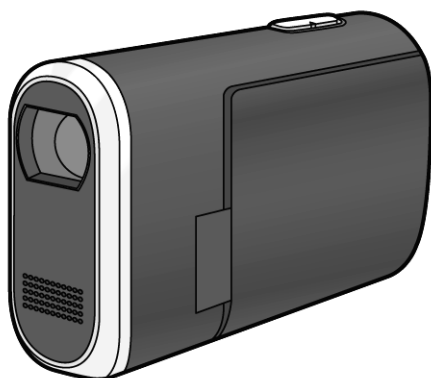


# Service Manual

SD Video Camera

**SDR-S10P****SDR-S10PC****SDR-S10PL****SDR-S10E****SDR-S10EB****SDR-S10EE****SDR-S10EF****SDR-S10EG****SDR-S10EP****SDR-S10GC****SDR-S10GN****SDR-S18GK**

Vol. 1

Colour

(K).....Black Type

**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# 1 Safety Precaution

## 1.1. General Guidelines

### 1. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by

⚠ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## 1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1\text{ M}\Omega$  and  $5.2\text{ M}\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be infinity.

## 1.3. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5\text{ k}\Omega$ , 10 W resistor, in parallel with a  $0.15\text{ }\mu\text{F}$  capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with  $1\text{ k}\Omega/\text{V}$  or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 V RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed  $1/2\text{ mA}$ . In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

Hot-Check Circuit

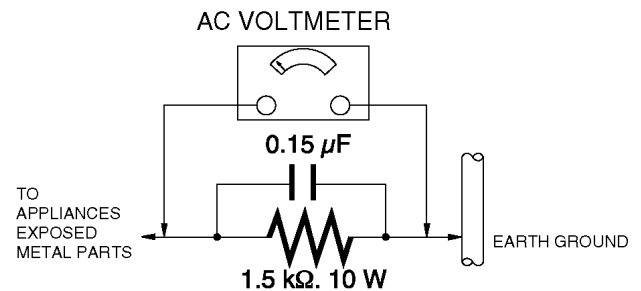


Figure. 1

## 2 Warning

### 2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION :**

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

### 2.2. How to Recycle the Lithium Ion Battery (U.S. Only)

**ENGLISH**



A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

**FRANÇAIS**



L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion/polymère recyclable. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

## 2.3. Caution for AC Cord (For EB/GC)

### 2.3.1. Information for Your Safety

#### IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

#### WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

#### CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

#### FOR YOUR SAFETY

##### DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

### 2.3.2. Caution for AC Mains Lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362

Check for the ASRA mark or the BSI mark on the body of the fuse.



If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safely.

There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

### 2.3.2.1. Important

The wires in this mains lead are coloured in accordance with the following code:

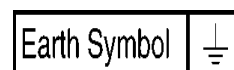
Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

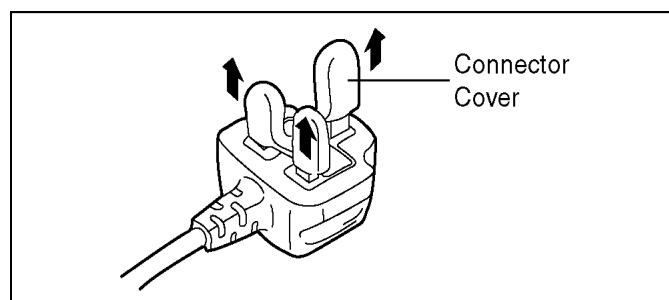
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.



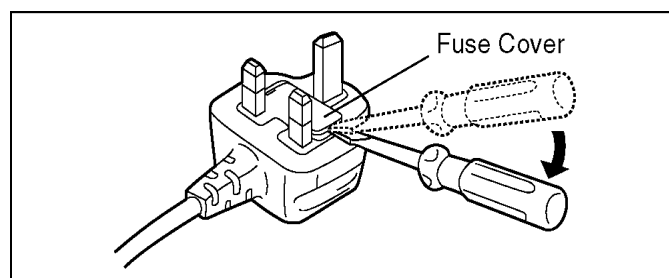
### 2.3.2.2. Before Use

Remove the Connector Cover as follows.

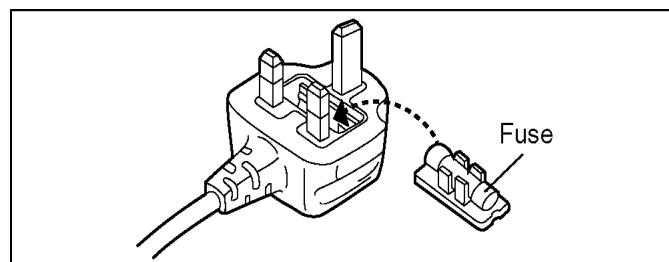


### 2.3.2.3. How to Replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



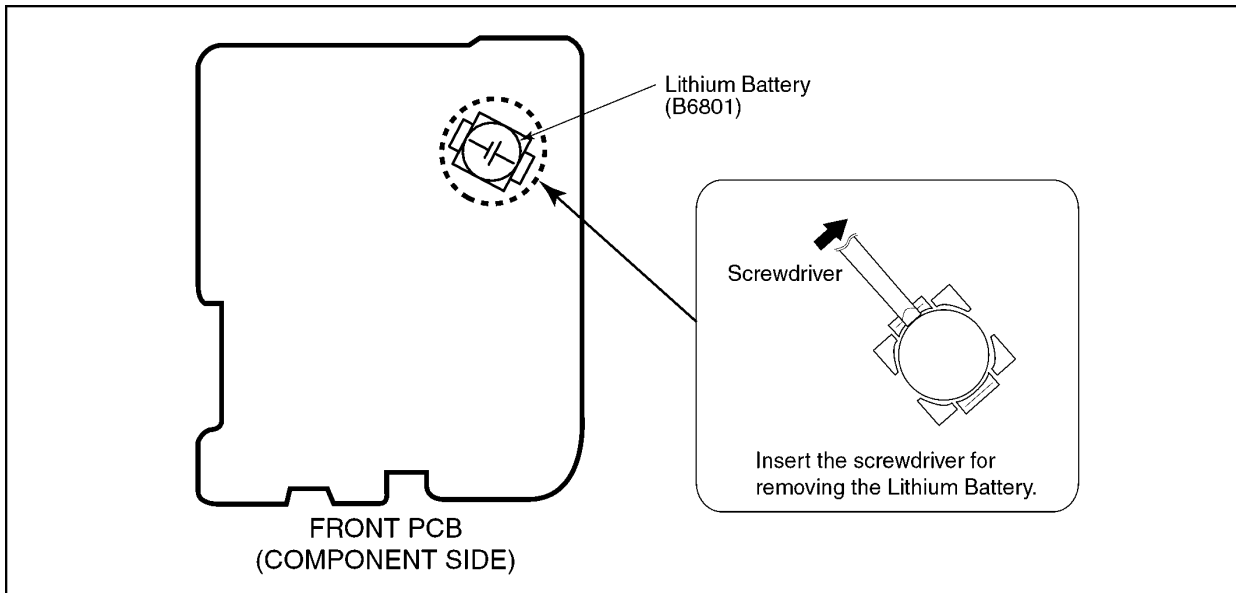
2. Replace the fuse and attach the Fuse cover.



## 2.4. How to Replace the Lithium Battery

### 2.4.1. Replacement Procedure

1. Remove the FRONT PCB. (Refer to Disassembly Procedures.)
2. Remove the Lithium battery (Ref. No. "B6801" at component side of FRONT PCB) and then replace it into new one.



#### NOTE:

This Lithium battery is a critical component.

(Type No.: ML-614S/ZT **Manufactured by Matsushita Battery Industrial Co.,Ltd.**)

It must never be subjected to excessive heat or discharge.

It must therefore only be fitted in requirement designed specifically for its use.

Replacement batteries must be of same type and manufacture.

They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose.

It should be disposed of in waste products destined for burial rather than incineration.

#### (For English)

### CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

#### (For German)

### ACHTUNG

Explosionsgefahr bei falschem Anbringen der Batterie. Ersetzen Sie nur mit einem äquivalentem vom Hersteller empfohlenem Typ.

Behandeln Sie gebrauchte Batterien nach den Anweisungen des Herstellers.

#### (For French)

### MISE EN GARDE

Une batterie de remplacement inappropriée peut exploser. Ne remplacez qu'avec une batterie identique ou d'un type recommandé par le fabricant. L'élimination des batteries usées doit être faite conformément aux instructions du fabricant.

#### NOTE:

Above caution is applicable for a battery pack which is for SDR-S10/S18 series, as well.

## 3 Service Navigation

### 3.1. Introduction

This service manual contains technical information, which allow service personnel's to understand and service this model.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, the information will be followed by service manual to be controlled with original service manual.

### 3.2. General Description About Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30°C (86°F) more than that of the normal solder.

**Distinction of PCB Lead Free Solder being used**

The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder.(See right figure)
---

PbF
-----

#### Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.  
(Definition: The letter of "PbF" is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30°C (662±86°F).

#### Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.  
RFKZ03D01K----- (0.3mm 100g Reel)  
RFKZ06D01K----- (0.6mm 100g Reel)  
RFKZ10D01K----- (1.0mm 100g Reel)

#### Note

\* Ingredient: tin (Sn) 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

### 3.3. Important Notice 1:(Other than U.S.A. and Canadian Market)

1. The service manual does not contain the following information, because of the impossibility of servicing at component level without concerned equipment/facilities.

- a. Schematic diagram, Block Diagram and PCB layout of MAIN PCB.
- b. Parts list for individual parts for MAIN PCB.

When a part replacement is required for repairing MAIN PCB, replace as an assembled parts. (Main PCB)

2. The following category is /are recycle module part. Please send it/them to Central Repair Center.

- MAIN PCB (VEP03H23A : SDR-S10P/PC/PL)
- MAIN PCB (VEP03H23B : SDR-S10E/EB/EF/EG/EP)
- MAIN PCB (VEP03H23C : SDR-S10GC/GN)
- MAIN PCB (VEP03H23D : SDR-S10EE)
- MAIN PCB (VEP03H23H : SDR-S18GK)

### 3.4. How to Define the Model Suffix (NTSC or PAL model)

There are six kinds of SDR-S10/S18.


- a) SDR-S10P
- b) SDR-S10PC
- c) SDR-S10E/EB/EF/EG/EP
- d) SDR-S10EE
- e) SDR-S10GN
- f) SDR-S10PL/GC, SDR-S18GK

What is the difference is that the "INITIAL SETTING" data which is stored in Flash ROM mounted on Main PCB.


#### 3.4.1. Defining methods:

To define the model suffix to be serviced, refer to the rating label which is putted on the bottom side of the Unit.


**a) SDR-S10P**  
The nameplate for this model show the following  
Safty registration mark.




**b) SDR-S10PC**  
The nameplate for this model show the following  
Safty registration mark.




**c) SDR-S10E/EB/EF/EG/EP**  
The nameplate for these models show the following  
Safty registration mark.




**d) SDR-S10EE**  
The nameplate for this model show the following  
Safty registration mark.



**e) SDR-S10GN**  
The nameplate for this model show the following  
Safty registration mark.



**f) SDR-S10PL/GC, SDR-S18GK**  
The nameplate for these models do not show any above Safty registration mark.



Safty registration mark

#### NOTE:

After replacing the MAIN PCB, be sure to achieve adjustment.

The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN system", together with Maintenance software.

## 4 Specifications

### SD Video Camera

Information for your safety

<b>Power source:</b>	DC 4.8 V (When using AC adaptor) DC 3.6 V (When using battery)
<b>Power consumption:</b>	Recording: 2.9 W Charging: 4.2 W
<b>Signal system</b>	EIA Standard: 525 lines, 60 fields NTSC color signal (only P/PC/PL) 625 lines, 50 fields PAL color signal (except P/PC/PL)
<b>Image sensor</b>	1/6" CCD image sensor Total: 680 K Effective pixels: Moving picture: 340 K (4:3), 300 K (16:9) Still picture: 350 K (4:3)
<b>Lens</b>	Auto Iris, F1.8 to F2.4 Focal length: 2.3 mm to 23.0 mm Macro (Full range AF)
<b>Zoom</b>	10× optical zoom, 25/700× digital zoom
<b>Monitor</b>	2.7" wide LCD monitor (approx. 123 K pixels)
<b>Microphone</b>	Stereo (with a zoom function)
<b>Speaker</b>	1 round speaker
<b>White balance adjustment</b>	Auto tracking white balance system
<b>Standard illumination</b>	1,400 lx
<b>Minimum required illumination</b>	Approx. 12 lx (Low light mode, 1/60) [Approx. 2 lx with the MagicPix function]
<b>Video output level</b>	1.0 Vp-p, 75 Ω
<b>Audio output level</b>	316 mV, 600 Ω
<b>USB</b>	Card reader/writer function (No copyright protection support) Hi-Speed USB (USB 2.0) compliant, USB terminal Type miniB PictBridge-compliant
<b>Dimensions (excluding the projecting parts)</b>	31 mm (W) × 63 mm (H) × 114 mm (D) [1.22" (W) × 2.48" (H) × 4.49" (D)]
<b>Mass</b>	Approx. 182 g (0.40 lbs.) (without supplied battery and an SD card)
<b>Mass in operation</b>	Approx. 204 g (0.45 lbs.) (with supplied battery and an SD card)
<b>Operating temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Operating humidity</b>	10% to 80%
<b>Battery operation time</b>	Refer to "Charging time and recordable time".

### Motion pictures

<b>Recording media</b>	SD Memory Card: 256 MB/512 MB/1 GB/2 GB (FAT12 and FAT16 format corresponding) SDHC Memory Card: 4 GB (FAT32 format corresponding)
<b>Picture size</b>	704×480
<b>Recordable time</b>	Refer to "Approximate recording times of motion pictures per SD card made by Panasonic".
<b>Compression</b>	MPEG2 (SD-Video standard compliant)
<b>Recording mode and transfer rate</b>	XP: 10 Mbps (VBR) SP: 5 Mbps (VBR) LP: 2.5 Mbps (VBR)
<b>Audio compression</b>	MPEG1-Layer2 compliant (stereo)

### Still pictures

<b>Recording media</b>	SD Memory Card: 8 MB/16 MB/32 MB/64 MB/128 MB/256 MB/512 MB/1 GB/2 GB (FAT12 and FAT16 format corresponding) SDHC Memory Card: 4 GB (FAT32 format corresponding)
<b>Number of recordable pictures</b>	Refer to "Number of recordable pictures on SD card".
<b>Compression</b>	JPEG (Design rule for Camera File system, based on Exif 2.2 standard), DPOF corresponding
<b>Picture size</b>	640×480 (4:3)

### AC adaptor

Information for your safety

<b>Power source:</b>	AC 110 V to 240 V, 50/60 Hz
<b>Power consumption:</b>	8 W
<b>DC output:</b>	DC 4.8 V, 1.1 A
<b>Dimensions</b>	76 mm (W) × 26 mm (H) × 40 mm (D) [2.99" (W) × 1.02" (H) × 1.57" (D)]
<b>Mass</b>	Approx. 80 g (0.18 lbs.)

### Battery pack

Information for your safety

<b>Maximum voltage:</b>	DC 4.2 V
<b>Nominal voltage:</b>	DC 3.6 V
<b>Rated capacitance:</b>	1000 mAh

Specifications may change without prior notice.

## Charging time and recordable time

The times shown in the tables below are for when the temperature is 25 °C (77 °F) and the humidity is 60%. If the temperature is higher or lower than 25 °C (77 °F), the charging time will become longer.

### Charging time

Battery model number	Voltage/capacity	Charging time
Supplied battery/ VW-VBJ10 (optional)	3.6 V/1000 mAh	2 h 10 min

- The charging time shown in the table are approximations.
- "2 h 10 min" indicates 2 hour 10 minutes.

### Recordable time

- The actual recordable time refers to the recordable time when repeatedly starting/stopping recording, turning the unit on/off, pressing the zoom button, etc.

Battery model number	Voltage/ capacity	Maximum continuously recordable time	Actual recordable time
Supplied battery/ VW-VBJ10 (optional)	3.6 V/ 1000 mAh	1 h 10 min	40 min

- The recordable time shown in the table are approximations.
- "1 h 10 min" indicates 1 hour 10 minutes.

## Approximate recording times of motion pictures per SD card made by Panasonic

Capacity	Recording mode		
	XP (High quality)	SP (Normal)	LP (Long play)
256 MB	3 min	6 min	12 min
512 MB	6 min	12 min	25 min
1 GB	12 min	25 min	50 min
2 GB (supplied)	25 min	50 min	1 h 40 min
4 GB	50 min	1 h 40 min	3 h 20 min




Image quality  
prioritized





Recording time  
prioritized

- The recordable time shown in the table are approximations.
- This unit records in VBR. VBR is an abbreviation for Variable Bit Rate. VBR recording automatically varies the bit rate (amount of data in a fixed time) depending on the subject being recorded. This means if a subject with sharp movements is recorded, the recording time is reduced.

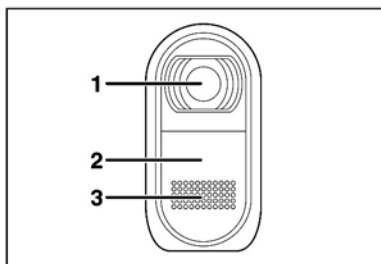
## Number of recordable pictures on an SD card

Picture size	 (640×480)	
Picture quality		
8 MB	37	75
16 MB	92	185
32 MB	200	410
64 MB	430	850
128 MB	820	1640
256 MB	1710	3410
512 MB	3390	6780
1 GB	6790	13580
2 GB	13820	27640
4 GB	27150	54290

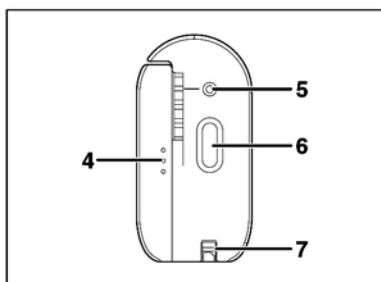
- The number of recordable pictures depends on whether  and  are used together and on the subject being recorded.
- The numbers shown in the table are approximations.

# 5 Location of Controls and Components

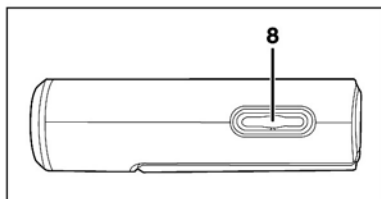
## Parts identification and handling



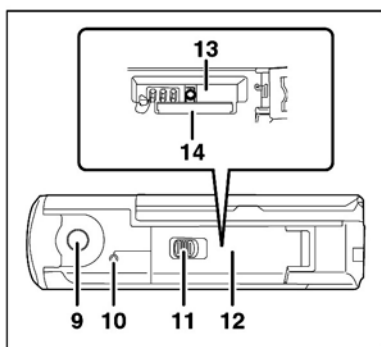
- 1 Lens
- 2 White balance sensor
- 3 Microphone (built-in, stereo)



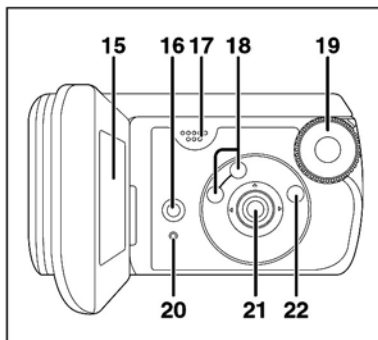
- 4 LCD monitor open part
- 5 Status indicator
- 6 Record button
- 7 Strap fixture



- 8 When recording:  
Zoom button [W/T]  
When playing back:  
Volume button [-VOL+]



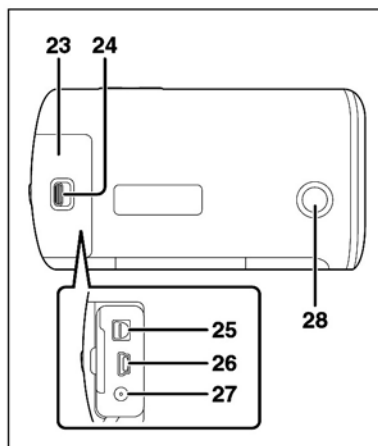
- 9 Attachment screw for tripod adaptor
- 10 Card access lamp [ACCESS]
- 11 Card/battery door lock [LOCK ◀▶ OPEN]
- 12 Card/battery door
- 13 Battery slot [BATT]
- 14 Card slot [SD CARD]



15 LCD monitor

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD monitor screen. However, this is not a malfunction and does not affect the recorded picture.

- 16 Delete button [⏏]
- 17 Speaker
- 18 Mode select buttons [AUTO]/[MANUAL AF/MF]
- 19 Mode dial
- 20 Reset button [RESET]
- 21 Cursor button
- 22 Menu button [MENU]



- 23 Terminal cover
- 24 Terminal cover lock [LOCK ◀▶ OPEN]
- 25 Audio-video output terminal [A/V]
- 26 USB terminal [⏏]
- 27 DC input terminal [DC IN 4.8V]
- 28 Sub record button
  - This button makes it easier to record from a non-standard or lower position, for example at waist level.

## Selecting a mode

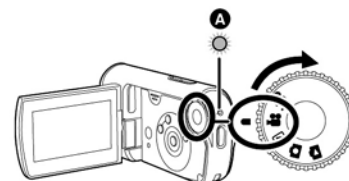
### Selecting a mode (Turning the unit on/off)

Rotate the mode dial to video recording, video playback, picture recording, picture playback or power OFF.  
Rotate the mode dial slowly but surely.

### How to turn on the power

Set the mode dial to , , or .

- Align the desired symbol to the position shown in the illustration.

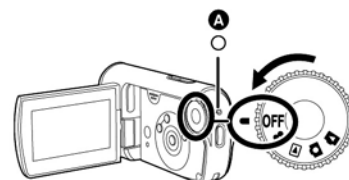


The status indicator **A** lights and the power turns on.

- When the unit is turned on for the first time, a message asking you to set the date and time will appear. Select [YES] and set the date and time.

### How to turn off the power

Set the mode dial to OFF.



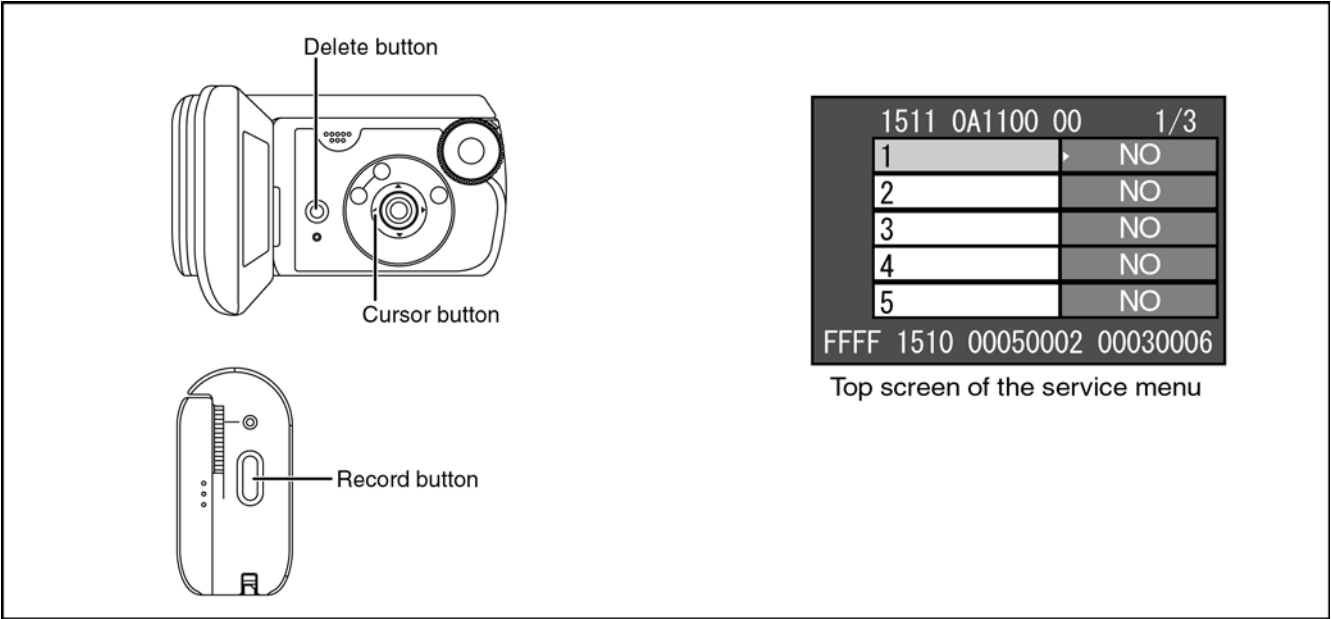
The status indicator **A** goes off when the power turns off.

	<b>Video recording mode</b> Use this to record motion pictures.
	<b>Video playback mode</b> Use this to play back motion pictures.
	<b>Picture recording mode</b> Use this to record still pictures.
	<b>Picture playback mode</b> Use this to play back still pictures.
<b>OFF</b>	The power turns off.

- Do not forcefully rotate the dial.

# 6 Service Mode

- 1. Indication method of the service menu  
Set the mode dial "Video playback" mode.
- 2. While keep pressing the "[LEFT<] of cursor" button, "record" button and "delete" button for more than 3 seconds until the top screen of the Service Menu being displayed.



## Service mode menu

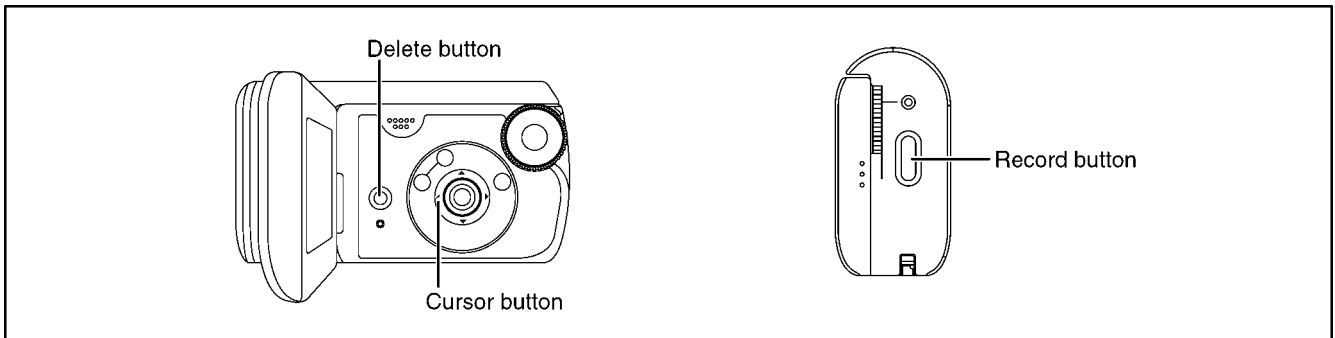
Screen display	Contents	Function
2	Factory settings	Function to throw a product up in a factory shipment state
4	Lock search history indication	Display an error cord for three histories saved in EEPROM

**NOTE:**  
Do not using service mode except [ 2 ], [ 4 ] of Service Menu.

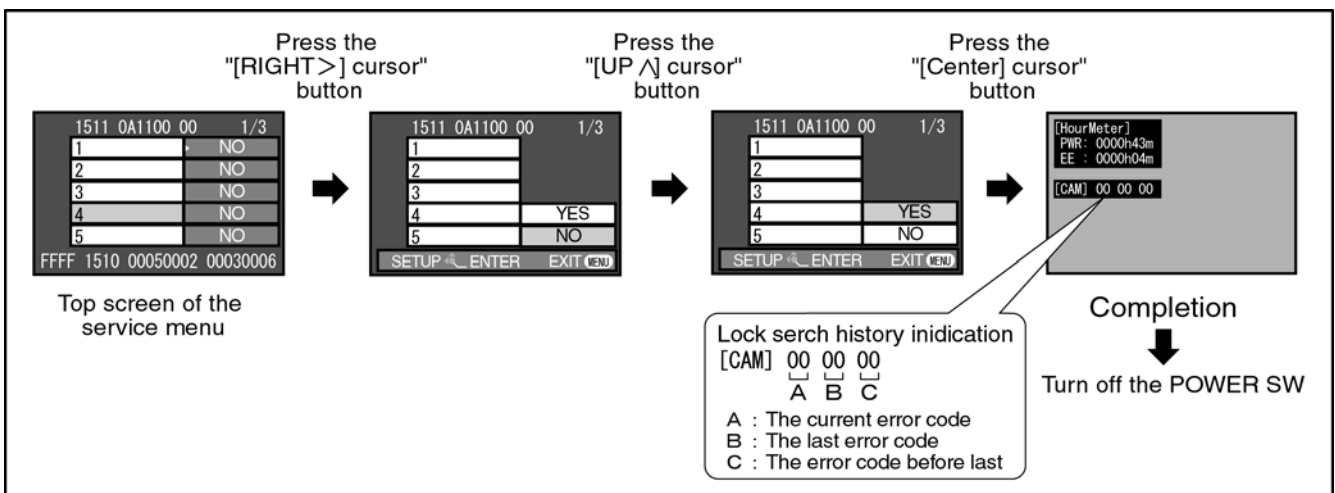
- 3. End method of the top screen of the service menu  
Top screen of the service menu is finished by POWER OFF.

## 6.1. Lock Search History Indication

1. Set the mode dial "Video playback" mode.
2. While keep pressing the "[LEFT<] of cursor" button, "record" button and "delete" button for more than 3 seconds until the top screen of the Service Menu being displayed.
3. Select [ 4 ] Lock search history indication.



### Operation specifications



### Indication contents

- Lock search history indication  
Display the camera system error cord for three histories saved in EEPROM.
- The error cord contents which are displayed

Error code	Function
51	Focus control is abnormal
52	Zoom control is abnormal
53	OIS lens control is abnormal
33	Communication between camera to ARM is abnormal

Lock search history indication is finished by POWER OFF.

## 7 Service Fixture & Tools

### 7.1. When Replacing the Main PCB

After replacing the MAIN PCB, be sure to achieve adjustment.

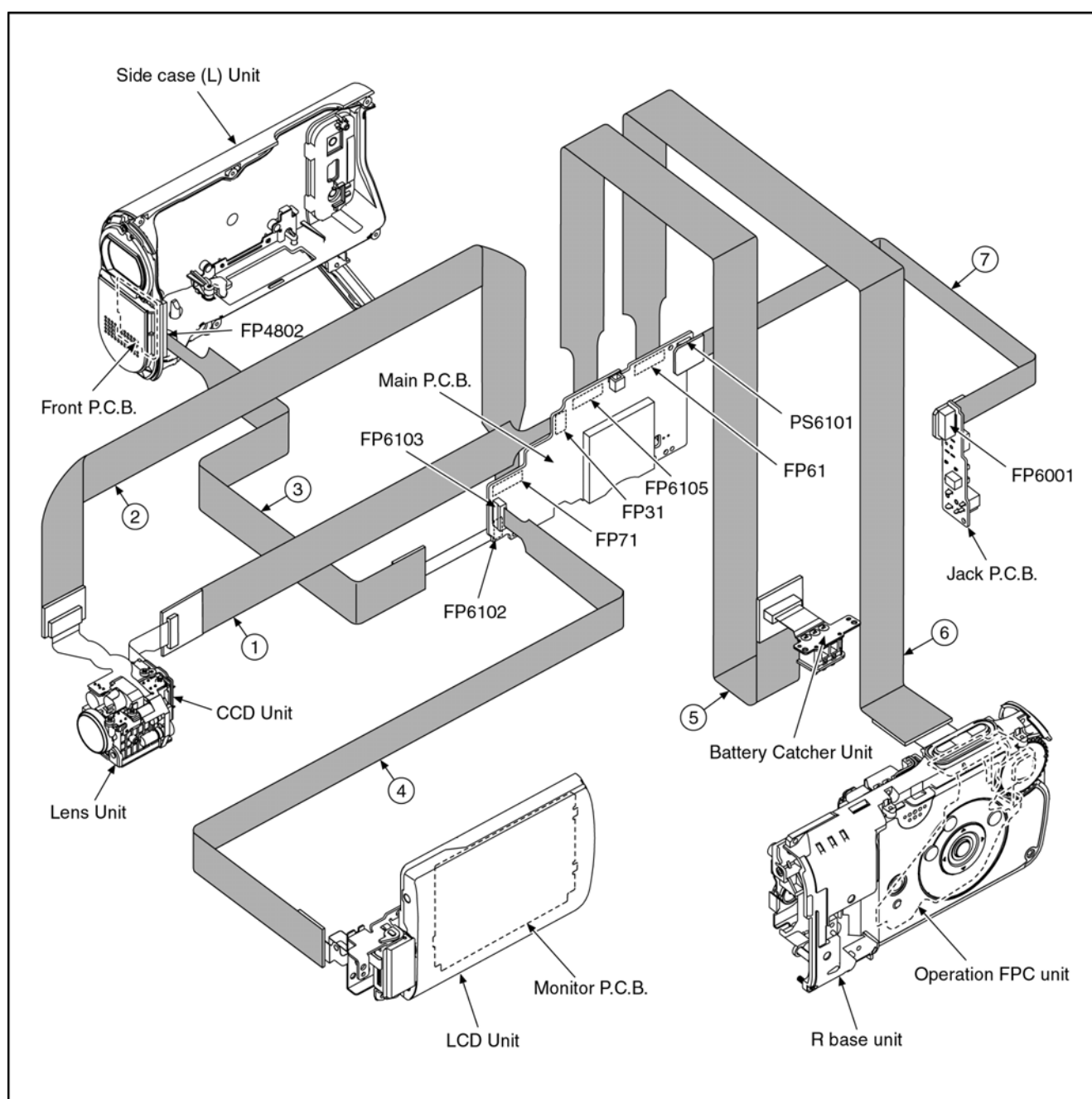
The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN system", together with Maintenance software.

### 7.2. Service Position

This Service Position is used for checking and replacing parts. Use the following Extension cables for servicing.

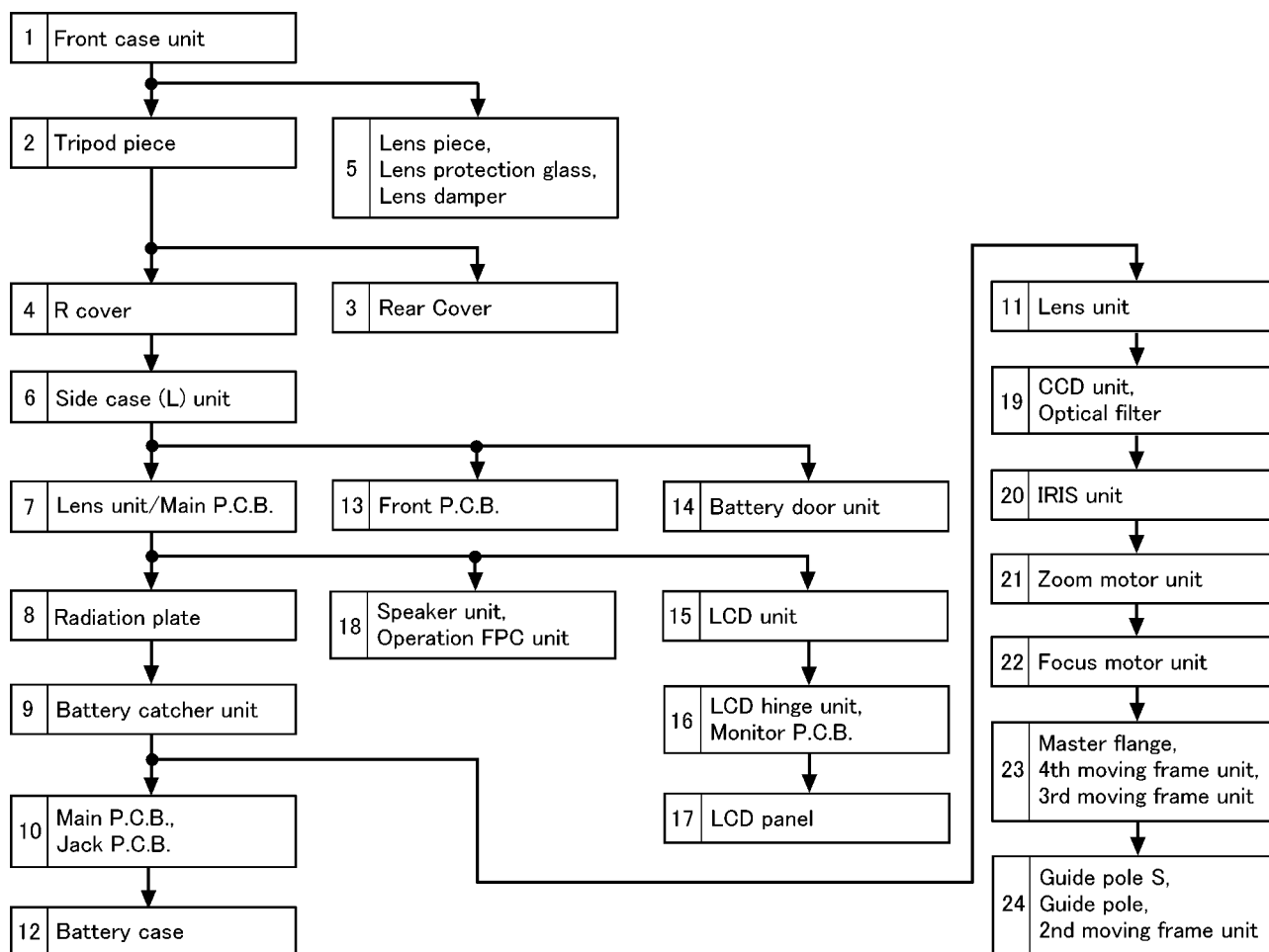
Table S1 Extension Cable List

No.	Parts No.	Connection	Form
1	VFK1364	FP31 (MAIN) - CCD UNIT	14PIN 0.5 FFC
2	VFK1461	FP71 (MAIN) - LENS UNIT	20PIN 0.5 FFC
3	VFK1388	FP6102 (MAIN) - FP4802 (FRONT)	12PIN 0.5 FFC
4	VFK1716	FP6103 (MAIN) - FP8101 (MONITOR)	25PIN 0.3 FFC
5	VFK1461	FP6105 (MAIN) - BATTERY CATCHER UNIT	20PIN 0.5 FFC
6	VFK1461	FP61 (MAIN) - OPERATION FPC UNIT	20PIN 0.5 FFC
7	VFK1870	PS6101 (MAIN) - FP6001 (JACK)	20PIN B to B

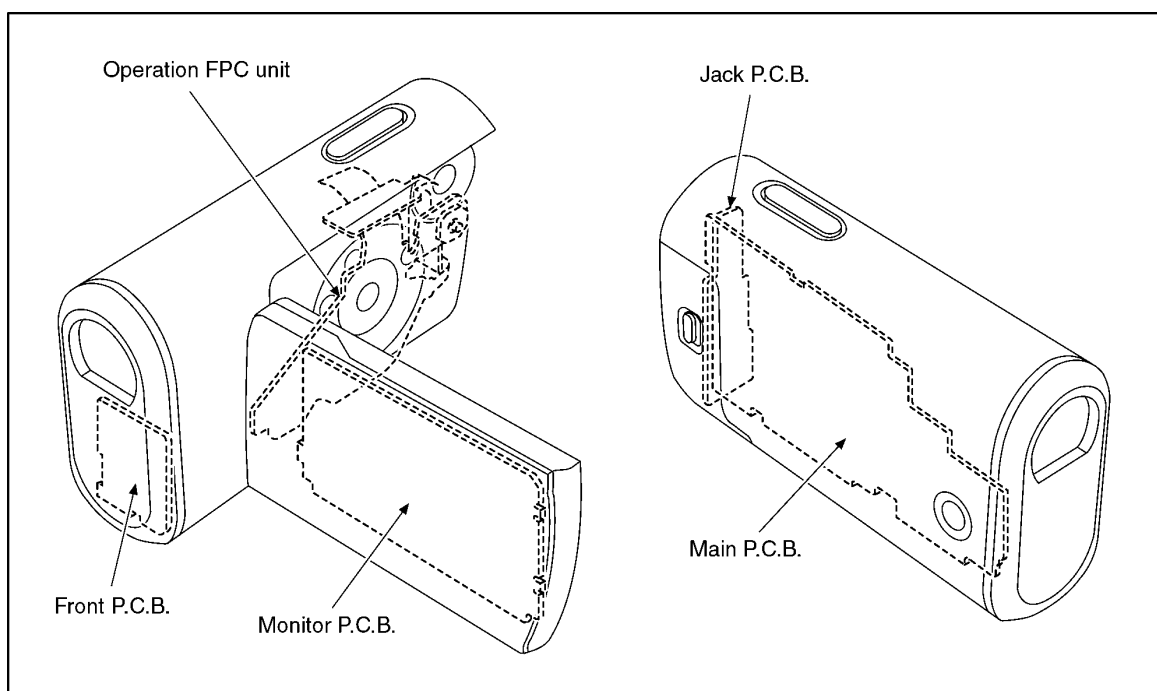


## 8 Disassembly and Assembly Instructions

### 8.1. Disassembly Flow Chart



### 8.2. PCB Location



### 8.3. Disassembly Procedure

No.	Item	Fig	Removal
1	Front case unit	Fig. D1	2 Screws (A) Front case unit
2	Tripod piece	Fig. D2	2 Screws (B) Access panel light Tripod O ring Panel light O ring Tripod piece
3	Rear cover	Fig. D3	2 Screws (C) Rear cover
4	R cover	Fig. D4 Fig. D5	2 Screws (D) 4 Locking tabs R cover
5	Lens piece, Lens protection glass Lens damper	Fig. D6	3 Screws (E) Lens piece Lens protection glass Lens damper
6	Side case (L) unit	Fig. D7 Fig. D8	6 Screws (F) Case O ring FP4802(Flex) Side case (L) unit NOTE: (When Installing)
7	Lens unit/Main P.C.B.	Fig. D9 Fig. D10	4 Screws (G) FP61(Flex) P4001(Connector) FP6103(Flex) Lens unit/Main P.C.B.
8	Radiation plate	Fig. D11	4 Screws (H) Radiation plate
9	Battery catcher unit	Fig. D12	2 Screws (I) FP6105(Flex) Battery catcher unit
10	Main P.C.B., Jack P.C.B.	Fig. D13 Fig. D14	1 Screw (J) FP31(Flex) FP71(Flex) FP6105(Flex) 2 Locking tabs FP6001(Connector) Main P.C.B. Jack P.C.B.
11	Lens unit	Fig. D15	FP31(Flex) FP71(Flex) 1 Screw (K) 1 Locking tab Lens unit
12	Battery case	Fig. D16	1 Screw (L) 2 Locking tabs Battery case
13	Front P.C.B.	Fig. D17	1 Screw (M) 2 Ribs 1 Hook FP4801(Flex) Front P.C.B.
14	Battery door unit	Fig. D18	Battery door shaft Battery door spring Battery door unit
15	LCD unit	Fig. D19 Fig. D20	R base rubber 1 Screw (N) 3 Screws (O) GND O ring LCD unit

No.	Item	Fig	Removal
16	LCD hinge unit, Monitor P.C.B.	Fig. D21 Fig. D22 Fig. D23	4 Screws (P) Packing angle 4 screw O rings 2 Screws (Q) 3 Locking tabs LCD case top FP8101(Flex) 3 Locking tabs FP8102(Flex) LCD hinge unit Monitor P.C.B. NOTE: (When Installing)
17	LCD panel	Fig. D24	Reflection sheet Lighting plate Diffusion sheet Prism sheet B Prism sheet A Light guide holder LCD panel LCD shield case LCD case bottom unit
18	Speaker unit, Operation FPC unit	Fig. D25 Fig. D26 Fig. D27	9 Screws (R) Operation angle Earth angle Speaker unit SS operation angle Zoom operation angle SS button rubber unit Zoom OP rubber unit Operation FPC unit NOTE: (When Installing)
19	CCD unit, Optical filter	Fig. D28	2 Screws (S) CCD cushion rubber CCD unit Optical filter
20	IRIS unit	Fig. D29 Fig. D30	Solder (8 points) 3 Screws (T) 1 Rib IRIS unit NOTE: (When Installing)
21	Zoom motor unit	Fig. D31	2 Screws (U) Zoom motor unit
22	Focus motor unit	Fig. D32	2 Screws (V) Focus motor unit
23	Master flange, 4th moving frame unit, 3rd moving frame unit	Fig. D33	3 Screws (W) Master flange 4th moving frame unit 3rd moving frame unit
24	Guide pole S, Guide pole, 2nd moving frame unit	Fig. D34	Guide pole S Guide pole 2nd moving frame unit

**NOTE:**

When servicing and reassembling, remove the card and battery from the unit.

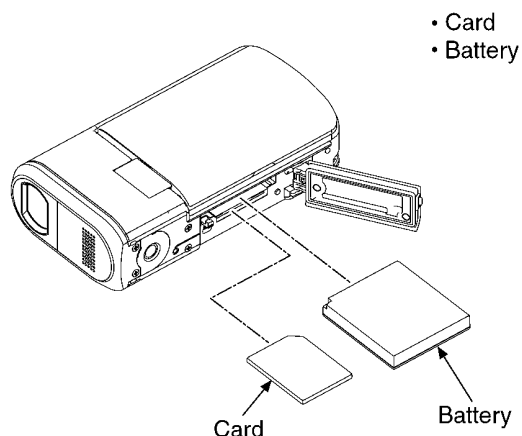
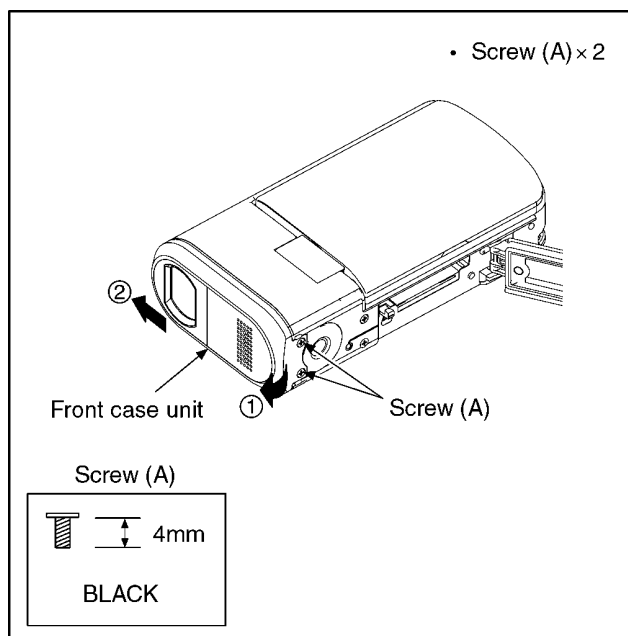
**8.3.1. Removal of the Front case unit**

Fig. D1

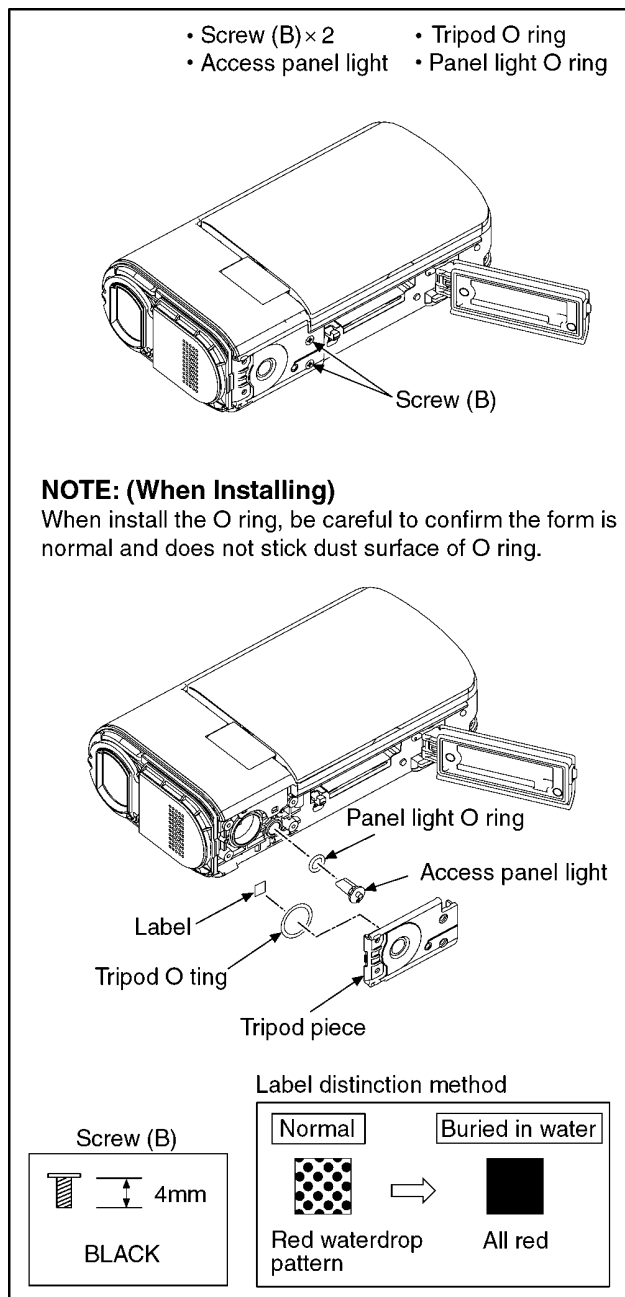
**8.3.2. Removal of the Tripod piece**

Fig. D2

### 8.3.3. Removal of the Rear cover

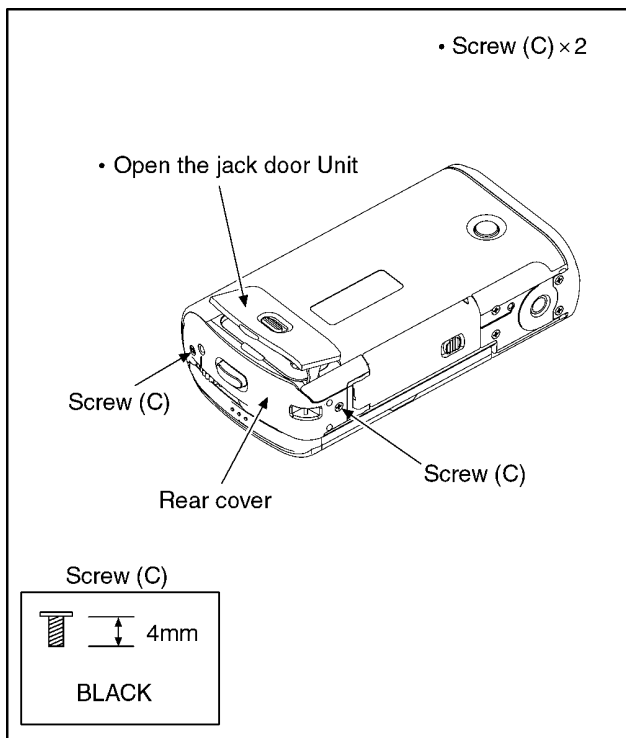


Fig. D3

### 8.3.4. Removal of the R cover

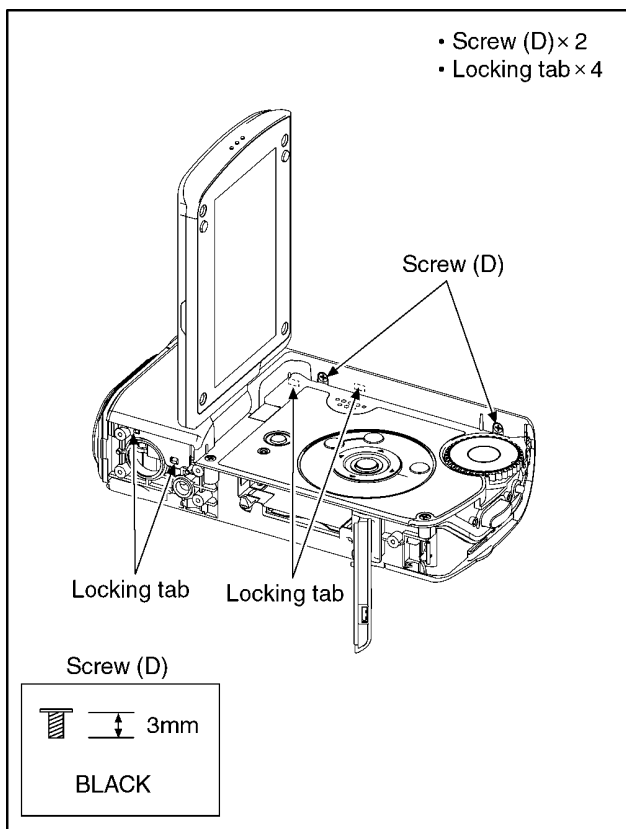


Fig. D4

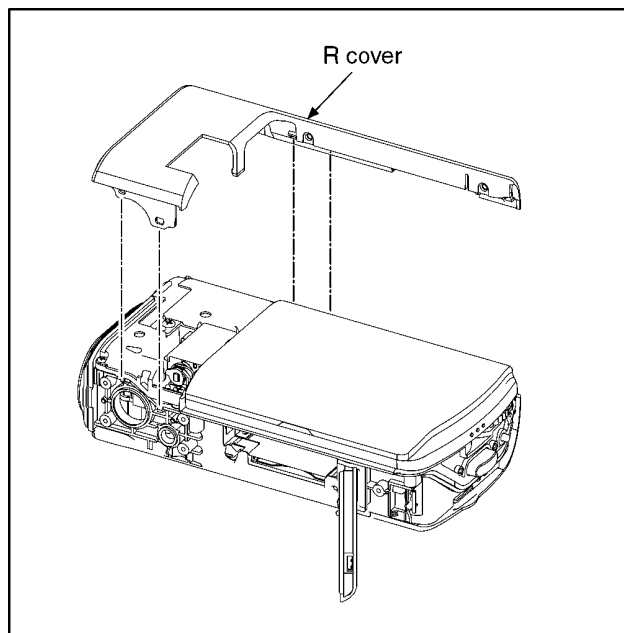


Fig. D5

### 8.3.5. Removal of the Lens piece, Lens protection glass and Lens damper

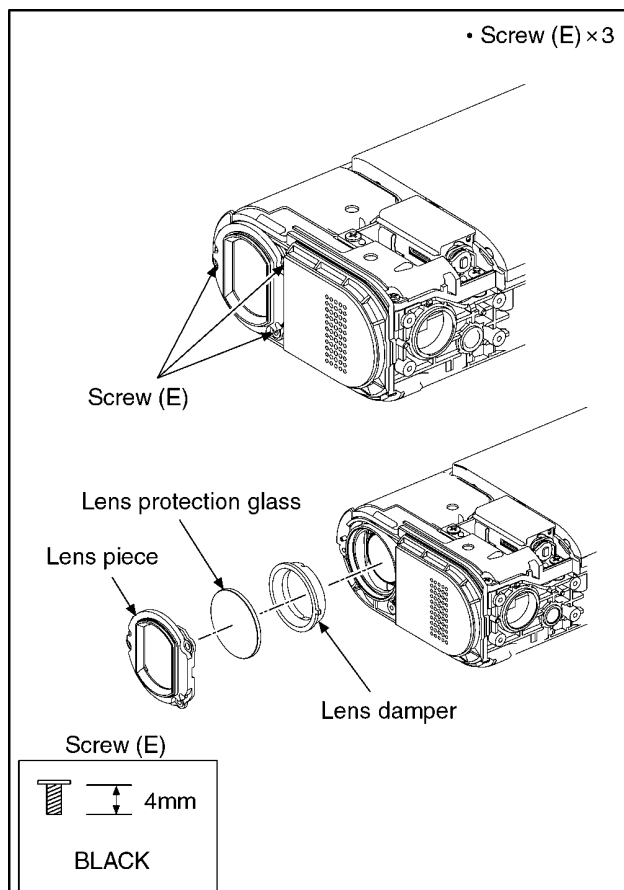


Fig. D6

### 8.3.6. Removal of the Side case (L) unit

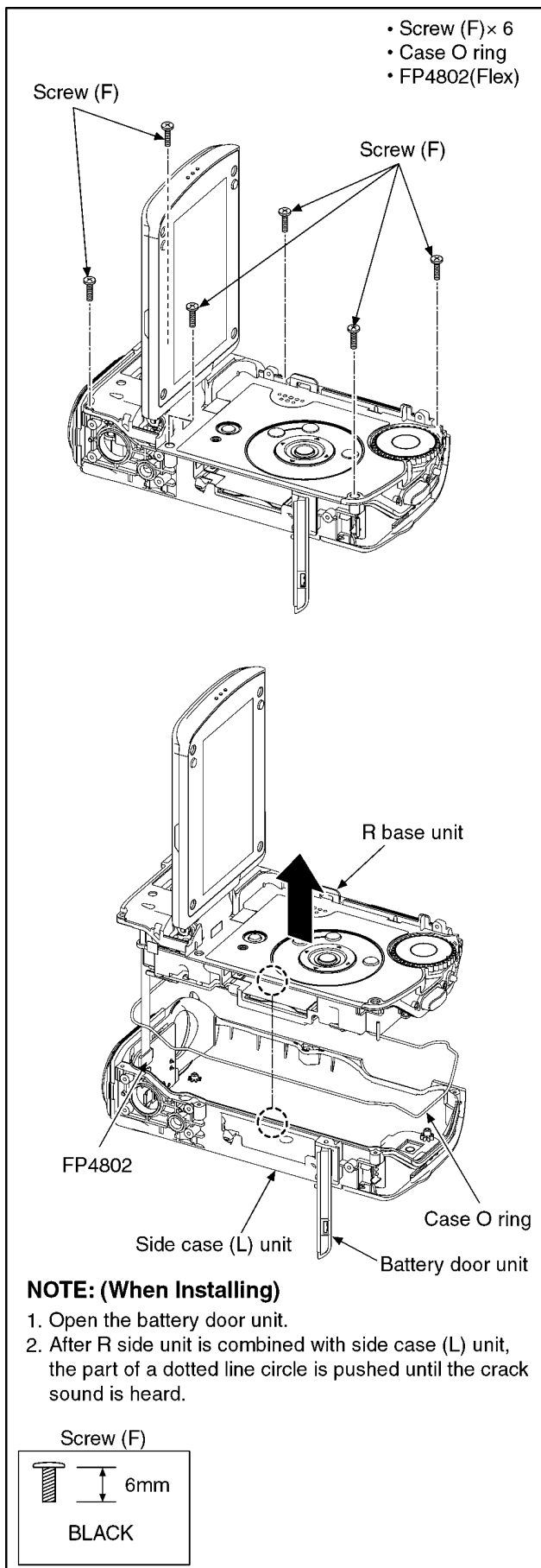


Fig. D7

### NOTE: (When Installing)

1. Be careful to confirm the form is normal and does not stick dust surface of case O ring.
2. Case O ring is put from start position in groove. At this time, the hard pressure is not given. To suppress it lightly, it puts in groove. It is noted that case O ring does not float in the difference of R side unit. The length of O ring is adjusted in a straight line part in the bottom (R base unit).

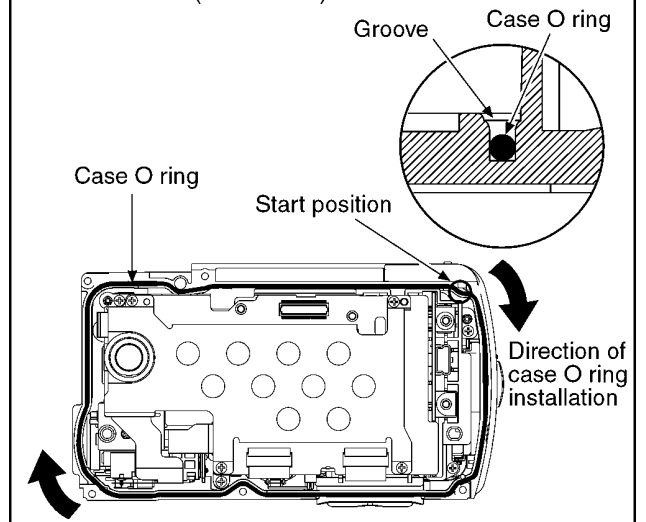


Fig. D8

### 8.3.7. Removal of the Lens unit/ Main P.C.B

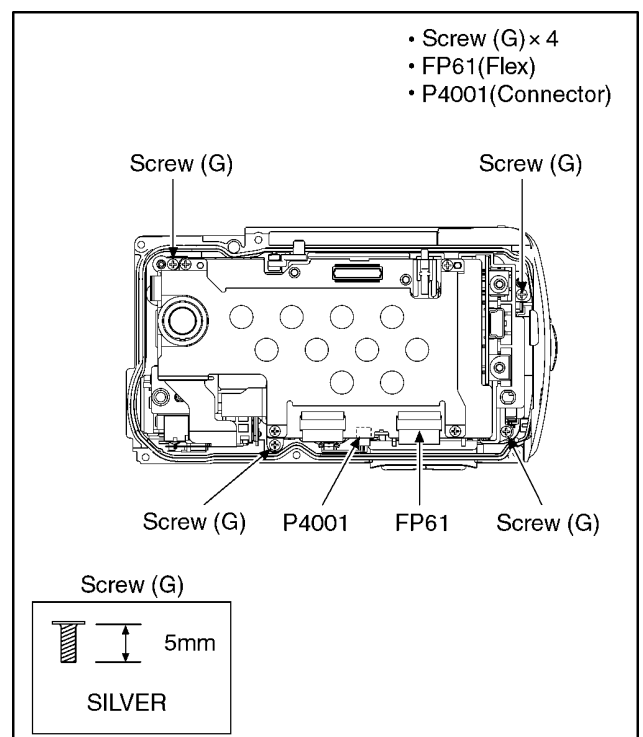


Fig. D9

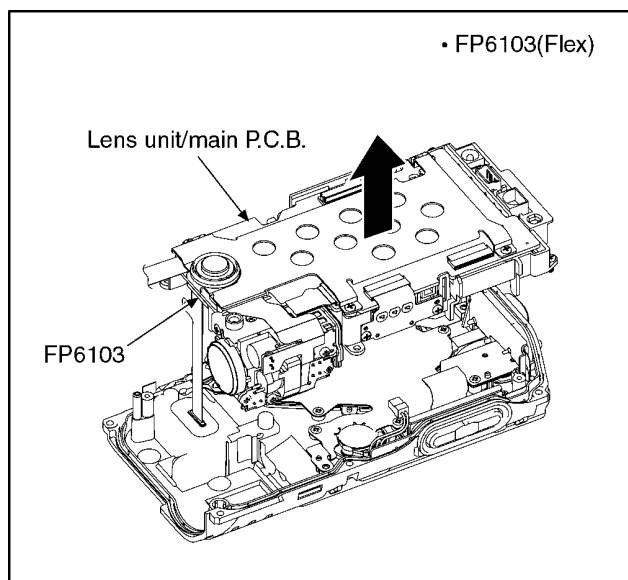


Fig. D10

### 8.3.8. Removal of the Radiation plate

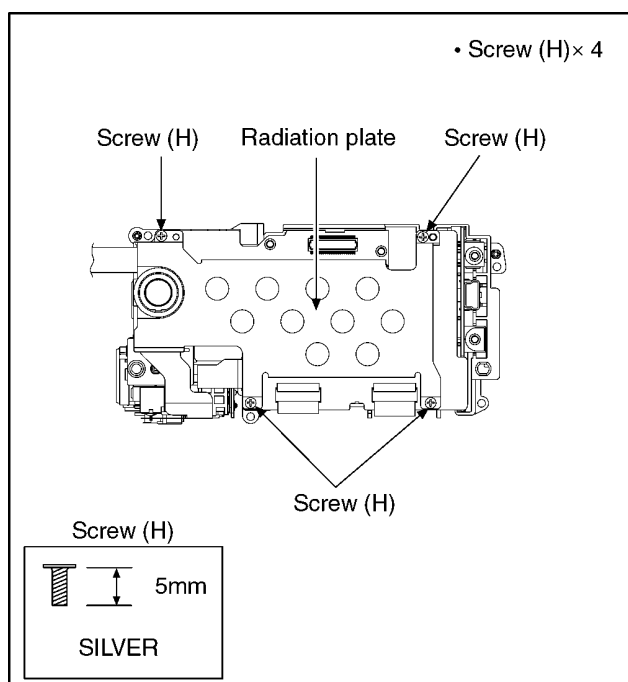


Fig. D11

### 8.3.9. Removal of the Battery catcher unit

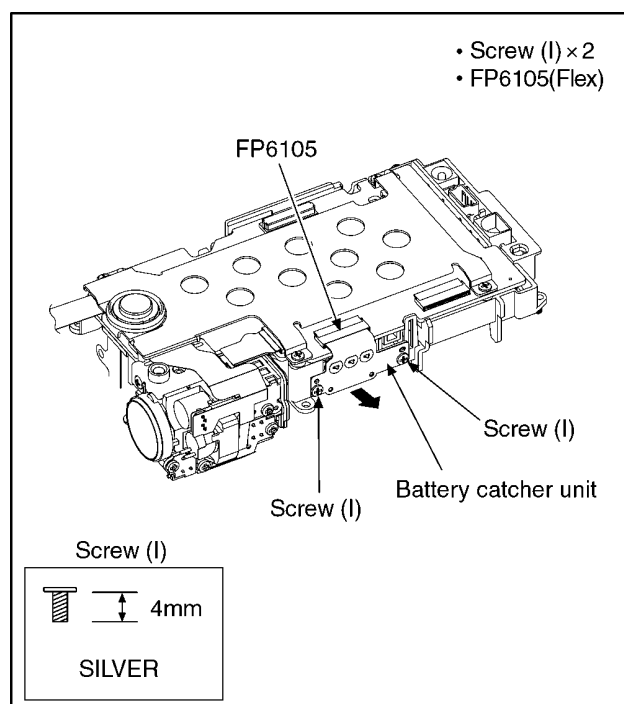


Fig. D12

### 8.3.10. Removal of the Main P.C.B. and Jack P.C.B.

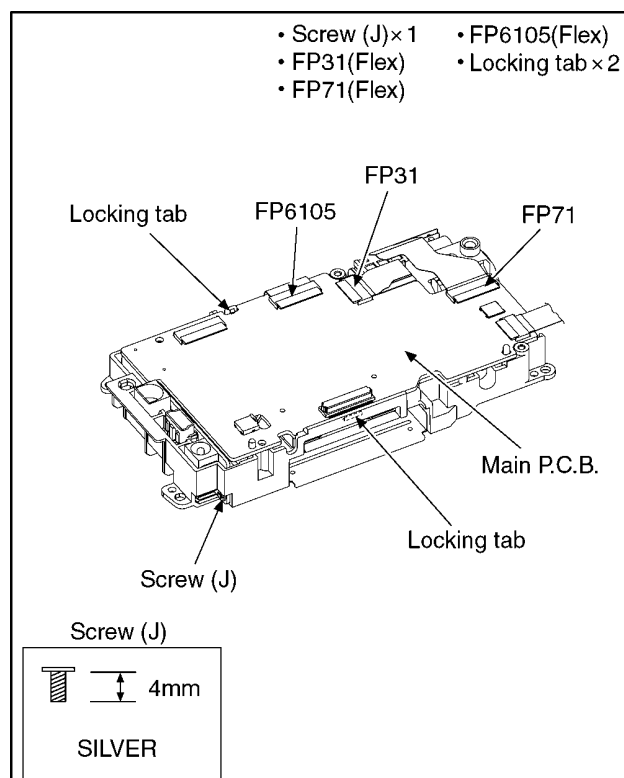


Fig. D13

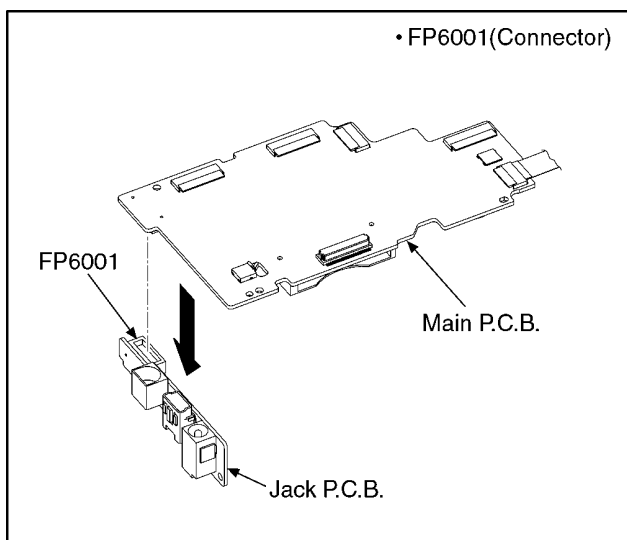


Fig. D14

### 8.3.11. Removal of the Lens unit

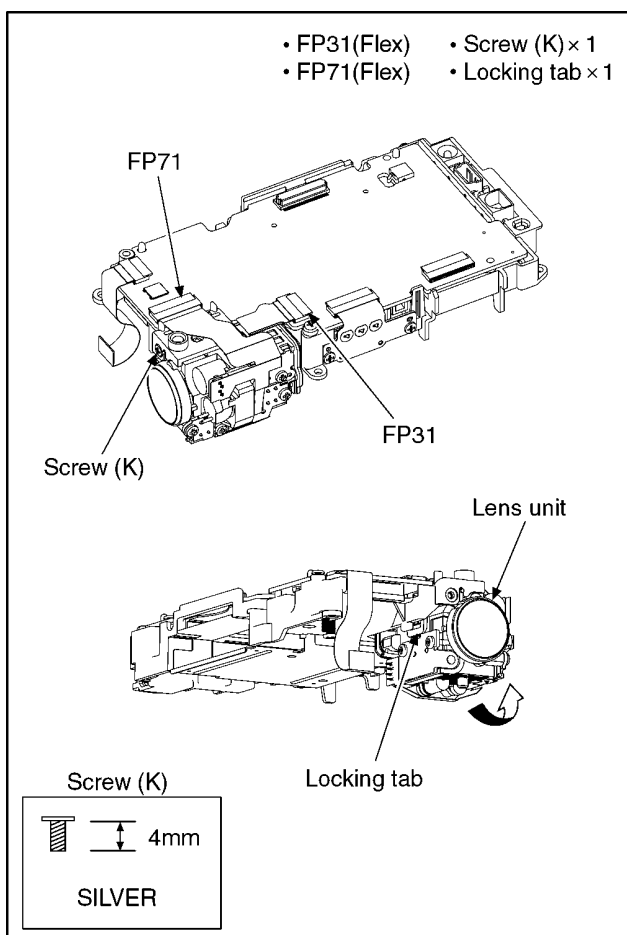


Fig. D15

### 8.3.12. Removal of the Battery case

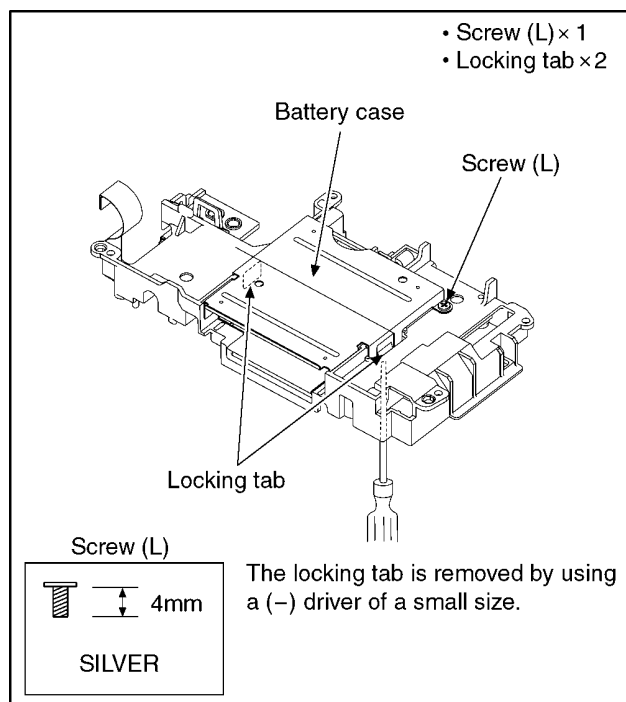


Fig. D16

### 8.3.13. Removal of the Front P.C.B.

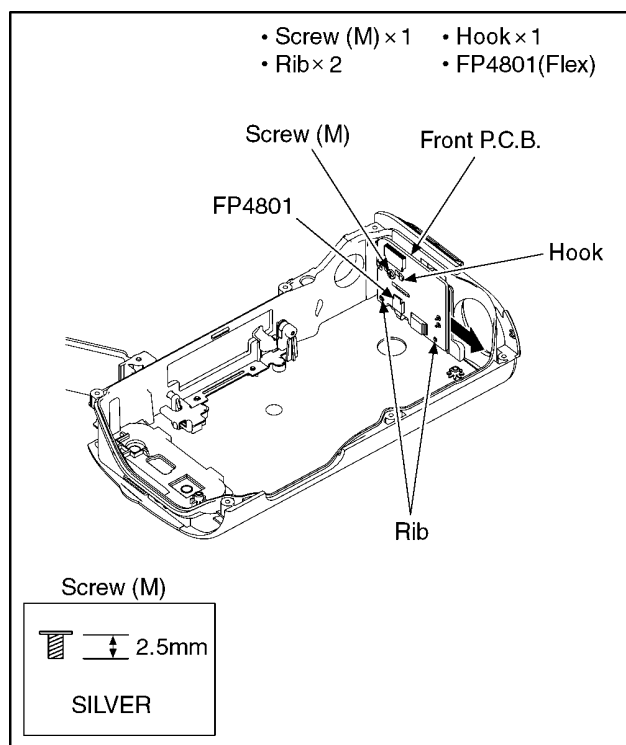


Fig. D17

### 8.3.14. Removal of the Battery door unit

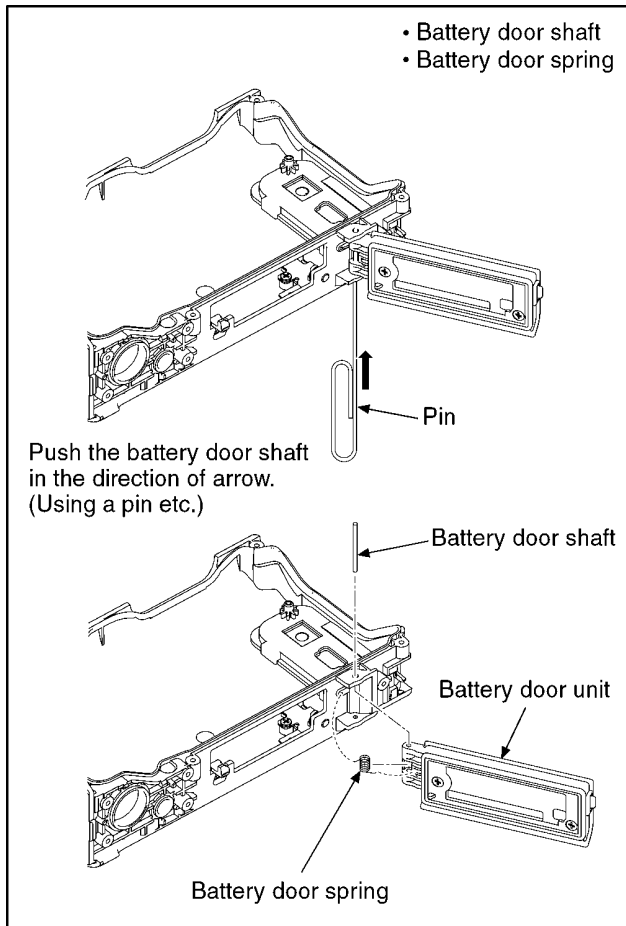


Fig. D18

### 8.3.15. Removal of the LCD unit

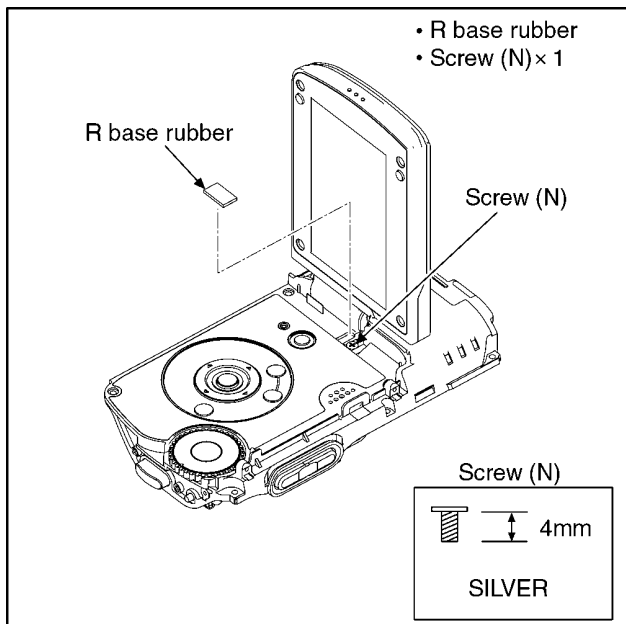


Fig. D19

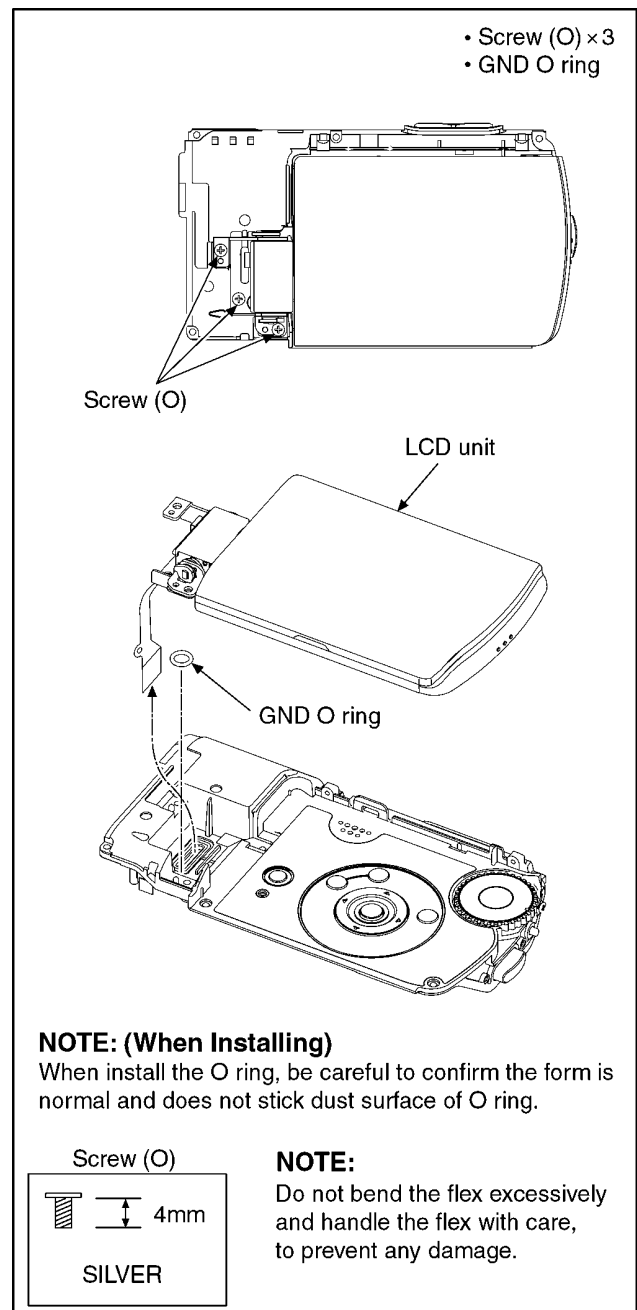


Fig. D20

### 8.3.16. Removal of the LCD hinge unit and Monitor P.C.B.

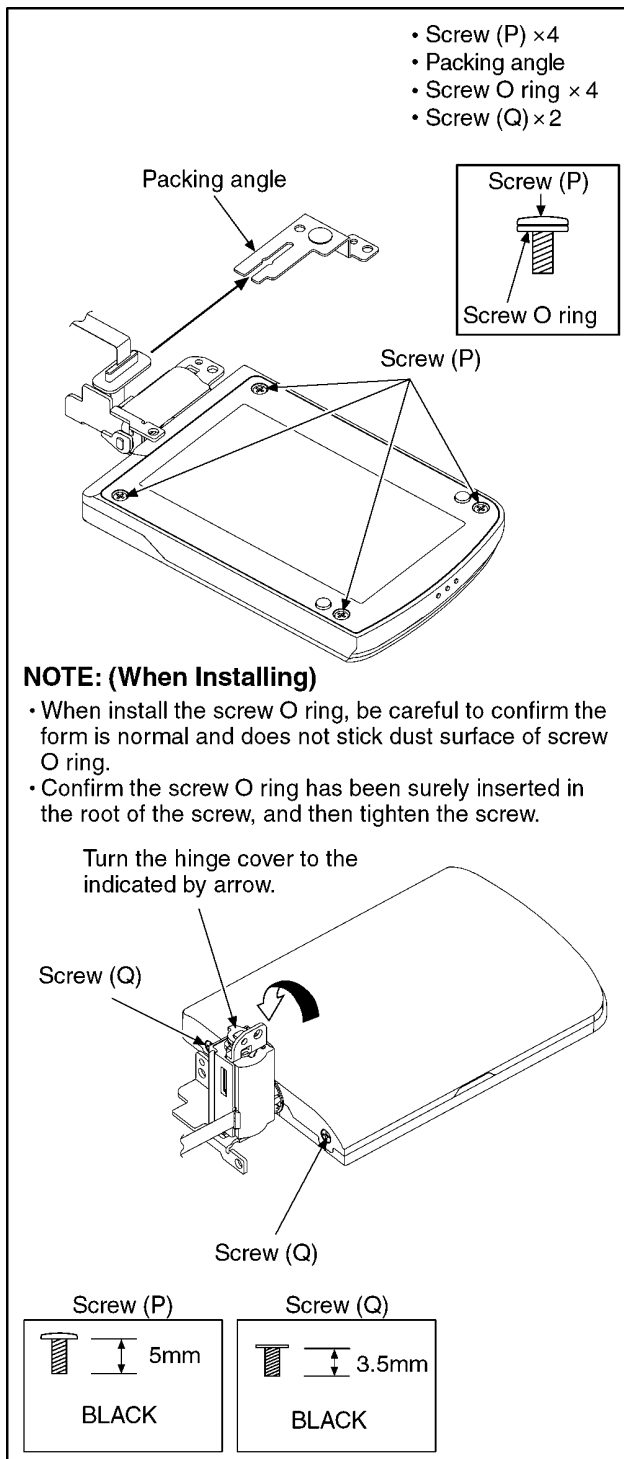


Fig. D21

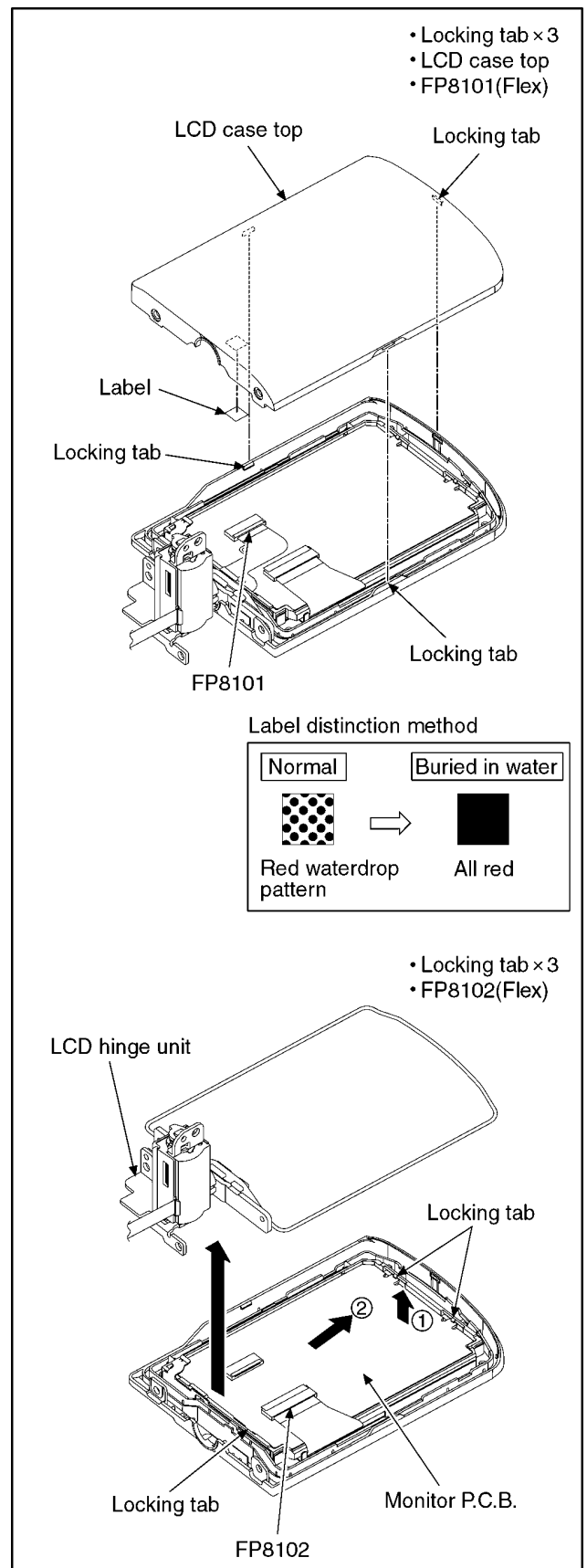


Fig. D22

**NOTE: (When Installing)**

1. When install the case O ring, groove it surely.  
(Be careful to confirm the form is normal and does not stick dust surface of case O ring.)
2. Confirm do not floatage in case O ring.

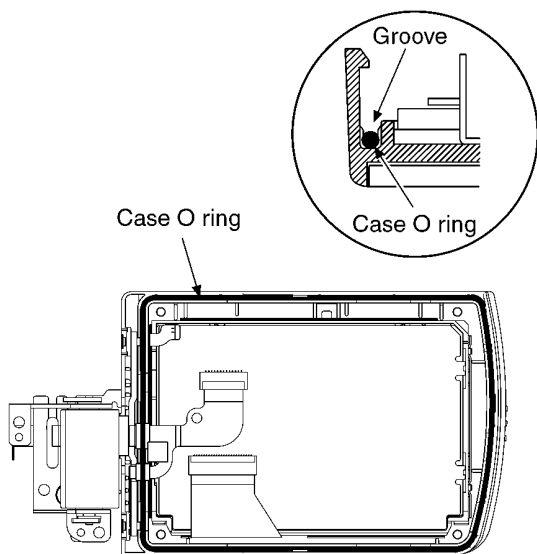
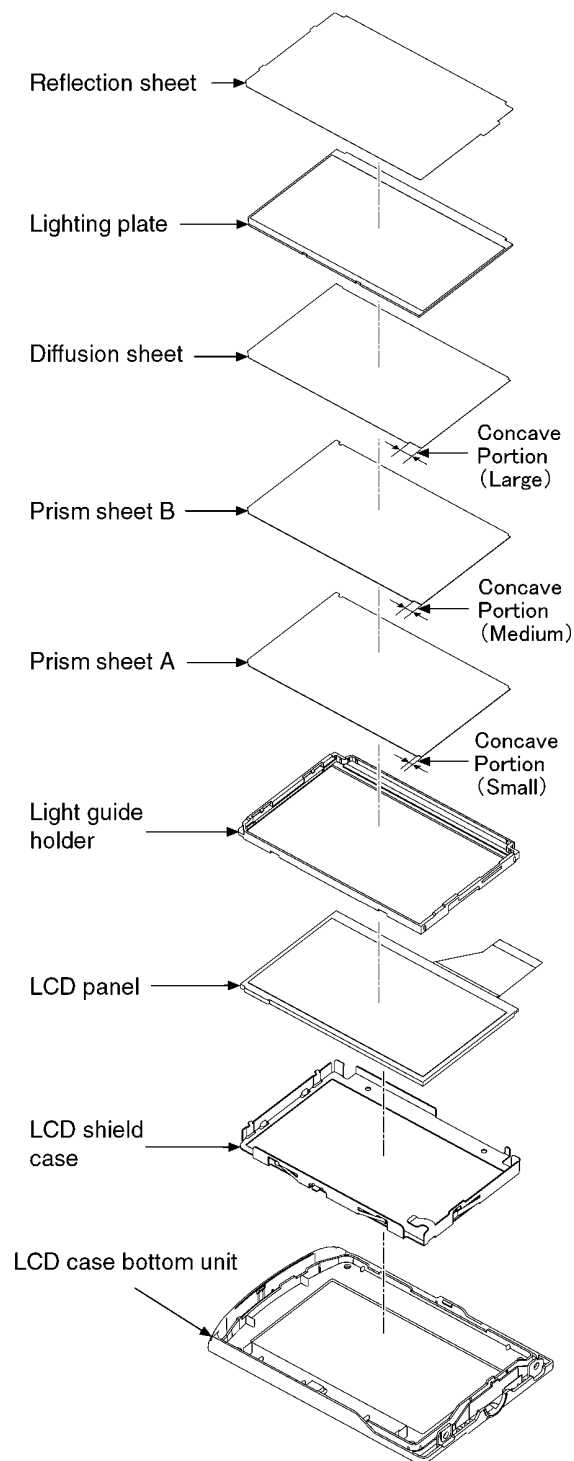


Fig. D23

### 8.3.17. Removal of the LCD panel



**NOTE**

- Be careful to the fingerprint or dust for each part.

Fig. D24

### 8.3.18. Removal of the Speaker unit and Operation FPC unit

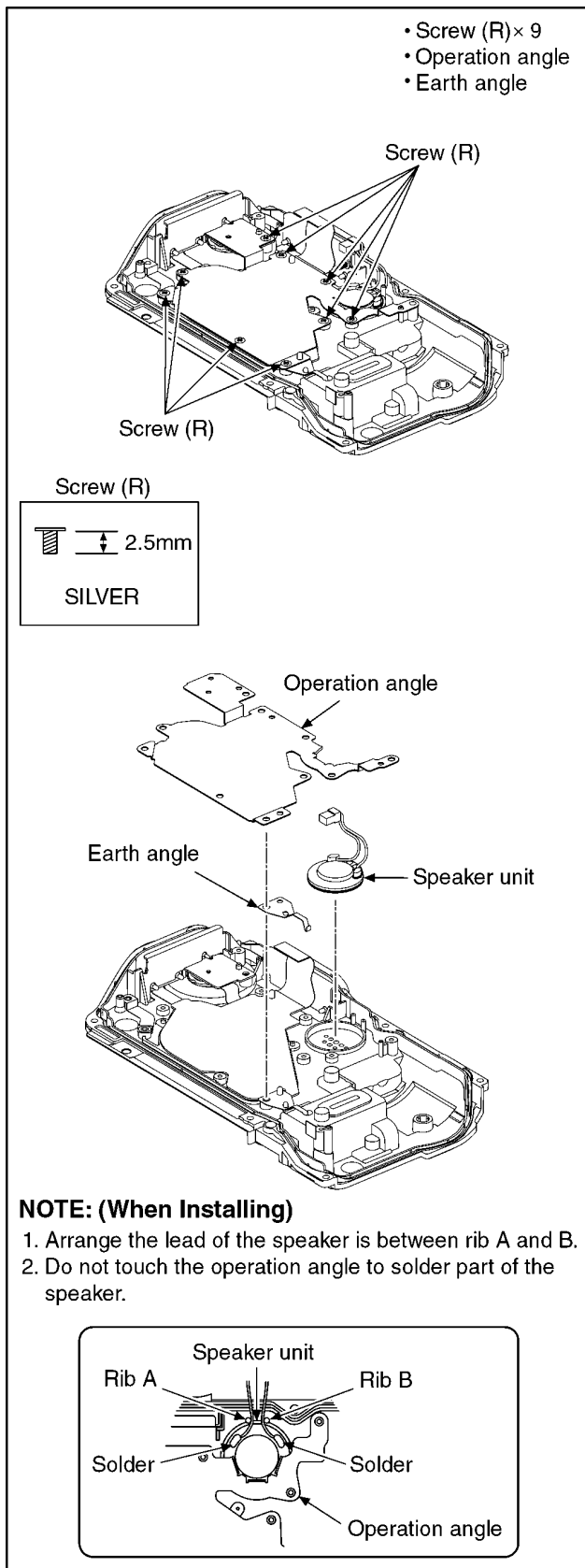


Fig. D25

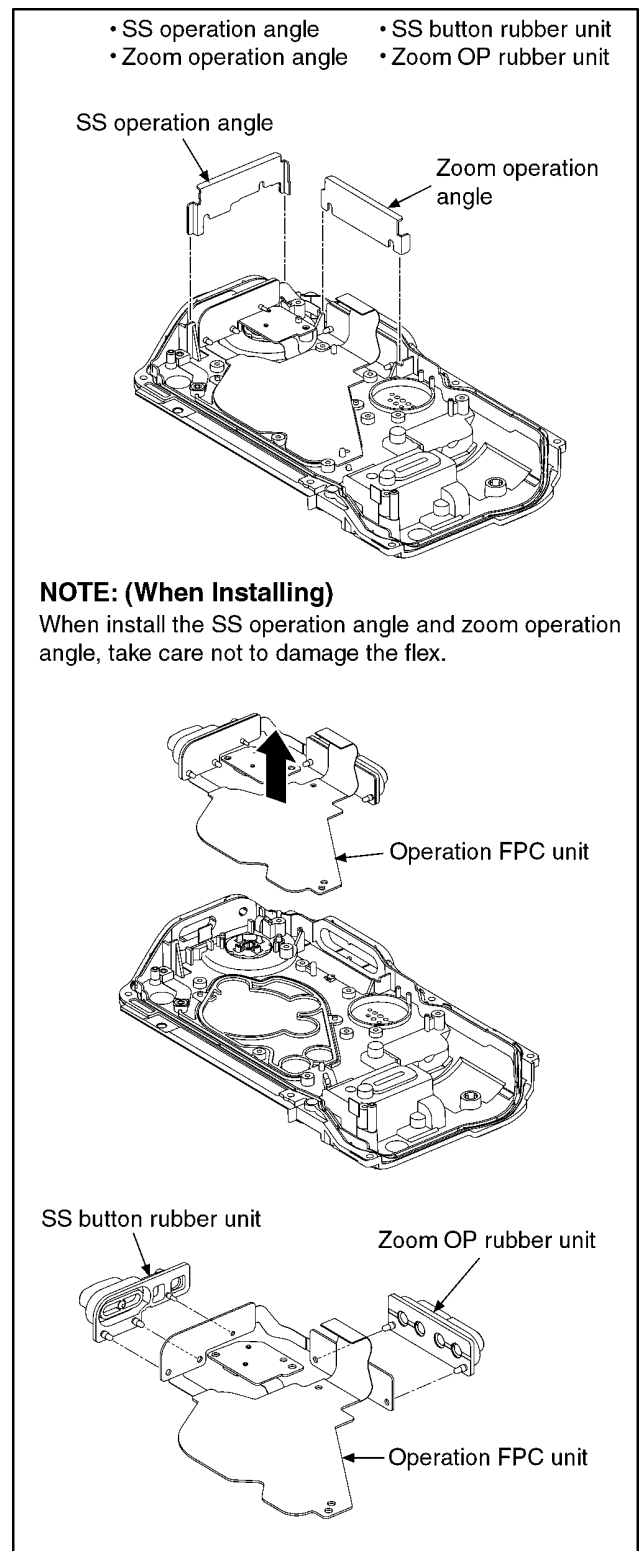


Fig. D26

**NOTE: (When Installing)**

Align the "D"cut part of switch of mode dial and "D"cut part of mode dial knob, and then install them.

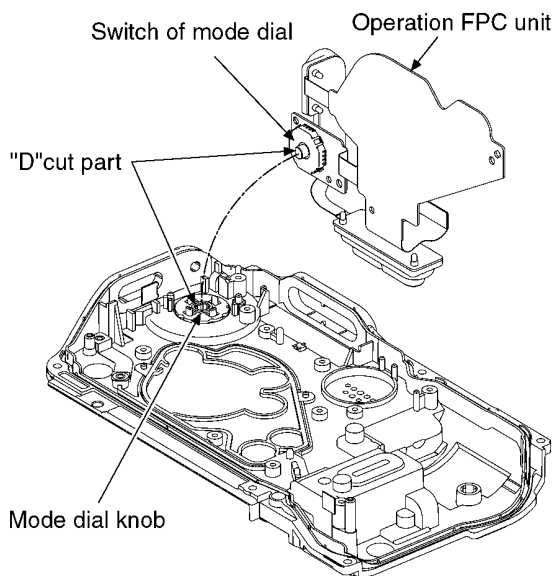
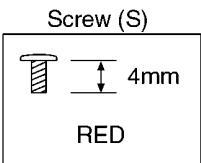
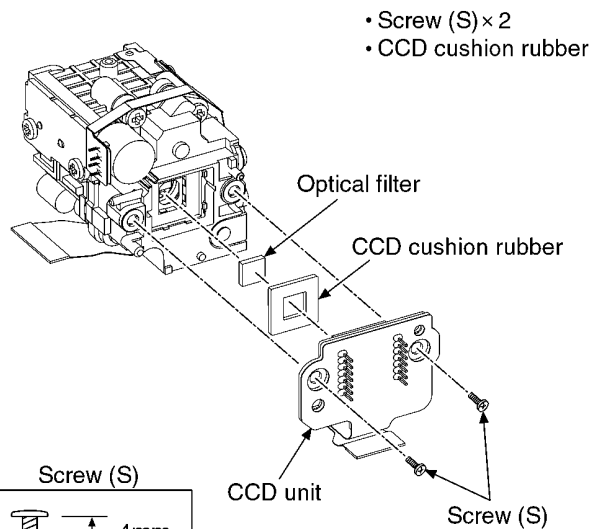


Fig. D27

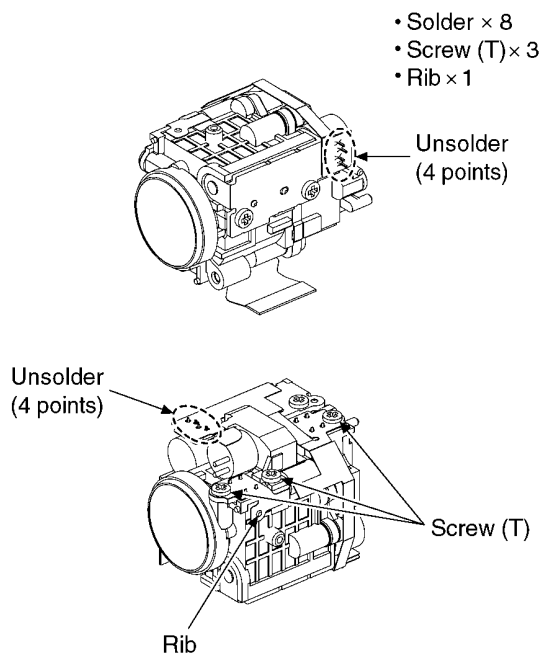
### 8.3.19. Removal of the CCD unit and Optical filter

**NOTE:**

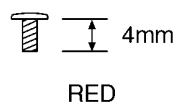
1. CCD unit is a performance important parts, be careful at handling.
2. Be careful not to damage the optical filter.

Fig. D28

### 8.3.20. Removal of the IRIS unit

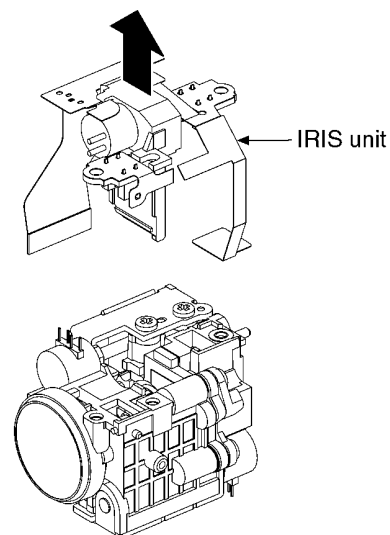


Screw (T)

**NOTE:**

Do not bend the flex excessively and handle the flex with care, to prevent any damage.

Fig. D29

**NOTE: (When Installing)**

Take care not to damage the flex.

Fig. D30

### 8.3.21. Removal of the Zoom motor unit

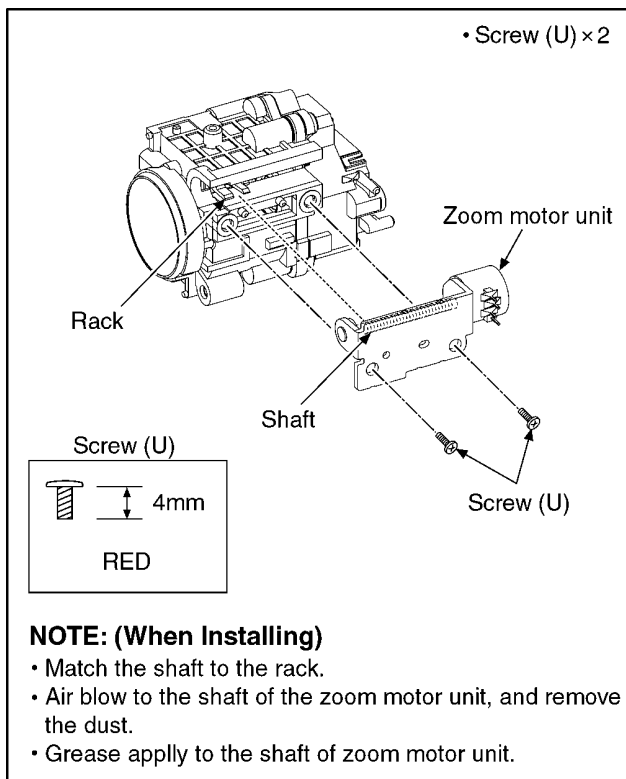


Fig. D31

### 8.3.22. Removal of the Focus motor unit

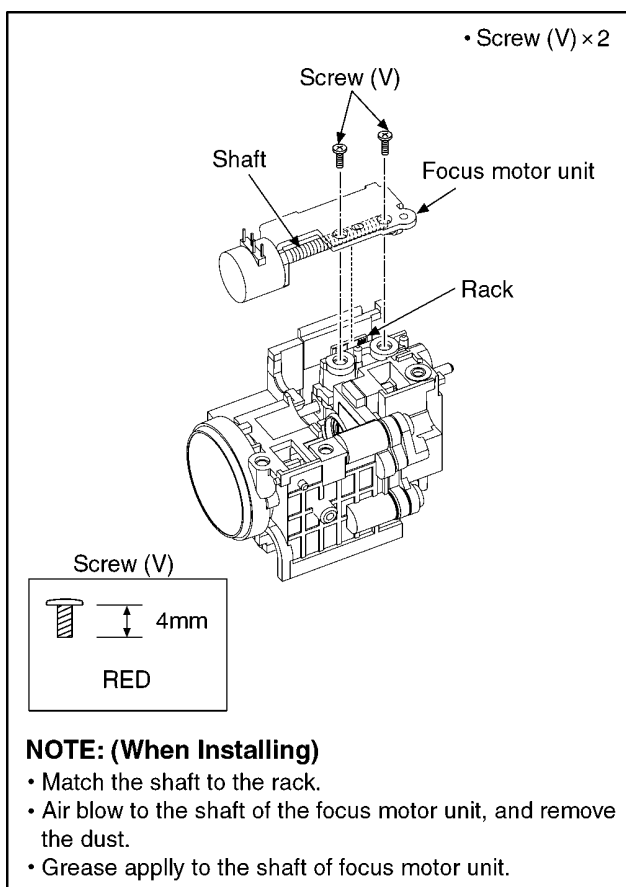


Fig. D32

### 8.3.23. Removal of the Master flange, 4th moving frame unit and 3rd moving frame unit

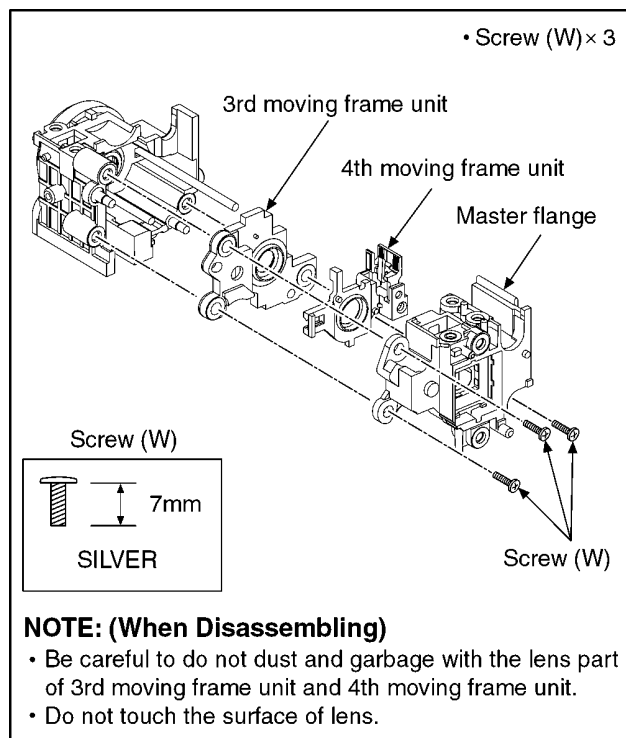


Fig. D33

### 8.3.24. Removal of the Guide pole S, Guide pole and 2nd moving frame unit

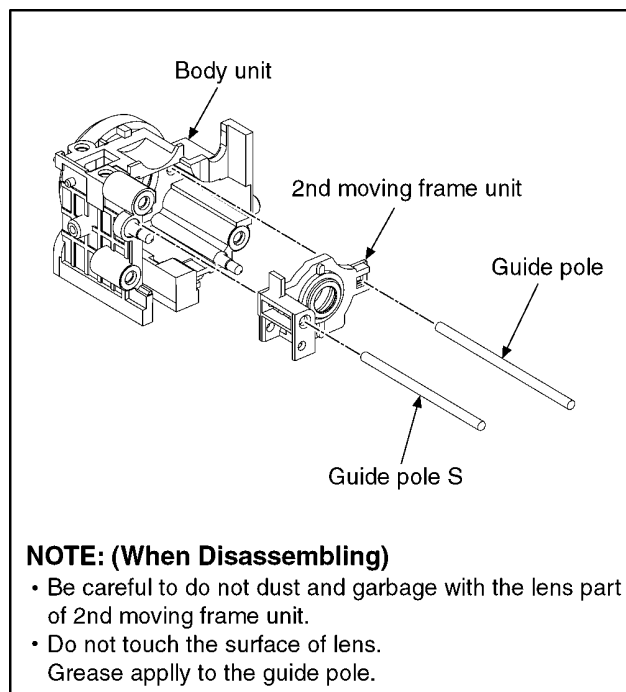


Fig. D34

# 9 Measurements and Adjustments

## 9.1. Electric Adjustment

- Adjustment method is different from a conventional SD video camera.
- An exclusive jig and PC (including software for adjustment “Tatsujin”) are necessary for electric adjustment.
- A USB driver for service is necessary to communication with PC.
- Connection method of the main unit and an exclusive adjustment jig as follows

### 9.1.1. Adjustment Procedure

- Connect the main unit to PC with USB.  
The adjustment instruction is available at "Software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN System".

Figure of connection

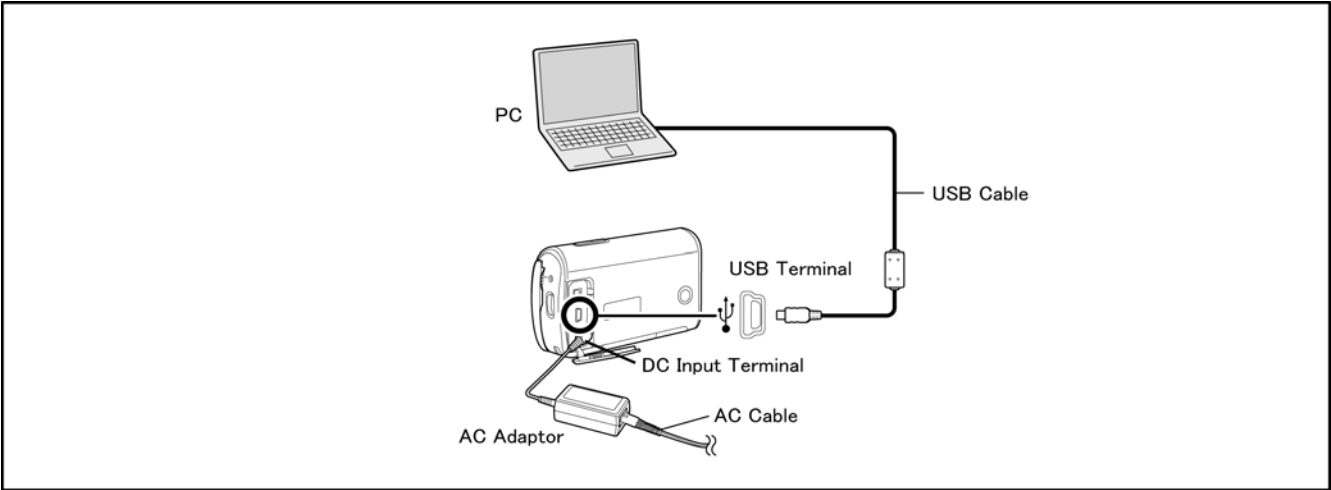
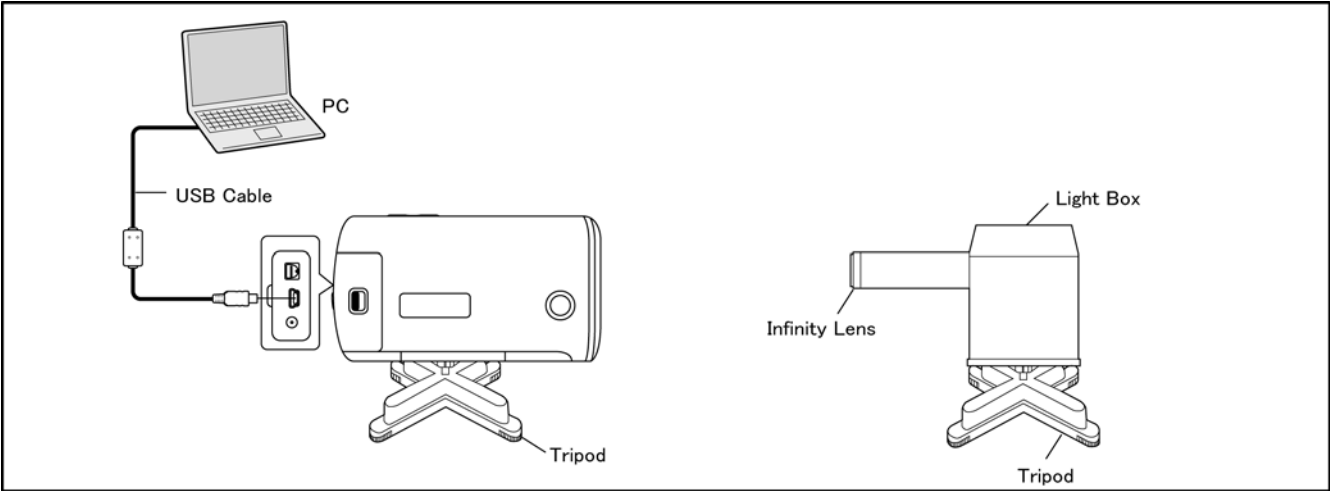


Figure of image when adjustment



### Part Number of jig

- Only a necessary jig mentions it in setup of electric adjustment.

No.	Part Name	Part Number	Remarks
1	PC	-----	
2	AC Adaptor	-----	
3	AC Cable	-----	
4	USB Cable	-----	
5	Adjustment Software (Tatsujin)	-----	

# Adjustment Items

- Adjustment item as follows.

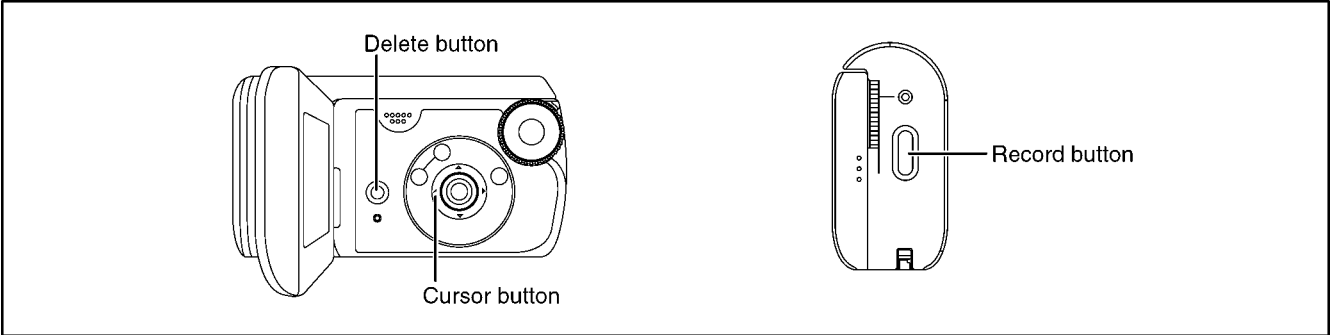
The adjustment instruction is available at "Software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN System".

Adjustment item		Replacement part	Main P.C.B.	IC6004(EEPROM)	Lens P.C.B.	Prism Unit	IRIS	4th lens frame move unit
Camera Part	●Hall amplifire/PWM bias (Automatic)		○	○	○	○	○	
	●Hall amplifire adjustment		○	○	○	○	○	
	●Zoom tracking adjustment (Automatic)		○	○	○	○	○	○
	●Address wound revision		○	○		○		
	●White balance adjustment		○	○		○		
Video Part	●Brightness level adjustment		○	○		○		

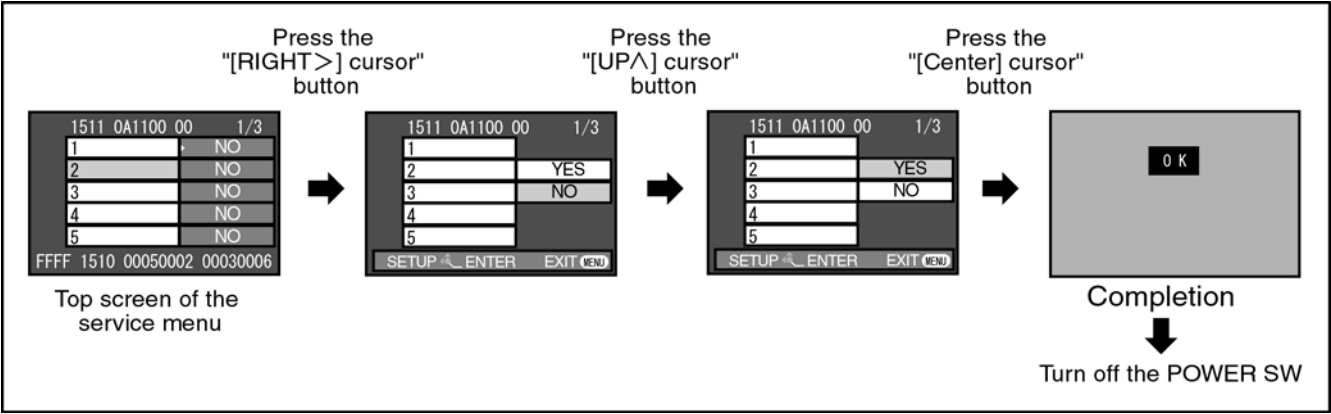
# 10 Factory Setting

## 10.1. HOW TO TURN ON THE FACTORY SETTINGS?

- 1. Set the mode dial "Video playback" mode.
- 2. While keep pressing the "[LEFT<] of cursor" button, "record" button and "delete" button for more than 3 seconds until the top screen of the Service Menu being displayed.



- 3. Under the condition of the Item No."2" is yellow high lighted, press the "[RIGHT>] of cursor" button.
- 4. By pressing the "[UP ^] of cursor" button, then press the "[center] of cursor" button.
- 5. After few seconds "OK" is displayed on LCD monitor. Turn off the power as a completion of the "FACTORY SETTINGS".



## 10.2. WHAT IS THE FACTORY SETTINGS?

The factory settings clean up and/or refresh the following settings.

- 1. The OSD MENU setting data.
- 2. Deletion only for all scene files in a card and format of the MPEG2 file system area.
- 3. Reset the folder number and file number of still pictures.  
(Setting the folder number is 100, and file number is 0.)
- 4. Clear the mechanism lock information.
- 5. Clear the service mode information contents.

The setting position of factory settings:

Name	Setting position
Mode select switch	AUTO
Mode dial	OFF

Service Manual

Diagrams and Replacement Parts List

SD Video Camera

Model No.	
SDR-S10P	SDR-S10EF
SDR-S10PC	SDR-S10EG
SDR-S10PL	SDR-S10EP
SDR-S10E	SDR-S10GC
SDR-S10EB	SDR-S10GN
SDR-S10EE	SDR-S18GK

Vol. 1  
Colour  
(K).....Black Type

Table of contents

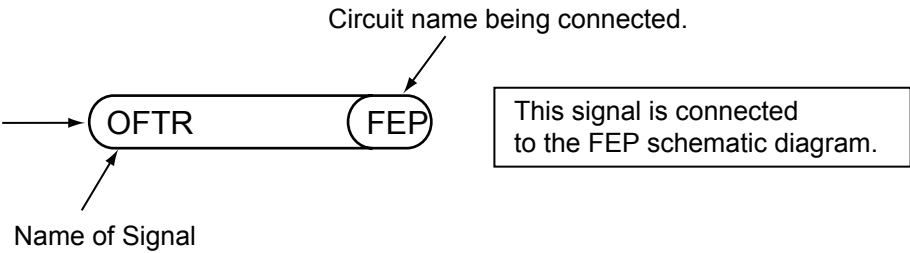
S1. About Indication of The Schematic Diagram.....	S-1	S5.2. Monitor P.C.B. ....	S-9
S1.1. Important Safety Notice.....	S-1	S5.2.1. Monitor P.C.B. (Component Side).....	S-9
S2. Voltage Chart .....	S-2	S5.2.2. Monitor P.C.B. (Foil Side).....	S-10
S2.1. Monitor P.C.B. ....	S-2	S5.3. Front P.C.B.....	S-11
S2.2. Front P.C.B.....	S-2	S5.4. CCD FPC P.C.B. ....	S-12
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S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK  $\triangle$  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

- 1.Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "\$" mark.
- 2.It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.
- 3.The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.
- 4.Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.
- 5.The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.
- 6.Use the parts number indicated on the Replacement Parts List .
- 7.Indication on Schematic diagrams:



## S2. Voltage Chart

Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.  
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

### S2.1. Monitor P.C.B.

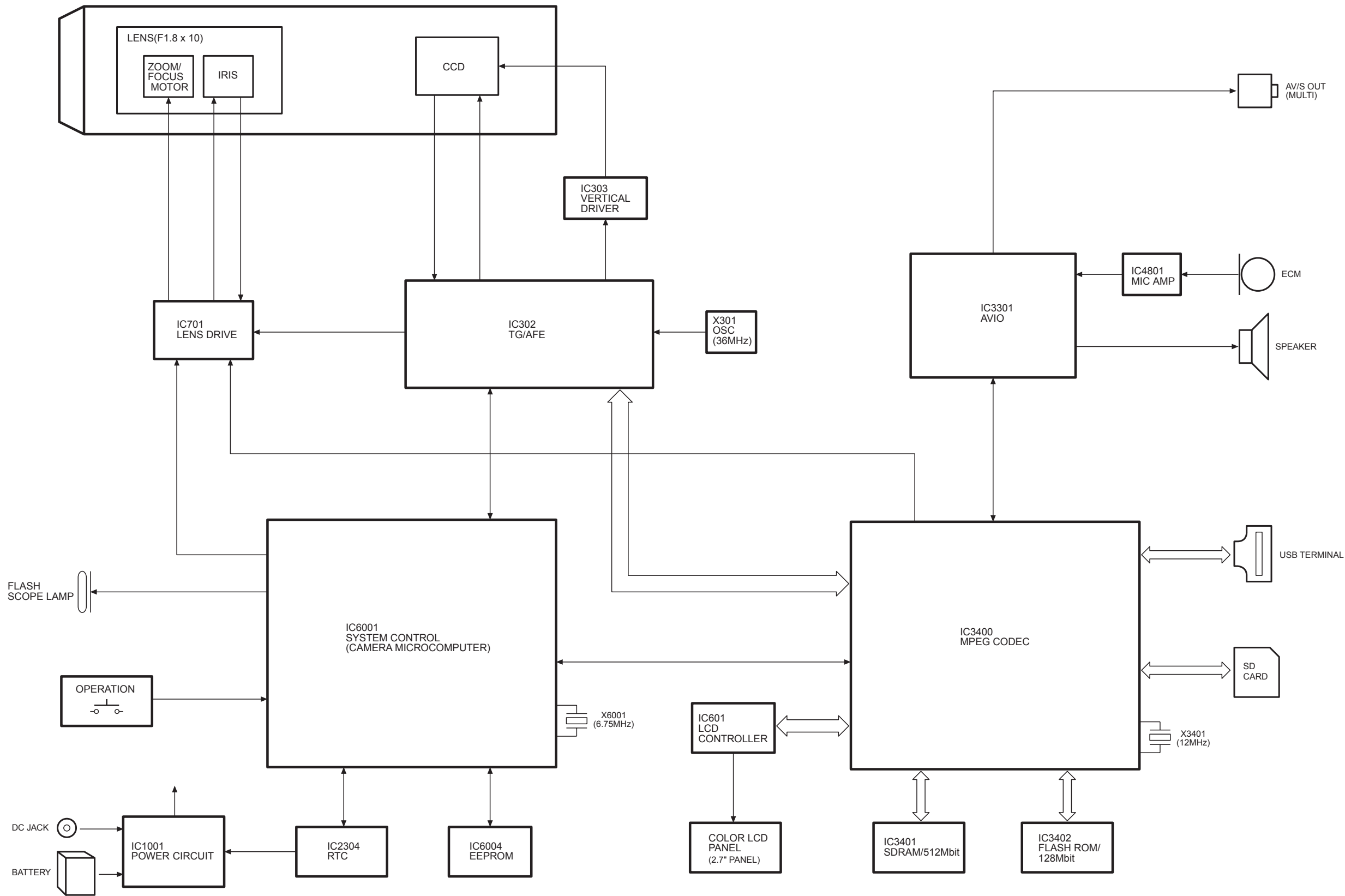
REF No.	PIN No.	POWER ON
Q8101	E	0.7
Q8101	C	1.7
Q8101	B	1.5
Q8102	E	0.7
Q8102	C	1.7
Q8102	B	1.5
Q8104	E	0.7
Q8104	C	1.7
Q8104	B	1.5
Q8105	E	0.7
Q8105	C	1.7
Q8105	B	1.5
Q8107	E	1.7
Q8107	C	0
Q8107	B	1
Q8108	E	0.7
Q8108	C	1.7
Q8108	B	1.5
Q8112	E	1.5
Q8112	C	0
Q8112	B	0.7
Q8113	E	0
Q8113	C	-6.6
Q8113	B	0.1

### S2.2. Front P.C.B.

REF No.	PIN No.	POWER ON
IC4801	1	2.9
IC4801	2	2.9
IC4801	3	2.9
IC4801	4	0
IC4801	5	2.9
IC4801	6	2.9
IC4801	7	2.9
IC4801	8	5.5
Q4801	E	4.9
Q4801	C	5.5
Q4801	B	5.8
Q6501	E	3.2
Q6501	C	3.5
Q6501	B	0.6
Q6502	E	2.5
Q6502	C	0
Q6502	B	3.2

S3. Block Diagram

S3.1. Overall Block Diagram

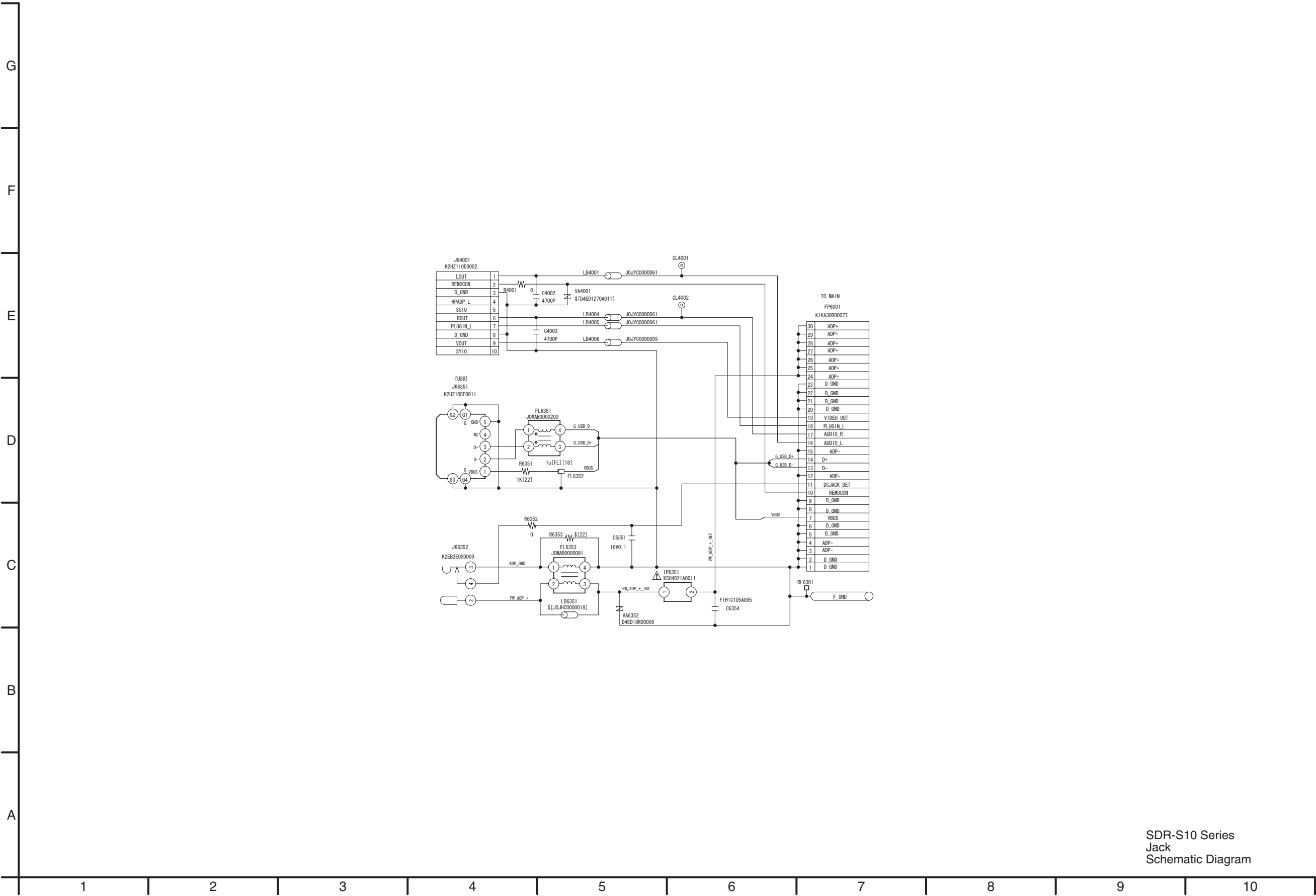


SDR-S10/S18 OVERALL BLOCK DIAGRAM

### S4.1. Interconnection Diagram

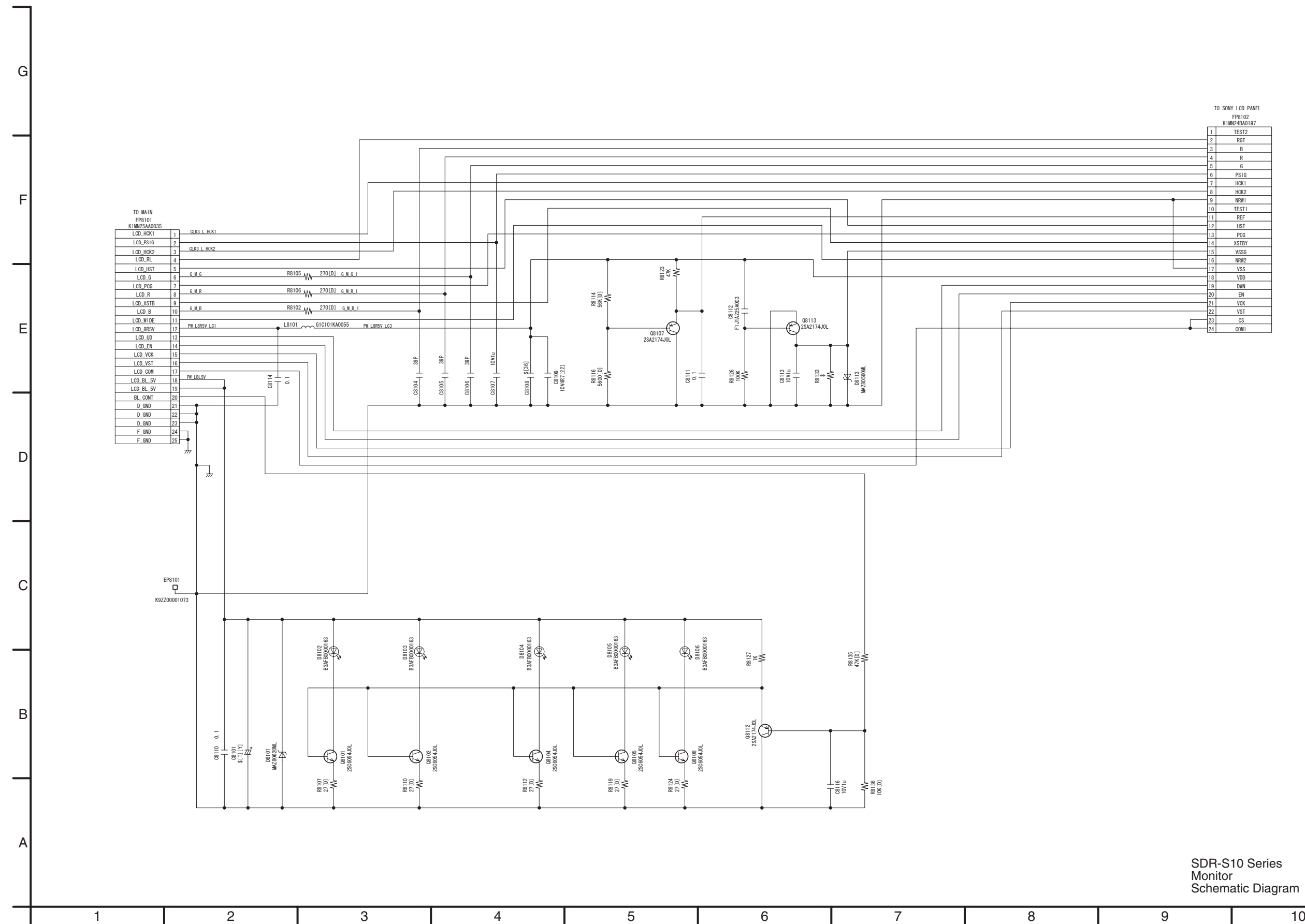


S4.2. Jack Schematic Diagram

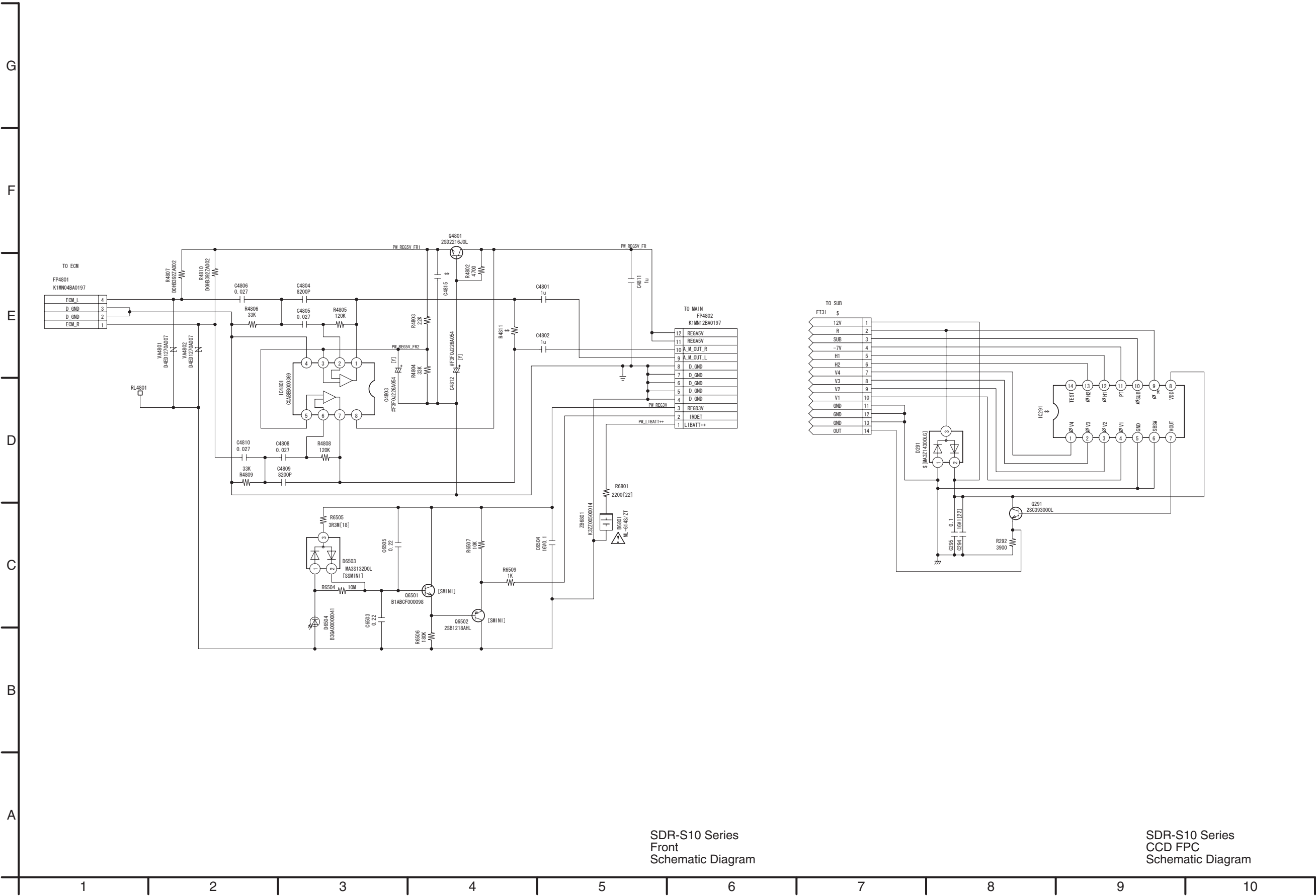


SDR-S10 Series  
Jack  
Schematic Diagram

### S4.3. Monitor Schematic Diagram

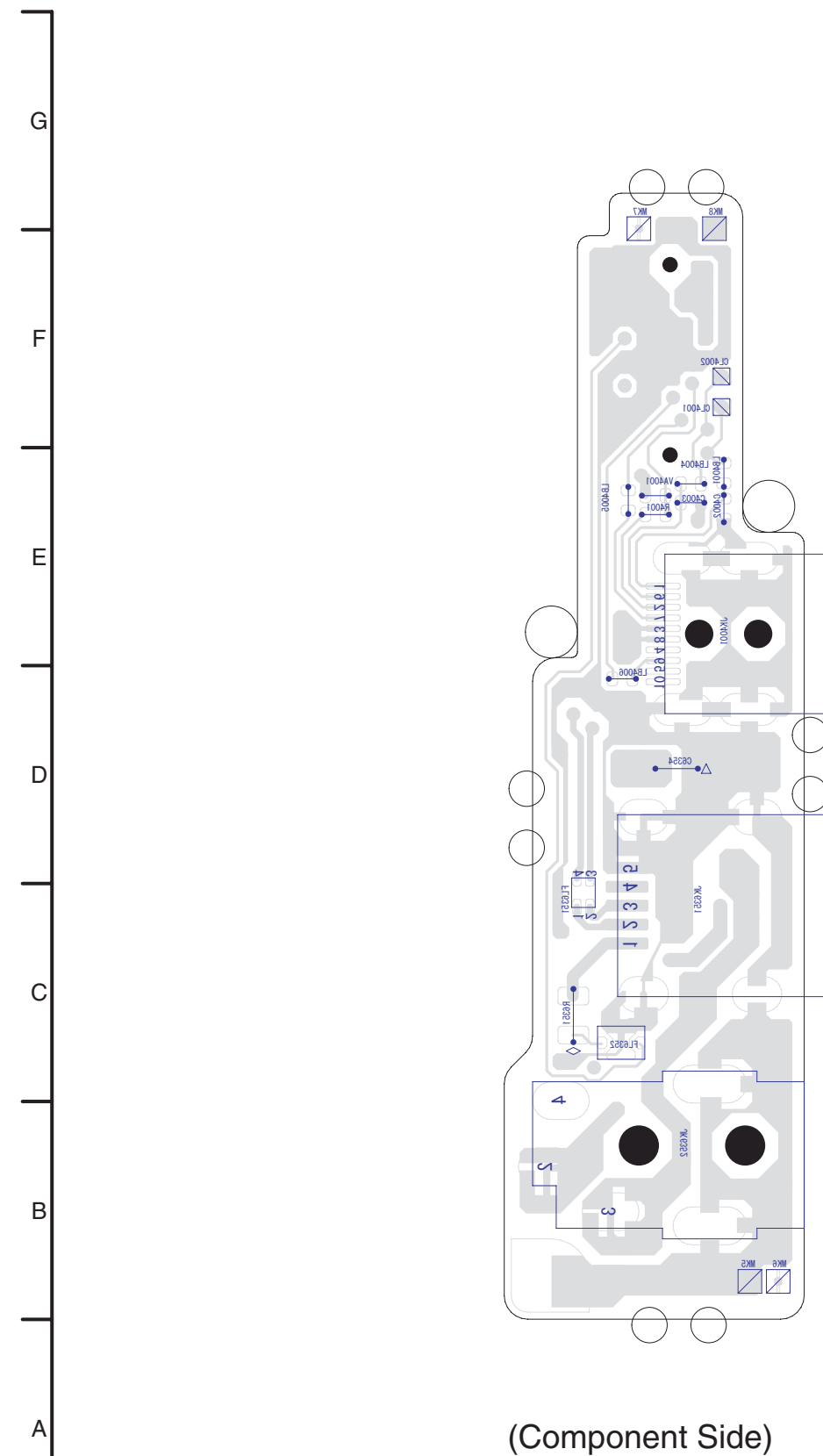


S4.4. Front Schematic Diagram / S4.5. CCD FPC Schematic Diagram

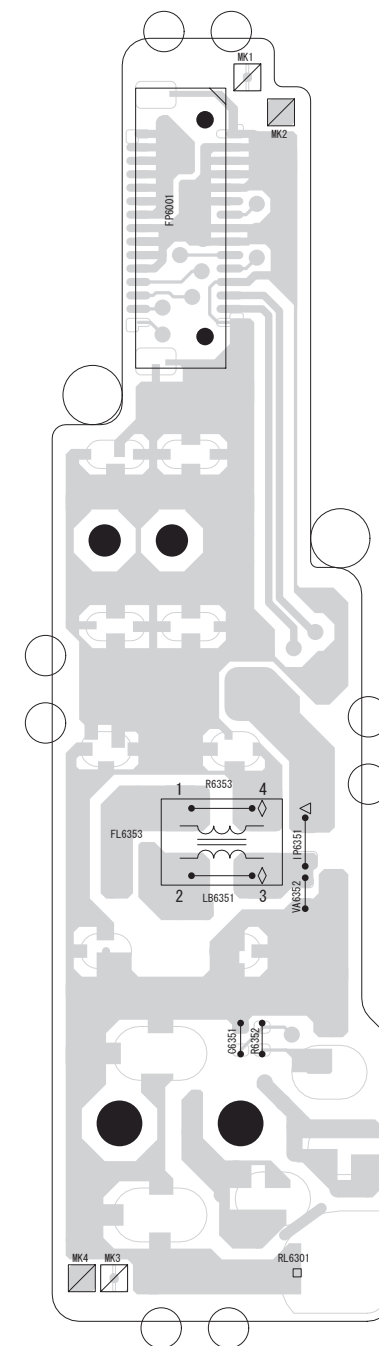


## S5. Print Circuit Board

### S5.1. Jack P.C.B.



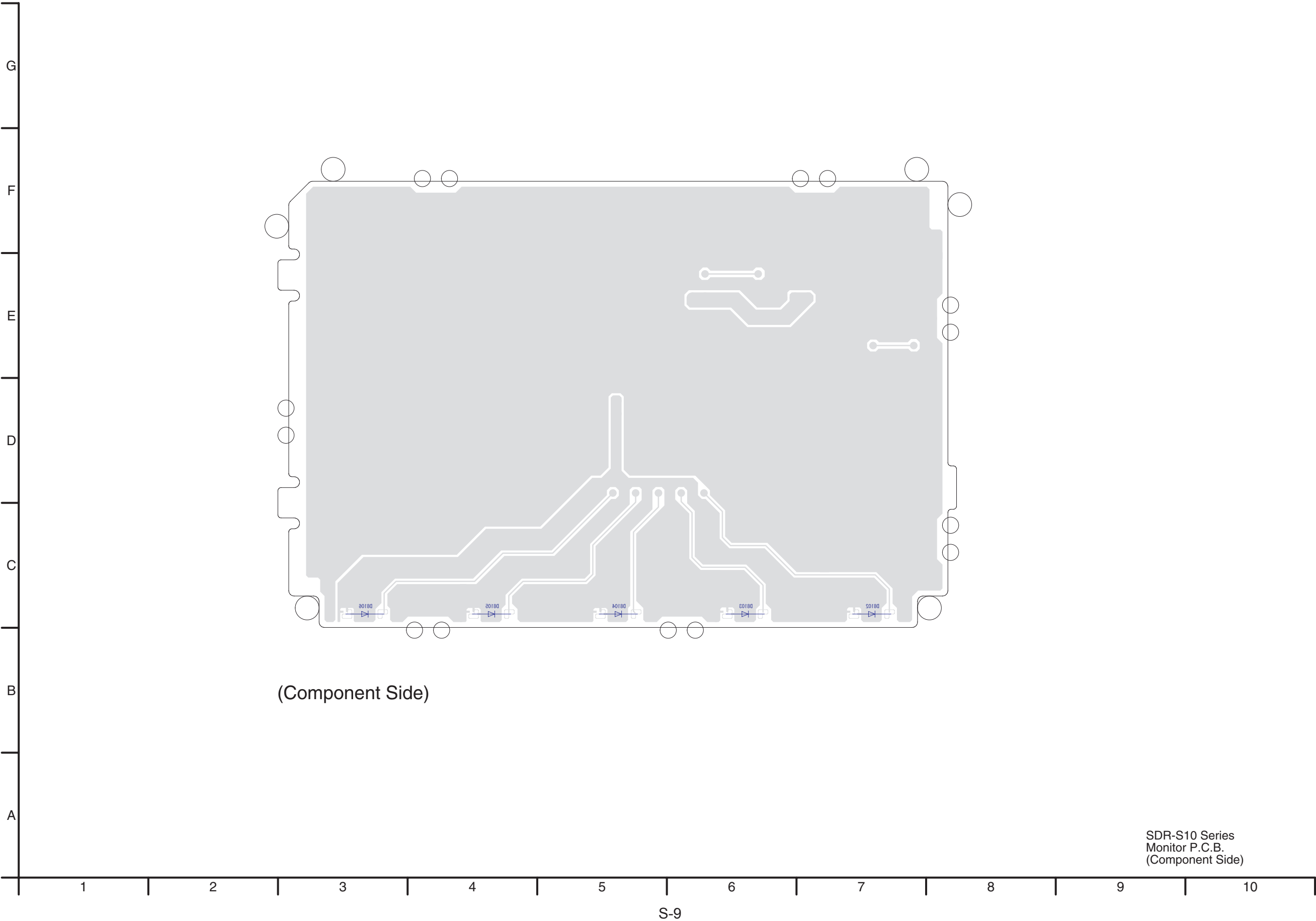
(Component Side)



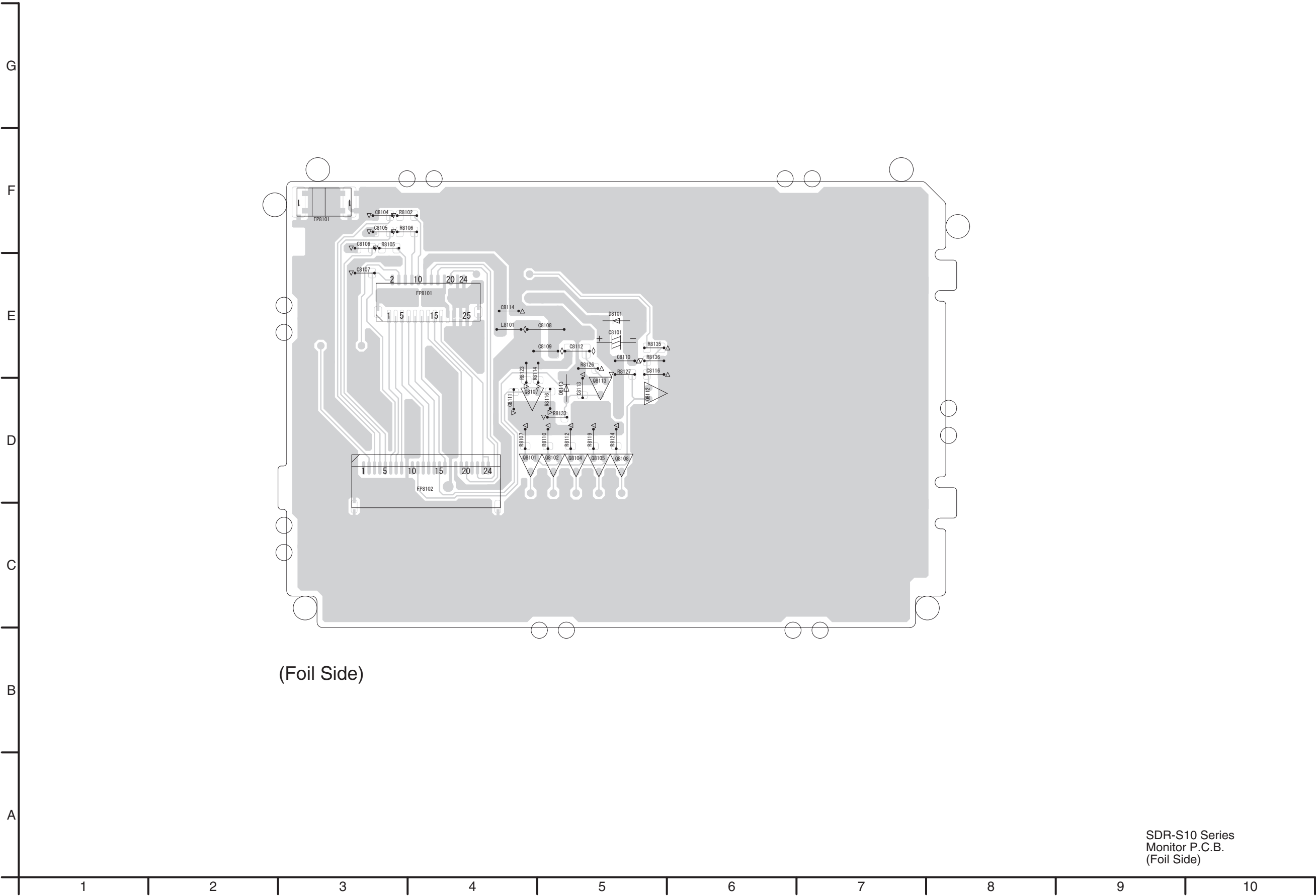
(Foil Side)

S5.2. Monitor P.C.B.

S5.2.1. Monitor P.C.B. (Component Side)



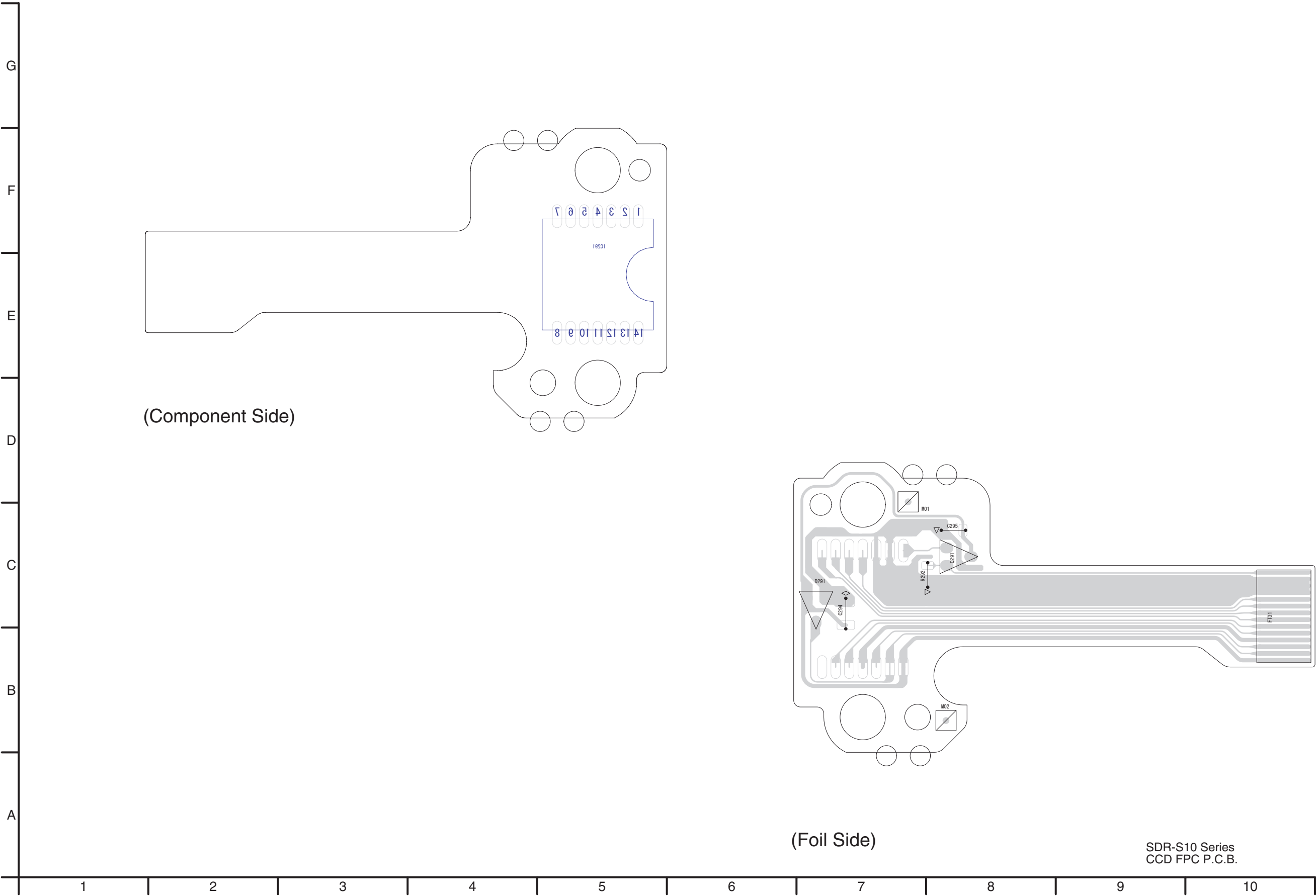
S5.2.2. Monitor P.C.B. (Foil Side)



SDR-S10 Series  
Monitor P.C.B.  
(Foil Side)



S5.4. CCD FPC P.C.B.



## S6. Replacement Parts List

- Note:
1. \* Be sure to make your orders of replacement parts according to this list.
  2. IMPORTANT SAFETY NOTICE  
Components identified with the mark  $\triangle$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.
  3. Unless otherwise specified,  
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
  4. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

**E.S.D. standards for Electrostatically Sensitive Devices, refer to “PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES” section.**

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
##	VEP03H23A	MAIN P.C.B.	1	(RTL)E.S.D. P.PC,PL
##	VEP03H23B	MAIN P.C.B.	1	(RTL)E.S.D. EB,EF,EG,E,EP
##	VEP03H23C	MAIN P.C.B.	1	(RTL)E.S.D. GC,GN
##	VEP03H23D	MAIN P.C.B.	1	(RTL)E.S.D. EE
##	VEP03H23E	MAIN P.C.B.	1	(RTL)E.S.D. S18GK
##	VEP03H24A	JACK P.C.B.	1	(RTL)
##	VEP29191A	MONITOR P.C.B.	1	(RTL) E.S.D.
##	VEP04925A	FRONT P.C.B.	1	(RTL) E.S.D.
##	VEP03H24A	JACK P.C.B.	1	(RTL)
C4002	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4003	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C6351	F1G1C104A080	C.CAPACITOR CH 16V 0.1U	1	
C6354	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
FL6351	J0MAB0000200	FILTER	1	
FL6352	F1H0J1050028	FILTER	1	
FL6353	VLF1378	FILTER	1	
FP6001	K1KA30B00077	CONNECTOR 30P	1	
△ IP6351	K5H4021A0011	IC PROTECTOR	1	
JK4001	K2HZ110E0002	JACK	1	
JK6351	K2HZ105E0011	JACK	1	
JK6352	K2EB2E000009	JACK	1	
LB4001	J0JYC0000061	FILTER	1	
LB4004	J0JYC0000061	FILTER	1	
LB4005	J0JYC0000061	FILTER	1	
LB4006	J0JYC0000059	FILTER	1	
R4001	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6351	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	1	
R6352	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
VA6352	D4ED18R00008	VARISTORS	1	
##	VEP29191A	MONITOR P.C.B.	1	(RTL) E.S.D.
C8104	ECJ1VC1H390J	C.CAPACITOR CH 50V 39P	1	
C8105	ECJ1VC1H390J	C.CAPACITOR CH 50V 39P	1	
C8106	ECJ1VC1H390J	C.CAPACITOR CH 50V 39P	1	
C8107	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
C8109	F1J1A475A023	C.CAPACITOR CH 10V 4.7U	1	
C8110	ECJ1XB1C104K	C.CAPACITOR CH 16V 0.1U	1	
C8111	ECJ1XB1C104K	C.CAPACITOR CH 16V 0.1U	1	
C8112	F1J1A2250007	C.CAPACITOR CH 10V 2.2U	1	
C8113	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
C8114	ECJ1XB1C104K	C.CAPACITOR CH 16V 0.1U	1	
C8116	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
D8101	MAZ80620ML	DIODE	1	E.S.D.
D8102	B3AFB0000163	DIODE	1	E.S.D.
D8103	B3AFB0000163	DIODE	1	E.S.D.
D8104	B3AFB0000163	DIODE	1	E.S.D.
D8105	B3AFB0000163	DIODE	1	E.S.D.
D8106	B3AFB0000163	DIODE	1	E.S.D.
D8113	MAZ80560ML	DIODE	1	E.S.D.
EP8101	K9Z200001073	EARTH TERMINAL	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FP8101	K1MN25AA0035	CONNECTOR 25P	1	
FP8102	K1MN24BA0197	CONNECTOR 24P	1	
L8101	G1C101KA0055	CHIP INDUCTOR 100UH	1	
Q8101	2SC6054J0L	TRANSISTOR	1	E.S.D.
Q8102	2SC6054J0L	TRANSISTOR	1	E.S.D.
Q8104	2SC6054J0L	TRANSISTOR	1	E.S.D.
Q8105	2SC6054J0L	TRANSISTOR	1	E.S.D.
Q8107	2SA2174J0L	TRANSISTOR	1	E.S.D.
Q8108	2SC6054J0L	TRANSISTOR	1	E.S.D.
Q8112	2SA2174J0L	TRANSISTOR	1	E.S.D.
Q8113	2SA2174J0L	TRANSISTOR	1	E.S.D.
R8102	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	
R8105	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	
R8106	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	
R8107	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R8110	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R8112	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R8114	ERJ3RBD563	M.RESISTOR CH 1/16W 56K	1	ERJ3RBD563V
R8116	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R8119	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R8123	D0GB473JA057	M.RESISTOR CH 1/10W 47K	1	
R8124	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R8126	ERJ3GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R8127	D0GB102JA057	M.RESISTOR CH 1/10W 1K	1	
R8135	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R8136	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
##	VEP04925A	FRONT P.C.B.	1	(RTL) E.S.D.
△ B6801	ML-614S/ZT	BATTERY	1	[MBI]
C4801	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
C4802	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
C4803	F3F0J226A054	E.CAPACITOR CH 6.3V 22U	1	
C4804	ECJ0EB1C822K	C.CAPACITOR CH 16V 8200P	1	
C4805	ECUENC273KBQ	C.CAPACITOR CH 16V 0.027U	1	F1G1C273A004
C4806	ECUENC273KBQ	C.CAPACITOR CH 16V 0.027U	1	F1G1C273A004
C4808	ECUENC273KBQ	C.CAPACITOR CH 16V 0.027U	1	F1G1C273A004
C4809	ECJ0EB1C822K	C.CAPACITOR CH 16V 8200P	1	
C4810	ECUENC273KBQ	C.CAPACITOR CH 16V 0.027U	1	F1G1C273A004
C4811	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
C4812	F3F0J226A054	E.CAPACITOR CH 6.3V 22U	1	
C6503	F1G0J224A004	C.CAPACITOR CH 6.3V 0.22U	1	
C6504	F1G1C104A080	C.CAPACITOR CH 16V 0.1U	1	
C6505	F1G0J224A004	C.CAPACITOR CH 6.3V 0.22U	1	
D6503	MA3S132D0L	DIODE	1	E.S.D.
D6504	B3GA00000041	DIODE	1	E.S.D.
FP4801	K1MN04BA0197	CONNECTOR 4P	1	
FP4802	K1MN12BA0197	CONNECTOR 12P	1	
IC4801	C0ABB0000369	IC	1	E.S.D.
Q4801	2SD2216J0L	TRANSISTOR	1	E.S.D.
Q6501	B1ABCF000098	TRANSISTOR	1	E.S.D.
Q6502	2SB1218ARL	TRANSISTOR	1	2SB1218AR E.S.D.
R4802	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4803	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R4804	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R4805	ERJ2GEJ124	M.RESISTOR CH 1/16W 120K	1	
R4806	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R4807	VRE0071E392	M.RESISTOR CH 1/10W 3.9K	1	D0HB392ZA002
R4808	ERJ2GEJ124	M.RESISTOR CH 1/16W 120K	1	
R4809	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R4810	VRE0071E392	M.RESISTOR CH 1/10W 3.9K	1	D0HB392ZA002
R6504	ERJ2GEJ106X	M.RESISTOR CH 1/16W 10M	1	
R6505	ERJ3GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R6506	ERJ2GEJ184	M.RESISTOR CH 1/16W 180K	1	

[illegible]

## SDR-S10P-K, PC-K, EB-K, EE-K, EF-K, EG-K, E-K, EP-K, GC-K, GN-K, PL-K, S18GK-S vol.1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VGQ9367	FRONT PANEL TAPE	1	
2	VYK2D17	MAIN FRAME UNIT	1	
3	VEP03H23A	MAIN P.C.B.	1	(RTL)E.S.D. P,PC,PL
3	VEP03H23B	MAIN P.C.B.	1	(RTL)E.S.D. EB,EF,EG,E,EP
3	VEP03H23D	MAIN P.C.B.	1	(RTL)E.S.D. EE
3	VEP03H23C	MAIN P.C.B.	1	(RTL)E.S.D. GC,GN
3	VEP03H23E	MAIN P.C.B.	1	(RTL)E.S.D. S18GK
4	VEP03H24A	JACK P.C.B.	1	(RTL)
5	VWJ1973	FRONT FPC	1	
6	VSC5960	RADIATION PLATE	1	
7	VXU1663	SUBREC BUTTON RUBBER UNIT	1	
8	VMD5661	MAIN FRAME	1	
9	VMB4094	BATTERY OUT SPRING	1	
10	VEK0L08	BATTERY CATCHER UNIT	1	
11	VKM7113	BATTERY CASE	1	
12	VGQ9405	LABEL	1	
13	VGQ9460	GASKET	1	
14	VGQ9482	FRAME SHEET	1	
15	VMG1775	LENS DAMPER	1	
16	VDL1949	LENS PROTECTION GLASS	1	
17	VGQ9358	LENS PIECE	1	
18	VKM7104	R COVER	1	
19	VKM7106	REAR COVER	1	
20	VMS7829	STRAP SHAFT	1	
21	VGQ9357	TRIPOD PIECE	1	
22	VMG1774	TRIPOD O RING	1	
23	VGL1238	ACCESS PANEL LIGHT	1	
24	VMG1788	PANEL LIGHT O RING	1	
25	VYK2D13	FRONT CASE UNIT	1	
26	VMG1791	GND O RING	1	
28	VGQ9398	R BASE RUBBER	1	
29	VYK2E36	R BASE UNIT	1	P,PL,E,EB,EE,EF,EG,EP,GC,GN
29	VYK2E37	R BASE UNIT	1	PC
29	VYK2E38	R BASE UNIT	1	S18GK
30	VMG1776	CASE O RING	1	
31	VGQ9363	SPEAKER WATERPROOF SHEET	1	
32	L0AA01A00029	SPEAKER UNIT	1	
33	VXU1659	OPERATION RUBBER UNIT	1	
34	VXU1660	ZOOM OP RUBBER UNIT	1	
35	VXU1661	SS BUTTON RUBBER UNIT	1	
36	VEP03H25A	OPERATION FPC UNIT	1	
37	VMP8826	EARTH ANGLE	1	
38	VMP8798	OPERATION ANGLE	1	
39	VMP8799	ZOOM OPERATION ANGLE	1	
40	VMP8800	SS OPERATION ANGLE	1	
41	VGQ9422	AL SHEET B	1	
65	VKM7112	SIDE CASE L	1	
66	VYK2D15	FRONT PANEL	1	
67	VMP8801	FRONT ANGLE	1	
68	VGQ9386	ECM FPC SHEET	1	
69	VYK2D14	JACK DOOR U	1	
70	VYK2D16	BATTERY DOOR UNIT	1	
71	VMS7810	BATTERY DOOR SHAFT	1	
72	VMB4104	BATTERY DOOR SPRING	1	
73	VXJ0242	BATTERY LOCK ANGLE UNIT	1	
74	VMB4105	BATTERY LOCK SPRING	1	
75	VGU0B18	BATTERY LOCK KNOB	1	
76	VGU0B19	BATT DETECTION BUTTON	1	
77	VMB3852	SD LOCK SPRING	1	
78	VEP04925A	FRONT P.C.B.	1	(RTL) E.S.D.
79	VEK0L11	ECM UNIT	1	
B1	XQN16•BJ4FN	SCREW	1	
B2	XQN16•BJ4FN	SCREW	1	
B3	XQN16•BJ4FN	SCREW	1	
B4	XQN16•BJ5FN	SCREW	1	
B5	XQN16•BJ5FN	SCREW	1	
B6	XQN16•BJ5FN	SCREW	1	
B7	XQN16•BJ5FN	SCREW	1	
B8	XQN16•BJ5FN	SCREW	1	
B9	XQN16•BJ5FN	SCREW	1	
B10	XQN16•BJ5FN	SCREW	1	
B11	XQN16•BJ5FN	SCREW	1	
B12	XQN16•BJ4FN	SCREW	1	

[illegible]

## SDR-S10P-K,PC-K,EB-K,EE-K,EF-K,EG-K,E-K,EP-K,GC-K,GN-K,PL-K, S18GK-S vol.1

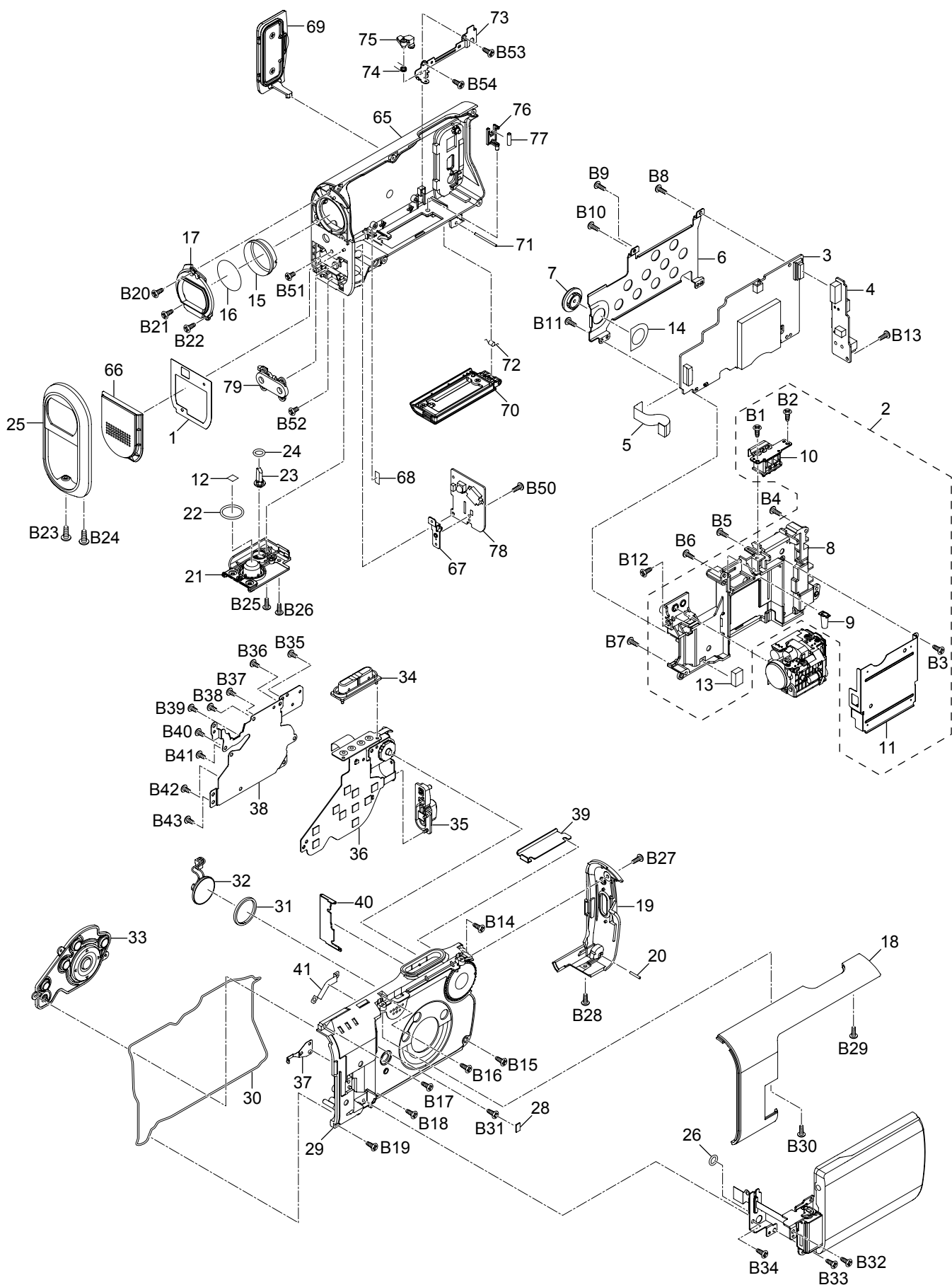
[illegible]

## SDR-S10P-K,PC-K,EB-K,EE-K,EF-K,EG-K,E-K,EP-K,GC-K,GN-K,PL-K, S18GK-S vol.1

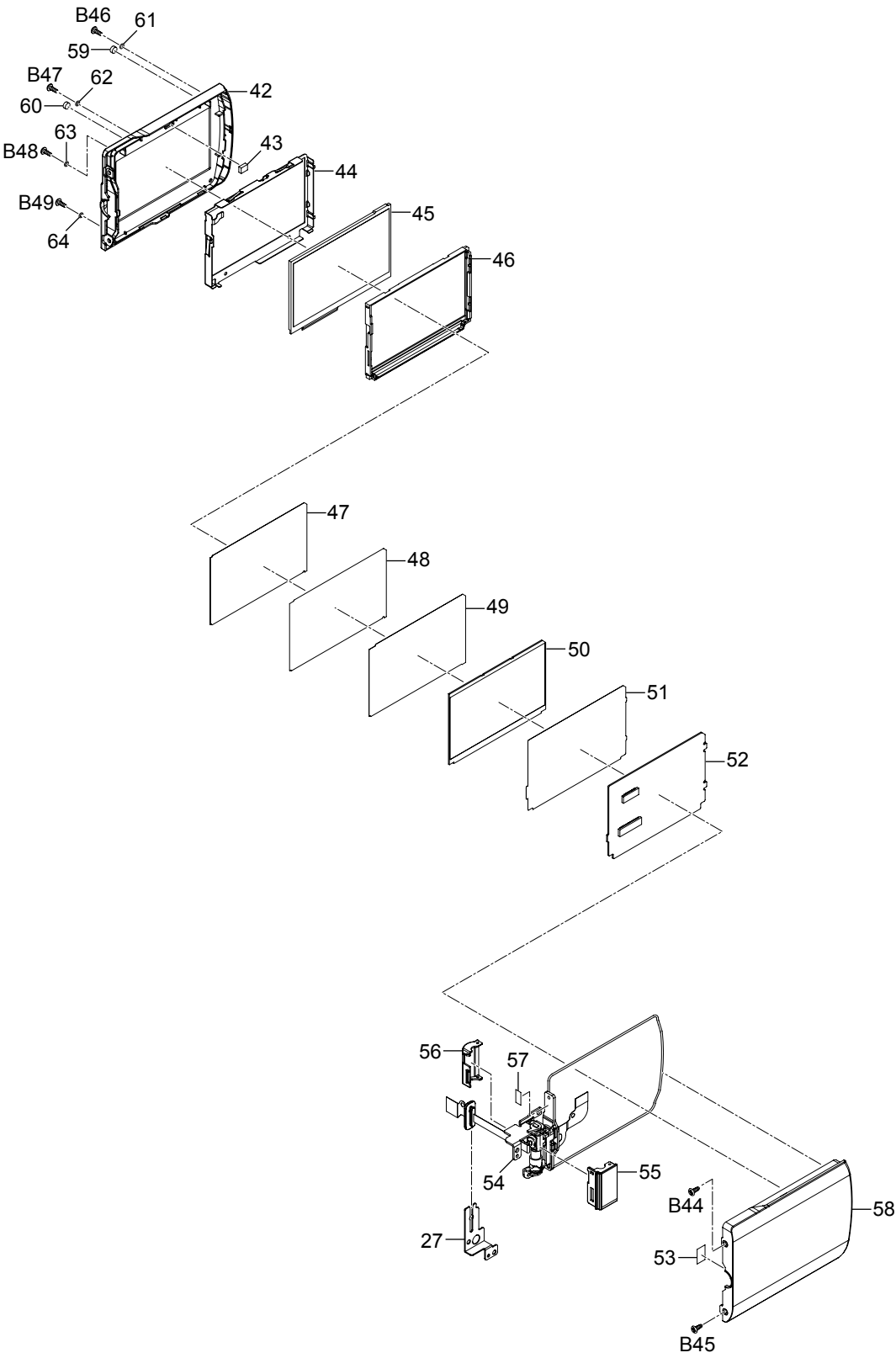
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300	-----	BATTERY PACK	1						
301	K2KZ9CB00002	AV CABLE	1						
302	VSK0688	AC ADAPTOR	1	P,PC					
302	VSK0686	AC ADAPTOR	1	EB,EE,EF,EG,E,EP,GC,GN,PL					
302	VSK0687	AC ADAPTOR	1	S18GK					
303	VFC4260	HAND STRAP	1						
304	K2KZ4CB00011	USB CABLE	1						
305	VPG1N01	PACKING CASE	1	P,PC					
305	VPG1N02	PACKING CASE	1	EB,EE,EF,EG,E,EP,GC,GN,PL					
305	VPG1N32	PACKING CASE	1	S18GK					
306	VPN6582	CUSHION	1						
307	VFF0367-S	CD-ROM	1	P,PC					
307	VFF0368-S	CD-ROM	1	EB,EE,EF,EG,E,EP,GC,GN,PL,S18GK					
308	VPF1249	CAMERA BAG	1						
309	VPF1253	BAG, POLYETHYLENE	1						
310	VQT1D97	OPERATING INSTRUCTIONS	1	P,PC					
		(ENGLISH(SPANISH))							
310	VQT1D99	OPERATING INSTRUCTIONS	1	PC					
		(CANADIAN FRENCH)							
310	VQT1E14	OPERATING INSTRUCTIONS	1	EB,EP,GC,GN					
		(ENGLISH)							
310	VQT1E19	OPERATING INSTRUCTIONS	1	EE					
		(RUSSIAN)							
310	VQT1E20	OPERATING INSTRUCTIONS	1	EE					
		(UKRAINIAN)							
310	VQT1E03	OPERATING INSTRUCTIONS	1	EF,EG					
		(FRENCH)							
310	VQT1E02	OPERATING INSTRUCTIONS	1	EG					
		(GERMAN)							
310	VQT1E04	OPERATING INSTRUCTIONS	1	EG					
		(ITALIAN)							
310	VQT1E05	OPERATING INSTRUCTIONS	1	EG					
		(DUTCH)							
310	VQT1E59	OPERATING INSTRUCTIONS	1	EG					
		(TURKISH)							
310	VQT1E06	OPERATING INSTRUCTIONS	1	E					
		(SPANISH)							
310	VQT1E07	OPERATING INSTRUCTIONS	1	E					
		(PORTUGUESE)							
310	VQT1E08	OPERATING INSTRUCTIONS	1	E					
		(SWEDISH)							
310	VQT1E09	OPERATING INSTRUCTIONS	1	E					
		(DANISH)							
310	VQT1E11	OPERATING INSTRUCTIONS	1	EP					
		(HUNGARIAN)							
310	VQT1E12	OPERATING INSTRUCTIONS	1	EP					
		(POLISH)							
310	VQT1E13	OPERATING INSTRUCTIONS	1	EP					
		(CZECH)							
310	VQT1E15	OPERATING INSTRUCTIONS	1	GC					
		(CHINESE(TRADITIONAL))							
310	VQT1E16	OPERATING INSTRUCTIONS	1	GC					
		(ARABIC)							
310	VQT1E60	OPERATING INSTRUCTIONS	1	GC					
		(PERSIAN)							
310	VQT1E17	OPERATING INSTRUCTIONS	1	GC					
		(THAI)							
310	VQT1E18	OPERATING INSTRUCTIONS	1	GC					
		(SINGAPOREAN)							
310	VQT1E00	OPERATING INSTRUCTIONS	1	PL					
		(ENGLISH)							
310	VQT1E01	OPERATING INSTRUCTIONS	1	PL					
		(SPANISH)							
310	VQT1E22	OPERATING INSTRUCTIONS	1	S18GK					
		(CHINESE(TRADITIONAL))							
		(ENGLISH)							
311	-----	SD CARD (2G)	1						
312	VPF1214	BAG, POLYETHYLENE	1						
313	K2CQ2CA00006	AC CORD W/PLUG	1	EE,EF,EG,E,EP,GC					
314	K2CJ2DA00008	AC CORD W/PLUG	1	GN					
315	K2CA2CA00029	AC CORD W/PLUG	1	PC,P,PL					
315	K2CA2CA00020	AC CORD W/PLUG	1	S18GK					
316	K2CT3CA00004	AC CORD W/PLUG	1	EB,GC					

# S7. Exploded View

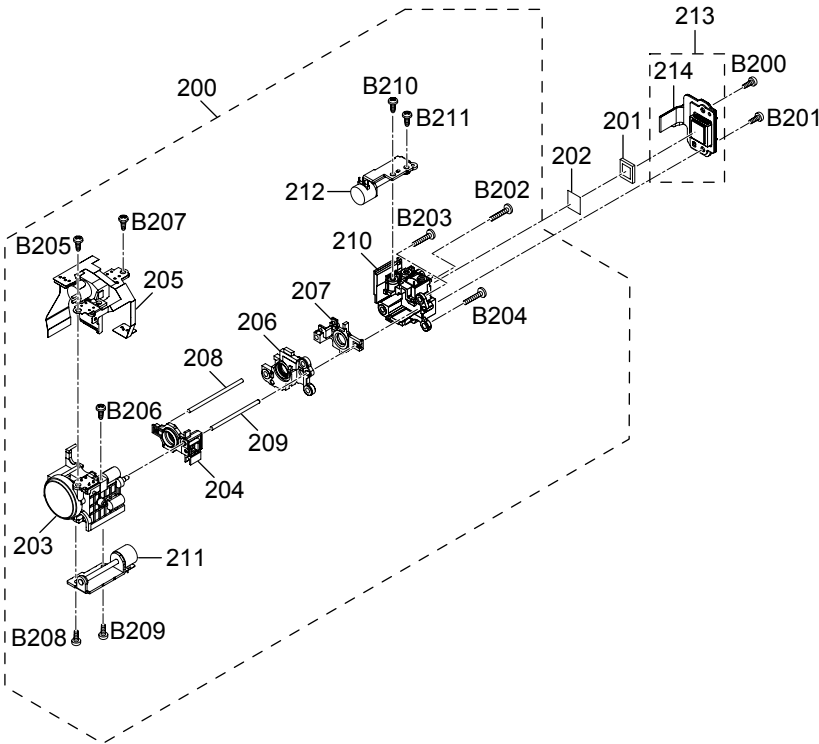
## S7.1. Frame and Casing Section



S7.2. LCD Section



**S7.3. Camera Lens Section**



S7.4. Packing Parts and Accessories Section

