

# JVC



LYT1837-001C

ENGLISH

**EN**

## ***INSTRUCTIONS***

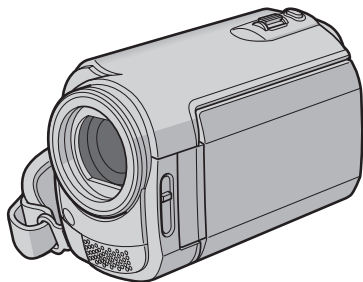
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### **HARD DISK CAMCORDER**

**GZ-MG465** **AA**

**GZ-MG345** **AA**

**GZ-MG330** **AA**



### **Dear Customer**

Thank you for purchasing this hard disk camera. Before use, please read the safety information and precautions contained in pages 4 and 5 to ensure safe use of this product.

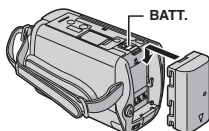


# Easy Start Guide

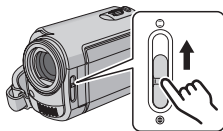
## 1 Preparation

### 1 Attach the battery pack

Charge the Battery Pack.  
(▶ pg. 14)

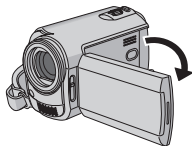


### 2 Open the lens cover



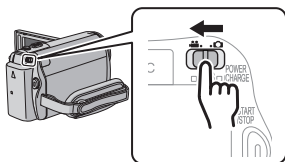
### 3 Open the LCD monitor

The camera turns on automatically.

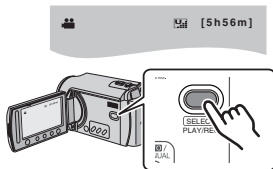


## 2 Video recording

### 1 Select (video) mode

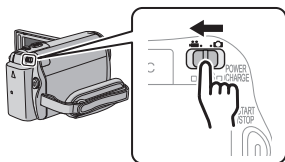


### 2 Select recording (REC) mode

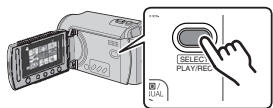


## 3 Playing back

### 1 Select (video) mode



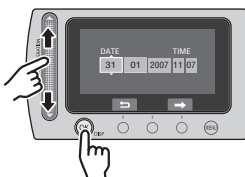
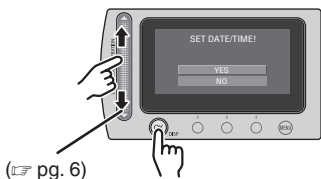
### 2 Select playback (PLAY) mode to display thumbnails on the screen



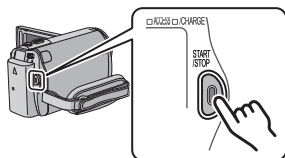
**CAUTION:** Touch the sensors with your finger. The sensors do not function if you touch them with your finger nail or with gloves on.

**4** When [SET DATE/TIME!] appears, select [YES] within 10 seconds.

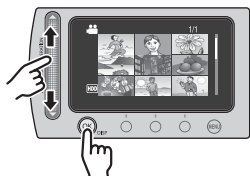
**5** Set the date and time  
(☞ pg. 14)



**3** Press the START/STOP button to start recording



**3** Select the desired file using the touch sensor. And then touch the OK button to start playback



● To stop playback  
Select ■.

# Safety Precautions

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.**

## CAUTIONS:

- If you notice smoke or a peculiar smell coming from the camcorder or AC Adapter, shut it down and unplug it immediately. Continue using the camcorder or AC Adapter under these conditions could lead to fire or electric shock. Contact your JVC dealer. Do not attempt to repair the malfunction yourself.
- To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.
- When you are not using the AC adapter for a long period of time, it is recommended that you disconnect the power cord from AC outlet.
- In certain areas, use the conversion plug depending on the type of your AC wall outlet.

## NOTES:

- The rating plate and safety caution are on the bottom and/or the back of the main unit.
- The serial number plate is on the battery pack mount.
- The rating information and safety caution of the AC adapter are on its upper and lower sides.

## WARNING:

The battery pack, the camera with battery installed, and the remote control with battery installed should not be exposed to excessive heat such as direct sunshine, fire or the like.

## CAUTION:

The mains plug shall remain readily operable.

## Caution on Replaceable lithium battery

The battery used in this device may present a fire or chemical burn hazard if mistreated.

Do not recharge, disassemble, heat above 100°C or incinerate.

Replace battery with Panasonic (Matsushita Electric), Sanyo, Sony or Maxell CR2025.

Danger of explosion or Risk of fire if the battery is incorrectly replaced.

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

When the equipment is installed in a cabinet or on a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm or more on both sides, on top and at the rear).

Do not block the ventilation holes.

(If the ventilation holes are blocked by a newspaper, or cloth etc. the heat may not be able to get out.)

No naked flame sources, such as lighted candles, should be placed on the apparatus.

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing.

Do not use this equipment in a bathroom or places with water.

Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups etc.) on top of this unit. (If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

Do not point the lens directly into the sun. This can cause eye injuries, as well as lead to the malfunctioning of internal circuitry. There is also a risk of fire or electric shock.

### CAUTION!

The following notes concern possible physical damage to the camera and to the user.

Carrying or holding the camera by the LCD monitor can result in dropping the unit, or in a malfunction.

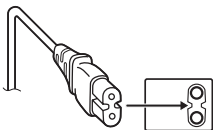
Do not use a tripod on unsteady or uneven surfaces. It could tip over, causing serious damage to the camera.

### CAUTION!

Connecting cables (Audio/Video, S-Video, etc.) to the camera and leaving it on top of the TV is not recommended, as tripping on the cables will cause the camera to fall, resulting in damage.

### CAUTION:

To avoid electric shock or damage to the unit, first firmly insert the small end of the power cord into the AC Adapter until it is no longer wobbly, and then plug the larger end of the power cord into an AC outlet.



If this symbol is shown, it is only valid in the European Union.

### Remember that this camera is intended for private consumer use only.

Any commercial use without proper permission is prohibited. (Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.)

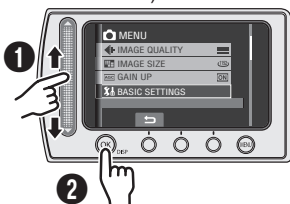
### Trademarks

- Manufactured under licence from Dolby Laboratories. Dolby and double-D symbol are trademarks of Dolby Laboratories.
- Windows® is either registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- Macintosh is a registered trademark of Apple Inc.
- Other product and company names included in this instruction manual are trademarks and/or registered trademarks of their respective holders.

## How to Select an Item Using the Touch Sensor

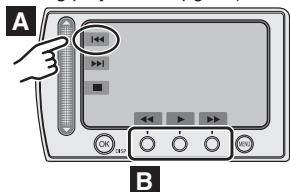
An example screen in English is used for the guidance below.

### ■ Selecting an item from the menu list (on the menu screen)



- 1 Slide your finger up and down on the sensor.
- 2 Touch the **OK** button.

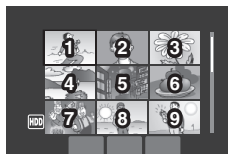
### ■ Using on-screen buttons (e.g. during playback pg. 18)



- A** To select an on-screen button appearing on the left side, touch the portion of the sensor next to the on-screen button.
- B** To select an on-screen button appearing at the bottom of the screen, touch the touch sensor under the on-screen button you want to select.

### NOTE

The cursor moves from 1 to 9 on the index screen when you slide your finger on the touch sensor.



### CAUTION

Touch the sensors with your finger. The sensors do not function if you touch them with your finger nail or with gloves on.

## Make a backup of important recorded data

JVC will not be responsible for any lost data. It is recommended to copy your important recorded data to a DVD or other recording media for storage. (▶ pg. 22)

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## Make a trial recording

Before the actual recording of important data, make a trial recording and play back the recorded data to check that the video and sound have been recorded correctly.

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## Reset the camera if it does not operate correctly

This camera uses a microcomputer. Factors such as background noise and interference can prevent it from operating correctly. If the camera does not operate correctly, reset the camera. (▶ pg. 33)

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## Precautions on handling batteries

- Be sure to use the JVC BN-VF808U/VF815U/VF823U battery packs.
  - If the camera is subjected to electrostatic discharge, turn the power off before using it again.
- 

## If a malfunction occurs, stop using the camera immediately and consult your local JVC dealer

- If a problem occurs when using the microSD card, take the card together with the camera for repair. If one of them is not included, the cause of the malfunction cannot be diagnosed, and the camera cannot be repaired.
  - Recorded data may be erased while the camera is being repaired or inspected. Back up all data before requesting repairs or inspections.
- 

## Because the camera may be used for demonstration in a shop, the demonstration mode is set to [ON] by default

To deactivate the demonstration mode, set [DEMO MODE] to [OFF] from the MENU.

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## When connecting the camera to other devices using an optional DV cable, make sure to follow the procedure below. Connecting the cable incorrectly may cause malfunctions to the camera and/or other devices.\*

- Connect the DV cable first to the device, and then to the camera.
- Connect the DV cable (plugs) correctly according to the shape of the DV connector.

\* This does not apply to the GZ-MG330 model.

# Contents

## GETTING STARTED

<b>Accessories</b> .....	9
How to Use the Everio Dock .....	9
Attaching the Core Filter to the USB Cable ...	9
<b>Index</b> .....	10
<b>Indications on LCD Monitor</b> .....	12
<b>Necessary Settings before Use</b> .....	14
Charging the Battery Pack.....	14
Date/Time Setting.....	14
<b>Other Settings</b> .....	15
Attaching the Shoulder Strap.....	15
Checking the Remaining Battery Power .....	15
Preparing the Remote Control.....	15

## RECORDING

<b>Recording Files</b> .....	16
Video Recording .....	16
Still Image Recording .....	17
<b>Playing Back Files</b> .....	18
Video/Still Image Playback .....	18
<b>Watching Images on TV</b> .....	19

## EDITING/COPYING

<b>Managing Files</b> .....	20
Deleting/Protecting Files.....	20
<b>Copying Files</b> .....	22
Using a DVD Burner to Copy Files from the Camera .....	22

## PC OPERATION

<b>File Backup on a Windows® PC</b> .....	23
System Requirements .....	23
Software Installation .....	24
Connecting the Camera to the PC.....	25
File Backup on the PC.....	26
File Backup on the PC without Using Software .....	27
<b>Other Windows® PC Operations</b> .....	28
Getting More Use of the Software .....	28
<b>Folder Structure and Extensions</b> .....	29
<b>File Backup on a Macintosh®</b> .....	30
System Requirements .....	30
Connecting the Camera to the Macintosh ...	30
File Backup on the Macintosh .....	31
<b>Customer Support Information</b> .....	32

## FURTHER INFORMATION

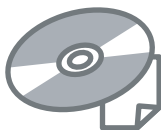
<b>Troubleshooting</b> .....	33
<b>Cleaning</b> .....	34
<b>Warning Indications</b> .....	35
<b>Specifications</b> .....	36
<b>Cautions</b> .....	38
<b>Terms</b> .....	40

Read these INSTRUCTIONS to enjoy your CAMCORDER.  
For more details on the operations, refer to the GUIDEBOOK in the  
supplied CD-ROM.

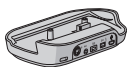
In order to view the GUIDEBOOK, Adobe® Acrobat® Reader™ or Adobe®  
Reader® must be installed.  
Adobe® Reader® can be loaded from Adobe's web site:  
<http://www.adobe.com/>

### NOTE

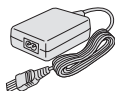
Select your desired language with a single click.  
The model name is indicated on the bottom of your camcorder.



# Accessories



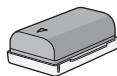
**Everio Dock\***  
CU-VC4U (☞ below)



**AC Adapter**  
AP-V14E



**Power Cord**



**Battery Pack**  
BN-VF808U



**Audio/Video Cable**



**USB Cable**  
(☞ pg. 22, 25 and 30)



**Shoulder Strap**  
(☞ pg. 15)



**CD-ROM**  
(☞ pg. 24, 28)



**Remote Control Unit**  
RM-V751U (☞ pg. 15)



**Lithium Battery**  
CR2025  
Pre-installed in the remote control unit.



**Core Filter**

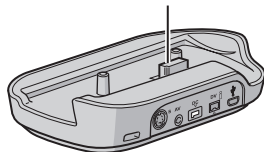
**NOTE**

Make sure to use the provided cables for connections. Do not use any other cables.

## How to Use the Everio Dock\*

You can connect cables to the connectors of the Everio dock. The connection is completed when you place the camera on the dock.

**Camera Connection Terminal**



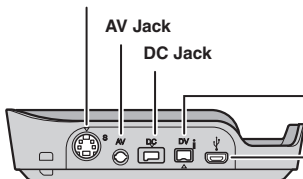
**S-Video Jack**

**AV Jack**

**DC Jack**

**DV Jack**

**USB Jack**



**NOTE**

For the connection using the S-Video jack and DV jack, an optional S-Video cable and DV cable are needed. Consult the JVC Service Centre described on the sheet included in the package for details on its availability. Make sure to connect the end with a core filter to the camera. The core filter reduces interference.

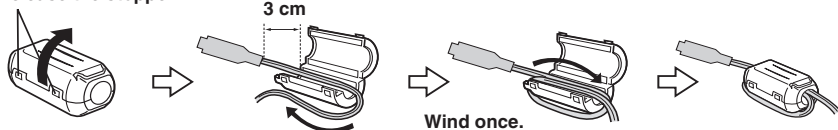
- The S-Video cable (optional) enables even higher playback quality on TV. (☞ pg. 19)

\* GZ-MG330 model does not include the Everio dock.

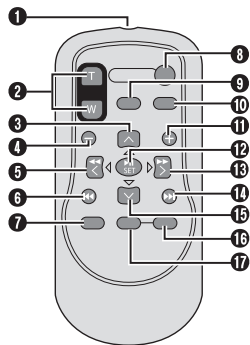
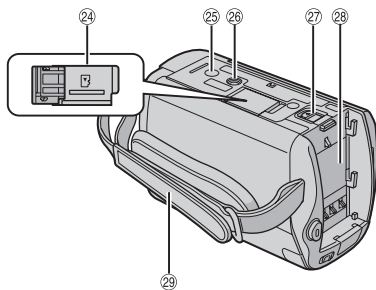
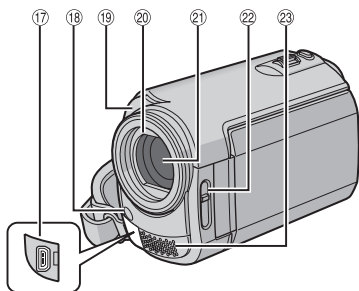
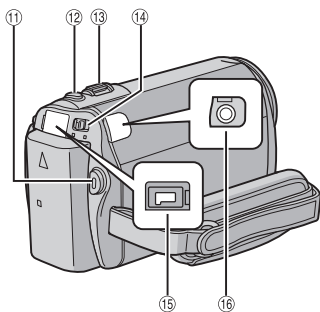
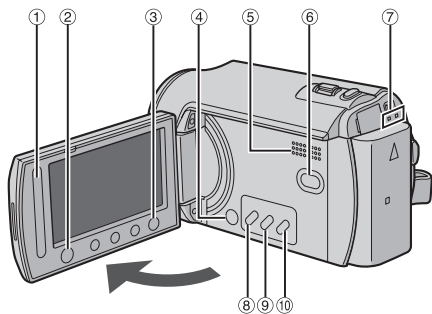
## Attaching the Core Filter to the USB Cable

Connect the end of the cable with the core filter to the camera.

**Release the stopper.**

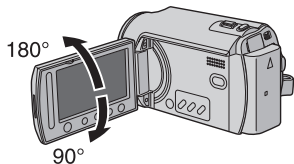


# Index



## NOTES








- The LCD monitor can rotate 270°.



## • Power-linked operation

- You can also turn the camera on/off by opening/closing the LCD monitor during the recording mode.
- Be careful not to cover (18), (19), (21) and (23) during shooting.

## Camera

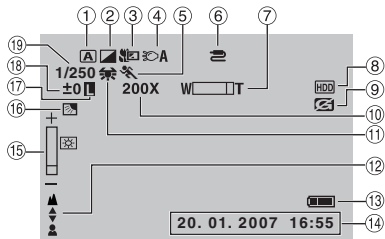
- ① Touch Sensor (☞ pg. 6)
- ② OK (DISP) Button [OK/DISP] (☞ pg. 13)
- ③ Menu Button [MENU]
- ④ Power Switch [POWER]  
(You can turn off the camera by pressing and holding this button.)
- ⑤ Speaker
- ⑥ Playback/Recording Mode Switching Button [SELECT PLAY/REC] (☞ pg. 16)
- ⑦ Access/Charge Lamp [ACCESS/CHARGE]  
(Blinks when you access files or charge the battery. Do not turn off the power or remove the battery pack/AC adapter while accessing files.)
- ⑧ Direct DVD Button [DIRECT DVD] (☞ pg. 22)/Title Button [TITLE]
- ⑨ Direct Backup Button [DIRECT BACK UP] (☞ pg. 26)/Information Button [INFO] (☞ pg. 15)
- ⑩ Auto/Manual Mode Button [AUTO/MANUAL]
- ⑪ Video Recording Start/Stop Button [START/STOP] (☞ pg. 16)
- ⑫ Still Image Shooting Button [SNAPSHOT] (☞ pg. 17)
- ⑬ Zoom Lever [W , T   
Speaker Volume Control [-VOL+]  
(☞ pg. 18)
- ⑭ Mode Switch [, 
- ⑮ DC Jack [DC] (☞ pg. 14)
- ⑯ Audio/Video Jack [AV]
- ⑰ USB (Universal Serial Bus) Jack [  ]  
(☞ pg. 22, 25 and 30)
- ⑱ LED Light
- ⑲ Camera Sensor  
Remote Sensor (☞ pg. 15)
- ⑳ Lens Cover
- ㉑ Lens
- ㉒ Lens Cover Switch [ ,  ]
- ㉓ Stereo Microphone
- ㉔ microSD Card Slot
- ㉕ Stud Hole
- ㉖ Tripod Mounting Socket
- ㉗ Battery Release Button [BATT.] (☞ pg. 14)
- ㉘ Battery Pack Mount (☞ pg. 14)
- ㉙ Grip Strap

## Remote Control

- ① Infrared Beam Transmitting Window
- ② ZOOM (T/W) Buttons  
Zoom In/Out
- ③ Up Button  
Rotate Button (counterclockwise)  
(☞ pg. 18)
- ④ Skip Backward Button
- ⑤ Left Button
- ⑥ Back Button
- ⑦ PLAYLIST Button
- ⑧ START/STOP Button
- ⑨ SNAPSHOT Button (☞ pg. 17)
- ⑩ INFO Button (☞ pg. 15)
- ⑪ Skip Forward Button
- ⑫ PLAY/PAUSE Button
- ⑬ Right Button
- ⑭ Next Button
- ⑮ Down Button  
Rotate Button (clockwise) (☞ pg. 18)
- ⑯ INDEX Button
- ⑰ DISP Button

# Indications on LCD Monitor

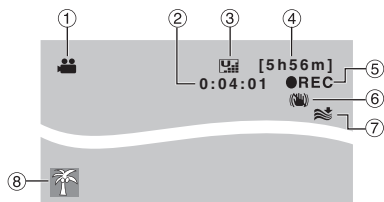
## During both Video and Still Image Recording



- ① Selected Operation Mode Indicator  
**A** : Auto Mode  
**M** : Manual Mode
- ② Effect Mode Indicator
- ③ Tele Macro Mode Indicator
- ④ LED Light Indicator
- ⑤ Program AE Mode Indicator
- ⑥ AV/S-Video Input Jack Indicator\*
- ⑦ Zoom Indicator
- ⑧ Selected Medium Indicator
- ⑨ Drop Detection Indicator (Appears when [DROP DETECTION] is set to [OFF].)
- ⑩ Approximate Zoom Ratio
- ⑪ White Balance Indicator
- ⑫ Manual Focus Adjustment Indicator
- ⑬ Battery Indicator (☞ pg. 35)
- ⑭ Date/Time (☞ pg. 14)
- ⑮ Brightness Control Indicator
- ⑯ Backlight Compensation Indicator
- ⑰ Iris Lock Indicator
- ⑱ ± : Exposure Adjustment Indicator
- ☐ : Photometry Area Control Indicator
- ⑲ Shutter Speed

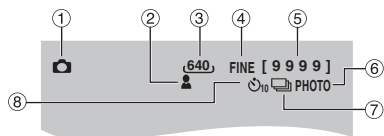
\* This does not apply to the GZ-MG330 model.

## During Video Recording Only



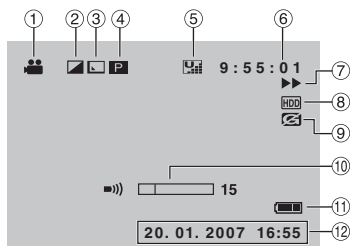
- ① Mode Indicator
- ② Counter
- ③ Picture Quality: **U** (ULTRA FINE), **F** (FINE), **N** (NORMAL), **E** (ECONOMY)
- ④ Remaining Time (☞ pg. 16, 37)
- ⑤ ● REC: (Appears during recording.) (☞ pg. 16)  
 ● || : (Appears during record-standby mode.)
- ⑥ Digital Image Stabiliser (DIS) Indicator (Appears when [DIS] is set to [OFF].)
- ⑦ Wind Cut Indicator
- ⑧ Event Indicator

## During Still Image Recording Only



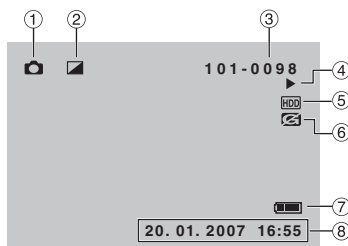
- ① Mode Indicator
- ② Focus Indicator
- ③ Image Size
- ④ Picture Quality: FINE (fine) or STD (standard)
- ⑤ Remaining Number of Shots (☞ pg. 37)
- ⑥ Shooting Indicator (☞ pg. 17)
- ⑦ Shutter Mode Indicator
- ⑧ Self-Timer Recording Indicator

## During Video Playback



- ① Mode Indicator (➔ pg. 18)
- ② Effect Mode Indicator
- ③ Wipe/Fader Effect Indicator
- ④ **PL** : Playlist Playback Indicator (Appears when playing back a playlist.)  
 ☺E : Event Search Playback Indicator (Appears when playing back a video file from the event search.)  
 ☺D : Date Search Playback Indicator (Appears when playing back a video file from the date search.)
- ⑤ Picture Quality: **UL** (ULTRA FINE), **F** (FINE), **N** (NORMAL), **E** (ECONOMY)
- ⑥ Counter
- ⑦ Playback Mode (➔ pg. 18)
  - ▶ : Playback
  - ⏸ : Pause
  - ▶▶ : Forward Search
  - ◀◀ : Reverse Search
  - ▶▶▶ : Forward Slow-Motion
  - ◀◀◀ : Reverse Slow-Motion (The number on the left shows speed.)
- ⑧ Selected Medium Indicator
- ⑨ Drop Detection Indicator (Appears when [DROPPED] is set to [OFF].)
- ⑩ Volume Level Indicator
- ⑪ Battery Indicator (➔ pg. 35)
- ⑫ Date/Time (➔ pg. 14)

## During Still Image Playback



- ① Mode Indicator (➔ pg. 18)
- ② Effect Mode Indicator
- ③ Folder/File Number
- ④ Slide Show Playback Indicator (➔ pg. 18)
- ⑤ Selected Medium Indicator
- ⑥ Drop Detection Indicator (Appears when [DROPPED] is set to [OFF].)
- ⑦ Battery Indicator (➔ pg. 35)
- ⑧ Date/Time (➔ pg. 14)

### Switching indication modes on LCD monitor

Each time you touch the **DISP** button, indications on LCD monitor switch as shown below;

In recording mode:

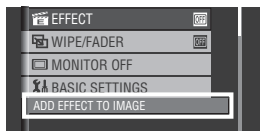
All indications/Indications for selected functions

In playback mode:

All indications/Only date and time/  
No indications

### On-screen function guide

The on-screen function guide is displayed at the bottom of the screen during menu display, etc.

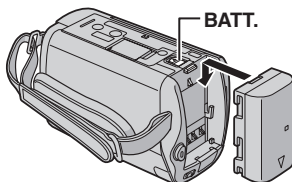


# Necessary Settings before Use

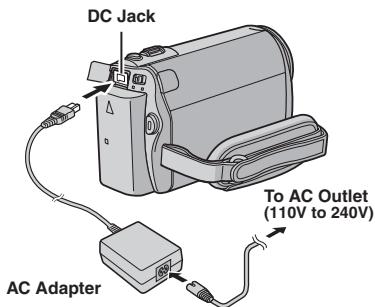
## Charging the Battery Pack

- 1 Close the LCD monitor to turn off the camera.
- 2 Attach the battery pack.  
Slide the battery pack down until it locks in place.

Bottom of the Camera



- 3 Connect the AC adapter.



- You can also connect the AC adapter using the Everio dock connector.\* (→ pg. 9)
- \* GZ-MG330 model does not include the Everio dock.
- The charge lamp blinks to indicate charging has started.

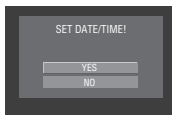
- 
- **To detach the battery pack**  
Slide and hold **BATT.** (→ step 2), then remove the battery pack.
  - **To check the remaining battery power**  
See page 15.

## NOTES

- You can also use the camera with just the AC adapter.
- Please do not pull or bend the AC adapter plug and cable. This may damage the AC adapter.

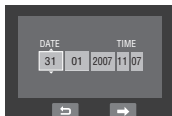
## Date/Time Setting

- 1 Open the LCD monitor to turn on the camera.
- 2 When [SET DATE/TIME!] appears, select [YES] within 10 seconds.




If you do not select within 10 seconds, the screen disappears. In such case, press and hold the **POWER** button and turn the camera on again.

- 3 Set the date and time.



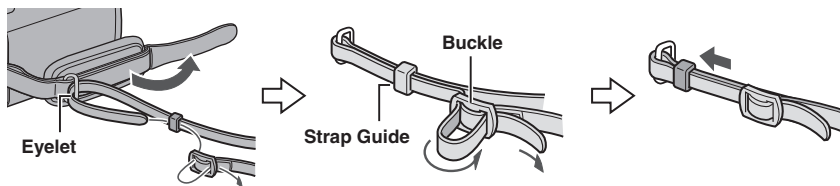
Repeat this step to input the day, month, year, hour and minute.

- 4 Touch the OK button to finish.

- 
- **To change the date and time**
    - 1) Touch the **MENU** button.
    - 2) Select [BASIC SETTINGS], and then [CLOCK ADJUST].
    - 3) Set the date and time.
  - **To return to the previous screen**  
Select .
  - **To quit the screen**  
Touch the **MENU** button.

# Other Settings

## Attaching the Shoulder Strap



## Checking the Remaining Battery Power

### Preparation:

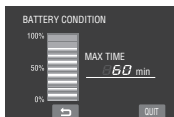
- Attach the battery pack.
- Press the **SELECT PLAY/REC** button to select recording mode.

For mode:

Press the **INFO** button twice or the **INFO** button and then select .

For mode:

Press the **INFO** button.



- **To return to the normal screen**  
Press the **INFO** button again.

### NOTES

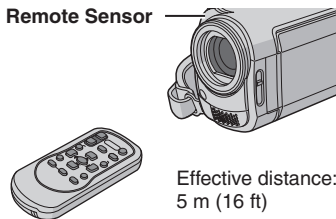
- If "COMMUNICATING ERROR" appears, there may be a problem with your battery. In such a case, consult your nearest JVC dealer.
- The recordable time display should only be used as a guide. It is displayed in 10 minute units.

## Preparing the Remote Control

A battery is included inside the remote control at the time of purchase.

Remove the insulation sheet before use.

### Beam Effective Area



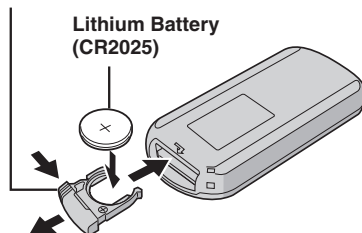
### NOTE

The transmitted beam may not be effective or may cause incorrect operation when the remote sensor is directly exposed to sunlight or powerful lighting.

### To Reinsert the Battery

Pull out the battery holder by pressing the lock tab.





### Lock Tab



# Recording Files

## Video Recording

**Preparation:** Open the LCD monitor to turn on the camera.

- 1** Slide the mode switch to select **video mode**.  

- 2** Press the **SELECT PLAY/REC** button to select recording mode.  

- 3** Press the **START/STOP** button to start recording.  
  


Approximate remaining time for recording appears.

### ■ To stop recording

Press the **START/STOP** button again.

### ■ To view the video you just recorded

Select **⏮** during pause.

During the preview, you can delete the video by selecting **⏻**.

### ■ To change the picture quality

Change the settings in [VIDEO QUALITY] from the MENU.

### ■ To change the aspect ratio of the image (16:9/4:3)

Change the settings in [SELECT ASPECT RATIO] from the MENU.





### NOTES


- Video files are given the names MOV001.MOD to MOV009.MOD, MOV00A.MOD to MOV00F.MOD, and MOV010.MOD in order of recording.
- After recording video for 12 consecutive hours, recording stops automatically.
- A new file will be created for every 4 GB of continuous shooting.
- This camera records video in MPEG2 format compliant with SD-VIDEO format. This camera is not compatible with other digital video formats.



## Still Image Recording


**Preparation:** Open the LCD monitor to turn on the camera.



- 1** Slide the mode switch to select  (still image) mode.


- 2** Press the SELECT PLAY/REC button to select recording mode.




- 3** Press and hold the SNAPSHOT button halfway.

The  indicator becomes green when the captured image is focused.



- **To view the image you just recorded**  
Select  after shooting.  
During the preview, you can delete the image by selecting .
- **To change the picture quality**  
Change the settings in [IMAGE QUALITY] from the MENU.
- **To record still images continuously**  
Set to [CONTINUOUS SHOOTING] in [SHUTTER MODE] from the MENU.
- **To change the image size**  
Change the settings in [IMAGE SIZE] from the MENU.

- 4** Press the SNAPSHOT button fully to take the photo/picture.

# Playing Back Files

## Video/Still Image Playback

- 1 Slide the mode switch to select  (video) or  (still image) mode.



- 2 Press the **SELECT PLAY/REC** button to select playback mode.



The index screen for videos appears.

- 3 Select the desired file.




### ■ To watch on TV

See page 19.

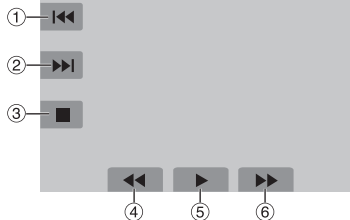
### ■ To check the file information










Press the **INFO** button when playback is paused.



### ■ To adjust the sound volume of videos

Turn down the volume  Turn up the volume

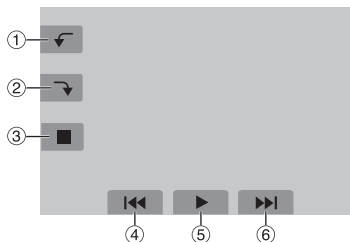
### ■ Operations during Video Playback









- 1  : Return to the first scene of the file
- 2  : Go to the first scene of the next file
- 3  : Return to the index screen
- 4  : Reverse search (during playback)
- 5  : Frame-by-frame playback in reverse direction (during pause)\*
- 6  : Playback
- 7  : Pause
- 8  : Forward search (during playback)
- 9  : Frame-by-frame playback in forward direction (during pause)\*

\* Slow playback starts when you keep touching the sensor button under  /  for a while.

### ■ Operations during Still Image Playback



- 1  : Rotate 90 degrees counterclockwise
- 2  : Rotate 90 degrees clockwise
- 3  : Return to the index screen
- 4  : Display the previous file
- 5  : Start/end the slide show
- 6  : Display the next file

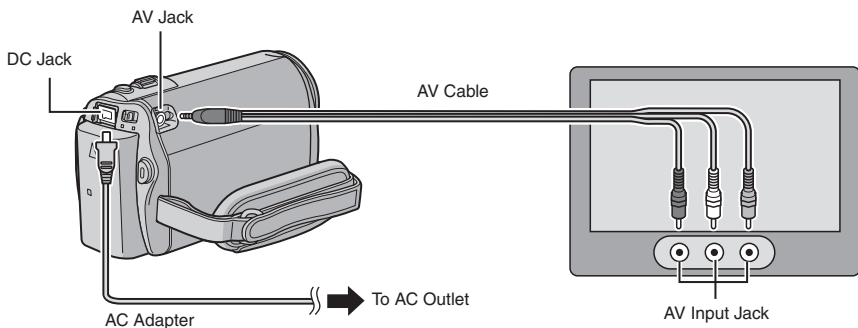
# Watching Images on TV

## Preparation:

- Set [SWITCH TO ANALOG I/O] to [OUTPUT]. (Factory-preset = [OUTPUT])\*

- Turn off all units.

\* This does not apply to the GZ-MG330 model.



## NOTES

- You can also connect the cables using the Everio dock connectors. The S-Video cable (optional) enables even higher playback quality. (☞ pg. 9) When other devices such as a DVD burner are connected to the Everio dock, turn the power of these devices off.\*
- This camera is designed to be used with PAL-type color television signals. It cannot be used with a television of a different standard.
- \* GZ-MG330 model does not include the Everio dock.

- 1 Turn on the camera and the TV.**
- 2 Set the TV to its VIDEO mode.**
- 3** (Only when connecting the camera to the VCR/DVD recorder)  
**Turn on the VCR/DVD recorder, and set it to its AUX input mode.**
- 4 Start playback on the camera. (☞ pg. 18)**

- **If the aspect ratio of the image is not correct as shown on the right**

Change the settings in [SELECT TV TYPE] from the MENU.

- **To display the camera's on-screen display on TV**

Set [DISPLAY ON TV] to [ON] from the MENU.

16:9 TV



4:3 TV



# Managing Files



## CAUTION

Do not remove the recording medium or perform any other operation (such as turning off the power) while accessing files. Also, be sure to use the provided AC adapter, as the data on the recording medium may be corrupted if the battery becomes exhausted during operation. If the data on the recording medium becomes corrupted, format the recording medium.

## Deleting/Protecting Files


- Protected files cannot be deleted. To delete them, release the protection first.
- Once files are deleted, they cannot be restored. Check files before deleting.

### Preparation:

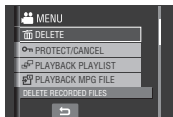
- Slide the mode switch to select  or  mode.
- Press the **SELECT PLAY/REC** button to select playback mode.

The following screen illustrations are examples when performing [DELETE].

### 1 Touch the MENU button.

You can skip directly to the delete menu by selecting .

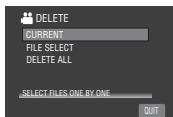
### 2 Select [DELETE] or [PROTECT/CANCEL].



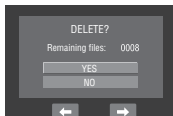
## Deleting/Protecting the Currently Displayed File



After performing steps 1-2

### 3 Select [CURRENT].



### 4 When [DELETE?] or [PROTECT?] appears, select [YES].



You can select the previous or next file by selecting  or .



## Deleting/Protecting Files

After performing steps 1-2

### 3 Select [FILE SELECT].

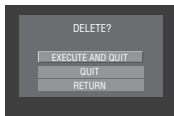
### 4 Select the desired file.



- The  (deletion) or  (protection) mark appears on the file. To select other files, repeat this step.
- If you slide the zoom lever towards **T**, the preview screen is displayed. Sliding the zoom lever towards **W** returns to the index screen.

### 5 Select [QUIT].

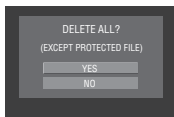
- 6** Select [EXECUTE AND QUIT] (when performing [DELETE]) or [YES] (when performing [PROTECT]).



### Deleting/Protecting All Files

After performing steps 1-2 ( pg. 20)

- 3** Select [DELETE ALL] or [PROTECT ALL].
- 4** When [DELETE ALL?] or [PROTECT ALL?] appears, select [YES].



#### ■ To quit the screen

Select [QUIT].

#### ■ To release protection

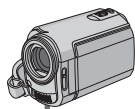
Select the protected file in step 4 ("Deleting/Protecting Files" pg. 20).

#### ■ To release protection of all files

- 1) In step 3, select [CANCEL ALL].
- 2) Select [YES].

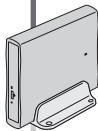
# Copying Files

## Types of Copying and Connectable Device



### The Camera

You can copy video/still images from HDD onto microSD card or from microSD card to HDD with this camera alone.



### DVD Burner (CU-VD3)

You can copy video files recorded on this camera onto DVD discs. (→ right column)



### PC

You can copy video/still image files on this camera onto your PC. (→ pg. 23 to 32)

## Using a DVD Burner to Copy Files from the Camera

Supported discs: 12cm DVD-R, DVD-RW

- Regarding DVD-R discs, only unused DVD-R discs can be used. Regarding DVD-RW discs, used DVD-RW discs can also be used, but they need to be formatted before recording. Formatting a disc deletes all content recorded on the disc up until that time.
- Dual-layer discs cannot be used.

### Regarding finalisation after copying

The disc is automatically finalised so that it can be played on other devices. After finalising, the disc is a play-only disc, so no more files can be added.

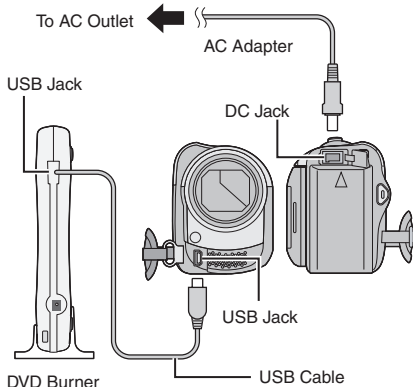
### NOTE

When using the optional DVD Burner, read its instructions.

## Connection with a DVD Burner

### Preparation:

Close the LCD monitor to turn off the camera.



### NOTE

Use the USB cable that came with the DVD burner.

## Copying Video Files that Have Never Been Copied

Files that have never been copied to the DVD discs are automatically selected and copied.

- 1 **Open the LCD monitor to turn on the camera.**
- 2 **Press the DIRECT DVD button.**
- 3 **Select [EXECUTE].**
  - The DVD disc begins to be created. When [COMPLETED] appears, touch the **OK** button.
  - When [COMPLETED. CHANGE DISC] appears, change the disc. The second DVD disc begins to be created.
  - To cancel the DVD creation, select [CANCEL].

### ■ To quit the screen

- 1) Select [QUIT].
- 2) When [QUIT?] appears, select [YES].

# File Backup on a Windows® PC

Install the software that came with the camera to your PC.

You can back up your files on your PC with a simple one-touch operation, edit your files on your PC, and also create discs.

Even if you do not install the software, you can still back up your files on your PC.

(☞ pg. 27)

For the compatible DVD burners, refer to CyberLink web site:

[http://www.cyberlink.com/english/products/powerproducer/3/comp\\_dvd\\_drives.jsp](http://www.cyberlink.com/english/products/powerproducer/3/comp_dvd_drives.jsp)

## NOTE

The system requirements information is not a guarantee that the provided software will work on all personal computers meeting those requirements.

## System Requirements

### OS:

Either one of the following OS should be pre-installed (32-bit):

Windows® XP Home Edition (SP2), Windows® XP Professional (SP2), Windows Vista™ Home Basic, Windows Vista™ Home Premium

### CPU:

Intel® Pentium® 4, at least 1.6 GHz

(at least 2.2 GHz recommended)

Intel® Pentium® M, at least 1.4 GHz

Intel® Core™ Duo, at least 1.5 GHz

### RAM:

[XP] At least 256 MB (For creating DVD Video by PowerCinema, 1 GB or more)

[Vista] At least 1 GB (2 GB or more recommended)

Free hard disk space:

At least 550 MB for installation

For creating DVD Video, at least 10 GB recommended

For creating VCD, at least 1 GB recommended

### USB port:

USB 2.0 port

### Display:

Must be capable of displaying at least 1024 x 768 (XGA) in high colour 16 bit or higher

(1280 x 1024 (SXGA) or higher is recommended)

### Miscellaneous:

Internet Explorer 5.5 or later

DirectX 9.0 or later

### Supported media:

DVD-Video: DVD-R/-RW, DVD+R/+RW

DVD-VR: DVD-RW, DVD-RAM

DVD+VR: DVD+RW

VideoCD: CD-R/RW

# File Backup on a Windows® PC (Continued)

## Software Installation

Please read the “JVC SOFTWARE LICENCE AGREEMENT” in the CD-ROM instruction before you install software.

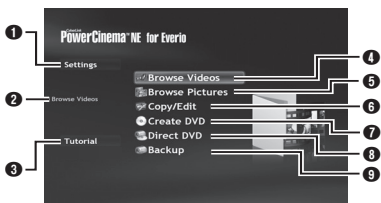
The following software is included in the CD-ROM that came with your camera.

### • CyberLink DVD Solution

Comprehensive application software that consists of the following three kinds of software.

#### PowerCinema NE for Everio

The main file managing software. You can perform various operations such as file backup, playback, and DVD authoring.



- 1 You can perform detailed settings for each item.
- 2 Select a function on the right, and the explanation of function is displayed.
- 3 Displays operating procedure for each function. (internet connection is required)
- 4 Plays back video files on the PC
- 5 Plays back still image files on the PC
- 6 Copies/edits files on the PC
- 7 Burns file that are backed up on the PC onto a DVD
- 8 Creates a DVD-Video
- 9 Backs up camera files onto the PC (pg. 26)

#### PowerProducer 3 NE

Allows you to create discs. Automatically starts from an operation in PowerCinema NE for Everio.

#### PowerDirector 5 NE Express

Allows you to edit files on your PC. Automatically starts from an operation in PowerCinema NE for Everio.

### • Digital Photo Navigator 1.5

Allows you to change the format of still image files backed up on your PC.

You can find the latest information on the provided software program at CyberLink's world wide web server at <http://www2.cli.co.jp/products/ne/>

### Preparation:

Quit any other software you are using. (Check that there are no other application icons on the status bar.)

## 1 Load the provided CD-ROM into the PC.

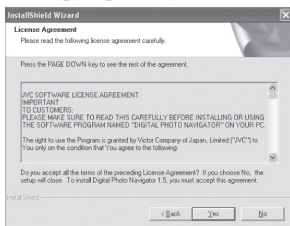
After a moment, the [SETUP] screen appears. If the [SETUP] screen does not appear, double-click the CD-ROM icon in [My Computer].

## 2 Click [Easy Installation].

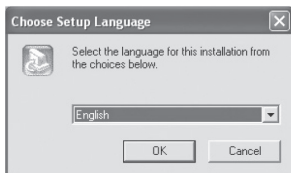
If you want to specify the type of software to install or the installation destination folder etc., select [Custom Installation]. Follow the instructions on the screen to install the software.



## 3 Click [Yes].

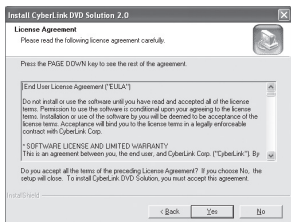


#### 4 Select the desired language and click [OK].



#### 5 Click [Yes].

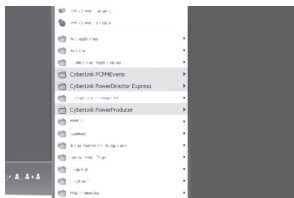
The software installation starts.



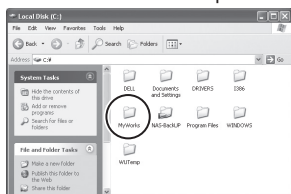
#### 6 Click [Finish].

### ■ When installation is completed

The installed software is displayed in [All Programs].



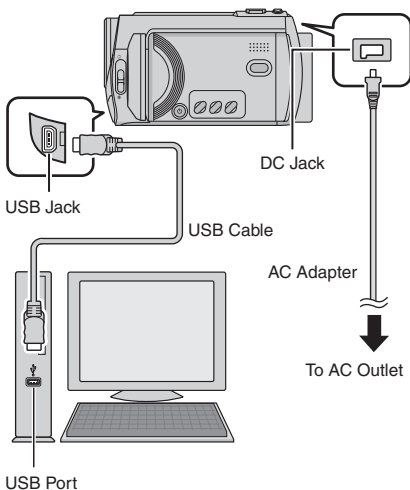
The backup destination folder [MyWorks] for files is created on the hard disk drive that has the most free space.



### Connecting the Camera to the PC

#### Preparation:

Close the LCD monitor to turn off the camera.



### NOTES

- Never disconnect the USB cable while the access/charge lamp on the camera lights or blinks.
- Do not turn off the camera when the USB cable is connected, to prevent malfunctions of the PC.
- Connect the camera directly to the USB jack on the PC, not through a hub.
- Do not use an extension USB cable.
- Saving the wrong kinds of files in a recording medium or deleting files or folders from a recording medium can cause problems with the operation of the camera. When it is necessary to delete a file from a recording medium, delete it through the camera. Also, do not move or rename folders and files in the medium on PC.

# File Backup on a Windows® PC (Continued)

## ■ When you have finished operation

Always follow the procedures below when disconnecting the camera, or turning off the power of the camera/PC.

Failing to do so may cause damage to the camera and PC.

- 1) Confirm that the access/charge lamp on the camera does not light or blink. (If the access/charge lamp lights or blinks, wait until it is turned off before proceeding.)
- 2) Double-click the [Safely Remove Hardware] or [Unplug or Eject Hardware] icon in the status bar.
- 3) Select [USB Mass Storage Device] or [USB Disk], and then click [Stop].
- 4) Click [OK].
- 5) Disconnect the USB cable.
- 6) Turn off the camera and PC.

## File Backup on the PC

This method uses the software on the provided CD-ROM to back up files onto your PC.

Video files that have never been backed up onto the connected PC are automatically selected from the back up history and backed up.

If you could not install the software, turn to page 27 for details of how to back up your files without using this software.

### Preparation:

- Install the software from the provided CD-ROM. (☞ pg. 24)
- Connect the camera to the PC with the USB cable. (☞ pg. 25)

**1** Open the LCD monitor to turn on the camera.

**2** On the camera, press the **DIRECT BACK UP** button.

Although a dialog box appears on the PC, you do not need to use it. File copy starts automatically.



When the progress bar disappears, the process is complete.

### NOTE

When backup is performed, folders for each medium (HDD or microSD) are created in the [MyWorks] folder (☞ pg. 25), and the files are backed up inside those folders. (If backup is performed from more than one camera HDD, individual HDD folders are created.)

## File Backup from a Specified Media

### Preparation:

- Install the software from the provided CD-ROM. (☞ pg. 24)
- Connect the camera to the PC with the USB cable. (☞ pg. 25)

**1** Open the LCD monitor to turn on the camera.

**2** On the camera, select **[BACK UP]**.

### 3 Click [EVERIO\_HDD] or [EVERIO\_SD].

When the progress bar disappears, the process is complete.



## File Backup on the PC without Using Software

### Preparation:

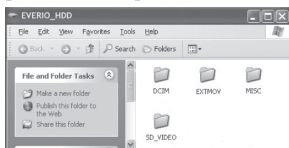
Connect the camera to the PC with the USB cable. (▶ pg. 25)

### 1 On the PC, create a folder to back up files into.

### 2 Open the LCD monitor to turn on the camera.

### 3 On the camera, select [PLAYBACK ON PC].

### 4 Double-click [EVERIO\_HDD] or [EVERIO\_SD] icon.



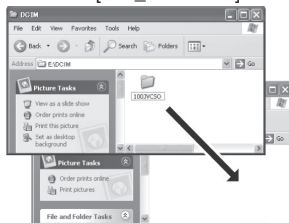
### 5 Select the folder you want to back up, and drag & drop it into the folder you created in step 1.

#### • SD\_VIDEO:

Folder that contains video files. If you want to back up files individually, open this folder, and drag & drop files such as [PRG001] one by one.

#### • DCIM:

Folder that contains still image files. If you want to back up files individually, open this folder, and drag & drop files such as [PIC\_0001.JPG] one by one.



### NOTE

For further details on the use of folders, see page 29.

# Other Windows® PC Operations

## Getting More Use of the Software

For more information on operations of the software, see the Tutorials for each software program or the User's Guides.

### PowerCinema NE for Everio

- 1 Double-click the PowerCinema NE for Everio icon.  
Start PowerCinema NE for Everio.
- 2 Click [Tutorial].

### PowerProducer 3 NE

- 1 Click [Start], go to [All Programs], select [CyberLink PowerProducer].
- 2 Click [PowerProducer User's Guide] or [Readme].

### PowerDirector 5 NE Express

- 1 Click [Start], go to [All Programs], select [CyberLink PowerDirector Express].
- 2 Click [PowerDirector Express User's Guide] or [Readme].

### Digital Photo Navigator 1.5

The User's Guide is included on the CD-ROM in PDF format.

- 1 Load the provided CD-ROM into the PC.
- 2 Right-click the CD-ROM icon in [MY Computer], then click [Open].
- 3 Double-click the [DOCS] folder.
- 4 Open the "Start.pdf" file and click the button of the desired language.

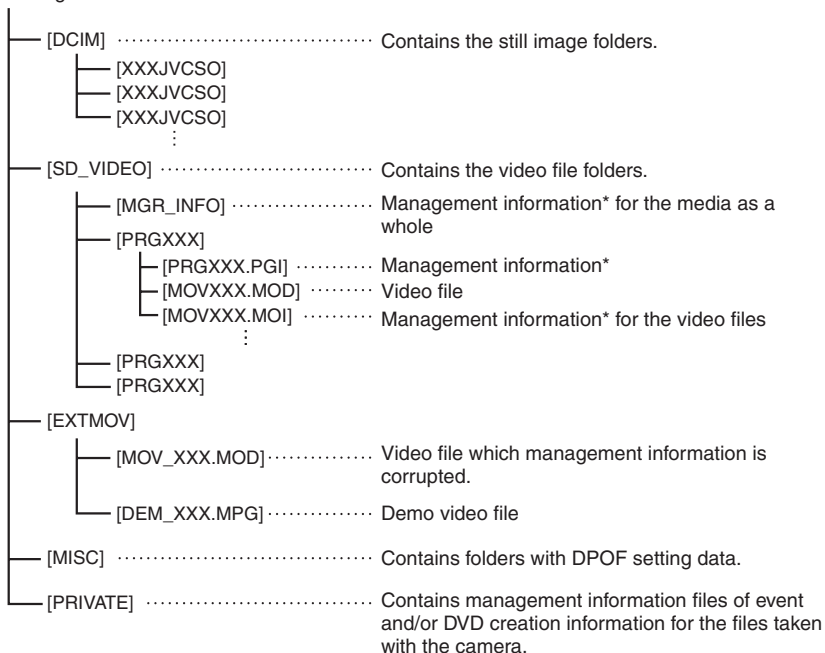
#### NOTES

- You need to connect to the Internet to see the Tutorial.
- Adobe® Acrobat® Reader™ or Adobe® Reader® must be installed to read PDF files. Adobe® Reader® can be loaded from Adobe's web site: <http://www.adobe.com/>

# Folder Structure and Extensions

Recording medium

X = number



\* Information such as the date and time of recording, recorded with the video file.

## Extensions

Video files : ".MOD"

Still image files : ".jpg"

For Windows®, the file extension may not appear depending on the [FOLDER] option setting.

# File Backup on a Macintosh®

You can back up camera files onto your computer.

## System Requirements

### Hardware:

Macintosh must be standard equipped with USB 2.0 port

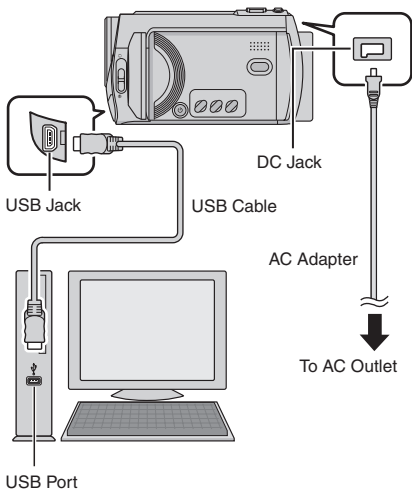
### OS:

Mac OS X (v10.3.9, v10.4.2 to v10.4.10)

## Connecting the Camera to the Macintosh

### Preparation:

Close the LCD monitor to turn off the camera.



## NOTES

- Never disconnect the USB cable while the access/charge lamp on the camera lights or blinks.
- Do not turn off the camera when the USB cable is connected, to prevent malfunctions of the PC.
- Connect the camera directly to the computer, not through a hub.
- Do not use an extension USB cable.

- When you copy files from the computer to the recording medium on the camera, do not include any other files than those recorded with the camera.
- Do not delete, move, or rename the files and folders in the camera from the computer.

### ■ When you have finished operation

Always follow the procedures below when disconnecting the camera, or turning the power of the camera/computer off. Failing to do so may cause damage to the camera and computer off.

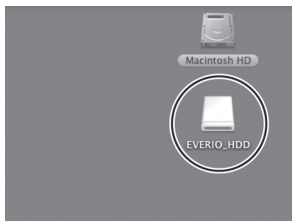
- 1) Drag & drop the recording medium icon on the desktop into the [Trash] icon. If the confirmation message appears, click [OK].
- 2) Confirm that the access/charge lamp on the camera does not light or blink. If the access/charge lamp lights or blinks, wait until it is turned off before proceeding.
- 3) Disconnect the USB cable.
- 4) Turn off the camera and computer.

## File Backup on the Macintosh

### Preparation:

Connect the camera to the computer with the USB cable. (☞ pg. 30)

- 1 On the computer, create a folder to back up files into.
- 2 Open the LCD monitor to turn on the camera.
- 3 On the camera, select [PLAYBACK ON PC].
- 4 Double-click [EVERIO\_HDD] or [EVERIO\_SD] icon.



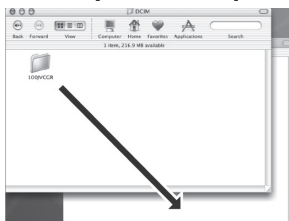
- 5 Select the folder you want to back up, and drag & drop it into the folder you created in step 1.

### • SD\_VIDEO:

Folder that contains video files. If you want to back up files individually, open this folder, and drag & drop files such as [PRG001] one by one.

### • DCIM:

Folder that contains still image files. If you want to back up files individually, open this folder, and drag & drop files such as [PIC\_0001.JPG] one by one.



### NOTE

For further details on the use of folders, see page 29.

# Customer Support Information

## Contact us for information on the provided software

Use of this software is authorized according to the terms of the software licence.

## JVC

When contacting the nearest JVC office or agency in your country (refer to the JVC Worldwide Service Network at <http://www.jvc-victor.co.jp/english/worldmap/index-e.html>) about this software, please have the following information ready.

- Product Name
- Model
- Problem
- Error Message
- PC
  - Manufacturer
  - Model (Desktop/Laptop)
  - CPU
  - OS
  - Memory (MB)
  - Available Hard Disk Space (GB)

Please note that it may take some time to respond to your questions, depending on their subject matter.

JVC cannot answer questions regarding basic operation of your PC, or questions regarding specifications or performance of the OS, other applications or drivers.

## CyberLink

### Telephone/fax support

Location	Language	Office hours (Mon. to Fri.)	Phone #	Fax #
Germany	English / German / French / Spanish / Italian	9:00 to 17:00	+49-700-462-92375	+49-241-70525-25
Taiwan	Mandarin	9:00 to 18:00	+886-2-8667-1298 ext. 333	+886-2-8667-1300
Japan	Japanese	10:00 to 17:00	+81-3-3516-9555	-

### Paid voice support

Location	Language	Lines are open (Mon. to Fri.)	URL
U.S.A.	English	13:00 to 22:00 CST	<a href="http://www.cyberlink.com/english/cs/support/new_site/voice_support.jsp">http://www.cyberlink.com/english/cs/support/new_site/voice_support.jsp</a>

### Support web/e-mail

Language	URL/e-mail address
English	<a href="http://www.cyberlink.com/english/cs/support/new_site/support_index.html">http://www.cyberlink.com/english/cs/support/new_site/support_index.html</a>
German / French / Spanish / Italian	<a href="mailto:goCyberlink@aixtema.de">goCyberlink@aixtema.de</a>
Japanese	<a href="http://jp.cyberlink.com/support/">http://jp.cyberlink.com/support/</a>

# Troubleshooting

The camera is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly.

## The following phenomena are not malfunctions.

- The camera heats up when it is used for a long time.
- The battery heats up during charging.
- When playing back a video file, the image stops momentarily or the sound is interrupted at junctions between scenes.

- To solve the problem, first follow the instructions below.
- If the problem is not solved, reset the camera. (➤ below)
- If the problem persists, please consult your nearest JVC dealer.

## ■ To reset the camera

- 1) Close the LCD monitor to turn off the camera and remove the power supply (battery pack or AC adapter) from the camera, then reattach it.
- 2) Select [FACTORY PRESET] from the MENU.

Trouble		Action	➤
Power	No power is supplied.	<ul style="list-style-type: none"> <li>● Connect the AC adapter securely.</li> <li>● Detach the battery pack once again and reattach it firmly.</li> <li>● Replace the dead battery with a fully charged one.</li> </ul>	14 14 –
	The power does not turn on, or the battery operation time is extremely short even after the battery is fully charged.	<ul style="list-style-type: none"> <li>● Make sure to use the camera under appropriate operating temperatures.</li> <li>● The battery is worn out and needs to be replaced. Please purchase a new one.</li> </ul>	36 –
	The access/charge lamp on the camera does not light during charging.	<ul style="list-style-type: none"> <li>● Charging may stop in places subject to extremely high/low temperatures to protect the battery. It is recommended to charge it in places with a temperature of 10°C to 35°C.</li> <li>● When the battery is already fully charged, the lamp does not light. Check the remaining battery power.</li> </ul>	– 15
Recording	Recording cannot be performed.	<ul style="list-style-type: none"> <li>● Recording medium is full. Delete unnecessary files or replace the microSD card.</li> <li>● Select the recording medium properly.</li> </ul>	20 –
	During recording, the date/time does not appear.	<ul style="list-style-type: none"> <li>● Touch the <b>DISP</b> button once.</li> </ul>	13
	During video recording, the ●REC indicator flashes.	<ul style="list-style-type: none"> <li>● The temperature of the camera is increasing. If the camera continues to heat up, recording may be stopped to protect the recording medium. In this case, turn off the power, and then wait until the camera cools down.</li> </ul>	–
	Digital zoom does not work.	<ul style="list-style-type: none"> <li>● Change the settings in [ZOOM].</li> <li>● Digital zoom is not available in the still image recording mode.</li> </ul>	– –

# Troubleshooting (Continued)

Trouble		Action	
Recording	The focus is not adjusted automatically.	<ul style="list-style-type: none"> <li>● Set [FOCUS] to [AUTO].</li> <li>● Clean the lens and check the focus again.</li> </ul>	– 34
	The continuous shooting speed is slow.	<ul style="list-style-type: none"> <li>● The continuous shooting speed will drop after repeated continuous shots, depending on the recording media, or under certain recording conditions.</li> </ul>	–
Playback	Playback cannot be performed.	<ul style="list-style-type: none"> <li>● Select the recording medium properly.</li> <li>● To watch images on a TV, set the TV's input mode or channel that is appropriate for video playback.</li> </ul>	– 19
	During video playback, the ► indicator flashes.	<ul style="list-style-type: none"> <li>● The temperature of the camera is increasing. If the camera continues to heat up, playback may be stopped to protect the recording medium. In this case, turn off the power, and then wait until the camera cools down.</li> </ul>	–
Other problems	Files cannot be deleted.	<ul style="list-style-type: none"> <li>● Remove protection from the files and delete them.</li> </ul>	21
	The data process is too slow after the power is switched on or the mode is changed.	<ul style="list-style-type: none"> <li>● There is a large number of still images (approx. 1,000 or more) stored in the recording medium. Copy the stored files to other devices, and delete them from the recording medium.</li> </ul>	20
	The microSD card cannot be removed from the camera.	<ul style="list-style-type: none"> <li>● Push the microSD card in a few more times.</li> </ul>	–
	The [CREATE DVD] screen is displayed in the LCD monitor, and no other operations can be performed.	<ul style="list-style-type: none"> <li>● Another operation is being attempted while a DVD burner that is turned on is connected. Turn off the camera connected to the DVD burner, or disconnect the USB cable.</li> </ul>	–
	The touch sensor or sensor button does not function.	<ul style="list-style-type: none"> <li>● Touch the sensors with your finger. The sensors do not function if you touch them with your finger nail or with gloves on.</li> </ul>	6

## Cleaning

Before cleaning, turn off the camera and remove the battery pack and AC adapter.

### ■ To clean the exterior

Wipe gently with a soft cloth. If the camera is particularly dirty, dip the cloth into diluted mild soap and wring it out well before wiping. Then wipe again with a dry cloth.

### ■ To clean the LCD monitor

Wipe gently with a soft cloth. Be careful not to damage the monitor.




### ■ To clean the lens

Wipe gently with lens cleaning paper.

#### NOTES

- Avoid using strong cleaning agents such as benzine or alcohol.
- Mould may form if the lens is left dirty.
- When using a cleaner or chemically treated cloth, refer to the cautions for each product.

# Warning Indications

Indication	Meaning/Action	
 (Battery indicator)	<ul style="list-style-type: none"> <li>Displays the remaining battery power.   </li> <li>As the battery power comes close to nil, the battery indicator blinks. When the battery power is exhausted, power turns off automatically.</li> </ul>	-  -
<b>SET DATE/TIME!</b>	<ul style="list-style-type: none"> <li>Appears when the date/time is not set.</li> <li>The built-in clock's rechargeable lithium battery is discharged, so the previously set date/time is erased. Connect the camera to an AC outlet using the AC adapter for over 24 hours to charge the clock's lithium battery. Then set the date/time.</li> </ul>	14 14
<b>CHECK LENS COVER</b>	<ul style="list-style-type: none"> <li>Appears for 5 seconds after power is turned on in recording mode if the lens cover is closed or when it is dark.</li> </ul>	-
<b>HDD ERROR! MEMORY CARD ERROR!</b>	<ul style="list-style-type: none"> <li>Perform clean up to restore the capacity of the recording media.</li> <li>Turn off the camera. Remove the microSD card and insert it again. Turn on the camera after inserting the microSD card. If the error message appears again, replace the card with one that is certified to operate correctly.</li> <li>It is also recommended to run check disc regularly on the PC, providing that there is no data on the hard disk of the camera.</li> </ul>	- - -
<b>VIDEO MANAGEMENT FILE IS BROKEN. TO RECORD/PLAYBACK VIDEO, RECOVERY IS REQUIRED. RECOVER?</b>	<ul style="list-style-type: none"> <li>The video management file is broken. Recovery is required to record or play back video files. Select [YES], then touch the <b>OK</b> button to recover the video management file.</li> </ul>	-
<b>RECORDING FAILURE</b>	<ul style="list-style-type: none"> <li>The writing speed of recording medium is slow, or the recording medium is corrupted. Use a microSD card that is guaranteed to operate correctly.</li> <li>The hard disk was subjected to vibrations or jolts. Be careful not to subject the hard disk to vibrations or jolts.</li> <li>Appears when the recording medium is full and recording is not possible. Delete unnecessary files, or replace the microSD card.</li> </ul>	- - 20
<b>POWER IS OFF, OR USB DEVICE IS UNSUPPORTED</b>	<ul style="list-style-type: none"> <li>Appears when an incompatible USB device is connected to the camera.</li> <li>Appears when a DVD burner that is switched off is connected. If you want to use the DVD burner, switch the power on.</li> </ul>	- -
<b>DROP DETECTION WORKED AND THE POWER IS TURNED OFF</b>	<ul style="list-style-type: none"> <li>To turn on the camera again, close the LCD monitor and open it again.</li> </ul>	-

# Specifications

## Camera

### ■ For general

#### Power supply

DC 11 V (Using AC adapter)

DC 7.2 V (Using battery pack)

#### Power consumption

[GZ-MG465]

Approx. 3.2 W\*

[GZ-MG345/330]

Approx. 2.7 W\*

\* When the LED light is off and the monitor backlight is set to [STANDARD] mode.

#### Dimensions (W x H x D)

113 mm x 68 mm x 54 mm

#### Weight

Approx. 315 g

(incl. grip belt)

Approx. 360 g

(incl. battery and grip belt)

#### Operating temperature

0°C to 40°C

#### Operating humidity

35% to 80%

#### Storage temperature

-20°C to 50°C

#### Pickup

[GZ-MG465]

1/6" (1,070,000 pixels) CCD

[GZ-MG345/330]

1/6" (800,000 pixels) CCD

#### Lens

[GZ-MG465]

Video: F 1.8 to 4.5, f = 2.5 mm to 80 mm, 32:1 power zoom lens

Still image: F 1.9 to 4.5, f = 2.9 mm to 80 mm, 27:1 power zoom lens

[GZ-MG345/330]

F 1.8 to 4.0, f = 2.2 mm to 77 mm, 35:1 power zoom lens

#### Filter diameter

ø30.5 mm

#### LCD monitor

2.7" diagonally measured, LCD panel/TFT active matrix system

#### Speaker

Monaural

#### LED Light

Within 1.5 m

(recommended shooting distance)

#### Language

English/French/German/Spanish/Italian/  
Dutch/Portuguese/Russian/Polish/Czech/  
Turkish/Simplified Chinese

### ■ For video/Audio

#### Format

SD-VIDEO

#### Recording/Playback format

Video: MPEG-2

Audio: Dolby Digital (2 ch)

#### Signal format

PAL standard

#### Recording mode (video)

ULTRA FINE: 720 x 576 pixels, 8.5 Mbps (VBR)

FINE: 720 x 576 pixels, 5.5 Mbps (VBR)

NORMAL: 720 x 576 pixels, 4.2 Mbps (VBR)

ECONOMY: 352 x 288 pixels, 1.5 Mbps (VBR)

#### Recording mode (audio)

ULTRA FINE: 48 kHz, 384 kbps

FINE: 48 kHz, 384 kbps

NORMAL: 48 kHz, 256 kbps

ECONOMY: 48 kHz, 128 kbps

### ■ For still image

#### Format

JPEG

#### Image size

[GZ-MG465]

2 modes (1152 x 864 / 640 x 480)

[GZ-MG345/330]

1 mode (640 x 480)

#### Picture quality

2 modes (FINE/STANDARD)

### ■ For connectors

#### AV input/output\*

Video input: 0.8 V (p-p) ~ 1.2 V (p-p), 75 Ω

Video output: 1.0 V (p-p), 75 Ω

Audio input: 300 mV (rms), 50 kΩ

Audio output: 300 mV (rms), 1 kΩ

\* Only GZ-MG465/345

#### USB

Mini USB type A and B, USB 2.0 compliant

## AC Adapter

### Power requirement

AC 110 V to 240 V~, 50 Hz/60 Hz

### Output

DC 11 V , 1 A

## Remote Control

### Power supply

DC 3 V

### Battery life

Approx. 1 year (depending on the frequency of use)

### Operating distance

Within 5 m

### Operating temperature

0°C to 40°C

### Dimensions (W x H x D)

42 mm x 14.5 mm x 91 mm

### Weight

Approx. 30 g  
(incl. battery)

Design and specifications subject to change without notice.

## Approximate recording time (minutes) (for video)

Quality \ Recording medium	HDD			microSD Card
	30 GB* <sup>1</sup>	40 GB* <sup>2</sup>	60 GB* <sup>3</sup>	4 GB
ULTRA FINE	430	570	860	57
FINE	640	850	1280	85
NORMAL	850	1130	1700	113
ECONOMY	2250	3000	4500	298

\*<sup>1</sup> GZ-MG330 \*<sup>2</sup> GZ-MG345 \*<sup>3</sup> GZ-MG465

## [GZ-MG465] Approximate number of storable images (for still image)

Image size/Quality \ Recording medium	HDD	microSD Card				
		256 MB	512 MB	1 GB	2 GB	4 GB
1152 x 864 / FINE	9999	535	1065	2140	4095	8045
1152 x 864 / STANDARD	9999	820	1625	3265	6145	9999
640 x 480 / FINE	9999	1555	3090	6205	9999	9999
640 x 480 / STANDARD	9999	2225	4420	8865	9999	9999

## [GZ-MG345/330] Approximate number of storable images (for still image)

Image size/Quality \ Recording medium	HDD		microSD Card				
	30 GB* <sup>1</sup>	40 GB* <sup>2</sup>	256 MB	512 MB	1 GB	2 GB	4 GB
640 x 480 / FINE	9999	9999	1035	2060	4135	7680	9999
640 x 480 / STANDARD	9999	9999	2225	4440	8865	9999	9999

\*<sup>1</sup> GZ-MG330 \*<sup>2</sup> GZ-MG345

## Required charging/recording time (approx.)

\* When the LED light is off and the monitor backlight is set to [STANDARD] mode.

Battery pack	Charging time	Recording time	
		GZ-MG465	GZ-MG345/330
BN-VF808U (Provided)	1 hr. 30 min.	1 hr. 30 min.*	1 hr. 50 min.*
BN-VF815U	2 hr. 40 min.	3 hr. 5 min.*	3 hr. 40 min.*
BN-VF823U	3 hr. 50 min.	4 hr. 35 min.*	5 hr. 30 min.*

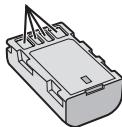
# Cautions

## Battery Packs

The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

- **To avoid hazards**
  - ... **do not** burn.
  - ... **do not** short-circuit the terminals. Keep it away from metallic objects when not in use. When transporting, make sure the provided battery cap is attached to the battery. If the battery cap is misplaced, carry the battery in a plastic bag.
  - ... **do not** modify or disassemble.
  - ... **do not** expose the battery to temperatures exceeding 60°C, as this may cause the battery to overheat, explode or catch fire.
  - ... use only specified chargers.
- **To prevent damage and prolong service life**
  - ... do not subject to unnecessary shock.
  - ... charge within the temperature range of 10°C to 35°C. This is a chemical reaction type battery — cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
  - ... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
  - ... fully charge and then fully discharge the battery every 6 months when storing the battery pack over a long period time.
  - ... remove from charger or powered unit when not in use, as some machines use current even when switched off.

### Terminals



## Recording Medium

- **Be sure to follow the guidelines below to prevent corruption or damage to your recorded data.**
  - Do not bend or drop the recording medium, or subject it to strong pressure, jolts or vibrations.
  - Do not splash the recording medium with water.
  - Do not use, replace, or store the recording medium in locations that are exposed to strong static electricity or electrical noise.
  - Do not turn off the camera power or remove the battery or AC adapter during shooting, playback, or when otherwise accessing the recording medium.
  - Do not bring the recording medium near objects that have a strong magnetic field or that emit strong electromagnetic waves.
  - Do not store the recording medium in locations with high temperature or high humidity.
  - Do not touch the metal parts.
- When formatting or erasing data using the camera, only the file administration information is changed. The data is not completely erased from the hard disk. If you want to completely erase all of the data, we recommend either using commercially available software that is specially designed for that purpose, or by physically destroying the camera with a hammer etc.

## LCD Monitor

- **To prevent damage to the LCD monitor, DO NOT**
  - ... push it strongly or apply any shocks.
  - ... place the camera with LCD monitor on the bottom.
- **To prolong service life**
  - ... avoid rubbing it with coarse cloth.

## Main Unit

- **For safety, DO NOT**

- ... open the camera's chassis.
- ... disassemble or modify the unit.
- ... allow inflammables, water or metallic objects to enter the unit.
- ... remove the battery pack or disconnect the power supply while the power is on.
- ... leave the battery pack attached when the camera is not in use.
- ... place naked flame sources, such as lighted candles, on the apparatus.
- ... expose the apparatus to dripping or splashing.
- ... leave dust or metal objects adhered to the power plug or an AC wall outlet.
- ... insert any objects in the camera.

- **Avoid using the unit**

- ... in places subject to excessive humidity or dust.
- ... in places subject to soot or steam such as near a cooking stove.
- ... in places subject to excessive shock or vibration.
- ... near a television set.
- ... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- ... in places subject to extremely high (over 40°C) or extremely low (under 0°C) temperatures.
- ... in places subject to the air pressure is low (more than 3000 m above the sea level).

- **DO NOT leave the unit**

- ... in places of over 50°C.
- ... in places where humidity is extremely low (below 35%) or extremely high (above 80%).
- ... in direct sunlight.
- ... in a closed car in summer.
- ... near a heater.
- ... in high places such as on a TV. Leaving the unit in high places while a cable is connected may result in a malfunction if the cable is caught and the unit falls onto the floor.

- **To protect the unit, DO NOT**

- ... allow it to become wet.
- ... drop the unit or strike it against hard objects.
- ... subject it to shock or excessive vibration during transportation.
- ... keep the lens directed at extremely bright objects for long periods.
- ... expose the lens to direct sunlight.
- ... swing it excessively when using the hand strap.
- ... swing the soft camera case excessively when the camera is inside it.

- **To prevent the unit from dropping,**

- Attach the shoulder strap securely and fasten the grip belt securely.
- When using the camera with a tripod, attach the camera to the tripod securely.

If the camera drops, you may be injured and the camera may be damaged.  
When a child uses the unit, there must be parental guidance.

# Terms

<b>A</b>		
AC Adapter .....	14	
<b>B</b>		
Battery Pack .....	14, 15, 38	
<b>C</b>		
Clock Adjust .....	14	
Copying (Moving) Still Images .....	23, 30	
Copying Video Files .....	23, 30	
<b>D</b>		
Deleting Files .....	20	
DVD Burner .....	22	
<b>E</b>		
Everio Dock .....	9	
<b>H</b>		
Hard Disk .....	38	
<b>I</b>		
Image Rotation .....	18	
<b>L</b>		
LCD Monitor .....	10, 12, 38	
<b>M</b>		
Macintosh .....	30	
<b>P</b>		
Power-Linked Operation .....	10	
Protecting Files .....	20	
<b>R</b>		
Recordable Time/Number of Images .....	37	
Recording Medium .....	38	
Remote Control .....	10, 15	
Resetting the Camera .....	33	
<b>S</b>		
Slide Show .....	18	
Speaker Volume .....	18	
Still Image .....	17	
<b>T</b>		
TV .....	19	
<b>V</b>		
Video .....	16	
<b>W</b>		
Windows PC .....	23	

# JVC