

# SECTION 1

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## SERVICE INFORMATION

Model No. : **AG-HMC40P/41E/43MC**

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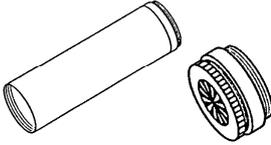
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# 1. Service Fixture & Tools

## 1-1. PC EVR Adjustment tools

No.	Parts No.	Name	Remarks
1	VVS0081	PC EVR Software for AG-HMC40	Download from Global Service WEB Site
2	VVS0058	USB Driver for Adjustment	Download from Global Service WEB Site
3	VFK1347	CC Filter (LB120)	
4	VFK2039	CC Filter (G-10)	
5	VFK1345	CC Filter Holder	
6	VFK1346	Step-Down Ring (62mm-52mm)	
7	VFK1659	Step-Up Ring (43mm-49mm)	
8	VFK1660	Step-Up Ring (49mm-62mm)	
9	VFK1164TCM0	Collimator Set (infinity Lens)	with focus light
10	VFK1164TAR43	43mm Attachment Ring	for setting the collimator
	-----	Halogen lamp	3100K, 2000lx

<p><b>1</b> <b>VVS0081</b> PC EVR Software for AG-HMC40</p> <p style="text-align: center;"><b>DOWN LOAD</b></p>	<p><b>2</b> <b>VVS0058</b> USB Driver for Adjustment</p> <p style="text-align: center;"><b>DOWN LOAD</b></p>	<p><b>3</b> <b>VFK1347 (LB120)</b> <b>4</b> <b>VFK2039 (G-10)</b></p> <p>CC Filter</p> 	<p><b>5</b> <b>VFK1345</b> CC Filter Holder</p> <p><b>6</b> <b>VFK1346</b> Step-Down Ring (62mm-52mm)</p>  <p>VFK1345 VFK1346</p>
<p><b>7</b> <b>VFK1659</b> Step-Up Ring (43mm-49mm)</p> <p><b>8</b> <b>VFK1660</b> Step-Up Ring (49mm-62mm)</p>  <p>VFK1660 VFK1659</p>	<p><b>9</b> <b>VFK1164TCM03</b> Collimator Set (with focus chart)</p> 	<p><b>10</b> <b>VFK1164TAR43</b> 43mm Attachment Ring</p> 	

## 2. Maintenance

### 2-1. Maintenance Schedule

NO.	Part name	Part No.	Pcs	Hours of exchange
1	FAN motor	L6FAG99D0019	1	Every 8,500 Operation Hours

The maintenance execution time shown in the above is recommendation for standard maintenance execution. This is not life of various parts. The life is influenced by temperature, humidity, dust, etc..

### 2-2. Display of operation times

The operation times is displayed in OTHER FUNCTIONS menu screen of setting menu.

1. Turn the power on.
2. Press **MENU** button to display the setting menu.



3. Touch the **OTHER FUNCTIONS** setting menu.
4. Touch ▲ or ▼ to switch pages, and the operation times is displayed on the item **OPERATION TIME**.

### 2-3. Replacement procedure of FAN motor

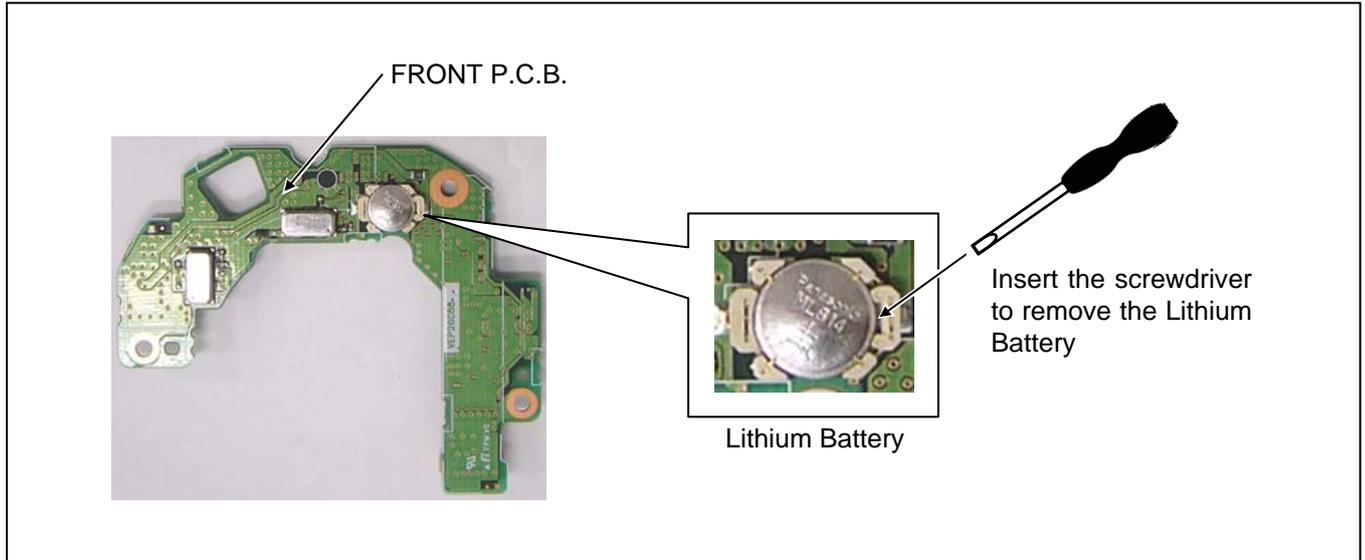
The removal procedure has been described to the item “**9. Removal of the FAN MOTOR**” of disassembly procedure (SECTION 2).

### 3. Replacement procedure of Lithium Battery

1. Remove the FRONT P.C.B.. (The removal procedure has been described to the item “10. Removal of FRONT Unit and FRONT P.C.B.” of disassembly procedure (SECTION 2)).
2. There is a Lithium battery “Ref No.: B6401 / Part No.: ML-614S/ZTK” on the FRONT P.C.Board.
3. Insert the screwdriver to groove of the Lithium Battery Holder and press down it to remove the Lithium Battery. (Pay attention for remove of battery to be pop-up)
4. Install the new battery.
5. Set the date and time of internal clock (Refer to item “Setting the calendar” of operation instructions for the setting method).

**NOTE:** The date and time of internal clock can be set also with PC EVR software.

**Main menu → Settings(S) → Calender and clock set up(C)**



**NOTE:**

The lithium battery is a critical component.

It must never be subjected to excessive heat of discharge.

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

Replacement batteries must be of the 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.

**CAUTION:** DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.  
REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE.

## 4. Firmware update procedure

### 4-1. Software Version Display

The version number of software is displayed in OTHER FUNCTIONS menu screen of setting menu.

1. Turn the power on.
2. Press **MENU** button to display the setting menu.



3. Touch the **OTHER FUNCTIONS** setting menu.
4. Touch ▲ or ▼ to switch pages, and touch the item **SYSTEM INFO**.
5. Touch **"YES"** for the SYSTEM INFO item to display the version number on the SYSTEM INFO screen.



### 4-2. Update procedure

#### 4-2-1. Update procedure for Windows

##### < Preparation >

Prepared following equipments for the software update.

- **PC:** Windows Vista, Windows XP, Windows 2000
- **USB cable:** AJ-HMC40 series (Mini-B type) ←→ PC

\*Microsoft, Windows, and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

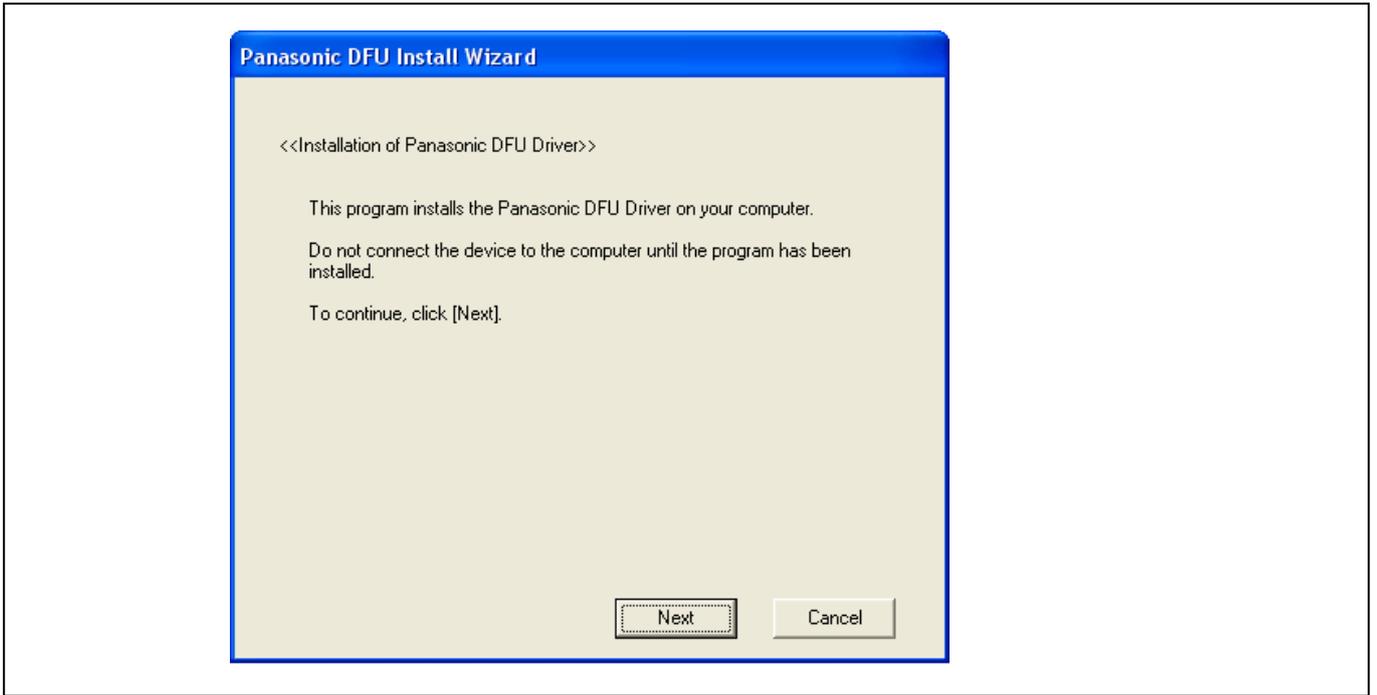
##### < Download of update software >

1. Download the file **"VSI\*\*\*\*\*.zip"** from Global Service Web Site.
2. Copy the file **"VSI\*\*\*\*\*.zip"** to hard disk of your PC and extract the file.
3. There is file **"HMC40.exe"** under the folder **"VSI\*\*\*\*\*"**.

**< Update procedure >**

1. Double click the file “HMC40.exe” and following windows displayed.

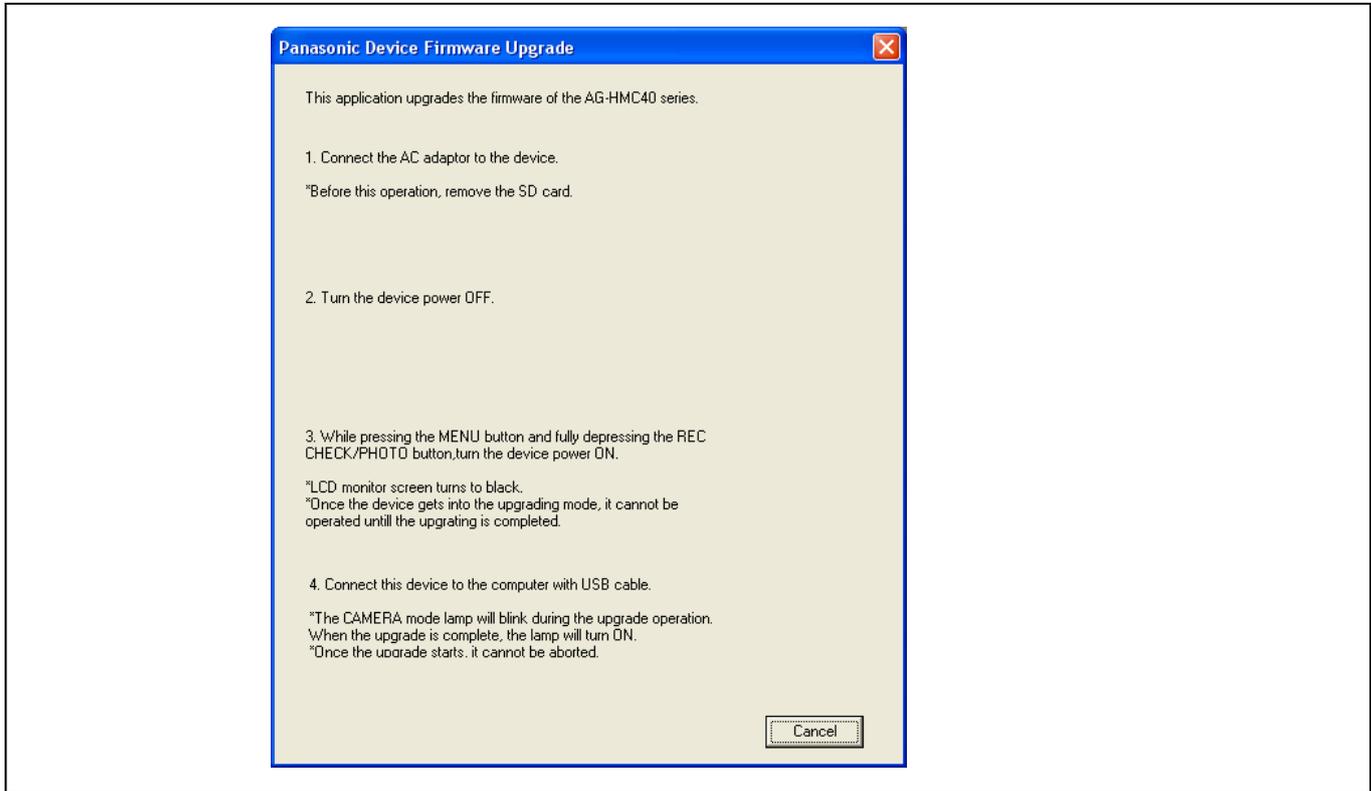
**NOTE:** If “Panasonic DFU Driver” is already installed in PC, the “Update Window (step 3)” is displayed.



2. Clicking the “Next” button on above window, following Licence Agreement window is displayed. Put the check mark in the “I agree” and click the “Next” button.



3. Update window is displayed. Execute the software update with procedure of the window.



4. Connect the AC adaptor to the camera recorder (\*This update can not be done with battery.).

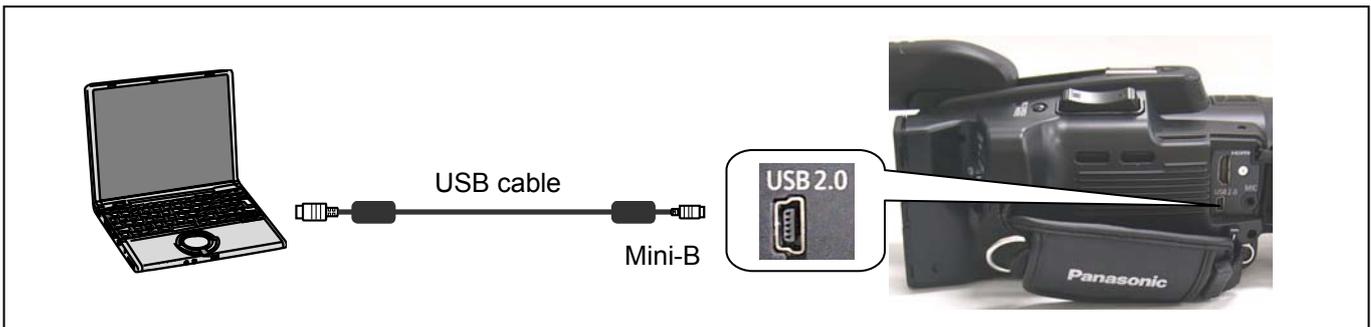
**NOTE:** Before this operation, remove the SD memory card from the camera recorder.

5. Turn off the power of camera recorder.

6. Turn on the power of camera recorder while keep pressing the **MENU** and **REC CHECK/PHOTO** button. LCD monitor is black out.



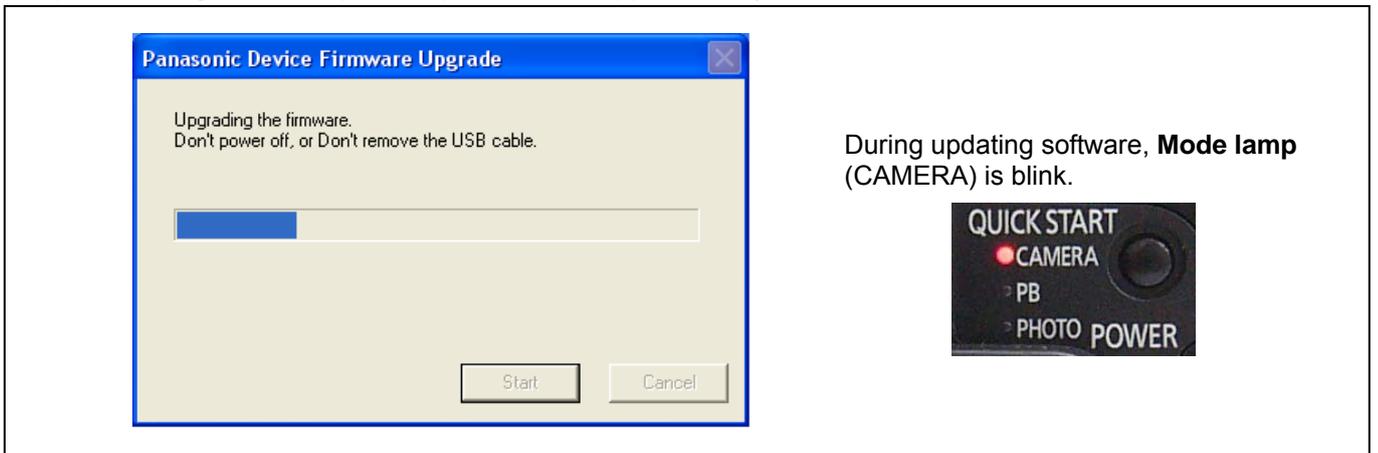
7. Connect the USB cable between camera recorder and PC.



8. The following window is displayed after the camera recorder is connected to PC with USB cable. Clicking “Start” button, software update is started.



9. The following window is displayed during software update. Don't disconnect the USB cable or turn off the power during software update. Update time is approximately 10 minutes.



10. The following window is displayed when the software update is completed. Click the “OK” button and turn off the power of camera recorder. Disconnect the USB cable.



End of the software update.

11. Confirm that the number of software version is renewed for your confirmation update was correctly done follow the item “4-1. Software Version Display”.

## 4-2-2. Update procedure for Mac

### < Preparation >

Prepared following equipments for the software update.

- **Macintosh computer** : Mac OS X 10.4, Mac OS X 10.5
- **USB cable**: AJ-HMC40 series (Mini-B type) ←→ Mac

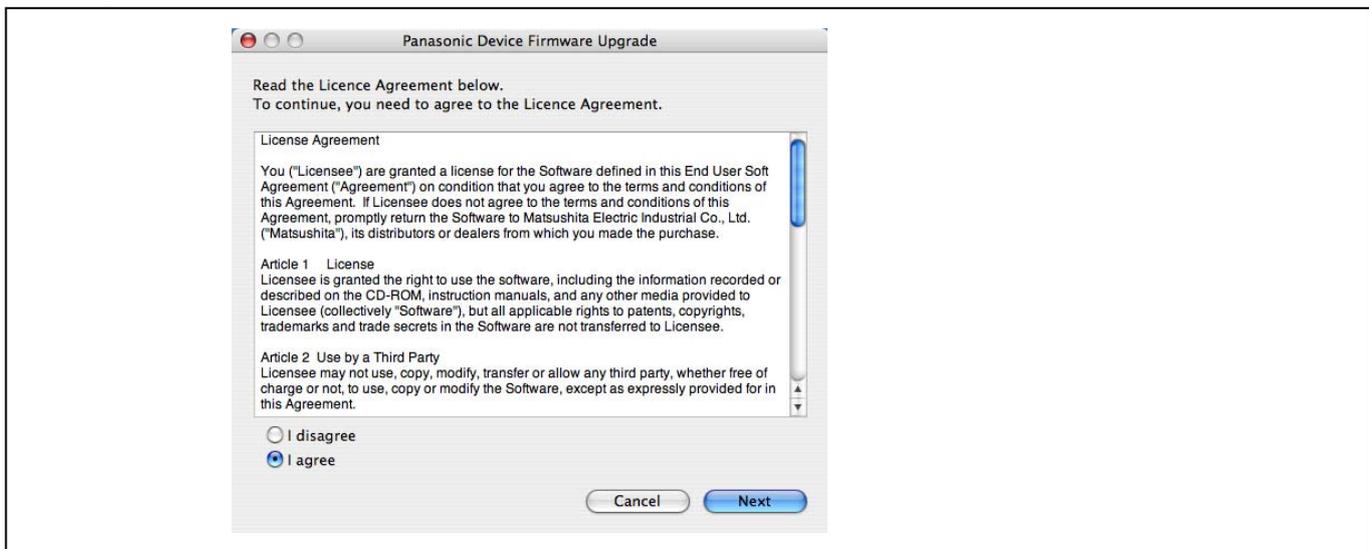
\*Macintosh and Mac OS X are trademarks of Apple inc., registered in the U.S. and other countries.

### < Download of update software >

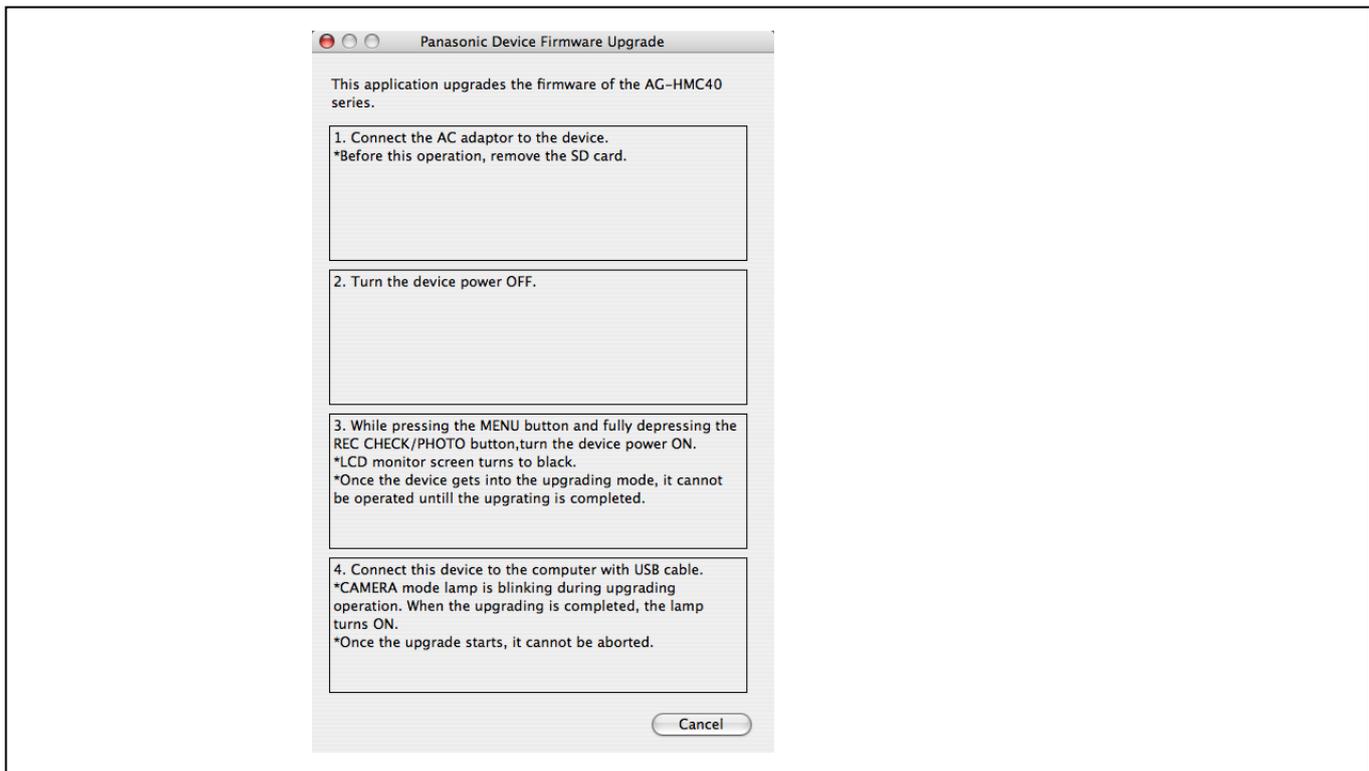
1. Download the file “**VSI\*\*\*\*\*.zip**” from Global Service Web Site.
2. Copy the file “**VSI\*\*\*\*\*.zip**” to hard disk of your PC and extract the file.

### < Update procedure >

1. Double click the file “**HMC40**” and following Licence Agreement window is displayed. Put the check mark in the “**I agree**” and click the “**Next**” button.



2. Update window is displayed. Execute the software update with procedure of the window.



3. Connect the AC adaptor to the camera recorder (\*This update can not be done with battery.).

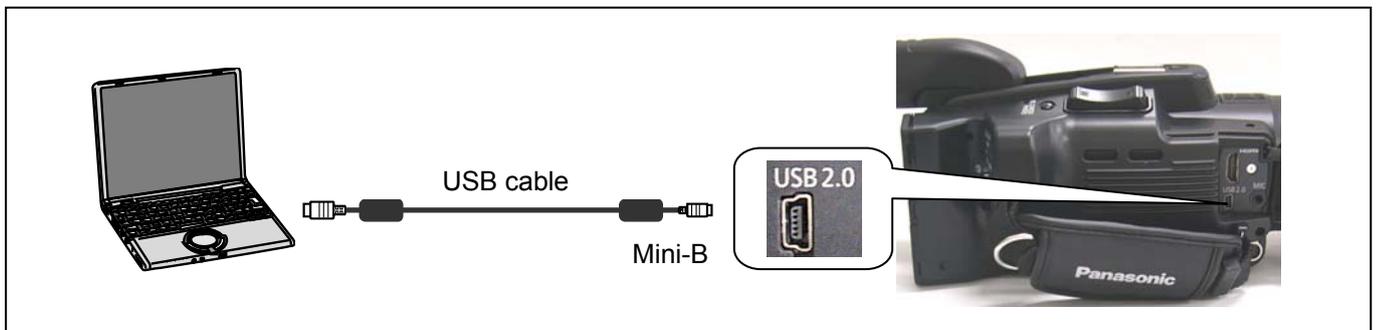
**NOTE:** Before this operation, remove the SD memory card from the camera recorder.

4. Turn off the power of camera recorder.

5. Turn on the power of camera recorder while keep pressing the **MENU** and **REC CHECK/PHOTO** button. LCD monitor is black out.



6. Connect the USB cable between camera recorder and PC.



7. The following window is displayed after the camera recorder is connected to PC with USB cable. Clicking "**Start**" button, software update is started.



8. The following window is displayed during software update. Don't disconnect the USB cable or turn off the power during software update. Update time is approximately 10 minutes.



During updating software, **Mode lamp (CAMERA)** is blink.



9. The following window is displayed when the software update is completed. Click the “**OK**” button and turn off the power of camera recorder. Disconnect the USB cable.



End of the software update.

10. Confirm that the number of software version is renewed for your confirmation update was correctly done follow the item “**4-1. Software Version Display**”.

# 5. UID Reading/Writing Procedure

## < PREPARATION >

When UID is written or read, the PC EVR software is used. Please connect the tools and set up the PC EVR software follow the instruction “How to use EVR software for AG-HMC40”.

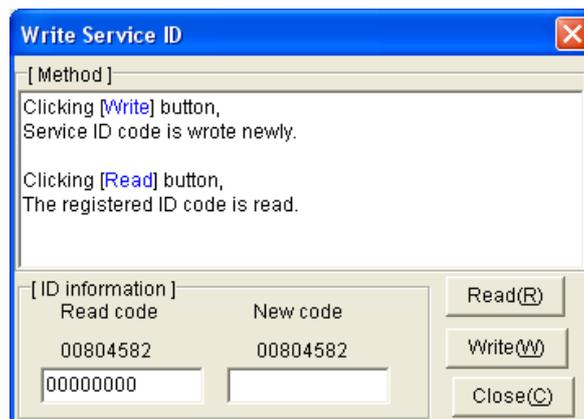
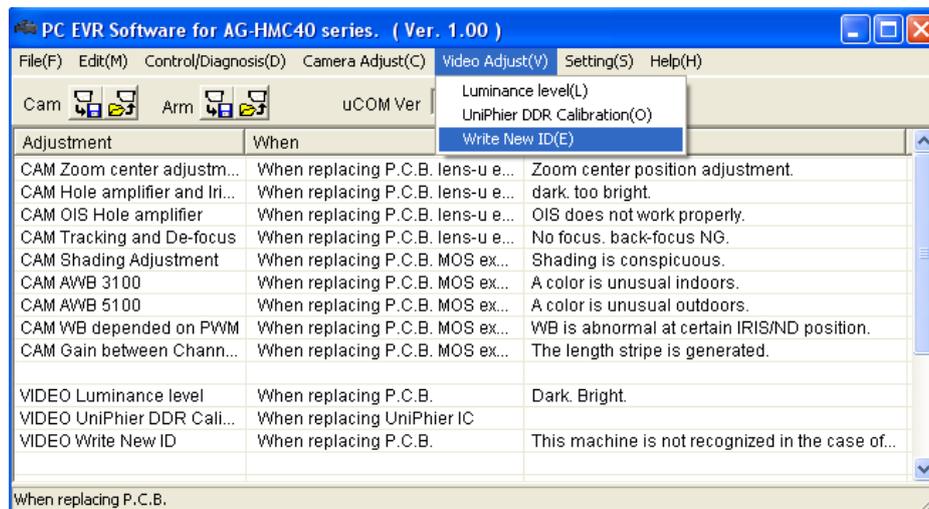
Please follow the instruction “How to use EVR software for AG-HMC40” about setup procedure of PC EVR software. The instruction can be confirmed by select tab “Help” on main window of EVR Adjustment software.

**Note:** The instruction file “Usage\_E.pdf” is included in folder “Help” under the folder “VVS0081”.

If necessary, open the file “Usage\_E.pdf” to confirm the communication, installation and adjustment procedure before boot up the EVR Adjustment software.

## < Reading/Writing Procedures >

1. Start up the PC EVR software and the main menu screen is displayed.
2. Select “Write New ID(E)” in “Video Adjust(V)” menu, Write Service ID screen will appear on screen.



3. Clicking “Write(W)” button, UID code is wrote newly.
4. Click “Read(R)” button, the registered UID code is read.

# 6. Operation after major part exchanged

## 6-1. Operation List

These are items that must be done when the major part has been replaced.

**X: Operation required**

	Replacement Parts	Adj.	Version Conf.	EEPROM	Clock Setting	Remark
	MAIN P.C.Board	X	X	X	X	
	SUB P.C.Board					Not required
CAMERA LENS Unit	CAMERA LENS Unit	X				
FRONT Unit	FRONT P.C.Board				X	
SIDE JACK Unit	SIDE JACK P.C.Board					Not required
BATTERY CASE Unit	BATTERY P.C.Board					Not required
	REAR JACK P.C.Board					Not required
TOP CASE Unit	TOP P.C.Board					Not required
EVF Unit	EVF BL P.C.Board					Not required
SIDE CASE R Unit	CAM OP P.C.Board					Not required
	SIDE R P.C.Board					Not required
LCD Unit	MONITOR P.C.Board					Not required

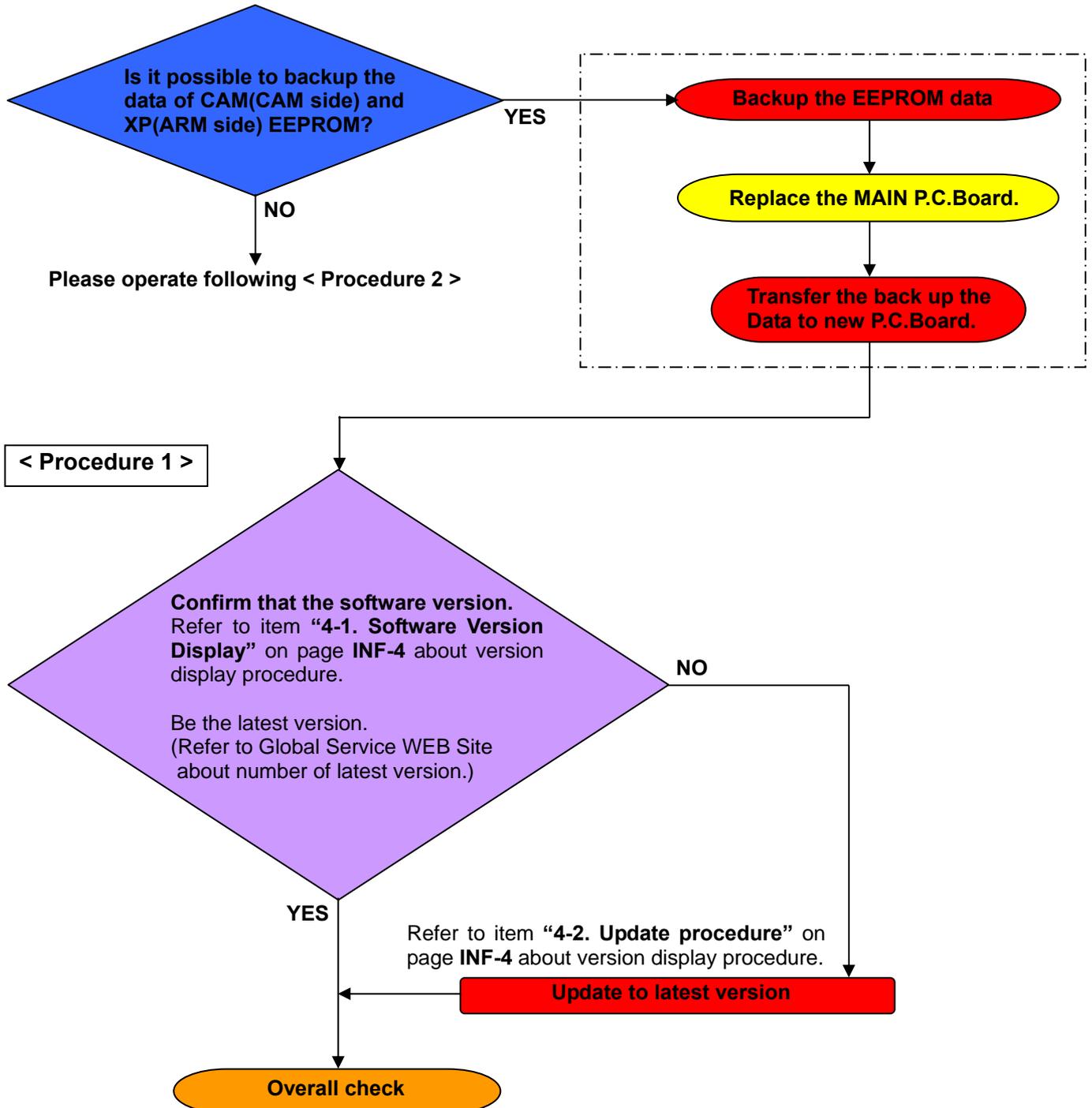
## 6-2. Operation flow chart after replacement of major parts

### 6-2-1. MAIN P.C.Board

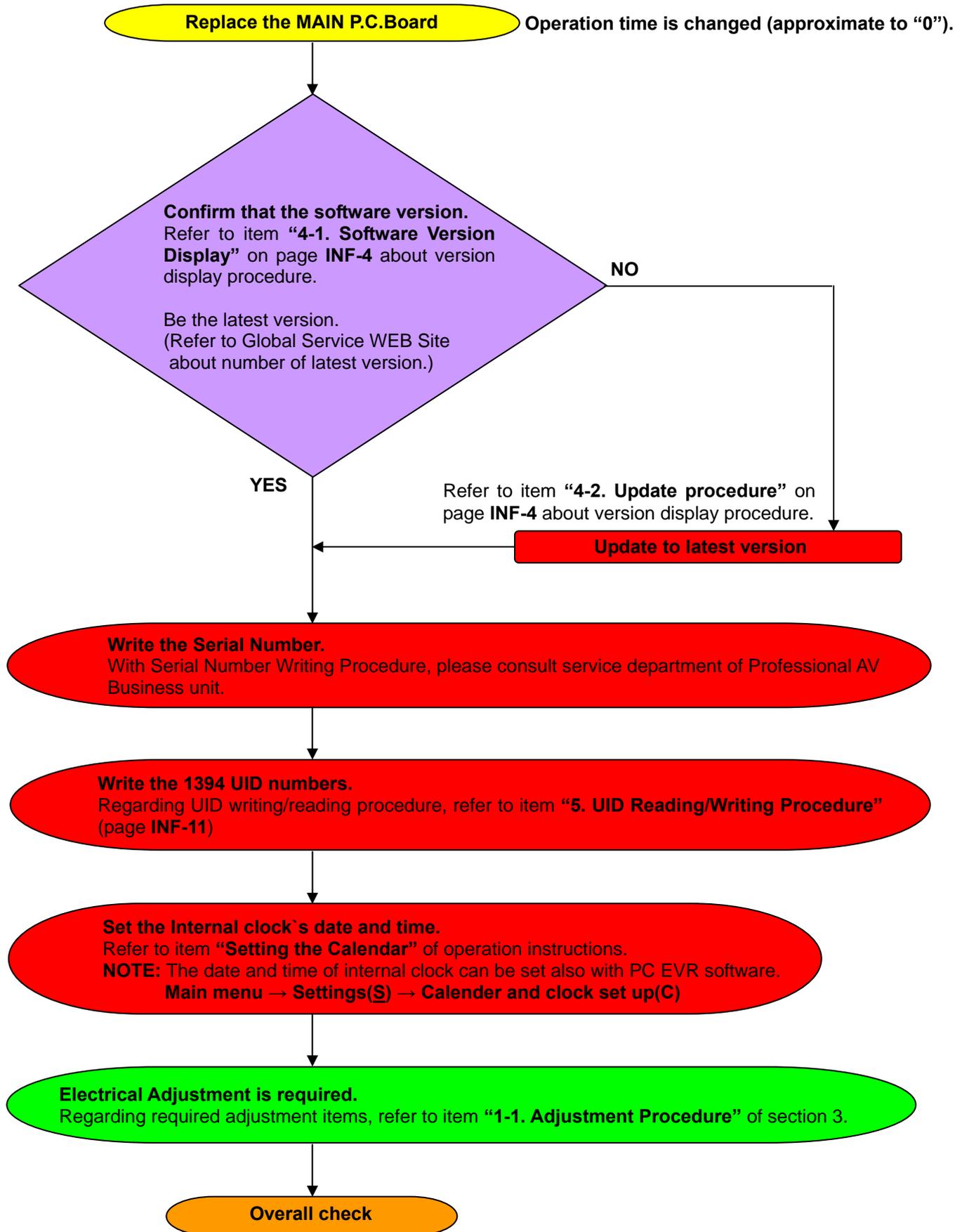
Please follow the instruction “How to use EVR software for AG-HMC40” about writing/reading procedure of EEPROM. The instruction can be confirmed by select tab “Help” on main window of EVR Adjustment software.

**Note:** The instruction file “Usage\_E.pdf” is included in folder “Help” under the folder “VVS0081”.

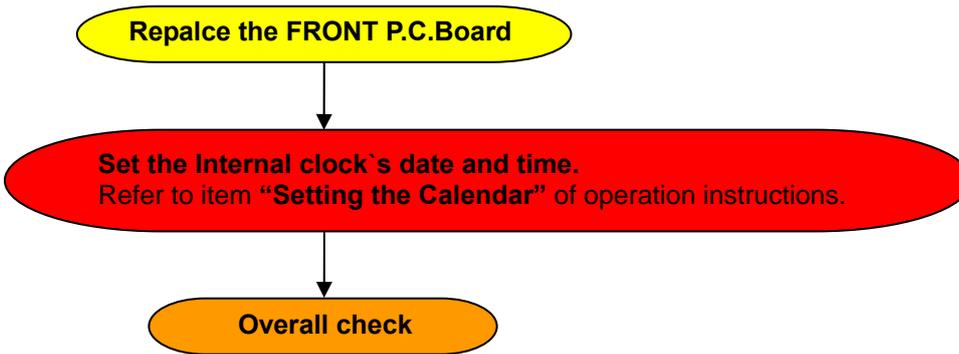
If necessary, open the file “Usage\_E.pdf” to confirm the communication, installation and adjustment procedure before boot up the EVR Adjustment software.



< Procedure 2 >

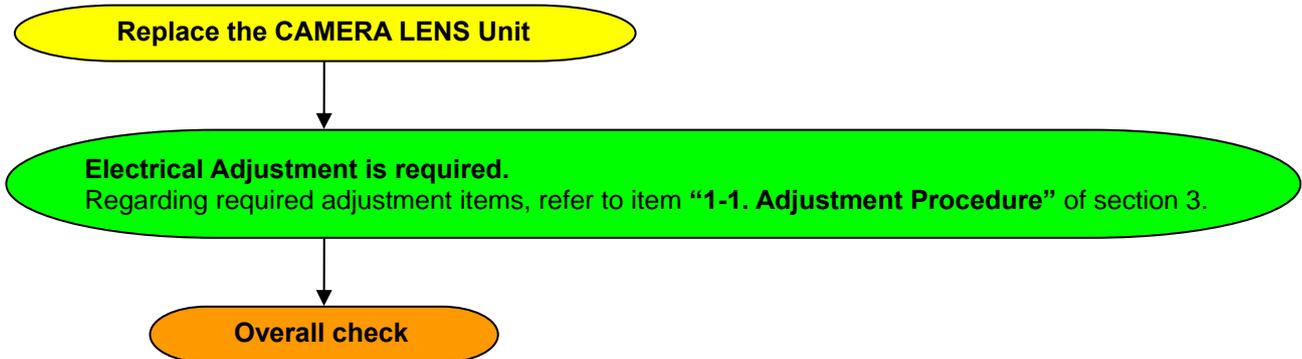


## 6-2-2. FRONT P.C.Board



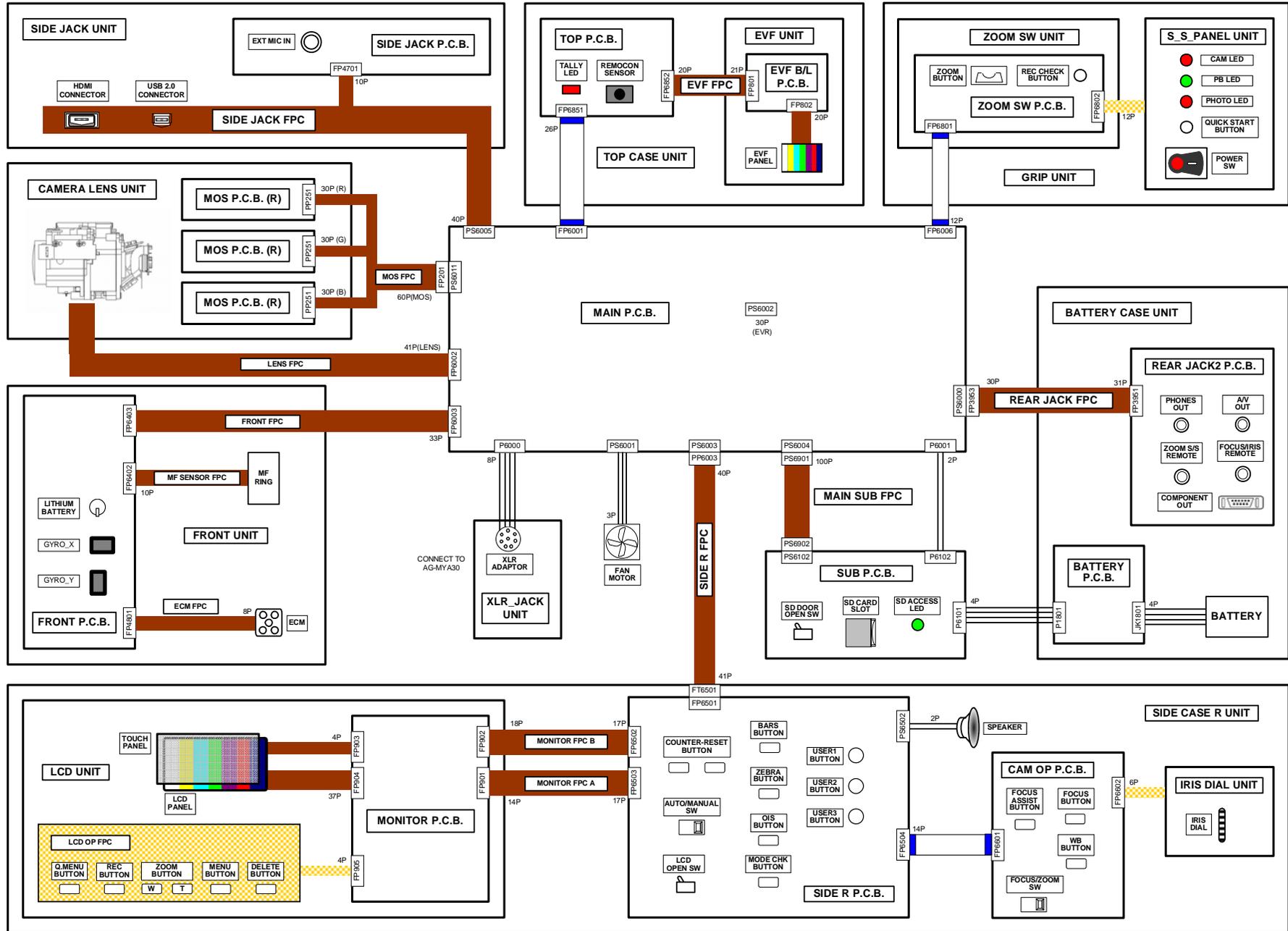
**NOTE:** The date and time of internal clock can be set also with PC EVR software.  
Main menu → **Settings(S)** → **Calendar and clock set up(C)**

## 6-2-3. CAMERA LENS Unit

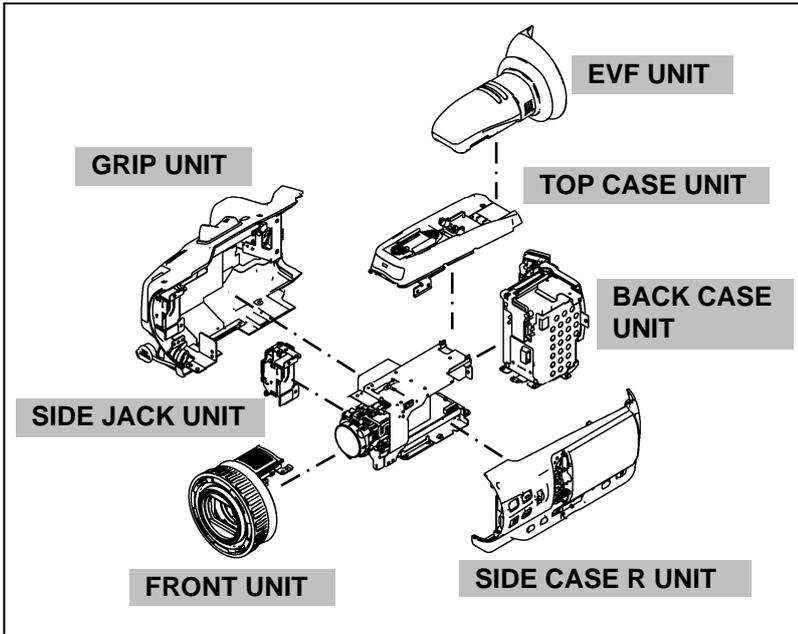


# 7. Interconnection

INF-16



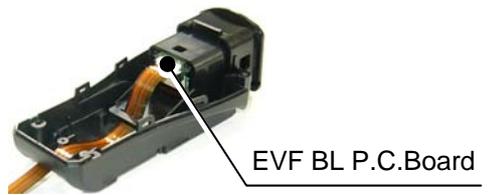
# 8. P.C.Board Location



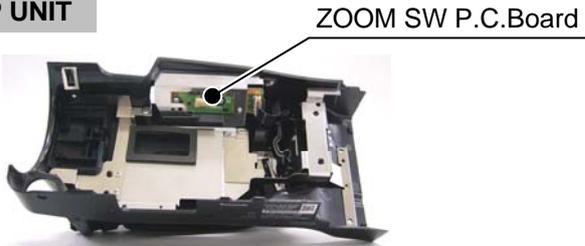
## TOP CASE UNIT



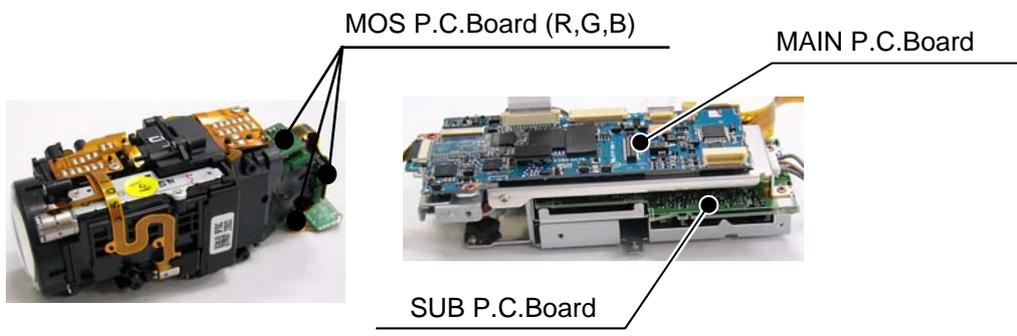
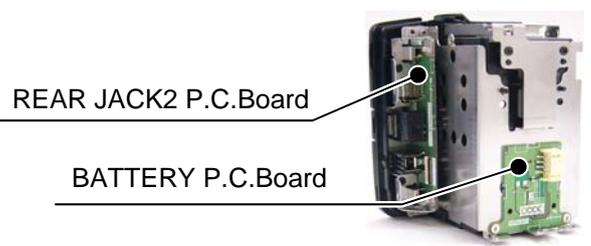
## EVF UNIT



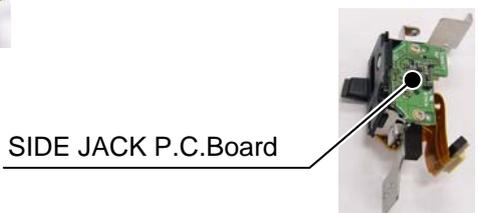
## GRIP UNIT



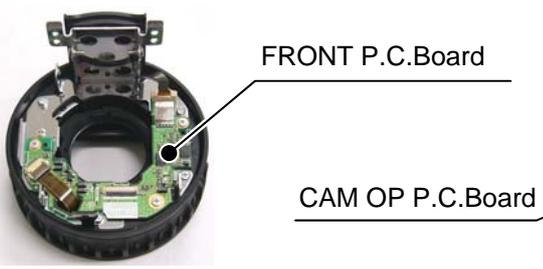
## BATTERY CASE UNIT



## SIDE JACK UNIT



## FRONT UNIT



## SIDE CASE R UNIT

