address: 67. Data: 00.

1. GENERAL

This section is extracted from DSC-S30/S50 instruction manual.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the Customers in the U.S.A.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Never expose the battery pack to temperature above 140°F (60°C), such as in a car parked in the sun or under direct sunlight.

If you have any questions about this product, you may call:
Sony Customer Information Center
1-800-222-SONY (7669)

or write to:
Sony Customer Information Center
1 Sony Drive, Mail Drop #T1-11, Park Ridge, NJ 07656

2

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-S30
Responsible Party: Sony Electronics Inc.
Address: 1 Sony Drive, Park Ridge, NJ 07656 USA
Telephone No.: 201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-S50
Responsible Party: Sony Electronics Inc.
Address: 1 Sony Drive, Park Ridge, NJ 07656 USA
Telephone No.: 201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

DISPOSAL OF LITHIUM ION BATTERY.

LITHIUM ION BATTERY. DISPOSE OF PROPERLY.

You can return your unwanted lithium ion batteries to your nearest Sony Service Center or Factory Service Center.

Note:

In some areas the disposal of lithium ion batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (United States only)

For the Sony Factory Service Center nearest you call 416-499-SONY (Canada only)

Caution:

Do not handle damaged or leaking lithium ion battery.

For the Customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362, (i.e. marked with ⚡ or ⚡ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

For the Customers in Germany

Directive: EMC Directive 89/336/EEC. 92/31/EEC

This equipment complies with the EMC regulations when used under the following circumstances:

- Residential area
 - Business district
 - Light-industry district
- (This equipment complies with the EMC standard regulations EN55022 Class B.)

3

Attention

The electromagnetic fields at the specific frequencies may influence the picture and sound of this camera.

"Memory Stick"



For the Customers in CANADA

This Class B digital apparatus complies with Canadian ICES-003.

For the Customers in the U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Be sure to read the following before using your camera

- This Owner's Manual is for the two models of the DSC-S30 and the DSC-S50. Check to make sure which model you have purchased before you use your camera.
- The illustrations in this manual show the DSC-S50.

Trial recording

Before you record one-time events, you may want to make a trial recording to make sure that the camera is working correctly.

No compensation for contents of the recording

Contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera, etc.

4

Notes on image data compatibility

- This camera conforms with the Design Rules for Camera File Systems universal standard established by the JEIDA (Japan Electronic Industries Development Association). You cannot play back on your camera still images recorded on other equipment (DCR-TRV890/TRV900/TRV900E, DSC-D700, DSC-D770) that does not conform with this universal standard. (These models are not sold in some areas.)

- Playback of images recorded with your camera on other equipment and playback of images recorded or edited with other equipment on your camera are not guaranteed.

Precaution on copyright

Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

Do not shake or strike the camera

In addition to malfunctions and inability to record images, this may render the "Memory Stick" unusable or image data breakdown, damage or loss may occur.

LCD screen and lens

- The LCD screen is manufactured using high-precision technology. However, there may be some tiny black points and/or bright points (red, blue or green in color) that constantly appear on the LCD screen. These points are normal in the manufacturing process and do not affect the recording in any way. Over 99.99% of the pixels are operational for effective use.
- Be careful when placing the camera near a window or outdoors. Exposing the LCD screen or the lens to direct sunlight for long periods may cause malfunctions.

Do not get the camera wet

When taking pictures outdoors in the rain or under similar conditions, be careful not to get the camera wet. If moisture condensation occurs, refer to page 54 and follow the instructions on how to remove it before using the camera.

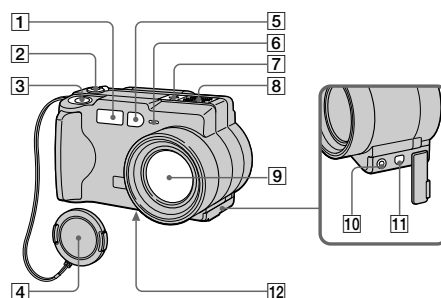
Back up recommendation

To avoid the potential risk of data loss, always copy (back up) data to a disk.

Getting started

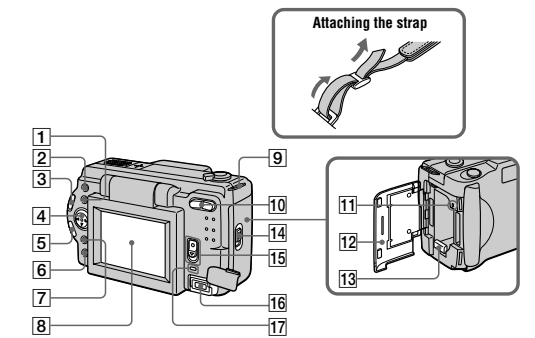
Identifying the parts

See the pages in parentheses for details of operation.



- | | |
|--------------------------------------|--|
| 1 Flash (19) | 9 Lens |
| 2 MODE selector (29) | 10 A/V OUT jack (DSC-S50 only) (48) |
| 3 Shutter button (16) (20) | Audio output is monaural. |
| 4 Lens cap | VIDEO OUT jack (DSC-S30 only) (48) |
| 5 Photocell window for flash | 11 USB jack (25) (26) |
| Do not block while recording. | |
| 6 Self-timer/recording lamp | 12 Tripod receptacle (bottom surface) |
| 7 Built-in microphone (DSC-S50 only) | Use a tripod with a screw length of less than 9/32 inch (6.5 mm). You will be unable to firmly secure the camera to tripods having longer screws, and may damage the camera. |
| 8 Speaker (DSC-S50 only) | |

6



- 1

Flash button
- 2

FOCUS button (41)
- 3

LCD BACKLIGHT BRIGHT/
NORMAL switch

Usually set to NORMAL. When you use the camera outdoors or in other bright places, setting this to BRIGHT makes the LCD screen bright and easy to see, but also uses up the battery faster.
- 4

Control button
- 5

PROGRAM AE +/- button
VOLUME +/- button
- 6

PROGRAM AE button (42)
- 7

DISPLAY button
- 8

LCD screen
- 9

Hook for lens cap/strap
- 10

Zoom button
- 11

Access lamp (15)
- 12

Battery/"Memory Stick" cover
- 13

Battery eject lever (8)
- 14

OPEN switch
- 15

POWER switch
- 16

DC IN jack (9) (12)
- 17

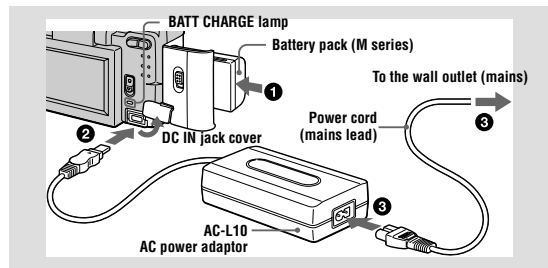
POWER lamp/BATT CHARGE lamp (9) (13)

Getting started



Charging the battery pack

You cannot charge the battery pack while your camera is turned on. Be sure to turn off your camera before charging.



- 1

Insert the battery pack into your camera.
- 2

Open the DC IN jack cover and connect the DC connecting cable to the DC IN jack of your camera with the ▲ mark facing up.
- 3

Connect the power cord (mains lead) to the AC power adaptor and then to a wall outlet (mains).

The BATT CHARGE lamp lights orange when charging begins. When the BATT CHARGE lamp goes off, **normal charge** is completed. For **full charge**, which allows you to use the battery longer than usual, leave the battery pack inserted for about one hour after normal charge is completed.

Battery remaining indicator
The LCD screen on the camera shows the remaining time for which you can still record or play back images. This indication may not be entirely accurate depending on the conditions of use and the operating environment.

Auto power-off function
If you do not operate the camera for about three minutes during recording, the camera turns off automatically to prevent wearing down the battery. To use the camera again, slide down the POWER switch to turn on the camera again.

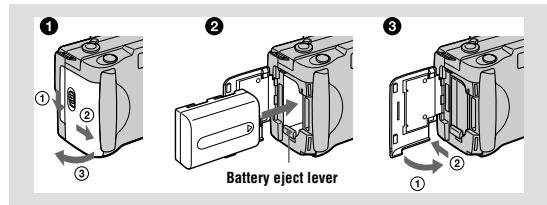
Getting started



Preparing the power supply

Installing the battery pack

Your camera operates only with the "InfoLITHIUM" NP-FM50 battery pack* (M series). You cannot use any other battery pack.



- 1

Open the battery/"Memory Stick" cover.

Open the cover while sliding the OPEN switch in the direction of the arrow.
- 2

Install the battery pack.

Insert the battery pack with the ► mark facing toward the battery compartment as illustrated.
- 3

Close the battery/"Memory Stick" cover.

To remove the battery pack
Open the battery/"Memory Stick" cover. Slide the battery eject lever downward, and remove the battery pack.
Be careful not to drop the battery pack when removing it.

*** What is "InfoLITHIUM"?**
"InfoLITHIUM" is a lithium ion battery pack which can exchange information such as battery consumption with compatible video equipment. This unit is compatible with the "InfoLITHIUM" battery pack (M series). "InfoLITHIUM" M series battery packs have the mark. "InfoLITHIUM" is a trademark of Sony Corporation.



Charging time

| Battery pack | Full charge (min.) | Normal charge (min.) |
|--------------------|--------------------|----------------------|
| NP-FM50 (supplied) | 150 | 90 |

Approximate time to charge a completely discharged battery pack using the A AC power adaptor.

Battery life and number of images that can be recorded/played back

STILL mode recording* DSC-S50

| LCD BACKLIGHT | Battery life (min.) | Number of images |
|---------------|---------------------|------------------|
| BRIGHT | 140 (130) | 2300 (2100) |
| NORMAL | 150 (140) | 2500 (2300) |

DSC-S30

| LCD BACKLIGHT | Battery life (min.) | Number of images |
|---------------|---------------------|------------------|
| BRIGHT | 140 (130) | 2800 (2600) |
| NORMAL | 150 (140) | 3000 (2800) |

STILL mode playback** (DSC-S50/S30)

| LCD BACKLIGHT | Battery life (min.) | Number of images |
|---------------|---------------------|------------------|
| BRIGHT | 170 (160) | 3400 (3200) |
| NORMAL | 220 (210) | 4400 (4200) |

Approximate battery life and number of images that can be recorded/played back with a fully charged battery pack at a temperature of 77°F (25°C), 640×480 image size and in NORMAL recording mode. Numbers in parentheses indicate the time when you use a normally charged battery pack.

* Recording at about 5-second intervals
** Playing back single images in order at about 3-second intervals

MOVIE mode recording (DSC-S50 only)

| LCD BACKLIGHT | Battery life (min.) |
|---------------|---------------------|
| BRIGHT | 140 (130) |
| NORMAL | 150 (140) |

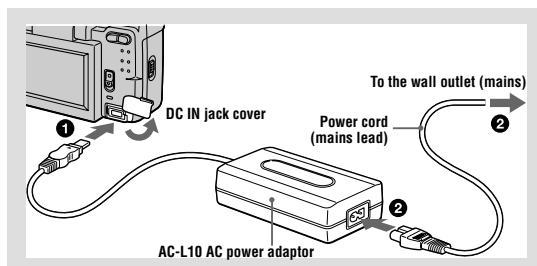
Approximate time that can be recorded with a fully charged battery pack at a temperature of 77°F (25°C) and 160×112 image size. Numbers in parentheses indicate the time when you use a normally charged battery pack.

Notes

- The battery life and number of images will be decreased if you use your camera at low temperatures, use the flash, repeatedly turn the power on/off or use the zoom.
- The capacity of the "Memory Stick" is limited. The above figures are a guide when you continuously record/play back while replacing the "Memory Stick."
- If sufficient battery remaining time is indicated but the power runs out soon, fully charge the battery so that the correct battery remaining time appears.
- Do not short the DC plug of the AC power adaptor with a metallic object, as this may cause malfunction.
- Do not expose the battery pack to water.

Getting started

Using the AC power adaptor



- 1 Open the DC IN jack cover and connect the DC connecting cable to the DC IN jack of your camera with the ▲ mark facing up.
- 2 Connect the power cord (mains lead) to the AC power adaptor and then to a wall outlet (mains).

Using a car battery

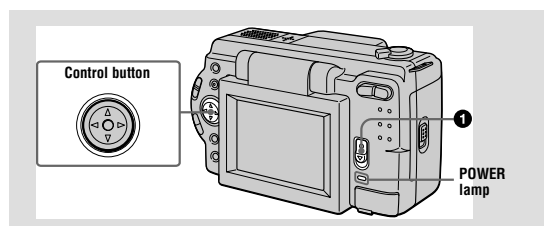
Use Sony DC adaptor/charger.

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Setting the date and time

When you first use your camera, set the date and time. If these are not set, the CLOCK SET screen appears whenever you turn on your camera for recording.



Getting started

- 1 Slide down the POWER switch to turn on the power. The POWER lamp lights up.
- 2 Press ▲ on the control button. The menu bar appears on the LCD screen.
- 3 Select [SETUP] with ► on the control button, then press the center ●.
- 4 Select [CLOCK SET] with ▲/▼ on the control button, then press the center ●.

- 5 Select the desired date display format with ▲/▼ on the control button, then press the center ●. Select from Y/M/D (year/month/day), M/D/Y (month/day/year) or D/M/Y (day/month/year).
- 6 Select the year, month, day, hour or minute item you want to set with ◀/▶ on the control button. The item to be set is indicated with ▲/▼.
- 7 Set the numeric value with ▲/▼ on the control button, then press the center ● to enter it. After entering the number, ▲/▼ moves to the next item. If you selected [D/M/Y] in step 5, set the time on a 24-hour cycle.
- 8 Select [ENTER] with ► on the control button, then press the center ● at the desired moment to begin clock movement. The date and time are entered.

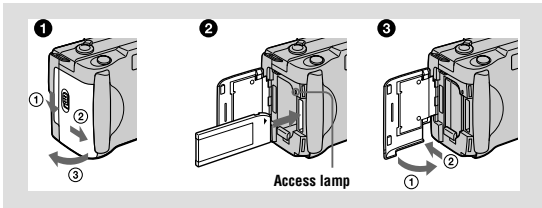
To cancel the date and time setting

Select [CANCEL] with ▲/▼/◀/▶ on the control button, then press the center ●.

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Inserting the "Memory Stick"



Getting started

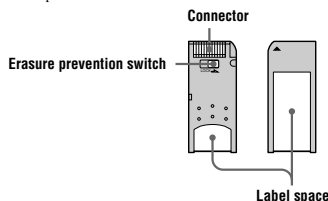
- 1 Open the battery/"Memory Stick" cover.**
Open the cover while sliding the OPEN switch in the direction of the arrow.
- 2 Insert the "Memory Stick."**
Insert the "Memory Stick" with the ► mark facing toward the battery compartment as illustrated until it clicks.
- 3 Close the battery/"Memory Stick" cover.**

Removing the "Memory Stick"

Open the battery/"Memory Stick" cover, then press the "Memory Stick" once lightly.

Notes

- Insert the "Memory Stick" firmly until it clicks, otherwise a message such as "MEMORY STICK ERROR" will be displayed.
- Never remove the "Memory Stick" or turn off the power while the access lamp is lit up.
- You cannot record or edit images on a "Memory Stick" if the erasure prev the LOCK position.



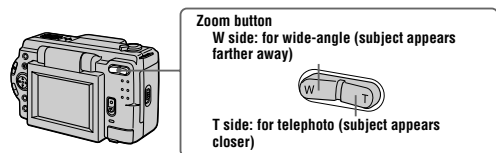
15

Checking the last recorded image (Quick Review)

You can check the last recorded image by clearing the menu bar from the screen (page 31) and pressing ◀ on the control button. To return to the normal recording mode, press lightly on the shutter button or select [RETURN] with ◀▶ on the control button and then press the center ●. You can also delete the image first by selecting [DELETE] on the Quick Review screen with ◀▶ on the control button and pressing the center ●, and then selecting [OK] with ▲▼ on the control button and pressing the center ●.

Recording

Using the zoom feature



Minimum focal distance to the subject
W side: About 9 7/8 inches (25 cm) or more
T side: About 23 5/8 inches (60 cm) or more
To record even closer subjects, see page 41.

Digital zoom function
This camera has a digital zoom function.
Digital zoom enlarges the image by digital processing and it starts to function when zoom exceeds 3x.



- Using digital zoom
- The maximum zoom magnification is 6x.
 - Digital zooming deteriorates the picture quality. When digital zoom is not necessary, set [DIGITAL ZOOM] to [OFF] in the menu settings (page 34).

Note
Digital zoom does not work for moving images.

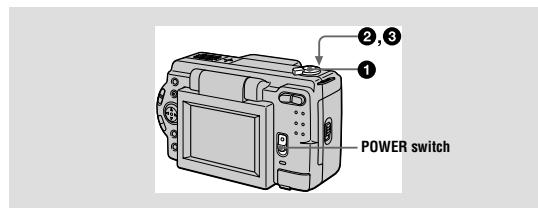
17

Basic operations

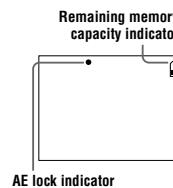
▶ Recording

Recording still images

Still images are recorded in JPEG format.
To record still images, slide the POWER switch down to turn on the power and insert a "Memory Stick."



- 1 Set the MODE selector to STILL.**
- 2 Press and hold the shutter button halfway down and check the image.**
While the AE lock indicator ● (green) is flashing, the image freezes momentarily, but is not yet recorded. When the camera finishes the automatic adjustments*, the AE lock indicator ● lights up and the camera is ready for recording.
To cancel the recording, release the shutter b
- 3 Press the shutter button fully down.**
The shutter sounds and the image is recorded on the "Memory Stick."
When "REC" disappears, you can record the next image.



* Exposure and focus are automatically adjusted.

The number of images you can record on a "Memory Stick"
See pages 37 to 40.

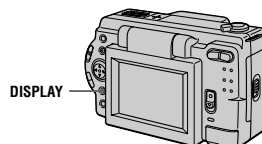
Note

While the image is being recorded on the "Memory Stick," do not shake or strike the camera. Also, do not turn the power off, or remove the battery pack or "Memory Stick."

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LCD screen indicators during recording

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 64 for a detailed description of the indicated items.

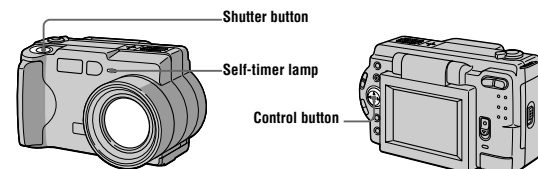


Notes

- You cannot turn off the self-timer indicators and some of the indicators used in advanced operations.
- The indicators on the LCD screen are not recorded.

Using the self-timer


When you use the self-timer function, the subject is recorded about 10 seconds after you press the shutter button.

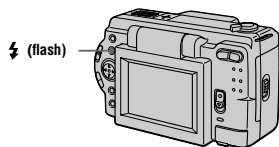






Select ⌚ (self-timer) indicator on the LCD screen with ▲▼/◀▶ on the control button, then press the center ●. The ⌚ (self-timer) indicator appears on the LCD screen, and about 10 seconds after you press the shutter button, the subject is recorded. The self-timer lamp flashes after you press the shutter button until the shutter is released.

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Recording images with the flash

The initial setting is auto (no indicator). In this mode, the flash automatically strobes when the surroundings become dark. When you change the flash mode, press the  (flash) repeatedly so that the flash mode indicator appears on the LCD screen.



Each time you press the  (flash), the indicator changes as follows.
(No indicator) →  →  →  → (No indicator)

1 Auto red-eye reduction: The flash strobes before recording to reduce the red-eye phenomenon.

2 Forced flash: The flash strobes regardless of the surrounding brightness.

3 No flash: The flash does not strobe.

You can change the brightness of the flash (FLASH LEVEL) in the menu settings (page 34).

Notes

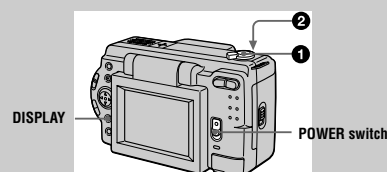
- The recommended shooting distance using the built-in flash is 31/32 feet to 8 1/3 feet (0.3 m to 2.5 m).
- Attaching a conversion lens (not supplied) may block the light from the flash or cause the lens shadow to appear.
- Auto red-eye reduction may not produce the desired red-eye reduction effects depending on individual differences, the distance to the subject, if the subject does not see the pre-strobe, or other conditions. In addition, red-eye reduction effects are also difficult to obtain if you set the shutter to a slow speed in the PROGRAM AE shutter priority mode.
- The flash effect is not obtained easily when you use forced flash in a bright location.

Recording

Recording moving images (DSC-S50 only)

Moving images with audio are recorded in MPEG format.

To record moving images, slide the POWER switch down to turn on the power and insert a "Memory Stick."



1 Set the MODE selector to MOVIE.

2 Press the shutter button fully down.

"REC" appears on the LCD screen, and the image and sound are recorded on the "Memory Stick."

If you press the shutter button momentarily

The image and sound are recorded for five seconds. You can change the recording time to 10 or 15 seconds with [REC TIME SET] in the menu settings (page 33).

If you hold the shutter button down

The image and sound are recorded while the shutter button is held down for up to 60 seconds. However, when [IMAGE SIZE] in the menu setting is set to [320x240], the maximum recording time is 15 seconds (page 33).

Zooming or using the self-timer, etc.

See pages 17 and 18.

LCD screen indicators during recording

Press DISPLAY to turn on/off the indicators on the LCD screen.

These indicators are not recorded. See page 64 for a detailed description of the indicators.

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▶ Playback

Playing back still images









1 Set the MODE selector to PLAY.


The last recorded image (still or moving) appears on the LCD screen.

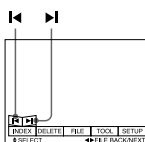
2 Press  on the control button to display the menu bar on the LCD screen.

3 Select the desired still image with the control button.

Press / on the control button to select / on the LCD screen, then press  on the control button.

: To display the preceding image.

: To display the next image.



When the menu bar is not displayed

You can directly select and play back the image with / on the control button.

Notes

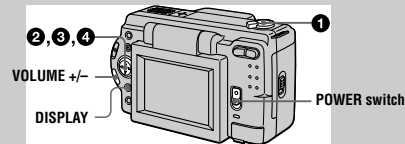
- You might not be able to correctly play back images recorded with this camera on other equipment.
- You cannot play back on this camera images larger than the maximum image size that can be recorded with this camera.

LCD screen indicators during still image playback

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 64 for a detailed description of the indicators.

Playback

Playing back moving images








1 Set the MODE selector to PLAY.


The last recorded image (still or moving) appears on the LCD screen.


2 Press  on the control button to display the menu bar on the LCD screen.

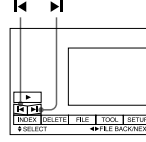
3 Select the desired moving image with the control button.





Moving images are displayed one-size smaller than still images.



Press / on the control button to select / on the LCD screen, then press  on the control button.

: To display the preceding image.

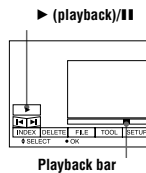
: To display the next image.







4 Select  (playback) on the LCD screen with / on the control button, then press the center .

The moving image and sound* are played back. During playback,  (playback) changes to  (pause).

* You can play back sound in DSC-S50 only.



To pause playback

Select  (pause) on the LCD screen with / on the control button, then press the center .

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When the menu bar is not displayed
You can directly select the image with ◀▶ on the control button, and play back the image and sound (DSC-S50 only) by pressing the center ●. When you press the center ● during playback, playback is paused.

Adjusting the volume (DSC-S50 only)

Press VOLUME +/- to adjust the volume.

LCD screen indicators during moving image playback

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 64 for a detailed description of the indicators.

▶ Playback

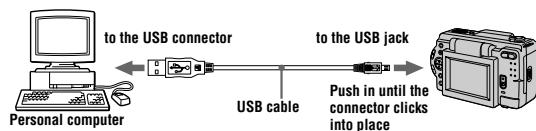
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Installing the USB driver

Before connecting your camera to your personal computer, install the USB driver to the computer. The USB driver is contained together with application software for viewing images on a CD-ROM which is supplied with your camera.

For Windows 98 users

- 1 Turn on your personal computer and allow Windows 98 to load.
- 2 Insert the supplied CD-ROM in the CD-ROM drive of your personal computer.
- 3 Connect the USB jack on your camera with the USB connector on your personal computer using the supplied USB cable.



▶ Playback

- 4 Insert a "Memory Stick" into your camera, connect the AC power adaptor and turn on your camera.
"PC MODE" appears on the LCD screen of your camera and the camera is set to communication standby mode. Your personal computer recognizes the camera, and the Windows 98 Add Hardware Wizard starts.
- 5 Follow the on-screen messages to specify the CD-ROM drive and install the USB driver.
The Add Hardware Wizard starts twice because two different USB drivers are installed. Be sure to allow the installation to complete without interrupting it.

Note

Be sure to insert a "Memory Stick" into your camera before installing the USB driver. Otherwise, you will be unable to install the USB driver.

For Macintosh users

- 1 Turn on your personal computer and allow the Mac OS to load.
- 2 Insert the supplied CD-ROM in the CD-ROM drive of your personal computer.

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Viewing images using a personal computer

You can view data recorded with your camera on a personal computer and attach it to e-mail. This section describes the method for installing the USB driver and viewing images on a personal computer. Be sure to also see the operation manuals for your personal computer and application software.

Note

Data recorded with your camera is stored in the following formats. Make sure that applications that support these file formats are installed on your personal computer.

- Still images (other than TEXT and uncompressed modes): JPEG format
- Moving images/audio: MPEG format
- Uncompressed mode still images: TIFF format
- TEXT mode: GIF format

Recommended computer environment

Recommended Windows environment

OS: Microsoft Windows 98, Windows 98SE
Standard installation is required.
Operation is not assured in an environment upgraded from:
Windows 3.1, Windows 95 to Windows 98 or
Windows 98 to Windows 98SE.
CPU: MMX Pentium 200 MHz or faster
The USB connector must be provided as standard.
ActiveMovie Player (DirectShow) must be installed (to play back moving pictures).

Recommended Macintosh environment

Macintosh computer with the Mac OS 8.5.1/8.6/9.0 standard installation
However, note that the update to Mac OS 9.0 should be used for the following models.
• iMac with the Mac OS 8.6 standard installation and a slot loading type CD-ROM drive
• iBook or G4 with the Mac OS 8.6 standard installation
The USB connector must be provided as standard.
QuickTime 3.2 or newer must be installed (to play back moving pictures).

Notes

- Operations are not guaranteed for either the Windows or Macintosh environment if you connect two or more USB equipment to a single personal computer at the same time (except for the USB keyboard and mouse which are provided as standard), or when using a hub.
- Depending on the type of USB equipment that is used simultaneously, some equipment may not operate.
- Operations are not guaranteed for all the recommended computer environments mentioned above.

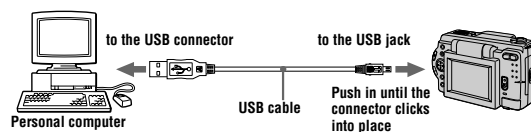
24

- 3 Double-click the CD-ROM drive icon to open the window.
- 4 Double-click the icon of the hard disk containing the OS to open the window.
- 5 Move the following two driver files from the window opened in step 3 to the "System Folder" icon in the window opened in step 4 (drag and drop).
 - Sony USB Driver
 - Sony USB Shim
- 6 When "Put these items into the Extensions folder?" appears, click "OK."
- 7 Restart your personal computer.

Viewing images

For Windows 98 users

- 1 Turn on the power of your personal computer and allow Windows 98 to load.
- 2 Connect one end of the USB cable to the USB jack on the camera and the other end to the USB connector on your personal computer.



- 3 Insert a "Memory Stick" into your camera, and connect the AC power adaptor to your camera and then to a wall outlet (mains).
- 4 Turn on the power of your camera.
"PC MODE" appears on the LCD screen of the camera.
- 5 Open "My Computer" on Windows 98 and double click the newly recognized drive. (Example: "Removable Disk (D:)")
The folders inside the "Memory Stick" are displayed.

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- 6 Select and double-click the desired image/sound file from the folder.**
For the detailed folder and file name, see "Image file storage destinations and image files" (page 28).

| Desired file type | Double-click in this order |
|--|---|
| Still image | "Dcim" folder → "100msdcf" folder → Image file |
| Moving image* | "Mssony" folder → "Moml0001" folder → Image file* |
| Audio* | "Mssony" folder → "Momlv100" folder → Audio file* |
| E-mail image TIFF image (uncompressed) | "Mssony" folder → "Imcif100" folder → Image file |

* Copying a file to the hard disk of your personal computer before viewing it is recommended. If you play back the file directly from the "Memory Stick", the image and sound may break off.

Notes on using your personal computer

"Memory Stick"

- "Memory Stick" operations on your camera cannot be assured if the "Memory Stick" has been formatted on your personal computer.
- Do not optimize the "Memory Stick" on a Windows machine. This will shorten the "Memory Stick" life.
- Do not compress the data on the "Memory Stick." Compressed files cannot be played back on your camera.

Software

- Depending on your application software, the file size may increase when you open a still image file.
- When you load an image modified using the supplied retouch software from your personal computer to the camera or when you directly modify the image on the camera, the image format will differ so the "FILE ERROR" message may appear and you may be unable to open the file.

Communications with your personal computer

Communications between your camera and your personal computer may not recover after recovering from Suspend, Resume, or Sleep.

- Windows and ActiveMovie, DirectShow are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Macintosh and Mac OS, QuickTime are trademarks of Apple Computer, Inc.
- All other product names mentioned herein may be the trademarks or registered trademarks of their respective companies. Furthermore, "TM" and "®" are not mentioned in each case in this manual.

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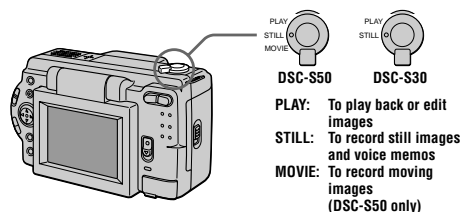
Advanced operations

Before performing advanced operations

This section describes the basic control methods that are frequently used for "Advanced operations".

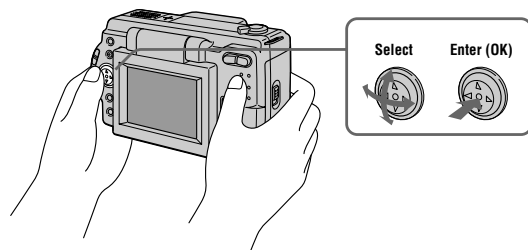
How to use the MODE selector

The MODE selector selects whether you can use your camera to record or to play back and edit images. Set the selector as follows before starting to operate your camera.



How to use the control button

The control button is used to select the indicators, images and menus appearing on the LCD screen of your camera. The operation methods that are frequently used for "Advanced operations" are described below.

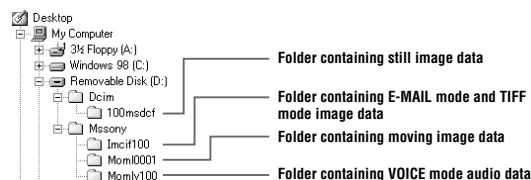


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Image file storage destinations and image files

Image files recorded with your camera are grouped in folders by recording mode. The meanings of the file names are as follows. □□□□ stands for any number within the range from 0001 to 9999.

For Windows 98 users (The drive recognizing the camera is "D:")



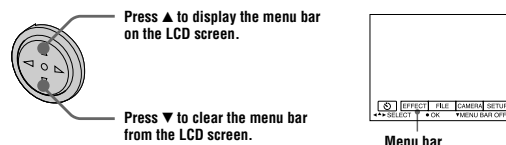
| Folder | File | Meaning |
|----------|---------------|---|
| 100msdcf | DSC0□□□□.JPG | <ul style="list-style-type: none"> Still image file recorded normally Still image file recorded in E-MAIL mode (page 38) Still image file recorded in TIFF mode (page 40) Still image file recorded in VOICE mode (page 39) |
| | TXT0□□□□.GIF | <ul style="list-style-type: none"> Still image file recorded in TEXT mode (page 39) |
| Imcif100 | DSC0□□□□.JPG | <ul style="list-style-type: none"> Small-size image file recorded in E-MAIL mode (page 38) |
| | DSC0□□□□.TIFF | <ul style="list-style-type: none"> Uncompressed image file recorded in TIFF mode (page 40) |
| Moml0001 | MOV0□□□□.MPG | <ul style="list-style-type: none"> Moving image file recorded normally |
| Momlv100 | DSC0□□□□.MPG | <ul style="list-style-type: none"> Audio file recorded in VOICE mode (page 39) |

The numerical portions of the following files are the same.

- A small-size image file recorded in E-MAIL mode and its corresponding image file
- An uncompressed image file recorded in TIFF mode and its corresponding image file
- An audio file recorded in VOICE mode and its corresponding image file

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Turning on/off the operation buttons (menu bar) on the LCD screen



Note

You cannot clear the menu bar during INDEX screen display (page 45).

Selecting items and images on the LCD screen

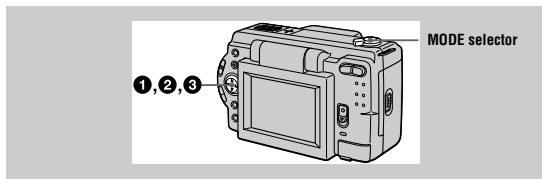
- Press ▲/▼/◀/▶ on the control button to select the item you want to set or the image you want to display.**
The color of the selected item or the border of the selected image changes from blue to yellow.
- Press the center ● to enter the item.**
Repeat steps 1 and 2 to execute each function.

The "Advanced operations" section of this manual refers to selecting and entering items by the above procedure as "Select [(item name)]."

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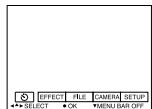
How to change the menu settings

Some of the advanced operations for your camera are executed by selecting menu items displayed on the LCD screen with the control button.

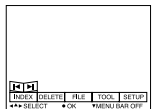


- Press **▲** on the control button to display the menu bar. The menu bar appears as follows according to the setting of the MODE selector.

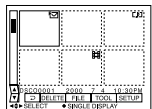
MOVIE/STILL



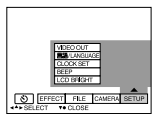
PLAY (single mode)



PLAY (INDEX mode)



- Select the desired item with **▲/▼/◀/▶** on the control button, then press the center **●**. The color of the selected item changes from blue to yellow, and when you press the center **●**, the modes that can be set for that item are displayed.



- Select the desired mode with **▲/▼/◀/▶** on the control button, then press the center **●**.

To clear the menu

Press **▼** on the control button until the LCD screen returns to the menu bar display in step 1. To clear the menu bar, press **▼** again.

| Item | Setting | Description | MODE selector |
|----------------------------------|--|---|---------------|
| IMAGE SIZE | 1600×1200 1600 (3:2) 1024×768 640×480 | Selects the image size when recording still images (DSC-S50 only). | STILL |
| | 1472×1104 1280×960 1280 (3:2) 1024×768 640×480 | Selects the image size when recording still images (DSC-S30 only). | STILL |
| | 320×240 160×112 | Selects the MPEG image size when recording moving images (DSC-S50 only). | MOVIE |
| REC MODE | TIFF | Records a TIFF (uncompressed) file in addition to the JPEG file. | STILL |
| | TEXT | Records a GIF file in black-and-white. | |
| | VOICE | Records an audio file (with still image) in addition to the JPEG file (DSC-S50 only). | |
| | E-MAIL | Records a small-size (320×240) JPEG file in addition to the selected image size. | |
| | ■ NORMAL | Records a JPEG file in the selected image size. | |
| REC TIME SET | 15 SEC 10 SEC ■ 5 SEC | Adjusts the recording time for moving images (DSC-S50 only). | MOVIE |
| ROTATE (in single mode only) | — | Rotates the still image. | PLAY |
| SLIDE SHOW (in single mode only) | INTERVAL | Sets the slide show interval. ■ 3 SEC/5 SEC/10 SEC/30 SEC/1 MIN | PLAY |
| | REPEAT | Repeats the slide show. ■ ON/OFF | |
| | START | Starts the slide show. | |
| | CANCEL | Cancels the slide show settings and execution. | |
| PRINT MARK | ON | Marks the still images to be printed (page 53). | PLAY |
| | ■ OFF | Unmarks the print mark of the still images. | |

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Menu settings

Menu items that can be modified differ depending on the setting of the MODE selector. The LCD screen shows only the items you can operate at the moment. Initial settings are indicated with **■**.

⌚ (SELF TIMER)

Records with the self-timer (page 18).

EFFECT

| Item | Setting | Description | MODE selector |
|-----------|--|--|----------------|
| P.EFFECT | SOLARIZE B&W SEPIA NEG.ART ■ OFF | Sets the image special effects (page 44). | MOVIE STILL |
| DATE/TIME | DAY&TIME DATE ■ OFF | Sets whether to insert the date and time into the image (page 44). | STILL |

FILE

| Item | Setting | Description | MODE selector |
|-------------|--------------------|--|------------------------|
| FORMAT | OK CANCEL | Formats a "Memory Stick." Cancels formatting of a "Memory Stick." | MOVIE STILL PLAY |
| POS. SENSOR | ON ■ OFF | Plays back images recorded with the camera on its side (vertical images) as horizontal images. This function does not work for images recorded in TEXT mode. When this camera may be subject to vibration such as when you record images from inside a moving car, set this to OFF to prevent improper horizontal/vertical judgement. | STILL |
| FILE NUMBER | SERIES ■ NORMAL | Assigns numbers to files in sequence even if the "Memory Stick" is changed. Resets the file numbering each time the "Memory Stick" is changed. | MOVIE STILL |

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| Item | Setting | Description | MODE selector |
|---------|-----------------|--|---------------|
| PROTECT | ON ■ OFF | Protects images against accidental erasure (page 49). Releases protection of images against accidental erasure. | PLAY |

CAMERA

| Item | Setting | Description | MODE selector |
|---------------|---------------------------------------|--|----------------|
| DIGITAL ZOOM | ■ ON OFF | Uses digital zoom. Does not use digital zoom. | STILL |
| SHARPNESS | +2 to -2 | Adjusts the sharpness of the image. [] appears on the LCD screen except when set to 0. | STILL |
| WHITE BALANCE | IN DOOR OUT DOOR HOLD ■ AUTO | Sets the white balance (page 43). | MOVIE STILL |
| FLASH LEVEL | HIGH ■ NORMAL LOW | Makes the flash level higher than normal. Normal setting. Makes the flash level lower than normal. | STILL |
| EXPOSURE | +2.0 EV to -2.0 EV | Adjusts the exposure. | MOVIE STILL |

TOOL

| Item | Setting | Description | MODE selector |
|------------------------------|--|---|---------------|
| COPY | OK CANCEL | Copies an image (page 51). Cancels copying of the image. | PLAY |
| RESIZE (in single mode only) | 1600×1200 1024×768 640×480 ■ CANCEL | Changes the recorded still image size (page 51) (DSC-S50 only). | PLAY |
| | 1472×1104 1280×960 1024×768 640×480 ■ CANCEL | Changes the recorded still image size (page 51) (DSC-S30 only). | PLAY |

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SETUP

| Item | Setting | Description | MODE selector |
|-----------------|--------------------------------|---|------------------------|
| DEMO | ■ ON/STBY OFF | Displayed only when you use the AC power adaptor in MOVIE or STILL mode. When ON is selected, a demonstration will start if you do not operate your camera for about 10 minutes. To stop the demonstration, turn off your camera. Select ON to make the demonstration appear again. | MOVIE STILL |
| VIDEO OUT | ■ NTSC PAL | Sets the video output signal to NTSC mode (North American countries, Japan, etc.). Sets the video output signal to PAL mode (European countries, etc.). | MOVIE STILL PLAY |
| 言語/ LANGUAGE | ■ ENGLISH 日本語/JPN | Displays the menu items in English. Displays the menu items in Japanese. | MOVIE STILL PLAY |
| CLOCK SET | — | Sets the date and time (page 13). | MOVIE STILL PLAY |
| BEEP | SHUTTER ■ ON OFF | Turns off the beep only. (The shutter sound is heard when you press the shutter button.) Turns on the beep/shutter sound (when you press the control button/shutter button). Turns off the beep/shutter sound. | MOVIE STILL PLAY |
| LCD BRIGHT | ■■■■■■■■ | Adjusts the LCD screen brightness using the +/- buttons on the LCD screen. This has no effect on the recorded images. | MOVIE STILL PLAY |

INDEX*

Displays six images at a time (PLAY (INDEX) mode) (page 45).

DELETE

| Setting | Description | MODE selector |
|---------|--------------------------------|---------------|
| OK | Deletes the displayed image. | PLAY |
| CANCEL | Cancels deleting of the image. | |

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⏮ (RETURN)**

Returns to PLAY (single) mode.

* Displayed only in PLAY (single) mode.
** Displayed only in PLAY (INDEX) mode.

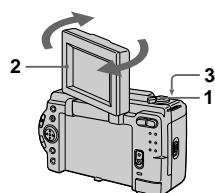
Before performing advanced operations

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► Various recording

Rotating the LCD screen — Face-to-Face recording

You can record images with the lens facing you.



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Adjust the angle of the LCD screen.
Rotate the LCD screen by 180° for Face-to-Face recording.
- 3 Record the image.
The image appears on the LCD screen as a mirror image, but the recorded image is the same as the actual subject.



Image appearing on the LCD screen

Recorded image

Setting the image size (IMAGE SIZE)



- 1 Set the MODE selector to MOVIE or STILL.
(MOVIE is for DSC-S50 only)
- 2 Select [FILE] and then [IMAGE SIZE] from the menu.
- 3 Select the desired image size.

DSC-S50:
Still image sizes
1600×1200, 1600 (3:2),
1024×768, 640×480

Moving image sizes
320×240, 160×112

DSC-S30:
Still image sizes
1472×1104, 1280×960, 1280 (3:2), 1024×768, 640×480

► Various recording

The number of images or the time that you can record on a "Memory Stick" (4 MB):

| Image size | Number of images or time* |
|------------|---------------------------|
| 1600×1200 | Approx. 4 |
| 1600 (3:2) | Approx. 4 |
| 1472×1104 | Approx. 5 |
| 1280×960 | Approx. 6 |
| 1280 (3:2) | Approx. 6 |
| 1024×768 | Approx. 10 |
| 640×480 | Approx. 57 |
| 320×240 | Approx. 42 (15**) sec. |
| 160×112 | Approx. 169 (60**) sec. |

* When [REC MODE] is set to [NORMAL].

** Numbers in parentheses indicate the maximum recording time during continuous recording.

When [1600 (3:2)], [1280 (3:2)] is selected

The image is recorded in 3:2 size to match the printing paper size ratio of 3:2.

Recording still images for e-mail (E-MAIL)

E-MAIL mode records a small-size (320×240) image at the same time as a still image. Small-size images are convenient for e-mail transmission, etc.



- 1 Set the MODE selector to STILL.
- 2 Select [FILE], [REC MODE], and then [E-MAIL] from the menu.
- 3 Record the image.

The number of images that you can record on a "Memory Stick" (4 MB) in E-MAIL mode.

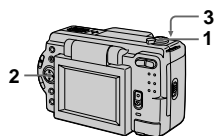
| Image size | Number of images |
|------------|------------------|
| 1600×1200 | Approx. 3 |
| 1600 (3:2) | Approx. 3 |
| 1472×1104 | Approx. 4 |
| 1280×960 | Approx. 5 |
| 1280 (3:2) | Approx. 5 |
| 1024×768 | Approx. 9 |
| 640×480 | Approx. 46 |

To return to normal recording mode
Select [NORMAL] in step 2.

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Adding audio files to still images (VOICE) (DSC-S50 only)



- 1 Set the MODE selector to STILL.
- 2 Select [FILE], [REC MODE], and then [VOICE] from the menu.
- 3 Record the image.
If you press and release the shutter button, sound is recorded for 5 seconds.
If you hold down the shutter button, sound is recorded until you release the shutter button for up to 40 seconds.

The number of images that you can record on a "Memory Stick" (4 MB) in VOICE mode (when recording sound for five seconds):

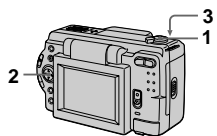
| Image size | Number of images |
|------------|------------------|
| 1600×1200 | Approx. 3 |
| 1600 (3:2) | Approx. 3 |
| 1024×768 | Approx. 8 |
| 640×480 | Approx. 28 |

To return to normal recording mode Select [NORMAL] in step 2.

When using the DSC-S30
The DSC-S30 does not have a VOICE function. When you edit (delete, protect, or copy files, etc.) files recorded in VOICE mode on a different camera, the still image file is edited but the audio file is not.

Recording text documents (TEXT)

Text is recorded in black and white GIF format to provide a clearer image.



- 1 Set the MODE selector to STILL.
- 2 Select [FILE], [REC MODE], and then [TEXT] from the menu.
- 3 Record the image.

The number of images that you can record on a "Memory Stick" (4 MB) in TEXT mode:

| Image size | Number of images |
|------------|-------------------|
| 1600×1200 | Approx. 12 to 87 |
| 1600 (3:2) | Approx. 14 to 97 |
| 1472×1104 | Approx. 14 to 97 |
| 1280×960 | Approx. 20 to 114 |
| 1280 (3:2) | Approx. 22 to 137 |
| 1024×768 | Approx. 30 to 160 |
| 640×480 | Approx. 80 to 363 |

To return to normal recording mode Select [NORMAL] in step 2.

Notes

- If the subject is not evenly illuminated, you may be unable to record a clear image.
- Writing and reading data takes more time than in normal recording.
- The flash does not strobe in TEXT mode regardless of the surrounding brightness.

Various recording

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Recording uncompressed images (TIFF)

This mode simultaneously records still images in both TIFF format (uncompressed) and JPEG format (compressed).



- 1 Set the MODE selector to STILL.
- 2 Select [FILE], [REC MODE], and then [TIFF] from the menu.
- 3 Record the image.

The number of images that you can record on a "Memory Stick" (16 MB) in TIFF mode:

| Image size | Number of images |
|------------|------------------|
| 1600×1200 | Approx. 2 |
| 1600 (3:2) | Approx. 2 |
| 1280×960 | Approx. 3 |
| 1280 (3:2) | Approx. 3 |

To return to normal recording mode Select [NORMAL] in step 2.

Notes

- JPEG images are recorded in the image size selected by the [IMAGE SIZE] menu. TIFF images are recorded in [1600×1200] size in DSC-S50, and [1280×960] size in DSC-S30 other than when [1600 (3:2)] or [1280 (3:2)] is selected.
- Writing data takes more time than in normal recording.
- The supplied "Memory Stick" (4 MB) does not have sufficient capacity to record uncompressed images.

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Recording images in macro



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Press FOCUS repeatedly until the (auto macro) indicator appears on the LCD screen.
You can record a subject as close as about 1 3/16 inches (3 cm) from the lens surface with the zoom set all the way to the W side.

To return to normal recording mode Press FOCUS repeatedly until disappears from the LCD screen.

Notes

- You cannot record images in macro with the following PROGRAM AE modes.
— Landscape mode
— Panfocus mode
- You cannot record images in macro when appears on the LCD screen.

Setting the distance to the subject

Normally the focus is automatically adjusted. This function is useful when the auto focus does not work well such as in dark places.



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Press FOCUS repeatedly to achieve a sharp focus.
The (manual focus) indicator appears on the LCD screen. You can select from the following 7 focus settings: auto (no indicator), (auto macro), 1 3/4 feet (0.5m), 3 1/4 feet (1.0m), 9 3/4 feet (3.0m), 23 feet (7.0m), ∞ (infinite)

To reactivate auto focusing Press FOCUS repeatedly until the indicator disappears in step 2.

Note

These setting distances are approximate, and should be used as a reference.

Various recording

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Using the PROGRAM AE function



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Press PROGRAM AE repeatedly to select the desired PROGRAM AE mode.

A Aperture priority mode

Makes the subject stand out against an unclear background or makes both the subject and the background stand out clearly. Press +/- repeatedly to select an aperture value in 9 steps from F2.8 to F11.

s Shutter speed priority mode

Records a sharp picture of a fast-moving subject or the flow of motion of a moving subject. Press +/- repeatedly to select a shutter speed in 18 steps from 8" to 1/725 when recording a still image and in 12 steps from 1/8 to 1/725 when recording a moving image.

Twilight mode

Suppresses the washed-out color of a bright subject in a dark place so that you can record the subject without losing the dark atmosphere of the surroundings.

Twilight plus mode

Increases the effectiveness of the twilight mode function.

Landscape mode

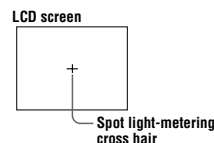
Focuses only on a distant subject to record landscapes, etc.

Panfocus mode

Changes the focus quickly and simply from a close subject to a distant subject.

Spot light-metering mode

Select this mode when there is backlight or when there is strong contrast between the subject and the background, etc. Position the point you want to record on the spot light-metering cross hair.



To cancel PROGRAM AE Press PROGRAM AE repeatedly until the indicator on the LCD screen goes out.

Notes

- You cannot select F2.8 in aperture priority mode when the zoom is set to the T side.
- You can focus only on distant subjects in Landscape mode.
- In Panfocus mode, the zoom position and focus are fixed.
- When you record in the Twilight plus mode, we recommend that you use a tripod to prevent shaking.
- Set the forced flash when you use the flash in the following modes:
— Twilight mode
— Twilight plus mode
— Landscape mode
- You cannot use the PROGRAM AE function when [REC MODE] is set to [TEXT].
- If the setting is not appropriate in aperture priority mode and shutter priority mode, the setting value indicator on the LCD screen flashes when you press the shutter button. In this case, reset the value.

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Adjusting the exposure (EXPOSURE)



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Select [CAMERA] and then [EXPOSURE] from the menu.
- 3 Select the desired exposure value.
Adjust the exposure value while checking the brightness of the background. You can select values ranging from +2.0 EV to -2.0 EV in steps of 1/3 EV.

Note

The exposure may not be adjusted properly when the subject is extremely bright or dark, or when using the flash.

Adjusting the white balance (WHITE BALANCE)

Normally the white balance is automatically adjusted.



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Select [CAMERA] and then [WHITE BALANCE] from the menu.
- 3 Select the desired white balance setting.
IN DOOR (☼)
• Places where the lighting condition changes quickly
• Under bright lighting such as photography studios
• Under sodium or mercury lamps
OUT DOOR (☼)
Recording a sunrise/sunset, night scene, neon signs, or fireworks
HOLD
Recording a single-colored subject or background
AUTO (No indicator)
Adjusts the white balance automatically

To reactivate auto adjustment
Select [AUTO] in step 3.

Note

Select [AUTO] when recording under fluorescent lighting.

➤ Various recording

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Recording the date and time on the still image (DATE/TIME)



- 1 Set the MODE selector to STILL.
- 2 Select [EFFECT] and then [DATE/TIME] from the menu.
- 3 Select the date and time setting.
DAY&TIME
The date, hour and minutes are imposed onto the image.
DATE
The year, month and day are imposed onto the image.
OFF
The date and time are not imposed onto the image.
- 4 Record the image.
The date and time are not displayed during recording. The date and time are displayed when playing back images.



Enjoying picture effects (P.EFFECT)



- 1 Set the MODE selector to MOVIE or STILL.
- 2 Select [EFFECT] and then [P.EFFECT] from the menu.
- 3 Select the desired mode.
SOLARIZE
The light contrast is clearer and the picture looks like an illustration.
B&W
The picture is monochrome (black and white).
SEPIA
The picture is colored like an old picture.
NEG.ART
The color and brightness of the picture are reversed.

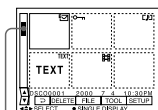
To cancel picture effect
Select [OFF] in step 3.

➤ Various playback

Playing back six images at once (INDEX)



- 1 Set the MODE selector to PLAY.
- 2 Select [INDEX] on the LCD screen.
Six images are displayed at once (index screen).



This shows the position of the currently displayed images relative to all the recorded images.

The following marks are displayed on each image according to the image type and settings.
 : Moving image file
 : Voice memo file
 : E-mail file
 : Print mark
 : Protect mark
 TEXT: Text mark
 TIFF: TIFF mark
 (No mark): Normal recording (no settings)

To display the next (previous) index screen

Select ▲▼ at the lower left of the LCD screen.



To return to normal playback (single image)

- Select the desired image with the control button.
- Select [RETURN] (RETURN).

Note

You cannot display images recorded in TEXT mode on the INDEX screen.

➤ Various playback

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Enlarging a part of the still image (Zoom and trimming)



- 1 Set the MODE selector to PLAY.
- 2 Display the image to be enlarged.
- 3 Zoom in/out the image with the zoom button.
The zoom scaling indicator appears on the LCD screen.
- 4 Press the control button repeatedly to select the desired part of the image.
 ▲: The image moves downward
 ▼: The image moves upward
 ◀: The image moves rightward
 ▶: The image moves leftward

To return to the normal size
Zoom in with the zoom button until the zoom scaling indicator (Q × 1.1) disappears from the screen, or simply press ●.

To record an enlarged image (trimming)

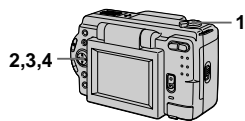
- ① Enlarge the image.
- ② Press the shutter button. The image is recorded at 640×480 size, then the display returns to the image display before enlargement.

Notes

- You cannot trim images recorded in TEXT mode or uncompressed images.
- The maximum zoom magnification is 5× the original image, regardless of the image size.
- The picture quality of trimmed images may deteriorate.
- The original picture remains even after trimming.
- The trimmed image is recorded as the newest file.

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Rotating a still image (ROTATE)



- 1 Set the MODE selector to **PLAY**.
- 2 Display the image to rotate.
- 3 Select **[FILE]** and then **[ROTATE]** from the menu.
- 4 Rotate the image clockwise ↻ or counterclockwise ↺, then select **[RETURN]**.

Notes

- You may not be able to rotate protected images or images recorded with other equipment.
- Also, when viewing images on a personal computer, the image rotation information may not be reflected depending on the application software.
- You cannot rotate protected or uncompressed images, or images recorded in **TEXT** mode.

Playing back the images in order (SLIDE SHOW)

This function is useful for checking the recorded images or for presentations, etc.



- 1 Set the MODE selector to **PLAY**.
- 2 Select **[FILE]** and then **[SLIDE SHOW]** from the menu. Set the following items.

INTERVAL

1 MIN (one minute), 30 SEC (30 seconds), 10 SEC (10 seconds), 5 SEC (5 seconds), 3 SEC (3 seconds)

REPEAT

ON: Plays back images in a continuous loop until **[RETURN]** is selected.
OFF: After all images have been played back, the slide show ends.

- 3 Select **[START]** with the control button. The slide show begins.

To cancel the slide show
 Select **[CANCEL]** in step 2 or 3.

To skip to the next/previous image during slide show playback
 Select ◀▶ at the lower left of the LCD screen.



Various playback

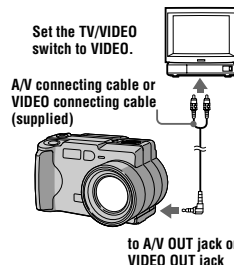
47

Note

The **[INTERVAL]** setting time is approximate, and may vary depending on the played back image size or other factors.

Viewing images on a TV screen

Before connecting your camera, be sure to turn off the TV. After connecting A/V connecting cable (DSC-S50) or VIDEO connecting cable (DSC-S30), turn on the TV.



- 1 Connect your camera and the TV.

DSC-S50

Connect the A/V connecting cable to the A/V OUT jack of your camera and to the audio/video input jacks of the TV.

If your TV has stereo type audio input jacks, connect the audio plug of the A/V connecting cable to the Lch jack.

DSC-S30

Connect the video cable to the VIDEO OUT jack of your camera and to the video input jack of the TV.

- 2 Turn on the TV, then start playback on your camera. The playback image appears on the TV screen.

Note

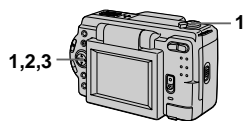
You cannot use a TV that has an antenna (aerial) connector only.

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Editing

Preventing accidental erasure (PROTECT)

The **PROTECT** indicator appears on protected images.



In single mode

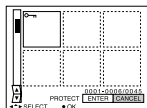
- 1 Set the MODE selector to **PLAY**, then display the image to protect.
- 2 Select **[FILE]**, **[PROTECT]**, and then **[ON]** from the menu. The displayed image is protected and **PROTECT** appears.

To release protection
 Select **[OFF]** in step 2.

In INDEX mode

- 1 Set the MODE selector to **PLAY**, then display the INDEX screen.
- 2 Select **[FILE]**, **[PROTECT]**, and then **[ALL]** or **[SELECT]** from the menu.
- 3 When you select **[ALL]**
 Select **[ON]**.
 All the images recorded in "Memory Stick" are protected.
 When you select **[SELECT]**
 Select all the images to protect with the control button, then select **[ENTER]**.

The selected images are protected.



To release protection

If you selected **[ALL]** in step 2, select **[OFF]**. If you selected **[SELECT]** in step 2, select the images to unprotect with the control button, then select **[ENTER]**.

Editing

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Deleting images (DELETE)

You cannot delete protected files.



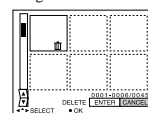
In single mode

- 1 Set the MODE selector to **PLAY**, then display the image to delete.
- 2 Select **[DELETE]** and then **[OK]** from the menu. The image is deleted.

In INDEX mode

- 1 Set the MODE selector to **PLAY**, then display the INDEX screen.
- 2 Select **[DELETE]** and then **[ALL]** or **[SELECT]** from the menu.
- 3 When you select **[ALL]**
 Select **[ENTER]**.
 All unprotected images are deleted.
 When you select **[SELECT]**
 Select all the images to delete with the control button, then select **[ENTER]**.

The **DELETE** indicator appears on the selected images and these images are deleted.



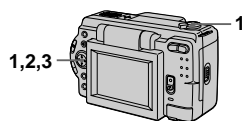
To cancel deleting
 Select **[CANCEL]** in step 2 or 3.

Note

If there are files on the "Memory Stick" with names having the same last 4 digits as the file name of the image to be deleted, these files are also deleted at the same time.

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Changing the recorded still image size (RESIZE)



- 1 Set the MODE selector to **PLAY** and display the image to resize.
- 2 Select **[TOOL]** and then **[RESIZE]** from the menu.
- 3 Select the desired image size.

DSC-S50
1600×1200, 1024×768, 640×480

DSC-S30
1472×1104, 1280×960,
1024×768, 640×480

The changed image is recorded, then the display returns to the image display before resizing.

To return to the original size
Select **[CANCEL]** in step 3.

Notes

- You cannot change the size of images recorded in **TEXT** mode or uncompressed images.
- When you change from a small size to a large size, the picture quality deteriorates.
- The original image is retained even after resizing.
- The resized image is recorded as the newest file.

Copying images (COPY)

You can copy images to another "Memory Stick."

In single mode



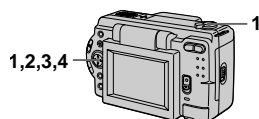
- 1 Set the MODE selector to **PLAY**, then display the image to copy.
- 2 Select **[TOOL]**, **[COPY]**, and then **[OK]** from the menu. "FILE ACCESS" appears.
- 3 When "CHANGE MEMORY STICK" appears, eject the "Memory Stick." "INSERT MEMORY STICK" appears.
- 4 Insert the "Memory Stick" on which to copy the image. "RECORDING" appears. When copying is completed, "COMPLETE" appears. If you exchange the "Memory Stick," the same image is copied again.

After copying is finished
Select **[EXIT]**.

If you do not select **[EXIT]**, the same image is copied each time you exchange the "Memory Stick."

Editing

In INDEX mode



- 1 Set the MODE selector to **PLAY**, then display the **INDEX** screen.
- 2 Select **[TOOL]**, **[COPY]**, and then **[SELECT]** from the menu.
- 3 Select the image to copy. The ✓ (select) indicator appears on the image.
- 4 Select **[ENTER]**. "MEMORY STICK ACCESS" appears.
- 5 When "CHANGE MEMORY STICK" is displayed, eject the "Memory Stick." "INSERT MEMORY STICK" appears.
- 6 Insert another "Memory Stick." "RECORDING" appears. When copying is completed, "COMPLETE" appears. If you exchange the "Memory Stick," the same image is copied again.

After copying is finished

Select **[EXIT]**.
If you do not select **[EXIT]**, the same image is copied each time you exchange the "Memory Stick."

To cancel copying part-way
Change the MODE selector setting or turn off the power.

Notes

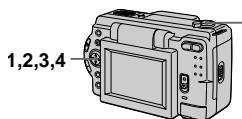
- You cannot copy uncompressed images.
- You cannot copy images that are bigger than 1.4 MB at once. If "NOT ENOUGH MEMORY" appears or ✓ flashes on the **INDEX** screen, cancel some images to copy and try again.

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
52

Selecting still images to print (PRINT MARK)

You can mark a print mark on still images recorded with your camera. This mark is convenient when you have images printed at a shop that conforms with the DPOF (Digital Print Order Format) standard.



In single mode


- 1 Set the MODE selector to **PLAY** and display the image you want to print.
- 2 Select **[FILE]**, **[PRINT MARK]**, and then **[ON]** from the menu. The  (print) mark is displayed on the image.

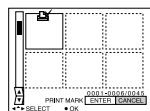
To unmark the print mark
Select **[OFF]** in step 2.

In INDEX mode

- 1 Set the MODE selector to **PLAY**, then display the **INDEX** screen.
- 2 Select **[FILE]**, **[PRINT MARK]**, and then **[SELECT]** from the menu.
- 3 Select the images to mark with the control button.


- 4 Select **[ENTER]**.

 of the selected images change from green to white.



To unmark selected print marks
Select the images to unmark in step 3 with the control button, then select **[ENTER]**.

To unmark all the print marks

Select **[FILE]**, **[PRINT MARK]**, **[ALL]** and then **[OFF]** from the menu.  of all images are unmarked.

Notes

- You cannot mark moving images or images recorded in **TEXT** mode.
- If you mark an image recorded in **TIFF** mode with a print mark, only the uncompressed image is printed, and the JPEG image recorded at the same time is not printed.

Editing

Additional information

Precautions

On cleaning

Cleaning the LCD screen

Wipe the screen surface with a cleaning cloth (not supplied) or a LCD cleaning kit (not supplied) to remove fingerprints, dust, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface dry. Do not use any type of solvent such as thinner, alcohol or benzene as this may damage the finish or the casing.

After using your camera at the seashore or other dusty locations
Clean your camera carefully. Otherwise, the salty air may corrode the metal fittings or dust may enter the inside of your camera, causing a malfunction.

Note on operating temperature

Your camera is designed for use between the temperatures of 32°F and 104°F (0°C and 40°C). Recording in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

If the camera is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense inside or outside the camera. Should this occur, the camera will not operate properly.

Moisture condensation occurs easily when:

- The camera is brought from a cold location such as a ski slope into a warmly heated room.
- The camera is taken from an air-conditioned room or car interior to the hot outdoors, etc.

How to prevent moisture condensation

When bringing the camera from a cold place to a warm place, seal the camera in a plastic bag and allow it to adapt to conditions at the new location over a period of time (about an hour).

If moisture condensation occurs

Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to record with moisture remaining inside the lens, you will be unable to record clear images.

On AC power adaptor

- Unplug the unit from the wall outlet (mains) when you are not using the unit for a long time.
- To disconnect the power cord (mains lead), pull it out by the plug. Never pull the power cord (mains lead) itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the power cord (mains lead) forcibly, or place a heavy object on it. This will damage the cord and may cause fire or electrical shock.
- Prevent metallic objects from coming into contact with the metal parts of the connecting section. If this happens, a short may occur and the unit may be damaged.
- Always keep metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment. AM reception and video operation are disturbed.
- The unit becomes warm during use. This is not a malfunction.
- Do not place the unit in locations that are:
 - Extremely hot or cold
 - Dusty or dirty
 - Very humid
 - Vibrating

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On battery pack

- Use only the specified charger with the charging function.
- To prevent accident from a short circuit, do not allow metal objects to come into contact with the battery terminals.
- Keep the battery pack away from fire.
- Never expose the battery pack to temperatures above 140°F (60°C), such as in a car parked in the sun or under direct sunlight.
- Keep the battery pack dry.
- Do not expose the battery pack to any mechanical shock.
- Do not disassemble nor modify the battery pack.
- Install the battery pack to the camera securely.
- Charging while some capacity remains does not affect the original battery capacity.

If any problem occurs, unplug your camera and contact your nearest Sony dealer.

On internal rechargeable button battery

This camera has an internal rechargeable button battery for maintaining the date and time and other settings regardless of whether the power is on or off. This rechargeable button battery is constantly charged as long as you are using the camera. However, if you use the camera for only short periods it discharges gradually, and if you do not use the camera at all for about half a year it becomes completely discharged. In this case, be sure to charge this rechargeable button battery before using the camera. However, even if this rechargeable button battery is not charged, you can still use the camera as long as you do not record the date and time.

Charging method

Connect the camera to a wall outlet (mains) with the AC power adaptor, or install a charged battery pack, and leave the camera for 24 hours or more with the POWER switch set to OFF.

On "Memory Sticks"

"Memory Stick" is a new compact, portable and versatile IC recording medium with a data capacity that exceeds a floppy disk. "Memory Stick" is specially designed for exchanging and sharing digital data among "Memory Stick" compatible products. Because it is removable, "Memory Stick" can also be used for external data storage.


There are two types of "Memory Sticks": general "Memory Sticks" and "MagicGate Memory Sticks" that are equipped with the MagicGate® copyright protection technology. You can use both types of "Memory Stick" with your camera. However, because your camera does not support the MagicGate standards, data recorded with your camera is not subject to MagicGate copyright protection.

* MagicGate is copyright protection technology that uses encryption technology.

Notes

- Do not remove the "Memory Stick" while reading or writing data.
- Data may be damaged if:
 - you remove the "Memory Stick" or turn off your camera while reading or writing data.
 - you use the "Memory Stick" in a location subject to the effects of static electricity or noise.
- Do not attach any other material than the supplied label on the labeling position.
- Attach the label so that it does not stick out from the proper attachment location.
- When you carry or store the "Memory Stick," put it in its supplied case.
- Do not touch the terminals of a "Memory Stick" with your hand or a metal object.
- Do not strike, bend or drop the "Memory Stick."
- Do not disassemble or modify the "Memory Stick."
- Do not allow the "Memory Stick" to get wet.

Additional information

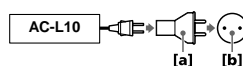
"Memory Stick", , "MagicGate Memory Stick" and  are trademarks of Sony Corporation.

"MagicGate" and **MAGICGATE** are trademarks of Sony Corporation.

Using your camera abroad

Power sources

You can use your camera in any country or area with the supplied battery charger within 100 V to 240 V AC, 50/60 Hz. Use the supplied AC power adaptor **[a]**, if necessary, depending on the design of the wall outlet (mains) **[b]**.



Watching the playback picture on TV

If you want to view the playback picture on a TV, you need a TV having a video input jack and a video connecting cable.

The color system of the TV must be the same as that of your digital still camera. TV color systems differ from country to country. Check the following list:

NTSC system countries

Bahama Islands, Bolivia, Canada, Central America, Chile, Columbia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.


PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, etc.





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Troubleshooting

If you experience trouble with your camera, first check the following items. Should your camera still not operate properly after you have made these checks, consult your Sony dealer or local authorized Sony service facility. If code displays (C:□□:□□) appear on the LCD screen, the self-diagnosis display function is working (page 62).

| Symptom | Cause and/or Solution |
|--------------------------------------|--|
| Your camera does not work. | <ul style="list-style-type: none">• You are not using an "InfoLITHIUM" battery pack.<ul style="list-style-type: none">→ Use an "InfoLITHIUM" battery pack (page 8).• The battery level is low (the  indicator appears on the LCD screen).<ul style="list-style-type: none">→ Charge the battery pack (page 9).• The AC power adaptor is not connected securely.<ul style="list-style-type: none">→ Connect it firmly to the DC IN jack of your camera and a wall outlet (mains) (page 12).• The built-in microcomputer is not working properly.<ul style="list-style-type: none">→ Disconnect and then reconnect all power sources after one minute. Then turn the power on by sliding the POWER switch down and check that the camera works properly. |
| Your camera cannot record images. | <ul style="list-style-type: none">• The MODE selector is set to PLAY.<ul style="list-style-type: none">→ Set it to MOVIE or STILL (pages 16, 20).• No "Memory Stick" has been inserted into your camera.<ul style="list-style-type: none">→ Insert a "Memory Stick" (page 15).• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Set it to the recording position. |
| The picture is out of focus. | <ul style="list-style-type: none">• Your camera is not in macro recording mode when you shoot a subject that is about 1 3/16 to 9 7/8 inches (3 to 25 cm) away from the lens.<ul style="list-style-type: none">→ Set the macro recording mode (page 41).→ Press the zoom button to set to the W side. |
| The resizing function does not work. | <ul style="list-style-type: none">• You cannot resize moving images and text images. |
| You cannot display a print mark. | <ul style="list-style-type: none">• You cannot display print marks on moving images and text images. |
| The picture is noisy. | <ul style="list-style-type: none">• Your camera is placed near a TV or other equipment that uses strong magnets.<ul style="list-style-type: none">→ Move your camera away from the TV, etc. |

Additional information

| Symptom | Cause and/or Solution |
|--|---|
| The picture is too dark. | <ul style="list-style-type: none">• You are shooting a subject with a light source behind the subject.<ul style="list-style-type: none">→ Adjust the exposure (page 43).→ Adjust the brightness of the LCD screen (page 35). |
| The flash does not work. | <ul style="list-style-type: none">• The flash is set to .<ul style="list-style-type: none">→ Set the flash to auto (no indicator),  or  (page 19).• PROGRAM AE is set to the Twilight, Twilight plus, or Panfocus mode.<ul style="list-style-type: none">→ Cancel the mode (page 42) or set the flash to .• The MODE selector is set to MOVIE (DSC-S50 only).<ul style="list-style-type: none">→ Set it to STILL. |
| The date and time are recorded incorrectly. | <ul style="list-style-type: none">• The date and time are not set correctly.<ul style="list-style-type: none">→ Set the correct date and time (page 13). |
| Vertical streaks appear when you are shooting a very bright subject. | <ul style="list-style-type: none">• The smear phenomenon is happening.<ul style="list-style-type: none">→ This is not a malfunction. |
| The battery life is short. | <ul style="list-style-type: none">• You are recording/playing back images under extremely cold temperatures.• The battery pack is not charged enough.<ul style="list-style-type: none">→ Charge the battery pack fully.• The battery pack is dead.<ul style="list-style-type: none">→ Replace the battery pack with a new one. |
| The battery remaining indicator is incorrect. | <ul style="list-style-type: none">• You have used the camera for a long time in an extremely hot or an extremely cold location.• The battery pack is dead.<ul style="list-style-type: none">→ Replace the battery pack with a new one (page 8).• The battery pack is discharged.<ul style="list-style-type: none">→ Install a charged battery pack (pages 8, 9). |
| Sufficient battery remaining indicator is displayed but the power runs out soon. | <ul style="list-style-type: none">→ Fully charge the battery pack (page 9). |
| The zoom does not work. | <ul style="list-style-type: none">• PROGRAM AE is set to the Panfocus mode.<ul style="list-style-type: none">→ Cancel the Panfocus mode (page 42). |
| Digital zoom does not function. | <ul style="list-style-type: none">• You cannot use digital zoom to record moving pictures. |

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
| Symptom | Cause and/or Solution |
|---|--|
| Your camera cannot play back images. | <ul style="list-style-type: none"> The MODE selector is set to STILL or MOVIE. → Set it to PLAY (page 21). |
| The image and sound break off when you play back an image on a personal computer. | <ul style="list-style-type: none"> You are playing back the file directly from the "Memory Stick." → Copy the file to the hard disk of the personal computer and then play back the file from the hard disk (page 27). |
| The image cannot be played back on a personal computer. | <ul style="list-style-type: none"> → Consult the personal computer or software manufacturer. |
| Your camera cannot delete an image. | <ul style="list-style-type: none"> The image is protected. → Cancel the protection (page 49). |
| The power turns off suddenly. | <ul style="list-style-type: none"> With the MODE selector set to STILL or MOVIE, if you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery. → Turn on the camera. The battery is discharged. → Replace it with a charged battery. |
| The image does not appear on the TV screen. | <ul style="list-style-type: none"> The video output signal setting of your camera is incorrect. → Change the setting (page 48). |
| A file error occurs when you play back a file. | <ul style="list-style-type: none"> The image size is larger than 1600×1200. → Use an image size of 1600×1200 or smaller. |
| The PROGRAM AE function does not work. | <ul style="list-style-type: none"> The camera is set to text mode. → Cancel text mode (page 42). |
| The LCD screen freezes momentarily. | <ul style="list-style-type: none"> This is a characteristic of the system and is not a malfunction. |

Additional Information

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Warning and notice messages

Various messages appear on the LCD screen. Check the corresponding descriptions in the following list.

| Message | Meaning |
|---|--|
| NO MEMORY STICK | No "Memory Stick" has been inserted. |
| SYSTEM ERROR | Turn the power off and on again. |
| MEMORY STICK ERROR | The inserted "Memory Stick" cannot be used with your camera, or is damaged. |
| FORMAT ERROR | Failed to format the "Memory Stick." |
| MEMORY STICK LOCKED | The write-protect tab on the "Memory Stick" is set to the LOCK position. |
| NO MEMORY SPACE | The capacity of the "Memory Stick" is full, and you cannot record or copy images. |
| NO FILE | No image has been recorded on the "Memory Stick." |
| FILE ERROR | An error occurred while playing back the image. |
| FILE PROTECT | The image is protected against erasure. |
| for "InfoLITHIUM" battery only | The battery is not the "InfoLITHIUM" type. |
| NOT ENOUGH MEMORY | The images you want to copy are too big to copy with your camera. |
| DIRECTORY ERROR | A directory with the same name already exists. |
| IMAGE SIZE OVER | You are playing back an image of a size that cannot be played back with your camera. |
| INVALID OPERATION | You are playing back a file that was created on equipment other than your camera. |
|  | The battery level is low or zero. |
|  | The image is protected. |


Additional Information

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| Symptom | Cause and/or Solution |
|--|--|
| Your personal computer does not recognize your camera. | <ul style="list-style-type: none"> The camera is turned off. → Turn on the camera. The battery level is low. → Use the AC power adaptor (page 12). The USB cable is not connected firmly. → Disconnect the USB cable, and connect it again firmly. Make sure that "PC MODE" is displayed on the LCD screen (page 26). The USB connectors on your personal computer are connected to other equipment besides the keyboard, the mouse, and your camera. → Disconnect the USB cables except for the ones connected to the keyboard, the mouse, and your camera (page 24). |

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Self-diagnosis display

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



Self-diagnosis display

- C:□□:□□
You can reverse the camera malfunction yourself.
- E:□□:□□
Contact your Sony dealer or local authorized Sony service facility.

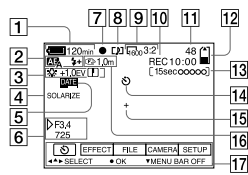
| First three digits | Cause and/or Corrective Action |
|--------------------|---|
| C:32:□□ | <ul style="list-style-type: none"> There is trouble with your camera's hardware. → Turn the power off and on again. |
| C:13:□□ | <ul style="list-style-type: none"> An unformatted "Memory Stick" is inserted. → Format the "Memory Stick" (page 32). The inserted "Memory Stick" cannot be used with your camera, or is damaged. → Insert a new "Memory Stick" (page 15). |
| E:61:□□ E:91:□□ | <ul style="list-style-type: none"> A camera malfunction that you cannot reverse has occurred. → Contact your Sony dealer or local authorized Sony service facility and inform them of the 5-digit service code. (example: E:61:10) |

If you are unable to solve the problem even after trying the corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

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LCD screen indicators

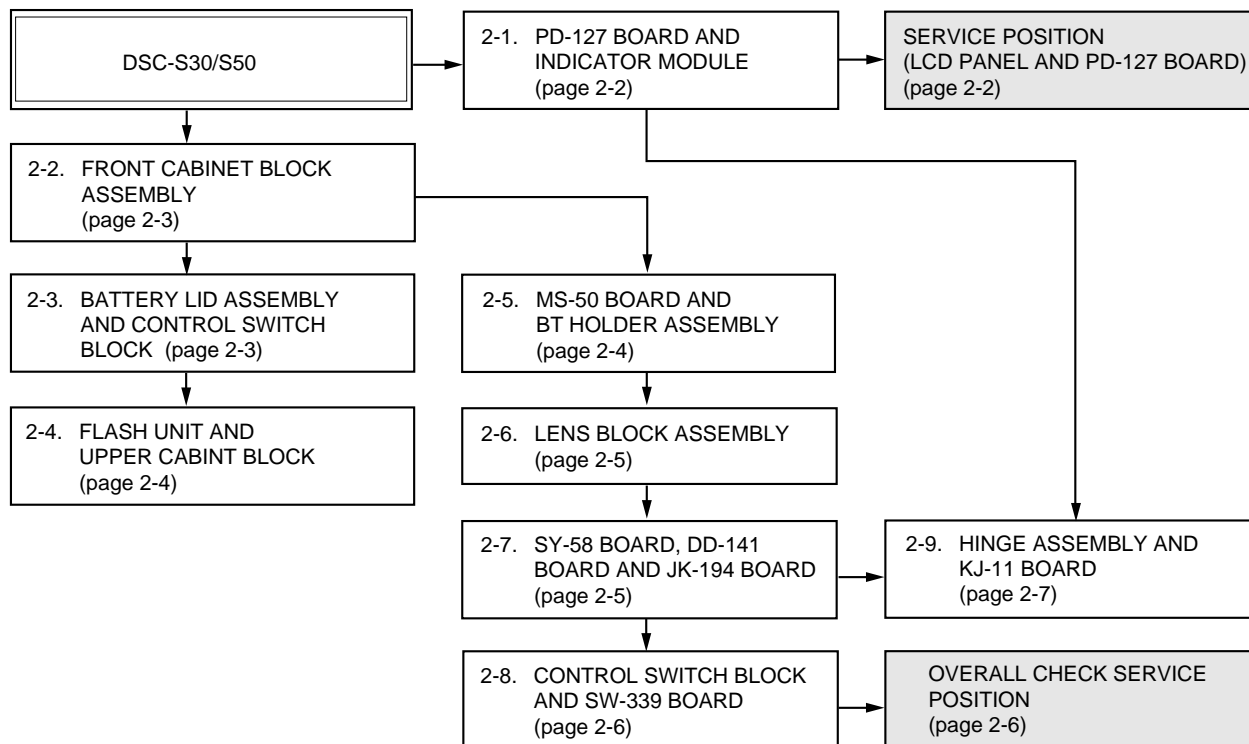
The indicators during recording



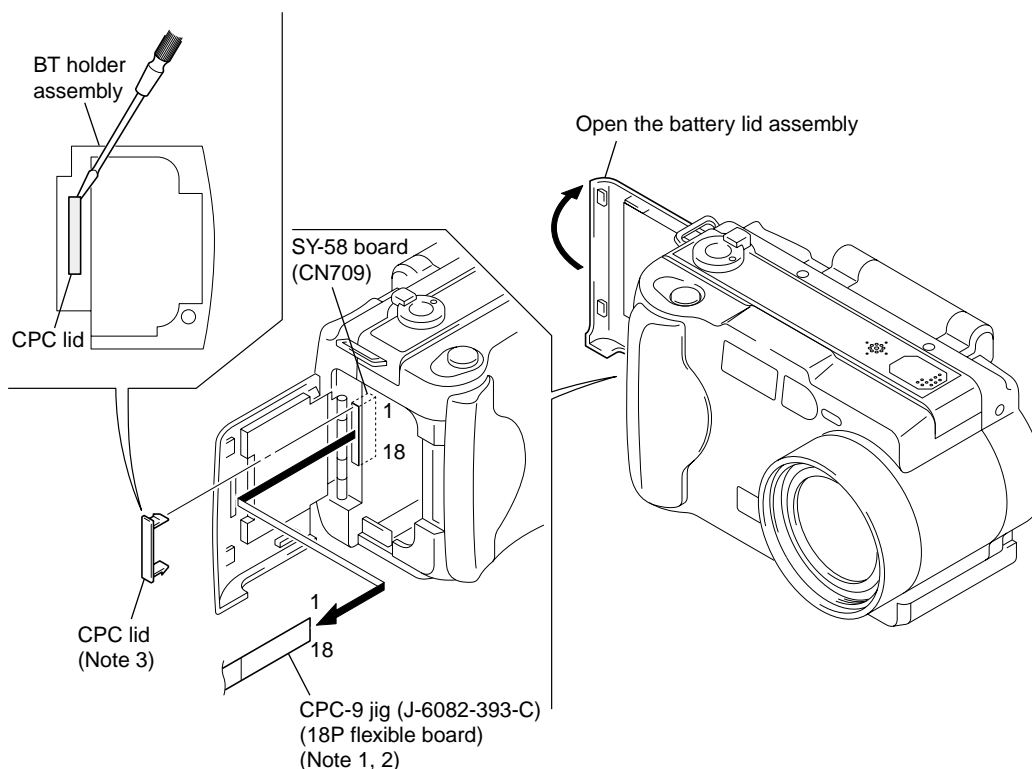
- | | |
|--|--|
| 1 Battery remaining indicator | 10 Self-diagnosis function/ recording time indicator |
| 2 PROGRAM AE/flash level/flash mode indicator | 11 Number of recorded images |
| 3 White balance/EV level/ sharpness indicator | 12 Remaining memory capacity indicator |
| 4 Picture effect indicator | 13 Moving image/VOICE recording time indicator (DSC-S50 only) |
| 5 Date/time indicator | 14 Self-timer indicator |
| 6 Aperture/shutter speed indicator | 15 Spot light-metering indicator |
| 7 AE lock/focus lock indicator | 16 Focus/macro mode indicator |
| 8 Recording mode indicator | 17 Menu bar and guide menu |
| 9 Image size indicator | They appear by pressing ▲ on the control button and disappear by pressing ▼ of it. |

SECTION 2 DISASSEMBLY

- This set can be disassembled in the order shown below.



• ATTACHMENT OF CPC-9 JIG



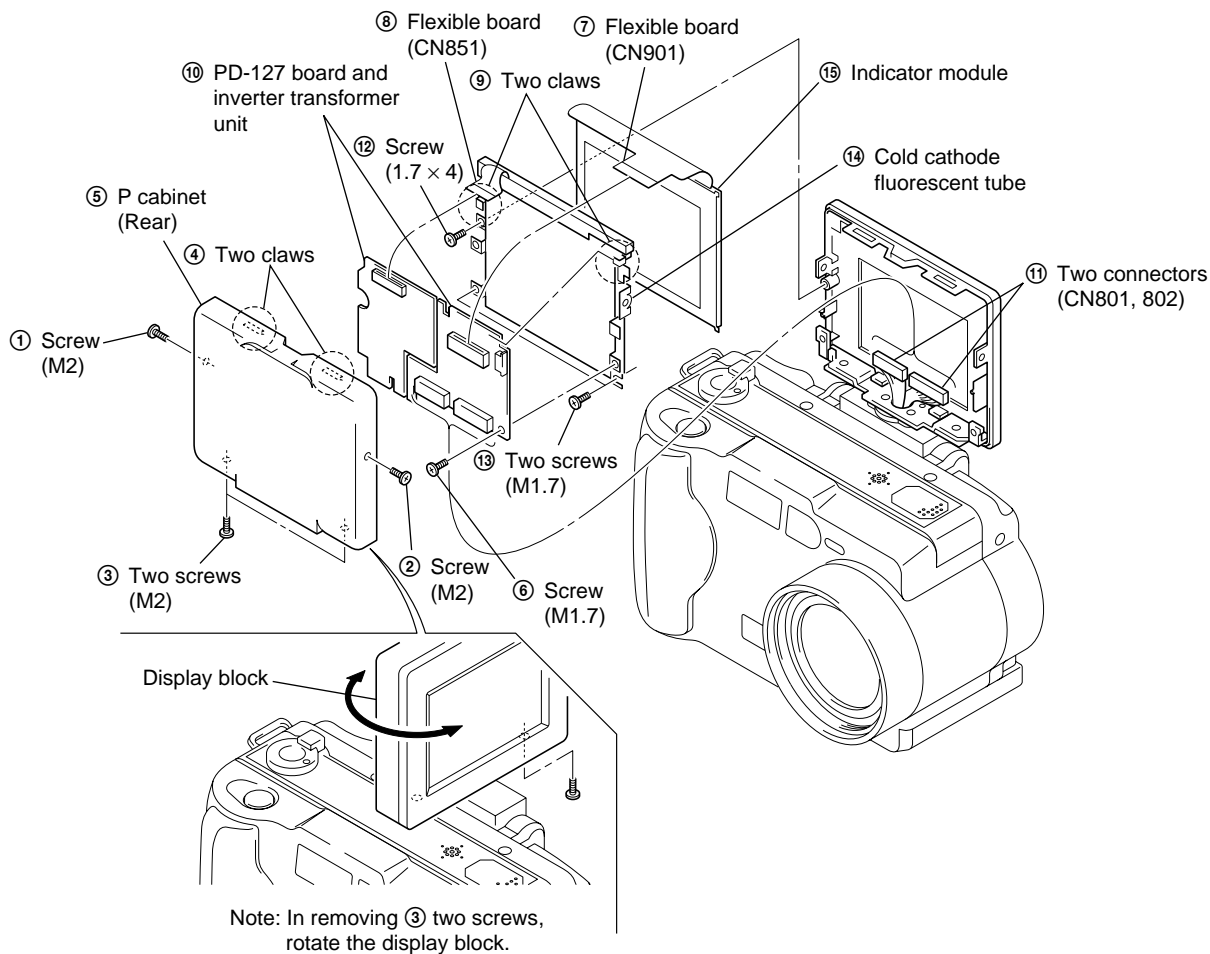
Note 1: Don't use the 12 pin flexible board of CPC-9 jig. It causes damage to the u

Note 2: The old CPC-9 jig (Parts code: J-6082-393-B) cannot be used, because it cannot operate the adjustment remote commander.

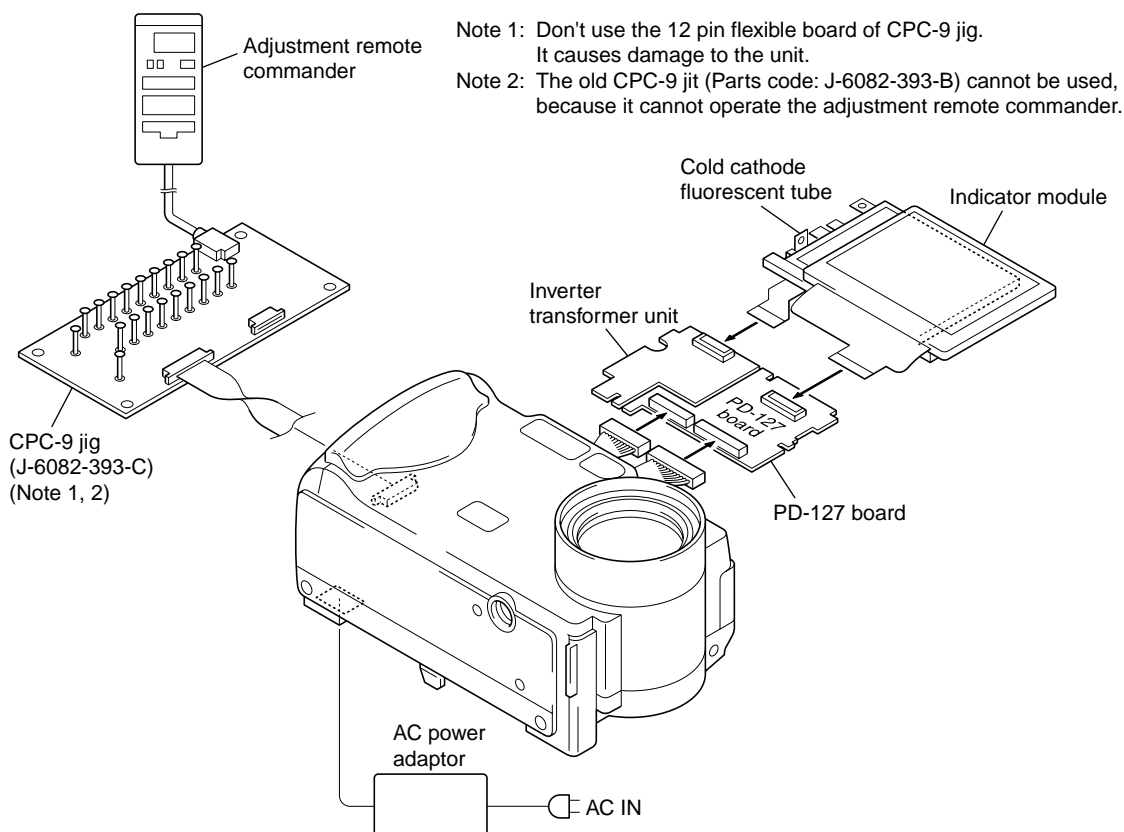
Note 3: In removing the CPC lid, start from the upper side.

Note: Follow the disassembly procedure in the numerical order given.

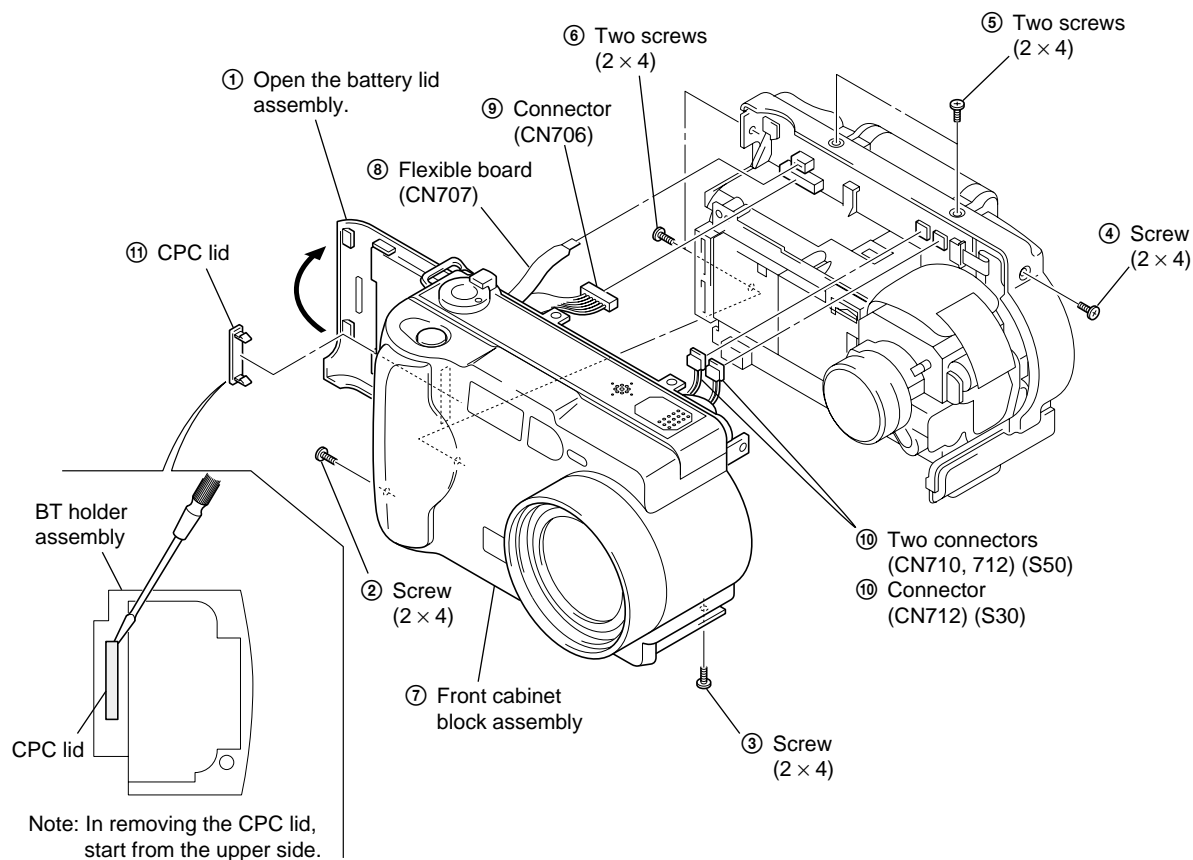
2-1. PD-127 BOARD AND INDICATOR MODULE



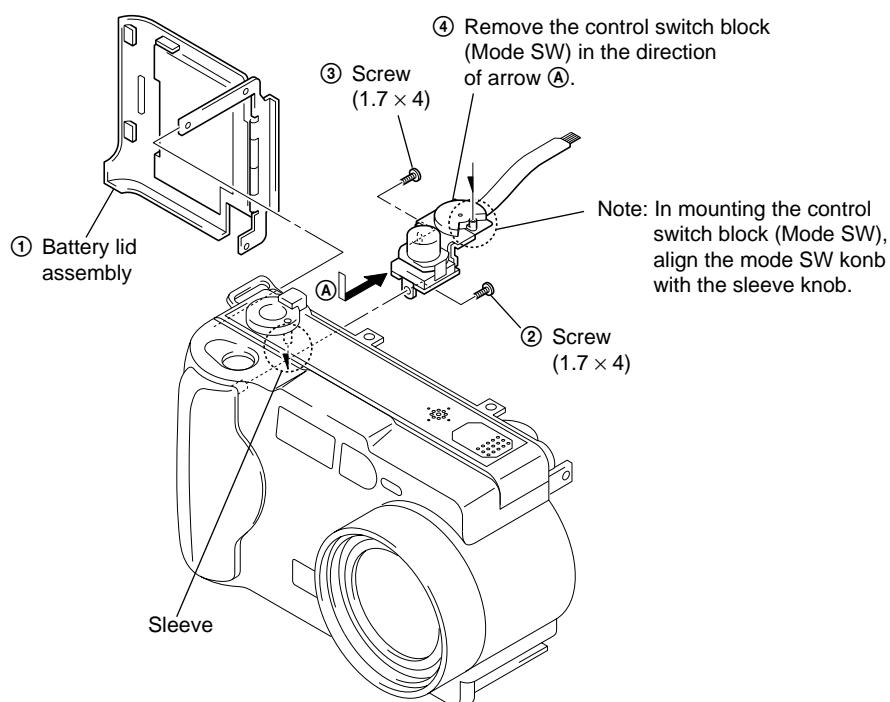
[SERVICE POSITION (LCD PANEL and PD-127 BOARD)]



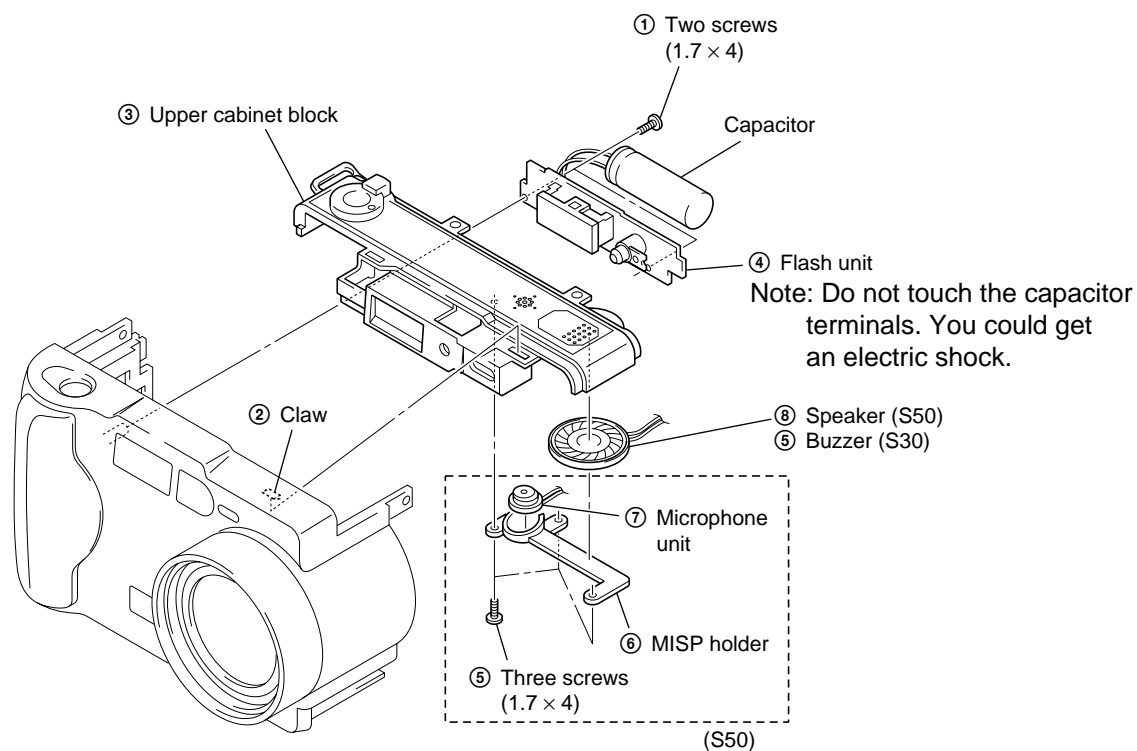
2-2. FRONT CABINET BLOCK ASSEMBLY



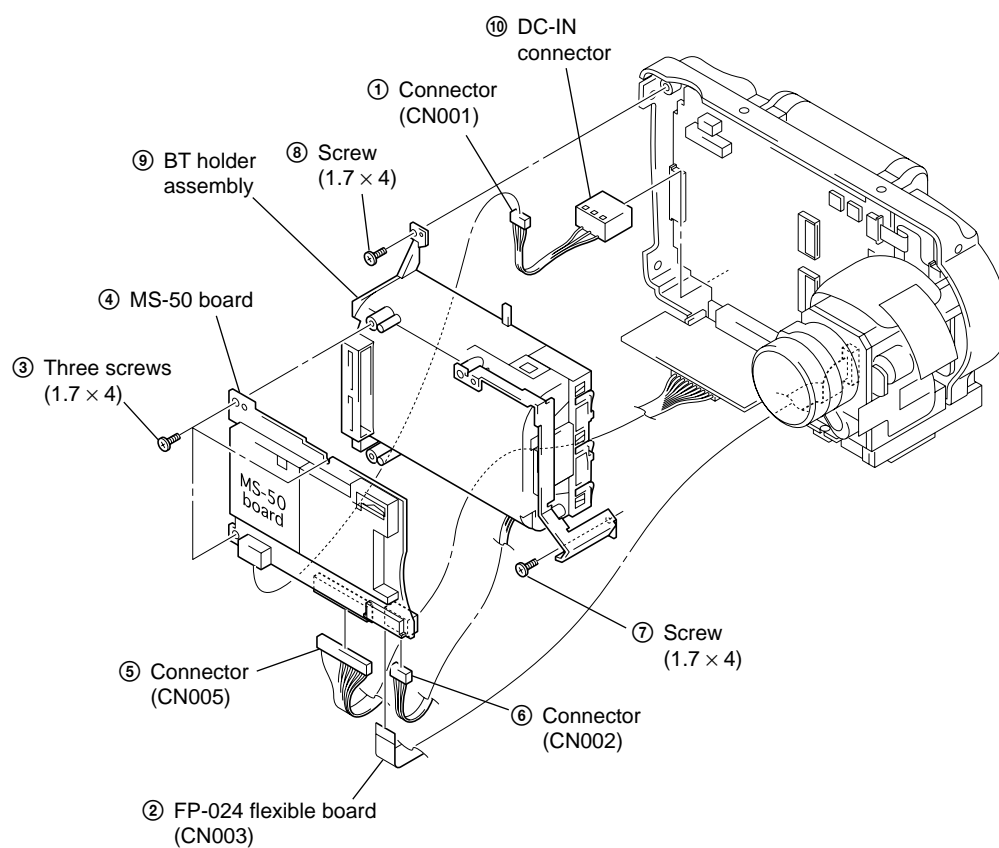
2-3. BATTERY LID ASSEMBLY AND CONTROL SWITCH BLOCK



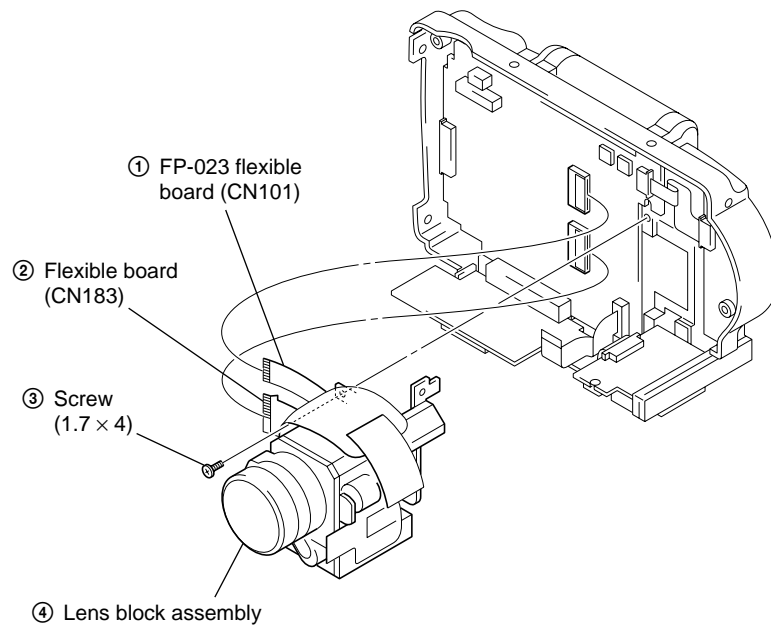
2-4. FLASH UNIT AND UPPER CABINET BLOCK



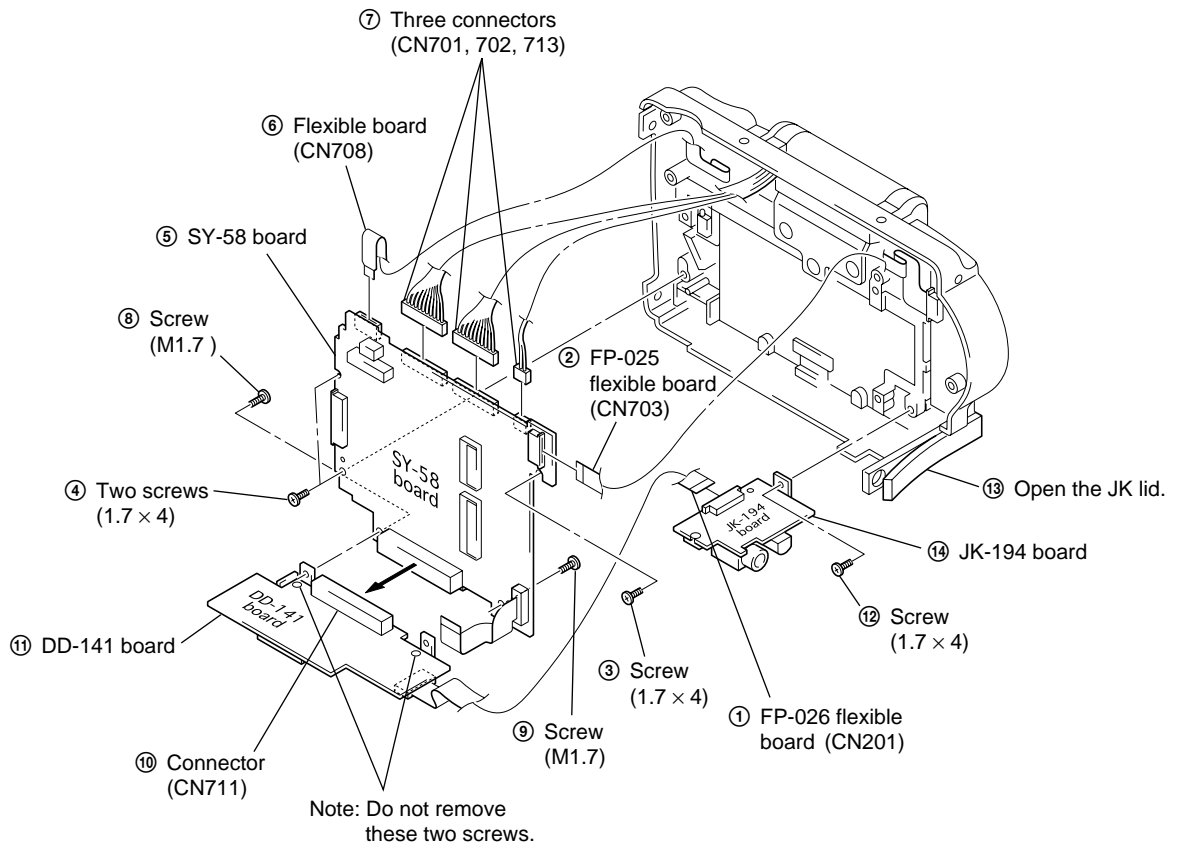
2-5. MS-50 BOARD AND BT HOLDER ASSEMBLY



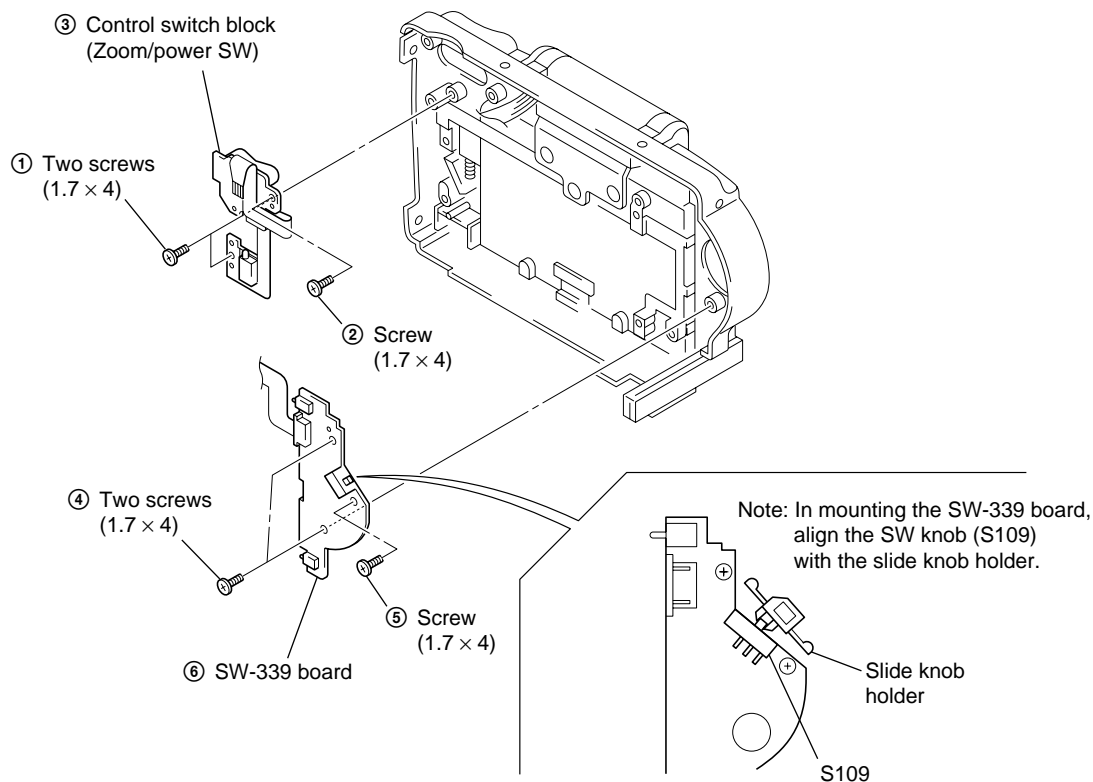
2-6. LENS BLOCK ASSEMBLY



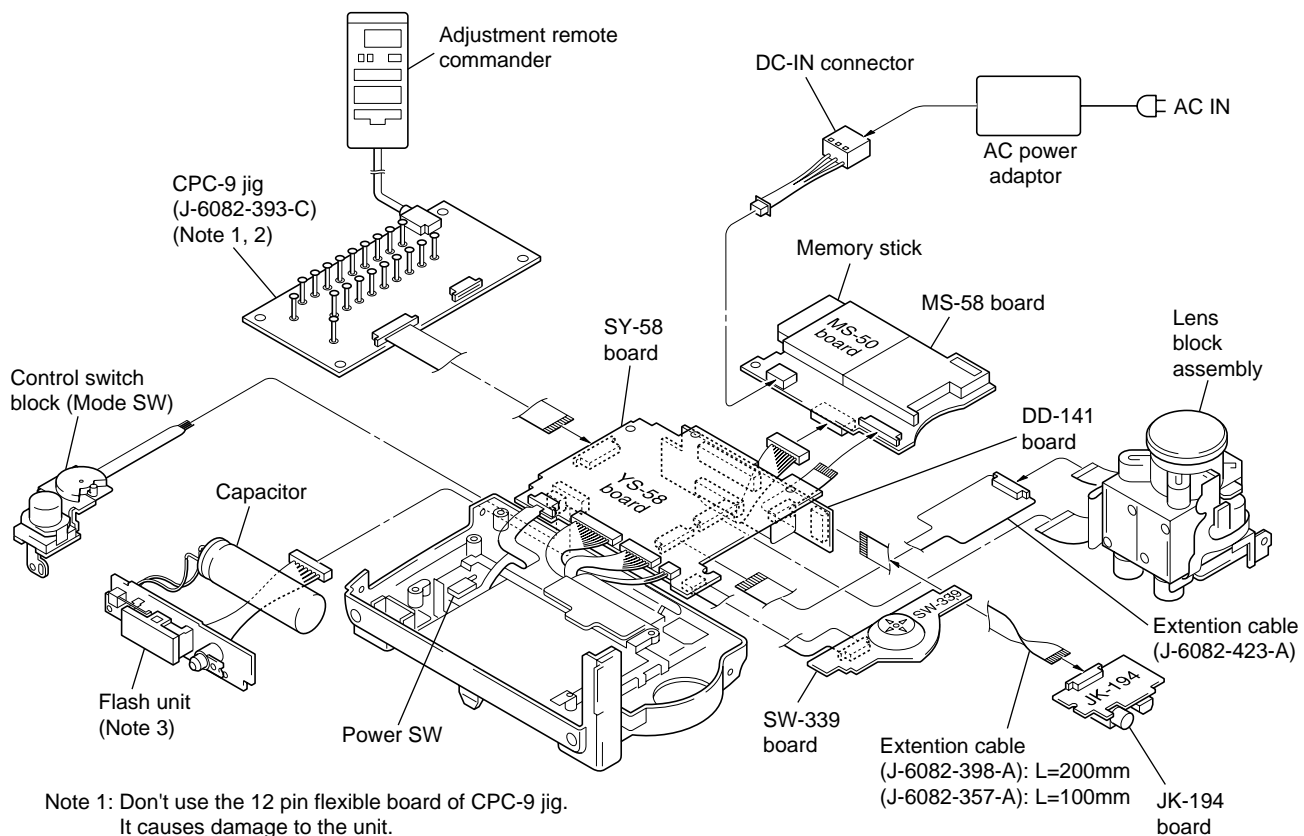
2-7. SY-58 BOARD, DD-141 BOARD AND JK-194 BOARD



2-8. CONTROL SWITCH BLOCK AND SW-339 BOARD



[OVERALL CHECK SERVICE POSITION]



Note 1: Don't use the 12 pin flexible board of CPC-9 jig.

It causes damage to the unit.

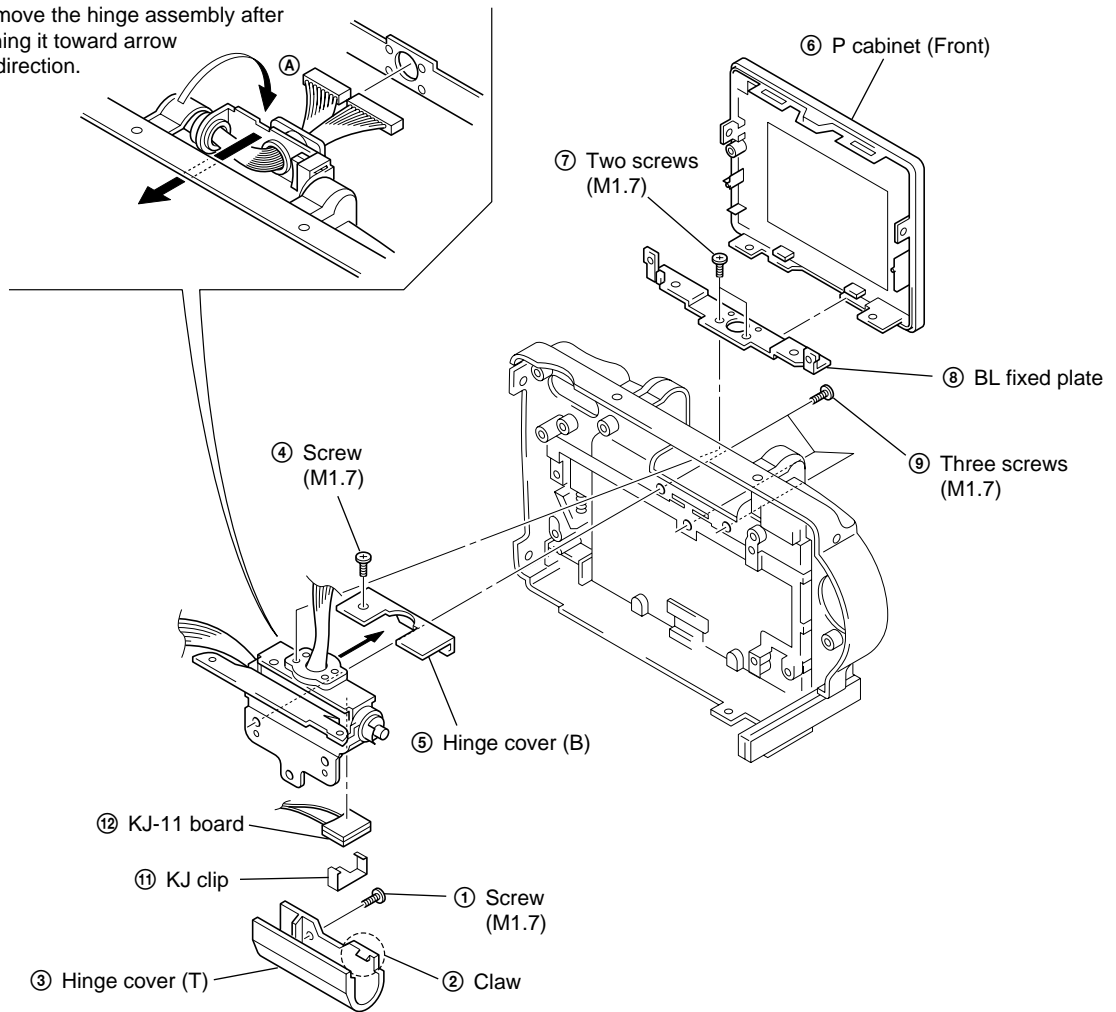
Note 2: The old CPC-9 jig (Parts code: J-6082-393-B) Cannot be used, because it cannot operate the adjustment remote commander.

Note 3: Do not touch the capacitor terminals.

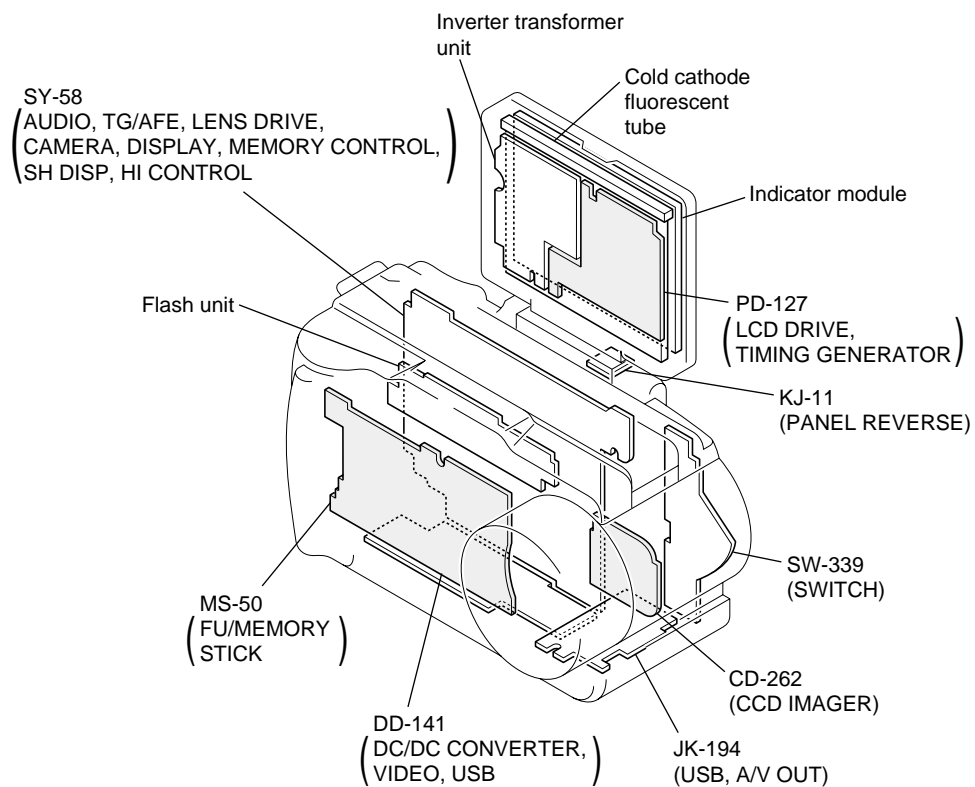
You could get an electric shock.

2-9. HINGE ASSEMBLY AND KJ-11 BOARD

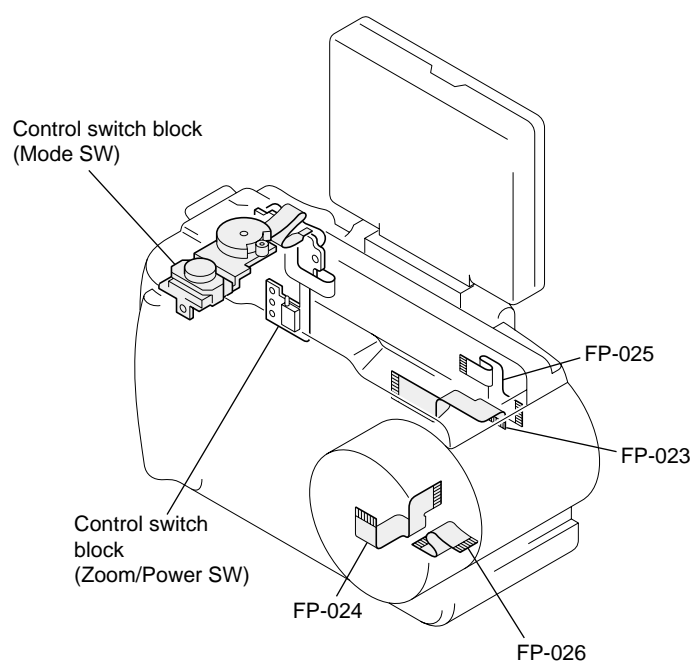
- ⑩ Remove the hinge assembly after turning it toward arrow (A) direction.



2-10. CIRCUIT BOARDS LOCATION

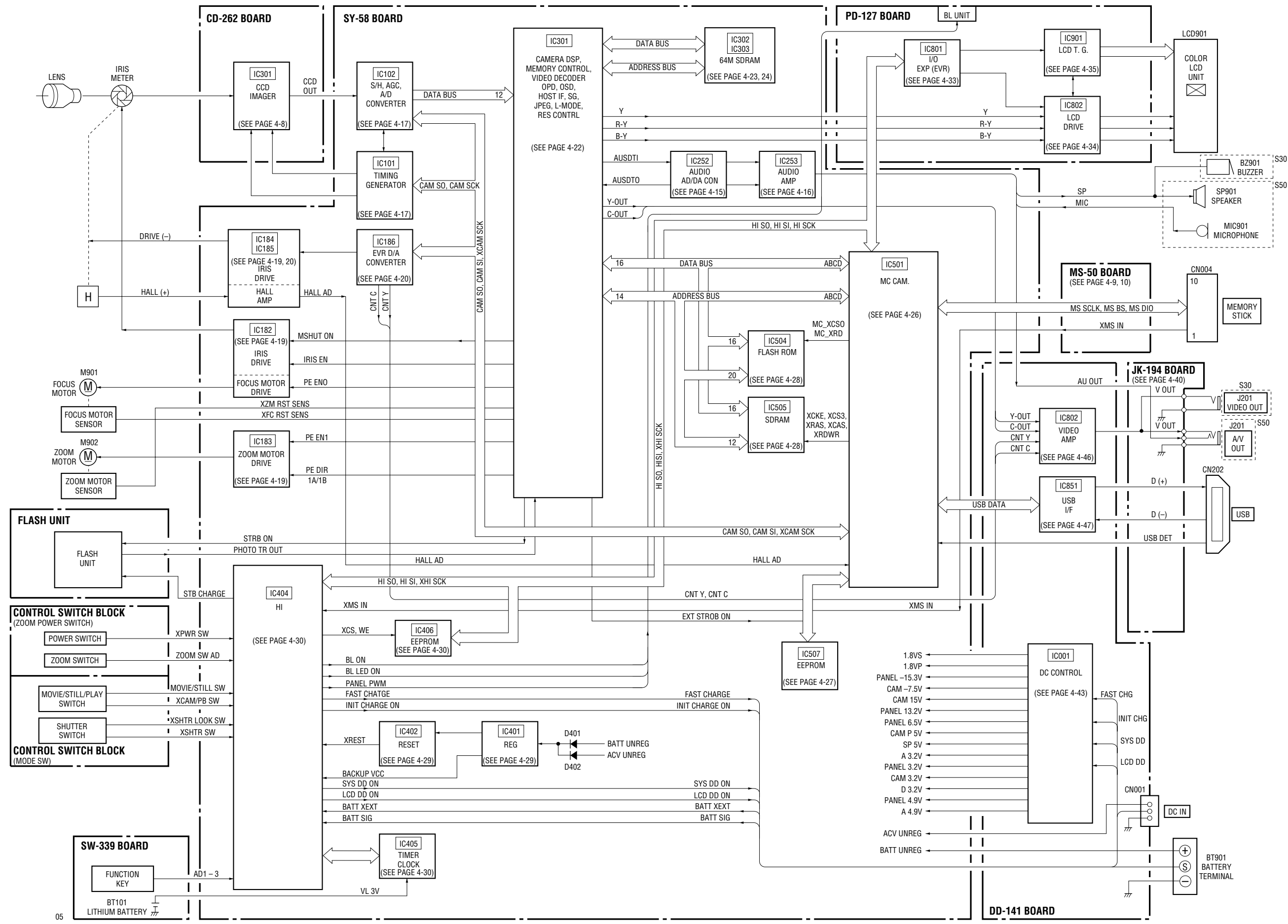


2-11. FLEXIBLE BOARDS LOCATION



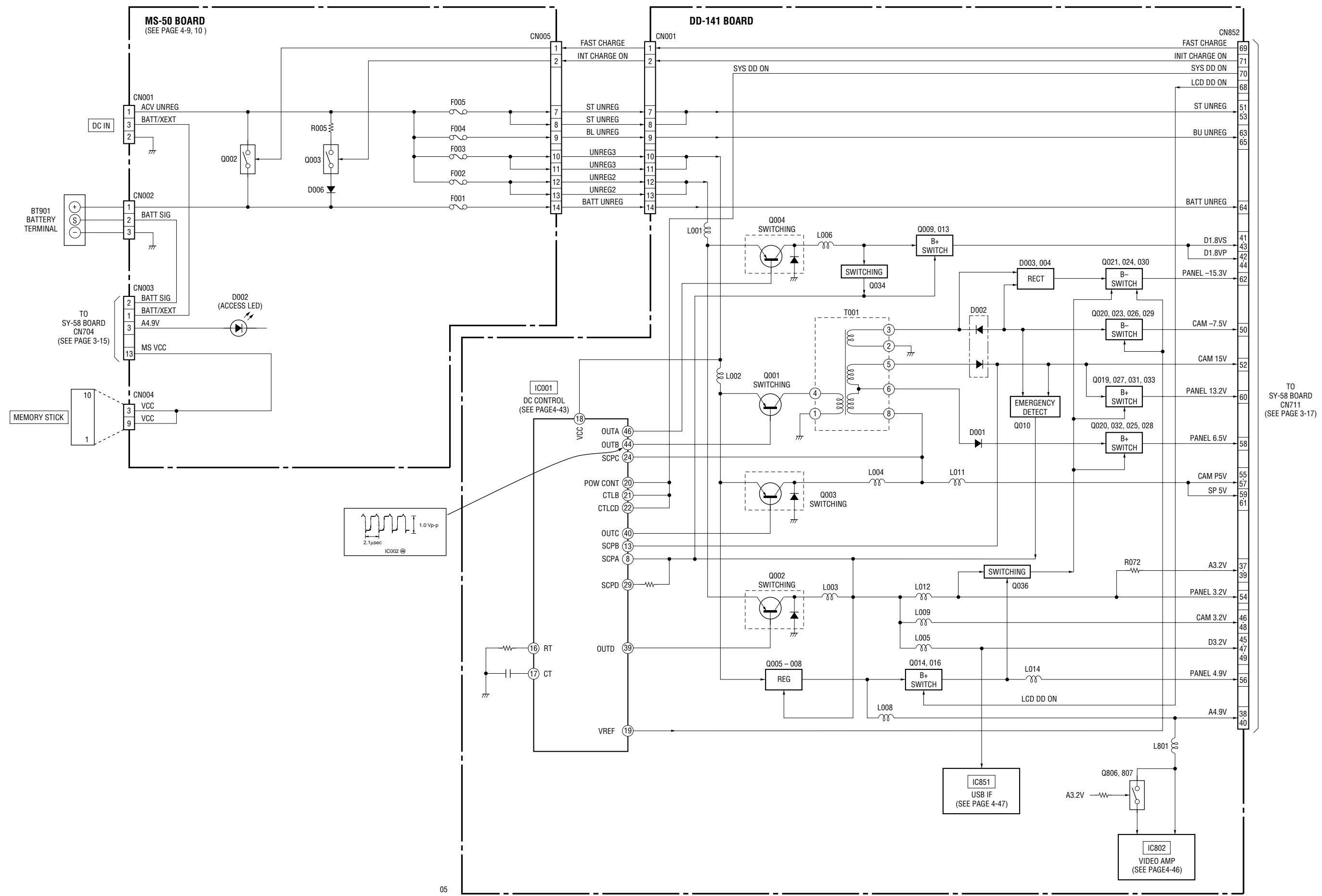
SECTION 3
BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM

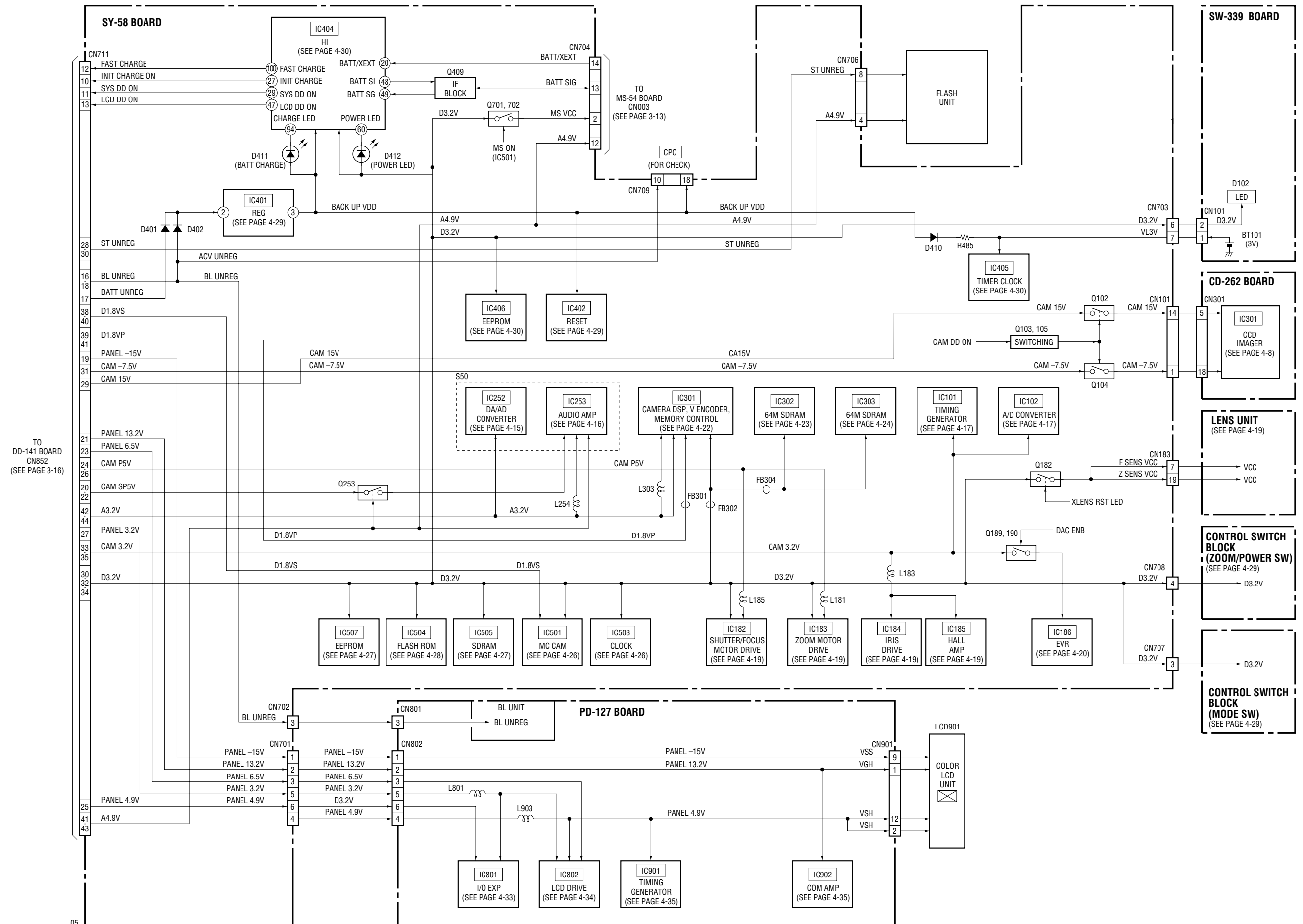


05

3-8. POWER BLOCK DIAGRAM 1



3-9. POWER BLOCK DIAGRAM 2

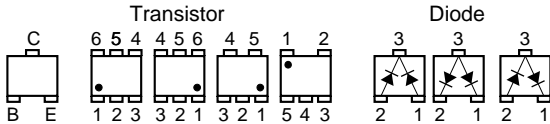


SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

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

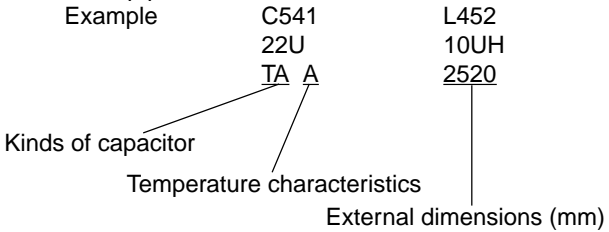
(For printed wiring boards)

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



(For schematic diagrams)

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



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

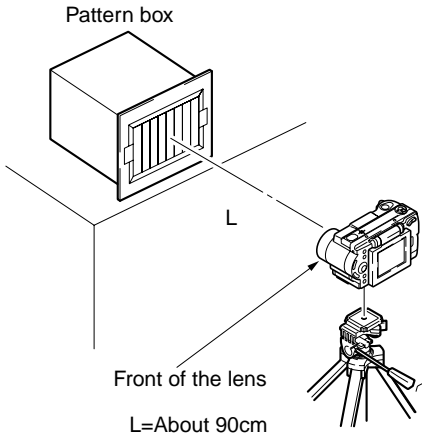
Note : The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

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

(Measuring conditions voltage and waveform)

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

1. Connection



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

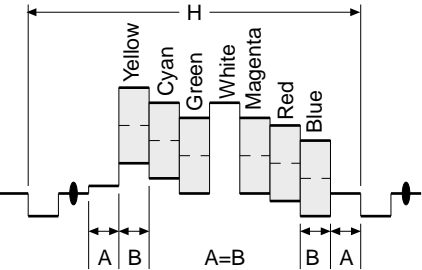


Fig. a (Video output terminal output waveform)

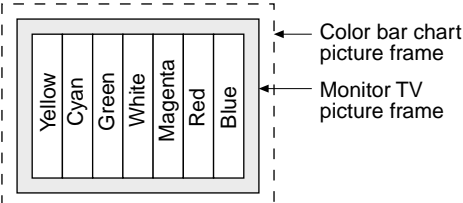
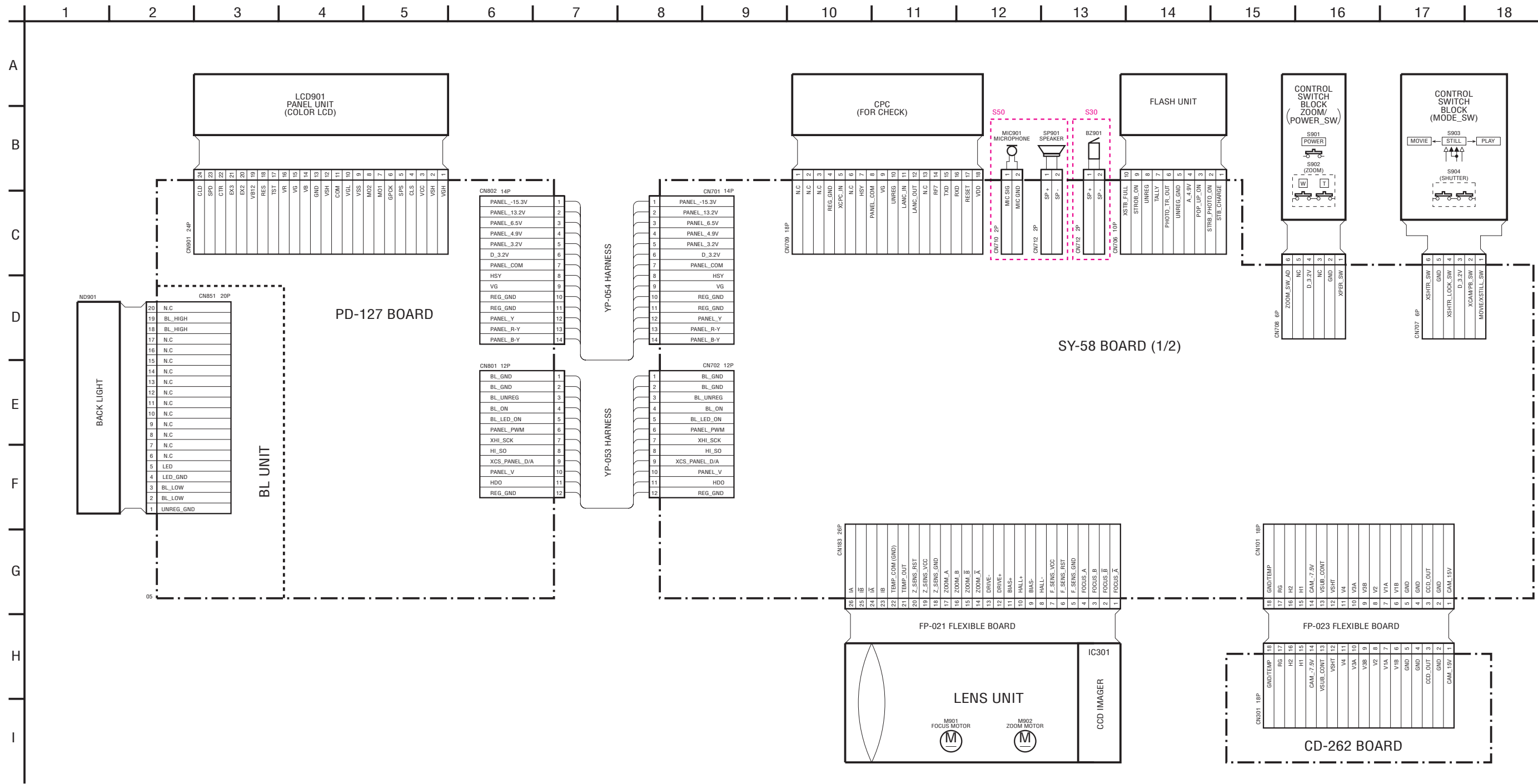


Fig.b (Picture on monitor TV)

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

4-1. FRAME SCHEMATIC DIAGRAMS

FRAME SCHEMATIC DIAGRAM (1/2)





4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

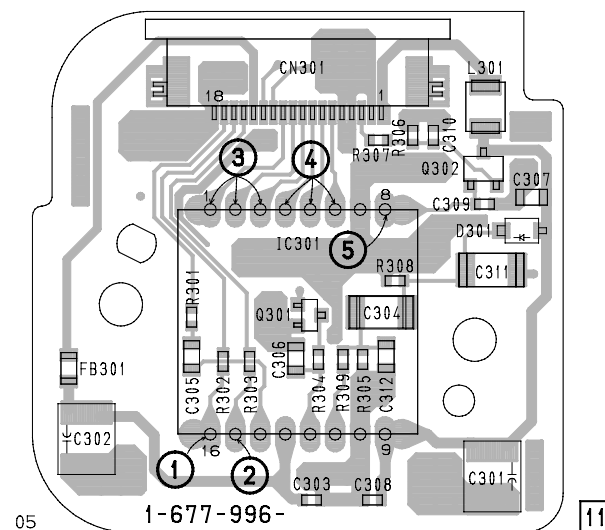
CD-262 (CCD IMAGER) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

– Ref. No.: CD-262 board; 2,000 series –

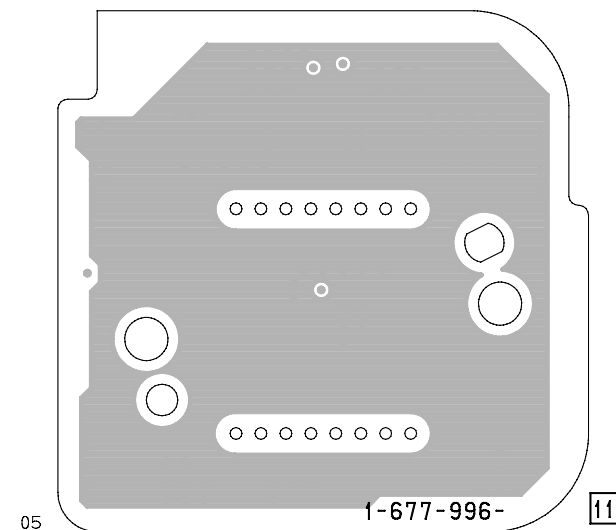
- **For Printed Wiring Board.**
- CD-262 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



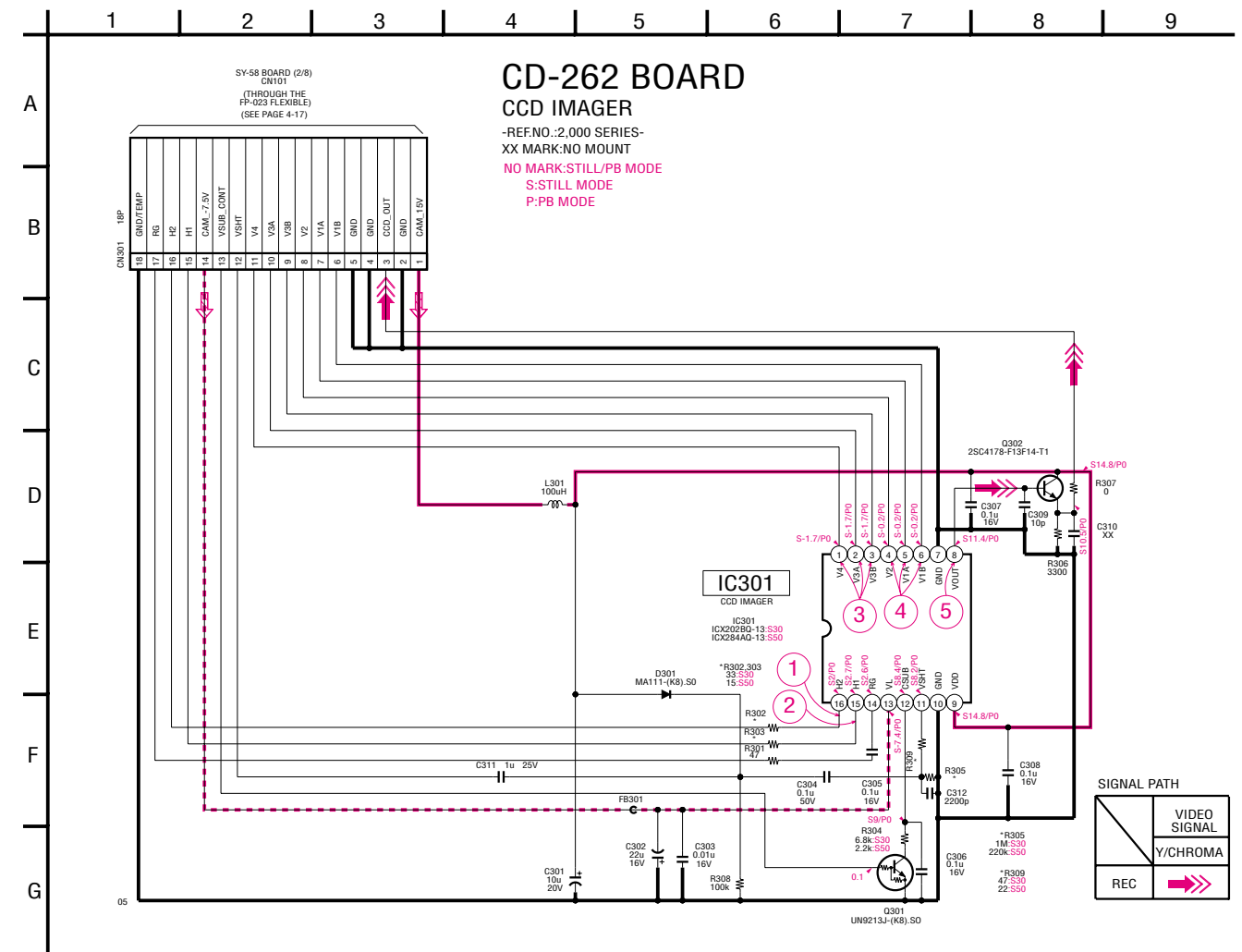
CD-262 BOARD
(SIDE A)



CD-262 BOARD
(SIDE B)



- See page 4-49 for waveforms.



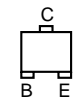
Precautions for Replacement of CCD Imager

- The CD-262 board mounted as a repair part is not equipped with a CCD imager.
When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

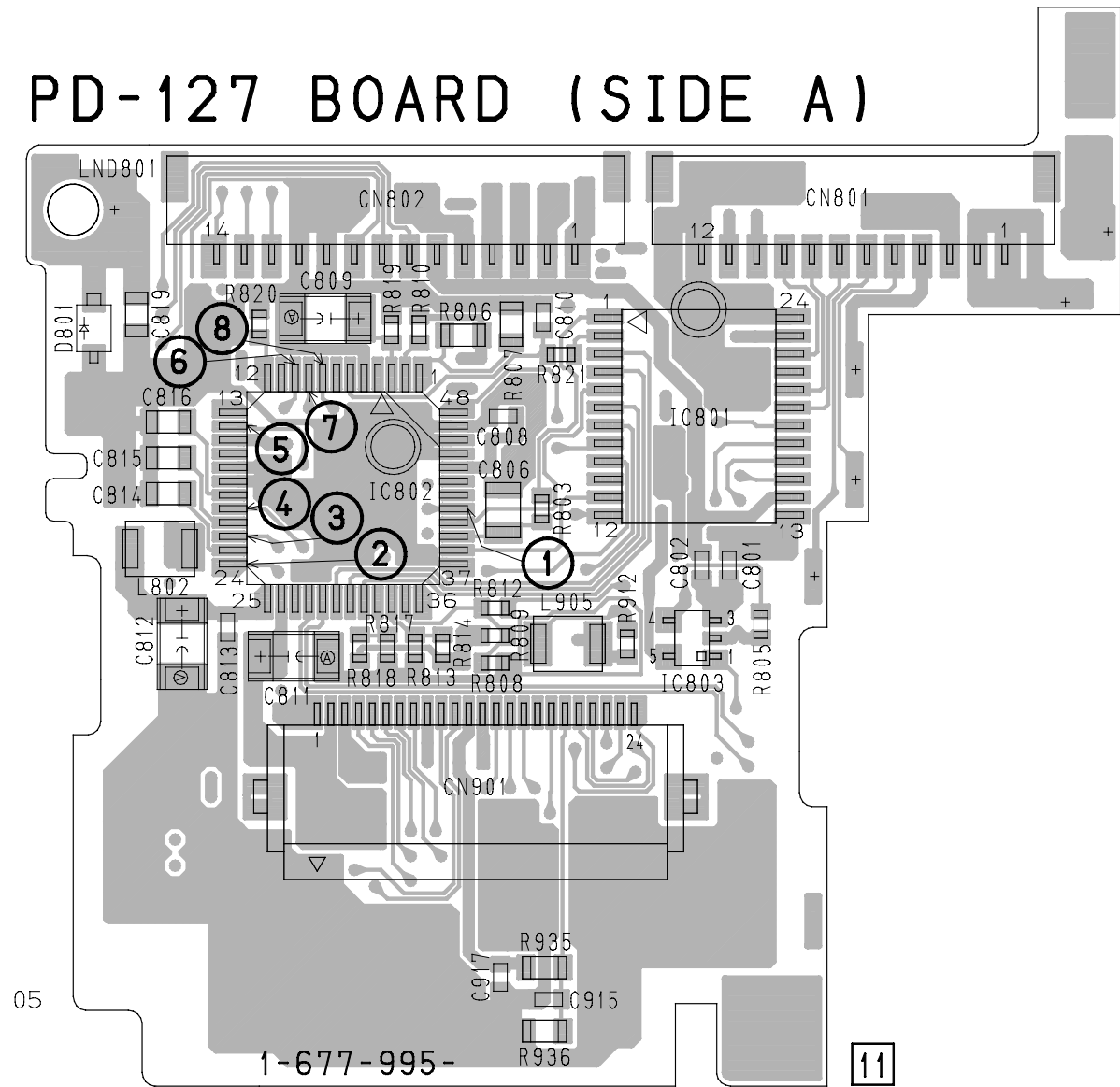
PD-127 (TG, LCD) PRINTED WIRING BOARD

– Ref. No.: PD-127 board; 2,000 series –

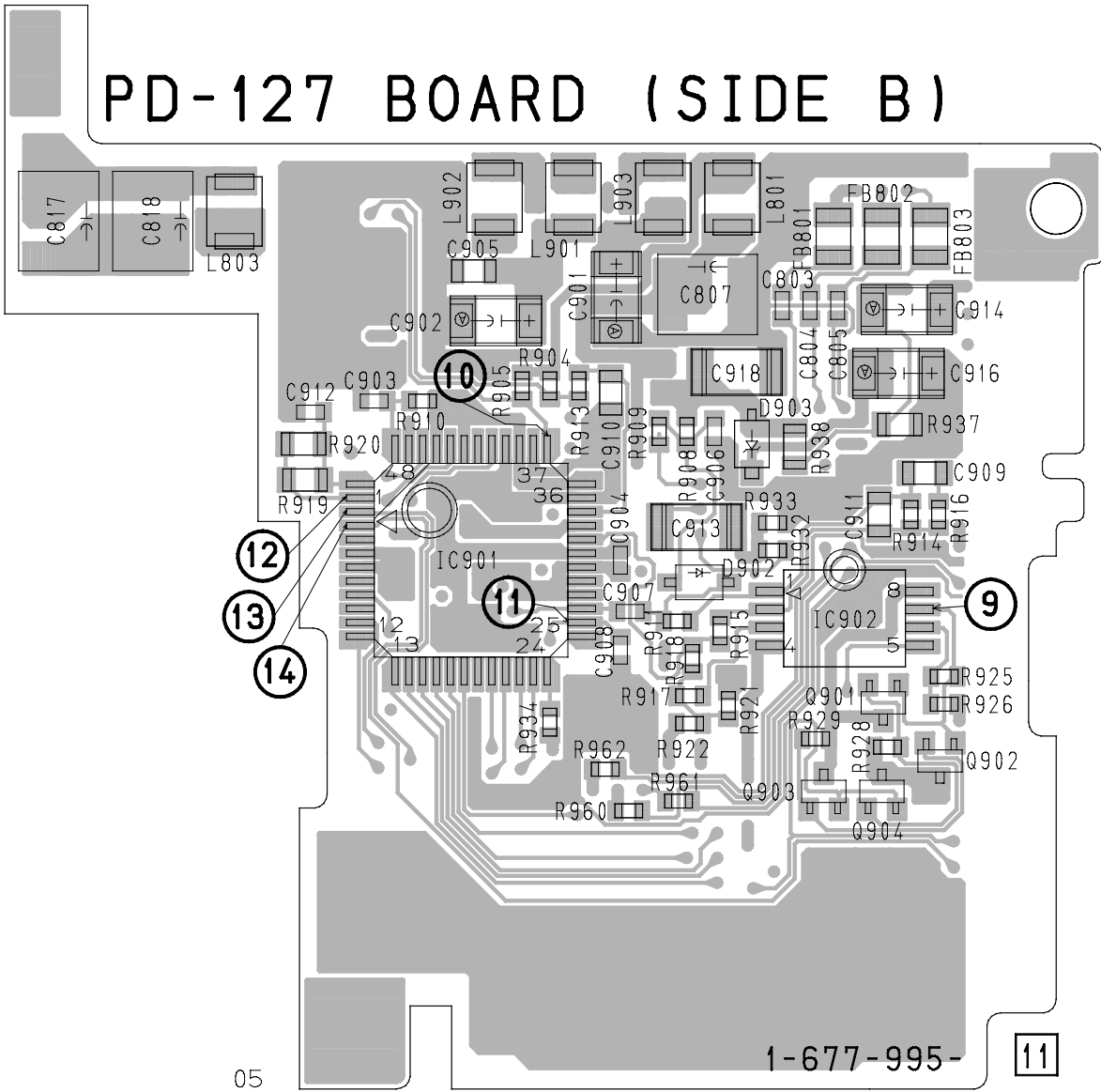
- **For Printed Wiring Board.**
- PD-127 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



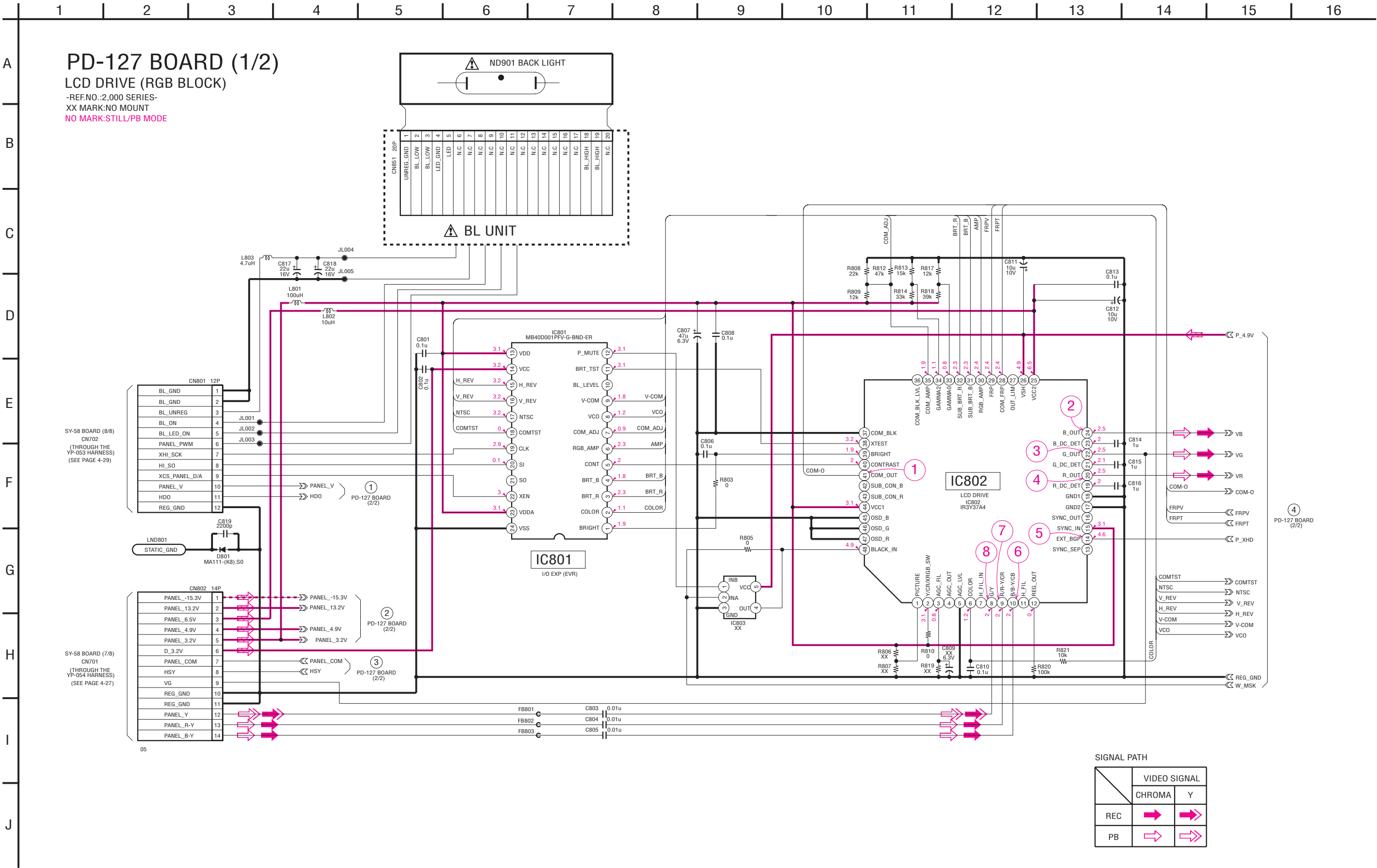
PD-127 BOARD (SIDE A)



PD-127 BOARD (SIDE B)



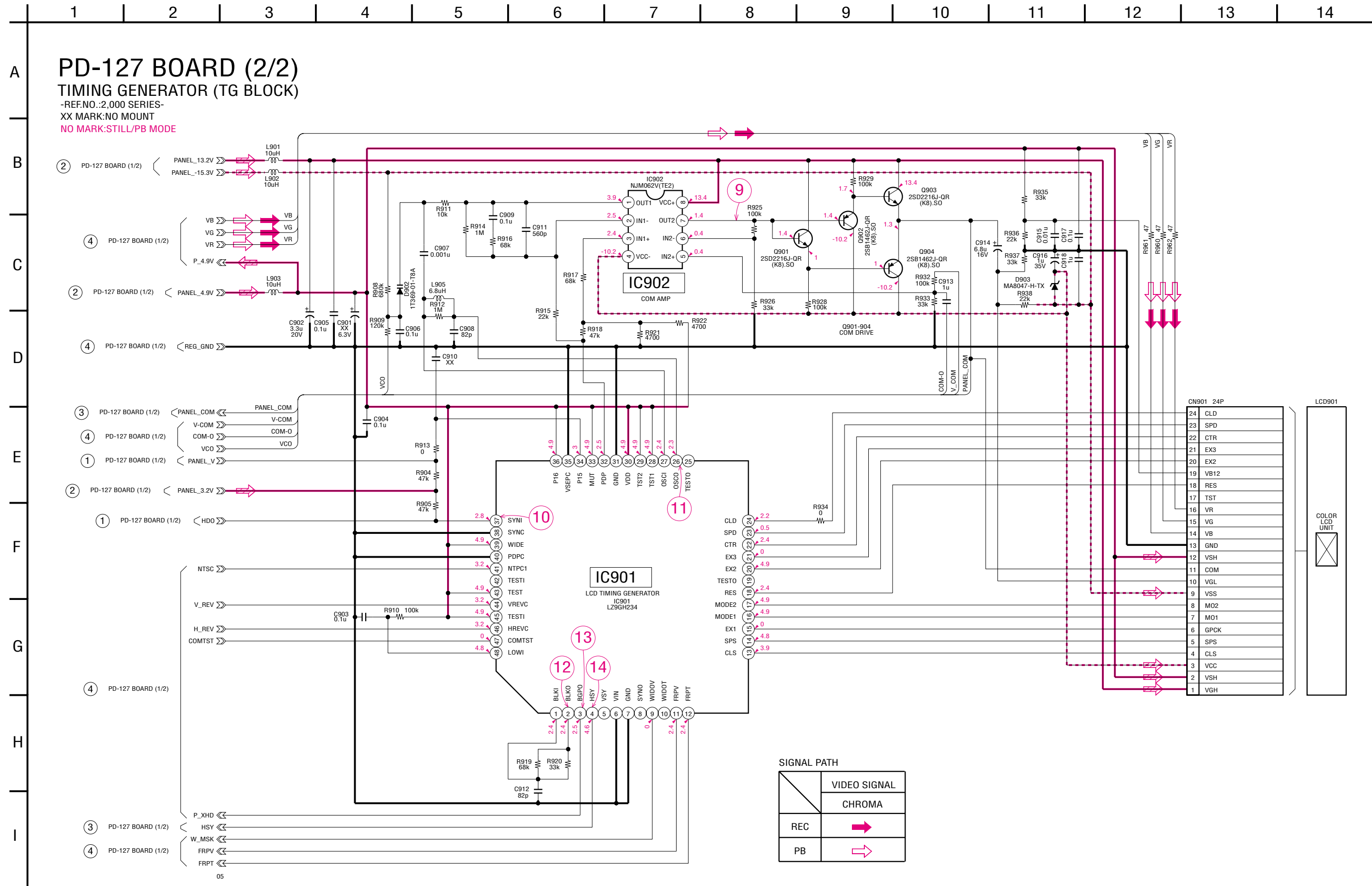
PD-127 (LCD DRIVE) SCHEMATIC DIAGRAM • See page 4-49 for waveforms.



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

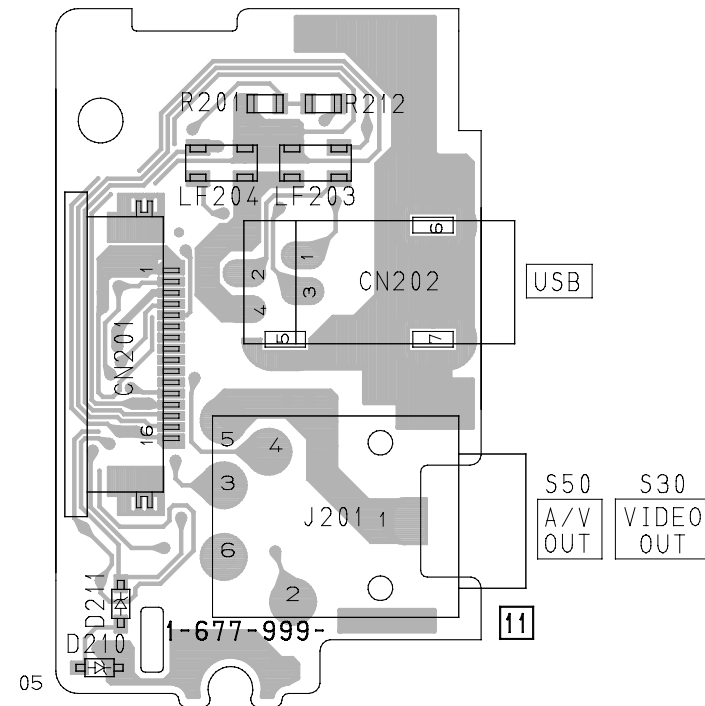
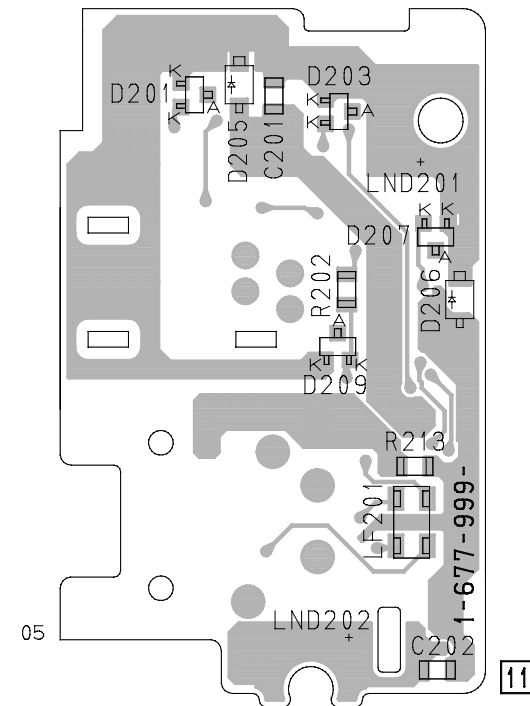
Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-127 (TIMING GENERATOR) SCHEMATIC DIAGRAM • See page 4-31 for PD-127 printed wiring board. • See page 4-49 for waveforms.

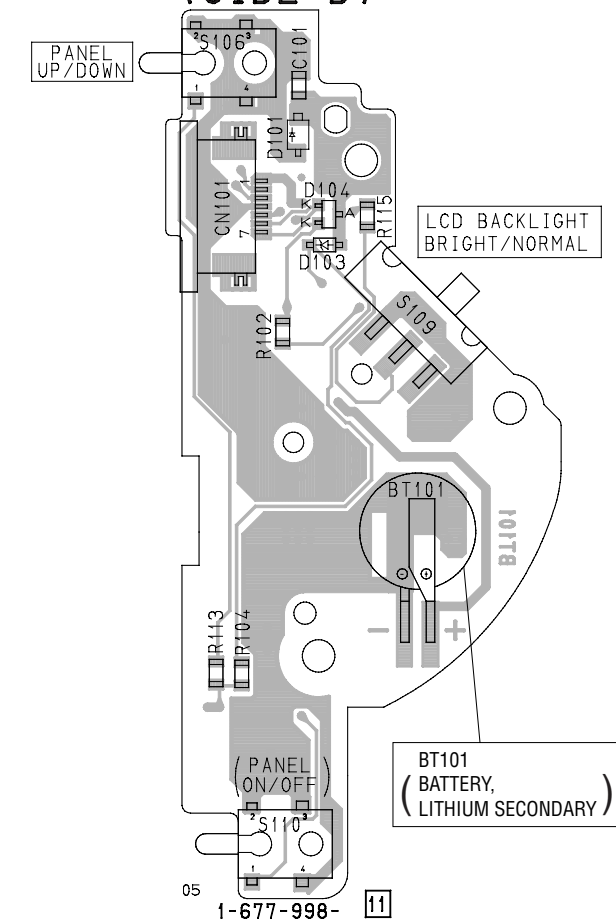
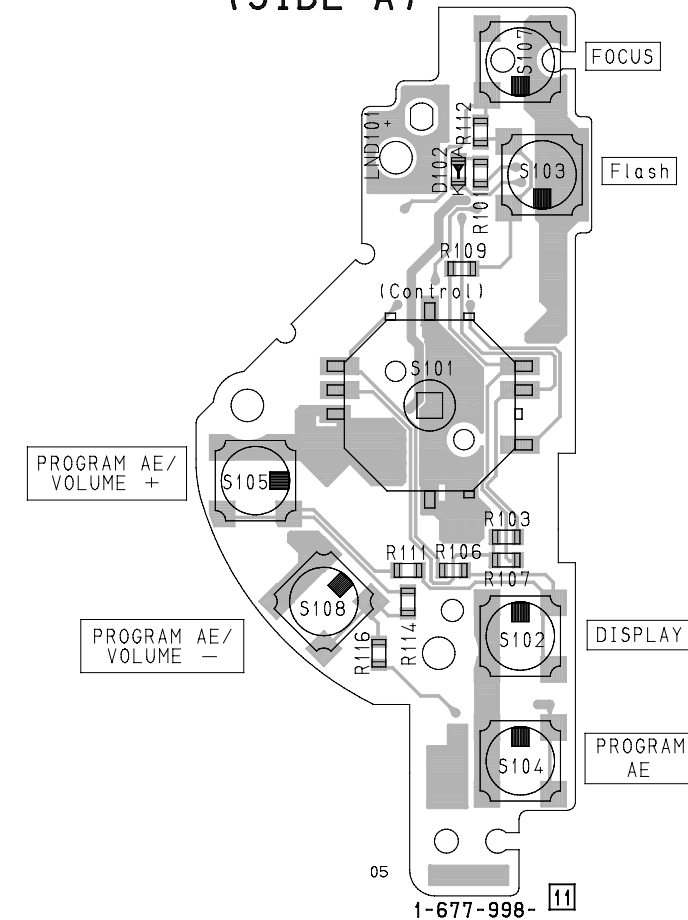


- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip Diode

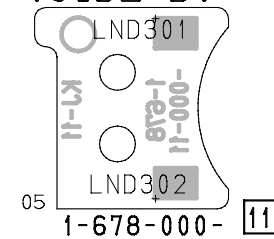
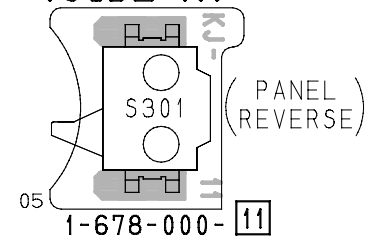
JK-194 BOARD
(SIDE B)

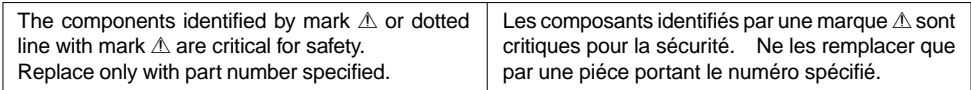


SW-339 BOARD
(SIDE B)



KJ-11 BOARD
(SIDE B)





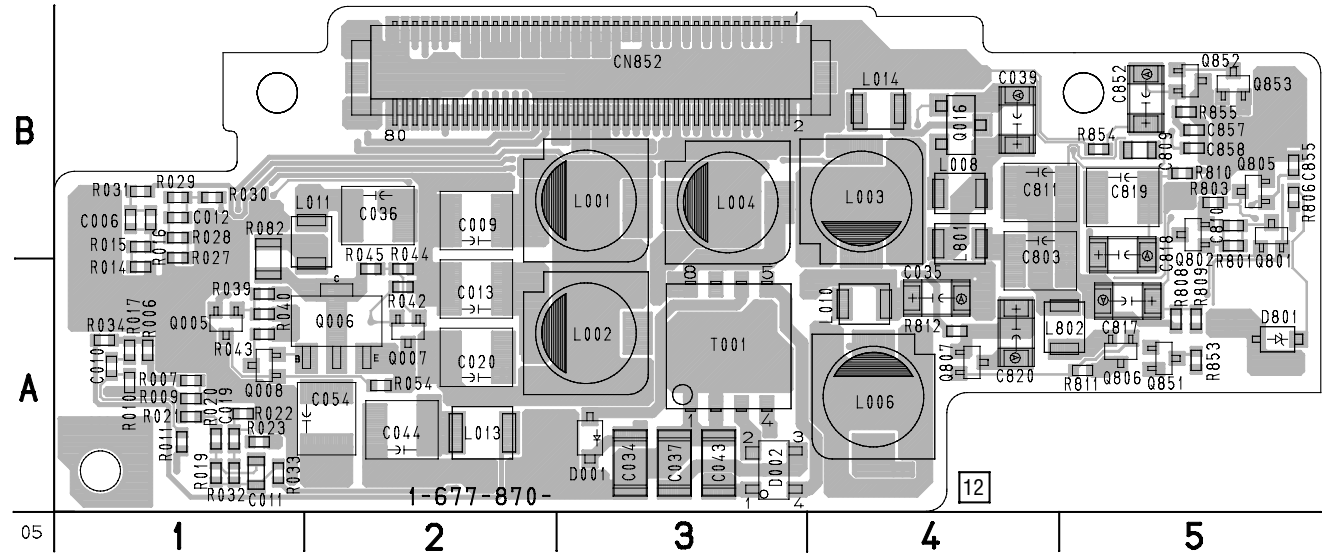
DD-141 (DC/DC CONVERTER, VIDEO, USB) PRINTED WIRING BOARD

– Ref. No.: DD-141 board; 1,000 series –

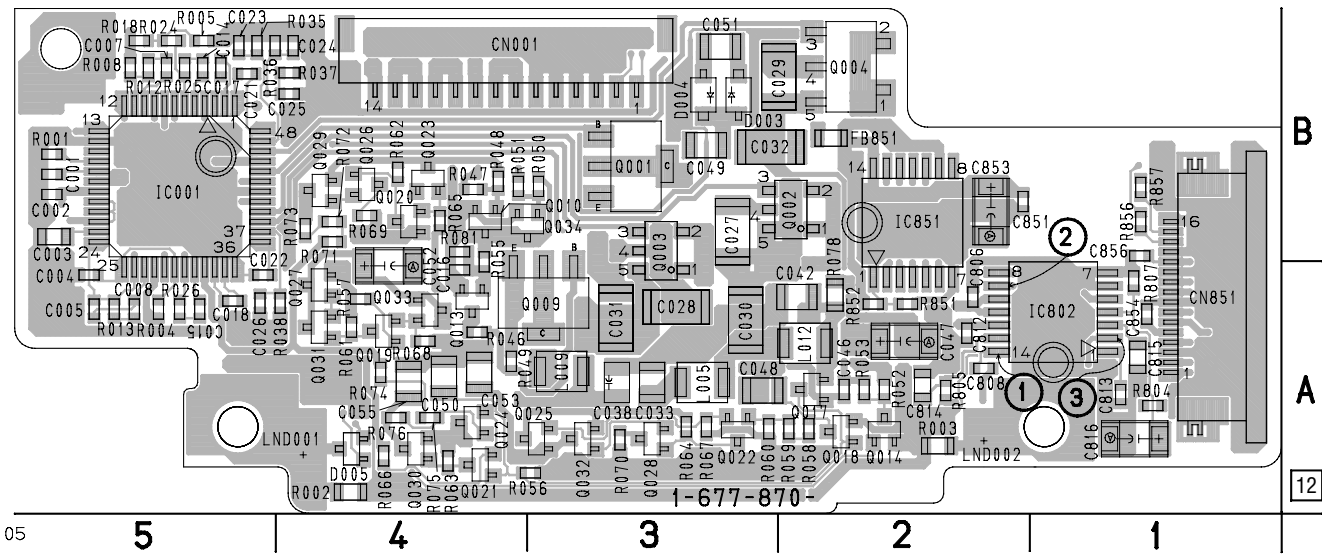
- **For Printed Wiring Board.**
- DD-141 board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-52 for printed parts location.
- Chip transistor

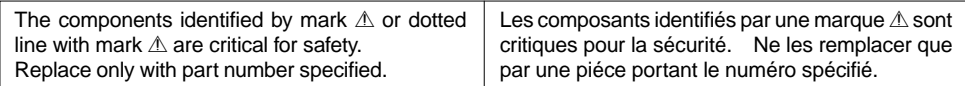


DD-141 BOARD (SIDE A)



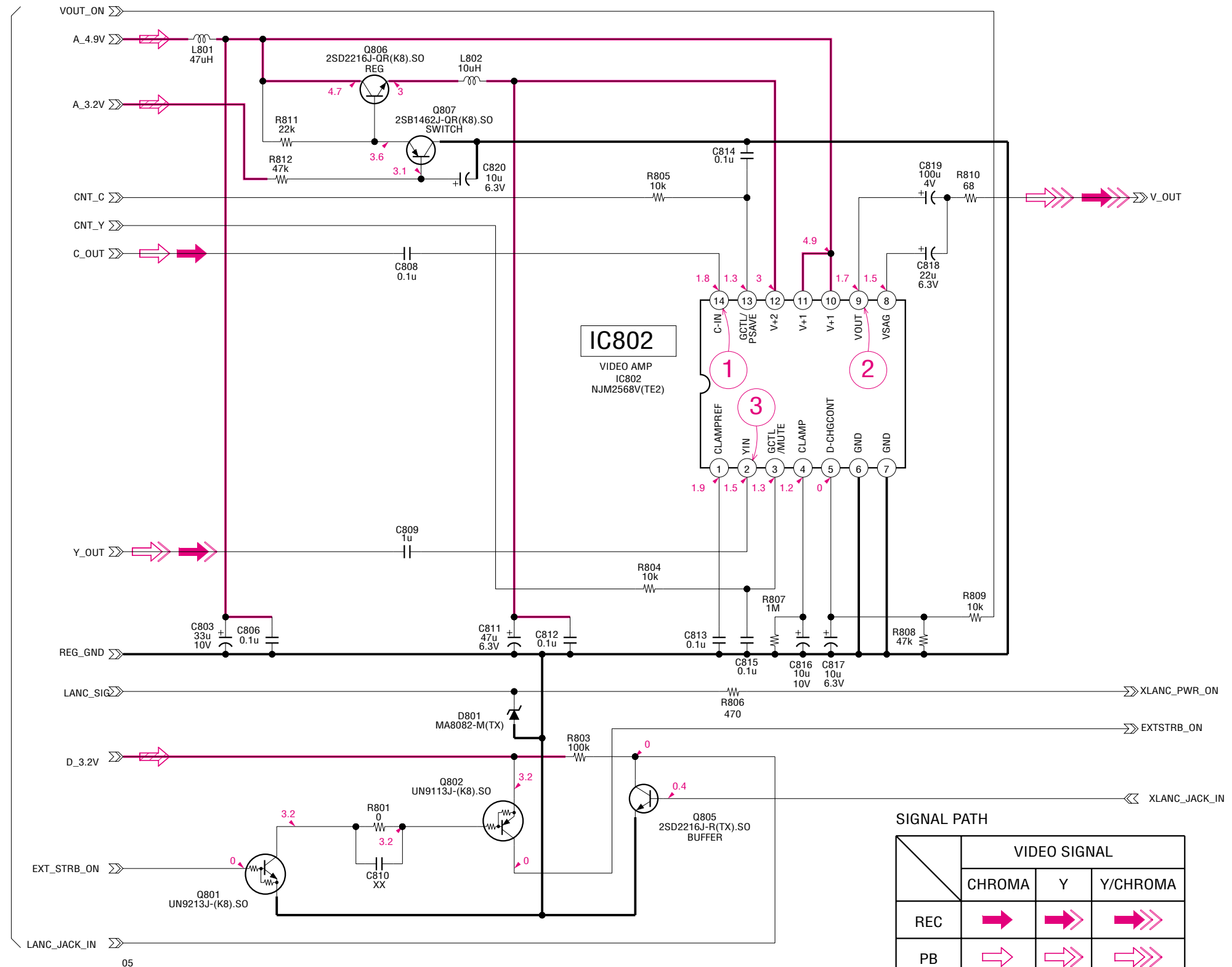
DD-141 BOARD (SIDE B)









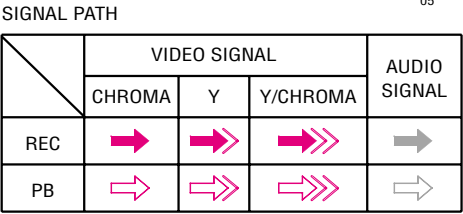


-REF.NO.:1,000 SERIES-
XX MARK:NO MOUNT

③ DD-141 BOARD (3/3)

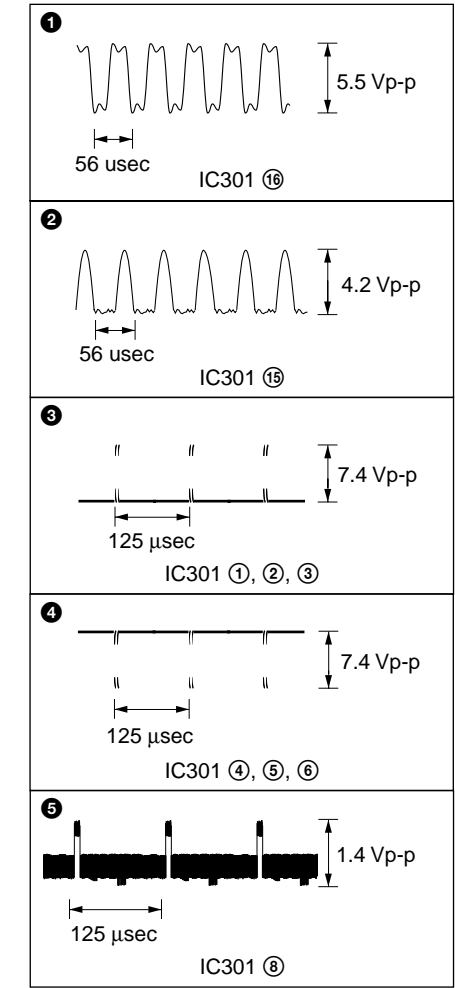


| | | VIDEO SIGNAL | | |
|-----|---|---|---|----------|
| | | CHROMA | Y | Y/CHROMA |
| REC |  |  |  | |
| PB |  |  |  | |

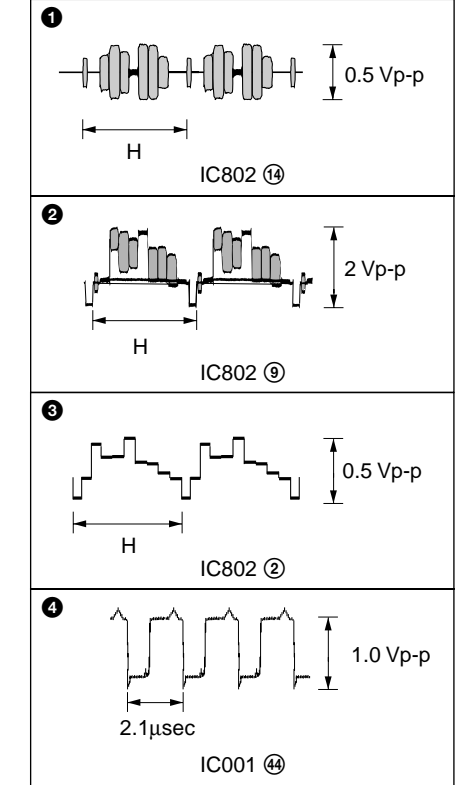


4-3. WAVEFORMS

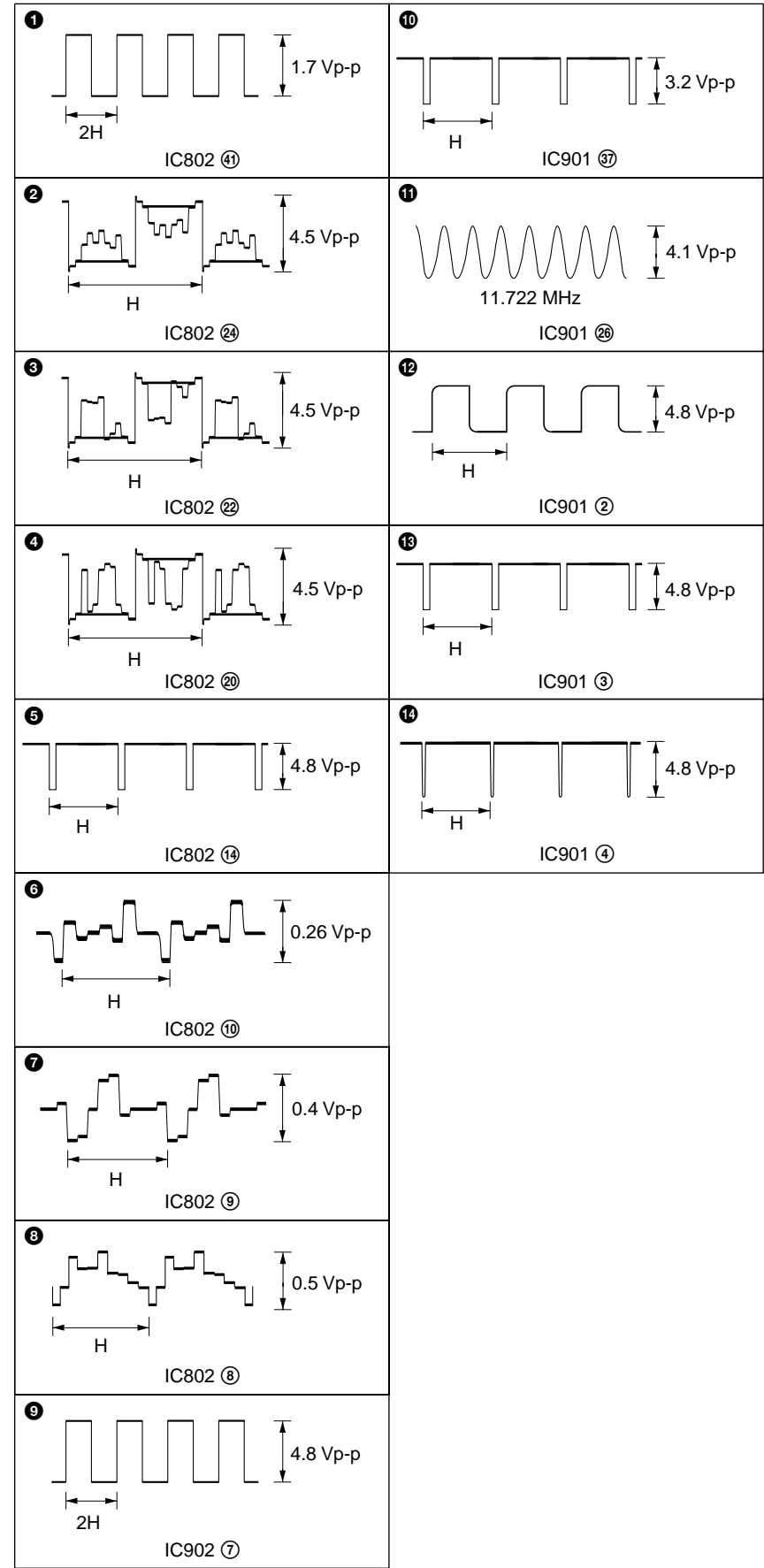
CD-262 BOARD



DD-141 BOARD



PD-127 BOARD



4-4. PARTS LOCATION

| DD-141 BOARD (SIDE A) | | DD-141 BOARD (SIDE B) | |
|--------------------------|----------|--------------------------|----------|
| C009 B-2 | T001 A-3 | C001 B-5 | R026 A-5 |
| C010 A-1 | | C002 B-5 | R035 B-5 |
| C013 A-2 | | C003 B-5 | R036 B-4 |
| C019 A-1 | | C004 A-5 | R037 B-4 |
| C020 A-2 | | C005 A-5 | R038 A-4 |
| C034 A-3 | | C007 B-5 | R046 A-4 |
| C035 A-4 | | C008 A-5 | R047 B-4 |
| C036 B-2 | | C014 B-5 | R048 B-4 |
| C037 A-3 | | C015 A-5 | R049 A-4 |
| C039 B-4 | | C016 A-4 | R050 B-3 |
| C043 A-3 | | C017 B-5 | R051 B-4 |
| C044 A-2 | | C018 A-5 | R052 A-2 |
| C054 A-2 | | C021 B-5 | R053 A-2 |
| C803 A-4 | | C022 A-5 | R055 B-4 |
| C809 B-5 | | C023 B-5 | R056 A-4 |
| C811 B-4 | | C024 B-4 | R057 A-4 |
| C817 A-5 | | C025 B-4 | R058 A-2 |
| C818 A-5 | | C026 A-5 | R059 A-2 |
| C819 B-5 | | C027 B-3 | R060 A-4 |
| C820 A-4 | | C028 A-3 | R061 A-4 |
| C852 B-5 | | C029 B-2 | R062 B-4 |
| C855 B-5 | | C030 A-3 | R063 A-4 |
| CN852 B-3 | | C031 A-3 | R064 A-3 |
| D001 A-3 | | C032 B-3 | R065 B-4 |
| D002 A-3 | | C033 A-3 | R066 A-4 |
| D801 A-5 | | C038 A-3 | R067 A-3 |
| L001 B-3 | | C042 A-2 | R068 A-4 |
| L002 A-3 | | C046 A-2 | R069 B-4 |
| L003 B-4 | | C047 A-2 | R070 A-3 |
| L004 B-3 | | C048 A-3 | R071 B-4 |
| L006 A-4 | | C049 B-3 | R072 B-4 |
| L008 B-4 | | C050 A-4 | R073 B-4 |
| L010 A-4 | | C051 B-3 | R074 A-4 |
| L011 B-2 | | C052 A-4 | R075 A-4 |
| L013 A-2 | | C053 A-4 | R076 A-4 |
| L014 B-4 | | C055 A-4 | R078 A-4 |
| L801 B-4 | | C806 A-2 | R081 B-4 |
| L802 A-5 | | C808 A-2 | R804 A-1 |
| Q005 A-1 | | C812 A-2 | R805 A-4 |
| Q006 A-2 | | C813 A-1 | R807 A-1 |
| Q007 A-2 | | C814 A-2 | R856 B-1 |
| Q008 A-1 | | C815 A-1 | R857 B-1 |
| Q016 B-4 | | C816 A-1 | |
| Q801 B-5 | | C851 B-2 | |
| Q802 B-5 | | C853 B-2 | |
| Q805 B-5 | | C854 A-1 | |
| Q806 A-5 | | C856 B-1 | |
| Q807 A-4 | | CN001 B-4 | |
| Q851 A-5 | | CN851 A-1 | |
| Q852 B-5 | | D003 B-3 | |
| Q853 B-5 | | D004 B-3 | |
| R006 A-1 | | FB851 B-2 | |
| R007 A-1 | | IC001 B-5 | |
| R009 A-1 | | IC802 A-1 | |
| R010 A-1 | | IC851 B-2 | |
| R011 A-1 | | L005 A-3 | |
| R014 A-1 | | L009 A-3 | |
| R015 B-1 | | L012 A-2 | |
| R016 B-1 | | Q001 B-3 | |
| R017 A-1 | | Q002 B-2 | |
| R018 B-5 | | Q003 B-3 | |
| R019 A-1 | | Q004 B-2 | |
| R020 A-1 | | Q009 A-3 | |
| R021 A-1 | | Q013 A-4 | |
| R022 A-1 | | Q014 A-2 | |
| R023 A-1 | | Q017 A-2 | |
| R027 A-1 | | Q018 A-2 | |
| R028 B-1 | | Q019 A-4 | |
| R029 B-1 | | Q020 B-4 | |
| R030 B-1 | | Q021 A-4 | |
| R031 B-1 | | Q022 A-3 | |
| R032 A-1 | | Q023 B-4 | |
| R033 A-1 | | Q024 A-4 | |
| R034 A-1 | | Q025 A-3 | |
| R039 A-1 | | Q026 B-4 | |
| R040 A-1 | | Q027 A-4 | |
| R042 A-2 | | Q028 A-3 | |
| R043 A-1 | | Q029 B-4 | |
| R044 A-2 | | Q030 A-4 | |
| R045 A-2 | | Q031 A-4 | |
| R054 A-2 | | Q032 A-3 | |
| R801 B-5 | | Q033 A-4 | |
| R803 B-5 | | R001 B-5 | |
| R806 B-5 | | R002 A-4 | |
| R808 A-5 | | R004 A-5 | |
| R809 A-5 | | R005 B-5 | |
| R810 B-5 | | R008 B-5 | |
| R811 A-5 | | R012 B-5 | |
| R812 A-4 | | R013 A-5 | |
| R853 A-5 | | R024 B-5 | |
| R854 B-5 | | R025 B-5 | |
| R855 B-5 | | | |

SECTION 5 ADJUSTMENTS

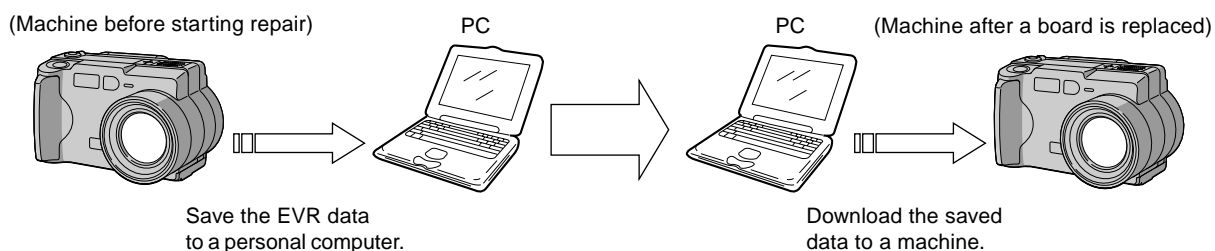
Before starting adjustment

EVR Data Re-writing Procedure When Replacing Board

The data that is stored in the repair board, is not necessarily correct.
Perform either procedure 1 or procedure 2 or procedure 3 when replacing board.

Procedure 1

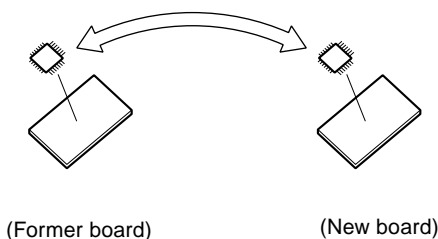
Save the EVR data of the machine in which a board is going to be replaced. Download the saved data after a board is replaced.



Procedure 2

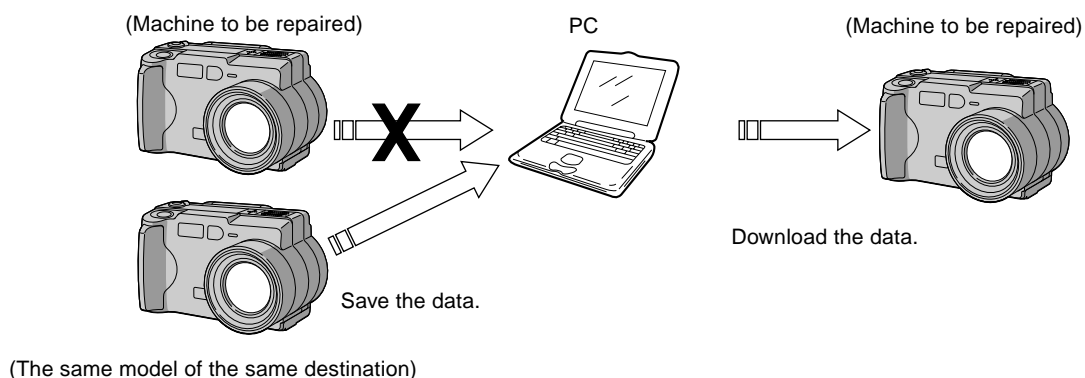
Remove the EEPROM from the board of the machine that is going to be repaired. Install the removed EEPROM to the replaced board.

Remove the EEPROM and install it.



Procedure 3

When the data cannot be saved due to defective EEPROM, or when the EEPROM cannot be removed or installed, save the data from the same model of the same destination, and download it.



After the EVR data is saved and downloaded, check the respective items of the EVR data.
(Refer to page 5-2 for the items to be checked.)

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.

| Adjustment section | Adjustment | Replaced parts | | | | | | | | | | | | | | | | |
|---|---|-------------------|-------------|------------------------------------|---------------------------------------|---------------------------------------|---|-------------------------------|--------------------------------------|--|---|--------------------------------|----------------------------|----------------------------|----------------------------|---------------------------|--------------------------------|--------------------------------|
| | | Block replacement | | | | Mounted parts replacement | | | | | | Board replacement | | | | | | |
| | | Lens device | Strobe unit | LCD block LCD901 (LCD panel) | LCD block ND901 Back light unit | CD-262 board IC301 (CCD imager) | SY-58 board IC102 (S/H, AGC, A/D) | SY-58 board IC186 (EVR) | DD-141 board IC802 (VIDEO AMP) | PD-127 board IC802 (RGB decoder) | PD-127 board IC901 (Timing generator) | PD-127 board IC801 (EVR) | PD-127 board (COMPLETE) | CD-262 board (COMPLETE) | DD-141 board (COMPLETE) | SY-58 board (COMPLETE) | SY-58 board IC406 EEPROM | SY-58 board IC507 EEPROM |
| Initialization of 7, B, D, E, F, page data | Initialization of D page data | | | | | | | | | | | | | | | ● | ● | |
| | Initialization of 7, B, E, F page data | | | | | | | | | | | | | | | ● | | ● |
| Video | Video sync level adj. | | | | | | | ● | ● | | | | | | ● | ● | | ● |
| | Video burst level adj. | | | | | | | ● | ● | | | | | | ● | ● | | ● |
| Camera | Hall adj. | ● | | | | | | ● | | | | | | | | ● | | ● |
| | Flange back adj. | ● | | | | ● | | | | | | | ● | | | ● | | ● |
| | F No. standard data input | ● | | | | ● | | | | | | | ● | | | ● | | ● |
| | Mechanical shutter adj. | ● | | | | ● | | | | | | | ● | | | ● | | ● |
| | Light level adj. | ● | | | | ● | ● | | | | | | ● | | | ● | | ● |
| | Mixed color cancel adj. | ● | | | | ● | ● | | | | | | ● | | | ● | | ● |
| | Auto white balance standard data input | | | | | ● | ● | | | | | | ● | | | ● | | ● |
| | Auto white balance adj. | | | | | ● | ● | | | | | | ● | | | ● | | ● |
| | Color reproduction adj. | | | | | ● | ● | | | | | | ● | | | ● | | ● |
| | Strobe white balance adj. | | ● | | | ● | ● | ● | | | | | ● | | | ● | | ● |
| | CCD (black and white) defect compensation | | | | | ● | | | | | | | ● | | | ● | | ● |
| LCD | LCD initial data input | | | | | | | | | | | | | | | ● | ● | |
| | VCO adj. | | | | | | | | | ● | ● | ● | | | | ● | ● | |
| | D range adj. | | | | | | | | ● | | ● | ● | | | | ● | ● | |
| | Bright adj. | | | | | | | | ● | | ● | ● | | | | ● | ● | |
| | Contrast adj. | | | | | | | | ● | | ● | ● | | | | ● | ● | |
| | Color adj. | | | | | | | | ● | | ● | ● | | | | ● | ● | |
| | V-COM level adj. | | | | | | | | ● | | ● | ● | | | | ● | ● | |
| | V-COM adj. | | | ● | | | | | ● | | ● | ● | | | | ● | ● | |
| | White balance adj. | | | ● | ● | | | | ● | | ● | ● | | | | ● | ● | |
| System control | Battery down adj. | | | | | | | | | | | | | | ● | ● | | |

Table 5-1-1

5-1. CAMERA SECTION ADJUSTMENT

1-1. PREPARATIONS BEFORE ADJUSTMENT

1-1-1. List of Service Tools

- Oscilloscope
- Color monitor
- Vectorscope
- Regulated power supply
- Digital voltmeter

| Ref. No. | Name | Parts Code | Usage |
|----------|---|--------------|--|
| J-1 | Filter for color temperature correction (C14) | J-6080-058-A | Auto white balance adjustment/check White balance adjustment/check |
| J-2 | Pattern box PTB-450 | J-6082-200-A | |
| J-3 | Color chart for pattern box | J-6020-250-A | |
| J-4 | Adjustment remote commander (RM-95 upgraded). (Note 1) | J-6082-053-B | |
| J-5 | Siemens star chart | J-6080-875-A | For checking the flange back |
| J-6 | Clear chart for pattern box | J-6080-621-A | |
| J-7 | CPC-9 jig (Note 2) | J-6082-393-C | For connecting the adjustment remote commander For adjusting the LCD block |
| J-8 | Mini pattern box | J-6082-353-B | For adjusting the flange back |
| J-9 | Extension cable (16P, 0.5mm, L=100mm) | J-6082-357-A | For extension between the DD-141 board (CN851) and the JK-194 board (CN201) |
| | Extension cable (16P, 0.5mm, L=200mm) | J-6082-398-A | |
| J-10 | Extension cable (18P, 0.5mm) | J-6082-423-A | For extension between the CD-262 board (CN301) and the SY-58 board (CN101) |
| J-11 | Back ground paper | J-2501-130-A | For adjusting the strobe |

Note 1: If the micro processor IC in the adjustment remote commander is not the new micro processor (UPD7503G-C56-12), The pages cannot be switched. In this case, replace with the new micro processor (8-759-148-35).

Note 2: The old CPC-9 jig (Parts code: J-6082-393-B) cannot be used, because it cannot operate the adjustment remote commander.

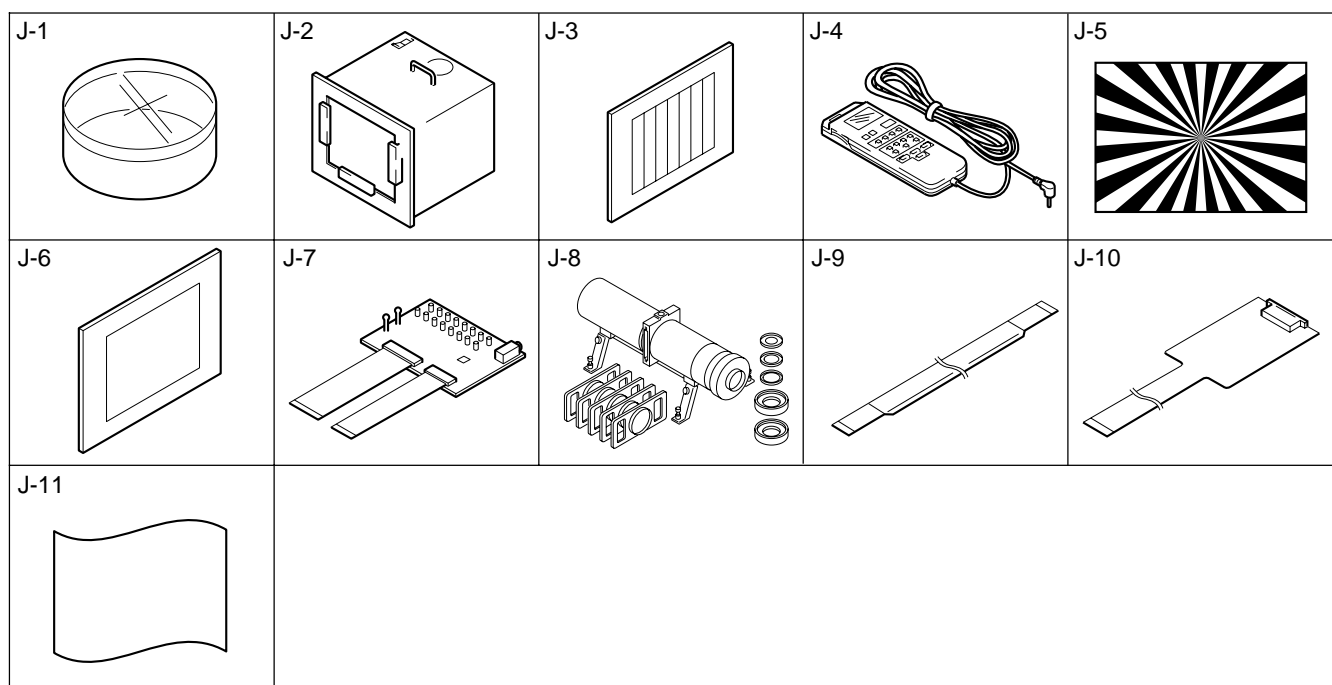


Fig. 5-1-1

1-1-2. Preparations

Note 1: For details of how remove the cabinet and boards, refer to “2. DISASSEMBLY”.

Note 2: When performing only the adjustments, the lens block and boards need not be disassemble.

- 1) Connect the equipment for adjustments according to Fig. 5-1-5.
- 2) Connect the Adjusting remote commander to SY-58 board CN709 via CPC-9 jig (J-6082-393-C). (See Fig. 5-1-3)

Note 3: Setting the “Forced STILL mode power ON” Mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjusting remote commander.

The Above procedure will enable the camera power to the turned on. After completing adjustments, be sure to exit the “Forced STILL mode power ON Mode”.

Note 4: Exiting the “Forced STILL mode power ON Mode”

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 0, address: 01, and set data: 00.

1-1-3. Discharging of the flashlight power supply

The capacitor which is used as power supply of flashlight is charged with 200 V to 300 V voltage. Discharge this voltage before starting adjustments in order to protect service engineers from electric shock during adjustment.

Discharge procedure

1. Press the FLASH button (SW-339 board S103) and turn off the FLASH LED (SW-339 board D102).
2. Fabricate the discharging jig as shown in Fig. 5-1-4 locally by yourself. Connect the discharging jig to the positive (+) and negative (–) terminal of the flash voltage charge capacitor. Allow ten seconds to discharge the voltage.

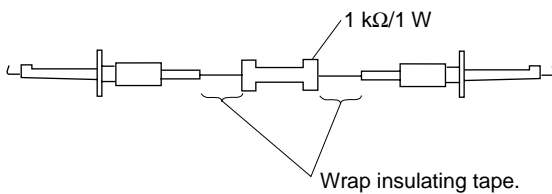


Fig. 5-1-4

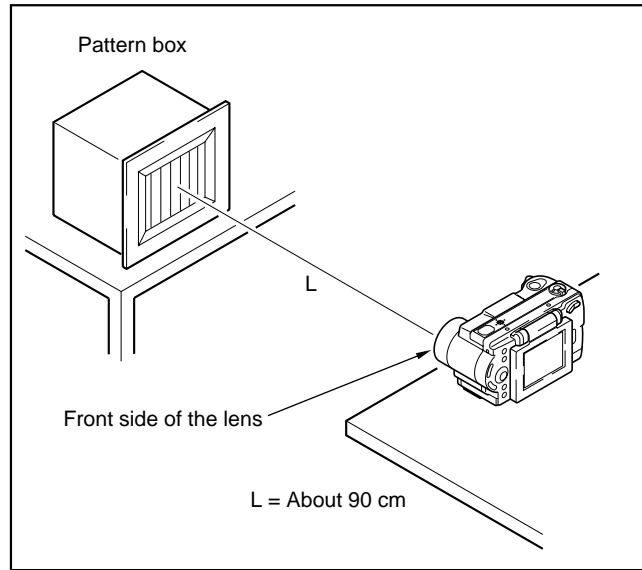
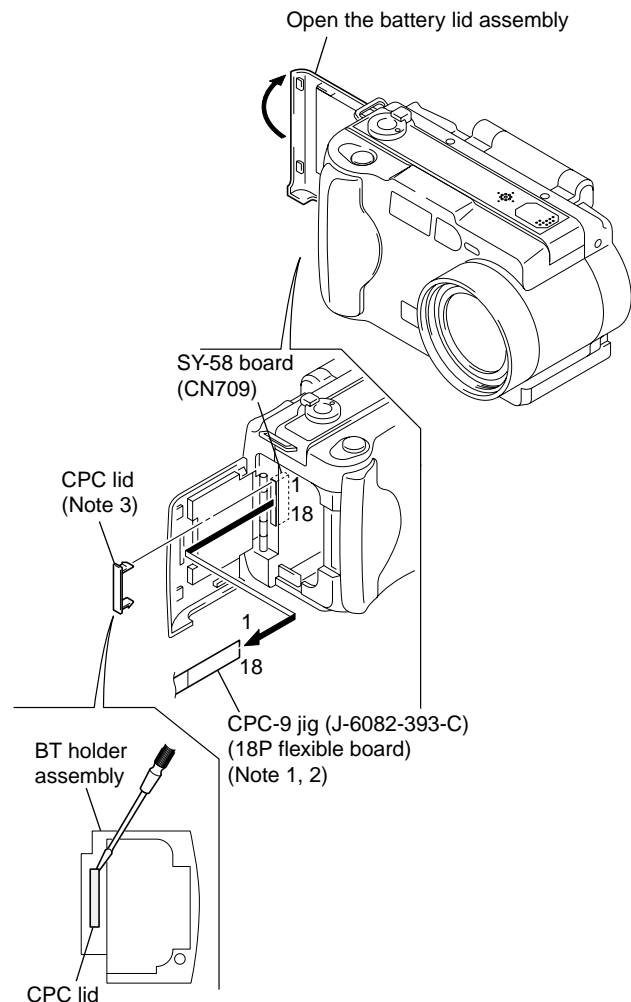


Fig. 5-1-2



Note 1: Don't use the 12 pin flexible board of CPC-9 jig. It causes damage to the unit.

Note 2: The old CPC-9 jig (Parts code: J-6082-393-B) cannot be used, because it cannot operate the adjustment remote commander.

Note 3: In removing the CPC lid, start from the upper side.

Fig. 5-1-3

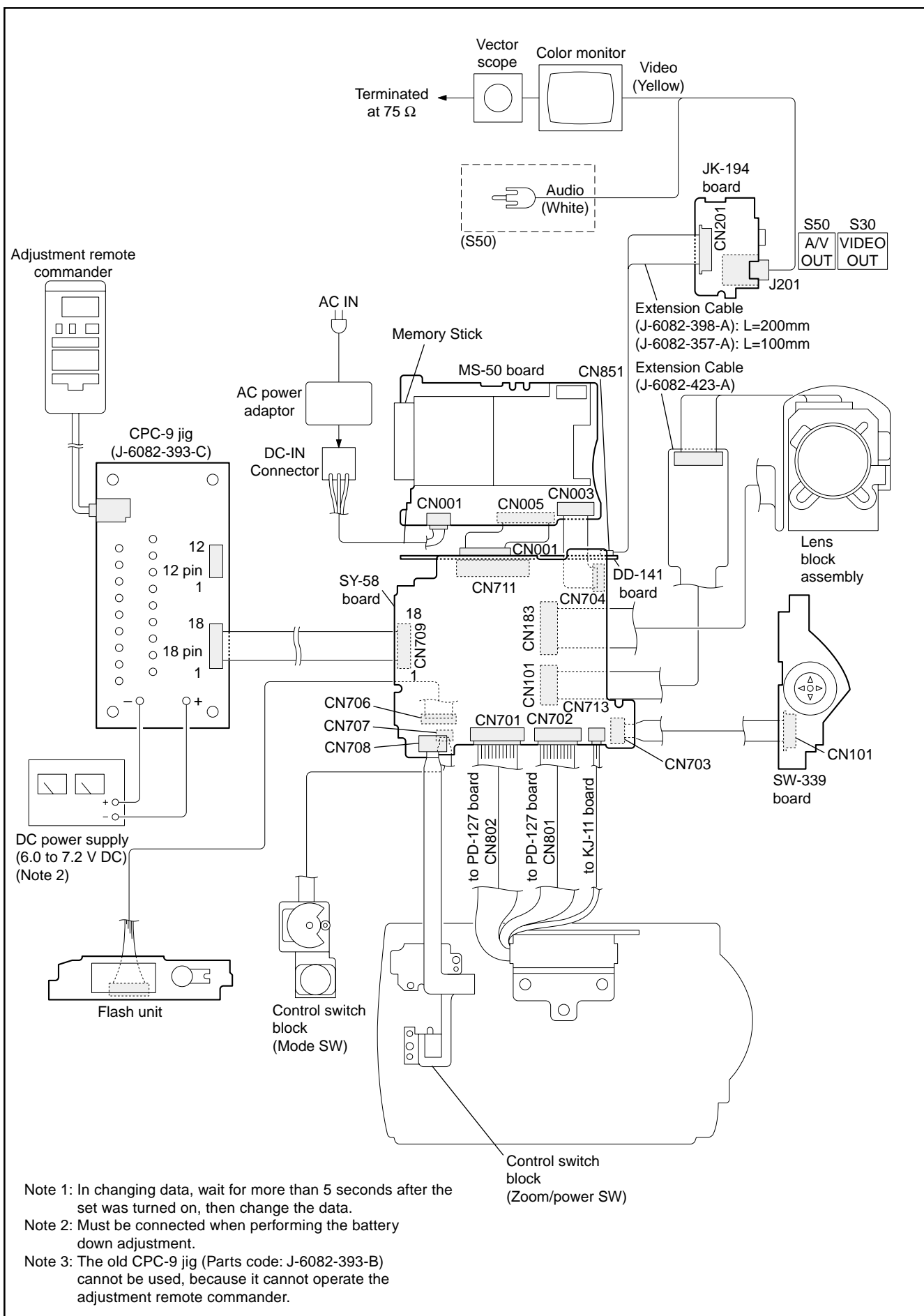


Fig. 5-1-5

1-1-4. Precautions

1. Setting the Switch

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

- | | | | |
|---|---------------------------------|---------------------------------------|--------|
| 1. FOCUS button (SW-339 board S107) | MANUAL | 5. DEMO (Menu display) | OFF |
| 2. PROGRAM AE button (SW-339 board S104) | | 6. VIDEO OUT (Menu display) | NTSC |
| | AUTO (No mark indicated on LCD) | 7. WHITE BALANCE (Menu display) | AUTO |
| 3. DISPLAY button (SW-339 board S102) | OSD OFF | 8. EXPOSURE | 0EV |
| 4. P. EFFECT (Menu display) | OFF | 9. FLASH LEVEL | NORMAL |

2. Order of Adjustments

Basically carry out adjustments in the order given.

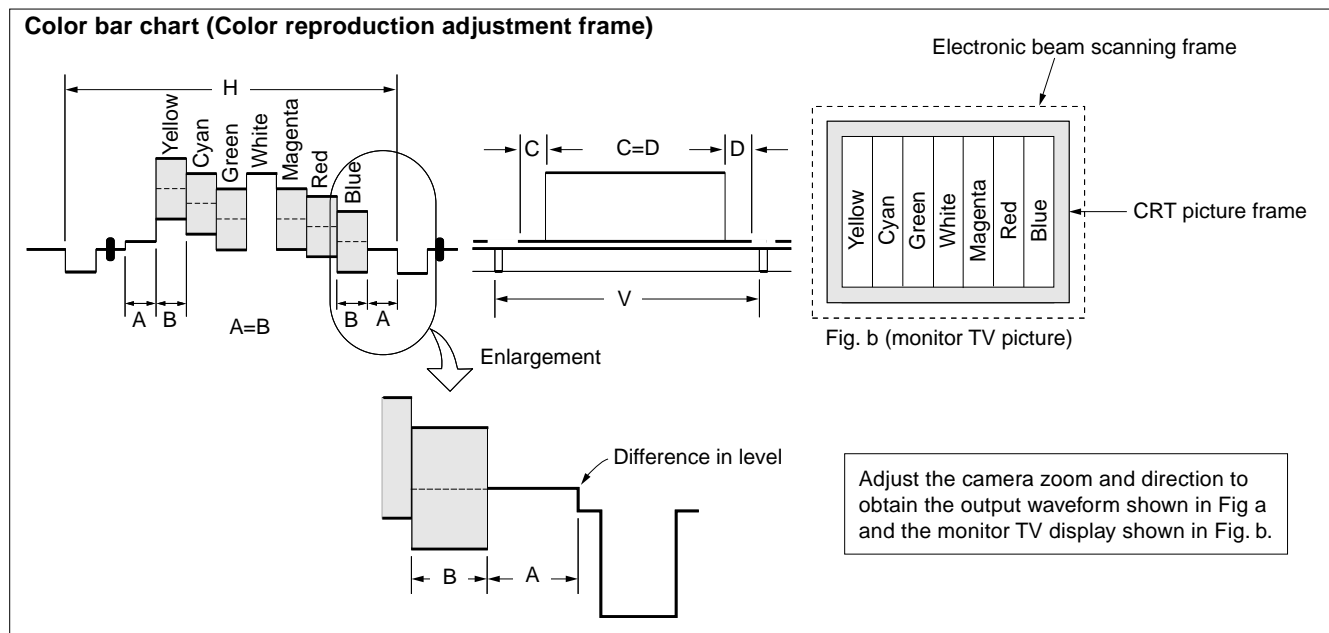


Fig. 5-1-6

3. Subjects

- 1) Color bar chart (Standard picture frame).
When performing adjustments using the color bar chart, adjust the picture frame as shown in Fig. 5-1-6. (Standard picture frame)
- 2) Clear chart (Standard picture frame)
Remove the color bar chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time)

4. 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 and C of 15 mm thickness.

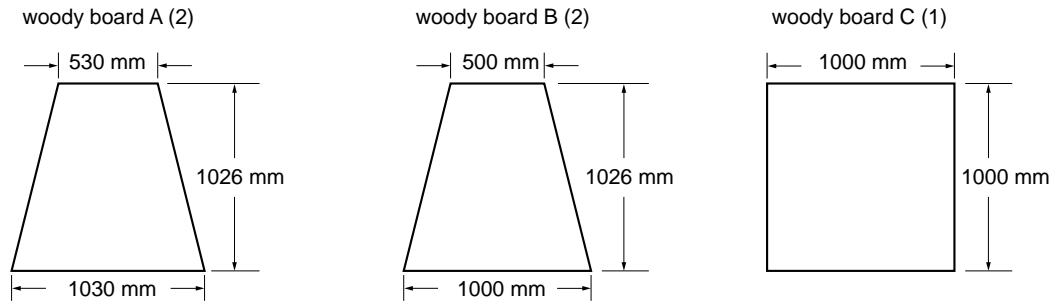


Fig. 5-1-8

- 2) Apply black mat paint to one side of woody board A and B.
- 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 and C are internal. (Fig 5-1-9)

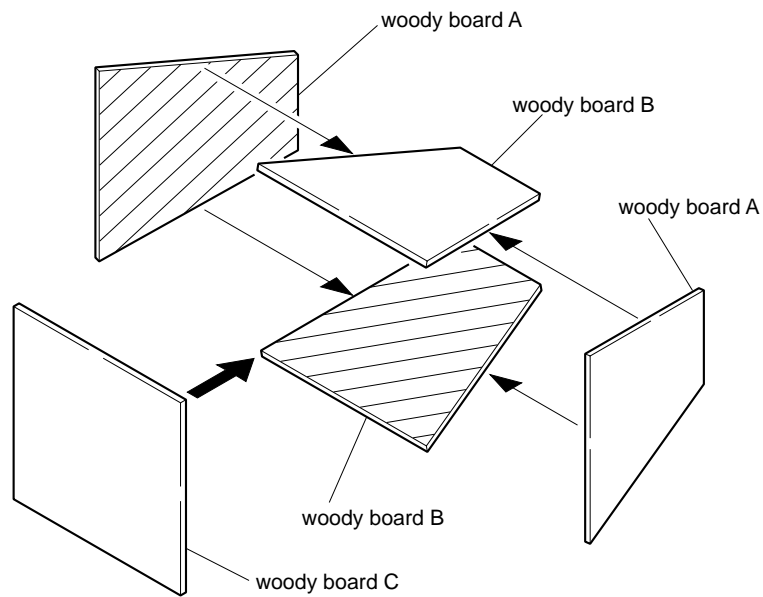


Fig. 5-1-9

1-2. INITIALIZATION OF B, D, E, F, 7 PAGE DATA

1-2-1. INITIALIZATION OF D PAGE DATA

1. Initializing the D Page Data

Note: If the D page data has been initialized, the following adjustments need to be performed again.

- 1) Modification of D page data
- 2) LCD system adjustments
- 3) Battery end adjustments

| | |
|-------------------|----------|
| Adjusting page | D |
| Adjusting Address | 10 to EF |

Initializing Method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 2, address: 03, and set data: 03 (S30) or data: 02 (S50).
- 3) Select page: 2, address: 00, and set data: 2D.
- 4) Select page: 2, address: 01, set data: 2D, and press the PAUSE button of the adjustment remote commander.
- 5) Select page: 2, address: 02, and check that the data changes to "01".
- 6) Perform "Modification of D Page Data".

2. Modification of D Page Data

If the D page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:

- 1) Before changing the data, select page: 0, address: 01, and set data: 01.
- 2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.

Note : If copy the data built in the different model, the camcorder may not operate.

- 3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
- 4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of D Page data

- 1) Select page: 2, address: 00, and set data: 29.
- 2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.

3. D Page table

Note 1: Fixed data-1: Initialized data.

(Refer to "1. Initializing the D Page Data")

Note 2: Fixed data-2: Modified data.

(Refer to "2. Modified of D Page Data")

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | S30 | S50 | |
| 00 to 0F | | | |
| 10 to 1B | | | Fixed data-1 (Initialized data) |
| 1C | | | Fixed data-2 |
| 1D | | | |
| 1E to 5F | | | Fixed data-1 (Initialized data) |
| 60 | | | Fixed data-2 |
| 61 | | | |
| 62 | | | |
| 63 | | | |
| 64 to 6F | | | Fixed data-1 (Initialized data) |
| 70 | | | Fixed data-2 |
| 71 | | | |
| 72 to 84 | | | Fixed data-1 (Initialized data) |
| 85 | | | Fixed data-2 |
| 86 to 8F | | | Fixed data-1 (Initialized data) |
| 90 | 80 | 80 | Battery down adj. |
| 91 | 88 | 88 | |
| 92 | AD | AD | |
| 93 | C2 | C2 | |
| 94 | CD | CD | |
| 95 to 97 | | | Fixed data-1 (Initialized data) |
| 98 | | | Fixed data-2 |
| 99 | | | |
| 9A | | | |
| 9B | | | |
| 9C | | | |
| 9D | | | |
| 9E | | | |
| 9C | | | |
| A0 | | | |
| A1 | | | |
| A2 to A4 | | | Fixed data-1 (Initialized data) |
| A5 | | | Fixed data-2 |
| A6 | | | |
| A7,A8 | | | Fixed data-1 (Initialized data) |
| A9 | | | Fixed data-2 |
| AA to CF | | | Fixed data-1 (Initialized data) |
| D0 | BC | BC | Bright adj. (LCD) |
| D1 | 80 | 80 | Color adj. (LCD) |
| D2 | B9 | B9 | White balance adj. (LCD) |
| D3 | B7 | B7 | |
| D4 | BE | BE | Contrast adj. (LCD) |
| D5 | C8 | C8 | D Range adj. (LCD) |
| D6 | 7C | 7C | V-COM Level adj. (LCD) |
| D7 | 80 | 80 | VCO adj. (NTSC) (LCD) |
| D8 | 74 | 74 | V-COM adj. (LCD) |
| D9 to DC | | | Fixed data-1 (Initialized data) |
| DD | 88 | 88 | VCO adj. (PAL) (LCD) |
| DE | | | Fixed data-2 |
| DF | | | |
| E0 to EF | | | Fixed data-1 (Initialized data) |

1-2-2. Initializing the B, E, F, 7 Page Data

1. Initializing the B, E, F, 7 Page Data

Note: If the B, E, F Page data has been initialized, “Modification of B, E, F, 7 Page Data” and following adjustments need to be performed again.

- 1) Modification of B, E, F, 7 page data
- 2) Video system adjustments
- 3) Camera system adjustments

| | |
|-------------------|----------|
| Adjusting page | F |
| Adjusting Address | 10 to FF |
| Adjusting page | E |
| Adjusting Address | 00 to FF |
| Adjusting page | B |
| Adjusting Address | 00 to FF |
| Adjusting page | 7 |
| Adjusting Address | 00 to FF |

Initializing Method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 6, address: 00, and set data: 2D.
- 3) Select page: 6, address: 01, set data: 2D, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 6, address: 02, and check that the data changes to “01”.
- 5) Perform “Modification of B, E, F, 7 Page Data”.

2. Modification of B, E, F, 7 Page Data

If the B, E, F, 7 Page data has been initialized, change the data of the “Fixed data-2” address shown in the following tables by manual input.

Modifying Method:

- 1) Before changing the data, select page: 0, address: 01, and set data: 01.
- 2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.

Note: If copy the data built in the different model, the camcorder may not operate.

- 3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
- 4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of B, E, F, 7 Page data

- 1) Select page: 2, address: 00, and set data: 29.
- 2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.

3. B Page table

Note 1: Fixed data-1: Initialized data.

(Refer to “1. Initializing the B, E, F, 7 Page Data”)

Note 2: Fixed data-2: Modified data.

(Refer to “2. Modified of B, E, F, 7 Page Data”)

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|--------|
| | S30 | S50 | |
| 00 | Fixed data-2 | | |
| 01 to FF | Fixed data-1 (Initialized data) | | |

4. E Page table

Note 1: Fixed data-1: Initialized data.

(Refer to “1. Initializing the B, E, F, 7 Page Data”)

Note 2: Fixed data-2: Modified data.

(Refer to “2. Modified of B, E, F, 7 Page Data”)

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|--------|
| | S30 | S50 | |
| 00 to F5 | Fixed data-1 (Initialized data) | | |
| F6 | Fixed data-2 | | |
| F7 to FF | Fixed data-1 (Initialized data) | | |

5. F Page table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the B, E, F, 7 Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modified of B, E, F, 7 Page Data”)

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|--|
| | S30 | S50 | |
| 00 to 0F | | | |
| 10 to 13 | Fixed data-1 (Initialized data) | | |
| 14 | 12 | 12 | Flange back adj. |
| 15 | A8 | A8 | |
| 16 | 18 | 18 | |
| 17 | C5 | C5 | |
| 18 | 12 | 12 | |
| 19 | C9 | C9 | |
| 1A | 00 | 00 | |
| 1B | 00 | 00 | |
| 1C | 00 | 00 | |
| 1D | 00 | 00 | |
| 1E | 41 | 41 | |
| 1F | 00 | 00 | |
| 20 | 20 | 20 | |
| 21 | 20 | 20 | |
| 22 | 20 | 20 | |
| 23 | 44 | 44 | |
| 24 | 0A | 0A | |
| 25 | 00 | 00 | |
| 26 | 6B | 7D | Light level adj. |
| 27 | Fixed data-1 (Initialized data) | | |
| 28 | 7B | 8D | Light level adj. |
| 29 | 4F | 52 | F No. standard data input |
| 2A | 49 | 4B | |
| 2B | 42 | 45 | |
| 2C | 40 | 42 | |
| 2D | Fixed data-1 (Initialized data) | | |
| 2E | 7C | 7E | Hall adj |
| 2F | 9A | 9B | |
| 30 to 33 | Fixed data-1 (Initialized data) | | |
| 34 | 15 | 15 | Hall adj |
| 35 | 7D | 7D | |
| 36 to 39 | Fixed data-1 (Initialized data) | | |
| 3A | 2F | 2F | Auto white balance standard data input |
| 3B | 37 | 37 | |
| 3C | 40 | 40 | |
| 3D | D0 | D0 | |
| 3E | Fixed data-1 (Initialized data) | | |
| 3F | B5 | B5 | Auto white balance adj. |
| 40 | 43 | 43 | |
| 41 | 03 | 03 | Color reproduction adj. |
| 42 | E9 | E9 | |
| 43 | 63 | 63 | |
| 44 | 83 | 83 | |
| 45 | D5 | D5 | |
| 46 | FE | FE | |
| 47 | 73 | 73 | |
| 48 | 45 | 45 | |
| 49 to 4C | Fixed data-1 (Initialized data) | | |
| 4D | 27 | 27 | Strobe white balance adj. |
| 4E | 77 | 77 | |
| 4F to 58 | Fixed data-1 (Initialized data) | | |
| 59 | 00 | 00 | Auto white balance standard data input |
| 5A | 14 | 14 | Mechanical shutter adj. |

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|---------------------------|
| | S30 | S50 | |
| 5B | Fixed data-1 (Initialized data) | | |
| 5C | 63 | 63 | Color reproduction adj. |
| 5D | 83 | 83 | |
| 5E | 03 | 03 | |
| 5F | E9 | E9 | |
| 60 to 63 | Fixed data-1 (Initialized data) | | |
| 64 | 10 | 10 | Strobe white balance adj. |
| 65 | 61 | 61 | Video sync level adj. |
| 66 | 61 | 61 | Video burst level adj. |
| 67, 68 | Fixed data-1 (Initialized data) | | |
| 69 | 00 | 01 | Strobe white balance adj. |
| 6A | AD | 38 | |
| 6B | 00 | 00 | |
| 6C | 0B | 0B | |
| 6D | C2 | C2 | Mechanical shutter adj. |
| 6E | 09 | 09 | |
| 6F | 42 | 42 | |
| 70 | 06 | 06 | |
| 71 | C2 | C2 | |
| 72 | 05 | 05 | |
| 73 | C2 | C2 | |
| 74 | 04 | 04 | |
| 75 | C2 | C2 | |
| 76 | 33 | 33 | |
| 77 | 33 | 33 | |
| 78 | 33 | 33 | |
| 79 | 33 | 33 | |
| 7A | 33 | 33 | |
| 7B | 33 | 33 | |
| 7C | 33 | 33 | |
| 7D | 33 | 33 | |
| 7E | 33 | 33 | |
| 7F | 33 | 33 | |
| 80 | 00 | 00 | Auto white balance adj. |
| 81 to 9F | Fixed data-1 (Initialized data) | | |
| A0 | 00 | 00 | Mixed color cancel adj. |
| A1 | 00 | 00 | |
| A2 | 00 | 00 | |
| A3 | 00 | 00 | |
| A4 to FF | Fixed data-1 (Initialized data) | | |

6. 7 Page table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the B, E, F, 7 Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modified of B, E, F, 7 Page Data”)

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|-------------------------------|
| | S30 | S50 | |
| 00 to 5F | Fixed data-1 (Initialized data) | | CCD black defect compensation |
| 60 | 0F | 0F | |
| 61 | FF | FF | |
| 62 | 0F | 0F | |
| 63 | FF | FF | |
| 64 | 0F | 0F | |
| 65 | FF | FF | |
| 66 | 0F | 0F | |
| 67 | FF | FF | |
| 68 | 0F | 0F | |
| 69 | FF | FF | |
| 6A | 0F | 0F | |
| 6B | FF | FF | |
| 6C | 0F | 0F | |
| 6D | FF | FF | |
| 6E | 0F | 0F | |
| 6F | FF | FF | |
| 70 | 0F | 0F | |
| 71 | FF | FF | |
| 72 | 0F | 0F | |
| 73 | FF | FF | |
| 74 | 0F | 0F | |
| 75 | FF | FF | |
| 76 | 0F | 0F | |
| 77 | FF | FF | |
| 78 | 0F | 0F | |
| 79 | FF | FF | |
| 7A | 0F | 0F | |
| 7B | FF | FF | |
| 7C | 0F | 0F | |
| 7D | FF | FF | |
| 7E | 0F | 0F | |
| 7F | FF | FF | |
| 80 | 0F | 0F | |
| 81 | FF | FF | |
| 82 | 0F | 0F | |
| 83 | FF | FF | |
| 84 | 0F | 0F | |
| 85 | FF | FF | |
| 86 | 0F | 0F | |
| 87 | FF | FF | |
| 88 | 0F | 0F | CCD white defect compensation |
| 89 | FF | FF | |
| 8A | 0F | 0F | |
| 8B | FF | FF | |
| 8C | 0F | 0F | |
| 8D | FF | FF | |
| 8E | 0F | 0F | |
| 8F | FF | FF | |
| 90 | 0F | 0F | |
| 91 | FF | FF | |
| 92 | 0F | 0F | |

| Address | Initial value | | Remark |
|----------|---------------------------------|-----|-------------------------------|
| | S30 | S50 | |
| 93 | FF | FF | CCD white defect compensation |
| 94 | 0F | 0F | |
| 95 | FF | FF | |
| 96 | 0F | 0F | |
| 97 | FF | FF | |
| 98 | 0F | 0F | |
| 99 | FF | FF | |
| 9A | 0F | 0F | |
| 9B | FF | FF | |
| 9C | 0F | 0F | |
| 9D | FF | FF | |
| 9E | 0F | 0F | |
| 9F | FF | FF | |
| A0 | 0F | 0F | |
| A1 | FF | FF | |
| A2 | 0F | 0F | |
| A3 | FF | FF | |
| A4 to FF | Fixed data-1 (Initialized data) | | |

1-3. VIDEO SYSTEM ADJUSTMENTS

1. Video Sync Level Adjustment

Adjust the sync level of the composite video signal output

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Color bar (Test signal) |
| Measurement Point | Video terminal of A/V OUT jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 65 |
| Specified Value | A=286 \pm 5 mV (NTSC) A=300 \pm 5 mV (PAL) |

Menu setting:

- 1) VIDEO OUT of SET UP menu
 - NTSC (NTSC mode)
 - PAL (PAL mode)

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 04.
- 3) Select page: F, address: 65, change the data and set the sync level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

2. Video Burst Level Adjustment

Adjust the burst level of the composite video signal output

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Color bar (Test signal) |
| Measurement Point | Video terminal of A/V OUT jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 66 |
| Specified Value | A=286 \pm 5 mV (NTSC) A=300 \pm 5 mV (PAL) |

Menu setting:

- 1) VIDEO OUT of SET UP menu
 - NTSC (NTSC mode)
 - PAL (PAL mode)

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 04.
- 3) Select page: F, address: 66, change the data and set the burst level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

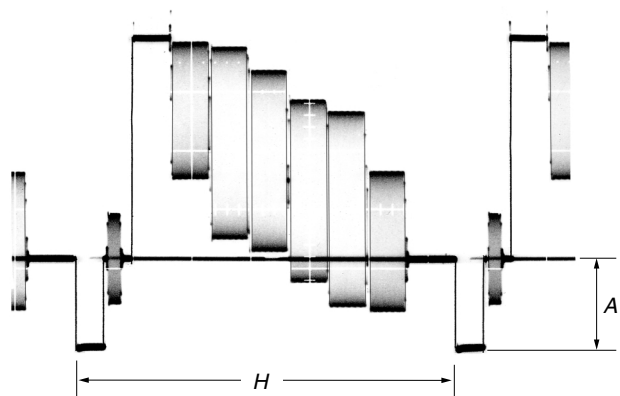


Fig. 5-1-10

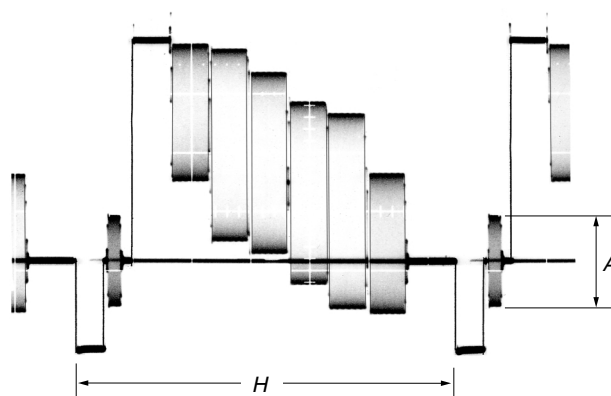


Fig. 5-1-11

1-4. CAMERA SYSTEM ADJUSTMENT

Before perform the camera system adjustments, check that the specified values of “VIDEO SYSTEM ADJUSTMENTS” are satisfied.

Data setting during camera system adjustment

Perform the following data setting before the camera system adjustments.

- 1) Select page: 0, address: 01, and set data: 01.
- 2) After writing down the original data of the following addresses, input the following data.

| Page | Address | Data |
|------|---------|------|
| E | 43 | 10 |
| E | 8F | 00 |
| B | 67 | 00 |

Note: Press the pause button of the adjusting remote commander each time to set data.

After completing the camera system adjustments, release the data setting:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select the above address, and input the original data written down at step 2).

Note: Press the pause button of the adjusting remote commander each time to set data.

- 3) Select page: 0, address: 01, and set data: 00.

1. HALL Adjustment

For detecting the position of lens iris, adjust the HALL AMP gain and offset.

| | |
|----------------------|---|
| Mode | STILL |
| Subject | Not required |
| Measurement Point | Displayed data of page: 1 (Note 2) |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | F |
| Adjustment Address | 2E, 2F, 34, 35 |
| Specified Value | 13 to 17 during IRIS OPEN 7B to 7F during IRIS CLOSE |

Note 1: Check that the data of page: 6, address: 02 is “00”.

If not, turn the power of unit OFF/ON.

Note 2: The right two digits of the page: 1 displayed data of the adjusting remote commander.

1:00:XX

└─ Displayed data

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”.
- 5) Select page: 6, address: 94, and set data: 15.
- 6) Select page: 6, address: 95, and set data: 7D.
- 7) Select page: 6, address: 01, set data: 6D, and press the PAUSE button. (The HALL adjustment is performed and the adjustment data is stored in page: F, address: 2E, 2F, 34 and 35)
- 8) Select page: 6, address: 02, and check that the data is “01”.
- 9) Select page: 6, address: 01, set data: 00, and press the PAUSE button.

Checking method:

- 1) Select page: 0, address: 03, and set data: 03.
- 2) Select page: 6, address: 01, set data: 01, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 1, and check that the displayed data (Note 2) during IRIS OPEN satisfies the specified value.
- 4) Select page: 6, address: 01, set data: 03, and press the PAUSE button.
- 5) Select page: 1, and check that the displayed data (Note 2) during IRIS CLOSE satisfies the specified value.

Processing after Completing Adjustments:

- 1) Select page: 0, address: 03, and set data: 00.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 6, address: 95, and set data: 00.
- 4) Select page: 6, address: 94, and set data: 00.
- 5) Select page: 5, address: F1, and set data: 00.
- 6) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 7) Release the data setting performed at step 4).
- 8) Select page: 0, address: 01, and set data: 00.

2. Flange Back Adjustment (Using the minipattern box)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Siemens star chart with ND filter for minipattern box (Note 1) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Adjustment Page | F |
| Adjustment Address | 14 to 25 |

Note 1: Dark Siemens star chart.

Note 2: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Preparations before adjustments:

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

Note 3: The attachment lenses are not used.

Note 4: Take care not to hit the mini-pattern box when extending the lens.

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

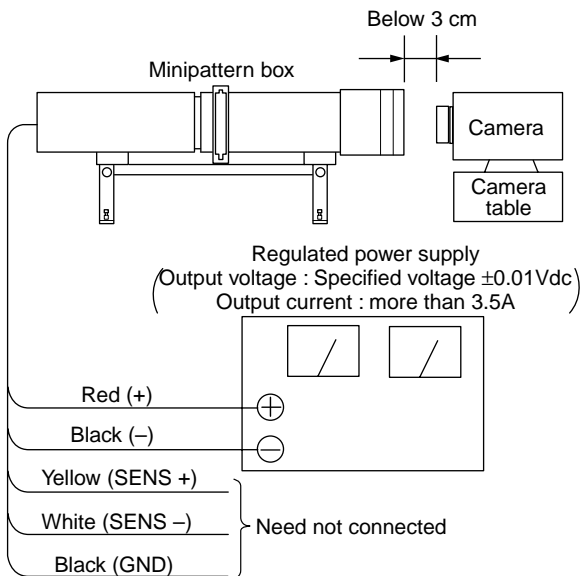


Fig. 5-1-12

Adjusting method:

- 1) Install the minipattern box so that the distance between it and the front of lens of the camera is less than 3cm.
- 2) Make the height of minipattern box and the camera equal.
- 3) Check the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
- 4) 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.
- 5) Select page: 0, address: 01, and set data: 01.
- 6) Select page: 5, address: F1, and set data: FF.
- 7) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 8) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 9) Check that the data on page: F, addresses: 14 to 25 are initial values (See table below).

| Address | Data | Address | Data |
|---------|------|---------|------|
| 14 | 12 | 1D | 00 |
| 15 | A8 | 1E | 41 |
| 16 | 18 | 1F | 00 |
| 17 | C5 | 20 | 20 |
| 18 | 12 | 21 | 20 |
| 19 | C9 | 22 | 20 |
| 1A | 00 | 23 | 44 |
| 1B | 00 | 24 | 0A |
| 1C | 00 | 25 | 00 |

- 10) Select page: 6, address: 01, set data: 13, and press the PAUSE button.
- 11) Select page: 6, address: 01, set data: 27, and press the PAUSE button. (The flange back adjustment is performed and the adjustment data is stored in page: F, address: 14 to 25)
- 12) Select page: 6, address: 02, and check that the data is “01”.

Processing after completion of adjustment:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 8). (Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Perform “Flange Back Check”.

3. Flange Back Check

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Siemens star (2.0 m from the front of the lens) (Luminance: approx. 200 lux) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Specified value | Focused at the TELE end and WIDE end |

Checking method:

- 1) Place the Siemens star 2.0 m from the front of the lens.
- 2) To open the IRIS, decrease the luminous intensity to the Siemens star up to a point before noise appear on the image.
- 3) Select page: 0, address: 01, and set data: 01.
- 4) Select page: 5, address: F1, and set data: FF.
- 5) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 6) Perform “Data setting during camera system adjustment”.
(Refer to page 5-13)
- 7) Shoot the Siemens star with the zoom TELE end.
- 8) Turn on the auto focus.
- 9) Check that the lens is focused.
- 10) Select page: 6, address: 2C, and set data: 01.
- 11) While observe the TV monitor, change the zoom to the WIDE end and check that the lens is focused.

Processing after completion of adjustment:

- 1) Select page: 6, address: 2C, and set data: 00.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 4) Release the data setting performed at step 6).
(Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.

4. F No. Standard Data Input

Compensate the unevenness of the iris meter sensitivity.

| | |
|--------------------|--|
| Mode | STILL |
| Subject | Clear chart 10 cm from the front of the lens) |
| Adjustment Page | F |
| Adjustment Address | 29 to 2C |

Note 1: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Adjusting method:

- 1) Shoot the Clear chart with the zoom WIDE end.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 5, address: F1, and set data: FF.
- 4) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 5) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 6) Select page: 6, address: 01, set data: BB, and press the PAUSE button.
- 7) (The F No. standard data input is performed and the standard data is stored in page: F, address: 29 to 2C)
- 8) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 5). (Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.

5. Mechanical Shutter Adjustment

Adjust the period which the mechanical shutter is closed, and compensate the exposure.

| | |
|--------------------|---|
| Mode | STILL |
| Subject | Clear chart (10 cm from the front of the lens) |
| Adjustment Page | F |
| Adjustment Address | 5A, 6C to 7F |

Note 1: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Adjusting method:

- 1) Shoot the Clear chart with the zoom WIDE end.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 5, address: F1, and set data: FF.
- 4) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 5) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 6) Select page: 6, address: 01, set data: AD, and press the PAUSE button. (The mechanical shutter adjustment is performed and the adjustment data is stored in page: F, address: 5A and 6C to 7F)
- 7) Select page: 6, address: 02, and check that the data is “01”.
- 8) Select page: 6, address: AB, and check that the data is “00”. (If the data other than “00”, mechanical shutter adjustment has errors)

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 5). (Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.

6. Picture Frame Setting

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Color bar chart (Color reproduction adjustment frame) |
| Measurement Point | Video terminal of A/V OUT jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope and TV monitor |
| Specified Value | A=B, C=D, E=F |

Note 1: Displayed data of page 1 of adjusting remote commander.

1:XX:XX

XL or YL data

XH or YH data

Setting method:

- 1) Select page: 5, address: F1, and set data: FF.
- 2) Perform "Data setting during camera system adjustment". (Refer to page 5-13)
- 3) Adjust the zoom and the camera direction, and set to the picture frame to the specified position.
- 4) Mark the position of the picture frame on the TV monitor, and adjust the picture frame to this position in following adjustments using "Color reproduction adjustment frame".
- 5) Select page: 0, address: 03, and set data: 18.
- 6) Select page: 1, and note down the XH and XL data. (Note 1)
- 7) Select page: 0, address: 03, and set data: 22.
- 8) Select page: 1, and note down the YH and YL data. (Note 1)
- 9) Release the data setting performed at step 2). (Refer to page 5-13)
- 10) Select page: 5, address: F1, and set data: 00.

How to reset the zoom and focus when they deviated:

If the zoom and focus deviated due to some reason, reset them in the following method.

- 1) Select page: 6, address: 90, and set data: XL. (Note 2)
- 2) Select page: 6, address: 91, and set data: XH. (Note 2)
- 3) Select page: 6, address: 92, and set data: YL. (Note 3)
- 4) Select page: 6, address: 93, and set data: YH. (Note 3)
- 5) Select page: 6, address: 01, set data: 79, press the PAUSE button, and wait for 1 second.
- 6) Select page: 6, address: 2C, and set data: 01.
- 7) Select page: 6, address: 01, set data: 00, and press the PAUSE button.

Note 2: The data noted down at step 6) of "Setting method".

Note 3: The data noted down at step 8) of "Setting method".

Check on the oscilloscope

1. Horizontal period

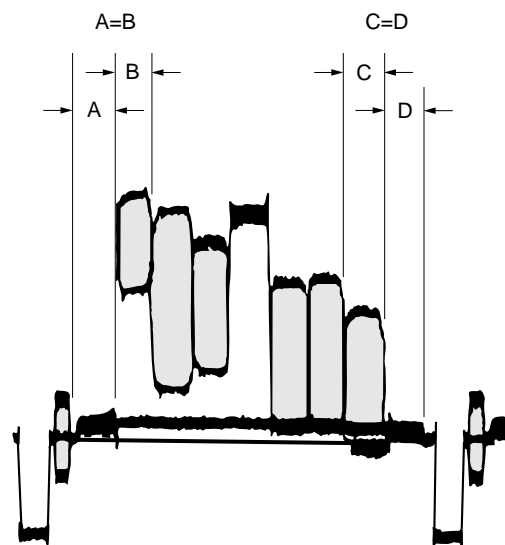


Fig. 5-1-13

2. Vertical period

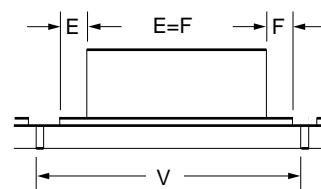


Fig. 5-1-14

Check on the TV monitor

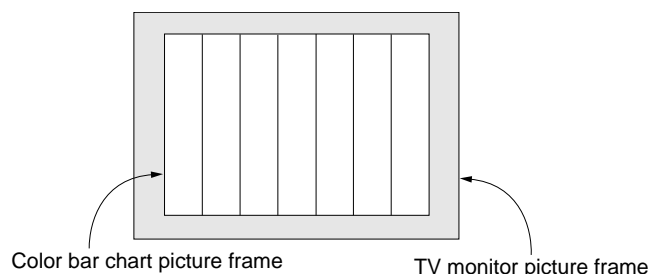


Fig. 5-1-15

7. Light Level Adjustment

Adjust the standard LV value.

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Clear chart (Color reproduction adjustment frame) |
| Measurement Point | Displayed data of page: 1 (Note 2) |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | F |
| Adjustment Address | 26, 28 |
| Specified Value | AE level: 0FE0 to 1020 |

Note 1: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Note 2: The right four digits of the page: 1 displayed data of the adjusting remote commander.
1:XX:XX
——— Displayed data

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 5) Select page: 6, address: 01, set data: 0D, and press the PAUSE button. (The light level adjustment is performed and the adjustment data is stored in page: F, address: 26 and 28)
- 6) Select page: 6, address: 02, and check that the data is “01”.
- 7) Select page: 0, address: 03, and set data: 06.
- 8) Select page: 1, and check that the displayed data (Note 2) satisfies the AE level specified value.

Processing after Completing Adjustments:

- 1) Select page: 0, address: 03, and set data: 00.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 5, address: F1, and set data: 00.
- 4) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 5) Release the data setting performed at step 4). (Refer to page 5-13)
- 6) Select page: 0, address: 01, and set data: 00.

8. Mixed Color Cancel Adjustment

To perform mixed color cancel adjustment based on data of each color in color bar.

| | |
|--------------------|--|
| Mode | STILL |
| Subject | Color bar chart (Color reproduction adjustment frame) |
| Adjustment Page | F |
| Adjustment Address | A0 to A3 |

Note 1: Perform “Light Level Adjustment” before this adjustment.

Note 2: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 5) Select page: 6, address: 01, set data: D7, and press the PAUSE button.
- 6) Select page: 6, address: 01, set data: D5, and press the PAUSE button. (The mixed color adjustment is performed and the adjustment data is stored in page: F, address: A0 to A3)
- 7) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 4). (Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.

9. Auto White Balance Standard Data Input

Adjust the white balance standard data at 3200K.

| | |
|--------------------|--|
| Mode | STILL |
| Subject | Clear chart (Color reproduction adjustment frame) |
| Adjustment Page | F |
| Adjustment Address | 3A to 3D, 59 |

Note 1: Perform “Light Level Adjustment” and “Mixed Color Cancel Adjustment” before this adjustment.

Note 2: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 5) Select page: 6, address: 01, set data: 11, and press the PAUSE button.
- 6) Select page: 6, address: 01, set data: 0B, and press the PAUSE button. (The auto white balance standard data input is performed and the standard data is stored in page: F, address: 3A to 3D, 59)
- 7) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 4). (Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Perform “Auto White Balance Adjustment”.

10. Auto White Balance Adjustment

Adjust to the proper auto white balance output data.

If it is not correct, auto white balance and color reproducibility will be poor.

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Clear chart (Color reproduction adjustment frame) |
| Filter | Filter C14 for color temperature correction |
| Measurement Point | Displayed data of page: 1 (Note 3) |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | F |
| Adjustment Address | 3F, 40, 80 |
| Specified Value | DSC-S30 R ratio: 2760 to 28A0 B ratio: 6220 to 6360 DSC-S50 R ratio: 27E0 to 2920 B ratio: 5EE0 to 6020 |

Note 1: Perform “Auto White Balance Standard Data Input” before this adjustment.

Note 2: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Note 3: The right four digits of the page: 1 displayed data of the adjusting remote commander.

1:XX:XX
 — Displayed data

Adjusting method:

- 1) Place the C14 filter for color temperature correction on the lens.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 5, address: F1, and set data: FF.
- 4) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 5) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 6) Select page: 6, address: 01, set data: A7, and press the PAUSE button.
- 7) Select page: F, address: 49 to 4C, and noting down the data of each address.
- 8) Write data in page: F, address: 49 to 4C as shown in the following table.

| Address | | 49 | 4A | 4B | 4C |
|---------|---------|----|----|----|----|
| Data | DSC-S30 | 28 | 00 | 62 | C0 |
| | DSC-S50 | 28 | 80 | 5F | 80 |

Note: After setting each data, be sure to press the PAUSE button of the adjusting remote commander.

- 9) Select page: 6, address: 01, set data: A5, and press the PAUSE button. (The auto white balance adjustment is performed and the adjustment data is stored in page: F, address: 3F, 40 and 80)
- 10) Select page: 6, address: 02, and check that the data is “01”.
- 11) Select page: 6, address: 01, set data: 3F, and press the PAUSE button.
- 12) Select page: 0, address: 03, and set data: 04.
- 13) Select page: 1, and check that the displayed data (Note 3) satisfies the R ratio specified value.
- 14) Select page: 0, address: 03, and set data: 05.
- 15) Select page: 1, and check that the displayed data (Note 3) satisfies the B ratio specified value.
- 16) Select page: F, address: 49 to 4C, and input the data noted down at step 7).

Note: After setting each data, be sure to press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 0, address: 03, and set data: 00.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 5, address: F1, and set data: 00.
- 4) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 5) Release the data setting performed at step 5). (Refer to page 5-13)
- 6) Select page: 0, address: 01, and set data: 00.

11. Color Reproduction Adjustment

Adjust the color separation matrix coefficient so that proper color reproduction is produced.

| | |
|--------------------|--|
| Mode | STILL |
| Subject | Color bar chart (Color reproduction adjustment frame) |
| Adjustment Page | F |
| Adjustment Address | 41 to 48, 5C to 5F |

Note 1: Perform “Auto White Balance Standard Data Input” before this adjustment.

Note 2: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”.
(Refer to page 5-13)
- 5) Select page: 6, address: 01, set data: AB, and press the PAUSE button.
- 6) Select page: 6, address: 12, set data: 80, and press the PAUSE button.
- 7) Wait for 1 second.
- 8) Select page: 6, address: 12, set data: 00, and press the PAUSE button.
- 9) Wait for 2 seconds.
- 10) Select page: 6, address: 01, set data: A9, and press the PAUSE button. (The color reproduction adjustment is performed and the adjustment data is stored in page: F, address: 41 to 48, 5C to 5F)
- 11) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 5, address: F1, and set data: 00.
- 3) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 4) Release the data setting performed at step 4).
(Refer to page 5-13)
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Perform “Color Reproduction Check”.

12. Color Reproduction Check

| | |
|----------------------|---|
| Mode | STILL |
| Subject | Color bar chart (Color reproduction adjustment frame) |
| Measurement Point | Video terminal of A/V OUT jack (75 Ω terminated) |
| Measuring Instrument | Vectorscope |
| Specified Value | All color luminance points should settle within each color reproduction frame. |

Menu setting:

- 1) VIDEO OUT of SET UP menu
 - NTSC (NTSC mode)
 - PAL (PAL mode)

Checking method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”.
(Refer to page 5-13)
- 5) Check that the picture frame is set to the specified position.
(Refer to “6. picture Frame Setting”)
- 6) Select page: 6, address: 10, and set data: 01.
- 7) Select page: E, address: 52, after noting down the data, set data: 0A, and press the PAUSE button.
- 8) Select page: 6, address: 01, set data: 0F, and press the PAUSE button.
- 9) Select page: 6, address: 12, set data: 80, and press the PAUSE button.
- 10) Wait for 1 second.
- 11) Select page: 6, address: 12, set data: 00, and press the PAUSE button.
- 12) Wait for 2 seconds.
- 13) Check the each color luminance point in each color reproduction frame.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 6, address: 10, and set data: 00.
- 3) Select page: E, address: 52, set data noted down at step 7) and press the PAUSE button.
- 4) Select page: 5, address: F1, and set data: 00.
- 5) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 6) Release the data setting performed at step 4).
(Refer to page 5-13)
- 7) Select page: 0, address: 01, and set data: 00.

For NTSC mode

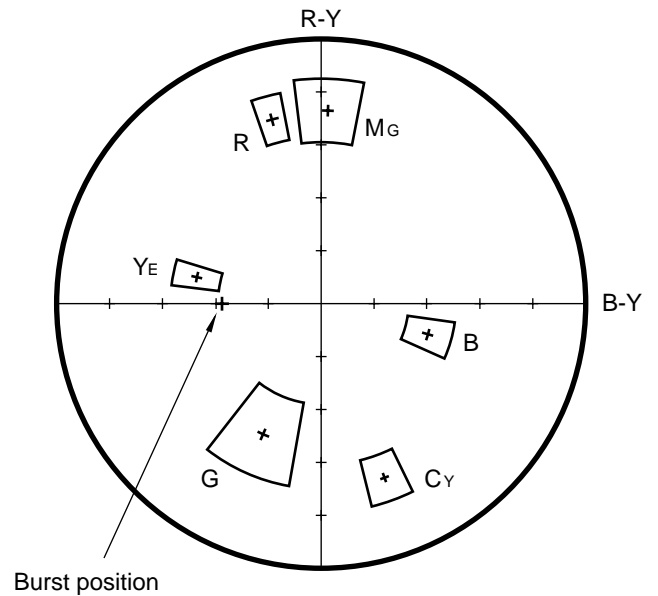


Fig. 5-1-16

For PAL mode

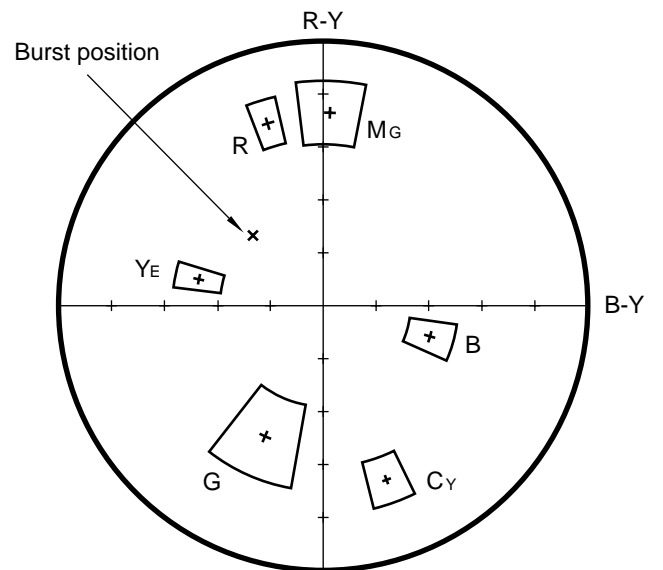


Fig. 5-1-17

13. White Balance Check

| | | |
|----------------------|--|---|
| Mode | STILL | |
| Subject | Clear chart (Color reproduction adjustment frame) | |
| Measurement Point | Displayed data of Page: 1 (Note 2) | Video terminal of A/V OUT jack (75 Ω terminated) |
| Measuring Instrument | Adjustment remote Commander | Vectorscope |
| Specified Value | R ratio: 3E00 to 4200 B ratio: 3E00 to 4200 | Fig. 5-1-18 (A) and (B) |

Note 1: Refer to “6. Picture Frame Setting” for XH, XL, YH and YL.

Note 2: The right four digits of the page: 1 displayed data of the adjusting remote commander.

1:XX:XX

Displayed data

Checking method:

- 1) Check that the lens is not covered with either filter.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 5, address: F1, and set data: FF.
- 4) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 5) Perform “Data setting during camera system adjustment”. (Refer to page 5-13)
- 6) Select page: 6, address: 90, and set data: XL. (Note 1)
- 7) Select page: 6, address: 91, and set data: XH. (Note 1)
- 8) Select page: 6, address: 92, and set data: YL. (Note 1)
- 9) Select page: 6, address: 93, and set data: YH. (Note 1)
- 10) Select page: 6, address: 6C, and set data: 01.
- 11) Select page: 6, address: 01, set data: 79, press the PAUSE button, and wait for 1 second.
- 12) Select page: 6, address: 2C, and set data: 01.
- INDOOR data check
- 13) Select page: E, address: 52, after noting down the data, set data: 0E, and press the PAUSE button.
- 14) Select page: 6, address: 01, set data: 0F, and press the PAUSE button.
- 15) Select page: 0, address: 03, and set data: 04.
- 16) Select page: 1, and check that the displayed data (Note 2) satisfies the R ratio specified value.
- 17) Select page: 0, address: 03, and set data: 05.
- 18) Select page: 1, and check that the displayed data (Note 2) satisfies the B ratio specified value.
- INDOOR luminance point check
- 19) Select page: 6, address: 1C, and set data: 00.
- 20) Select page: 0, address: 03, and set data: 00.
- 21) Check that the center of the white luminance point is within the circle shown Fig. 5-1-18 (A).
- OUTDOOR luminance point check
- 22) Place the C14 filter on the lens.
- 23) Select page: E, address: 4B, after noting down the data, set data: 20, and press the PAUSE button.
- 24) Select page: 6, address: 01, set data: 3F, and press the PAUSE button.
- 25) Check that the center of the white luminance point settles in the circle shown Fig. 5-1-18 (B).

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 6, address: 6C, and set data: 00.
- 3) Select page: E, address: 52, set data noted down at step 13) and press the PAUSE button.
- 4) Select page: E, address: 4B, set data noted down at step 23) and press the PAUSE button.
- 5) Select page: 5, address: F1, and set data: 00.
- 6) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 7) Release the data setting performed at step 5).
- 8) Select page: 0, address: 01, and set data: 00.

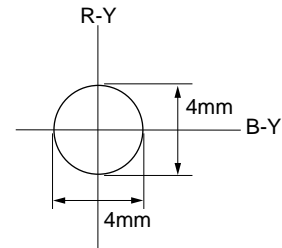
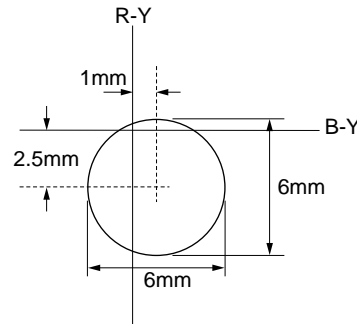


Fig. 5-1-18 (A)

DSC-S30



DSC-S50

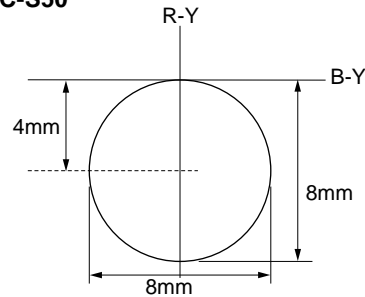


Fig. 5-1-18 (B)

14. Strobe White Balance Adjustment

Adjust the white balance when the strobe light flashed.

| | |
|--------------------|---|
| Mode | STILL |
| Subject | Flash adjustment box (Note 3) (1.0 m from the front of lens) |
| Adjustment Page | F |
| Adjustment Address | 4D, 4E, 64, 69, 6A, 6B |

Note 1: Perform “HALL Adjustment”, “Flange Back Adjustment”, “Light Level Adjustment”, “Auto White Balance Adjustment” and “Auto White Balance Standard Data Input” before this adjustment.

Note 2: Perform this adjustment in the Flash adjustment box.

Note 3: Refer to “4. Preparing the Flash adjustment box”.
(See page 5-7)

Note 4: Check that the data of page: 6, address: 02 is “00”.
If not, turn the power of unit OFF/ON.

Switch setting:

- 1) FLASH ON

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform “Data setting during camera system adjustment”.
(Refer to page 5-13)
- 5) Select page: 7, address: 03, and set data: 08.
- 6) Select page: 6, address: 90, and set data: 00.
- 7) Select page: 6, address: 91, and set data: 00.
- 8) Select page: 6, address: 92, and set data: 00.
- 9) Select page: 6, address: 93, and set data: 80.
- 10) Select page: 6, address: 6C, and set data: 01.
- 11) Select page: 6, address: 2C, and set data: 01.
- 12) Select page: 6, address: 01, set data: 79, and press the PAUSE button.
- 13) Select page: 6, address: 01, set data: 67, and press the PAUSE button.
- 14) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 15) Select page: 6, address: 01, set data: 79, and press the PAUSE button.
- 16) Select page: 6, address: 01, set data: 67, and press the PAUSE button.
- 17) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 18) Select page: 6, address: 01, set data: 79, and press the PAUSE button.
- 19) Select page: 6, address: 01, set data: B9, and press the PAUSE button. (The strobe white balance adjustment is performed and the adjustment data is stored in page: F, address: 4D, 4E, 64, 69, 6A and 6B)
- 20) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments:

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 2) Perform “Strobe Light Level and White Balance Check” successively. (Do not turn the power of unit OFF)

15. Strobe Light Level and White balance Check

Check the light level regulation and the white balance when the strobe light flashed.

| | |
|----------------------|--|
| Mode | STILL |
| Subject | Flash adjustment box (Note 3) (1.0 m from the front of lens) |
| Measurement Point | Displayed data of page: 1 |
| Measuring Instrument | Adjusting remote commander |
| Specified value | Y level data: 60 to 94 R-Y level data: FA to FF or 00 to 06 (Note 4) B-Y level data: FA to FF or 00 to 06 (Note 4) |

Note 1: Perform this checking successively after performing “HALL Adjustment”, “Flange Back Adjustment”, “Light Level Adjustment”, “Strobe White Balance Adjustment” and “Auto White Balance Standard Data Input”. (Do not turn the power of unit OFF)

Note 2: Perform this adjustment in the Flash adjustment box.

Note 3: Refer to “4. Preparing the Flash adjustment box”.
(See page 5-7)

Note 4: The right four digits of the page: 1 displayed data of the adjusting remote commander.

1:XX:XX
└───┬───┘
 └───┘
 B-Y level data
 R-Y level data

Note 5: Displayed data of page: F, address: 64 of the adjusting remote commander.

F:XX:64
└───┘
 Y level data

Note 6: Check that the data of page: 6, address: 02 is “00”.

Checking method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 6, address: 01, set data: 79, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 6, address: 01, set data: 67, and press the PAUSE button.
- 4) Check the flashing of strobe light.
- 5) Select page: F, address: 64, and check that the data satisfies the Y level data specified value. (Note 5)
- 6) Select page: 0, address: 03, and set data: 02.
- 7) Select page: 1, and check the R-Y, B-Y level data (Note 4) satisfies the specified value.

Processing after Completing Adjustments:

- 1) Select page: 0, address: 03, and set data: 00.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Select page: 6, address: 2C, and set data: 00.
- 4) Select page: 6, address: 6C, and set data: 00.
- 5) Select page: 6, address: 93, and set data: 00.
- 6) Select page: 7, address: 03, set data: 00, and press the PAUSE button.
- 7) Select page: 5, address: F1, and set data: 00.
- 8) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 9) Release the data setting performed at step 4) of “Strobe White Balance Adjustment”. (Refer to page 5-13)
- 10) Select page: 0, address: 01, and set data: 00.

16. CCD Black Defect Compensation

| | |
|----------------------|---|
| Mode | STILL |
| Subject | Clear chart (25 cm from the front of lens) |
| Measurement Point | Displayed data of page: 6, address: 55 |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | 7 |
| Adjustment Address | 60 to 87 |

Note 1: Check that there are no dust, no dirt and reflection of the clear chart.

Note 2: Any subject other than the clear chart should be in the screen.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform "Data setting during camera system adjustment". (Refer to page 5-13)
- 5) Select page: F, address: DF, after noting down the data, set data: 4C, and press the PAUSE button.
- 6) Select page: 6, address: 2C, and set data: 01.
- 7) Select page: 6, address: 90, and set data: 00.
- 8) Select page: 6, address: 91, and set data: 03.
- 9) Select page: 6, address: 92, and set data: 00.
- 10) Select page: 6, address: 93, and set data: 00.
- 11) Select page: 6, address: 6C, and set data: 01.
- 12) Select page: 6, address: 01, set data: 79, and press the PAUSE button.
- 13) Select page: 6, address: 30, and set data: 01.
- 14) Wait 4 seconds.
- 15) Select page: 6, address: 01, set data: 8D, and press the PAUSE button. (The CCD black defect compensation is performed and the compensation data is stored in page: 7, address: 60 to 87)
- 16) Select page: 6, address: 02, and check that the data is "01".
- 17) Select page: 6, address: 55, and check the data.
00 to 0A: Normal
0B to FF: Defective
- 18) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 19) Select page: F, address: DF, set data: 5A, and press the PAUSE button.
- 20) Select page: 6, address: 01, set data: 89, and press the PAUSE button.
- 21) Select page: 6, address: 02, and check that the data is "01".
- 22) Select page: 6, address: 55, and check the data.
00: Normal
01 to FF: Defective

Processing after Completing Adjustments:

- 1) Select page: F, address: DF, set data noted down at step 5) and press the PAUSE button of the adjusting remote commander.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 3) Select page: 6, address: 2C, and set data: 00.
- 4) Select page: 6, address: 30, and set data: 00.
- 5) Select page: 6, address: 6C, and set data: 00.
- 6) Select page: 6, address: 91, and set data: 00.
- 7) Select page: 5, address: F1, and set data: 00.
- 8) Select page: D, address: 63, set data: 00, and press the PAUSE button.

- 9) Release the data setting performed at step 4).
(Refer to page 5-13)
- 10) Select page: 0, address: 01, and set data: 00.

17. CCD White Defect Compensation

| | |
|----------------------|---|
| Mode | STILL |
| Subject | Clear chart (25 cm from the front of lens) |
| Measurement Point | Displayed data of page: 6, address: 55 |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | 7 |
| Adjustment Address | 88 to A3 |

Note 1: Check that there are no dust, no dirt and reflection of the clear chart.

Note 2: Any subject other than the clear chart should be in the screen.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: FF.
- 3) Select page: D, address: 63, set data: 40, and press the PAUSE button of the adjusting remote commander.
- 4) Perform "Data setting during camera system adjustment". (Refer to page 5-13)
- 5) Select page: F, address: DE, after noting down the data, set data: 1E, and press the PAUSE button.
- 6) Select page: F, address: E3, after noting down the data, set data: 08, and press the PAUSE button.
- 7) Select page: 6, address: 01, set data: 8B, and press the PAUSE button. (The CCD white defect compensation is performed and the compensation data is stored in page: 7, address: 88 to A3)
- 8) Select page: 6, address: 02, and check that the data is "01".
- 9) Select page: 6, address: 55, and check the data.
00 to 7F: Normal
80 to FF: Defective
- 10) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 11) Select page: F, address: DE, set data: 0F, and press the PAUSE button.
- 12) Select page: F, address: E3, set data: A0, and press the PAUSE button.
- 13) Select page: 6, address: 01, set data: 87, and press the PAUSE button.
- 14) Select page: 6, address: 02, and check that the data is "01".
- 15) Select page: 6, address: 55, and check the data.
00: Normal
01 to FF: Defective

Processing after Completing Adjustments:

- 1) Select page: F, address: DE, set data noted down at step 5) and press the PAUSE button of the adjusting remote commander.
- 2) Select page: F, address: E3, set data noted down at step 6) and press the PAUSE button.
- 3) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 4) Select page: 5, address: F1, and set data: 00.
- 5) Select page: D, address: 63, set data: 00, and press the PAUSE button.
- 6) Release the data setting performed at step 4).
(Refer to page 5-13)
- 7) Select page: 0, address: 01, and set data: 00.

1-5. LCD SYSTEM ADJUSTMENTS

Before perform the LCD system adjustments, check that the specified values of “VIDEO SYSTEM ADJUSTMENTS” are satisfied.

Note 1: The back light (fluorescent tube) is driven with high voltage AC power. Therefore, do not touch the back light directly, otherwise you will feel an electric shock.

Note 2: Taken an extreme care not to destroy the liquid crystal display module by static electricity when replacing it.

Note 3: Set the LCD BRIGHT to the center.

[Adjusting connector]

Most of the measuring points for adjusting the LCD system are concentrated in CN709 of the SY-58 board.

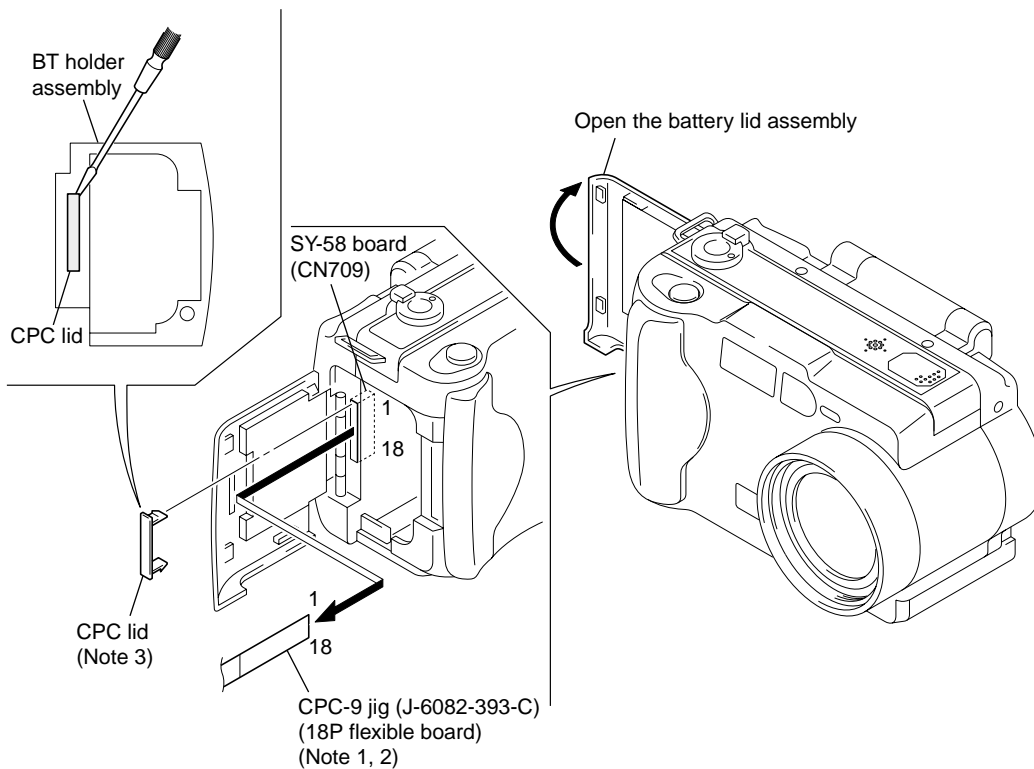
Connect the Measuring Instruments via the CPC-9 jig (J-6082-393-C).

The following table shows the Pin No. and signal name of CN709.

| Pin No. | Signal Name | Pin No. | Signal Name |
|---------|-------------|---------|-------------|
| 1 | N. C. | 10 | UNREG |
| 2 | N. C. | 11 | LANC IN |
| 3 | N. C. | 12 | LANC OUT |
| 4 | REG GND | 13 | N. C. |
| 5 | XCPC_IN | 14 | RF7 |
| 6 | N. C. | 15 | TXD |
| 7 | HSY | 16 | RXD |
| 8 | PANEL COM | 17 | RESET |
| 9 | VG | 18 | VDD |

Table 5-1-7

• ATTACHMENT OF CPC-9 JIG



Note 1: Don't use the 12 pin flexible board of CPC-9 jig. It causes damage to the unit.

Note 2: The old CPC-9 jig (Parts code: J-6082-393-B) cannot be used, because it cannot operate the adjustment remote commander.

Note 3: In removing the CPC lid, start from the upper side.

Fig. 5-1-19

1. LCD Initial Data Input

| | |
|--------------------|----------------------------|
| Mode | PLAY |
| Signal | Arbitrary |
| Adjustment Page | D |
| Adjustment Address | 1C, 1D, D0 to D8, DD to DF |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, and enter the data given in the following table.

Note: Press the PAUSE button of the adjusting remote commander each time the data are set, as the data are written to non-volatile memory (EEPROM).

| Address | Data | Remark |
|---------|------|--------------------------|
| 1C | 02 | Fixed value |
| 1D | 2C | |
| D0 | BC | Bright Adjustment |
| D1 | 80 | Color Adjustment |
| D2 | B9 | White Balance Adjustment |
| D3 | B7 | |
| D4 | BE | Contrast Adjustment |
| D5 | C8 | D Range Adjustment |
| D6 | 7C | V-COM Level Adjustment |
| D7 | 80 | VCO Adjutment (NTSC) |
| D8 | 74 | V-COM Adjustment |
| DD | 88 | VCO Adjutment (PAL) |
| DE | 13 | Fixed value |
| DF | 11 | |

Processing after Completing Adjustments:

- 1) Select page: 0, address: 01, and set data: 00.

2. VCO Adjustment (PD-127 Board)

Set the VCO free-run frequency. If deviated, the LCD screen will be blurred.

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑦ of CN709 (HSY) on SY-58 board |
| Measuring Instrument | Frequency counter |
| Adjustment Page | D |
| Specified Value | D7 (NTSC) DD (PAL) |
| Specified Value | $f = 15734 \pm 30 \text{ Hz}$ (NTSC) $f = 15745 \pm 30 \text{ Hz}$ (PAL) |

Menu setting:

- 1) VIDEO OUT of SET UP menu..... NTSC (NTSC mode)
(This adjustment must be performed in NTSC mode, so don't set the menu setting to "PAL")

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F0, and set data: 01.
- 3) Select page: D, address: D7, change the data and set the frequency (f) to the NTSC specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Select page: D, address: DD, and change the data and set the frequency (f) to the PAL specified value.
- 6) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F0, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

3. D Range Adjustment (PD-127 Board)

Set the D range of the LCD driver to the specified value.

If deviated, the LCD screen will become blackish or saturated (whitish)

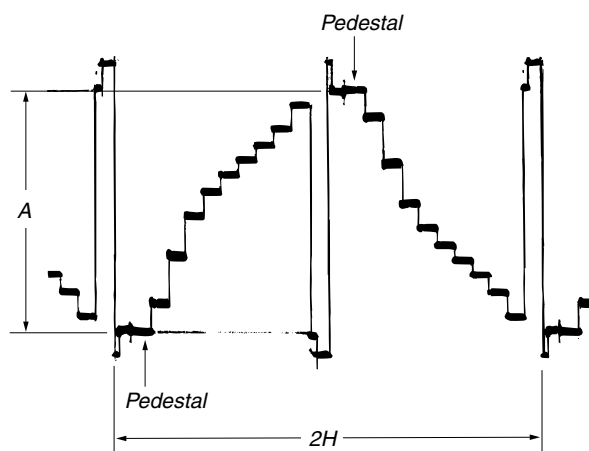
| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑨ of CN709 (VG) on SY-58 board External trigger: Pin ⑧ of CN709 (PANEL COM) on SY-58 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | D5 |
| Specified Value | $A = 3.62 \pm 0.05 \text{ Vp-p}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 03.
- 3) Select page: D, address: D5, change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.



A: Pedestal level difference between 1H period and previous 1H period.

Fig. 5-1-20

4. Bright Adjustment (PD-127 Board)

Set the level of the VIDEO signal for driving the LCD to the specified value.

If deviated, the LCD screen image will be blackish or saturated (whitish).

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑨ of CN709 (VG) on SY-58 board External trigger: Pin ⑧ of CN709 (PANEL COM) on SY-58 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | D0 |
| Specified Value | $A = 1.85 \pm 0.08 \text{ Vp-p}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 03.
- 3) Select page: 2, address: 10, and set data: 01.
- 4) Select page: D, address: D0, change the data and set the voltage (A) between the pedestal and GAMMA 1 limiter level to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 2, address: 10, and set data: 00.
- 3) Select page: 0, address: 01, and set data: 00.

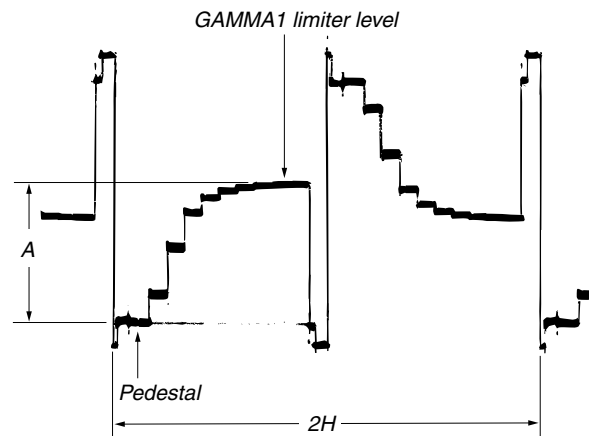


Fig. 5-1-21

5. Contrast Adjustment (PD-127 Board)

Set the level of the VIDEO signal for driving the LCD to the specified value.

If deviated, the LCD screen image will be blackish or saturated (whitish).

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑨ of CN709 (VG) on SY-58 board External trigger: Pin ⑧ of CN709 (PANEL COM) on SY-58 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | D4 |
| Specified Value | $A = 3.31 \pm 0.07 \text{ Vp-p}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 03.
- 3) Select page: D, address: D4, change the data and set the voltage (A) between the pedestal and 10 steps peak to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

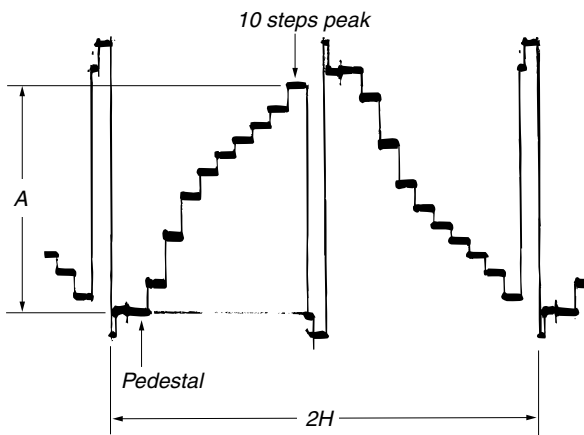


Fig. 5-1-22

6. Color Adjustment (PD-127 Board)

Set the color saturation to the standard value.

If, deviated, the color will be dark or light.

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑨ of CN709 (VG) on SY-58 board External trigger: Pin ⑧ of CN709 (PANEL COM) on SY-58 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | D1 |
| Specified Value | $A = 544 \pm 50 \text{ mVp-p}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 04.
- 3) Select page: D, address: D1, change the data and set the voltage (A) between the white 100% (Reference level) and green to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

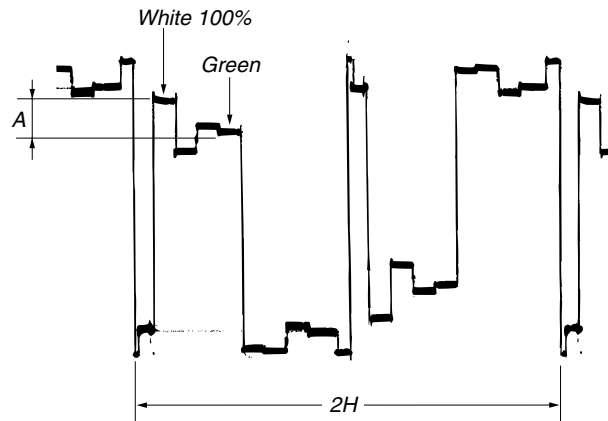


Fig. 5-1-23

7. V-COM Level Adjustment (PD-127 Board)

Set the common electrode drive signal level of LCD to the specified value.

| | |
|----------------------|---|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Pin ⑧ of CN709 (PANEL COM) on SY-58 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | D6 |
| Specified Value | $A = 6.50 \pm 0.05 \text{ Vp-p}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 03.
- 3) Select page: D, address: D6, change the data and set the V-COM signal level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.

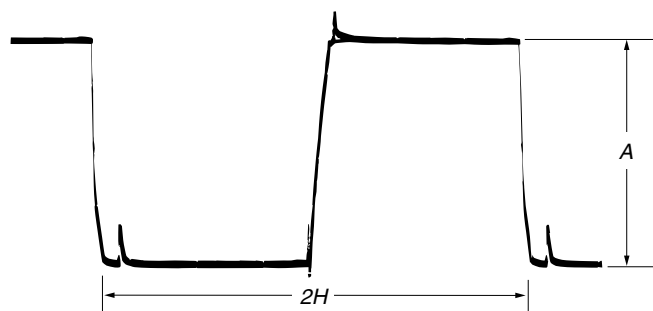


Fig. 5-1-24

8. V-COM Adjustment (PD-127 Board)

Set the DC bias of the common electrode drive signal of LCD to the specified value.

If deviated, the LCD display will be move, producing flicker and conspicuous vertical lines.

| | |
|----------------------|--|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Check on LCD screen |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | D8 |
| Specified Value | The brightness difference between the section-A and section-B is minimum |

Note: Perform “Bright Adjustment” and “Contrast Adjustment” before this adjustment.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 01.
- 3) Select page: 2, address: 10, and set data: 02.
- 4) Select page: D, address: D8, change the data so that brightness of the section A and section B is equal.
- 5) Press the PAUSE button of the adjusting remote commander.

Processing after Completing Adjustments:

- 1) Select page: 5, address: F1, and set data: 00.
- 2) Select page: 2, address: 10, and set data: 00.
- 3) Select page: 0, address: 01, and set data: 00.

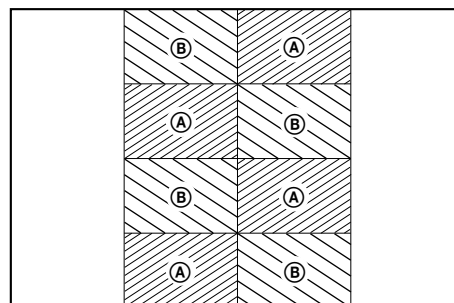


Fig. 5-1-25

9. White Balance Adjustment (PD-127 Board)

Correct the white balance.

If deviated, the LCD screen color cannot be reproduced.

| | |
|----------------------|--------------------------------|
| Mode | PLAY |
| Signal | Arbitrary |
| Measurement Point | Check on LCD screen |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | D2, D3 |
| Specified Value | LCD screen must not be colored |

Note: Check the white balance only when replacing the following parts.

If necessary, adjust them.

1. LCD panel
2. Light induction plate
3. IC802

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 5, address: F1, and set data: 02.
- 3) Select page: D, address: D2 and D3, and set the data to the initial value.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

| Address | Data |
|---------|------|
| D2 | B9 |
| D3 | B7 |

- 4) Check that the LCD screen is not colored. If colored, change the data of page: D, address: D2 and D3 so that the LCD screen is not colored.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

- 5) Select page: 5, address: F1, and set data: 00.
- 6) Select page: 0, address: 01, and set data: 00.

1-6. SYSTEM CONTROL SYSTEM ADJUSTMENTS

1. Battery Down Adjustment

Set the battery end voltage.

If the voltage is incorrect, the life of battery will shorten.

The image at the battery end will also be rough.

| | |
|----------------------|---|
| Mode | STILL |
| Subject | Arbitrary |
| Measurement Point | Displayed data of page: 2, address: 51 |
| Measuring Instrument | Adjusting remote commander |
| Adjustment Page | D |
| Adjustment Address | 90 to 94 |

Connection:

- 1) Connect the regulated power supply and the digital voltmeter to the battery terminal as shown in Fig. 5-1-26.

Adjusting method:

- 1) Adjust the output voltage of the regulated power supply so that the digital volt meter display is 7.2 ± 0.1 Vdc.
- 2) Turn off the power supply.
- 3) Turn the HOLD switch of the adjusting remote commander.
- 4) Turn on the power supply.
- 5) Insert the memory stick to the unit, and set the STILL mode.
- 6) Set the FOCUS switch in MANUAL mode.
- 7) Select page: 0, address: 01, and set data: 01.
- 8) Decrease the output voltage of the regulated power supply so that the digital voltmeter display is 5.30 ± 0.01 Vdc.
- 9) Select page: 2, address: 51, read the data, and this data is named Dref.
- 10) Select page: D, address: 90, set data Dref, and then press the PAUSE button of adjusting remote commander.
(The data of address: 90, should be "7E" to "8F")
- 11) Convert Dref to decimal notation, and obtain Dref'.
- 12) Calculate D_{91}' , D_{92}' , D_{93}' and D_{94}' using following equations (decimal calculation), convert it to a hexadecimal number, and input each adjustment address.

$$\text{Address: 91} \quad D_{91}' = \text{Dref}' + 8$$

$$\text{Address: 92} \quad D_{92}' = \text{Dref}' + 23$$

$$\text{Address: 93} \quad D_{93}' = \text{Dref}' + 44$$

$$\text{Address: 94} \quad D_{94}' = \text{Dref}' + 55$$

Note: After setting each data, be sure to press the PAUSE button.

Processing after Completing Adjustments:

- 1) Select page: 0, address: 01, and set data: 00.

Note : The old CPC-9 jit (Parts code: J-6082-393-B) cannot be used, because it cannot operate the adjustment remote commander.

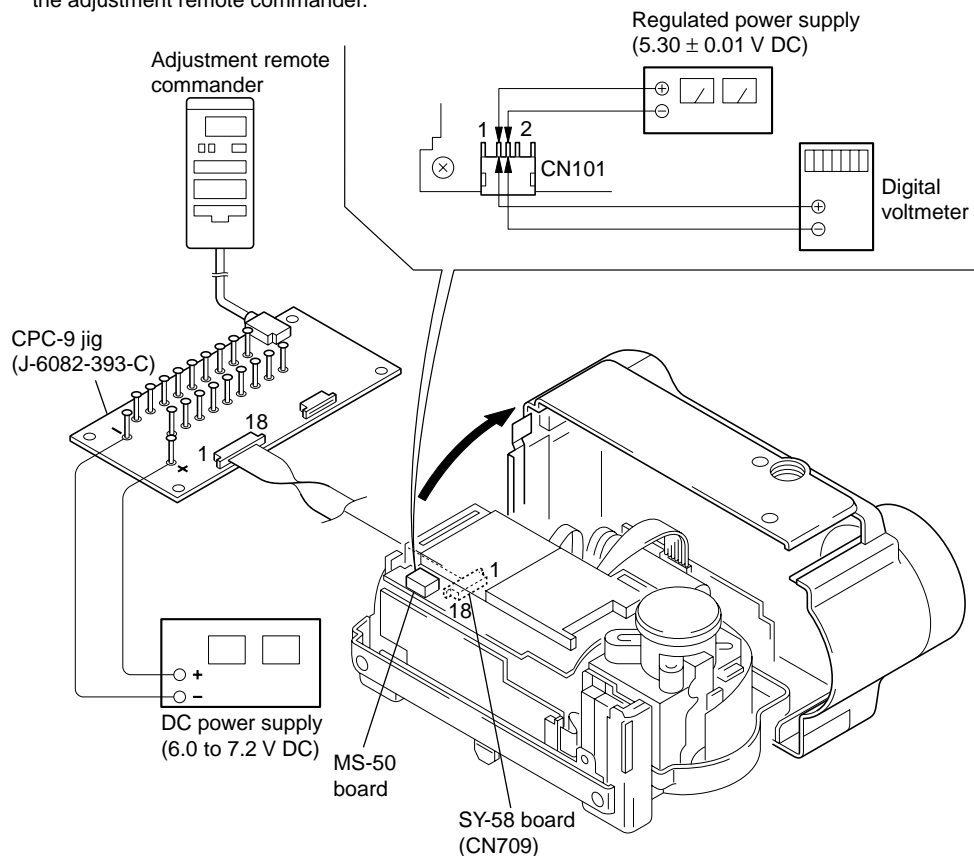


Fig. 5-1-26

5-2. SERVICE MODE

2-1. ADJUSTING REMOTE COMMANDER

The adjusting remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjusting remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Used Adjusting Remote Commander

- 1) Connect the adjusting remote commander to the CN709 on the SY-58 board via CPC-9 jig (J-6082-393-C).
 - 2) Adjust the HOLD switch of the adjusting remote commander to "HOLD" (SERVICE position).
 - 3) Turn on the power with the POWER switch of the unit.
- If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 5-2-1.

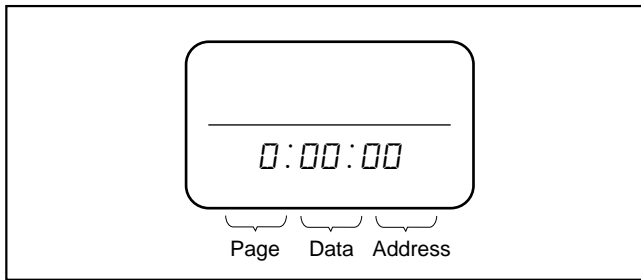


Fig. 5-2-1

- 4) Operate the adjusting remote commander as follows.
 - Changing the pageThe page increases when the EDIT SEARCH + button is pressed, and decreases when the EDIT SEARCH – button is pressed. There are altogether 16 pages, from 0 to F.

| | |
|-----------------------------------|---------------------------------------|
| Hexadecimal notation | 0 1 2 3 4 5 6 7 8 9 A B C D E F |
| LCD Display | 0 1 2 3 4 5 6 7 8 9 A b c d E F |
| Decimal notation conversion value | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |

Table 5-2-1

- Changing the address
- The address increases when the FF (▶▶) button is pressed, and decreases when the REW (▶▶) button is pressed. There are altogether 256 addresses, from 00 to FF.
- Changing the data (Data setting)
- The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
- Writing the adjustment data
- The PAUSE button must be pressed to write the adjustment data in the nonvolatile memory. (The new adjustment data will not be recorded in the nonvolatile memory if this step is not performed)

2. Precautions upon Using the Adjusting Remote Commander

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

2-2. DATA PROCESS

The calculation of the adjusting remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Table 5-2-2. indicates the hexadecimal notation- the decimal notation, calculation table.

| Hexadecimal notation-Decimal notation | | | | | | | | | | | | | | | | | ② ↓ |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| The lower digits of the hexadecimal notation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | |
| The upper digits of the hexadecimal notation | | | | | | | | | | | (H) | (b) | (c) | (d) | (E) | (F) | |
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| 1 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | |
| 2 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | |
| 3 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | |
| 4 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | |
| 5 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | |
| 6 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | |
| 7 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | |
| 8 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | |
| 9 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | |
| A (H) | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | |
| ①→ B (b) | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | |
| C (c) | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | |
| D (d) | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | |
| E (E) | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | |
| F (F) | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | |

Note : () indicate the adjusting remote control unit display.

(Example) In the case that the adjusting remote control unit display are BD (bd).
As the upper digit of the hexadecimal notation is B (b), and the lower digit is D (d), the intersection “189” of the ① and ② in the above table is the decimal notation to be calculated.

Table 5-2-2

2-3. SERVICE MODE

1. Setting the Test Mode

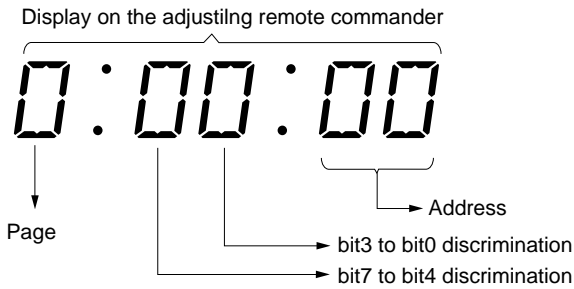
| | |
|--------|------------|
| Page D | Address 10 |
|--------|------------|

| Data | Function |
|------|----------------------------|
| 00 | Normal |
| 01 | Forced STILL mode power ON |
| 02 | Forced PLAY mode power ON |
| 03 | Forced MOVIE mode power ON |

- Before setting the data, select page: 0, address: 01, and set data: 01.
- For page D, the data set is recorded in the non-volatile memory by pressing the PAUSE button of the adjusting remote commander. In this case, take note that the test mode will not be exited even when the main power is turned off.
- After completing adjustments/repairs, be sure to return the data of this address to “00”, and press the PAUSE button of the adjusting remote commander.
Select page: 0, address: 01, and set data: 00.

2. Bit Value Discrimination

Bit values must be discriminated using the display data of the adjusting remote commander for following items. Use the table below to discriminate if the bit value is “1” or “0”



| Display on the Adjusting remote commander | Bit values | | | |
|---|--------------|--------------|--------------|--------------|
| | bit3 or bit7 | bit2 or bit6 | bit1 or bit5 | bit0 or bit4 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 1 |
| 2 | 0 | 0 | 1 | 0 |
| 3 | 0 | 0 | 1 | 1 |
| 4 | 0 | 1 | 0 | 0 |
| 5 | 0 | 1 | 0 | 1 |
| 6 | 0 | 1 | 1 | 0 |
| 7 | 0 | 1 | 1 | 1 |
| Ⓐ 8 | 1 | 0 | 0 | 0 |
| 9 | 1 | 0 | 0 | 1 |
| A(\bar{A}) | 1 | 0 | 1 | 0 |
| B(\bar{b}) | 1 | 0 | 1 | 1 |
| C(\bar{c}) | 1 | 1 | 0 | 0 |
| D(\bar{d}) | 1 | 1 | 0 | 1 |
| Ⓑ E(\bar{E}) | 1 | 1 | 1 | 0 |
| F(\bar{F}) | 1 | 1 | 1 | 1 |

Example: If “8E” is displayed on the adjusting remote commander, the bit values for bit7 to bit4 are shown in the Ⓐ column, and the bit values for bit3 to bit0 are shown in the Ⓑ column.

3. Switch Check (1)

| | |
|--------|------------|
| Page 2 | Address 43 |
|--------|------------|

| Bit | Function | When bit value=1 | When bit value=0 |
|-----|--|------------------|------------------|
| 1 | SHUTTR SW (Control Switch Block Mode SW) | OFF | ON |
| 2 | XSHUTTER LOCK SW (Control Switch Block Mode SW) | OFF | ON |

Using method:

- 1) Select page: 2, address: 43
- 2) By discriminating the bit value of display data, the state of the switches can be discriminated.

4. Switch Check (2)

| | |
|--------|------------------|
| Page 2 | Address 54 to 57 |
|--------|------------------|

Using method:

- 1) Select page: 2, addresses: 54 to 57.
- 2) By discriminating the display data, the pressed key can be discriminated.

| Address | Data | | | | | | |
|------------------------------|---|--|---|---|---|---|----------|
| | 00 to 14 | 15 to 33 | 3C to 64 | 65 to 91 | 92 to BD | BE to E9 | EA to FF |
| 54 (KEY AD0) (IC404 ㉗) | | | | | | PANEL REVERSE (JK-11 board) (S301) | |
| 55 (KEY AD1) (IC404 ㉘) | CONTROL DOWN (SW-339 board) (S101) | CONTROL UP (SW-339 board) (S101) | DISPLAY (SW-339 board) (S102) | PROGRAM AE+ (SW-339 board) (S105) | PROGRAM AE- (SW-339 board) (S108) | PANEL ON/OFF (SW-339 board) (S110) | |
| 56 (KEY AD2) (IC404 ㉙) | CONTROL RIGHT (SW-339 board) (S101) | CONTROL LEFT (SW-339 board) (S101) | CONTROL SET (SW-339 board) (S101) | FLASH (SW-339 board) (S103) | FOCUS (SW-339 board) (S107) | | |
| 57 (KEY AD3) (IC404 ㉚) | | | | | PROGRAM AE (SW-339 board) (S104) | PANEL UP/DOWN (SW-339 board) (S106) | |

5. LED Check

| | | |
|--------|------------|---------|
| Page 2 | Address 06 | Data 02 |
|--------|------------|---------|

Using method:

- 1) Select page: 2, address: 06, and set data: 01.
- 2) Check that all LED except for the ACCESS LED are lit.
- 3) Select page: 2, address: 06, and set data: 00.

6. LCD Check

| | | |
|--------|------------|---------|
| Page 2 | Address 06 | Data 02 |
|--------|------------|---------|

Using method:

- 1) Select page: 2, address: 05, and set data: 02.
- 2) Check that all LED are lit and all segments of LCD (display window) are lit.
- 3) Select page: 2, address: 05, and set data: 00.

SECTION 6

REPAIR PARTS LIST

6-1. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
 - Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
- ↑

Parts Color

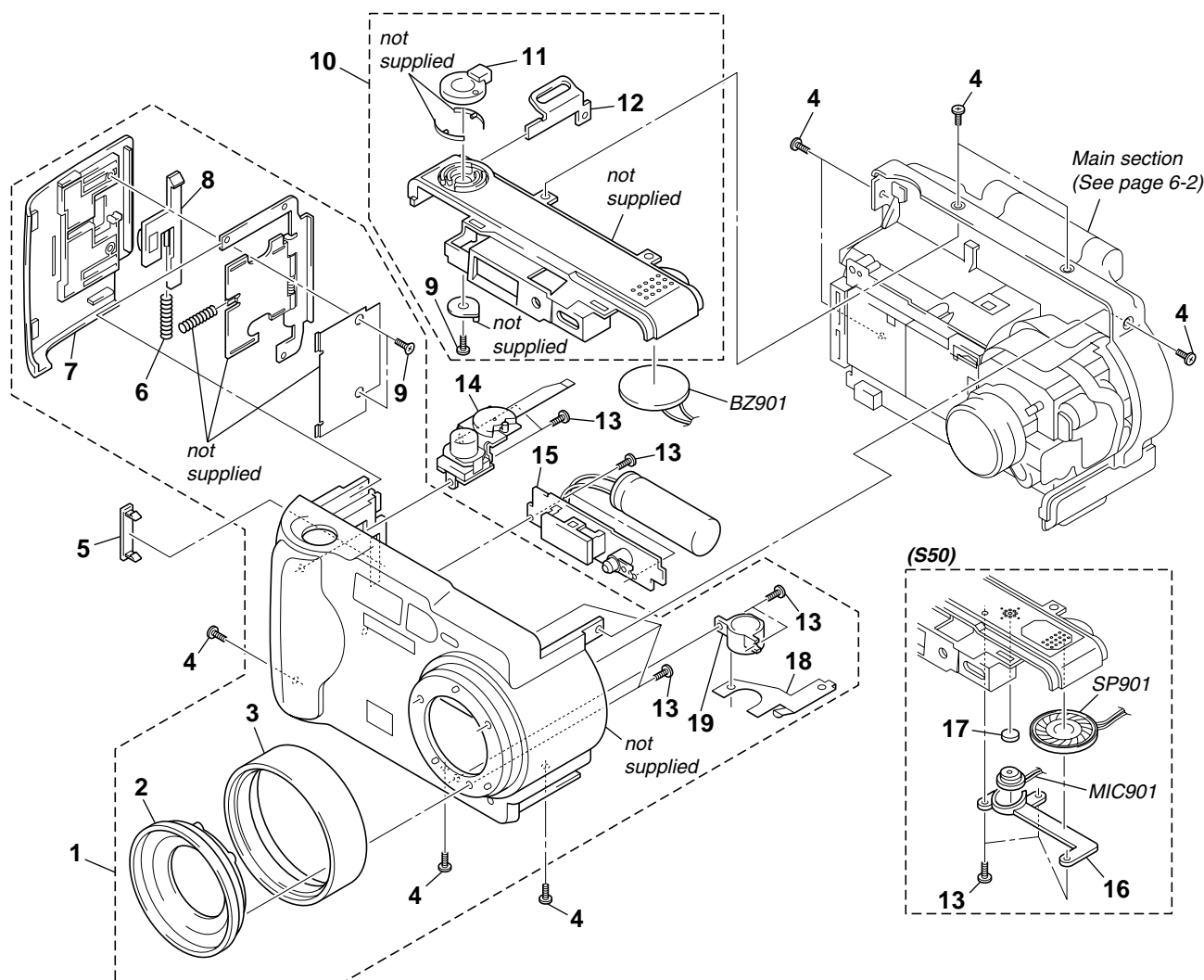
↑

Cabinet's Color
- 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.
 - Accessories are given in the last of the electrical parts list.

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

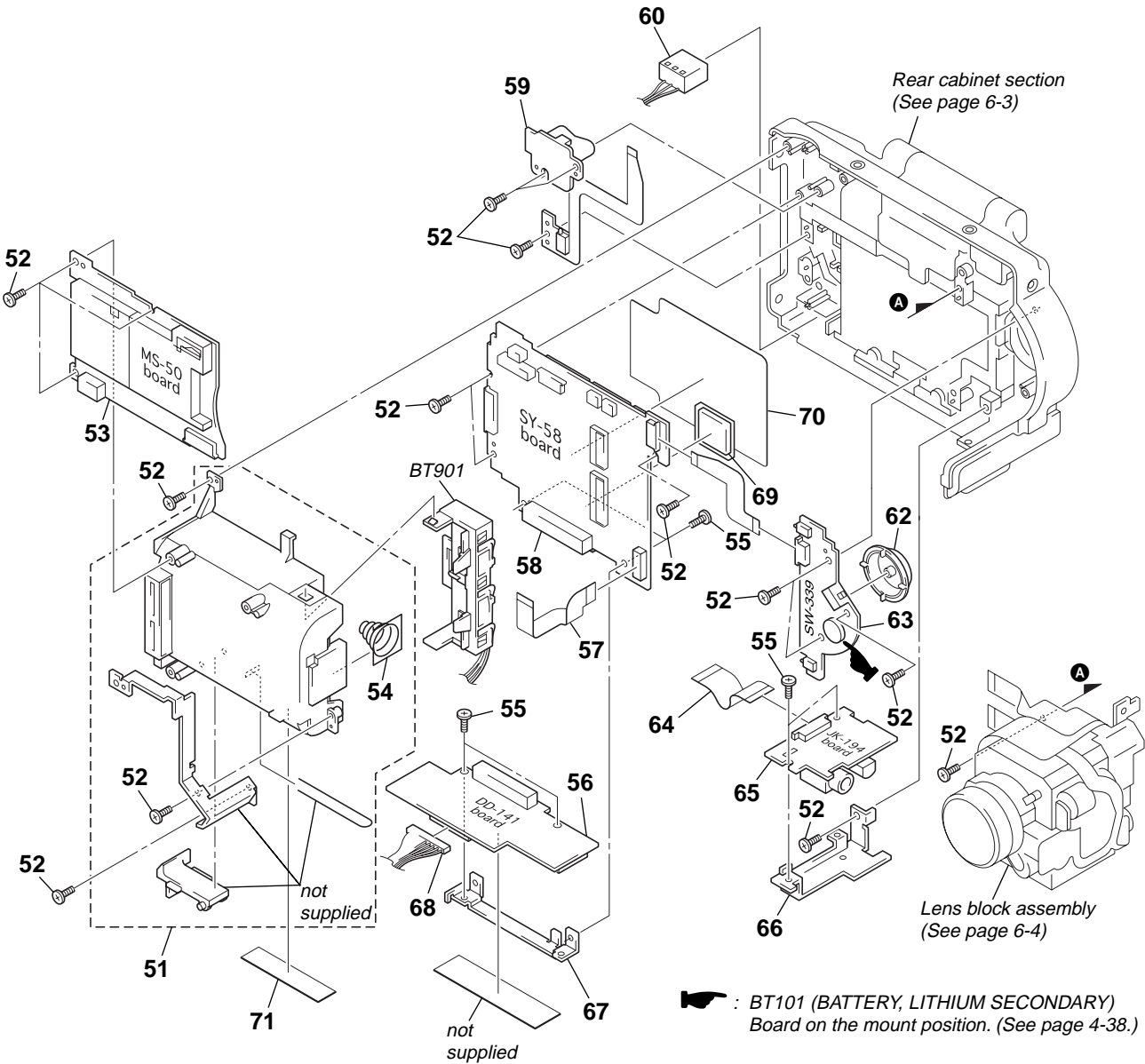
Les composants identifiés par une
marque Δ sont critiques pour la
sécurité.
Ne les remplacer que par une pièce
portant le numéro spécifié.

6-1-1. FRONT PANEL SECTION



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------------|--------|----------|--------------|---------------------------------|--------|
| 1 | X-3950-656-1 | CABINET (FRONT) ASSY (S50) | | 10 | X-3950-665-1 | CABINET (UPPER) ASSY (S30) | |
| 1 | X-3950-664-1 | CABINET (FRONT) ASSY (S30) | | 11 | 3-060-275-01 | KNOB, MODE | |
| 2 | 3-061-075-01 | LABEL, LENS | | 12 | 3-061-115-01 | BRACKET, STRAP | |
| 3 | 3-061-675-01 | RING, ORNAMENTAL | | 13 | 3-914-366-01 | SCREW (DIA. 1.7X4), PRECISION | |
| 4 | 3-968-729-91 | SCREW (M2), LOCK ACE, P2 | | 14 | 1-476-038-11 | SWITCH BLOCK, CONTROL (MODE SW) | |
| 5 | 3-060-251-01 | LID, CPC | | △ 15 | 1-476-005-11 | FLASH UNIT | |
| 6 | 3-050-594-01 | SPRING, COMPRESSION | | 16 | 3-061-114-01 | HOLDER, MISP (S50) | |
| 7 | 3-061-076-01 | LID, BATTERY (S50) | | * 17 | 3-055-971-01 | CUSHION, MICROPHONE (S50) | |
| 7 | 3-061-076-11 | LID, BATTERY (S30) | | * 18 | 3-061-077-01 | PLATE (1), GROUND | |
| 8 | 3-060-284-11 | SLIDER, BT LOCK (S50) | | 19 | 3-060-274-01 | SCREW, TRIPOD | |
| 8 | 3-060-284-21 | SLIDER, BT LOCK (S30) | | BZ901 | 1-529-739-11 | BUZZER, PIEZOELECTRIC (S30) | |
| 9 | 3-318-382-01 | SCREW (1.7X3), TAPPING | | MIC901 | 1-542-428-11 | MICROPHONE UNIT (S50) | |
| 10 | X-3950-659-1 | CABINET (UPPER) ASSY (S50) | | SP901 | 1-505-862-41 | SPEAKER (2.0 cm) (S50) | |

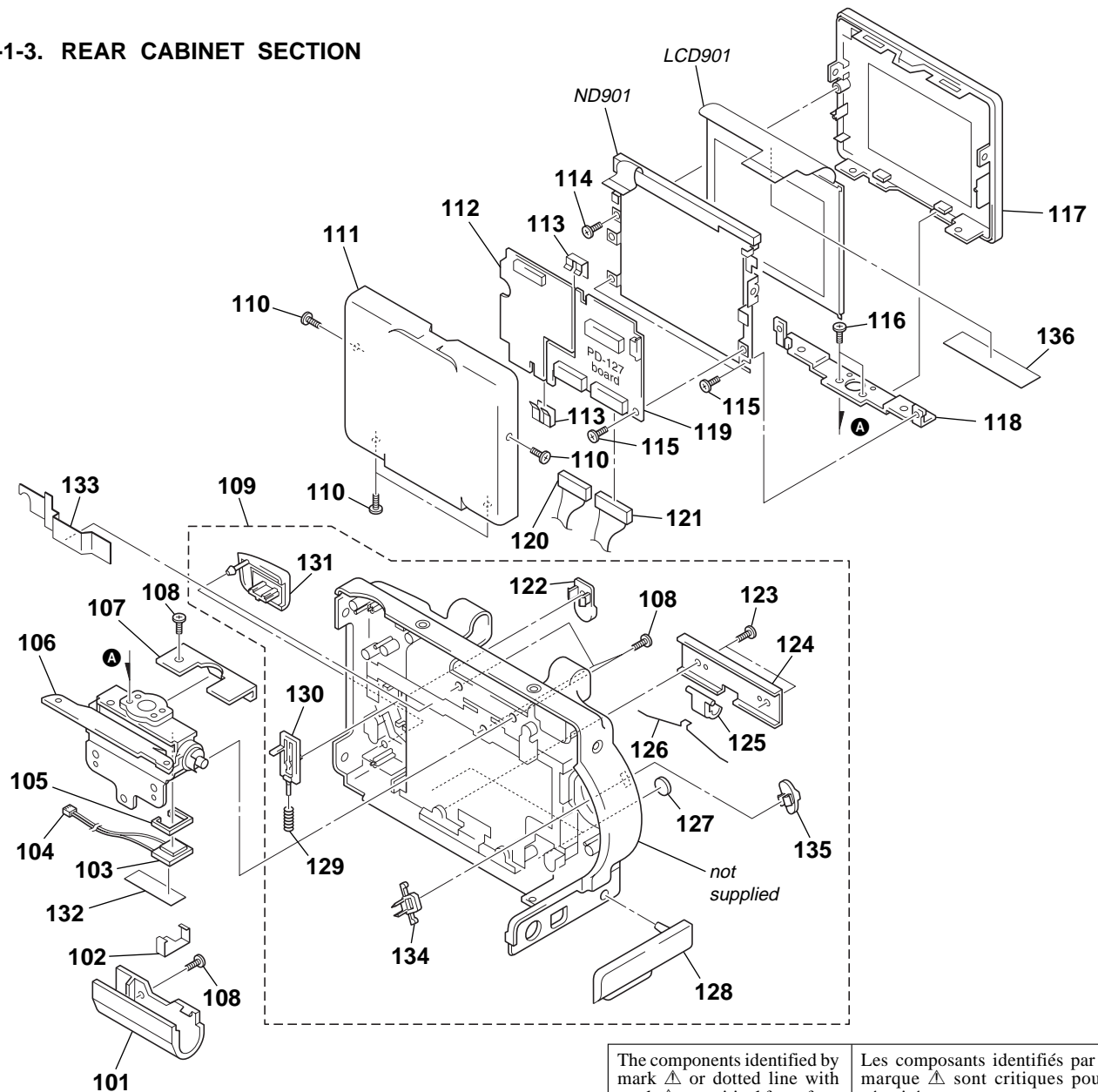
6-1-2. MAIN SECTION



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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------------------|--------|----------|--------------|-------------------------|--------|
| 51 | X-3950-655-1 | HOLDER ASSY, BT | | ▲ 60 | 1-794-045-11 | CONNECTOR, DC-IN | |
| 52 | 3-914-366-01 | SCREW (DIA. 1.7X4), PRECISION | | 61 | 1-678-002-11 | FP-025 FLEXIBLE BOARD | |
| 53 | A-7074-427-A | MS-50 BOARD, COMPLETE | | 62 | 3-061-157-11 | BUTTON, FUNCTION | |
| 54 | 3-969-380-01 | SPRING, BATTERY | | 63 | A-7074-431-A | SW-339 BOARD, COMPLETE | |
| 55 | 3-989-735-51 | SCREW (M1.7), LOCK ACE, P2 | | 64 | 1-678-003-11 | FP-026 FLEXIBLE BOARD | |
| 56 | A-7074-426-A | DD-141 BOARD, COMPLETE (S50) | | 65 | A-7074-428-A | JK-194 BOARD, COMPLETE | |
| 56 | A-7074-434-A | DD-141 BOARD, COMPLETE (S30) | | * 66 | 3-061-069-01 | FRAME, JK | |
| 57 | 1-677-877-11 | FP-024 FLEXIBLE BOARD | | * 67 | 3-060-250-01 | FRAME, SD | |
| 58 | A-7096-244-A | SY-58 BOARD, COMPLETE (SERVICE) (S50) | | 68 | 1-960-457-11 | HARNESS (YP-052) | |
| 58 | A-7096-245-A | SY-58 BOARD, COMPLETE (SERVICE) (S30) | | * 69 | 3-062-774-01 | SHEET (SH) | |
| 59 | 1-476-039-11 | SWITCH BLOCK, CONTROL (ZOOM/POWER SW) | | * 70 | 3-061-699-01 | SY SHEET (260) | |
| | | | | BT901 | 1-694-654-11 | TERMINAL BOARD, BATTERY | |

6-1-3. REAR CABINET SECTION

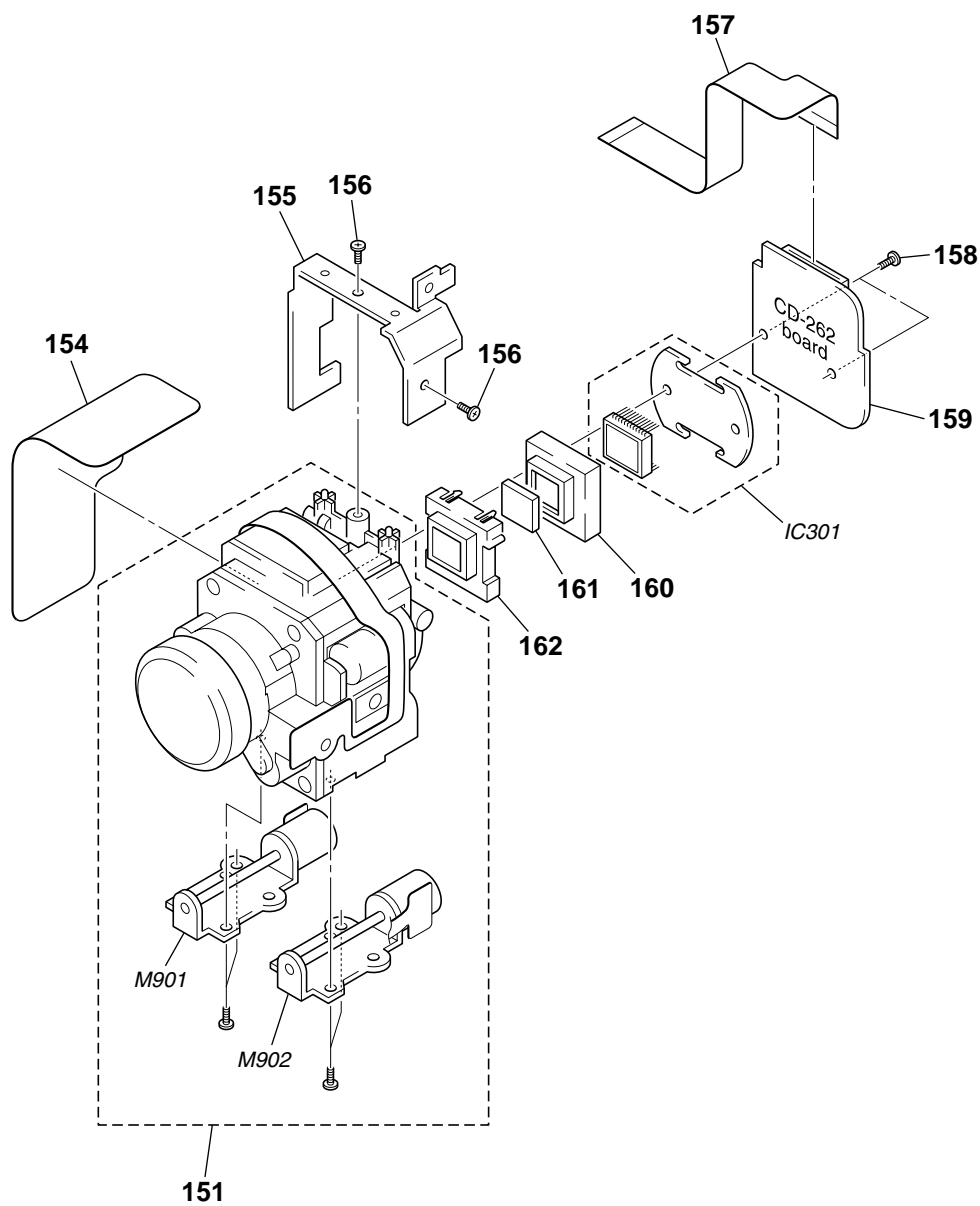


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|--------------|--------------|-------------------------------|--------|----------------|--------------|---------------------------------|--------|
| 101 | 3-061-079-01 | COVER (T), HINGE | | 119 | A-7074-436-A | PD-127 BOARD, COMPLETE (S30) | |
| * 102 | 3-061-083-01 | CLIP, KJ | | 120 | 1-960-472-11 | HARNESS (YP-053) | |
| 103 | A-7074-432-A | KJ-11 BOARD, COMPLETE | | 121 | 1-960-473-11 | HARNESS (YP-054) | |
| 104 | 1-960-474-11 | HARNESS (SK-100) | | 122 | 3-060-299-12 | KNOB, POWER | |
| * 105 | 3-061-082-01 | HOLDER, KJ | | 123 | 3-318-382-02 | SCREW (1.7), TAPPING | |
| 106 | X-3950-657-1 | HINGE ASSY | | 124 | 3-061-108-01 | HOLDER, LOCK | |
| 107 | 3-061-084-01 | COVER (B), HINGE | | 125 | 3-061-107-01 | LEVER, LOCK | |
| 108 | 3-061-216-01 | ACE (M1.7), SPECIAL HEAD LOCK | | 126 | 3-061-109-01 | SPRING, LOCK | |
| 109 | X-3950-658-1 | CABINET (REAR) ASSY (S50) | | 127 | 3-959-978-02 | CUSHION, PANEL | |
| 109 | X-3950-794-1 | CABINET (REAR) ASSY (S30) | | 128 | 3-061-096-01 | LID, JK | |
| 110 | 3-968-729-91 | SCREW (M2), LOCK ACE, P2 | | 129 | 3-051-520-01 | SPRING, POWER | |
| 111 | 3-061-080-01 | CABINET (REAR), P | | 130 | 3-060-297-01 | HOLDER, POWER | |
| Δ 112 | 1-418-879-21 | TRANSFORMER UNIT, INVERTER | | 131 | 3-061-111-01 | COVER, DC | |
| * 113 | 3-051-232-01 | CLIP, PCB | | * 132 | 3-062-825-01 | SHEET, KJ | |
| 114 | 3-914-366-01 | SCREW (DIA. 1.7X4), PRECISION | | * 133 | 3-062-736-01 | SHEET, ELECTROSTATIC | |
| 115 | 3-989-735-51 | SCREW (M1.7), LOCK ACE, P2 | | 134 | 3-061-113-01 | HOLDER, SLIDE KNOB | |
| 116 | 3-973-497-91 | SCREW (M1.7), 0-NO. +P 2 | | 135 | 3-061-112-01 | KNOB, SLIDE | |
| 117 | 3-061-078-01 | CABINET (FRONT), P | | 136 | 3-060-295-01 | SHEET (BL) | |
| * 118 | 3-061-081-01 | PLATE, BL FIXED | | LCD901 | 1-803-857-21 | INDICATOR MODULE LIQUID CRYSTAL | |
| 119 | A-7074-430-A | PD-127 BOARD, COMPLETE (S50) | | Δ ND901 | 1-517-878-31 | TUBE, FLUORESCENT, COLD CATHODE | |

6-1-4. LENS BLOCK ASSEMBLY



(Note) Be sure to read "Precuations for Replcement of CCD Imager" on page 4-8 when changing the CCD imager

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------------------------|--------|----------|--------------|-----------------------------------|--------|
| 151 | 1-758-415-11 | LENS, ZOOM (VCL-6103WA) | | 160 | 3-060-714-01 | RUBBER (CL), SEAL | |
| 154 | 3-061-122-01 | SHEET, LENS | | 161 | 1-758-435-11 | FILTER BLOCK, OPTICAL (S30) | |
| 155 | 3-061-121-01 | FRAME (260), LENS | | 161 | 1-758-436-11 | FILTER BLOCK, OPTICAL (S50) | |
| 156 | 3-914-366-01 | SCREW (DIA. 1.7X4), PRECISION | | 162 | 3-058-032-01 | ADAPTOR (CL), CCD FITTING | |
| 157 | 1-678-001-11 | FP-023 FLEXIBLE BOARD | | IC301 | A-7031-090-A | CCD BLOCK ASSY (CCD IMAGER) (S30) | |
| 158 | 3-947-268-11 | TITE (2), +B TAPPING (P) | | IC301 | A-7031-092-A | CCD BLOCK ASSY (CCD IMAGER) (S50) | |
| 159 | A-7074-429-A | CD-262 BOARD, COMPLETE (S50) | | M901 | 3-709-573-01 | MOTOR UNIT, FOCUS | |
| 159 | A-7074-435-A | CD-262 BOARD, COMPLETE (S30) | | M902 | 3-709-574-01 | MOTOR UNIT, ZOOM | |

6-2. ELECTRICAL PARTS LIST

NOTE:

- 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.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
AUS : Australian model J : Japanese model
CN : Chinese model JE : Tourist model
CND : Canadian model KR : Korea model
HK : Hong Kong model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS**
uF: μ F
COILS
uH: μ H

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.

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

| Ref. No. | Part No. | Description | | | | Remark | Ref. No. | Part No. | Description | | | | Remark |
|----------|--------------|--|----------|--------|-----|--------|-------------------------|-----------------------------------|---------------|---------|-----|-------|--------|
| | A-7074-435-A | CD-262 (30) BOARD, COMPLETE (S30) | | | | | | | | | | | |
| | A-7074-429-A | CD-262 (50) BOARD, COMPLETE (S50) | | | | | | | < RESISTOR > | | | | |
| | | ***** | | | | | | | | | | | |
| | | (Ref.No.: 2,000 Series) | | | | | R301 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W | |
| | | (IC301 is not included in this complete board) | | | | | R302 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W | (S30) |
| | | < CAPACITOR > | | | | | R302 | 1-218-931-11 | RES-CHIP | 15 | 5% | 1/16W | (S50) |
| C301 | 1-113-985-11 | TANTAL. CHIP | 10uF | 20% | 20V | | R303 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W | (S30) |
| C302 | 1-119-751-11 | TANTAL. CHIP | 22uF | 20% | 16V | | R303 | 1-218-931-11 | RES-CHIP | 15 | 5% | 1/16W | (S50) |
| C303 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | R304 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W | (S30) |
| C304 | 1-104-329-11 | CERAMIC CHIP | 0.1uF | 10% | 50V | | R304 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | (S50) |
| C305 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | R305 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W | (S30) |
| C306 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | R305 | 1-218-981-11 | RES-CHIP | 220K | 5% | 1/16W | (S50) |
| C307 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | R306 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W | |
| C308 | 1-107-820-11 | CERAMIC CHIP | 0.1uF | | 16V | | R307 | 1-218-990-11 | SHORT | 0 | | | |
| C309 | 1-164-850-11 | CERAMIC CHIP | 10PF | 0.50PF | 16V | | R308 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | |
| C311 | 1-125-827-91 | CERAMIC CHIP | 1uF | 10% | 25V | | R309 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W | (S30) |
| C312 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V | | R309 | 1-208-643-11 | RES-CHIP | 22 | 5% | 1/16W | (S50) |
| | | < CONNECTOR > | | | | | | | | | | | |
| CN301 | 1-766-348-21 | CONNECTOR, FFC/FPC 18P | | | | | | | | | | | |
| | | < DIODE > | | | | | | | | | | | |
| D301 | 8-719-073-01 | DIODE MA111- (K8).S0 | | | | | | | | | | | |
| | | < FERRITE BEAD > | | | | | | | | | | | |
| FB301 | 1-414-228-11 | INDUCTOR CHIP 0uH | | | | | A-7074-434-A | DD-141 (30) BOARD, COMPLETE (S30) | | | | | |
| | | < IC > | | | | | A-7074-426-A | DD-141 (50) BOARD, COMPLETE (S50) | | | | | |
| | | | | | | | ***** | | | | | | |
| | | | | | | | (Ref.No.: 1,000 Series) | | | | | | |
| IC301 | A-7031-090-A | CCD BLOCK ASSY (CCD IMAGER) (S30) | | | | | | | < CAPACITOR > | | | | |
| IC301 | A-7031-092-A | CCD BLOCK ASSY (CCD IMAGER) (S50) | | | | | | | | | | | |
| | | < COIL > | | | | | C001 | 1-164-880-11 | CERAMIC CHIP | 180PF | 5% | 16V | |
| | | | | | | | C002 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| | | | | | | | C003 | 1-110-563-11 | CERAMIC CHIP | 0.068uF | 10% | 16V | |
| L301 | 1-414-757-11 | INDUCTOR 100uH | | | | | C004 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V | |
| | | < TRANSISTOR > | | | | | C005 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | |
| | | | | | | | C007 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V | |
| Q301 | 8-729-037-74 | TRANSISTOR UN9213J- (K8).S0 | | | | | C008 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V | |
| Q302 | 8-729-117-73 | TRANSISTOR 2SC4178-F13F14-T1 | | | | | C009 | 1-104-913-11 | TANTAL. CHIP | 10uF | 20% | 16V | |
| | | | | | | | C010 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V | |

DD-141

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------|--------|
| C013 | 1-104-913-11 | TANTAL. CHIP 10uF 20% | 16V |
| C014 | 1-164-941-11 | CERAMIC CHIP 0.0047uF 10% | 16V |
| C015 | 1-107-819-11 | CERAMIC CHIP 0.022uF 10% | 16V |
| C016 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C017 | 1-164-935-11 | CERAMIC CHIP 470PF 10% | 16V |
| C018 | 1-164-935-11 | CERAMIC CHIP 470PF 10% | 16V |
| C019 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C020 | 1-104-913-11 | TANTAL. CHIP 10uF 20% | 16V |
| C021 | 1-164-935-11 | CERAMIC CHIP 470PF 10% | 16V |
| C022 | 1-164-935-11 | CERAMIC CHIP 470PF 10% | 16V |
| C023 | 1-164-937-11 | CERAMIC CHIP 0.001uF 10% | 16V |
| C024 | 1-164-937-11 | CERAMIC CHIP 0.001uF 10% | 16V |
| C025 | 1-164-937-11 | CERAMIC CHIP 0.001uF 10% | 16V |
| C026 | 1-164-937-11 | CERAMIC CHIP 0.001uF 10% | 16V |
| C027 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C028 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C029 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C030 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C031 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C032 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% | 10V |
| C033 | 1-125-838-91 | CERAMIC CHIP 2.2uF 10% | 6.3V |
| C034 | 1-164-506-11 | CERAMIC CHIP 4.7uF | 16V |
| C035 | 1-104-847-11 | TANTAL. CHIP 22uF 20% | 4V |
| C036 | 1-113-682-11 | TANTAL. CHIP 33uF 20% | 10V |
| C037 | 1-164-506-11 | CERAMIC CHIP 4.7uF | 16V |
| C038 | 1-117-919-11 | TANTAL. CHIP 10uF 20% | 6.3V |
| C039 | 1-104-851-11 | TANTAL. CHIP 10uF 20% | 10V |
| C042 | 1-125-838-91 | CERAMIC CHIP 2.2uF 10% | 6.3V |
| C043 | 1-164-506-11 | CERAMIC CHIP 4.7uF | 16V |
| C044 | 1-135-214-21 | TANTAL. CHIP 4.7uF 20% | 20V |
| C046 | 1-107-819-11 | CERAMIC CHIP 0.022uF 10% | 16V |
| C047 | 1-104-851-11 | TANTAL. CHIP 10uF 20% | 10V |
| C048 | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% | 16V |
| C049 | 1-165-319-11 | CERAMIC CHIP 0.1uF | 50V |
| C050 | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% | 16V |
| C051 | 1-165-319-11 | CERAMIC CHIP 0.1uF | 50V |
| C052 | 1-135-177-21 | TANTALUM CHIP 1uF 20% | 20V |
| C053 | 1-164-505-11 | CERAMIC CHIP 2.2uF | 16V |
| C054 | 1-104-913-11 | TANTAL. CHIP 10uF 20% | 16V |
| C055 | 1-164-346-11 | CERAMIC CHIP 1uF | 16V |
| C803 | 1-113-682-11 | TANTAL. CHIP 33uF 20% | 10V |
| C806 | 1-107-820-11 | CERAMIC CHIP 0.1uF | 16V |
| C808 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C809 | 1-125-837-91 | CERAMIC CHIP 1uF 10% | 6.3V |
| C811 | 1-110-569-11 | TANTAL. CHIP 47uF 20% | 6.3V |
| C812 | 1-107-820-11 | CERAMIC CHIP 0.1uF | 16V |
| C813 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C814 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| C815 | 1-164-156-11 | CERAMIC CHIP 0.1uF | 25V |
| C816 | 1-104-851-11 | TANTAL. CHIP 10uF 20% | 10V |
| C817 | 1-135-259-11 | TANTAL. CHIP 10uF 20% | 6.3V |
| C818 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C819 | 1-127-569-91 | TANTAL. CHIP 100uF 20% | 4V |
| C820 | 1-135-259-11 | TANTAL. CHIP 10uF 20% | 6.3V |
| C851 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C852 | 1-135-259-11 | TANTAL. CHIP 10uF 20% | 6.3V |
| C853 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C854 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C855 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |
| C856 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% | 10V |

| Ref. No. | Part No. | Description | Remark |
|------------------|--------------|--------------------------------|--------|
| < CONNECTOR > | | | |
| CN001 | 1-785-283-21 | PIN, CONNECTOR (PC BOARD) 14P | |
| CN851 | 1-766-346-21 | CONNECTOR, FFC/FPC 16P | |
| CN852 | 1-794-044-21 | CONNECTOR, BOARD TO BOARD 80P | |
| < DIODE > | | | |
| D001 | 8-719-027-76 | DIODE 1SS357-TPH3 | |
| D002 | 8-719-027-77 | DIODE MA796-TX | |
| D003 | 8-719-073-01 | DIODE MA111- (K8).SO | |
| D004 | 8-719-073-01 | DIODE MA111- (K8).SO | |
| D801 | 8-719-420-14 | DIODE MA8082-M (TX) | |
| < FERRITE BEAD > | | | |
| FB851 | 1-414-228-11 | INDUCTOR CHIP 0uH | |
| < IC > | | | |
| IC001 | 8-759-060-94 | IC MB3785APFV-G-BND-ER | |
| IC802 | 8-759-652-45 | IC NJM2568V (TE2) | |
| IC851 | 8-759-657-69 | IC PDIUSBP11APW, 118 | |
| < COIL > | | | |
| L001 | 1-419-353-21 | INDUCTOR 10uH | |
| L002 | 1-419-353-21 | INDUCTOR 10uH | |
| L003 | 1-416-345-11 | INDUCTOR 22uH | |
| L004 | 1-416-345-11 | INDUCTOR 22uH | |
| L005 | 1-412-939-11 | INDUCTOR 1uH | |
| L006 | 1-419-354-21 | INDUCTOR 22uH | |
| L008 | 1-412-939-11 | INDUCTOR 1uH | |
| L009 | 1-469-524-91 | INDUCTOR 4.7uH | |
| L010 | 1-412-939-11 | INDUCTOR 1uH | |
| L011 | 1-412-939-11 | INDUCTOR 1uH | |
| L012 | 1-412-939-11 | INDUCTOR 1uH | |
| L013 | 1-414-406-11 | INDUCTOR 220uH | |
| L014 | 1-412-947-11 | INDUCTOR 4.7uH | |
| L801 | 1-414-756-11 | INDUCTOR 47uH | |
| L802 | 1-414-754-11 | INDUCTOR 10uH | |
| < TRANSISTOR > | | | |
| Q001 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | |
| Q002 | 8-729-047-74 | TRANSISTOR CPH5701-TL | |
| Q003 | 8-729-047-74 | TRANSISTOR CPH5701-TL | |
| Q004 | 8-729-033-14 | TRANSISTOR FP107-TL | |
| Q005 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | |
| Q006 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | |
| Q007 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | |
| Q008 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | |
| Q009 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | |
| Q010 | 8-729-037-74 | TRANSISTOR UN9213J- (K8).SO | |
| Q013 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | |
| Q014 | 8-729-037-74 | TRANSISTOR UN9213J- (K8).SO | |
| Q016 | 8-729-041-23 | TRANSISTOR NDS356AP | |
| Q017 | 8-729-037-61 | TRANSISTOR UN9113J- (K8).SO | |
| Q018 | 8-729-037-74 | TRANSISTOR UN9213J- (K8).SO | |
| Q019 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | |
| Q020 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | |
| Q021 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | |
| Q022 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | |
| Q023 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | |
| Q024 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|--------------|--------------|-------------|---------------------|------|-------|-----------------|--------------|------------------------|--------|------|-------|
| Q025 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R042 | 1-218-955-11 | RES-CHIP | 1.5K | 5% | 1/16W |
| Q026 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R043 | 1-218-955-11 | RES-CHIP | 1.5K | 5% | 1/16W |
| Q027 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | | R044 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W |
| Q028 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | | R045 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W |
| Q029 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R046 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W |
| Q030 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R047 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| Q031 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | | R048 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| Q032 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | | R049 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| Q033 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R050 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| Q801 | 8-729-037-74 | TRANSISTOR | UN9213J- (K8).SO | | | R051 | 1-218-849-11 | METAL CHIP | 3.3K | 0.5% | 1/16W |
| Q802 | 8-729-037-61 | TRANSISTOR | UN9113J- (K8).SO | | | R052 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| Q805 | 8-729-037-92 | TRANSISTOR | 2SD2216J-R (TX).SO | | | R053 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| Q806 | 8-729-037-52 | TRANSISTOR | 2SD2216J-QR (K8).SO | | | R054 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| Q807 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | | R055 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| Q851 | 8-729-037-61 | TRANSISTOR | UN9113J- (K8).SO | | | R056 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| Q852 | 8-729-042-74 | TRANSISTOR | UN9216J- (K8).SO | | | R057 | 1-208-719-11 | METAL CHIP | 33K | 0.5% | 1/16W |
| Q853 | 8-729-037-61 | TRANSISTOR | UN9113J- (K8).SO | | | R058 | 1-218-978-11 | METAL CHIP | 120K | 0.5% | 1/16W |
| < RESISTOR > | | | | | | R059 | 1-218-990-11 | SHORT | 0 | | |
| R001 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R060 | 1-218-978-11 | METAL CHIP | 120K | 0.5% | 1/16W |
| R002 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R061 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R004 | 1-218-982-11 | RES-CHIP | 270K | 5% | 1/16W | R062 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R005 | 1-208-711-11 | METAL CHIP | 15K | 0.5% | 1/16W | R063 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R006 | 1-218-878-11 | METAL CHIP | 20K | 0.5% | 1/16W | R064 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R007 | 1-208-696-11 | METAL CHIP | 3.6K | 0.5% | 1/16W | R065 | 1-208-933-11 | METAL CHIP | 82K | 0.5% | 1/16W |
| R008 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R066 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R009 | 1-208-699-11 | METAL CHIP | 4.7K | 0.5% | 1/16W | R067 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R010 | 1-218-972-11 | RES-CHIP | 39K | 5% | 1/16W | R068 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R011 | 1-218-970-11 | RES-CHIP | 27K | 5% | 1/16W | R069 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R012 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R070 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R013 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R071 | 1-208-922-11 | METAL CHIP | 30K | 0.5% | 1/16W |
| R014 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R072 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R015 | 1-218-948-11 | METAL CHIP | 390 | 0.5% | 1/16W | R073 | 1-208-931-11 | METAL CHIP | 68K | 0.5% | 1/16W |
| R016 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R074 | 1-208-713-11 | METAL CHIP | 18K | 0.5% | 1/16W |
| R017 | 1-218-979-11 | RES-CHIP | 150K | 5% | 1/16W | R075 | 1-208-688-11 | METAL CHIP | 1.6K | 0.5% | 1/16W |
| R018 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R076 | 1-218-978-11 | METAL CHIP | 120K | 0.5% | 1/16W |
| R019 | 1-208-703-11 | METAL CHIP | 6.8K | 0.5% | 1/16W | R078 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R020 | 1-208-691-11 | METAL CHIP | 2.2K | 0.5% | 1/16W | R081 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R021 | 1-208-713-11 | METAL CHIP | 18K | 0.5% | 1/16W | R801 | 1-218-990-11 | SHORT | 0 | | |
| R022 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R803 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R023 | 1-208-931-11 | METAL CHIP | 68K | 0.5% | 1/16W | R804 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R024 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R805 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R025 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R806 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R026 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W | R807 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R027 | 1-218-958-11 | METAL CHIP | 2.7K | 0.5% | 1/16W | R808 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R028 | 1-208-711-11 | METAL CHIP | 15K | 0.5% | 1/16W | R809 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R029 | 1-208-699-11 | METAL CHIP | 4.7K | 0.5% | 1/16W | R810 | 1-218-939-11 | RES-CHIP | 68 | 5% | 1/16W |
| R030 | 1-218-990-11 | SHORT | 0 | | | R811 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R031 | 1-218-990-11 | SHORT | 0 | | | R812 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R032 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R853 | 1-218-955-11 | RES-CHIP | 1.5K | 5% | 1/16W |
| R033 | 1-218-990-11 | SHORT | 0 | | | R854 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R034 | 1-218-990-11 | SHORT | 0 | | | R855 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R035 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W | R856 | 1-220-168-11 | RES-CHIP | 24 | 5% | 1/16W |
| R036 | 1-218-951-11 | RES-CHIP | 680 | 5% | 1/16W | R857 | 1-220-168-11 | RES-CHIP | 24 | 5% | 1/16W |
| R037 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W | < TRANSFORMER > | | | | | |
| R038 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W | △ T001 | 1-429-565-21 | TRANSFORMER, CONVERTER | | | |
| R039 | 1-208-709-11 | METAL CHIP | 12K | 0.5% | 1/16W | | | | | | |
| R040 | 1-208-721-11 | METAL CHIP | 39K | 0.5% | 1/16W | | | | | | |

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

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JK-194**KJ-11****MS-50****PD-127**

| Ref. No. | Part No. | Description | Remark | | | |
|-------------------------------------|--------------|--|----------|-----|-------|--|
| A-7074-428-A JK-194 BOARD, COMPLETE | | | | | | |
| ***** | | | | | | |
| (Ref.No.: 2,000 Series) | | | | | | |
| < CAPACITOR > | | | | | | |
| C201 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V | |
| C202 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V | |
| < CONNECTOR > | | | | | | |
| CN201 | 1-766-346-21 | CONNECTOR, FFC/FPC 16P | | | | |
| CN202 | 1-794-335-11 | CONNECTOR (USB) (4P), SQUARE | | | | |
| < DIODE > | | | | | | |
| D201 | 8-719-045-87 | DIODE MA4Z082WA- (TX).SO | | | | |
| D203 | 8-719-045-87 | DIODE MA4Z082WA- (TX).SO | | | | |
| D205 | 8-719-073-01 | DIODE MA111- (K8).SO | | | | |
| D206 | 8-719-073-01 | DIODE MA111- (K8).SO | | | | |
| D207 | 8-719-045-87 | DIODE MA4Z082WA- (TX).SO | | | | |
| D209 | 8-719-045-87 | DIODE MA4Z082WA- (TX).SO | | | | |
| D210 | 8-719-159-96 | DIODE RD5.1UM-T1B | | | | |
| D211 | 8-719-159-96 | DIODE RD5.1UM-T1B | | | | |
| < JACK > | | | | | | |
| J201 | 1-695-514-31 | JACK (SMALL TYPE) 1P (VIDEO OUT) (S30) | | | | |
| J201 | 1-695-514-31 | JACK (SMALL TYPE) 1P (A/V OUT) (S50) | | | | |
| < LINE FILTER > | | | | | | |
| LF201 | 1-419-100-21 | COIL, COMMON-MODE CHOKE | | | | |
| LF203 | 1-419-100-21 | COIL, COMMON-MODE CHOKE | | | | |
| LF204 | 1-419-100-21 | COIL, COMMON-MODE CHOKE | | | | |
| < RESISTOR > | | | | | | |
| R201 | 1-216-851-11 | METAL CHIP | 330K | 5% | 1/16W | |
| R202 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W | |
| R212 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/16W | |
| R213 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | |
| A-7074-432-A KJ-11 BOARD, COMPLETE | | | | | | |
| ***** | | | | | | |
| (Ref.No.: 3,000 Series) | | | | | | |
| < SWITCH > | | | | | | |
| S301 | 1-771-483-21 | SWITCH, PUSH (1 KEY) (PANEL REVERSE) | | | | |
| A-7074-425-A MS-50 BOARD, COMPLETE | | | | | | |
| ***** | | | | | | |
| (Ref.No.: 2,000 Series) | | | | | | |
| < CAPACITOR > | | | | | | |
| C003 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | |
| C004 | 1-164-227-11 | CERAMIC CHIP | 0.022uF | 10% | 25V | |
| C006 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | |
| C007 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V | |
| < CONNECTOR > | | | | | | |
| * CN001 | 1-580-056-21 | PIN, CONNECTOR (SMD) 3P | | | | |
| * CN002 | 1-580-056-21 | PIN, CONNECTOR (SMD) 3P | | | | |



| Ref. No. | Part No. | Description | Remark | | | |
|--|--------------|-------------------------------|--------|-----|-------|--|
| CN003 | 1-766-344-21 | CONNECTOR, FFC/FPC 14P | | | | |
| CN004 | 1-793-111-14 | CONNECTOR, MEMORY STICK | | | | |
| CN005 | 1-785-283-21 | PIN, CONNECTOR (PC BOARD) 14P | | | | |
| < DIODE > | | | | | | |
| D001 | 8-719-073-03 | DIODE MA8082- (K8).SO | | | | |
| D002 | 8-719-066-44 | DIODE CL-270HR-C-TS | | | | |
| D003 | 8-719-073-03 | DIODE MA8082- (K8).SO | | | | |
| D005 | 8-719-158-49 | DIODE MA8120-TX | | | | |
| D006 | 8-719-027-76 | DIODE 1SS357-TPH3 | | | | |
| < FUSE > | | | | | | |
| △ F001 | 1-576-406-11 | FUSE, MICRO (1608) (1.4A/32V) | | | | |
| △ F002 | 1-576-406-11 | FUSE, MICRO (1608) (1.4A/32V) | | | | |
| △ F003 | 1-576-406-11 | FUSE, MICRO (1608) (1.4A/32V) | | | | |
| △ F004 | 1-576-406-11 | FUSE, MICRO (1608) (1.4A/32V) | | | | |
| △ F005 | 1-576-406-11 | FUSE, MICRO (1608) (1.4A/32V) | | | | |
| < FERRITE BEAD > | | | | | | |
| FB001 | 1-414-228-11 | INDUCTOR CHIP 0uH | | | | |
| FB002 | 1-414-228-11 | INDUCTOR CHIP 0uH | | | | |
| < LINE FILTER > | | | | | | |
| LF001 | 1-411-957-11 | FILTER, COMMON MODE | | | | |
| < TRANSISTOR > | | | | | | |
| Q001 | 8-729-047-68 | TRANSISTOR SSM3K03FE (TPL3) | | | | |
| Q002 | 8-729-046-77 | TRANSISTOR SI4963DY-T1 | | | | |
| Q003 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | | | | |
| Q004 | 8-729-037-74 | TRANSISTOR UN9213J- (K8).SO | | | | |
| < RESISTOR > | | | | | | |
| R001 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W | |
| R002 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W | |
| R003 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W | |
| R004 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W | |
| R005 | 1-216-150-91 | RES-CHIP | 10 | 5% | 1/8W | |
| R006 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W | |
| R007 | 1-216-831-11 | METAL CHIP | 6.8K | 5% | 1/16W | |
| R009 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | |
| A-7074-436-A PD-127 (30) BOARD, COMPLETE (S30) | | | | | | |
| A-7074-430-A PD-127 (50) BOARD, COMPLETE (S50) | | | | | | |
| ***** | | | | | | |
| (Ref.No.: 2,000 Series) | | | | | | |
| < CAPACITOR > | | | | | | |
| C801 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| C802 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| C803 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C804 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C805 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C806 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | |
| C807 | 1-110-569-11 | TANTAL. CHIP | 47uF | 20% | 6.3V | |
| C808 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| C810 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| C811 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V | |
| C812 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V | |


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| Ref. No. | Part No. | Description | | | Remark |
|------------------|--------------|--------------------------------|----------|-----|--------|
| C813 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C814 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C815 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C816 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C817 | 1-119-751-11 | TANTAL. CHIP | 22uF | 20% | 16V |
| C818 | 1-119-751-11 | TANTAL. CHIP | 22uF | 20% | 16V |
| C819 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C902 | 1-107-687-11 | TANTAL. CHIP | 3.3uF | 20% | 20V |
| C903 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C904 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C905 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C906 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C907 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C908 | 1-164-872-11 | CERAMIC CHIP | 82PF | 5% | 16V |
| C909 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C911 | 1-164-739-11 | CERAMIC CHIP | 560PF | 5% | 50V |
| C912 | 1-164-872-11 | CERAMIC CHIP | 82PF | 5% | 16V |
| C913 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| C914 | 1-113-994-11 | TANTAL. CHIP | 6.8uF | 20% | 16V |
| C915 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C916 | 1-107-689-21 | TANTAL. CHIP | 1uF | 20% | 35V |
| C917 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C918 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| < CONNECTOR > | | | | | |
| CN801 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | | | |
| CN802 | 1-785-283-21 | PIN, CONNECTOR (PC BOARD) 14P | | | |
| * CN901 | 1-774-261-11 | CONNECTOR, FFC (ZIF) 24P | | | |
| < DIODE > | | | | | |
| D801 | 8-719-073-01 | DIODE MA111- (K8).SO | | | |
| D902 | 8-713-102-80 | DIODE 1T369-01-T8A | | | |
| D903 | 8-719-976-96 | DIODE MA8047-H-TX | | | |
| < FERRITE BEAD > | | | | | |
| FB801 | 1-414-234-22 | INDUCTOR CHIP 0uH | | | |
| FB802 | 1-414-234-22 | INDUCTOR CHIP 0uH | | | |
| FB803 | 1-414-234-22 | INDUCTOR CHIP 0uH | | | |
| < IC > | | | | | |
| IC801 | 8-759-364-05 | IC MB40D001PFV-G-BND-ER | | | |
| IC802 | 8-759-539-27 | IC IR3Y37A4 | | | |
| IC901 | 8-759-587-61 | IC LZ9GH234 | | | |
| IC902 | 8-759-327-01 | IC NJM062V (TE2) | | | |
| < COIL > | | | | | |
| L801 | 1-414-757-11 | INDUCTOR 100uH | | | |
| L802 | 1-414-078-11 | INDUCTOR 10uH | | | |
| L803 | 1-412-947-11 | INDUCTOR 4.7uH | | | |
| L901 | 1-414-754-11 | INDUCTOR 10uH | | | |
| L902 | 1-414-754-11 | INDUCTOR 10uH | | | |
| L903 | 1-412-951-11 | INDUCTOR 10uH | | | |
| L905 | 1-412-949-21 | INDUCTOR 6.8uH | | | |
| < TRANSISTOR > | | | | | |
| Q901 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | | | |
| Q902 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8).SO | | | |
| Q903 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8).SO | | | |

| Ref. No. | Part No. | Description | Remark | | |
|-------------------------------------|--------------|----------------------------|---------------------|------|-------|
| Q904 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8).SO | | |
| < RESISTOR > | | | | | |
| R803 | 1-218-990-11 | SHORT | 0 | | |
| R805 | 1-218-990-11 | SHORT | 0 | | |
| R808 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R809 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R810 | 1-218-990-11 | SHORT | 0 | | |
| R812 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R813 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| R814 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R817 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R818 | 1-218-972-11 | RES-CHIP | 39K | 5% | 1/16W |
| R820 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R821 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R904 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R905 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R908 | 1-218-987-11 | RES-CHIP | 680K | 5% | 1/16W |
| R909 | 1-218-978-11 | RES-CHIP | 120K | 5% | 1/16W |
| R910 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R911 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R912 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R913 | 1-218-990-11 | SHORT | 0 | | |
| R914 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R915 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R916 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W |
| R917 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W |
| R918 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R919 | 1-218-891-11 | METAL CHIP | 68K | 0.5% | 1/16W |
| R920 | 1-218-883-11 | METAL CHIP | 33K | 0.5% | 1/16W |
| R921 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R922 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R925 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R926 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R928 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R929 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R932 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R933 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R934 | 1-218-990-11 | SHORT | 0 | | |
| R935 | 1-218-883-11 | METAL CHIP | 33K | 0.5% | 1/16W |
| R936 | 1-218-879-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R937 | 1-218-883-11 | METAL CHIP | 33K | 0.5% | 1/16W |
| R938 | 1-218-879-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R960 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W |
| R961 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W |
| R962 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W |
| | | | | | |
| A-7074-431-A SW-339 BOARD, COMPLETE | | | | | |
| ***** | | | | | |
| (Ref.No.: 2,000 Series) | | | | | |
| < BATTERY > | | | | | |
| △ BT101 | 1-528-900-11 | BATTERY, LITHIUM SECONDARY | | | |
| < CAPACITOR > | | | | | |
| C101 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |

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Ne les remplacer que par une pièce portant le numéro spécifié.

SW-339

| Ref. No. | Part No. | Description | Remark |
|------------------------|--------------|--|--------|
| < CONNECTOR > | | | |
| CN101 | 1-573-347-11 | CONNECTOR, FFC/FPC (ZIF) 7P | |
| < DIODE > | | | |
| D101 | 8-719-073-01 | DIODE MA111- (K8).S0 | |
| D102 | 8-719-060-92 | DIODE SML-311YTT86 (FLASH) | |
| D103 | 8-719-057-91 | DIODE RD8.2UM-T1B | |
| D104 | 8-719-045-87 | DIODE MA4Z082WA- (TX).S0 | |
| < RESISTOR > | | | |
| R101 | 1-216-817-11 | METAL CHIP 470 5% 1/16W | |
| R102 | 1-216-824-11 | METAL CHIP 1.8K 5% 1/16W | |
| R103 | 1-216-824-11 | METAL CHIP 1.8K 5% 1/16W | |
| R104 | 1-216-835-11 | METAL CHIP 15K 5% 1/16W | |
| R106 | 1-216-826-11 | METAL CHIP 2.7K 5% 1/16W | |
| R107 | 1-216-826-11 | METAL CHIP 2.7K 5% 1/16W | |
| R109 | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W | |
| R111 | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W | |
| R112 | 1-216-831-11 | METAL CHIP 6.8K 5% 1/16W | |
| R113 | 1-216-839-11 | METAL CHIP 33K 5% 1/16W | |
| R114 | 1-216-831-11 | METAL CHIP 6.8K 5% 1/16W | |
| R115 | 1-216-839-11 | METAL CHIP 33K 5% 1/16W | |
| R116 | 1-216-839-11 | METAL CHIP 33K 5% 1/16W | |
| < SWITCH > | | | |
| S101 | 1-771-688-21 | SWITCH, TACTILE (CONTROL) | |
| S102 | 1-771-138-61 | SWITCH, KEY BOARD (DISPLAY) | |
| S103 | 1-771-138-61 | SWITCH, KEY BOARD (FLASH) | |
| S104 | 1-771-138-61 | SWITCH, KEY BOARD (PROGRAM AE) | |
| S105 | 1-771-138-61 | SWITCH, KEY BOARD (PROGRAM AE/VOLUME +) | |
| S106 | 1-572-467-21 | SWITCH, PUSH (1 KEY) (PANEL UP/DOWN) | |
| S107 | 1-771-138-61 | SWITCH, KEY BOARD (FOCUS) | |
| S108 | 1-771-138-61 | SWITCH, KEY BOARD (PROGRAM AE/VOLUME -) | |
| S109 | 1-570-397-11 | SWITCH, SLIDE (BACK LIGHT) | |
| S110 | 1-572-467-21 | SWITCH, PUSH (1 KEY) (PANEL ON/OFF) | |
| MISCELLANEOUS ***** | | | |
| 14 | 1-476-038-11 | SWITCH BLOCK, CONTROL (MODE SW) | |
| △ 15 | 1-476-005-11 | FLASH UNIT | |
| 57 | 1-677-877-11 | FP-024 FLEXIBLE BOARD | |
| 59 | 1-476-039-11 | SWITCH BLOCK, CONTROL (ZOOM/POWER SW) | |
| △ 60 | 1-794-045-11 | CONNECTOR, DC-IN | |
| 61 | 1-678-002-11 | FP-025 FLEXIBLE BOARD | |
| 64 | 1-678-003-11 | FP-026 FLEXIBLE BOARD | |
| 68 | 1-960-457-11 | HARNESS (YP-052) | |
| 104 | 1-960-474-11 | HARNESS (SK-100) | |
| △ 112 | 1-418-879-21 | TRANSFORMER UNIT, INVERTER | |
| 120 | 1-960-472-11 | HARNESS (YP-053) | |
| 121 | 1-960-473-11 | HARNESS (YP-054) | |
| 151 | 1-758-415-11 | LENS, ZOOM (VCL-6103WA) | |
| 157 | 1-678-001-11 | FP-023 FLEXIBLE BOARD | |
| 161 | 1-758-435-11 | FILTER BLOCK, OPTICAL (S30) | |
| 161 | 1-758-436-11 | FILTER BLOCK, OPTICAL (S50) | |

| Ref. No. | Part No. | Description | Remark |
|--|--------------|---|--------|
| BT901 | 1-694-654-11 | TERMINAL BOARD, BATTERY | |
| BZ901 | 1-529-739-11 | BUZZER, PIEZOELECTRIC (S30) | |
| IC301 | A-7031-090-A | CCD BLOCK ASSY (CCD IMAGER) (S30) | |
| IC301 | A-7031-092-A | CCD BLOCK ASSY (CCD IMAGER) (S50) | |
| LCD901 | 1-803-857-21 | INDICATOR MODULE LIQUID CRYSTAL | |
| MIC901 | 1-542-428-11 | MICROPHONE UNIT (S50) | |
| △ ND901 | 1-517-878-31 | TUBE, FLUORESCENT, COLD CATHODE | |
| SP901 | 1-505-862-41 | SPEAKER (2.0 cm) (S50) | |
| ACCESSORIES & PACKING MATERIALS ***** | | | |
| △ | 1-475-599-11 | ADAPTOR, AC (EXCEPT KR) | |
| △ | 1-475-599-71 | ADAPTOR, AC (KR) | |
| △ | 1-569-007-11 | ADAPTOR, CONVERSION 2P (E, JE) | |
| △ | 1-569-008-21 | ADAPTOR, CONVERSION 2P (E) | |
| △ | 1-696-819-11 | CORD, POWER (AUS) | |
| △ | 1-769-608-11 | CORD, POWER (AEP, E) | |
| △ | 1-776-985-11 | CORD, POWER (KR) | |
| △ | 1-783-374-11 | CORD, POWER (UK, HK) | |
| | 1-783-738-31 | CORD, CONNECTION (AV CONNECTING 1.5m) (S50) | |
| △ | 1-790-073-11 | CORD, POWER 2P (JE, J) | |
| △ | 1-790-107-22 | CORD, POWER (US, CND) | |
| | 1-791-785-11 | CORD, CONNECTION (USB CABLE) | |
| | 1-792-955-11 | CORD, CONNECTION (VIDEO CONNECTING 1.5m) (S30) | |
| | 3-056-776-01 | STRAP, LIST | |
| | 3-060-523-01 | MANUAL, INSTRUCTION (JAPANESE) (J) | |
| | 3-060-523-11 | MANUAL, INSTRUCTION (ENGLISH) (US, CND, AEP, UK, E, HK, AUS, JE) | |
| | 3-060-523-21 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (CND, AEP, JE) | |
| | 3-060-523-31 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (AEP, E, JE) | |
| | 3-060-523-41 | MANUAL, INSTRUCTION (ITALIAN, DUTCH) (AEP) | |
| | 3-060-523-51 | MANUAL, INSTRUCTION (CHINESE) (E, HK, JE) | |
| | 3-060-523-61 | MANUAL, INSTRUCTION (RUSSIAN, SWEDISH) (AEP, JE) | |
| | 3-060-523-71 | MANUAL, INSTRUCTION (ARABIC) (E) | |
| | 3-060-523-81 | MANUAL, INSTRUCTION (KOREAN) (JE, KR) | |
| | 3-060-716-01 | SOFT(2000), BUNDLE | |
| | 3-061-217-01 | STRING, CAP | |
| | 3-866-482-01 | MANUAL, INSTRUCTION (for SAFETY) (JAPANESE) (J) | |
| | X-3950-660-2 | CAP ASSY, LENS | |

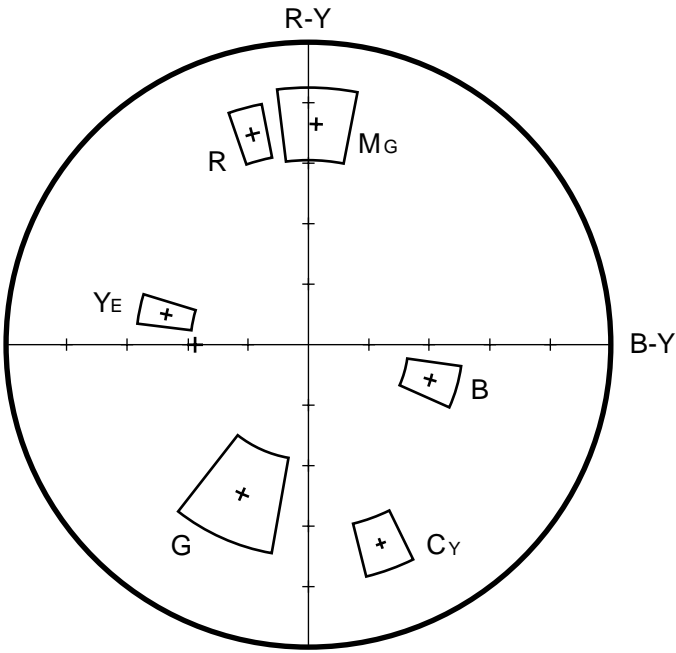
(Note) Be sure to read "Precautions for Replacement of CCD Imager" on page 4-8 when changing the CCD imager

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

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

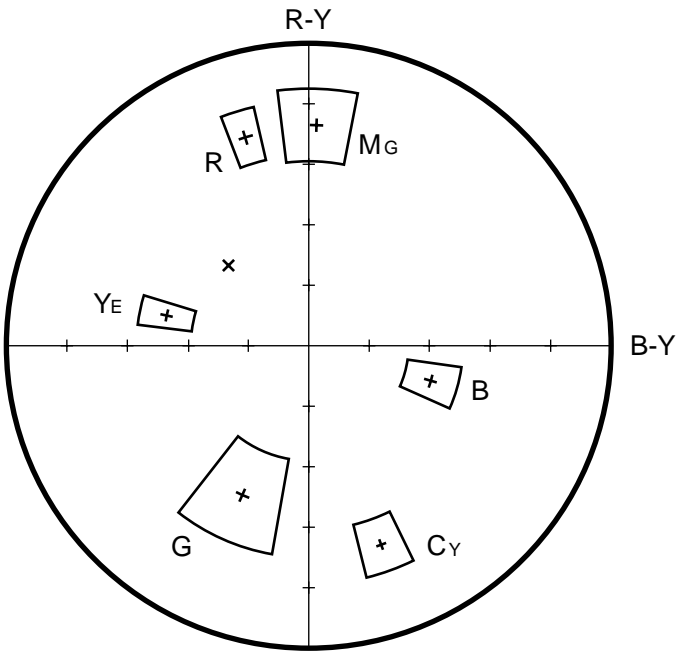
FOR CAMERA COLOR REPRODUCTION ADJUSTMENT

For NTSC mode



DSC-S30/S50

For PAL mode



DSC-S30/S50

Take a copy of CAMERA COLOR REPRODUCTION FRAME and Parts reference sheets with a clear sheet for use.

DSC-S30/S50

SONY®

SERVICE MANUAL

Level 2

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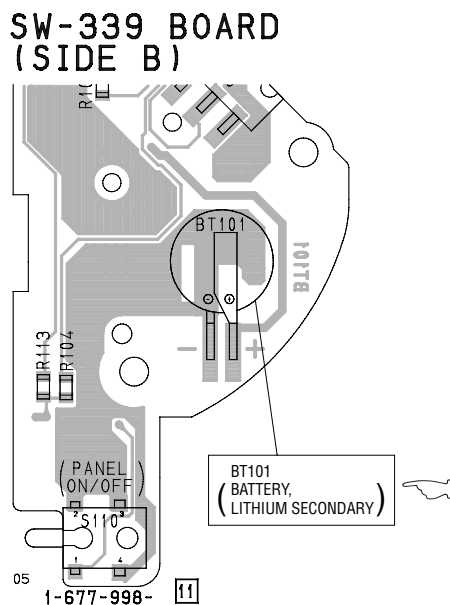
*US Model
Canadian Model
AEP Model
UK Model
E Model
Hong Kong Model
Australian Model
Chinese Model
Korea Model
Tourist Model
Japanese Model*

SUPPLEMENT-1

File this supplement with the service manual.
(PV00-007)

- Correction of Hall Adjustment
- Supplied Parts Modification



JK-194 (USB, A/V OUT), KJ-11 (PANEL REVERSE), SW-339 (SWITCH) PRINTED WIRING BOARDS
 – Ref. No.: JK-194 board; 2,000 series, KJ-11 board; 3,000 series, SW-339 board; 2,000 series –
(Service manual pages 4-37 and 4-38)



SECTION 5 ADJUSTMENTS



1-4. CAMERA SYSTEM ADJUSTMENTS

1. HALL Adjustment (Service manual page 5-13)

| INCORRECT | CORRECT |
|--|--|
| <p>Note 2: The right four digits of the page: 1 displayed data of the adjusting remote commander.</p> <p>1:XX:XX</p> <p>└─ Displayed data</p> | <p></p> <p>Note 2: The right two digits of the page: 1 displayed data of the adjusting remote commander.</p> <p> 1:00:XX</p> <p>└─ Displayed data</p> |

SECTION 6 REPAIR PARTS LIST

6-1. EXPLODED VIEWS

 : Points added portion.
 : Points changed portion.

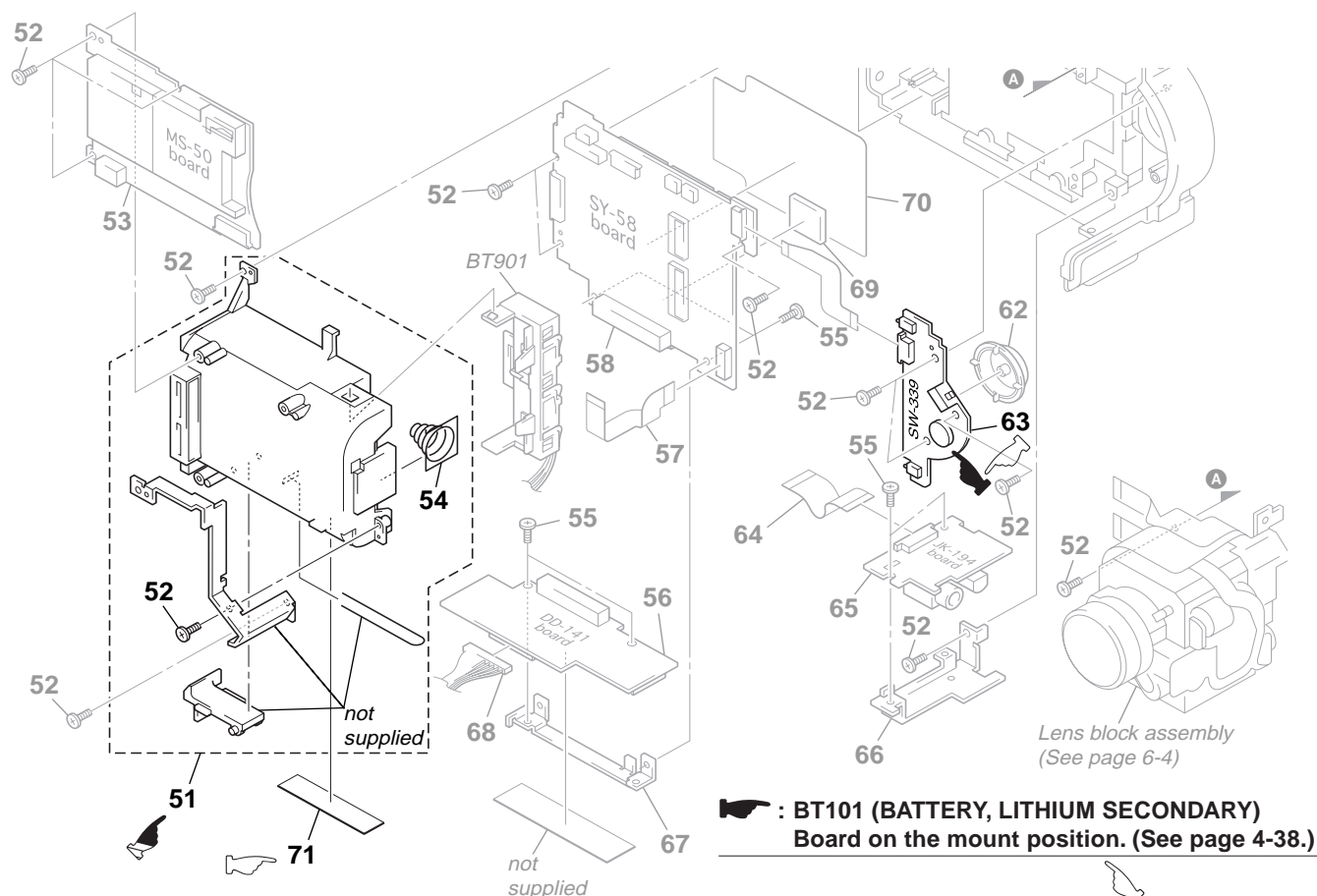
NOTE:

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

6-1-1. FRONT PANEL SECTION (Service manual page 6-1)

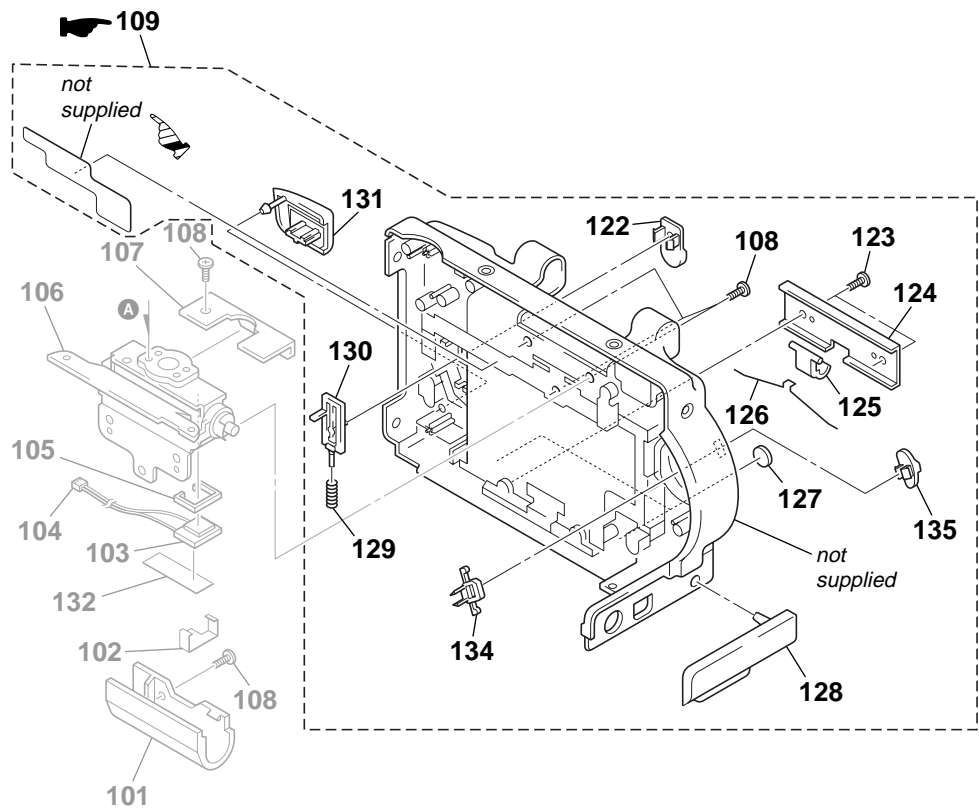
| Former Type | | | | New Type | | | |
|-------------|--------------|----------------------------|--------|----------|--------------|----------------------------|--------|
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
| 1 | X-3950-656-1 | CABINET (FRONT) ASSY (S50) | | 1 | X-3950-656-3 | CABINET (FRONT) ASSY (S50) | |
| 1 | X-3950-664-1 | CABINET (FRONT) ASSY (S30) | | 1 | X-3950-664-3 | CABINET (FRONT) ASSY (S30) | |
| 10 | X-3950-659-1 | CABINET (UPPER) ASSY (S50) | | 10 | X-3950-659-4 | CABINET (UPPER) ASSY (S50) | |
| 10 | X-3950-665-1 | CABINET (UPPER) ASSY (S30) | | 10 | X-3950-665-4 | CABINET (UPPER) ASSY (S30) | |

6-1-2. MAIN SECTION (Service manual page 6-2)



| Former Type | | | | New Type | | | |
|-------------|--------------|-----------------|--------|----------|--------------|-----------------|--------|
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
| 51 | X-3950-655-1 | HOLDER ASSY, BT | | 51 | X-3950-655-3 | HOLDER ASSY, BT | |
| | | | | * 71 | 3-062-855-01 | TAPE (40) | |

6-1-3. REAR CABINET SECTION
(Service manual page 6-3)



| Former Type | | | | New Type | | | |
|-------------|--------------|---------------------------|--------|--------------|--------------|---------------------------|--------|
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
| 109 | X-3950-658-1 | CABINET (REAR) ASSY (S50) | | 109 | X-3950-658-3 | CABINET (REAR) ASSY (S50) | |
| 109 | X-3950-794-1 | CABINET (REAR) ASSY (S30) | | 109 | X-3950-794-3 | CABINET (REAR) ASSY (S30) | |
| * 133 | 3-062-736-01 | SHEET, ELECTROSTATIC | | Not Supplied | | | |

DSC-S30/S50

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Level 2

Ver 1.2 2001. 10

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


SUPPLEMENT-2

File this supplement with the service manual.
(PV01-009)

• Change of Service Parts.

SECTION 6 REPAIR PARTS LIST

6-1. EXPLODED VIEWS

 : Points changed portion.

6-1-3. REAR CABINET SECTION (Service manual page 6-3)

| Former Type | | | | New Type | | | |
|-------------|--------------|---------------------------|--------|----------|--------------|---------------------------|--------|
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
| 109 | X-3950-658-3 | CABINET (REAR) ASSY (S50) | | 109 | X-3950-658-4 | CABINET (REAR) ASSY (S50) | |
| 109 | X-3950-794-3 | CABINET (REAR) ASSY (S30) | | 109 | X-3950-794-4 | CABINET (REAR) ASSY (S30) | |

| Ver. | Date | History | Contents | S.M. Rev. issued |
|------|---------|--|---|------------------|
| 1.0 | 2000.04 | Official Release | — | — |
| 1.1 | 2000.09 | Supplement-1/ Correction (S1 PV00-007) | <ul style="list-style-type: none"> • Correction of Hall Adjustment • Supplied Parts Modification S.M. correction: Page 4-37 , Page 4-38 , Page 5-13 , Page 6-2 | Yes |
| 1.2 | 2001.10 | Supplement-2 (S2 PV01-009) | <ul style="list-style-type: none"> • Change of Service Parts | No |
| 1.3 | 2004.07 | Correction-1 (C1) | <ul style="list-style-type: none"> • Correction of SCHEMATIC DIAGRAMS • Correction of EXPLODED VIEWS S.M. correction: Page 4-3 , Page 4-33 , Page 6-3 | Yes |
| | | | | |