

# JVC

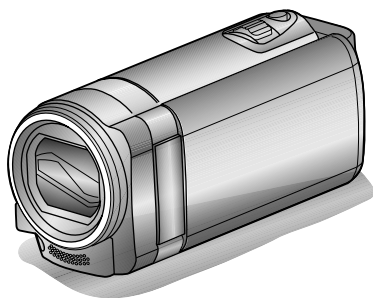
LYT2282-001B-M

**EN**

CAMCORDER

**GZ-HM650BEK/GZ-HM445SEK****GZ-HM445REK/GZ-HM445BEK****GZ-HM445AEK/GZ-HM440BEK**

## *Basic User Guide*



# Everio

### Dear Customers

Thank you for purchasing this JVC product.

Before use, please read the Safety Precautions and Cautions on p. 2 and p. 24 to ensure safe use of this product.



Detailed User Guide

A "Basic User Guide" (this manual) and a "Detailed User Guide" are available for this product. For more details on operating this product, please refer to the "Detailed User Guide" at the following website.

- <http://manual.jvc.co.jp/index.html/>
- You can also access the website from the built-in application software of this unit.

Getting Started

Recording

Playback

Copying

Further Information



ENGLISH

# 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 and the camcorder with battery installed, and the remote control with battery installed should not be exposed to excessive heat such as direct sunlight, fire or the like.

## CAUTION:

The mains plug shall remain readily operable.

- Remove the mains plug immediately if the camcorder functions abnormally.

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!

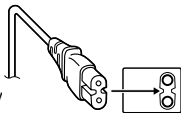
The following notes concern possible physical damage to this unit and to the user.  
Carrying or holding this unit by the LCD monitor can result in dropping the unit, or in a malfunction.  
Do not use a tripod on unsteady or uneven surfaces. It could tip over, causing serious damage to the unit.

## CAUTION!

Connecting cables (Audio/Video, etc.) to this unit and leaving it on top of the TV is not recommended, as tripping on the cables will cause this unit 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.



## 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, 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.

### 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 <http://www.jvc.eu> 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!

#### 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 disc or other recording media for storage.

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## Detailed User Guide

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■ <http://manual.jvc.co.jp/index.html/>

■ You can also access the website from the built-in application software of this unit.

## Verifying the Accessories

AC Adapter  
AC-V10M\*



Power Cord\*



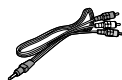
Battery Pack  
BN-VG114E



USB Cable  
(Type A - Mini Type B)



AV Cable



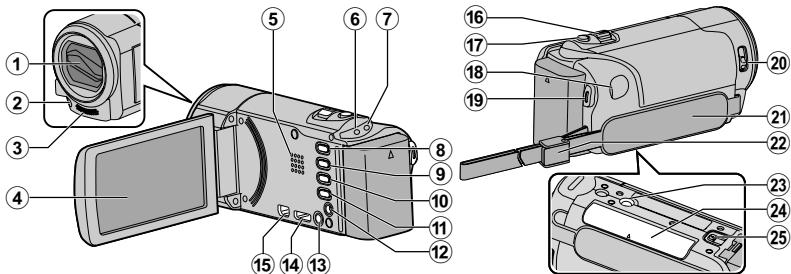
Basic User Guide  
(this manual)





- SD cards are sold separately. For details on the types of cards that can be used on this unit, refer to p. 10.

\* When using the AC adapter overseas, please prepare a commercially available converter plug for the country or region of visit.

# Names of Parts and Functions

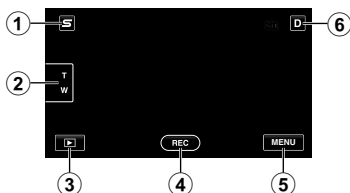


- ① Lens Cover
- ② Light (GZ-HM650/GZ-HM445)
- ③ Stereo Microphone
- ④ LCD Monitor  
Turns on/off the power by opening/closing the LCD monitor.
- ⑤ Speaker
- ⑥ ACCESS (Access) Lamp  
Lights up/blinks during recording or playback.
- ⑦ POWER/CHARGE (Power/Charge) Lamp (p. 8)
- ⑧ i.AUTO (Intelligent Auto) Button (p. 14)  
Switches between Intelligent Auto and Manual modes.
- ⑨ USER (User) Button
- ⑩  (Video/Still Image) Button  
Switches between video and still image modes.
- ⑪ INFO (Information) Button  
Recording : Displays the remaining time (for video only) and battery power.  
Playback : Displays file information such as recording date.
- ⑫ AV Connector (p. 18, 19)
- ⑬  (Power) Button  
Press and hold to turn the power on/off while the LCD monitor is opened.
- ⑭ HDMI Mini Connector (p. 17)
- ⑮ USB Connector
- ⑯ Zoom/Volume Lever (p. 14, 16)
- ⑰ SNAPSHOT (Still Image Recording) Button (p. 15)
- ⑱ DC Connector (p. 8)
- ⑲ START/STOP (Video Recording) Button (p. 14)
- ⑳ Lens Cover Switch (p. 14)
- ㉑ Grip Belt (p. 9)
- ㉒ Strap Lock (p. 9)
- ㉓ Tripod Mounting Hole
- ㉔ SD Card Slot (p. 9)
- ㉕ Battery Release Lever (p. 8)

# Names of Buttons and Functions on the LCD Monitor

The following screens are displayed during the video and still image modes, and operate as the touch screens.

## Recording Screen (Video/Still Image)



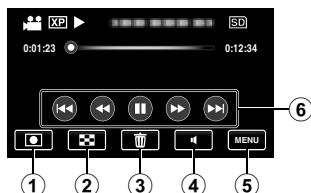
- ① Face Short Cut Menu Button  
Displays a short cut screen of face recognition functions.
- ② Zoom Button
- ③ Playback Mode Button  
Switches to the playback mode.
- ④ Recording Start/Stop Button (p. 14, 15)

**REC** : Video Recording Start Button  
**● ||** : Video Recording Stop Button  
**⦿** : Still Image Recording Button

- ⑤ Menu Button (p. 20)
- ⑥ Display Button

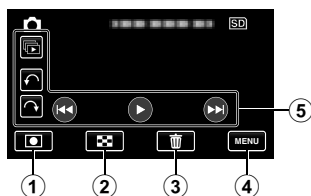
Some displays disappear after approximately 3 seconds. Press this button to show the displays again. The displays appear for approximately 3 seconds with every press. Press and hold this button to fix the displays. Press this button again to release the displays.

## Playback Screen (Video)



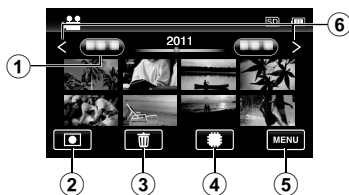
- ① Recording Mode Button  
Switches to the recording mode.
- ② Index Screen Button
- ③ Delete Button
- ④ Volume Adjustment Button (p. 16)
- ⑤ Menu Button (p. 20)
- ⑥ Operation Buttons (p. 16)

## Playback Screen (Still Image)



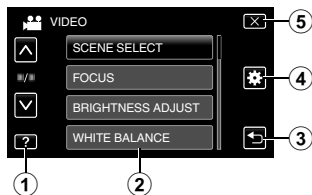
- ① Recording Mode Button  
Switches to the recording mode.
- ② Index Screen Button
- ③ Delete Button
- ④ Menu Button (p. 20)
- ⑤ Operation Buttons (p. 16)

## Index Screen



- ① Date Button
- ② Recording Mode Button  
Switches to the recording mode.
- ③ Delete Button
- ④ Playback Media Button  
Switches between SD card and built-in memory or slot A and slot B (GZ-HM445/GZ-HM440).
- ⑤ Menu Button (p. 20)
- ⑥ Page Forward/Back Button

## Menu Screen

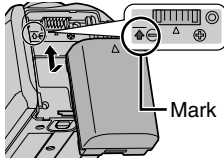


- ① Help Button (p. 20)
- ② Menu Items (p. 20)
- ③ Return Button
- ④ Common/Basic Settings Button
- ⑤ Close Button

## Charging the Battery Pack

### 1 Attach the battery pack.

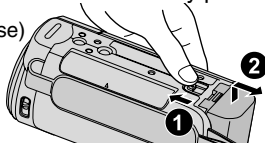
\* The battery pack is not charged at the time of purchase.



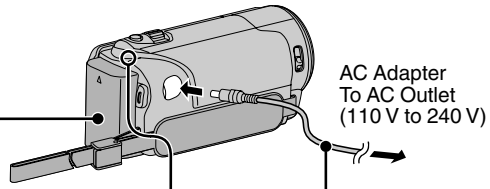
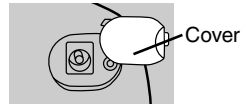
- Align the top of the battery with the mark on this unit, and slide in until the battery clicks into place.

### ■ To detach the battery pack

(Base)

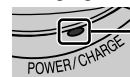


### 2 Connect the DC connector.



### 3 Plug in the power.

Charging Lamp



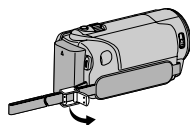
Charging in progress:  
Blinks  
Charging finished:  
Goes out

### CAUTION

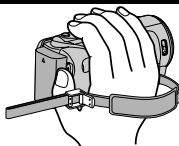
Be sure to use JVC battery packs.

- If you use any other battery packs besides JVC battery packs, safety and performance cannot be guaranteed.
- Charging time: Approx. 2 h 30 m (using supplied battery pack)
- \* The charging time is when the unit is used at 25°C. If the battery pack is charged outside the room temperature range of 10°C to 35°C, charging may take a longer time or it may not start. The recordable and playable time may also be shortened under some usage conditions such as at low temperature.
- Charging is also possible with a USB cable. (Refer to Detailed User Guide.)

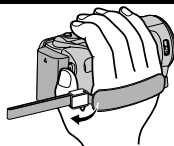
## Grip Adjustment



- ① Open the lever on the strap lock



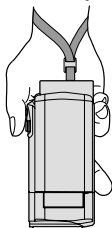
- ② Adjust the length of the belt



- ③ Close the lever

## Using as a Hand Strap

Adjust the length of the belt and loop it around your wrist.



## Inserting an SD Card

### ■ GZ-HM650 (Models with Built-in Memory)

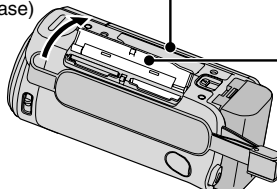
When a commercially available SD card is inserted, recordings can still be made to the card without stopping when the remaining recording time on the built-in memory runs out.

\*To record to the card, it is necessary to perform media settings. (p. 11)

When no card is available, set media settings to "BUILT-IN MEMORY" for recording.

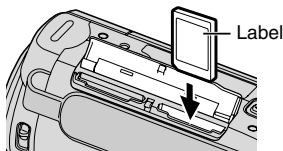
- 1 Close the LCD monitor.

(Base)



- 2 Open the cover.

- 3 Insert an SD card.



\* Turn off the power of this unit before inserting or removing a card.

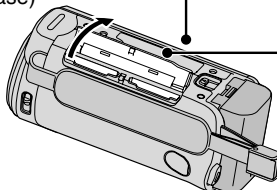
## ■ GZ-HM445/GZ-HM440 (Models with Dual Slot)

Insert a commercially available SD card before recording.

This unit comes with two SD card slots. When two SD cards are inserted, recordings can be continued on the other card even if one card is full.

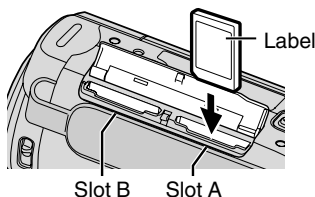
1 Close the LCD monitor.

(Base)



2 Open the cover.

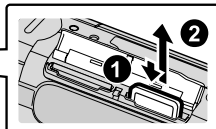
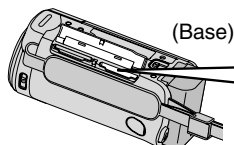
3 Insert an SD card into slot A.



\* Turn off the power of this unit before inserting or removing a card.



## ■ To remove the card

Push the card inward once, then pull it out straight.



### NOTE

Operations are confirmed on the following SD cards.


Manufacturer	Panasonic, TOSHIBA, SanDisk, ATP, Eye-Fi*
Video 	Class 4 or higher compatible SD card (2 GB) / Class 4 or higher compatible SDHC card (4 GB to 32 GB) / Class 4 or higher compatible SDXC card (48 GB to 64 GB)
Still Image 	SD card (256 MB to 2 GB) / SDHC card (4 GB to 32 GB) / SDXC card (48 GB to 64 GB)
Eye-Fi	Eye-Fi Connect X2 / Eye-Fi Explore X2 / Eye-Fi Pro X2

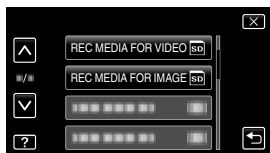
\*Only the specified models may be used. Refer to the Detailed User Guide for details.

- Using SD cards (including SDHC/SDXC cards) other than those specified above may result in recording failure or data loss.
- To protect the data, do not touch the terminals of the SD card.
- Eye-Fi manufactures SD memory cards with wireless LAN function.

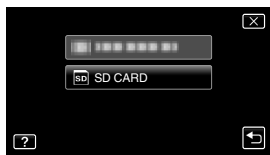
## ■ To use an SD card (GZ-HM650)

Recording can be performed on a card when “REC MEDIA FOR VIDEO” or “REC MEDIA FOR IMAGE” of “COMMON” (basic settings) is set to “SD CARD”.

- ① Open the LCD monitor.
- The unit turns on.
- ② Tap “MENU”.
- ③ Tap “”.
- ④ Tap “REC MEDIA FOR VIDEO” or “REC MEDIA FOR IMAGE”.



- ⑤ Tap “SD CARD”.



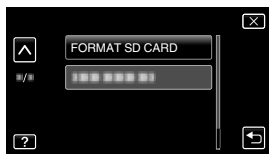
## ■ To use SD cards that have been used on other devices

Format (initialize) the card using “FORMAT SD CARD” from “COMMON” (basic settings).

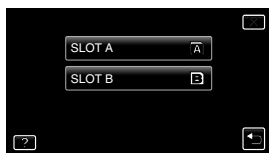
**All data on the card will be deleted when it is formatted. Copy all files on the card to a computer before formatting.**

Perform steps ① - ③ from “To use an SD card”.

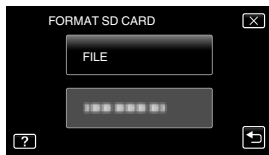
- ④ Tap “FORMAT SD CARD”.



- ⑤ (GZ-HM445/GZ-HM440)  
Tap the slot with the card to format.



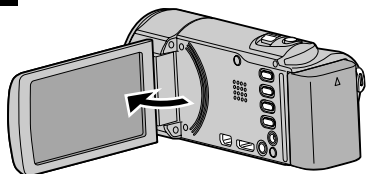
- ⑥ Tap “FILE”.



- ⑦ Tap “YES”.
- ⑧ After formatting, tap “OK”.

# Clock Setting

- 1** Open the LCD monitor.

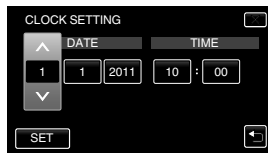


- The unit turns on. When the LCD monitor is closed, the unit turns off.

- 2** Tap “YES” when “SET DATE/TIME!” is displayed.



- 3** Set the date and time.

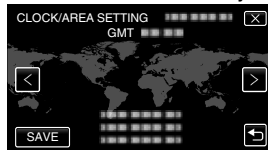


- When the year, month, day, hour, or minute item is tapped, “^” and “v” will be displayed. Tap “^” or “v” to adjust the value.
- Repeat this step to input the year, month, day, hour, and minute.

- 4** After setting the date and time, tap “SET”.


- 5** Select the region where you live and tap “SAVE”.

- The city name and time difference are displayed.
- Tap “<” or “>” to select the city name.

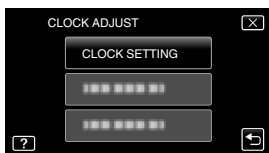


## To reset the clock

Set the clock with “CLOCK ADJUST” from the menu.

- ① Open the LCD monitor.
- The unit turns on.
- ② Tap “MENU”.
- ③ Tap “

- ⑤ Tap “CLOCK SETTING”.



- The subsequent setting operations are the same as steps 3 - 5 on p. 12.

## To change the display language

The language on the display can be changed.

Perform steps ① - ③ from “To reset the clock”.

- ④ Tap “LANGUAGE”.



- ⑤ Tap to the desired language.

### NOTE

- “SET DATE/TIME!” is displayed when you turn on this unit after it has not been used for a prolonged period. Charge this unit for more than 24 hours before setting the clock. (p. 8)

## Video Quality

This unit can perform recording in both high and standard definition. By default, it is set to high definition (XP).

### ■ To change the setting

- ① Tap “MENU”.
- ② Tap “VIDEO QUALITY”.
- ③ Tap the desired video quality.

High Definition	UXP	Higher video quality
	XP	
	SP	
	EP	
Standard Definition	SSW	More recording time
	SEW	



\* For the approximate video recording time, refer to p. 21.


# Video Recording


You can record without worrying about the setting details by using the Intelligent Auto mode. Settings such as exposure and focus will be adjusted automatically to suit the shooting conditions.


- In case of specific shooting scenes such as backlight (A), night view (M), person (P) etc., its icon is displayed on the screen.


Before recording an important scene, it is recommended to conduct a trial recording.

- 1 Open the lens cover.


- 2 Select video mode.

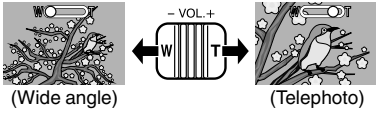

- 3 Check if the recording mode is i.A. Intelligent Auto.

  - If the mode is M Manual, press the **AUTO** button to switch.
  - The mode changes between Intelligent Auto and Manual with every press.
- 4 Start recording.

  - Press again to stop.

START/STOP

Zooming



(Wide angle) (Telephoto)

- You can also tap **REC** on the touch screen to record. To stop recording, tap **II**. In addition, you can also tap T/W to zoom.

## ■ Indications during video recording



Video Quality ————

Recording Media ————

Battery Indicator ————

Image Stabilizer ————

Scene Counter ————

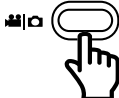
Remaining Recording Time ————

### NOTE

- The estimated recording time of the supplied battery pack is approximately 1 hour 5 minutes. (p. 21)
- Do not remove the battery pack, AC adapter, or SD card when the access lamp is lighted. The recorded data may become unreadable.

# Still Image Recording

**1** Select still image mode.



**2** Set the focus on the subject.

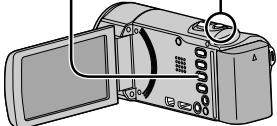
SNAPSHOT **Press halfway**


Lights up in green when focused

**3** Take a still image.

SNAPSHOT **Press fully**

**PHOTO** Lights up during still image recording



- You can also tap  on the touch screen to record. However, focus cannot be set by pressing halfway.

## ■ Indications during still image recording

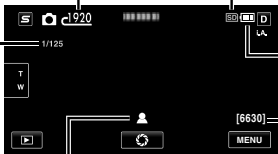


Image Size — 920

Shutter Speed — 1/125

Recording Media — [SD]

Battery Indicator — [LA]


Remaining Number of Shots — [6630]



Focus — [Person icon]

PHOTO: Recording in Progress

## Playing Back/Deleting Files on this Unit




Select and play back the recorded videos or still images from an index screen (thumbnail display).

1 Select video or still image mode. 

2 Tap  on the touch screen to select the playback mode.  
\* Tap  to return to the recording mode.

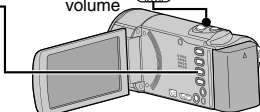
3 Tap on the file to play back.




- Tap  to select the media for playback.
- Tap  to pause playback.
- Tap  to return to the video index screen.

Volume adjustment during playback

Turn down the volume  Turn up the volume



■ To delete unwanted files

- 1 Tap .
- 2 Tap on the files to delete.















A delete mark appears on the selected file. To remove the delete mark, tap again.

- 3 Tap "SET".
- 4 Tap "EXECUTE" when the confirmation message appears.
- 5 Tap "OK".

### ■ To capture a still image during playback

Pause the playback and press the SNAPSHOT button.

### ■ Usable operation buttons during playback (\*)


	During video playback	During still image playback
	Playback/pause	Start/pause slideshow
	Stop (returns to index screen)	Stop (returns to index screen)
	Advances to the next video	Advances to the next still image
	Returns to the beginning of the scene	Returns to the previous still image
	Forward search	-
	Reverse search	-
	Forward slow-motion / Press and hold to start slow playback	-
	Reverse slow-motion / Press and hold to start reverse slow playback	-
	Volume adjustment	-
	-	Rotates 90 degrees counterclockwise
	-	Rotates 90 degrees clockwise
	-	Continuous playback of images taken by continuous shooting

\* The buttons disappear after approximately 3 seconds. Tap on the screen to display the buttons again.

# Playing Back on TV

## 1 Connect to a TV.

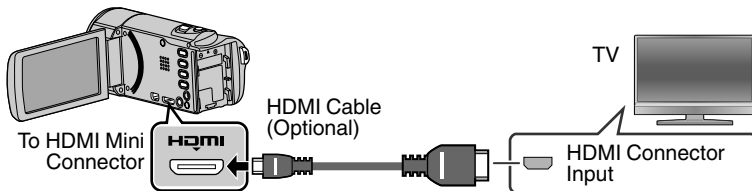
\* Refer also to the instruction manual of the TV in use.

- Turn off the camcorder by pressing the  button for about 2 seconds.

### ■ Playing back in HD quality

If you are using an HDTV, you can play back in HD quality by connecting to the HDMI connector.

#### Connecting to the HDMI connector



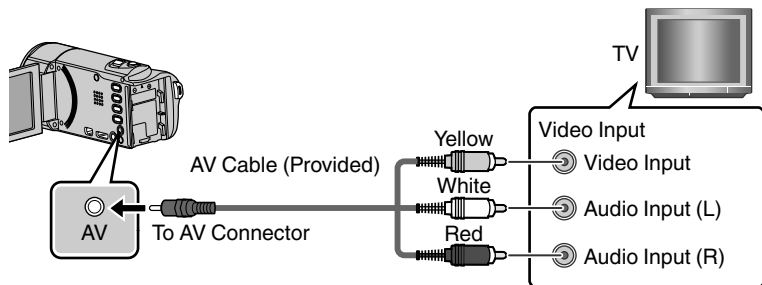
#### NOTE

- For questions about the TV or method of connection, contact your TV's manufacturer.
- Use a High Speed HDMI Cable as the HDMI mini cable.

## ■ Playing back in standard quality

If you are using a conventional TV, you can play back in standard quality by connecting to the AV connector.

### Connecting to the AV connector



## 2 Connect the AC adapter. (p. 8)

- This unit powers on automatically when the AC adapter is connected.

## 3 Select the TV input switch.

## 4 Play back a file. (p. 16)


## ■ When images look unnatural on the TV

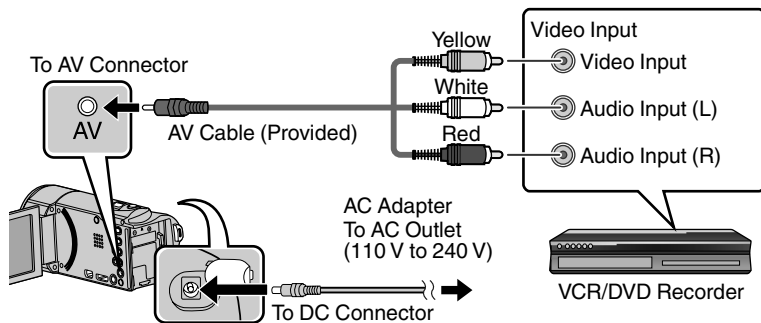
Images do not appear on the TV properly.	<ul style="list-style-type: none"><li>• Disconnect the cable and connect again.</li><li>• Turn off and on this unit again.</li></ul>
Images are projected vertically on the TV.	<ul style="list-style-type: none"><li>• Set "VIDEO OUTPUT" in the "COMMON" (basic settings) menu to "4:3".</li></ul>
Images are projected horizontally on the TV.	<ul style="list-style-type: none"><li>• Adjust the TV's screen accordingly.</li></ul>
The color of images looks strange.	<ul style="list-style-type: none"><li>• When the video was recorded with "x.v.Color" set to "ON", change the setting as desired on TV.</li><li>• Adjust the TV's screen accordingly.</li></ul>

## Dubbing Files by Connecting to a DVD Recorder or VCR

You can dub videos in standard quality by connecting to a DVD recorder or VCR. Refer also to the instruction manuals of the TV, DVD recorder, VCR, etc.

### 1 Connect to a VCR/DVD recorder.

- Turn off the camcorder by pressing the  button for about 2 seconds.



- This unit powers on automatically when the AC adapter is connected.

### 2 Tap to select the playback mode.

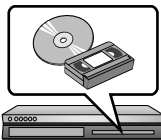
### 3 Prepare to record.

#### Preparation on TV and VCR/DVD recorder

- Switch to a compatible external input.
- Insert a DVD-R or video tape.

#### Preparation on this unit

- Set "VIDEO OUTPUT" in the "COMMON" (basic settings) menu to the aspect ratio ("4:3" or "16:9") of the connecting TV.



### 4 Start recording.

- Start playback on this unit (p. 16) and press the record button on the recorder.
- After playback is complete, stop the recording.

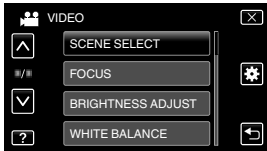
# Operating the Menu

You can configure various settings using the menu.

### 1 Tap "MENU".

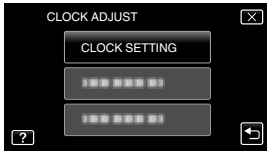
- The menu differs according to the mode in use.
- Tap "**S**" to display the face short cut menu.

### 2 Tap the desired menu.



- Tap "**gear**" to display the "COMMON" (basic settings) menu.

### 3 Tap the desired setting.



#### ■ To exit the screen

Tap "X" (quit).

#### ■ To return to the previous screen

Tap "←" (return).

#### ■ To display the help file

Tap "?" (help) and tap the menu item.

- Help file may not be available for some items.

- **For more information on the settings, refer to the Detailed User Guide.**

# Recordable Time/Number of Images

You can check the video recording time by pressing the INFO button.

## Approximate Video Recording Time

Quality	Built-in Memory	SDHC/SDXC Card					
	GZ-HM650 8 GB	4 GB	8 GB	16 GB	32 GB	48 GB	64 GB
UXP	40 m	20 m	40 m	1 h 20 m	2 h 50 m	4 h 20 m	5 h 50 m
XP	50 m	30 m	1 h	2 h	4 h 10 m	6 h 10 m	8 h 20 m
SP	1 h 20 m	40 m	1 h 20 m	2 h 50 m	5 h 50 m	8 h 40 m	11 h 50 m
EP	3 h 20 m	1 h 40 m	3 h 40 m	7 h 10 m	14 h 50 m	21 h 50 m	29 h 50 m
SSW	2 h 30 m	1 h 20 m	2 h 50 m	5 h 40 m	11 h 30 m	17 h	23 h
SEW	5 h 20 m	2 h 50 m	5 h 50 m	11 h 40 m	23 h 50 m	35 h 10 m	47 h 40 m

- The approximate recording time is only a guide. The actual recording time may shorten depending on the shooting environment.

## Approximate Number of Still Images (Unit: Number of Shots)

Image Size	Built-in Memory	SDHC Card	
	GZ-HM650 8 GB	4 GB	8 GB
640×480 (4:3)	9999	9999	9999
1440×1080 (4:3)	8800	4300	8800
1920×1080 (16:9)	6700	3200	6700
2400×1344 (16:9) *	4300	2100	4300

\* GZ-HM650

- Up to 9999 still images may be recorded on SD cards with at least 32 GB capacity (regardless of image size).

## Approximate Recording Time (Using Battery)

Battery Pack	Actual Recording Time		Continuous Recording Time	
	GZ-HM445/GZ-HM440	GZ-HM650	GZ-HM445/GZ-HM440	GZ-HM650
BN-VG114E	1 h 5 m	1 h 5 m	2 h	1 h 55 m
BN-VG121E	1 h 40 m	1 h 35 m	3 h 5 m	2 h 55 m
BN-VG138E	3 h	2 h 55 m	5 h 30 m	5 h 20 m




- The above are values when "LIGHT" is set to "OFF" and "MONITOR BRIGHTNESS" is set to "3" (standard).
- The actual recording time may be shorter if zooming is used or if recording is stopped repeatedly. (It is recommended to prepare battery packs ready for three times the expected recording time.)
- When the battery life is reached, the recording time becomes shorter even if the battery pack is fully charged. (Replace the battery pack with a new one.)

# Troubleshooting

If you encounter problems with this unit, check the following before requesting service.

- 1 Refer to "Trouble" below.
- 2 Refer to the "Troubleshooting" section in the "Detailed User Guide".  
If you have difficulties operating the unit, refer to the detailed descriptions in the "Detailed User Guide".
  - <http://manual.jvc.co.jp/index.html/>
- 3 Refer to the FAQ of new products on JVC's website.
  - <http://www.jvc.com/>
- 4 This unit is a microcomputer-controlled device. Electrostatic discharge, external noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly.  
In such a case, reset the unit.
  - ① Turn off the power. (Close the LCD monitor.)
  - ② Remove the AC adapter and battery pack from this unit, reattach them, open the LCD monitor and this unit powers on automatically.
- 5 If the above do not solve the problem, consult your nearest JVC dealer or JVC service center.

## Trouble

Trouble		Action	Page
Power	POWER/CHARGE lamp starts blinking when the monitor is closed.	<ul style="list-style-type: none"> <li>• The battery pack is being charged.</li> </ul>	8
	Recording cannot be performed.	<ul style="list-style-type: none"> <li>• Check the  /  button.</li> <li>• Set to the recording mode by tapping the  button on the screen.</li> </ul>	14 16
Recording	Recording stops automatically.	<ul style="list-style-type: none"> <li>• Turn off this unit, wait for a while, and turn it on again. (This unit stops automatically to protect the circuit when the temperature rises.)</li> <li>• Recording stops automatically after 12 hours of continuous recording.</li> </ul>	- -
	Sound or video is interrupted.	<ul style="list-style-type: none"> <li>• Sometimes playback is interrupted at the connecting section between two scenes. This is not a malfunction.</li> </ul>	-
Playback			

The lamp does not flash during battery pack charging.

- Check the remaining battery power. (When the battery pack is fully charged, the lamp does not flash.)
- When charging in either a hot or cold environment, ensure that battery is being charged within the permitted temperature range. (Otherwise, charging may stop to protect the battery pack.)

14  
8

This unit heats up.

- This is not a malfunction. (This unit may become warm when used for a long time.)

-

## Warning Indications

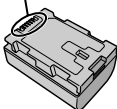
Warning Indications	Action	Page
RECORDING FAILURE	<ul style="list-style-type: none"> <li>• Turn off and on this unit again.</li> <li>• If the above does not solve the problem, back up your files and execute "FORMAT BUILT-IN MEM." or "FORMAT SD CARD" in the "COMMON" (basic settings) menu. (All data will be deleted.)</li> </ul>	- -
DATA RECORDED FILE IS TOO SMALL TO BE SAVED	<ul style="list-style-type: none"> <li>• When time-lapse recording is stopped with the recorded time less than "0:00:00:14", the video will not be saved.</li> </ul>	-
ERROR IN BUILT-IN MEMORY/ MEMORY CARD ERROR!	<ul style="list-style-type: none"> <li>• Turn off and on this unit again.</li> <li>• Remove the AC adapter and battery pack, then remove and re-insert the SD card.</li> <li>• Remove any dirt from the SD card terminals.</li> <li>• If the above does not solve the problem, back up your files and execute "FORMAT BUILT-IN MEM." or "FORMAT SD CARD" in the "COMMON" (basic settings) menu. (All data will be deleted.)</li> </ul>	- - - -
CHECK LENS COVER	<ul style="list-style-type: none"> <li>• Appears for 5 seconds after power is turned on if the lens cover is closed or when it is dark.</li> </ul>	-



# Cautions

## Battery Pack

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, 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. Cooler temperatures require longer charging time, or in some cases stop charging at all. Warmer temperatures prevent complete charging, or in some cases stop charging at all.
  - ... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
  - ... keep a 30% battery level (  ) if the battery pack is not to be used for a long period of time. In addition, fully charge and then fully discharge the battery pack every 2 months, then continue to store it at a 30% battery level (  ).
  - ... remove from charger or powered unit when not in use, as some machines use current even when switched off.
  - ... do not drop or subject to strong impact.

## 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 camcorder 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 camcorder, only the file administration information is changed. The data is not completely erased from the recording medium. 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 camcorder with a hammer etc.

## LCD Monitor

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

## Main Unit

- **For safety, DO NOT**

- ... open the camcorder'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 camcorder 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 camcorder.

- **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.

- **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.
- ... store the camcorder in a dusty or sandy area.

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

- Fasten the grip belt securely.
  - When using the camcorder with a tripod, attach the camcorder to the tripod securely.
- If the camcorder drops, you may be injured and the camcorder may be damaged.  
When a child uses the unit, there must be parental guidance.

**Remember that this unit 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**

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x.v.Colour



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 04  
61145 Friedberg  
Germany

# Specifications

Camera			
Model Name	GZ-HM440	GZ-HM445	GZ-HM650
Power supply	Using AC adapter: DC 5.2 V, Using battery pack: DC 3.5 V - 3.6 V		
Power consumption	2.3 W (when "MONITOR BRIGHTNESS" is set to "3" (standard)) 2.5 W (when "MONITOR BRIGHTNESS" is set to "4" (brighter))		2.4 W (when "MONITOR BRIGHTNESS" is set to "3" (standard)) 2.6 W (when "MONITOR BRIGHTNESS" is set to "4" (brighter))
Dimensions (W x H x D)	51 mm x 55 mm x 111 mm (W x H x D: excluding grip belt)		
Mass	Approx. 195 g (camera only), Approx. 235 g (including supplied battery pack)		
Operating environment	Allowable operating temperature: 0°C to 40°C Allowable storage temperature: -20°C to 50°C Allowable relative humidity: 35 % to 80 %		
Image pickup device	1/5.8" 1,500,000 pixels (progressive CMOS)		1/4.1" 3,320,000 pixels (progressive CMOS)
Recording area (Video)	(UXP/XP/SP/EP) 630,000 to 1,050,000 pixels (AIS ON) 630,000 to 1,250,000 pixels (AIS OFF) (SSW/SEW) 340,000 to 1,050,000 pixels (dynamic zoom ON) 630,000 to 1,050,000 pixels (dynamic zoom OFF)		(UXP/XP/SP/EP) 1,220,000 pixels (AIS ON) 1,440,000 pixels (AIS OFF) (SSW/SEW) 390,000 to 1,220,000 pixels (dynamic zoom ON) 1,220,000 pixels (dynamic zoom OFF)
Recording area (Still image)	(4:3) 470,000 to 930,000 pixels (16:9) 630,000 to 1,250,000 pixels		(4:3) 1,080,000 pixels (16:9) 1,440,000 pixels
Lens	F1.8 - 6.3, f= 2.9 mm to 116.0 mm (UXP/XP/SP/EP) 35 mm conversion: 45.6 mm to 1,824 mm (AIS ON) 35 mm conversion: 42.0 mm to 1,680 mm (AIS OFF) (SSW/SEW) 35 mm conversion: 45.6 mm to 3,182 mm (dynamic zoom ON) 35 mm conversion: 45.6 mm to 1,824 mm (dynamic zoom OFF)		F1.8 - 6.3, f= 2.9 mm to 116.0 mm (UXP/XP/SP/EP) 35 mm conversion: 45.0 mm to 1,800 mm (AIS ON) 35 mm conversion: 41.4 mm to 1,656 mm (AIS OFF) (SSW/SEW) 35 mm conversion: 45.0 mm to 3,150 mm (dynamic zoom ON) 35 mm conversion: 45.0 mm to 1,800 mm (dynamic zoom OFF)
Zoom (Video)	Optical zoom: Up to 40x Dynamic zoom: Up to 70x (SSW/SEW) Digital zoom: Up to 200x		
Zoom (Still image)	Optical zoom: Up to 40x		
Video recording format	AVCHD standard, Video: AVC/H.264, Audio: Dolby Digital (2ch)		
Still image recording format	JPEG standard		

Recording Media	SD/SDHC/SDXC card (commercially available)	
	Dual slot	Built-in memory
		8 GB
	Eye-Fi card (commercially available)	
Clock battery	Rechargeable battery	

#### AC Adapter (AC-V10M)\*

Power supply	AC 110 V to 240 V, 50 Hz/60 Hz
Output	DC 5.2 V, 1 A
Allowable operating temperature	0°C to 40°C (10°C to 35°C during charging)
Dimensions (mm)	83 x 28 x 40 (W x H x D: excluding cord and AC plug)
Mass	Approx. 77 g

\* When using the AC adapter overseas, please prepare a commercially available converter plug for the country or region of visit.

- **The specifications and appearance of this product are subject to changes for further improvement without prior notice.**

#### Customer Support Information

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

##### JVC (for inquires regarding this unit)

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, Serial Number, Problem, Error Message
  - Computer (Manufacturer, Model (Desktop/Laptop), CPU, OS, Memory (MB/GB), 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 computer, or questions regarding specifications or performance of the OS, other applications or drivers.

##### Pixela (for inquires regarding the provided software)

Region	Language	Phone #
USA and Canada	English	+1-800-458-4029 (toll-free)
Europe (UK, Germany, France, and Spain)	English/German/French/Spanish	+800-1532-4865 (toll-free)
Other Countries in Europe	English/German/French/Spanish	+44-1489-564-764
Asia (Philippines)	English	+63-2-438-0090
China	Chinese	10800-163-0014 (toll-free)

**Homepage:** <http://www.pixela.co.jp/oem/jvc/mediabrowser/e/>

Please check our website for latest information and downloading.

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