

Panasonic®**ORDER NO. VM1602004CE****B27**

Service Manual

4K Video Camera

Model No. **HC-VX980EG**
HC-VX980EB
HC-VX980EE
HC-VX980EF
HC-VX980EP
HC-VX980PU
HC-VX980GC
HC-VX980GK
HC-VX980GW
HC-VX981PP
HC-VX989EG
HC-VX980MGH
HC-VX980MGK
HC-VX980MGN

Colour**(K).....Black Type****AVCHD™**
Progressive**HDMI****SDXC****DOLBY**
DIGITAL**LEICA**
DICOMAR**DLNA**
CERTIFIED™**WiFi**
CERTIFIED**SETUP**

**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 M Ω and 5.2 M Ω . 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 k Ω , 10 W resistor, in parallel with a 0.15 μ 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 k Ω /V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 V RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

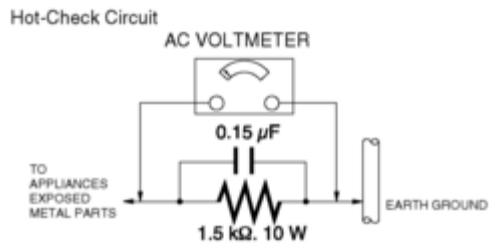


Figure. 1

2 Warning

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

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

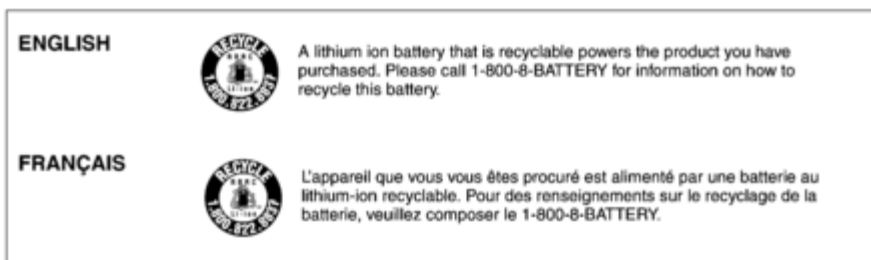
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior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

CAUTION :

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

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

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



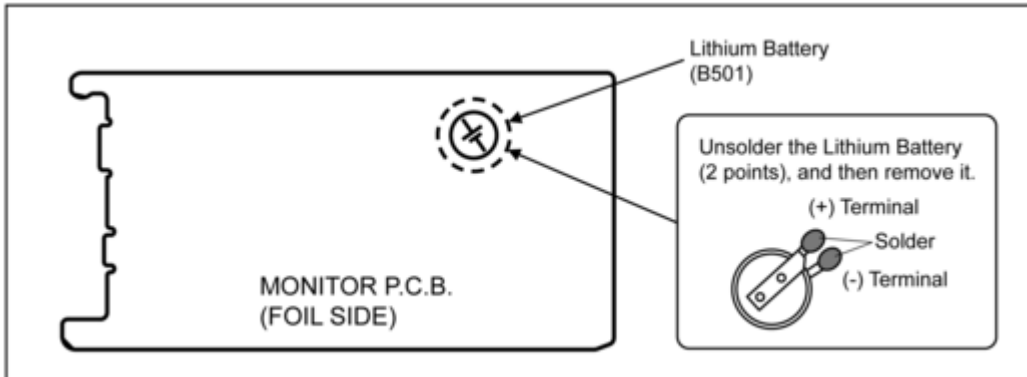
2.3 How to Replace the Lithium Battery

2.3.1 Replacement Procedure

1. Remove the MONITOR P.C.B.. (Refer to Disassembly Procedures.)
2. Unsolder the each soldering point of electric lead terminal for Lithium battery (Ref. No. "B501" at foil side of MONITOR P.C.B.) and remove the Lithium battery together with electric lead terminal. Then replace it into new one.

NOTE:

The Lithium battery includes electric lead terminals.



NOTE:

This Lithium battery is a critical component.

It must never be subjected to excessive heat or discharge.

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

Replacement batteries must be of same type and manufacture.

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

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

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

(For English)

CAUTION

Danger of explosion if battery is incorrectly replaced.

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

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

(For German)

ACHTUNG

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

Behandeln Sie gebrauchte Batterien nach den Anweisungen des Herstellers.

(For French)

MISE EN GARDE

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

NOTE:

Above caution is applicable for a battery pack which is for HC-VX980/VX981/VX989/VX980M

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.
SVKZ000001----- (0.3mm 100g Reel)
SVKZ000002----- (0.6mm 100g Reel)
SVKZ000003----- (1.0mm 100g Reel)

Note

* Ingredient: Tin (Sn) 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%. (Flux cored)

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

There are seven kinds of HC-VX980/VX981/VX989/VX980M.

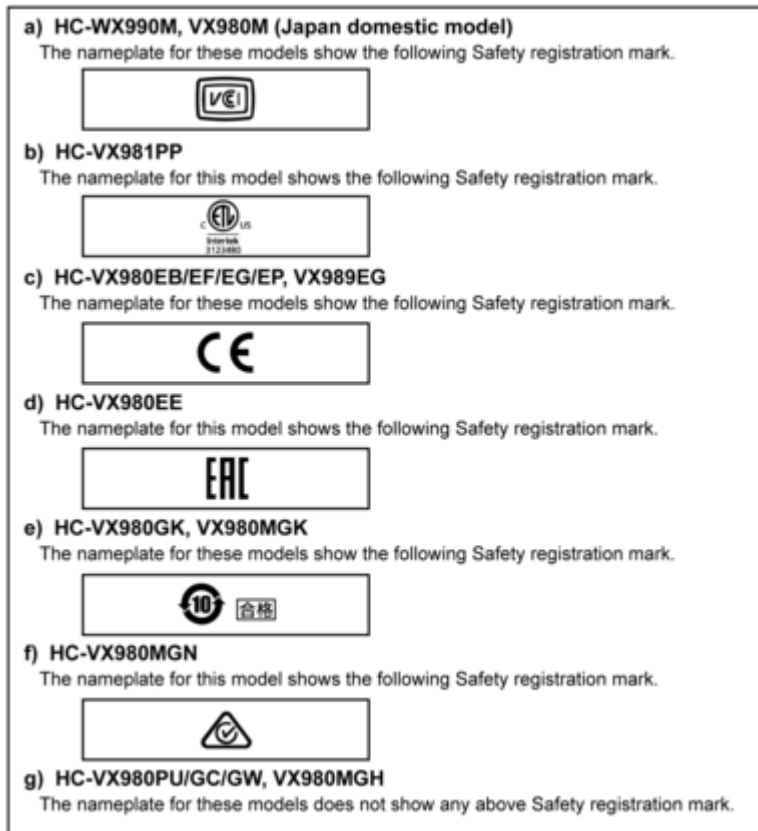
- a) HC-WX990M, VX980M (Japan domestic model)

- b) HC-VX981PP
- c) HC-VX980EB/EF/EG/EP, VX989EG
- d) HC-VX980EE
- e) HC-VX980GK, VX980MGK
- f) HC-VX980MGN
- g) HC-VX980PU/GC/GW, VX980MGH

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

3.3.1 Defining methods:

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



NOTE:

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

3.4 Baking of replacement IC and defective P.C.B.

When replacing the CSP/BGA/QFN type IC mounted on the P.C.B., the problem of IC crack or foil pattern breaking in the P.C.B.

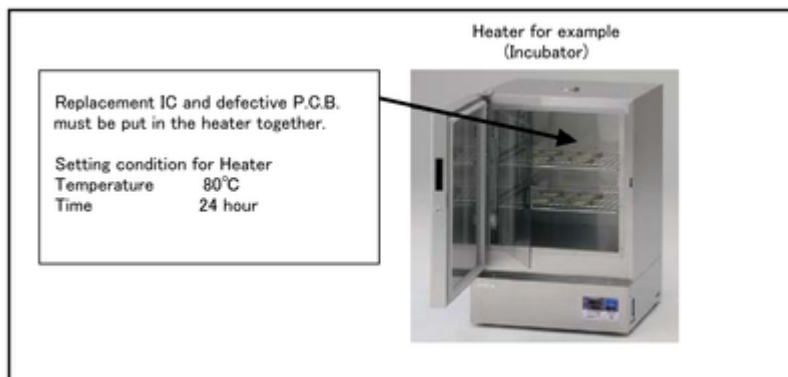
might sometimes occur by rapid heating.

In order to improve the success rate of IC replacement for repair, it would be required to work out baking of replacement IC and defective P.C.B. before replacing IC.

Please refer the way of baking as follows.

Replacement IC and defective P.C.B. must be put in the heater together.

- Baking temperature and time (Hour)
80°C / 24 hour



4 Specifications

The following specification is for HC-WXF990/WXF990M/VXF990/VXF999/VX980/VX989/VX980M (EB/EP).
Some specifications may differ depending on model suffix.

The page number in this chapter does not show the page number of this service manual.

4K Video Camera

- *1 When [REC FORMAT] is set to [4K MP4], or when [REC FORMAT] is set to [24p] with [REC MODE] set to [2160/24p]
- *2 When [REC FORMAT] is set to [AVCHD] or [MP4/iFrame], or when [REC FORMAT] is set to [24p] with [REC MODE] set to [1080/24p]
- *3 When Level Shot Function is set to normal or off
- *4 When Level Shot Function is set to off

Information for your safety

Power source:

DC 5.0 V (When using AC adaptor)
DC 3.6 V (When using battery)

Power consumption:

[WXF990] series

Recording;

6.6 W (When using the viewfinder)
7.8 W (When using the LCD monitor)

Charging; 7.7 W

[VXF990] series

Recording;

6.6 W (When using the viewfinder)
6.8 W (When using the LCD monitor)

Charging; 7.7 W

[VX980] series

Recording; 7.1 W

Charging; 7.7 W

Motion picture recording format:

[4K MP4], [MP4/iFrame], [24p];

MPEG-4 AVC file format compliant (.MP4)

[AVCHD];

AVCHD format version 2.0 compliant
(AVCHD Progressive)

Motion picture compression:

MPEG-4 AVC/H.264

Audio compression:

[4K MP4], [MP4/iFrame], [24p];

AAC/2 ch

[AVCHD];

Dolby® Digital/5.1 ch (built-in microphone),

2 ch (built-in microphone/external microphone)

Recording mode and transfer rate:

[4K MP4];

[2160];

Maximum 72 Mbps (VBR)

[MP4/iFrame]

[1080/50M];

Maximum 50 Mbps (VBR)

[1080/28M];

Maximum 28 Mbps (VBR)

[720];

Average 9 Mbps (VBR)

[iFrame];

Maximum 28 Mbps (VBR)

[AVCHD]

[1080/50p];

Maximum 28 Mbps (VBR)

[PH];

Maximum 24 Mbps (VBR)

[HA];

Average 17 Mbps (VBR)

[HG];

Average 13 Mbps (VBR)

[HE];

Average 5 Mbps (VBR)

[24p]

[2160/24p];

Maximum 72 Mbps (VBR)

[1080/24p];

Maximum 50 Mbps (VBR)

Refer to the operating instructions (PDF format) for the picture size and recordable time of a motion picture.

Still picture recording format:

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

Refer to the operating instructions (PDF format) for picture size of a still picture and number of recordable pictures.

Recording media:

SD Memory Card
SDHC Memory Card
SDXC Memory Card
Refer to page 14 for details on SD cards usable in this unit.
WXF990M / **VX980M**
Built-in memory; 64 GB

Image sensor:

1/2.3 type (1/2.3") 1MOS image sensor
Total; 18910 K
Effective pixels;
Motion picture; 8290 K (16:9)^{*1},
6100 K (16:9)^{*2, 3}
Still picture; 8290 K (16:9), 6220 K (4:3),
7000 K (3:2)

Lens:

Auto Iris, 20× optical zoom, F1.8 to F3.6
Focal length;
4.08 mm to 81.6 mm
(Full range AF)
35 mm equivalent;
Motion picture;
30.8 mm to 626 mm (16:9)^{*1, 4},
37.0 mm to 752 mm (16:9)^{*2, 3}
Still picture;
30.8 mm to 626 mm (16:9),
37.6 mm to 752.8 mm (4:3),
34.5 mm to 690.3 mm (3:2)
Minimum focus distance;
Normal; Approx. 3 cm (Wide)/
Approx. 1.5 m (Tele)
Intelligent Auto Macro;
Approx. 1 cm (Wide)

Filter diameter:

49 mm

Zoom:

WXF990 / **WXF990M** / **VXF990** / **VX980** /
VX980M
20× optical zoom, 25×^{*1}/40×^{*2} i.Zoom,
60×/1500× digital zoom
VXF990 / **VX980**
20× optical zoom, 25×^{*1}/40×^{*2} i.Zoom,
60×/250× digital zoom

Image stabilizer function:

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

Level Shot Function:

Off/Normal/Strong

Creative Control:

[Miniature Effect]/[Silent movie]/[8mm movie]/
[Time Lapse Rec]

HDR movie:

Low/High

Monitor:

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

WXF990 / **VXF990** series

Viewfinder:

0.61 cm (0.24") wide EVF (Approx. 1550 K
dots equivalent)

Microphone:

5.1 channel surround microphone/
Zoom microphone/Focus microphone/
Stereo microphone

Minimum required illumination:

Approx. 2 lx (1/25 with Low Light Mode in the
Scene Mode)
Approx. 1 lx with the Night Mode ([COLOUR]) function
0 lx with the Night Mode ([Infrared]) function

AV connector video output level:

1.0 Vp-p, 75 Ω, PAL system

HDMI micro connector video output level:

HDMI™ (x.v.Colour™) 2160p/1080p/1080i/576p

AV connector audio output level (Line):

251 mV, 600 Ω, 2 ch

Headphone output:

85 mV, 32 Ω (Stereo mini jack)

HDMI micro connector audio output level:

[4K MP4], [MP4/Frame], [24p];
Linear PCM
[AVCHD];
Dolby Digital/Linear PCM

MIC input:

−60 dBV (Mic sensitivity −40 dB equivalent,
0 dB=1 V/Pa, 1 kHz)
(Stereo mini jack)

USB:

Reader function
SD card; Read only (No copyright
protection support)
WXF990M / **VX980M**
Built-in memory; Read only
Hi-Speed USB (USB 2.0), USB terminal
Type micro AB
USB host function (for USB HDD)
Battery charging function (Charges from
USB terminal when the main unit is off)

Dimensions:

WXF990 / **VXF990** series
68.0 mm (W)×78 mm (H)×163 mm (D)
(including projecting parts)

VX980 series
65.0 mm (W)×73 mm (H)×139 mm (D)
(including projecting parts)
[with battery (supplied)]:
65.0 mm (W)×73 mm (H)×141 mm (D)
(including projecting parts)

Mass:

WXF990
Approx. 403 g
[without battery (supplied) and an SD card
(optional)]

WXF990M
Approx. 405 g
[without battery (supplied)]

VXF990 / **VXF999**
Approx. 396 g
[without battery (supplied) and an SD card
(optional)]

VX980 / **VX989**
Approx. 351 g
[without battery (supplied) and an SD card
(optional)]

VX980M
Approx. 352 g
[without battery (supplied)]

Mass in operation:

WXF990
Approx. 448 g
[with battery (supplied) and an SD card
(optional)]

WXF990M
Approx. 448 g
[with battery (supplied)]

VXF990 / **VXF999**
Approx. 441 g
[with battery (supplied) and an SD card
(optional)]

VX980 / **VX989**
Approx. 396 g
[with battery (supplied) and an SD card
(optional)]

VX980M
Approx. 395 g
[with battery (supplied)]

Operating temperature:

0 °C to 40 °C

Operating humidity:

10%RH to 80%RH

Battery operation time:

See page 12

Wireless transmitter:

Compliance standard; IEEE802.11b/g/n
Frequency range used;
Central frequency 2412 MHz to 2462 MHz [11ch]
Encryption method; Wi-Fi compliant WPA™/
WPA2™/WEP
Access method; Infrastructure mode

WXF990 series

Sub Camera**Image sensor:**

1/4 type (1/4") 1MOS image sensor
Total; 5270 K

Lens:

F2.2
Focal length;
3.54 mm
35 mm equivalent (Motion picture);
37.2 mm
Minimum focus distance;
Approx. 30 cm

AC adaptor

Information for your safety

Power source:

AC 110 V to 240 V, 50/60 Hz

AC input:

0.25 A

DC output:

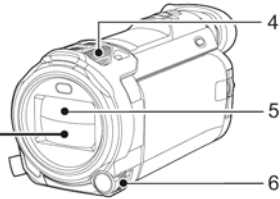
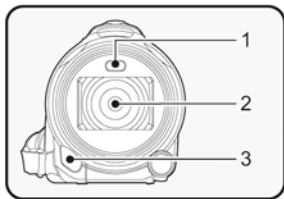
DC 5.0 V, 1.8 A

Dimensions:

(VSK0815L)
66.4 mm (W)×72 mm (H)×46.3 mm (D)
(VSK0815K)
66.4 mm (W)×78.8 mm (H)×31 mm (D)

Mass:

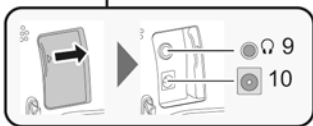
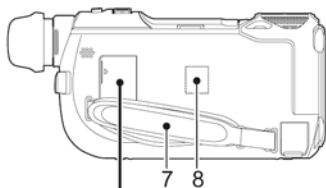
(VSK0815L)
Approx. 70 g
(VSK0815K)
Approx. 65 g



- 1 **Video light** (→ 86, 103)
- 2 **Lens (LEICA DICOMAR)**
 - For information on how to attach the supplied lens hood, refer to page 27.
- 3 **Infrared light** (→ 86)
- 4 **Internal microphones**

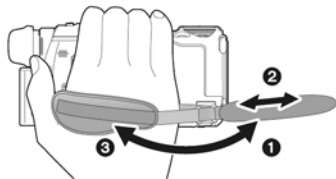
- 5 **Lens cover**
 - The lens cover opens in Motion Picture Recording Mode or Still Picture Recording Mode. (→ 20)
- 6 **Multi Manual Dial [CAMERA FUNCTION]** (→ 73, 101)

WXF990 / VXF990 series



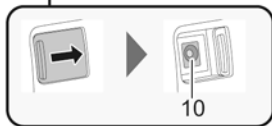
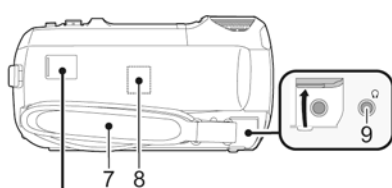
7 Grip belt

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.

VX980 series



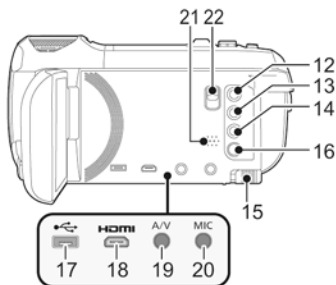
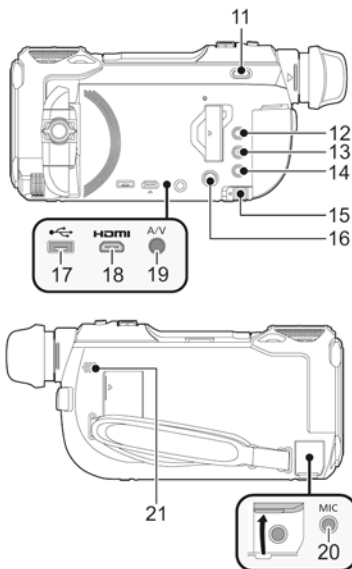
8 Wi-Fi Transmitter (→ 161)

9 Headphone terminal [🎧] (→ 88)

- Excessive sound pressure from earphones and headphones can cause hearing loss.
- Listening at full volume for long periods may damage the user's ears.

10 DC input terminal [DC IN] (→ 12)

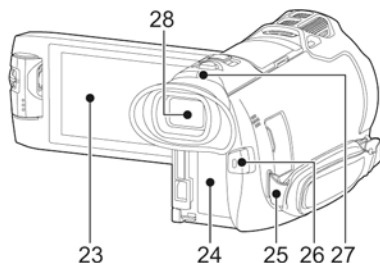
- Do not use any other AC adaptors except the supplied one.



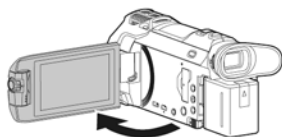
- 11 **WXF990 / VXF990 series only**
Recording mode selector button
[/ 4K PHOTO /] (→ 21)
- 12 Recording/playback button [/]
(→ 20)
- 13 HDR button [HDR] (→ 50)
- 14 Wi-Fi button [Wi-Fi]
(→ 162, 168, 171, 176, 178, 182, 196, 199, 208, 212)
- 15 Battery release lever [BATT] (→ 11)
- 16 Power button [/] (→ 19)
- 17 USB terminal [] (→ 147, 154, 234)
- 18 Micro HDMI connector [HDMI]
(→ 139)
- 19 A/V connector [A/V] (→ 139, 156)
- 20 Microphone terminal [MIC]

- A compatible plug-in powered microphone can be used as an external microphone.
- If you connect an external microphone when a setting other than [AUTO] is selected for [MIC LEVEL] (→ 100), (Microphone input level meter) will be displayed.

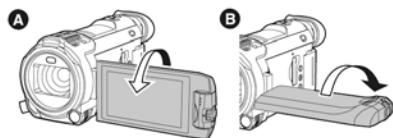
- When the unit is connected with the AC adaptor, sometimes noise may be heard depending on the microphone type. In this case, please switch to the battery for the power supply and the noise will stop.
- 21 **Speaker**
- 22 **VX980 series only**
Shoe adaptor release lever
[SHOE ADAPTOR RELEASE] (→ 259)



23 LCD monitor (Touch screen) (→ 22)



- It can open up to 90°.



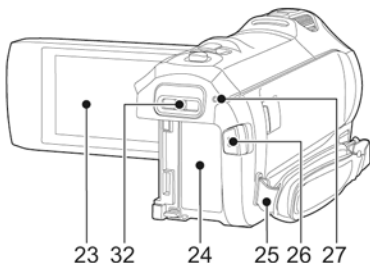
- It can rotate up to 180° **A** towards the lens or 90° **B** towards the opposite direction.

24 Battery holder (→ 11)

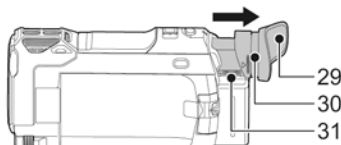
25 Shoulder strap fixture

26 Recording start/stop button (→ 29)

27 Status indicator (→ 19, 189)



**28 WXF990 / VXF990 series only
Viewfinder (→ 22)**



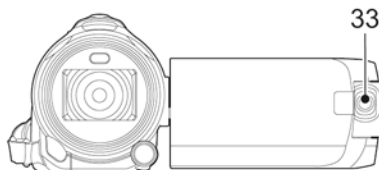
**29 WXF990 / VXF990 series only
Eyecup**

- Keep the Eyecup out of reach of children to prevent swallowing.

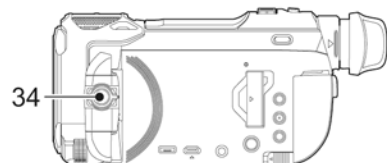
**30 WXF990 / VXF990 series only
Eyecup mount (→ 27)**

**31 WXF990 / VXF990 series only
Diopter adjustment dial (→ 23)**

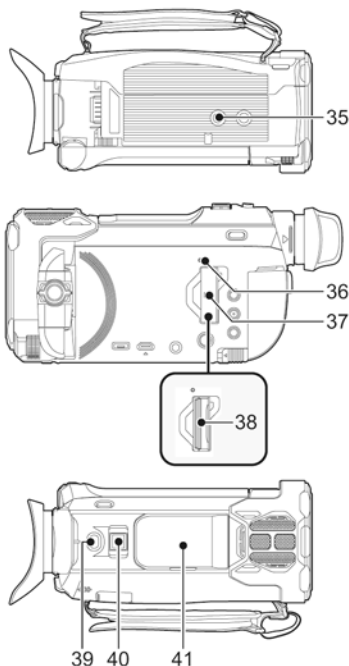
**32 VX980 series only
Shoe adaptor mounting part
[SHOE ADAPTOR] (→ 259)**



33 Sub Camera (→ 51)



34 Sub Camera dial (→ 52)



35 Tripod receptacle

- Attaching a tripod with a screw length of 5.5 mm or more may damage the unit.

36 Access lamp [ACCESS] (→ 18)

37 SD card cover (→ 17)

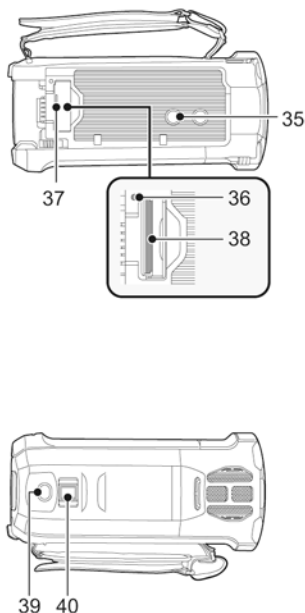
38 Card slot (→ 17)

39 Photoshot button [] (→ 31)

40 Zoom lever [W/T] (In Motion Picture Recording Mode or Still Picture Recording Mode) (→ 49)/

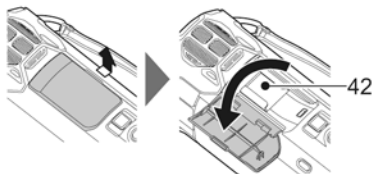
Thumbnail display switch [/]/

Volume lever [-VOL+] (In Playback Mode) (→ 36)



41 WXF990 / VXF990 series only

Accessory shoe cover



- Close this cover when not using the accessory shoe.

42 WXF990 / VXF990 series only

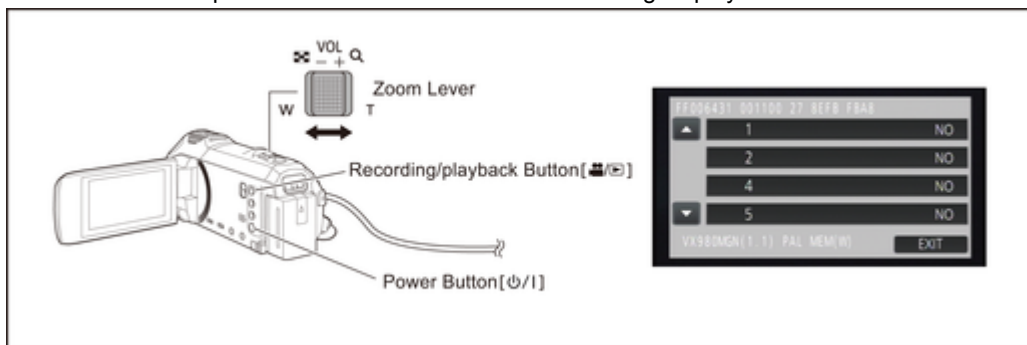
Accessory shoe

- You can attach a variety of optional accessories to the shoe adaptor. For information on how to attach and use those accessories, refer to their manuals.

6 Service Mode

Indication method of the service menu

1. Keep pressing the “Power” button, “Zoom Lever” to W side and “Recording/Playback” 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.
2	Model/Destination settings	Change the Model/Destination. (Selectable models and destinations are displayed.)
4	Lock search history indication	Display the main camera system error code 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.
14	Adjutment function for the service	The service adjustment do setup and adjustment of the following items required in the field service.
15	Restore the backed up adjustment data	Restore the adjustment data to new or repaired Main P.C.B. from SD card that the data backed up from original Main P.C.B. before repairs or replacement.
16	Touch panel calibration	Calibrate the touch positions of the touch panel.

NOTE:

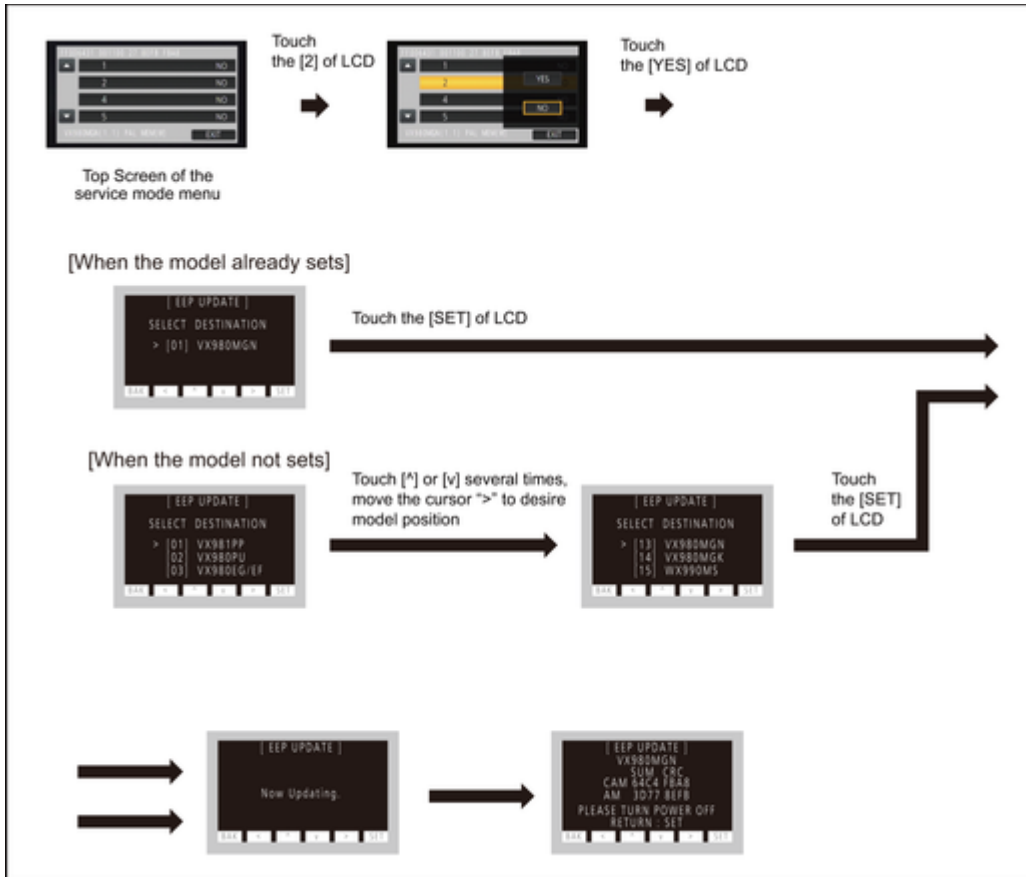
Do not using service mode except above table of Service mode menu.

2. 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 Model/Destination Settings

Touch the [2] of LCD, select model/destination settings.

Operation specifications



Function description

- Change the Model/Destination
Display the lists of model/destination which the unit can be changed, if a shipment setup is finished. Therefore in some cases, the model/destination that is currently set is only displayed.

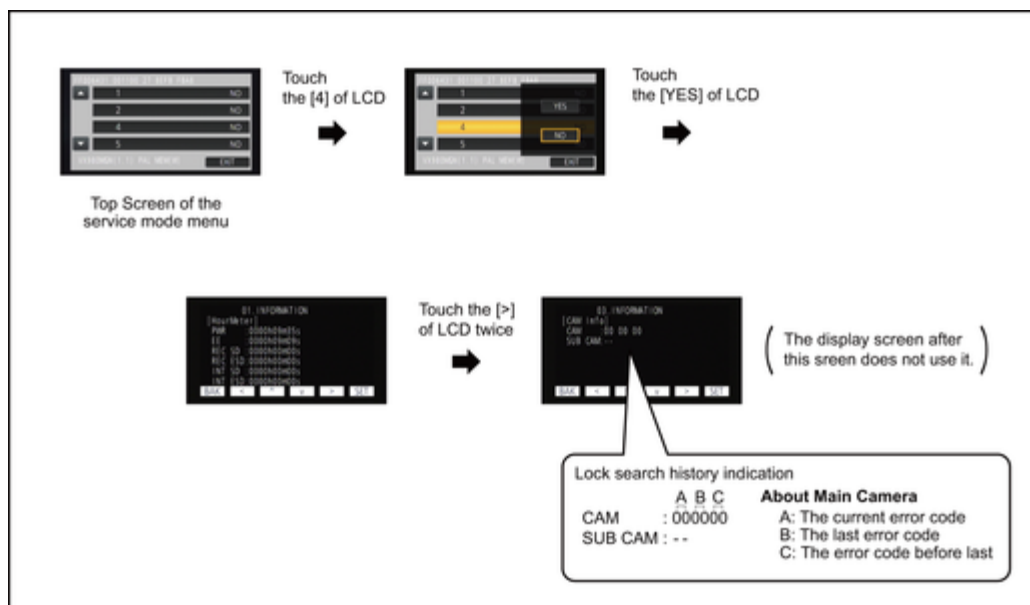
End method of operation

- Touch the [SET] of LCD to exit the model/destination settings, and then POWER OFF.

6.2 Lock Search and Error History Indication

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

Operation specifications



Indication contents

1. Main Camera

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

Error code	Description	Problematic Parts
51	Focus control is abnormal	Lens Unit
52	Zoom control is abnormal	2nd Stepping Motor / Lens Unit
53	OIS lens control is abnormal	Lens Unit
54	Zoom control is abnormal (2)	3rd Stepping Motor / Lens Unit
55	Zoom control is abnormal (3)	4th Stepping Motor / Lens Unit
71	Lens barrier open/close is abnormal	Barrier Motor Unit / Lens Frame Unit

2. Sub Camera

- This model has no sub camera.

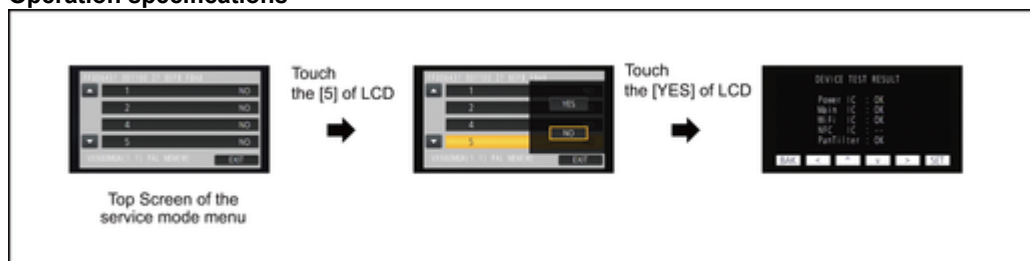
End method of operation

- Touch the [BAK] of LCD to exit the lock search and error history indication, 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.
 - Power IC : Communication test between IC3401 and IC1503.
 - Main IC : DDR. Communication test inside IC3401.
 - WiFi IC : Communication test between IC3401 and Wi-Fi P.C.B..
 - NFC IC : -- (Excluded).
- Display other than “OK” are abnormalities of each lines.
 - PanTilter : Error display of the Remote Pan Tilt Cradle (VW-CTR1)
(When not connected the remote pan tilt cradle, display “--”.)
When error is occurred, display “NG” with the error code.

Error Code	Description
NG 01	Battery undercut
NG 04	The start-up state of the update error factor
NG 10	The failure of Tilt motor
NG 80	USB Communication Error

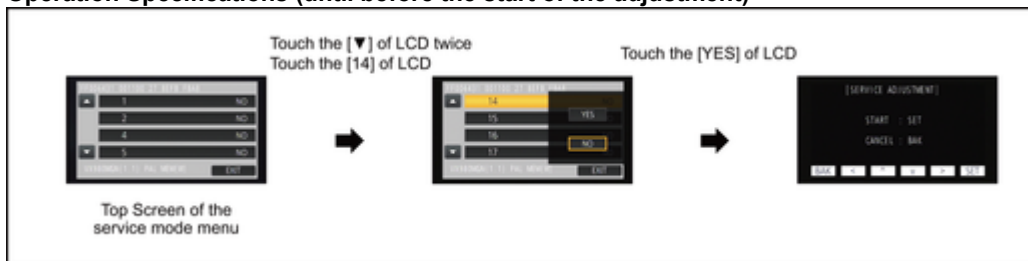
End method of operation

- Touch the [BAK] of LCD to exit the power on self check result display, and the POWER OFF.

6.4 Adjustment function for the Service

Touch the [14] of LCD, select the adjustment function for the service.

Operation Specifications (until before the start of the adjustment)



Function description

The service adjustment do setup and adjustment of the following items required in the field service.
For a detailed content, such as the adjustment procedure, refer to “9 Measurements and Adjustments”.

- Model setting
- Setting of the file name for adjustment data backup to SD card.
- Execution of adjustment data backup to SD card
- Checking of Switches
- Camera adjustment
- Zoom Tracking adjustments
- Indoor White Balance Adjustment
- Outdoor White Balance Adjustment
- Level shot adjustment

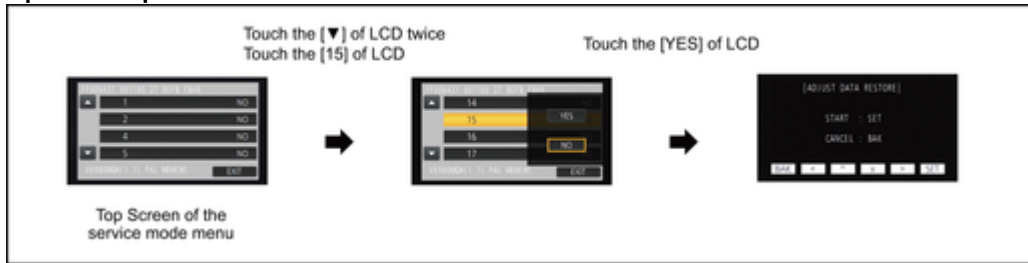
End method of operation

- Press the power button to turn the unit off.

6.5 Restore the backed up adjustment data

Touch the [15] of LCD, select restoring the backed up adjustment data from SD card to the unit.

Operation Specifications

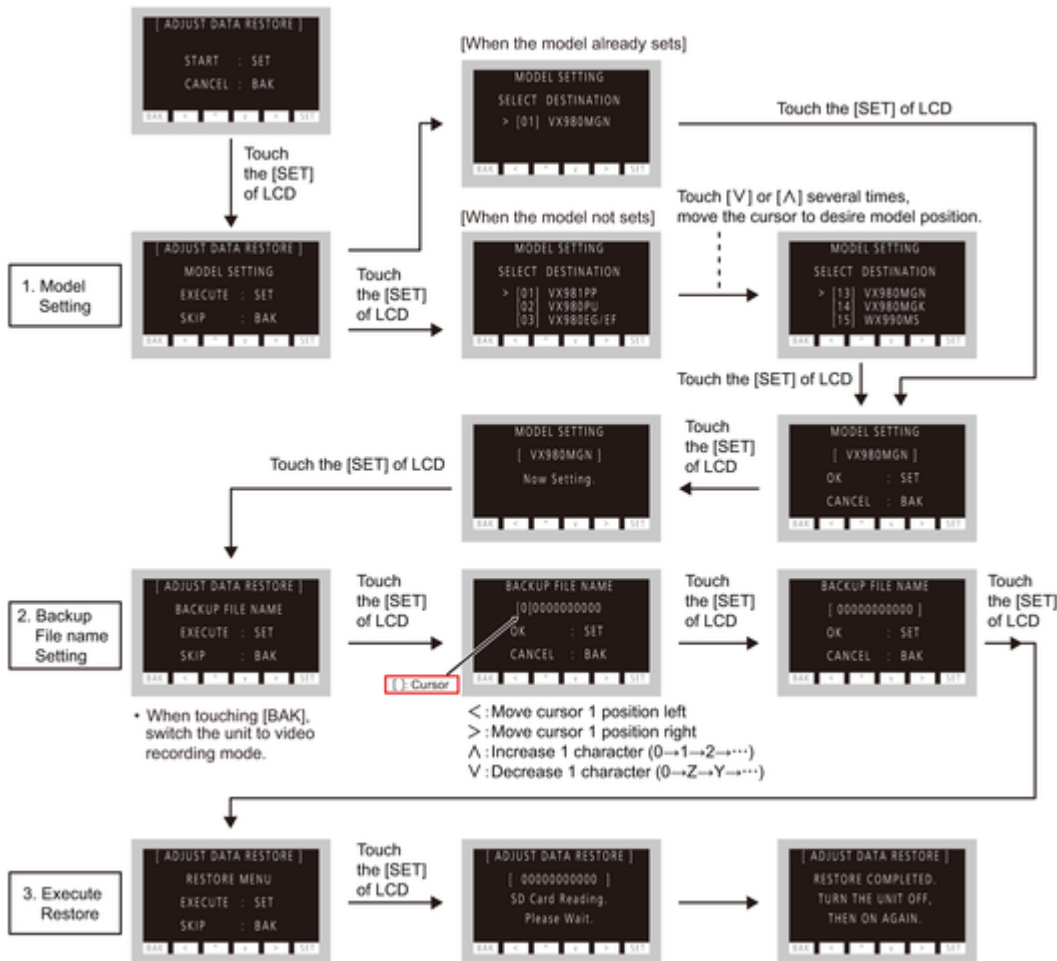


Function description

Restore the adjustment data to new or repaired Main P.C.B. from SD card that the data backed up from original Main P.C.B. before repairs or replacement.

To backup the adjustment data, use “6.4. Adjustment function for the Service”.

Restoring procedure



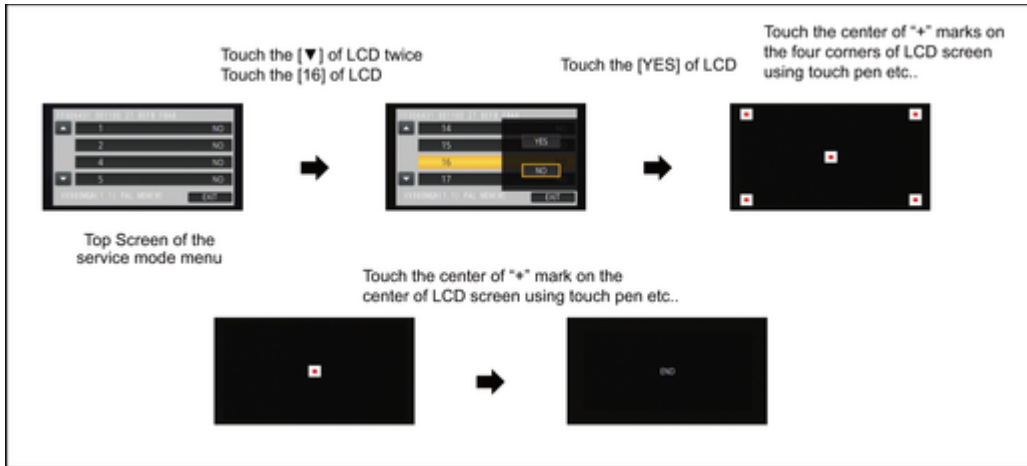
End method of operation

- Press the power button to turn the unit off.

6.6 Touch Panel Calibration

Touch the [16] of LCD, select the calibration of touch panel.

Operation Specifications



Function description

Calibrate the touch positions of the touch panel.

End method of operation

- Press the power button to turn the unit off.

7 Service Fixture & Tools

7.1 When Replacing the Main P.C.B.

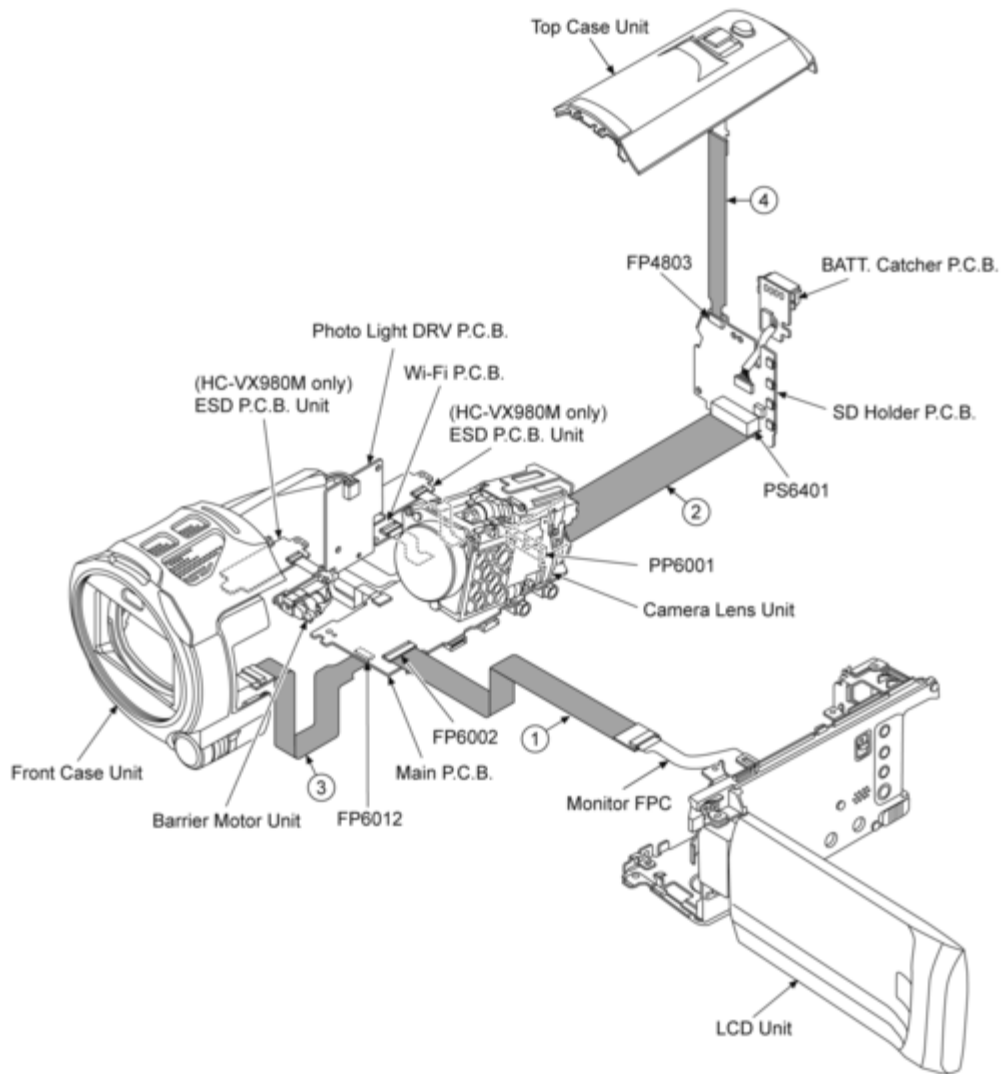
After replacing the MAIN P.C.B., be sure to achieve adjustment.

7.2 Service Position

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

No.	Parts No.	Connection	Form
1	RFKZ0354	FP6002(MAIN) - MONITOR FPC	37PIN 0.3 FFC
2	VFK1581A6025	PP6001(MAIN) - PS6401(SD HOLDER)	60PIN 0.5 B to B
3	VFK1388	FP6012(MAIN) - FRONT FFC	12PIN 0.5 FFC
4	VFK1440	FP4803(SD HOLDER) - TOP CASE UNIT	10PIN 0.5 FFC

7.2.1 Extention Cable Connection

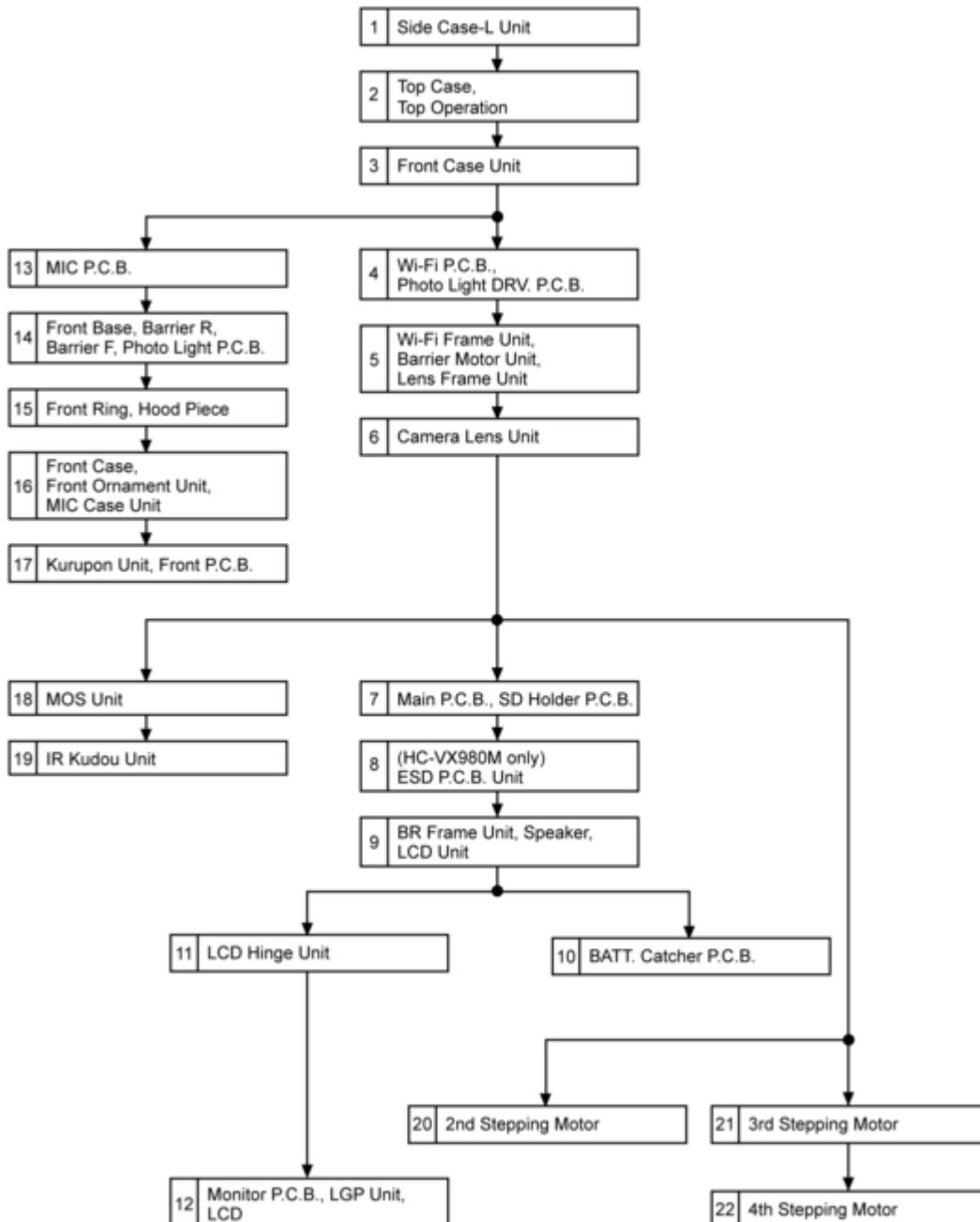


8 Disassembly and Assembly Instructions

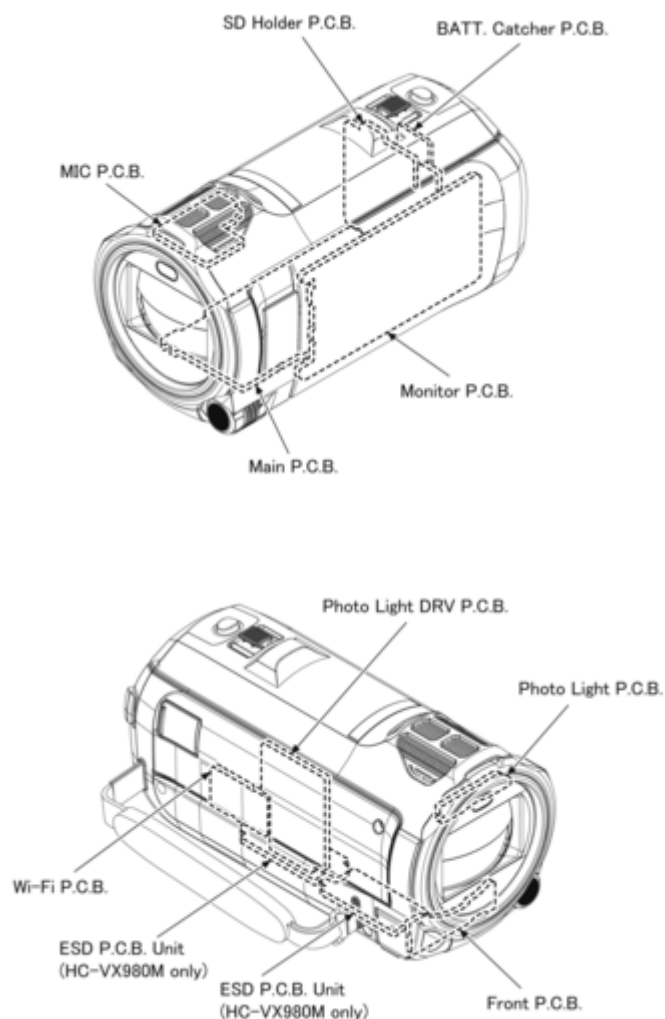
8.1 Disassembly Flow Chart for the Unit

This is a disassembling chart.

When assembling, perform this chart conversely.



8.2 PCB Location



8.3 Disassembly Procedure for the Unit

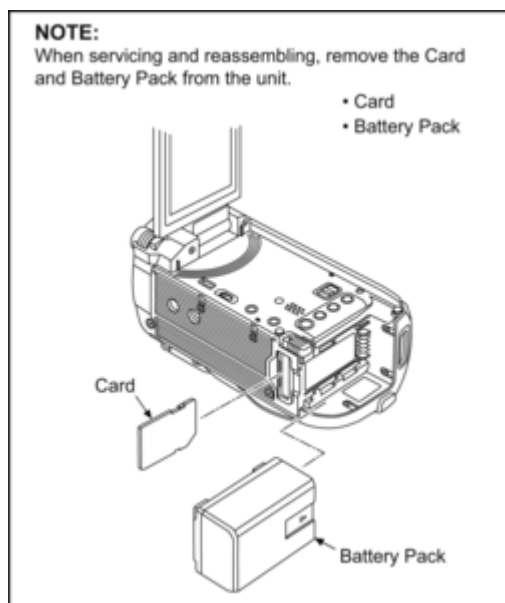
No.	Item	Fig.	Removal
1	Side Case-L Unit	(Fig. D1)	Screw (A) × 2
			Screw (B) × 2
		(Fig. D2)	Screw (C) × 3
			Locking tab ×3
			Side Case-L Unit
		(Fig. D3)	Screw (D) × 1
			Locking tab ×1
			SS Button
			Jack Cover Piece
			SS Lever
			Jack Door Spring
			DC Jack Cover Unit

			Screw (E) × 2
			HP Jack Cover Piece
			HP Jack Cover
			Locking tab ×2
			IR Piece
2	Top Case, Top Operation	(Fig. D4)	Screw (F) × 1
			Screw (G) × 1
		(Fig. D5)	Screw (H) × 1
			Locking tab ×1
			Projecting part × 2
			FP4803 (Flex)
		(Fig. D6)	Screw (I) × 4
			Convex × 2
			Top Shoe Angle
			Screw (J) × 3
			Top Operation
			Power Panel Light
			Shoe Cover
			Cover Open Spring
			Locking tab ×1
			Top Ornament
			Top Case
		(Fig. D7)	(When Installing)
3	Front Case Unit	(Fig. D8)	Screw (K) × 1
			Screw (L) × 2
		(Fig. D9)	Flex A
			Lead wire A
			Screw (M) × 1
			Locking tab ×1
			Convex × 1
			FP6012 (Flex)
			Front Case Unit
4	Wi-Fi P.C.B., Photo Light DRV P.C.B.	(Fig. D10)	Flex B
			Flex C
			Screw (O) × 3
			Hooking part × 1
			Wi-Fi P.C.B.
			Photo Light DRV P.C.B.
5	Wi-Fi Frame Unit, Barrier Motor Unit, Lens Frame Unit	(Fig. D11)	Screw (P) × 3
			Convex × 3
			Hooking part × 2
			Wi-Fi Frame Unit
		(Fig. D12)	Screw (Q) × 1
			Hooking part × 3
			FP6005 (Flex)
		(Fig. D13)	Screw (R) × 2
			Barrier Motor Unit
			Lens Frame Unit
6	Camera Lens Unit	(Fig. D14)	FP6008 (Flex)
			FP301 (Flex)
			Convex × 2
			Camera Lens Unit
7	Main P.C.B., SD Holder P.C.B.	(Fig. D15)	Screw (S) × 5
			Hooking part × 3
			Heat Radiation Plate Unit

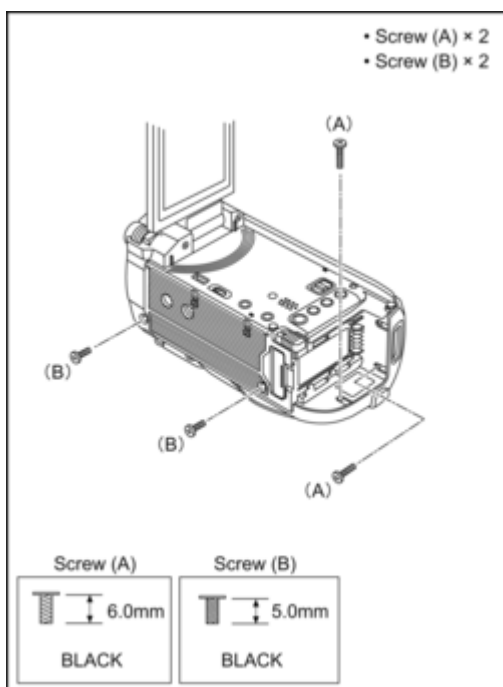
		(Fig. D16)	P6003 (Connector)
			P6401 (Connector)
			FP6002 (Flex)
			Hooking part × 1
			FP6011 (Flex)
			(HC-VX980M only)
			FP6010 (Flex)
			(HC-VX980M only)
		(Fig. D17)	Main P.C.B.
			SD Holder P.C.B.
8	(HC-VX980M only) ESD P.C.B. Unit	(Fig. D18)	Screw (T) × 2
			ESD P.C.B. Unit
			ESD P.C.B. Unit
9	BR Frame Unit, Speaker, LCD Unit	(Fig. D19)	Screw (V) × 2
			Screw (W) × 2
			Screw (X) × 2
			Locking tab × 2
			Convex × 4
		(Fig. D20)	BR Frame Unit
			Shoe Lock Knob
			Shoe Lock Spring
			Speaker
			LCD Lever
			Convex × 3
		(Fig. D21)	Convex × 2
			LCD Unit
10	Batt. Catcher P.C.B.	(Fig. D22)	SD Door Unit
			SR OP Button
		(Fig. D23)	Hooking part × 2
			BATT. Frame
			Batt. Catcher P.C.B.
11	LCD Hinge Unit	(Fig. D24)	Screw (o) × 2
			Screw (p) × 2
			Locking tab × 9
			LCD Case (T) Unit
			FP901 (Flex)
		(Fig. D25)	LCD Hinge Unit
			Screw (q) × 1
			Convex × 3
			LCD Frame A
12	Monitor P.C.B., LGP Unit, LCD	(Fig. D26)	FP904(Flex)
			FP905(Flex)
			Locking tab × 1
			Hooking part × 1
			Monitor P.C.B.
			Locking tab × 4
			LGP Unit
			LCD
			TP Spacer
			LCD Frame B
			LCD Case (B) Unit
		(Fig. D27)	Reflection Sheet
			Light Guide Plate
			Diffusion Sheet
			Prism Sheet B

			Prism Sheet A
			LGP Holder
13	MIC P.C.B.	(Fig. D28)	Screw (b) × 1
			FP4802 (Flex)
			MIC P.C.B.
14	Front Base, Barrier R, Barrier F, Photo Light P.C.B.	(Fig. D29)	Projecting part × 3
			Lens Damper Rubber
			Screw (c) × 5
		(Fig. D30)	Front Base
			Barrier R
			Barrier F
			Hooking part × 1
			Convex × 2
			Photo Light P.C.B.
15	Front Ring, Hood Piece	(Fig. D31)	Screw (d) × 2
			Front Ring
			Convex × 2
			Locking tab × 6
			Hood Piece
			LED Light Cover
			Hood Mask
			LED Light Lens
16	Front Case, Front Ornament Unit, MIC Case Unit	(Fig. D32)	Screw (e) × 1
			Screw (f) × 1
			Convex × 1
			Locking tab × 1
			Convex × 2
			Locking tab × 1
			Front Case
			Locking tab × 2
			MF Ornament
			Front Ornament Unit
		(Fig. D33)	Screw (g) × 2
			MIC Earth Plate
			MIC Case Unit
			MIC Net Cover
17	Kurupon Unit, Front P.C.B.	(Fig. D34)	Screw (h) × 2
			Locking tab × 2
			Convex × 2
			FR Earth Angle
			FP6501 (Flex)
			Kurupon Unit
			Locking tab × 1
			Convex × 2
			Front P.C.B.
18	MOS Unit	(Fig. D35)	Screw (i) × 3
			Convex × 2
			MOS Unit
			MOS Cushion
19	IR Kudou Unit	(Fig. D36)	Solder × 2 points
			Screw (j) × 1
			Convex × 2
			IR Kudou Unit
20	2nd Stepping Motor	(Fig. D37)	Solder × 4 points
			Screw (k) × 2

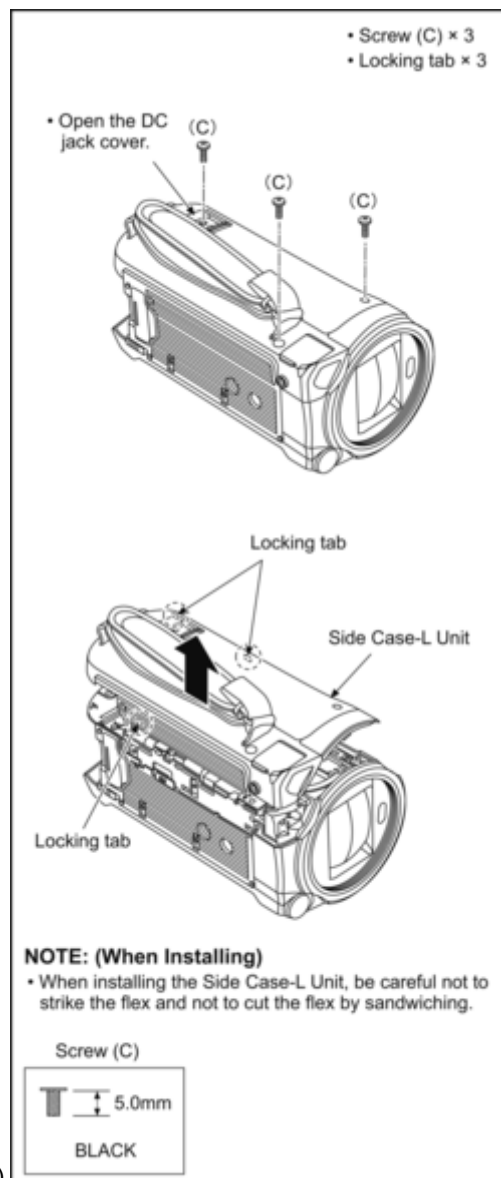
			2nd Stepping Motor
21	3rd Stepping Motor	(Fig. D38)	Solder × 4 points
			Screw (m) × 3
			Convex × 1
			3rd Stepping Motor
22	4th Stepping Motor	(Fig. D39)	Solder × 4 points
			Screw (n) × 2
			Convex × 2
			4th Stepping Motor



8.3.1 Removal of the Side Case-L Unit

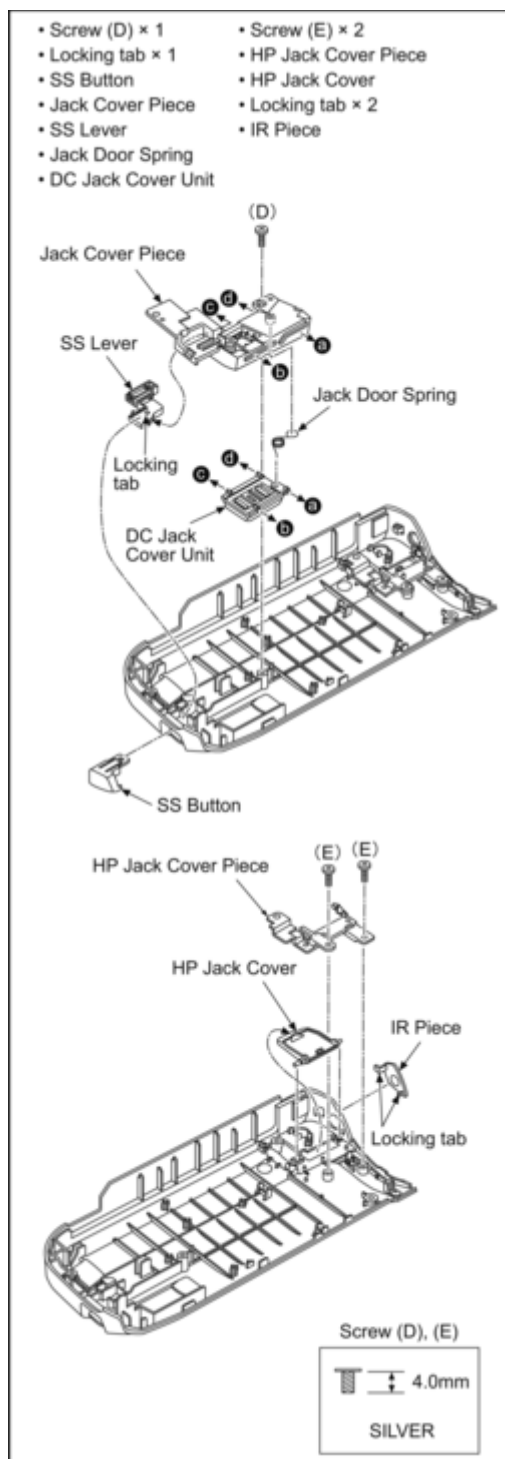


(Fig. D1)

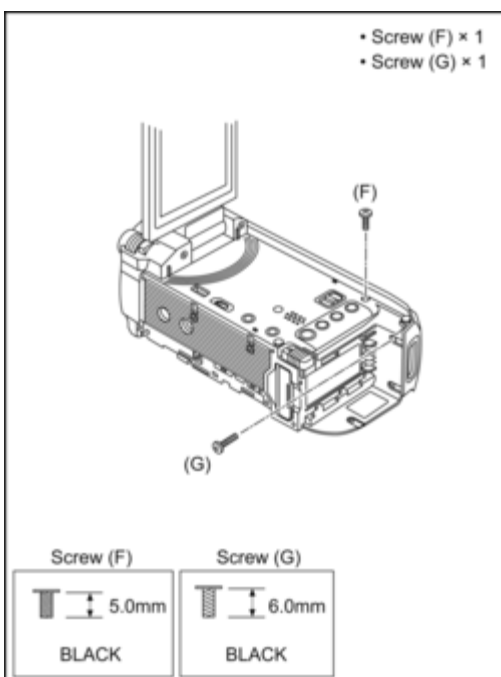


(Fig. D2)

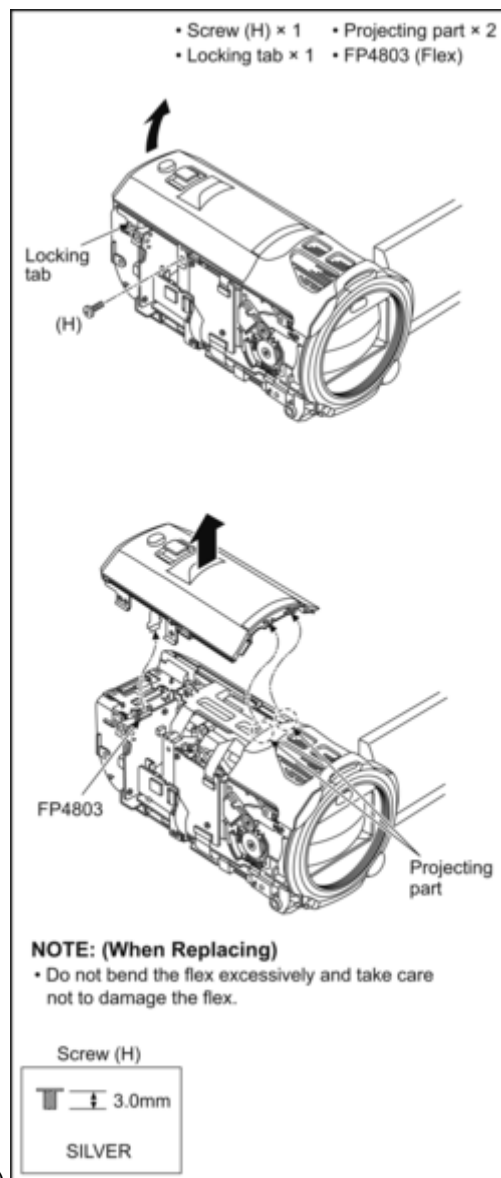
(Fig. D3)



8.3.2 Removal of the Top Case, Top Operation

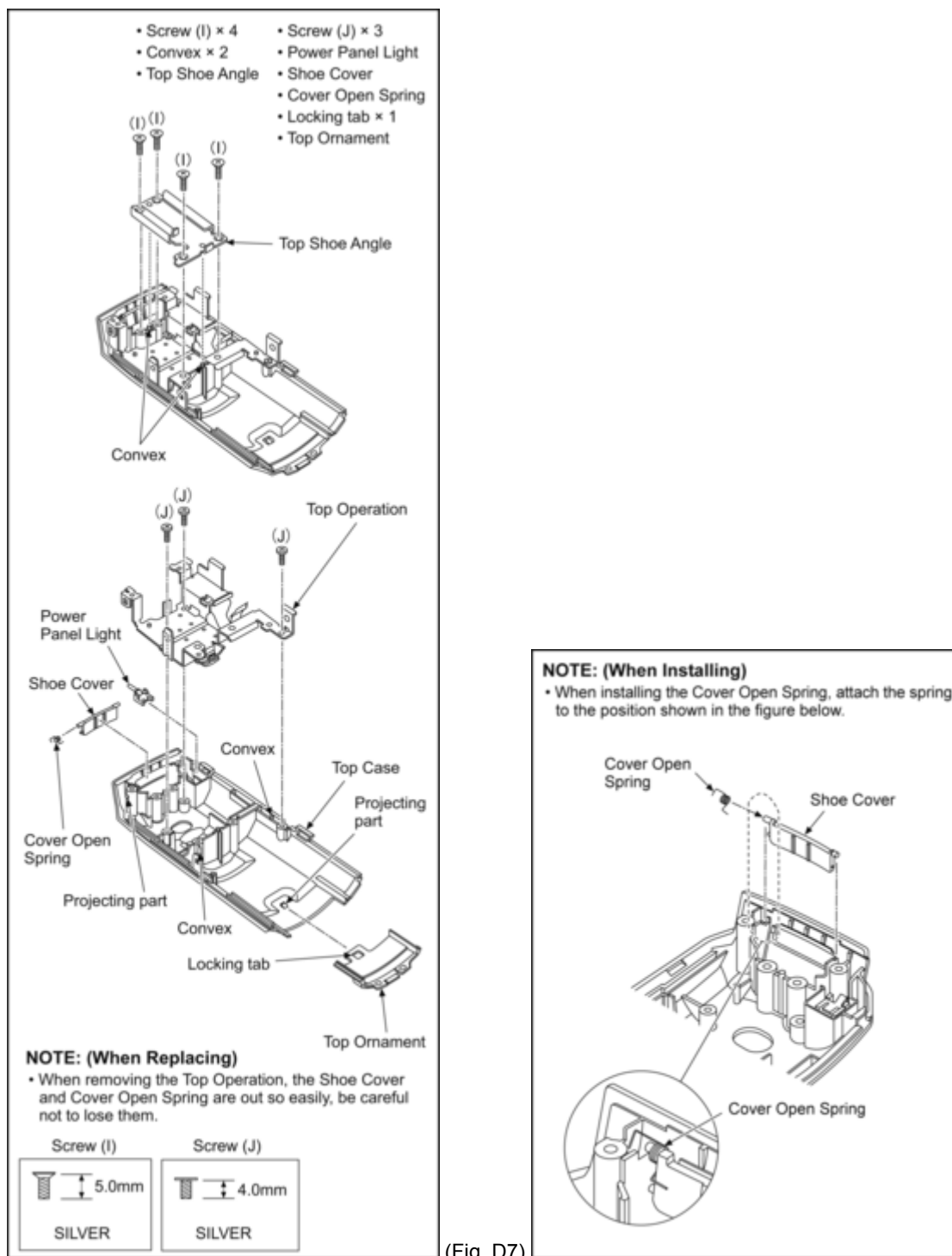


(Fig. D4)



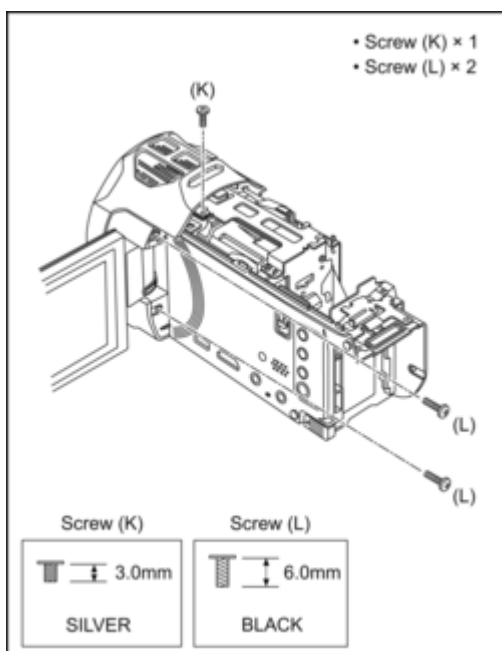
(Fig. D5)

(Fig. D6)

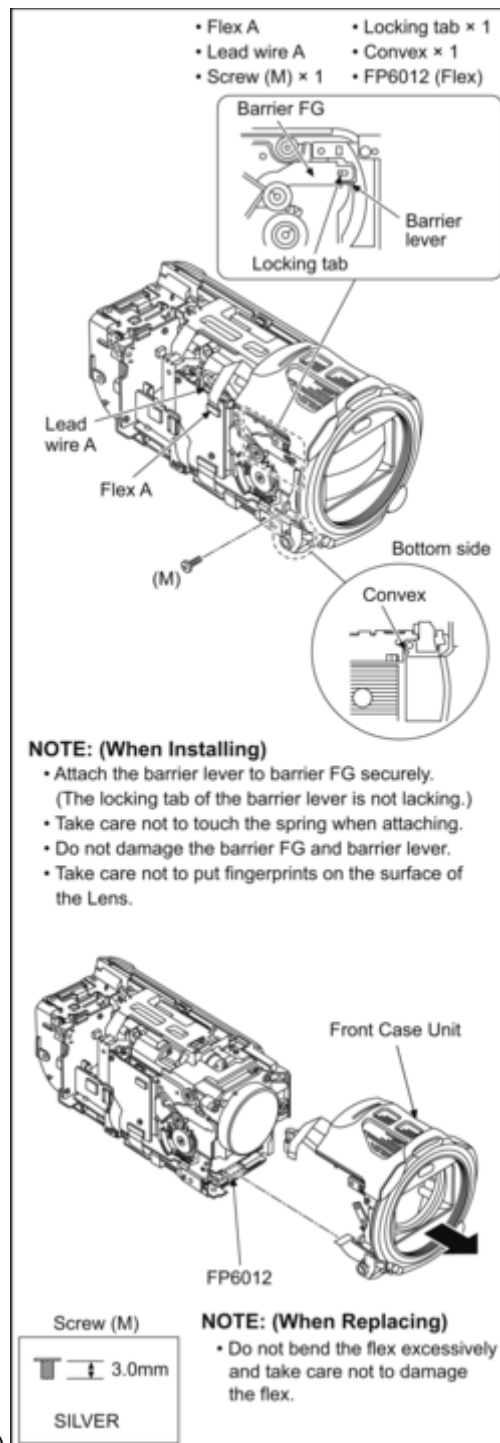


(Fig. D7)

8.3.3 Removal of the Front Case Unit

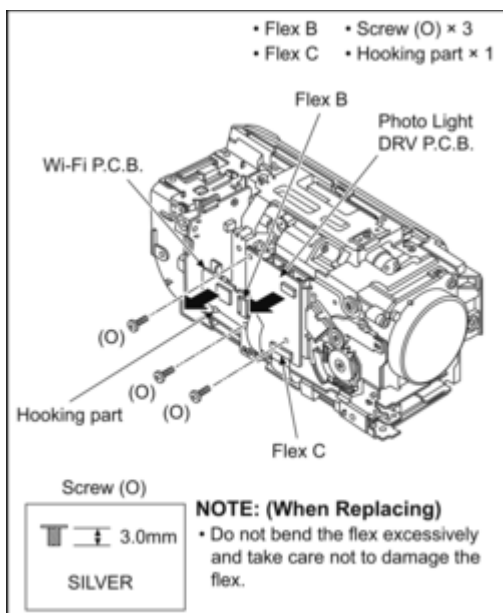


(Fig. D8)



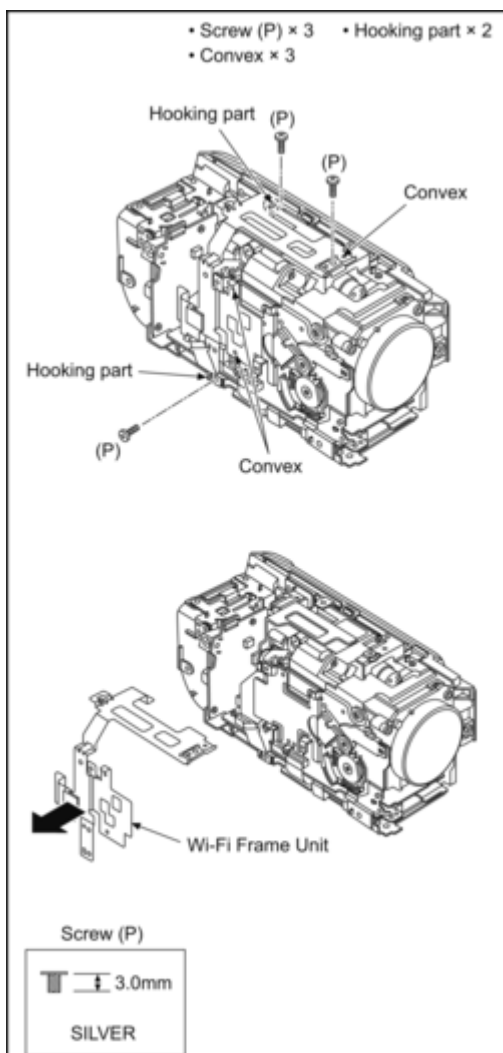
(Fig. D9)

8.3.4 Removal of the Wi-Fi P.C.B., Photo Light DRV P.C.B.

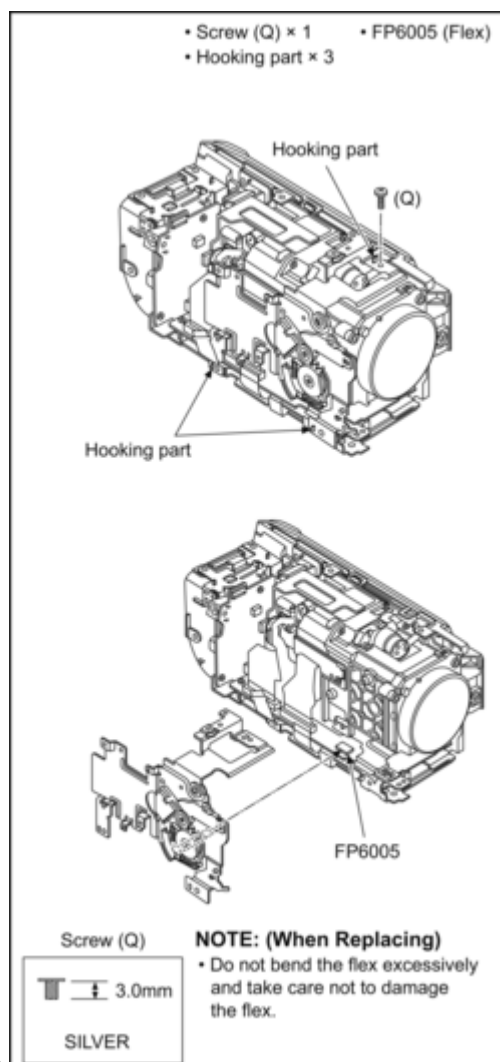


(Fig. D10)

8.3.5 Removal of the Wi-Fi Frame Unit, Barrier Motor Unit, Lens Frame Unit

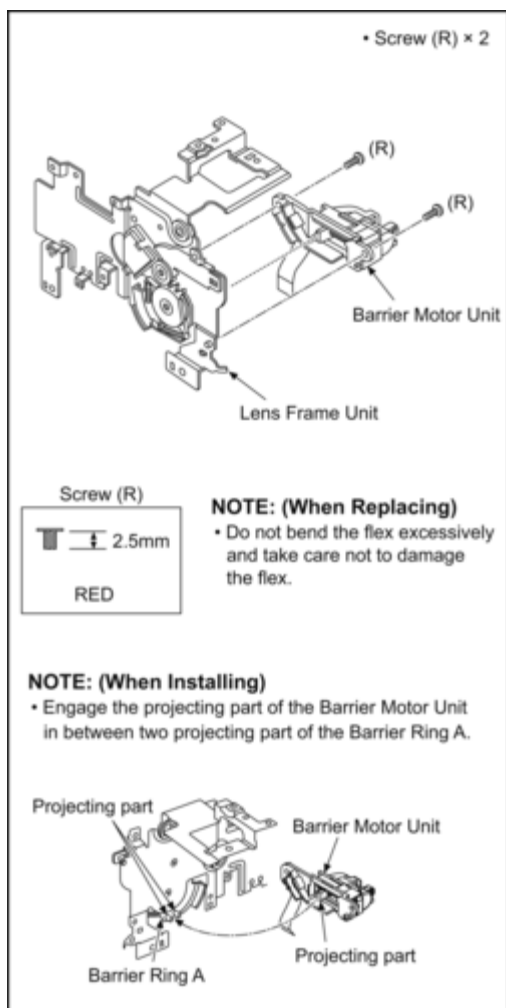


(Fig. D11)



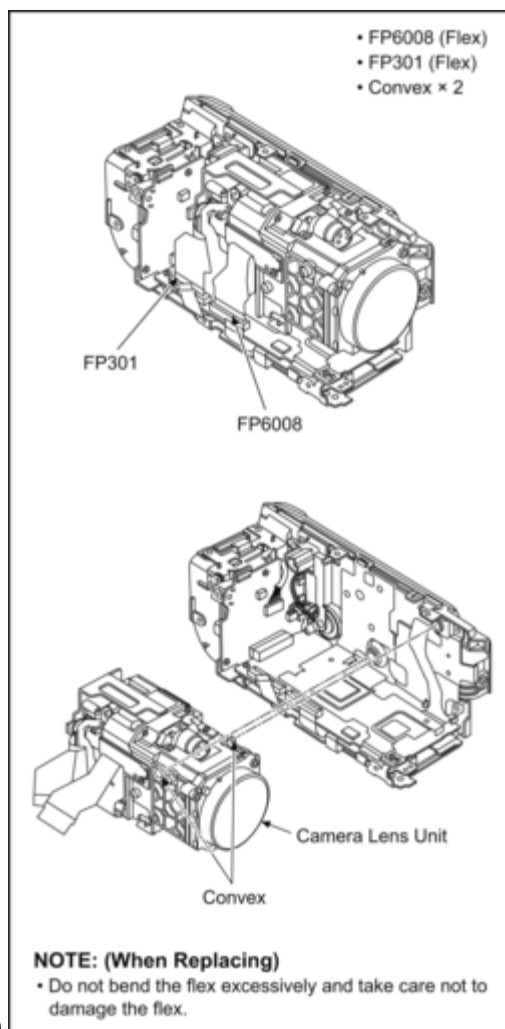
(Fig. D12)

(Fig.



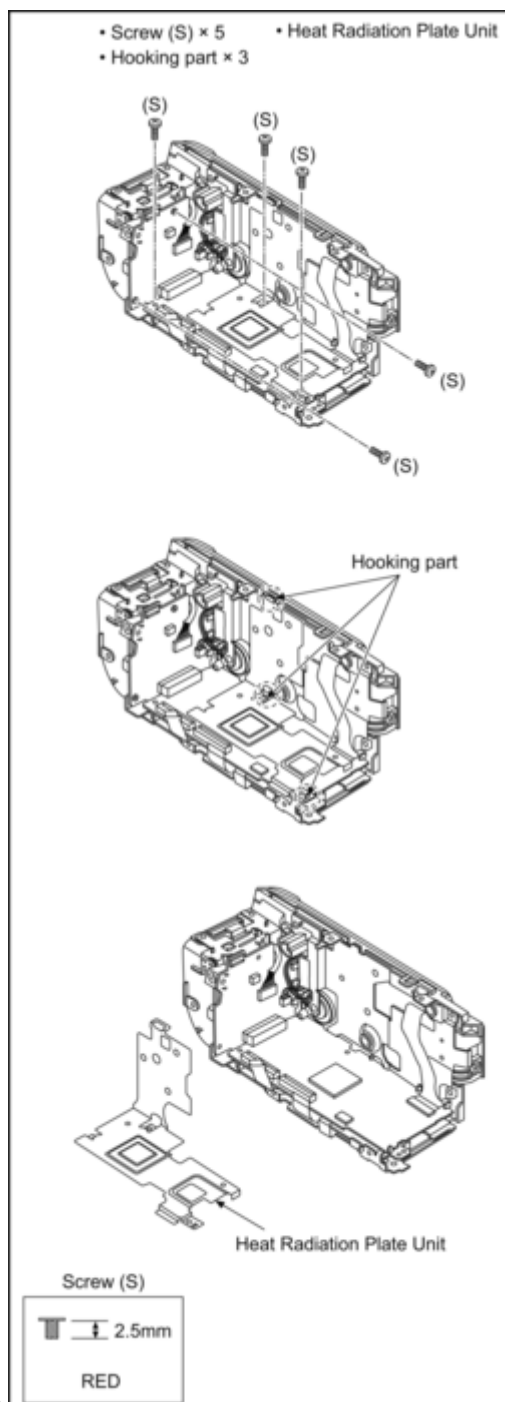
D13)

8.3.6 Removal of the Camera Lens Unit

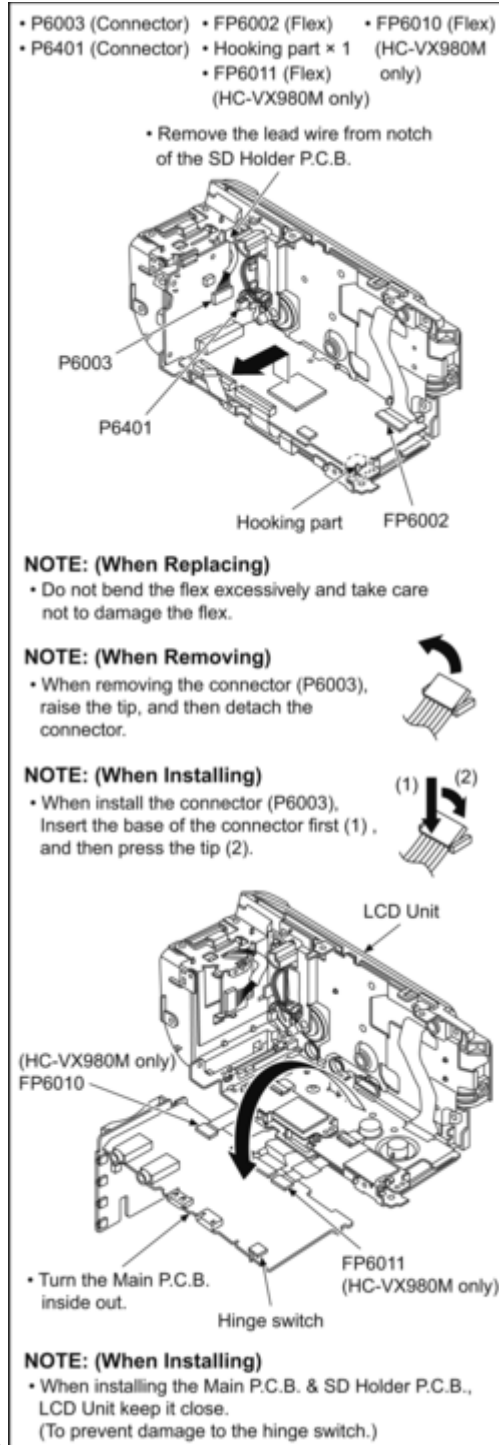


(Fig. D14)

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

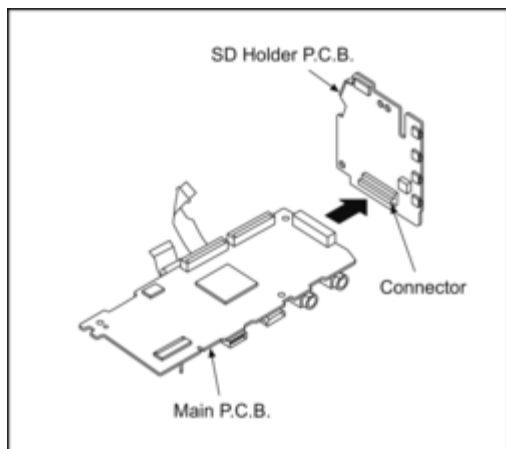


(Fig. D15)



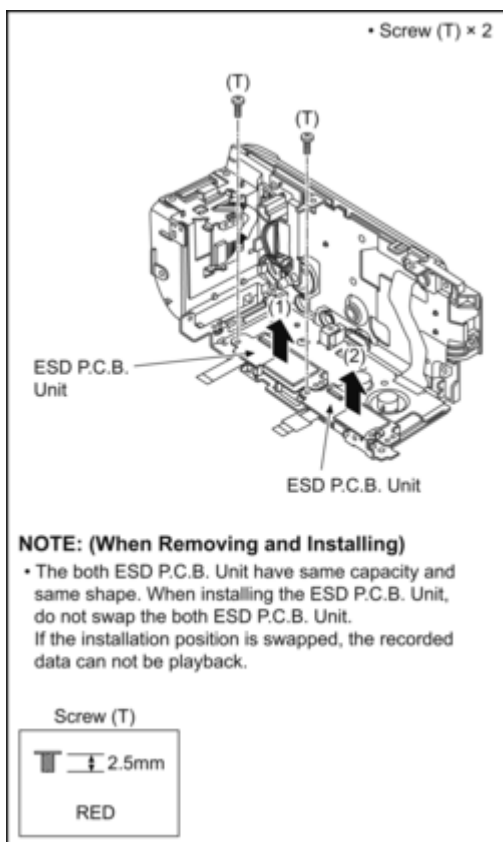
(Fig. D16)

(Fig.



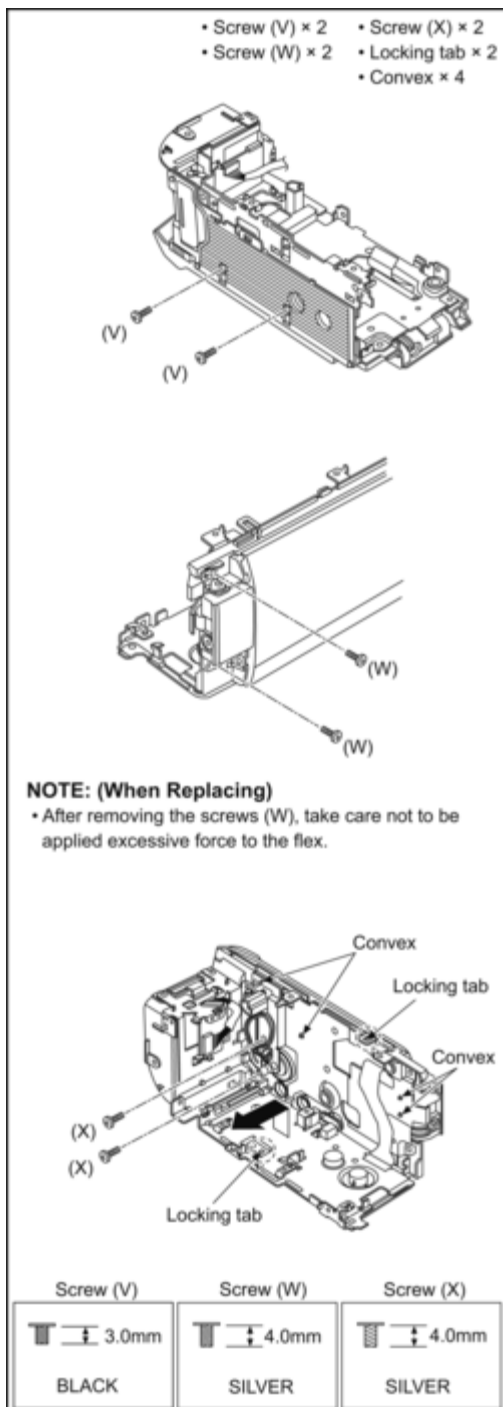
D17)

8.3.8 (HC-VX980M only) Removal of the ESD P.C.B. Unit

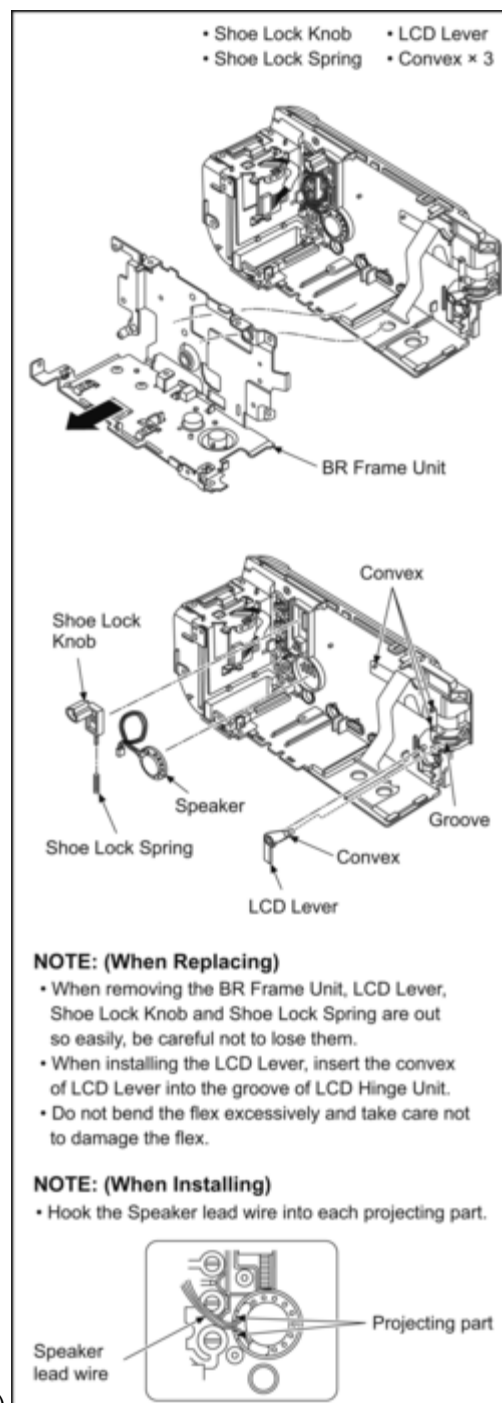


(Fig. D18)

8.3.9 Removal of the BR Frame Unit, Speaker, LCD Unit

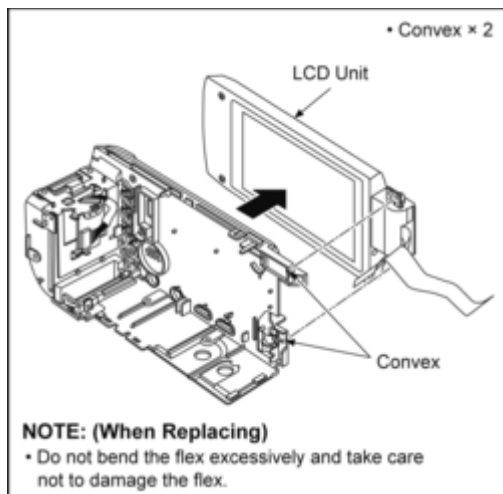


(Fig. D19)



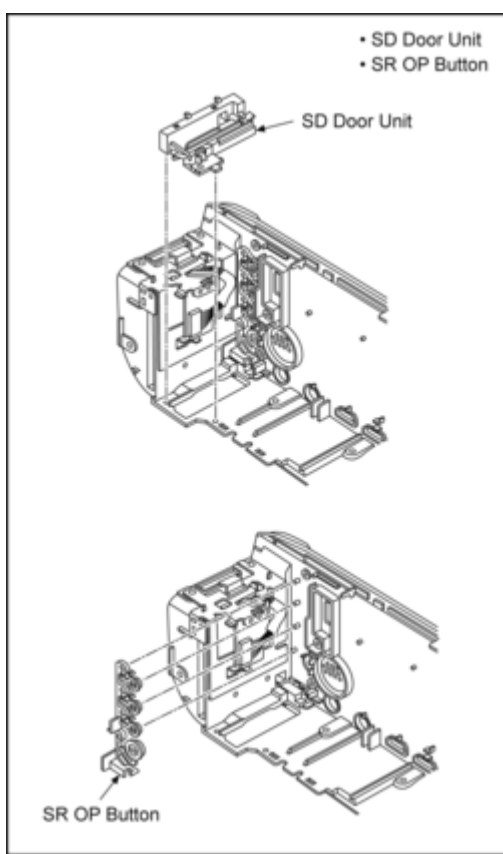
(Fig. D20)

(Fig.

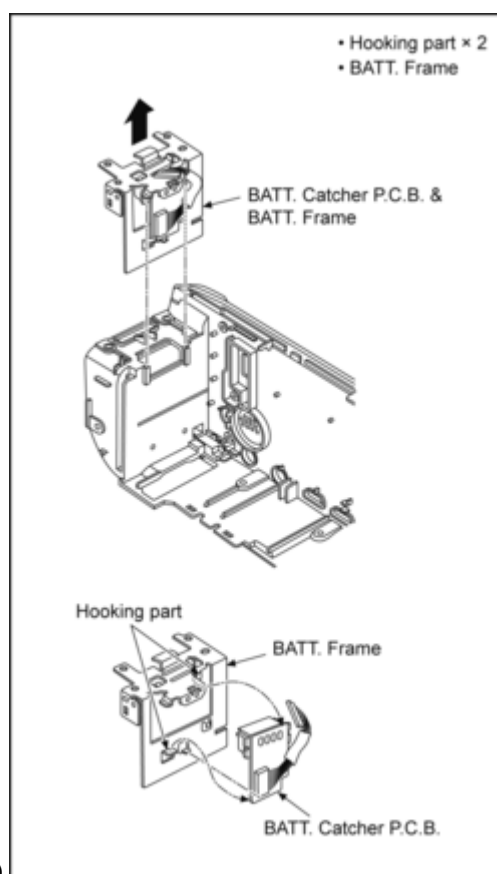


D21)

8.3.10 Removal of the BATT. Catcher P.C.B.

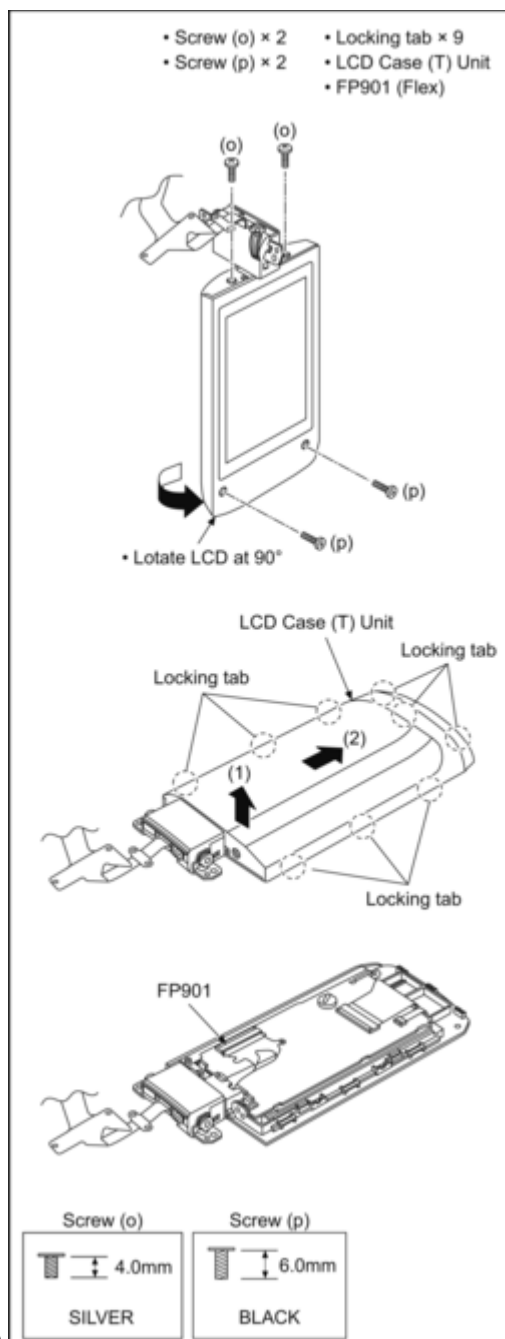


(Fig. D22)

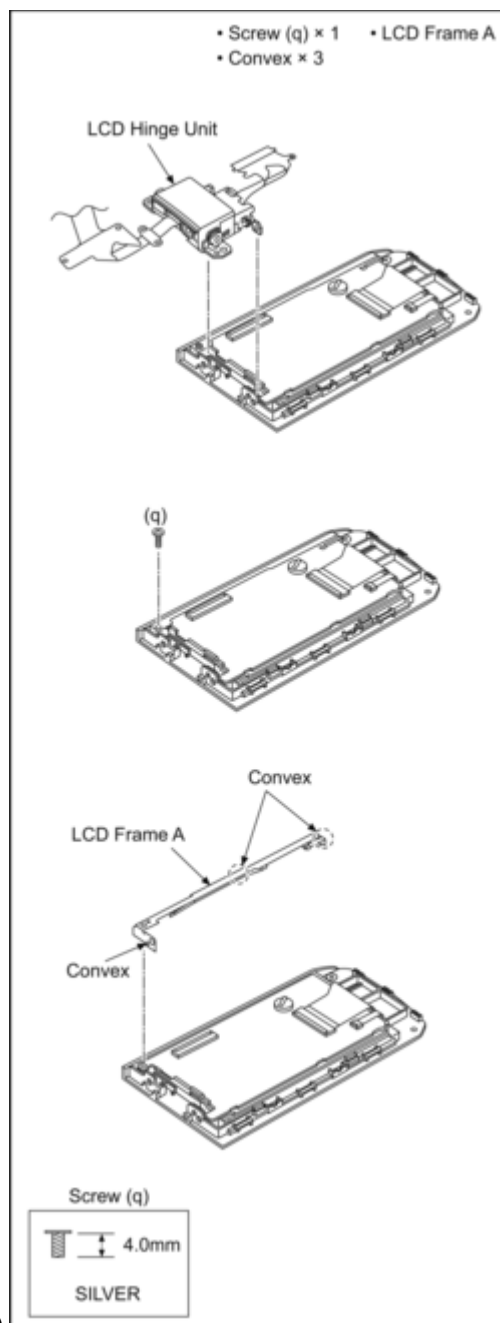


(Fig. D23)

8.3.11 Removal of the LCD Hinge Unit

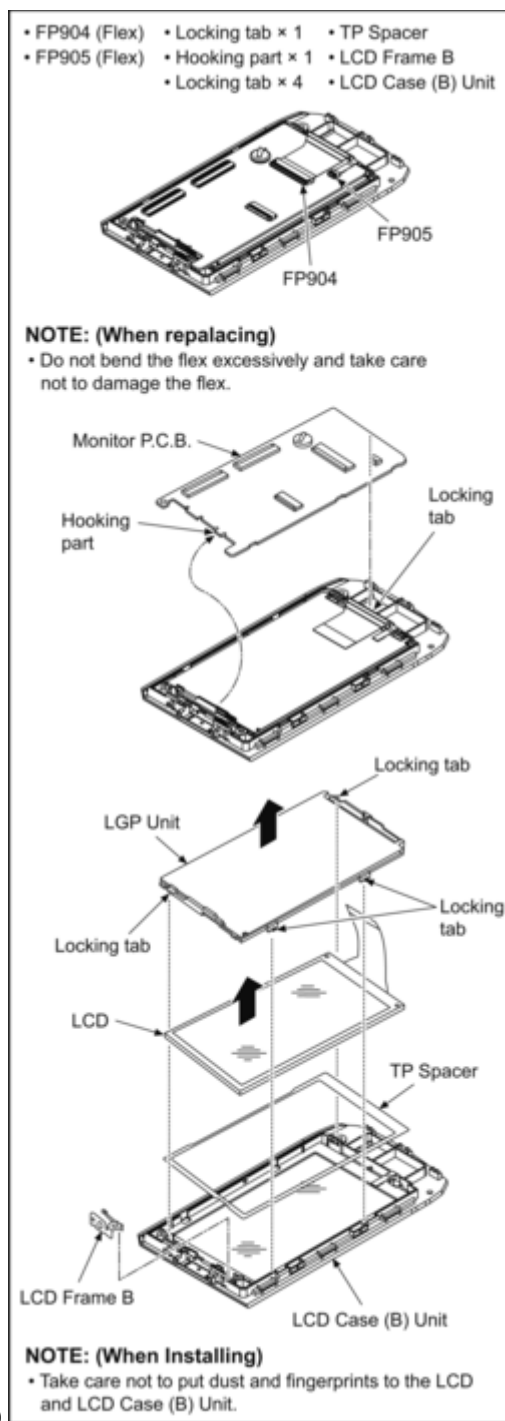


(Fig. D24)

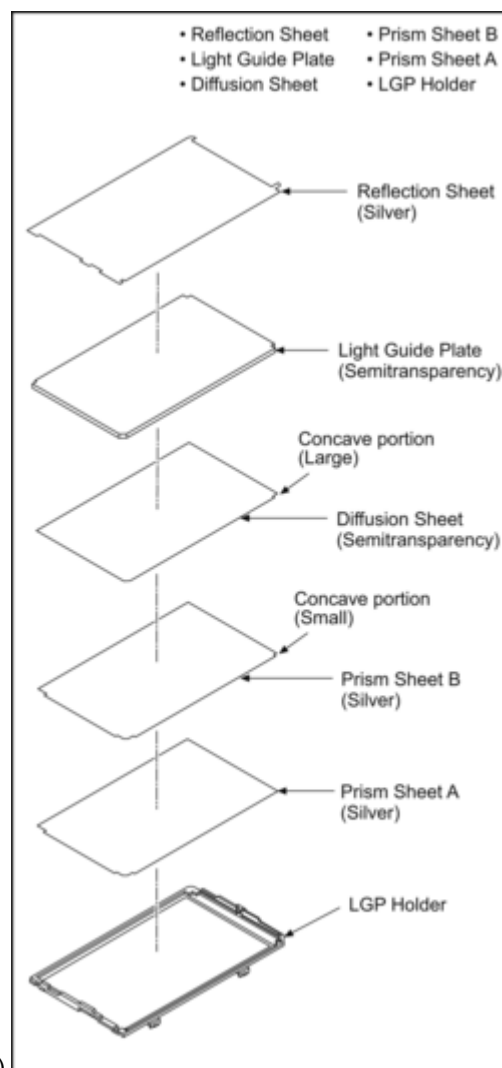


(Fig. D25)

8.3.12 Removal of the Monitor P.C.B., LGP Unit, LCD

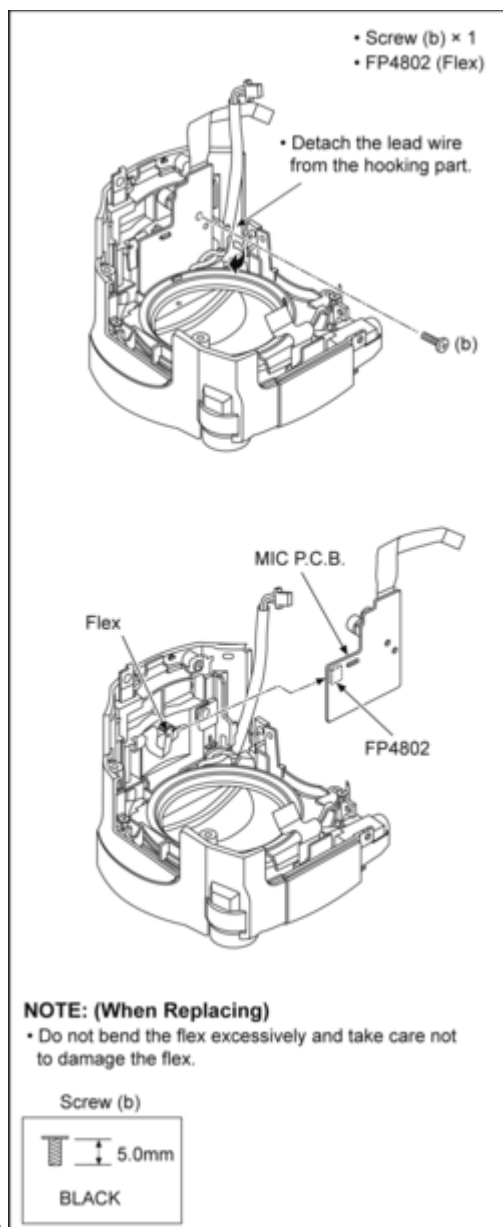


(Fig. D26)



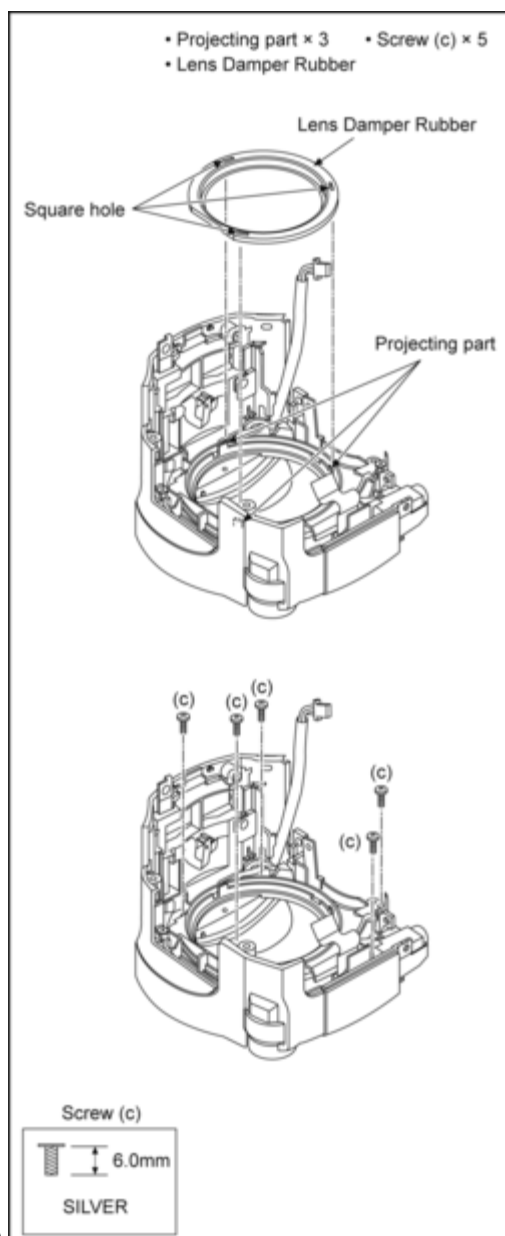
(Fig. D27)

8.3.13 Removal of the Mic P.C.B.

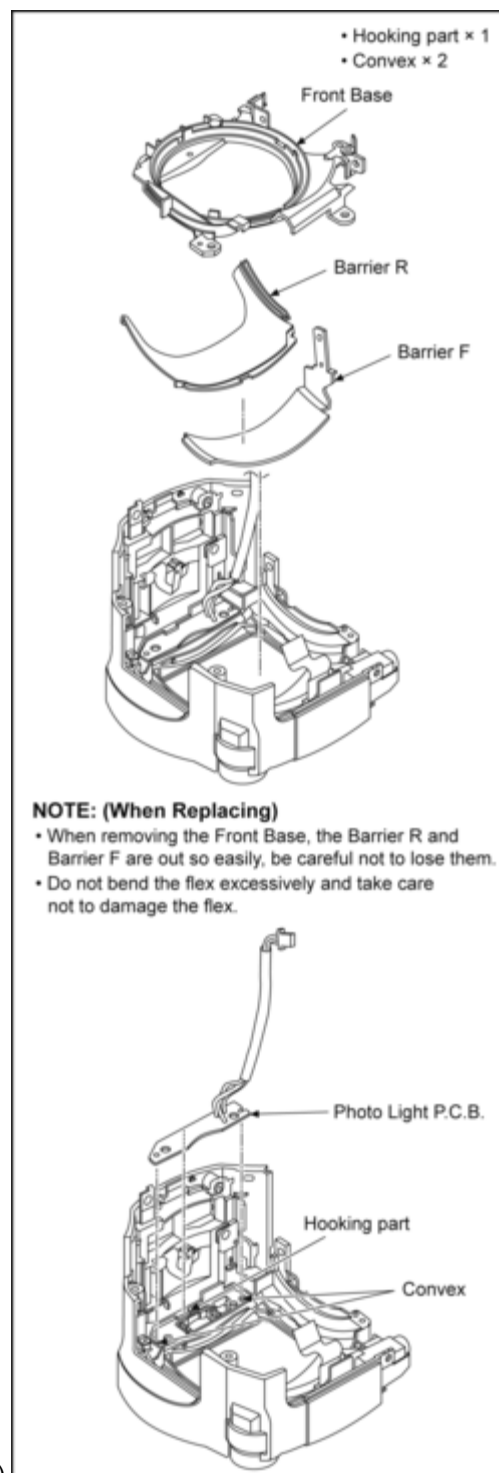


(Fig. D28)

8.3.14 Removal of the Front Base, Barrier R, Barrier F, Photo Light P.C.B.

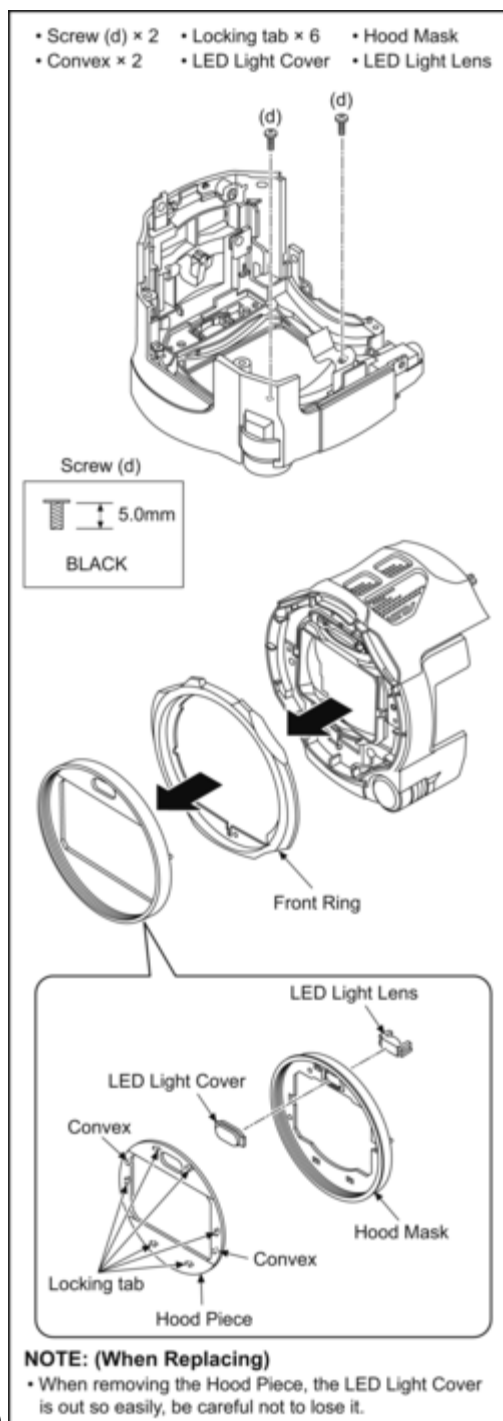


(Fig. D29)



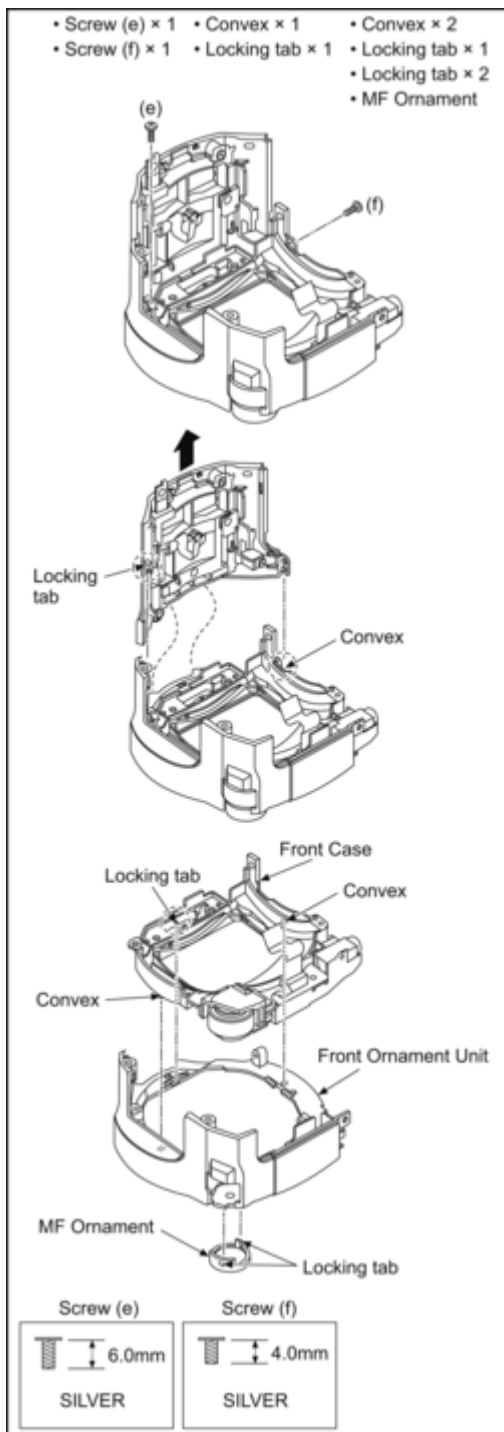
(Fig. D30)

8.3.15 Removal of the Front Ring, Hood Piece

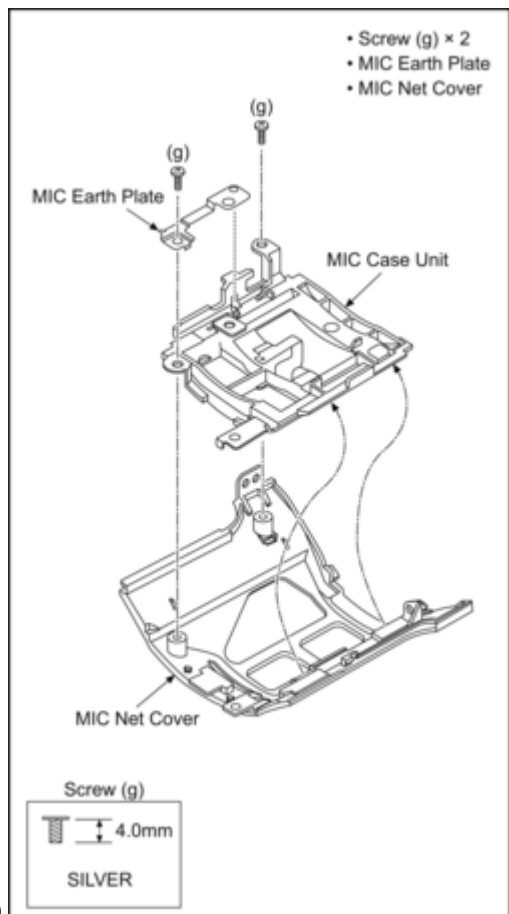


(Fig. D31)

8.3.16 Removal of the Front Case, Front Ornament Unit, Mic Case Unit

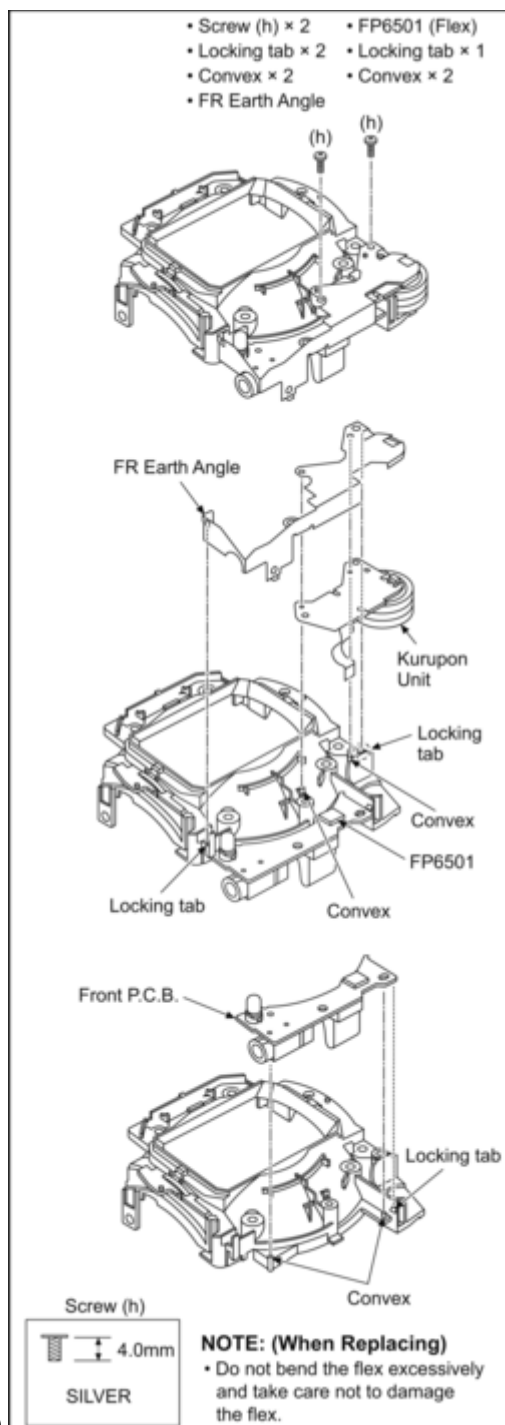


(Fig. D32)



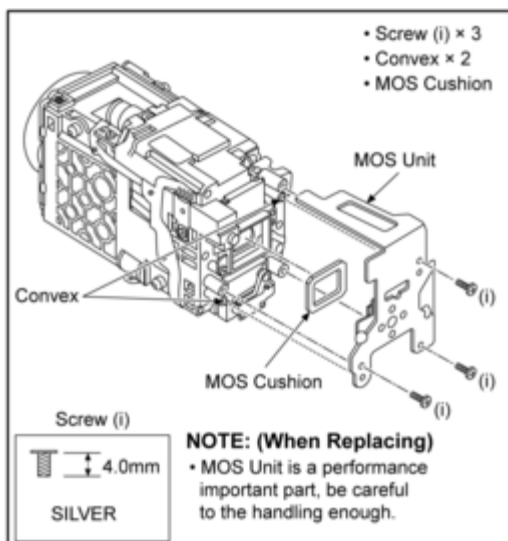
(Fig. D33)

8.3.17 Removal of the Kurupon Unit, Front P.C.B.



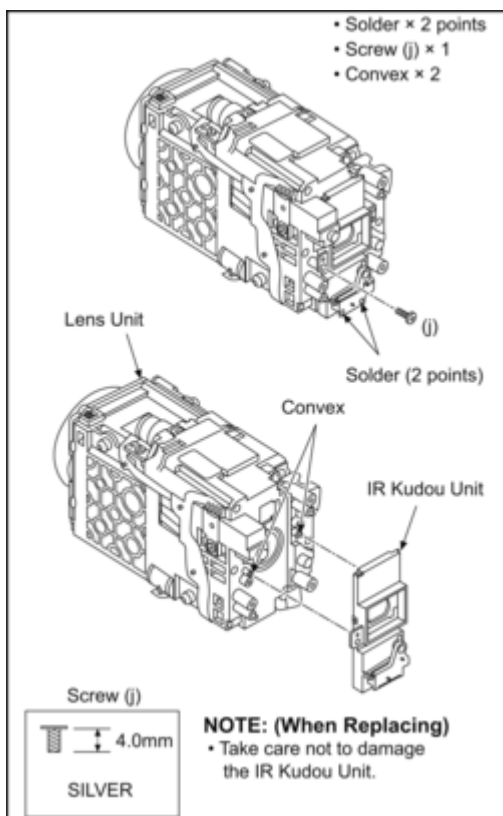
(Fig. D34)

8.3.18 Removal of the MOS Unit



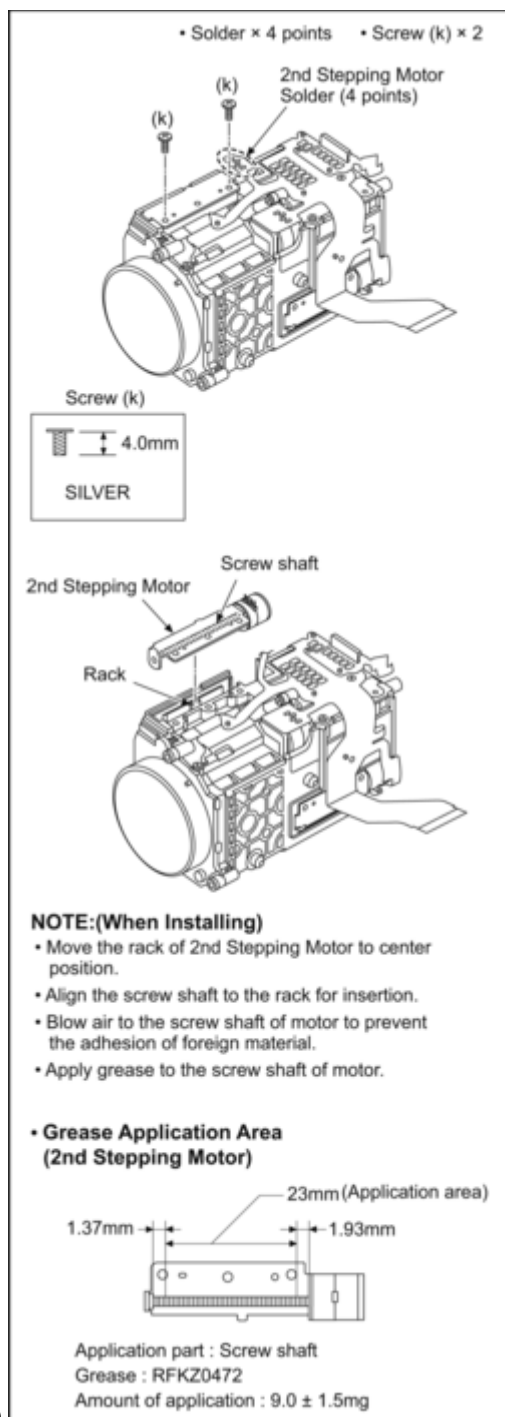
(Fig. D35)

8.3.19 Removal of the IR Kudou Unit



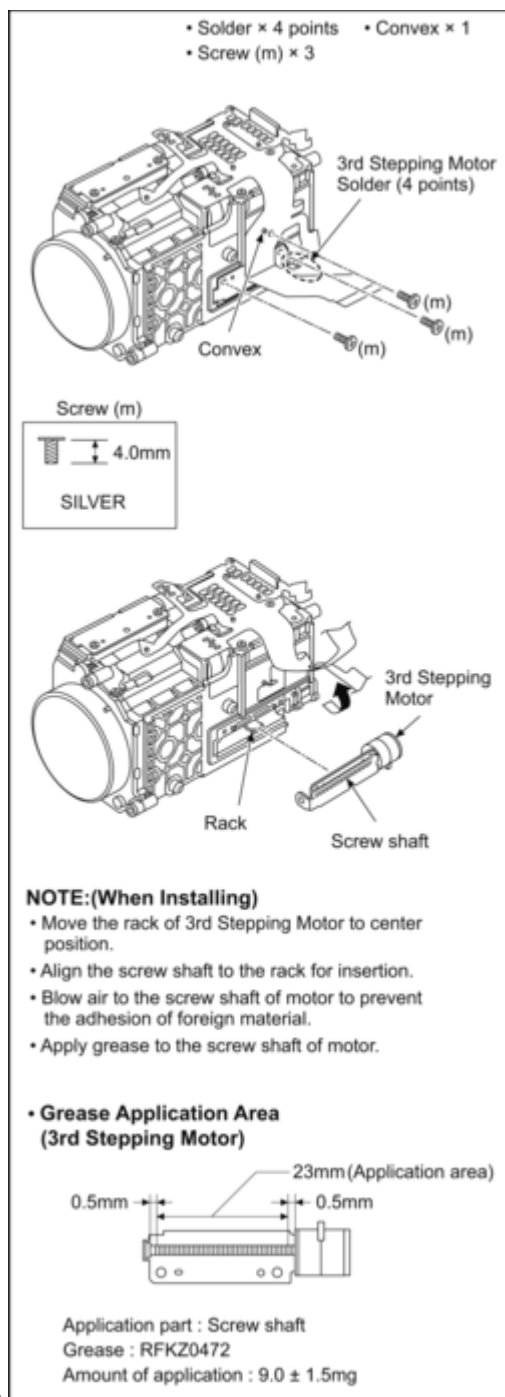
(Fig. D36)

8.3.20 Removal of the 2nd Stepping Motor



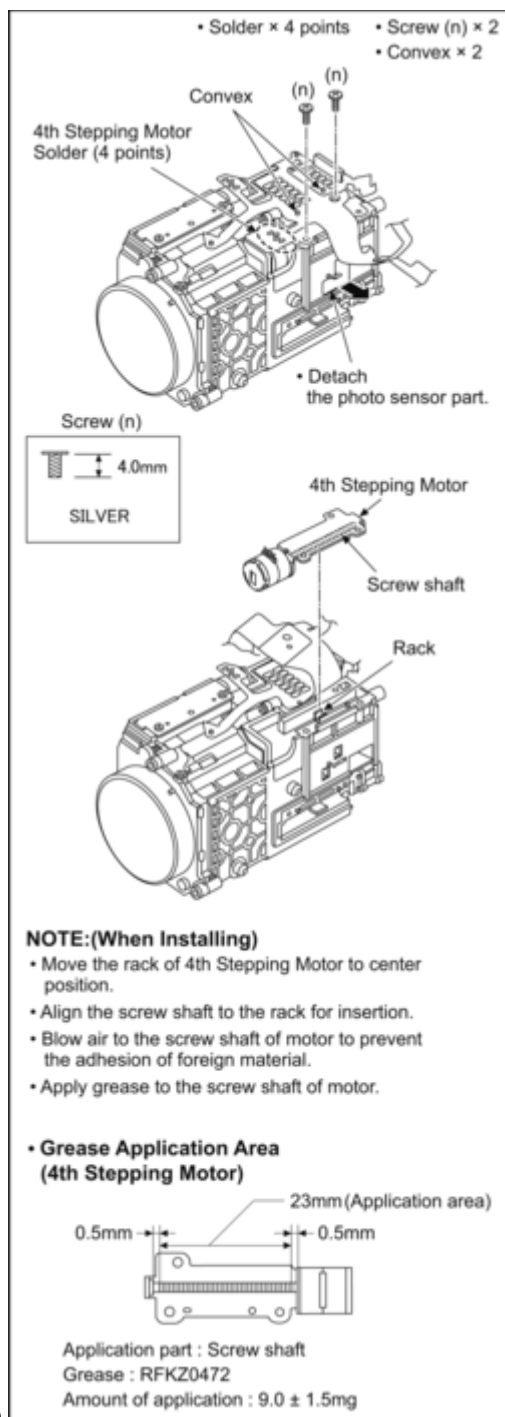
(Fig. D37)

8.3.21 Removal of the 3rd Stepping Motor



(Fig. D38)

8.3.22 Removal of the 4th Stepping Motor



(Fig. D39)

9 Measurements and Adjustments

9.1 Electric Adjustment

- An exclusive jig are necessary for electric adjustment.
- Connection method of the main unit and an exclusive adjustment jig as follows.

Figure of connection

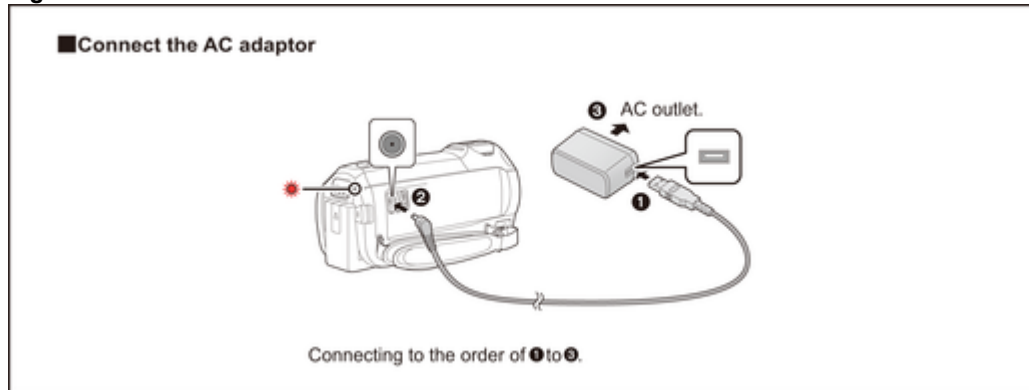
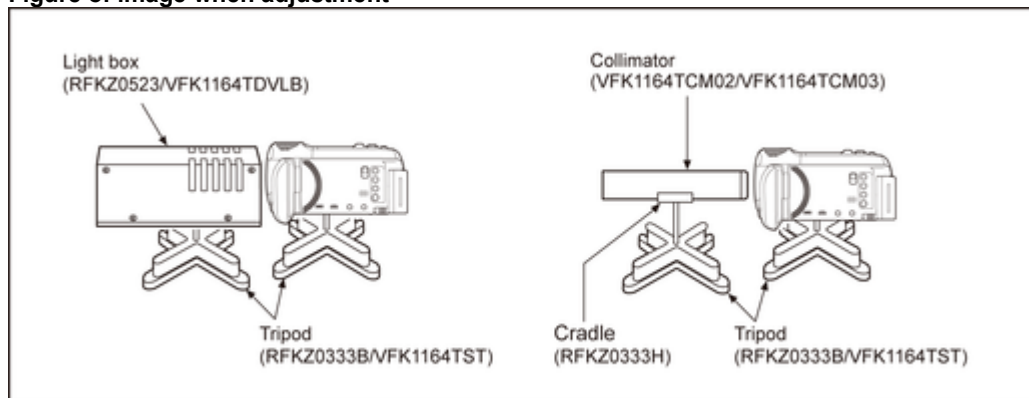


Figure of image when adjustment



Part Number of jig

1. Basic Jig

Item	Contents
AC adaptor	Banded with camcorder
DC Cable	Banded with camcorder

2. Optical Jig for Camera Adjustment

Item	Part number	Remarks
Light box	VFK1164TDVLB/RFKZ0523*	Need external power supply: 12V $\pm$ 0.1V /1.8A or over
Collimator with focus chart	VFK1164TCM02/VFK1164TCM03	Same as DSC
CC filter	3100K/5100K	VFK1164CC10G
		Need 2 set. For indoor/outdoor white balance adjutment
C2 Filter	5100K	VFK1164LBB2
		For outdoor white balance adjustment
C8 Filter	5100K	VFK1164LBB8
		For outdoor white balance adjustment

ND Filter 0.1	3100K	VFK1164ND01	For indoor white balance adjustment
ND Filter 0.6	3100K	VFK1164ND06	For indoor white balance adjustment
Adjustment chart for Level Shot		Banded with this Manual	For Level shot adjustment

* RFKZ0523 (same as DSC) is recommended.

[Level Shot Adjustment Chart]

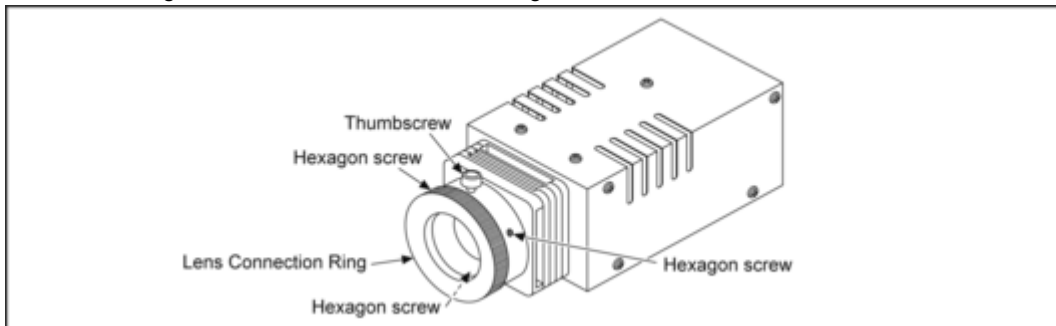


9.1.1 About Light Box

When using VFK1164TDVLB Light Box

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

* RFKZ0523 Light Box has no lens connection ring.

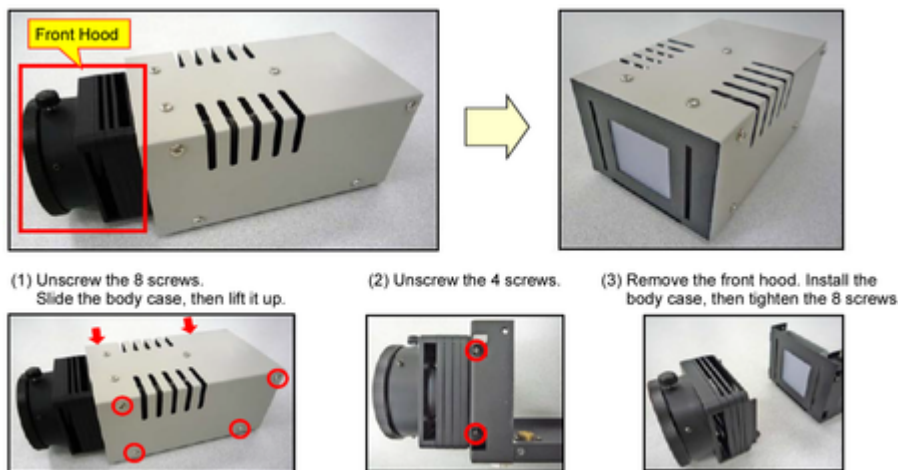


How to remove the Front Hood

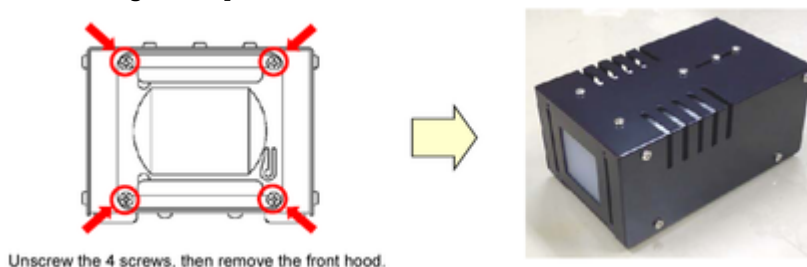
In order to utilize maximum of the diffusing surface of light box, some adjustment items need the distance between diffusing surface of light box and camera body becomes several centimeters.

Before the adjustments, remove the front hood of light box following steps below.

[For VFK1164TDVLB Light Box]



[For RFKZ0523 Light Box]



9.1.2 Adjustment Items

Adjustment item as follows.

Adjustment item Replacement part			Adjustments						Settings	
			Camera Adjustments ^{*1}	Zoom Tracking Adjustment	Indoor White Balance Adjustment	Outdoor White Balance Adjustment	Level Shot adjustment ^{*2}	Touch Panel Calibration	Model setting	Factory settings
MAIN P.C.B.			○	○	○	○	○	-	○	○
	IC701	LENS DRIVE IC	○	○	-	-	○	-	-	-
	IC751	ROLL GYRO	○	-	-	-	○	-	-	-
	IC1001	7CH DC/DC IC	○	○	○	○	○	-	-	-
	IC1421	REG 3V I/O	○	○	○	○	○	-	-	-
	IC3401	VENUS ENGINE	-	-	-	-	○	-	-	-
	IC3404	FLASH ROM	○	○	○	○	○	-	○	○
SD HOLDER P.C.B.			○	-	-	-	○	-	-	-
	IC6401	PIT/YAW GYRO	○	-	-	-	○	-	-	-
	IC6411	ACCELEROMETER	-	-	-	-	○	-	-	-
ESD P.C.B. ^{*3}			-	-	-	-	○	-	-	-
Wi-Fi P.C.B.			-	-	-	-	○	-	-	○
LENS UNIT			○	○	○	○	○	-	-	-
MOS UNIT			○	○	○	○	○	-	-	-
LCD CASE (B) UNIT			-	-	-	-	○	○	-	-

*1...IRIS adjustment, OIS hall amp adjustment, Missing pixels compensation, OIS gyro adjustment, AGS adjustment.

*2...Accelerometer : Since the assembly is accompanied, always need to be adjusted.

*3...HC-VX980M only

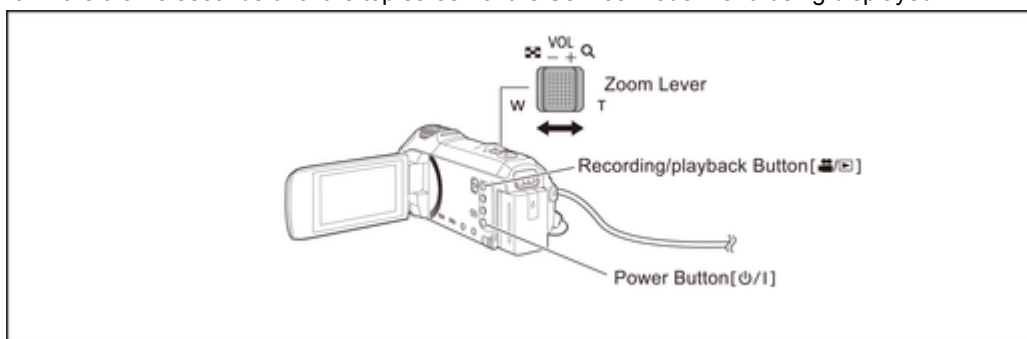
9.1.3 Adjustment Procedure

All adjustments except “Touch Panel Calibration” and “Factory Setting” performs using “14 Adjustment function for the service” in service mode menu.

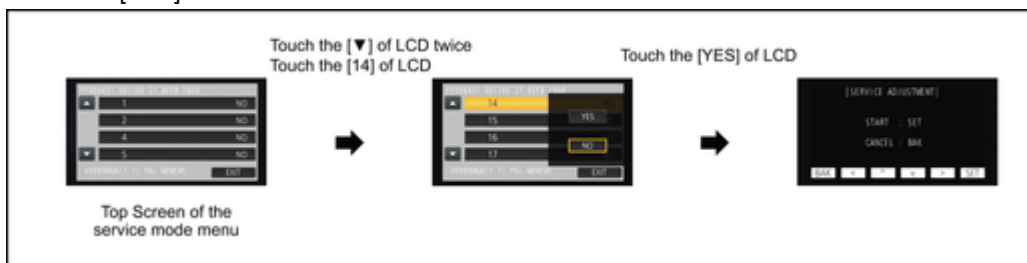
“Touch Panel Calibration” is performed using 16 of service mode menu and “Factory Setting” is performed using 1 of service mode menu. Refer to “6 Service mode” and “10 Factory Setting”.

[Execute adjustment function for service]

1. While the power is turned OFF, keep pressing the “Power” button, “Zoom Lever” to W side and “Recording/Playback” button for more than 3 seconds until the top screen of the Service Mode Menu being displayed.



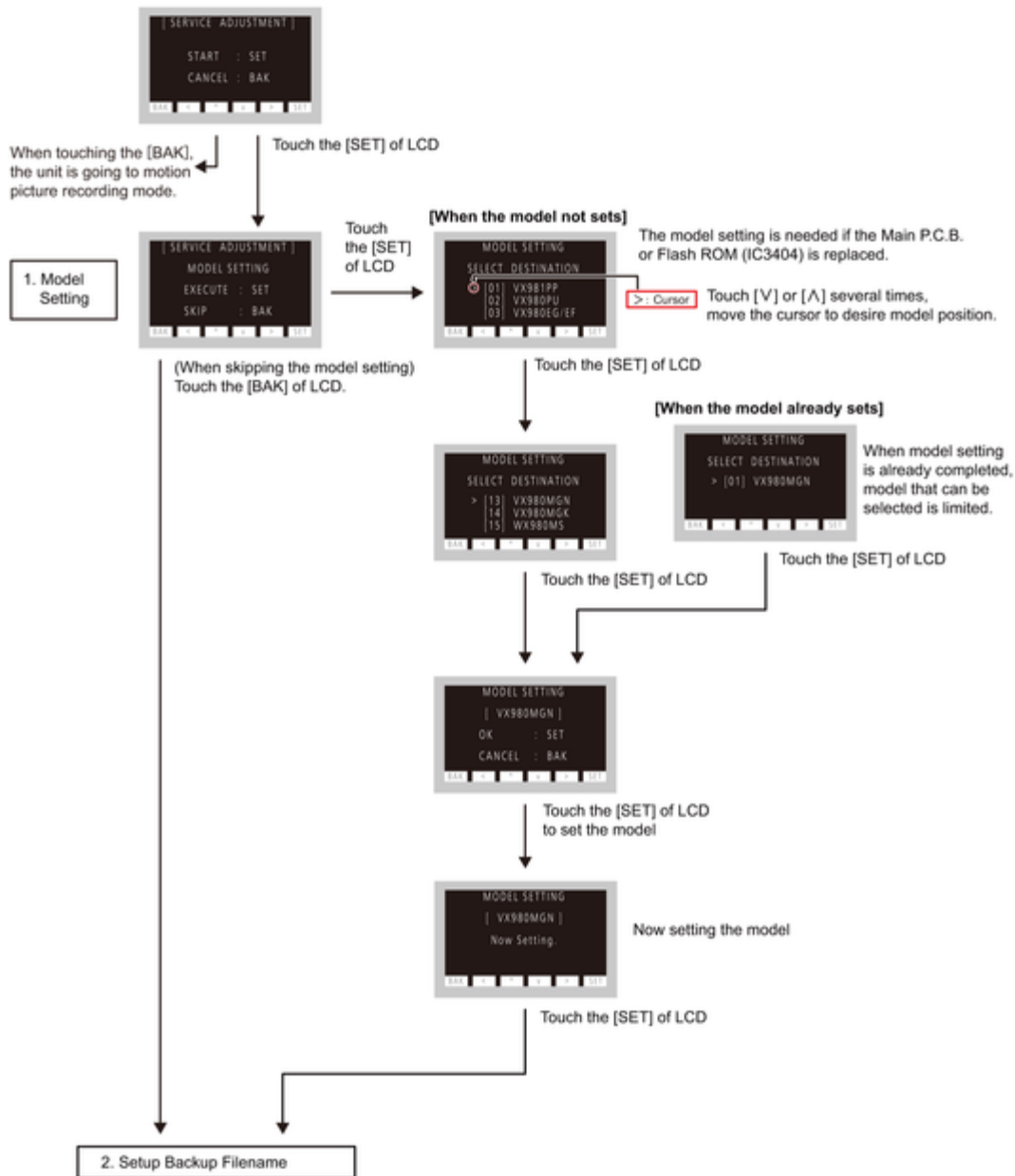
2. Touch the ▼ twice then touch the [14] of LCD.
3. Touch the [YES] of LCD.

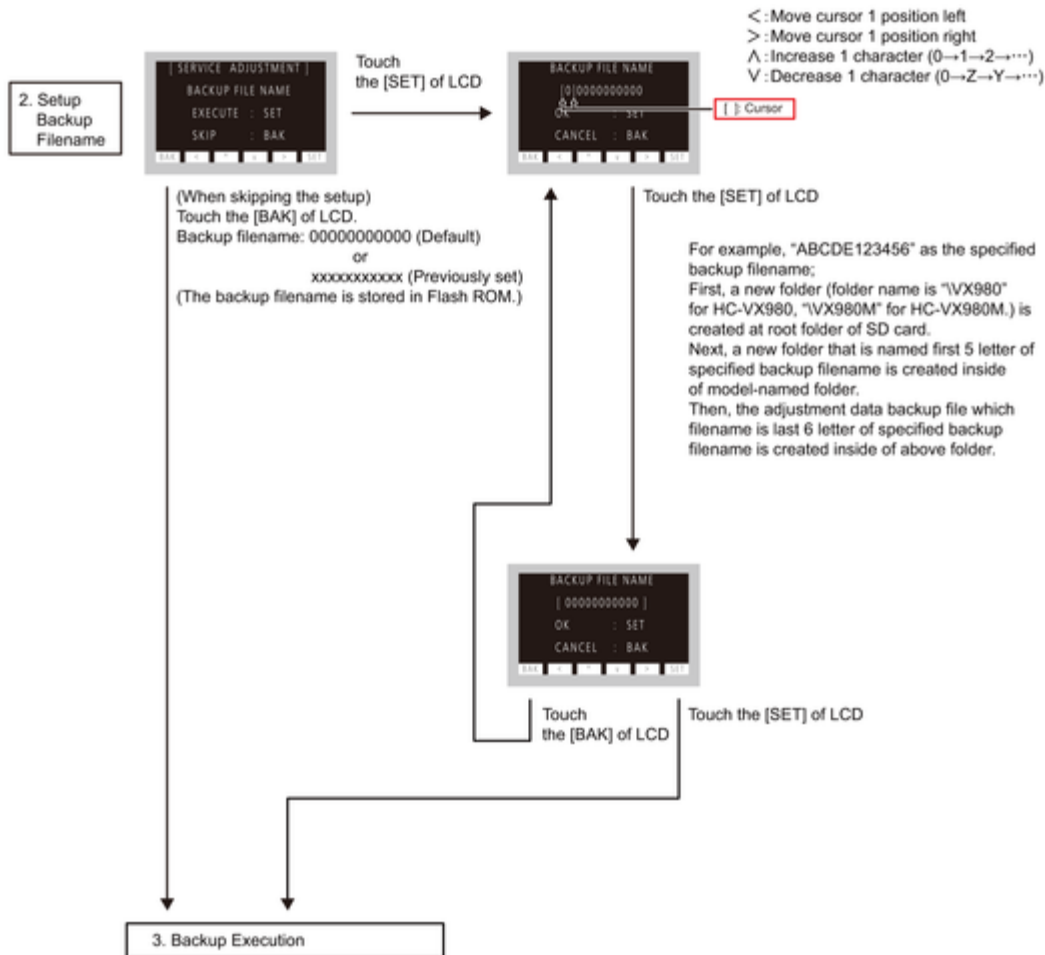


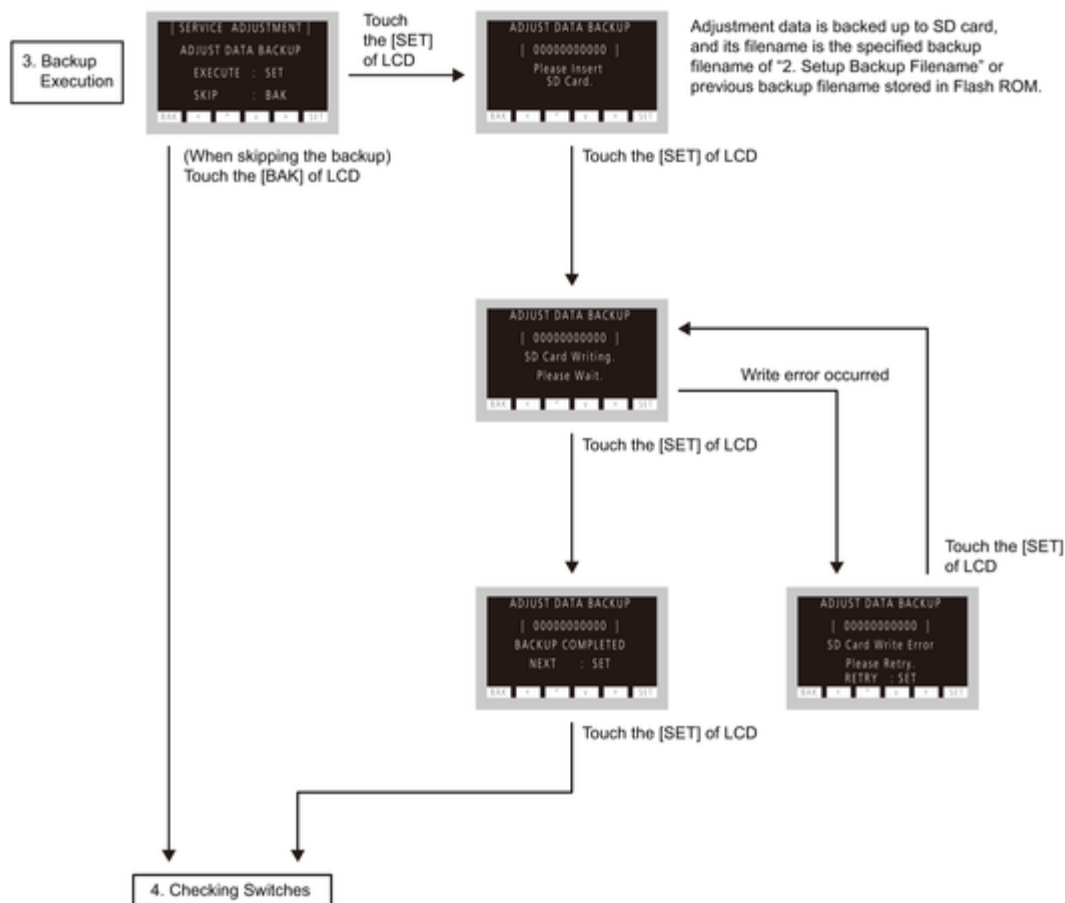
[Adjustment Procedure]

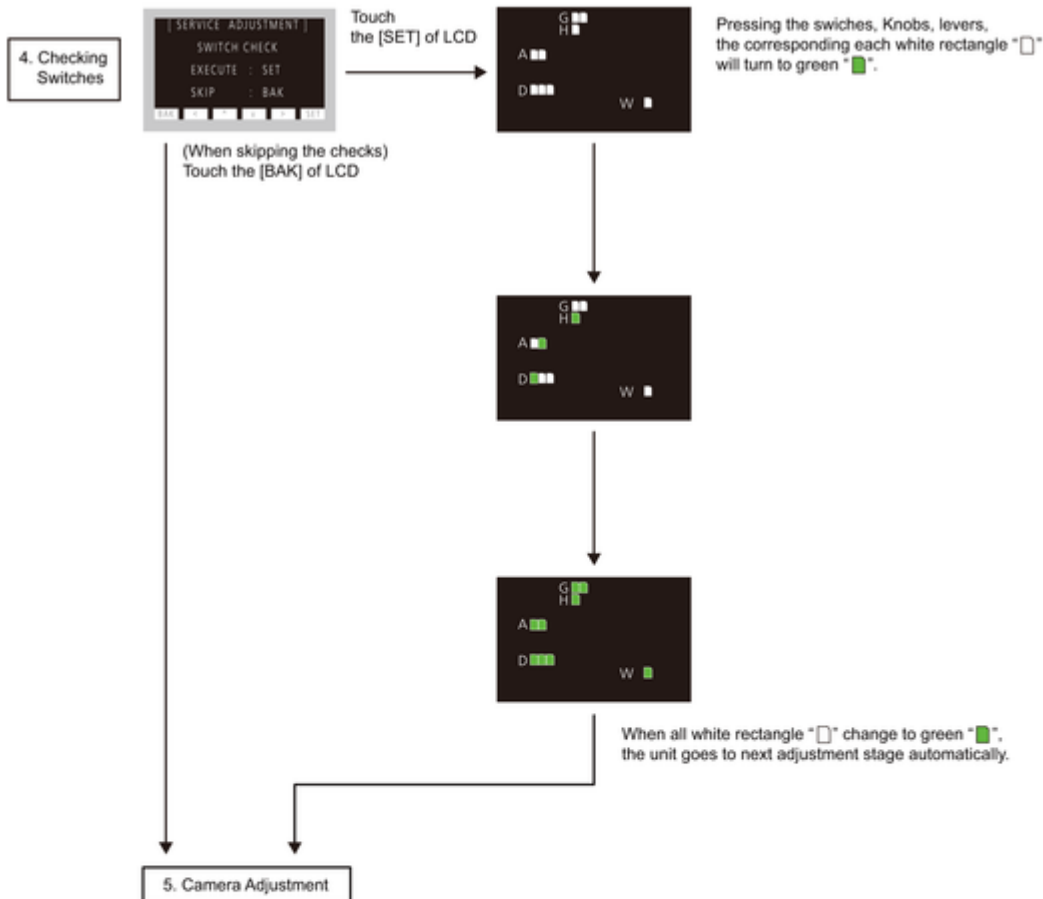
Adjustments and settings are performed following order:

1. Model setting
2. Filename setting for backup to SD card
3. Backing up adjustment data to SD card
4. Checking switches
5. Camera adjustment
6. Zoom/tracking adjustment
7. Indoor white balance adjustment
8. Outdoor white balance adjustment
9. Level shot adjustment

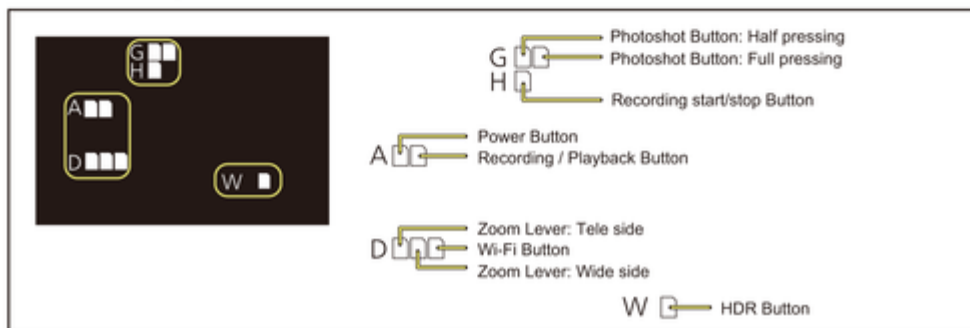


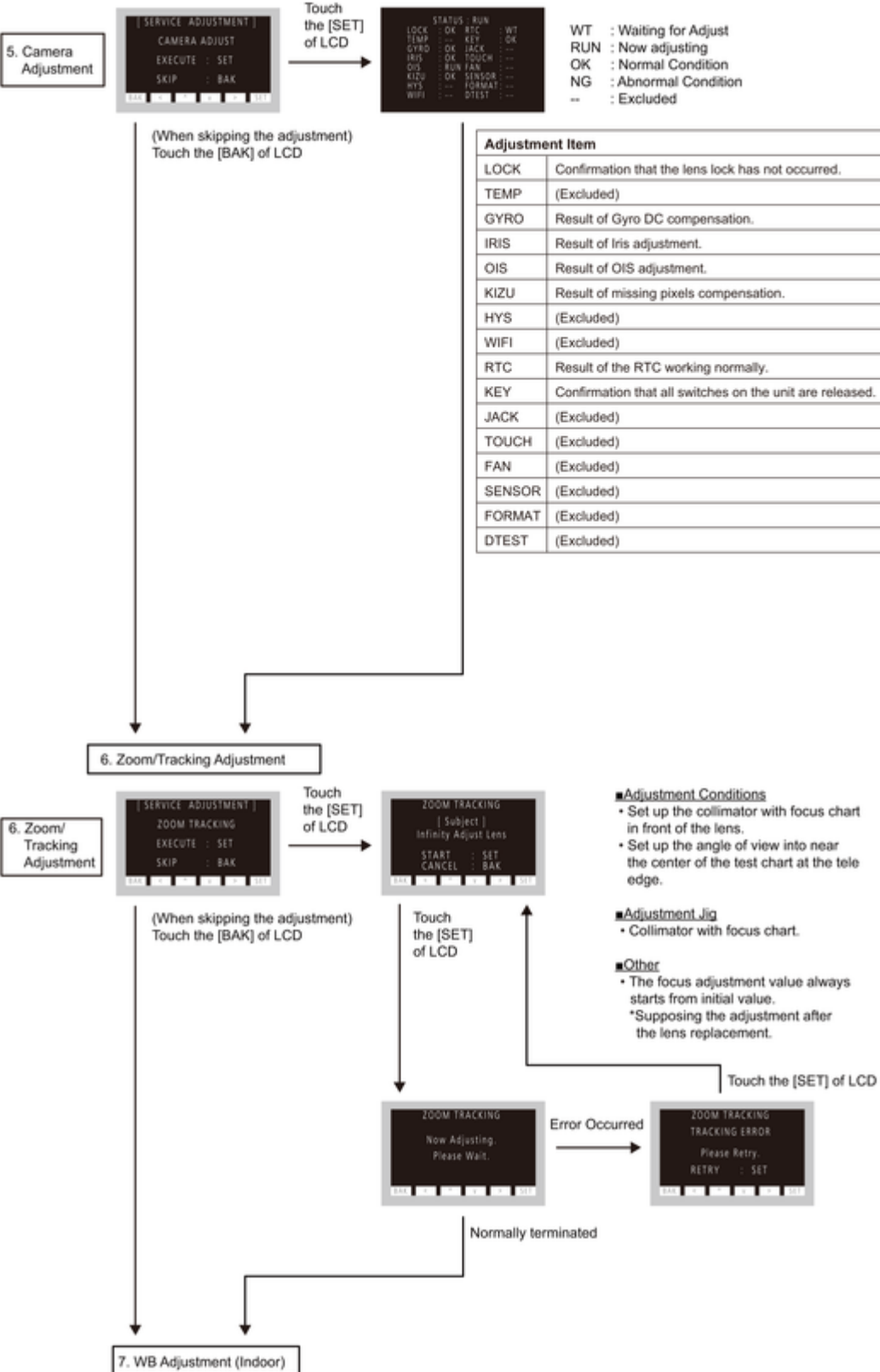


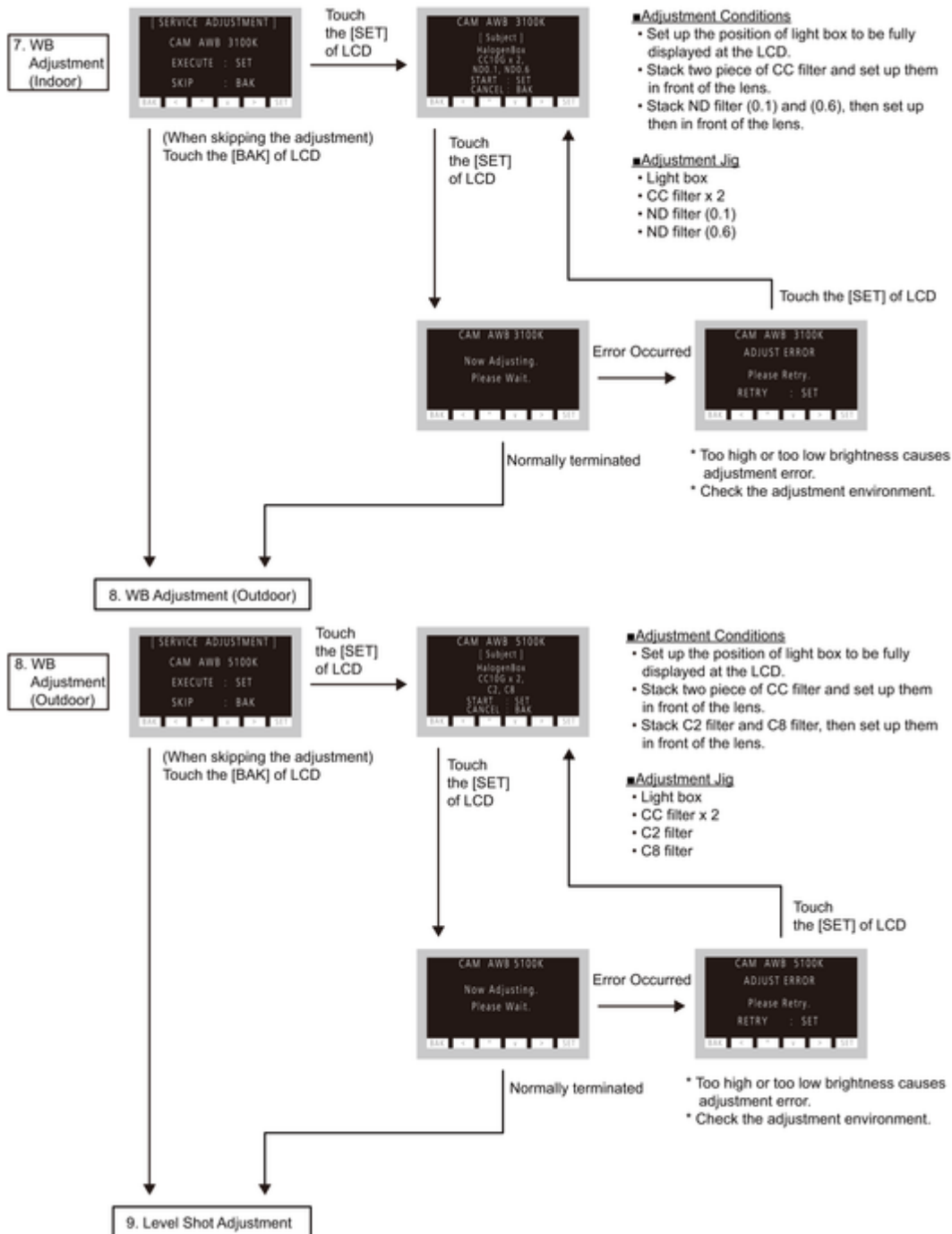


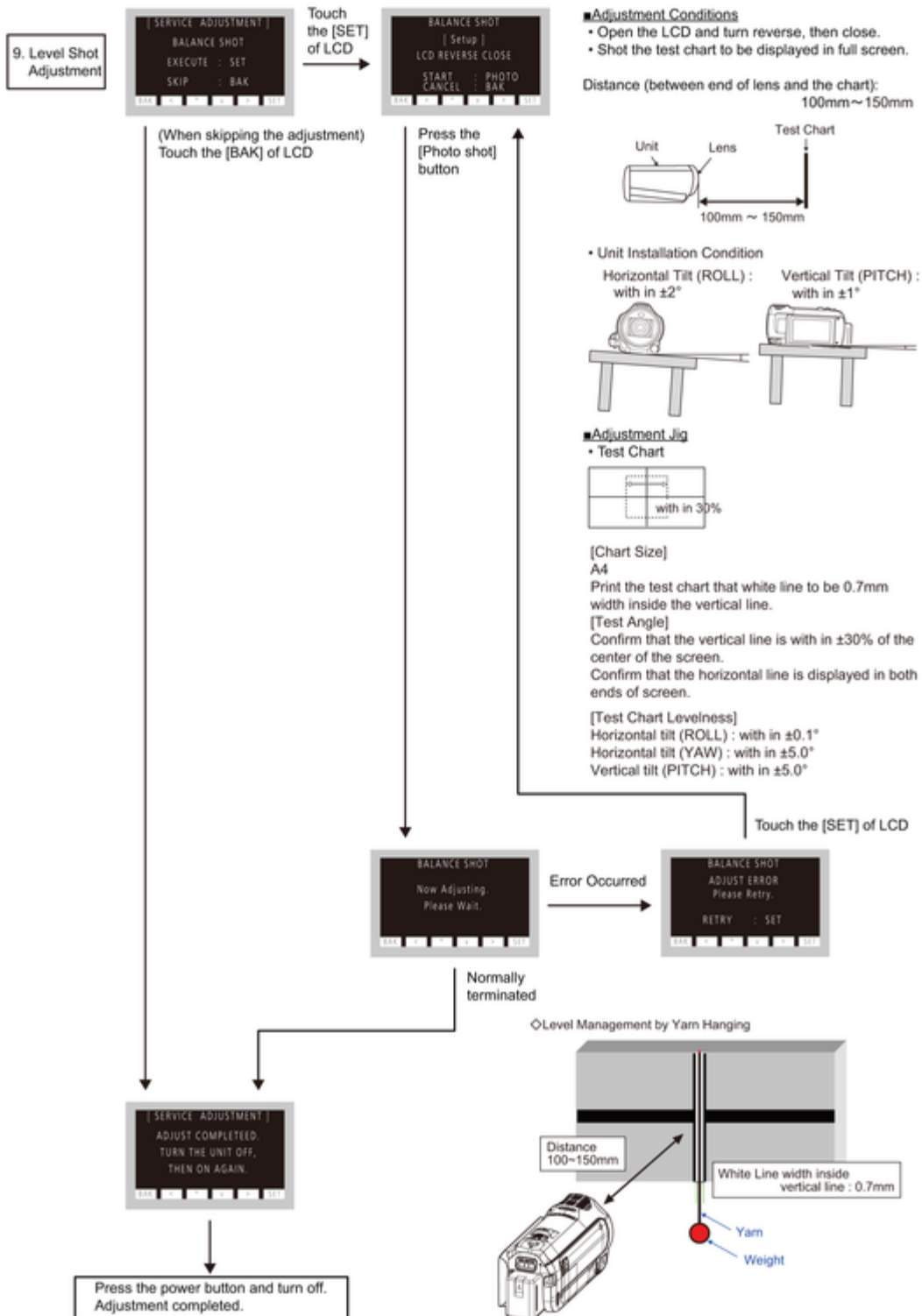


< Switches arrangement >





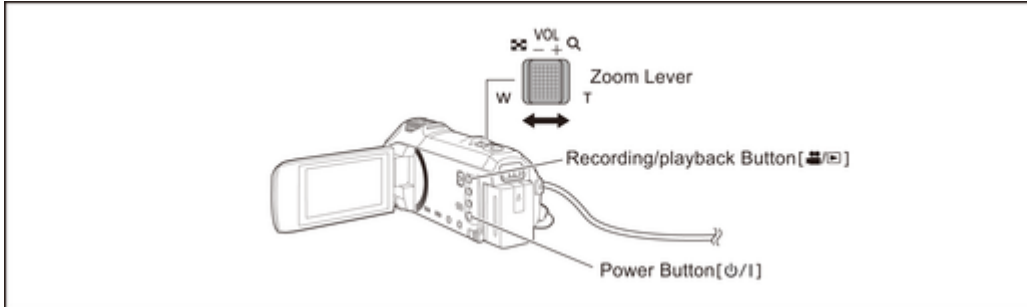




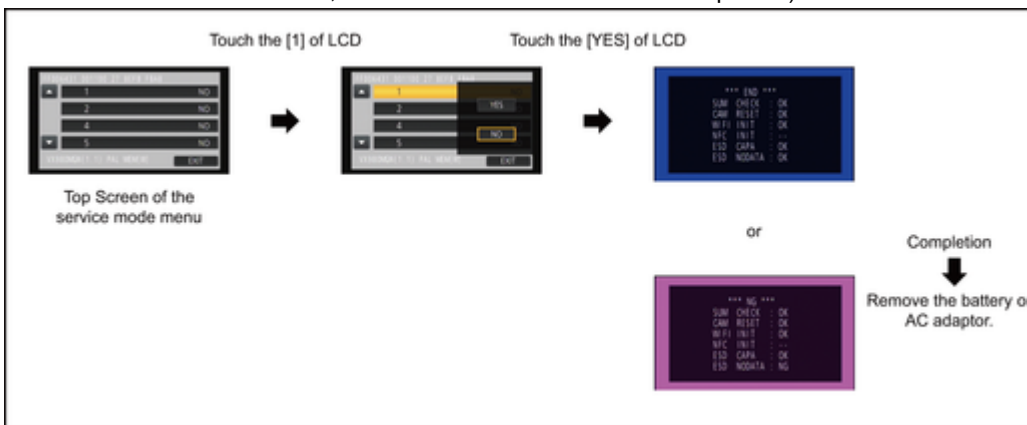
10 Factory Setting

10.1 How To Turn On The Factory Settings?

1. While the power is turned OFF, keep pressing the “Power” button, “Zoom Lever” to W side and “Recording/Playback” button for more than 3 seconds until the top screen of the Service Mode Menu being displayed.



2. Touch the [1] of LCD.
3. Touch the [YES] of LCD.
4. 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.

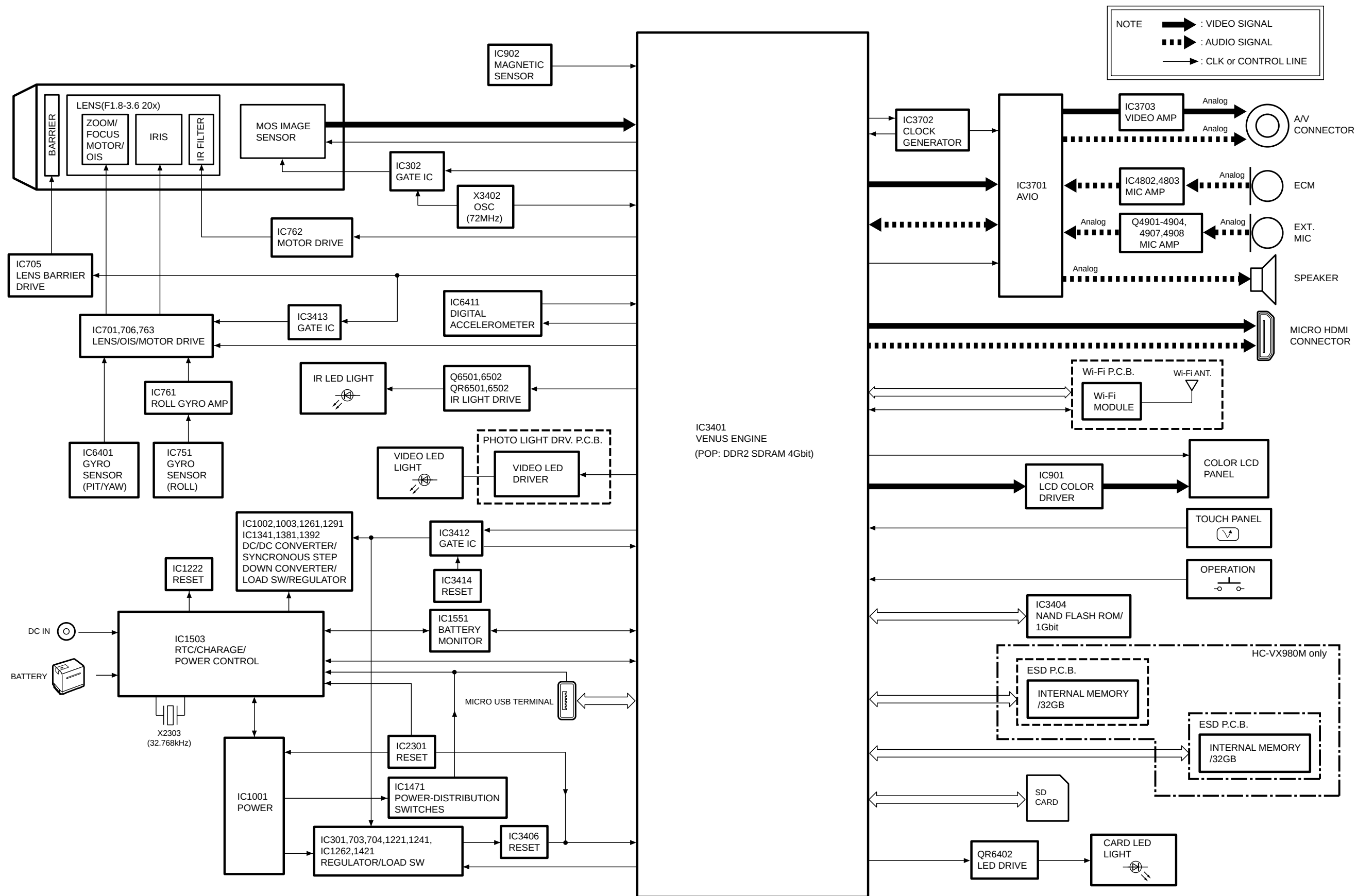
1. Setting Values of menu.
2. Clear the time and date setting.
3. Initialize the Wi-Fi data settings.
4. Confirm that the built-in memory capacity is correct. (HC-VX980M only)
(Checking of the built-in memory mounting error.)
5. Confirm that the data area of built-in memory is cleared. (HC-VX980M only)
6. Close the lens cover

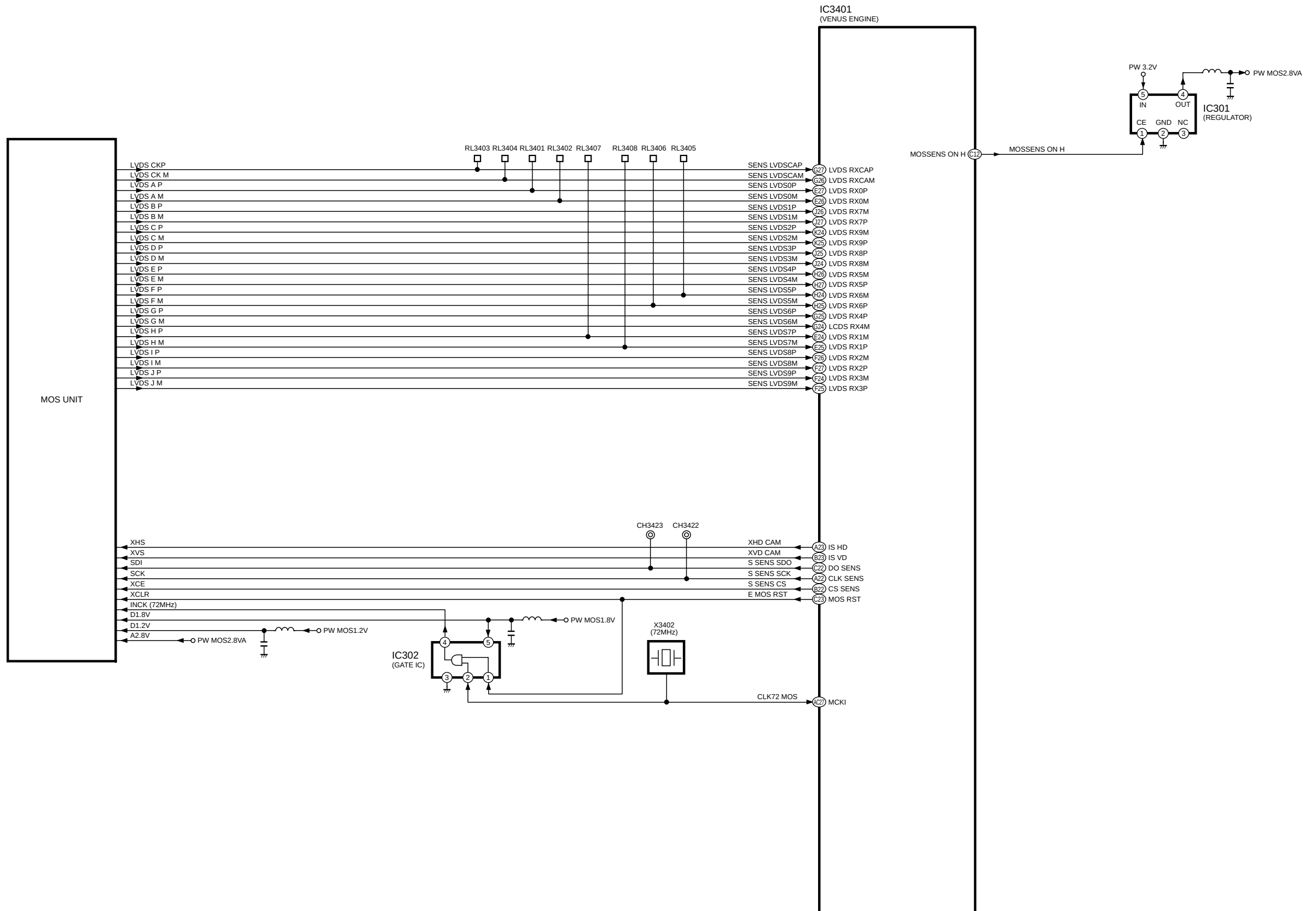
(HC-VX980M only)

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

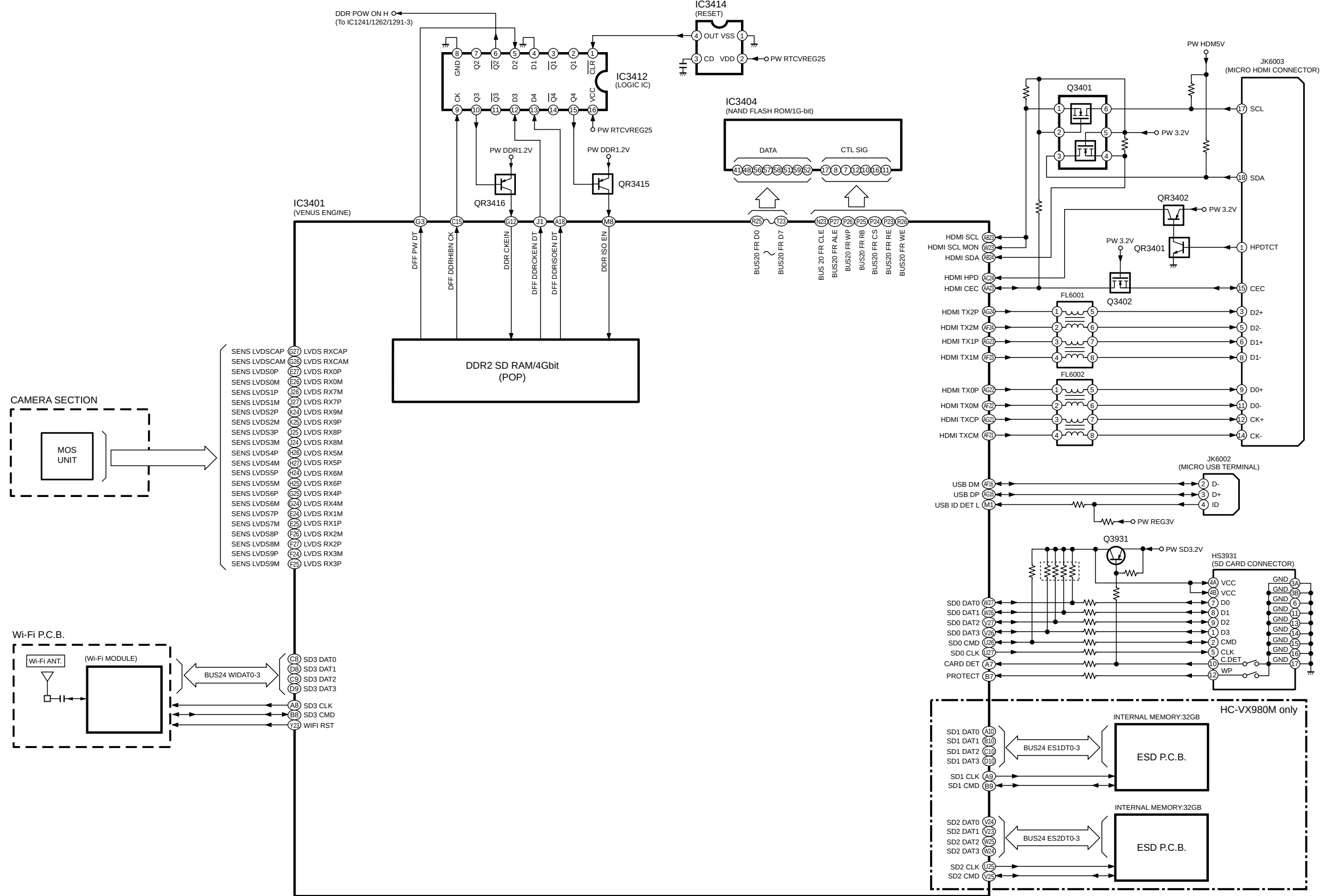
To physically format the built-in memory, connect the unit via the AC adaptor, select [SETUP] → [FORMAT MEDIA] → [Built-inMemory] from the menu, and then press and hold the recording start/stop button on the screen below for about 3 seconds. When the built-in memory data deletion screen appears, select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



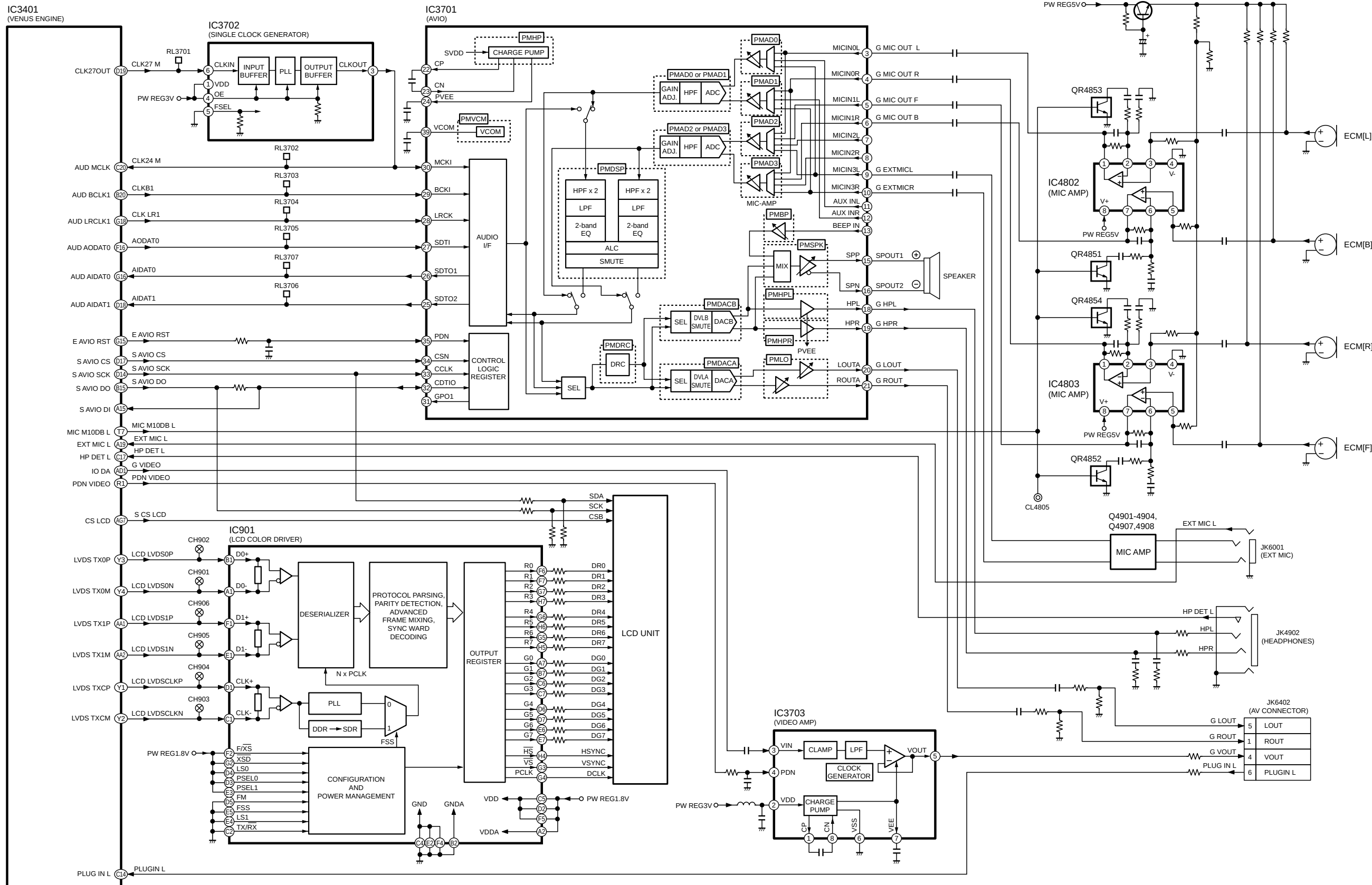








IC3401
(VENUS ENGINE)



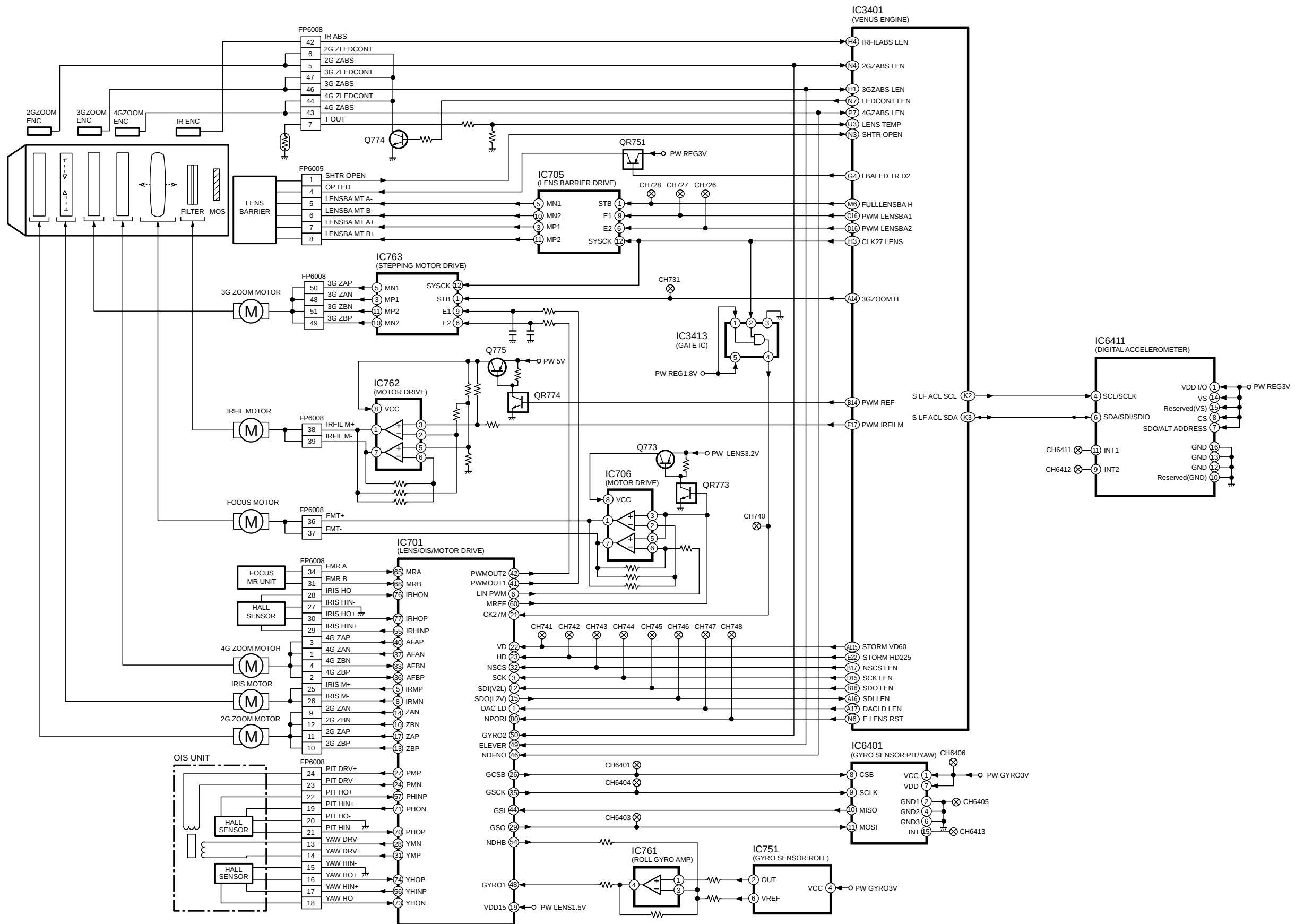


PHOTO LIGHT P.C.B.
(COMPONENT SIDE)

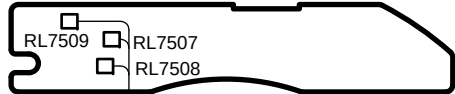
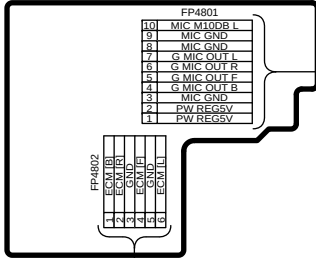


PHOTO LIGHT WIRE

PHOTO LIGHT
DRV. P.C.B.

MIC P.C.B.
(COMPONENT SIDE)



ECM RELAY FFC

LENS BARRIER

PHOTO LIGHT FFC

MAIN P.C.B.
(FOIL SIDE)

※ [Dashed Box] : (COMPONENT SIDE)

FP6005
1 LENS SW A2
2 LENS SW A1
3 OPT LED
4 D GND
5 SHTR OPEN

MIC

HC-VX980M only

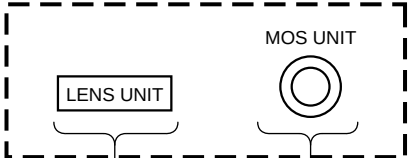
ESD P.C.B.

ESD FFC UNIT

FP6001
1 SDO VDD
2 SDO VDD
3 SDO VDD
4 SDO VDD
5 SDO VDD
6 SDO VDD
7 SDO VDD
8 SDO VDD
9 SDO VDD
10 SDO VDD
11 SDO VDD
12 SDO VDD
13 SDO VDD
14 SDO VDD
15 SDO VDD
16 SDO VDD
17 SDO VDD
18 SDO VDD
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50 SDO VDD
51 SDO VDD

FP6004
1 PW REG3V
2 PW REG3V
3 PW REG3V
4 PW REG3V
5 PW REG3V
6 PW REG3V
7 PW REG3V
8 PW REG3V
9 PW REG3V
10 PW REG3V
11 PW REG3V
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13 PW REG3V
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44 PW REG3V
45 PW REG3V
46 PW REG3V
47 PW REG3V
48 PW REG3V
49 PW REG3V
50 PW REG3V
51 PW REG3V

FP6008
1 45 ZAP
2 45 ZAP
3 45 ZAP
4 45 ZAP
5 45 ZAP
6 2G ZAP
7 2G ZAP
8 2G ZAP
9 2G ZAP
10 2G ZAP
11 2G ZAP
12 2G ZAP
13 2G ZAP
14 2G ZAP
15 2G ZAP
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51 2G ZAP



Wi-Fi P.C.B.

Wi-Fi FPC

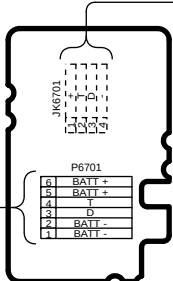
HC-VX980M only

ESD P.C.B.

ESD FFC

BATTERY CATCHER P.C.B.
(FOIL SIDE)

※ [Dashed Box] : (COMPONENT SIDE)



BATTERY

TOP OPERATION

BATTERY CATCHER WIRE

SD HOLDER P.C.B.
(FOIL SIDE)

FP4803
1 STANDBY LED
2 POWER LED
3 LED GND
4 VTR KEY
5 VTR KEY2
6 VTR KEY3
7 ZOOMAD
8 AVREF (L RV)

P6003
1 BATT +
2 BATT +
3 BATT +
4 BATT +
5 BATT +
6 BATT +
7 BATT +
8 BATT +
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51 BATT +

SPEAKER

P6401
1 SP-OUT1
2 SP-OUT2

PS6401
1 CARD LED B
2 S GYRO CSB
3 S GYRO SCK
4 S GYRO SO
5 S GYRO SI
6 GYRO GND
7 PW GYRO3V
8 S I/F ACL SCI
9 S I/F ACL SDA
10 D GND
11 SD CMD
12 SD DATA2
13 SD DATA3
14 SD DATA0
15 SD DATA1
16 D GND
17 SD CLK
18 D GND
19 E CARD PRO
20 BATT +
21 BATT +
22 BATT +
23 BATT +
24 BATT +
25 BATT +
26 BATT +
27 BATT +
28 BATT +
29 BATT +
30 BATT +
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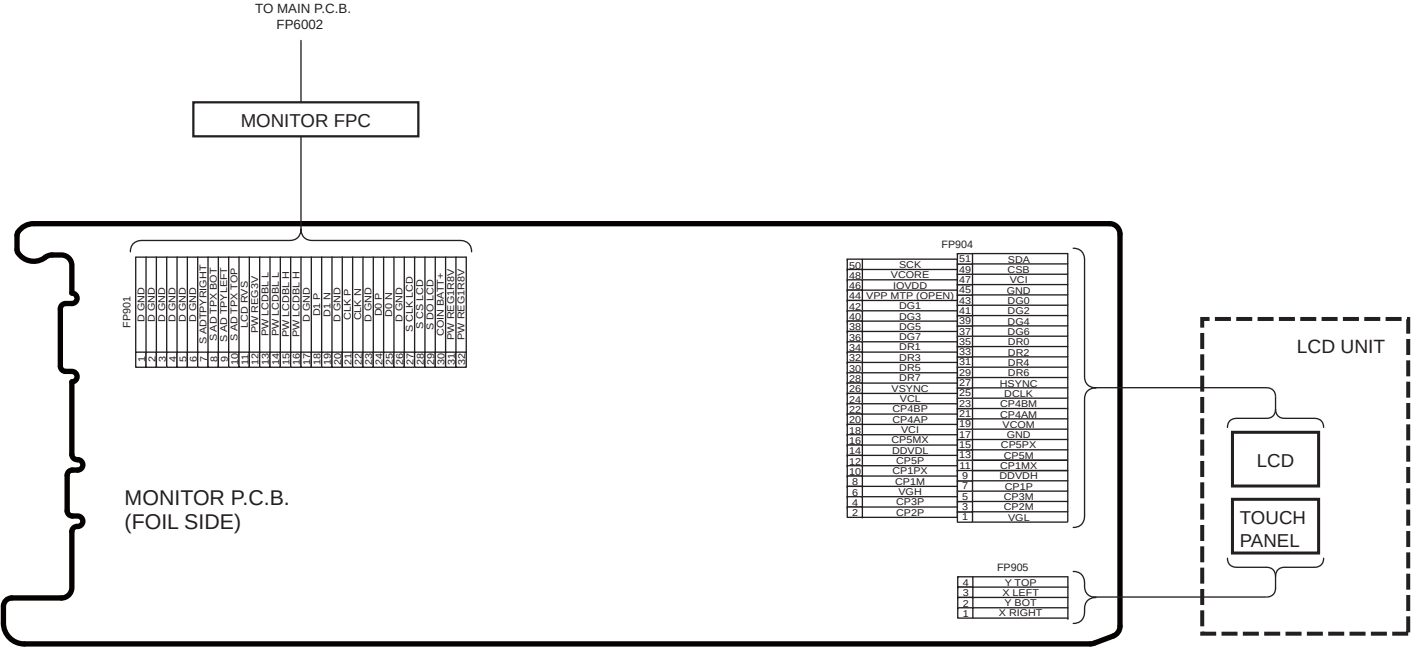
FRONT P.C.B.
(FOIL SIDE)

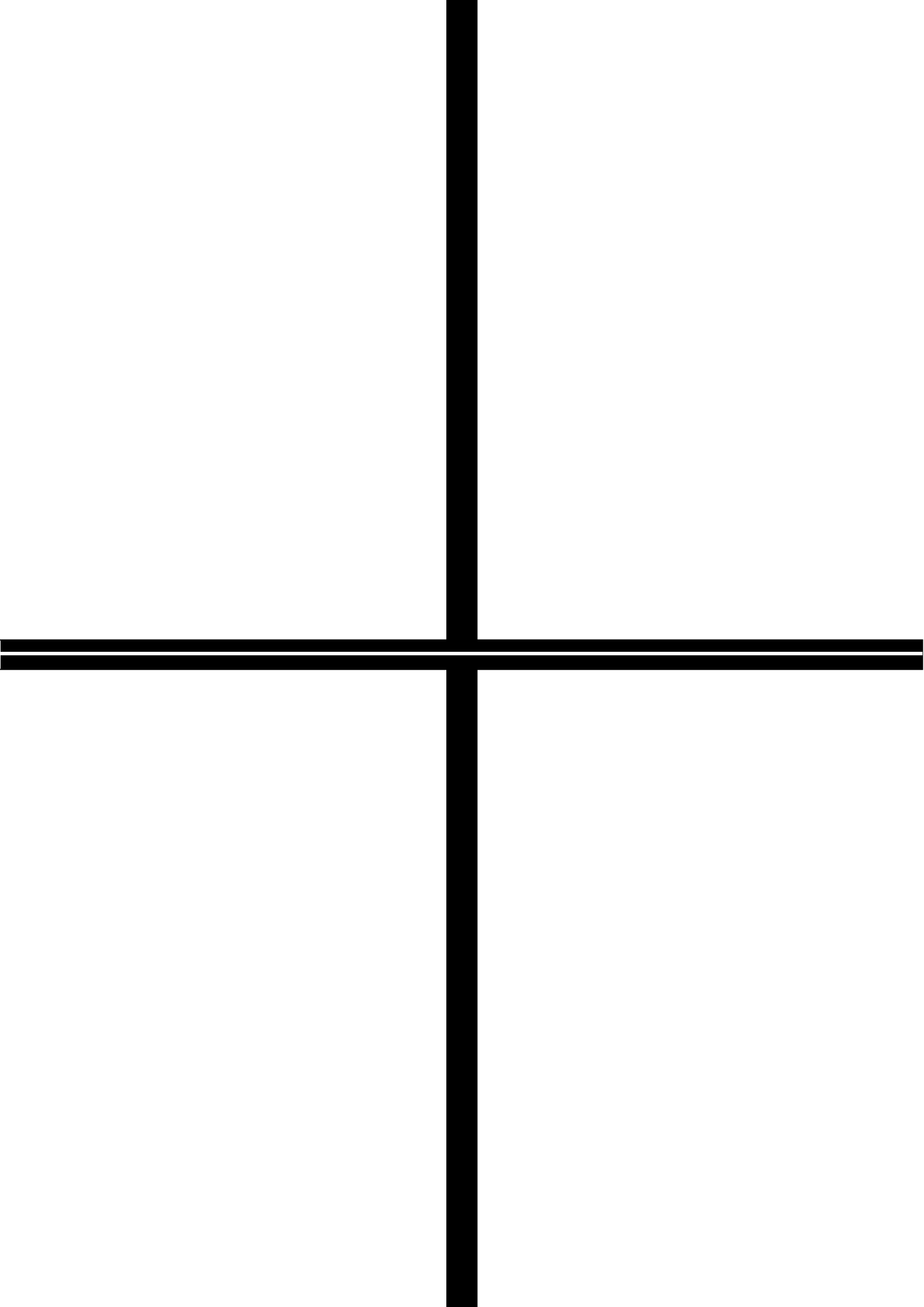
※ [Dashed Box] : (COMPONENT SIDE)

KURUPON UNIT

MONITOR FPC

TO MONITOR P.C.B.
FP901



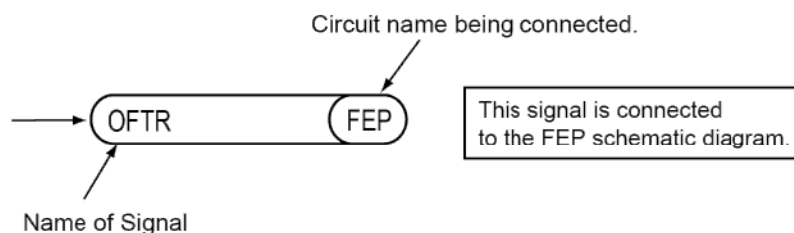


Model No. : HC-VX980M/VX980/VX981/VX989 Schematic Diagram Note

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.

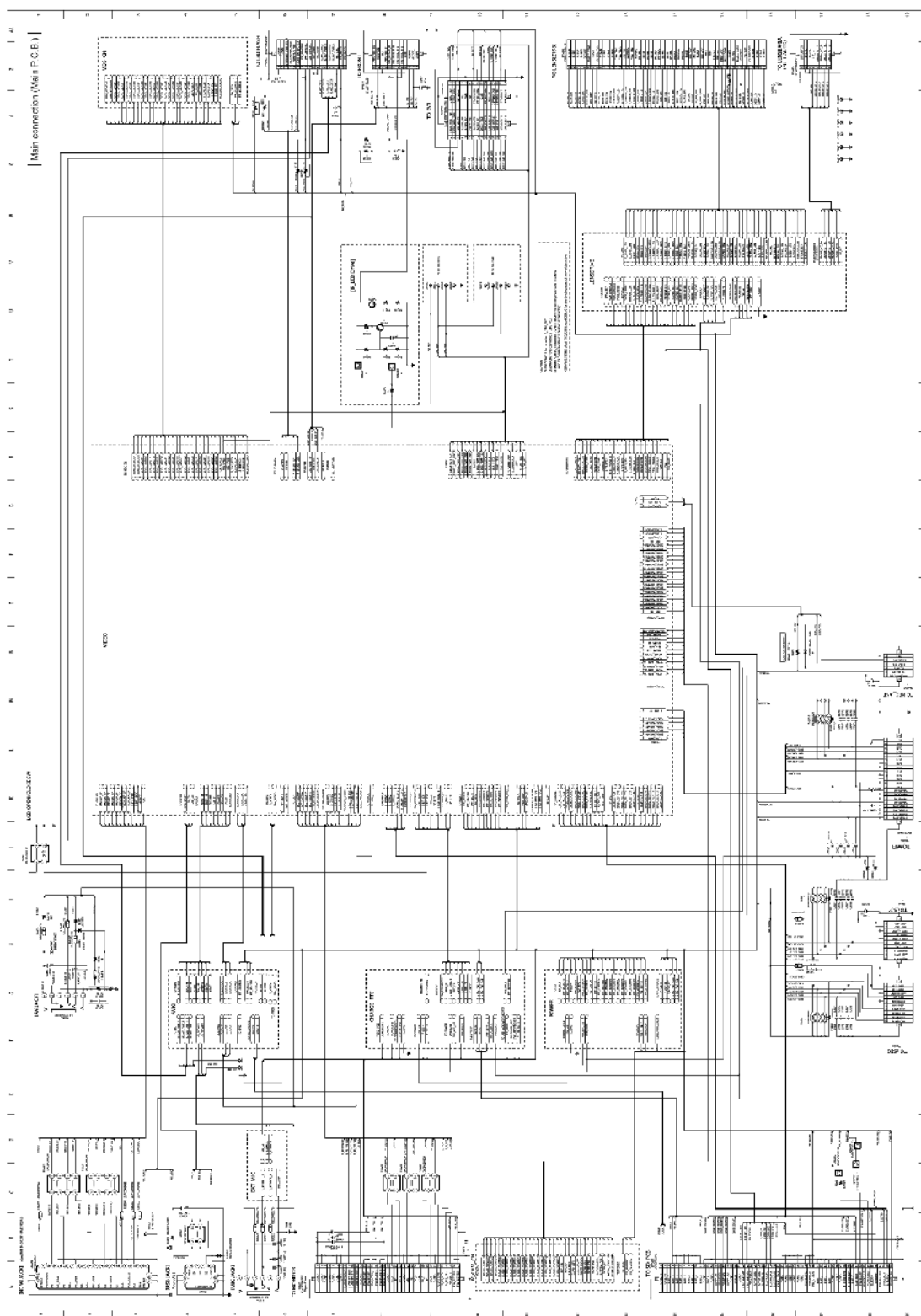
Model No. : HC-VX980M/VX980/VX981/VX989 Parts List Note

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

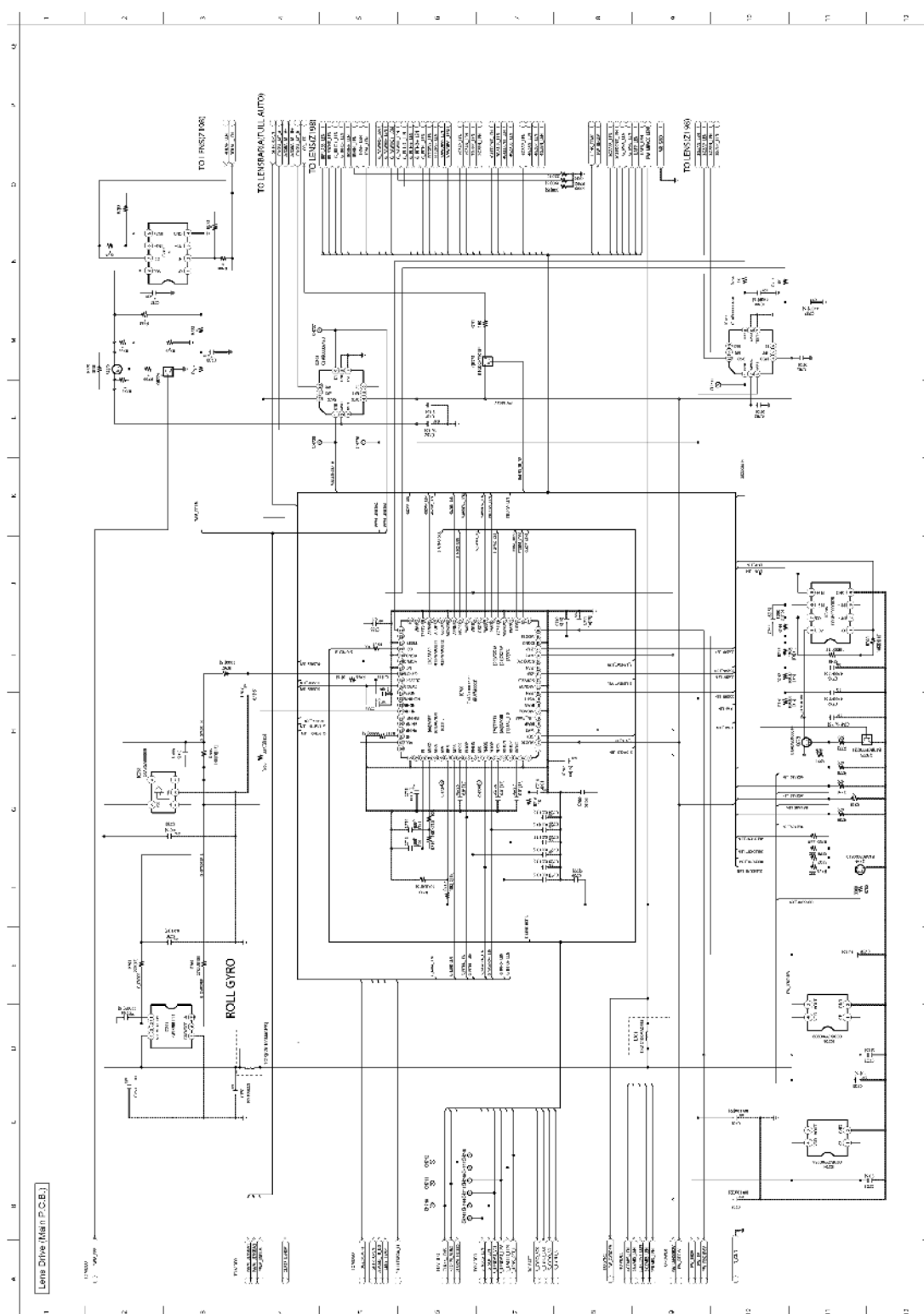
E.S.D. standards for Electrostatically Sensitive Devices, refer to PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES section.

Definition of Parts supplier:

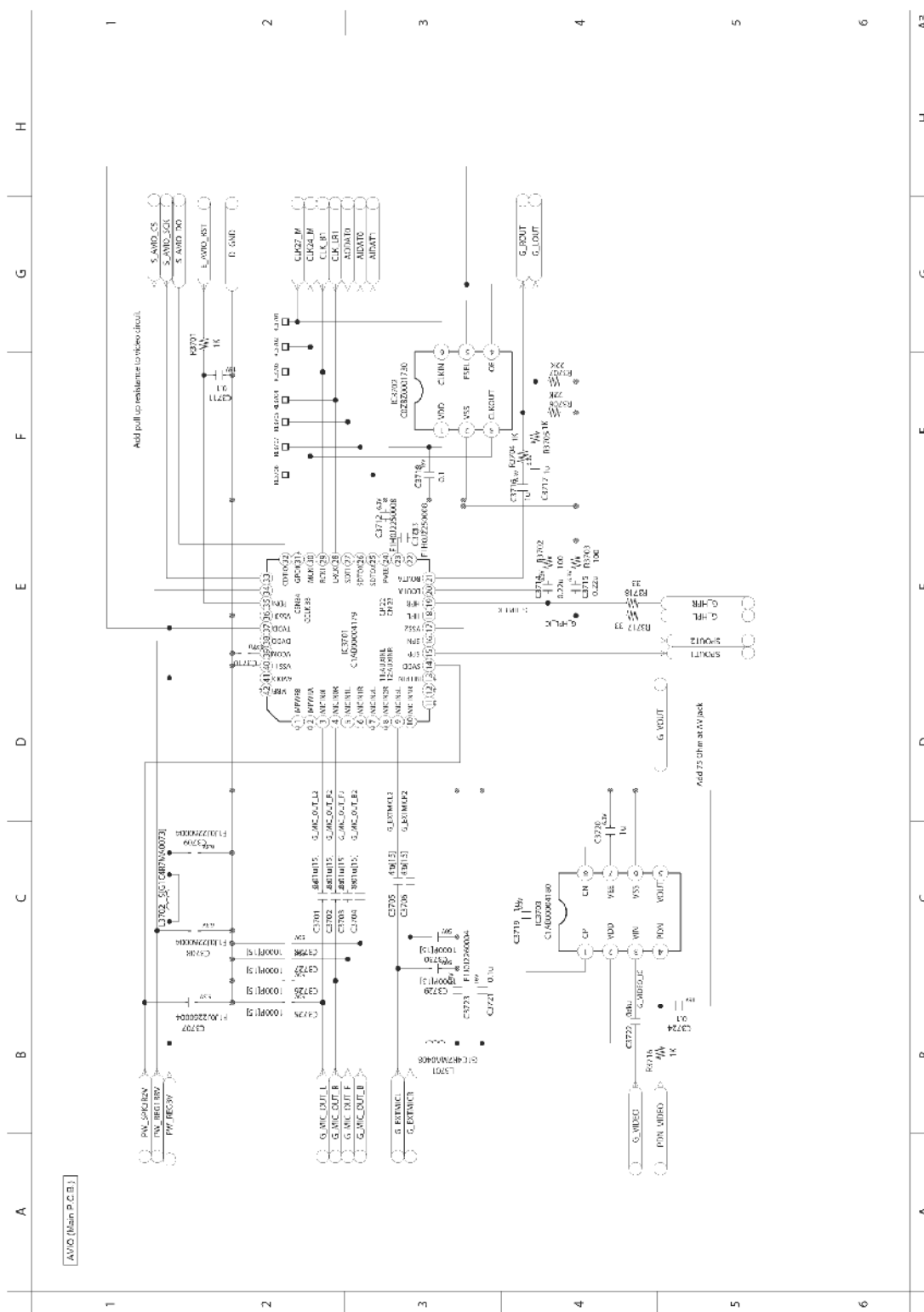
1. Parts marked with [INBD] in the remarks column are supplied from AVC-IMAGING.
Others are supplied from PAVCJM.

Model No. : HC-VX980M/VX980/VX981/VX989 Main connection (Main P.C.B.)

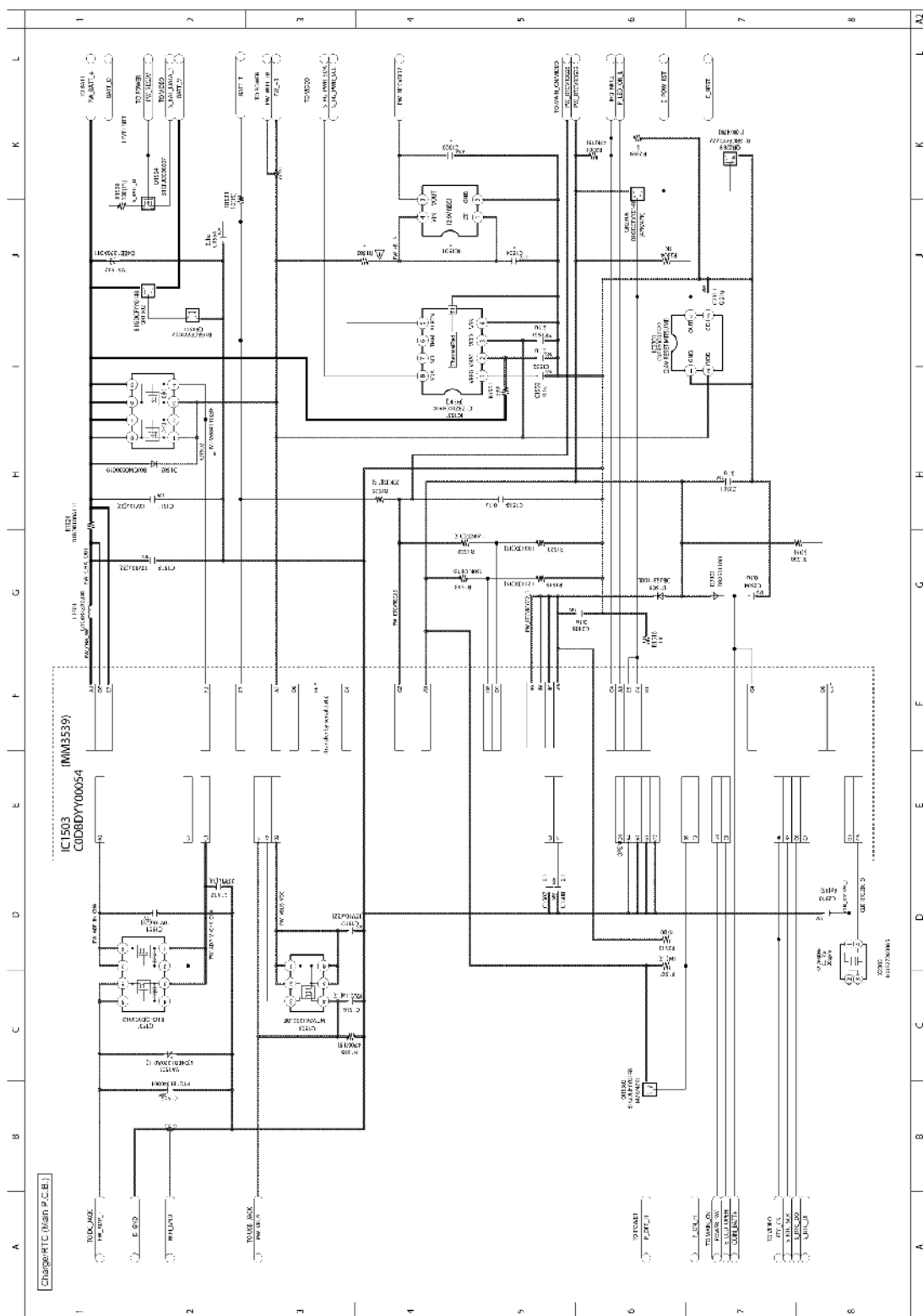
Model No. : HC-VX980M/VX980/VX981/VX989 Lens Drive (Main P.C.B.)

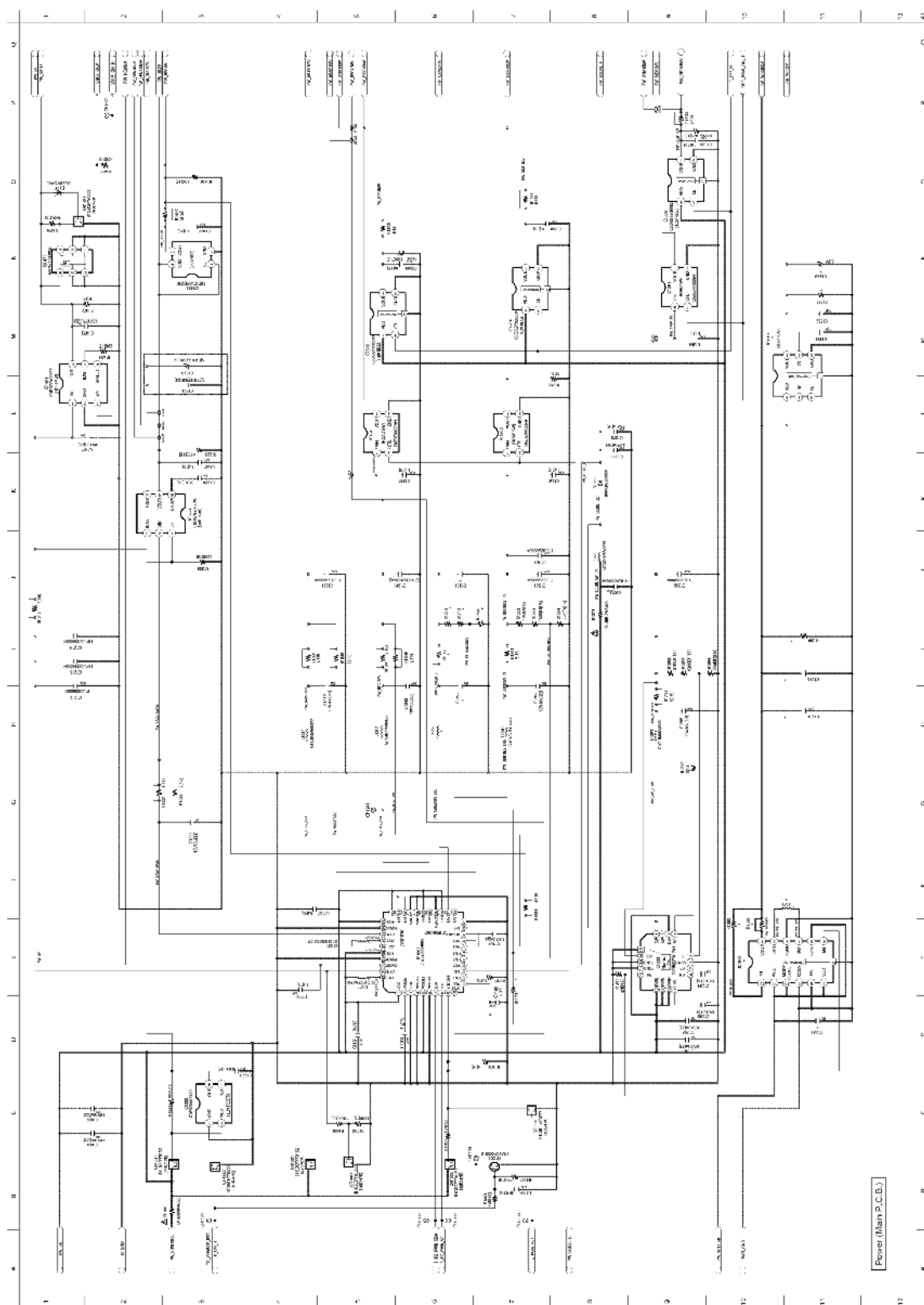


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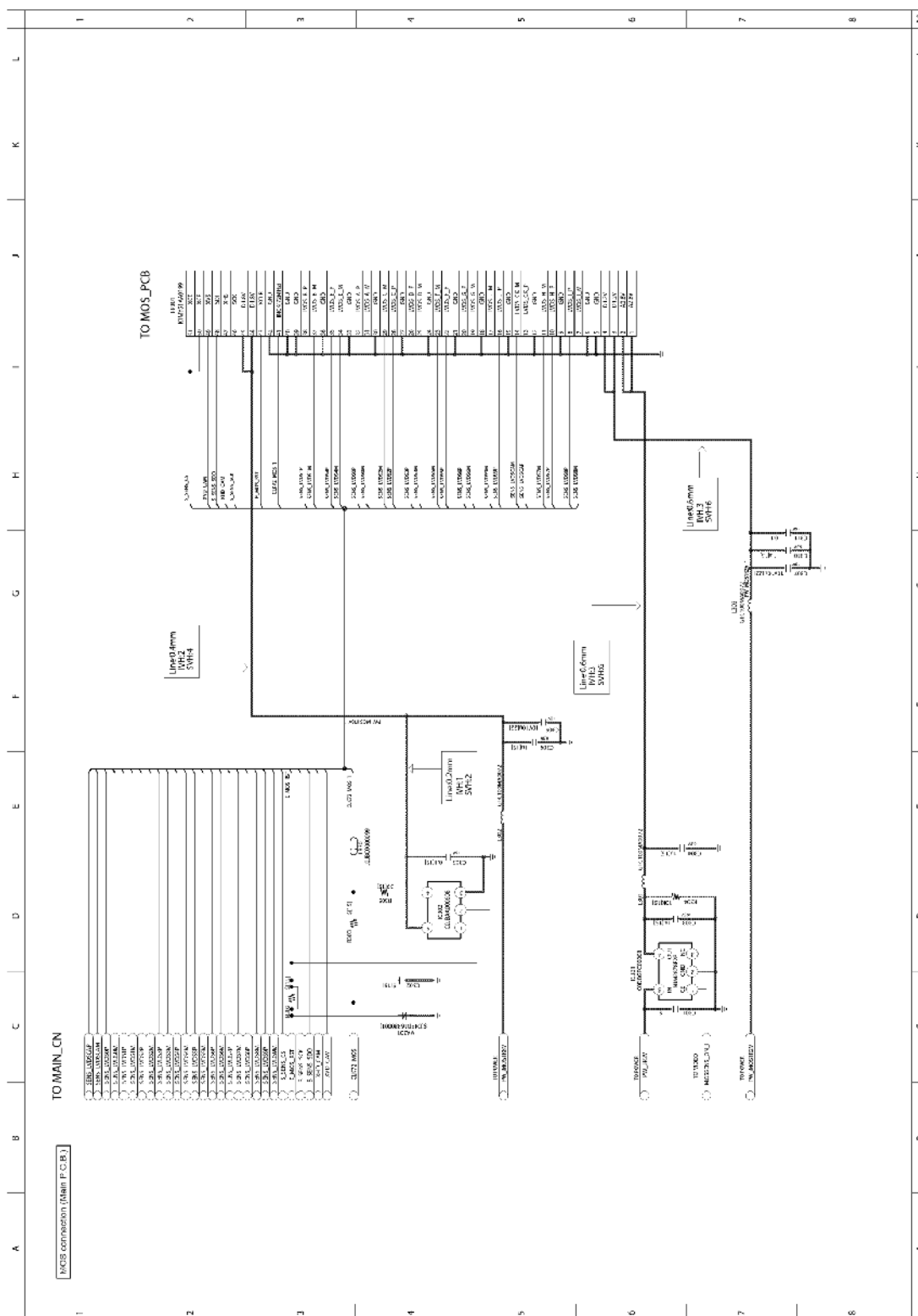


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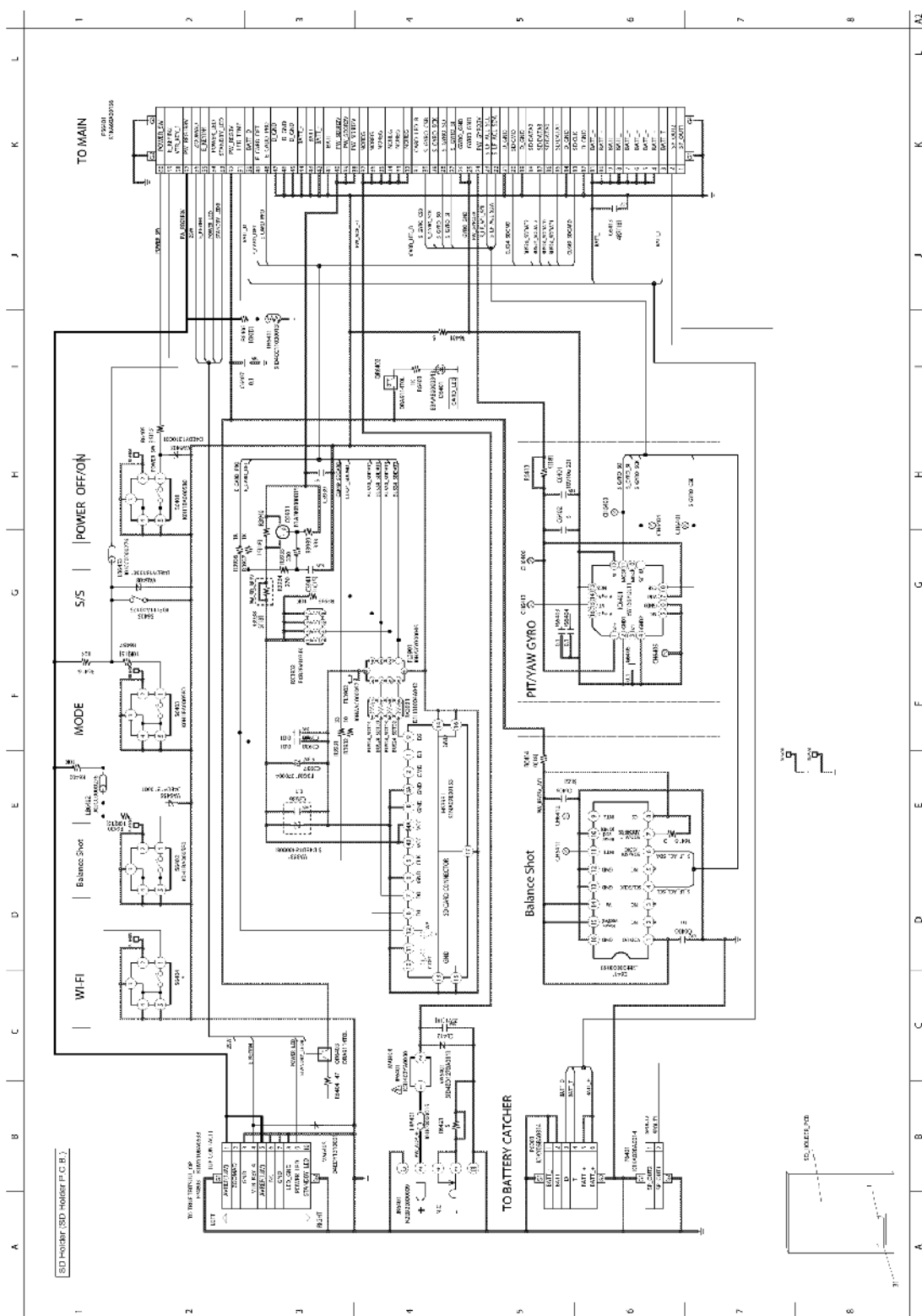
Model No. : HC-VX980M/VX980/VX981/VX989 Power (Main P.C.B.)

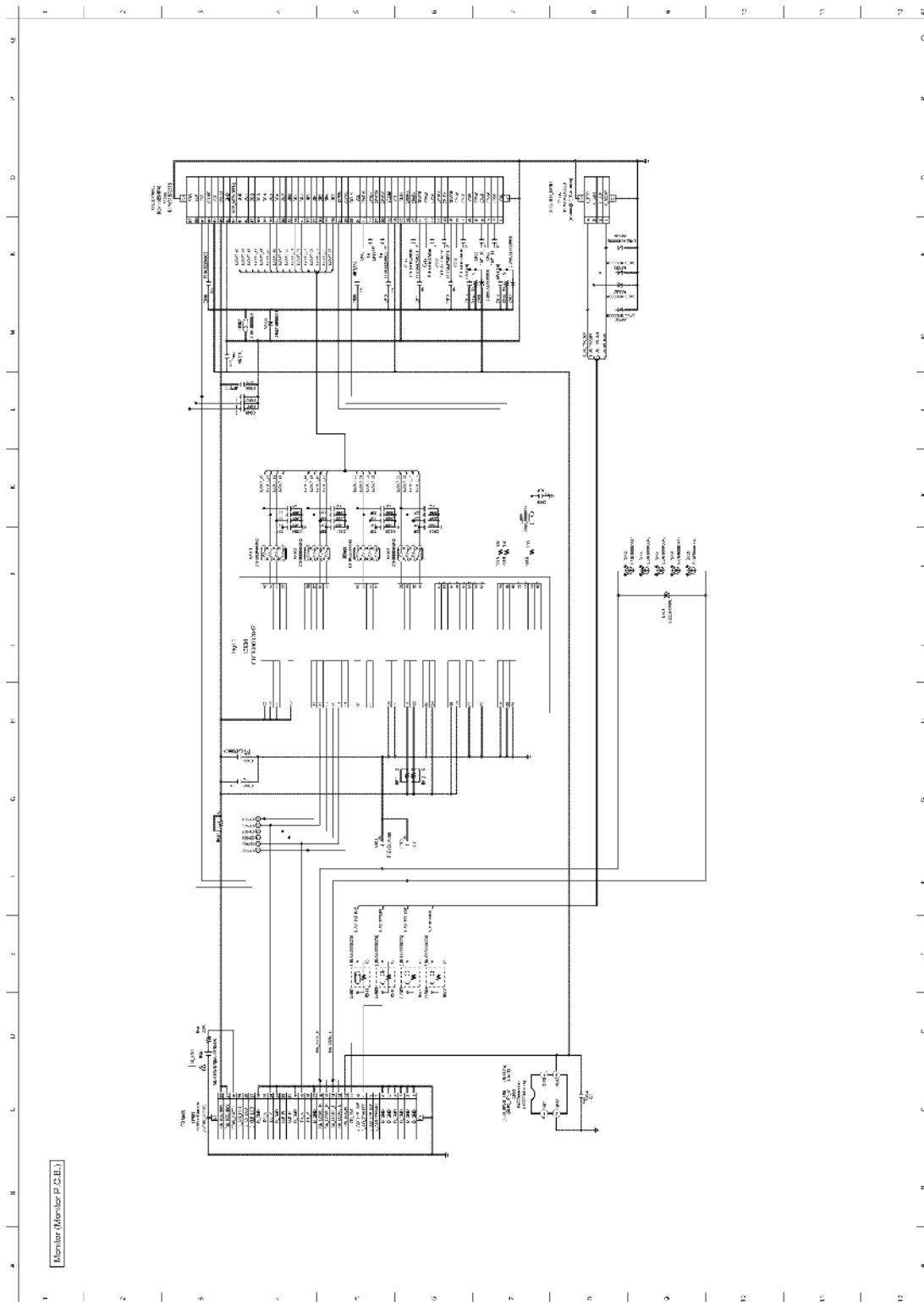
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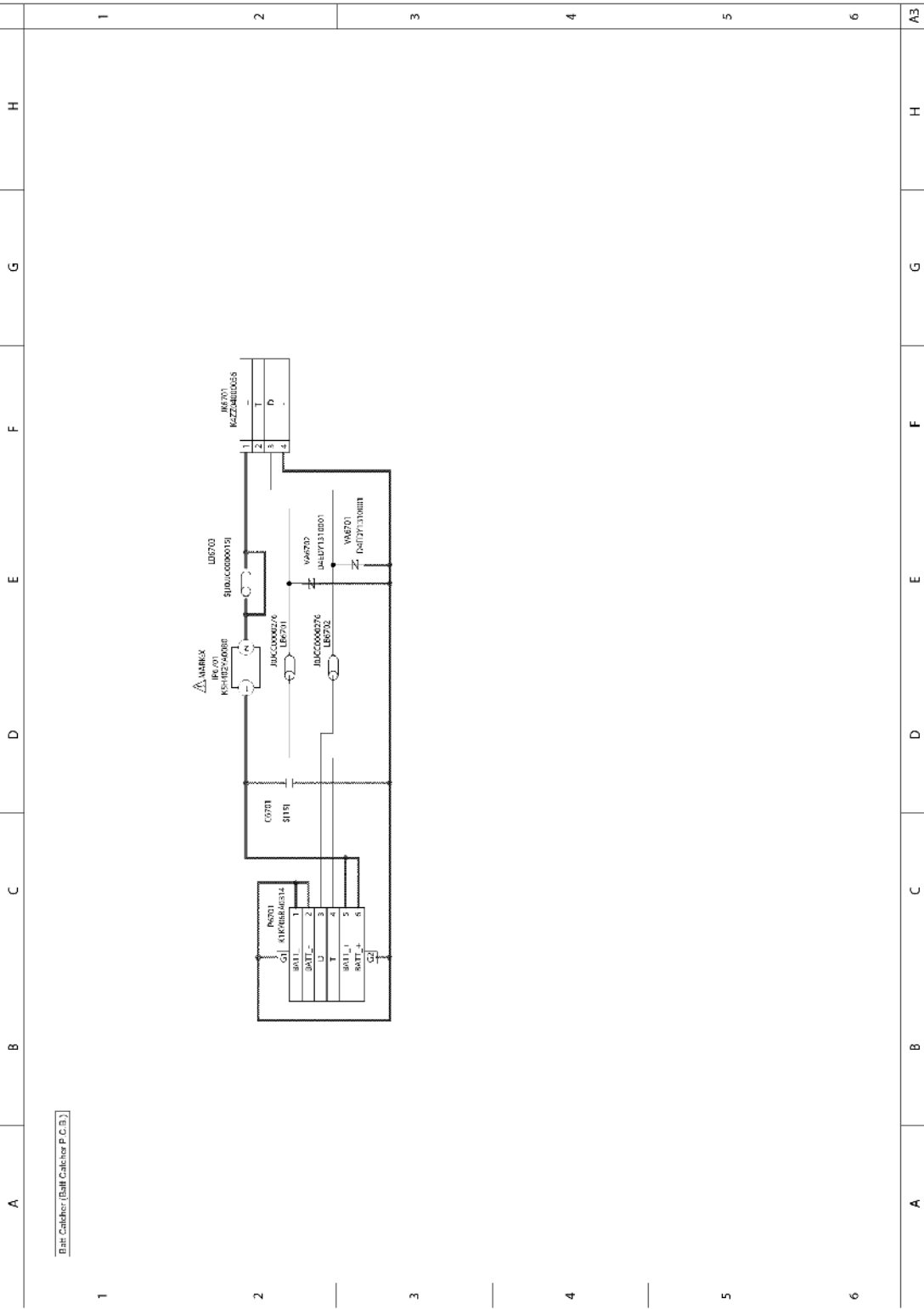
EXT Mic (Main p.c.B.)

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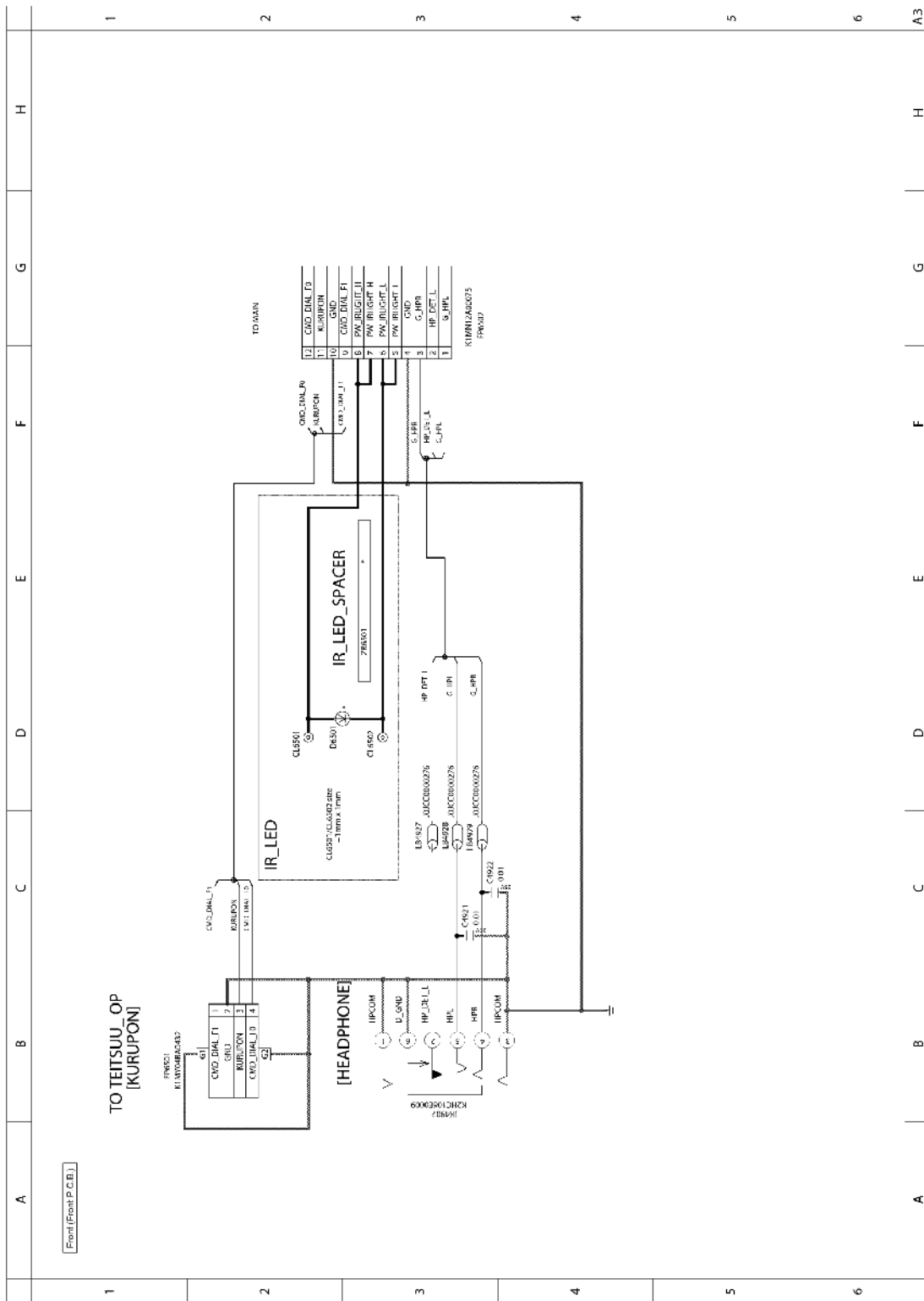


Model No. : HC-VX980M/VX980/VX981/VX989 Monitor (Monitor P.C.B.)

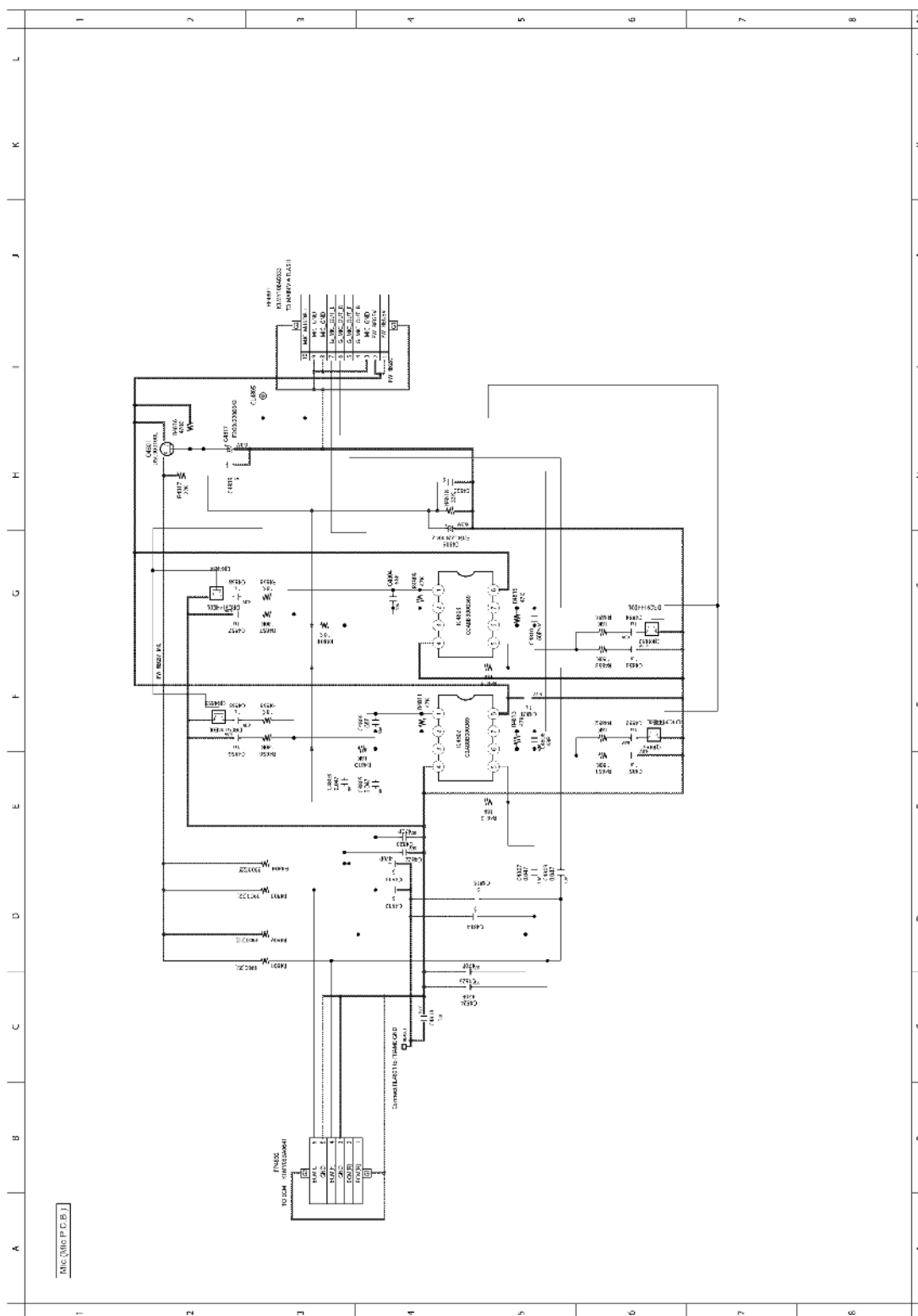
Model No. : HC-VX980M/VX980/VX981/VX989 Batt Catcher (Batt Catcher P.C.B.)



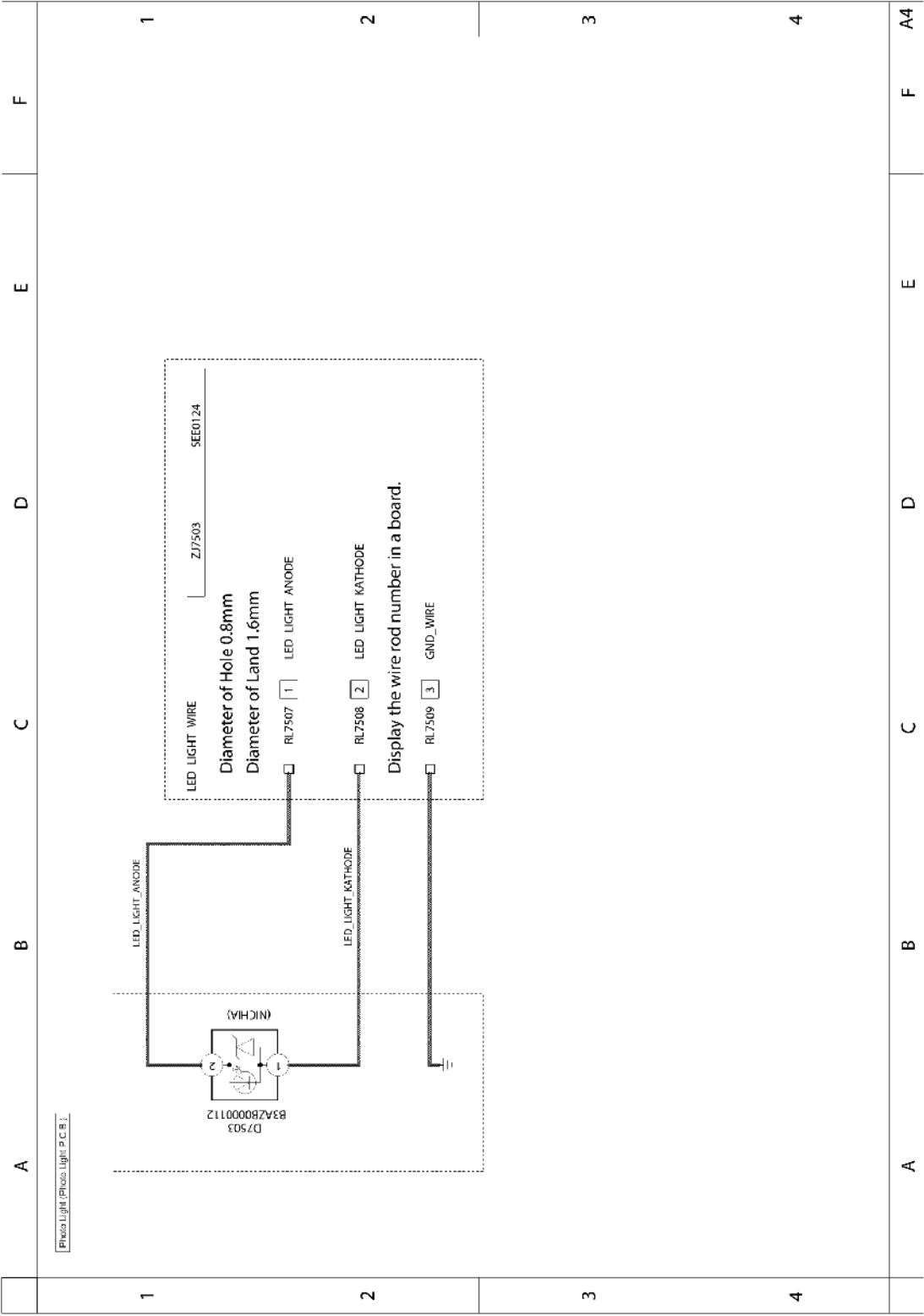
Model No. : HC-VX980M/VX980/VX981/VX989 Front (Front P.C.B.)



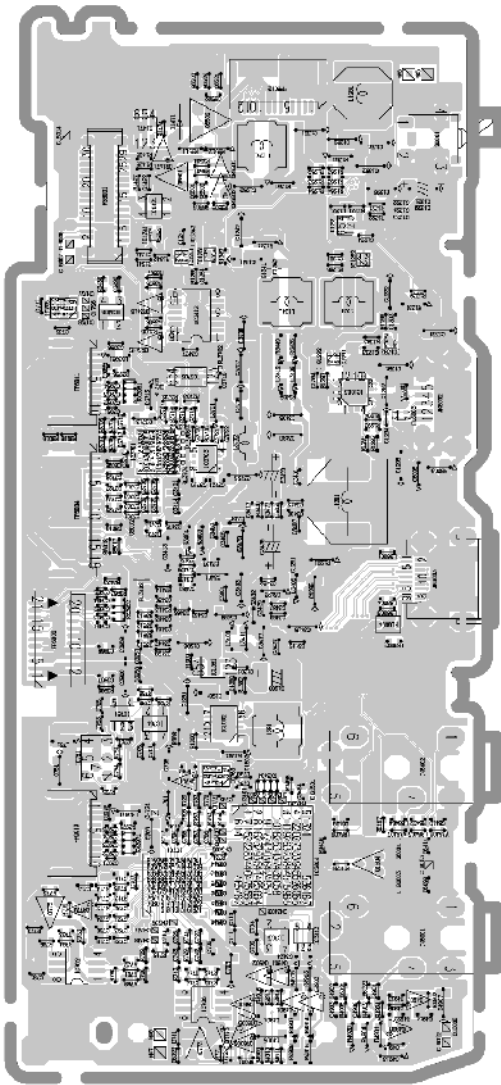
MIC (MIC P.C.B.)



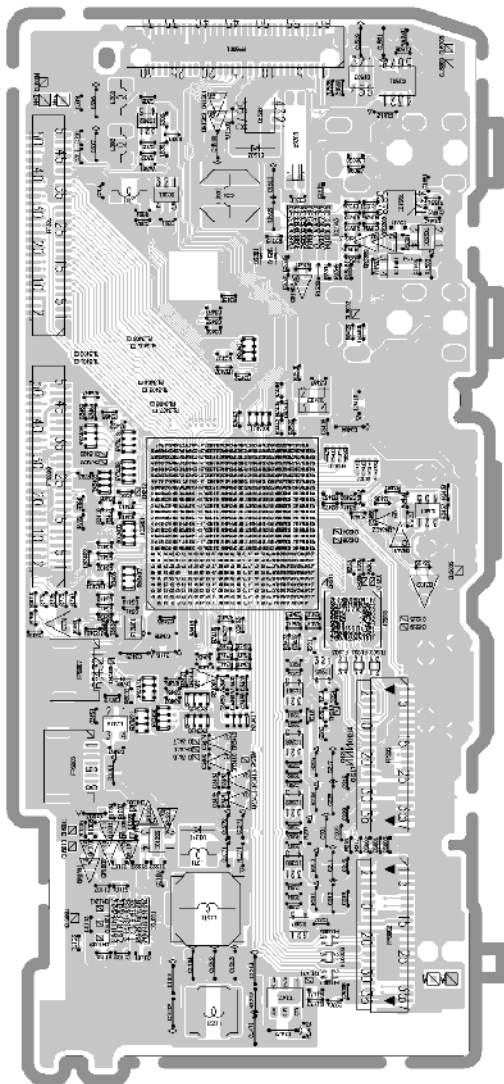
Model No. : HC-VX980M/VX980/VX981/VX989 Photo Light (Photo Light P.C.B.)



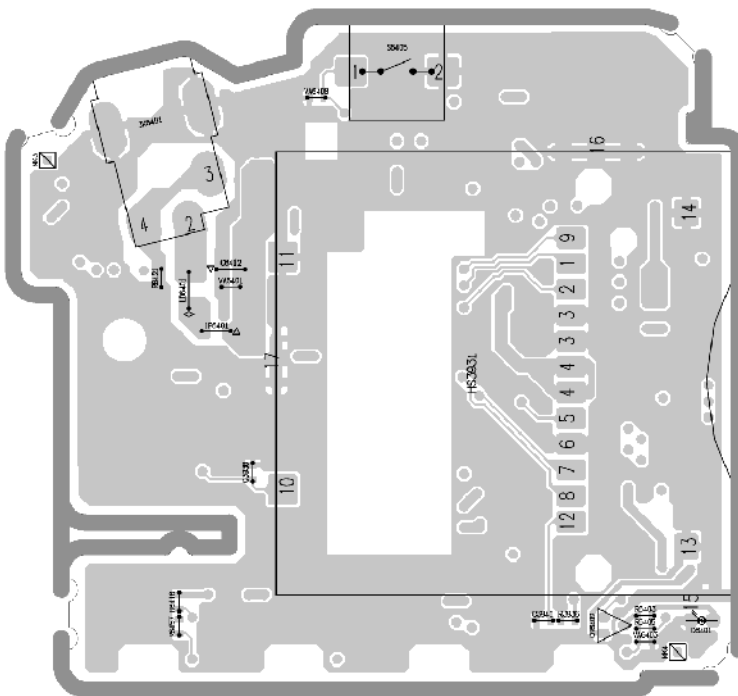
Model No. : HC-VX980M/VX980/VX981/VX989 Main P.C.B.(Component Side)



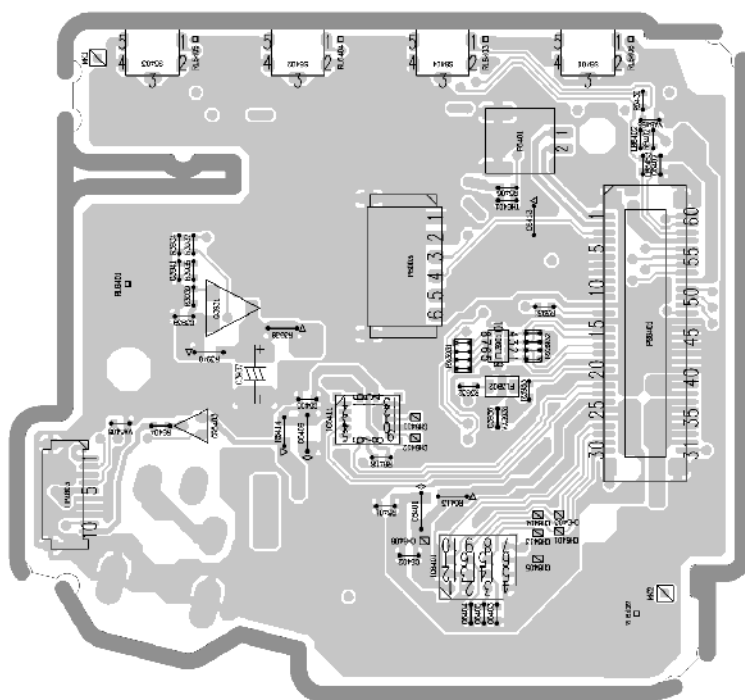
Model No. : HC-VX980M/VX980/VX981/VX989 Main P.C.B.(Foil Side)



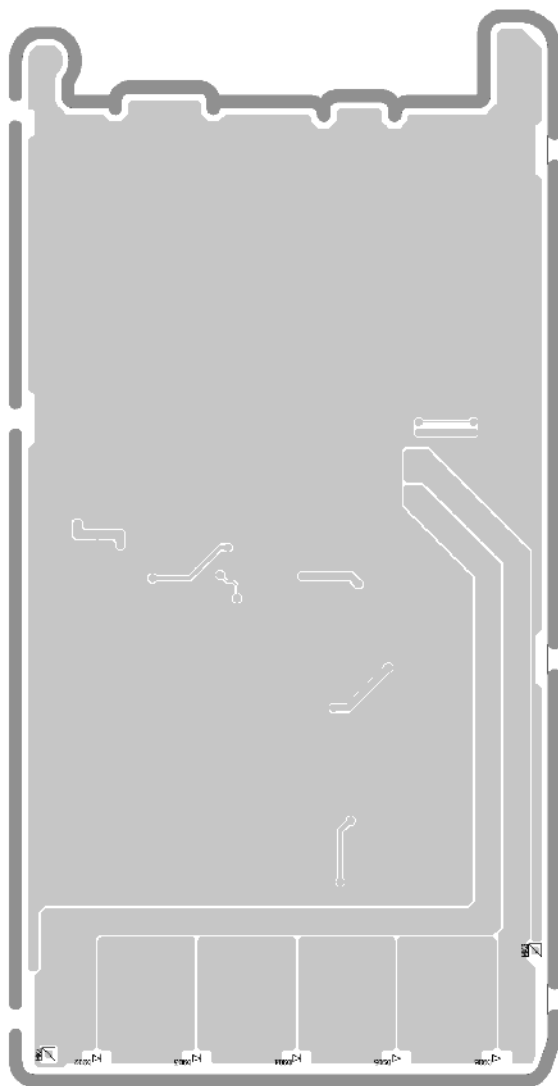
Model No. : HC-VX980M/VX980/VX981/VX989 SD Holder P.C.B.(Component Side)



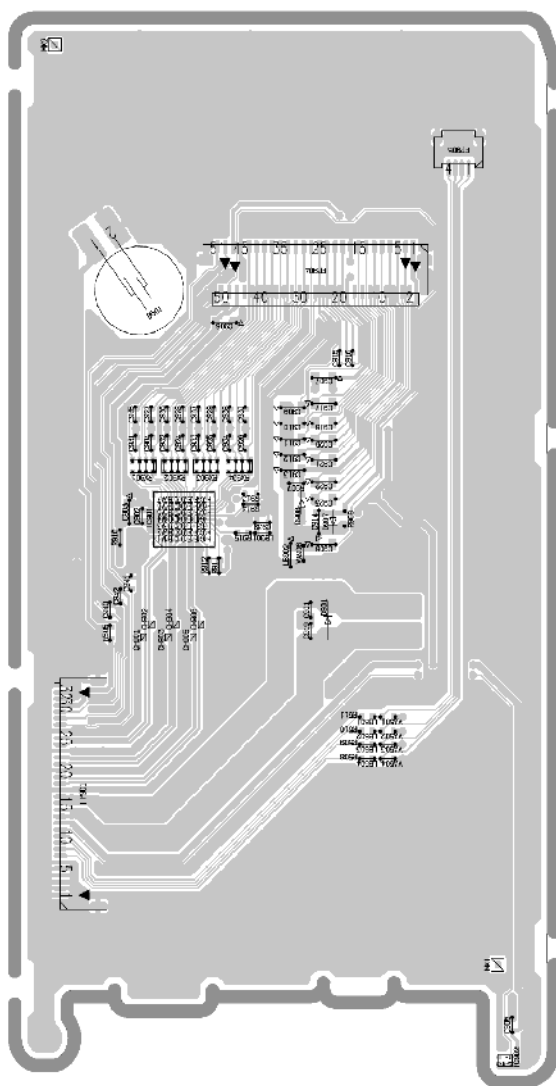
Model No. : HC-VX980M/VX980/VX981/VX989 SD Holder P.C.B.(Foil Side)



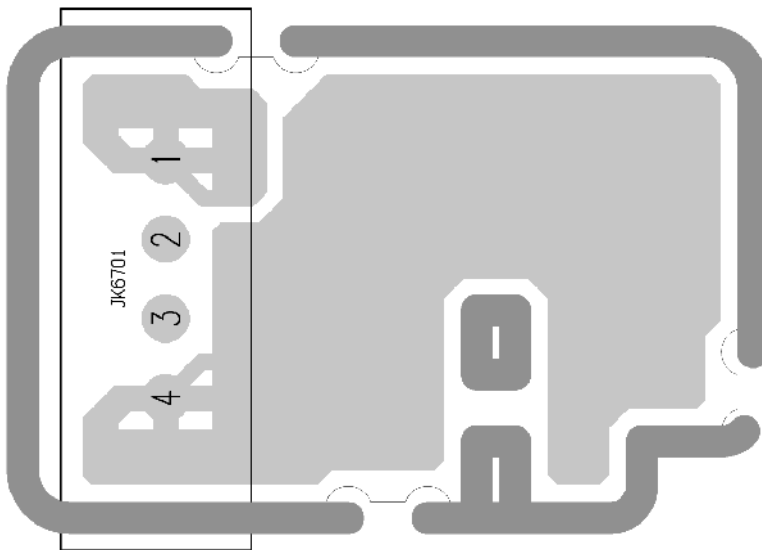
Model No. : HC-VX980M/VX980/VX981/VX989 Monitor P.C.B.(Component Side)



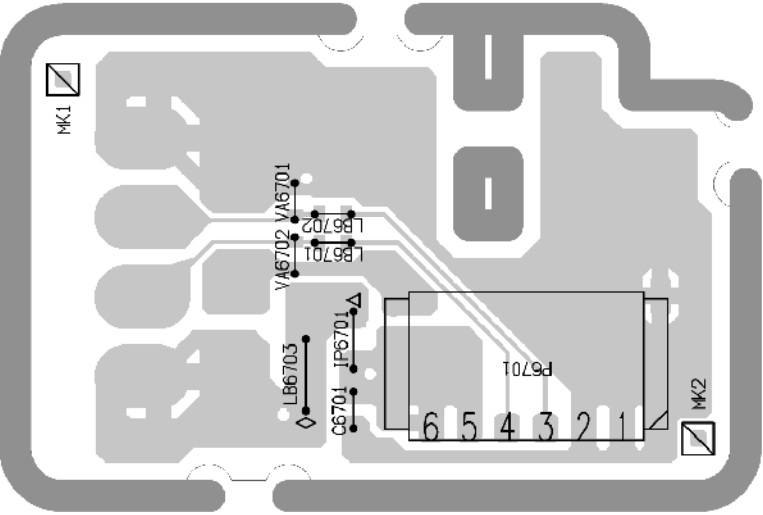
Model No. : HC-VX980M/VX980/VX981/VX989 Monitor P.C.B.(Foil Side)



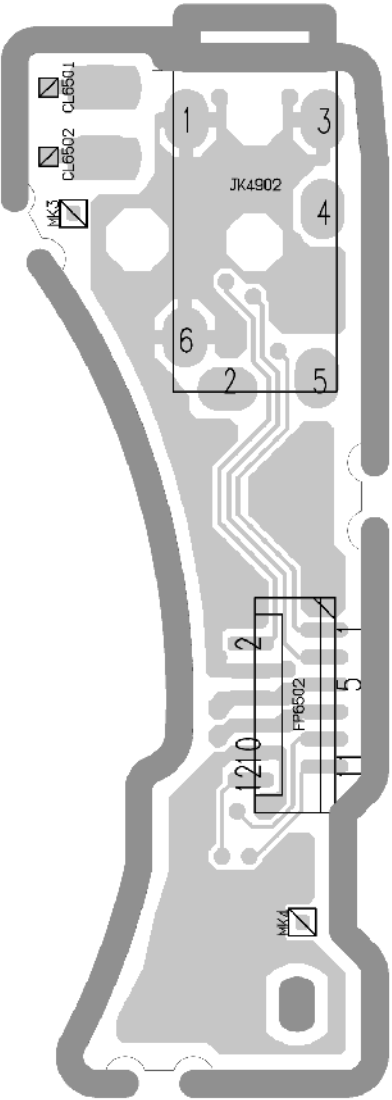
Model No. : HC-VX980M/VX980/VX981/VX989 Battery Catcher P.C.B.(Component Side)



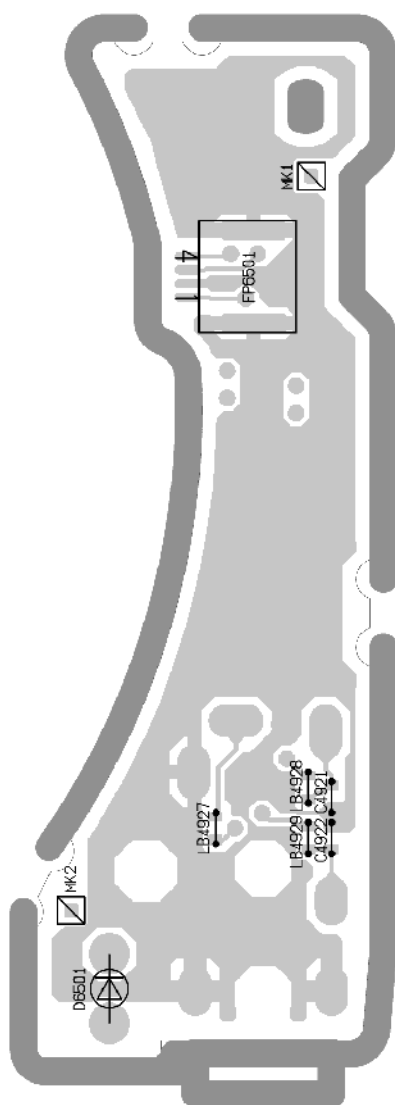
Model No. : HC-VX980M/VX980/VX981/VX989 Battery Catcher P.C.B.(Foil Side)



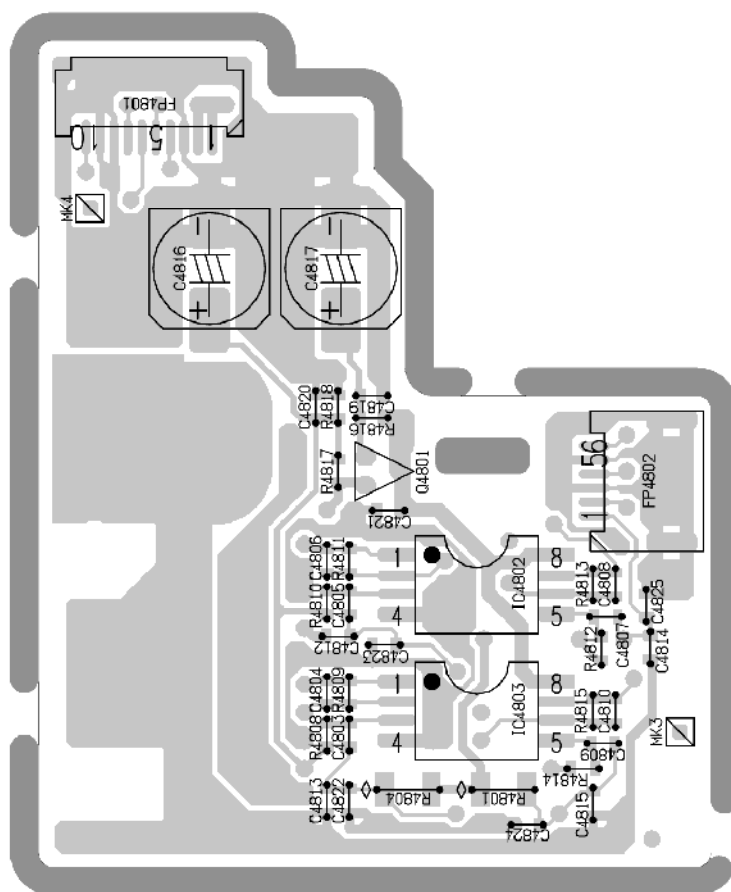
Model No. : HC-VX980M/VX980/VX981/VX989 Front P.C.B.(Component Side)



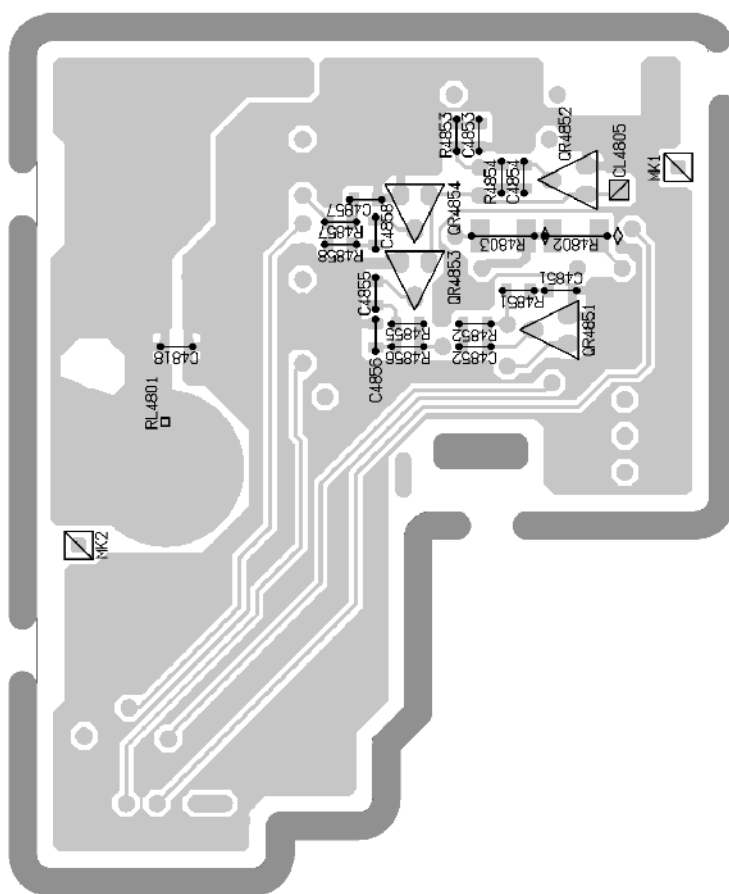
Model No. : HC-VX980M/VX980/VX981/VX989 Front P.C.B.(Foil Side)



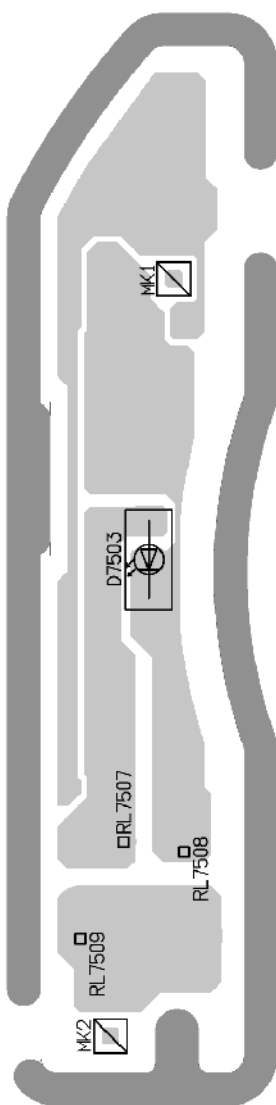
Model No. : HC-VX980M/VX980/VX981/VX989 Mic P.C.B.(Component Side)



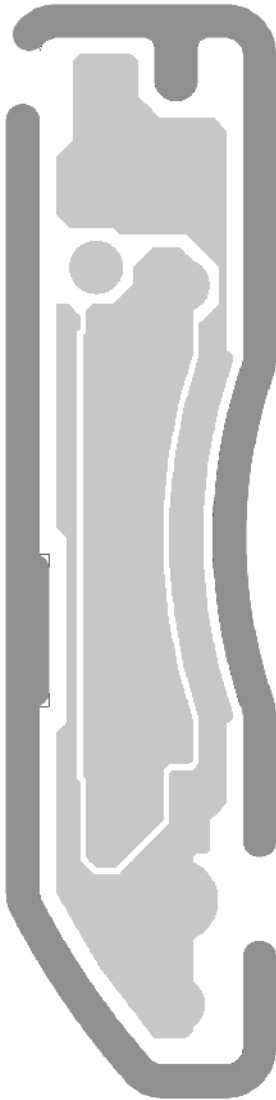
Model No. : HC-VX980M/VX980/VX981/VX989 Mic P.C.B.(Foil Side)



Model No. : HC-VX980M/VX980/VX981/VX989 Photo Light P.C.B.(Component Side)



Model No. : HC-VX980M/VX980/VX981/VX989 Photo Light P.C.B.(Foil Side)



Model No. : HC-VX980M/VX980/VX981/VX989 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		B501	ML-614S/DN	BUTTON BATTERY	1	
		C303	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C304	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C305	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C306	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C307	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C309	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C310	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C311	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C703	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C704	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C705	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C707	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C708	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C711	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C713	F1G1H101A948	C.CAPACITOR CH 50V 100P	1	
		C714	F1G1H101A948	C.CAPACITOR CH 50V 100P	1	
		C715	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C716	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C719	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C720	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C721	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C722	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C723	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C724	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C725	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C726	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C727	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C732	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C741	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C742	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C743	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C751	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C753	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C754	F1G1H222A830	C.CAPACITOR CH 50V 2200P	1	
		C761	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C765	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C767	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C780	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C781	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C784	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C785	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C786	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C787	F1G1H471A946	C.CAPACITOR CH 50V 470P	1	
		C788	F1G1H471A946	C.CAPACITOR CH 50V 470P	1	
		C901	F1G1E1040001	C.CAPACITOR CH 25V 0.1U	1	
		C902	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C903	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C904	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C905	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C906	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C907	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C908	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C909	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C910	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C911	F1H1A4750001	C.CAPACITOR CH 10V 4.7U	1	
		C912	F1H1A4750001	C.CAPACITOR CH 10V 4.7U	1	
		C913	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
		C914	F1H1C105A167	C.CAPACITOR CH 16V 1U	1	
		C915	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C916	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	

		C917	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
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Model No. : HC-VX980M/VX980/VX981/VX989nb; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C918	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
		C919	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C920	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
		C921	F1H1A105A036	C.CAPACITOR CH 10V 1U	1	
		C922	F1H1C105A167	C.CAPACITOR CH 16V 1U	1	
		C923	F1H1C105A167	C.CAPACITOR CH 16V 1U	1	
		C924	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C925	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C926	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C927	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C928	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C929	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C930	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C931	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C932	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C933	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C934	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C935	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C936	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C937	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C938	F1G1H220A834	C.CAPACITOR CH 50V 22P	1	
		C939	F1G1H100A833	C.CAPACITOR CH 50V 10P	1	
		C1001	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1002	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1003	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C1071	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C1101	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1102	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1103	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1104	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1107	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1110	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1212	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1221	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1222	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1223	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C1224	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C1232	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1241	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1242	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1261	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1262	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1264	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1271	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
		C1272	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
		C1281	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1284	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1288	F3G0J1070012	E.CAPACITOR CH 6.3V 100U	1	
		C1291	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1292	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1293	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C1294	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C1295	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1296	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1331	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1344	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1361	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1362	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C1381	F1G0J4740003	C.CAPACITOR CH 6.3V 0.47U	1	
		C1382	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1393	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	

		C1394	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C1422	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C1471	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1472	F1J1A475A112	C.CAPACITOR CH 10V 4.7U	1	
		C1501	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1505	F1G1E1040001	C.CAPACITOR CH 25V 0.1U	1	
		C1507	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1508	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1511	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1512	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
		C1515	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1516	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1518	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1519	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C1551	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1552	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1553	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C1554	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C2301	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C2304	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C2305	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C2310	F1G1H8R0A833	C.CAPACITOR CH 50V 8P	1	
		C2311	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3401	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3403	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3404	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3405	F1J0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C3406	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3407	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3408	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3409	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3411	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3412	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3413	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3414	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3415	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3416	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3417	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3420	F3F0G4760004	E.CAPACITOR CH 4V 47U	1	
		C3421	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3422	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3423	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C3424	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3425	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3426	F1G1E682A144	C.CAPACITOR CH 25V 6800P	1	
		C3427	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3428	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3429	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3430	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3431	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3432	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3433	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3434	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3435	F1J0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C3437	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3438	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3439	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3443	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3444	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3447	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3449	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3450	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	

		C3451	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C3452	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3453	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C3454	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3455	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3456	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3457	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3458	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3459	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3460	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3461	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3462	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3463	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3464	F1J0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C3465	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3466	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3467	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3468	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3469	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3474	F1G1H332A946	C.CAPACITOR CH 50V 3300P	1	
		C3476	F3G0J1070012	E.CAPACITOR CH 6.3V 100U	1	
		C3477	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3479	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3480	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3481	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3483	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3484	F1G1H332A946	C.CAPACITOR CH 50V 3300P	1	
		C3485	F1G1H332A946	C.CAPACITOR CH 50V 3300P	1	
		C3486	F1G1H332A946	C.CAPACITOR CH 50V 3300P	1	
		C3487	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3488	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3489	F1J0J106A020	C.CAPACITOR CH 6.3V 10U	1	
		C3490	F1J0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C3491	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3492	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3495	F1J0J1060009	C.CAPACITOR CH 6.3V 10U	1	
		C3496	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3497	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3701	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3702	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3703	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3704	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3705	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3706	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3707	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C3708	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C3709	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C3710	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3711	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3712	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C3713	F1H0J2250008	C.CAPACITOR CH 6.3V 2.2U	1	
		C3714	F1G0J2240003	C.CAPACITOR CH 6.3V 0.22U	1	
		C3715	F1G0J2240003	C.CAPACITOR CH 6.3V 0.22U	1	
		C3716	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3717	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3718	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3719	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3720	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3721	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3722	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3723	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C3724	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	

		C3725	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C3726	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
		C3727	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
		C3728	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
		C3729	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
		C3730	F1G1H102A830	C.CAPACITOR CH 50V 1000P	1	
		C3936	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3937	F3G0J1070004	E.CAPACITOR CH 6.3V 100U	1	
		C3938	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3940	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C3941	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C3956	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	(HC-VX980M)
		C3957	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3958	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C3976	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	(HC-VX980M)
		C4803	F1G1A473A069	C.CAPACITOR CH 10V 0.047U	1	
		C4804	F1G1H680A834	C.CAPACITOR CH 50V 68P	1	
		C4805	F1G1A473A069	C.CAPACITOR CH 10V 0.047U	1	
		C4806	F1G1H680A834	C.CAPACITOR CH 50V 68P	1	
		C4807	F1G1A473A069	C.CAPACITOR CH 10V 0.047U	1	
		C4808	F1G1H680A834	C.CAPACITOR CH 50V 68P	1	
		C4809	F1G1A473A069	C.CAPACITOR CH 10V 0.047U	1	
		C4810	F1G1H680A834	C.CAPACITOR CH 50V 68P	1	
		C4816	F2G0J2200042	E.CAPACITOR CH 6.3V 22U	1	
		C4817	F2G0J2200042	E.CAPACITOR CH 6.3V 22U	1	
		C4818	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4821	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4822	F1G1H471A830	C.CAPACITOR CH 50V 470P	1	
		C4823	F1G1H471A830	C.CAPACITOR CH 50V 470P	1	
		C4824	F1G1H471A830	C.CAPACITOR CH 50V 470P	1	
		C4825	F1G1H471A830	C.CAPACITOR CH 50V 470P	1	
		C4851	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4852	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4853	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4854	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4855	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4856	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4857	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4858	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4901	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C4902	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C4903	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4904	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C4905	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C4907	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
		C4908	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4909	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C4913	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C4914	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C4915	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C4921	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C4922	F1G1E103A144	C.CAPACITOR CH 25V 0.01U	1	
		C6001	F1G1E1040001	C.CAPACITOR CH 25V 0.1U	1	
		C6002	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6005	F1H1C105A167	C.CAPACITOR CH 16V 1U	1	
		C6018	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6019	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6023	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6096	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6098	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6401	F1J1A106A043	C.CAPACITOR CH 10V 10U	1	
		C6403	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	

		C6404	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C6405	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6406	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C6407	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6408	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C6410	F1G1H472B014	C.CAPACITOR CH 50V 4700P	1	
		C6412	F1H1E105A116	C.CAPACITOR CH 25V 1U	1	
		C6413	F1H0J4750004	C.CAPACITOR CH 6.3V 4.7U	1	
		C6501	F1G0J1050007	C.CAPACITOR CH 6.3V 1U	1	
		C6502	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		C6521	F1G1C104A146	C.CAPACITOR CH 16V 0.1U	1	
		D901	DZ2J200M0L	DIODE	1	E.S.D.
		D902	B3AFB0000645	LED	1	E.S.D.
		D903	B3AFB0000645	LED	1	E.S.D.
		D904	B3AFB0000645	LED	1	E.S.D.
		D905	B3AFB0000645	LED	1	E.S.D.
		D906	B3AFB0000645	LED	1	E.S.D.
		D1271	B0ACRC000001	DIODE	1	E.S.D.
		D1471	DZ2J075M0L	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.
		D6401	B3AAB0000343	LED	1	E.S.D.
		D6501	B3EA00000217	LED	1	E.S.D.
		D7503	B3AZB0000112	LED	1	E.S.D.
		FL3401	F1H0J105A037	C.CAPACITOR CH 6.3V 1U	1	
		FL3402	F1H0J105A037	C.CAPACITOR CH 6.3V 1U	1	
		FL3901	J0HAYY000045	FILTER	1	
		FL3902	J0HAAC000057	FILTER	1	
		FL6001	EXC28CH900U	FILTER	1	
		FL6002	EXC28CH900U	FILTER	1	
		FL6004	F1H0J105A037	C.CAPACITOR CH 6.3V 1U	1	
		FL6005	EXC14CE900U	FILTER	1	
		FL6006	EXC14CE900U	FILTER	1	
		FL6007	EXC14CE900U	FILTER	1	
		FP301	K1MY51AA0199	CONNECTOR 51P	1	
		FP901	K1MY32BA0370	CONNECTOR 32P	1	
		FP904	K1MY51BA0575	CONNECTOR 51P	1	
		FP905	K1MY04BA0633	CONNECTOR 4P	1	
		FP4801	K1MY10BA0633	CONNECTOR 10P	1	
		FP4802	K1MY06BA0641	CONNECTOR 6P	1	
		FP4803	K1MY10BA0633	CONNECTOR 10P	1	
		FP6002	K1MY37BA0667	CONNECTOR 37P	1	
		FP6004	K1MY18BA0641	CONNECTOR 18P	1	
		FP6005	K1MY08BA0641	CONNECTOR 8P	1	
		FP6006	K1MY21BA0605	CONNECTOR 21P	1	
		FP6008	K1MY51AA0199	CONNECTOR 51P	1	
		FP6010	K1MY10BA0641	CONNECTOR 10P	1	(HC-VX980M)
		FP6011	K1MY10BA0641	CONNECTOR 10P	1	(HC-VX980M)
		FP6012	K1MY12BA0641	CONNECTOR 12P	1	
		FP6501	K1MY04BA0432	CONNECTOR 4P	1	
		FP6502	K1MN12A00075	CONNECTOR 12P	1	
		HS3931	K1NA09E00153	SD CARD SLOT	1	
		IC301	C0DBGFC00008	IC	1	E.S.D.
		IC302	C0JBAA000608	IC	1	E.S.D.
		IC701	C1AB00003719	IC	1	E.S.D.
		IC703	C0DBGYY00909	IC	1	E.S.D.
		IC704	C0DBGYY00936	IC	1	E.S.D.
		IC705	C1AB00003450	IC	1	E.S.D.
		IC706	C0GBC0000028	IC	1	E.S.D.
		IC751	EWTS9RCL1A	IC	1	E.S.D. [INBD]
		IC761	C0ABGA000035	IC	1	E.S.D.

		IC762	C0GBC0000028	IC	1	E.S.D.
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Model No. : HC-VX980M/VX980/VX981/VX989nbsp; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		IC763	C1AB00003450	IC	1	E.S.D.
		IC901	C1CB00002847	IC	1	E.S.D.
		IC902	B4ZZ00000041	IC	1	E.S.D.
		IC1001	C1ZBZ0004885	IC	1	E.S.D.
		IC1221	C0DBZYY00724	IC	1	E.S.D.
		IC1222	C0EBY0002310	IC	1	E.S.D.
		IC1241	C0ZBZ0002264	IC	1	E.S.D.
		IC1261	C0DBGYY05584	IC	1	E.S.D.
		IC1262	C0ZBZ0002264	IC	1	E.S.D.
		IC1291	C0ZBZ0002264	IC	1	E.S.D.
		IC1341	C0DBGYY05590	IC	1	E.S.D.
		IC1381	C0DBGYY03698	IC	1	E.S.D.
		IC1392	C0DBGYY05582	IC	1	E.S.D.
		IC1421	C0DBGYY00936	IC	1	E.S.D.
		IC1471	C0DBZYY00793	IC	1	E.S.D.
		IC1503	C0DBDY00054	IC	1	E.S.D.
		IC1551	VUEALLPT082	IC	1	E.S.D. [INBD]
		IC2301	C0EBY0002322	IC	1	E.S.D.
		IC3401	VSG1026	IC	1	E.S.D.
		IC3404	TC58NYG0F16A	IC	1	E.S.D.
		IC3406	C0EBY0002365	IC	1	E.S.D.
		IC3412	C0JBAF000805	IC	1	E.S.D.
		IC3413	C0JBAA000608	IC	1	E.S.D.
		IC3414	C0EBY0002355	IC	1	E.S.D.
		IC3701	C1AB00004179	IC	1	E.S.D.
		IC3702	C0ZBZ0001730	IC	1	E.S.D.
		IC3703	C1AB00004180	IC	1	E.S.D.
		IC4802	C0ABBB000369	IC	1	E.S.D.
		IC4803	C0ABBB000369	IC	1	E.S.D.
		IC6401	EWTS9PDL1A	IC	1	E.S.D. [INBD]
		IC6411	VUEALLPT053	IC	1	E.S.D. [INBD]
		IP6401	K5H402YA0080	IC PROTECTOR	1	
		IP6701	K5H402YA0080	IC PROTECTOR	1	
		JK4902	K2HC106E0009	JACK	1	
		JK6001	K2HC106E0009	JACK	1	
		JK6002	K2HZ105B0012	JACK	1	
		JK6003	K1FY119E0057	JACK	1	
		JK6401	K2EB2E000009	JACK	1	
		JK6402	K2HC106E0009	JACK	1	
		JK6701	K4ZZ04000056	JACK	1	
		L301	G1C100MA0072	CHIP INDUCTOR 10UH	1	
		L302	G1C100MA0072	CHIP INDUCTOR 10UH	1	
		L303	G1C100MA0072	CHIP INDUCTOR 10UH	1	
		L1211	G1C4R7ZA0390	CHIP INDUCTOR 4.7UH	1	
		L1221	G1C3R3MA0477	CHIP INDUCTOR 3.3UH	1	
		L1231	G1C3R3MA0477	CHIP INDUCTOR 3.3UH	1	
		L1241	G1C4R7MA0477	CHIP INDUCTOR 4.7UH	1	
		L1261	G1C4R7ZA0240	CHIP INDUCTOR 4.7UH	1	
		L1271	G1C6R8MA0478	CHIP INDUCTOR 6.8UH	1	
		L1281	G1C2R2MA0477	CHIP INDUCTOR 2.2UH	1	
		L1291	G1C1R0MA0535	CHIP INDUCTOR 1.0UH	1	
		L1501	G1C4R7ZA0240	CHIP INDUCTOR 4.7UH	1	
		L3406	G1C4R7MA0495	CHIP INDUCTOR 4.7UH	1	
		L3408	G1C4R7MA0408	CHIP INDUCTOR 4.7UH	1	
		L3409	G1C100MA0495	CHIP INDUCTOR 10UH	1	
		L3410	G1C100MA0495	CHIP INDUCTOR 10UH	1	
		L3411	G1C4R7MA0408	CHIP INDUCTOR 4.7UH	1	
		L3412	G1C4R7MA0495	CHIP INDUCTOR 4.7UH	1	
		L3415	G1C4R7MA0495	CHIP INDUCTOR 4.7UH	1	
		L3701	G1C4R7MA0408	CHIP INDUCTOR 4.7UH	1	

		LB301	J0JBC0000099	FILTER	1	
		LB901	J0JBC0000099	FILTER	1	

Model No. : HC-VX980M/VX980/VX981/VX989nb; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		LB902	J0JHC0000078	FILTER	1	
		LB3401	J0JBC0000099	FILTER	1	
		LB3402	J0JBC0000099	FILTER	1	(HC-VX980M)
		LB3403	J0JBC0000099	FILTER	1	(HC-VX980M)
		LB3404	J0JBC0000099	FILTER	1	
		LB3951	J0JGC0000059	FILTER	1	(HC-VX980M)
		LB3971	J0JGC0000059	FILTER	1	(HC-VX980M)
		LB4927	J0JCC0000276	FILTER	1	
		LB4928	J0JCC0000276	FILTER	1	
		LB4929	J0JCC0000276	FILTER	1	
		LB6001	J0JYC0000086	FILTER	1	
		LB6002	J0JYC0000086	FILTER	1	
		LB6003	J0JYC0000086	FILTER	1	
		LB6004	J0JYC0000086	FILTER	1	
		LB6020	J0JCC0000276	FILTER	1	
		LB6021	J0JCC0000276	FILTER	1	
		LB6022	J0JCC0000276	FILTER	1	
		LB6401	J0JJC0000015	FILTER	1	
		LB6402	J0JCC0000276	FILTER	1	
		LB6403	J0JCC0000276	FILTER	1	
		LB6404	J0JCC0000276	FILTER	1	
		LB6405	J0JCC0000276	FILTER	1	
		LB6406	J0JCC0000276	FILTER	1	
		LB6453	J0JCC0000276	FILTER	1	
		LB6701	J0JCC0000276	FILTER	1	
		LB6702	J0JCC0000276	FILTER	1	
		P6003	K1KY06BA0495	CONNECTOR 6P	1	
		P6401	K1KA02BA0014	CONNECTOR 2P	1	
		P6701	K1KY06BA0495	CONNECTOR 6P	1	
		PP6001	K1KA60B00061	CONNECTOR 60P	1	
		PS6401	K1KA60A00156	CONNECTOR 60P	1	
		Q773	B1ADGE000014	TRANSISTOR	1	E.S.D.
		Q774	B1ABCF000310	TRANSISTOR	1	E.S.D.
		Q775	B1ADGE000014	TRANSISTOR	1	E.S.D.
		Q1001	B1ABCF000316	TRANSISTOR	1	E.S.D.
		Q1471	MTM761230LBF	TRANSISTOR	1	E.S.D.
		Q1501	B1CHQD000012	TRANSISTOR	1	E.S.D.
		Q1502	MTM684110LBF	TRANSISTOR	1	E.S.D.
		Q1503	MTM761230LBF	TRANSISTOR	1	E.S.D.
		Q1504	B1CFJD000007	TRANSISTOR	1	E.S.D.
		Q3401	B1CFGD000003	TRANSISTOR	1	E.S.D.
		Q3402	B1CFJD000007	TRANSISTOR	1	E.S.D.
		Q3931	B1ADKB000015	TRANSISTOR	1	E.S.D.
		Q4801	DSC900100L	TRANSISTOR	1	E.S.D.
		Q4901	B1ABCF000316	TRANSISTOR	1	E.S.D.
		Q4902	DSA300100L	TRANSISTOR	1	E.S.D.
		Q4903	B1ABCF000316	TRANSISTOR	1	E.S.D.
		Q4904	DSA300100L	TRANSISTOR	1	E.S.D.
		Q4907	B1ABCF000316	TRANSISTOR	1	E.S.D.
		Q4908	B1ABCF000316	TRANSISTOR	1	E.S.D.
		Q6501	B1ADGE000014	TRANSISTOR	1	E.S.D.
		Q6502	B1ABGE000015	TRANSISTOR	1	E.S.D.
		QR751	B1GDCFY0154	TRANSISTOR-RESISTOR	1	E.S.D.
		QR773	DRC3143Z0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR774	DRC3143Z0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1001	B1GDCFY0152	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1002	B1GDCFY0152	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1003	B1GBCFY0284	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1101	B1GBCFY0284	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1221	B1GDCFY0152	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1222	B1GBCFY0284	TRANSISTOR-RESISTOR	1	E.S.D.

		QR1471	B1GBCFY0284	TRANSISTOR-RESISTOR	1	E.S.D.
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		QR1501	B1GBCFYY0284	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1502	B1GDCFY0207	TRANSISTOR-RESISTOR	1	E.S.D.
		QR1503	B1GDCFY0207	TRANSISTOR-RESISTOR	1	E.S.D.
		QR2308	B1GDCFY0207	TRANSISTOR-RESISTOR	1	E.S.D.
		QR2389	B1GBCFYY0284	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3401	B1GBCFYY0224	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3402	B1GDCFY0207	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3403	B1GBCFYY0284	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3410	B1GBCFYY0234	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3411	B1GDCFY0189	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3412	B1GBCFYY0234	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3413	B1GDCFY0189	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3415	B1GDCFY0151	TRANSISTOR-RESISTOR	1	E.S.D.
		QR3416	B1GDCFY0151	TRANSISTOR-RESISTOR	1	E.S.D.
		QR4851	DRC9144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR4852	DRC9144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR4853	DRC9144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR4854	DRC9144E0L	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6006	B1GDCFY0151	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6007	B1GDCFY0152	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6008	B1GBCFYY0217	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6402	B1GDCFY0180	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6403	B1GDCFY0180	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6501	B1GDCFY0158	TRANSISTOR-RESISTOR	1	E.S.D.
		QR6502	B1GBCFYY0229	TRANSISTOR-RESISTOR	1	E.S.D.
		R304	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R305	D0GA390JA023	M.RESISTOR CH 1/16W 39	1	
		R505	D0GA222JA023	M.RESISTOR CH 1/10W 2.2K	1	
		R508	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R509	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R510	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R511	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R712	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R713	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R714	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R715	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R716	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R717	D0GA682JA023	M.RESISTOR CH 1/10W 6.8K	1	
		R729	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R731	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R732	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R733	D0GA124JA023	M.RESISTOR CH 1/10W 120K	1	
		R741	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R742	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R743	D1BA1003A022	M.RESISTOR CH 1/16W 100K	1	
		R744	D1BA1203A022	M.RESISTOR CH 1/16W 120K	1	
		R745	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R746	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R751	D0GA181JA023	M.RESISTOR CH 1/10W 180	1	
		R753	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R754	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R761	D0GA223JA023	M.RESISTOR CH 1/10W 22K	1	
		R765	D1BA2702A022	M.RESISTOR CH 1/16W 27K	1	
		R766	D1BA1502A022	M.RESISTOR CH 1/16W 15K	1	
		R767	D0GA222JA023	M.RESISTOR CH 1/10W 2.2K	1	
		R768	D1BA3302A022	M.RESISTOR CH 1/16W 33K	1	
		R771	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R772	D0GA821JA023	M.RESISTOR CH 1/10W 820	1	
		R773	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R775	D0GA221JA023	M.RESISTOR CH 1/10W 220	1	
		R776	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	

		R778	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R779	D0GA221JA023	M.RESISTOR CH 1/10W 220	1	
		R780	D0GA224JA023	M.RESISTOR CH 1/10W 220K	1	
		R781	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R782	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R783	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R784	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R785	D0GA221JA023	M.RESISTOR CH 1/10W 220	1	
		R786	D0GA332JA023	M.RESISTOR CH 1/10W 3.3K	1	
		R788	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R789	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R790	D0GA391JA023	M.RESISTOR CH 1/10W 390	1	
		R792	D0GA391JA023	M.RESISTOR CH 1/10W 390	1	
		R793	D0GA221JA023	M.RESISTOR CH 1/10W 220	1	
		R795	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R799	D0GA821JA023	M.RESISTOR CH 1/10W 820	1	
		R913	D0GA151JA023	M.RESISTOR CH 1/10W 150	1	
		R914	D0GA151JA023	M.RESISTOR CH 1/10W 150	1	
		R915	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R1001	D1JBR084A023	FUSING RESISTOR 0.084	1	
		R1003	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R1004	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R1005	D0GA154JA023	M.RESISTOR CH 1/10W 150K	1	
		R1006	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R1101	D0GA120JA023	M.RESISTOR CH 1/10W 12	1	
		R1103	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R1107	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R1221	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R1222	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R1223	D0GA224JA023	M.RESISTOR CH 1/10W 220K	1	
		R1241	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R1262	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R1263	D1BA1501A022	M.RESISTOR CH 1/16W 1.5K	1	
		R1264	D1BA2202A022	M.RESISTOR CH 1/16W 22K	1	
		R1271	D1JBR179A023	FUSING RESISTOR 0.179	1	
		R1282	D1BA1302A022	M.RESISTOR CH 1/16W 13K	1	
		R1292	D1BA5102A022	M.RESISTOR CH 1/16W 51K	1	
		R1293	D1BA6201A022	M.RESISTOR CH 1/16W 6.2K	1	
		R1294	D1BA2203A022	M.RESISTOR CH 1/16W 220K	1	
		R1296	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R1297	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R1382	D0GA222JA023	M.RESISTOR CH 1/10W 2.2K	1	
		R1426	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R1471	D0GA163JA023	M.RESISTOR CH 1/10W 16K	1	
		R1472	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R1473	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R1474	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R1501	D0GA105JA023	M.RESISTOR CH 1/10W 1M	1	
		R1513	D1BA1503A022	M.RESISTOR CH 1/16W 150K	1	
		R1515	D1BA1203A022	M.RESISTOR CH 1/16W 120K	1	
		R1516	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R1522	D1BA1203A022	M.RESISTOR CH 1/16W 120K	1	
		R1523	D1BA1803A022	M.RESISTOR CH 1/16W 180K	1	
		R1525	D1BA2202A022	M.RESISTOR CH 1/16W 22K	1	
		R1526	D1BDR100A111	M.RESISTOR CH 1/3W 100	1	
		R1529	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R1531	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R1535	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R1551	D0GA331JA023	M.RESISTOR CH 1/10W 330	1	
		R2301	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R2304	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	

		R2312	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R3400	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	

Model No. : HC-VX980M/VX980/VX981/VX989nbps; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R3401	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3402	D0GA681JA023	M.RESISTOR CH 1/10W 680	1	
		R3406	D0GA121JA023	M.RESISTOR CH 1/10W 120	1	
		R3407	D0GA560JA023	M.RESISTOR CH 1/10W 56	1	(HC-VX980M)
		R3409	D0GA560JA023	M.RESISTOR CH 1/10W 56	1	
		R3410	D0GA152JA023	M.RESISTOR CH 1/10W 1.5K	1	
		R3411	D1BA3901A022	M.RESISTOR CH 1/16W 3.9K	1	
		R3413	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3414	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3417	D0GA122JA023	M.RESISTOR CH 1/10W 1.2K	1	
		R3418	D0GA122JA023	M.RESISTOR CH 1/10W 1.2K	1	
		R3419	D0GA681JA023	M.RESISTOR CH 1/10W 680	1	
		R3423	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R3427	D1BA2400A022	M.RESISTOR CH 1/16W 240	1	
		R3428	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3429	D0GA273JA023	M.RESISTOR CH 1/10W 27K	1	
		R3430	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3431	D1BA2400A022	M.RESISTOR CH 1/16W 240	1	
		R3432	D1BA4701A022	M.RESISTOR CH 1/16W 4.7K	1	
		R3433	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R3436	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R3437	D0GA182JA023	M.RESISTOR CH 1/10W 1.8K	1	
		R3438	D0GA182JA023	M.RESISTOR CH 1/10W 1.8K	1	
		R3439	D1BA2400A022	M.RESISTOR CH 1/16W 240	1	
		R3440	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R3441	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R3442	D0GA330JA023	M.RESISTOR CH 1/10W 33	1	
		R3443	D0GA220JA023	M.RESISTOR CH 1/10W 22	1	
		R3444	D1BA2400A022	M.RESISTOR CH 1/16W 240	1	
		R3445	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	(HC-VX980M)
		R3446	D0GA560JA023	M.RESISTOR CH 1/10W 56	1	(HC-VX980M)
		R3448	D1BA6201A022	M.RESISTOR CH 1/16W 6.2K	1	
		R3450	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3451	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3452	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	(HC-VX980M)
		R3453	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3454	D1BA1801A022	M.RESISTOR CH 1/16W 1.8K	1	
		R3457	D0GA152JA023	M.RESISTOR CH 1/10W 1.5K	1	
		R3458	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3461	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R3462	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3463	D0GA104JA039	M.RESISTOR CH 1/16W 100K	1	
		R3466	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R3467	D1BA1802A022	M.RESISTOR CH 1/16W 18K	1	
		R3468	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R3470	D1BA2000A022	M.RESISTOR CH 1/16W 200	1	
		R3472	D1BA6801A022	M.RESISTOR CH 1/16W 6.8K	1	
		R3476	D1BA2000A022	M.RESISTOR CH 1/16W 200	1	
		R3477	D1BA5601A022	M.RESISTOR CH 1/16W 5.6K	1	
		R3486	D0GA270JA023	M.RESISTOR CH 1/10W 27	1	
		R3487	D0GA270JA023	M.RESISTOR CH 1/10W 27	1	
		R3499	D0GA470JA023	M.RESISTOR CH 1/10W 47	1	
		R3506	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3507	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3508	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3530	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R3701	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3702	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R3703	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R3704	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3705	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	

		R3706	D0GA223JA023	M.RESISTOR CH 1/10W 22K	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R3707	D0GA223JA023	M.RESISTOR CH 1/10W 22K	1	
		R3716	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3717	D0GA330JA023	M.RESISTOR CH 1/10W 33	1	
		R3718	D0GA330JA023	M.RESISTOR CH 1/10W 33	1	
		R3931	D0GA330JA023	M.RESISTOR CH 1/10W 33	1	
		R3932	D0GA100JA023	M.RESISTOR CH 1/10W 10	1	
		R3933	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R3934	D0GA271JA023	M.RESISTOR CH 1/10W 270	1	
		R3935	D0GA331JA023	M.RESISTOR CH 1/10W 330	1	
		R3936	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3937	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R3939	D0GA333JA023	M.RESISTOR CH 1/10W 33K	1	
		R3940	D0GB150JA065	M.RESISTOR CH 1/10W 15	1	
		R3953	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R3956	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	(HC-VX980M)
		R3976	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	(HC-VX980M)
		R3980	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R3981	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R4801	D0GD392JA052	M.RESISTOR CH 1/8W 3.9K	1	
		R4802	D0GD392JA052	M.RESISTOR CH 1/8W 3.9K	1	
		R4803	D0GD392JA052	M.RESISTOR CH 1/8W 3.9K	1	
		R4804	D0GD392JA052	M.RESISTOR CH 1/8W 3.9K	1	
		R4808	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4809	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R4810	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4811	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R4812	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4813	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R4814	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4815	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
		R4816	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R4817	D0GA223JA023	M.RESISTOR CH 1/10W 22K	1	
		R4818	D0GA333JA023	M.RESISTOR CH 1/10W 33K	1	
		R4851	D0GA184JA023	M.RESISTOR CH 1/10W 180K	1	
		R4852	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4853	D0GA184JA023	M.RESISTOR CH 1/10W 180K	1	
		R4854	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4855	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4856	D0GA184JA023	M.RESISTOR CH 1/10W 180K	1	
		R4857	D0GA184JA023	M.RESISTOR CH 1/10W 180K	1	
		R4858	D0GA183JA023	M.RESISTOR CH 1/10W 18K	1	
		R4901	D0HB331ZA002	M.RESISTOR CH 1/10W 330	1	
		R4902	D0GA472JA023	M.RESISTOR CH 1/10W 4.7K	1	
		R4904	D0HB562ZA002	M.RESISTOR CH 1/10W 5.6K	1	
		R4905	D0GA471JA023	M.RESISTOR CH 1/10W 470	1	
		R4906	D0HB103ZA002	M.RESISTOR CH 1/16W 10K	1	
		R4907	D0HB154ZA002	M.RESISTOR CH 1/16W 150K	1	
		R4908	D0HB563ZA002	M.RESISTOR CH 1/10W 56K	1	
		R4909	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R4910	D0GA562JA023	M.RESISTOR CH 1/10W 5.6K	1	
		R4911	D0GA821JA023	M.RESISTOR CH 1/10W 820	1	
		R4912	D0GA471JA023	M.RESISTOR CH 1/10W 470	1	
		R4913	D0HB103ZA002	M.RESISTOR CH 1/16W 10K	1	
		R4914	D0HB154ZA002	M.RESISTOR CH 1/16W 150K	1	
		R4915	D0HB563ZA002	M.RESISTOR CH 1/10W 56K	1	
		R4916	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R4917	D0GA562JA023	M.RESISTOR CH 1/10W 5.6K	1	
		R4918	D0GA821JA023	M.RESISTOR CH 1/10W 820	1	
		R4920	D0HB562ZA002	M.RESISTOR CH 1/10W 5.6K	1	
		R4922	D0GA223JA023	M.RESISTOR CH 1/10W 22K	1	
		R4923	D0GA683JA023	M.RESISTOR CH 1/10W 68K	1	

		R4924	D0GA473JA039	M.RESISTOR CH 1/16W 47K	1	
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Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

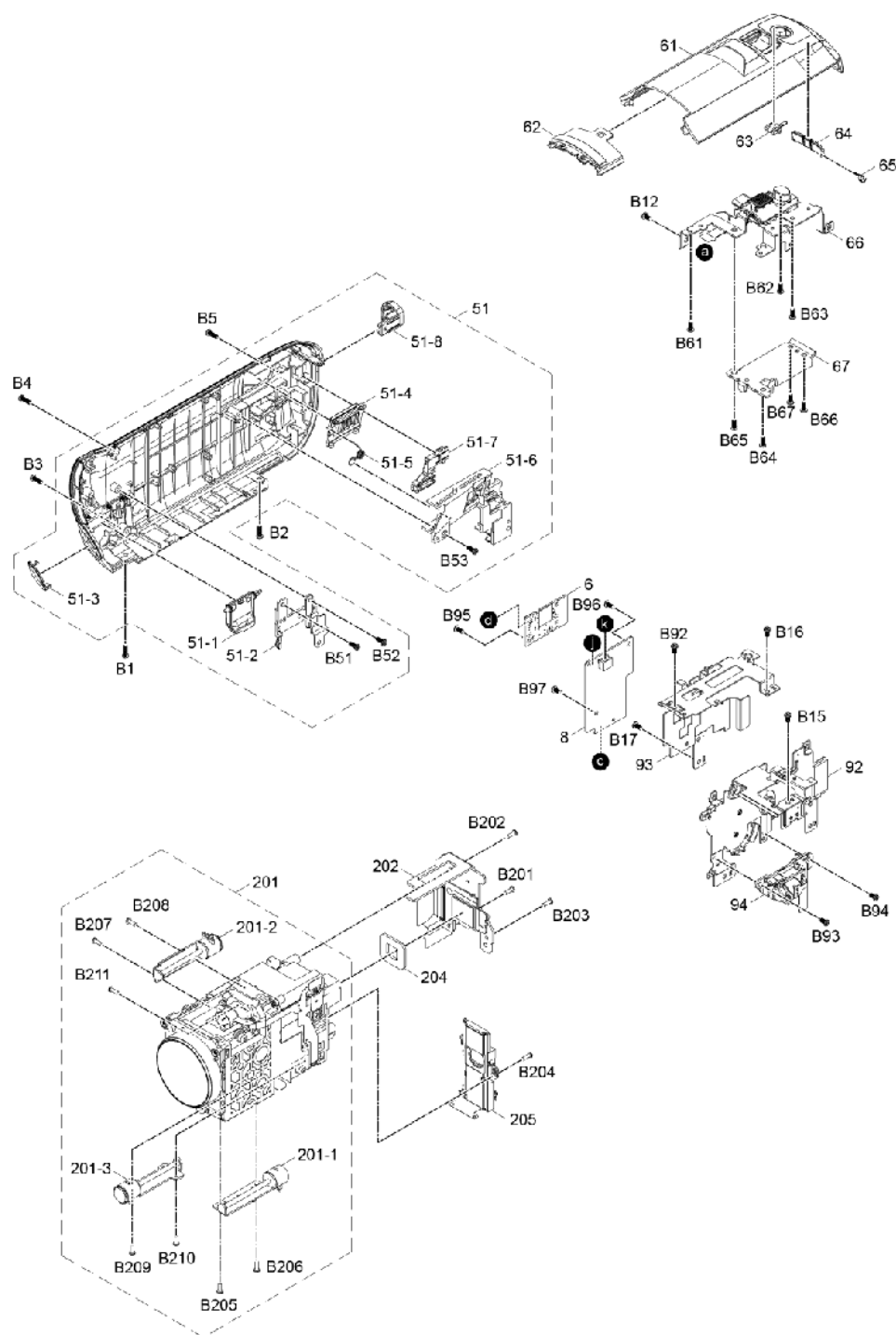
Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R6001	D0GA471JA023	M.RESISTOR CH 1/10W 470	1	
		R6002	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R6003	D1JBR045A055	FUSING RESISTOR 0.045	1	
		R6402	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R6403	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R6404	D0GA470JA023	M.RESISTOR CH 1/10W 47	1	
		R6405	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R6406	D1BA1002A022	M.RESISTOR CH 1/16W 10K	1	
		R6414	D0GBR00JA008	M.RESISTOR CH 1/16W 0	1	
		R6416	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R6417	D1BA68R0A022	M.RESISTOR CH 1/16W 68	1	
		R6418	D0GAR00J0005	M.RESISTOR CH 1/10W 0	1	
		R6420	D0GA102JA039	M.RESISTOR CH 1/16W 1K	1	
		R6422	D0GA101JA039	M.RESISTOR CH 1/16W 100	1	
		R6430	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R6457	D0GA103JA039	M.RESISTOR CH 1/16W 10K	1	
		R6501	D1BA8200A022	M.RESISTOR CH 1/16W 820	1	
		R6502	D1BA1200A022	M.RESISTOR CH 1/16W 120	1	
		R6503	D1BA1500A022	M.RESISTOR CH 1/16W 150	1	
		R6504	D1BA8200A022	M.RESISTOR CH 1/16W 820	1	
		R6511	D1BB3R90A073	M.RESISTOR CH 1/10W 3.9	1	
		R6512	D1BB3R90A073	M.RESISTOR CH 1/10W 3.9	1	
		RX901	D1H88204A042	RESISTOR NETWORKS	1	
		RX902	D1H88204A042	RESISTOR NETWORKS	1	
		RX903	D1H88204A042	RESISTOR NETWORKS	1	
		RX904	D1H88204A042	RESISTOR NETWORKS	1	
		RX3401	D1H82204A042	RESISTOR NETWORKS	1	
		RX3402	D1H85604A042	RESISTOR NETWORKS	1	(HC-VX980M)
		RX3404	D1H81034A042	RESISTOR NETWORKS	1	
		RX3405	D1H81034A042	RESISTOR NETWORKS	1	
		RX3407	D1H85604A042	RESISTOR NETWORKS	1	
		RX3408	D1H84734A042	RESISTOR NETWORKS	1	
		RX3409	D1H84734A042	RESISTOR NETWORKS	1	
		RX3411	D1H85604A042	RESISTOR NETWORKS	1	(HC-VX980M)
		RX3414	D1H84734A042	RESISTOR NETWORKS	1	
		RX3415	D1H81034A042	RESISTOR NETWORKS	1	
		RX3417	D1H81034A042	RESISTOR NETWORKS	1	
		RX3418	D1H84724A042	RESISTOR NETWORKS	1	
		RX3419	D1H81034A042	RESISTOR NETWORKS	1	
		RX3420	D1H81034A042	RESISTOR NETWORKS	1	
		RX3421	D1H81034A042	RESISTOR NETWORKS	1	
		RX3931	D1H81004A042	RESISTOR NETWORKS	1	
		RX3932	EXB28V103JX	RESISTOR NETWORKS	1	
		RX3951	D1H81034A042	RESISTOR NETWORKS	1	(HC-VX980M)
		RX3952	D1H81034A042	RESISTOR NETWORKS	1	
		RX3971	D1H81034A042	RESISTOR NETWORKS	1	(HC-VX980M)
		S6001	ESE18L12BXFD	SWITCH	1	
		S6401	K0H1BA000580	SWITCH	1	
		S6402	K0H1BA000580	SWITCH	1	
		S6403	K0H1BA000580	SWITCH	1	
		S6404	K0H1BA000580	SWITCH	1	
		S6405	K0F111A00475	SWITCH	1	
		TH3401	D4CC11030013	THERMISTORS	1	
		VA501	D4ED18R00008	VARISTOR	1	
		VA502	D4ED18R00008	VARISTOR	1	
		VA503	D4ED18R00008	VARISTOR	1	
		VA504	D4ED18R00008	VARISTOR	1	
		VA906	D4ED16R80001	VARISTOR	1	
		VA1502	D4ED1270A011	VARISTOR	1	
		VA6403	D4EDY1310001	VARISTOR	1	
		VA6405	D4EDY1310001	VARISTOR	1	

		VA6406	D4EDY1310001	VARISTOR	1	
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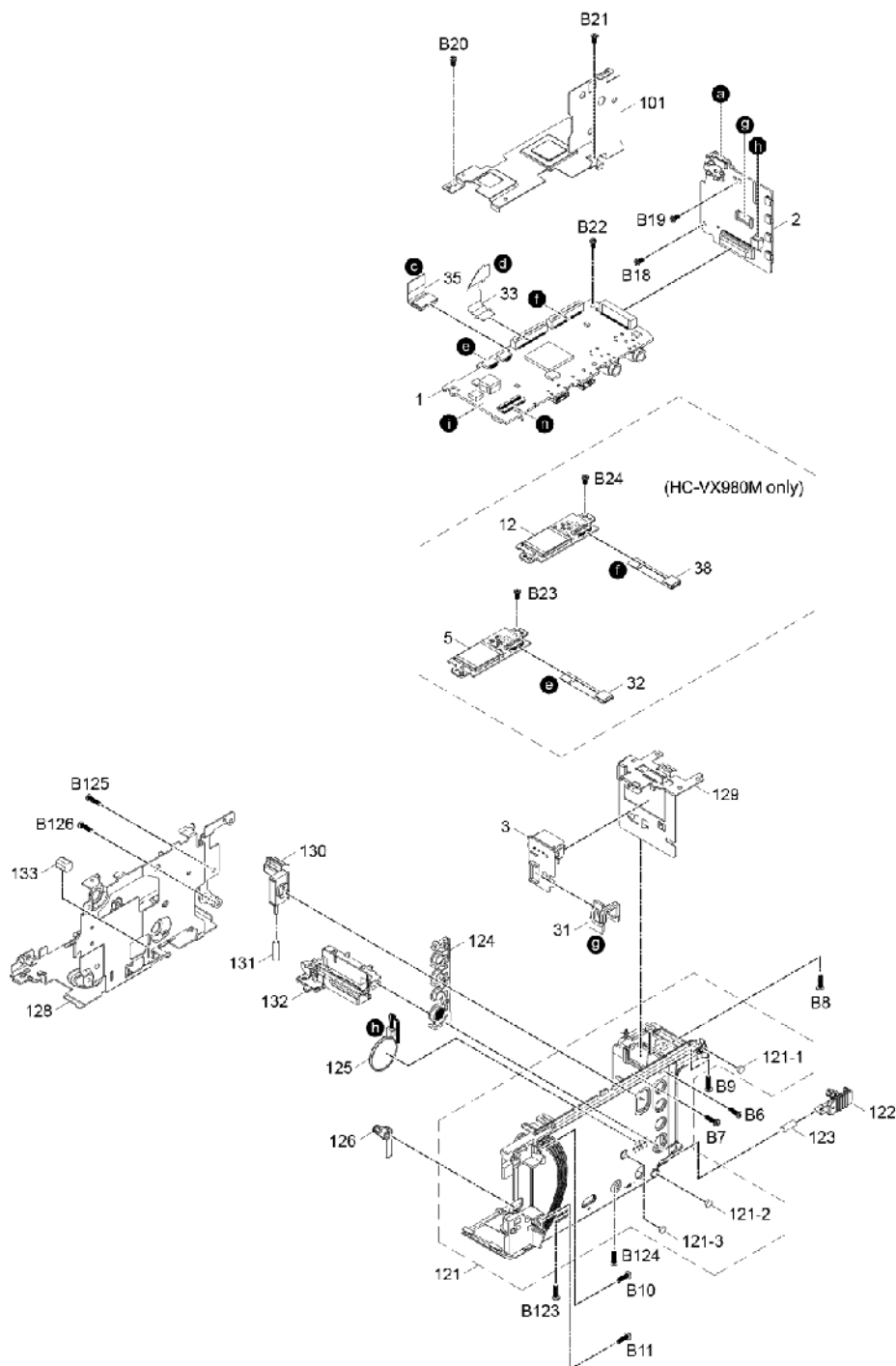
Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		VA6407	D4EDY1310001	VARISTOR	1	
		VA6408	D4EDY1310001	VARISTOR	1	
		VA6456	D4EDY1310001	VARISTOR	1	
		VA6701	D4EDY1310001	VARISTOR	1	
		VA6702	D4EDY1310001	VARISTOR	1	
		X2303	H0J327200085	CRYSTAL OSCILLATOR	1	
		X3402	H1A7205B0007	CRYSTAL OSCILLATOR	1	
		ZB6501	SMX0014	LED SPACER	1	
		ZJ7503	SEE0124	PHOTO LIGHT WIRE	1	

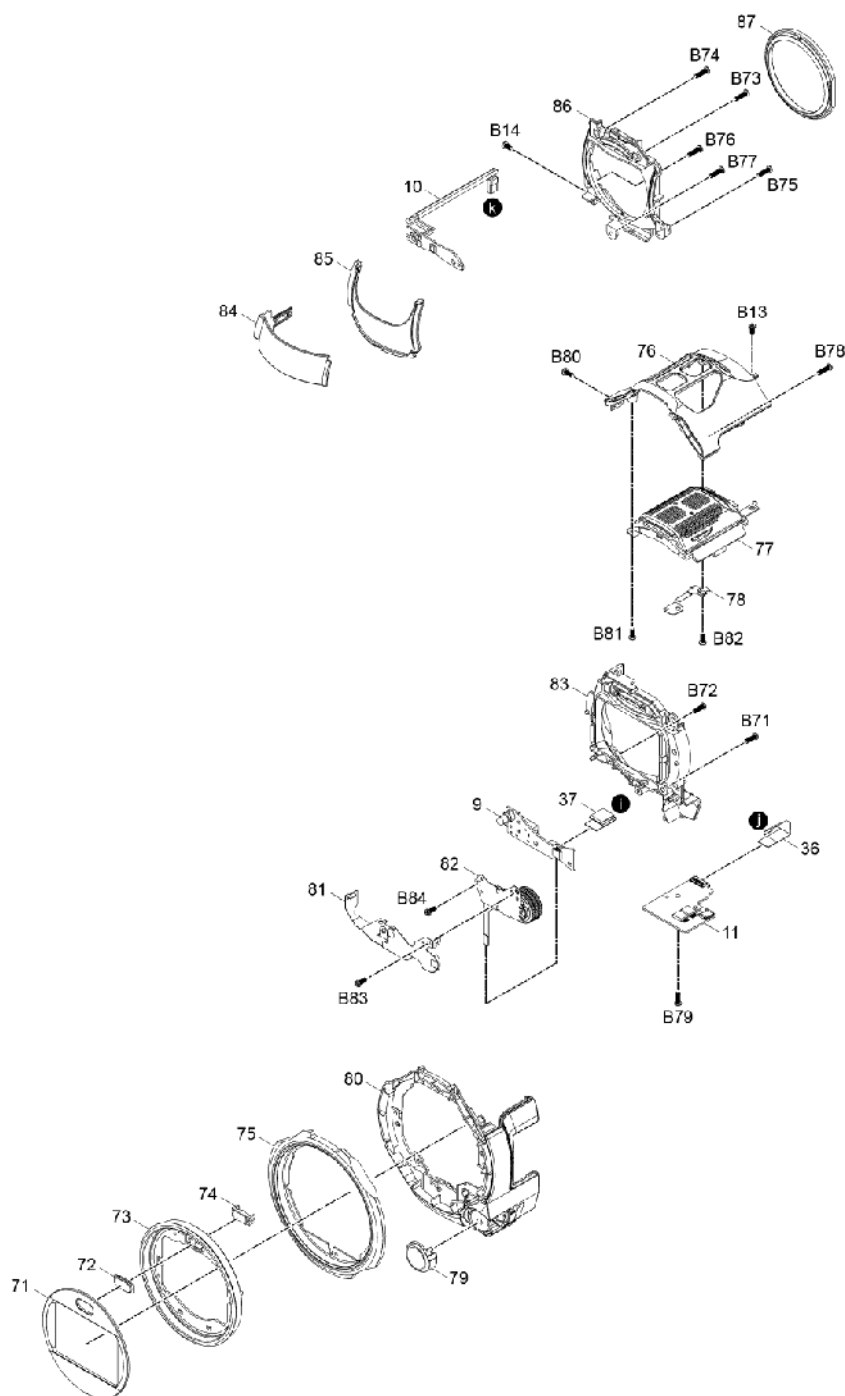
Model No. : HC-VX980M/VX980/VX981/VX989 Frame and Casing Section (1)



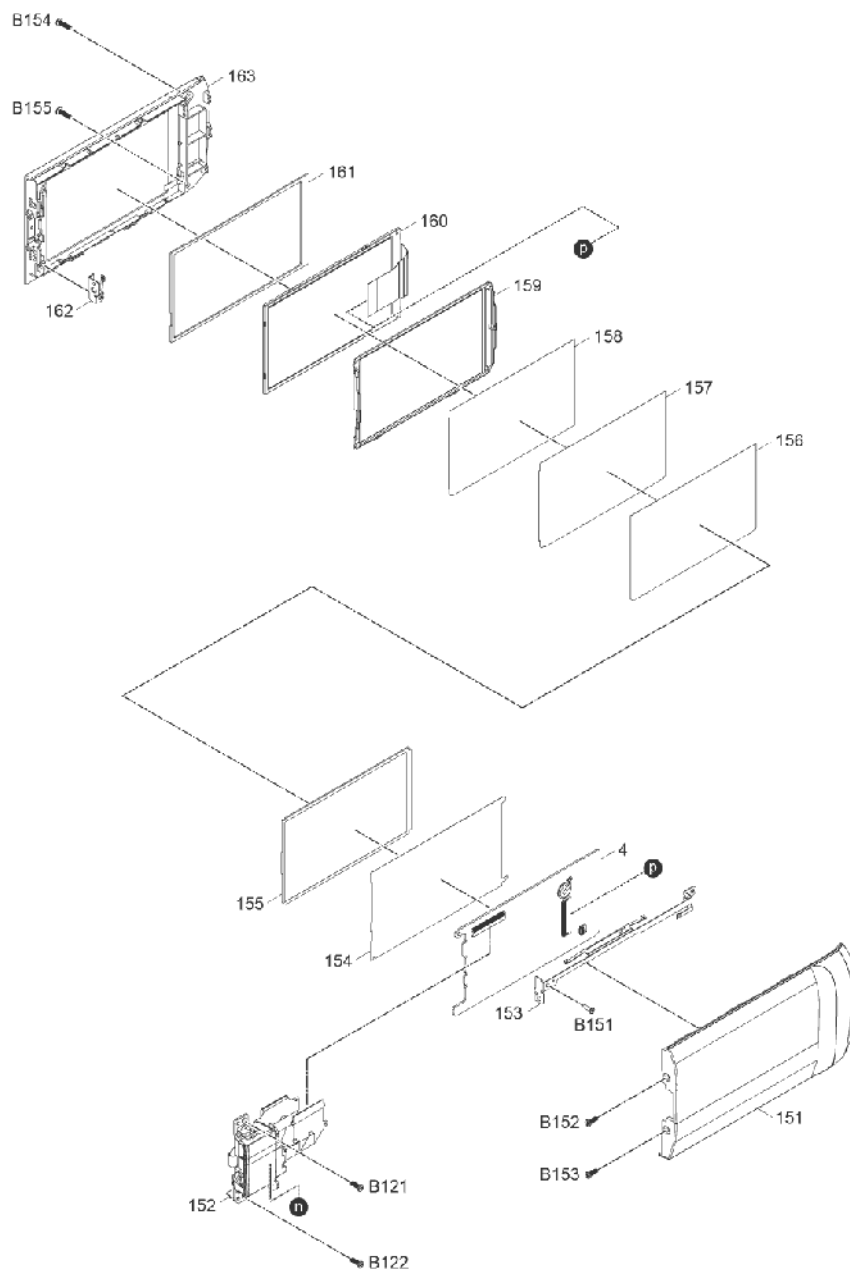
Model No. : HC-VX980M/VX980/VX981/VX989 Frame and Casing Section (2)



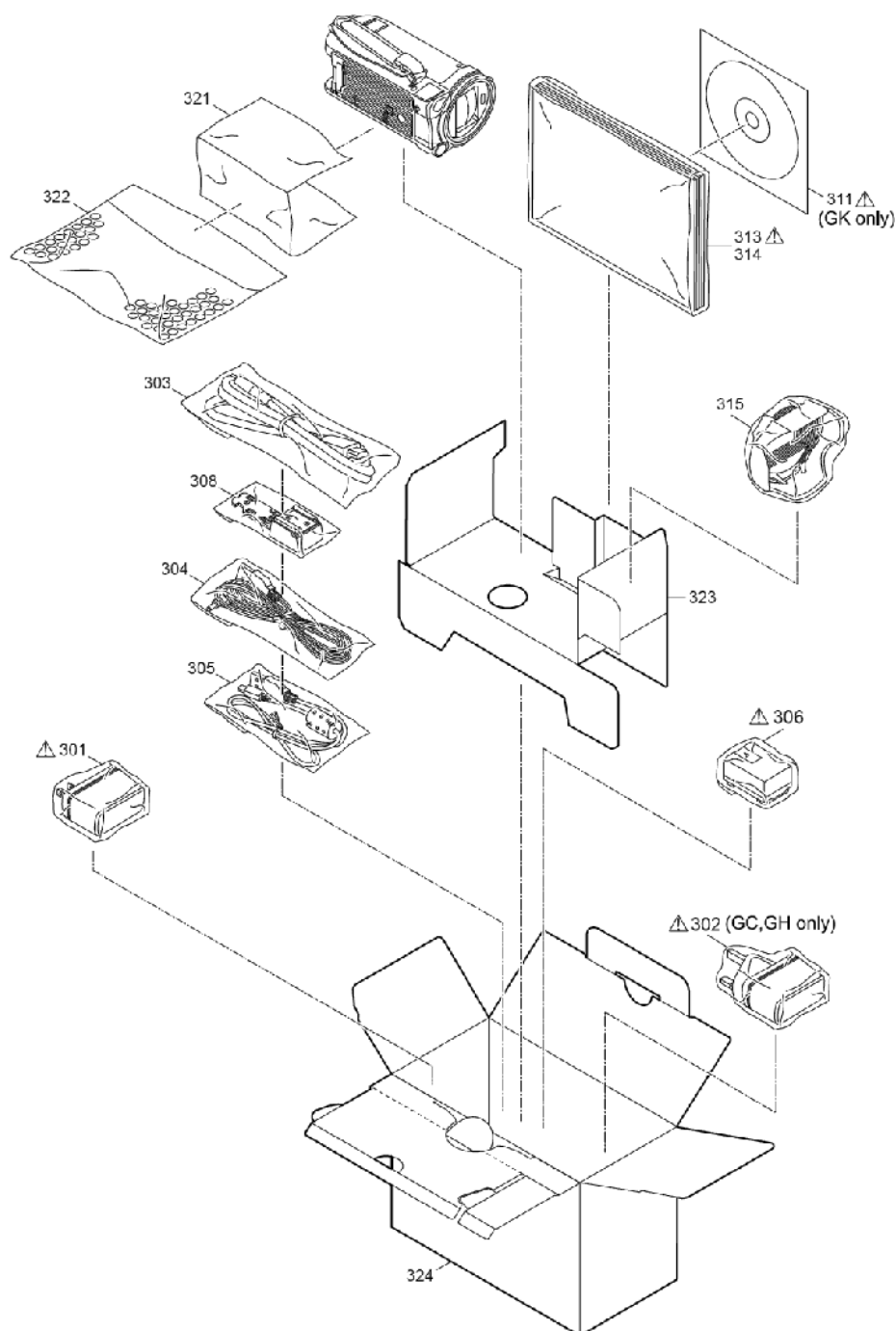
Model No. : HC-VX980M/VX980/VX981/VX989 Frame and Casing Section (3)



Model No. : HC-VX980M/VX980/VX981/VX989 LCD Section



Model No. : HC-VX980M/VX980/VX981/VX989 Packing Parts and Accessories Section



Model No. : HC-VX980M/VX980/VX981/VX989 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		1	SEP0276AL	MAIN P.C.B.	1	(RTL) E.S.D. (HC-VX980M)
		1	SEP0276AM	MAIN P.C.B.	1	(RTL) E.S.D. (HC-VX980,HC-VX981,HC-VX989)
		2	SEP0006AC	SD HOLDER P.C.B.	1	(RTL) E.S.D.
		3	SEP0033AB	BATT. CATCHER P.C.B.	1	(RTL) E.S.D.
		4	SEP0007AA	MONITOR P.C.B.	1	(RTL) E.S.D.
		5	VEP03J60AA	ESD P.C.B. UNIT	1	E.S.D. (HC-VX980M)
		6	VEP06G78G	Wi-Fi P.C.B.	1	E.S.D. (except GK)
		6	VEP06G78K	Wi-Fi P.C.B.	1	E.S.D. GK
		8	SEP0298AA	PHOTO LIGHT DRV P.C.B.	1	E.S.D.
		9	SEP0009AA	FRONT P.C.B.	1	(RTL) E.S.D.
		10	SEP0300AA	PHOTO LIGHT P.C.B.	1	(RTL) E.S.D.
		11	SEP0299AA	MIC P.C.B.	1	(RTL) E.S.D.
		12	VEP03J60AA	ESD P.C.B. UNIT	1	E.S.D. (HC-VX980M)
		31	SEE0210	BATT. CATCHER WIRE	1	
		32	SEQ0137	ESD FFC UNIT	1	(HC-VX980M)
		33	VWJ2365	Wi-Fi FFC	1	
		35	STJ0014	PHOTO LIGHT FFC	1	
		36	STJ0008	MIC FFC	1	
		37	STJ0006	FRONT FFC	1	
		38	STJ0008	ESD FFC	1	(HC-VX980M)
		51	SYK0772	SIDE CASE-L UNIT	1	
		51-1	SKQ0003K	HP JACK COVER	1	
		51-2	SGQ0028	HP JACK COVER PIECE	1	
		51-3	SGQ0022	IR PIECE	1	
		51-4	SYK0150	DC JACK COVER UNIT	1	
		51-5	VMB4656	JACK DOOR SPRING	1	
		51-6	SGQ0026	JACK COVER PIECE	1	
		51-7	VGQ1J19	SS LEVER	1	
		51-8	SGU0110	SS BUTTON	1	
		61	SKK0332K	TOP CASE	1	
		62	SGK0105K	TOP ORNAMENT	1	
		63	VGL1447	POWER PANEL LIGHT	1	
		64	VKF4851	SHOE COVER	1	
		65	VMB4725	COVER OPEN SPRING	1	
		66	K0RE00300033	TOP OPERATION	1	
		67	VMP9941	TOP SHOE ANGLE	1	
		71	SGQ0288	HOOD PIECE	1	
		72	VGL1381	LED LIGHT COVER	1	
		73	SGQ0020	HOOD MASK	1	
		74	VDL2652	LED LIGHT LENS	1	
		75	SGK0020K	FRONT RING	1	
		76	SKK0231K	MIC NET COVER	1	
		77	SYK0987	MIC CASE UNIT	1	
		78	SMA0030	MIC EARTH PLATE	1	
		79	SGK0104K	MF ORNAMENT	1	
		80	SYK0528	FRONT ORNAMENT UNIT	1	
		81	SMA0014	FR EARTH ANGLE	1	
		82	K0RE00300034	KURUPON UNIT	1	
		83	SKK0072K	FRONT CASE	1	
		84	SGQ0023	BARRIER F	1	
		85	SGQ0024	BARRIER R	1	
		86	SGQ0025	FRONT BASE	1	
		87	SMG0003	LENS DAMPER RUBBER	1	
		92	SYK0409	LENS FRAME UNIT	1	
		93	SYK0410	Wi-Fi FRAME UNIT	1	
		94	N92Z00000450	BARRIER MOTOR UNIT	1	
		101	SYD0013	HEAT RADIATION PLATE UNIT	1	
		121	SYK1321	SIDE CASE-R UNIT	1	
		121-1	VMG1822-A	LCD CUSHION	1	
		121-2	VMG1822-A	LCD CUSHION	1	

		121-3	VMG1822-A	LCD CUSHION	1	
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Model No. : HC-VX980M/VX980/VX981/VX989 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		122	SGU0009	BATT. LOCK BUTTON	1	
		123	VMB4482	BATT. LOCK SPRING	1	
		124	SGU0007	SR OP BUTTON	1	
		125	L0AA01A00162	SPEAKER	1	
		126	SGQ0014	LCD LEVER	1	
		128	SYQ0015	BR FRAME UNIT	1	
		129	SGF0009	BATT. FRAME	1	
		130	SGU0010	SHOE LOCK KNOB	1	
		131	VMB4728	SHOE LOCK SPRING	1	
		132	SYQ0032	SD DOOR UNIT	1	
		133	VGQ9672	GASKET	1	
		151	SYK1327	LCD CASE (T) UNIT	1	(HC-VX980M)
		151	SYK1337	LCD CASE (T) UNIT	1	(HC-VX980)
		151	SYK1339	LCD CASE (T) UNIT	1	(HC-VX989)
		151	SYK1374	LCD CASE (T) UNIT	1	(HC-VX981)
		152	SYQ0626	LCD HINGE UNIT	1	
		153	SGF0011	LCD FRAME A	1	
		154	VGL1449	REFLECTION SHEET	1	
		155	VKW3518	LIGHT GUIDE PLATE	1	
		156	VGL1384	DIFFUSION SHEET	1	
		157	VGL1460	PRISM SHEET B	1	
		158	SGQ0313	PRISM SHEET A	1	
		159	SGQ0002	LGP HOLDER	1	
		160	L5BDDY00073	LCD	1	
		161	SGQ0001	TP SPACER	1	
		162	SGF0002	LCD FRAME B	1	
		163	SYK0411	LCD CASE (B) UNIT	1	*With a touch panel
		201	SXW0161	LENS UNIT	1	
		201-1	L6HAYYYB0011	2ND STEPPING MOTOR	1	
		201-2	L6HAYYYC0056	3RD STEPPING MOTOR	1	
		201-3	L6HAYYYB0012	4TH STEPPING MOTOR	1	
		202	SXQ0251	MOS UNIT	1	
		204	SMT0022	MOS CUSHION	1	
		205	SXQ0002	IR KUDOU UNIT	1	
		B1	XQN16+B5FJK	SCREW	1	
		B2	XQN16+B5FJK	SCREW	1	
		B3	XQN16+B5FJK	SCREW	1	
		B4	XQN16+B5FJK	SCREW	1	
		B5	XQN16+B5FJK	SCREW	1	
		B6	XQN16+B5FJK	SCREW	1	
		B7	XQN16+BJ6FJK	SCREW	1	
		B8	XQN16+BJ6FJK	SCREW	1	
		B9	XQN16+BJ6FJK	SCREW	1	
		B10	XQN16+BJ6FJK	SCREW	1	
		B11	XQN16+BJ6FJK	SCREW	1	
		B12	XQN16+B3FN	SCREW	1	
		B13	XQN16+B3FN	SCREW	1	
		B14	XQN16+B3FN	SCREW	1	
		B15	XQN16+B3FN	SCREW	1	
		B16	XQN16+B3FN	SCREW	1	
		B17	XQN16+B3FN	SCREW	1	
		B18	VHD1919	SCREW	1	
		B19	VHD1919	SCREW	1	
		B20	VHD1919	SCREW	1	
		B21	VHD1919	SCREW	1	
		B22	VHD1919	SCREW	1	
		B23	VHD1919	SCREW	1	(HC-VX980M)
		B24	VHD1919	SCREW	1	(HC-VX980M)
		B51	XQN16+BJ4FN	SCREW	1	
		B52	XQN16+BJ4FN	SCREW	1	
		B53	XQN16+BJ4FN	SCREW	1	

		B61	XQN16+BJ4FN	SCREW	1	
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Model No. : HC-VX980M/VX980/VX981/VX989 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		B62	XQN16+BJ4FN	SCREW	1	
		B63	XQN16+BJ4FN	SCREW	1	
		B64	XQS2+AJ5FN	SCREW	1	
		B65	XQS2+AJ5FN	SCREW	1	
		B66	XQS2+AJ5FN	SCREW	1	
		B67	XQS2+AJ5FN	SCREW	1	
		B71	XQN16+BJ5FJK	SCREW	1	
		B72	XQN16+BJ5FJK	SCREW	1	
		B73	XQN16+BJ6FN	SCREW	1	
		B74	XQN16+BJ6FN	SCREW	1	
		B75	XQN16+BJ6FN	SCREW	1	
		B76	XQN16+BJ6FN	SCREW	1	
		B77	XQN16+BJ6FN	SCREW	1	
		B78	XQN16+BJ6FN	SCREW	1	
		B79	XQN16+BJ5FJK	SCREW	1	
		B80	XQN16+BJ4FN	SCREW	1	
		B81	XQN16+BJ4FN	SCREW	1	
		B82	XQN16+BJ4FN	SCREW	1	
		B83	XQN16+BJ4FN	SCREW	1	
		B84	XQN16+BJ4FN	SCREW	1	
		B92	XQN16+B3FN	SCREW	1	
		B93	VHD1919	SCREW	1	
		B94	VHD1919	SCREW	1	
		B95	XQN16+B3FN	SCREW	1	
		B96	XQN16+B3FN	SCREW	1	
		B97	XQN16+B3FN	SCREW	1	
		B121	VHD1411	SCREW	1	
		B122	VHD1411	SCREW	1	
		B123	XQN16+B3FJK	SCREW	1	
		B124	XQN16+B3FJK	SCREW	1	
		B125	XQN16+BJ4FN	SCREW	1	
		B126	XQN16+BJ4FN	SCREW	1	
		B151	XQN14+BJ4FN	SCREW	1	
		B152	VHD1688	SCREW	1	
		B153	VHD1688	SCREW	1	
		B154	XQN16+BJ6FJK	SCREW	1	
		B155	XQN16+BJ6FJK	SCREW	1	
		B201	VHD2072	SCREW	1	
		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	
		B209	VHD2072	SCREW	1	
		B210	VHD2072	SCREW	1	
		B211	VHD2072	SCREW	1	
	⚠	301	VSK0815FA	AC ADAPTOR	1	PP, PU
	⚠	301	VSK0815H	AC ADAPTOR	1	GK
	⚠	301	VSK0815K	AC ADAPTOR	1	EG, EE, EF, EP, GC
	⚠	301	VSK0815L	AC ADAPTOR	1	EB
	⚠	301	VSK0815MA	AC ADAPTOR	1	GN
	⚠	301	VSK0815Q	AC ADAPTOR	1	GW
	⚠	302	VSK0815N	AC ADAPTOR	1	GC, GH
		303	K1HY19YY0038	MICRO HDMI CABLE	1	
		304	K2GHYY00002	DC CABLE	1	
		305	K2KYYY00236	USB CABLE	1	
	⚠	306	-----	BATTERY PACK	1	(except PP, GK)

		306	-----	BATTERY PACK	1	GK
		306	-----	BATTERY PACK	1	PP
		308	VYC1055-A	SHOE ADPTOR	1	

Model No. : HC-VX980M/VX980/VX981/VX989; Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		311	SFM0120	CD-ROM(O/I)	1	GK
		313	SQT1152	OPERATING INSTRUCTIONS (ENGLISH/FRENCH)	1	PP
		313	SQT1153	OPERATING INSTRUCTIONS (SPANISH)	1	PU
		313	SQT1154	OPERATING INSTRUCTIONS (GERMAN/TURKISH/ITALIAN)	1	VX980EG, VX989EG
		313	SQT1155	OPERATING INSTRUCTIONS (FRENCH/DUTCH)	1	VX980EG, VX989EG, EF
		313	SQT1156	OPERATING INSTRUCTIONS (SPANISH/PORTUGUESE)	1	VX980EG
		313	SQT1157	OPERATING INSTRUCTIONS (SWEDISH/DANISH/FINNISH)	1	VX980EG
		313	SQT1158	OPERATING INSTRUCTIONS (ENGLISH)	1	EB, EP
		313	SQT1159	OPERATING INSTRUCTIONS (POLISH/CZECH/HUNGARIAN)	1	EP
		313	SQT1160	OPERATING INSTRUCTIONS (ENGLISH)	1	GC, GW, GH, GN
		313	SQT1161	OPERATING INSTRUCTIONS (ARABIC)	1	GC
		313	SQT1162	OPERATING INSTRUCTIONS (RUSSIAN/UKRAINIAN)	1	EE
		313	SQT1163	OPERATING INSTRUCTIONS (CHINESE (TRADITIONAL))	1	GH
		313	SQT1164	OPERATING INSTRUCTIONS (CHINESE (SIMPLIFIED))	1	GK
		314	VPF1545	BAG, POLYETHYLENE	1	
		315	SYK0602	LENS HOOD UNIT	1	
		321	LSMF0623	PROTECT SHEET	1	
		322	VPF1560	PROTECT BAG	1	
		323	SPN0189	PAD	1	
		324	SPG0586	PACKING CASE	1	VX980EG, VX980EB, VX980EE, VX980EF, VX980EP, VX980GW, VX980PU
		324	SPG0588	PACKING CASE	1	VX980GC
		324	SPG0589	PACKING CASE	1	VX981PP
		324	SPG0590	PACKING CASE	1	VX989EG
		324	SPG0592	PACKING CASE	1	VX980MGH, VX980MGN
		324	SYQ0664	PACKING CASE UNIT	1	VX980GK
		324	SYQ0666	PACKING CASE UNIT	1	VX980MGK