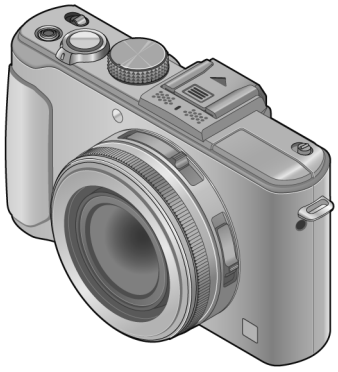
ORDER NO. DSC1208031CE
B26

Service Manual

Digital Camera

LUMIX

Model No. DMC-LX7P
DMC-LX7PC
DMC-LX7PU
DMC-LX7EB
DMC-LX7EE
DMC-LX7EF
DMC-LX7EG
DMC-LX7EP
DMC-LX7GC
DMC-LX7GD
DMC-LX7GH
DMC-LX7GK
DMC-LX7GN
DMC-LX7GT
DMC-LX7SG



Colour
(K).....Black Type
(W).....White Type (except PU/EB/EE/EF/EG/EP)

⚠ 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.

Panasonic

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1 Safety Precautions

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 MΩ and 5.2 MΩ. 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 kΩ, 10 W resistor, in parallel with a 0.15 μF 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 kΩ/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 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

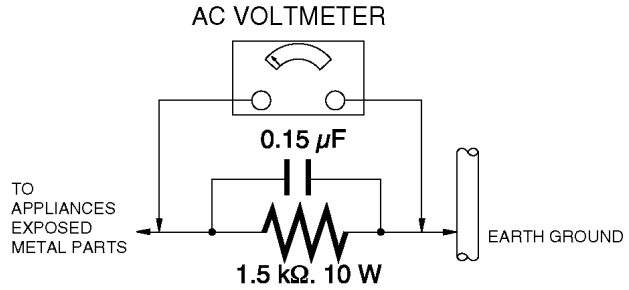


Figure. 1

1.4. How to Discharge the E.Capacitor on Flash P.C.B.

CAUTION:

1. **Be sure to discharge the E.Capacitor on FLASH P.C.B..**
2. **Be careful of the high voltage circuit on FLASH P.C.B. when servicing.**

[Discharging Procedure]

1. Refer to the disassemble procedure and remove the necessary parts/unit.
2. Install the insulation tube onto the lead part of resistor (ERG5SJ102:1kΩ /5W).
   (An equivalent type of resistor may be used.)
3. Place a resistor between both terminals of E.Capacitor on the FLASH P.C.B. for approx. 5 seconds.
4. After discharging, confirm that the E.Capacitor voltage is lower than 10V using a voltmeter.

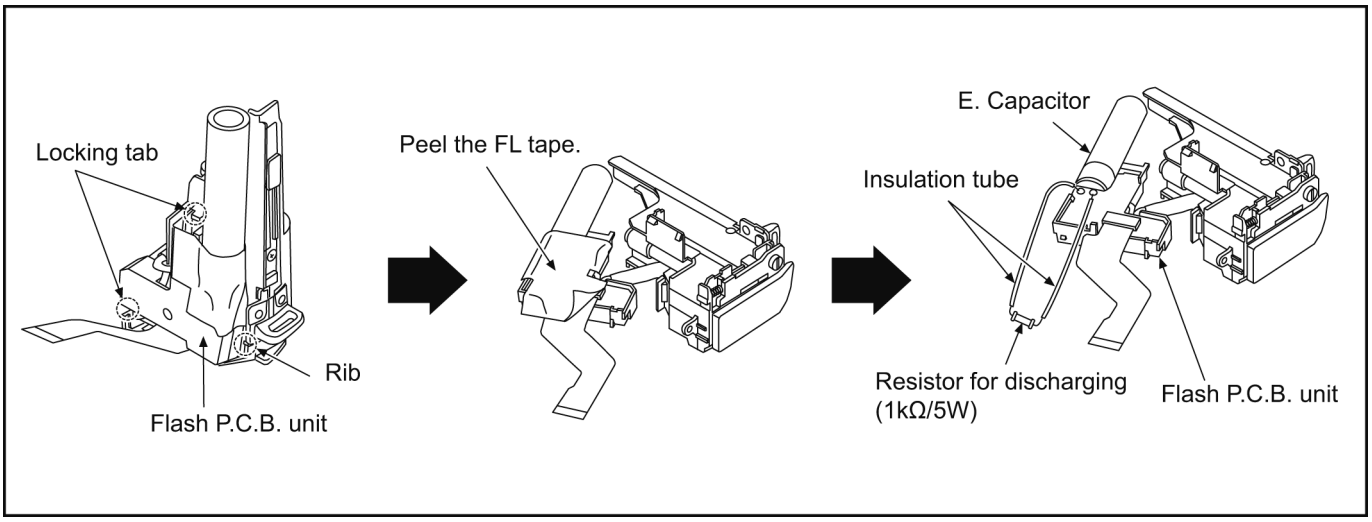


Fig. F1

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 IC (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 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 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/GH)

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 ASTA 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 safety.
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:

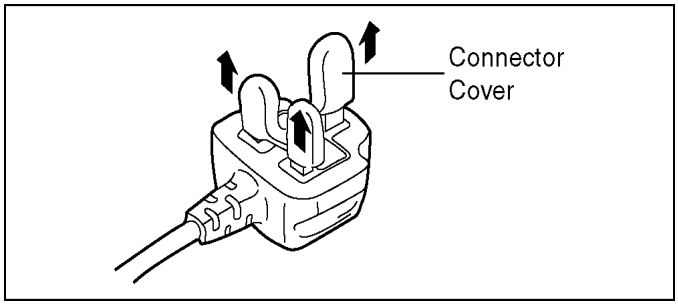
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

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.

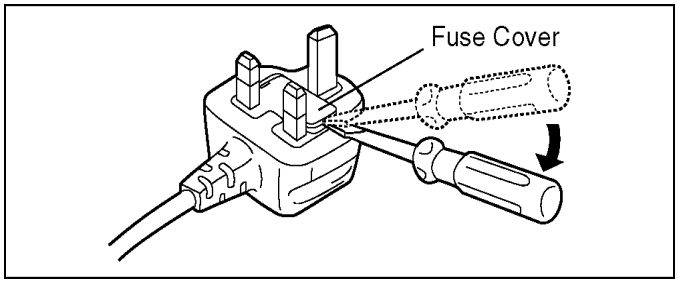
2.3.2.2. Before Use

Remove the Connector Cover as follows.

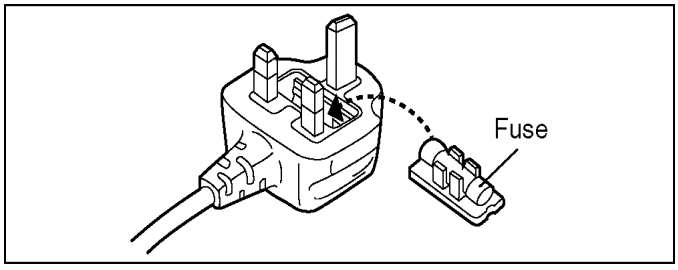


2.3.2.3. How to Replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



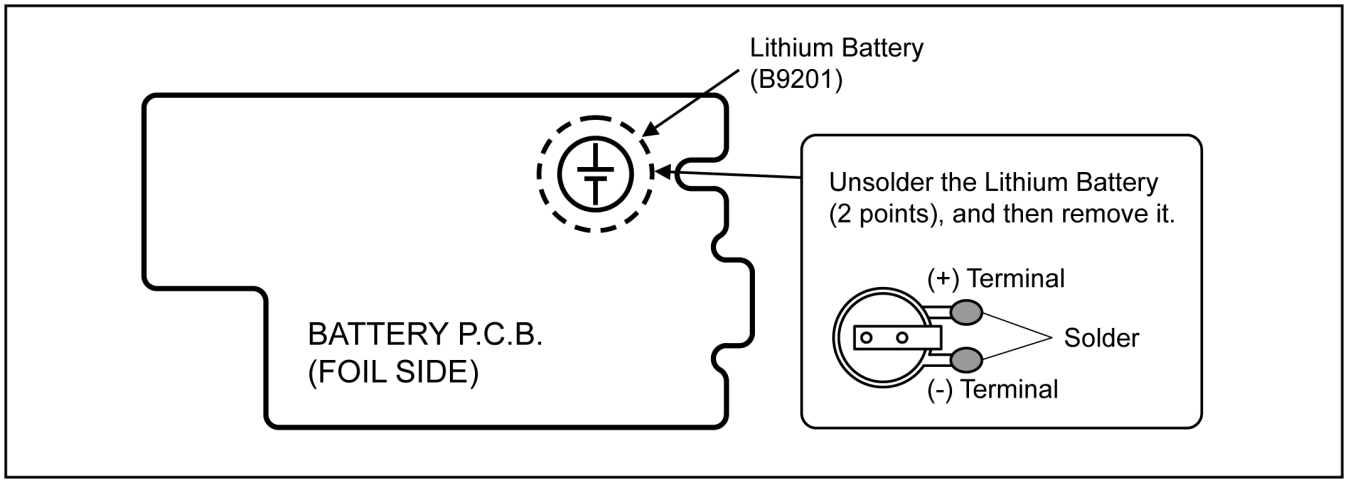
2.4. How to Replace the Lithium Battery

2.4.1. Replacement Procedure

1. Remove the BATTERY P.C.B.. (Refer to Disassembly Procedures.)
2. Unsolder the each soldering point of electric lead terminal for Lithium battery (Ref. No. “B9201” at foil side of BATTERY P.C.B.) and remove the Lithium battery together with electric lead terminal. Then replace it into new one.

NOTE:

The Type No. ML421 includes electric lead terminals.



NOTE:

This Lithium battery is a critical component.
(Type No.: ML421 **Manufactured by Energy Company, Panasonic Corporation.**)
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 type recommended by the manufacturer.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

(For German)

ACHTUNG
- Explosionsgefahr bei falschem Anbringen der Batterie. Ersetzen Sie die Batterie nur durch den vom Hersteller empfohlenen Typ.
- Wenden Sie sich zur Entsorgung der Batterien an die lokalen Behörden oder erfragen Sie die richtige Vorgehensweise zur Entsorgung.

(For French)

MISE EN GARDE
- Il y a un danger d’explosion si la batterie n’est pas correctement remplacée. Remplacez-la uniquement par le type recommandé par le fabricant.
- Pour vous débarrasser des batteries, veuillez contacter les autorités locales ou votre revendeur afin de connaître la procédure d’élimination à suivre.

NOTE:

Above caution is applicable for a battery pack which is for DMC-LX7 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. Important Notice

3.2.1. About lens block

- The image sensor (MOS) unit which are connected to the lens unit with 3 screws.
  These screws are locked with the screw locking glue, after performing the Optical tilt adjustment.
  During servicing, if one of MOS unit fixing screws are loosened or removed, the Optical tilt adjustment must be performed.
  About the Optical tilt adjustment, refer to the "9.3.2. Adjustment Specifications" for details.

3.2.2. About Flexible Cable and Connector

Do not touch carelessly so that the foreign body should not adhere to the terminal part of flexible cable and connector.
Wipe off with a clean cloth and the cotton bud, etc. when the terminal part is dirty.

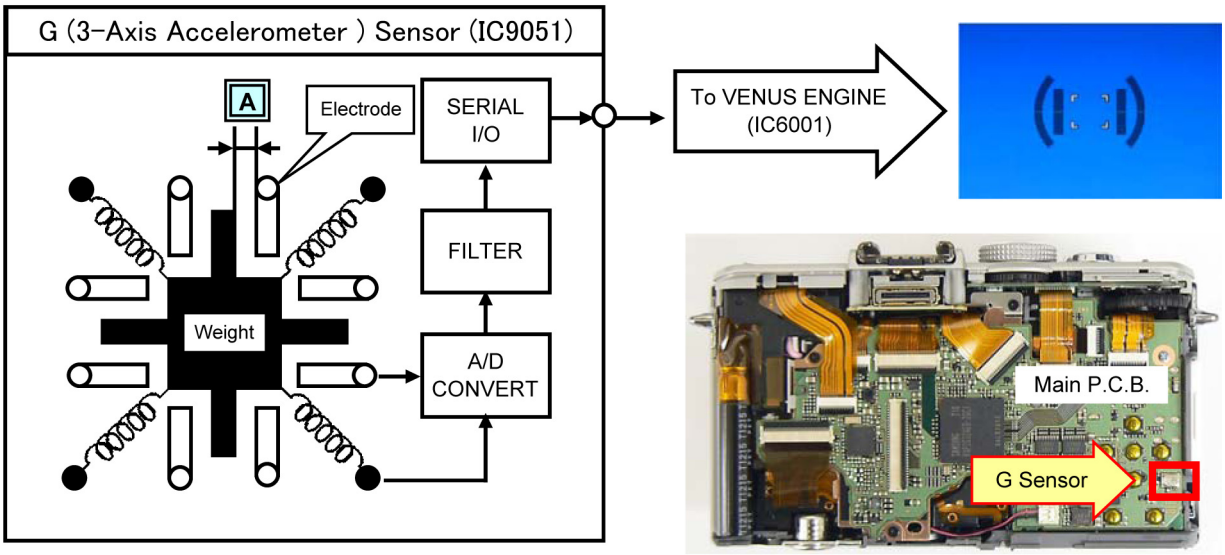
3.3. Service Notes

3.3.1. About Electronic Level

The unit has the electronic level function using G (3-axis accelerometer) sensor inside the unit.

[Principal of Operation]

1. Movement of "Weight" is detected by capacitance. -------- [A]
2. Each acceleration of the X/Y/Z axis is converted into data and they are output.
3. The VENUS ENGINE converts the data into a horizontal angle and an angle of inclination, and displays them to screen.



3.4. 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 P.C.B. Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the P.C.B. 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 P.C.B. 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 P.C.B. 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.
  RFKZ03D01KS----------(0.3mm 100g Reel)
  RFKZ06D01KS----------(0.6mm 100g Reel)
  RFKZ10D01KS----------(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%

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

There are nine kinds of DMC-LX7, regardless of the colours.

- a) DMC-LX7 (Japan domestic model), DMC-LX7SG
- b) DMC-LX7P/PC
- c) DMC-LX7EB/EF/EG/EP
- d) DMC-LX7EE
- e) DMC-LX7GT
- f) DMC-LX7GK
- g) DMC-LX7GD
- h) DMC-LX7GN
- i) DMC-LX7PU/GC/GH

What is the difference is that the “INITIAL SETTINGS” data which is stored in Flash-ROM mounted on MAIN P.C.B..

3.5.1. Defining methods:

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

a) DMC-LX7 (Japan domestic model), DMC-LX7SG

The nameplate for these models show the following Safety registration mark.

b) DMC-LX7P/PC

The nameplate for these models show the following Safety registration mark.

c) DMC-LX7EB/EF/EG/EP

The nameplate for these models show the following Safety registration mark.

d) DMC-LX7EE

The nameplate for this model shows the following Safety registration mark.

e) DMC-LX7GT

The nameplate for this model shows the following Safety registration mark.

f) DMC-LX7GK

The nameplate for this model shows the following Safety registration mark.

g) DMC-LX7GD

The nameplate for this model shows the following Safety registration mark.

h) DMC-LX7GN

The nameplate for this model shows the following Safety registration mark.

i) DMC-LX7PU/GC/GH

The nameplate for these models do not show any above Safety registration mark.

NOTE:

After replacing the MAIN P.C.B., be sure to achieve adjustment.

The service software is available at “TSN Website”.

3.5.2. INITIAL SETTINGS:

After replacing the MAIN P.C.B., be sure to perform the initial settings after achieving the adjustment by ordering the following procedure in accordance with model suffix of the unit.

1. IMPORTANT NOTICE:

Before proceeding Initial settings, be sure to read the following CAUTIONS.

CAUTION 1:(INITIAL SETTINGS)

--- AFTER REPLACING THE MAIN P.C.B. and/or FLASH-ROM ---

[Except "EB, EF, EG and EP" models]

*. The model suffix can be chosen **JUST ONE TIME.**
(Effective model suffix : "P/PC/PU/EE/GC/GD/GH/GK/GN/GT/SG and NONE(JAPAN)")

*. Once one of the model suffix has been chosen, the model suffix lists will not be displayed, thus, it can not be changed.

CAUTION 2:(Stored picture image data in the unit)

This unit employs "Built-in Memory" for picture image data recording.(Approx.70MB)
After proceeding "INITIAL SETTINGS", the picture image data stored in the unit is erased.

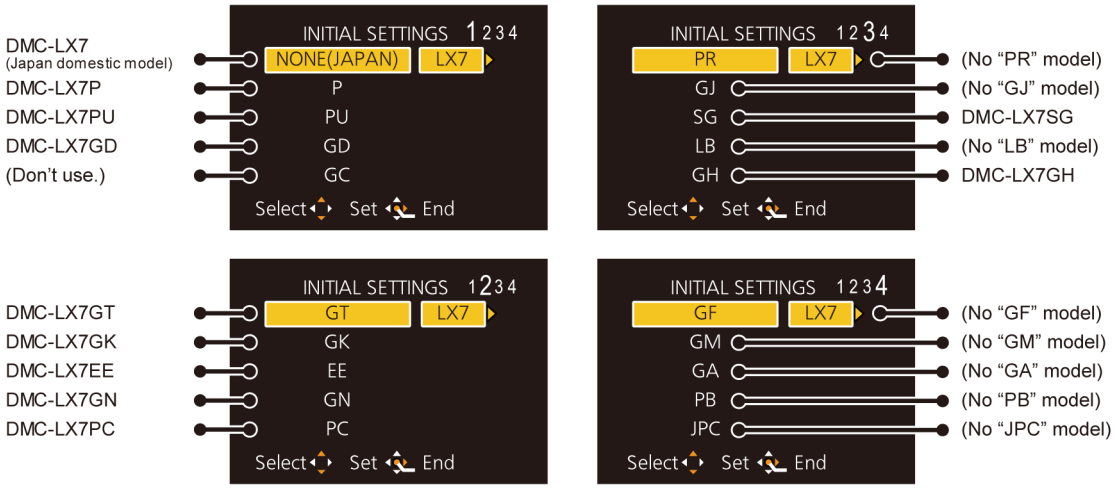
2. PROCEDURES:

- Precautions: Read the above “CAUTION 1” and “CAUTION 2”, carefully.
- Preparation:
  - Attach the Battery or AC Adaptor with a DC coupler to the unit.
    (Since this unit has built-in memory, it can be performed without inserting SD memory card.)
  - Remove the lens cap.
- **Step 1. The temporary cancellation of “INITIAL SETTINGS”:**
  Set the mode dial to “[P] (Program AE mode)”.
  While keep pressing “[UP] of Cursor button” and [MOTION PICTURE] button simultaneously, turn the Power on.
- **Step 2. The cancellation of “INITIAL SETTINGS”:**
  Press the [PLAYBACK] button, then playback the picture.
  Press “[UP] of Cursor button” and [MOTION PICTURE] button simultaneously, then turn the Power off.

  The LCD displays the “ ! ” mark before the unit powers down.

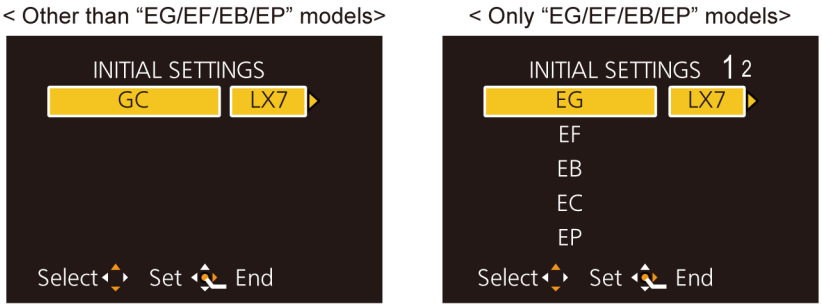
- **Step 3. Turn the Power on:**
  Set the mode dial to “[P] (Program AE mode)”, and then turn the Power on.
- **Step 4. Display the INITIAL SETTING:**
  While keep pressing [MENU/SET] and “[RIGHT] of Cursor buttons” simultaneously, turn the Power off.
  The “INITIAL SETTINGS” menu is displayed.
  There are two kinds of “INITIAL SETTINGS” menu form as follows:

[CASE 1. After replacing MAIN P.C.B.]
[Except “EG, EF, EB, EP and GC” models: (VEP56164A is used as a Main P.C.B.)]
When MAIN P.C.B. has just been replaced, all of the model suffix is displayed as follows. (Four pages in total)



[Only “EG, EF, EB, EP and GC” models: (VEP56164B is used as a Main P.C.B.)]
When MAIN P.C.B. has just been replaced, only 7 model suffix are displayed as follows. (Two pages in total)

[CASE 2. Other than “After replacing MAIN P.C.B.”]



- **Step 5. Choose the model suffix in “INITIAL SETTINGS”: (Refer to “CAUTION 1”)**

[Caution: After replacing MAIN P.C.B.]

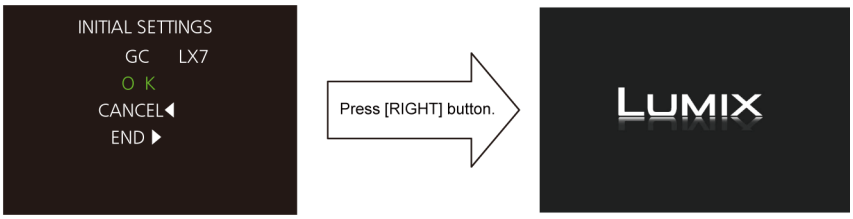
The model suffix can been chosen, **JUST ONE TIME**.

Once one of the model suffix have been chosen, the model suffix lists will not be displayed, thus, it can not be changed.

Therefore, select the area carefully.

Select the area with pressing “[UP] / [DOWN] of Cursor buttons”.

• **Step 6. Set the model suffix in “INITIAL SETTINGS”:**
• Press the “[RIGHT] of Cursor buttons”.
• The only set area is displayed, and then press the “[RIGHT] of Cursor buttons” after confirmation.
(The unit is powered off automatically.)



• **Step 7. CONFIRMATION:**
Confirm the display of “PLEASE SET THE CLOCK” in concerned language when the unit is turned on again.
When the unit is connected to PC with USB cable, it is detected as removable media.
(When the “GT” or “GK” model suffix is selected, the display shows “PLEASE SET THE CLOCK” in Chinese.)

As for your reference, major default setting condition is as shown in the following table.

• **Default setting (After “INITIAL SETTINGS”)**

	MODEL	VIDEO OUTPUT	LANGUAGE	DATE	REMARKS
a)	DMC-LX7 (Japan domestic model)	NTSC	Japanese	Year/Month/Date	
b)	DMC-LX7P	NTSC	English	Month/Date/Year	
c)	DMC-LX7PU	NTSC	English	Month/Date/Year	
d)	DMC-LX7GD	NTSC	Korean	Year/Month/Date	
e)	DMC-LX7GC	PAL	English	Date/Month/Year	
f)	DMC-LX7GT	NTSC	Chinese (traditional)	Year/Month/Date	
g)	DMC-LX7GK	PAL	Chinese (simplified)	Year/Month/Date	
h)	DMC-LX7EE	PAL	Russian	Date/Month/Year	
i)	DMC-LX7GN	PAL	English	Date/Month/Year	
j)	DMC-LX7PC	NTSC	English	Month/Date/Year	
k)	DMC-LX7SG	PAL	English	Date/Month/Year	
l)	DMC-LX7GH	PAL	English	Date/Month/Year	
m)	DMC-LX7EG	PAL	English	Date/Month/Year	
n)	DMC-LX7EF	PAL	French	Date/Month/Year	
o)	DMC-LX7EB	PAL	English	Date/Month/Year	
p)	DMC-LX7EP	PAL	English	Date/Month/Year	

4 Specifications

The following specification is for DMC-LX7P.
Some specifications may differ depending on model suffix.

Digital Camera: Information for Your Safety

Power Source	DC 5.1 V
Power Consumption	When recording: 1.6 W When playing back: 1.1 W
Camera effective pixels	10,100,000 pixels
Image sensor	1/1.7” MOS sensor, total pixel number 12,800,000 pixels Primary color filter
Lens [NANO SURFACE COATING]	Optical 3.8x zoom f=4.7 mm to 17.7 mm (35 mm film camera equivalent: 24 mm to 90 mm) / F1.4 (Max. Wide) to F2.3 (Max. Tele)
Image Stabilizer	Optical method
Focus range	
Normal	50 cm (1.6 feet) to ∞
AF Macro / MF / Intelligent Auto / Motion pictures	1 cm (0.033 feet) (Max. Wide) / 30 cm (0.98 feet) (Max. Tele) to ∞
Scene Mode	The focus ranges listed above may vary depending on the selected Scene Mode.
Shutter system	Electronic shutter + Mechanical shutter
Minimum Illumination	Approx. 3 lx (when i-Low light is used, the shutter speed is 1/30th of a second)
Shutter speed	250 seconds to 1/4000th of a second
Exposure (AE)	Program AE (P) / Aperture-priority AE (A) / Shutter-priority AE (S) / Manual exposure (M)
Metering Mode	[Multi Metering] / [Center Weighted] / [Spot]

LCD monitor	3.0” TFT LCD (3:2) (Approx. 921,600 dots)
Microphone	Stereo
Speaker	Monaural
Recording media	Built-in Memory (Approx. 70 MB) SD Memory Card / SDHC Memory Card / SDXC Memory Card
Recording file format	
Still picture	RAW / JPEG (based on Design rule for Camera File system, based on Exif 2.3 standard / DPOF corresponding) / MPO
Motion pictures	AVCHD / MP4
Audio compression format	AVCHD: Dolby® Digital (2 ch) MP4: AAC (2 ch)
Interface	
Digital	USB 2.0 (High Speed)
Analog video	NTSC Composite
Audio	Audio line output (Monaural)
Terminal	HDMI: MiniHDMI TypeC AV OUT/DIGITAL: Dedicated jack (8 pin)
Dimensions	Approx. 110.5 mm (W) x 67.1 mm (H) x 45.6 mm (D) [4.35” (W) x 2.64” (H) x 1.80” (D)] (excluding the projection part)
Mass (Weight)	With card and battery: Approx. 298 g (0.66 b) Excluding card and battery: Approx. 269 g (0.60 b)

Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity	10%RH to 80%RH

Battery charger
(Panasonic DE-A81B): Information for Your Safety

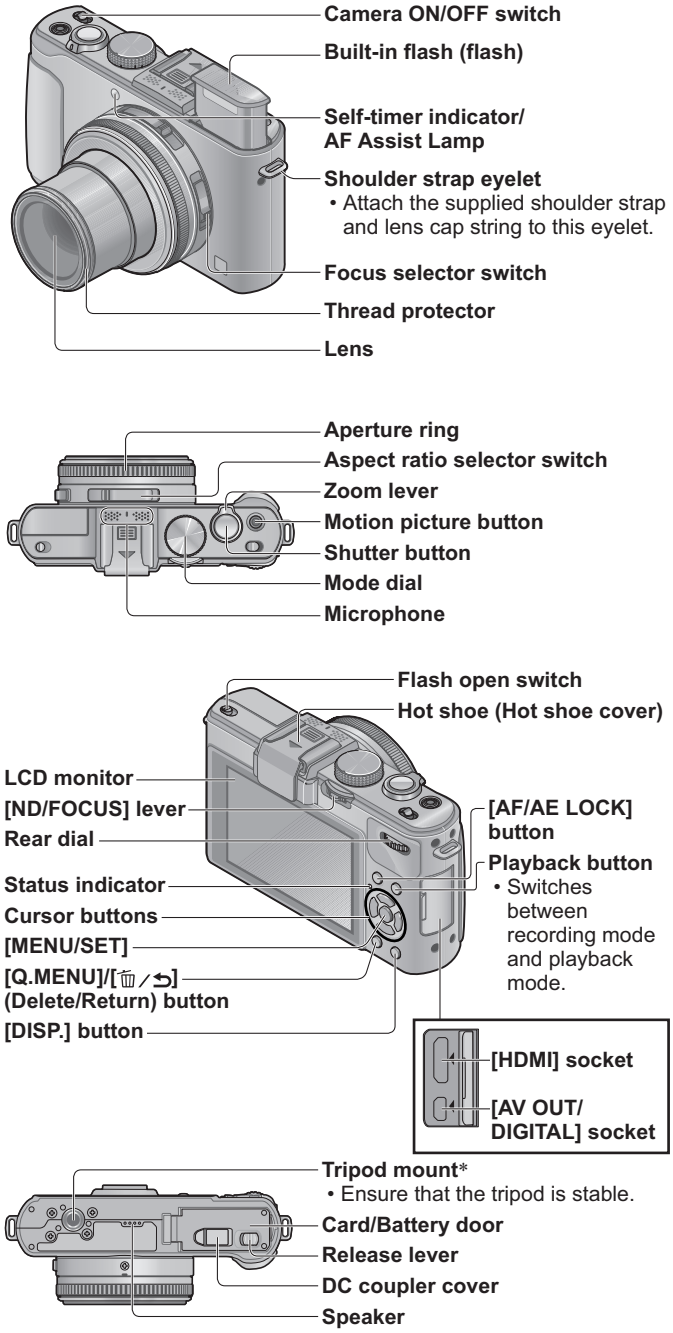
Input	~ 110 V to 240 V, 50/60 Hz, 0.2 A
Output	⎓ 4.2 V, 0.65 A

Equipment mobility: Movable

Battery pack (lithium-ion)
(Panasonic DMW-BCJ13PP): Information for Your Safety

Voltage / capacity	3.6 V / 1250 mAh

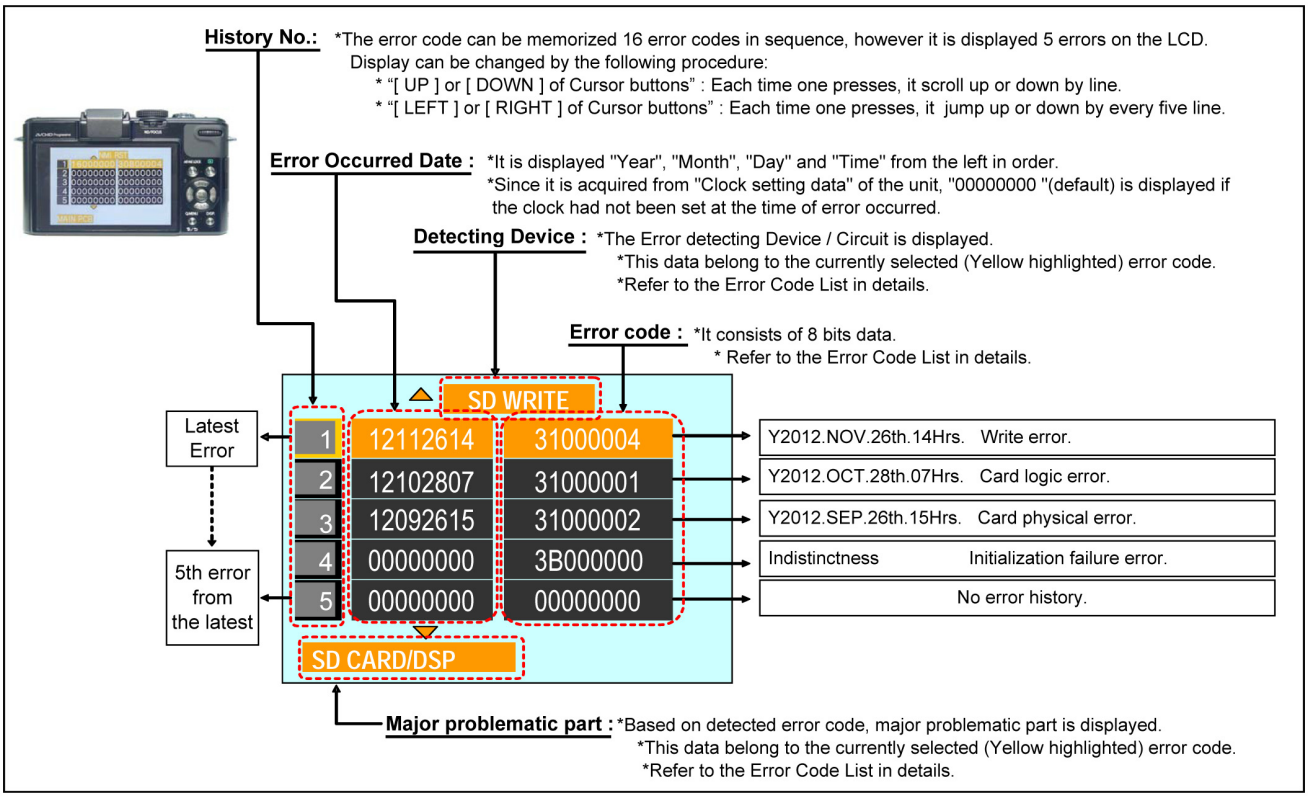
5 Location of Controls and Components



6 Service Mode

6.1. Error Code Memory Function

1. **General description**
   This unit is equipped with history of error code memory function, and can be memorized 16 error codes in sequence from the latest. When the error is occurred more than 16, the oldest error is overwritten in sequence.
   The error code is not memorized when the power supply is shut down forcibly (i.e.,when the unit is powered on by the battery, the battery is pulled out) The error code is memorized to FLASH-ROM when the unit has just before powered off.
2. **How to display**
   The error code can be displayed by ordering the following procedure:
   - **Preparation:**
     - Attach the Battery or AC Adaptor with a DC coupler to the unit.
       (Since this unit has built-in memory, it can be performed without inserting SD memory card.)
     - Remove the lens cap.
   - **Step 1. The temporary cancellation of "INITIAL SETTINGS":**
     Set the mode dial to "[P] (Program AE mode)".
     While keep pressing "[UP] of Cursor button" and [MOTION PICTURE] button simultaneously, turn the Power on.
   - **Step 2. Execute the error code display mode:**
     Press the "[LEFT] of Cursor button", [MENU/SET] button and [MOTION PICTURE] button simultaneously.
     The display is changed as shown below when the above buttons are pressed simultaneously.
     Normal display → Error code display → Operation history display → Normal display → .....



Example of Error Code Display

3. **Error Code List**

The error code consists of 8 bits data and it shows the following information.

Attribute	Main item	Sub item	Error code		Contents (Upper line)	Error Indication	
			High 4 bits	Low 4 bits	Problematic Part & Check point (Lower line)	Detecting device	Problematic Part/Circuit
LENS	Lens drive	OIS	18*0	1000	PSD (X) error. Hall element (X axis) position detect error in OIS unit. OIS Unit	OIS X	LENSu NG
				2000	PSD (Y) error. Hall element (Y axis) position detect error in OIS unit. OIS Unit	OIS Y	
				3000	GYRO (X) error. Gyro (IC7101: X axis) detect error on MAIN P.C.B.. IC7101 (Gyro element) or IC6001 (VENUS ENGINE)	GYRO X	GYRO NG
				4000	GYRO (Y) error. Gyro (IC7101: Y axis) detect error on MAIN P.C.B.. IC7101 (Gyro element) or IC6001 (VENUS ENGINE)	GYRO Y	
				6000	Drive voltage (X) error. LENS Unit, LENS flex breaks, IC6001 (VENUS ENGINE) AD value error,	OISX REF	LENSu/LENS FPC
				7000	Drive voltage (Y) error. LENS Unit, LENS flex breaks, IC6001 (VENUS ENGINE) AD value error,	OISY REF	
				8000	OIS GYRO-Digital communication error IC7101(Gyro element) or IC6001(VENUS ENGINE)	(No indication)	(No indication)
		Zoom		0?10	Collapsible barrel Low detect error (Collapsible barrel encoder always detects Low.) Mechanical lock, FP9005-(6), (8) signal line or IC6001 (VENUS ENGINE)	ZOOM L	ZOOMm/LENSu
				0?20	Collapsible barrel High detect error (Collapsible barrel encoder always detects High.) Mechanical lock, FP9005-(6), (8) signal line or IC6001 (VENUS ENGINE)	ZOOM H	
				0?30	Zoom motor sensor error. Mechanical lock, FP9005-(6), (8) signal line or IC6001 (VENUS ENGINE)	ZOOM ENC	
				0?40	Zoom motor sensor error. (During monitor mode.) Mechanical lock, FP9005-(6), (8) signal line or IC6001 (VENUS ENGINE)		
				0?50	Zoom motor sensor error. (During monitor mode with slow speed.) Mechanical lock, FP9005-(6), (8) signal line or IC6001 (VENUS ENGINE)		
				0?60	Detection of zoom misregistration by impact such as fails. Lens Unit	(No indication)	(No indication)
		Focus		0?01	HP Low detect error (Focus encoder always detects High, and not becomes Low) Mechanical lock, FP9005-(42) signal line or IC6001 (VENUS ENGINE)	FOCUS L	LENS FPC/DSP
				0?02	HP High detect error (Focus encoder always detects Low, and not becomes High) Mechanical lock, FP9005-(42) signal line or IC6001 (VENUS ENGINE)	FOCUS H	
		Lens	10*8	0000	Lens cap error Zoom motor,Zoom pulse encoder2	(No indication)	(No indication)
			18*1	0000	Power ON time out error. Lens drive system	LENS DRV	LENSu
			18*2	0000	Power OFF time out error. Lens drive system		
	Adj. History	OIS	19*0	2000	OIS adj. Yaw direction amplitude error (small)	OIS ADJ	OIS ADJ
				3000	OIS adj. Pitch direction amplitude error (small)		
				4000	OIS adj. Yaw direction amplitude error (large)		
				5000	OIS adj. Pitch direction amplitude error (large)		
				8000	OIS adj. Yaw direction off set error		
				9000	OIS adj. Pitch direction off set error		
				A000	OIS adj. Yaw direction gain error		
				B000	OIS adj. Pitch direction gain error		
				C000	OIS adj. Yaw direction position sensor error		
				D000	OIS adj. Pitch direction position sensor error		
				E000	OIS adj. other error		
HARD	VENUS A/D	Flash	28*0	0000	Flash charging error. IC6001-(A12) signal line or Flash charging circuit	STRB CHG	STRB PCB/FPC
	FLASH ROM (EEPROMArea)	FLASH ROM (EEPROM Area)	2B*0	0001	EEPROM read error IC6005 (FLASH ROM)	FROM RE	FROM
				0002	EEPROM write error IC6005 (FLASH ROM)	FROM WR	FROM
				0005	Firmware version up error Replace the firmware file in the SD memory card.	(No indication)	(No indication)
	SYSTEM	RTC	2C*0	0001	SYSTEM IC initialize failure error Communication between IC6001 (VENUS ENGINE) and IC9101	SYS INIT	MAIN PCB
SOFT	CPU	Reset	30*0	0001 | 0007	NMI reset Non Mask-able Interrupt (30000001-30000007 are caused by factors)	NMI RST	MAIN PCB
	CPU, ASIC	Stop	38*0	0001	Camera task finish process time out. Communication between Lens system and IC6001 (VENUS ENGINE)	LENS COM	LENSu/DSP
				0002	Camera task invalid code error. IC6001 (VENUS ENGINE)	DSP	DSP
				0100	File time out error in recording motion image IC6001 (VENUS ENGINE)		
				0200	File data cue send error in recording motion image IC6001 (VENUS ENGINE)		
				0300	Single or burst recording brake time out.		
		Memory area	3A*0	0008	USB work area partitioning failure USB dynamic memory securing failure when connecting	(No indication)	(No indication)
	Operation	Power on	3B*0	0000	FLASHROM processing early period of camera during movement.	INIT	(No indication)
	Zoom	Zoom	3C*0	0000	Inperfect zoom lens processing Zoom lens	ZOOM	ZOOMm/LENSu
			35*0	0000 | FFFF	Software error (0-7bit : command, 8-15bit : status)	DSP	DSP
			35*1	0000	Though record preprocessing is necessary, it is not called.		
			35*2	0000	Though record preprocessing is necessary, it is not completed.	(No indication)	(No indication)

Important notice about “Error Code List”

1) About “*” indication:

The third digit from the left is different as follows.

- In case of 0 (example: 18**0**01000)
  When the third digit from the left shows “0”, this error occurred under the condition of INITIAL SETTINGS has been completed.
  It means that this error is occurred basically at user side.
- In case of 8 (example: 18**8**01000)
  When the third digit from the left shows “8”, this error occurred under the condition of INITIAL SETTINGS has been released. (Example; Factory assembling-line before unit shipment, Service mode etc.)
  It means that this error is occurred at service side.

2) About “?” indication: (“18*0 0?01” to “18*0 0?50”):

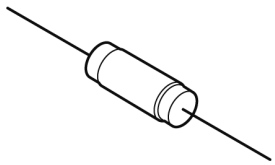
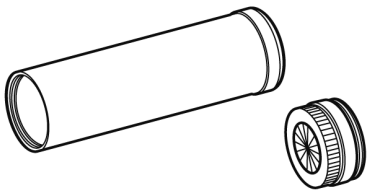
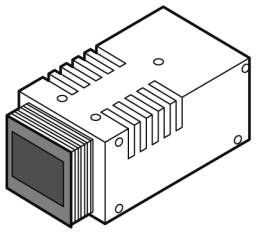
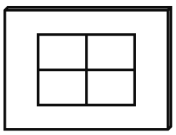
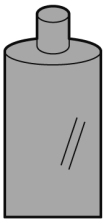
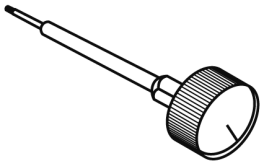
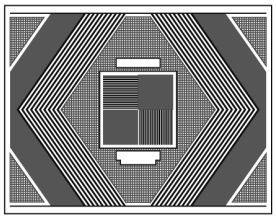
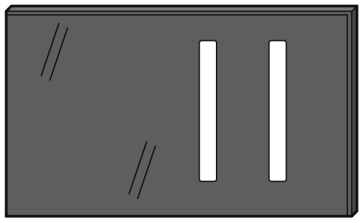
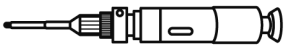
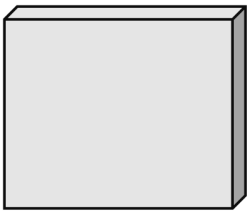
The third digit from the right shows one of the hexadecimal (“0” to “F”) character.

4. **How to exit from Error Code display mode:**
   Simply, turn the power off. (Since Error code display mode is executed under the condition of temporary cancellation of “INITIAL SETTINGS”, it wake up with normal condition when turn off the power.)
   NOTE:
   The error code can not be initialized.

7 Service Fixture & Tools

7.1. Service Fixture and Tools

The following Service Fixture and tools are used for checking and servicing this unit.

Resistor for Discharging (1kΩ/5W) **ERG5SJ102**	Collimator (with Focus Chart) **VFK1164TCM02**	LIGHT BOX (with DC Cable) **RFKZ0523**
 An equivalent type of Resistor may be used.	 ∗VFK1164TCM03 can be used. ∗RFKZ0422 can be used.	 ∗VFK1164TDVLB can be used.
TR Chart **RFKZ0443**	Lens Cleaning Kit (BK) **VFK1900BK**	Grease (for Lens) **RFKZ0472**
	 ∗Only supplied 10 set/box.	
Screw locking glue **RFKZ0573**	Driver (for optical axis adjustment) **RFKZ0609**	Optical axis adjustment chart **RFKZ0570**
	 ∗T3 Torx type	
Camera stand **RFKZ0333J**	Torque Driver **RFKZ0542**	Diffuser **RFKZ0591**
		

7.2. When Replacing the Main P.C.B.

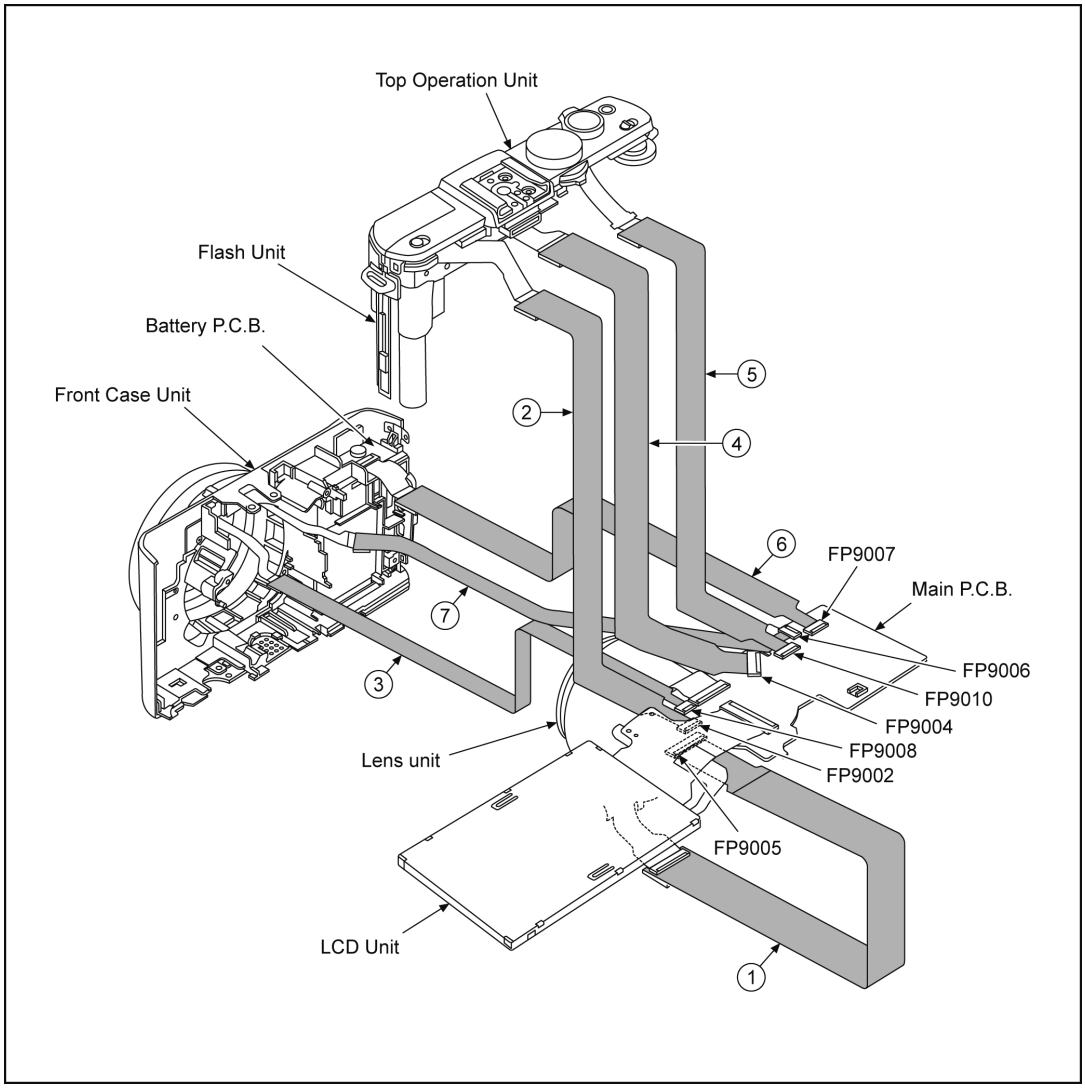
After replacing the MAIN P.C.B., be sure to achieve adjustment.
The service software is available at “TSN Website”.

7.3. 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	RFKZ0581	FP9005 (MAIN) - LENS UNIT	47pin 0.3FFC
2	VFK1364	FP9002 (MAIN) - JOINT FPC - FP8001 (FLASH)	14pin 0.5FFC
3	VFK1441	FP9008 (MAIN) - LENS RING UNIT (FOCUS/ASPECT SW)	8pin 0.5FFC
4	RFKZ0354	FP9004 (MAIN) - JOINT FPC - FP2501 (LVF)	37pin 0.3FFC
5	RFKZ0564	FP9010 (MAIN) - JOINT FPC - FP9903 (TOP)	23pin 0.3FFC
6	VFK1364	FP9007 (MAIN) - JOINT FPC - FP9201 (BATTERY)	14pin 0.5FFC
7	VFK1440	FP9006 (MAIN) - LENS RING UNIT (IRIS RING SW)	10pin 0.5FFC



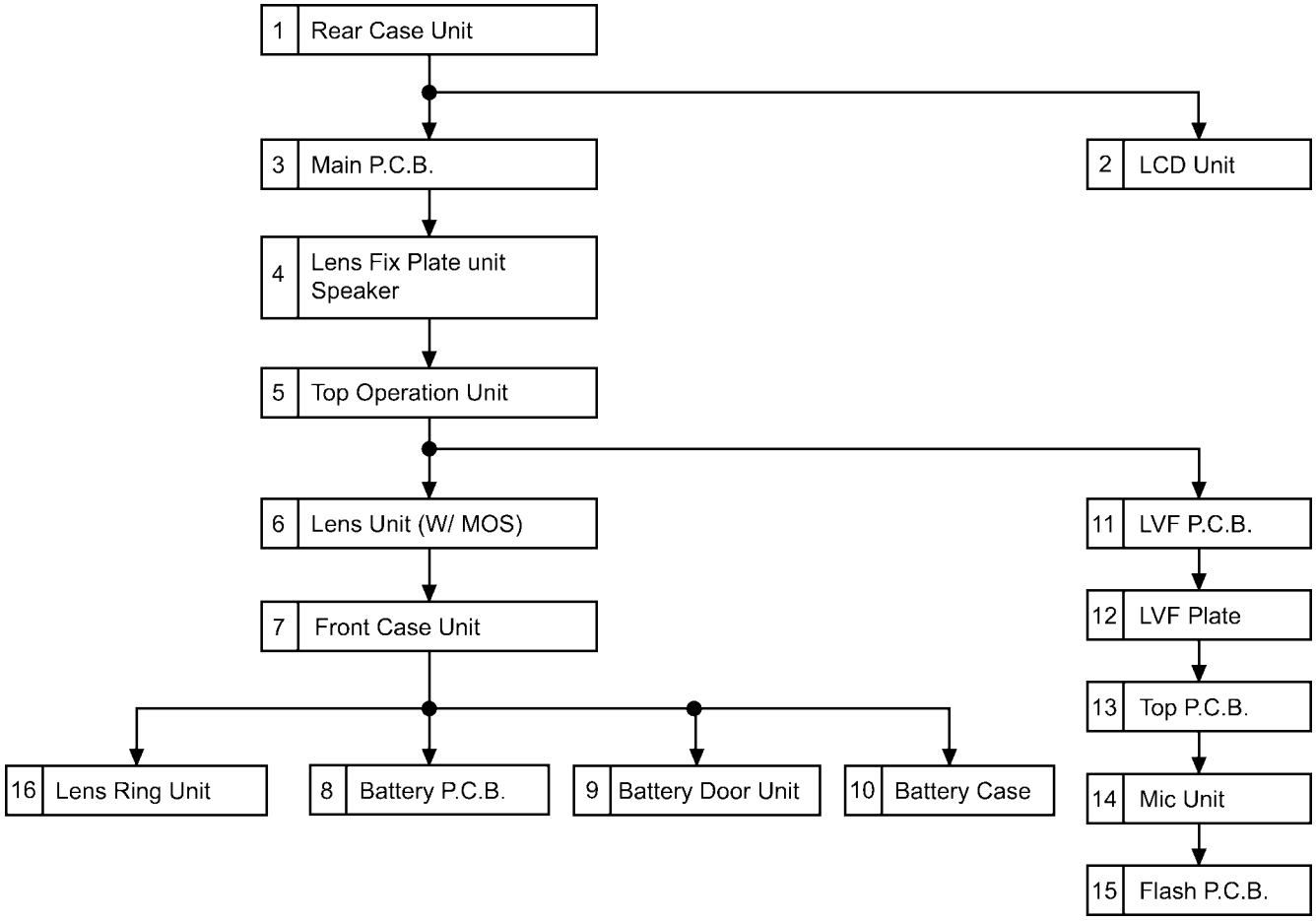
CAUTION-1. (When servicing FLASH P.C.B.)

1. Be sure to discharge the E.capacitor on FLASH P.C.B..
   Refer to “HOW TO DISCHARGE THE E.CAPACITOR ON FLASH P.C.B.”.
   The E.Capacitor voltage is not lowered soon even if the AC Cord is unplugged or the battery is removed.
2. Be careful of the high voltage circuit on FLASH P.C.B..
3. DO NOT allow other parts to touch the high voltage circuit on FLASH P.C.B..

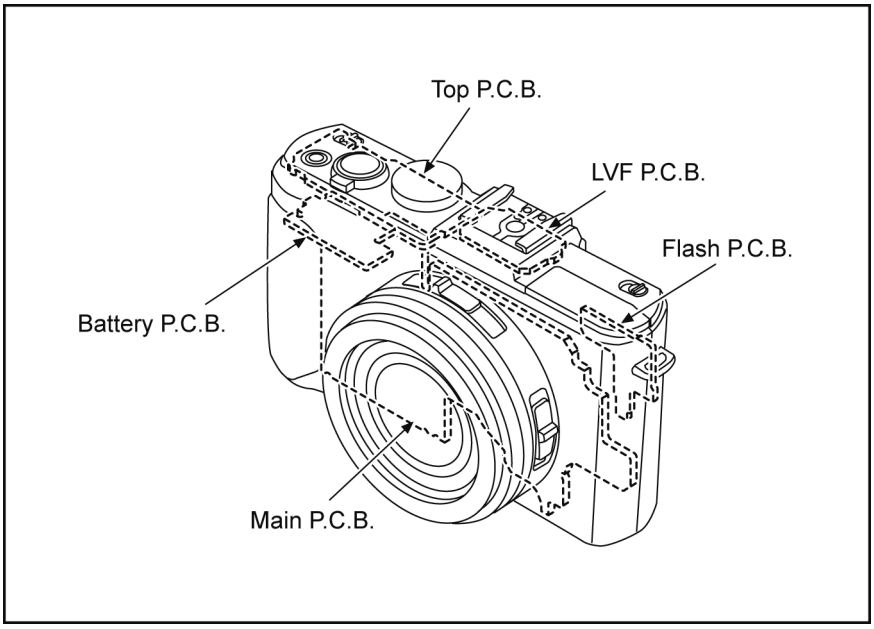
8 Disassembly and Assembly Instructions

8.1. Disassembly Flow Chart

This is a disassembling chart.
When assembling, perform this chart conversely.



8.2. P.C.B. Location



8.3. Disassembly Procedure

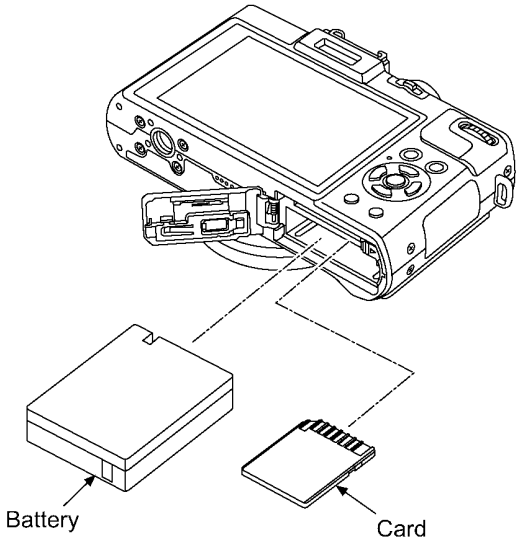
No.	Item	Fig	Removal
1	Rear Case Unit	(Fig. D1)	Card
			Battery
			1 Screw (A)
			2 Screws (B)
			2 Screws (C)
		(Fig. D2)	Shoe Spring
			2 Screws (D)
			FP9001 (Flex)
			Rear Case Unit
2	LCD Unit	(Fig. D3)	1 Screw (E)
			4 Locking tabs
			Frame Plate Unit
			LCD Unit
3	Main P.C.B.	(Fig. D4)	FP9002 (Flex)
			FP9003 (Flex)
			FP9004 (Flex)
			FP9005 (Flex)
			FP9006 (Flex)
			FP9007 (Flex)
			FP9008 (Flex)
			FP9010 (Flex)
			FP900 (Connector)
			1 Screw (F)
			3 Locking tabs
			Main P.C.B.
4	Lens Fix Plate Unit Speaker	(Fig. D5)	3 Screws (G)
			Lens Fix Plate Unit
			Speaker
5	Top Operation Unit	(Fig. D6)	2 Screws (H)
			1 Screw (I)
			1 Screw (J)
		(Fig. D7)	Top Operation Unit
6	Lens Unit (W/ MOS)	(Fig. D8)	2 Screws (K)
			Tripod
		(Fig. D9)	Lens Unit (W/ MOS)
7	Front Case Unit	(Fig. D10)	1 Screw (L)
			2 Locking tabs
			Front Case Unit
8	Battery P.C.B.	(Fig. D11)	1 Screw (M)
			1 Hooking part
			Battery P.C.B.
9	Battery Door Unit	(Fig. D12)	Battery Door Shaft
			Battery Door Spring
			Battery Door Unit
10	Battery Case	(Fig. D13)	3 Locking tabs
			Battery Out Spring
			Battery Case
11	LVF P.C.B.	(Fig. D14)	2 Screws (N)
			LVF P.C.B.
12	LVF Plate	(Fig. D15)	2 Locking tabs
			LVF Plate
13	Top P.C.B.	(Fig. D16)	FP9902 (Flex)
			FP9951 (Flex)
			4 Screws (O)
			3 Ribs
			1 Hooking part
			Top P.C.B.
			Coupling Plate
		(Fig. D17)	NOTE: (When Installing)
14	Mic Unit	(Fig. D18)	Mic Cushion (C)
			Mic Unit
			Mic Cushion (B)
			Mic Cushion (A)

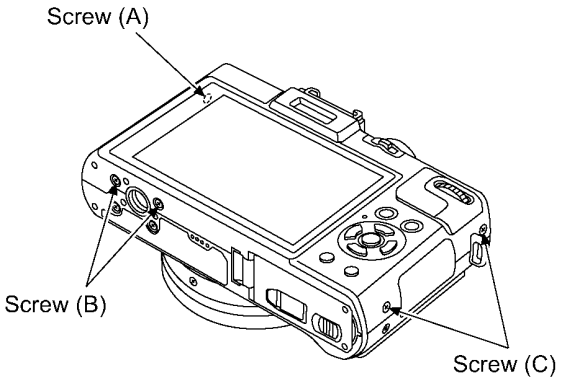
No.	Item	Fig	Removal
15	Flash P.C.B.	(Fig. D19)	1 Screw (P)
			1 Rib
			2 Locking tabs
			FL tape
		(Fig. D20)	1 Locking tab
			1 Rib
			FL PCB Cover
			P8001 (Connector)
			P8002 (Connector)
			Flash P.C.B.
16	Lens Ring Unit	(Fig. D21)	4 Screws (Q)
			Front Plate
			Front Case Unit
			Lens Ring Unit

8.3.1. Removal of the Rear Case Unit

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

- Card
- Battery
- Screw (A) × 1
- Screw (B) × 2
- Screw (C) × 2

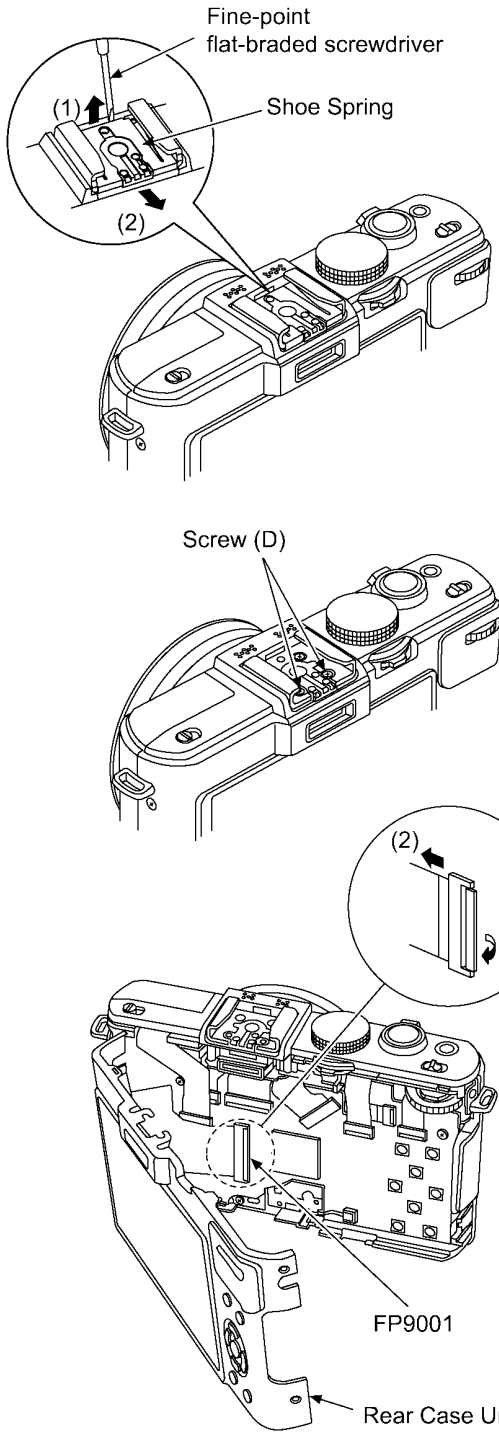




Screw (A)	Screw (B)	Screw (C)
2.5mm	3.3mm	2.8mm
Ⓦ: SILVER Ⓚ: BLACK	Ⓦ: SILVER Ⓚ: BLACK	Ⓦ: SILVER Ⓚ: BLACK

(Fig. D1)

- Shoe Spring
- Screw (D) × 2
- FP9001 (Flex)



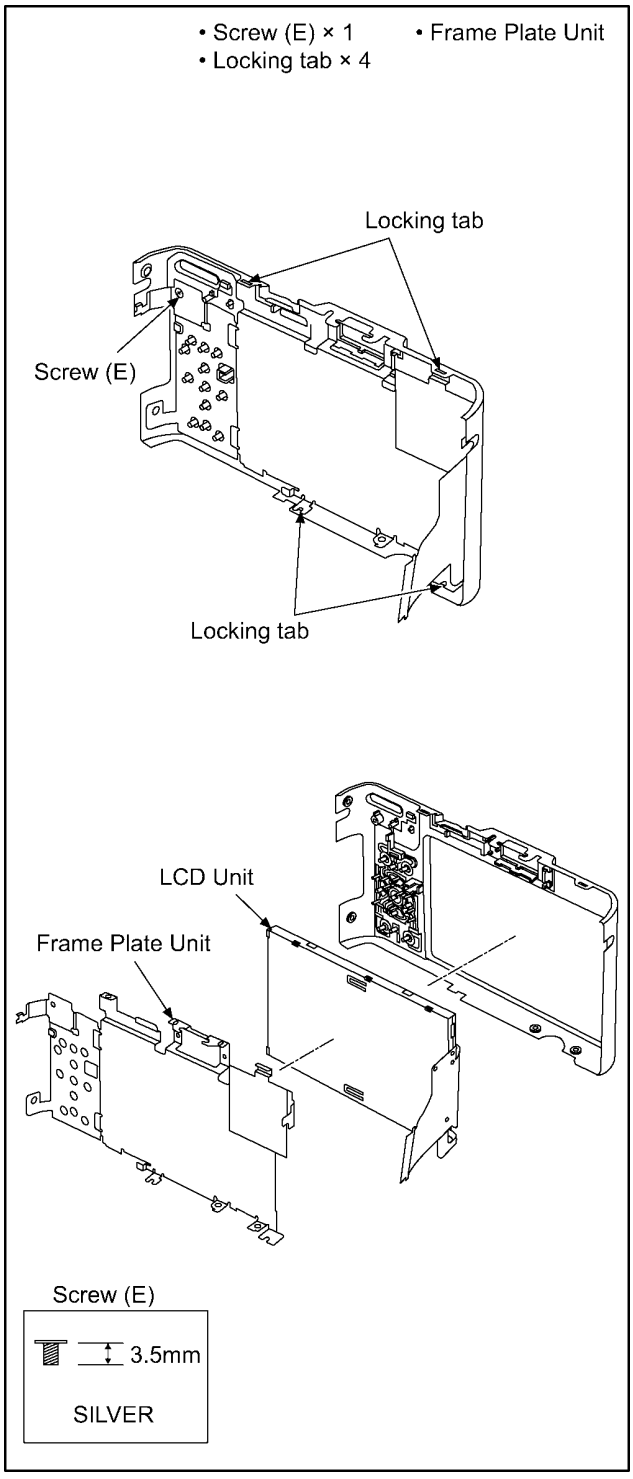
Screw (D)
5.5mm
SILVER

NOTE: (When Replacing)

- When remove the flex, pull up the locking tab in the direction of arrow (1), and then remove the flex in the direction of arrow (2).

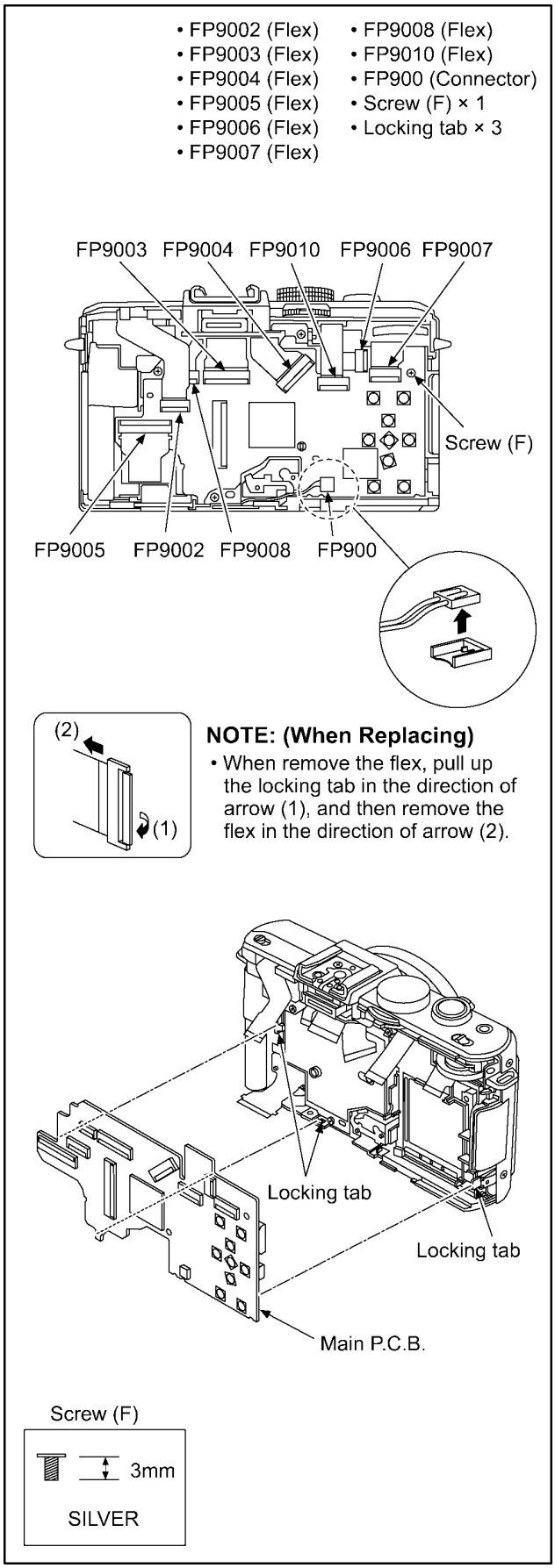
(Fig. D2)

8.3.2. Removal of the LCD Unit



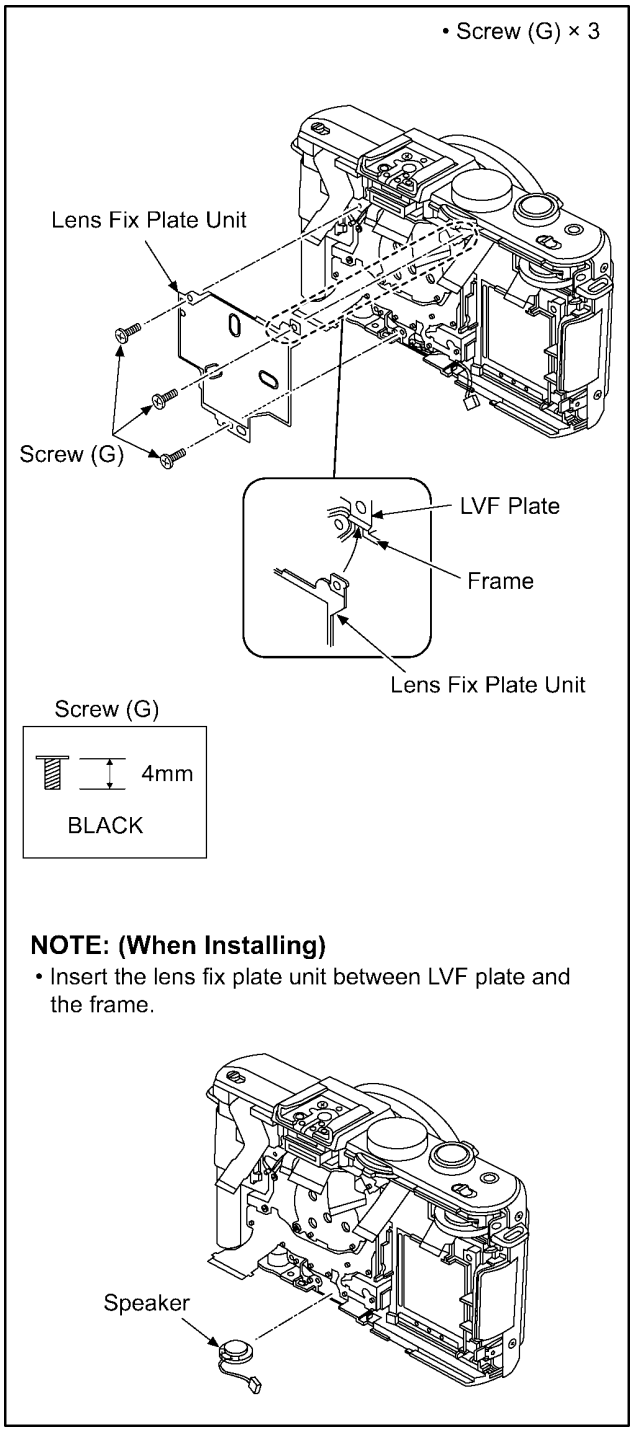
(Fig. D3)

8.3.3. Removal of the Main P.C.B.



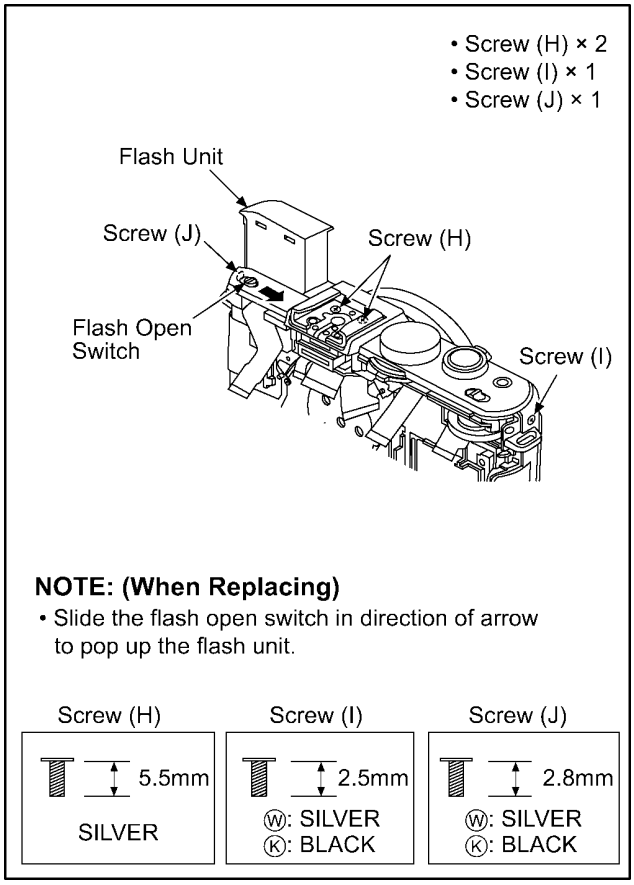
(Fig. D4)

8.3.4. Removal of the Lens Fix Plate Unit and Speaker

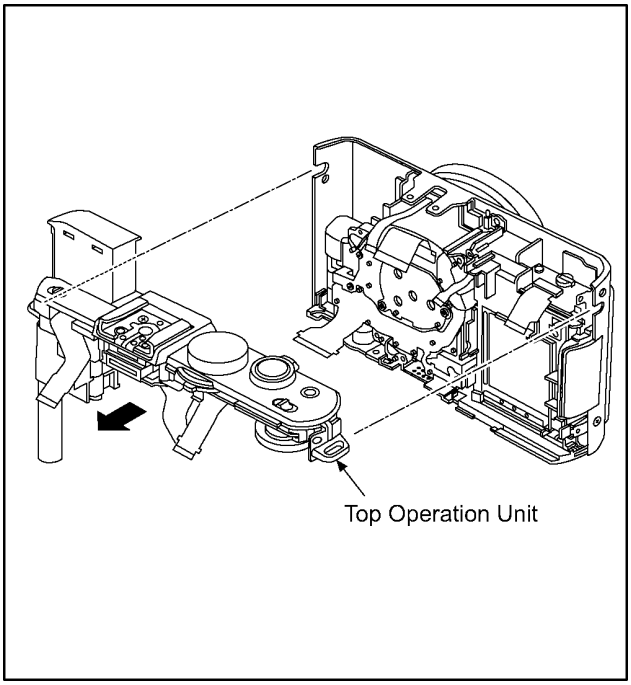


(Fig. D5)

8.3.5. Removal of the Top Operation Unit

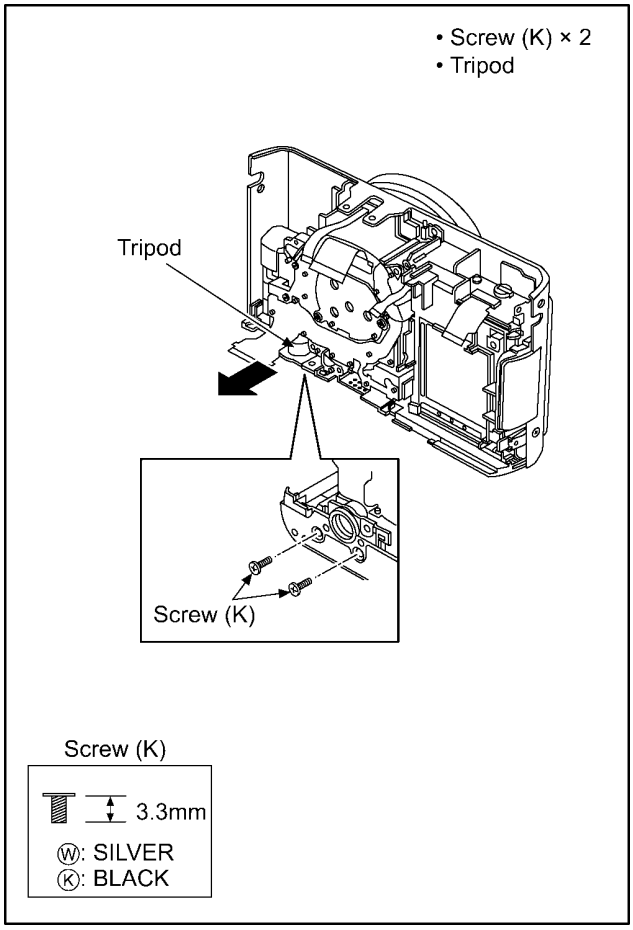


(Fig. D6)

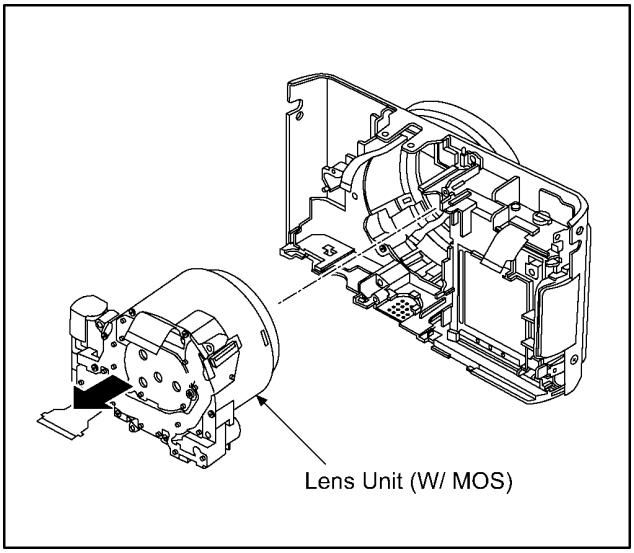


(Fig. D7)

8.3.6. Removal of the Lens Unit (W/ MOS)

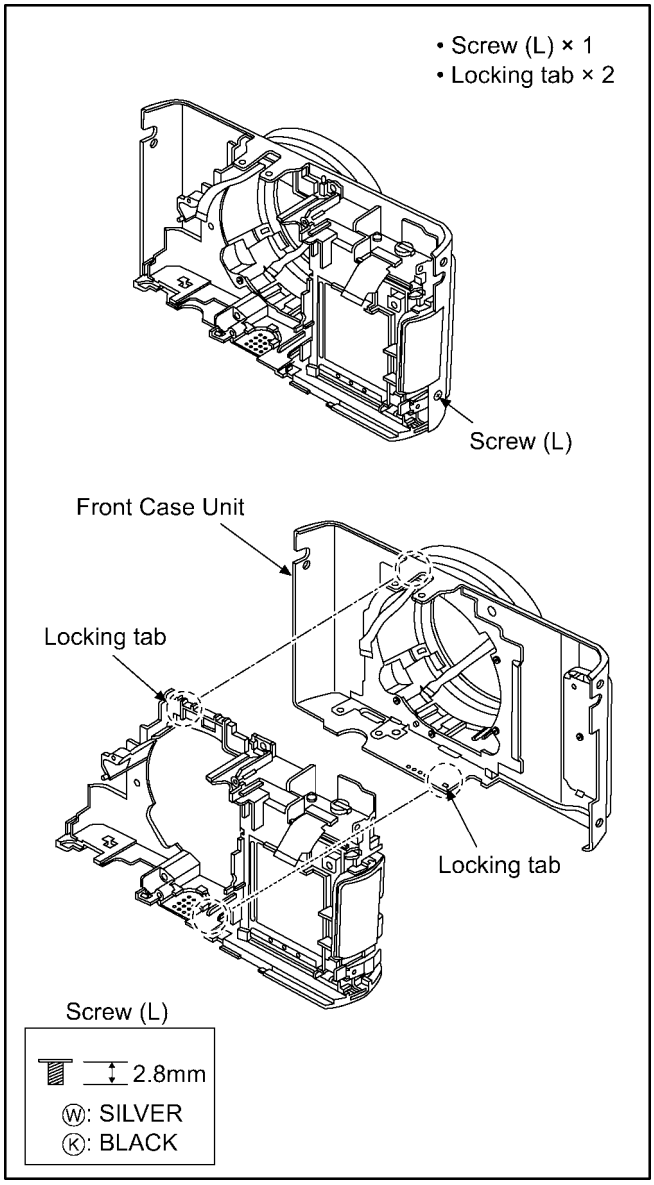


(Fig. D8)



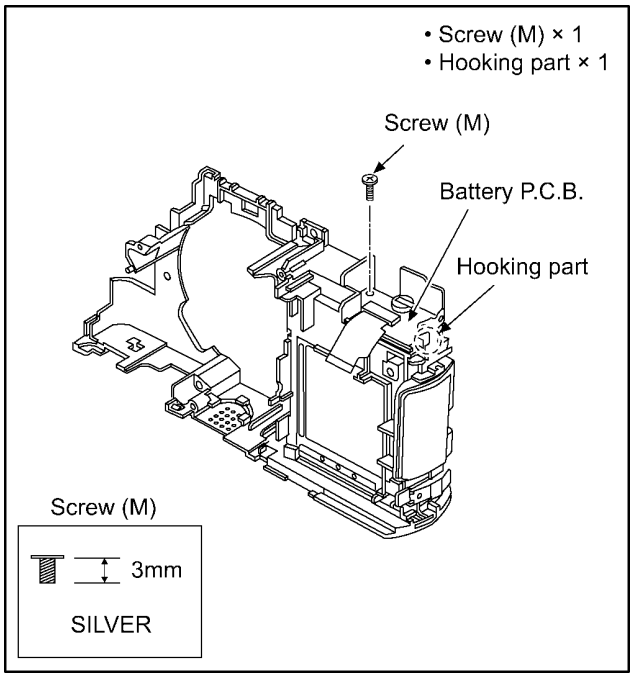
(Fig. D9)

8.3.7. Removal of the Front Case Unit



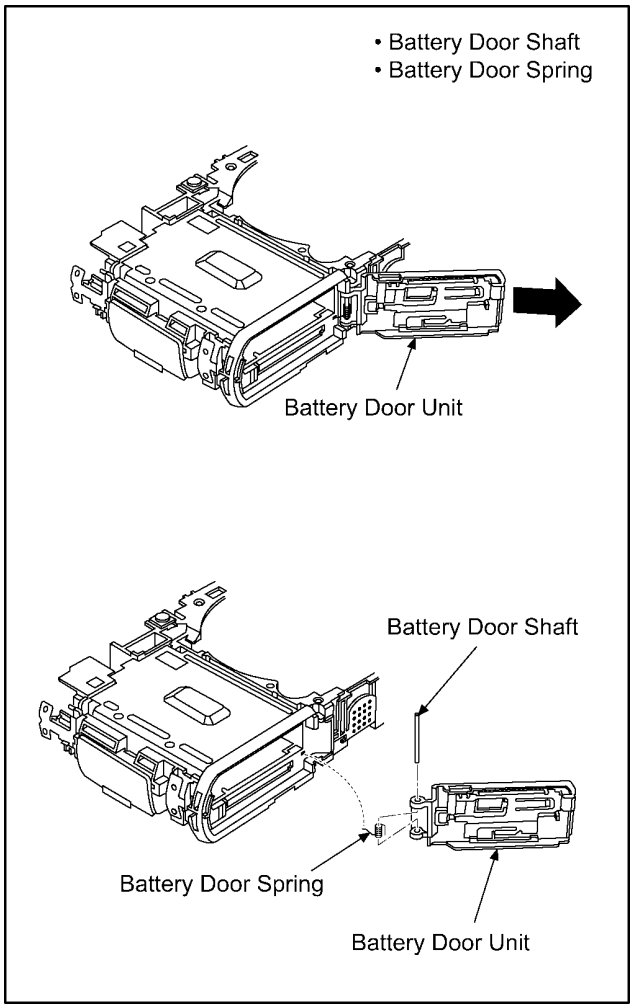
(Fig. D10)

8.3.8. Removal of the Battery P.C.B.



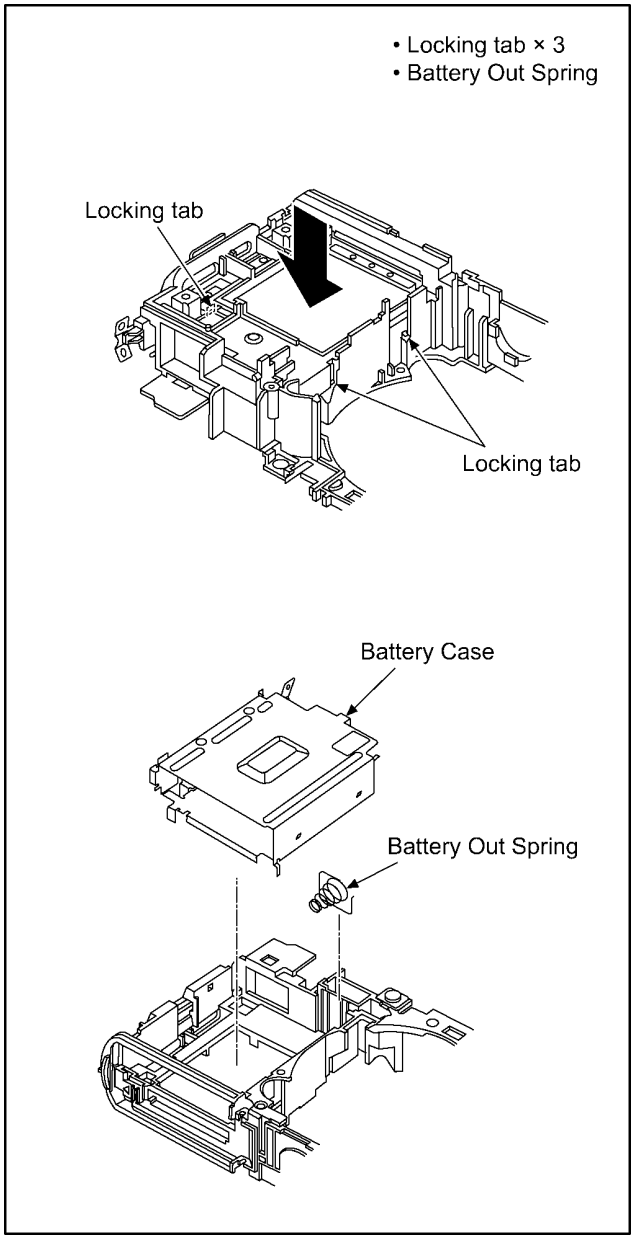
(Fig. D11)

8.3.9. Removal of the Battery Door Unit



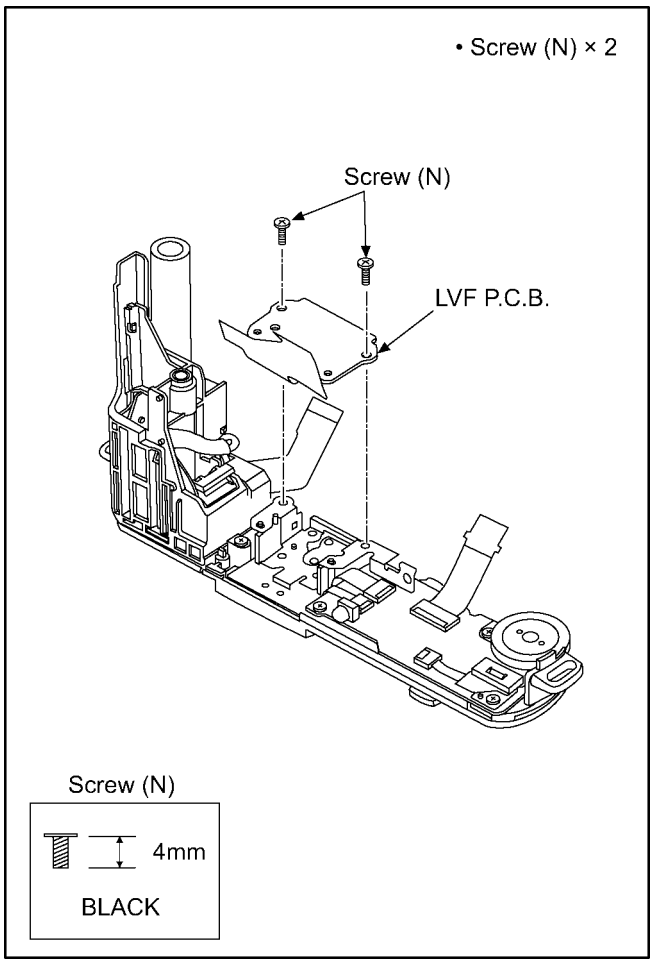
(Fig. D12)

8.3.10. Removal of the Battery Case



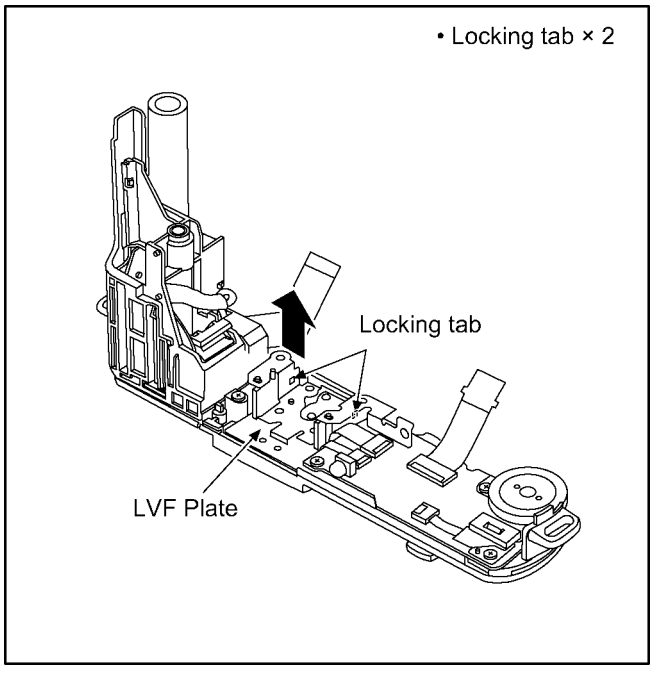
(Fig. D13)

8.3.11. Removal of the LVF P.C.B.



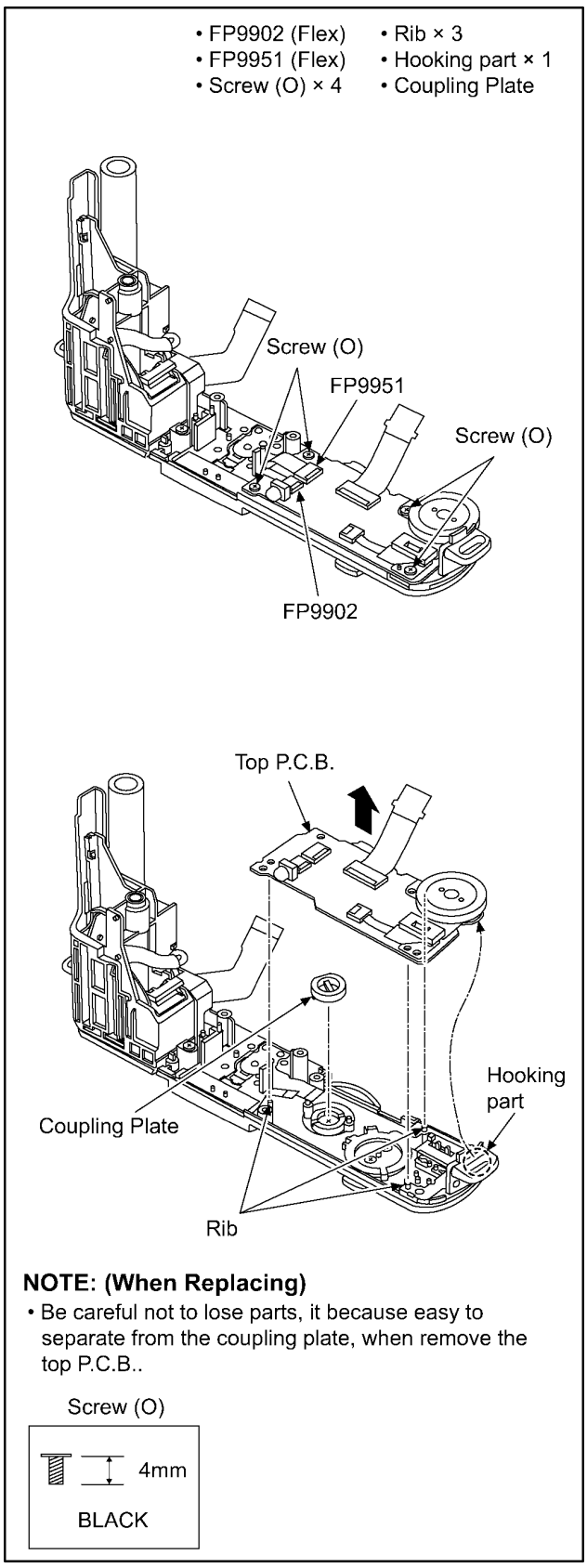
(Fig. D14)

8.3.12. Removal of the LVF Plate



(Fig. D15)

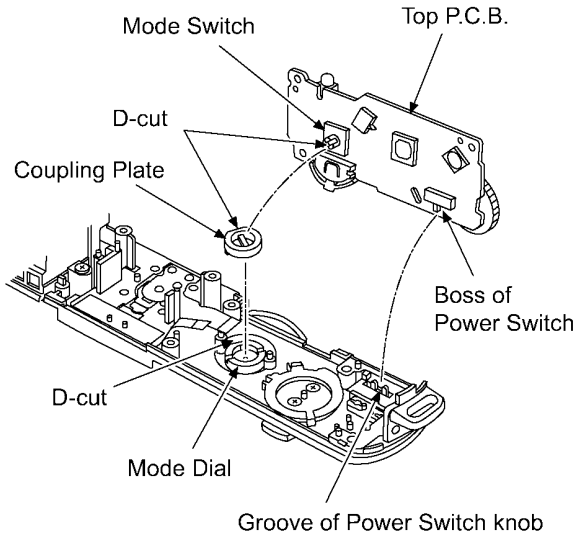
8.3.13. Removal of the Top P.C.B.



(Fig. D16)

NOTE: (When Installing)

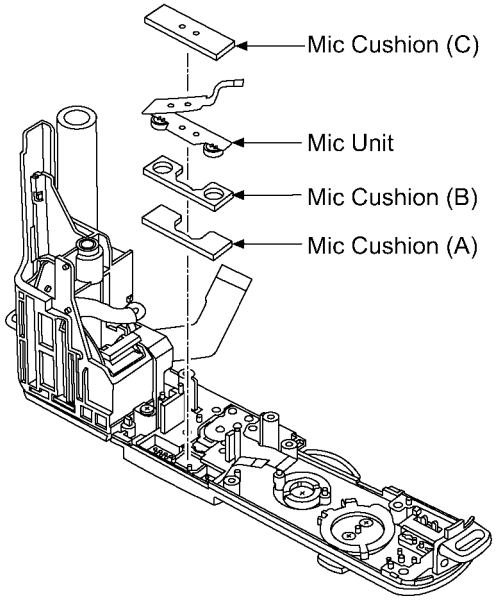
- Align the boss of power switch and groove of power switch knob.
- Align the D-cut of mode dial and D-cut of coupling plate, then attach the coupling plate to mode dial.
- Align the D-cut of coupling plate and D-cut of mode switch, then attach to the top P.C.B.



(Fig. D17)

8.3.14. Removal of the Mic Unit

- Mic Cushion (C)
- Mic Cushion (B)
- Mic Cushion (A)

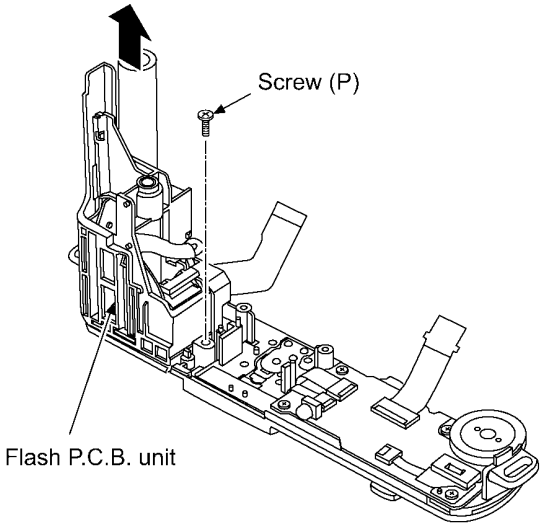


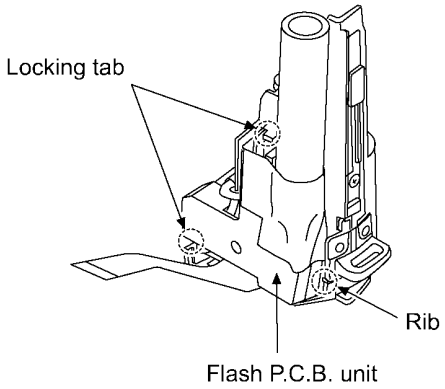
(Fig. D18)

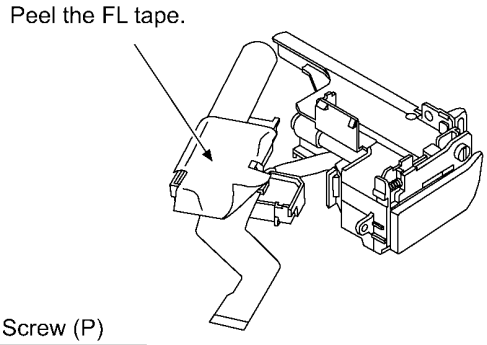
8.3.15. Removal of the Flash P.C.B.

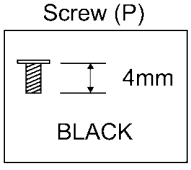
IMPORTANT NOTICE:
Take care not apply any bending load to the charging E.capacitor. It brings about the possibility of P.C.B. and/or component damage on the Flash P.C.B..

- Screw (P) × 1
- Rib × 1
- Locking tab × 2
- FL tape





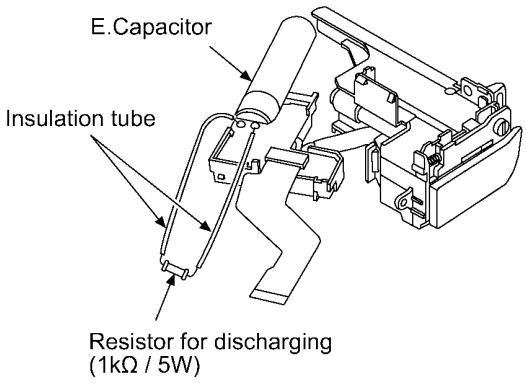




(Fig. D19)

IMPORTANT NOTICE:
Take care not apply any bending load to the charging E.Capacitor. It brings about the possibility of P.C.B. and/or component damage on the Flash P.C.B..

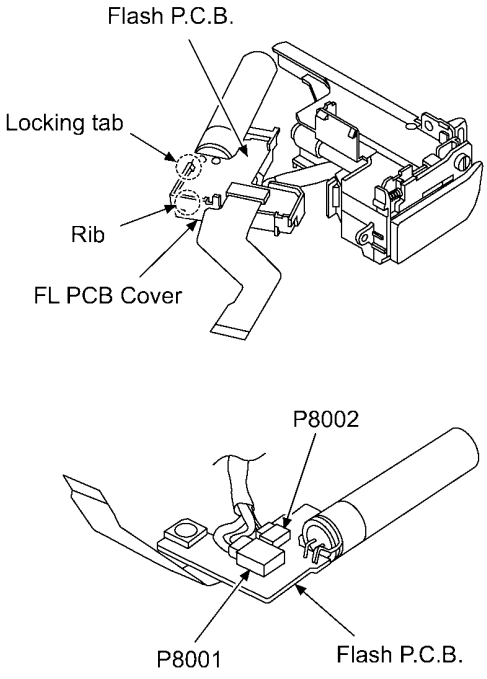
- Locking tab × 1
- Rib × 1
- FL PCB Cover
- P8001 (Connector)
- P8002 (Connector)



⚠ CAUTION

Be sure to discharge the E.Capacitor on Flash P.C.B. before disassembling.

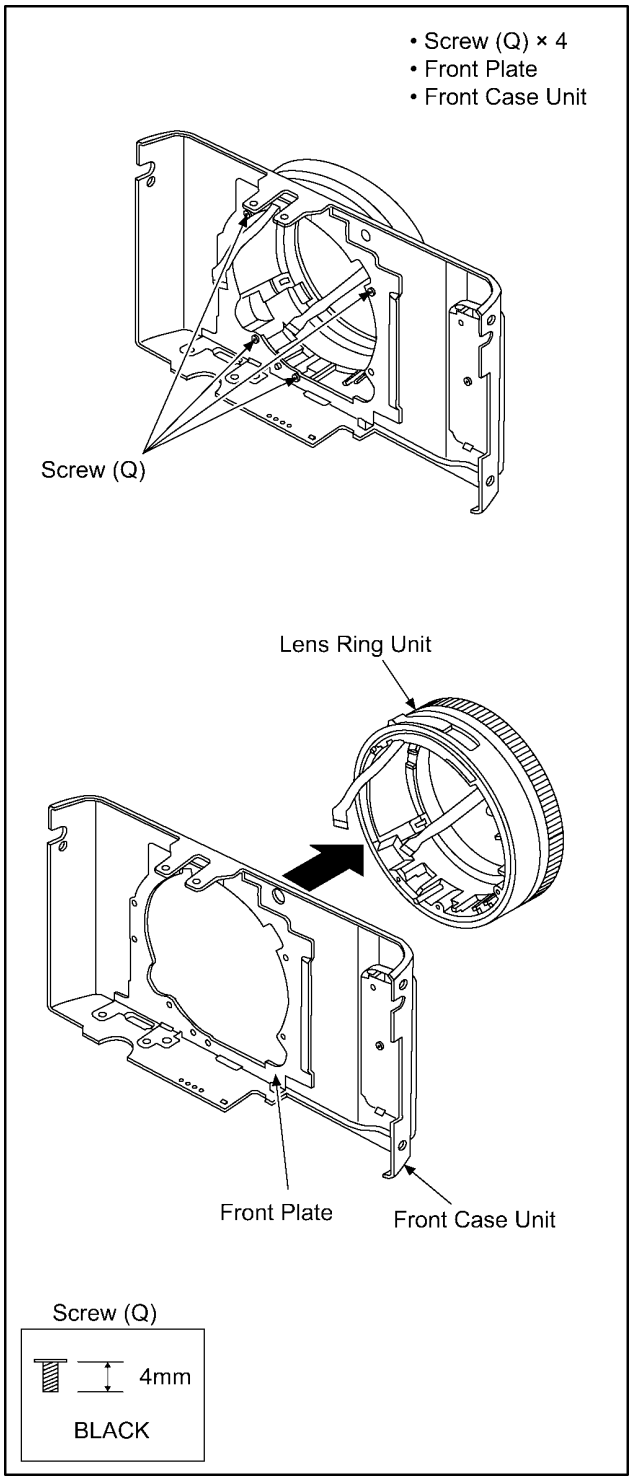
1. Remove the flash P.C.B. unit.
2. Peel the FL tape.
3. Put the insulation tube on the lead part of resistor (ERG5SJ102: 1kΩ / 5W).
4. Put the resistor between both terminals of E.Capacitor unit for approx. 5 seconds.



(Fig. D20)

8.3.16. Removal of the Lens Ring Unit

- Screw (Q) × 4
- Front Plate
- Front Case Unit



(Fig. D21)

NOTE: (When Installing)

Make sure to confirm the following points when installing:

- The Screw is tightened enough.
- Installing conditions are fine. (No distortion, no abnormal-space.)
- No dust and/or dirt on Lens surfaces.
- LCD image is fine. (No dust and dirt on it, and no gradient images.)

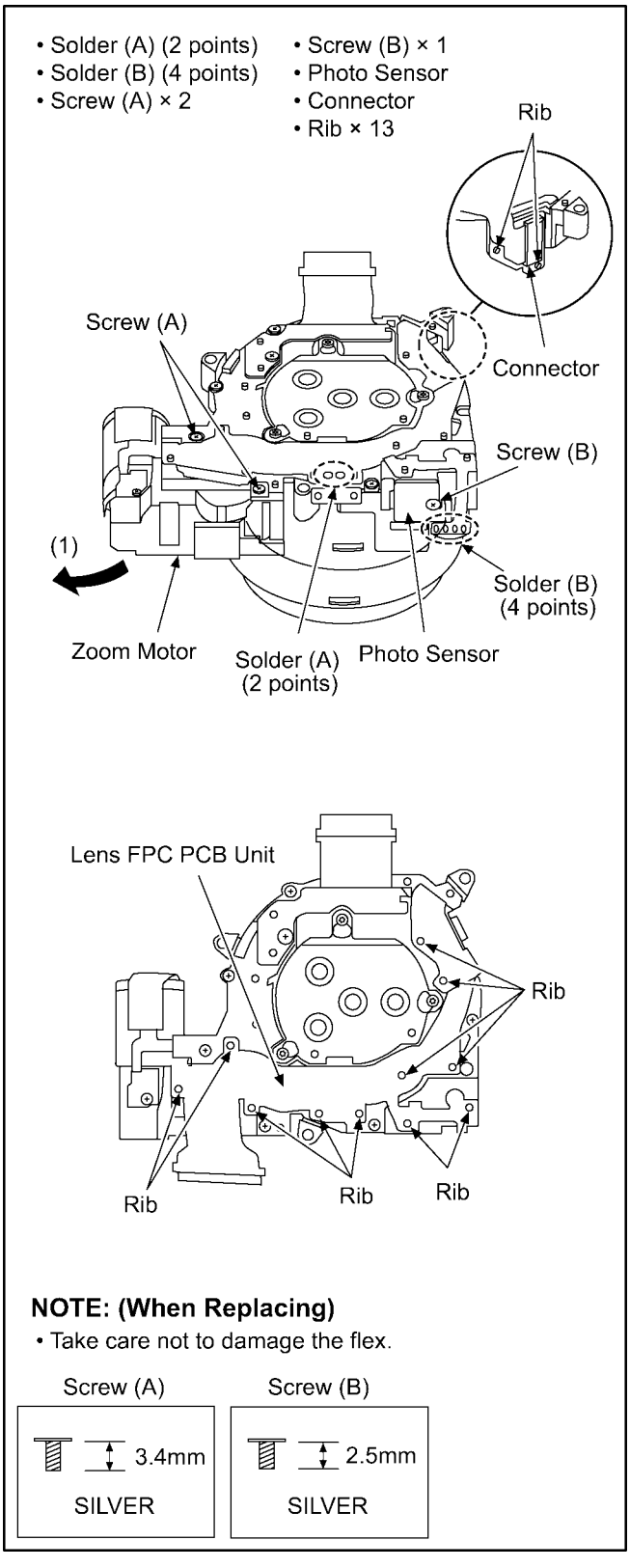
8.4. Lens Disassembly Procedure

Precaution:

1. Do not remove the MOS unit when disassembling or re-assembling the lens in order to maintain it clean.
   The screw fitting the MOS unit to the master flange unit is fixed by the screw locking glue with the adjustment of the installation angle of the MOS unit against the lens (optical tilt adjustment) finished.
   When remove it, refer to item “8.8.”.
2. Keep dust or dirt away from the lens.
   To remove dirt or dust from the lens, blow with dry air.
3. Do not touch the lens surface.
4. Use lens cleaning KIT (VFK1900BK).
5. 2nd lens has the "Nano Surface Coating".
   To avoid damage the coating, don't wipe the lens surface.
   You can only blow out the dust by Blower.
6. Apply grease (RFKZ0472) as shown on “THE APPLICATION OF GREASE METHOD” in the figure.

8.4.1. Removal of the Zoom Motor and Lens FPC PCB Unit

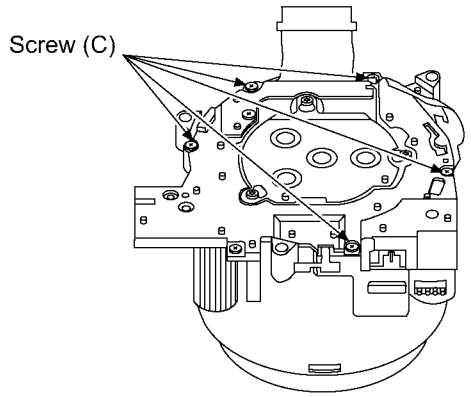
1. Remove the 2 solders (A) and 4 solders (B).
2. Unscrew the 2 screws (A).
3. Remove the zoom motor to the direction of arrow (1).
4. Unscrew the 1 screw (B) and remove the photo sensor.
5. Disconnect the 1 connector.
6. Remove the 13 ribs.
7. Remove the lens FPC PCB unit.

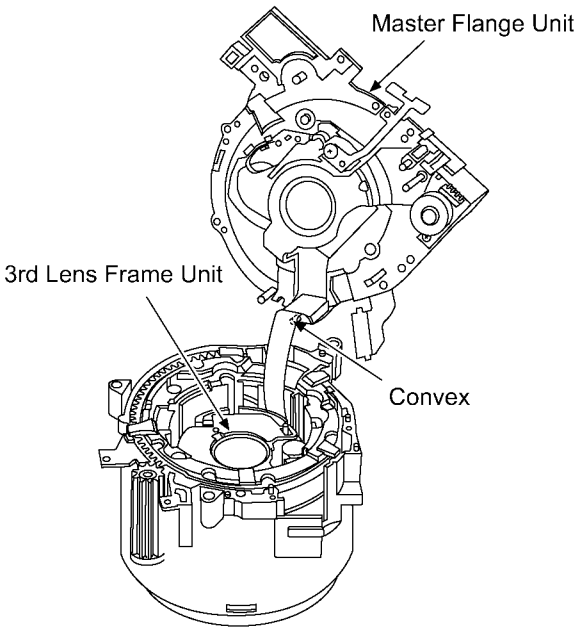


8.4.2. Removal of the Master Flange Unit

1. Unscrew the 5 screws (C).
2. Remove the 1 convex.
3. Remove the master flange unit.

• Screw (C) × 5
• Convex × 1





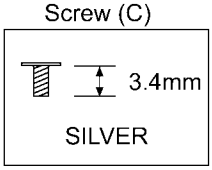
NOTE: (When Replacing)

- Remove the flex of 3rd lens frame unit from convex of the master flange unit.
- Take care not to damage the flex.

NOTE: (When Installing)

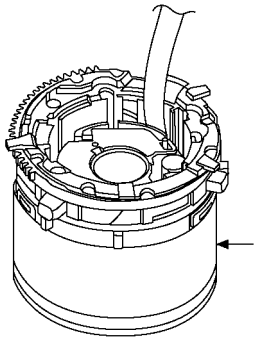
- Refer to “THE APPLICATION OF GREASE METHOD” when installing the master flange unit.

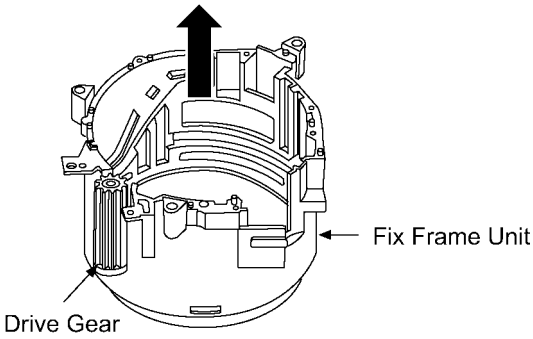
Screw (C)



8.4.3. Removal of the 1st Direct Frame Unit/1st Lens Frame Unit/Both Side Cam Frame/2nd-3rd Direct Frame/ 2nd Lens Frame Unit/3rd Lens Frame Unit

1. Push the 1st direct frame unit from the lens front side in the direction of arrow, and then remove the unit of 1st direct frame unit/1st lens frame unit/both side cam frame/ 2nd-3rd direct frame/2nd lens frame unit/3rd lens frame unit from the fix frame unit.



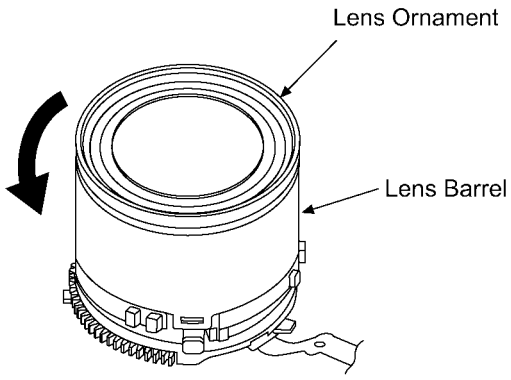


NOTE: (When Replacing)

- Take care not to damage the flex.
- When push and lift, take care not to put fingerprint of the lens.
- Be careful not to lose parts, it because easy to separate from the drive gear.

8.4.4. Removal of the Lens Ornament

1. Hold the lens barrel with fingers lightly, rotate the lens ornament in the direction of arrow with the oppsite hand and remove the lens ornament from the barrel.

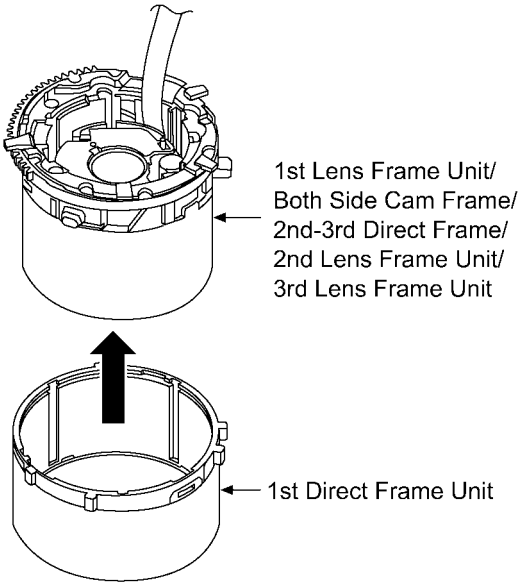


NOTE: (When Replacing)

• Take care not to put fingerprint of the lens.

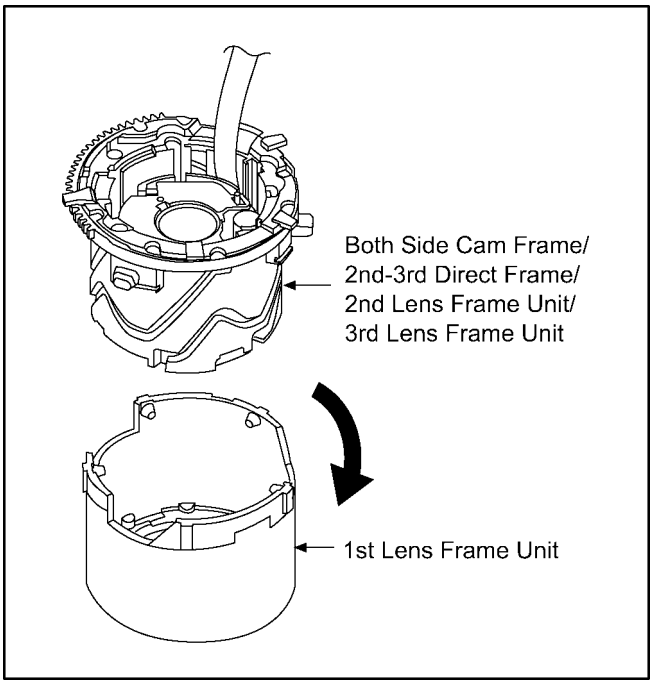
8.4.5. Removal of the 1st Lens Frame Unit/Both Side Cam Frame/2nd-3rd Direct Frame/ 2nd Lens Frame Unit/ 3rd Lens Frame Unit

1. Push the 1st lens frame unit from the lens front side in the direction of arrow, and then remove the unit of 1st lens frame unit/both side cam frame/2nd-3rd direct frame/2nd lens frame unit/3rd lens frame unit from the 1st direct frame unit.



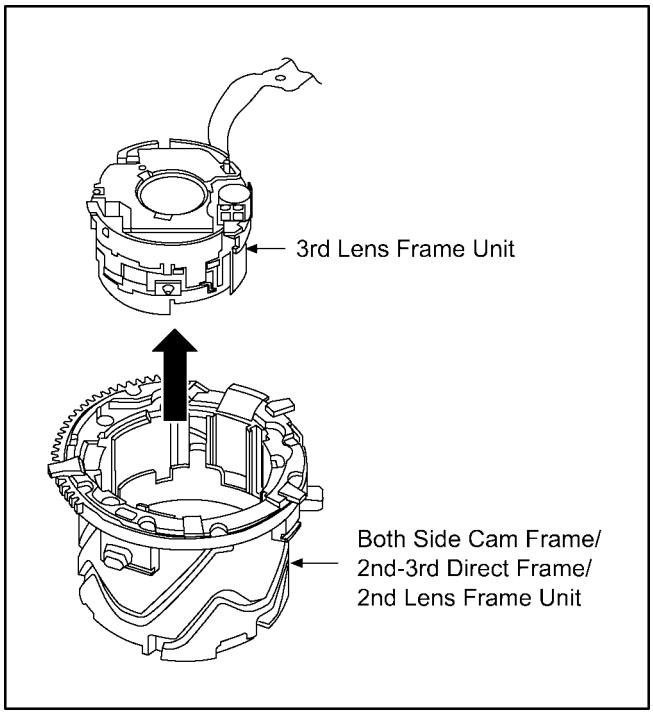
8.4.6. Removal of the Both Side Cam Frame/ 2nd-3rd Direct Frame/2nd Lens Frame Unit/3rd Lens Frame Unit

1. Rotate the 1st lens frame unit in the direction of arrow, and then remove the 1st lens frame unit from unit of both side cam frame/2nd-3rd direct frame/2nd lens frame unit/ 3rd lens frame unit.



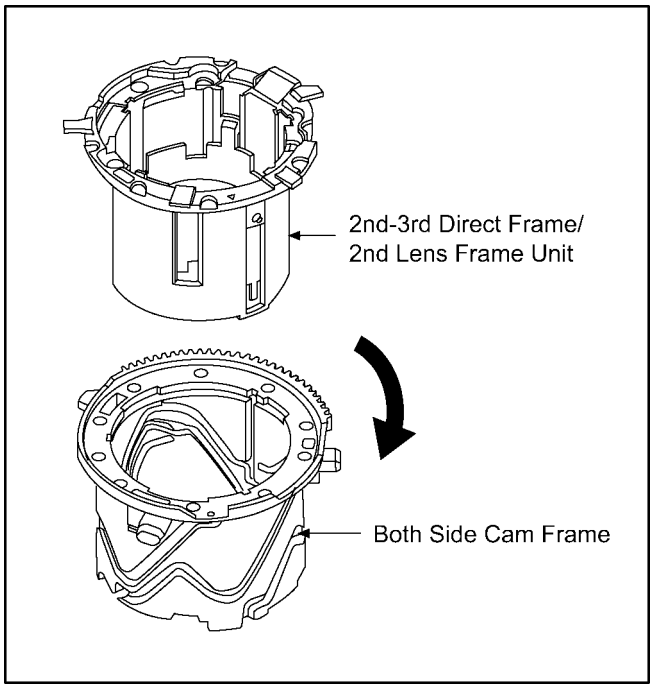
8.4.7. Removal of the 3rd Lens Frame Unit

1. Remove the unit of both side cam frame/2nd-3rd direct frame/2nd lens frame unit from 3rd lens frame unit.



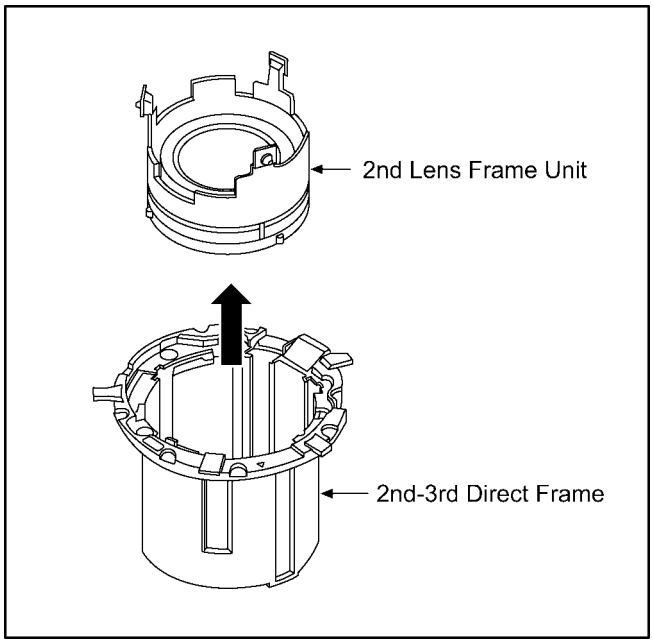
8.4.8. Removal of the Both Side Cam Frame

1. Rotate the both side cam frame in the direction of arrow, and then remove the both side cam frame from the unit of 2nd-3rd direct frame/2nd lens frame unit.



8.4.9. Removal of the 2nd Lens Frame Unit

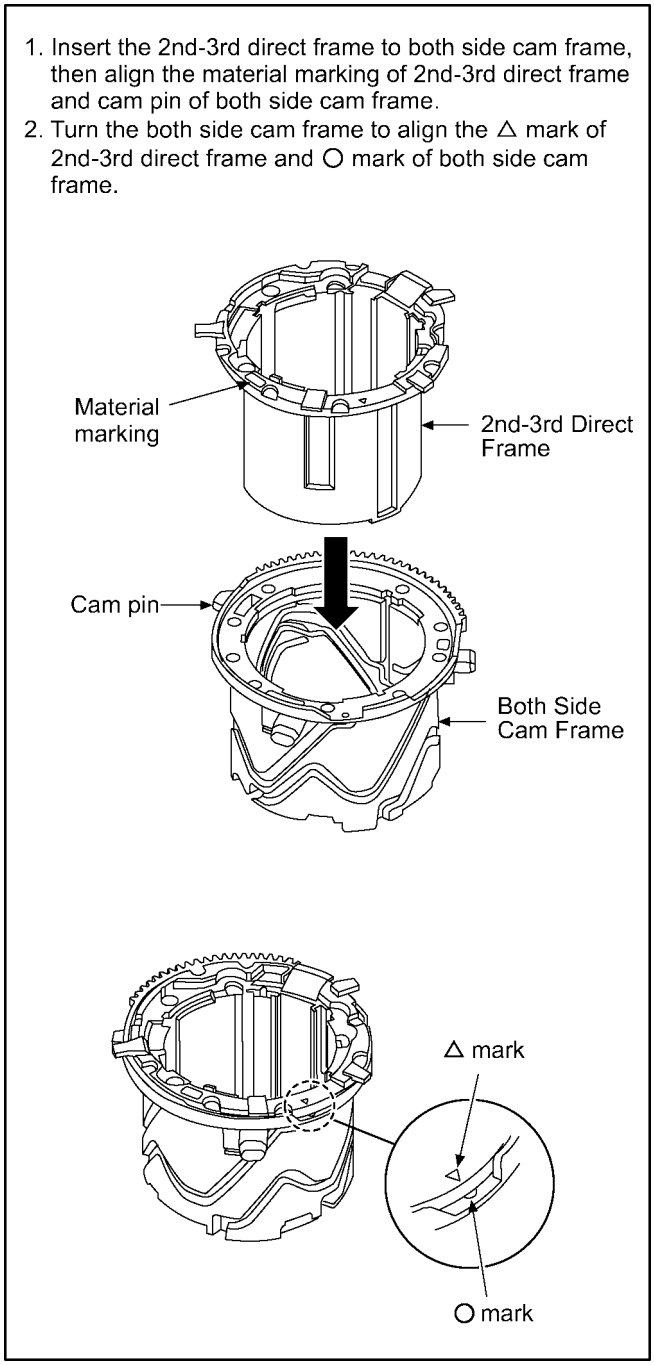
1. Remove the 2nd lens frame unit from the 2nd-3rd direct frame.



8.5. Assembly Procedure for the Lens (Phase Alignment)

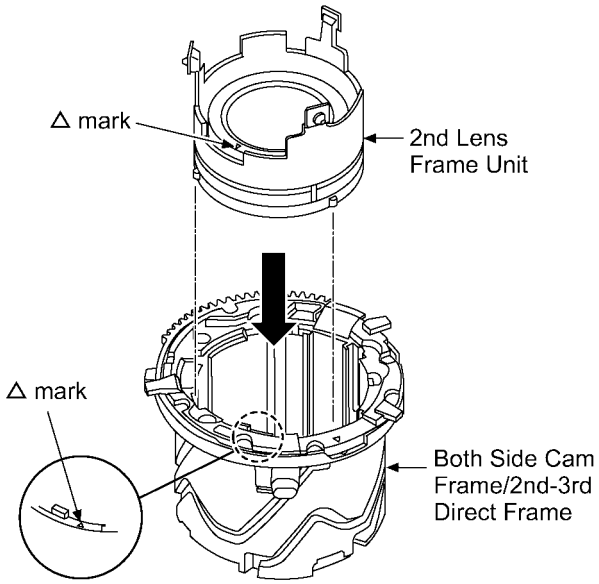
8.5.1. Phase alignment of the 2nd-3rd Direct Frame and Both Side Cam Frame

1. Insert the 2nd-3rd direct frame to both side cam frame, then align the material marking of 2nd-3rd direct frame and cam pin of both side cam frame.
2. Turn the both side cam frame to align the △ mark of 2nd-3rd direct frame and ○ mark of both side cam frame.



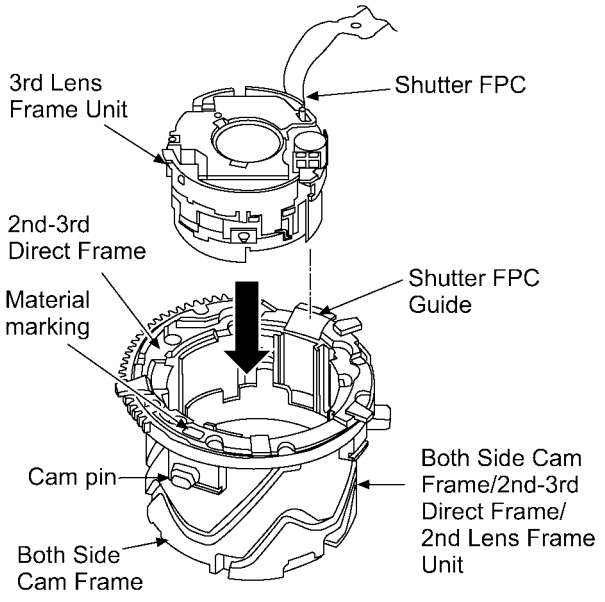
8.5.2. Phase alignment of the Both Side Cam Frame/2nd-3rd Direct Frame and 2nd Lens Frame

• Align the △ mark of both side cam frame/2nd-3rd direct frame and the △ mark of 2nd lens frame unit, and then insert them.



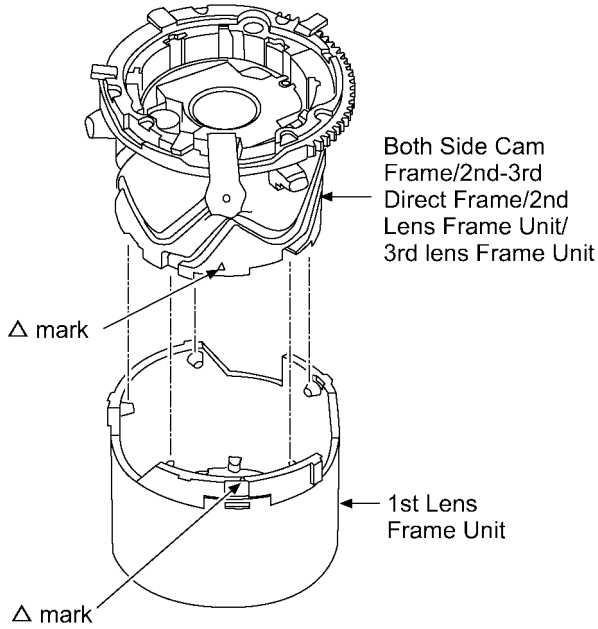
8.5.3. Phase alignment of the Both Side Cam Frame/2nd-3rd Direct Frame/ 2nd Lens Frame and 3rd Lens Frame

1. Turn the 2nd-3rd direct frame to align the material marking of 2nd-3rd direct frame and cam pin of both side cam frame.
2. Align the shutter FPC of 3rd lens frame unit and shutter FPC guide of 2nd-3rd direct frame, then insert them.



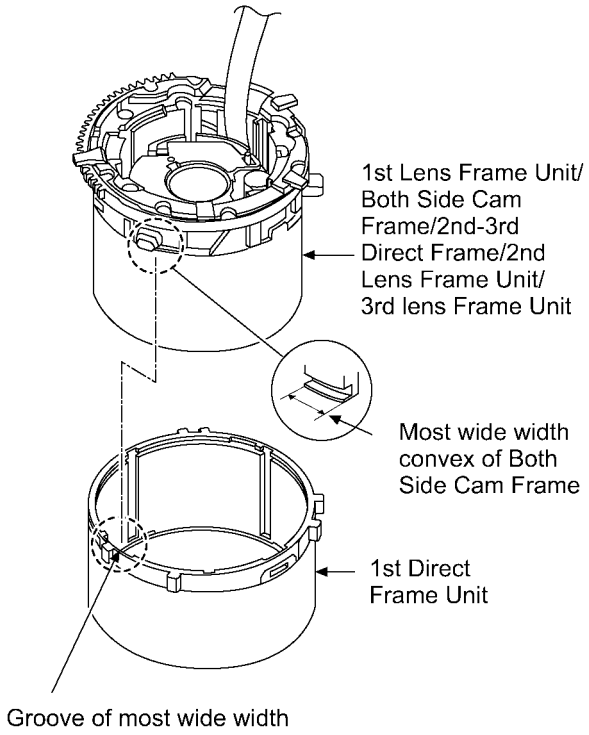
8.5.4. Phase alignment of the Both Side Cam Frame/2nd-3rd Direct Frame/ 2nd Lens Frame Unit/3rd Lens Frame Unit and 1st Lens Frame unit

• Align the △ mark of both side cam frame/2nd-3rd direct frame/2nd lens frame unit/3rd lens frame unit and the △ mark of 1st lens frame unit, then insert them.



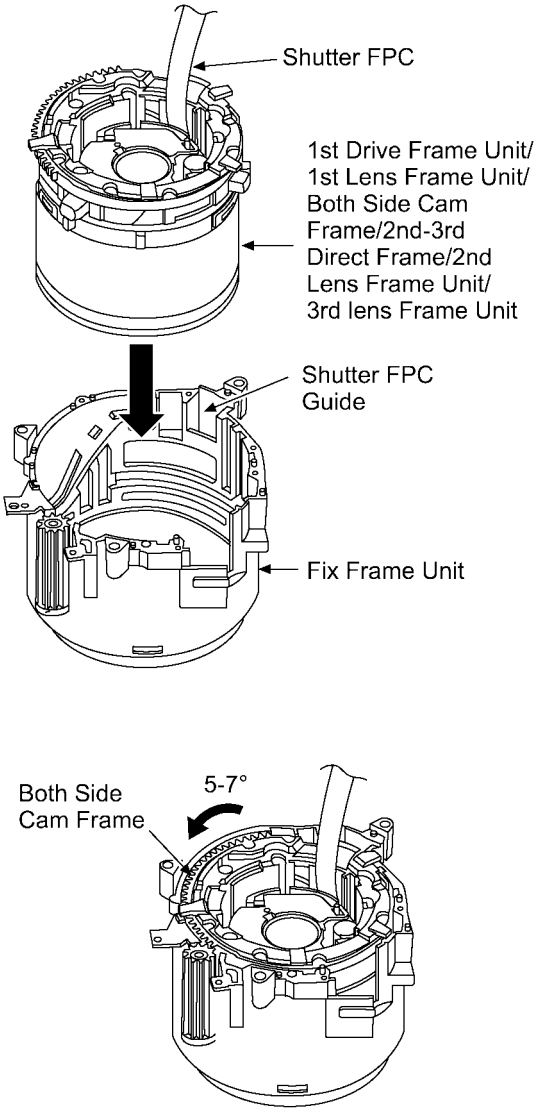
8.5.5. Phase alignment of the 1st Lens Frame Unit/Both Side Cam Frame/ 2nd-3rd Direct Frame/2nd Lens Frame Unit/3rd Lens Frame Unit and 1st Direct Frame unit

• Align the most wide width convex of both side cam frame and most wide width groove of 1st direct frame unit, then insert them.

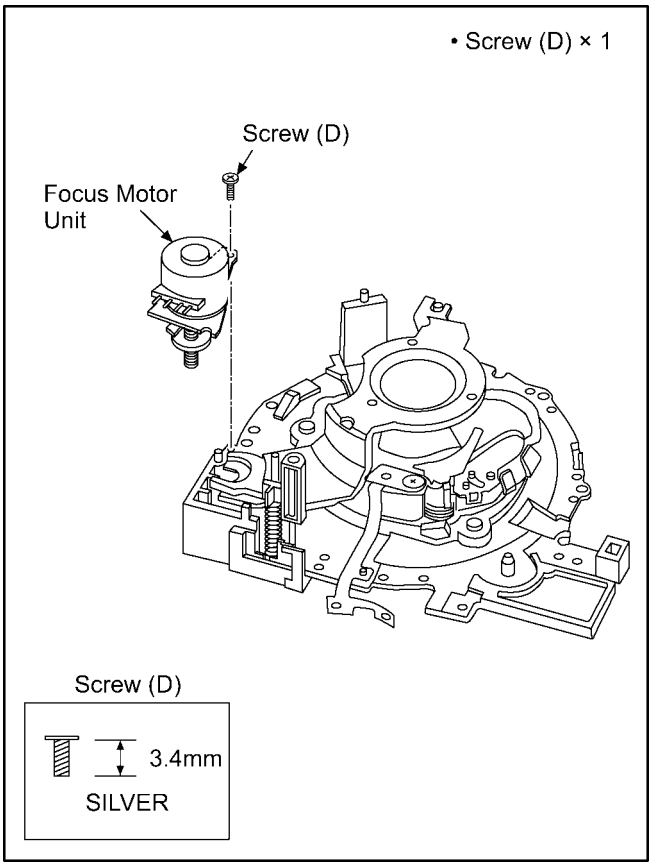


8.5.6. Phase alignment of the 1st Direct Frame unit/1st Lens Frame Unit/ Both Side Cam Frame/2nd-3rd Direct Frame/2nd Lens Frame Unit/ 3rd Lens Frame Unit and Fix Frame Unit

1. Align the shutter FPC guide of fix frame unit and shutter FPC, then insert them.
2. Rotate the both side cam frame counterclockwise 5 to 7 degrees.



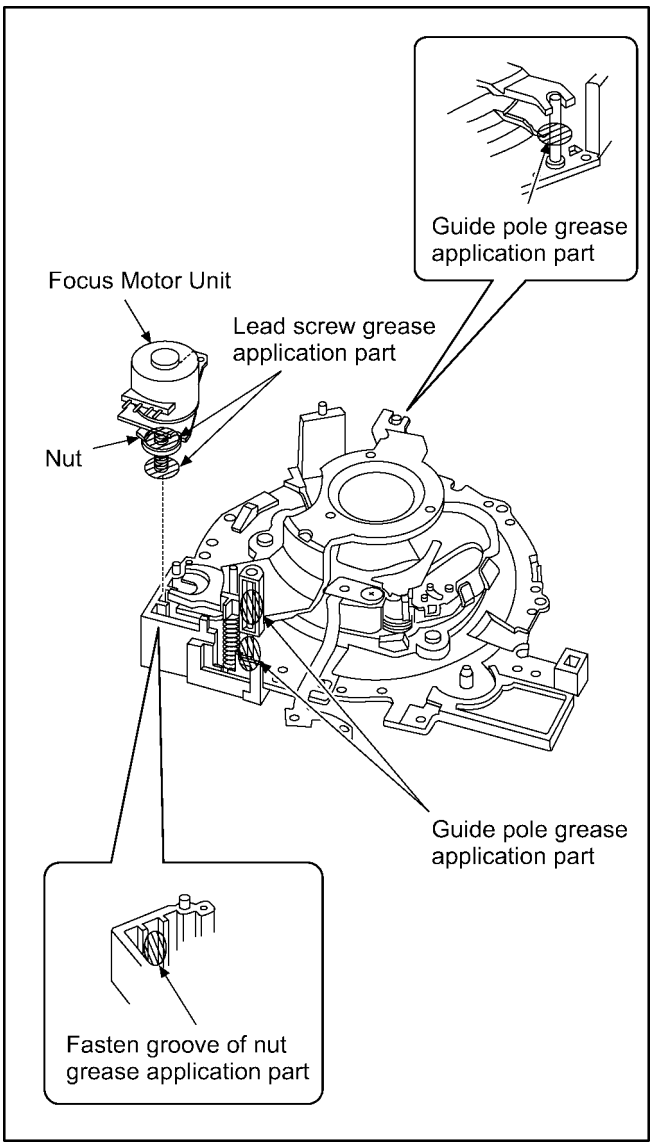
8.6. Removal of the Focus Motor Unit



8.7. The Application of Grease Method

The grease application parts of lens unit are as follows.
Apply grease additionally in the specified position if necessary.
When the grease is applied, use a toothpick and apply thinly.

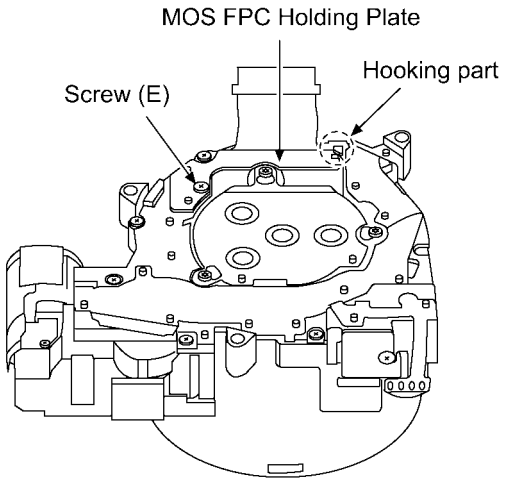
- Focus motor unit (lead screw)/Fasten groove of nut.
  - Grease: RFKZ0472
  - Amount of application: 2 - 4 mg
- Guide pole
  - Grease: RFKZ0472
  - Amount of application: 1 - 2 mg



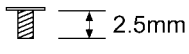
8.8. Removal of the MOS Unit

- When remove the MOS unit once (the screw (F) is loosened even a little), the optical tilt adjustment is required. When loosen the screw (F), necessary the optical tilt adjustment at the end of assembling. (Refer to item “9.3.2.”)
- To prevent the MOS unit from catching the dust and dirt, do not remove the MOS unit except for replacing.

• Screw (E) × 1
• Hooking part × 1
• MOS FPC Holding Plate



Screw (E)

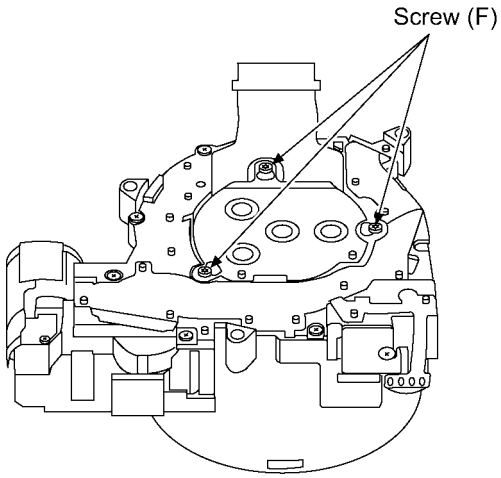


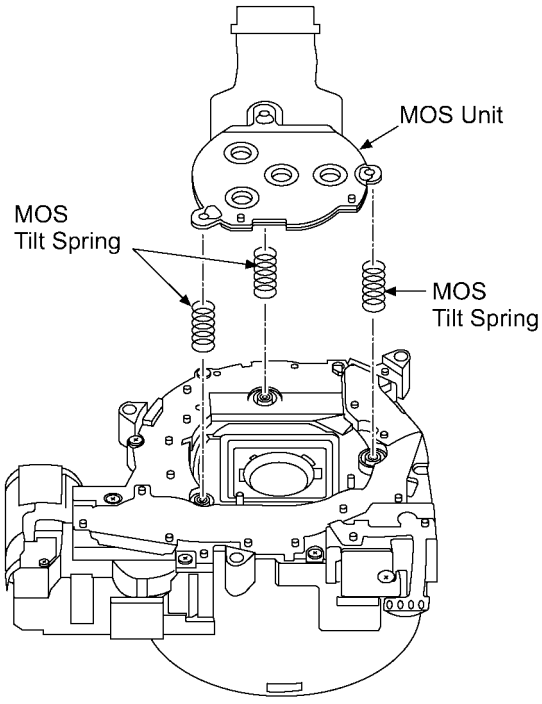
SILVER

■ CAUTION

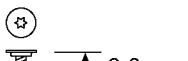
- The screw (F) is fixed by the screw locking glue with the optical tilt adjustment finished. When remove the MOS unit, wipe the screw locking glue away carefully.
- Don’t reuse the screw (F) that the screw locking glue adheres to keep dust or dirt away from the MOS unit. (When installing, take new screw(F).)

• Screw (F) × 3
• MOS Tilt Spring × 3





Screw (F)



SILVER
Special Screw
(T3 Torx type)

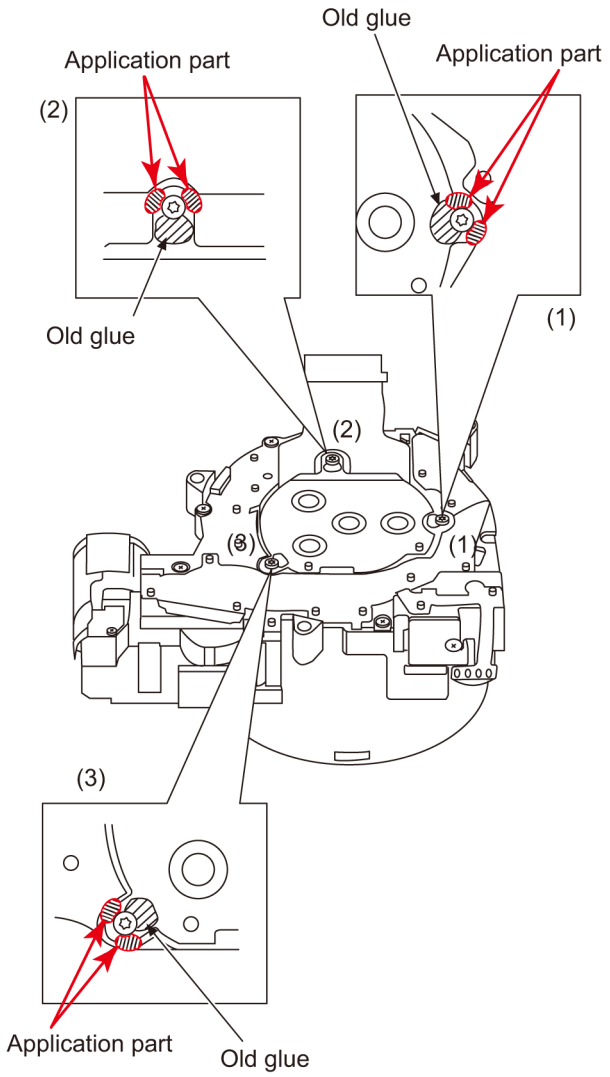
NOTE: (When Installing)

- Take new screw.
  (Don't reuse the screw that the screw locking glue adheres.)
- Tighten the 3 special screws according to the following.
  - Set the bit of adjustment driver (RFKZ0609) to the torque driver(RFKZ0542).

  [Screw order]: (1)→(2)→(3).
  [Screw torque]: 5±0.5 N•cm.
- Be sure to execute the optical tilt adjustment with the screw (1), (2) and (3).
- After the adjustment is finished, apply the screw locking glue as shown in the figure below.

- Apply the screw locking glue thinly on the head of screw to the sheet metal with a toothpick.
- Don't apply the screw locking glue where it is applied before disassembling.

(Example)
This is the case where the screw locking glue is applied to inside of the slash area.



9 Measurements and Adjustments

9.1. Introduction

When servicing this unit, make sure to perform the adjustments necessary based on the part(s) replaced.
Before disassembling the unit, it is recommended to back up the camera data stored in flash-rom as a data file.
NOTE: (When replacing the Lens unit, Master flange unit and MOS unit)

- When the MOS unit is unavoidably removed for Lens unit, Master flange unit and MOS unit replaced, an optical adjustment is necessary after parts are exchanged.
- The adjustment software (DSC_Tilt) is necessary to execute an optical tilt adjustment.
- The adjustment software “DSC_Tilt” is available at “TSN Website”.

9.2. Before Disassembling the unit

9.2.1. Initial Setting Release

The cameras specification are initially set in accordance with model suffix (such as EB, EG, GK, GC, and so on.).
Unless the initial setting is not released, an automatic alignment software in the camera is not able to be executed when the alignment is carried out.
Note:
The initial setting should be again done after completing the alignment. Otherwise, the camera may not work properly.
Therefore as a warning, the camera display a warning symbol “ ! ” on the LCD monitor every time the camera is turned off.
Refer to the procedure described in “3.5.2 INITIAL SETTINGS” for details.

[How to Release the camera initial setting]
Preparation:

- Attach the Battery or AC Adaptor with a DC coupler to the unit.
  (Since this unit has built-in memory, it can be performed without inserting SD memory card.)
- Remove the lens cap.

Step 1. Temporary cancellation of “INITIAL SETTINGS”:
Set the mode dial to “[P] (Program AE mode)”.
While keep pressing “[UP] of Cursor button” and [MOTION PICTURE] button simultaneously, turn the Power on.
Step 2. Cancellation of “INITIAL SETTINGS”:
Press the [PLAYBACK] button, then playback the picture.
Press “[UP] of Cursor button” and [MOTION PICTURE] button simultaneously. (The camera will beep after this.)
Turn the Power off. (The warning symbol “ ! ” is displayed on the LCD monitor.)

9.2.2. Flash-Rom Data Backup

When trouble occurs, it is recommended to backup the Flash-rom data before disassembling the unit.

[ROM_BACKUP (Method of Non-PC backup)]

1. Insert the SD memory card into the camera.
2. Set the camera to “Temporary cancellation of the initial settings”.
3. Select the “SETUP” menu.
   From the “SETUP” menu, select “ROM BACKUP”.
   NOTE:
   This item is not listed on the customer’s “SETUP” menu.
4. When this “ROM_BACKUP” item is selected, the following submenus are displayed.

Fig.2-1

Item	Function	Details
DSC → SD	Save all the DSC's Flash-rom data to SD memory card	*DSC's Flash-rom data is saved to the SD memory card as a data file by the same format as the TATSUJIN software for the previous models. (DATA BACKUP) -File location: ROOT DIRECTORY in SD memory card. -File Name: 1) User Setup Information data: <Model Number>U.txt [Example: DMC-FX66 : “FX66U.txt”] 2) Optical Adjustment data: <Model Number>F.txt [Example: DMC-FX66 : “FX66F.txt”] *If the concerned file already exists, “OVERWRITE?” message is displayed.
SDALL→ DSC (ID CHECK)	Write the all data to DSC's Flash-rom from SD memory card	*The backup data being stored in the SD memory card is transferred to DSC unit. *ID CHECK: When the model ID is different, data is not transferred. *FORCE: Even if the model ID is different, data is transferred. ※If the main PCB is replaced, select “SDALL → DSC (FORCE)”.
SDALL→ DSC (FORCE)	Write the all data to DSC's Flash-rom from SD memory card	
SDUSER→DSC（FORCE）	Only “User setup information” is written from the saved file in the SD memory card to DSC's Flash-rom.	*Only the user's “setup” setting condition is transferred to DSC unit. *FORCE: Even if the model ID is different, the data is transferred.
!→LUMIX	Shipping set without initializing “User setup information”	*Initial setting is executed without initializing the user's set up setting condition. ※ The initial setting must be perform while the Self-timer LED is blinking, ※ The picture data stored in the built-in memory of the DSC is not erased, with this operation.
ADJFLAG→ALL F	Set all adjustment flags to “F”	*All adjustment flags are set to adjustment completed condition “F”.

9.2.3. Light Box

If using VFK1164TDVLB Light Box, remove the lens connection ring by loosing three hexagon screws.

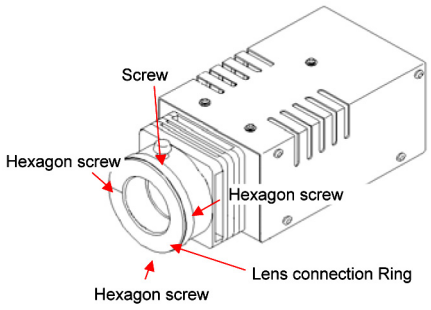


Fig.2-2

9.3. Details of Electrical Adjustment

9.3.1. How to execute the Electrical Adjustment

It is not necessary to connect the camera to a PC to perform adjustments.
“Flag reset operation” and “Initial setting operation” are required when carrying out the alignment, follow the procedure below.

9.3.1.1. Startup Electrical Adjustment mode

1. Release the initial settings.
2. Insert a recordable SD memory card (32MB or more).
   (Without a SD memory card, the automatic adjustment can not executed.)
3. Procedure to set the camera into adjustment mode:
   a. Set the mode dial to “[P] (Program AE mode)”.
   b. Turn the Power off.
   c. Turn the Power on pressing [MENU/SET] and [MOTION PICTURE] simultaneously.
   LCD monitor displays “SERVICE MODE”.(Refer to Fig. 3-1)

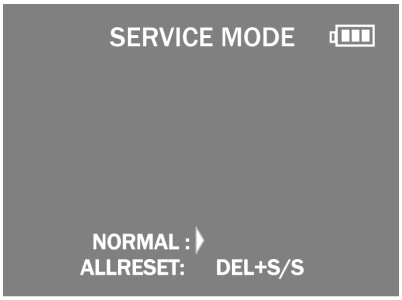


Fig.3-1

9.3.1.2. Status Adjustment Flag Setting

Reset (Not yet adjusted) the status flag condition.

1. After pressing the [DISPLAY] button, the LCD monitor displays the Flag status screen (Refer to Fig.3-2)
2. Select item by pressing the Cursor buttons. (Gray cursor is moved accordingly.)
3. Press the [Delete] button.

NOTE:
The selected item's flag has been changed from “F (green)” to “0 (yellow)”.

*Flag conditions:
F (green)
means that the alignment has been completed and the status flag condition is set. In this case, the flag condition should be reset, if you try to carry out the automatic alignment.
0 (yellow)
means that the alignment has been not “completed” and the status flag condition is “reset”. In this case, automatic alignment is available.

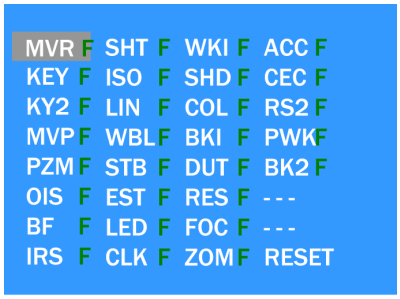


Fig.3-2

- In case of setting the status flag into set condition again without completion of the alignment, the status flag should be UNDO by using ROM BACKUP function.

9.3.1.3. Execute Adjustment (In case of “OIS Adjustment”)

1. Perform step “9.3.1.1.” to “9.3.1.2.”, to reset the OIS flag status “F” (Set) to “0” (Reset)
2. Press [DISPLAY] button after Flag reset.
   OIS Adjustment screen is displayed on the LCD panel. (Refer to Fig.3-3)
3. Press the [Shutter] button. The adjustment will start automatically.

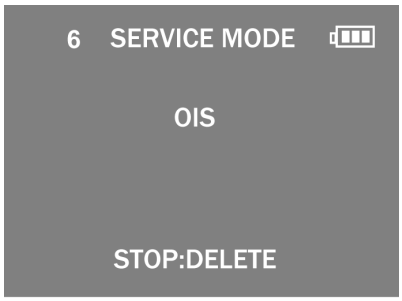


Fig.3-3

4. When the adjustment is completed successfully, adjustment report menu appears with Green OK on the LCD monitor. (Refer to Fig.3-4)

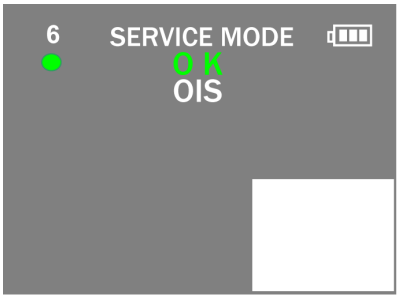


Fig.3-4

9.3.1.4. Attention point during Adjustment

1. Step “9.3.1.3.” procedure shows OIS adjustment as an example. To perform the adjustment, refer to the “9.3.2. Adjustment Specifications” table which shows key point for each adjustment.
2. Do not move the light box, the camera or the chart while adjusting. If one of these is moved accidentally, start the adjustment again.
3. Do not press any buttons/keys until the default menu (Fig.3-5) is displayed on the LCD monitor. Otherwise, adjustment data may not be stored properly.
4. If the adjustment is interrupted accidentally, the alignment data may not be properly saved in the Flash-rom.

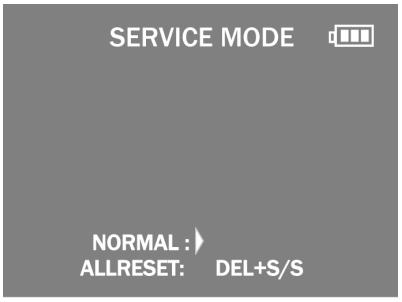


Fig.3-5

9.3.1.5. Finalizing the Adjustment

1. Several adjustment flags can be reset (“F” into “0”) at the same time. In this case, when the adjustment has been completed, the screen will change showing the adjustment for the next item until all reset items are completed.
   Also, when the shutter button is pressed, the screen jump to the next adjustment item.
2. To cancel the adjustment mode while in the process of performing the adjustment, follow this procedures.
   (1) Press [Delete] button.
   (2) Press [RIGHT] of Cursor button.

NOTE:

• If adjustment is cancelled with above procedure, adjustment is not completed. Make sure to adjust it later.

9.3.2. Adjustment Specifications

The following matrix table shows the relation between the replaced part and the Necessary Adjustment.
When a part is replaced, make sure to perform the necessary adjustment(s) in the order indicated.
The table below shows all the information necessary to perform each adjustment.

Adjustment order	Adjustment Item	FLAG	Purpose	Replacing Parts							JIG/TOOLS	SET UP	How to Operate
				MAIN P.C.B.	VENUS ENGINE（IC6001）	FLASH ROM (IC6005)	Lens part （Excluding MOS UNIT）	MOS UNIT	GYRO (IC7101)	Electronic Level (IC9051)			
1	Optical Tilt	—	Aligh the image sensor installation angle to the Lens.	—	—	—	○	○	—	—	NOTE: ・It is necessary to use the "DSC_Tilt" software to allow the "Optical tilt adjustment". ・The Adjustment software "DSC_Tilt" is available at “TSN Website”. ・Optical Axis Adjustment Driver （RFKZ0609）:T3		
2	Venus Zoom	PZM	Venus Zoom Inspection	○	○	○	—	—	—	—	NONE	NONE	1)Press Shutter Button 2)After completed, the “OK” menu appears.
3	OIS sensor	OIS	OIS sensor output level adjustment	○	○	○	○	—	—	—	NONE	NONE	1)Press Shutter Button 2)After completed, the “OK” menu appears.
4	Backfocus / GYRO	BF	To have the focus tracking curve be appropriate shape and GYRO sensor adjustment	○	○	○	○	○ ※1	○	○	・COLLIMATOR （VFK1164TCM02 or VFK1164TCM03 or RFKZ0422）	1)Set the camera in front of collimator so that the distance from collimator to camera becomes about 5.5 cm as shown in Fig. A. 【NOTE】 Please notice ! "NG" might happen while auto adjusting. - Do not put the black colored stuff at the back side of collimator near hunching chart to get some certain brightness. - Make sure the hunching chart has no dust and dirty condition. - Not connect the USB cable at this stage.	1)A star chart changes into the state where it is reflected to the center. Press Shutter Button (Do not apply any shock and vibration for the camera while adjusting) (Green ● mark is displayed on LCD). 2)A star chart changes into the state where it is reflected to the center. 3)Press shutter button. 4)After completed, the “OK” message appears.
5	Iris	IRS	Iris adjustment	○	○	○	○	○	—	—	・LIGHT BOX RFKZ0523 （VFK1164TDVLB）	1)Set the camera in front of LIGHTBOX so that the distance from LIGHTBOX to camera becomes about 12 cm as shown in Fig. B. 2)Set the camera angle so that the diffusing surface of LIGHTBOX is displayed on the center of LCD monitor. 【NOTE】 Please notice ! "NG" might happen while auto adjusting. - Do not put the black colored stuff at the back side of collimator near hunching chart to get some certain brightness. - Make sure the hunching chart has no dust and dirty condition. - Not connect the USB cable at this stage.	1)Press Shutter Button 2)After completed, the “OK” menu appears.
6	Shutter	SHT	Shutter speed adjustment	○	○	○	○	○	—	—			1)Press Shutter Button 2)After completed, the “OK” menu appears.
7	ISO	ISO	ISO sensitivity adjustment	○	○	○	○	○	—	—	・LIGHT BOX RFKZ0523 （VFK1164TDVLB） ・TR CHART （RFKZ0443）	1)Insert the TR chart into the slot of LIGHTBOX as shown in Fig. D. 2)Set the camera in front of LIGHTBOX so that the distance from LIGHTBOX to camera becomes about 13 cm as shown in Fig. B. 3)Set the camera angle so that the center of chart is displayed on the center of LCD monitor. 【NOTE】 - Since the lens position is automatically set into certain position after executing auto adjustment, confirm the angle after stopping the lens zoom position. - It is no problem even though the chart on to the LCD monitor slightly cut at the corner. - It is no problem even though the focusing slightly becomes out of focusing condition. - Not connect the USB cable at this stage.	1)Press Shutter Button 2)After completed, the “OK” menu appears.
8	High brightness coloration	LIN	High brightness coloration adjustment	○	○	○	○	○	—	—			1)Press Shutter Button 2)After completed, the “OK” menu appears.
9	White Balance	WBL	White balance adjustment under various color temperature	○	○	○	○	○	—	—			1)Press Shutter Button 2)After completed, the “OK” menu appears.

Adjustment order	Adjustment Item	FLAG	Purpose	Replacing Parts							JIG/TOOLS	SET UP	How to Operate
				MAIN P.C.B.	VENUS ENGINE (IC6001)	FLASH ROM (IC6005)	Lens part (Excluding MOS UNIT)	MOS UNIT	GYRO (IC7101)	Electronic Level (IC9051)			
10	Flash adjustment	STB	Flash adjustment	○	○	○	—	—	—	—	NONE	NONE	1)Pop up the built in Flash. 2)Press Shutter Button. (Do not apply any shock and vibration for the camera while adjusting.) 3)Check that a flash shines. (It is different for every model how many times it shines.) ※When a flash does not shine, there is a possibility that the flash unit is out of order. 4)Check a test result. ※Results of the tests are usually NG. (When a result is OK, it is the completion of an inspection.) 5)When a result is NG, rewrite STB flag to "F (adjustment completed) " using ROM_BACKUP function. ※The flag "STB" is an item which checks shines operation of a flash automatically at a Manufacturing facility. For this reason, Except environment for exclusive use, a result will be NG, but it is no problem if shines operation can be checked visually.
11	MOS SENSOR Missing Pixels (White) ※2	WKI	Compensation of MOS SENSOR Missing Pixels (White)	○	○	○	—	○ ※1	—	—	NONE	NONE	1)Press Shutter Button 2)After completed, the “OK” menu appears.
12	Color reproduction inspection and Microphone check	COL	Color reproduction inspection and Microphone check	○	○	○	○	○	—	—	NONE	NONE	1)While speaking into the microphone, press Shutter Button. (When zooming started, stop speaking.) 2)After completed, the “OK” menu appears.
		BKI	Do not use "BKI" adjustment flag for this unit. Use "BK2" adjustment flag, instead. (In case of most DSC models, the adjustment flag for MOS SENSOR Missing Pixcels is "BKI". But, in this model, "BK2" the adjustment flag for MOS SENSOR Missing Pixcels.)										
13	MOS SENSOR Missing Pixels (Black) ※3	BK2	Compensation of MOS SENSOR Missing Pixels (Black)	○	○	○	—	○ ※1	—	—	・LIGHT BOX RFKZ0523 (VFK1164TDVLB) ・DIFFUSER RFKZ0591	1)Prepair the LIGHTBOX. (The LIGHTBOX "VFK1164TDVLB" can be used if the front hood of VFK1164TDVLB is removed.) 2)Set the DIFFUSER to diffusing surface of LIGHTBOX. NOTE: Do not use "BKI" adjustment flag for this unit. Use "BK2" adjustment flag, instead.	1)While no object between the LIGHTBOX and Camera, press the Shutter Button. (The lens starts zooming and stops automatically, then green ● mark is displayed on LCD). 2)Set the LIGHTBOX and Camera (the edge of Lens ring front) so that distance becomes about 5 cm. (Refer to Fig. B) And, press the Shutter Button. (The 1st adjustment is executed, and then green ● mark is displayed on LCD). 3)While no object between the LIGHTBOX and Camera, press the Shutter Button. (The green ● mark is displayed on LCD). 4)Set the LIGHTBOX and Camera (the edge of Lens ring front) so that distance becomes about 5 cm. (Refer to Fig. B) And, press the Shutter Button. (The 2nd adjustment is executed, and then green ● mark is displayed on LCD). 5While no object between the LIGHTBOX and Camera, press the Shutter Button. (The green ● mark is displayed on LCD). 6)Set the LIGHTBOX and Camera (the edge of Lens ring front) so that distance becomes about 6 cm. (Refer to Fig. B) And, press the Shutter Button. (The 3rd adjustment is executed, and then OK mark is displayed on LCD when the adjustment has been completed successfully.)

Adjustment order	Adjustment Item	FLAG	Purpose	Replacing Parts: MAIN P.C.B.	VENUS ENGINE (IC6001)	FLASH ROM (IC6005)	Lens part (Excluding MOS UNIT)	MOS UNIT	GYRO (IC7101)	Electronic Level (IC9051)	JIG/TOOLS	SET UP	How to Operate
14	Electornic Level	ACC	Electorinic Level adjustment	○	○	○	–	–	–	○	・AAC Adjustment Chart	1)Download the "ACC Adjustment chart.pdf" and print it to A3 size (or equivalent size) paper. ("ACC Adjustment chart.pdf" is available at "TSN Website". To download, click on "Support Information from NWBG/VDBG-AVC".) 2)Hang in the string with weight, then put the printed ACC Adjustment chart on the wall or panel horizontally. (Fig. 1) ※ After putting the adjustment chart horizontally, remove the string with weight. ※ Attach the camera to general-purpose tripod. 3)Set the camera in front of chart so that the distance from chart to camera becomes about 20 cm as shown in Fig. C. Set the angle of camera so that the center of chart and optical axis of camera in orthogonal position. (Fig. 2) <Setup procedures> 3-1)Adjust the height of tripod to match the lens of camera and center of the adjustment chart. 3-2)Apply the triangle (or equivalent) in center of the chart, then adjust center of the lens of camera on the vertical extension. 3-3)Confirm that the chart is displayed on the LCD monitor fully. 3-4)Fine adjust the camera angle so that the horizontal bar of chart is displayed horizontally on the LCD monitor and matches the cross guide line of the LCD monitor. (Fig. 3)	1)Press the Shutter Button. When green ● mark is displayed on LCD, press the Shutter Button again. 2)While remain attached to tripod, rotate the camera 90 degrees so that the grip side up. (Fig. 4) 3)Press the Shutter Button. When green ● mark is displayed on LCD, press the Shutter Button again. 4)While remain attached to tripod, rotate the camera 180 degrees so that the grip side down. (Fig. 5) 5)Press Shutter Button, then the "OK" menu appears, the adjustment is completed..

Fig. 1:
Setting of the adjustment chart horizontally

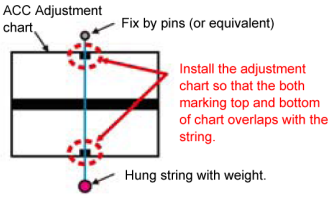


Fig. 2:
Setting of the camera to the front of adjustment chart

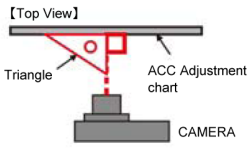


Fig. 3:
【Horizontal Position】

Fig. 4:
【Vertical Position】
(Grip side Up)

Fig. 5:
【Vertical Position】
(Grip side Down)

※1:Execute the adjustment when remove the MOS unit and replace the MOS unit.
※2:The pixel that always lights while shaded is called a white wound.
※3:The pixel that does not light while complete exposed is called a black wound.
*This unit does not have the LCD adjustment of the camera (LCD flicker adjustment etc.).

Fig.A

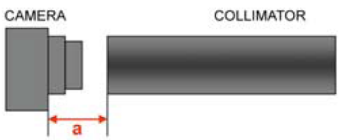


Fig.B

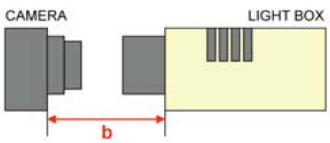


Fig.C

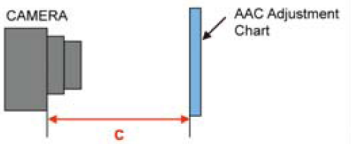


Fig.D How to Insert the TR chart into LIGHT BOX

■IMPORTANT NOTICE (After replacing the MAIN P.C.B.)
After replacing the MAIN P.C.B., make sure to perform the "INITIAL SETTINGS" first, then release the "INITIAL SETTINGS" in order to proceed the electrica adjustment.

NOTE:
1). If electrical adjustment or data re-writing is executed before "INITIAL SETTINGS", suffix code list is never displayed, and it cannot be chosen suitable suffix code.
2). Never remove the battery during initial setting in process.

9.4. After Adjustment

9.4.1. Initial Setting

Since the initial setting has been released to execute the built-in adjustment software, it should be set up again before shipping the camera to the customer.
Refer to the procedure described in “3.5.2. INITIAL SETTINGS” for details.

[IMPORTANT]

1. The initial setting should be done again after completing the alignment. Otherwise, the camera will not work properly. Therefore as a warning, the camera display a warning symbol “ ! ” on the LCD monitor every time the camera is turned off.
2. Confirm that status of all adjustment flag show “F”. Even if one of the adjustment flag shows “0”, initial setting programmed is never executed.

10 Maintenance

10.1. Cleaning Lens and LCD Panel

Do not touch the surface of lens and LCD Panel with your hand.
When cleaning the lens, use air-Blower to blow off the dust.
When cleaning the LCD Panel, dampen the lens cleaning paper with lens cleaner, and the gently wipe the its surface.

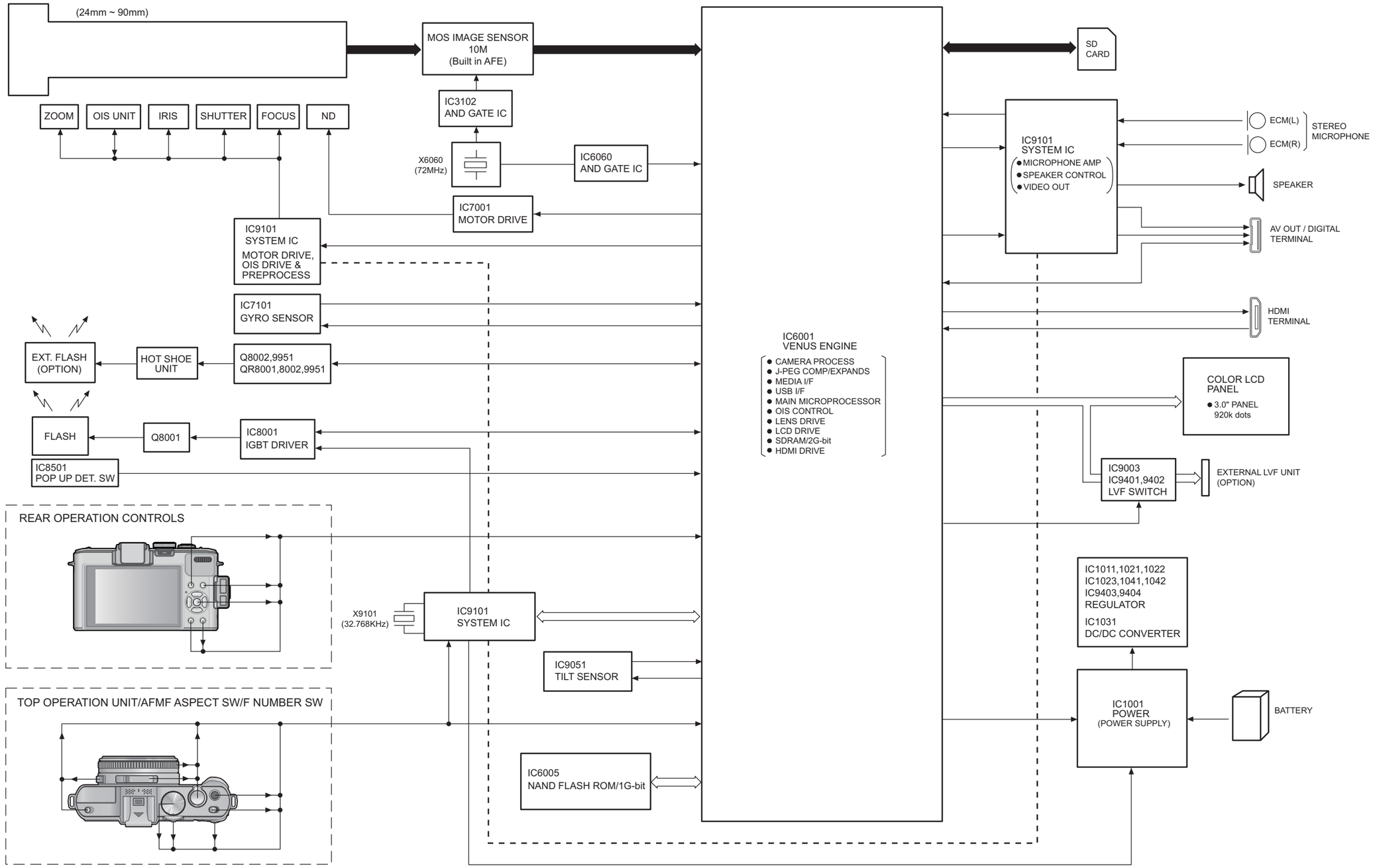
Note:

The Lens Cleaning KIT ; VFK1900BK (Only supplied as 10 set/Box) is available as Service Aid.

11 Block Diagram

11.1. Overall Block Diagram

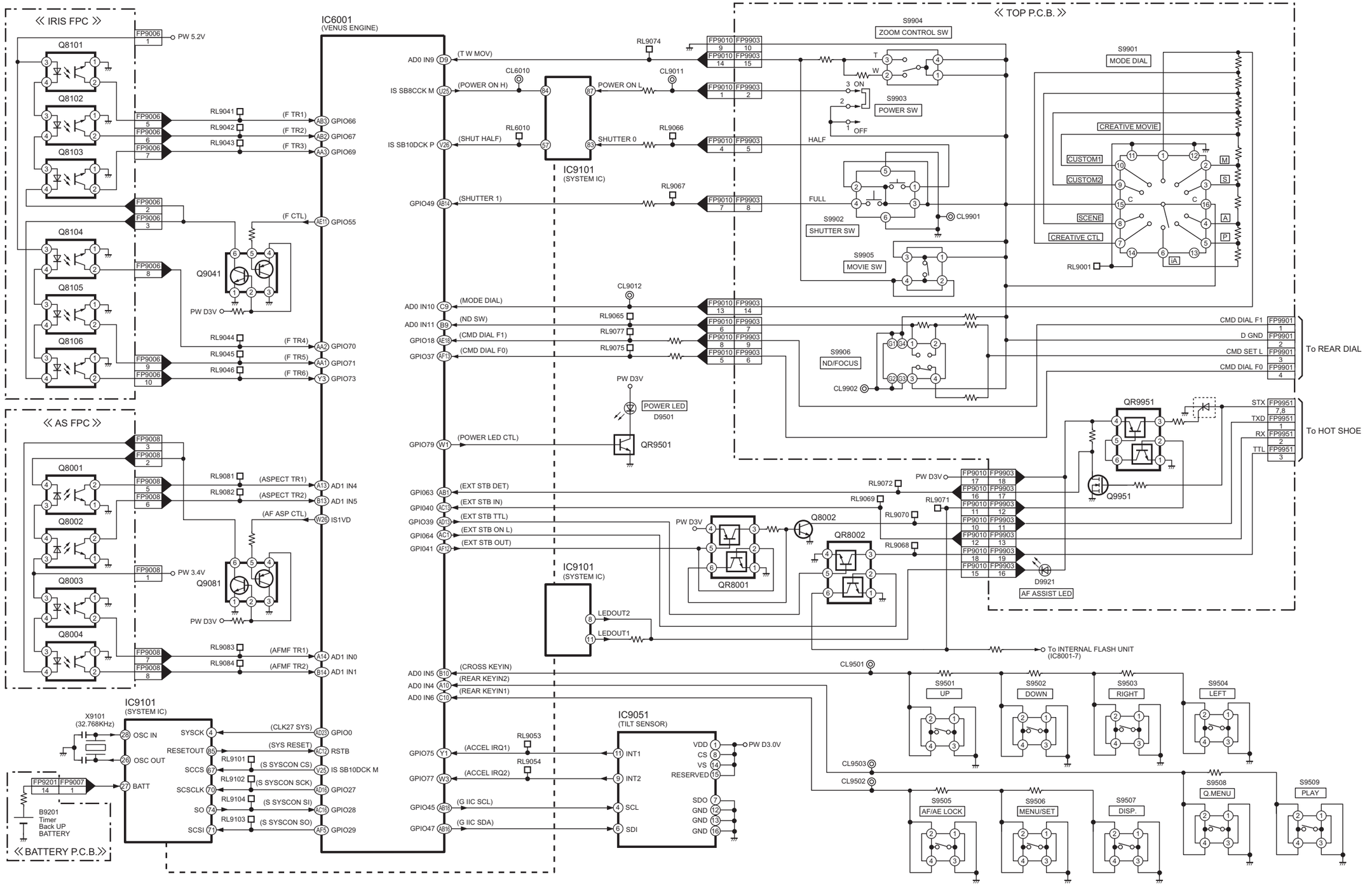
◆ OVERALL BLOCK DIAGRAM



DMC-LX7 OVERALL BLOCK DIAGRAM

11.2. System Control Block Diagram

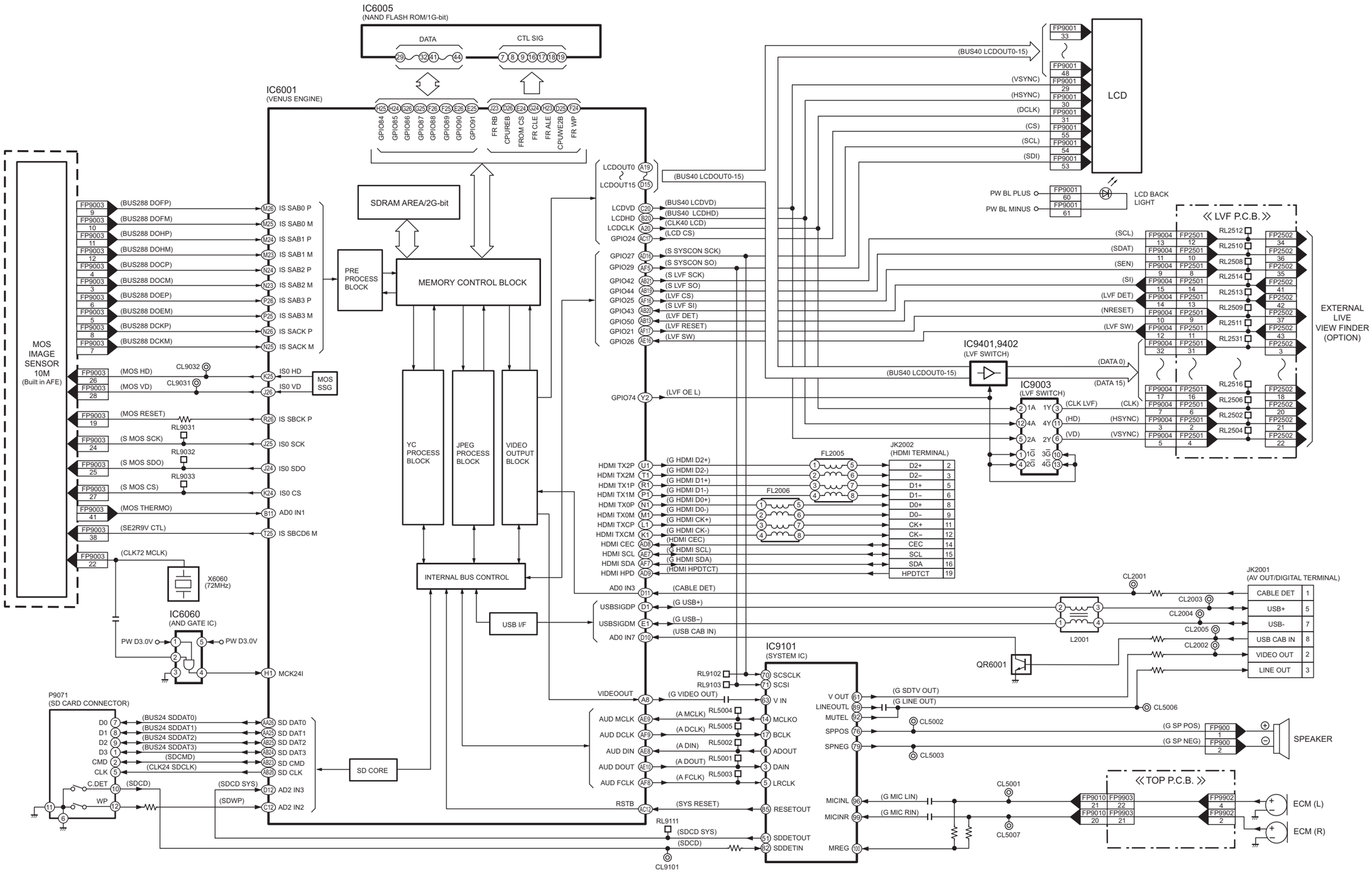
SYSTEM CONTROL BLOCK DIAGRAM



DMC-LX7 SYSTEM CONTROL BLOCK DIAGRAM

11.3. Video/Audio Process Block Diagram

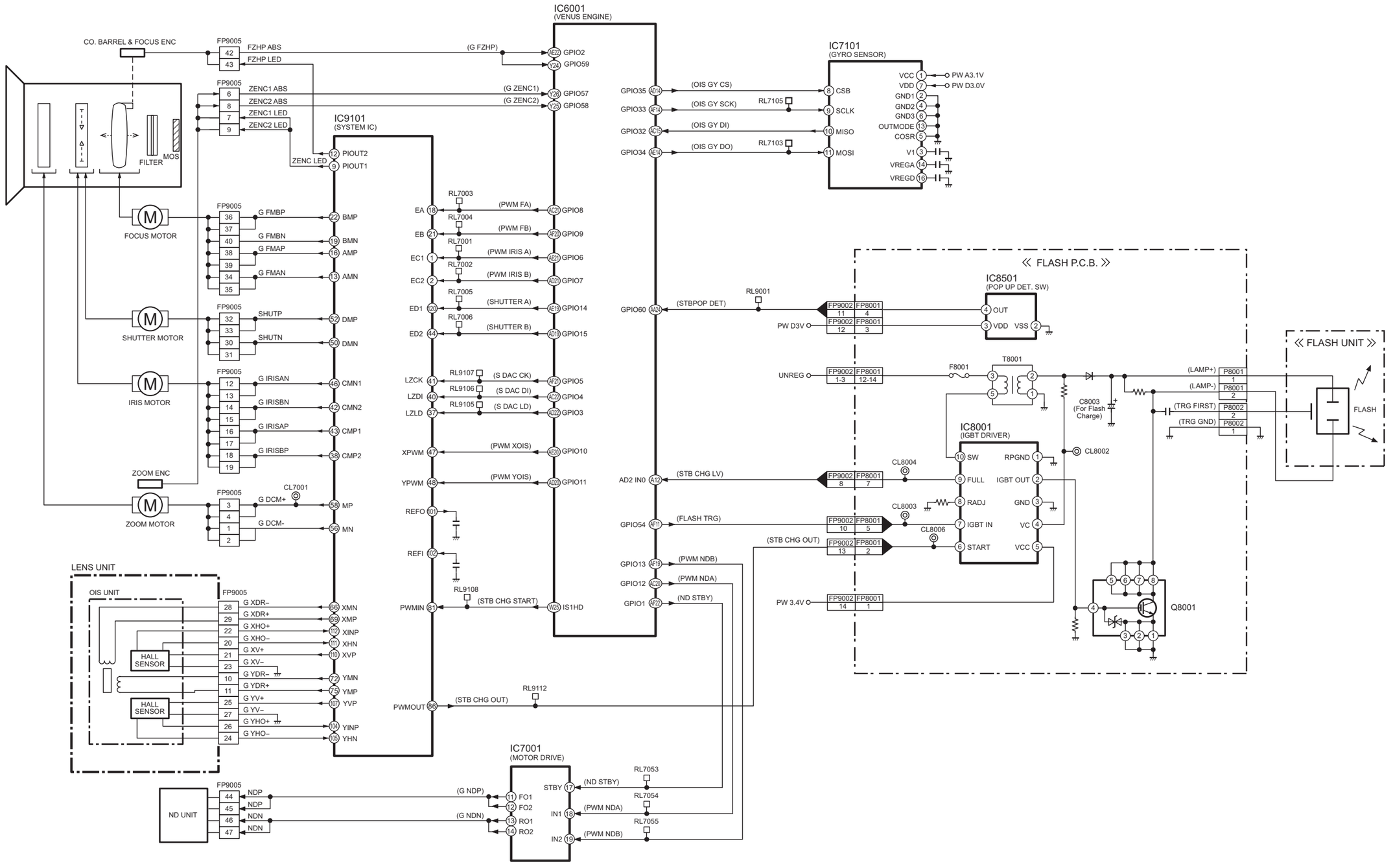
◆ VIDEO/AUDIO PROCESS BLOCK DIAGRAM



DMC-LX7 VIDEO/AUDIO PROCESS BLOCK DIAGRAM

11.4. Lens/Flash Block Diagram

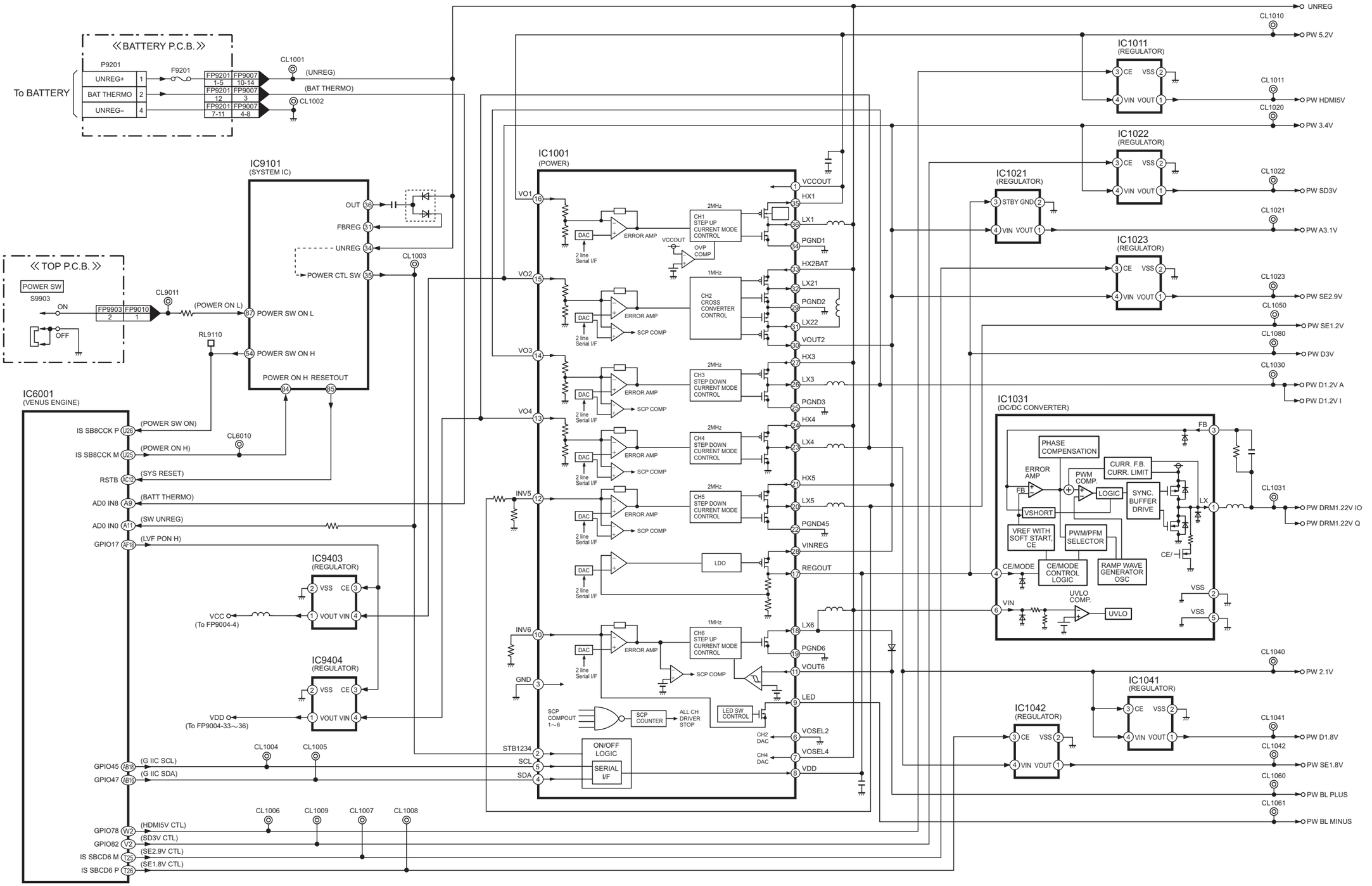
◆ LENS/FLASH BLOCK DIAGRAM



DMC-LX7 LENS/FLASH BLOCK DIAGRAM

11.5. Power Block Diagram

◆ POWER BLOCK DIAGRAM

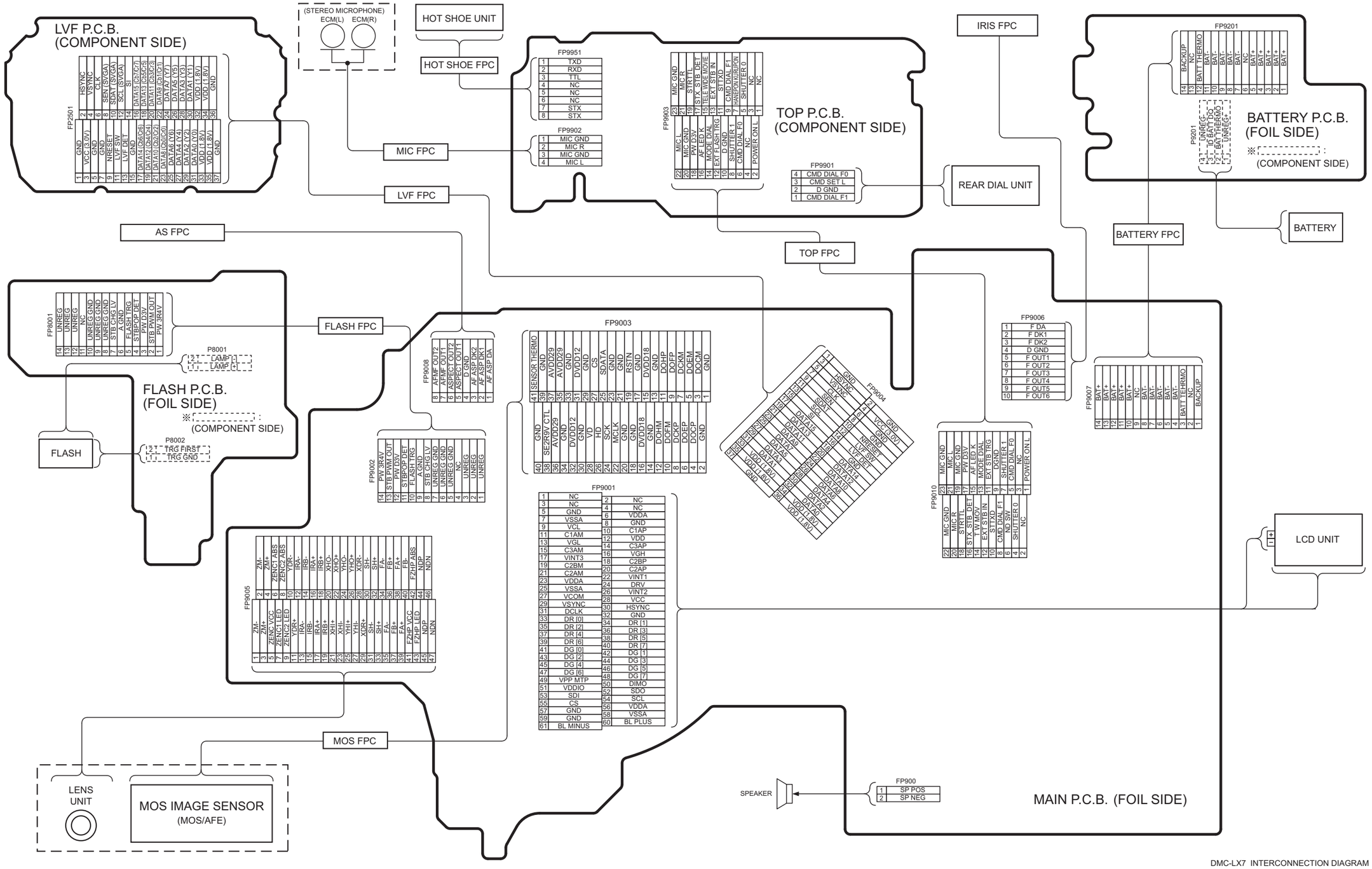


DMC-LX7 POWER BLOCK DIAGRAM

12 Wiring Connection Diagram

12.1. Interconnection Diagram

◆ INTERCONNECTION DIAGRAM



DMC-LX7 INTERCONNECTION DIAGRAM

IMPORTANT SAFETY NOTICE:

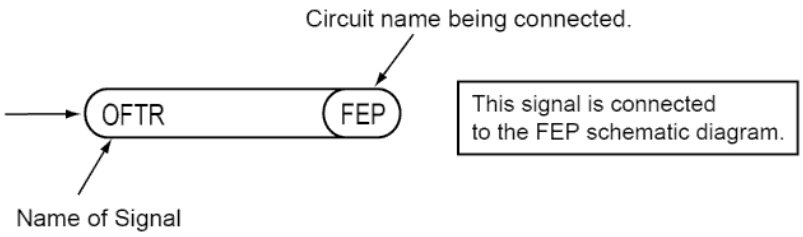
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

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.Use the parts number indicated on the Replacement Parts List .

4.Indication on Schematic diagrams:



5. It might be taking time for display and/or access of the Schematic Diagrams & P. C. B having the heavy data volume.

Model No. : DMC-LX7 Parts List Note

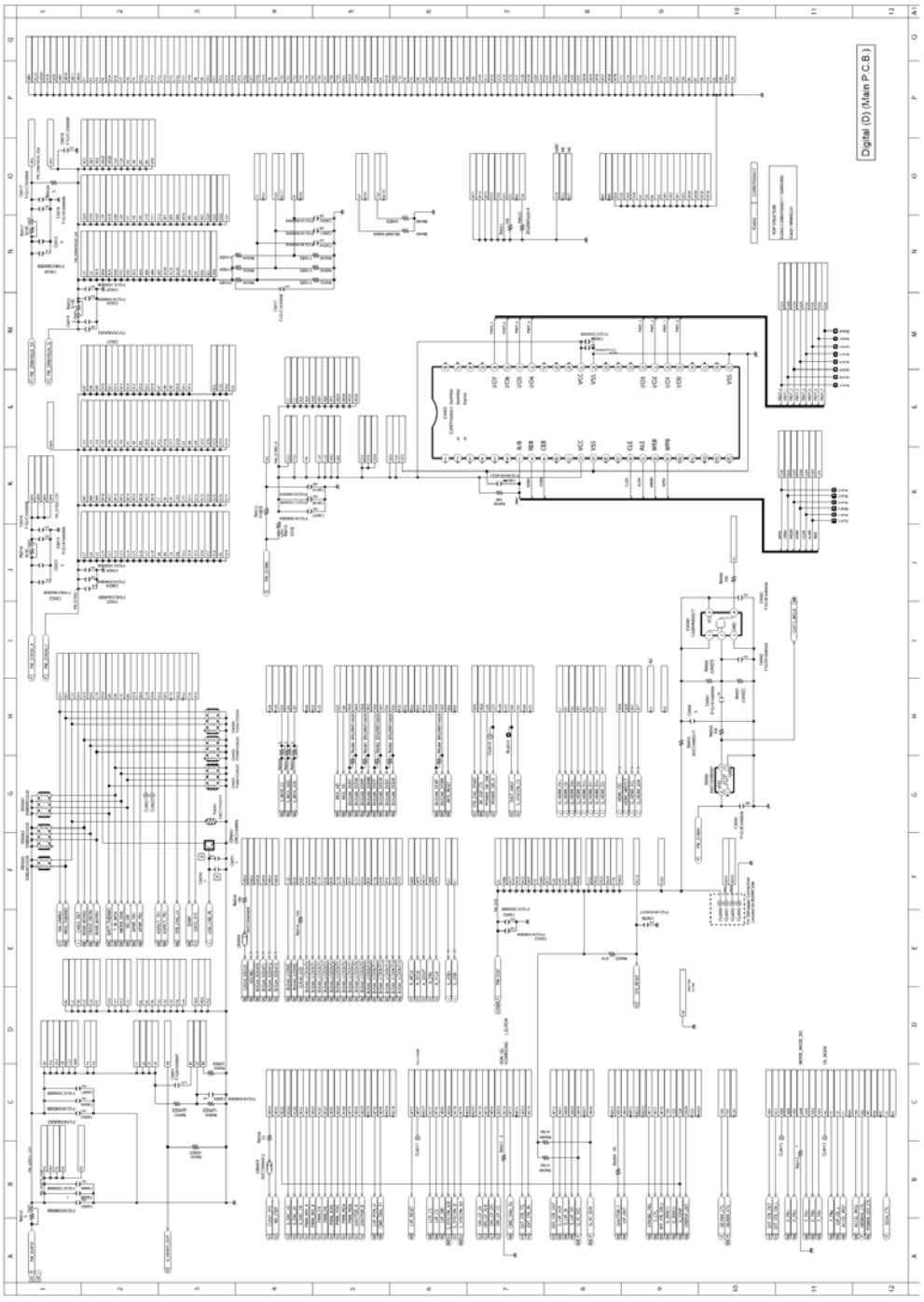
Note:
1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
   Components identified with the mark ⚠have the special characteristics for safety.
   When replacing any of these components, use only the same type.
3. Unless otherwise specified,
   All 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.
5. Supply of CD-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.

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

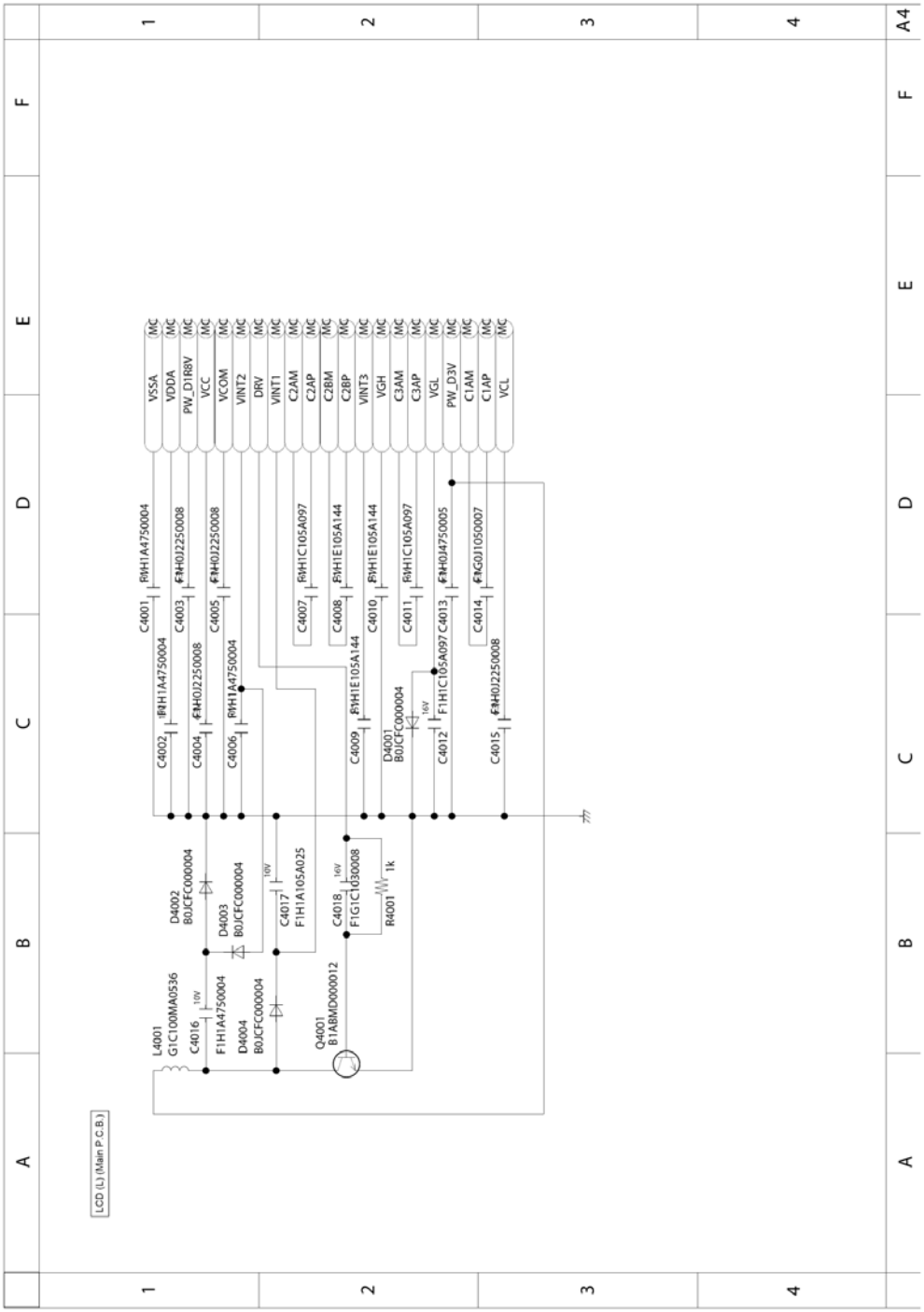
Definition of Parts supplier:

1. **Parts marked with [ENERGY] in the remarks column are supplied from Panasonic Corporation Energy Company.**
2. **Parts marked with [PAVCX] in the remarks column are supplied from PAVCX. Others are supplied from AVC-CSC-SPC.**

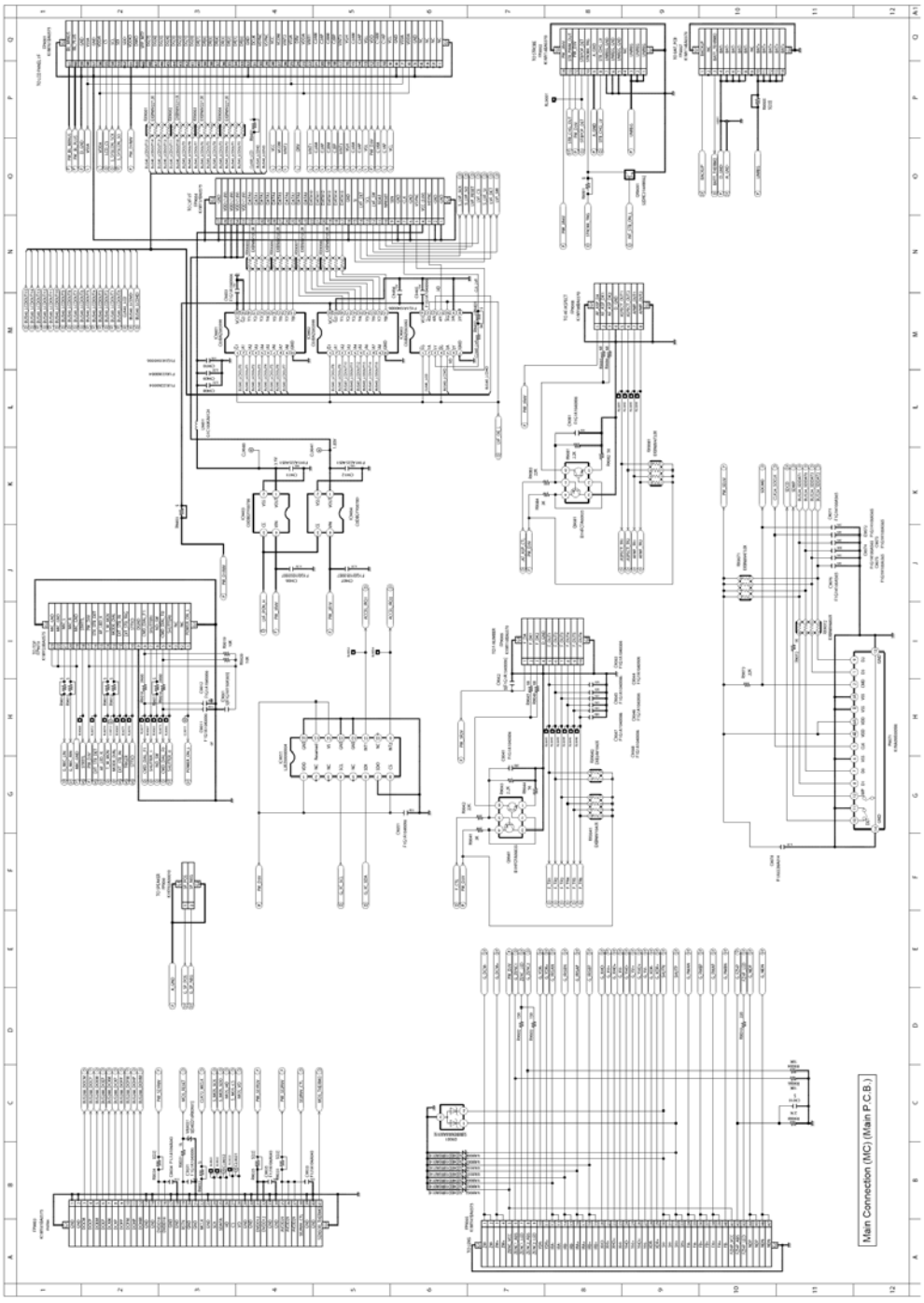
Model No. : DMC-LX7 Digital (D) (Main P.C.B.)



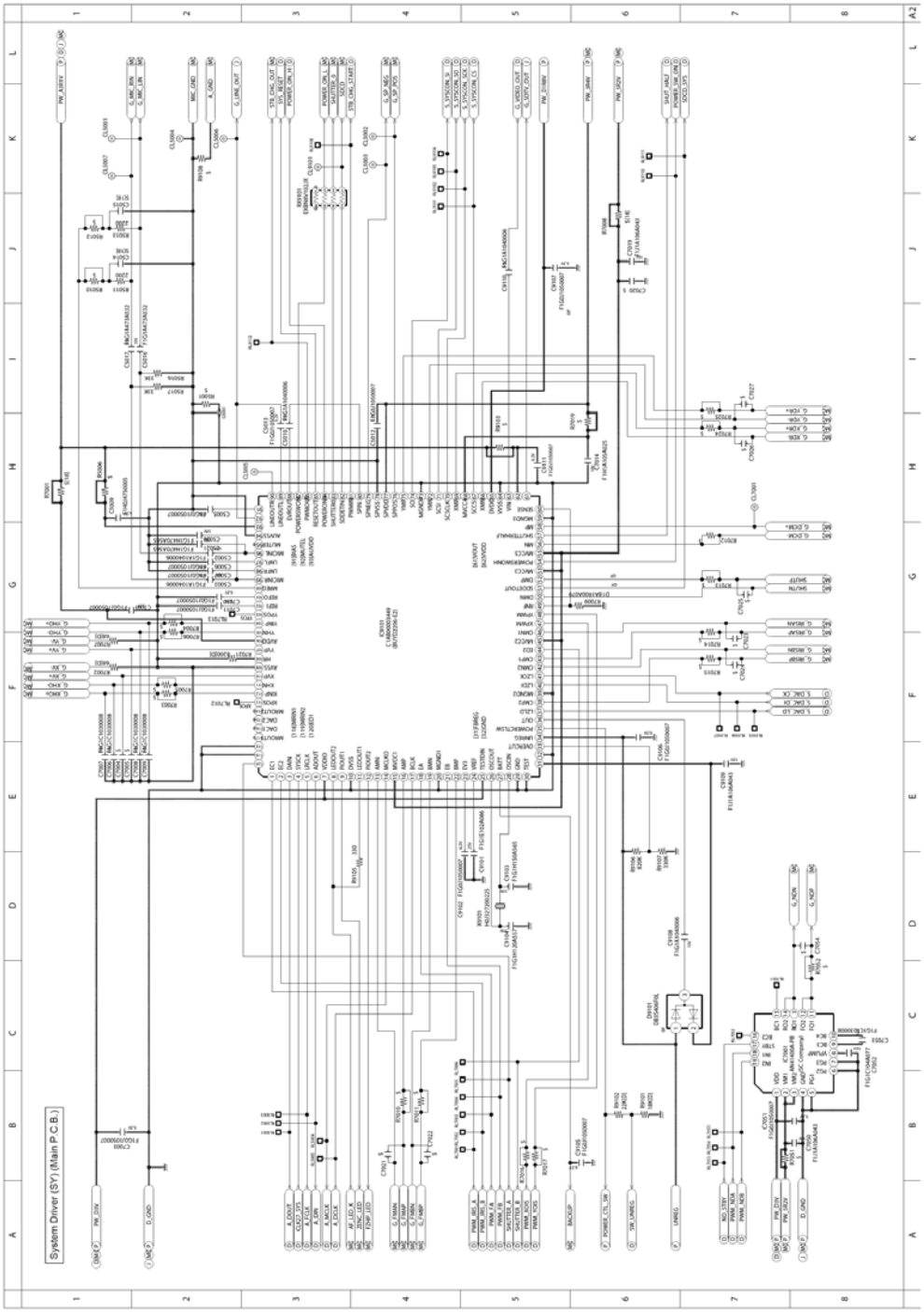
Model No. : DMC-LX7 LCD (L) (Main P.C.B.)



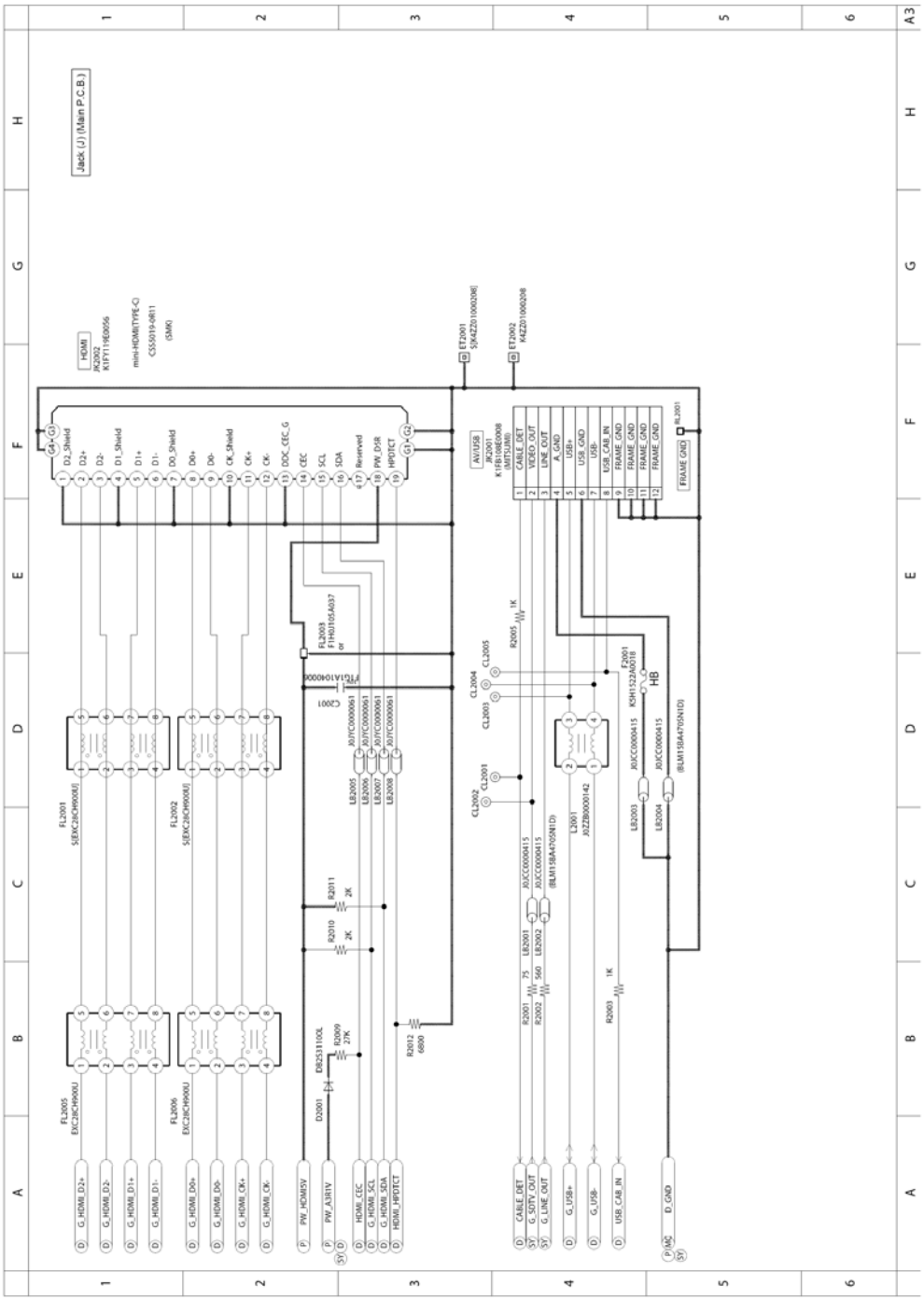
Model No. : DMC-LX7 Main Connection (MC) (Main P.C.B.)



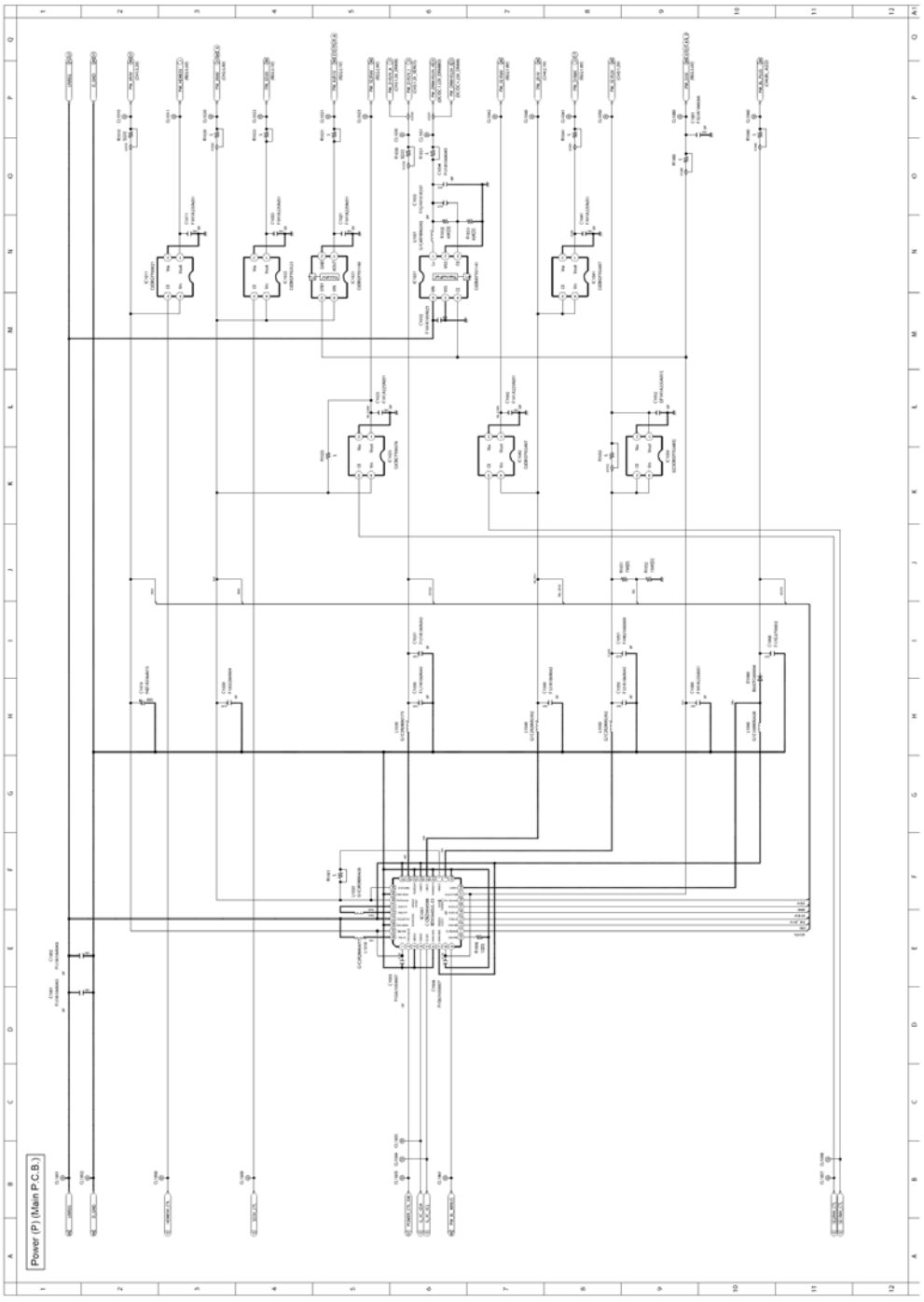
Model No. : DMC-LX7 System Driver (SY) (Main P.C.B.)



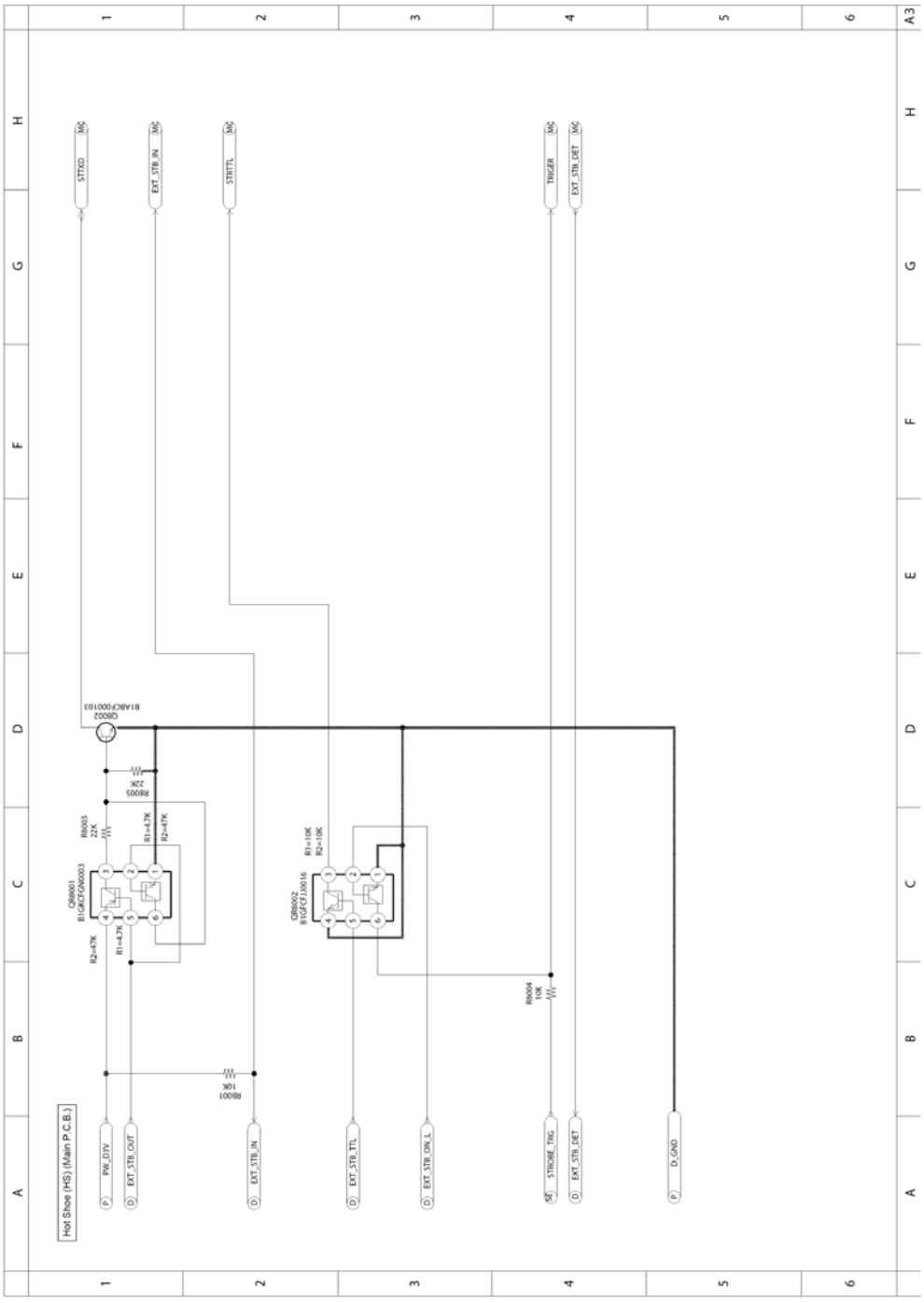
Model No. : DMC-LX7 Jack (J) (Main P.C.B.)



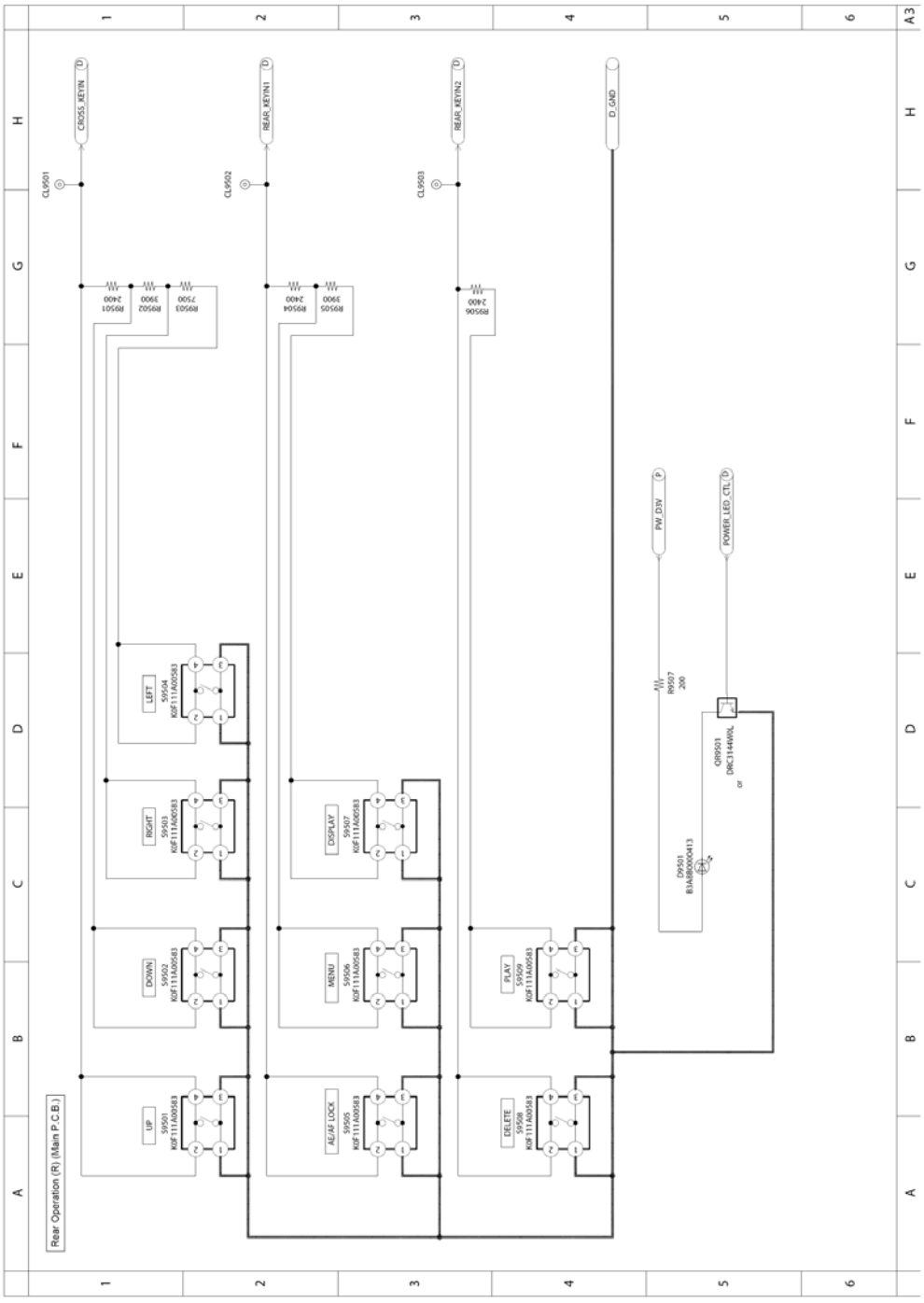
Model No. : DMC-LX7 Power (P) (Main P.C.B.)



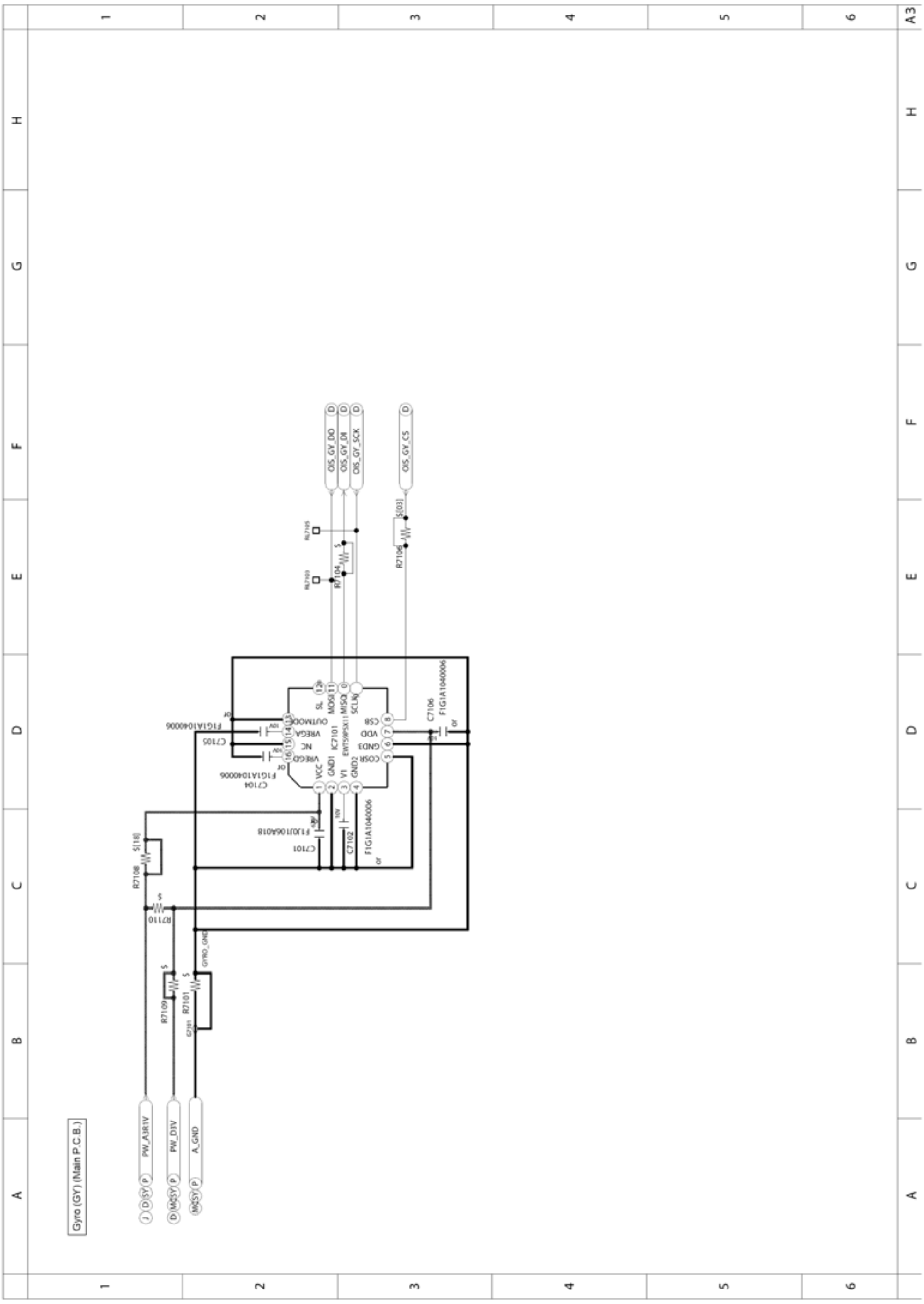
Model No. : DMC-LX7 Hot Shoe (HS) (Main P.C.B.)



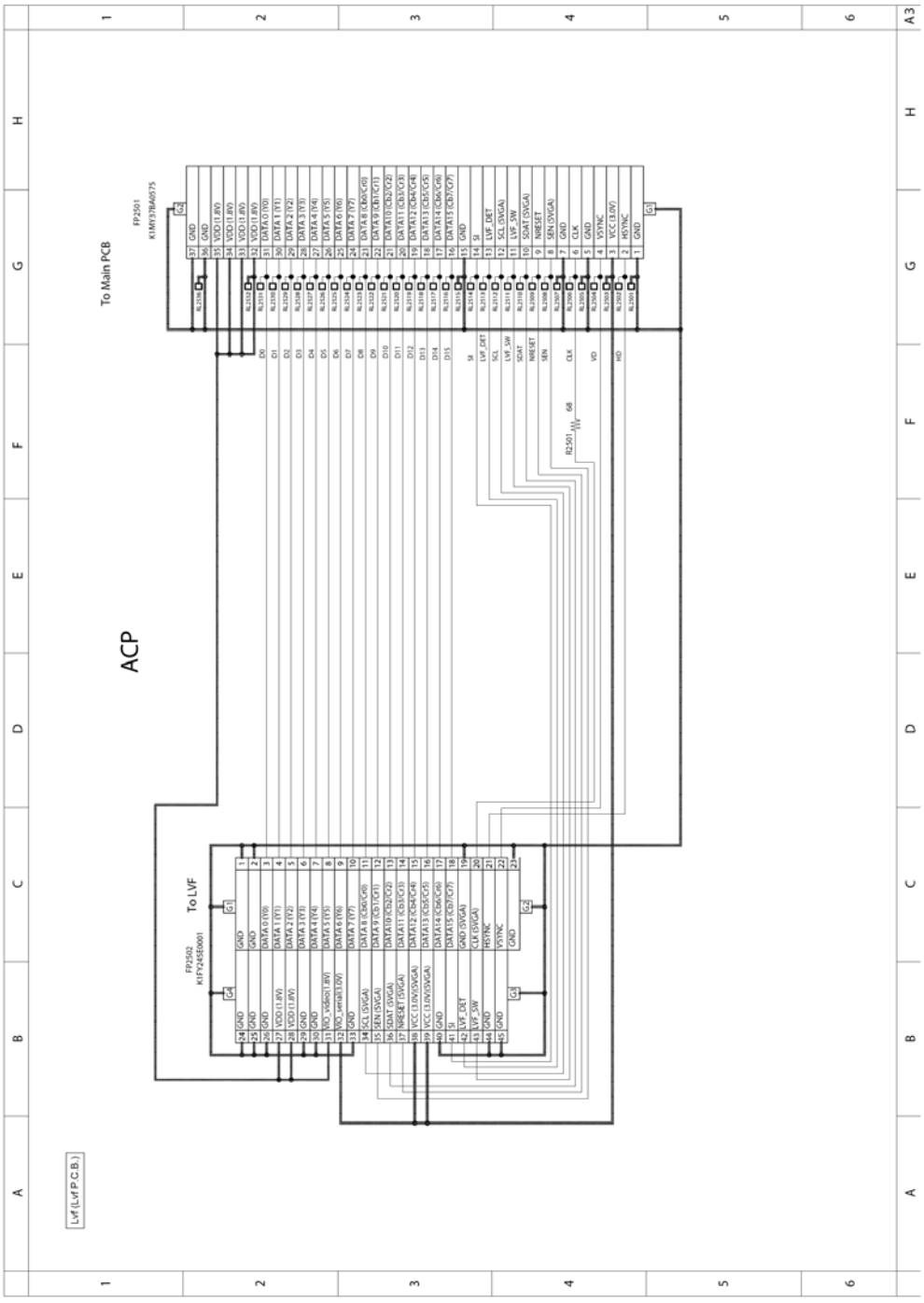
Model No. : DMC-LX7 Rear Operation (R) (Main P.C.B.)



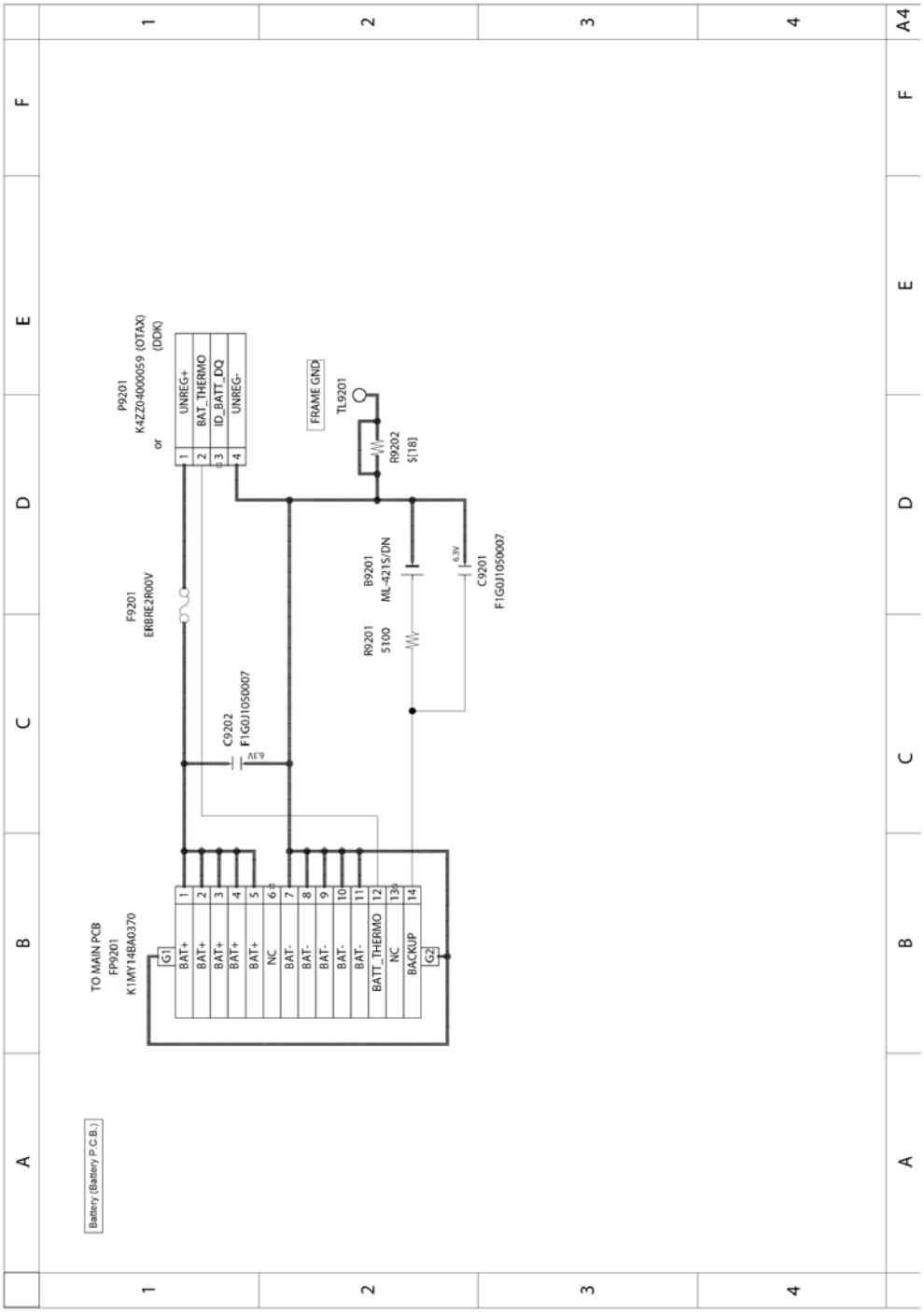
Model No. : DMC-LX7   Gyro (GY) (Main P.C.B.)



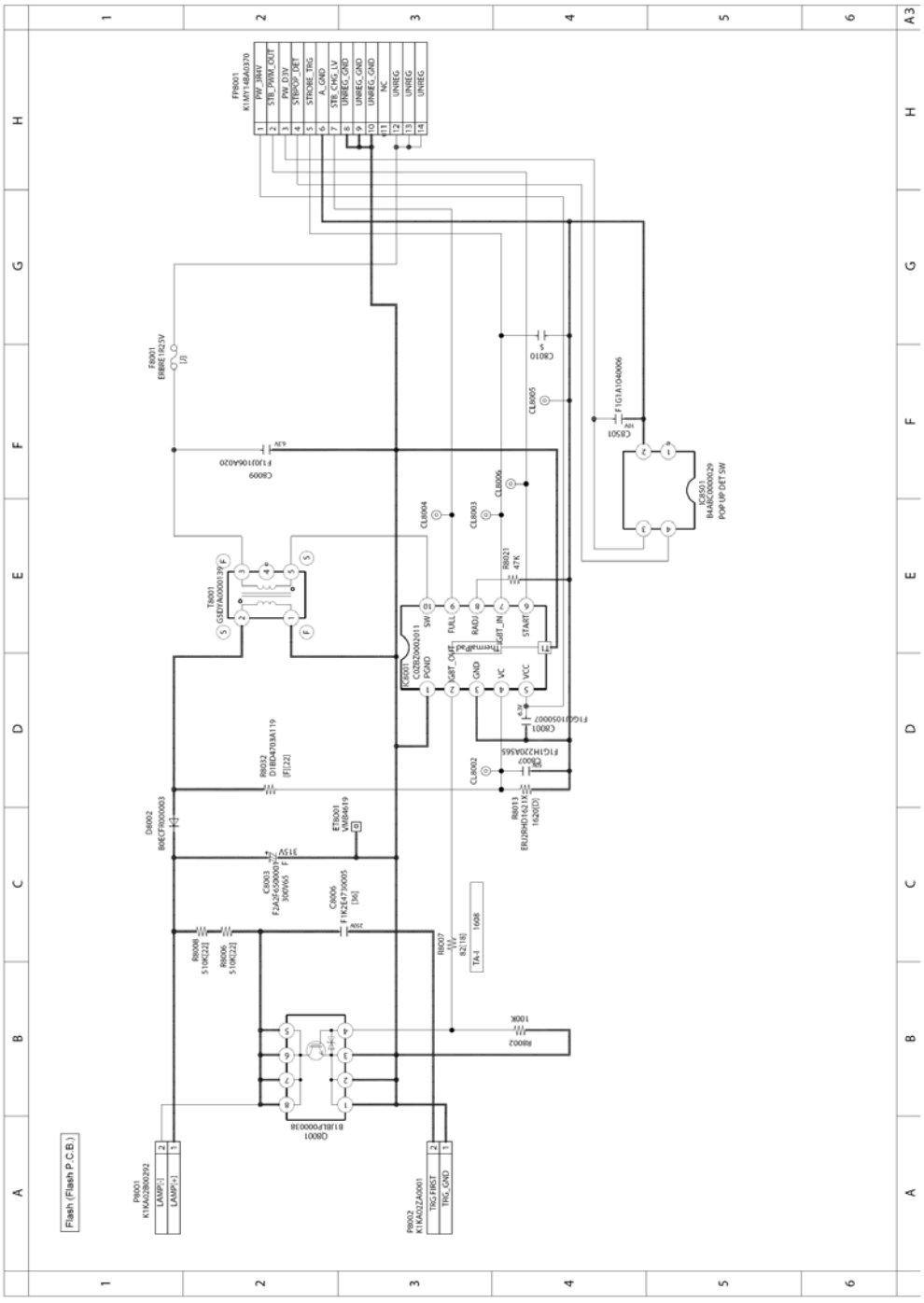
Model No. : DMC-LX7 Lvf (Lvf P.C.B.)



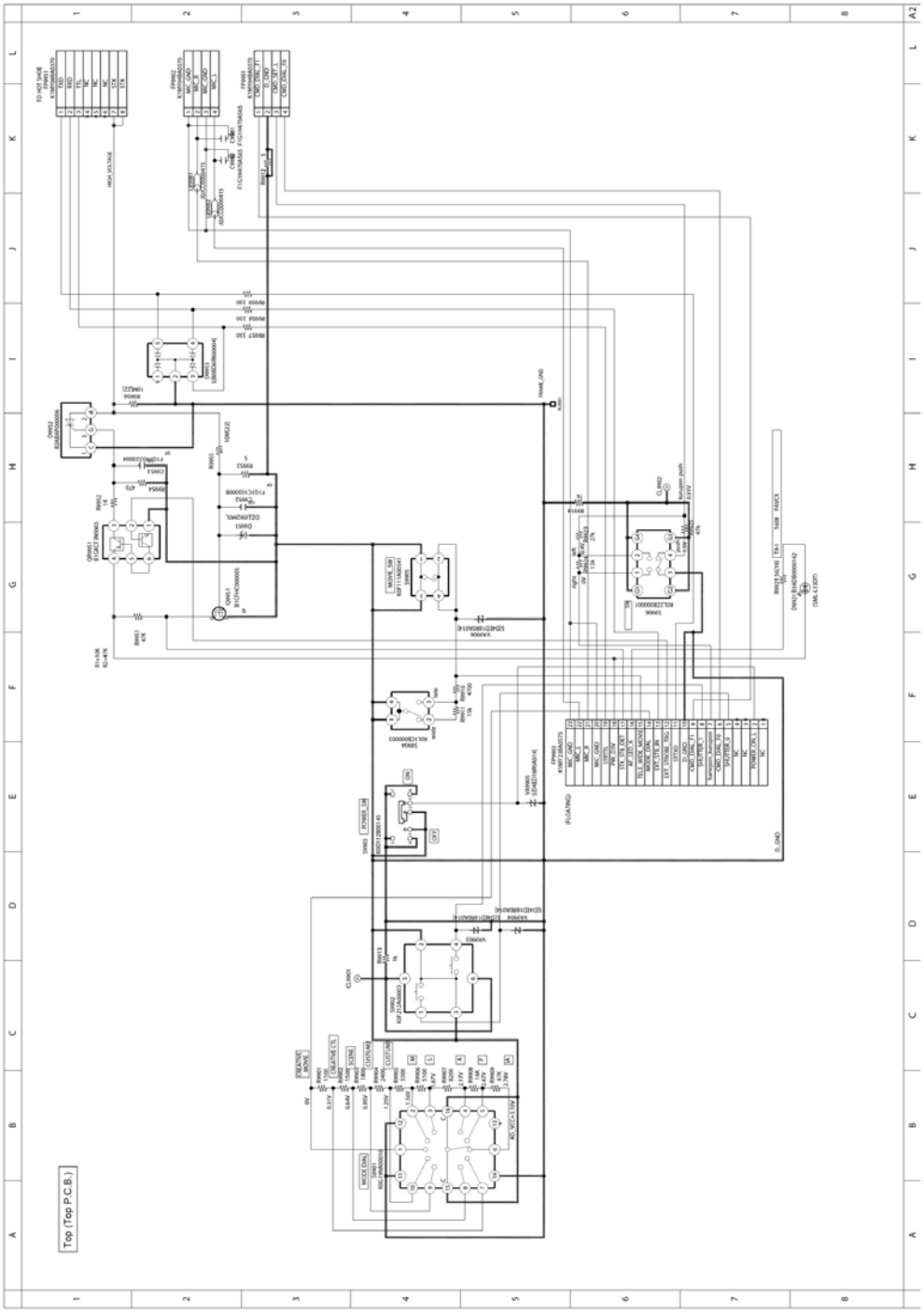
Model No. : DMC-LX7 Battery (Battery P.C.B.)



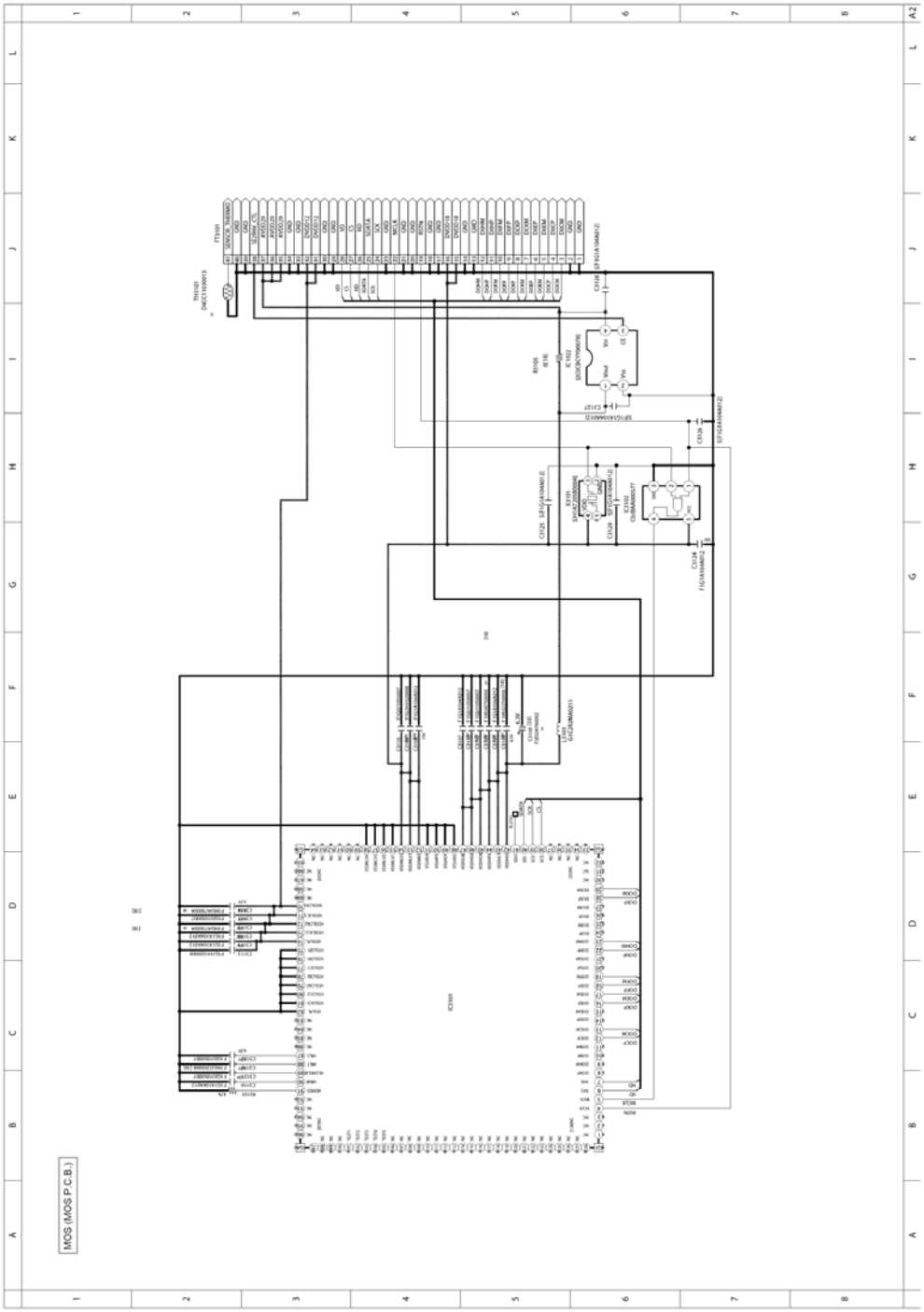
Model No. : DMC-LX7 Flash (Flash P.C.B.)



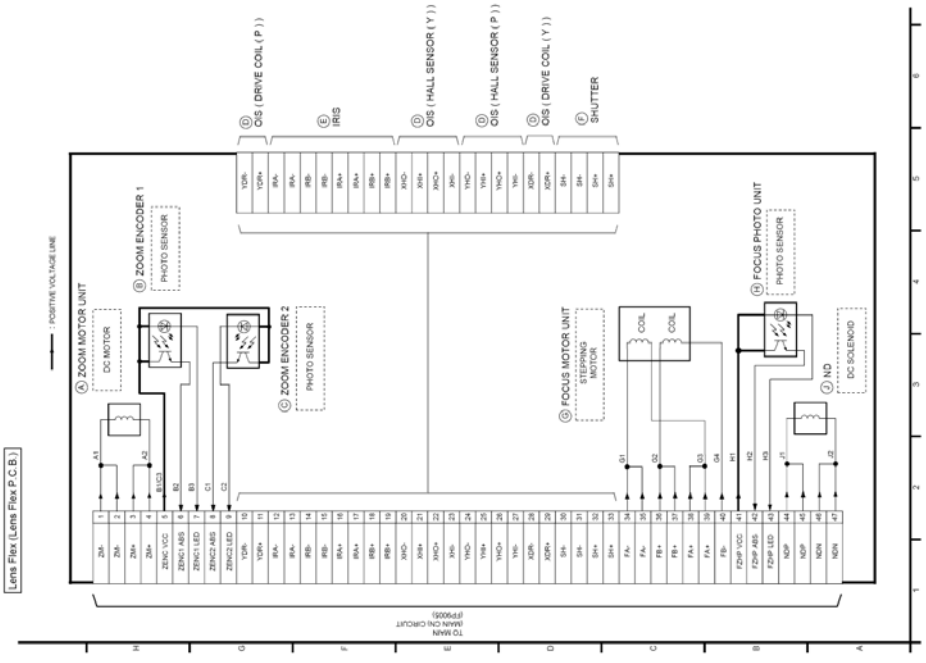
Model No. : DMC-LX7 Top (Top P.C.B.)



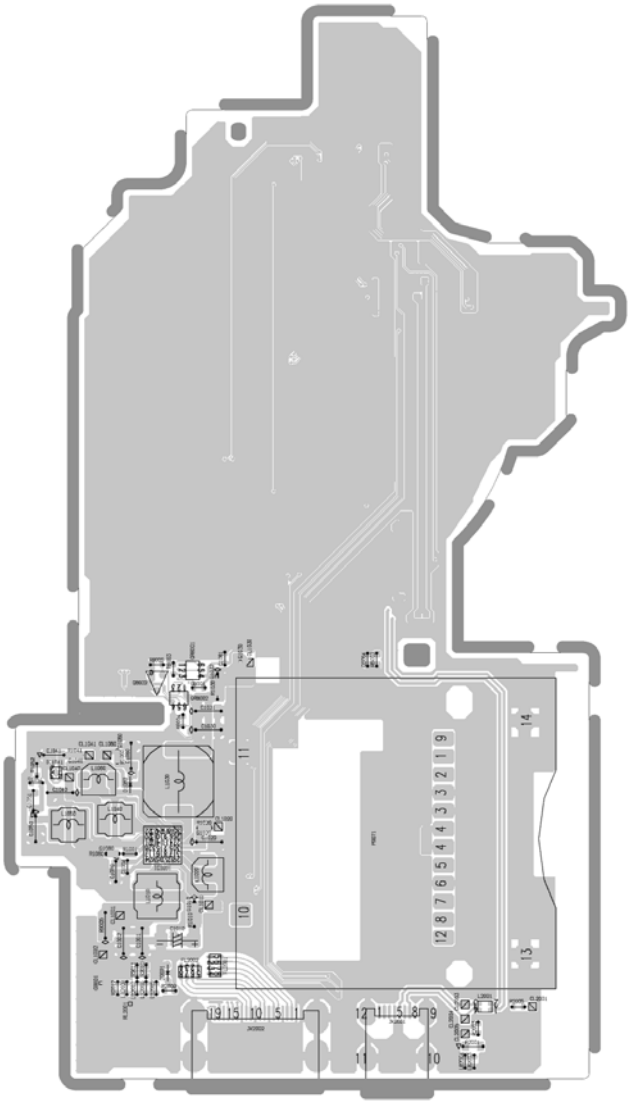
Model No. : DMC-LX7 MOS (MOS P.C.B.)



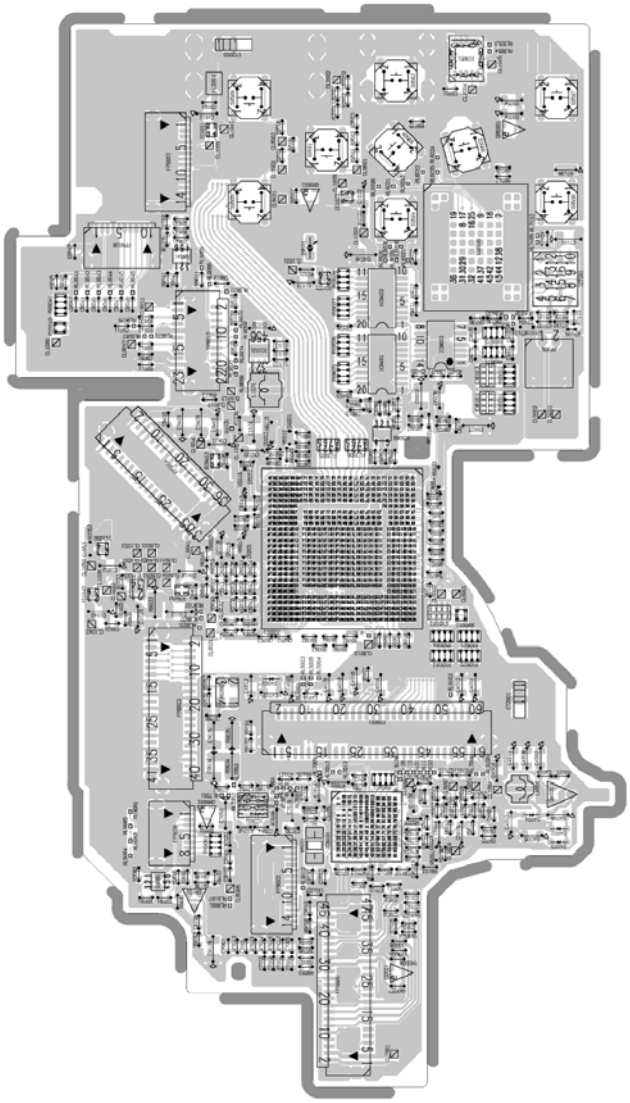
Model No. : DMC-LX7 Lens Flex (Lens Flex P.C.B.)



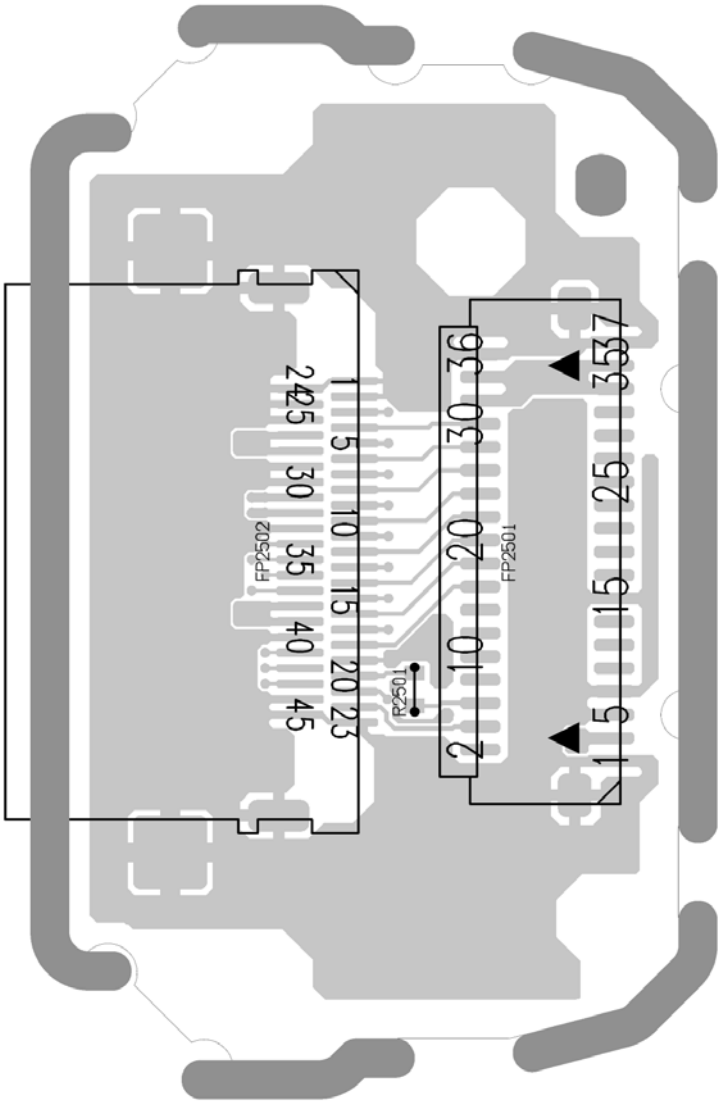
Model No. : DMC-LX7 Main P.C.B. (Component Side)



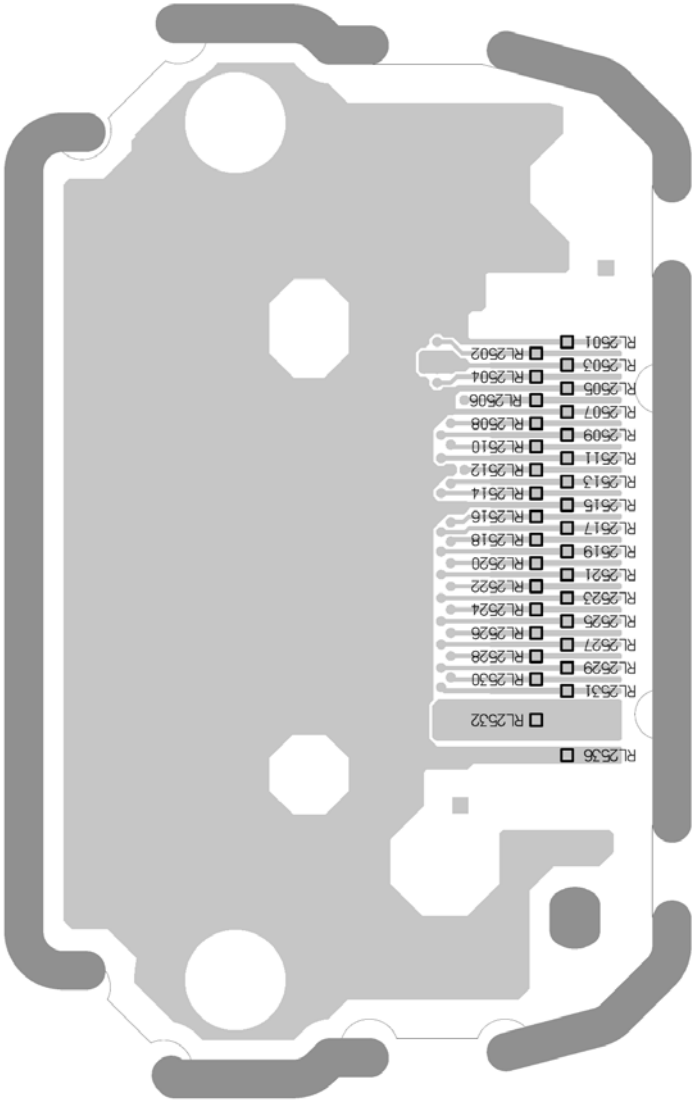
Model No. : DMC-LX7 Main P.C.B. (Foil Side)



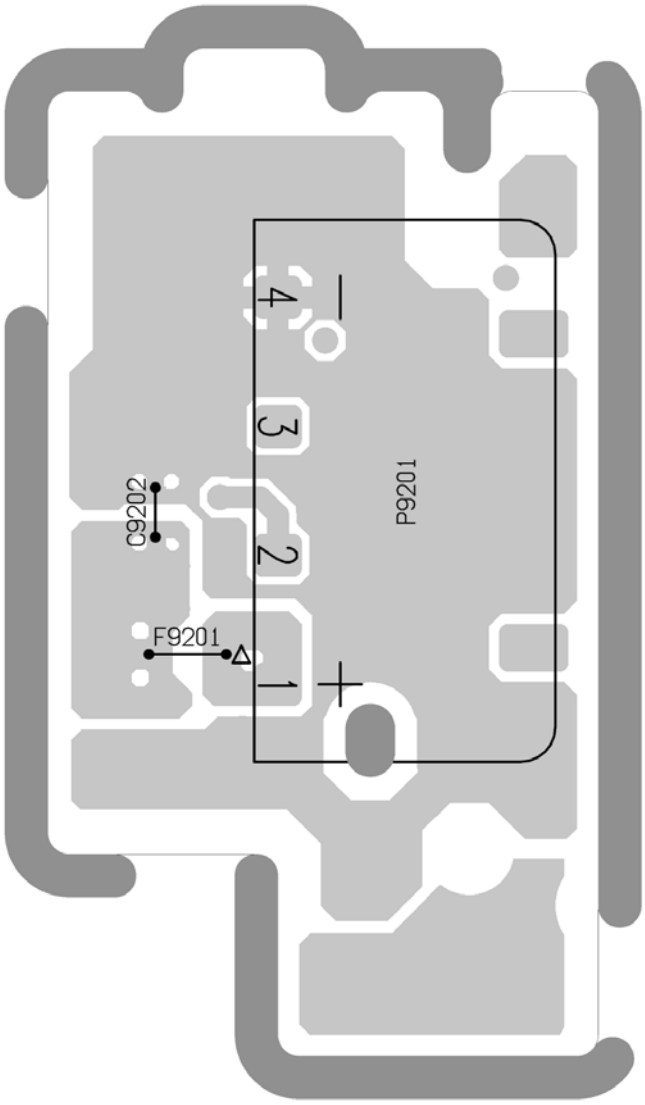
Model No. : DMC-LX7 LVF P.C.B. (Component Side)



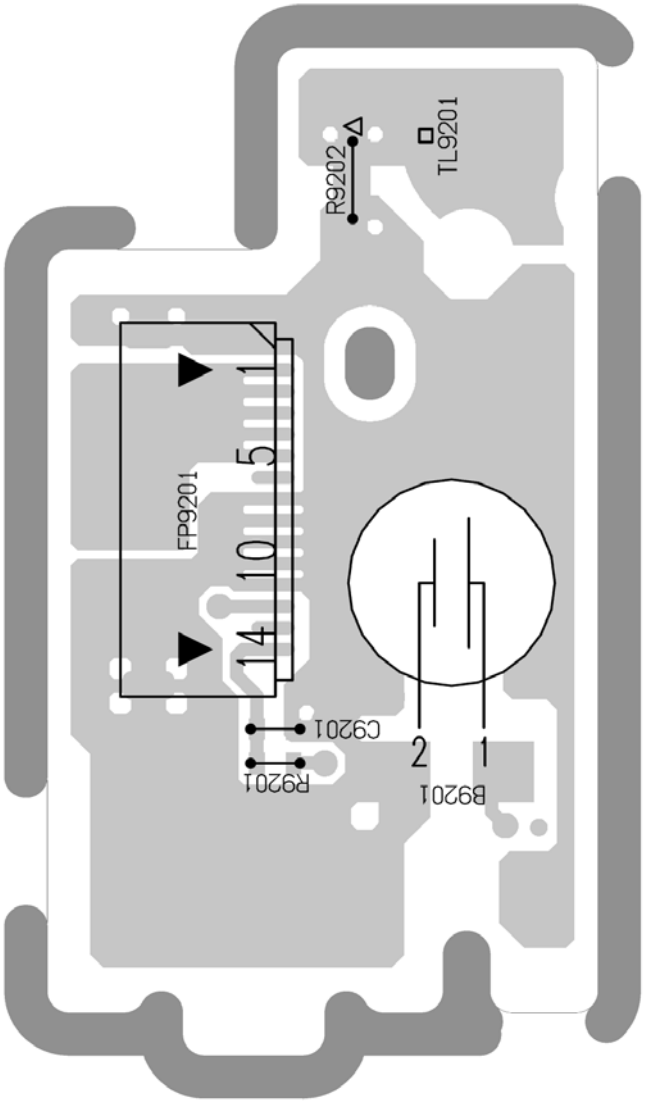
Model No. : DMC-LX7 LVF P.C.B. (Foil Side)



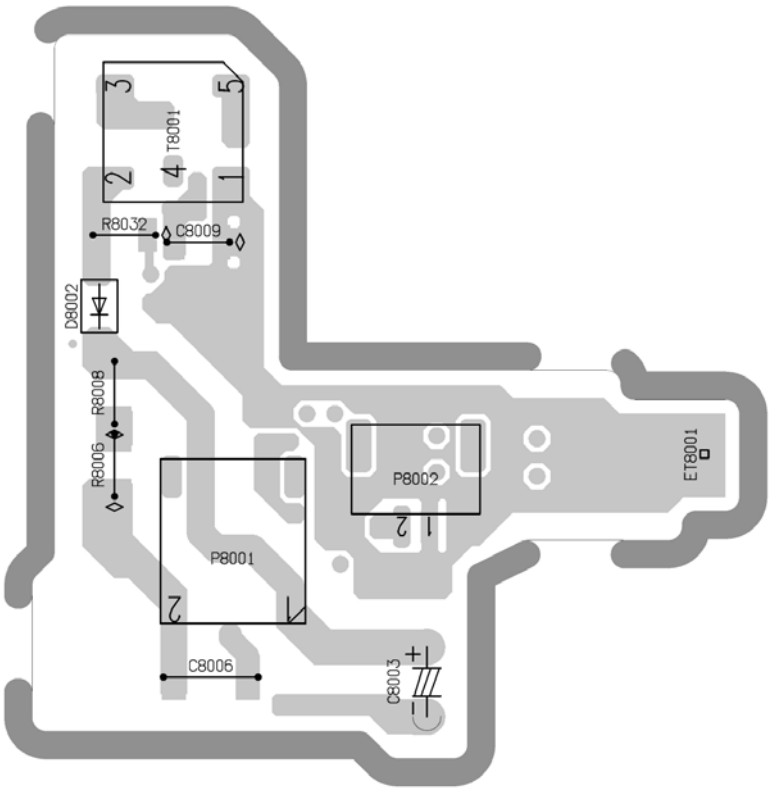
Model No. : DMC-LX7 Battery P.C.B. (Component Side)



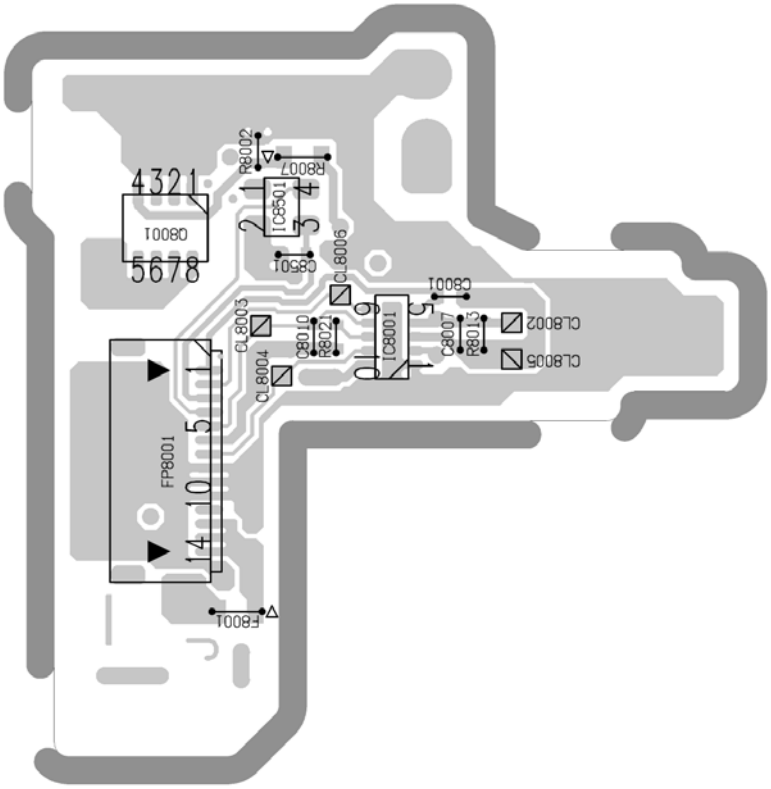
Model No. : DMC-LX7 Battery P.C.B. (Foil Side)



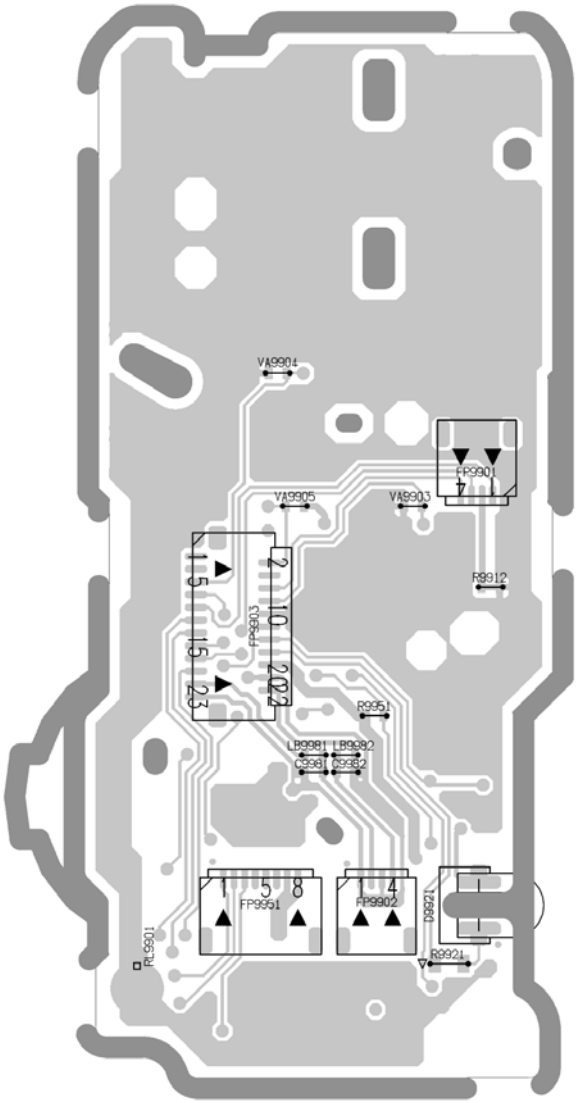
Model No. : DMC-LX7 Flash P.C.B. (Component Side)



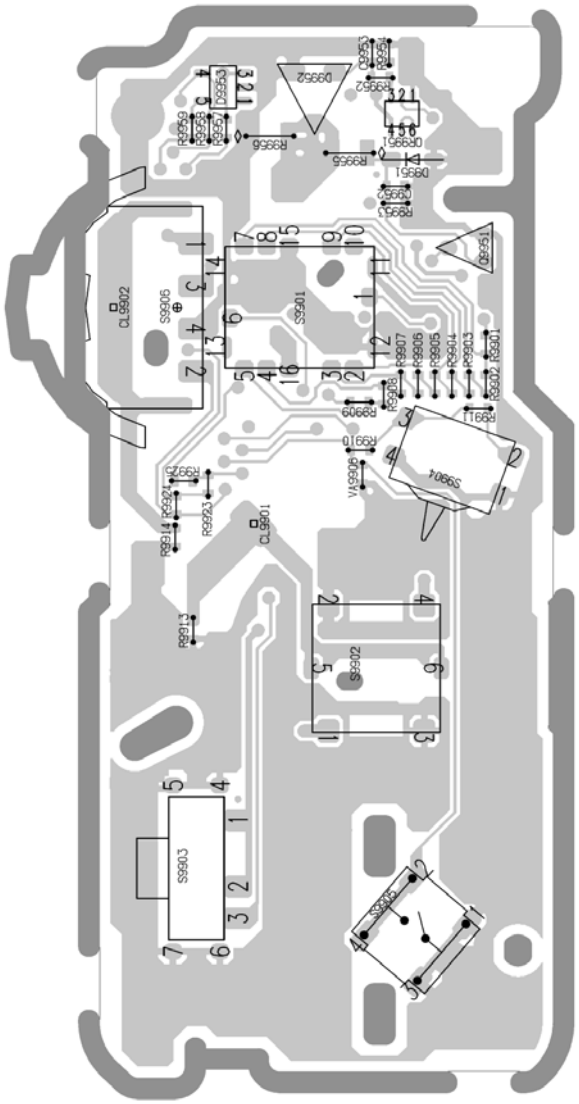
Model No. : DMC-LX7 Flash P.C.B. (Foil Side)



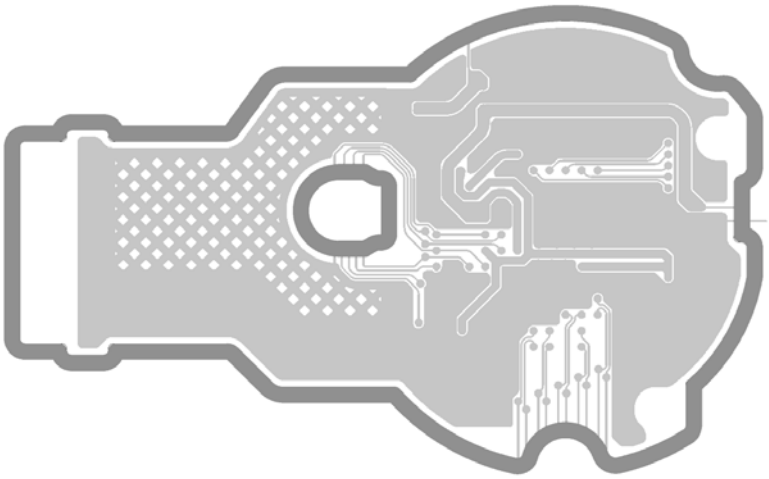
Model No. : DMC-LX7 Top P.C.B. (Component Side)



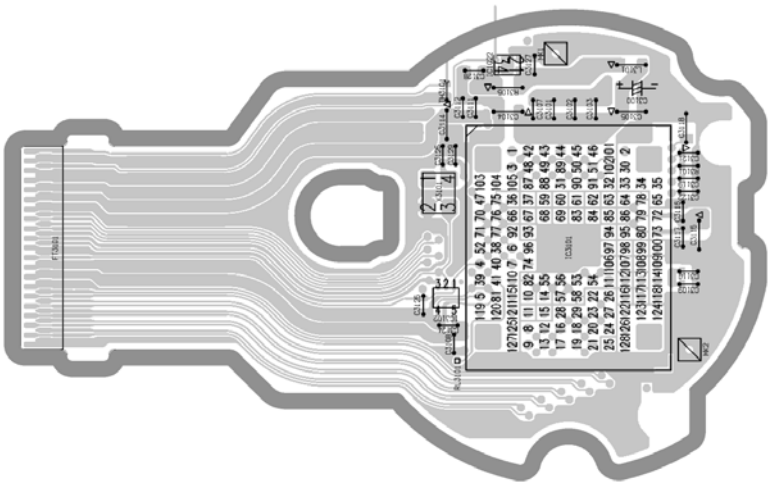
Model No. : DMC-LX7 Top P.C.B. (Foil Side)



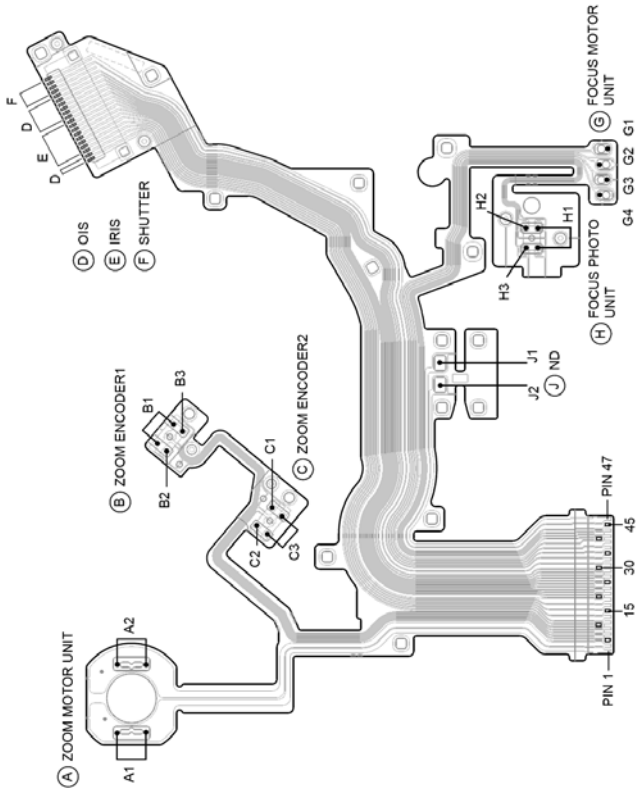
Model No. : DMC-LX7 MOS P.C.B. (Component Side)



Model No. : DMC-LX7 MOS P.C.B. (Foil Side)



Model No. : DMC-LX7 Lens Flex P.C.B.



Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C1001	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1002	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1003	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1004	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1010	F4Z1A336A013	C.CAPACITOR CH 10V 33U	1	
		C1011	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1020	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1021	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1022	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1023	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1030	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1031	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1032	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
		C1033	F1G1H101A557	C.CAPACITOR CH 50V 100P	1	
		C1034	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1040	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1041	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1042	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1050	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1051	F1H0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C1060	F1J1E4750002	C.CAPACITOR CH 25V 4.7U	1	
		C1080	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C1081	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C2001	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C4001	F1H1A4750004	C.CAPACITOR CH 10V 4.7U	1	
		C4002	F1H1A4750004	C.CAPACITOR CH 10V 4.7U	1	
		C4003	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C4004	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C4005	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C4006	F1H1A4750004	C.CAPACITOR CH 10V 4.7U	1	
		C4007	F1H1C105A097	C.CAPACITOR CH 16V 1U	1	
		C4008	F1H1E105A144	C.CAPACITOR CH 25V 1U	1	
		C4009	F1H1E105A144	C.CAPACITOR CH 25V 1U	1	
		C4010	F1H1E105A144	C.CAPACITOR CH 25V 1U	1	
		C4011	F1H1C105A097	C.CAPACITOR CH 16V 1U	1	
		C4012	F1H1C105A097	C.CAPACITOR CH 16V 1U	1	
		C4013	F1H0J4750005	C.CAPACITOR CH 6.3V 4.7U	1	
		C4014	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4015	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C4016	F1H1A4750004	C.CAPACITOR CH 10V 4.7U	1	
		C4017	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
		C4018	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C5002	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C5003	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C5005	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C5006	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C5007	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C5009	F1H0J4750005	C.CAPACITOR CH 6.3V 4.7U	1	
		C5010	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C5012	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C5013	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C5016	ECJ0EB1A473K	C.CAPACITOR CH 10V 0.047U	1	
		C5017	ECJ0EB1A473K	C.CAPACITOR CH 10V 0.047U	1	
		C5020	ECJ0EC1H470J	C.CAPACITOR CH 50V 47P	1	
		C5021	ECJ0EC1H470J	C.CAPACITOR CH 50V 47P	1	
		C6001	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C6002	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C6003	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6004	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6005	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6006	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6007	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	

Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C6010	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6011	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6013	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6014	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6016	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6017	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6018	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6022	F1H0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C6024	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6025	F1H0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C6026	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6027	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C6028	F1H0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C6029	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6030	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6034	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6035	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6036	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6037	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6038	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6039	F1G1H181A551	C.CAPACITOR CH 50V 180P	1	
		C6041	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6043	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6051	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	P,PC,PU,EE,GH,SG,GT,GK,GN,GD
		C6052	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6053	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C6056	F1G1H101A557	C.CAPACITOR CH 50V 100P	1	
		C6060	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6061	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6062	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C6063	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C6064	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7001	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C7003	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C7006	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7007	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7008	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7009	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7010	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C7011	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C7014	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
		C7019	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C7050	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C7051	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C7052	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
		C7053	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	
		C7101	F1J0J106A018	C.CAPACITOR CH 6.3V 10U	1	
		C7102	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C7104	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C7105	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C7106	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C8001	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	[PAVCX]
		C8006	F1K2E4730005	C.CAPACITOR 250V 0.047U	1	[PAVCX]
		C8007	F1G1H220A565	C.CAPACITOR CH 50V 22P	1	[PAVCX]
		C8009	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	[PAVCX]
		C8501	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	[PAVCX]
		C9011	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9012	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9031	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9033	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C9034	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C9035	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C9041	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9043	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9044	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9045	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9046	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9047	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9048	F1G1A1040006	C.CAPACITOR CH 10V 0.1U	1	
		C9051	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9071	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9072	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9073	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9074	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9075	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9076	ECJ0EC1H100D	C.CAPACITOR CH 50V 10P	1	
		C9078	F1J0J226A014	C.CAPACITOR CH 6.3V 22U	1	
		C9081	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9101	F1G1H1020008	C.CAPACITOR CH 50V 1000P	1	
		C9102	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9103	ECJ0EC1H150J	C.CAPACITOR CH 50V 15P	1	
		C9104	F1G1H120A557	C.CAPACITOR CH 50V 12P	1	
		C9105	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9106	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9107	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9108	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9109	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C9110	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9111	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9201	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	[PAVCX]
		C9202	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	[PAVCX]
		C9403	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9404	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9405	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9406	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9407	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C9408	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C9409	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C9410	F1G1A104A012	C.CAPACITOR CH 10V 0.1U	1	
		C9411	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C9412	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	
		C9952	F1G1C1030008	C.CAPACITOR CH 16V 0.01U	1	[PAVCX]
		C9953	F1G1H3320004	C.CAPACITOR CH 50V 3300P	1	[PAVCX]
		C9981	F1G1H470A565	C.CAPACITOR CH 50V 47P	1	[PAVCX]
		C9982	F1G1H470A565	C.CAPACITOR CH 50V 47P	1	[PAVCX]
		CX6001	F5A84103A020	CAPACITOR NETWORKS	1	
		CX6002	F5A84103A020	CAPACITOR NETWORKS	1	
		CX6003	F5A84103A020	CAPACITOR NETWORKS	1	
		D1060	B0JCFC000004	DIODE	1	E.S.D.
		D2001	DB2S31100L	DIODE	1	E.S.D.
		D4001	B0JCFC000004	DIODE	1	E.S.D.
		D4002	B0JCFC000004	DIODE	1	E.S.D.
		D4003	B0JCFC000004	DIODE	1	E.S.D.
		D4004	B0JCFC000004	DIODE	1	E.S.D.
		D8002	B0ECFR000003	DIODE	1	[PAVCX] E.S.D.
		D9101	DB3S406F0L	DIODE	1	E.S.D.
		D9501	B3ABB0000413	DIODE	1	E.S.D.
		D9921	B3ADB0000142	DIODE	1	[PAVCX] E.S.D.
		D9951	DZ2J082M0L	DIODE	1	[PAVCX] E.S.D.
		D9952	B2ABAP000006	DIODE	1	[PAVCX] E.S.D.
		ET2002	K4ZZ01000208	EARTH TERMINAL	1	
	⚠	F2001	K5H1522A0018	FUSE 32V 1.5A	1	
	⚠	F8001	ERBRE1R25V	FUSE 32V 1.25A	1	[PAVCX]
	⚠	F9201	ERBRE2R00V	FUSE 32V 2.0A	1	[PAVCX]

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		FL2003	F1H0J105A037	FILTER	1	
		FL2005	EXC28CH900U	FILTER	1	
		FL2006	EXC28CH900U	FILTER	1	
		FP900	K1KY02A00010	CONNECTOR 2P	1	
		FP2501	K1MY37BA0575	CONNECTOR 37P	1	
		FP2502	K1FY245E0001	CONNECTOR 24P	1	
		FP8001	K1MY14BA0370	CONNECTOR 14P	1	[PAVCX]
		FP9001	K1MY61BA0575	CONNECTOR 61P	1	
		FP9002	K1MY14BA0370	CONNECTOR 14P	1	
		FP9003	K1MY41BA0575	CONNECTOR 41P	1	
		FP9004	K1MY37BA0575	CONNECTOR 37P	1	
		FP9005	K1MY47BA0575	CONNECTOR 47P	1	
		FP9006	K1MY10BA0370	CONNECTOR 10P	1	
		FP9007	K1MY14BA0370	CONNECTOR 14P	1	
		FP9008	K1MY08BA0370	CONNECTOR 8P	1	
		FP9010	K1MY23BA0575	CONNECTOR 23P	1	
		FP9201	K1MY14BA0370	CONNECTOR 14P	1	[PAVCX]
		FP9901	K1MY04BA0370	CONNECTOR 4P	1	[PAVCX]
		FP9902	K1MY04BA0370	CONNECTOR 4P	1	[PAVCX]
		FP9903	K1MY23BA0575	CONNECTOR 23P	1	[PAVCX]
		FP9951	K1MY08BA0370	CONNECTOR 8P	1	[PAVCX]
		IC1001	C1ZBZ0004588	IC	1	E.S.D.
		IC1011	C0DBGYY00821	IC	1	E.S.D.
		IC1021	C0DBGYY01180	IC	1	E.S.D.
		IC1022	C0DBGYY02523	IC	1	E.S.D.
		IC1023	C0CBCYY00078	IC	1	E.S.D.
		IC1031	C0DBAYY01141	IC	1	E.S.D.
		IC1041	C0DBGYY02497	IC	1	E.S.D.
		IC1042	C0DBGYY02497	IC	1	E.S.D.
		IC6001	VSG1011	IC	1	E.S.D.
		IC6005	RS10358	IC	1	E.S.D.
		IC6060	C0JBAA000577	IC	1	E.S.D.
		IC7001	AN41400A-PB	IC	1	E.S.D.
		IC7101	EWTS9PSX1A	IC	1	E.S.D.
		IC8001	C0ZBZ0002011	IC	1	[PAVCX] E.S.D.
		IC8501	B4ABC0000029	IC	1	[PAVCX] E.S.D.
		IC9003	C0JBAZ003092	IC	1	E.S.D.
		IC9051	L2EZ00000004	IC	1	E.S.D.
		IC9101	C1AB00003449	IC	1	E.S.D.
		IC9401	C0JBAZ003090	IC	1	E.S.D.
		IC9402	C0JBAZ003090	IC	1	E.S.D.
		IC9403	C0DBGYY00798	IC	1	E.S.D.
		IC9404	C0DBGYY00780	IC	1	E.S.D.
		JK2001	K1FB108E0008	JACK, AV/USB	1	
		JK2002	K1FY119E0056	JACK	1	
		L1010	G1C2R2MA0477	CHIP INDUCTOR 2.2UH	1	
		L1020	G1C3R3MA0428	CHIP INDUCTOR 3.3UH	1	
		L1030	G1C2R0MA0175	CHIP INDUCTOR 2.0UH	1	
		L1031	G1C4R7MA0392	CHIP INDUCTOR 4.7UH	1	
		L1040	G1C2R2MA0392	CHIP INDUCTOR 2.2UH	1	
		L1050	G1C2R2MA0392	CHIP INDUCTOR 2.2UH	1	
		L1060	G1C100MA0428	CHIP INDUCTOR 10UH	1	
		L2001	J0ZZB0000142	CHIP INDUCTOR	1	
		L4001	G1C100MA0536	CHIP INDUCTOR 10UH	1	
		L9401	G1C100KA0124	CHIP INDUCTOR 10UH	1	
		LB2001	J0JCC0000415	FILTER	1	
		LB2002	J0JCC0000415	FILTER	1	
		LB2003	J0JCC0000415	FILTER	1	
		LB2004	J0JCC0000415	FILTER	1	
		LB2005	J0JYC0000061	FILTER	1	
		LB2006	J0JYC0000061	FILTER	1	
		LB2007	J0JYC0000061	FILTER	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		LB2008	J0JYC0000061	FILTER	1	
		LB6003	J0JCC0000412	FILTER	1	
		LB6004	J0JCC0000408	FILTER	1	
		LB9981	J0JCC0000415	FILTER	1	[PAVCX]
		LB9982	J0JCC0000415	FILTER	1	[PAVCX]
		P8001	K1KA02B00292	CONNECTOR 2P	1	[PAVCX]
		P8002	K1KA02ZA0001	CONNECTOR 2P	1	[PAVCX]
		P9071	K1NA09E00098	SD CARD SLOT	1	
		P9201	K4ZZ04000059	CONNECTOR 4P	1	[PAVCX]
		Q4001	B1ABMD000012	TRANSISTOR	1	E.S.D.
		Q8001	B1JBLP000038	TRANSISTOR	1	[PAVCX] E.S.D.
		Q8002	B1ABCF000103	TRANSISTOR	1	E.S.D.
		Q9041	B1HFCFA00035	TRANSISTOR	1	E.S.D.
		Q9081	B1HFCFA00035	TRANSISTOR	1	E.S.D.
		Q9951	B1CFHD000027	TRANSISTOR	1	[PAVCX] E.S.D.
		QR6001	DRC3144W0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR8001	B1GKCFGN0003	TRANSISTOR-RESISTOR	1	E.S.D.
		QR8002	B1GFCFJJ0016	TRANSISTOR-RESISTOR	1	E.S.D.
		QR9501	DRC3144W0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR9951	B1GKCFJN0003	TRANSISTOR-RESISTOR	1	[PAVCX] E.S.D.
		R1006	ERJ2RKD120	M.RESISTOR CH 1/16W 12	1	
		R1032	ERJ2RHD433	M.RESISTOR CH 1/16W 43K	1	
		R1033	ERJ2RHD823	M.RESISTOR CH 1/16W 82K	1	
		R1051	ERJ2RHD753	M.RESISTOR CH 1/16W 75K	1	
		R1052	ERJ2RKD154	M.RESISTOR CH 1/16W 150K	1	
		R2001	ERJ2GEJ750	M.RESISTOR CH 1/10W 75	1	
		R2002	ERJ2GEJ561	M.RESISTOR CH 1/16W 560	1	
		R2003	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R2005	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R2009	ERJ2GED273X	M.RESISTOR CH 1/10W 27K	1	
		R2010	ERJ2GEJ202	M.RESISTOR CH 1/10W 2K	1	
		R2011	ERJ2GEJ202	M.RESISTOR CH 1/10W 2K	1	
		R2012	ERJ2RHD682X	M.RESISTOR CH 1/10W 6.8K	1	
		R2501	ERJ2GEJ680	M.RESISTOR CH 1/10W 68	1	
		R4001	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R5011	ERJ2GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
		R5013	ERJ2GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
		R5016	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
		R5017	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
		R6001	ERJ2RHD223	M.RESISTOR CH 1/16W 22K	1	
		R6002	ERJ2RHD222	M.RESISTOR CH 1/16W 2.2K	1	
		R6003	ERJ2RKD330	M.RESISTOR CH 1/16W 33	1	
		R6004	ERJ2RHD122	M.RESISTOR CH 1/16W 1.2K	1	
		R6005	ERJ2RHD101	M.RESISTOR CH 1/16W 100	1	
		R6009	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R6012	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6014	ERJ2GEJ101	M.RESISTOR CH 1/10W 100	1	
		R6021	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R6022	ERJ2RKF6201	M.RESISTOR CH 1/16W 6.2K	1	
		R6028	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6030	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6032	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6034	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6036	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6038	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
		R6040	ERJ2RHD241	M.RESISTOR CH 1/16W 240	1	
		R6042	ERJ2RKF2800	M.RESISTOR CH 1/16W 28	1	
		R6043	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R6048	ERJ2GEJ472	M.RESISTOR CH 1/10W 4.7K	1	
		R6049	ERJ2GEJ472	M.RESISTOR CH 1/10W 4.7K	1	
		R6053	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
		R6054	ERJ2GEJ101	M.RESISTOR CH 1/10W 100	1	

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R6056	ERJ2RKD330	M.RESISTOR CH 1/16W 33	1	
		R6063	ERJ2GEJ101	M.RESISTOR CH 1/10W 100	1	
		R6064	ERJ2RHD222	M.RESISTOR CH 1/16W 2.2K	1	
		R6065	ERJ2RHD222	M.RESISTOR CH 1/16W 2.2K	1	
		R6066	ERJ2GEJ101	M.RESISTOR CH 1/10W 100	1	
		R6080	ERJ2RKF1000	M.RESISTOR CH 1/16W 1K	1	
		R6081	ERJ2RKF1000	M.RESISTOR CH 1/16W 1K	1	
		R6082	ERJ2RKF1000	M.RESISTOR CH 1/16W 1K	1	
		R6083	ERJ2RKF1000	M.RESISTOR CH 1/16W 1K	1	
		R6084	ERJ2RKF1000	M.RESISTOR CH 1/16W 1K	1	
		R7002	ERJ2RKD680	M.RESISTOR CH 1/16W 68	1	
		R7007	ERJ2RKD680	M.RESISTOR CH 1/16W 68	1	
		R7009	D1BA1R00A079	M.RESISTOR CH 1/8W 1	1	
		R7021	ERJ2RHD822X	M.RESISTOR CH 1/16W 8.2K	1	
		R8001	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R8002	D0GA104JA023	RESISTOR	1	[PAVCX]
		R8003	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
		R8004	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R8005	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
		R8006	ERJ6GEYJ514V	M.RESISTOR CH 1/8W 510K	1	[PAVCX]
		R8007	D0GB820JA065	M.RESISTOR CH 1/10W 82	1	[PAVCX]
		R8008	ERJ6GEYJ514V	M.RESISTOR CH 1/8W 510K	1	[PAVCX]
		R8013	ERJ2RHD1621X	M.RESISTOR CH 1/16W 1620	1	[PAVCX]
		R8021	D0GA473JA023	RESISTOR	1	[PAVCX]
		R8032	D1BD4703A119	CHIP RESISTOR	1	[PAVCX]
		R9002	ERJ2GEJ151	M.RESISTOR CH 1/10W 150	1	
		R9003	ERJ2GEJ151	M.RESISTOR CH 1/10W 150	1	
		R9004	ERJ2GEJ183	M.RESISTOR CH 1/10W 18K	1	
		R9006	ERJ2GEJ183	M.RESISTOR CH 1/10W 18K	1	
		R9008	ERJ2GED273X	M.RESISTOR CH 1/10W 27K	1	
		R9010	ERJ2GEJ221	M.RESISTOR CH 1/16W 220	1	
		R9016	ERJ2GEJ392	M.RESISTOR CH 1/10W 3.9K	1	
		R9018	ERJ2GEJ392	M.RESISTOR CH 1/10W 3.9K	1	
		R9019	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R9020	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
		R9031	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R9041	ERJ2GEJ302	M.RESISTOR CH 1/16W 3K	1	
		R9042	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
		R9043	ERJ2GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
		R9044	ERJ2GEJ560X	M.RESISTOR CH 1/10W 56	1	
		R9045	ERJ2GEJ680	M.RESISTOR CH 1/10W 68	1	
		R9046	ERJ2GEJ680	M.RESISTOR CH 1/10W 68	1	
		R9072	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	
		R9073	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
		R9081	ERJ2GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
		R9082	ERJ2GEJ560X	M.RESISTOR CH 1/10W 56	1	
		R9083	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
		R9084	ERJ2GEJ302	M.RESISTOR CH 1/16W 3K	1	
		R9085	ERJ2GEJ680	M.RESISTOR CH 1/10W 68	1	
		R9086	ERJ2GEJ680	M.RESISTOR CH 1/10W 68	1	
		R9101	ERJ2RHD183	M.RESISTOR CH 1/16W 18K	1	
		R9102	ERJ2RHD223	M.RESISTOR CH 1/16W 22K	1	
		R9105	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
		R9106	ERJ2GEJ824	M.RESISTOR CH 1/16W 820K	1	
		R9107	ERJ2GEJ334	M.RESISTOR CH 1/16W 330K	1	
		R9201	D0GA512JA023	M.RESISTOR CH 1/10W 5.1K	1	[PAVCX]
		R9402	ERJ2GEJ560X	M.RESISTOR CH 1/10W 56	1	
		R9501	ERJ2GEJ242	M.RESISTOR CH 1/16W 2.4K	1	
		R9502	ERJ2GEJ392	M.RESISTOR CH 1/10W 3.9K	1	
		R9503	ERJ2GEJ752X	M.RESISTOR CH 1/10W 7.5K	1	
		R9504	ERJ2GEJ242	M.RESISTOR CH 1/16W 2.4K	1	
		R9505	ERJ2GEJ392	M.RESISTOR CH 1/10W 3.9K	1	

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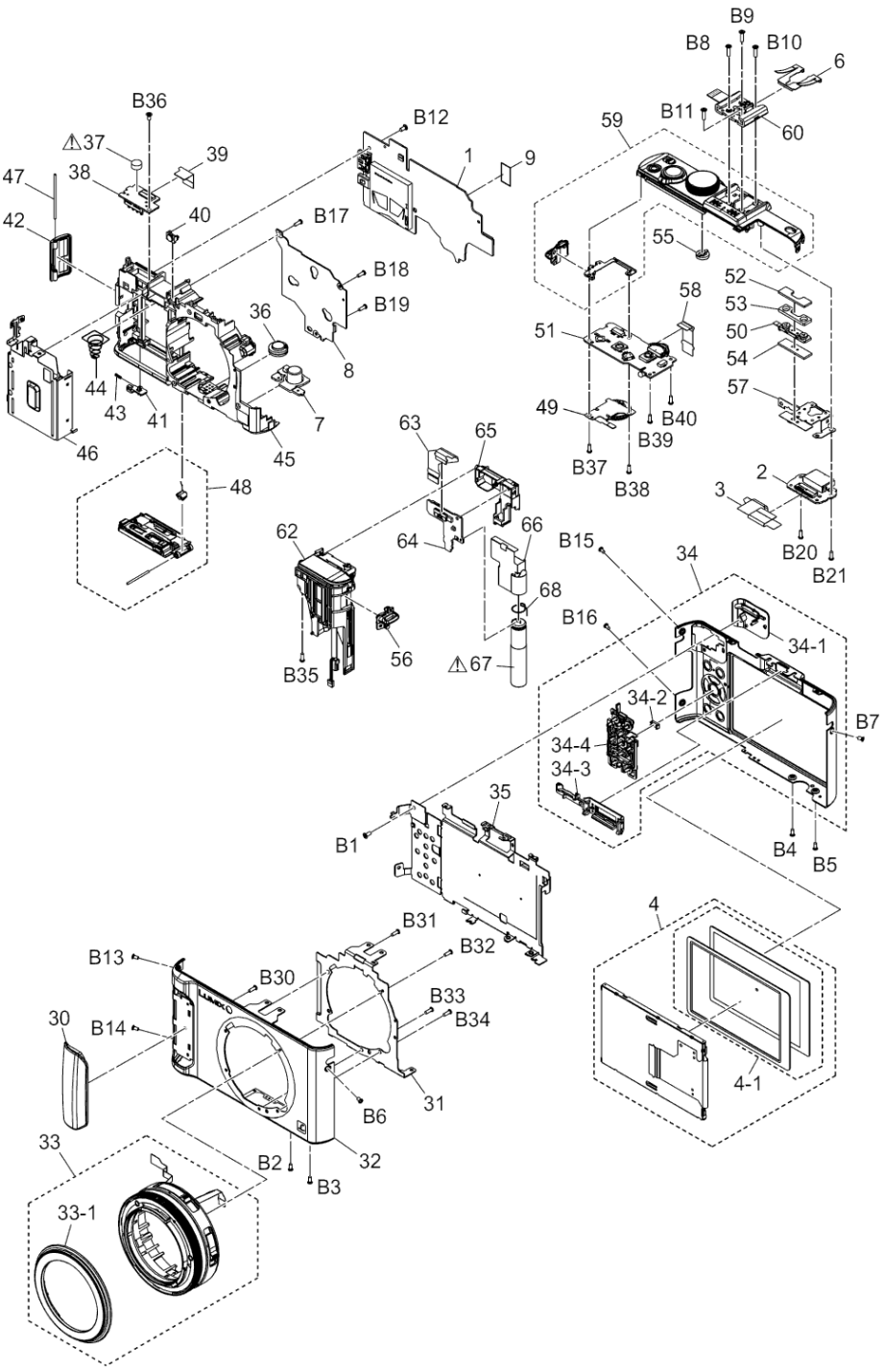
Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R9506	ERJ2GEJ242	M.RESISTOR CH 1/16W 2.4K	1	
		R9507	ERJ2GEJ201	M.RESISTOR CH 1/16W 200	1	
		R9901	D0GA112JA023	RESISTORS	1	[PAVCX]
		R9902	D0GA152JA023	CHIP RESISTOR	1	[PAVCX]
		R9903	D0GA182JA023	RESISTOR	1	[PAVCX]
		R9904	D0GA242JA023	CHIP RESISTOR	1	[PAVCX]
		R9905	D0GA332JA023	RESISTOR	1	[PAVCX]
		R9906	D0GA512JA023	M.RESISTOR CH 1/10W 5.1K	1	[PAVCX]
		R9907	D0GA822JA023	CHIP RESISTOR	1	[PAVCX]
		R9908	D0GA163JA023	RESISTORS	1	[PAVCX]
		R9909	D0GA473JA023	RESISTOR	1	[PAVCX]
		R9910	D0GA472JA023	RESISTOR	1	[PAVCX]
		R9911	D0GA153JA023	CHIP RESISTOR	1	[PAVCX]
		R9913	D0GA102JA023	M.RESISTOR CH 1/10W 1K	1	[PAVCX]
		R9914	D0GA102JA023	M.RESISTOR CH 1/10W 1K	1	[PAVCX]
		R9921	D0GB560JA065	RESISTORS	1	[PAVCX]
		R9923	D0GA273JA023	CHIP RESISTOR	1	[PAVCX]
		R9924	D0GA153JA023	CHIP RESISTOR	1	[PAVCX]
		R9925	D0GA473JA023	RESISTOR	1	[PAVCX]
		R9951	D0GA473JA023	RESISTOR	1	[PAVCX]
		R9952	D0GA102JA023	M.RESISTOR CH 1/10W 1K	1	[PAVCX]
		R9954	D0GA471JA023	CHIP RESISTOR	1	[PAVCX]
		R9955	ERJ6GEYJ106V	M.RESISTOR CH 1/10W 10M	1	[PAVCX]
		R9956	ERJ6GEYJ106V	M.RESISTOR CH 1/10W 10M	1	[PAVCX]
		R9957	D0GA331JA023	RESISTOR	1	[PAVCX]
		R9958	D0GA331JA023	RESISTOR	1	[PAVCX]
		R9959	D0GA331JA023	RESISTOR	1	[PAVCX]
		RX6001	EXBN8V103J	RESISTOR NETWORKS	1	
		RX6002	EXBN8V103J	RESISTOR NETWORKS	1	
		RX6003	EXB24V103JX	RESISTOR NETWORKS	1	
		RX9001	EXBN8V221J	RESISTOR NETWORKS	1	
		RX9002	EXBN8V221J	RESISTOR NETWORKS	1	
		RX9003	EXBN8V221J	RESISTOR NETWORKS	1	
		RX9004	EXBN8V221J	RESISTOR NETWORKS	1	
		RX9005	EXBN8V101JX	RESISTOR NETWORKS	1	
		RX9006	EXBN8V101JX	RESISTOR NETWORKS	1	
		RX9007	EXBN8V101JX	RESISTOR NETWORKS	1	
		RX9008	EXBN8V101JX	RESISTOR NETWORKS	1	
		RX9041	EXBN8V104J	RESISTOR NETWORKS	1	
		RX9042	EXB24V104JX	RESISTOR NETWORKS	1	
		RX9071	EXBN8V473J	RESISTOR NETWORKS	1	
		RX9072	EXBN8V680J	RESISTOR NETWORKS	1	
		RX9081	EXBN8V473J	RESISTOR NETWORKS	1	
		RX9101	EXBN8V102J	RESISTOR NETWORKS	1	
		S9501	K0F111A00583	SWITCH	1	
		S9502	K0F111A00583	SWITCH	1	
		S9503	K0F111A00583	SWITCH	1	
		S9504	K0F111A00583	SWITCH	1	
		S9505	K0F111A00583	SWITCH	1	
		S9506	K0F111A00583	SWITCH	1	
		S9507	K0F111A00583	SWITCH	1	
		S9508	K0F111A00583	SWITCH	1	
		S9509	K0F111A00583	SWITCH	1	
		S9901	K0G199A00010	SWITCH	1	[PAVCX]
		S9902	K0F212A00003	SWITCH	1	[PAVCX]
		S9903	K0D112B00145	SWITCH	1	[PAVCX]
		S9904	K0L1CB000003	SWITCH	1	[PAVCX]
		S9905	K0F111A00541	SWITCH	1	[PAVCX]
		S9906	K0L2ZB000001	SWITCH	1	[PAVCX]
		T8001	G5DYA0000139	TRANSFORMER	1	[PAVCX]
		TH6001	D4CC11030013	THERMISTORS	1	
		X6060	H1A7205B0004	CRYSTAL OSCILLATOR	1	

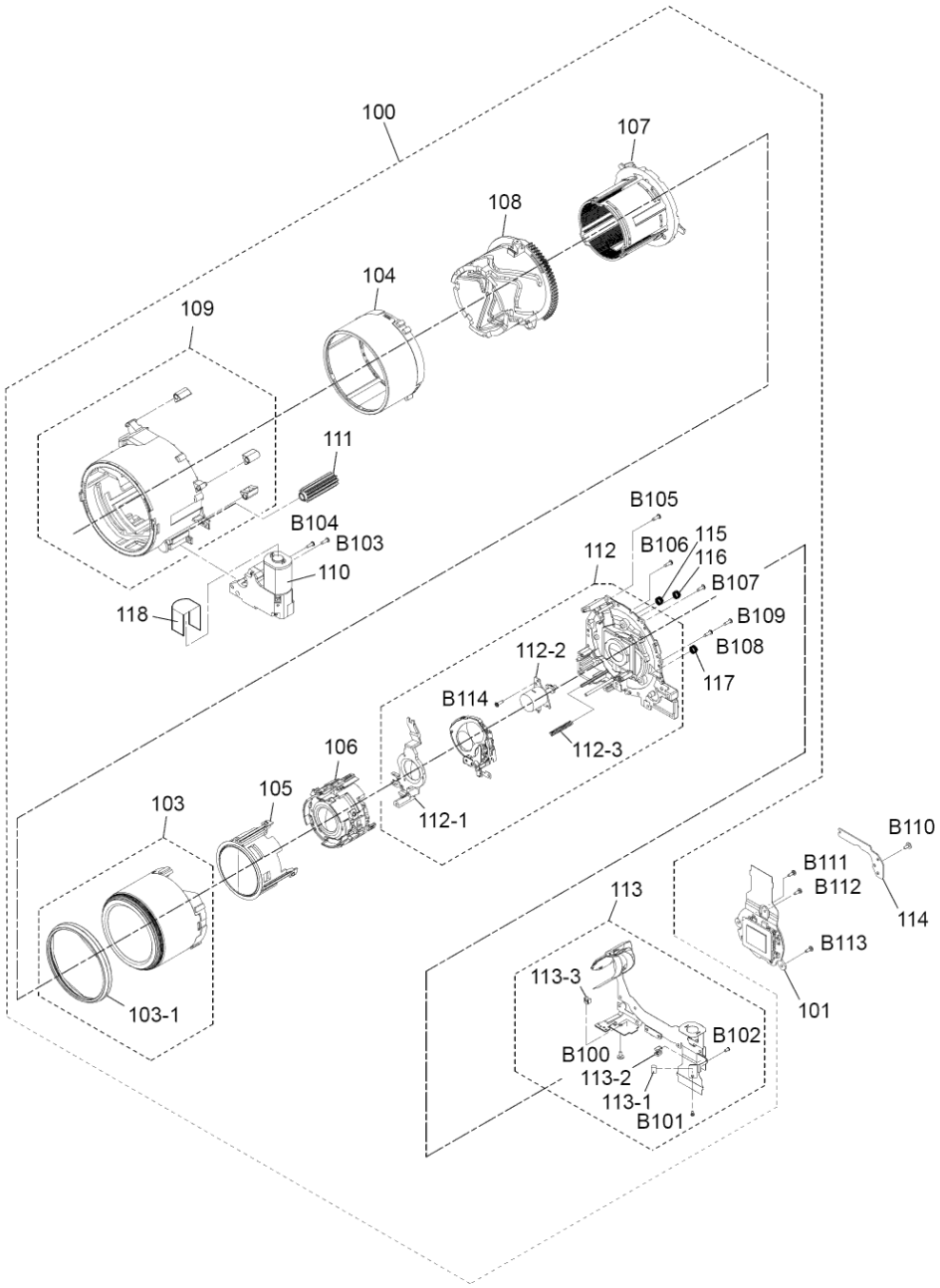
Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		X9101	H0J327200225	CRYSTAL OSCILLATOR	1	

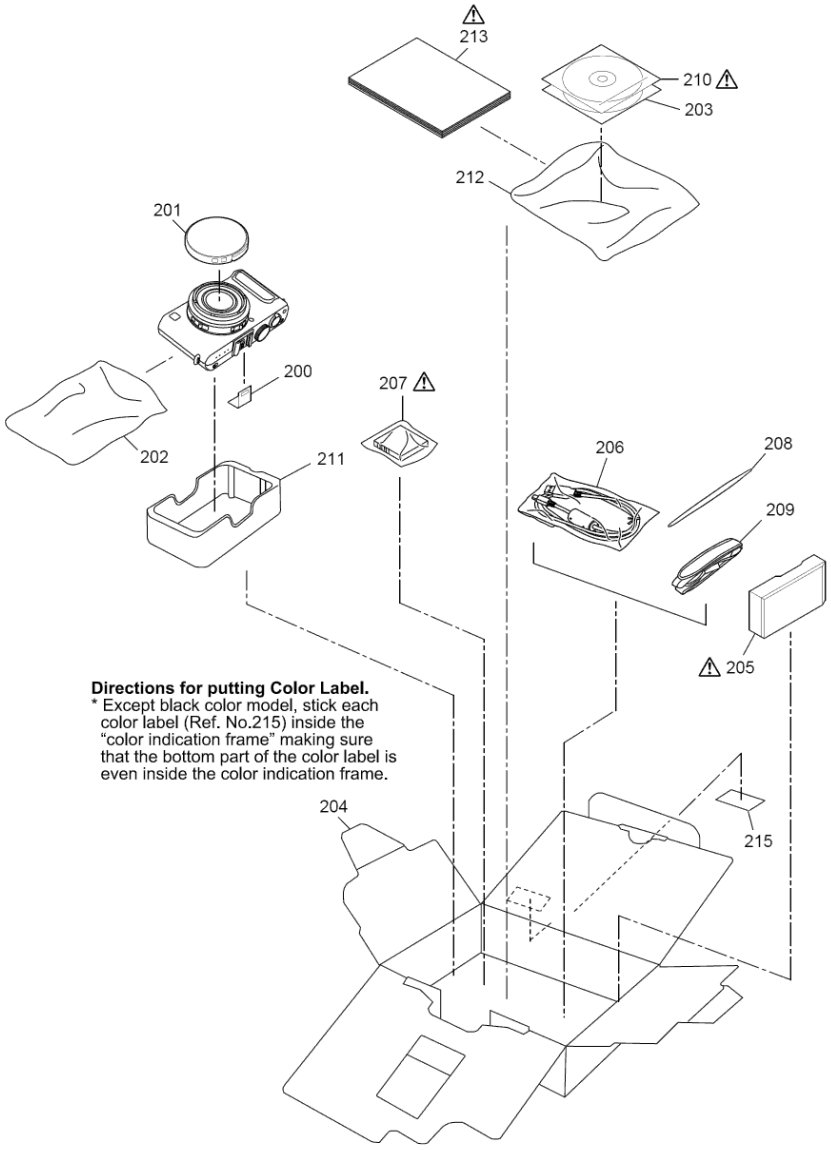
Model No. : DMC-LX7 Frame and Casing Section



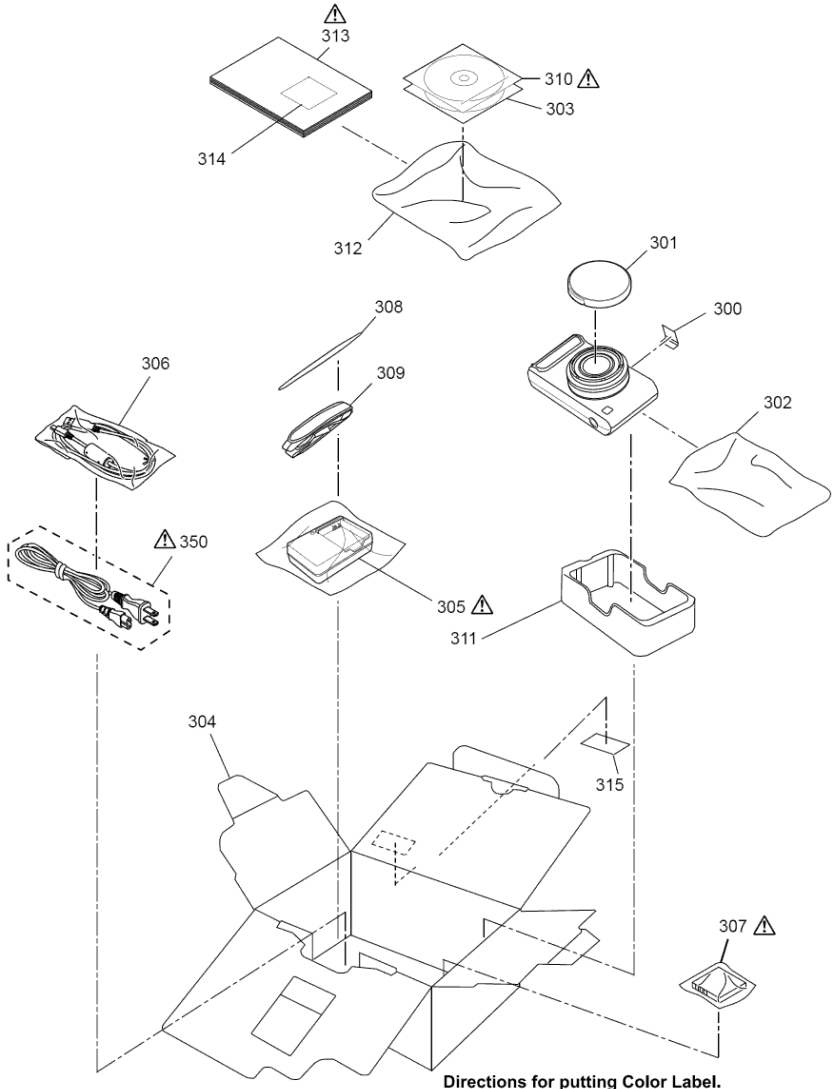
Model No. : DMC-LX7 Lens Section



Model No. : DMC-LX7 Packing Parts and Accessories Section (1)



Model No. : DMC-LX7 Packing Parts and Accessories Section (2)



Directions for putting Color Label.
* Except black color model, stick each color label (Ref. No.315) inside the "color indication frame" making sure that the bottom part of the color label is even inside the color indication frame.

Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		1	VEP56164A	MAIN P.C.B.	1	(RTL) E.S.D. P,PC,PU,EE,GH,SG,GT,GK,GN,GD
		1	VEP56164B	MAIN P.C.B.	1	(RTL) E.S.D. EG,EP,EF,EB,GC
		2	VEP59111A	LVF P.C.B.	1	(RTL)
		3	VWJ2349	MAIN-LVF JOINT FPC	1	
		4	VYK5X11	LCD UNIT	1	
		4-1	VYK5W83	LCD PANEL UNIT	1	
		6	VMC2111	SHOE SPRING	1	
		7	VMP9740	TORIPOD	1	
		8	VYK5W73	LENS FIX PLATE UNIT	1	
		9	VGQ0A02	CONNECTOR TAPE	1	
		30	VGK3933	FRONT GRIP	1	(-K) [PAVCX]
		30	VGK3934	FRONT GRIP	1	(-W) [PAVCX]
		31	VMP0D06	FRONT PLATE	1	[PAVCX]
		32	VYK5W93	FRONT CASE UNIT	1	(-K) [PAVCX]
		32	VYK5W94	FRONT CASE UNIT	1	(-W) [PAVCX]
		33	VYK5W95	LENS RING UNIT	1	(-K) [PAVCX]
		33	VYK5W96	LENS RING UNIT	1	(-W) [PAVCX]
		33-1	VYK5W97	FRONT RING UNIT	1	(-K) [PAVCX]
		33-1	VYK5W98	FRONT RING UNIT	1	(-W) [PAVCX]
		34	VYK6B22	REAR CASE UNIT	1	(-K) [PAVCX]
		34	VYK6B23	REAR CASE UNIT	1	(-W) [PAVCX]
		34-1	VGK3941	REAR GRIP	1	(-K) [PAVCX]
		34-1	VGK3942	REAR GRIP	1	(-W) [PAVCX]
		34-2	VGL1408	REAR PANEL LIGHT	1	[PAVCX]
		34-3	VGQ1D98	LVF JACK HOLDER	1	(-K) [PAVCX]
		34-3	VGQ1D99	LVF JACK HOLDER	1	(-W) [PAVCX]
		34-4	VGU0M04	CURSOR BUTTON	1	(-K) [PAVCX]
		34-4	VGU0M33	CURSOR BUTTON	1	(-W) [PAVCX]
		35	VYK6B24	FLAME PLATE UNIT	1	[PAVCX]
		36	L0AA01A00135	SPEAKER	1	[PAVCX]
	⚠	37	ML-421S/DN	BUTTON BATTERY	1	[ENERGY]、(B9201)
		38	VEP51032A	BATTERY P.C.B.	1	(RTL) [PAVCX]
		39	VWJ2346	MAIN-BATTERY JOINT FPC	1	[PAVCX]
		40	VGL1365	AF PANEL LIGHT	1	[PAVCX]
		41	VGQ0M78-A	BATTERY LOCK KNOB	1	[PAVCX]
		42	VKF5076	JACK DOOR	1	(-K) [PAVCX]
		42	VKF5077	JACK DOOR	1	(-W) [PAVCX]
		43	VMB4152	BATTERY LOCK SPRING	1	[PAVCX]
		44	VMB4571	BATTERY OUT SPRING	1	[PAVCX]
		45	VMP0D09	FRAME	1	[PAVCX]
		46	VMP0D10	BATTERY CASE	1	[PAVCX]
		47	VMS8049-A	JACK DOOR SHAFT	1	[PAVCX]
		48	VYK5X16	BATTERY DOOR UNIT	1	(-K) [PAVCX]
		48	VYK5X17	BATTERY DOOR UNIT	1	(-W) [PAVCX]
		49	K0RC01100013	SWITCH UNIT	1	[PAVCX]
		50	L0CBAY000155	MIC UNIT	1	[PAVCX]
		51	VEP50122A	TOP P.C.B.	1	(RTL) [PAVCX] E.S.D.
		52	VGQ0Y46	MIC CUSHION (A)	1	[PAVCX]
		53	VGQ1J86	MIC CUSHION (B)	1	[PAVCX]
		54	VGQ0Y48	MIC CUSHION (C)	1	[PAVCX]
		55	VGQ1E02	COUPLING PLATE	1	[PAVCX]
		56	VKH0458	STRAP HOLDER (R)	1	[PAVCX]
		57	VMP0D11	LVF PLATE	1	[PAVCX]
		58	VWJ2348	MAIN-TOP JOINT FPC	1	[PAVCX]
		59	VYK5Y18	TOP CASE UNIT	1	(-K) [PAVCX]
		59	VYK5Y19	TOP CASE UNIT	1	(-W) [PAVCX]
		60	VEK0Q59	HOT SHOE UNIT	1	[PAVCX]
		62	VYK5X22	FLASH UNIT	1	(-K) [PAVCX]
		62	VYK5X23	FLASH UNIT	1	(-W) [PAVCX]
		63	VWJ2350	MAIN-FLASH JOINT FPC	1	[PAVCX]
		64	VEP59112A	FLASH P.C.B.	1	(RTL) [PAVCX] E.S.D.

Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		65	VGQ1E07	FL PCB COVER	1	[PAVCX]
		66	VGQ1E04	FL TAPE	1	[PAVCX]
	⚠	67	F2A2F6500001	E.CAPACITOR	1	[PAVCX]、(C8003)
		68	VMB4619	CONDENSER EARTH SPRING	1	[PAVCX]、(ET8001)
		B1	VHD1803	SCREW	1	
		B2	VHD2206	SCREW	1	(-K)
		B2	VHD2205	SCREW	1	(-W)
		B3	VHD2206	SCREW	1	(-K)
		B3	VHD2205	SCREW	1	(-W)
		B4	VHD2206	SCREW	1	(-K)
		B4	VHD2205	SCREW	1	(-W)
		B5	VHD2206	SCREW	1	(-K)
		B5	VHD2205	SCREW	1	(-W)
		B6	VHD2208	SCREW	1	(-K)
		B6	VHD2207	SCREW	1	(-W)
		B7	VHD2208	SCREW	1	(-K)
		B7	VHD2207	SCREW	1	(-W)
		B8	VHD2259	SCREW	1	
		B9	VHD2259	SCREW	1	
		B10	VHD2259	SCREW	1	
		B11	VHD2259	SCREW	1	
		B12	VHD2324	SCREW	1	
		B13	VHD2431	SCREW	1	(-K)
		B13	VHD2432	SCREW	1	(-W)
		B14	VHD2431	SCREW	1	(-K)
		B14	VHD2432	SCREW	1	(-W)
		B15	VHD2431	SCREW	1	(-K)
		B15	VHD2432	SCREW	1	(-W)
		B16	VHD2431	SCREW	1	(-K)
		B16	VHD2432	SCREW	1	(-W)
		B17	XQN14+BJ4FJK	SCREW	1	
		B18	XQN14+BJ4FJK	SCREW	1	
		B19	XQN14+BJ4FJK	SCREW	1	
		B20	XQN14+BJ4FJK	SCREW	1	
		B21	XQN14+BJ4FJK	SCREW	1	
		B30	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B31	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B32	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B33	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B34	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B35	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B36	VHD2019	SCREW	1	[PAVCX]
		B37	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B38	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B39	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		B40	XQN14+BJ4FJK	SCREW	1	[PAVCX]
		100	VXW1506	LENS UNIT (W/O MOS)	1	(-K)
		100	VXW1514	LENS UNIT (W/O MOS)	1	(-W)
		101	VEK0T22	MOS UNIT	1	
		103	VXP3808	1ST LENS FRAME UNIT	1	(-K)
		103	VXP3821	1ST LENS FRAME UNIT	1	(-W)
		103-1	VGQ1H81	LENS ORNAMENT	1	(-K)
		103-1	VGQ1H82	LENS ORNAMENT	1	(-W)
		104	VXP3810	1ST DIRECT FRAME UNIT	1	(-K)
		104	VXP3822	1ST DIRECT FRAME UNIT	1	(-W)
		105	VXP3811	2ND LENS FRAME UNIT	1	
		106	VXP3812	3RD LENS FRAME UNIT	1	
		107	VDW2550	2ND-3RD DIRECT FRAME	1	
		108	VDW2548	BOTH SIDE CUM FRAME	1	
		109	VXQ2269	FIX FRAME UNIT	1	
		110	L6DAYYYD0007	ZOOM MOTOR	1	
		111	VDG1784	DRIVE GEAR	1	

Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		112	VXQ2270	MASTER FLANGE UNIT	1	
		112-1	VXP3817	4TH LENS FRAME UNIT	1	
		112-2	L6HAYYYD0055	FOCUS MOTOR	1	
		112-3	VMB4626	FOCUS SPRING	1	
		113	VEK0T21	LENS FPC PCB UNIT	1	
		113-1	B3NBA0000011	PHOTO SENSOR	1	
		113-2	B3NBA0000011	PHOTO SENSOR	1	
		113-3	B3NBA0000018	PHOTO SENSOR	1	
		114	VMA0Z03	MOS FPC HOLDING PLATE	1	
		115	VMB4601	MOS TILT SPRING	1	
		116	VMB4601	MOS TILT SPRING	1	
		117	VMB4601	MOS TILT SPRING	1	
		118	VGQ0R21	PROTECT SHEET	1	
		B100	VHD2346	SCREW	1	
		B101	VHD2411	SCREW	1	
		B102	VHD2411	SCREW	1	
		B103	VHD2390	SCREW	1	
		B104	VHD2390	SCREW	1	
		B105	VHD2390	SCREW	1	
		B106	VHD2390	SCREW	1	
		B107	VHD2390	SCREW	1	
		B108	VHD2390	SCREW	1	
		B109	VHD2390	SCREW	1	
		B110	VHD2346	SCREW	1	
		B111	VHD2388	SCREW	1	
		B112	VHD2388	SCREW	1	
		B113	VHD2388	SCREW	1	
		B114	VHD2390	SCREW	1	
		200	VKF4970	HOT SHOE COVER	1	P,PC
		201	VYK5W85	LENS CAP UNIT	1	P,PC (-K)
		201	VYK5W86	LENS CAP UNIT	1	P,PC (-W)
		202	VPF1316A	CAMERA BAG	1	P,PC
		203	VFF1021-E	CD-ROM (SOFTWARE)	1	P,PC See "Notes"
		204	VPK5401	PACKING CASE	1	P,PC
	⚠	205	DE-A81BB	BATTERY CHARGER	1	P,PC
		206	K1HY08YY0025	USB CABLE W/PLUG	1	
	⚠	207	-----	BATTERY	1	P,PC
		208	VFC4366	LENS CAP STRING	1	P,PC
		209	VFC4901	SHOULDER STRAP	1	P,PC
	⚠	210	VFF1038	CD-ROM (INSTRUCTION BOOK)	1	P,PC
		211	VPN7420	CUSHION	1	P,PC
		212	VPF1230	BAG, POLYETHYLENE	1	P,PC
	⚠	213	VQT4H90	BASIC O/I (ENGLISH/SPANISH)	1	P
	⚠	213	VQT4H91	BASIC O/I (ENGLISH/CANADIAN FRENCH)	1	PC
		215	VQL2U30	COLOR LABEL	1	P-W,PC-W
		300	VKF4970	HOT SHOE COVER	1	EXCEPT P,PC
		301	VYK5W85	LENS CAP UNIT	1	EXCEPT P,PC (-K)
		301	VYK5W86	LENS CAP UNIT	1	(-W)
		302	VPF1316A	CAMERA BAG	1	EXCEPT P,PC
		303	VFF1021-E	CD-ROM (SOFTWARE)	1	PU,EG,EP,EF,EB,EE,GC,GH, SG,GT,GN,GD See "Notes"
		303	VFF1022-E	CD-ROM (SOFTWARE)	1	GK See "Notes"
		304	VPK5403	PACKING CASE	1	PU,EG,EP,EF,EB,EE, GC,GH,SG,GT,GN,GD
		304	VPK5404	PACKING CASE	1	GK
	⚠	305	DE-A82AC	BATTERY CHARGER	1	EG,EP,EF,EB,EE,GN
	⚠	305	DE-A82BC	BATTERY CHARGER	1	GC,GH,GK,GD
	⚠	305	DE-A82DB	BATTERY CHARGER	1	SG
	⚠	305	DE-A82CB	BATTERY CHARGER	1	GT
	⚠	305	DE-A81BB	BATTERY CHARGER	1	PU
		306	K1HY08YY0025	USB CABLE W/PLUG	1	
	⚠	307	-----	BATTERY	1	EXCEPT P,PC

Model No. : DMC-LX7 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		308	VFC4366	LENS CAP STRING	1	EXCEPT P,PC
		309	VFC4901	SHOULDER STRAP	1	EXCEPT P,PC
	⚠	310	VFF1039	CD-ROM (INSTRUCTION BOOK)	1	EG,EP,EF,EB
	⚠	310	VFF1040	CD-ROM (INSTRUCTION BOOK)	1	EE
	⚠	310	VFF1041	CD-ROM (INSTRUCTION BOOK)	1	GC,GH,SG,GN
	⚠	310	VFF1042	CD-ROM (INSTRUCTION BOOK)	1	GT,GD
	⚠	310	VFF1043	CD-ROM (INSTRUCTION BOOK)	1	GK
	⚠	310	VFF1038	CD-ROM (INSTRUCTION BOOK)	1	PU
		311	VPN7420	CUSHION	1	EXCEPT P,PC
		312	VPF1230	BAG, POLYETHYLENE	1	EXCEPT P,PC
	⚠	313	VQT4H92	BASIC O/I (SPANISH/PORTUGUESE)	1	PU
	⚠	313	VQT4H93	BASIC O/I (GERMAN/TURKISH)	1	EG
	⚠	313	VQT4H94	BASIC O/I (ITALIAN/DUTCH)	1	EG
	⚠	313	VQT4H95	BASIC O/I (SPANISH/PORTUGUESE)	1	EG
	⚠	313	VQT4H96	BASIC O/I (FRENCH)	1	EG,EF
	⚠	313	VQT4H97	BASIC O/I (SWEDISH/DANISH)	1	EP
	⚠	313	VQT4H98	BASIC O/I (POLISH/CZECH)	1	EP
	⚠	313	VQT4H99	BASIC O/I (HUNGARIAN/FINNISH)	1	EP
	⚠	313	VQT4J01	BASIC O/I (ENGLISH)	1	EB
	⚠	313	VQT4J02	BASIC O/I (RUSSIAN/UKRAINIAN)	1	EE
	⚠	313	VQT4J03	BASIC O/I (ENGLISH/CHINESE(TRADITIONAL))	1	GC,GH,SG
	⚠	313	VQT4J04	BASIC O/I (ARABIC/PERSIAN)	1	GC
	⚠	313	VQT4J05	BASIC O/I (VIETNAMESE)	1	GC
	⚠	313	VQT4J06	BASIC O/I (CHINESE(TRADITIONAL))	1	GT
	⚠	313	VQT4J07	BASIC O/I (CHINESE(SIMPLIFIED))	1	GK
	⚠	313	VQT4J08	BASIC O/I (ENGLISH)	1	GN
	⚠	313	VQT4J09	BASIC O/I (KOREAN)	1	GD
		314	VQL2C68-1	OPERATING LABEL	1	GT
		315	VQL2U30	COLOR LABEL	1	GC-W,GH-W,SG-W,GT-W,GN-W,GD-W
		315	VQL2U31	COLOR LABEL	1	GK-W
	⚠	350	K2CQ2YY00082	AC CORD W/PLUG	1	EG,EP,EF,EE,GC
	⚠	350	K2CT3YY00034	AC CORD W/PLUG	1	EB,GC,GH
	⚠	350	K2CA2YY00247	AC CORD W/PLUG	1	SG
	⚠	350	K2CA2YY00129	AC CORD W/PLUG	1	GT
	⚠	350	K2CA2YY00130	AC CORD W/PLUG	1	GK
	⚠	350	K2CJ2YY00052	AC CORD W/PLUG	1	GN
	⚠	350	K2CR2YY00026	AC CORD W/PLUG	1	GD