

Service Manual

High Definition Video Camera

AVCHD™
Progressive

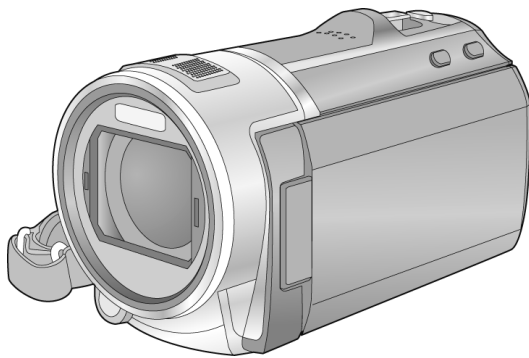
HDMI

SD
XC

VIERA Link™

BD

DOLBY
DIGITAL
STEREO CREATOR



Model No. **HC-V700P**

HC-V700PC

HC-V700EB

HC-V700EC

HC-V700EE

HC-V700EF

HC-V700EG

HC-V700EP

HC-V700GC

HC-V700GN

HC-V700GK

HC-V707EG

HC-V700MP

HC-V700MPC

HC-V700MPU

HC-V700MGK

HC-V707MEG

Colour

(K).....Black Type

(S).....Silver Type (only HC-V707EG)

WARNING

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

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1 Safety 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 $1\text{ M}\Omega$ and $5.2\text{ M}\Omega$. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

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

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

Hot-Check Circuit

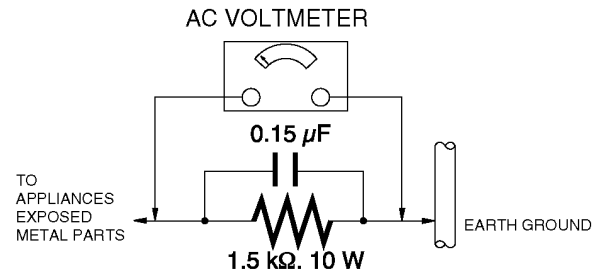


Figure. 1

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

CAUTION:

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

Before disassembling, perform "6.4. Forced full flash emission" for discharging capacitor.
The capacitor also can be discharged according to the following procedures.

[Discharging Procedure]

1. Refer to the disassemble procedure and Remove the necessary parts/unit.
2. Put the insulation tube onto the lead part of Resistor (ERG5SJ102:1k Ω /5W).
(an equivalent type of resistor may be used.)
3. Put the resistor between both terminals of capacitor on FLASH P.C.B. for approx. 5 seconds.
4. After discharging confirm that the capacitor voltage is lower than 10V using a voltmeter.

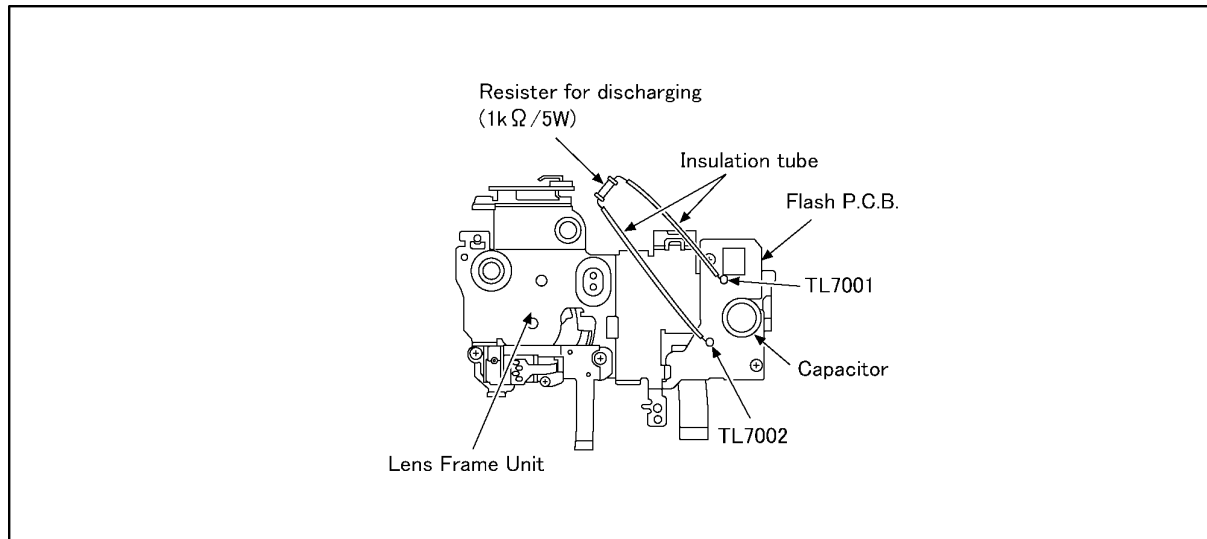


Fig. F1

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 integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

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

CAUTION :

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

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

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

ENGLISH



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

FRANÇAIS



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

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

2.3.1. Information for Your Safety

IMPORTANT

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

WARNING

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

CAUTION

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

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

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

2.3.2. Caution for AC Mains Lead

For your safety, please read the following text carefully.

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

A 5-ampere fuse is fitted in this plug.

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

Check for the 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 safely.

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

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

If in any doubt, please consult a qualified electrician.

2.3.2.1. Important

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

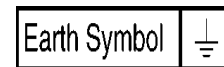
Blue	Neutral
Brown	Live

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

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

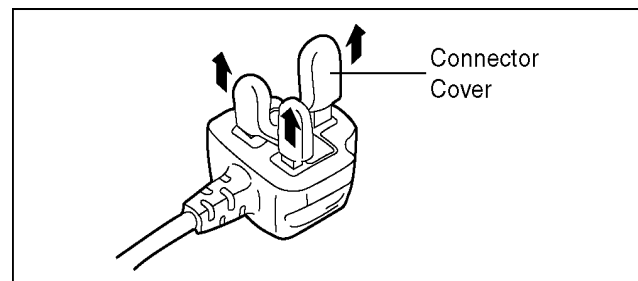
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

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



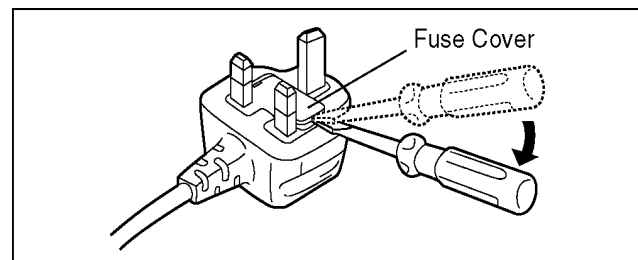
2.3.2.2. Before Use

Remove the Connector Cover as follows.

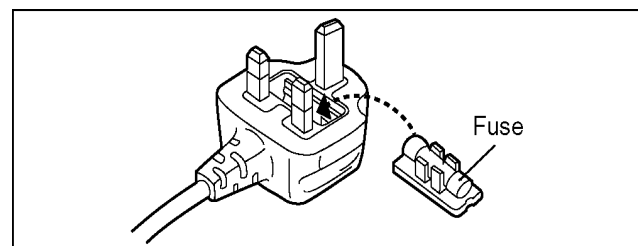


2.3.2.3. How to Replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



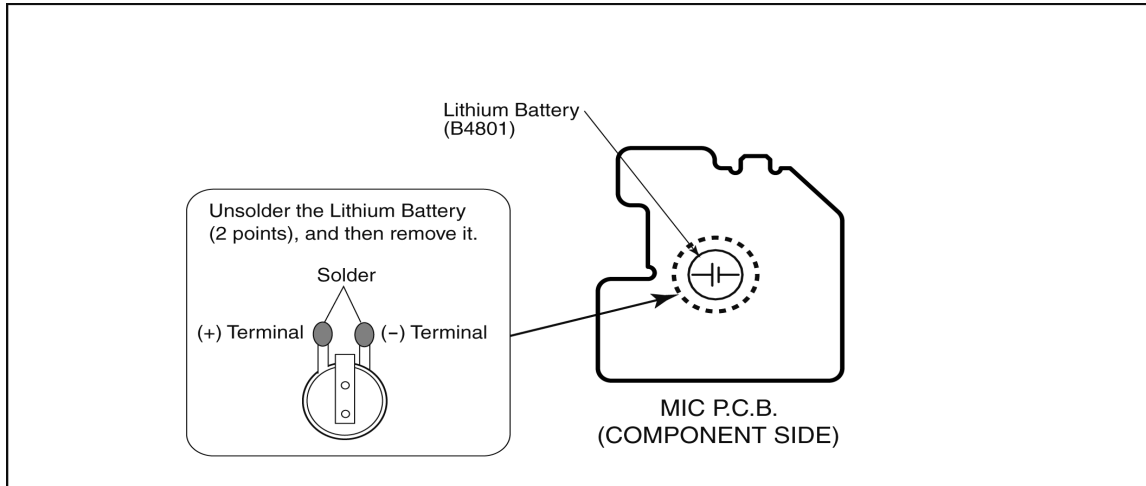
2.4. How to Replace the Lithium Battery

2.4.1. Replacement Procedure

1. Remove the MIC P.C.B.. (Refer to Disassembly Procedures.)
2. Unsolder the each soldering point of electric lead terminal for Lithium battery (Ref. No. "B4801" at component side of MIC P.C.B.) and remove the Lithium battery together with electric lead terminal. Then replace it into new one.

NOTE:

The Type No. ML-614S/DK includes electric lead terminals.



NOTE:

This Lithium battery is a critical component.

(Type No.: ML-614S/DN **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)

ATTENTION

- Il y a un danger d'explosion si la batterie n'est pas remplacée correctement. Remplacez uniquement avec le type recommandé par le fabricant.
- Pour mettre au rebut les batteries, prenez contact avec les autorités locales ou le revendeur et renseignez-vous sur la méthode correcte de la mise au rebut.

NOTE:

Above caution is applicable for a battery pack which is for HC-V700/V707/V700M/V707M series, as well.

1. Battery Pack for this model.

3 Service Navigation

3.1. Introduction

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

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

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

3.2. General Description About Lead Free Solder (PbF)

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

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

Distinction of 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%

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

1. The service manual does not contain the following information, because of the impossibility of servicing at component level without concerned equipment/facilities.
 - a. Schematic diagram, Block Diagram and P.C.B. layout of MAIN P.C.B..
 - b. Parts list for individual parts for MAIN P.C.B..When a part replacement is required for repairing MAIN P.C.B., replace as an assembled parts. (Main P.C.B.)
2. The following category is /are recycle module part. Please send it/them to Central Repair Center.
 - MAIN P.C.B. (VEP03J48B: HC-V700MP/PC/PU/GK, HC-V707MEG)
 - MAIN P.C.B. (VEP03J48C: HC-V700P/PC/EB/EC/EE/EF/EG/EP/GC/GK/GN, HC-V707EG)

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








There are eight kinds of HC-V700/V707/V700M/V707M.

- a) HC-V700M, V600M (Japan domestic model)
- b) HC-V700P, V700MP
- c) HC-V700PC, V700MPC
- d) HC-V700EB/EC/EF/EG/EP/GN
- e) HC-V707EG, V707MEG
- f) HC-V700EE
- g) HC-V700GK, V700MGK
- h) HC-V700GC, V700MPU

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

3.4.1. Defining methods:

To define the model suffix to be serviced, refer to the rating label and caution label which are putted on the Unit.

<p>a) HC-V700M, V600M (Japan domestic model) The nameplate for these models show the following Safety registration mark.</p> 
<p>b) HC-V700P, V700MP The nameplate for these models show the following Safety registration mark.</p> 
<p>c) HC-V700PC, V700MPC The nameplate for these models show the following Safety registration mark.</p> 
<p>d) HC-V700EB/EC/EF/EG/EP/GN The nameplate for these models show the following Safety registration mark.</p> 
<p>e) HC-V707EG, V707MEG The nameplate for these models show the following Safety registration mark.</p> 
<p>f) HC-V700EE The nameplate for this model shows the following Safety registration mark.</p> 
<p>g) HC-V700GK, V700MGK The nameplate for these models show the following Safety registration mark.</p> 
<p>h) HC-V700GC, V700MPU The nameplate for these models do not show any above Safety registration mark.</p>

NOTE:

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

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

3.5. Formatting

HC-V700 HC-V707 [FORMAT CARD]

Please be aware that if a medium is formatted, then all the data recorded on the medium will be erased and cannot be restored. Back up important data on a PC, DVD disc etc.

- When formatting is complete, touch [EXIT] to exit the message screen.
 - Perform a physical formatting of the SD card when the SD card is to be disposed/ transferred.
-
- Do not turn this unit off or remove the SD card, while formatting. Do not expose the unit to vibrations or shock.

**Use this unit to format media.
Do not format an SD card using any other equipment such as a PC. The card may not be used on this unit.**

HC-V700M HC-V707M [FORMAT MEDIA]

Please be aware that if a medium is formatted, then all the data recorded on the medium will be erased and cannot be restored. Back up important data on a PC, DVD disc etc.

- 1 Touch [FORMAT MEDIA].
- 2 Touch [SD CARD] or [Built-inMemory].

- When formatting is complete, touch [EXIT] to exit the message screen.
 - Perform a physical formatting of the SD card when the SD card is to be disposed/ transferred.
 - Perform a physical formatting of the built-in memory when this unit is to be disposed/ transferred.
-
- Do not turn this unit off or remove the SD card, while formatting. Do not expose the unit to vibrations or shock.

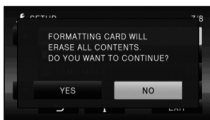
**Use this unit to format media.
Formatting built-in memory is only available with this unit.
Do not format an SD card using any other equipment such as a PC. The card may not be used on this unit.**

When disposing of or giving away the SD card, note that:

- Formatting and deletion of this unit or computer only changes the file management information and does not completely delete the data in the SD card.
- It is recommended that the SD card is physically destroyed or the SD card is physically formatted using this unit when disposing of or giving away the SD card.

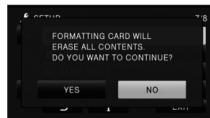
HC-V700 HC-V707

To physically format the SD card, connect the unit via the AC adaptor, select [SETUP] → [FORMAT CARD] → [YES] from the menu, and then press and hold the recording start/stop button on the screen below for about 3 seconds. When the SD card data deletion screen appears, select [YES], and then follow the on-screen instructions.



HC-V700M HC-V707M

To physically format the SD card, connect the unit via the AC adaptor, select [SETUP] → [FORMAT MEDIA] → [SD CARD] from the menu, and then press and hold the recording start/stop button on the screen below for about 3 seconds. When the SD card data deletion screen appears, select [YES], and then follow the on-screen instructions.



- The customer is responsible for the management of the data in the SD card.

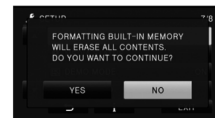
HC-V700M HC-V707M

When disposing of or giving away this unit, note that:

- Formatting and deletion simply change the file management information and cannot be used to completely erase the data in built-in memory of this unit. The data can be recovered using commercially available software or the like.

- We recommend that you physically format the built-in memory before disposing of or giving away this unit.

To physically format the built-in memory, connect the unit via the AC adaptor, select [SETUP] → [FORMAT MEDIA] → [Built-inMemory] from the menu, and then press and hold the recording start/stop button on the screen below for about 3 seconds. When the built-in memory data deletion screen appears, select [YES], and then follow the on-screen instructions.



- Please look after the data in your built-in memory carefully. Panasonic will not be held responsible in the unlikely case that private data is divulged.

4 Specifications

High Definition Video Camera

Information for your safety

Power source:	DC 5.0 V (When using AC adaptor) DC 3.6 V (When using battery)
Power consumption:	Recording: Charging: 6.7 W 7.7 W

Motion picture recording format:

[AVCHD]; AVCHD format version 2.0 compliant (AVCHD Progressive)
[iFrame]; MPEG-4 AVC file format compliant (.MP4)

Motion picture compression:

MPEG-4 AVC/H.264

Audio compression:

[AVCHD]; Dolby Digital/2 ch
[iFrame], [MP4]; AAC/2 ch

Recording mode and transfer rate:

[1080/60p] (NTSC areas) / [1080/50p] (PAL areas); Maximum 28 Mbps (VBR)

[HA]; Average 17 Mbps (VBR)

[HG]; Average 13 Mbps (VBR)

[HX]; Average 9 Mbps (VBR)

[HE]; Average 5 Mbps (VBR)

[iFrame]; Maximum 28 Mbps (VBR)

[Sbs 3D]; Average 17 Mbps (VBR)

For picture size and recordable time of a motion pictures, refer to "Recording modes/ approximate recording time".

Still picture recording format:

JPEG (Design rule for Camera File system, based on Exif 2.2 standard)

MPO format compatible (3D still pictures)

For picture size of a still picture, and for number of recordable pictures, refer to "Approximate number of recordable pictures".

Recording media:

SD Memory Card (FAT12 and FAT16 system compliant)

SDHC Memory Card (FAT32 system compliant)

SDXC Memory Card (exFAT system compliant)

Refer to "Cards that you can use with this unit" for details on SD cards usable in this unit.

HC-V700M / HC-V707M

Built-in memory; 16 GB

Image sensor:

1/2.33" CMOS image sensor

Total; 15300 K

Effective pixels;

Motion picture; 3550 K to 2580 K (16:9)

Still picture; 2790 K (4:3), 2790 K (3:2), 3550 K to 2580 K (16:9)

Lens:

Auto Iris, 21× Optical Zoom, F1.8 to F3.5

Focal length;

2.82 mm to 59.2 mm

Macro (Full range AF)

35 mm equivalent;

Motion picture; 28 mm to 717.4 mm (16:9)

Still picture; 34.7 mm to 728.7 mm (4:3), 34.1 mm to 715.2 mm (3:2),

28 mm to 717.4 mm (16:9)

Minimum focus distance;

Normal; Approx. 3.0 cm (1.2") (Wide)/Approx. 1.5 m (4.9 feet) (Tele)

Tele Macro; Approx. 60 cm (24") (Tele)

Intelligent Auto Macro; Approx. 1 cm (0.4") (Wide)/Approx. 60 cm (24") (Tele)

Filter diameter:

46 mm

Zoom:

i.Zoom OFF 26×, 46× i.Zoom, 60×/1500× Digital Zoom

(Using image sensor effective area)

Image stabilizer function:

Optical (Hybrid Optical Image Stabilizer, Active Mode (Rotation correction), Optical Image Stabilizer Lock function)

Monitor:

3.0" wide LCD monitor (Approx. 460 K dots)

Microphone:

Stereo (with a Zoom Microphone Function)

Speaker:

1 round speaker, dynamic type

White balance adjustment:

Auto tracking white balance system

Standard illumination:

1,400 lx

Minimum required illumination:

Approx. 4 lx (1/30 (NTSC areas) / 1/25 (PAL areas) with Low Light Mode in the Scene Mode)

Approx. 1 lx with the Color Night Rec function (NTSC areas) /

the Colour Night View function (PAL areas)

AV multi connector video output level:

Component video output level;

Y; 1.0 Vp-p, 75 Ω

Pb; 0.7 Vp-p, 75 Ω

Pr; 0.7 Vp-p, 75 Ω

AV video output level;

1.0 Vp-p, 75 Ω, NTSC system (NTSC areas) / PAL system (PAL areas)

HDMI mini connector video output level:

HDMI™ (x.v.Color™) 1080p/1080i/480p (NTSC areas) /

HDMI™ (x.v.Colour™) 1080p/1080i/576p (PAL areas) /

AV multi connector audio output level (Line):

316 mV, 600 Ω, 2 ch

HDMI mini connector audio output level:

[AVCHD]; Dolby Digital/Linear PCM

[iFrame], [MP4]; Linear PCM

MIC input:

-70 dBV (Mic sensitivity -50 dB equivalent, 0 dB=1 V/Pa, 1 kHz)

(Stereo mini jack)

USB:

Reader function

SD card; Read only (No copyright protection support)

HC-V700M / HC-V707M

Built-in memory; Read only

Hi-Speed USB (USB 2.0), USB terminal Type Mini AB

USB host function (for DVD burner)

Battery charging function (Charges from USB terminal when the main unit is off)

Flash:

Available range; Approx. 1.0 m to 2.5 m (3.3 feet to 8.2 feet)

Dimensions:

55 mm (W)×69 mm (H)×119.5 mm (D)

[2.165" (W)×2.717" (H)×4.705" (D)] (including projecting parts)

Mass (Weight):

HC-V700M / HC-V707M

Approx. 270 g (Approx. 0.595 lbs.)

[without battery (supplied) and an SD card (optional)]

HC-V700M / HC-V707M

Approx. 271 g (Approx. 0.597 lbs.)

[without battery (supplied)]

Mass (Weight) in operation:

HC-V700M / HC-V707M

Approx. 314 g (Approx. 0.692 lbs.)

[with battery (supplied) and an SD card (optional)]

HC-V700M / HC-V707M

Approx. 313 g (Approx. 0.690 lbs.)

[with battery (supplied)]

Operating temperature:

0 °C to 40 °C (32 °F to 104 °F)

Operating humidity:

10%RH to 80%RH

Battery operation time:

See "Charging and recording time".

AC adaptor

Information for your safety

Power source:	AC 100 V to 240 V, 50/60 Hz (VSK0780) AC 110 V to 240 V, 50/60 Hz (VSK0781)
Power consumption:	12 W
DC output:	DC 5.0 V, 1.6 A

Dimensions:

49 mm (W)×24 mm (H)×79 mm (D) [1.93" (W)×0.94" (H)×3.11" (D)]

Mass (Weight):

Approx. 91 g (Approx. 0.20 lbs.)

■ 3D Conversion Lens (optional)

Lens:

F2.4 (f = 1.47 mm)

35 mm equivalent; 34 mm

Minimum recording distance; Approx. 1.2 m (3.9 feet)

Minimum required illumination:

Approx. 18 lx (1/30 (NTSC areas) / 1/25 (PAL areas) with Low Light Mode in the Scene Mode)

Charging and recording time

■ Charging/Recording time

- Temperature: 25 °C (77 °F)/humidity: 60%RH
- Charging times in parentheses are when charging from the USB terminal.

NTSC areas				
Battery model number [Voltage/Capacity (minimum)]	Charging time	Recording mode	Maximum continuous recordable time	Actual recordable time
Supplied battery/ VW-VBK180 (optional) [3.6 V/1790 mAh]	2 h 25 min (5 h 45 min)	[1080/60p]	1 h 15 min	40 min
		[HA],[HG], [HX],[HE]	1 h 20 min	40 min
		[iFrame]	1 h 25 min	45 min
VW-VBK360 (optional) [3.6 V/3580 mAh]	4 h 20 min (10 h 40 min)	[1080/60p]	2 h 40 min	1 h 20 min
		[HA],[HG], [HX]	2 h 50 min	1 h 25 min
		[HE]	2 h 50 min	1 h 30 min
		[iFrame]	3 h	1 h 35 min

PAL areas				
Battery model number [Voltage/Capacity (minimum)]	Charging time	Recording mode	Maximum continuously recordable time	Actual recordable time
Supplied battery/ VW-VBK180 (optional) [3.6 V/1790 mAh]	2 h 25 min (5 h 45 min)	[1080/50p]	1 h 20 min	40 min
		[HA],[HG], [HX],[HE]	1 h 25 min	45 min
		[iFrame]	1 h 30 min	
VW-VBK360 (optional) [3.6 V/3580 mAh]	4 h 20 min (10 h 40 min)	[1080/50p]	2 h 50 min	1 h 30 min
		[HA]	3 h	1 h 35 min
		[HG],[HX], [HE]	3 h 5 min	
		[iFrame]	3 h 15 min	

- These times are approximations.
- The indicated charging time is for when the battery has been discharged completely. Charging time and recordable time vary depending on the usage conditions such as high/low temperature.
- Recordable time of 3D recording mode is the same. (During 3D recording mode, 1080/60p (NTSC areas)/1080/50p (PAL areas) and iFrame recording mode cannot be used.)

Cards that you can use with this unit

Use SD cards conforming to Class 4 or higher of the SD Speed Class Rating* for motion picture recording.

Card type	Capacity
SD Memory Card	512 MB/1 GB/2 GB
SDHC Memory Card	4 GB/6 GB/8 GB/12 GB/16 GB/24 GB/32 GB
SDXC Memory Card	48 GB/64 GB

* SD Speed Class Rating is the speed standard regarding continuous writing. e.g.:



- Operation of the SD Memory Cards 256 MB or less is not guaranteed. Also, the SD Memory Card 32 MB or less cannot be used for the motion picture recording.
- 4 GB or more Memory Cards that do not have the SDHC logo or 48 GB or more Memory Cards that do not have the SDXC logo are not based on SD Memory Card Specifications.
- The operation of Memory Cards exceeding 64 GB cannot be guaranteed.

Recording modes/approximate recordable time

- SD cards are only mentioned with their main memory size. The stated times are the approximate recordable times for continuous recording.

Recording mode	[1080/60p] (NTSC areas) / [1080/50p] (PAL areas)		[1080/60i] (NTSC areas) / [1080/50i] (NTSC areas)			
	[HA]	[HG]	[HX]	[HE]	[HE]	[HE]
Picture size/ frame rate	1920×1080/60p (NTSC areas) / 50p (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)
	4 GB	19 min	30 min	40 min	1 h	1 h 30 min
SD card	16 GB	1 h 20 min	2 h	2 h 40 min	4 h 10 min	6 h 40 min
	64 GB	5 h 20 min	8 h 30 min	11 h	16 h 50 min	27 h 30 min
HC-V700M / HC-V707M Built-in memory		16 GB	1 h 20 min	2 h	2 h 40 min	4 h 10 min

- A Favors image quality
- B Favors Recording time

Recording mode	[iFrame]	[SbS 3D]		
Picture size/ frame rate	960×540/30p (NTSC areas) / 25p (PAL areas)	1920×1080/60i (NTSC areas) / 50i (PAL areas)		
	4 GB	19 min	30 min	
SD card	16 GB	1 h 20 min	2 h	
	64 GB	5 h 20 min	8 h 30 min	
HC-V700M / HC-V707M Built-in memory		16 GB	1 h 20 min	2 h

- If recording for long periods, prepare batteries for 3 or 4 times the period you wish to record for.
- The default setting is [HG] Mode.
- Maximum continuously recordable time for one scene: 6 hours
- The recording is paused once when the recording time for one scene exceeds 6 hours, and the recording will automatically resume after a few seconds.
- The recordable time may be reduced if recording with a lot of action is recorded or recording of short scene is repeated.
- Use time in the row of 4 GB in above table as a guideline for the time that can be copied onto one DVD disc (4.7 GB).

Approximate number of recordable pictures

- SD cards are only mentioned with their main memory size. The stated number is the approximate number of recordable pictures.

Picture size	[30M]				
	2848×2136	1760×1320	640×480		
Aspect ratio					
4:3					
SD card	4 GB	1100	2800	28000	
	16 GB	4700	11500	118000	
	64 GB	18500	47000	475000	
HC-V700M / HC-V707M Built-in memory		16 GB	4700	11500	118000

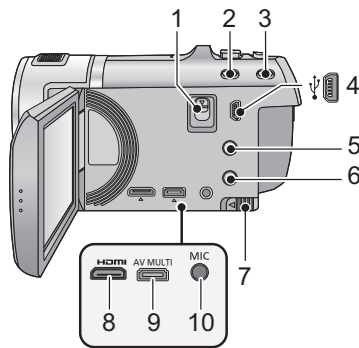
Picture size	[30M]					
	3024×2016	1872×1248	3200×1800	1920×1080		
Aspect ratio						
3:2						
SD card	4 GB	1100	2800	1200	3100	
	16 GB	4700	11500	5000	13000	
	64 GB	18500	47000	20000	52000	
HC-V700M / HC-V707M Built-in memory		16 GB	4700	11500	5000	13000

When recording 3D still pictures

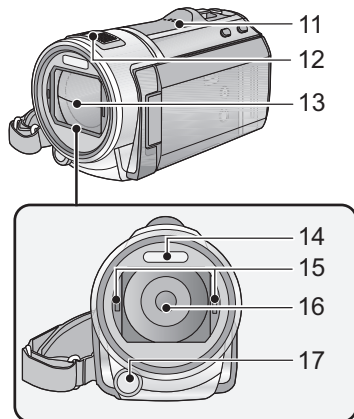
Picture size	[30M]		
	1920×1080		
Aspect ratio			
16:9			
SD card	4 GB	1000	
	16 GB	4300	
	64 GB	17500	
HC-V700M / HC-V707M Built-in memory		16 GB	4300



- The number of recordable pictures depends on the subject being recorded.
- When recording a 3D still picture, the equivalent 2D still picture is recorded as well; therefore, the number of recordable pictures will be reduced accordingly.
- Maximum number of recordable pictures that can be displayed is 9999. If the number of recordable pictures exceeds 9999, R 9999+ is displayed. The number will not change when the picture is taken until the number of recordable pictures is 9999 or less.
- The memory capacity indicated on the label of an SD card is the total of the capacity for copyright protection and management and the capacity that can be used on the unit, a PC etc.

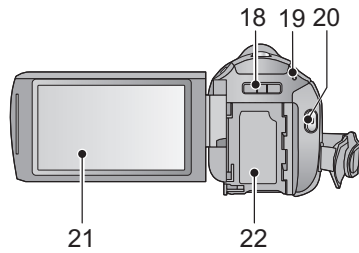
5 Location of Controls and Components



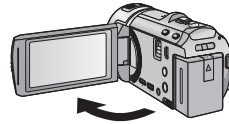
- 1 Shoe adaptor release lever [SHOE ADAPTOR RELEASE]
- 2 Intelligent auto/Manual button [i/MANUAL]
- 3 Optical image stabilizer button [((O.I.S.)) O.I.S.]
- 4 USB terminal [ψ]
- 5 1080/60p button [1080/60p] (NTSC areas)
1080/50p button [1080/50p] (PAL areas)
- 6 Power button [⏻/⏷]
- 7 Battery release lever [BATT]
- 8 HDMI mini connector [HDMI]
- 9 AV multi connector [AV MULTI]
- 10 Microphone terminal [MIC]
 - Use the AV multi cable (only the supplied cable).
 - A compatible plug-in powered microphone can be used as an external microphone.
 - Audio will be stereo (2 ch) with the external microphone input.
 - □□□■ (Microphone input level meter) is displayed when the external microphone is connected.
 - When the unit is connected with the AC adaptor, sometimes noise may be heard depending on the microphone type. In this case, please switch to the battery for the power supply and the noise will stop.



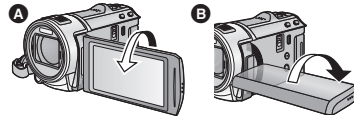
- 11 Speaker
- 12 Internal stereo microphones
- 13 Lens cover
 - The lens cover opens in  Motion Picture Recording Mode or  Still Picture Recording Mode.
- 14 Built-in flash
- 15 Step up ring attachment part (concave)
- 16 Lens
- 17 Video light



- 18 Shoe adaptor mount [SHOE ADAPTOR]
- 19 Status indicator
- 20 Recording start/stop button
- 21 LCD monitor (Touch screen)



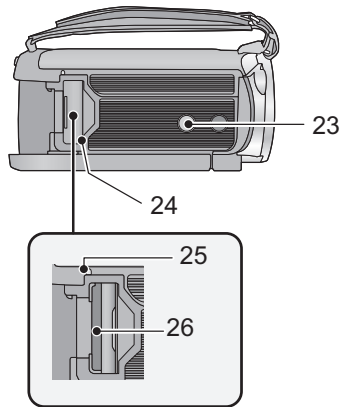
- It can open up to 90°.



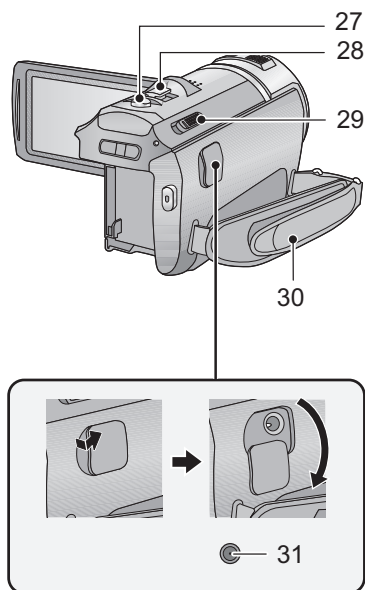
- It can rotate up to 180° **A** towards the lens or 90° **B** towards the opposite direction.

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

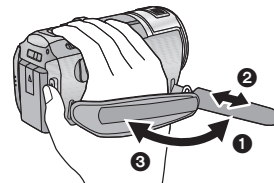
22 Battery holder



- 23 Tripod receptacle
- If you attach a tripod with a 5.5 mm (0.22 ") screw or larger, it may damage this unit.
- 24 SD card cover
- 25 Access lamp [ACCESS]
- 26 Card slot






- 27 Photoshot button []
- 28 Zoom lever [W/T] (In Motion Picture Recording Mode or Still Picture Recording Mode)
- Thumbnail display switch [/ Q,]
- Volume lever [-VOL+] (In Playback Mode)
- 29 Mode switch
- 30 Grip belt
- Adjust the length of the grip belt so that it fits your hand.

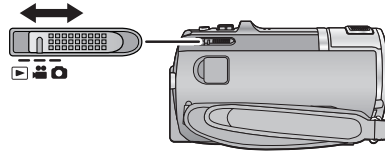





- 1 Flip the belt.
- 2 Adjust the length.
- 3 Replace the belt.
- 31 DC input terminal [DC IN]
- Do not use any other AC adaptors except the supplied one.

Selecting a mode

Slide the mode switch to switch between recording and playback.

Operate the mode switch to change the mode to ,  or .



	Motion Picture Recording Mode
	Still Picture Recording Mode
	Playback Mode

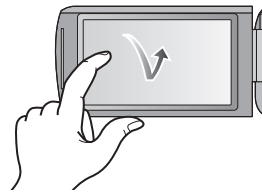
How to use the touch screen

You can operate by directly touching the LCD monitor (touch screen) with your finger.

■ Touch

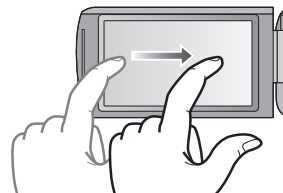
Touch and release the touch screen to select icon or picture.

- Touch the center of the icon.
- Touching the touch screen will not operate while you are touching another part of the touch screen.



■ Slide while touching

Move your finger while pressing on the touch screen.



■ About the operation icons

 /  /  /  :


These icons are used to switch the menu and thumbnail display page, for item selection and setting etc.

 :

Touch to return to the previous screen such as when setting menus.

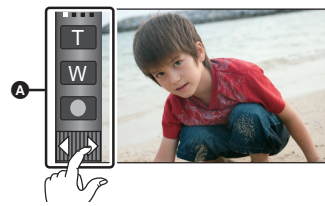


About the Touch Menu

Touch ◀ (left side)/▶ (right side) of  on the Touch Menu to switch the operation icons.

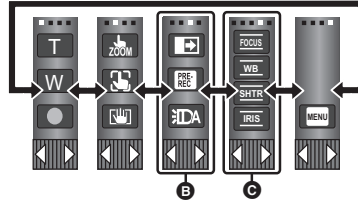
Touch ◀ (left side)/▶ (right side) of on the Touch Menu.

- It is also possible to switch the operation icons by sliding the Touch Menu right or left while touching it.

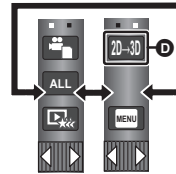


A Touch Menu

Recording Mode




Playback Mode



- B** You can change the operation icons to display.
- C** Displayed only during the Manual Mode.
- D** Displayed only when connected to a TV.

■ To display the Touch Menu



Display of the Touch menu will disappear when no touch operation is performed for a specific period of time. To display it again, touch .

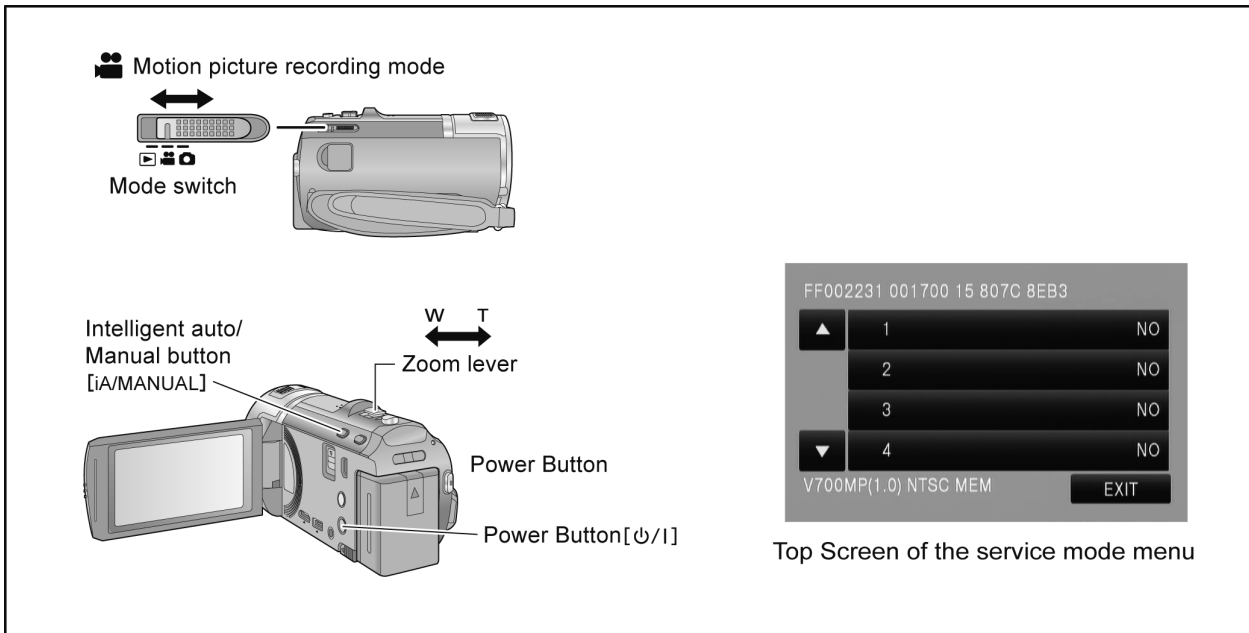
- Do not touch on the LCD monitor with hard pointed tips, such as ball point pens.

6 Service Mode

1. Indication method of the service menu

Set the mode switch "Motion Picture Recording" mode.

2. While the power is turned OFF, keep pressing the "Power" button, "Zoom lever" to W side and "intelligent auto/Manual" button for more than 3 seconds until the top screen of the Service Mode Menu being displayed.



Service mode menu

Screen display	Contents	Function
1	Factory settings	Function to throw a product up in a factory shipment state (When recorded data in Built-in memory, "error display" is done)
3	Built-in memory self check execution (HC-V700M/V707M only)	Function to check self as for the state of Built-in memory
4	Lock search history indication	Display the camera system error cord for three histories saved in EEPROM
5	Power ON self check result display	Power ON self check (function to diagnose correct function of the device and interface between devices) result display
9	Forced full flash emission	Forced full flash emission for discharging the capacitor on FLASH P.C.B. and set to prohibit charge
10	Erasing the lock histories	Erasing the error histories (working time is not erased)
12	Camera data indications while the video playback	Display the camera informations (Shutter speed, Iris value, White balance and focal length) while playing recorded video

NOTE:

Do not using service mode except above table of Service mode menu.

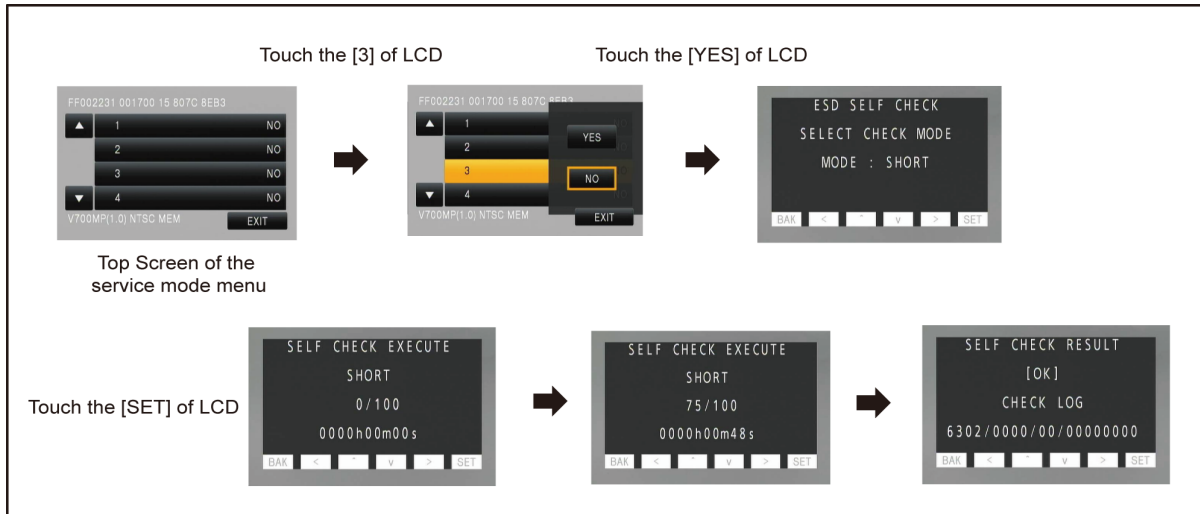
3. End method of the top screen of the service mode menu

Touch the [EXIT] of LCD to end the service mode, and then POWER OFF.

6.1. Built-in Memory Self Check Execution (HC-V700M/V707M only)

Touch the [3] of LCD, select Built-in memory self check execution.

Operation specifications



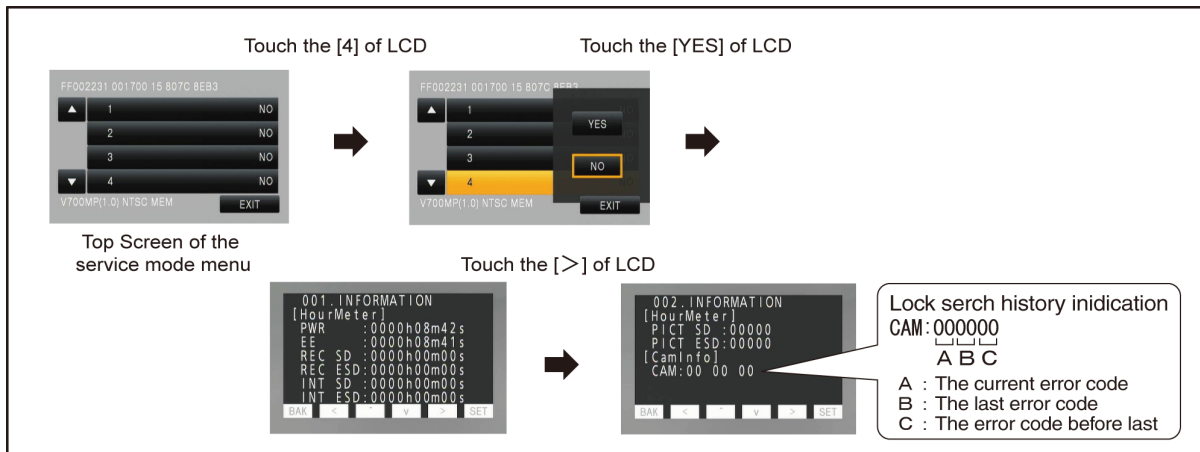
Indication contents

- Built-in memory self check result display
 - Display the Built-in memory self check execution.
 - Displays other than "OK" are abnormalities of Built-in memory.
 - Touch the [BAK] of LCD to end the service mode, and then POWER OFF.

6.2. Lock Search History Indication

Touch the [4] of LCD, select Lock search history indication.

Operation specifications



Indication contents

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

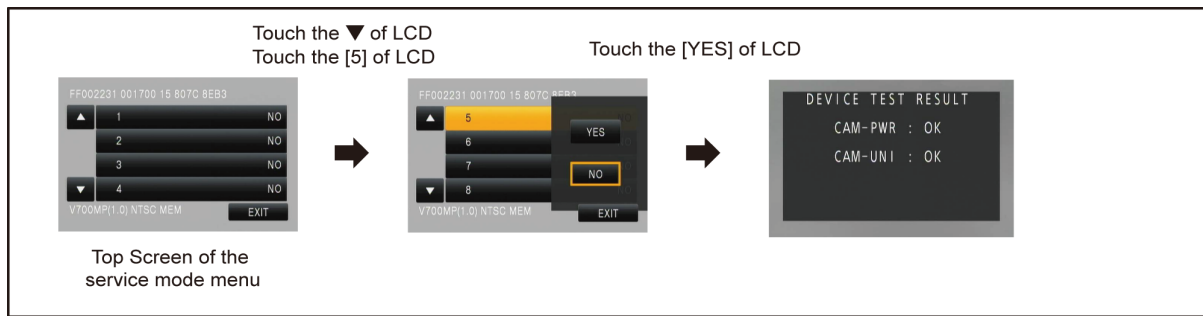
Error code	Function
51	Focus control is abnormal
52	Zoom control is abnormal
53	OIS lens control is abnormal
54	Zoom control is abnormal (2)
71	Lens cover open/close is abnormal
73	High temperature is abnormal

Touch the [BAK] of LCD to end the service mode, and then POWER OFF.

6.3. Power ON Self Check Result Display

Touch the [5] of LCD, select Power ON self check result display.

Operation specifications



Indication contents

- Power ON self check result display
Function to diagnose correct function of the device and interface between devices result display.

Display the following communication test result.

- CAM-PWR : communication test between IC3401 and IC1503
- CAM-UNI : Internal communication test of IC3401

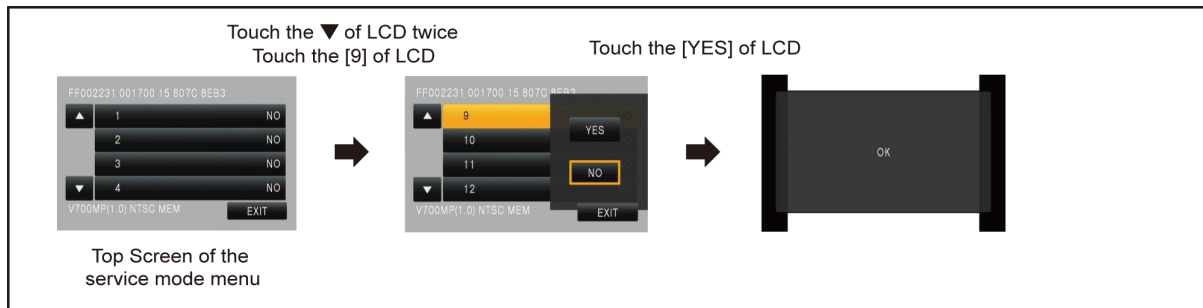
Display other than “OK” are abnormalities of each lines.

Cutting of battery connection or AC power supply connection to end the service mode.

6.4. Forced full flash emission

Touch the [9] of LCD, select Forced full flash execution.

Operation specifications



Indication contents

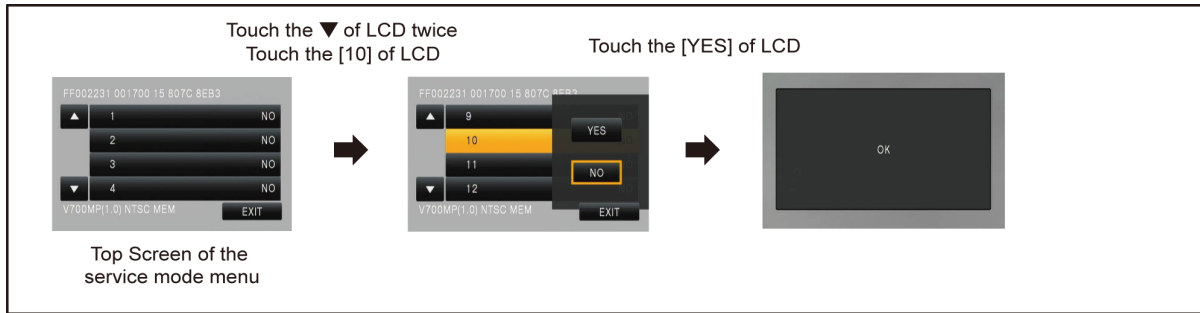
- Discharging the capacitor without using register.
Forced full flash emission for charge capacitor completely discharge.
To prevent electric shock, we recommend enforcement before disassembling.

Cutting of battery connection or AC power supply connection to end the service mode.

6.5. Erasing the lock histories

Touch the [10] of LCD, select erasing the lock histories execution.

Operation specifications



Indication contents

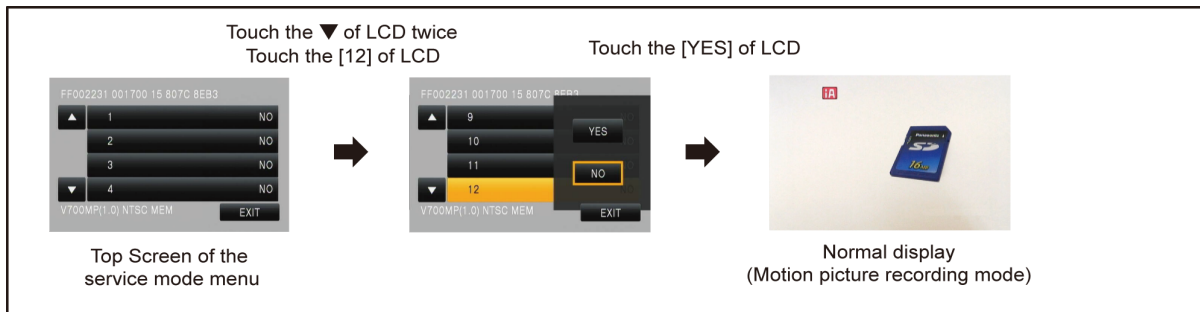
- Erasing the error histories stored in EEPROM. (working time is not erased)

Cutting of battery connection or AC power supply connection to end the service mode.

6.6. Camera data indications while the video playback

Touch the [12] of LCD, select indicating the camera informations while playing back the recorded video.

Operation specifications



Indication contents

- While playing back the recorded videos, the camera informations (Shutter speed, Iris value, White balance and focal length) are superimposed on the LCD screen.



Press the power button and turn off.

7 Service Fixture & Tools

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

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

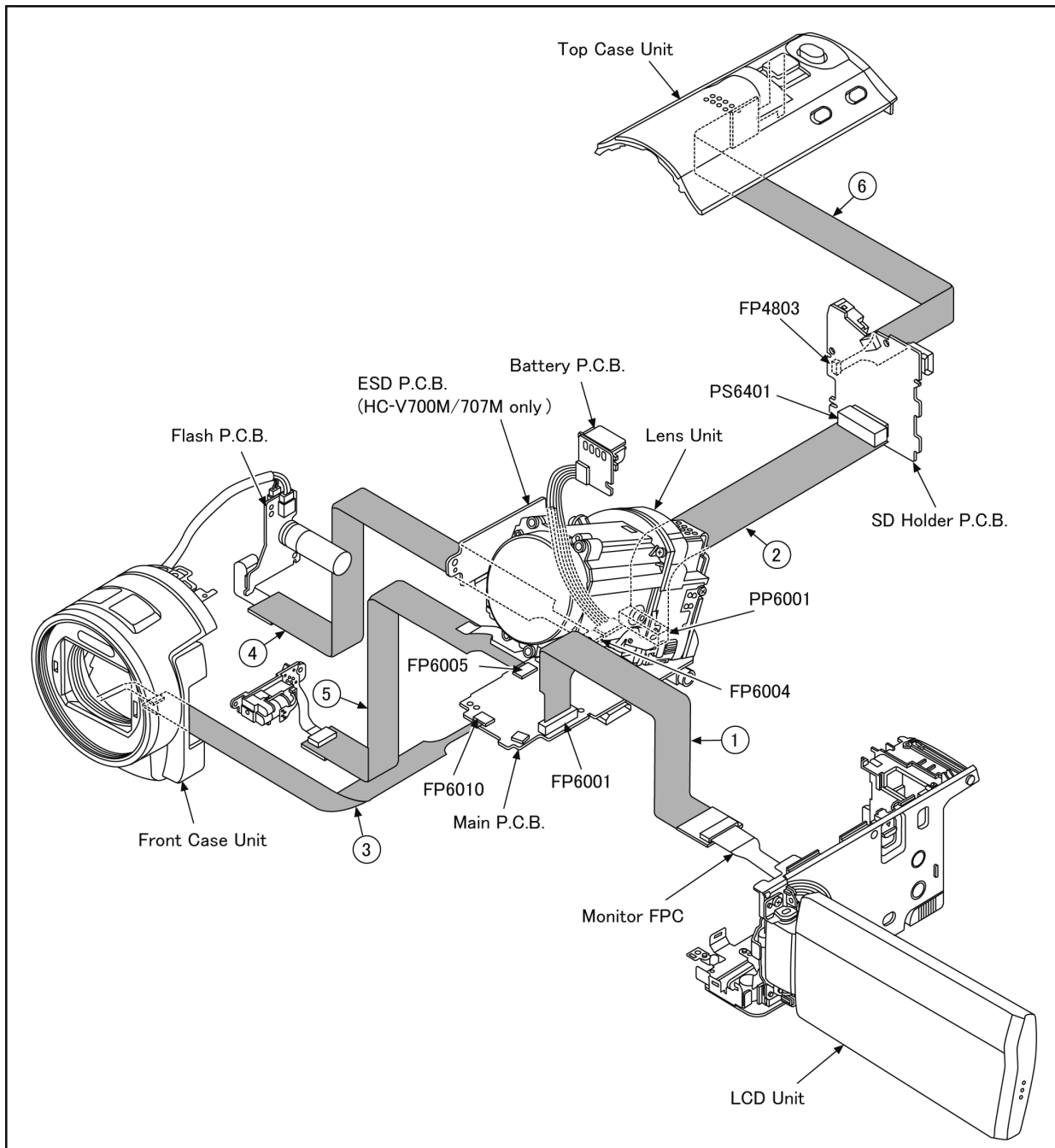
The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-AVC" web-site in "TSN system", together with Maintenance software.

7.2. Service Position

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

Table S1 Extension Cable List

No.	Parts No.	Connection	Form
1	RFKZ0487	FP6001(MAIN) - MONITOR FPC	35PIN 0.3 FFC
2	RFKZ0444	PP6001(MAIN) - PS6401(SD HOLDER)	50PIN 0.5 B to B
3	VFK1480	FP6010(MAIN) - ECM HOLL FPC(FRONT CASE UNIT)	6PIN 0.5 FFC
4	VFK1388	FP6004(MAIN) - FP7001(FLASH)	12PIN 0.5 FFC
5	VFK1441	FP6005(MAIN) - LENS BARRIER UNIT	8PIN 0.5 FFC
6	VFK1440	FP4803(SD HOLDER) - OPERATION SW UNIT(TOP CASE UNIT)	10PIN 0.5 FFC



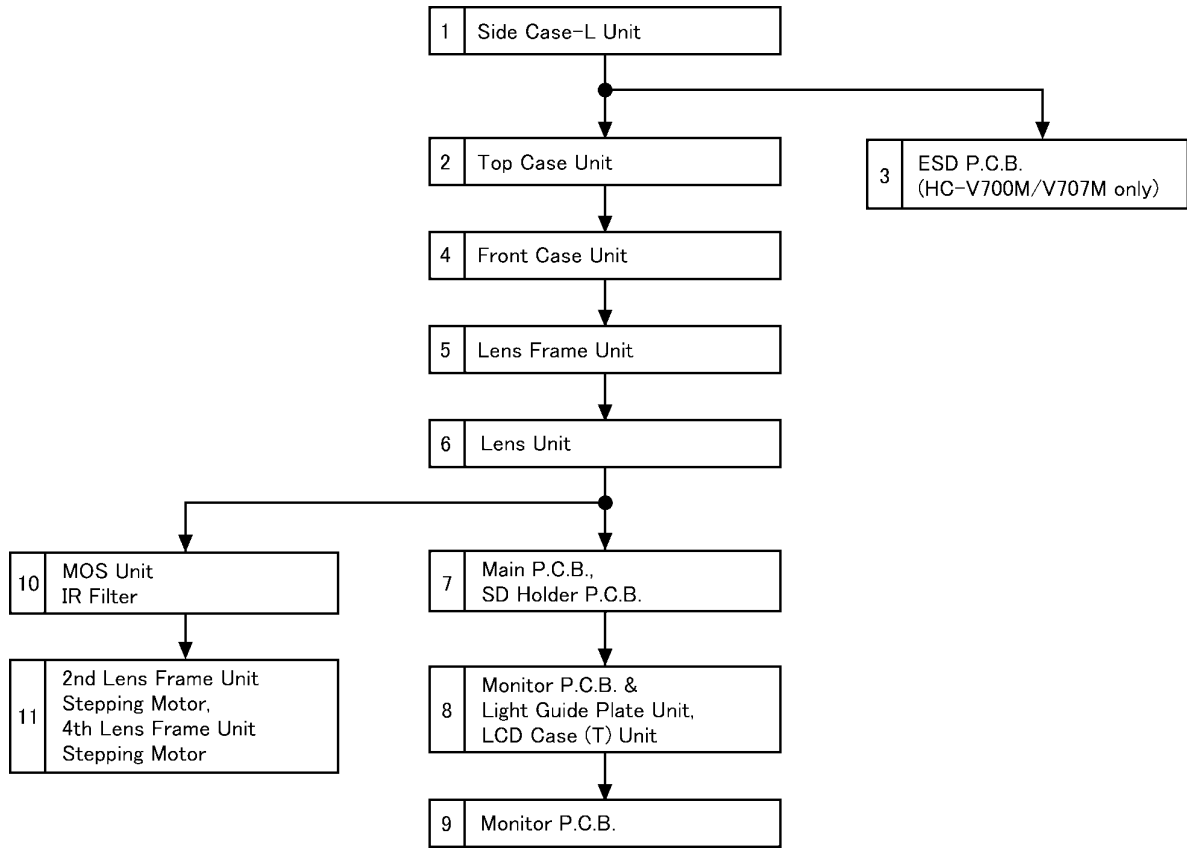
CAUTION-1. (When servicing FLASH P.C.B.)

1. Be sure to discharge the capacitor on FLASH P.C.B..
Refer to "HOW TO DISCHARGE THE CAPACITOR ON FLASH P.C.B.".
The 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..

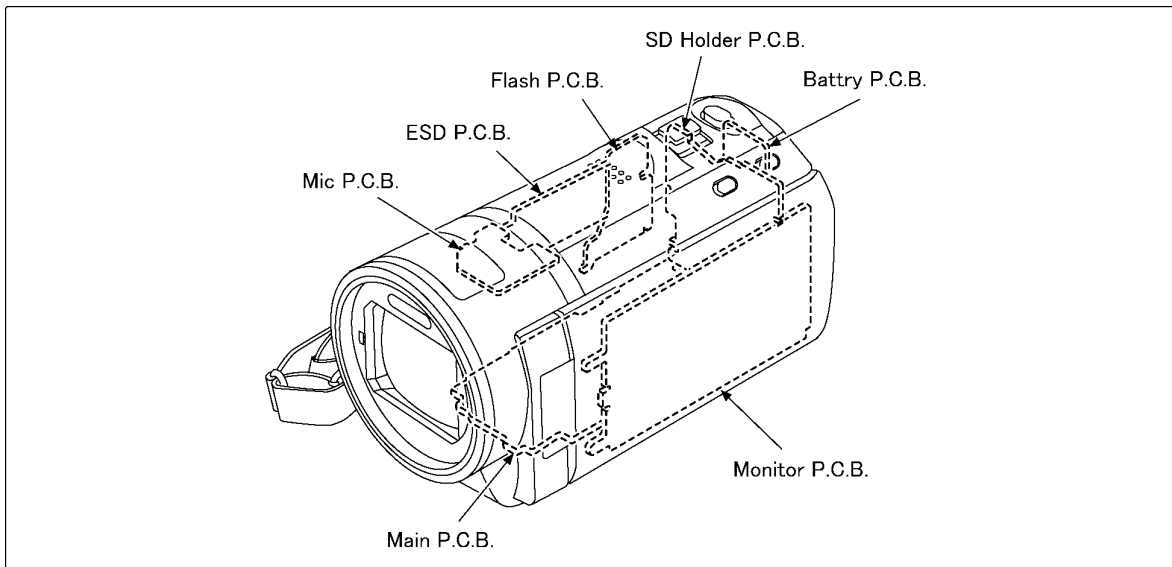
8 Disassembly and Assembly Instructions

8.1. Disassembly Flow Chart for the Unit

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



8.2. PCB Location



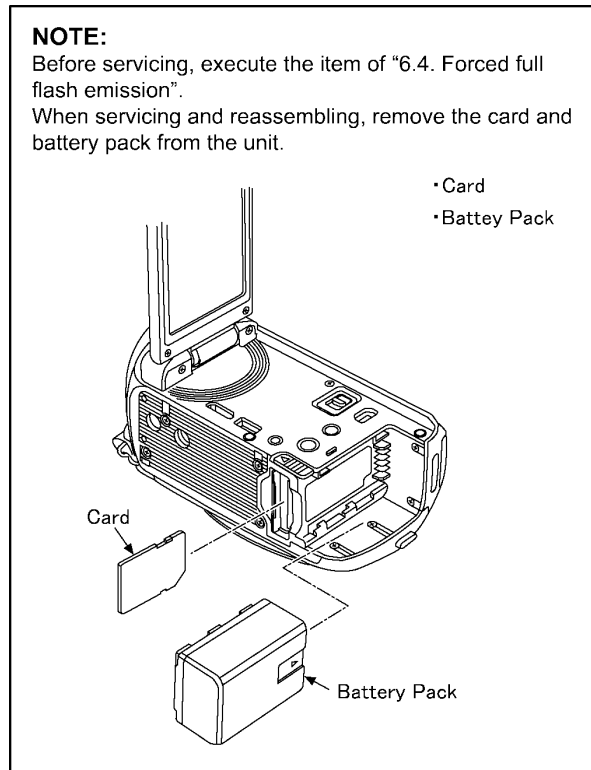
8.3. Disassembly Procedure for the Unit

No.	Item	Fig	Removal			
1	Side Case-L Unit	(Fig. D1)	2 Screws (A)			
			1 Screws (B)			
			2 Screws (C)			
		(Fig. D2)	2 Screws (D)			
			1 Screw (E)			
			2 Locking tabs			
			P6005 (Connector)			
			Side Case-L Unit			
			2	Top Case Unit	(Fig. D3)	1 Screw (F)
						1 Screw (G)
1 Rib						
(Fig. D4)	5 Locking tabs					
	FP4803 (Flex)					
	P6401 (Connector)					
	Top Case Unit					
	3	ESD P.C.B. (HC-V700M/V707M only)			(Fig. D4)	2 Screws (H)
						FP3201 (Flex)
ESD P.C.B.						
4	Front Case Unit	(Fig. D5)	1 Screw (I)			
			2 Screws (J)			
			P4801 (Flex)			
		(Fig. D6)	P7001(Connector)			
			P7002 (Connector)			
			2 Locking tabs			
		(Fig. D7)	1 Rib			
			FP6010 (Flex)			
			Front Case Unit			
			5	Lens Frame Unit	(Fig. D8)	1 Screw (K)
3 Screws (L)						
2 Locking tabs						
(Fig. D9)	1 Projection Part					
	1 Rib					
	FP4802 (Flex)					
	FP6004 (Flex)					
	FP6005 (Flex)					
	Lens Frame Unit					
	Discharge the capacitor					
6	Lens Unit	(Fig. D10)	FP6008 (Flex)			
			P6001 (Connector)			
			Lens Unit			
7	Main P.C.B. SD Holder P.C.B.	(Fig. D11)	4 Screws (M)			
			Batt Frame			
			Heat Radiation Plate Unit			
		(Fig. D12)	P6003 (Connector)			
			FP6001 (Flex)			
		(Fig. D13)	FP3201 (Flex)			
			Main P.C.B.			
			SD Holder P.C.B.			
			8	Monitor P.C.B. & Light Guide Plate Unit LCD Panel Unit	(Fig. D14)	1 Screw (O)
						(Fig. D15)
2 Screws (Q)						
6 Locking tabs						
LCD Case (T) Unit						
FP901 (Flex)						
FP904 (Flex)						
FP905 (Flex)						
(Fig. D16)	3 Locking tabs					
	Monitor P.C.B. & Light Guide Plate Unit					
	LCD Panel Unit					

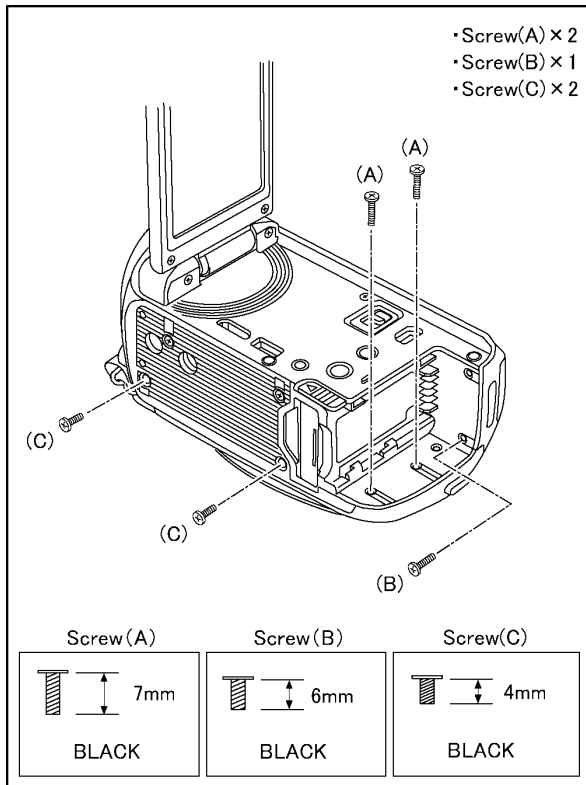
No.	Item	Fig	Removal
9	Monitor P.C.B.	(Fig. D17)	1 Locking tab
			1 Hanging part
			Monitor P.C.B.
10	MOS Unit IR Filter	(Fig. D18)	3 Screws (S)
			MOS Shield Case Unit
			Lens Sheet
			MOS Unit
			MOS Cushion
			IR Filter
11	2nd Lens Frame Unit Stepping Motor 4th Lens Frame Unit Stepping Motor	(Fig. D19)	3 Screws (T)
			Solder (4 points)
			2 Projection Part
			2nd Lens Frame Unit Stepping Motor
			(Fig. D20)
		Solder (6 points)	
		2 Projection Part	
		4th Lens Frame Unit Stepping Motor	

NOTE:

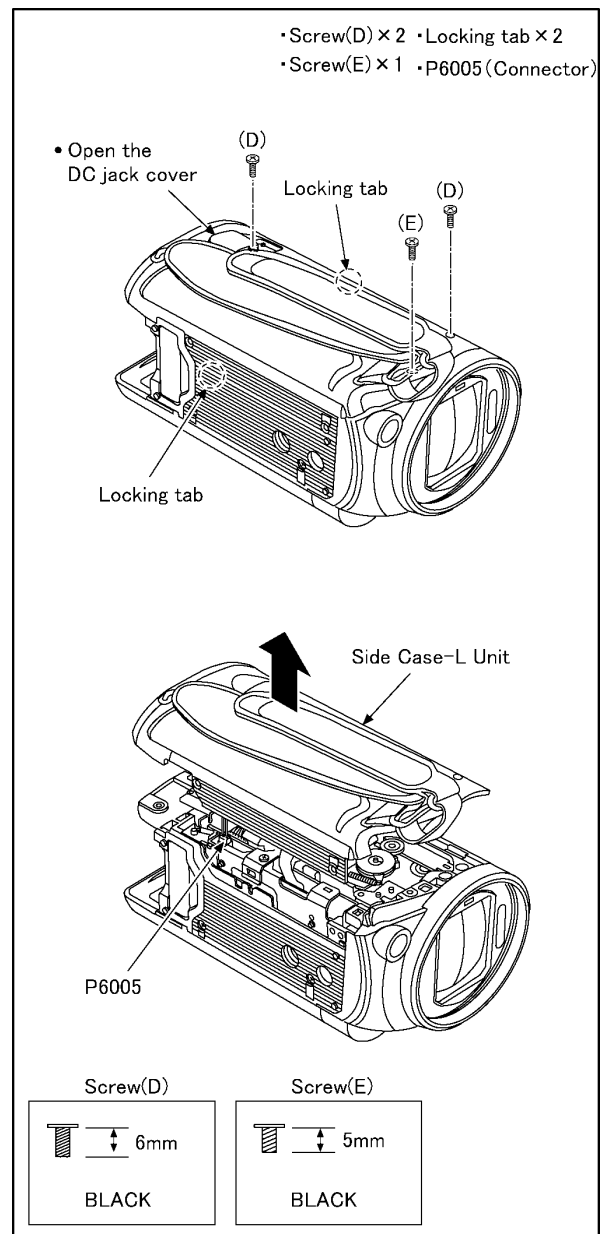
Before servicing, execute the item of "6.4. Forced full flash emission".
When servicing and reassembling, remove the card and battery pack from the unit.



8.3.1. Removal of the Side Case-L Unit

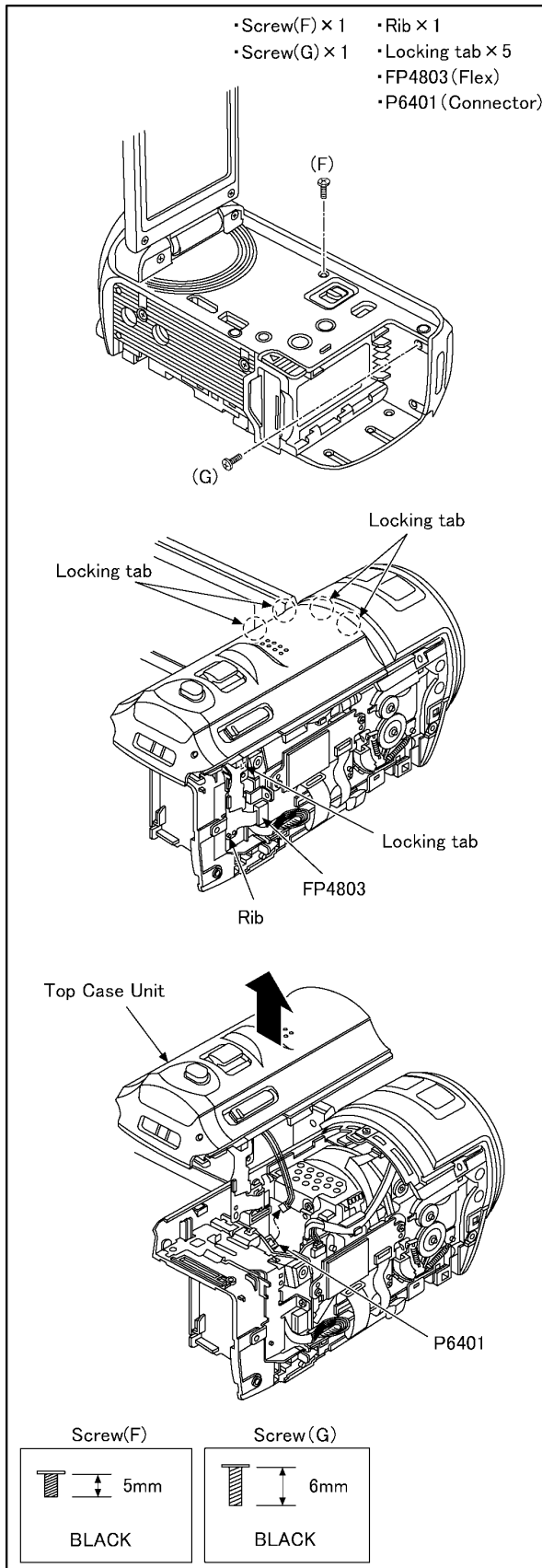


(Fig. D1)



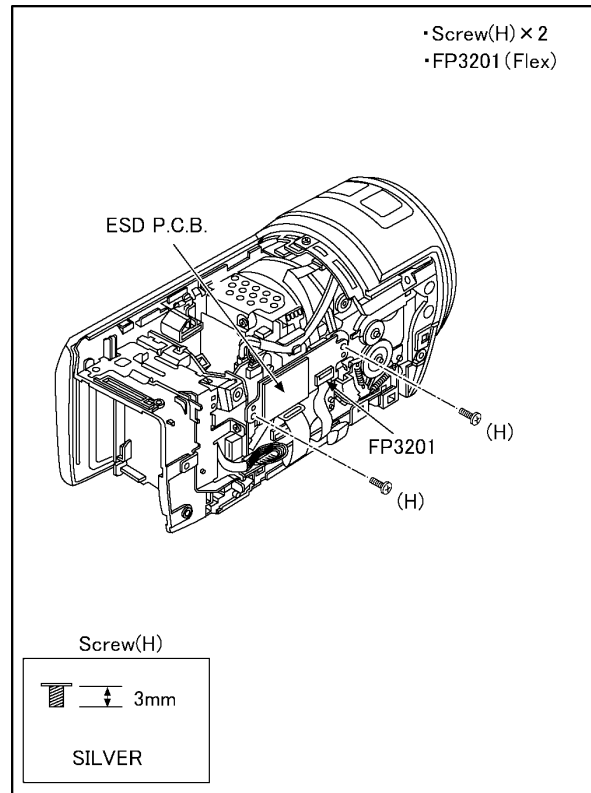
(Fig. D2)

8.3.2. Removal of the Top Case Unit



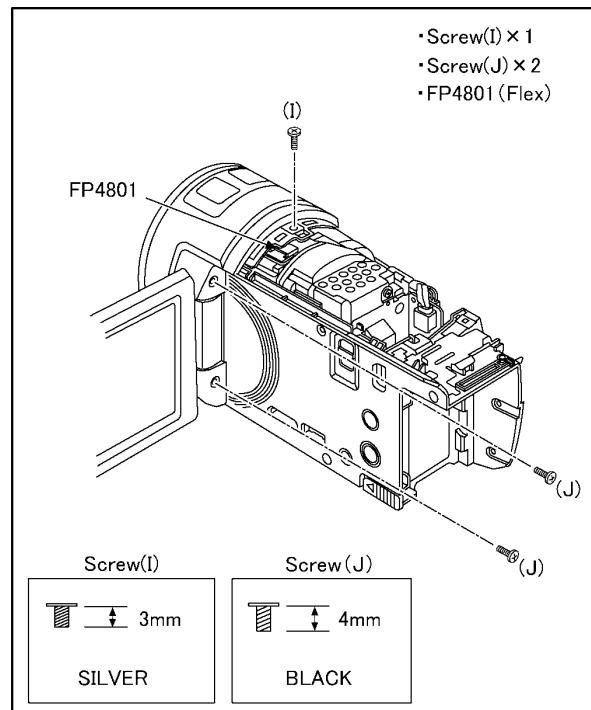
(Fig. D3)

8.3.3. Removal of the ESD P.C.B. Unit (HC-V700M/V707M only)

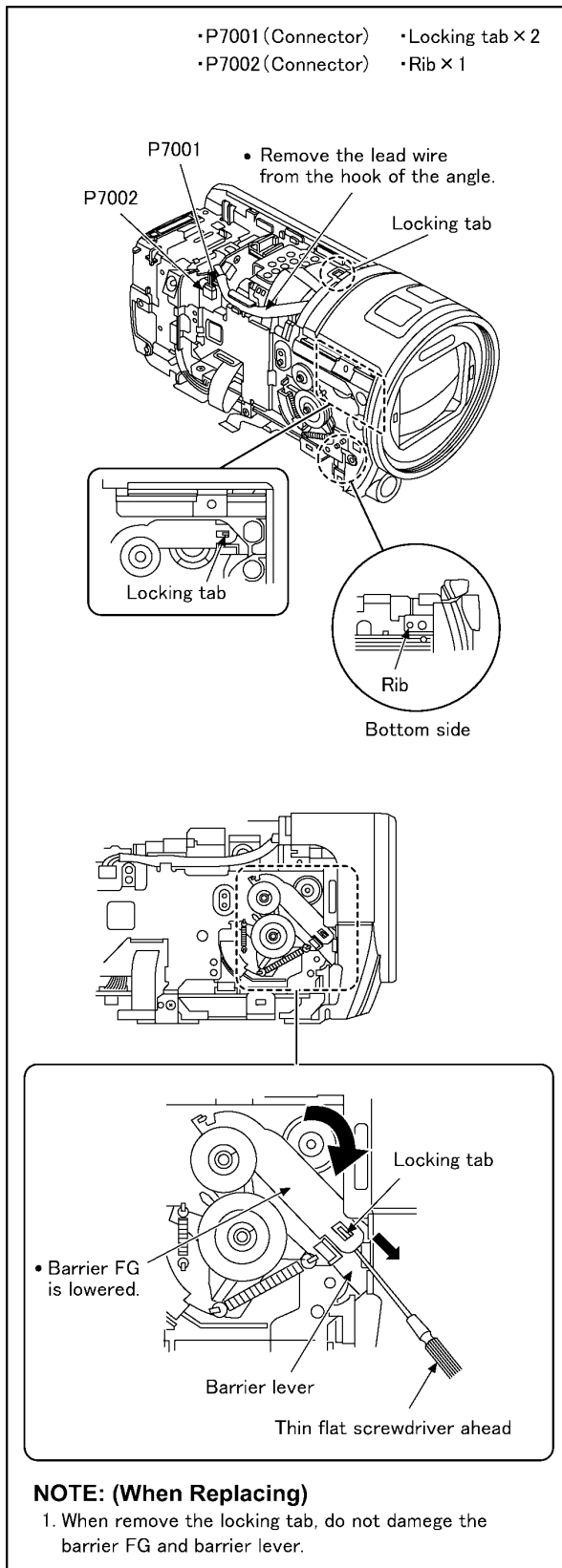


(Fig. D4)

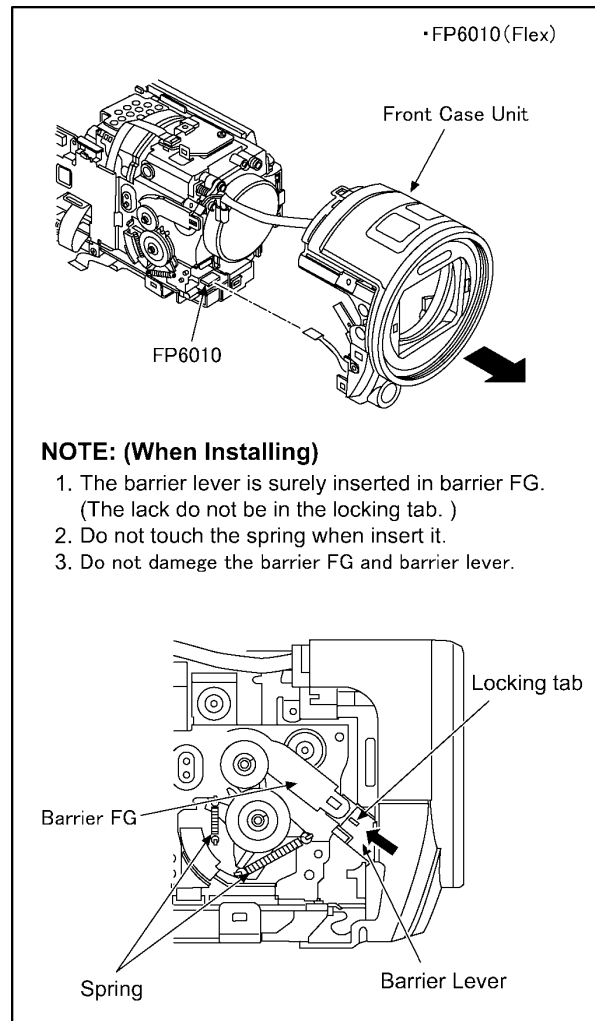
8.3.4. Removal of the Front Case Unit



(Fig. D5)

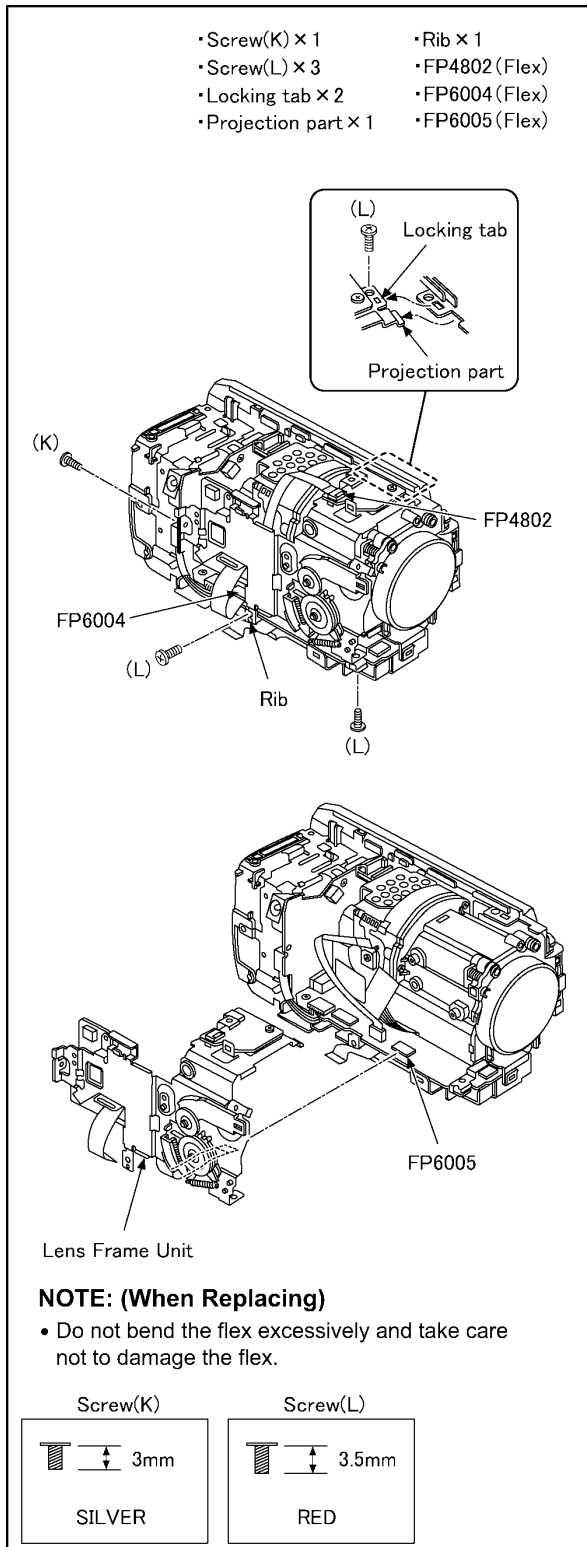


(Fig. D6)

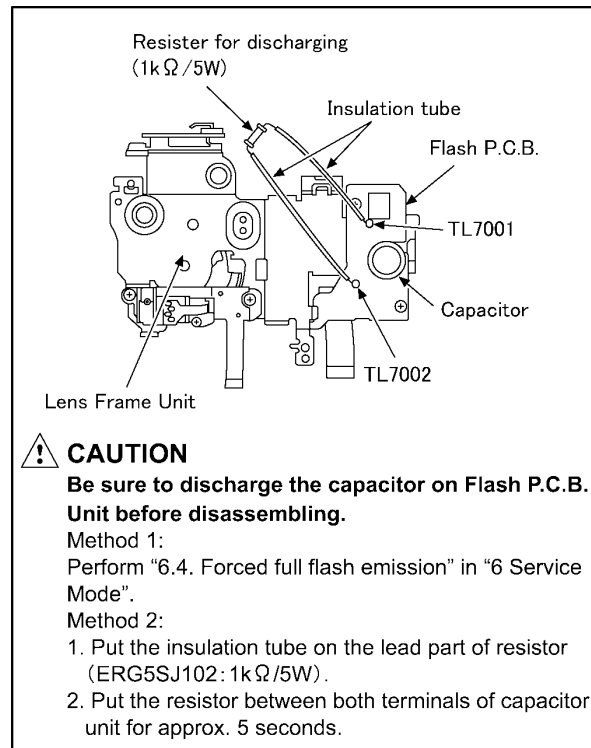


(Fig. D7)

8.3.5. Removal of the Lens Frame Unit

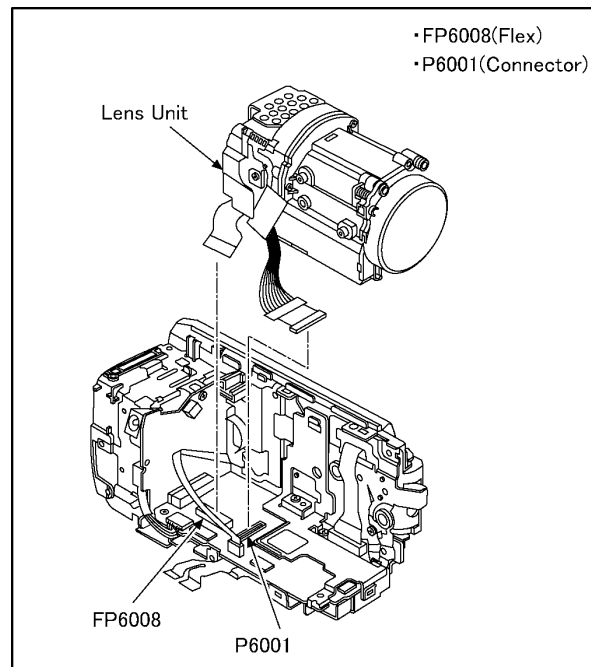


(Fig. D8)



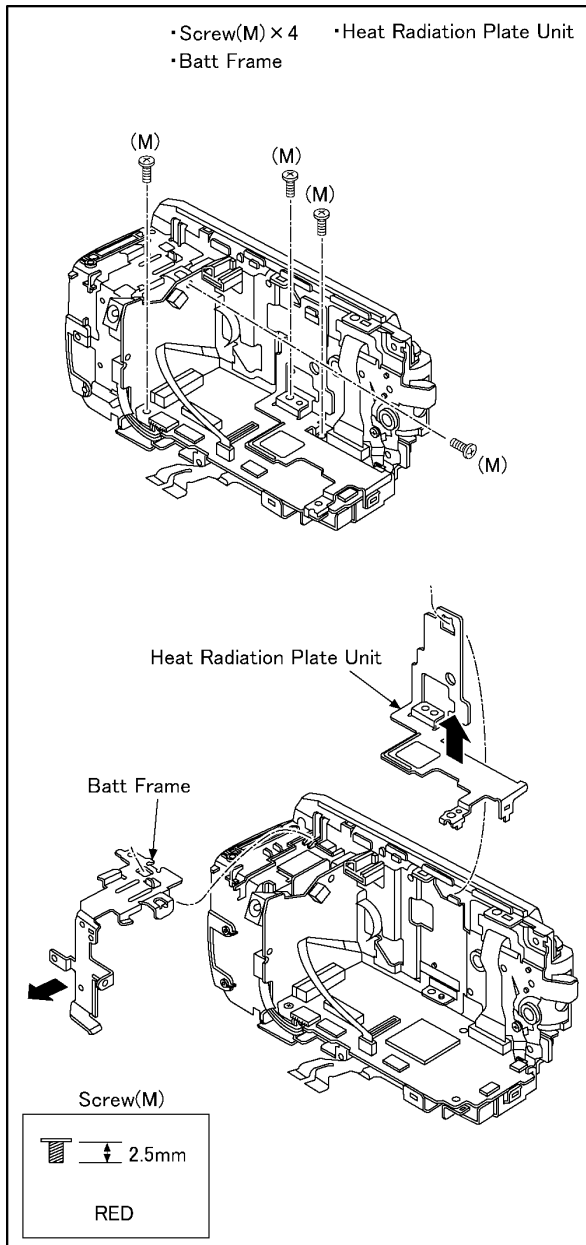
(Fig. D9)

8.3.6. Removal of the Lens Unit

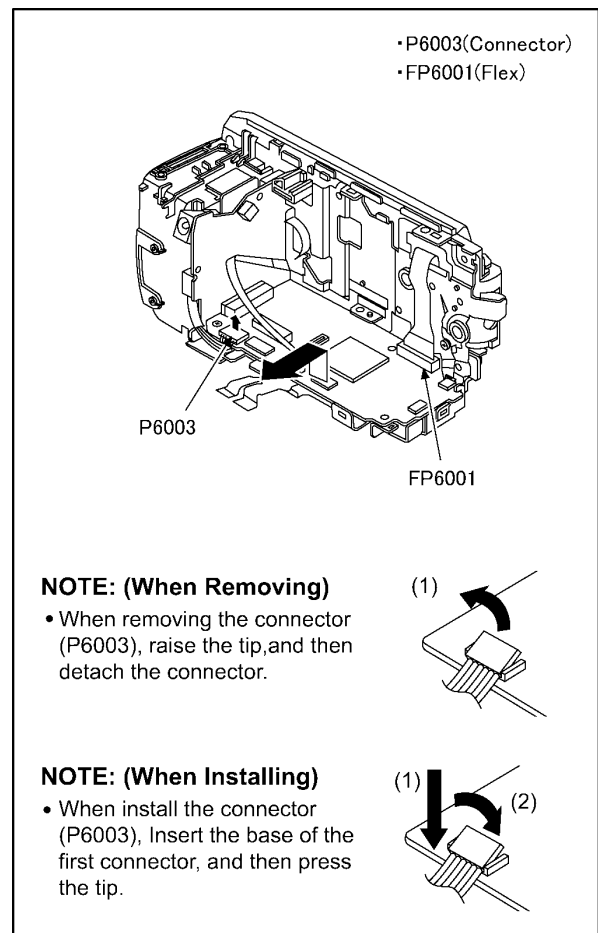


(Fig. D10)

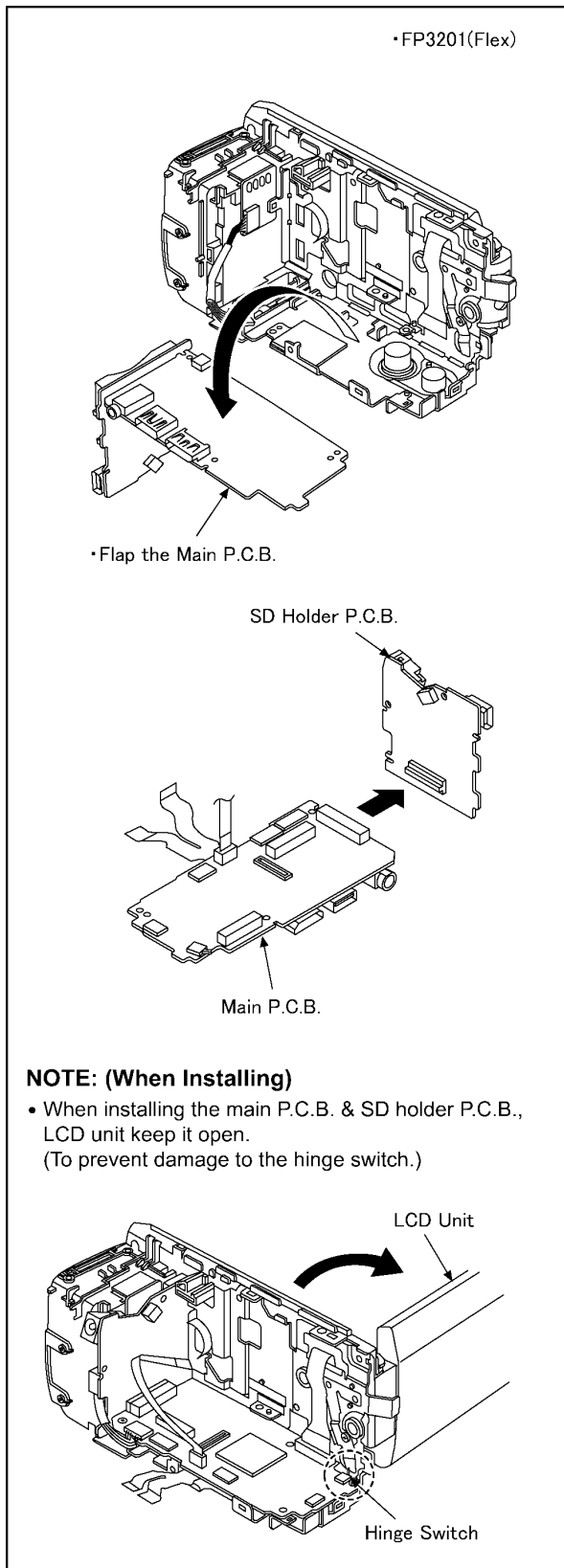
8.3.7. Removal of the Main P.C.B. and SD Holder P.C.B.



(Fig. D11)

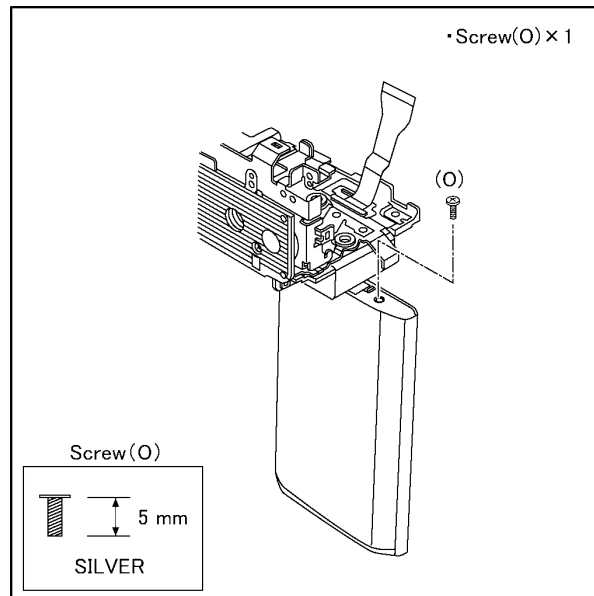


(Fig. D12)

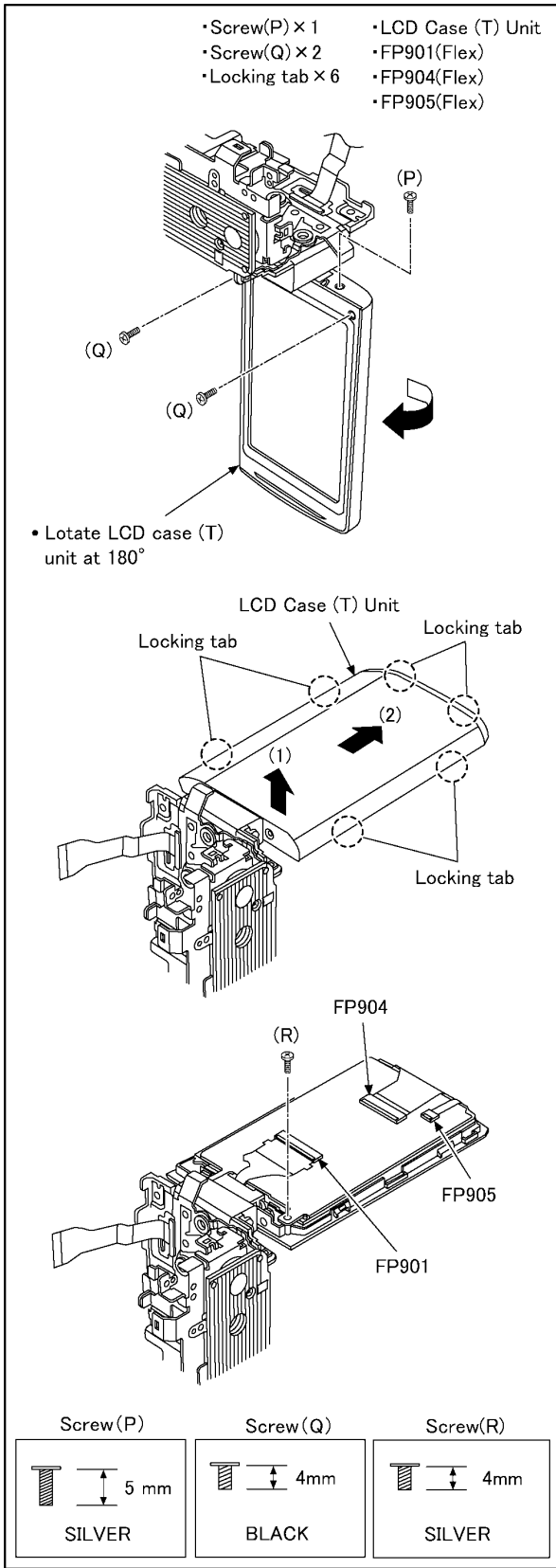


(Fig. D13)

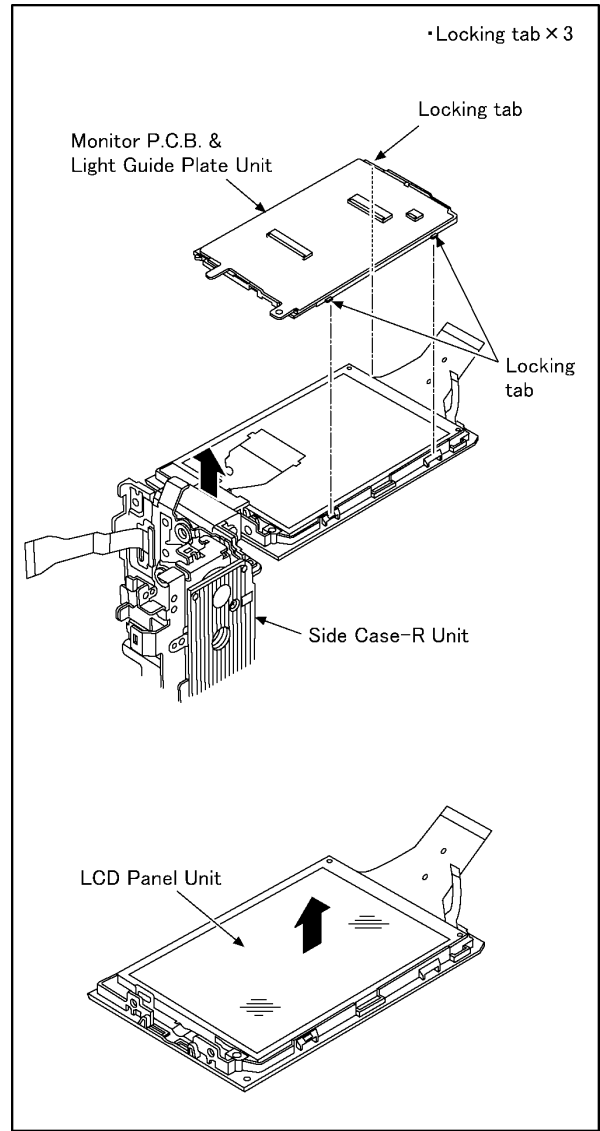
8.3.8. Removal of the Monitor P.C.B. & Light Guide Plate Unit and LCD Panel Unit



(Fig. D14)

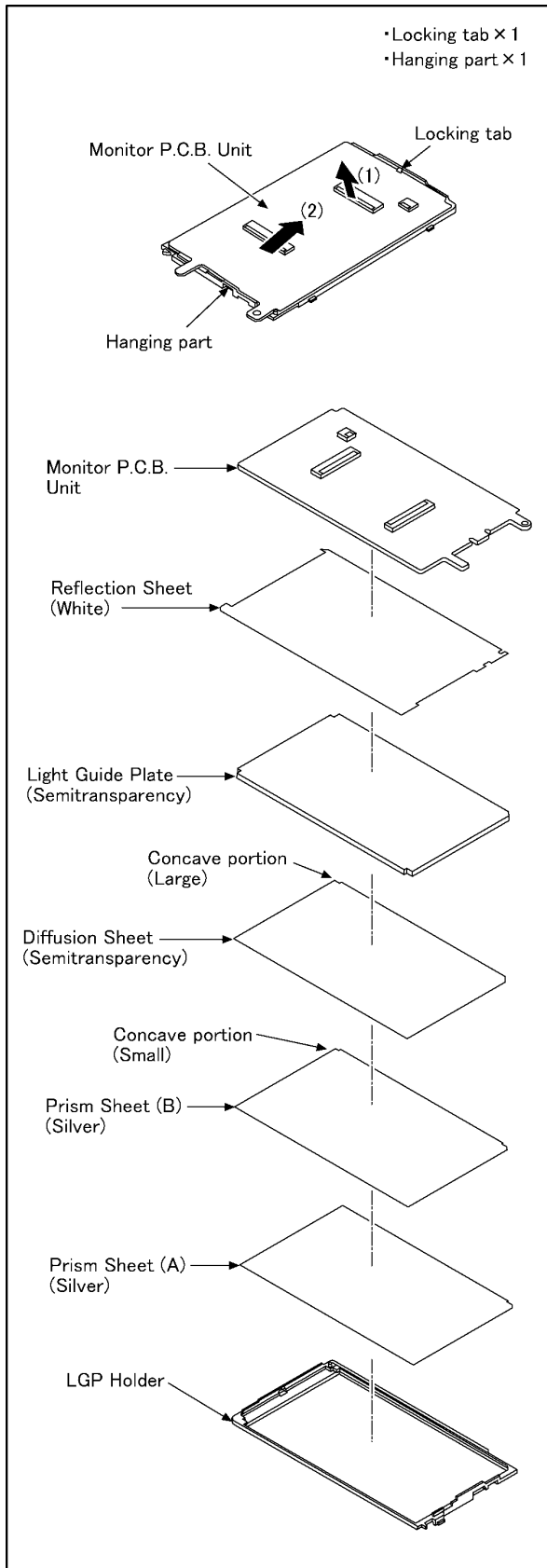


(Fig. D15)



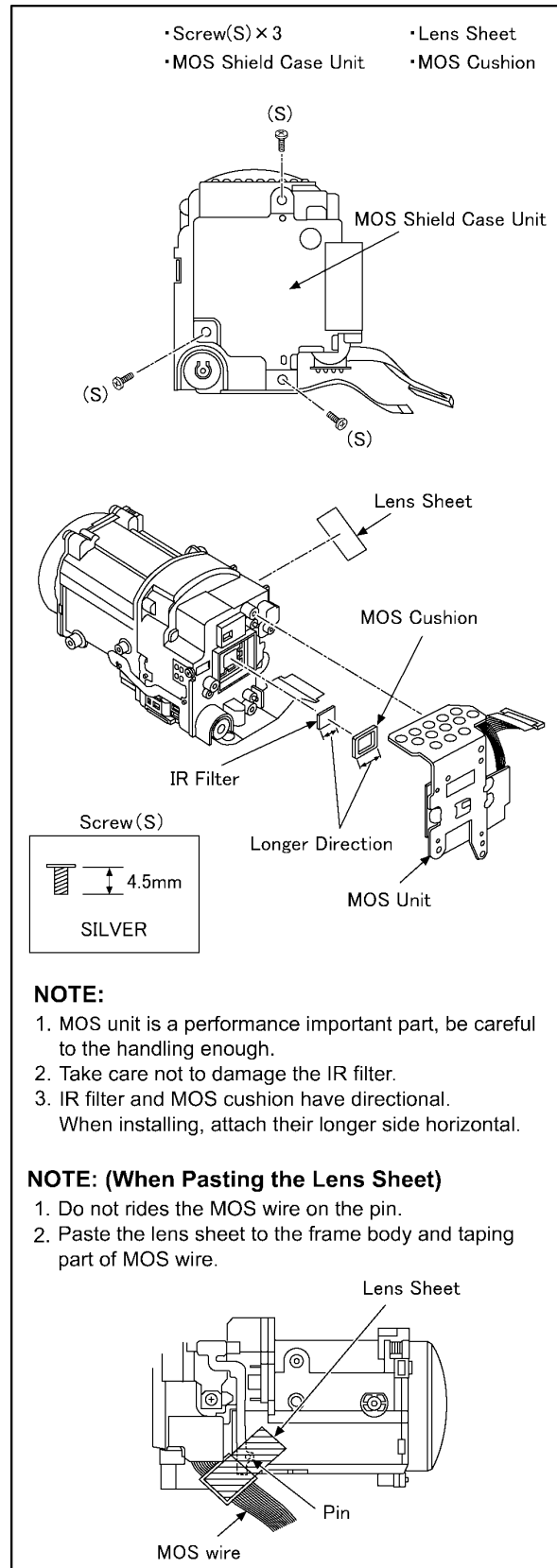
(Fig. D16)

8.3.9. Removal of the Monitor P.C.B.



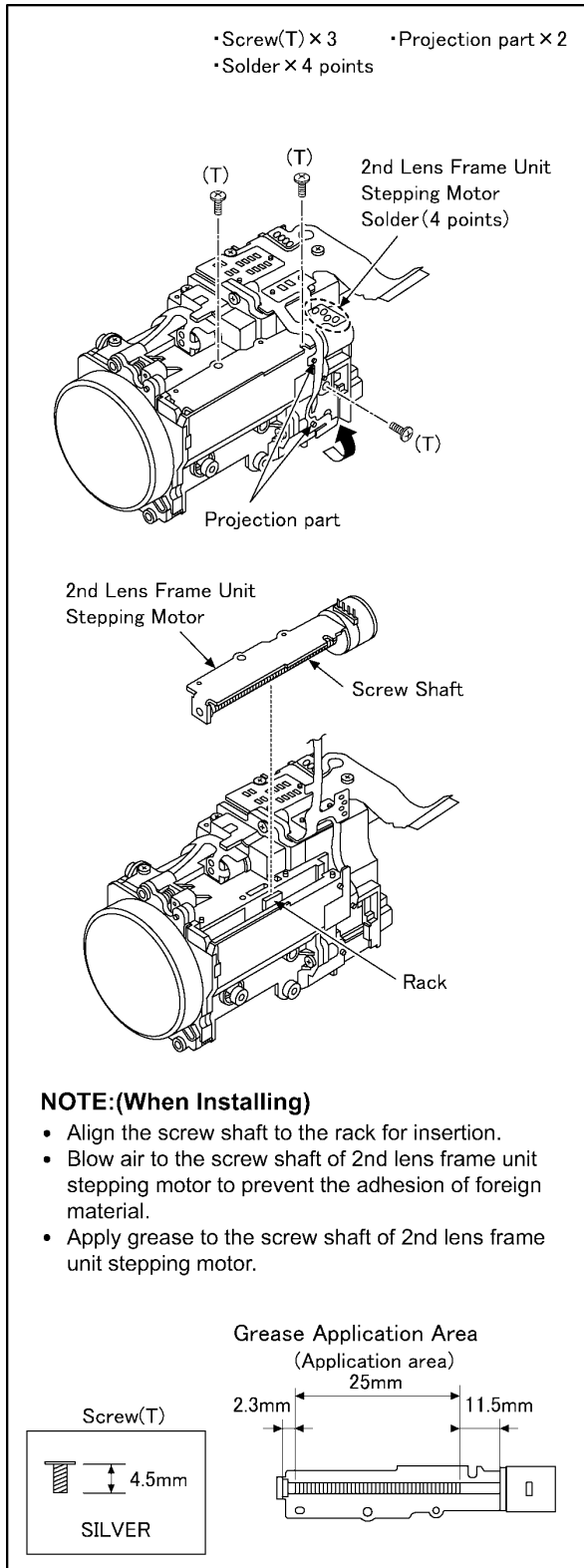
(Fig. D17)

8.3.10. Removal of the MOS Unit and IR Filter

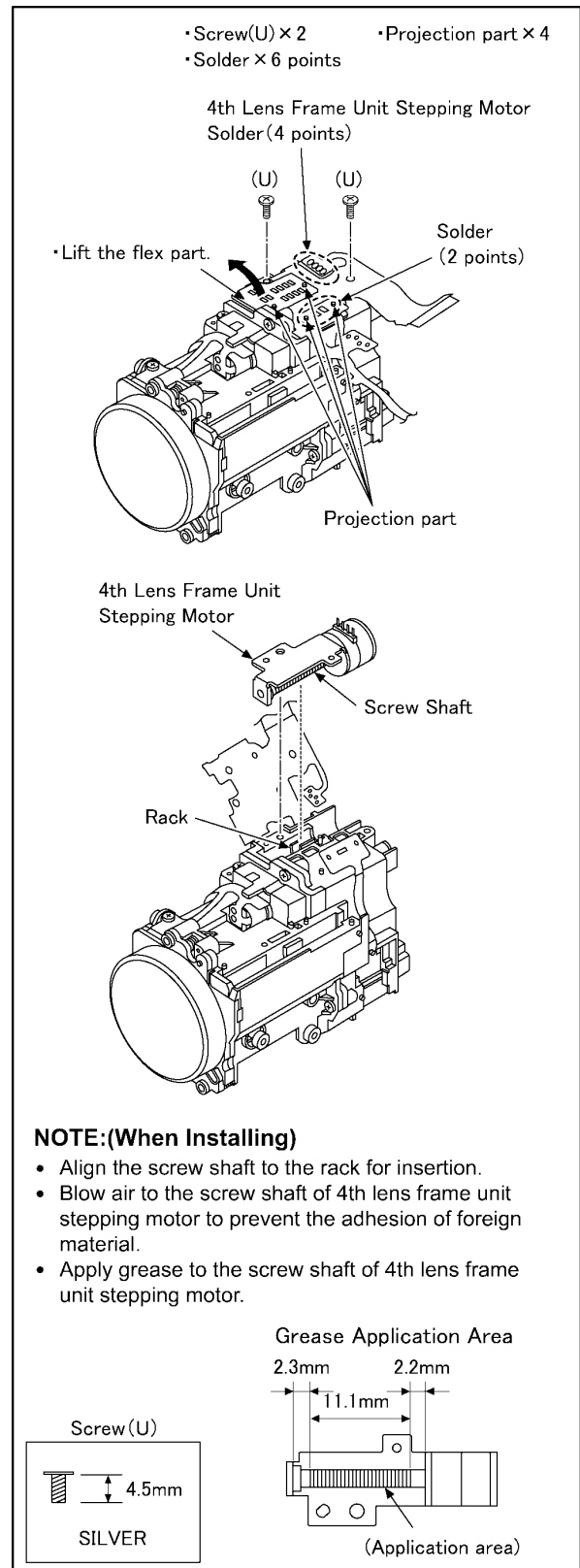


(Fig. D18)

8.3.11. Removal of the 2nd Lens Frame Unit Stepping Motor and 4th Lens Frame Unit Stepping Motor



(Fig. D19)



(Fig. D20)

9 Measurements and Adjustments

9.1. Electric Adjustment

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

9.1.1. Adjustment Procedure

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

Figure of connection

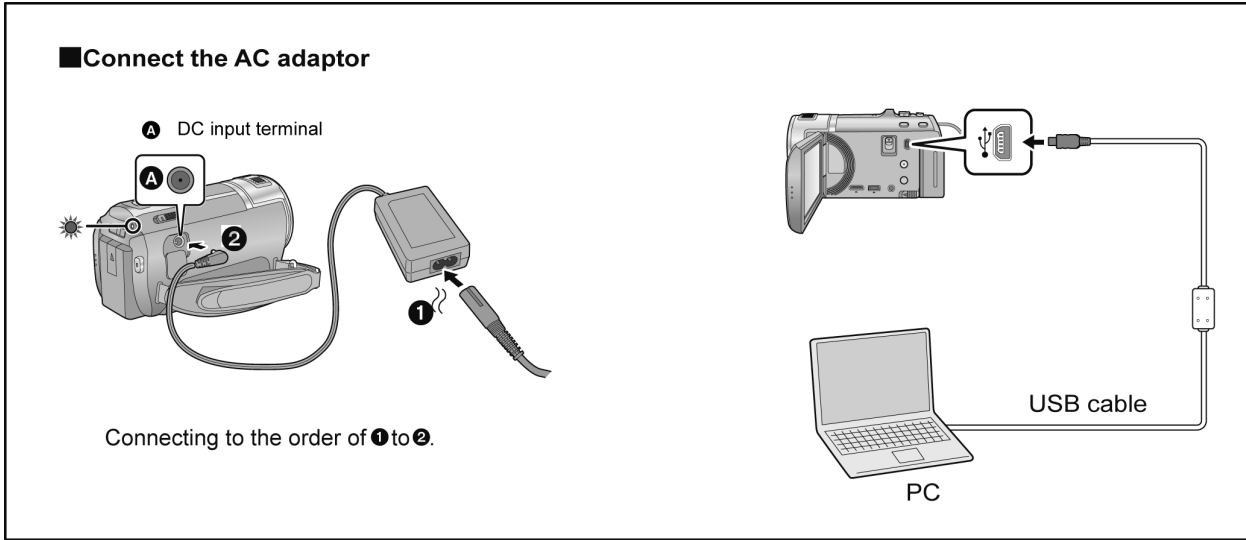
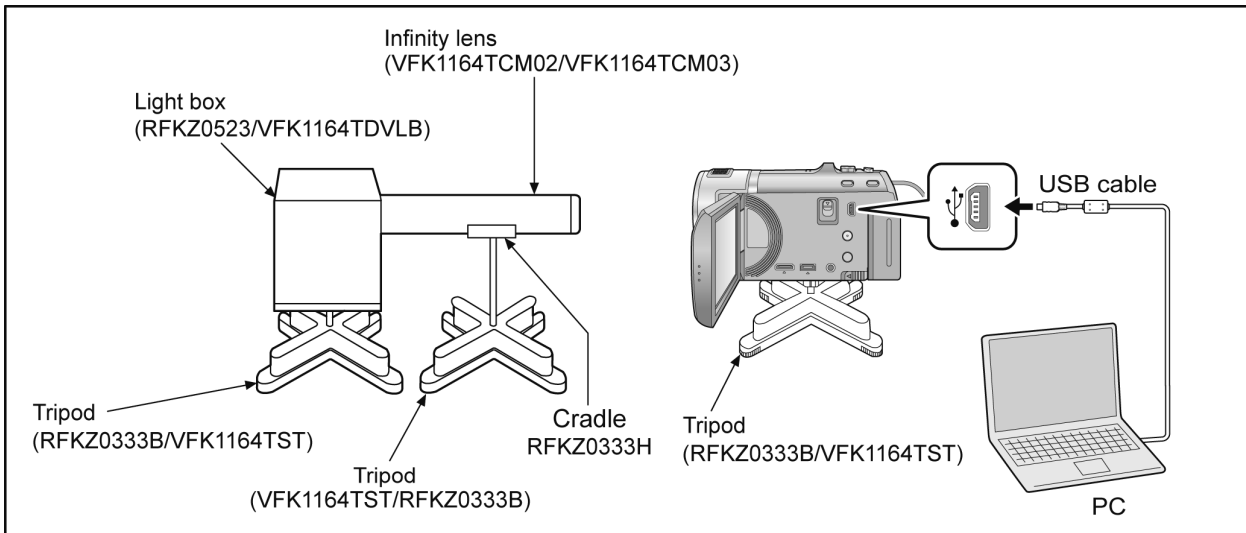


Figure of image when adjustment



Part Number of jig

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

No.	Part Name	Part Number	Remarks
1	PC	-----	
2	AC Adaptor	-----	
3	USB Cable	-----	
4	Adjustment Software (Tatsujin)	-----	
5	C4 Filter	VFK1164LBB4	The same as C12 Filter (VFK1164LBB12).
6	C8 Filter	VFK1164LBB8	

Adjustment Items

- Adjustment item as follows.

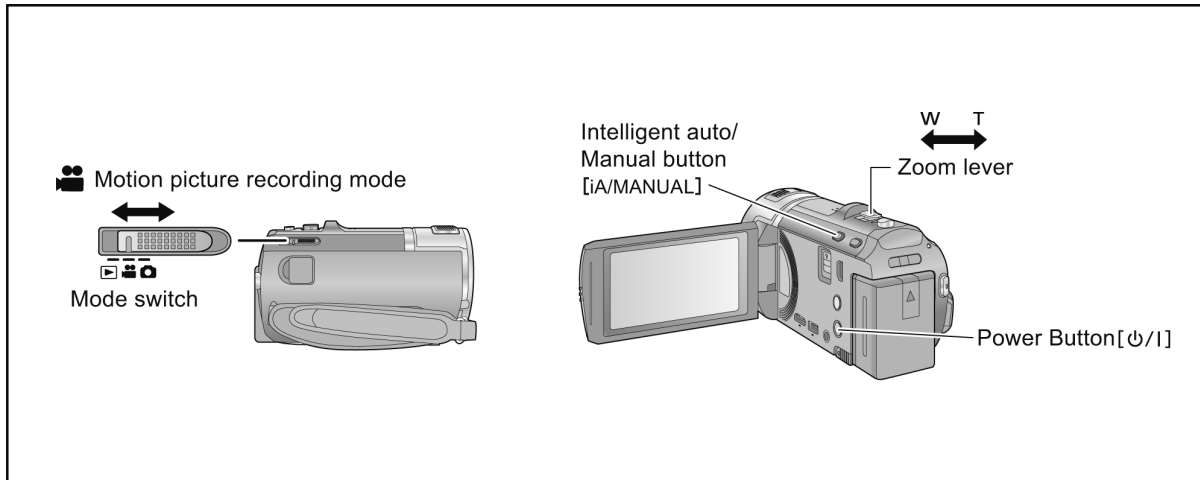
The adjustment instruction is available at "Software download" on the "Support Information from NWBG/VDBG-AVC" web-site in "TSN System".

	Adjustment item	Replacement part	Main P.C.B.	IC3403 (FLASH ROM)	Lens Unit	MOS Unit	IC701	IC6401, IC6411
Camera part	● CAM IRIS		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	● CAM OIS G sensor		<input type="radio"/>	<input type="radio"/>				<input type="radio"/>
	● CAM Tracking & De-focus		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	● CAM Flaw correction of MOS sensor		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		
	● CAM AWB 3100		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		
	● CAM AWB 5100		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		
	● CAM Gain among Channels		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		

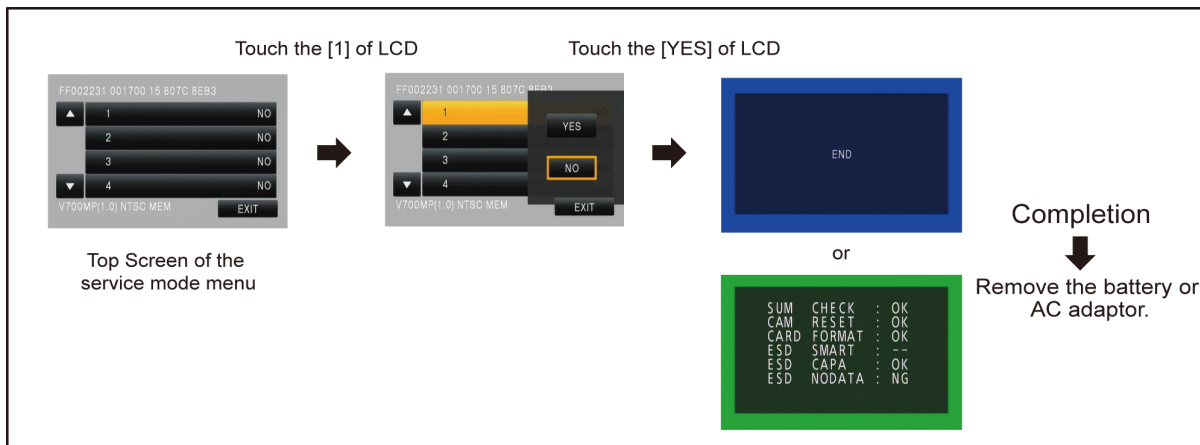
10 Factory Setting

10.1. How To Turn On The Factory Settings?

1. Set the mode switch "Motion Picture Recording" mode.
2. While the power is turned OFF, keep pressing the "Power" button, "Zoom lever" to W side and "intelligent auto/Manual" button for more than 3 seconds until the top screen of the Service Mode Menu being displayed.



3. Touch the [1] of LCD.
4. Touch the [YES] of LCD.
5. After few seconds "END" is displayed or "ESD NODATA" as "NG" is displayed on LCD monitor. Cutting of battery connection or AC power supply connection as a completion of the "FACTORY SETTINGS".
(After recording at least once, even if the physical format of the build-in memory will be performed, "ESD NODATA" as "NG" is indicated, but "FACTORY SETTINGS" is completed.)



10.2. What Is The Factory Settings?

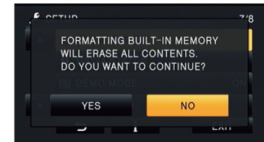
The factory settings clean up and/or refresh the following settings.

1. MENU, MODE, ADJUSTMENT VALUE.
2. SD card format.
3. Reset the folder number and file number of still pictures.
(Setting the folder number is 100, and file number is 0.)
4. Clear the mechanism lock information.
5. Clear the service mode information contents.
6. Close the lens cover
7. Initialize the VIERA Link Physical Address.

(HC-V700M/V707M)

If the "Factory Settings" is completed, physical format of the built-in memory is not performed, execute physical format according to the following procedure.

To physically format the built-in memory, connect the unit via the AC adaptor, select [SETUP] → [FORMAT MEDIA] → [Built-inMemory] from the menu, and then press and hold the recording start/stop button on the screen below for about 3 seconds. When the built-in memory data deletionscreen appears, select [YES], and then follow the on-screen instructions.



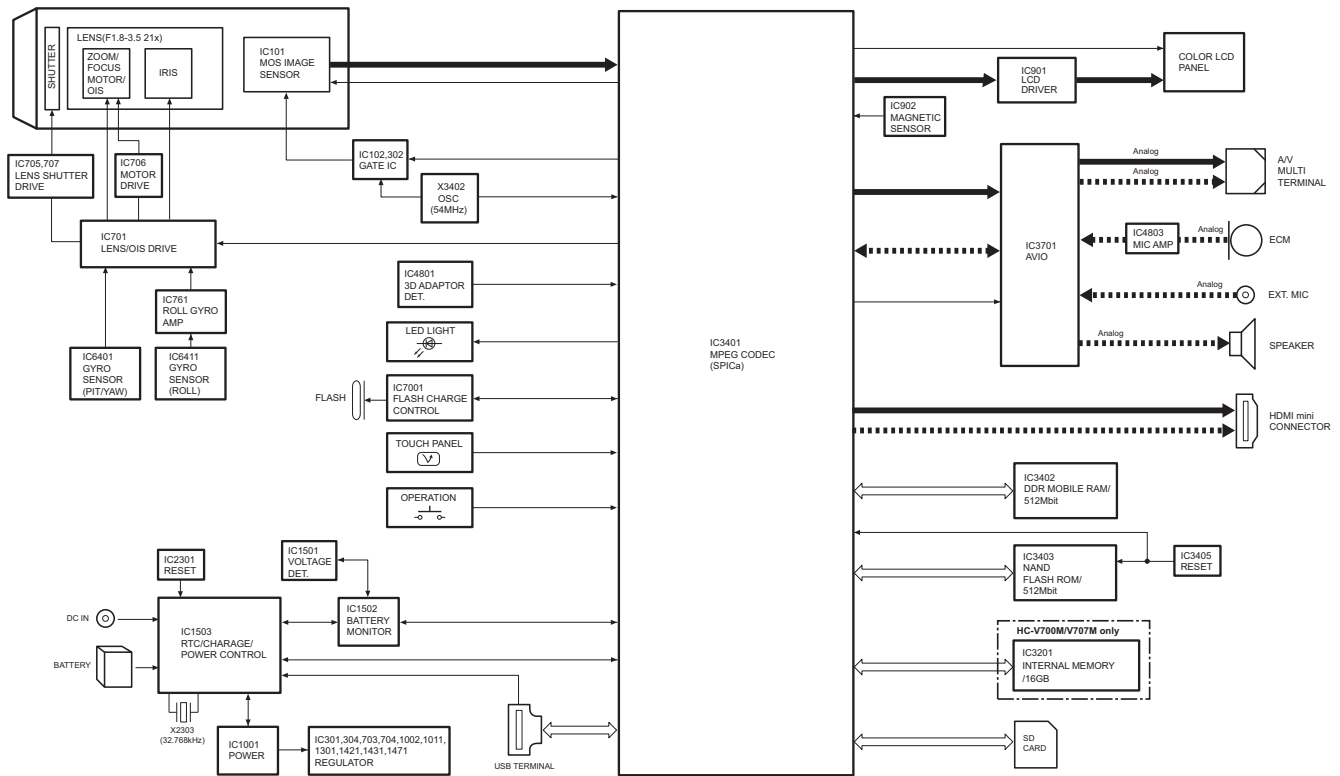
The setting position of factory settings:

Name	Setting position
Mode switch	Motion picture recording mode

11 Block Diagram

11.1. Overall Block Diagram

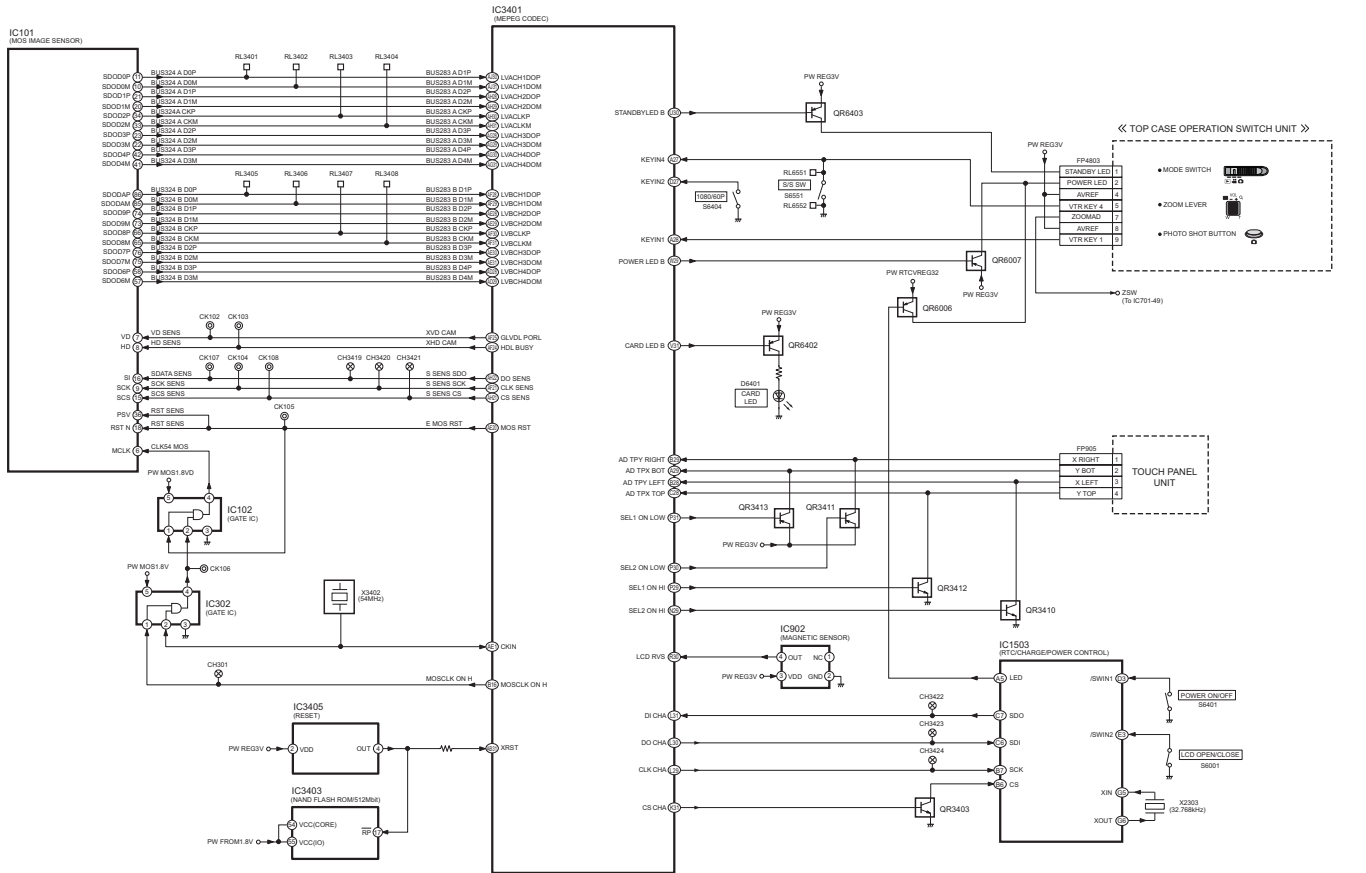
OVERALL BLOCK DIAGRAM



HC-V700M/V707M/V700/V707 OVERALL BLOCK DIAGRAM

11.2. Camera/System Control Circuit Block Diagram

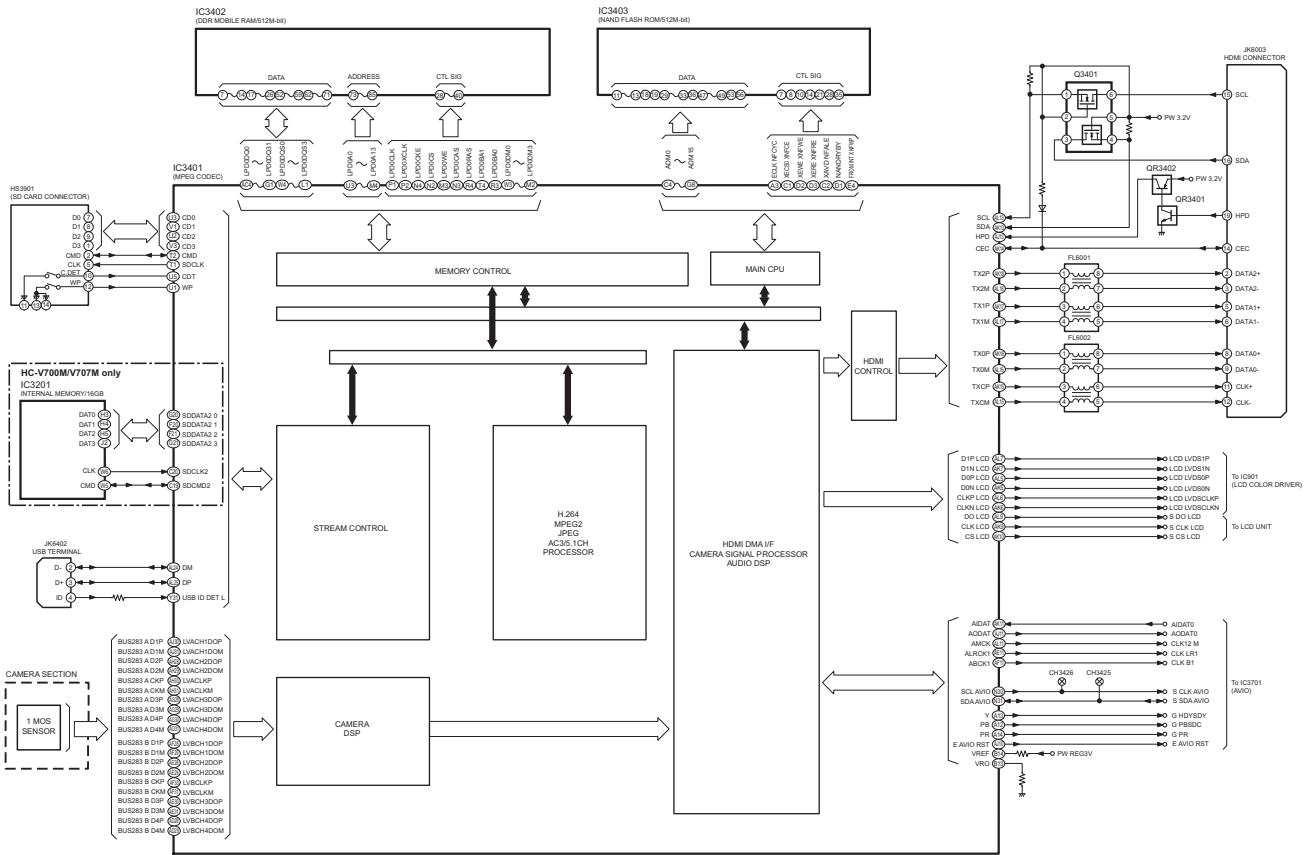
CAMERA/SYSTEM CONTROL CIRCUIT BLOCK DIAGRAM



HC-V700M/V707M/V700V/V707 CAMERA/SYSTEM CONTROL CIRCUIT BLOCK DIAGRAM

11.3. Video/Audio Signal Process(1) Circuit Block Diagram

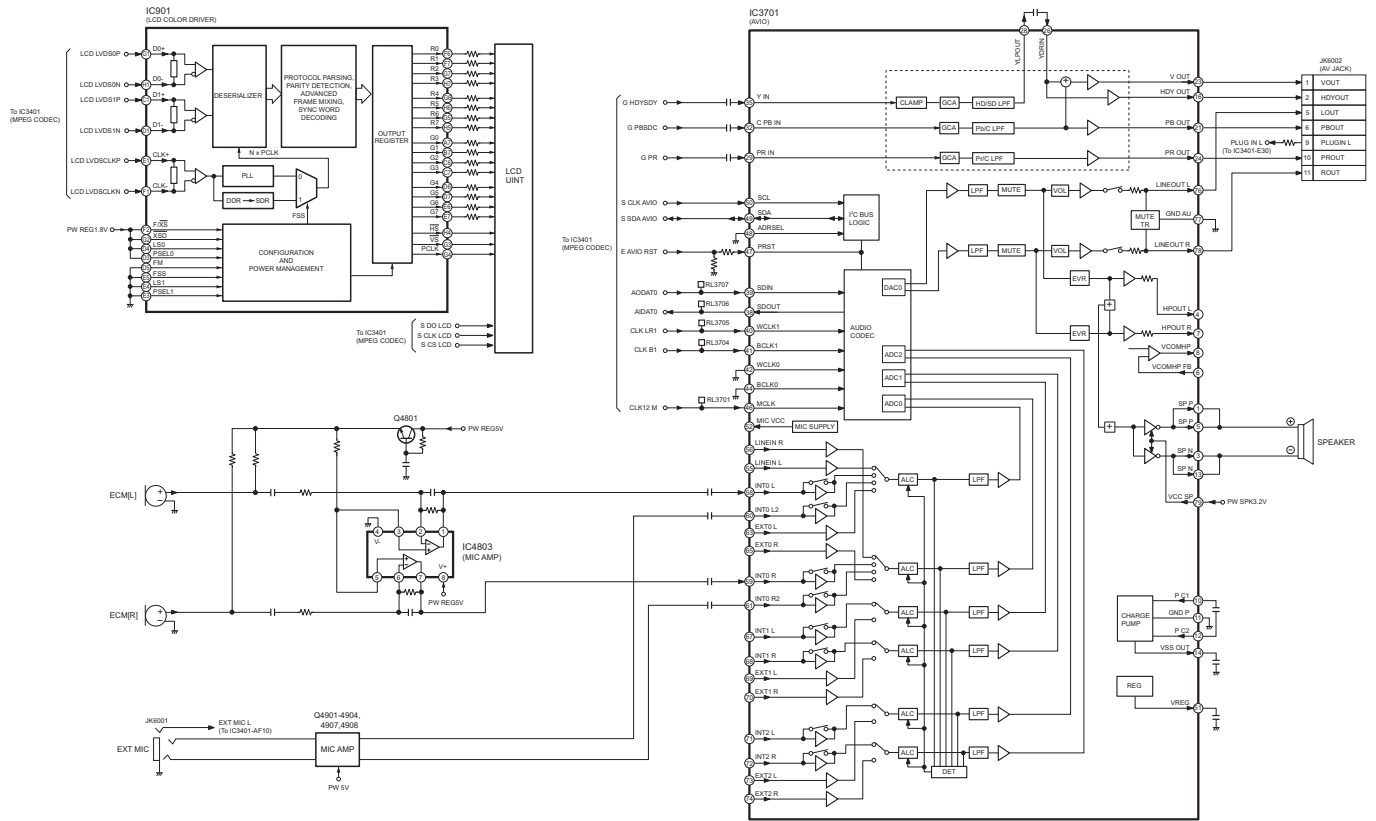
VIDEO/AUDIO SIGNAL PROCESS(1) CIRCUIT BLOCK DIAGRAM



HC-V700M/V707M/V700/V707 VIDEO/AUDIO SIGNAL PROCESS(1) CIRCUIT BLOCK DIAGRAM

11.4. Video/Audio Signal Process(2) Circuit Block Diagram

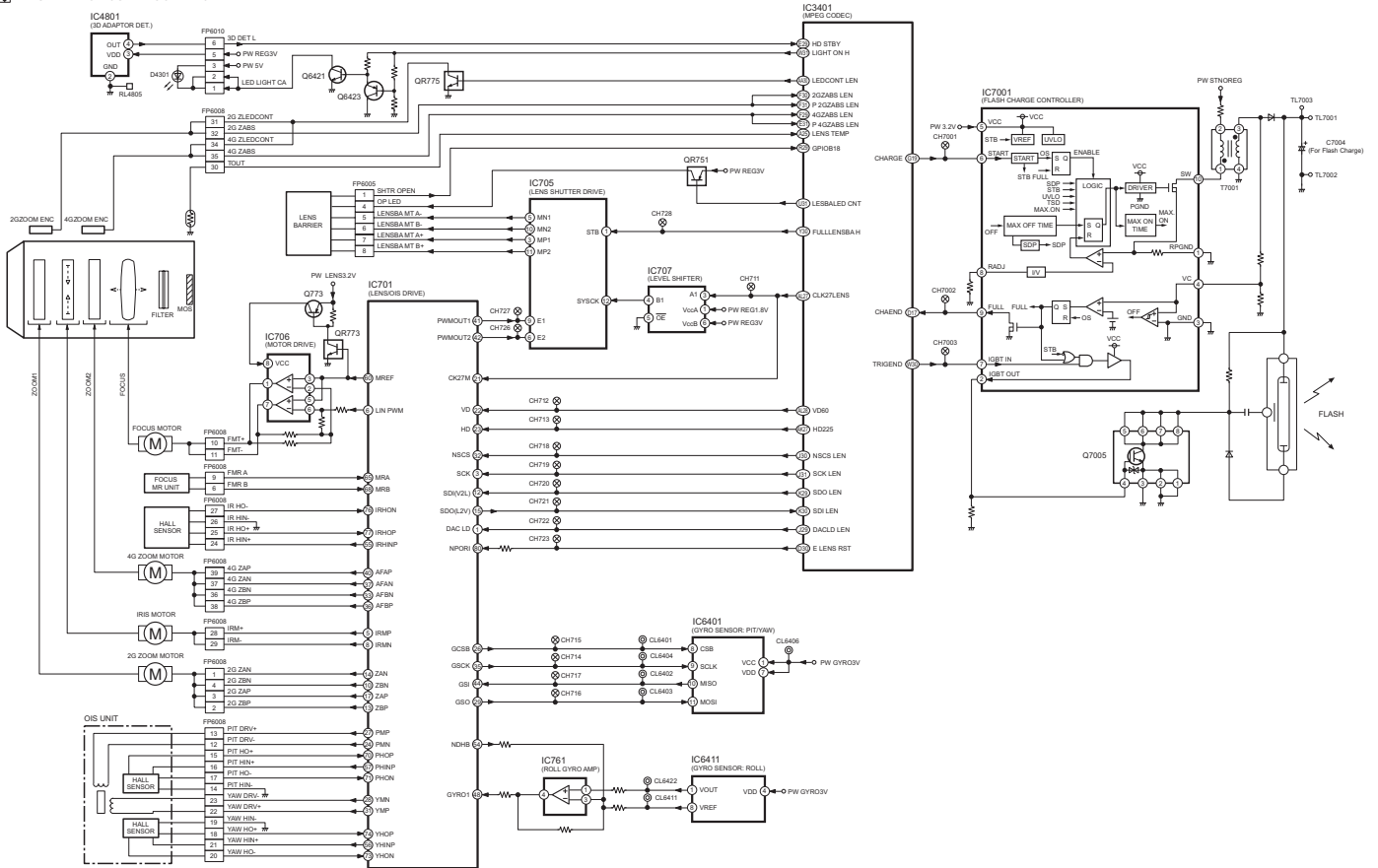
VIDEO/AUDIO SIGNAL PROCESS(2) CIRCUIT BLOCK DIAGRAM



HC-V700M/V707M/V700/V707 VIDEO/AUDIO SIGNAL PROCESS(2) CIRCUIT BLOCK DIAGRAM

11.5. Lens Drive Circuit Block Diagram

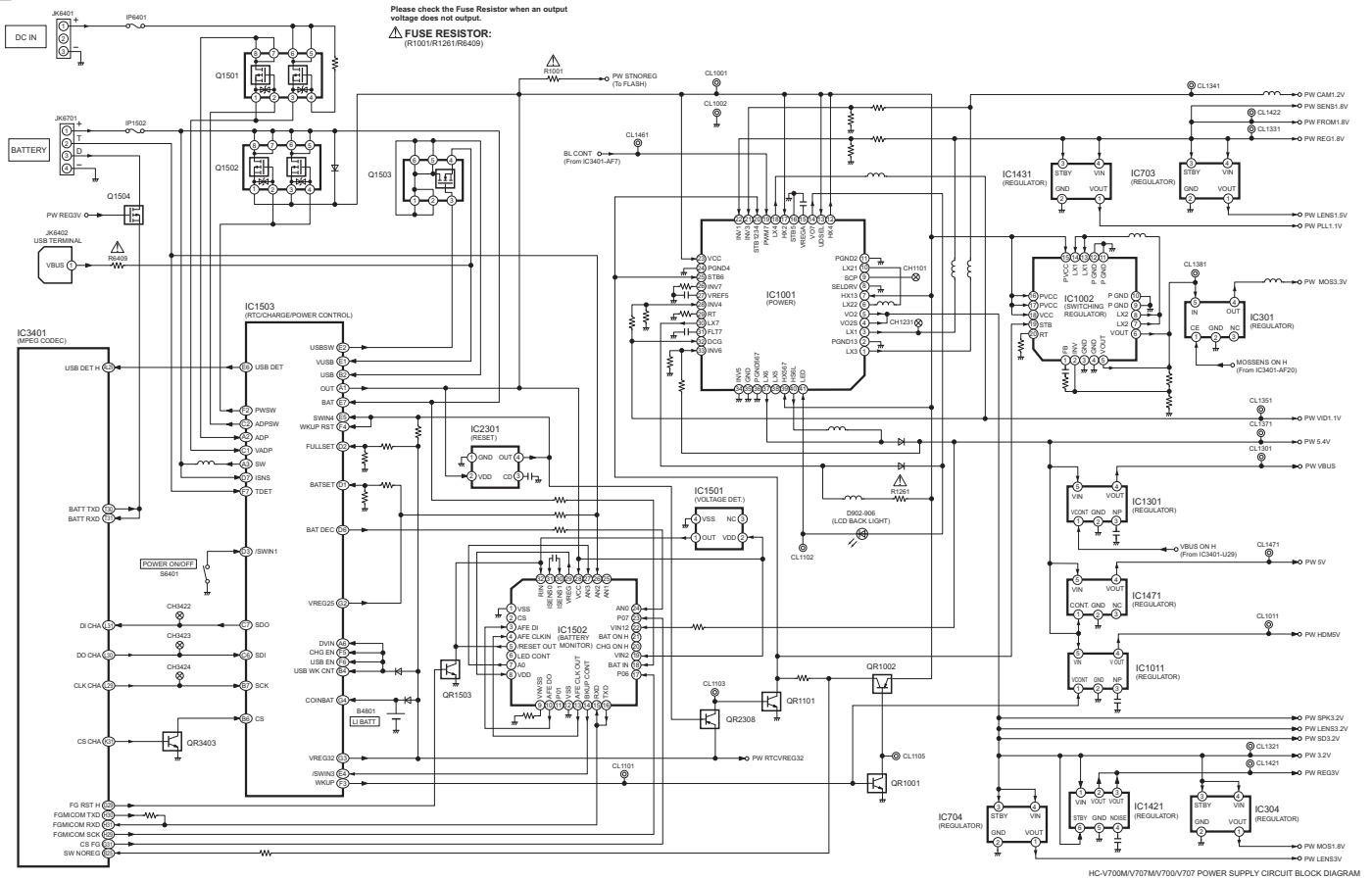
LENS DRIVE CIRCUIT BLOCK DIAGRAM



HC-V700M/V707M/V709V707 LENS DRIVE CIRCUIT BLOCK DIAGRAM

11.6. Power Supply Circuit Block Diagram

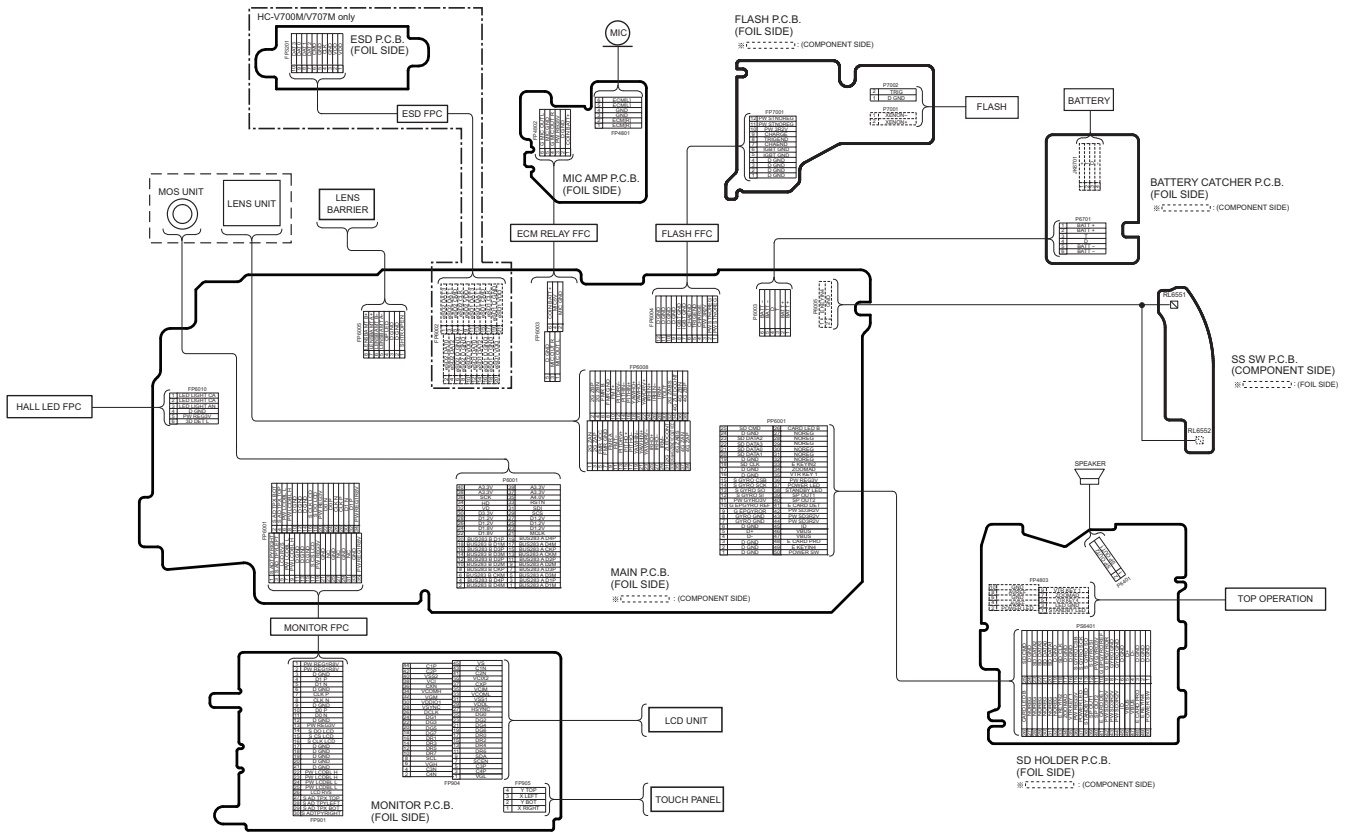
POWER SUPPLY CIRCUIT BLOCK DIAGRAM



12 Wiring Connection Diagram

12.1. Interconnection Diagram

INTERCONNECTION DIAGRAM

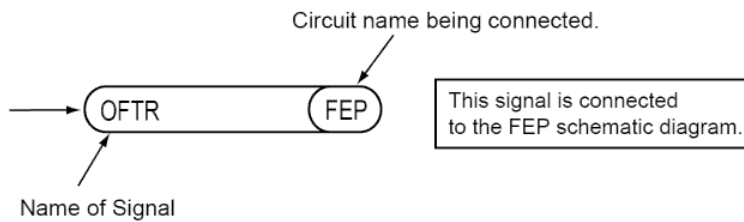


HC-V700M/V707M/V700V707 INTERCONNECTION DIAGRAM

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:



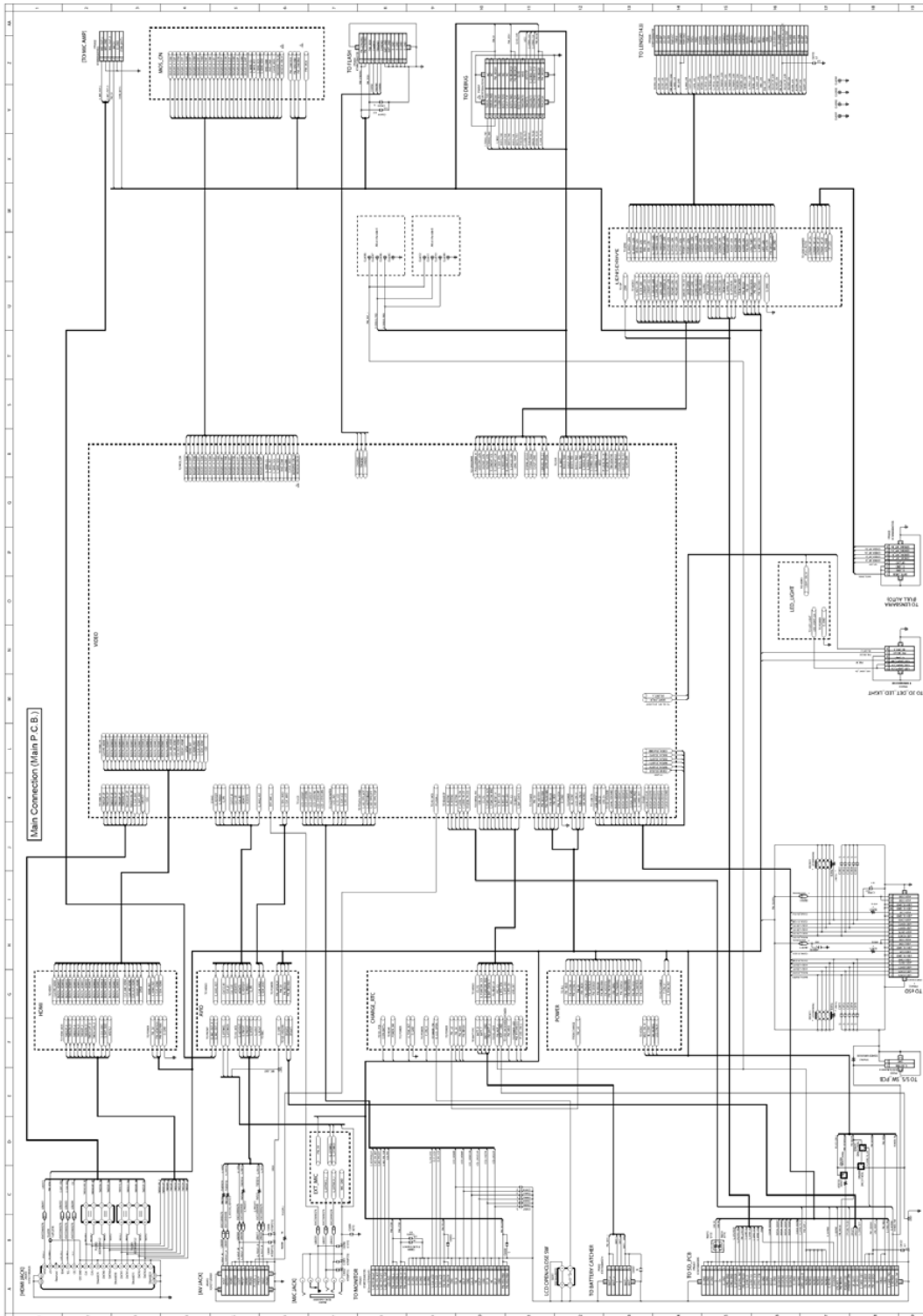
5. It might be taking time for display and/or access of the Schematic Diagrams & P. C. B having the heavy data volume.

Model No. : HC-V700/V700M/V707/V707M Parts List Note

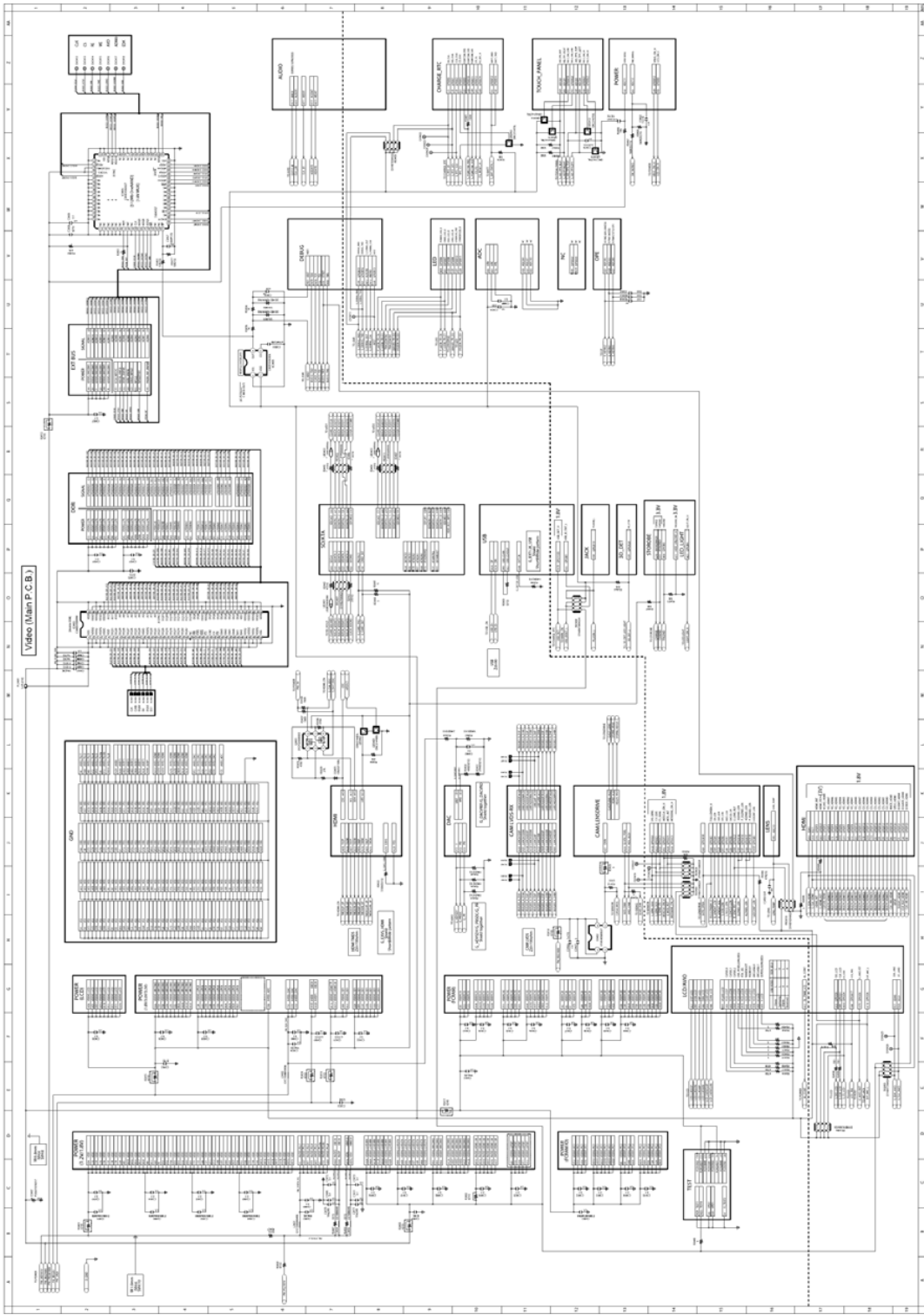
- Note: 1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTE
Components identified with the mark \triangle have the special characteristics for safety.
When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors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

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

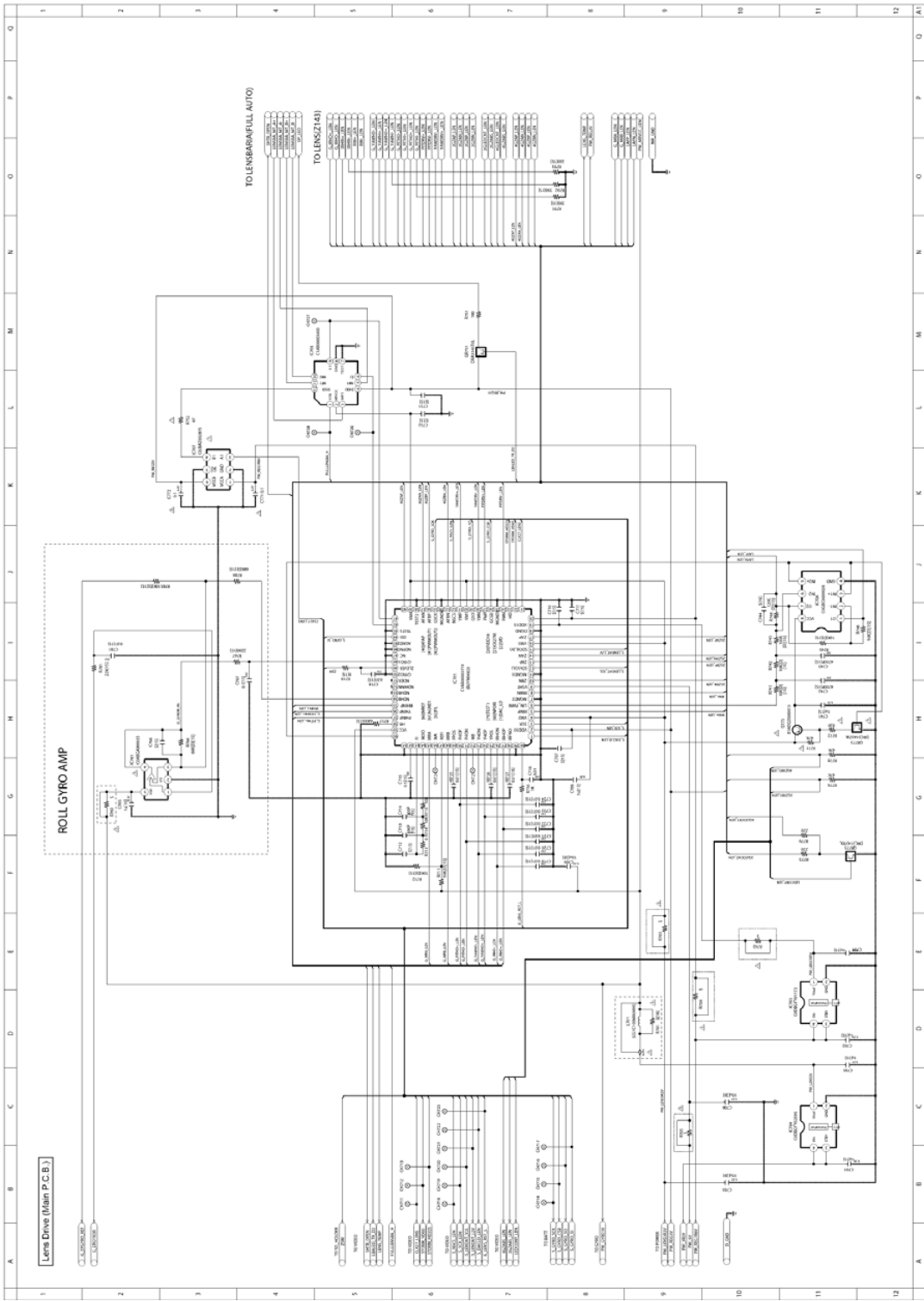
Model No. : HC-V700/V700M/V707/V707M Main Connection (Main P.C.B.)



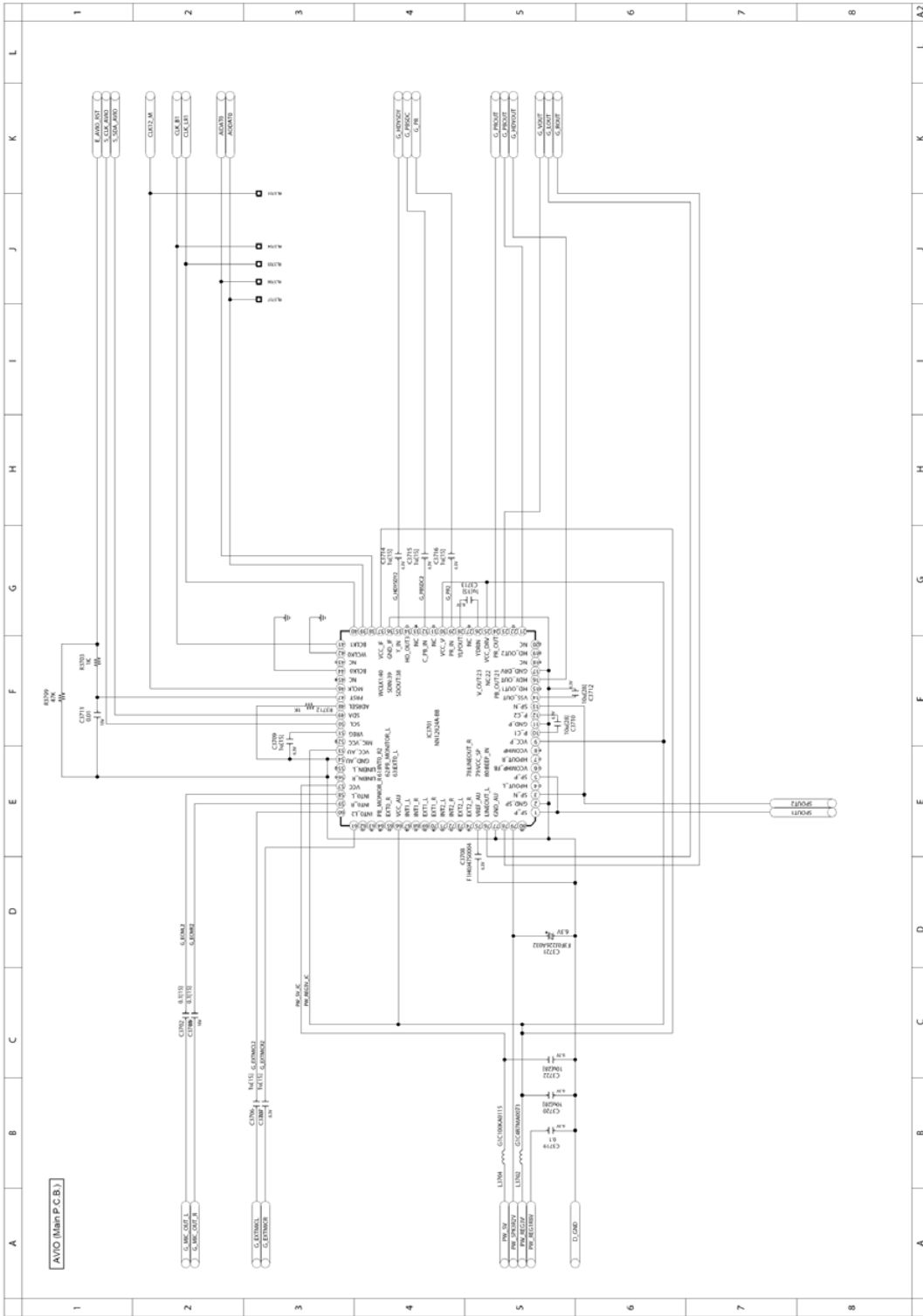
Model No. : HC-V700/V700M/V707/V707M Video (Main P.C.B.)



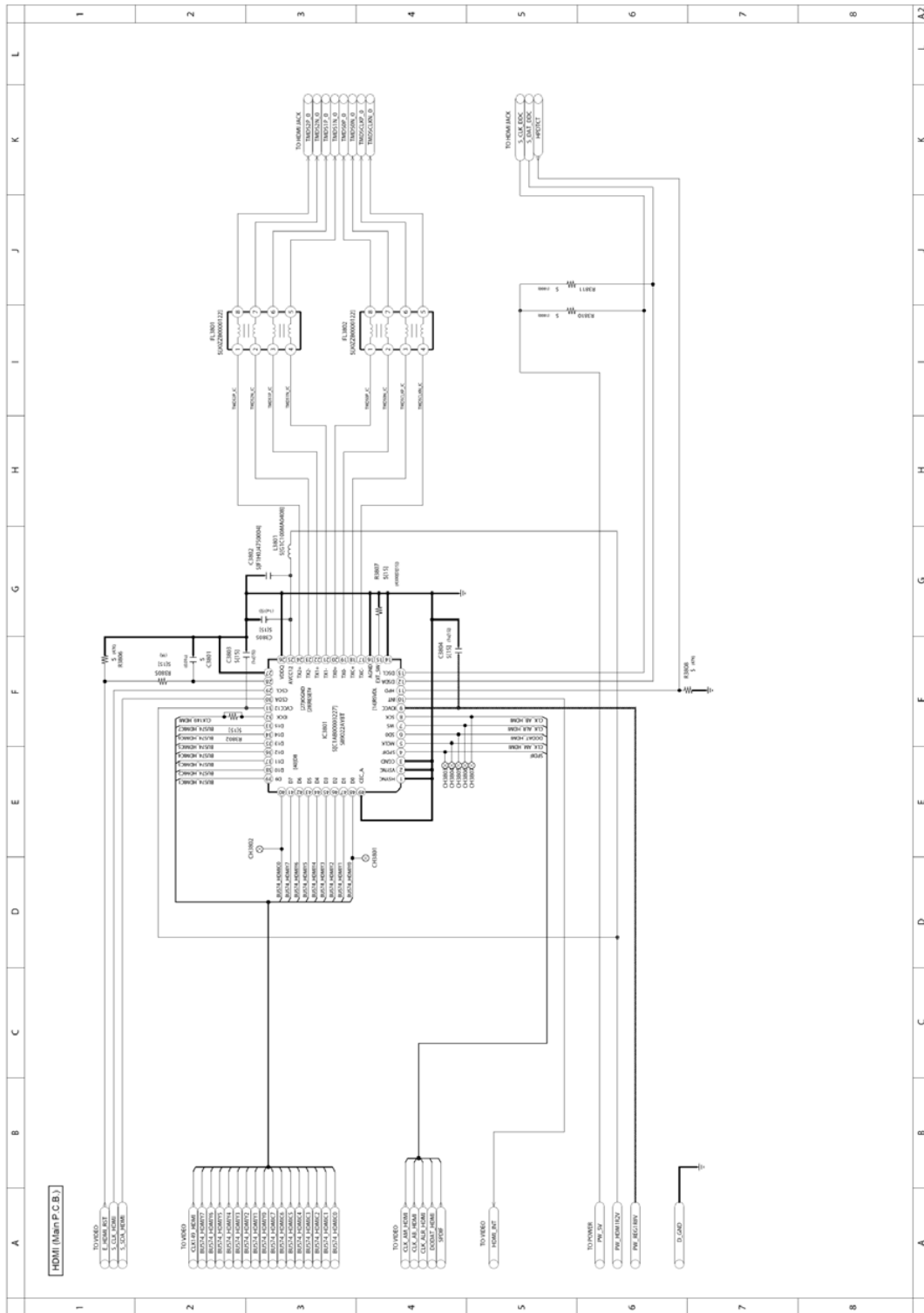
Model No. : HC-V700/V700M/V707/V707M Lens Drive (Main P.C.B.)



Model No. : HC-V700/V700M/V707/V707M AVIO (Main P.C.B.)

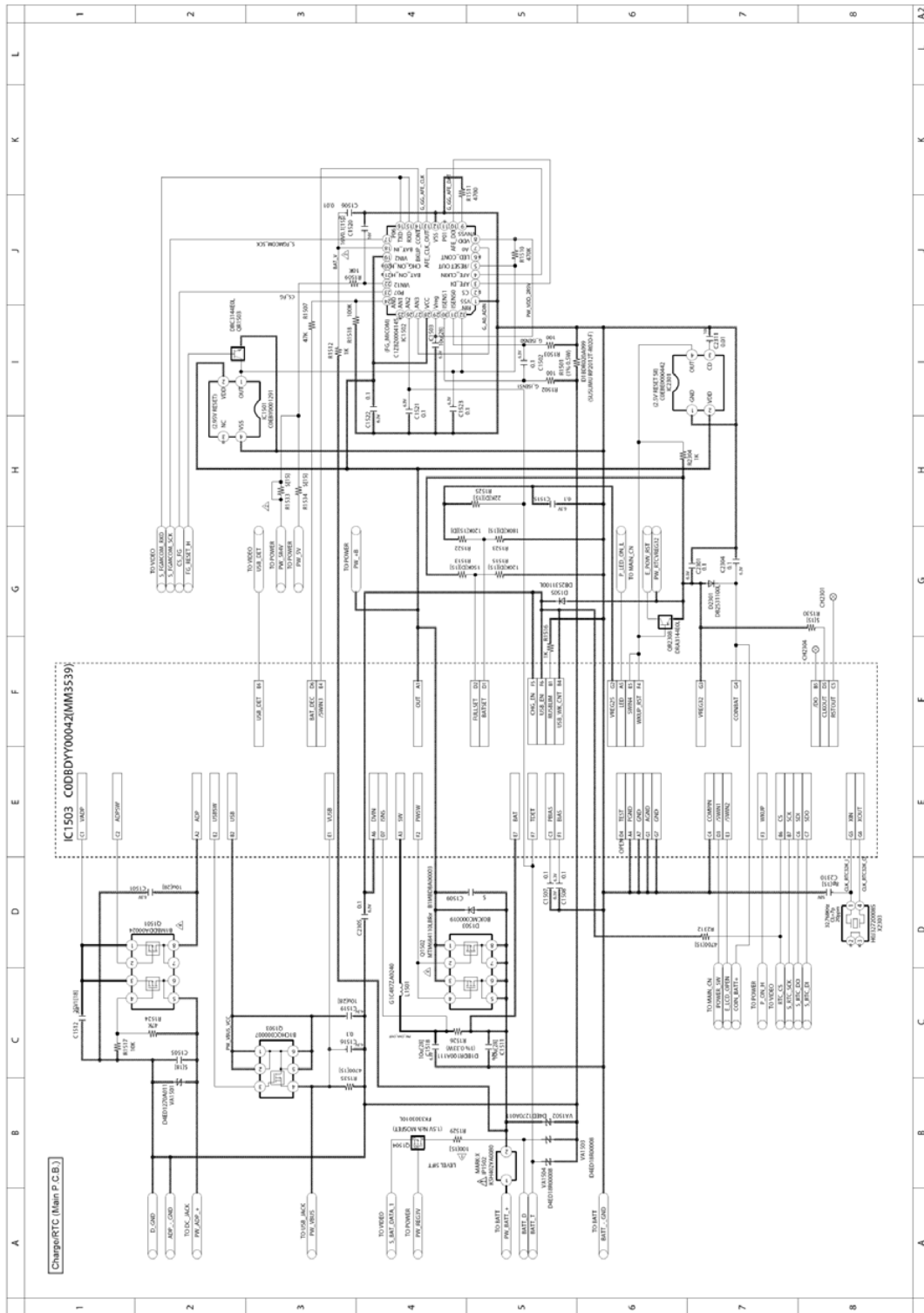


Model No. : HC-V700/V700M/V707/V707M HDMI (Main P.C.B.)

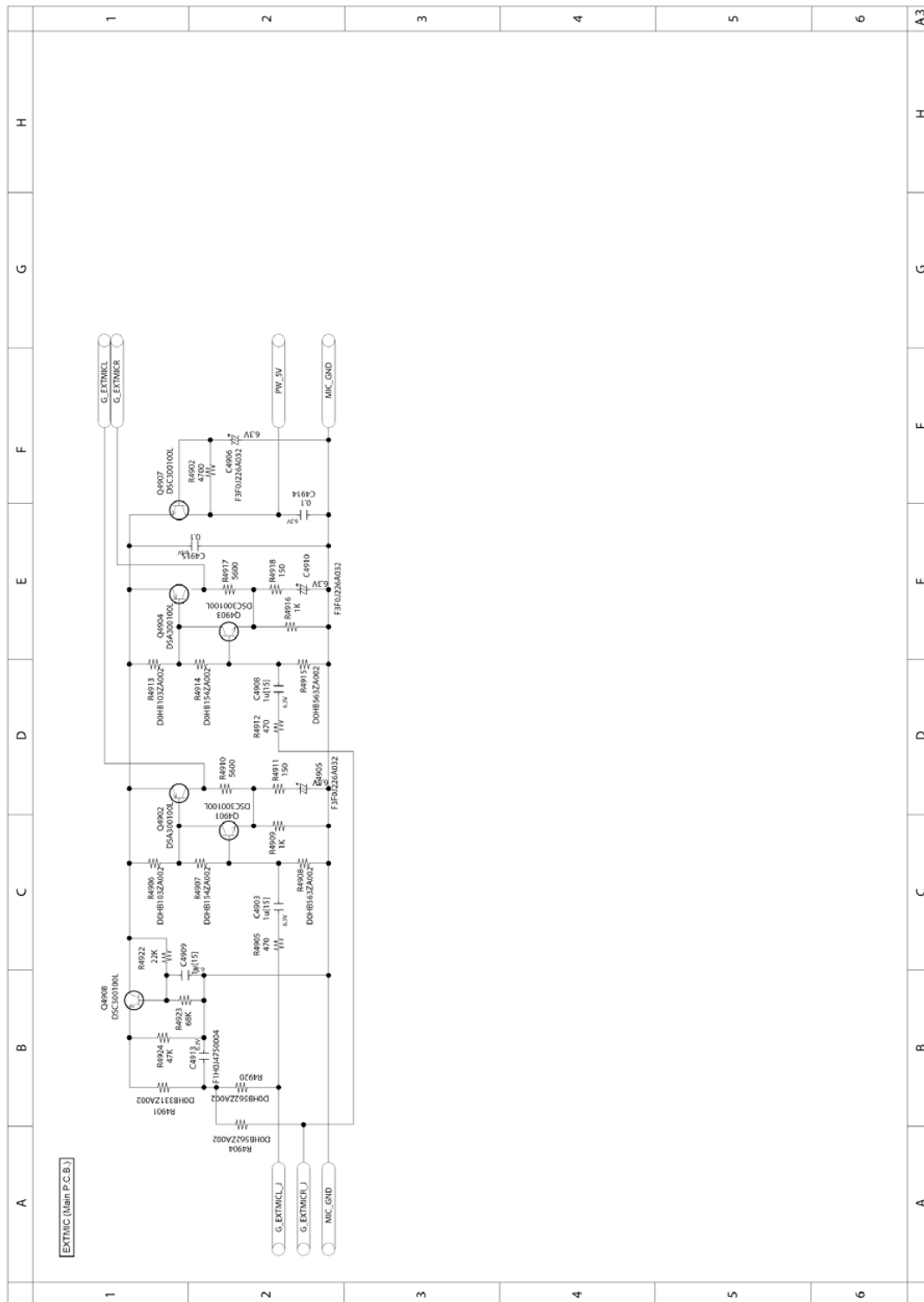


HDMI (Main P.C.B.)

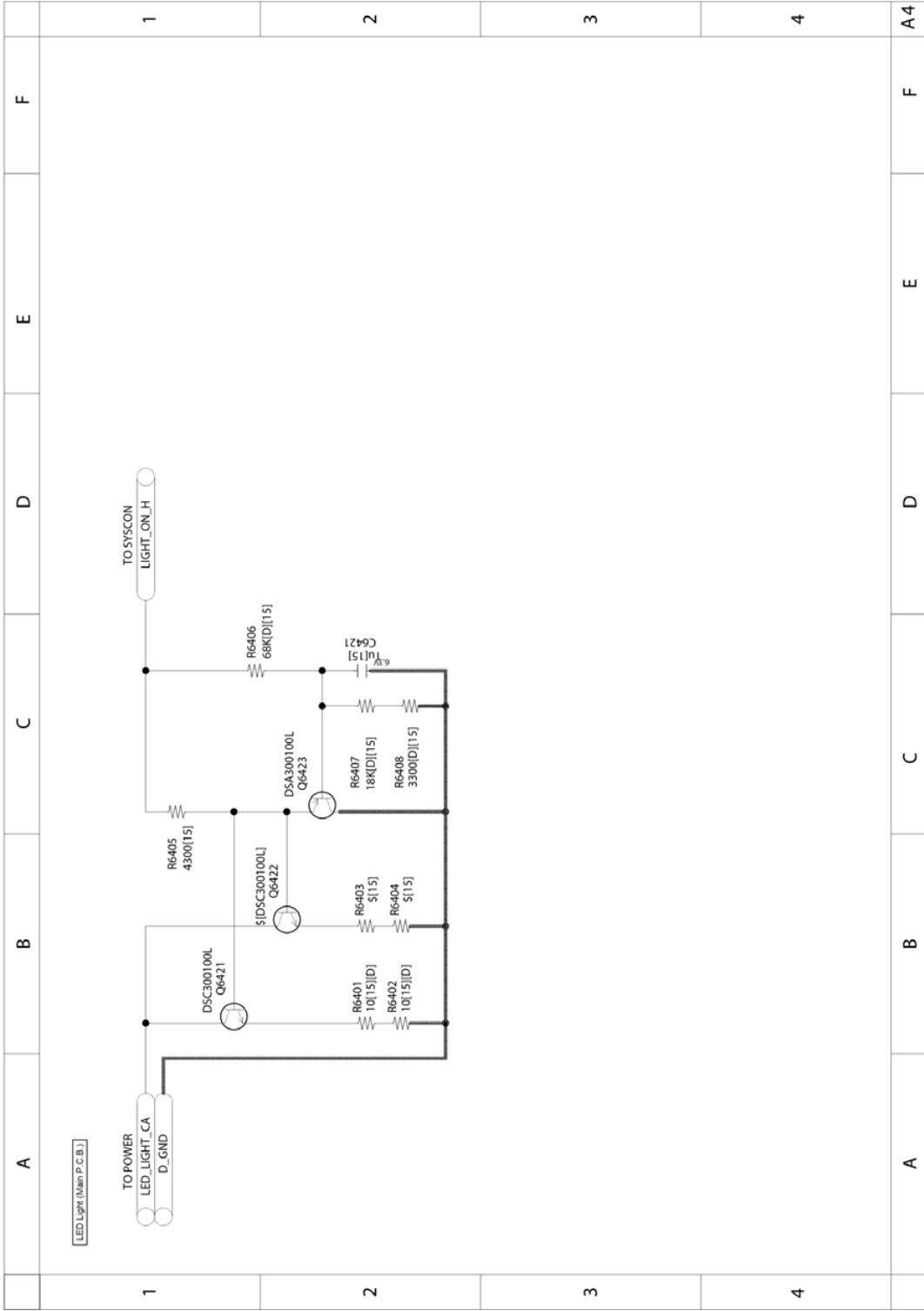
Model No. : HC-V700/V700M/V707/V707M Charge/RTC (Main P.C.B.)



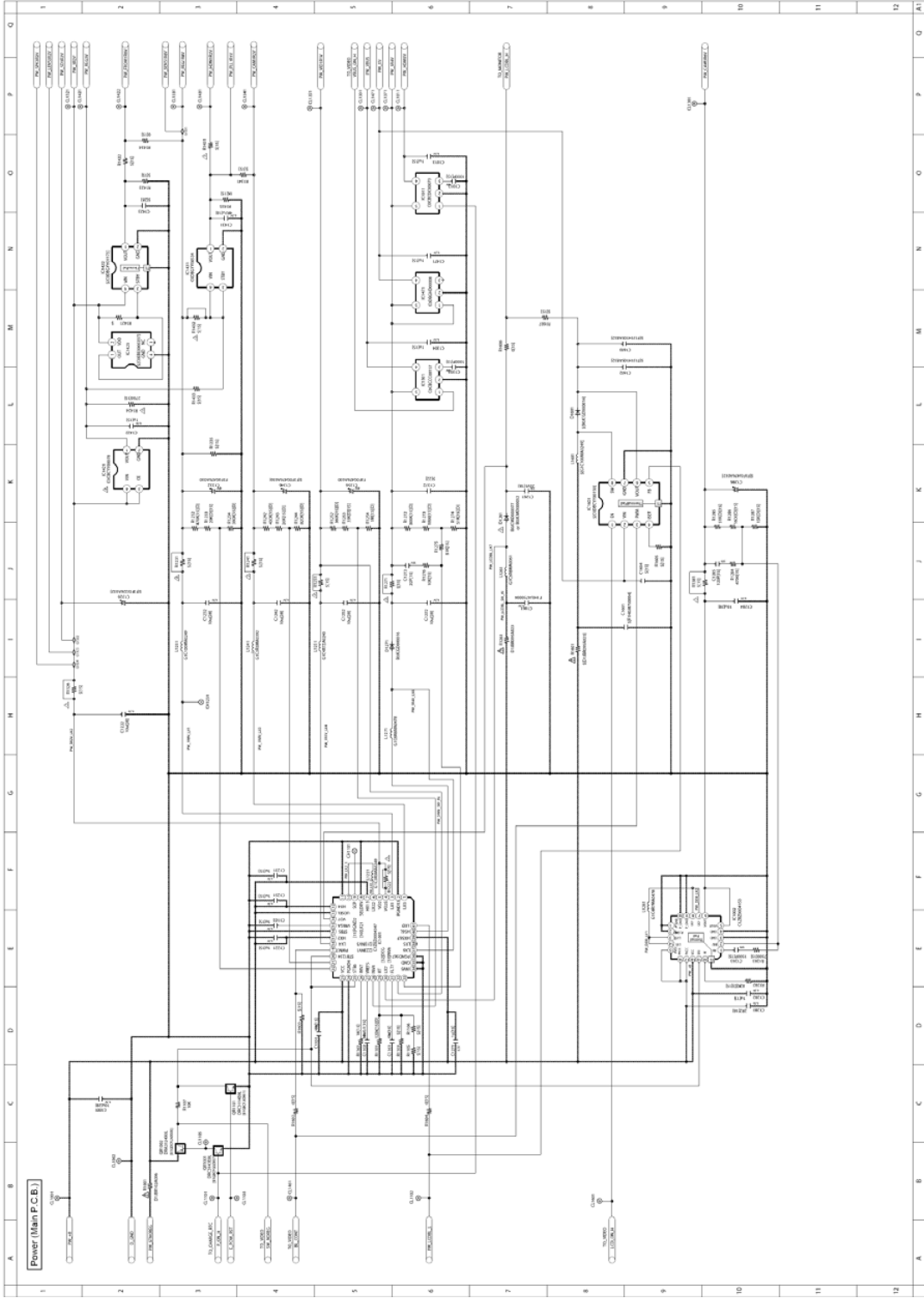
Model No. : HC-V700/V700M/V707/V707M EXTMIC (Main P.C.B.)



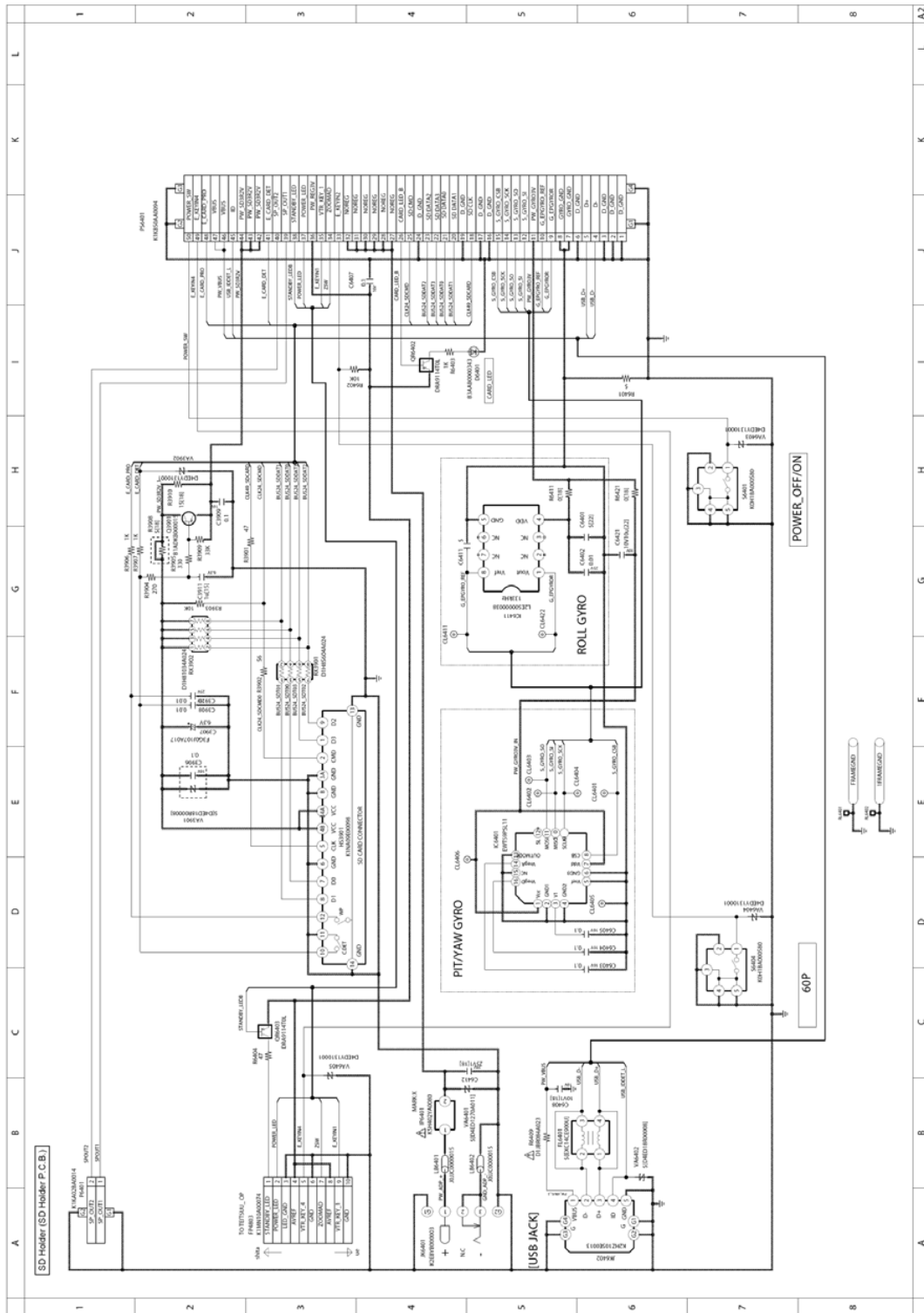
Model No. : HC-V700/V700M/V707/V707M LED Light (Main P.C.B.)



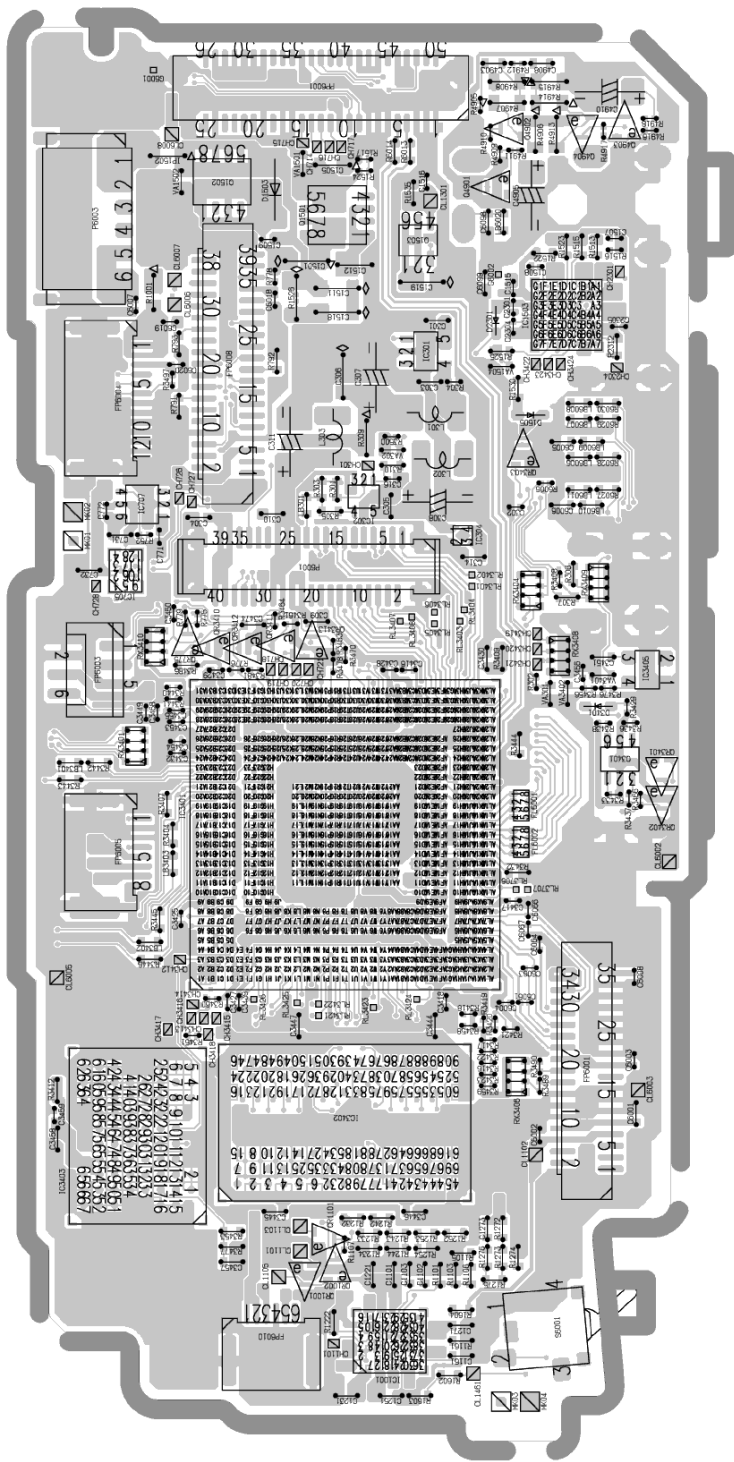
Model No. : HC-V700/V700M/V707/V707M Power (Main P.C.B.)



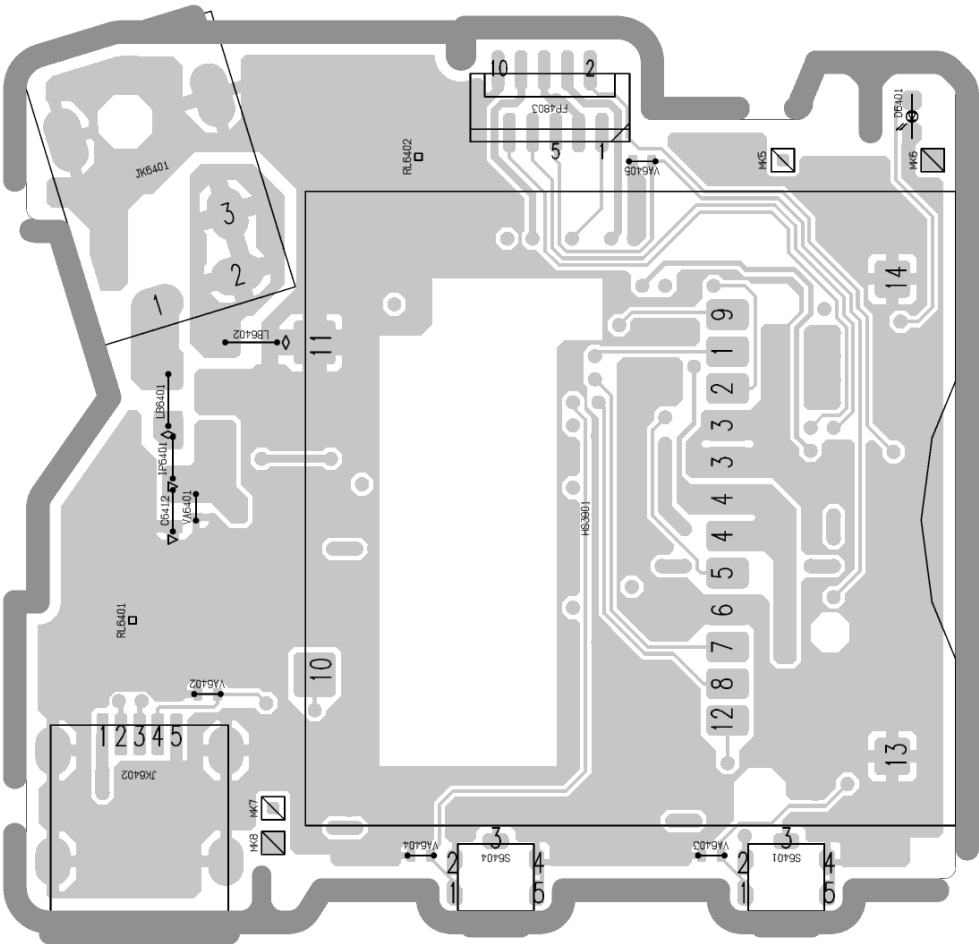
Model No. : HC-V700/V700M/V707/V707M SD Holder (SD Holder P.C.B.)



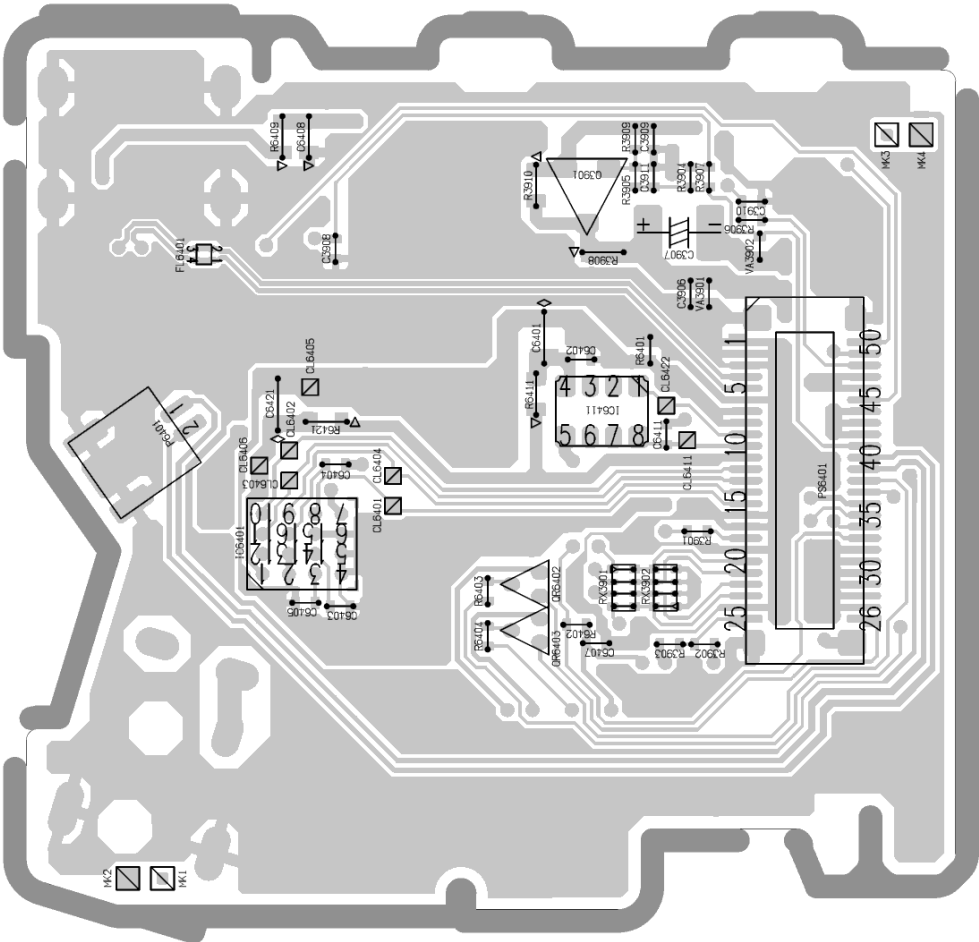
Model No. : HC-V700/V700M/V707/V707M Main P.C.B. (Foil Side)



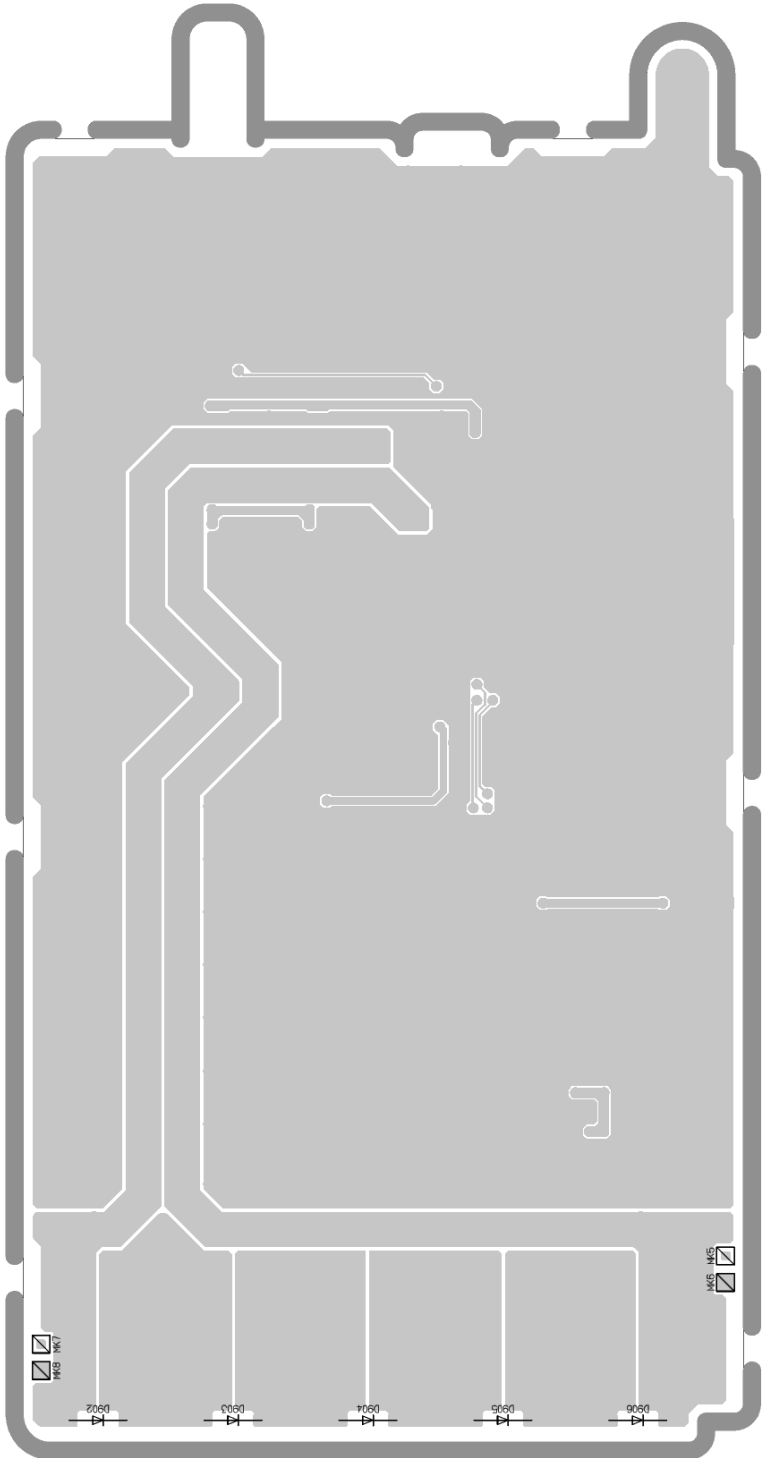
Model No. : HC-V700/V700M/V707/V707M SD Holder P.C.B. (Component Side)



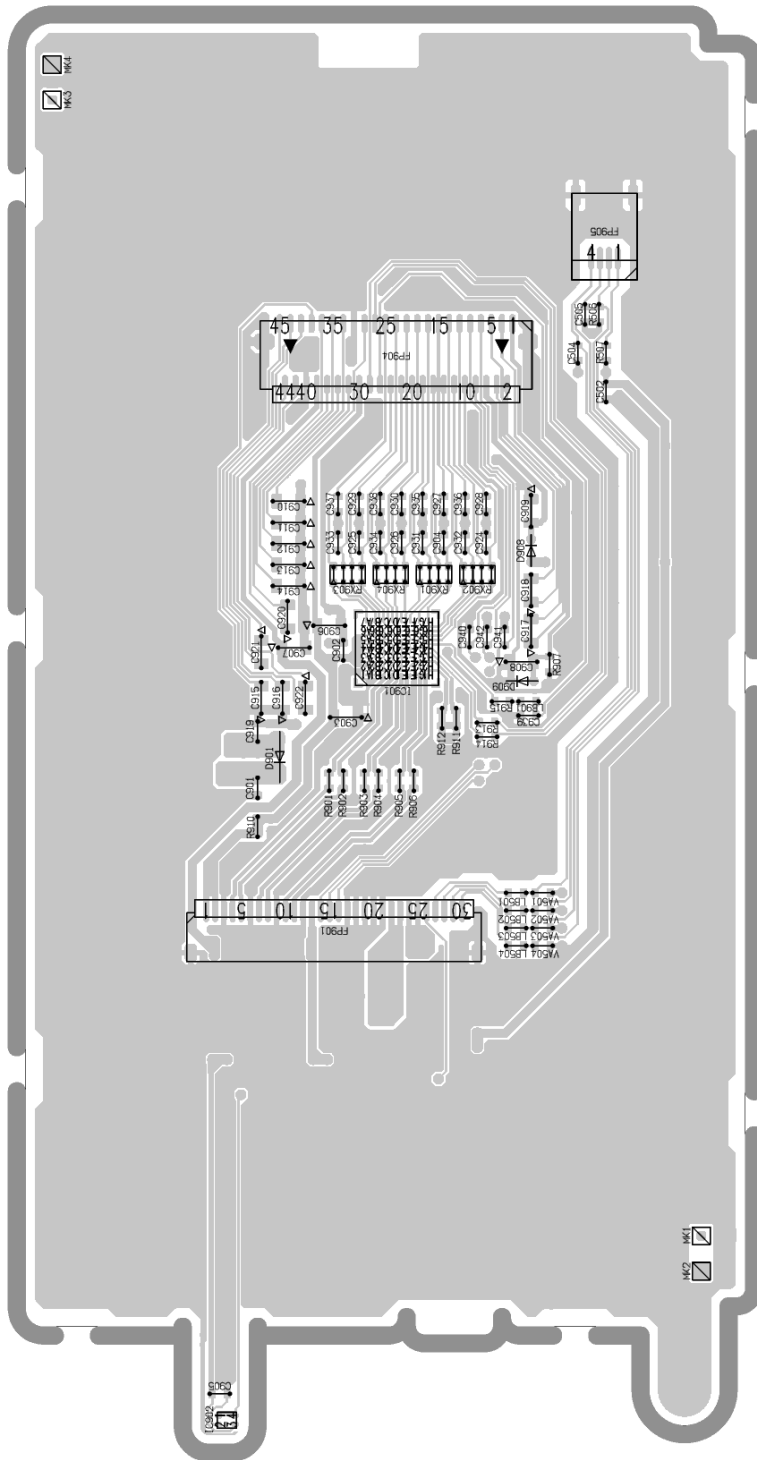
Model No. : HC-V700/V700M/V707/V707M SD Holder P.C.B. (Foil Side)



Model No. : HC-V700/V700M/V707/V707M Monitor P.C.B. (Component Side)



Model No. : HC-V700/V700M/V707/V707M Monitor P.C.B. (Foil Side)



Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	C301	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C302	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C303	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C304	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C305	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C309	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C310	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C314	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C316	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C502	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C504	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C505	FIG1H102A640	C.CAPACITOR CH 50V 1000P	1	
	C701	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C702	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C703	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C704	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C705	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C706	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C708	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C709	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C713	FIG1H101A644	C.CAPACITOR CH 50V 100P	1	
	C714	FIG1H101A644	C.CAPACITOR CH 50V 100P	1	
	C715	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C716	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C718	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C719	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C720	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C721	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C722	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C723	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C724	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C725	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C726	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C727	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C741	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C742	FIG1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C743	FIG1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C765	FIG0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C767	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C771	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C772	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C781	FIG1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C901	FIG1E1040001	C.CAPACITOR CH 25V 0.1U	1	
	C902	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C903	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C904	FIG1H220A644	C.CAPACITOR CH 50V 22P	1	
	C905	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C906	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C907	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C908	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
	C909	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
	C910	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C911	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C912	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C913	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C914	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C915	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C916	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C917	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C918	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C919	FIG1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C920	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	C921	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C922	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
	C924	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C925	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C926	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C927	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C928	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C929	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C930	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C931	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C932	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C933	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C934	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C935	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C936	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C937	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C938	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C1001	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1012	F1G1H102A640	C.CAPACITOR CH 50V 1000P	1	
	C1013	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1061	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C1101	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1102	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C1103	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1161	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1221	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1222	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1231	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1232	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1242	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1251	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1252	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1261	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
	C1271	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1272	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1273	F1G1H220A644	C.CAPACITOR CH 50V 22P	1	
	C1281	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
	C1282	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1283	F1G1H152A640	C.CAPACITOR CH 50V 1500P	1	
	C1284	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1285	F1G1H121A644	C.CAPACITOR CH 50V 120P	1	
	C1303	F1G1H102A640	C.CAPACITOR CH 50V 1000P	1	
	C1304	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1332	F3F0G476A030	E.CAPACITOR CH 4V 47U	1	
	C1356	F3F0G476A030	E.CAPACITOR CH 4V 47U	1	
	C1422	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1431	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C1471	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C1501	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1502	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1503	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1506	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C1507	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1508	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1511	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1512	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
	C1515	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1516	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1518	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1519	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C1520	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C1521	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	C1522	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C1523	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C2301	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C2304	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C2305	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C2310	F1G1H8R0A642	CAPACITOR	1	
	C2311	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3401	F1H0J106A009	C.CAPACITOR CH 6.3V 10U	1	
	C3402	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3403	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C3406	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3407	F3G0J107A017	C.CAPACITOR CH 6.3V 100U	1	
	C3408	F1H0J106A009	C.CAPACITOR CH 6.3V 10U	1	
	C3409	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3410	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3411	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3412	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3413	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3414	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3415	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3416	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3417	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3418	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3419	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3420	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3421	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3423	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3424	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3425	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3426	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3427	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3428	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3429	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3430	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3431	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3432	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3433	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3434	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3435	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3436	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3437	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3438	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3439	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3440	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3441	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3442	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3443	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3444	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3445	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3446	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3447	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3449	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3450	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3451	F1G1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C3452	F1H0J106A009	C.CAPACITOR CH 6.3V 10U	1	
	C3453	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3454	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3455	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3456	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3457	F1G1H102A640	C.CAPACITOR CH 50V 1000P	1	
	C3459	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3460	F1H0J106A009	C.CAPACITOR CH 6.3V 10U	1	



Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	C3461	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3462	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3464	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3465	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3466	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3468	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3469	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3470	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3471	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3472	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3473	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3474	F1G1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C3702	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3703	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3706	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3707	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3708	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C3709	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3710	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3711	F1L1A103A016	C.CAPACITOR CH 10V 0.01U	1	
	C3712	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3713	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3714	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3715	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3716	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3719	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C3720	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3721	F3F0J226A032	T.CAPACITOR CH 6.3V 22U	1	
	C3722	F1J0J106A049	C.CAPACITOR CH 6.3V 10U	1	
	C3906	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3907	F3G0J107A017	C.CAPACITOR CH 6.3V 100U	1	
	C3908	F1G1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C3909	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C3910	F1G1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C3911	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C3956	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	V700MP, MPC, MPU, MGK, V707MEG
	C4901	F1G1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C4902	F1G1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C4903	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C4905	F3F0J226A032	T.CAPACITOR CH 6.3V 22U	1	
	C4906	F3F0J226A032	T.CAPACITOR CH 6.3V 22U	1	
	C4908	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C4909	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
	C4910	F3F0J226A032	T.CAPACITOR CH 6.3V 22U	1	
	C4913	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
	C4914	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C4915	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C6001	F1G1E1040001	C.CAPACITOR CH 25V 0.1U	1	
	C6002	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C6005	F1G1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C6006	F1G1H472A571	C.CAPACITOR CH 50V 4700P	1	
	C6018	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C6019	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C6023	F1L0J1040001	C.CAPACITOR CH 6.3V 0.1U	1	
	C6098	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C6402	F1G1E1030005	C.CAPACITOR CH 25V 0.01U	1	
	C6403	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C6404	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C6405	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C6407	F1G1C104A077	C.CAPACITOR CH 16V 0.1U	1	
	C6408	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
	C6412	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	C6421	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	(MAIN P.C.B.)
	C6421	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	(SD HOLDER P.C.B.)
	D901	DZ2J200M0L	DIODE	1	E.S.D.
	D902	B3AFB0000426	DIODE	1	E.S.D.
	D903	B3AFB0000426	DIODE	1	E.S.D.
	D904	B3AFB0000426	DIODE	1	E.S.D.
	D905	B3AFB0000426	DIODE	1	E.S.D.
	D906	B3AFB0000426	DIODE	1	E.S.D.
	D908	B0JCCD000003	DIODE	1	E.S.D.
	D909	B0JCCD000003	DIODE	1	E.S.D.
	D1261	B0JCMD000052	DIODE	1	E.S.D.
	D1271	B0JCGD000016	DIODE	1	E.S.D.
	D1503	B0JCMC000019	DIODE	1	E.S.D.
	D1505	DB2S31100L	DIODE	1	E.S.D.
	D2301	DB2S31100L	DIODE	1	E.S.D.
	D3401	DB2S31100L	DIODE	1	E.S.D.
	D6401	B3AAB0000343	DIODE	1	E.S.D.
	FL3401	F1H0J105A037	FILTER	1	
	FL6001	J0ZZB0000122	FILTER	1	
	FL6002	J0ZZB0000122	FILTER	1	
	FL6004	F1H0J105A037	FILTER	1	
	FP901	K1MY30BA0385	CONNECTOR 30P	1	
	FP904	K1MY45BA0235	CONNECTOR 45P	1	
	FP905	K1MN04BA0262	CONNECTOR 4P	1	
	FP4803	K1MN10A00074	CONNECTOR 10P	1	
	FP6001	K1MY35AA0199	CONNECTOR 35P	1	
	FP6002	K1MY21BA0281	CONNECTOR 21P	1	V700MP,MPC,MPU,MGK, V707MEG
	FP6003	K1MN06A00065	CONNECTOR 6P	1	
	FP6004	K1MN12BA0108	CONNECTOR 12P	1	
	FP6005	K1MN08BA0108	CONNECTOR 8P	1	
	FP6008	K1MY39AA0199	CONNECTOR 39P	1	
	FP6010	K1MN06BA0108	CONNECTOR 6P	1	
	HS3901	K1NA09E00098	SD CARD SLOT	1	
	IC301	C0DBGGC00007	IC	1	E.S.D.
	IC302	C0JBAA000479	IC	1	E.S.D.
	IC304	C0DBGYY01173	IC	1	E.S.D.
	IC701	C1AB00003719	IC	1	E.S.D.
	IC703	C0DBGYY01172	IC	1	E.S.D.
	IC704	C0DBGYY02595	IC	1	E.S.D.
	IC705	C1AB00003450	IC	1	E.S.D.
	IC706	C0GBC0000028	IC	1	E.S.D.
	IC707	C0JBAZ002875	IC	1	E.S.D.
	IC761	C0ABGA000035	IC	1	E.S.D.
	IC901	C1CB00002847	IC	1	E.S.D.
	IC902	B4ZZ00000031	IC	1	E.S.D.
	IC1001	C1ZBZ0004347	IC	1	E.S.D.
	IC1002	VUEALLPT033	IC	1	E.S.D.
	IC1011	C0CBCDC00073	IC	1	E.S.D.
	IC1301	C0CBCCC00157	IC	1	E.S.D.
	IC1421	C0CBCYY00078	IC	1	E.S.D.
	IC1431	C0DBGYY00534	IC	1	E.S.D.
	IC1471	C0DBGHD00008	IC	1	E.S.D.
	IC1501	C0EBY0001291	IC	1	E.S.D.
	IC1502	C1ZBZ0004145	IC	1	E.S.D.
	IC1503	C0DBDY000042	IC	1	E.S.D.
	IC2301	C0EBE0000442	IC	1	E.S.D.
	IC3401	C1AB00003898	IC	1	E.S.D.
	IC3402	C3ABSY000099	IC	1	E.S.D.
	IC3403	TC58RYM9C12A	IC	1	E.S.D.
	IC3405	C0EBY0000906	IC	1	E.S.D.
	IC3701	NN12924A-BB	IC	1	E.S.D.
	IC6401	EWTS9PSL1A	IC	1	E.S.D.

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	IC6411	L2ES00000038	IC	1	E.S.D.
	IP1502	K5H402YA0080	IC PROTECTOR	1	
	IP6401	K5H402YA0080	IC PROTECTOR	1	
	JK6001	K2HC106E0009	JACK, A/V	1	
	JK6002	K2HZ112E0001	JACK, AV MULTI	1	
	JK6003	K1FA119E0020	JACK, HDMI	1	
	JK6401	K2EBYB000003	JACK, DC	1	
	JK6402	K2HZ105E0013	JACK, USB	1	
	L301	G1C100MA0072	CHIP INDUCTOR 10UH	1	
	L303	G1C100MA0072	CHIP INDUCTOR 10UH	1	
	L1221	G1C3R3MA0249	CHIP INDUCTOR 3.3UH	1	
	L1231	G1C100MA0249	CHIP INDUCTOR 10UH	1	
	L1241	G1C3R3MA0392	CHIP INDUCTOR 3.3UH	1	
	L1251	G1C4R7ZA0240	CHIP INDUCTOR 4.7UH	1	
	L1261	G1C6R8MA0061	CHIP INDUCTOR 6.8UH	1	
	L1271	G1C6R8MA0478	CHIP INDUCTOR 6.8UH	1	
	L1281	G1C4R7MA0478	CHIP INDUCTOR 4.7UH	1	
	L1501	G1C4R7ZA0240	CHIP INDUCTOR 4.7UH	1	
	L3401	G1C100MA0495	CHIP INDUCTOR 10UH	1	
	L3402	G1C100MA0408	CHIP INDUCTOR 10UH	1	
	L3404	G1C100MA0495	CHIP INDUCTOR 10UH	1	
	L3405	G1C100MA0495	CHIP INDUCTOR 10UH	1	
	L3702	G1C4R7MA0073	CHIP INDUCTOR 4.7UH	1	
	L3704	G1C100KA0115	CHIP INDUCTOR 10UH	1	
	LB301	J0JBC0000099	FILTER	1	
	LB501	J0JCC0000276	FILTER	1	
	LB502	J0JCC0000276	FILTER	1	
	LB503	J0JCC0000276	FILTER	1	
	LB504	J0JCC0000276	FILTER	1	
	LB901	J0JBC0000099	FILTER	1	
	LB3401	J0JBC0000099	FILTER	1	
	LB3402	J0JBC0000099	FILTER	1	V700MP,MPC,MPU,MGK, V707MEG
	LB3951	J0JGC0000059	FILTER	1	V700MP,MPC,MPU,MGK, V707MEG
	LB6001	J0JCC0000276	FILTER	1	
	LB6002	J0JCC0000276	FILTER	1	
	LB6003	J0JCC0000276	FILTER	1	
	LB6004	J0JCC0000276	FILTER	1	
	LB6006	J0JCC0000408	FILTER	1	
	LB6007	J0JCC0000408	FILTER	1	
	LB6008	J0JCC0000276	FILTER	1	
	LB6009	J0JCC0000276	FILTER	1	
	LB6010	J0JCC0000276	FILTER	1	
	LB6011	J0JCC0000408	FILTER	1	
	LB6020	J0JCC0000276	FILTER	1	
	LB6021	J0JCC0000276	FILTER	1	
	LB6022	J0JCC0000276	FILTER	1	
	LB6401	J0JCC0000015	FILTER	1	
	LB6402	J0JCC0000015	FILTER	1	
	P6001	K1KY40AA1067	CONNECTOR 40P	1	
	P6003	K1KY06BA0314	CONNECTOR 6P	1	
	P6005	K1KA02BA0014	CONNECTOR 2P	1	
	P6401	K1KA02BA0014	CONNECTOR 2P	1	
	PP6001	K1KY50BA0095	CONNECTOR 50P	1	
	PS6401	K1KB50AA0094	CONNECTOR 50P	1	
	Q773	B1ADGD000013	TRANSISTOR	1	E.S.D.
	Q1501	B1MBDDA00024	TRANSISTOR	1	E.S.D.
	Q1502	MTM684110LBF	TRANSISTOR	1	E.S.D.
	Q1503	B1CHQC000007	TRANSISTOR	1	E.S.D.
	Q1504	FK33303010L	TRANSISTOR	1	E.S.D.
	Q3401	B1CFGD000003	TRANSISTOR	1	E.S.D.
	Q3901	B1ADKB000015	TRANSISTOR	1	E.S.D.
	Q4901	DSC300100L	TRANSISTOR	1	E.S.D.

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	Q4902	DSA300100L	TRANSISTOR	1	E.S.D.
	Q4903	DSC300100L	TRANSISTOR	1	E.S.D.
	Q4904	DSA300100L	TRANSISTOR	1	E.S.D.
	Q4907	DSC300100L	TRANSISTOR	1	E.S.D.
	Q4908	DSC300100L	TRANSISTOR	1	E.S.D.
	Q6421	DSC300100L	TRANSISTOR	1	E.S.D.
	Q6423	DSA300100L	TRANSISTOR	1	E.S.D.
	QR751	DRA3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR773	DRC3143Z0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR775	DRC3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR1001	DRC3143E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR1002	DRA3124X0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR1101	DRC3114E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR1503	DRC3144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR2308	DRA3144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3401	DRC3144W0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3402	DRA3144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3403	DRC3114T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3410	DRC3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3411	DRA3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3412	DRC3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR3413	DRA3143T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR6006	DRA3124X0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR6007	DRA3124X0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR6008	DRC3114E0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR6402	DRA9114T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	QR6403	DRA9114T0L	TRANSISTOR-RESISTOR	1	E.S.D.
	R302	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R304	ERJ1GEJ272	M.RESISTOR CH 1/20W 2.7K	1	
	R305	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	
	R310	ERJ2GEJ102Y	M.RESISTOR CH 1/10W 1K	1	
	R711	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R712	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R713	ERJ1GE0R00C	M.RESISTOR CH 1/20W 0	1	
	R714	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R715	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R716	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R717	ERJ2RHD682X	M.RESISTOR CH 1/10W 6.8K	1	
	R719	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R741	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R742	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R743	ERJ2RHD104	M.RESISTOR CH 1/16W 100K	1	
	R744	ERJ2RKD124	M.RESISTOR CH 1/16W 120K	1	
	R745	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R746	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R751	ERJ1GEJ181	M.RESISTOR CH 1/20W 180	1	
	R752	ERJ1GEJ470	M.RESISTOR CH 1/20W 47	1	
	R766	ERJ2RHD683	M.RESISTOR CH 1/16W 68K	1	
	R767	ERJ2GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
	R771	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R772	ERJ1GEJ821	M.RESISTOR CH 1/20W 820	1	
	R775	ERJ1GEJ221	M.RESISTOR CH 1/20W 220	1	
	R776	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R778	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R779	ERJ1GEJ221	M.RESISTOR CH 1/20W 220	1	
	R781	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
	R785	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
	R786	ERJ2RHD683	M.RESISTOR CH 1/16W 68K	1	
	R791	ERJ2GEJ391	M.RESISTOR CH 1/16W 390	1	
	R792	ERJ2GEJ391	M.RESISTOR CH 1/16W 390	1	
	R793	ERJ2GEJ221	M.RESISTOR CH 1/16W 220	1	
	R907	ERJ2GEJ104	M.RESISTOR CH 1/10W 100K	1	


Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	R913	ERJ2GEJ151	M.RESISTOR CH 1/10W 150	1	
	R914	ERJ2GEJ151	M.RESISTOR CH 1/10W 150	1	
	R915	ERJ2GEJ820	M.RESISTOR CH 1/16W 82	1	
⚠	R1001	DLJBR102A006	FUSE RESISTOR	1	
	R1101	ERJ2RKD124	M.RESISTOR CH 1/16W 120K	1	
	R1107	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R1161	ERJ2GEJ180X	M.RESISTOR CH 1/10W 18	1	
	R1232	ERJ2RKD474X	M.RESISTOR CH 1/16W 470K	1	
	R1233	ERJ2RHD203	M.RESISTOR CH 1/16W 20K	1	
	R1234	ERJ2RKD394	M.RESISTOR CH 1/16W 390K	1	
	R1242	ERJ2RKD434	M.RESISTOR CH 1/16W 430K	1	
	R1243	ERJ2RHD203	M.RESISTOR CH 1/16W 20K	1	
	R1244	ERJ2RKD824	M.RESISTOR CH 1/16W 820K	1	
	R1252	ERJ2RKD364	M.RESISTOR CH 1/16W 360K	1	
	R1253	ERJ2RHD333X	M.RESISTOR CH 1/16W 33K	1	
	R1254	ERJ2RKD105	M.RESISTOR CH 1/16W 1M	1	
⚠	R1261	DLJBR095A023	FUSE RESISTOR	1	
	R1272	ERJ2RKD304	M.RESISTOR CH 1/16W 300K	1	
	R1273	ERJ2RHD182	M.RESISTOR CH 1/16W 1.8K	1	
	R1274	ERJ2RHD513	M.RESISTOR CH 1/16W 51K	1	
	R1275	ERJ2GEJ513X	M.RESISTOR CH 1/16W 51K	1	
	R1276	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
	R1282	ERJ2RHD823	M.RESISTOR CH 1/16W 82K	1	
	R1283	ERJ2GEJ752X	M.RESISTOR CH 1/10W 7.5K	1	
	R1284	ERJ2GEJ472	M.RESISTOR CH 1/10W 4.7K	1	
	R1285	ERJ2RHD513	M.RESISTOR CH 1/16W 51K	1	
	R1286	ERJ2RHD162X	M.RESISTOR CH 1/16W 1.6K	1	
	R1287	ERJ2RHD153X	M.RESISTOR CH 1/16W 15K	1	
	R1424	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
	R1434	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R1435	ERJ2GEJ102Y	M.RESISTOR CH 1/10W 1K	1	
	R1501	D1BDR020A099	RESISTOR	1	
	R1502	ERJ1GEJ101	M.RESISTOR CH 1/20W 100	1	
	R1503	ERJ1GEJ101	M.RESISTOR CH 1/20W 100	1	
	R1507	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R1509	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R1510	ERJ1GEJ474	M.RESISTOR CH 1/20W 470K	1	
	R1511	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R1512	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R1513	ERJ2RKD154	M.RESISTOR CH 1/16W 150K	1	
	R1515	ERJ2RKD124	M.RESISTOR CH 1/16W 120K	1	
	R1516	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R1517	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R1518	ERJ1GEJ104	M.RESISTOR CH 1/20W 100K	1	
	R1522	ERJ2RKD124	M.RESISTOR CH 1/16W 120K	1	
	R1523	ERJ2RKD184	M.RESISTOR CH 1/16W 180K	1	
	R1524	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R1525	ERJ2RHD223	M.RESISTOR CH 1/16W 22K	1	
	R1526	D1BDR100A111	RESISTOR	1	
	R1529	ERJ2GEJ101	M.RESISTOR CH 1/10W 100	1	
	R1535	ERJ2GEJ472	M.RESISTOR CH 1/10W 4.7K	1	
	R1602	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R1604	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R1606	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R2304	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R2312	ERJ2GEJ472	M.RESISTOR CH 1/10W 4.7K	1	
	R3403	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R3408	ERJ1GEOR00C	M.RESISTOR CH 1/20W 0	1	
	R3416	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3417	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3418	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3424	ERJ2RHD101	M.RESISTOR CH 1/16W 100	1	

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	R3426	ERJ2RHD101	M.RESISTOR CH 1/16W 100	1	
	R3428	ERJ2RHD101	M.RESISTOR CH 1/16W 100	1	
	R3429	ERJ1GEJ273	M.RESISTOR CH 1/20W 27K	1	
	R3430	ERJ2RHD431	M.RESISTOR CH 1/16W 430	1	
	R3431	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
	R3432	ERJ2RHD512	M.RESISTOR CH 1/16W 5.1K	1	
	R3433	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3434	ERJ2RHD243	M.RESISTOR CH 1/16W 24K	1	
	R3435	ERJ2RHD183	M.RESISTOR CH 1/16W 18K	1	
	R3436	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3437	ERJ1GEJ182	M.RESISTOR CH 1/20W 1.8K	1	
	R3438	ERJ1GEJ182	M.RESISTOR CH 1/20W 1.8K	1	
	R3442	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	
	R3443	ERJ2GEJ270	M.RESISTOR CH 1/10W 27	1	
	R3444	ERJ2RHD123X	M.RESISTOR CH 1/16W 12K	1	
	R3445	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	V700MP, MPC, MPU, MGK, V707MEG
	R3446	ERJ2GEJ560X	M.RESISTOR CH 1/10W 56	1	V700MP, MPC, MPU, MGK, V707MEG
	R3447	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R3450	DOYAR0000007	M.RESISTOR CH 1/10W 0	1	
	R3453	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
	R3456	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R3458	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R3460	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3461	ERJ1GEJ104	M.RESISTOR CH 1/20W 100K	1	
	R3463	ERJ1GEJ104	M.RESISTOR CH 1/20W 100K	1	
	R3464	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3466	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3467	ERJ2RKD184	M.RESISTOR CH 1/16W 180K	1	
	R3468	ERJ2RKD184	M.RESISTOR CH 1/16W 180K	1	
	R3470	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R3475	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R3476	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R3477	ERJ2GEJ183	M.RESISTOR CH 1/10W 18K	1	
	R3478	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3481	ERJ1GEJ152	M.RESISTOR CH 1/20W 1.5K	1	
	R3486	ERJ2GEJ473Y	M.RESISTOR CH 1/10W 47K	1	
	R3489	ERJ1GEJ101	M.RESISTOR CH 1/20W 100	1	
	R3490	ERJ1GEJ101	M.RESISTOR CH 1/20W 100	1	
	R3496	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R3497	ERJ1GEJ103	M.RESISTOR CH 1/20W 10K	1	
	R3500	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3703	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R3712	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R3799	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R3901	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	
	R3902	ERJ2GEJ560X	M.RESISTOR CH 1/10W 56	1	
	R3903	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	
	R3904	ERJ2GEJ271	M.RESISTOR CH 1/10W 270	1	
	R3905	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
	R3906	ERJ2GEJ102Y	M.RESISTOR CH 1/10W 1K	1	
	R3907	ERJ2GEJ102Y	M.RESISTOR CH 1/10W 1K	1	
	R3909	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
	R3910	D0GB150JA057	M.RESISTOR CH 1/10W 15	1	
	R3951	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	V700MP, MPC, MPU, MGK, V707MEG
	R3956	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	V700MP, MPC, MPU, MGK, V707MEG
	R4901	ERJ3RBD331	M.RESISTOR CH 1/10W 330	1	
	R4902	ERJ1GEJ472	M.RESISTOR CH 1/20W 4.7K	1	
	R4904	ERJ3RBD562	M.RESISTOR CH 1/10W 5.6K	1	
	R4905	ERJ1GEJ471	M.RESISTOR CH 1/20W 470	1	
	R4906	ERJ3RBD103	M.RESISTOR CH 1/10W 10K	1	
	R4907	D0HB154ZA002	M.RESISTOR CH 1/16W 150K	1	
	R4908	D0HB563ZA002	M.RESISTOR CH 1/10W 56K	1	

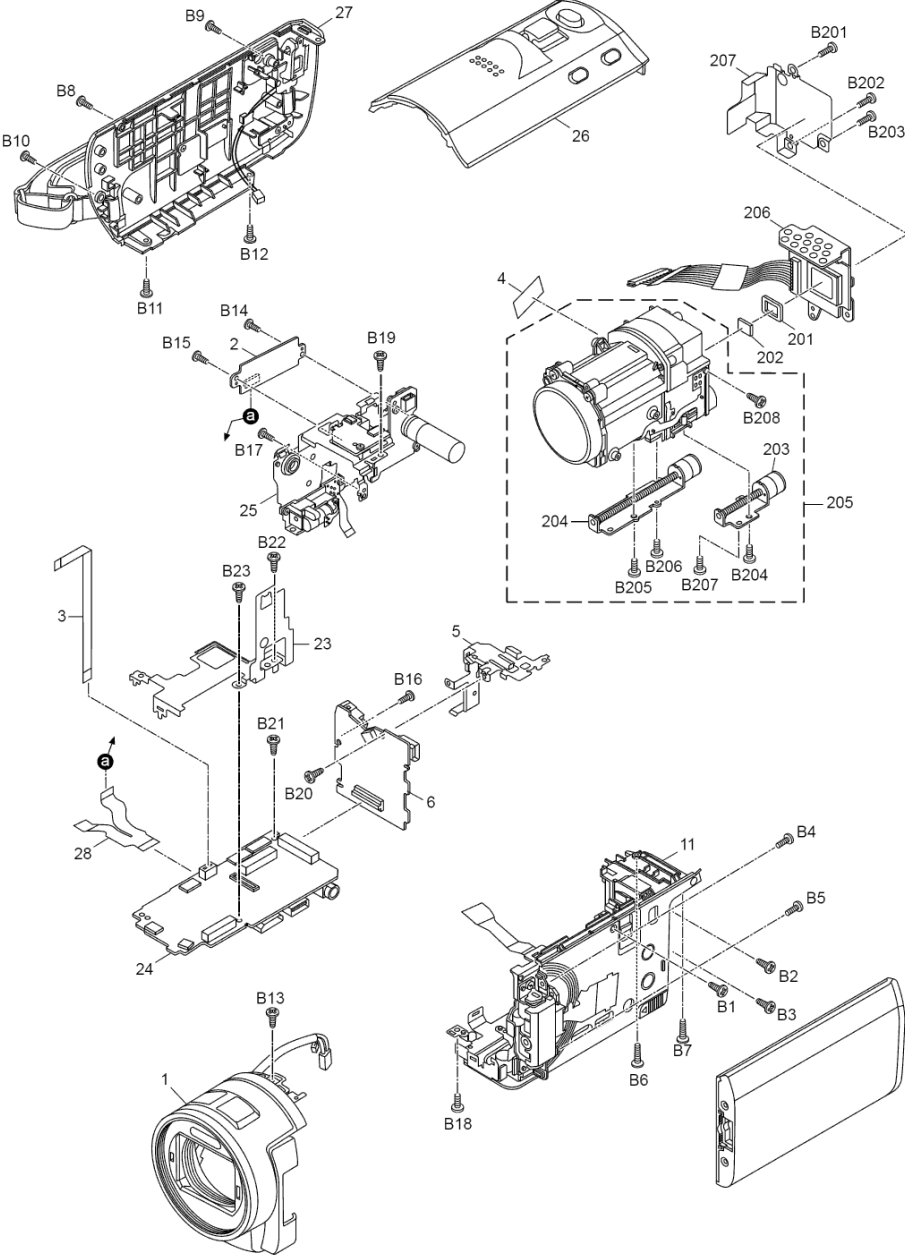
Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	R4909	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R4910	ERJ1GEJ562	M.RESISTOR CH 1/20W 5.6K	1	
	R4911	ERJ1GEJ151	M.RESISTOR CH 1/20W 150	1	
	R4912	ERJ1GEJ471	M.RESISTOR CH 1/20W 470	1	
	R4913	ERJ3RBD103	M.RESISTOR CH 1/10W 10K	1	
	R4914	DOHB154ZA002	M.RESISTOR CH 1/16W 150K	1	
	R4915	DOHB563ZA002	M.RESISTOR CH 1/10W 56K	1	
	R4916	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R4917	ERJ1GEJ562	M.RESISTOR CH 1/20W 5.6K	1	
	R4918	ERJ1GEJ151	M.RESISTOR CH 1/20W 150	1	
	R4920	ERJ3RBD562	M.RESISTOR CH 1/10W 5.6K	1	
	R4922	ERJ1GEJ223	M.RESISTOR CH 1/20W 22K	1	
	R4923	ERJ1GEJ683	M.RESISTOR CH 1/20W 68K	1	
	R4924	ERJ1GEJ473	M.RESISTOR CH 1/20W 47K	1	
	R6001	ERJ2GEJ471	M.RESISTOR CH 1/10W 470	1	
	R6006	ERJ1GEJ102	M.RESISTOR CH 1/20W 1K	1	
	R6027	ERJ2RKD750	M.RESISTOR CH 1/16W 75	1	
	R6028	ERJ2RKD750	M.RESISTOR CH 1/16W 75	1	
	R6029	ERJ2RKD750	M.RESISTOR CH 1/16W 75	1	
	R6030	ERJ2RKD750	M.RESISTOR CH 1/16W 75	1	
	R6401	ERJ2RKD100	M.RESISTOR CH 1/16W 10	1	
	R6402	ERJ2RKD100	M.RESISTOR CH 1/16W 10	1	(MAIN P.C.B.)
	R6402	ERJ2GEJ103	M.RESISTOR CH 1/10W 10K	1	(SD HOLDER P.C.B.)
	R6403	ERJ2GEJ102Y	M.RESISTOR CH 1/10W 1K	1	
	R6404	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	
	R6405	ERJ2GEJ432	M.RESISTOR CH 1/10W 4.3K	1	
	R6406	ERJ2RHD683	M.RESISTOR CH 1/16W 68K	1	
	R6407	ERJ2RHD183	M.RESISTOR CH 1/16W 18K	1	
	R6408	ERJ2RHD332X	M.RESISTOR CH 1/16W 3.3K	1	
	R6409	DLJBR084A023	FUSE RESISTOR	1	
	R6411	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
	R6421	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
	RX901	DLH88204A024	RESISTOR NETWORKS	1	
	RX902	DLH88204A024	RESISTOR NETWORKS	1	
	RX903	DLH88204A024	RESISTOR NETWORKS	1	
	RX904	DLH88204A024	RESISTOR NETWORKS	1	
	RX3401	DLH82704A024	RESISTOR NETWORKS	1	
	RX3402	DLH85604A024	RESISTOR NETWORKS	1	V700MP, MPC, MPU, MGK, V707MEG
	RX3403	DLH84724A024	RESISTOR NETWORKS	1	
	RX3404	DLH84734A024	RESISTOR NETWORKS	1	
	RX3405	EXB28V103JX	RESISTOR NETWORKS	1	
	RX3406	EXB28V103JX	RESISTOR NETWORKS	1	
	RX3408	DLH84734A024	RESISTOR NETWORKS	1	
	RX3409	DLH84734A024	RESISTOR NETWORKS	1	
	RX3410	EXB28V103JX	RESISTOR NETWORKS	1	
	RX3901	DLH85604A024	RESISTOR NETWORKS	1	
	RX3902	EXB28V103JX	RESISTOR NETWORKS	1	
	RX3951	DLH86834A024	RESISTOR NETWORKS	1	V700MP, MPC, MPU, MGK, V707MEG
	S6001	ESE18L62BXFD	SWITCH	1	
	S6401	K0H1BA000580	SWITCH	1	
	S6404	K0H1BA000580	SWITCH	1	
	VA501	D4ED18R00008	VARISTOR	1	
	VA502	D4ED18R00008	VARISTOR	1	
	VA503	D4ED18R00008	VARISTOR	1	
	VA504	D4ED18R00008	VARISTOR	1	
	VA1501	D4ED1270A011	VARISTOR	1	
	VA1502	D4ED1270A011	VARISTOR	1	
	VA1503	D4ED18R00008	VARISTOR	1	
	VA1504	D4ED18R00008	VARISTOR	1	
	VA3902	D4EDY1310001	VARISTOR	1	
	VA6403	D4EDY1310001	VARISTOR	1	
	VA6404	D4EDY1310001	VARISTOR	1	

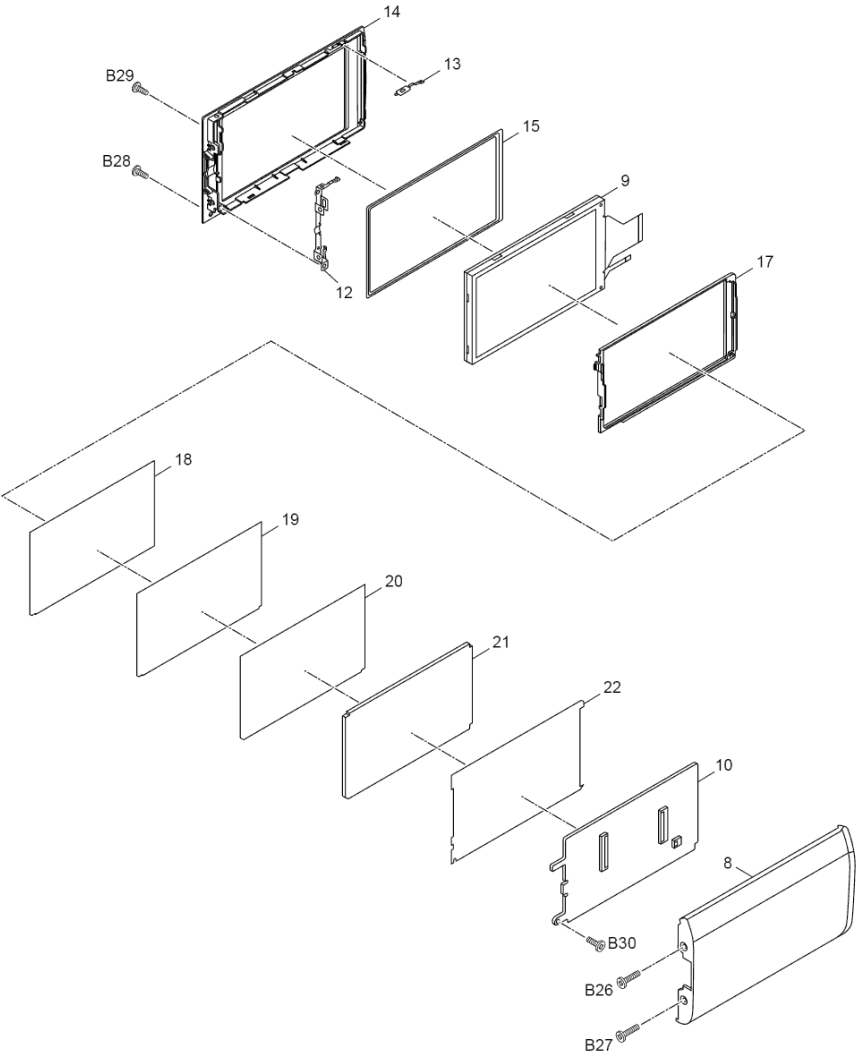
Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	VA6405	D4EDY1310001	VARISTOR	1	
	X2303	H0J327200085	CRYSTAL OSCILLATOR	1	
	X3402	H1A5405B0027	CRYSTAL OSCILLATOR	1	

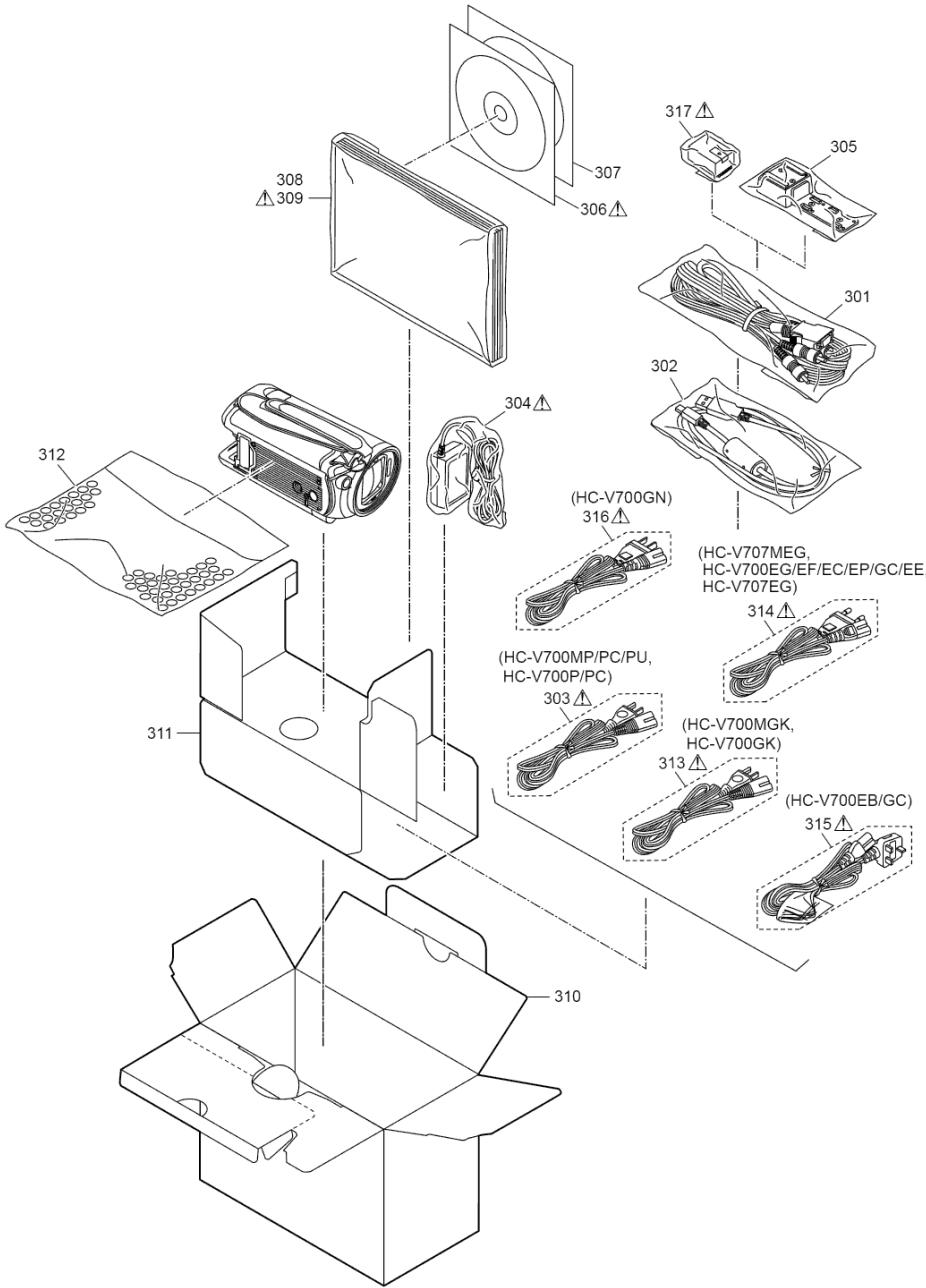
Model No. : HC-V700/V700M/V707/V707M Frame and Casing Section



Model No. : HC-V700/V700M/V707/V707M LCD Section



Model No. : HC-V700/V700M/V707/V707M Packing Parts and Accessories Section



Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	1	VYK5L06	FRONT CASE UNIT	1	(-K)
	1	VYK5L17	FRONT CASE UNIT	1	(-S)
	2	VEP03J60C	ESD P.C.B. UNIT(16GB)	1	V700MP,MPC,MPU,MGK, V707MEG
	3	VWJ2327	ECM RELAY FPC	1	
	4	VGQ1D43	LENS SHEET	1	
	5	VMP0C14	BATTERY FRAME	1	
	6	VEP03J51A	SD HOLDER P.C.B. UNIT	1	(RTL) E.S.D.
	8	VYK5L05	LCD CASE(T) UNIT	1	V700MP,MPC,MPU,MGK
	8	VYK5T16	LCD CASE(T) UNIT	1	V707MEG
	8	VYK5L10	LCD CASE(T) UNIT	1	V700P,PC,EG,EF,EC,EP,EB, GC,EE,GN,GK
	8	VYK5L16	LCD CASE(T) UNIT	1	V707EGK
	8	VYK5L20	LCD CASE(T) UNIT	1	V707EGS
	9	VYK5J47	LCD PANEL UNIT	1	
	10	VEP26353A	MONITOR P.C.B. UNIT	1	(RTL) E.S.D.
	11	VYK5J45	SIDE CASE-R UNIT	1	V700MP,MPC,MPU, V700P,PC
	11	VYK5L08	SIDE CASE-R UNIT	1	V700MGK, V707MEG, V700EG,EF,EC,EP,EB,GC, EE,GN,GK, V707EGK
	11	VYK5L19	SIDE CASE-R UNIT	1	V707EGS
	12	VMP0C16	LCD FRAME A	1	
	13	VMP0C17	LCD FRAME B	1	
	14	VKM9802	LCD CASE(B)	1	
	15	VGQ1B39	TP SPACER	1	
	17	VGQ1B04	LGP HOLDER	1	
	18	VGL1416	PRISM SHEET(A)	1	
	19	VGL1417	PRISM SHEET(B)	1	
	20	VGL1384	DIFFUSION SHEET	1	
	21	VKW3518	LIGHT GUIDE PLATE	1	
	22	VGL1418	REFLECTION SHEET	1	
	23	VXK2003	HEAT RADIATION PLATE UNIT	1	
	24	VEP03J48B	MAIN P.C.B. UNIT	1	(RTL) E.S.D. V700MP,MPC,MPU,MGK, V707 MEG
	24	VEP03J48C	MAIN P.C.B. UNIT	1	(RTL) E.S.D. V700P,PC,EG,EF,EC,EP,EB, GC,EE,GN,GK, V707EGK,EGS
	25	VXK1993	LENS FRAME UNIT	1	
	26	VYK5J50	TOP CASE UNIT	1	(-K)
	26	VYK5K83	TOP CASE UNIT	1	(-S)
	27	VYK5J49	SIDE CASE-L UNIT	1	
	28	VWJ2172	ESD FPC	1	V700MP,MPC,MPU,MGK, V707MEG
	201	VMX3811	MOS CUSHION	1	
	202	VDL2467	IR FILTER	1	
	203	L6HAYYYB0004	4TH LENS FRAME UNIT STEPPING MOTOR	1	
	204	L6HAYYYB0007	2ND LENS FRAME UNIT STEPPING MOTOR	1	
	205	VXW1402	LENS UNIT	1	
	206	VXQ2208	MOS UNIT	1	
	207	VXK2009	MOS SHIELD CASE UNIT	1	
	301	K1HY12YY0016	MULTI D/RCA CABLE	1	
	302	K2KYYYY00201	USB CABLE	1	
	303	K2CA2CA00025	AC CORD W/PLUG	1	V700MP,MPC,MPU, V700P,PC
	304	VSK0780	AC ADAPTOR	1	V700MP,MPC, V700P,PC
	304	VSK0781	AC ADAPTOR	1	V700MPU,MGK, V707MEG, V700EG,EF,EC,EP,EB,GC,EE,GN,GK, V707EGK,EGS
	305	VYC1055	ATTACHMENT SHOE UNIT	1	
	306	VFF0929	CD-ROM(O/I)	1	V707MEG, V700EG,EF,EC,EP, V707EGK,EGS
	306	VFF0930	CD-ROM(O/I)	1	V700GC,EE,GN
	307	VFF0890-S	CD-ROM	1	V700MP,MPC,MPU, V707MEG, V700P,PC,EG,EF, EC, EP,EB,GC,EE,GN, V707EGK,EGS
	307	VFF0891-S	CD-ROM	1	V700MGK, V700GK
	308	VFF1294	BAG, POLYETHYLENE	1	
	309	VQT3Y41	OPERATING INSTRUCTIONS (ENGLISH)	1	P,PC,PU
	309	VQT3Y42	OPERATING INSTRUCTIONS (CANADIAN FRENCH)	1	PC
	309	VQT3Y43	OPERATING INSTRUCTIONS (SPANISH)	1	V700MPU

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	309	VQT3Y53	OPERATING INSTRUCTIONS (CHINESE(SIMPLIFIED))	1	GK
	309	VQT3Y44	OPERATING INSTRUCTIONS (GERMAN/TURKISH/ITALIAN/DUTCH)	1	EG
	309	VQT3Y45	OPERATING INSTRUCTIONS (FRENCH)	1	EG, EF
	309	VQT3Y46	OPERATING INSTRUCTIONS (SPANISH/PORTUGUESE/SWEDISH/ DANISH/FINNISH)	1	EC
	309	VQT3Y47	OPERATING INSTRUCTIONS (ENGLISH/POLISH/CZECH/HUNGARIAN)	1	EP
	309	VQT3Y48	OPERATING INSTRUCTIONS (ENGLISH)	1	EB
	309	VQT3Y50	OPERATING INSTRUCTIONS (ENGLISH)	1	GC, GN
	309	VQT3Y51	OPERATING INSTRUCTIONS (ARABIC/PERSIAN)	1	GC
	309	VQT3Y52	OPERATING INSTRUCTIONS (THAI/CHINESE (TRADITIONAL)/HINDI)	1	GC
	309	VQT3Y49	OPERATING INSTRUCTIONS (RUSSIAN/UKRAINIAN)	1	EE
	310	VPG3E04	PACKING CASE	1	V700MP, MPC
	310	VYQ7603	PACKING CASE UNIT	1	V700MPU
	310	VYQ7604	PACKING CASE UNIT	1	V700MGK
	310	VPG3F64	PACKING CASE	1	V707MEG
	310	VPG3E06	PACKING CASE	1	V700P, PC
	310	VPG3E07	PACKING CASE	1	V700EG, EF, EC, EP, EB, GC, EE, GN
	310	VYQ7605	PACKING CASE UNIT	1	V700GK
	310	VPG3E08	PACKING CASE	1	V707EGK
	310	VYQ7606	PACKING CASE UNIT	1	V707EGS
	311	VPN7349	PAD	1	
	312	VPF1447	PROTECT BAG	1	
	313	K2CA2YY00130	AC CORD W/PLUG	1	V700MGK, V700GK
	314	K2CQ2YY00082	AC CORD W/PLUG	1	V707MEG, V700EG, EF, EC, EP, GC, EE, V707EGK, EGS
	315	K2CT3YY00034	AC CORD W/PLUG	1	V700EB, GC
	316	K2CJ2YY00052	AC CORD W/PLUG	1	V700GN
	317	---	BATTERY PACK	1	
	B1	XQN16+B5FJK	SCREW	1	
	B2	XQN16+BJ7FJK	SCREW	1	
	B3	XQN16+BJ7FJK	SCREW	1	
	B4	XQN16+BJ4FJK	SCREW	1	
	B5	XQN16+BJ4FJK	SCREW	1	
	B6	XQN16+BJ6FJK	SCREW	1	
	B7	XQN16+BJ6FJK	SCREW	1	
	B8	XQN16+B6FJK	SCREW	1	
	B9	XQN16+B6FJK	SCREW	1	
	B10	XQN16+BJ5FJK	SCREW	1	
	B11	XQN16+B4FJK	SCREW	1	
	B12	XQN16+B4FJK	SCREW	1	
	B13	XQN16+B3FN	SCREW	1	
	B14	XQN16+B3FN	SCREW	1	
	B15	XQN16+B3FN	SCREW	1	
	B16	XQN16+B3FN	SCREW	1	
	B17	VHD1907	SCREW	1	
	B18	VHD1907	SCREW	1	
	B19	VHD1907	SCREW	1	
	B20	VHD1919	SCREW	1	
	B21	VHD1919	SCREW	1	
	B22	VHD1919	SCREW	1	
	B23	VHD1919	SCREW	1	
	B26	VHD1688	SCREW	1	
	B27	VHD1688	SCREW	1	
	B28	XQN14+BJ4FJK	SCREW	1	
	B29	XQN14+BJ4FJK	SCREW	1	
	B30	XQN16+BJ4FN	SCREW	1	
	B201	VHD2072	SCREW	1	

Model No. : HC-V700/V700M/V707/V707M Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	B202	VHD2072	SCREW	1	
	B203	VHD2072	SCREW	1	
	B204	VHD2072	SCREW	1	
	B205	VHD2072	SCREW	1	
	B206	VHD2072	SCREW	1	
	B207	VHD2072	SCREW	1	
	B208	VHD2072	SCREW	1	