

# JVC



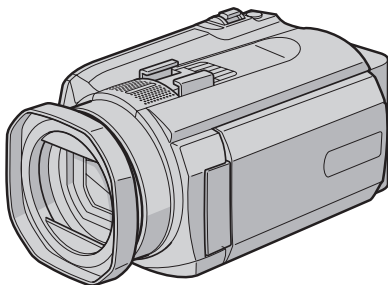
LYT1879-001A

ENGLISH

**EN**

## INSTRUCTIONS

### HD HARD DISK CAMCORDER

**GZ-HD5** **E/EK****GZ-HD6** **E/EK**

#### Dear Customer

Thank you for purchasing this hard disk camera. Before use, please read the safety information and precautions contained in pages 6 and 7 to ensure safe use of this product.

**HD****micro  
SD  
HC****HDMI**<sup>TM</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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

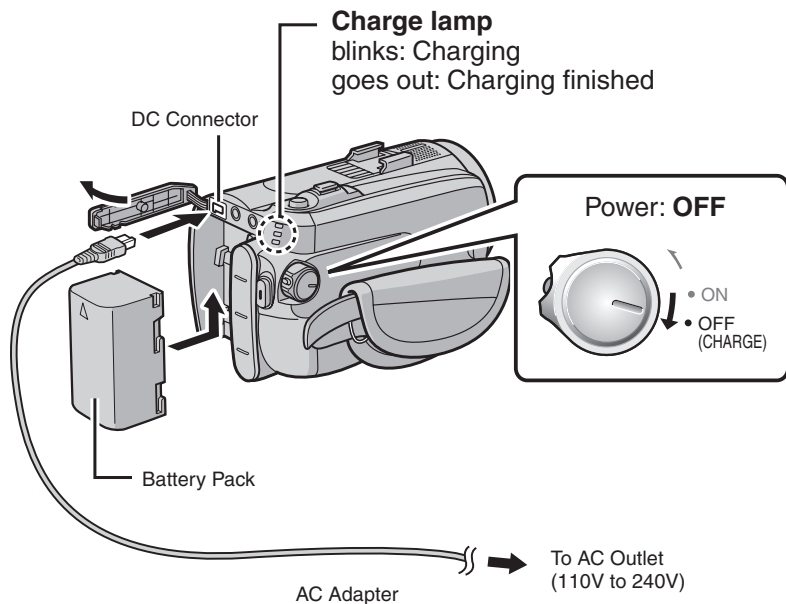
**NOTE**

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

# Easy Start Guide

## Charge the battery before recording

Turn off the camera and attach the battery pack.



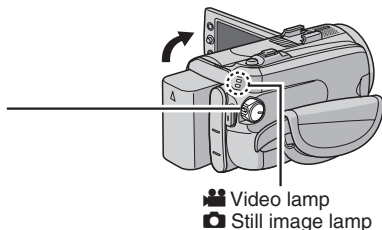
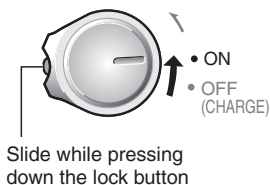
■ After charging is finished, set the date/time.

### CAUTION

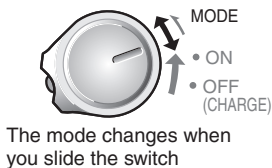
- Charge the battery pack before use.
- Be sure to use JVC battery packs. If you use any other battery packs besides JVC battery packs, safety and performance can not be guaranteed.

# Preparation

## 1 Open the LCD monitor and set the power/mode switch to ON



## 2 Select video mode



Video mode

Video lamp lights

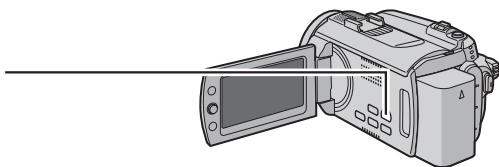


Still image mode

Still image lamp lights



## 3 Select recording or playback mode



When recording



(p. 20, 21)

When playing back



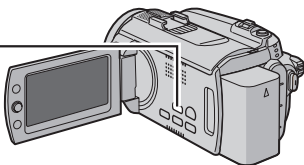
(p. 24, 25)

# Video recording

## CAUTION

- Before recording an important scene, it is recommended to conduct a trial recording.
- Try recording with easy [AUTO] mode first.

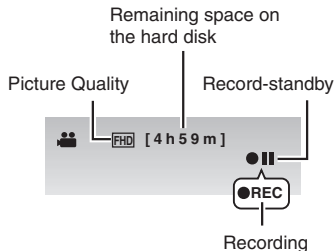
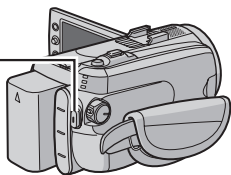
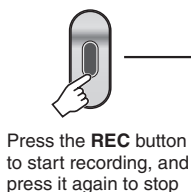
## 1 Select auto recording mode



Auto recording mode



## 2 Start recording



## NOTE

Select the mode which suits your purpose.

Video quality	Purpose	
<b>FHD</b>	To record in full high-definition	Full high-definition (1920 x 1080i)
<b>SP</b>	To record in higher quality video	High-definition (1440 x 1080i)
<b>LP</b>	To record a longer time	
<b>1440 CBR</b>	To copy and edit the video as high-definition images by i.LINK output	

- To change the settings (p. 18)

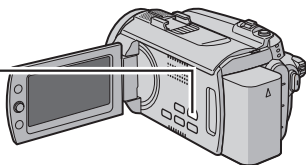
# Playing back

## 1 Select playback mode

SELECT  
PLAY/REC



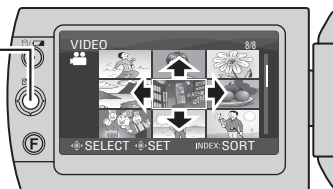
The mode changes when you press the button



## 2 Select the desired file



Index screen

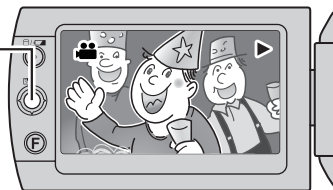


## 3 Press down the set lever



Press down the set lever to start playback, and press it again to stop

Playback screen



- Operations during Video Playback (p. 24, 25)
- To view video/still image files on TV (p. 26)

### CAUTION

- Don't forget to make copies after recording! To copy files onto DVD discs. (p. 29)
- To dub files using a VCR/DVD recorder. (GUIDEBOOK in the CD-ROM)
- To play back a created DVD disc. (GUIDEBOOK in the CD-ROM)

# Safety Precautions

## **IMPORTANT (for owners in the U.K.) Connection to the mains supply in the United Kingdom.**

**DO NOT cut off the mains plug from this equipment.**

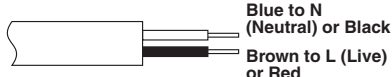
If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

**BE SURE to replace the fuse only with an identical approved type, as originally fitted, and to replace the fuse cover.**

If nonetheless the mains plug is cut off be sure to remove the fuse and dispose of the plug immediately, to avoid possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below: **DO NOT** make any connection to the Larger Terminal coded E or Green.

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



If these colours do not correspond with the terminal identifications of your plug, connect as follows:

Blue wire to terminal coded N (Neutral) or coloured black.

Brown wire to terminal coded L (Live) or coloured Red.

If in doubt — consult a competent electrician.

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

## **CAUTIONS:**

- 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.

## **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.

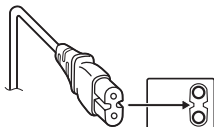
Do not use a tripod on unsteady or unlevel surfaces. It could tip over, causing serious damage to the camera.

## **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.



## Information for Users on Disposal of Old Equipment and Batteries



Products



Battery

### Notice:

The sign Pb below the symbol for batteries indicates that this battery contains lead.

### [European Union]

These symbols indicate that the electrical and electronic equipment and the battery with this symbol should not be disposed of as general household waste at its end-of-life. Instead, the products should be handed over to the applicable collection points for the recycling of electrical and electronic equipment as well as batteries for proper treatment, recovery and recycling in accordance with your national legislation and the Directive 2002/96/EC and 2006/66/EC.

By disposing of these products correctly, you will help to conserve natural resources and will help to prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of these products. For more information about collection points and recycling of these products, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

### [Business users]

If you wish to dispose of this product, please visit our web page [www.jvc-europe.com](http://www.jvc-europe.com) to obtain information about the take-back of the product.

### [Other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to dispose of these items, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment and batteries.

## SOME DO'S AND DON'TS ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

**DO** read the operating instructions before you attempt to use the equipment.

**DO** ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

**DO** consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

**DO** be careful with glass panels or doors on equipment.

**DON'T** continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way — switch off, withdraw the mains plug and consult your dealer.

**DON'T** remove any fixed cover as this may expose dangerous voltages.

**DON'T** leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family knows how to do this. Special arrangements may need to be made for infirm or handicapped people.

**DON'T** use equipment such as personal stereos or radios so that you are distracted from the requirements of road safety. It is illegal to watch television whilst driving.

**DON'T** listen to headphones at high volume, as such use can permanently damage your hearing.

**DON'T** obstruct the ventilation of the equipment, for example with curtains or soft furnishings.

Overheating will cause damage and shorten the life of the equipment.

**DON'T** use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

**DON'T** allow electrical equipment to be exposed to rain or moisture.

### ABOVE ALL

- NEVER let anyone especially children push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock;
- NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!

### 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

- i.LINK is a trademark of Sony Corporation.
- x.v.Colour™ is a trademark of Sony Corporation.
- HDMI is a trademark of HDMI Licensing, LLC.
- 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.



x.v.Colour

HDMI  
HIGH-DEFINITION MULTIMEDIA INTERFACE

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## Read This First!

### Make a backup of important recorded data

It is recommended to copy your important recorded data to a DVD or other recording media for storage. (☞ p. 29) JVC will not be responsible for any lost data.

### 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.

### 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. (☞ p. 37)

### Precautions on handling batteries

- Be sure to use the JVC BN-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 cameras 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]. (☞ p. 18)

### Do not cover the fan (☞ p. 12 ⑤, ③③)

If the camera becomes too hot inside it may cause a malfunction.

Read these INSTRUCTIONS to enjoy your CAMCORDER.

For more details on the operations, refer to the GUIDEBOOK and the PC OPERATION GUIDE 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/>

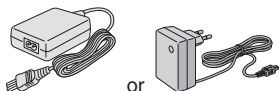


#### NOTE

Select your desired language with a single click.

The model name is indicated on the bottom of your camcorder.

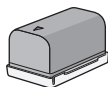
# Accessories



**AC Adapter**  
AP-V14E/17E



**Power Cord**  
(for AP-V14E only)



**Battery Pack**  
BN-VF815U



**Component Cable**  
(p. 26)



**Audio/Video Cable**  
(p. 26, 27)



**USB Cable**  
(p. 29, 33, 35)



**Lens Hood**  
GZ-HD6  
Already attached to the camera. (p. below)



**Shoulder Strap**  
(p. 11)



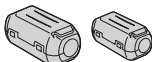
**CD-ROM**  
(p. 32, 35)



**Remote Control**  
RM-V750U (p. 11)



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

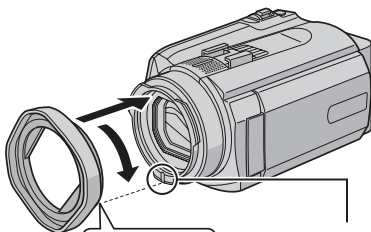
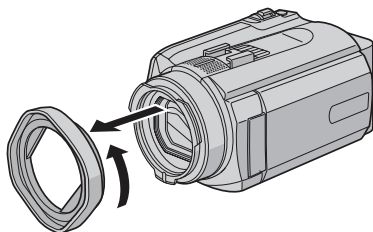


**Core Filter**  
(p. 11)

## NOTE

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

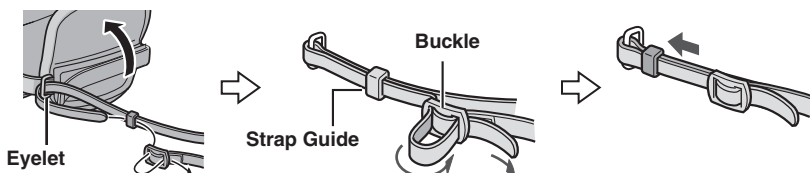
## GZ-HD6 Attaching/Detaching the Lens Hood



Guide ridge

Place the guide ridge in the groove.

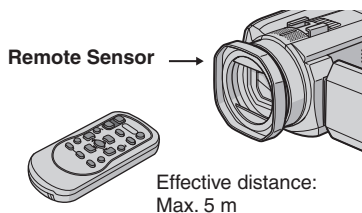
## Attaching the Shoulder Strap



## 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



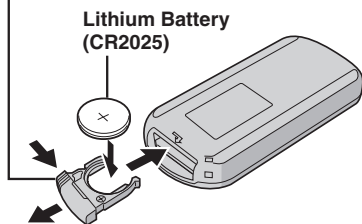
#### NOTE

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.

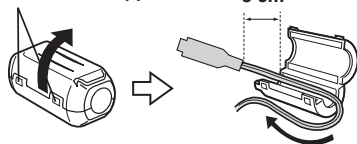
#### Lock Tab



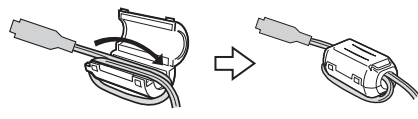
## Attaching the Core Filter to the USB Cable and DC cord

Attach the core filter (Large) to the USB cable. Also, attach the core filter (Small) to the DC cord. The core filter reduces interference. Connect the end of the cable with the core filter to the camera.

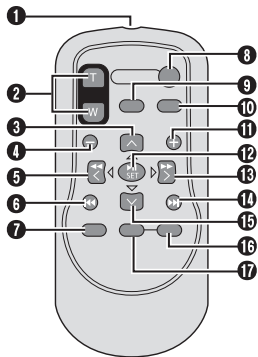
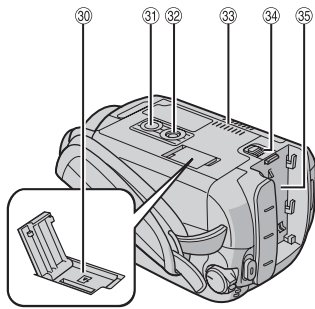
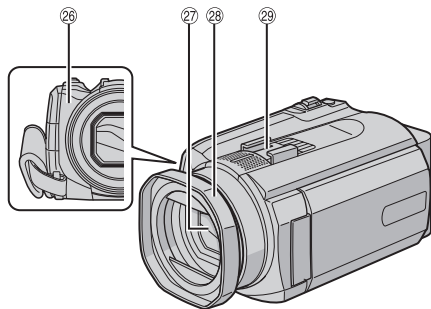
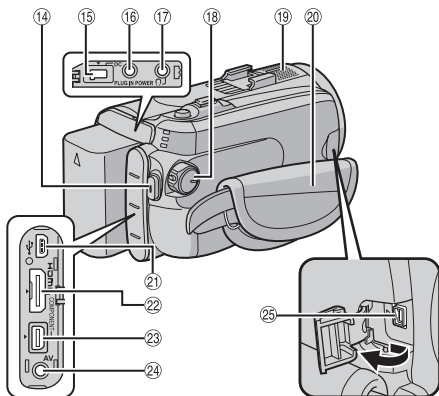
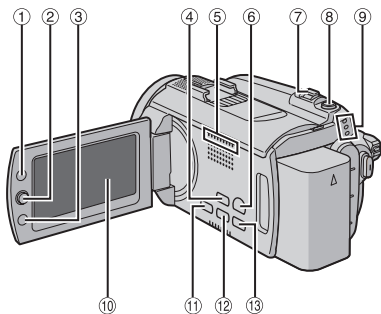
### Release the stopper.



### Wind once.

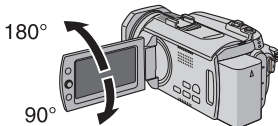


# Index



## NOTES

- The LCD monitor can rotate 270°.




































- **Power-linked operation**

You can also turn the camera on/off by opening/closing the LCD monitor.




- Be careful not to cover sensors ⑱, ㉔ and ㉕ during shooting.

## Camera

- ① Index Button [INDEX]  
Remaining Space Button/  
Data Battery Button [  /  ] (  p. 22)
- ② Set Lever  
Move to  $\wedge$  :  
Reverse Skip (  p. 24)/Up/ Backlight  
Compensation Button [BACK LIGHT]  
Move to  $\vee$  :  
Forward Skip (  p. 24)/Down/ Manual  
Focus Button [FOCUS]  
Move to  $\lt$  :  
Reverse Search (  p. 24)/Left/  
Nightscope [NIGHT]  
Move to  $\gt$  :  
Forward Search (  p. 24)/Right/Program  
AE [PROGRAM AE] (  p. 23)  
Press down:  
Play/Pause (  p. 24)
- ③ Function Button [FUNCTION] (  p. 23)
- ④ Auto/Manual Mode Button [AUTO]  
(  p. 23)/Information Button [INFO]
- ⑤ Fan outlet
- ⑥ Playback/Recording Mode Switching  
Button [PLAY/REC] (  p. 20)
- ⑦ Zoom Lever [W  , T  ] (  p. 22)  
Speaker Volume Control [-VOL+] (  p. 24)
- ⑧ Still Image Shooting Button [SNAPSHOT]  
(  p. 21)
- ⑨ Access/Charge Lamp [ACCESS/CHARGE]  
(  p. 16) (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.)  
Video/Still Image Mode Lamp [  ,  ]  
(  p. 20, 21)
- ⑩ LCD Monitor
- ⑪ Direct Backup Button [DIRECT BACK UP]  
(  p. 34)/Event Button [EVENT] (  p. 22)
- ⑫ Focus Assist Button [FOCUS ASSIST]
- ⑬ Menu Button [MENU] (  p. 18)
- ⑭ Video Recording Start/Stop Button [REC]  
(  p. 20)
- ⑮ DC Input Connector [DC] (  p. 16)
- ⑯ Microphone Input Connector [MIC]
- ⑰ **GZ-HD6** Headphone Connector
- ⑱ Power/Mode Switch [OFF (CHARGE), ON,  
MODE] (  p. 16)
- ⑲ Stereo Microphone
- ⑳ Grip Strap (  p. 18)

- ㉑ USB (Universal Serial Bus) Connector [  ]  
(  p. 29, 33, 35)
- ㉒ HDMI Connector [HDMI] (  p. 26)
- ㉓ Component Connector [COMPONENT]  
(  p. 26)
- ㉔ Audio/Video Connector [AV] (  p. 27)
- ㉕ i.LINK Connector [ i ]
- ㉖ Remote Sensor (  p. 11)
- ㉗ Lens Cover/Lens
- ㉘ **GZ-HD6** Lens Hood (  p. 10)
- ㉙ Shoe
- ㉚ microSD Card Slot (  p. 19)
- ㉛ Stud Hole (  p. 18)
- ㉜ Tripod Mounting Socket (  p. 18)
- ㉝ Fan inlet
- ㉞ Battery Release Button [BATT.] (  p. 16)
- ㉟ Battery Pack Mount (  p. 16)

## Remote Control

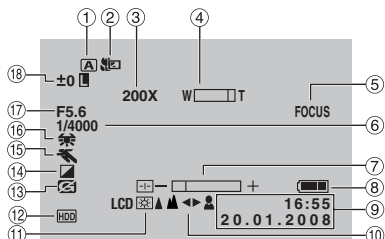
- ① Infrared Beam Transmitting Window
- ② ZOOM (T/W) Buttons  
(Zoom in/out during playback.)
- ③ Up Button  
Rotate Button (counterclockwise) (  p. 25)
- ④ Skip Backward Button
- ⑤ Left Button
- ⑥ Back Button
- ⑦ PLAYLIST Button
- ⑧ START/STOP Button
- ⑨ SNAPSHOT Button (  p. 21)
- ⑩ INFO Button
- ⑪ Skip Forward Button
- ⑫ PLAY/PAUSE Button
- ⑬ Right Button
- ⑭ Next Button
- ⑮ Down Button  
Rotate Button (clockwise) (  p. 25)
- ⑯ INDEX Button
- ⑰ DATE Button

### NOTE

You can move the zooming area with the up/  
down/left/right button during zoom in playback  
mode.

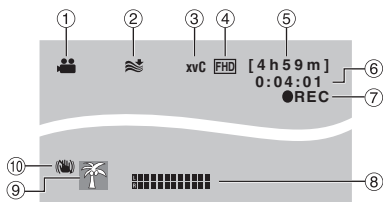
# Indications on LCD Monitor

## During both Video and Still Image Recording



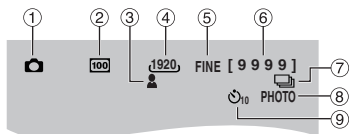
- ① Selected Recording Mode Indicator (p. 23)
- ② Tele Macro Mode Indicator
- ③ Approximate Zoom Ratio (p. 22)
- ④ Zoom Indicator (p. 22)
- ⑤ Focus Assist Indicator
- ⑥ Shutter Speed
- ⑦ Brightness/Sharpness Control Indicator
- ⑧ Battery Indicator (p. 22)
- ⑨ Date/Time (p. 17)
- ⑩ Manual Focus Adjustment Indicator
- ⑪ Monitor Backlight
- ⑫ Selected Recording Medium Indicator
- ⑬ Drop Detection Indicator (Appears when [DRO DETECTION] is set to [OFF].)
- ⑭ Effect Mode Indicator
- ⑮ Program AE Mode Indicator (p. 23)/  
☀ : Nightscope Indicator
- ⑯ White Balance Indicator
- ⑰ Aperture Value (F-number)
- ⑱ ±0 : Exposure Adjustment Indicator  
☀ : Backlight Compensation Indicator  
☀ : Spot Exposure Control Indicator  
☀ : Iris Lock Indicator

## During Video Recording Only



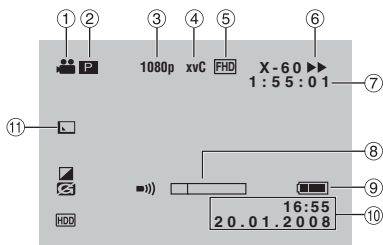
- ① Mode Indicator (p. 20)
- ② Wind Cut Indicator
- ③ x.v.Colour™
- ④ Picture Quality
- ⑤ Remaining Time (p. 20, 41)
- ⑥ Counter
- ⑦ ●REC : (Appears during recording.)  
(p. 20)  
●II : (Appears during record-standby mode.)
- ⑧ External Microphone Input Level Indicator
- ⑨ Event Indicator (p. 22)
- ⑩ Optical Image Stabiliser (OIS) Indicator (Appears when [OIS] is set to [OFF].)

## During Still Image Recording Only



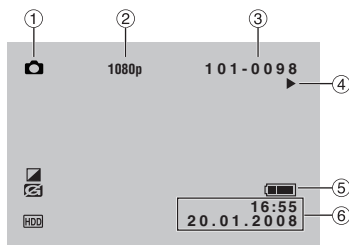
- ① Mode Indicator (p. 21)
- ② ISO Sensitivity (GAIN): When set to [AUTO], there is no indication.
- ③ Focus Indicator (p. 21)
- ④ Image Size
- ⑤ Picture Quality
- ⑥ Remaining Number of Shots (p. 41)
- ⑦ C : Continuous Shooting Mode Indicator  
B : Bracket Shooting Mode Indicator
- ⑧ Shooting Indicator (p. 21)
- ⑨ Self-Timer Recording Indicator

## During Video Playback



- ① Mode Indicator (p. 24)
- ② **P** : Playlist Playback Indicator (Appears when playing back a playlist.)
- ③ Output with 1080p
- ④ x.v.Colour™
- ⑤ Picture Quality
- ⑥ Playback Mode (p. 24)
  - ▶ : Playback
  - || : Pause
  - ▶▶ : Forward Search
  - ◀◀ : Reverse Search
  - ||| : Forward Slow-Motion
  - ◀|| : Reverse Slow-Motion
 (The number on the left shows speed.)
- ⑦ Counter
- ⑧ Volume Level Indicator
- ⑨ Battery Indicator
- ⑩ Date/Time
- ⑪ Wipe/Fader Effect Indicator

## During Still Image Playback



- ① Mode Indicator (p. 25)
- ② Output with 1080p
- ③ Folder/File Number
- ④ Slide Show Playback Indicator (p. 25)
- ⑤ Battery Indicator
- ⑥ Date/Time

### Operation guide display

The operation guide is displayed at the bottom of the screen during menu display etc.



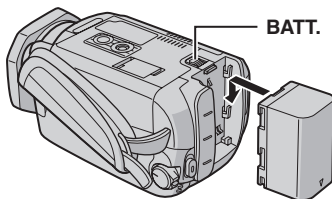
# Necessary Settings before Use

## Charging the Battery Pack

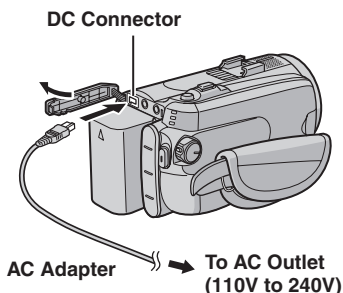
### 1 Set the power/mode switch to OFF.



### 2 Attach the battery pack.



### 3 Connect the AC adapter.



- The access/charge lamp blinks to indicate charging has started.
- When the lamp goes out, charging is finished.

## Required charging/recording time (approx.)

Battery pack	Charging time	Recording time
BN-VF815U (Provided)	2 hr. 40 min.	<b>GZ-HD5</b> 1 hr. 25 min. <b>GZ-HD6</b> 1 hr. 20 min.
BN-VF823U	3 hr. 50 min.	<b>GZ-HD5</b> 2 hr. 05 min. <b>GZ-HD6</b> 2 hr. 00 min.

#### ■ To detach the battery pack

Slide and hold **BATT.** (step 2), then remove the battery pack.

#### ■ To check the remaining battery power

See page 22.

#### 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.



## Language Setting

The language on the display can be changed.

### 1 Set the power/mode switch to ON.



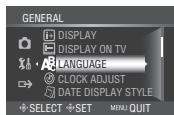
### 2 Select the menu mode.



### 3 Select [GENERAL].



### 4 Select [LANGUAGE].



### 5 Select the desired language.



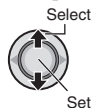
■ **To return to the previous screen**  
Move the set lever to  $\leftarrow$ .

■ **To exit the screen**  
Press the **MENU** button.

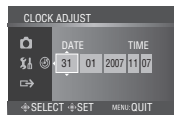
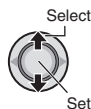
## Date/Time Setting

After performing steps 1-3 (left column)

### 4 Select [CLOCK ADJUST].



### 5 Set the date and time.



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

■ **To return to the previous screen**  
Move the set lever to  $\leftarrow$ .

■ **To exit the screen**  
Press the **MENU** button.

# Other Settings

## Changing the Menu Setting

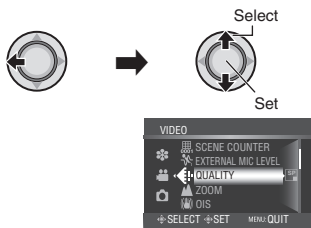
For more details on the operations, refer to the GUIDEBOOK in the supplied CD-ROM.

### 1 Select the menu mode.



### 2 Select the desired first menu item.

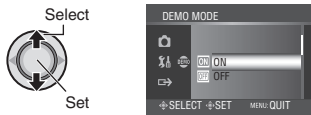
- : VIDEO
- : IMAGE
- : GENERAL
- : OUTPUT SETTING
- : MEDIA



### 3 Select the desired second menu item.



### 4 Select the desired setting.



#### ■ To return to the previous screen

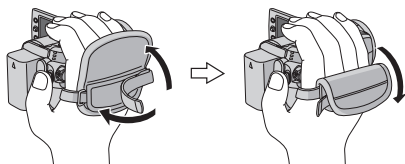
Move the set lever to <.

#### ■ To exit the screen

Press the MENU button.

## Grip Adjustment

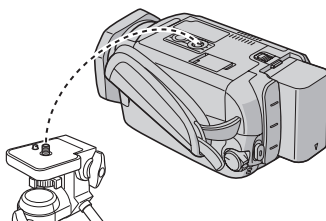
Open the pad and make grip adjustments.



## Tripod Mounting

Align the camera stud hole with the tripod stud, and the mounting socket with the screw, and then rotate the camera clockwise to mount it to the tripod.

### Bottom of the Camera



#### NOTE

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

## When Using a microSD Card

Operations are certified on the following microSD cards.

- Panasonic
- TOSHIBA
- SanDisk
- ATP

### Video recording:

Class 6 compatible SDHC card (4 GB)

### Still image recording:

microSD Card (128 MB to 2 GB) or SDHC card (4 GB)

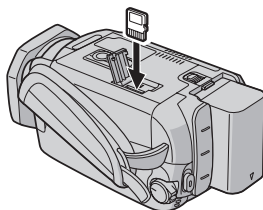
## ① Insert a microSD card

### Preparation:

Set the power/mode switch to **OFF**.

- 1 Open the microSD card cover.
- 2 Firmly insert the card with its clipped edge first.

Bottom of the Camera



- 3 Close the microSD card cover.

### ■ To remove a microSD card

Push the microSD card once.

After the card comes out a little, pull it out.

## ② Change the recording medium

The camera is programmed to record on the built-in hard disk when it is shipped from the factory. You can change the recording medium to microSD card.

Set **[REC MEDIA FOR VIDEO]** and **[REC MEDIA FOR IMAGE]** to **[SD]**. (👉 p. 18)

### NOTE

Video picture quality will automatically be set to **[SP]**.

## ③ Format a microSD card when using it for the first time

This will also ensure stable speeds and operation when accessing the microSD card.

Select **[EXECUTE]** in **[FORMAT SD CARD]** to format the card. (👉 p. 18)


### NOTES


- Insert and remove the microSD card only while the power is turned off. Otherwise, data on the card may be corrupted.
- Do not touch the terminal on the reverse side of the label.

# Recording Files


## Video Recording

**Preparation:** Set the power/mode switch to **ON**.



**1** Slide the power/mode switch to **MODE** to select  (video) mode.



The switch returns to the original position when it is released.

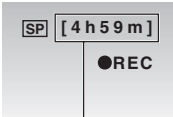

The  lamp on the camera lights up.

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

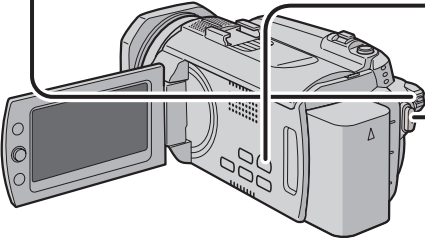


The lens cover opens automatically.

**3** Press the **REC** button to start recording.



Approximate remaining time for recording



### ■ To stop recording

Press the **REC** button again.

### ■ To change the picture quality

Change the settings in [QUALITY].

( p. 18)

### ■ To register a file to an event

See page 22.

## NOTES

- If the camera is not operated for 5 minutes while the power is on, it turns itself off automatically to conserve power. To turn the camera on again when using the battery pack, set the power/mode switch to **OFF**, then to **ON**. When using the AC adapter, perform any operation such as zooming.
- Video files are given the names MOV001.TOD to MOV009.TOD, MOV00A.TOD to MOV00F.TOD, and MOV010.TOD in order of recording.
- A new file will be created for every 4 GB or approx. 19 minutes of continuous shooting.
- This camera records video in MPEG2 format compliant with SD-VIDEO format.
- Do not move or shake the camera suddenly during recording. If you do so, the driving sound (hum) of the hard disk may be recorded.

## Still Image Recording

**Preparation:** Set the power/mode switch to **ON**.

1

Slide the power/mode switch to **MODE** to select (still image) mode.



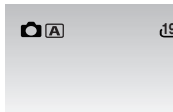
The switch returns to the original position when it is released.

The lamp on the camera lights up.

2

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

SELECT  
PLAY/REC



The lens cover opens automatically.

3

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



The indicator becomes green when the captured image is focused.

4

Press the **SNAPSHOT** button to start recording.



### ■ To change the picture quality

Change the settings in [QUALITY].

( p. 18)

### ■ To record still images continuously

Set [CONTINUOUS SHOOTING] to [ON].

( p. 18)

### ■ To change the image size

Change the settings in [IMAGE SIZE].

( p. 18)

## NOTES

- If the camera is not operated for 5 minutes while the power is on, it turns itself off automatically to conserve power. To turn the camera on again when using the battery pack, set the power/mode switch to **OFF**, then to **ON**. When using the AC adapter, perform any operation such as zooming.
- The sides of still images recorded in 16:9 size may be cut off when printed. Check whether 16:9 size prints can be printed at your local print store.

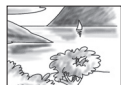
# Recording Files (Continued)

## Zooming

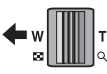
### Preparation:

- Select or mode.
- Select the recording mode.

### Zoom out



W: Wide angle



### Zoom in



T: Telephoto

### NOTE

Macro shooting is possible as close as approx. 5 cm to the subject when the zoom lever is set all the way to **W**.

## Registering Files to Events — mode only

If you select an event to register the file to before starting recording, the file will be registered to the selected event, thus making the file easy to find at playback.

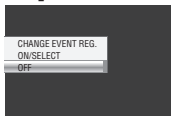
### Preparation:

- Select mode.
- Select the recording mode.

1



## 2 Select [ON/SELECT].



## 3 Select the event that you want to register the file to.

To cancel the event registration, select [NON SECTION].



The selected event is displayed on the screen.

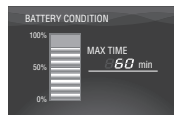
### NOTE

Once you select a certain event to register a file, the setting will remain even if you turn the power off.

## Checking the Remaining Battery Power

### Preparation:

- Set the power/mode switch to **OFF**.
- Attach the battery pack.



Battery information is displayed for approx. 3 seconds if the button is pressed and released quickly, and for approx. 15 seconds if the button is pressed and held for several seconds.

### NOTE

The recordable time display should only be used as a guide. It is displayed in 10 minute units.

# Manual Recording

## To Change to Manual Recording Mode

### Preparation:

- Select or mode.
- Select the recording mode.



### To return to the auto recording mode

Press the **AUTO/INFO** button so that the **A** indicator appears.

## Program AE

1



### 2 Select the desired setting.



- **To cancel the program AE**  
Select [OFF] in step 2.

### Items for program AE setting

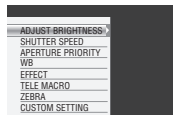
- **PORTRAIT:**  
The subject in the foreground is accentuated by blurring the background.
- **SPORTS:**  
Records fast moving subjects clearly.
- **SNOW:**  
Compensates for subjects that may appear too dark when shooting in extremely bright surroundings, such as in snow.
- **SPOTLIGHT:**  
Select this when a spotlight makes a subject appear too bright.
- **TWILIGHT:**  
Makes evening scenes look more natural.

## Manual Setting in Function Menu

1



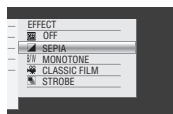
### 2 Select the desired menu.



### 3 Select the desired setting.



4



The menu disappears and the indicator for the set function appears.

- **To return to the previous screen**  
Move the set lever to <.

- **To exit the screen**  
Press the **FUNCTION** button.

# Playing Back Files

## Video Playback

### 1 Select (video) mode.



The switch returns to the original position when it is released.

The  lamp on the camera lights up.

### 2 Select the playback mode.

SELECT  
PLAY/REC



The index screen appears.  
(The lens cover closes automatically.)

### 3 Select the desired file.



#### ■ To return to the index screen

Press the **INDEX** button.

#### ■ To watch on TV

See page 26.

#### ■ To turn the date display on/off

Change the settings in [DATE/TIME].

( p. 18)

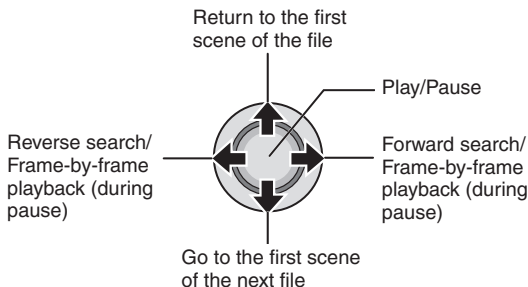
#### ■ To check the file information

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

#### ■ To make one frame of video being played back into a still image

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

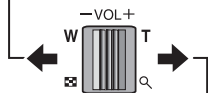
### Operations during Playback



During forward/reverse search, moving the set lever to < / > alters the search speed (maximum 60x).

### Speaker volume/ [GZ-HD6] Headphone volume

— : Turn down the volume



+ : Turn up the volume



# Still Image Playback

## 1 Select (still image) mode.



The switch returns to the original position when it is released.

The  lamp on the camera lights up.

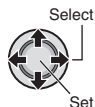
## 2 Select the playback mode.

SELECT  
PLAY/REC



The index screen appears.  
(The lens cover closes automatically.)

## 3 Select the desired file.



### ■ To return to the index screen

Press the **INDEX** button.

### ■ To watch on TV

See page 26.

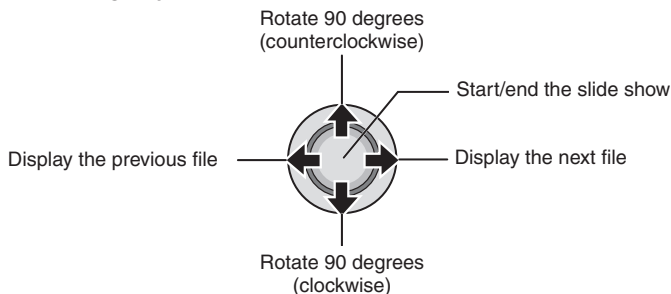
### ■ To turn the date display on/off

Change the settings in [DATE/TIME]. (p. 18)

### ■ To check the file information

Press the **AUTO/INFO** button.

## Operations during Playback



During the slide show, moving the set lever to  $\wedge$  /  $\vee$  changes the playback order.

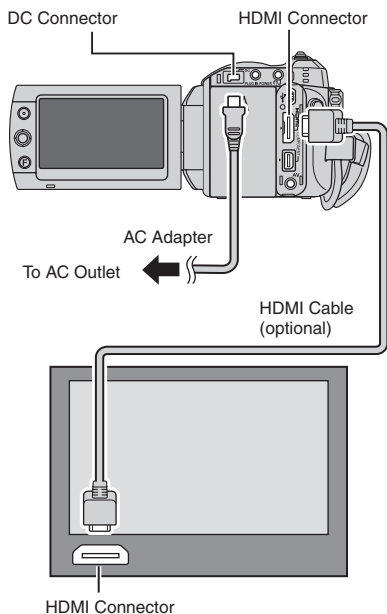
# Watching Images on TV

## Connection with TV

You can output videos from the HDMI connector, COMPONENT connector, or AV connector. Select the connector that best suits your television.

**Preparation:** Turn off all units.

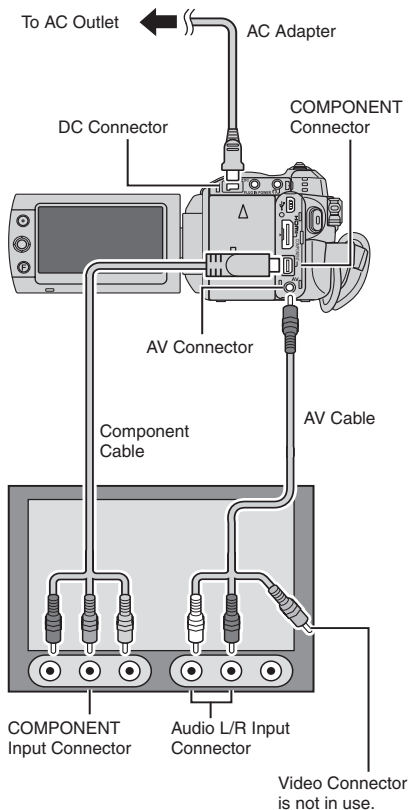
### ■ To connect using the HDMI connector



#### NOTE

Change the settings in [HDMI OUTPUT], [HDMI COLOR SETTING] or [HDMI ENHANCE SETTING] according to the connection. (p. 18)

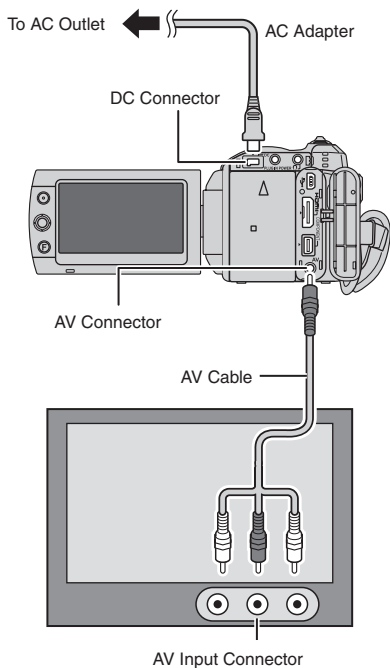
### ■ To connect using the COMPONENT connector



#### NOTE

Change the settings in [COMPONENT OUTPUT] according to the connection. (p. 18)

## ■ To connect using the AV connector



### NOTE

Change the settings in [VIDEO OUTPUT] to suit the screen size of your television. (p. 18)

## Playback Operation

After the connection with TV is completed

- 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 the VCR/DVD recorder to its AUX input mode.
- 4 Start playback on the camera. (p. 24, 25)

### ■ To display camera's on-screen display on TV

Set [DISPLAY ON TV] to [ON]. (p. 18)

### NOTE

When the video was recorded with x.v.Colour™ set to [ON], change the x.v.Colour™ setting on TV. For details, refer to the TV's instruction manual.

# Managing Files

## 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:

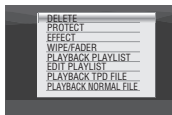
- Select or mode.
- Select the playback mode.

## Deleting/Protecting the Currently Displayed File

1



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

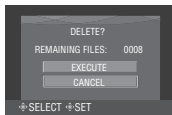


### 3 Select [CURRENT].



You can select the previous or next file by moving the set lever to < / >.

### 4 Select [EXECUTE].



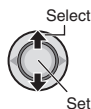
### ■ To exit the screen

Press the **FUNCTION** button.

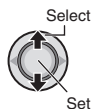
## Deleting/Protecting Files

After performing steps 1-2 (➡ left column)

### 3 Select [FILE SELECT].



### 4 Select the desired file.

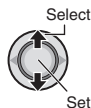


- The (deletion) or (protection) mark appears on the file. To select other files, repeat this step.
- If you slide the zoom lever towards **T**, the preview screen is displayed. Sliding the zoom lever towards **W** returns to the index screen.

5



### 6 Select [EXECUTE AND QUIT] (when performing [DELETE]), or [QUIT] (when performing [PROTECT]).

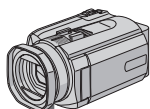


### ■ To exit the screen

Press the **FUNCTION** button.

# Copying Files

## Types of Copying and Connectable Device



### The Camera

You can copy still images between the HDD and microSD card with this camera alone.



### DVD Burner (CU-VD40)

You can copy video/still image files recorded on this camera onto DVD discs.



### VCR/DVD Recorder

You can dub video files recorded on this camera onto DVD discs.



### PC

You can copy video/still image files on this camera onto your PC. For details, refer to PC OPERATION section.

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

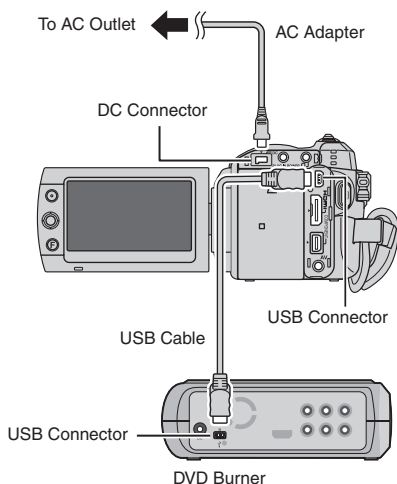
The files in the camera can be backed up to a DVD disc using a DVD burner.

- **Supported media:**  
DVD-R, DVD-RW, DVD-R DL (More than one disc may be required depending on the size of the file to be copied. In this case, use new (unused) discs.)
  - This disc cannot be played in a normal DVD player. Use one of the following methods to view the disc.
    - Playback the disc using the camera.  
("To play back the created disc using the camera" p. 30)
    - Playback the disc using a DVD burner.\*
    - Playback on a PC.\*
- \* The disc must first be finalised on the camera.

### Connection with a DVD Burner

#### Preparation:

Set the power/mode switch to **OFF**.





#### NOTES

- Turn the DVD burner on, then turn the camera on.
- Use the USB cable that came with the DVD burner.

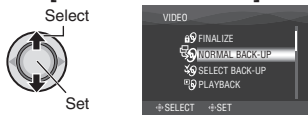
# Copying Files (Continued)

## Backup Files

### Preparation:

- Connect the camera to the DVD burner.
- Select  or  mode.

### 1 Select [NORMAL BACK-UP].



### 2 Select the desired menu.

- **[UNSAVED SCENES/FILES NOT BACKED-UP]:**

Files that have never been copied to a DVD disc are automatically selected and copied.

- **[ALL]:**  
All files in the recording medium are copied.



### 3 Select the desired menu.

- **[CONTINUE TO COPY]:**  
Files are added to the free space of a disc. Displayed only when a recordable disc is inserted.
- **[FORMAT]:**  
After the disc is formatted (all recorded data on the disc is deleted), the files are copied on the disc.



### 4 Select [EXECUTE] or [EXECUTE AND FINALIZE].

By selecting [EXECUTE AND FINALIZE], the disc is finalised after the files are copied.



- The files are copied on the disc. When [COMPLETED] appears, press down the set lever to complete the operation.
- When [COMPLETED. CHANGE DISC] appears, change the disc. Remaining files are copied on the second disc.
- To cancel the copying, select [STOP].

### ■ To return to the top screen

Press the **MENU** button, then select [YES].

### ■ To finalize the disc after copy is finished

- 1) Connect the camera to the DVD burner.
- 2) Turn the camera's power on.
- 3) Select [FINALIZE].
- 4) Select [EXECUTE].
- 5) When [COMPLETED] appears, select [OK].

### ■ To play back the created disc using the camera

- 1) Connect the camera to the DVD burner.
- 2) Turn the DVD burner on, then turn the camera on.
- 3) Select [PLAYBACK].
- 4) Select the desired folder.
- 5) Select the desired file.  
To return to the previous screen, press the **INDEX** button.

# 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.

## 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 3.2 GHz (Intel® Core™ Duo 1.66 GHz or more recommended)
- Intel® Pentium® M, at least 1.8 GHz

### RAM:

- [XP] At least 512 MB (1 GB or more recommended)
- [Vista] At least 1 GB (2 GB or more recommended)

### Free hard disk space:

- At least 750 MB for installation
- For creating Blu-ray disc, at least 30 GB (60 GB or more recommended)

### Connector:

- USB 2.0 connector

### Sound card:

- Direct Sound compatible sound card

### 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)
- Intel/nVidia/ATI MPEG-2 HD DxVA compatible card

### Miscellaneous:

- Internet Explorer 5.5 or later
- DirectX 9.0 or later

### Supported media:

- BD-RE, BD-R, DVD-R/-RW, DVD+R/+RW, CD-R/RW

For the compatible drives:

[http://jp.cyberlink.com/english/products/powerproducer/4/comp\\_dvd\\_drive.jsp](http://jp.cyberlink.com/english/products/powerproducer/4/comp_dvd_drive.jsp)

For the compatible BD drives:

[http://jp.cyberlink.com/english/products/powerproducer/4/comp\\_nextgen\\_drives.jsp](http://jp.cyberlink.com/english/products/powerproducer/4/comp_nextgen_drives.jsp)

### NOTE

Even if your system meets the recommended requirements above, you may still experience dropped frames while playing back high definition video, or you may find that editing takes a long time. In order to use these functions more smoothly, it is recommended that you use a higher performance PC (CPU: Intel® Core™ 2 Duo, memory: 2 GB or more).

# 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.

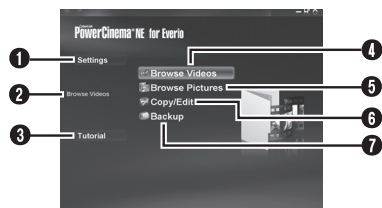
The following software is included in the CD-ROM that came with your camera.

### CyberLink BD Solution

Comprehensive application software that consists of the following 3 kinds of software.

#### ● PowerCinema NE for Everio

The main authoring software. You can perform various operations such as file backup, playback, and editing from the top menu of this software.



- 1 You can perform detailed settings for each item.
- 2 Select a function on the right, and an explanation is displayed.
- 3 The operating procedure for each function is displayed.
- 4 Plays back video files on the PC.
- 5 Plays back still image files on the PC.
- 6 Creates discs/Edits files.
- 7 Backs up camera files onto the PC.

#### ● PowerProducer 4 NE

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

#### ● PowerDirector 6 NE

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

### NOTE

If the recorded video will be edited with the software in the supplied CD-ROM, set x.v.Colour™ to [OFF] before recording.

## 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.

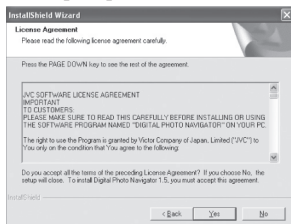
After a moment, the [SETUP] screen appears. If the [SETUP] screen does not appear, double-click the CD-ROM icon in [My Computer].

## 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.

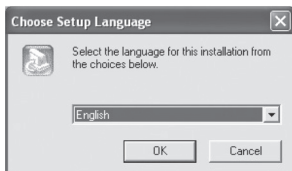


## 3 Click [Yes].



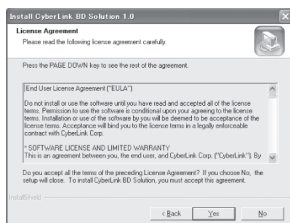


#### 4 Select the desired language and click [OK].



#### 5 Click [Yes].

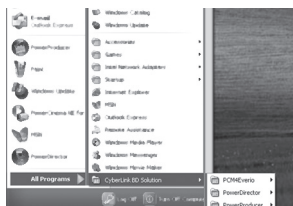
The software installation starts.



#### 6 Click [Finish].

### ■ When installation is completed

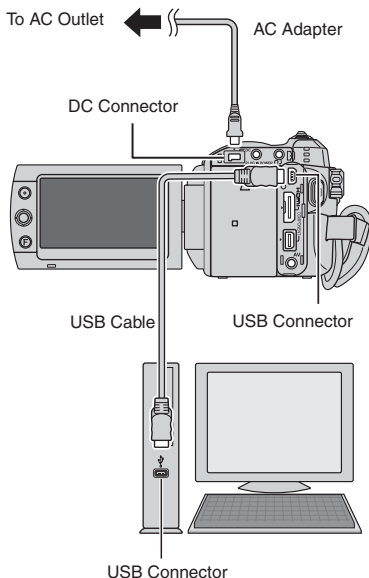
The installed software is displayed in [All Programs] – [CyberLink BD Solution].



## Connecting the Camera to the PC

### Preparation:

Set the camera's power/mode switch to **OFF**.



### 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 PC, not through a hub.
- Do not use an extension USB cable.
- Do not delete, move, or rename the files and folders in the camera from the PC.

# File Backup on a Windows® PC (Continued)

## File Backup on the PC

This method uses the software on the CD-ROM to back up files onto your PC. Video files that have never been backed up onto the PC are automatically selected and backed up.

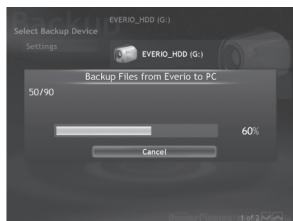
### Preparation:

- Install the software from the provided CD-ROM.
- Connect the camera to the PC.

**1 Set the camera's power/mode switch to ON.**

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

A dialog box is displayed on the PC screen. However, you do not need to use the dialog box. 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, 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 the specified media

### Preparation:

- Install the software.
- Connect the camera to the PC.

**1 Set the camera's power/mode switch to ON.**

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



**3 On the PC, Click [EVERIO\_HDD] or [EVERIO\_SD].**



When the progress bar disappears, the process is complete.

# File Backup on a Macintosh

For more details on the operations, double-click the GUIDEBOOK/PC OPERATION GUIDE folder in the supplied CD-ROM.

## System Requirements

### Hardware:

- Macintosh 1.25 GHz or faster Power PC G4/G5 or Intel® processor (Intel® Core™ Duo 1.66 GHz or more recommended.)
- USB 2.0 connector is required.

### OS:

- Mac OS X (10.4.4 to 10.4.11, 10.5.1)

### RAM:

- At least 512 MB  
(1 GB or more recommended)

## Software Installation

### Preparation:

Quit any other software you are using.

- 1** Load the provided CD-ROM into the PC.
- 2** Double-click the CD-ROM icon.
- 3** Double-click the QuickTime Component for Everio icon.

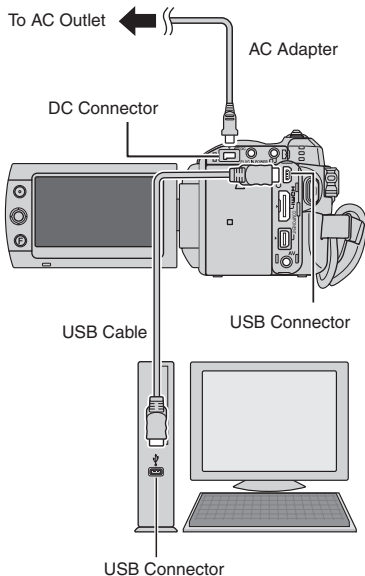


- 4** Install the software following the procedures shown in the screen.

## Connecting the Camera to the Macintosh

### Preparation:

Set the camera's power/mode switch to **OFF**.



### 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 computer.
- Connect the camera directly to the computer, not through a hub.
- Do not use an extension USB cable.
- Do not delete, move, or rename the files and folders in the camera from the computer.

# 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.
- If the problem persists, please consult your nearest JVC dealer.

## ■ To reset the camera

- ① Set the power/mode switch to **OFF** and remove the power supply (battery pack or AC adapter) from the camera, then reattach it.
- ② Execute [PRESET] in the general menu. (p. 18)

Trouble		Action
Power	No power is supplied.	<ul style="list-style-type: none"> <li>● Connect the AC adapter correctly.</li> <li>● Recharge the battery.</li> </ul>
	There is a sound when turning on/off the power.	<ul style="list-style-type: none"> <li>● When you turn on/off the power, the lens cover opens/closes automatically and this causes a sound. This is not a malfunction.</li> </ul>
Recording	Recording cannot be performed.	<ul style="list-style-type: none"> <li>● Set the power/mode switch to <b>ON</b>.</li> <li>● Set the <b>PLAY/REC</b> button to recording mode.</li> </ul>
	Recording stops by itself.	<ul style="list-style-type: none"> <li>● If the camera temperature increases, REC flashes in the LCD monitor. If the temperature continues to increase, operation stops automatically to protect the HDD.</li> <li>● Move to a place where the camera is not affected by excessive sound or vibration.</li> <li>● Recording stops automatically after 12 hours of continuous recording.</li> </ul>
	The focus is not adjusted automatically.	<ul style="list-style-type: none"> <li>● Clean any dirt or water droplets from the lens.</li> <li>● Set focus to the automatic mode.</li> <li>● If you are recording in a dark place or a subject that has no contrast between dark and light, adjust the focus manually.</li> </ul>
	The continuous shooting speed is slow.	<ul style="list-style-type: none"> <li>● The continuous shooting speed will drop after continuous shots.</li> <li>● Continuous shooting speed may drop depending on the recording media or under certain recording conditions.</li> </ul>
	The date/time does not appear.	<ul style="list-style-type: none"> <li>● Set [DATE/TIME] in the general menu to [ON].</li> </ul>
	A function cannot be activated.	<ul style="list-style-type: none"> <li>● Check the indication that represents that function.</li> <li>● If the indication is flashing or off, you have selected two functions that cannot be used together. Choose which of the functions to use.</li> </ul>

# Troubleshooting (Continued)

Trouble		Action
Displays	The LCD monitor appears blank.	<ul style="list-style-type: none"> <li>Operate the camera. (When using the AC adapter, if the camera is not operated for a certain length of time it will enter sleep mode, the video/still image mode lamp lights, and the LCD backlight turns off.)</li> </ul>
	The same scene appears stopped for a long time.	<ul style="list-style-type: none"> <li>Replace the microSD card. (If there are scratches etc. on the microSD card, the camera will have difficulty reading the data, and this phenomenon may occur. The camera will try to play back as much as possible, but if this condition continues, the camera will not be able to play back the video and it will automatically stop.)</li> <li>Perform cleanup or formatting.</li> </ul>
Playback	Video movement appears jerky.	
	Images look unnatural on the TV (long and thin etc.)	<ul style="list-style-type: none"> <li>Change [VIDEO OUTPUT] in the output setting menu to match your TV.</li> </ul>
	The colour of images looks strange.	<ul style="list-style-type: none"> <li>When recording the white balance was not correctly adjusted.</li> <li>When the video was recorded with x.v.Colour set to [ON], change the setting as desired on TV.</li> </ul>
Dubbing	High-definition dubbing cannot be performed to a HDV device.	<ul style="list-style-type: none"> <li>Check all of the following.                             <ul style="list-style-type: none"> <li>Record with [QUALITY] in the video menu set to [1440 CBR].</li> <li>Create a playlist, then dub the playlist. (Dubbing cannot be done for each video file.)</li> <li>When dubbing, set [i.LINK OUTPUT (DUB)] in the output setting menu to [1440 CBR].</li> </ul> </li> </ul>
	When dubbing, the connected video device does not start recording automatically.	<ul style="list-style-type: none"> <li>Operate the video device manually to start and stop recording.</li> </ul>
Other problems	The camera operates slowly when switching between video mode and still image mode, or when switching the power on or off.	<ul style="list-style-type: none"> <li>Copy all files from the media onto your computer, and erase the files from the media. (If there are many still images (more than 1,000 files) on the media, it takes time for the camera to process the files.)</li> </ul>
	The lamp does not flash during battery charging.	<ul style="list-style-type: none"> <li>Check the remaining battery charge. (When the battery is fully charged, the lamp does not flash.)</li> <li>When recharging in either a hot or cold environment, ensure that battery is being charged within the permitted temperature range. (If the battery is being recharged outside the permitted temperature range, recharging may stop to protect the battery.)</li> </ul>

# Warning Indications

Indication	Meaning/Action
<b>HARD DISK DRIVE IS FULL</b>	<ul style="list-style-type: none"> <li>● Erase files. Move onto media such as a computer.</li> </ul>
<b>MEMORY CARD IS FULL</b>	<ul style="list-style-type: none"> <li>● Erase files. Move onto media such as a computer. Replace with a new microSD card.</li> </ul>
<b>INCOMPATIBLE FORMAT</b>	<ul style="list-style-type: none"> <li>● Remove and re-insert the microSD card.</li> </ul>
<b>NUMBER OF FOLDERS OVERFLOW</b>	<ul style="list-style-type: none"> <li>● Perform the following operations in order.               <ol style="list-style-type: none"> <li>① Backup files onto a PC etc.</li> <li>② Select [FORMAT HDD] in the media menu. (For microSD cards, select [FORMAT SD CARD].)</li> <li>③ Select [EXECUTE].</li> <li>④ While holding down the event button, press the set lever.</li> </ol> </li> </ul>
<b>POWER NOT ON OR USB DEVICE NOT COMPATIBLE</b>	<ul style="list-style-type: none"> <li>● Check that the power of the connected USB device is on.</li> </ul>
<b>RECORDING FAILURE</b>	<p><b>[microSD card]</b></p> <ul style="list-style-type: none"> <li>● Check whether the microSD card has been checked for operability.</li> </ul> <p><b>[HDD]</b></p> <ul style="list-style-type: none"> <li>● Perform cleanup.</li> <li>● Do not allow the camera to be subject to impact/vibrations.</li> </ul>
<b>RECORDING CANCELLED</b>	<ul style="list-style-type: none"> <li>● Select [OK] and stop recording.</li> <li>● Use the camera in areas where it will not be subject to impact/vibrations.</li> </ul>
<b>PROCESSING CANCELLED DUE TO LACK OF SPACE FOR OPERATION</b>	<ul style="list-style-type: none"> <li>● Reduce the number of videos that can be registered to a playlist to less than 99 files.</li> </ul>
<b>MEMORY CARD ERROR!</b>	<ul style="list-style-type: none"> <li>● Remove and re-insert the microSD card. (Multimedia cards cannot be used.)</li> <li>● Remove any dirt from the microSD card terminals.</li> <li>● Insert the microSD card before switching the power on.</li> </ul>
<b>HDD ERROR!</b>	<ul style="list-style-type: none"> <li>● Perform cleanup or formatting.</li> </ul>
<b>THIS CARD IS NOT FORMATTED</b>	<ul style="list-style-type: none"> <li>● Perform formatting.</li> </ul>
<b>SET DATE/TIME!</b>	<ul style="list-style-type: none"> <li>● Set the date and time. (If the display does not disappear after completing the settings, the clock battery is exhausted. Consult your nearest JVC dealer.)</li> </ul>

# Specifications

## Camera

### ■ For general

#### Power supply

- DC 11 V (Using AC adapter)
- DC 7.2 V (Using battery pack)

#### Power consumption

- [GZ-HD5]** Approx. 6.9 W
- [GZ-HD6]** Approx. 7.1 W

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

- [GZ-HD5]** 78 mm x 73 mm x 130 mm
- [GZ-HD6]** 79 mm x 73 mm x 138 mm

#### Weight

- [GZ-HD5]** Approx. 480 g (incl. strap)  
Approx. 565 g (incl. battery and strap)
- [GZ-HD6]** Approx. 505 g (incl. strap)  
Approx. 590 g (incl. battery and strap)

#### Operating temperature

0°C to 40°C

#### Operating humidity

35% to 80%

#### Storage temperature

-20°C to 50°C

#### Pickup

1/5" (570,000 pixels) progressive CCD

#### Lens

- F 1.8 to 1.9,
- f = 3.3 mm to 33.0 mm,
- 10:1 power zoom lens

#### Filter diameter

ø43.0 mm

#### LCD monitor

- 2.8" diagonally measured,
- LCD panel/TFT active matrix system

#### Speaker

Monaural

### ■ For video/audio

#### Format

SD-VIDEO

#### Recording/Playback format

- Video: MPEG-2 TS
- Audio: MPEG-1 Layer 2

#### Signal format

1080/50i

#### Recording mode (video)

- FHD: VBR, average of 26.6 Mbps
- SP: VBR, average of 19 Mbps
- LP: VBR, average of 11.1 Mbps
- 1440 CBR: CBR, 27 Mbps

#### Recording mode (audio)

48 kHz, 384 kbps

### ■ For still image

#### Format

JPEG

#### Image size

- 4 modes: 1920 x 1080
- 1440 x 1080
- 1024 x 768
- 640 x 480

#### Picture quality

2 modes: FINE / STANDARD

### ■ For connectors

#### HDMI

HDMI™ (V.1.3 with x.v.Colour™)

#### Component output

- Y, Pb, Pr component output
- Y: 1.0 V (p-p), 75 Ω
- Pb/Pr: 0.7 V (p-p), 75 Ω

#### i.LINK output

4-pin (i.LINK/IEEE1394 compliant)

#### AV output

- Video output: 1.0 V (p-p), 75 Ω
- Audio output: 300 mV (rms), 1 kΩ

#### USB

- Mini USB type A and type B,
- USB 2.0 compliant

#### Microphone

ø3.5 mm stereo mini jack

#### **[GZ-HD6]** Headphone

ø3.5 mm stereo mini jack

## 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)

Recording medium \ Quality	HDD		microSD Card
	<b>[GZ-HD5]</b> 60 GB	<b>[GZ-HD6]</b> 120 GB	4 GB
FHD	300	600	—
SP	420	840	25
LP	720	1440	—
1440 CBR	300	600	—

## Approximate number of storable images (for still image)

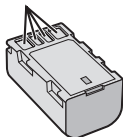
Recording medium \ Image size/Quality		HDD		microSD Card			
		<b>[GZ-HD5]</b> 60 GB	<b>[GZ-HD6]</b> 120 GB	512 MB	1 GB	2 GB	4 GB
16:9	1920 x 1080 / FINE	9999	9999	535	1065	2115	4220
	1920 x 1080 / STANDARD	9999	9999	840	1670	3225	6445
4:3	1440 x 1080 / FINE	9999	9999	705	1405	2785	5565
	1440 x 1080 / STANDARD	9999	9999	1110	2205	4380	8750
	1024 x 768 / FINE	9999	9999	1415	2810	5575	9999
	1024 x 768 / STANDARD	9999	9999	2225	4115	8765	9999
	640 x 480 / FINE	9999	9999	3465	6870	9999	9999
	640 x 480 / STANDARD	9999	9999	6235	9999	9999	9999

# 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:

### Terminals



- **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.

## 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.

## Hard disk

- Do not use the unit where it is subject to vibrations or loud sounds.
- If you move the unit suddenly, the drop detection function may operate and the power may be turned off.

## 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 metal 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 where 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.
- ... place the camera in dusty or sandy areas, such as on a beach.

### ● 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.

Dear Customer,

**[European Union]**

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan Limited is:  
JVC Technical Services Europe GmbH  
Postfach 10 05 52  
61145 Friedberg  
Germany

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