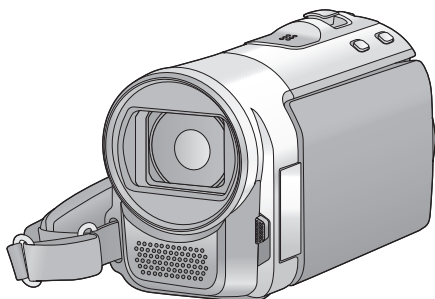


Panasonic®

Basic Operating Instructions

Digital Video Camera

Model No. **HC-V10**



Before use, please read these instructions completely.

More detailed instructions on the operation of this unit are contained in "Operating Instructions (PDF format)" in the supplied CD-ROM. Install it on your PC to read it.



HDMI

**SD
XC**

**VIERA
Link**

Information for Your Safety

WARNING:

To reduce the risk of fire, electric shock or product damage,

- Do not expose this unit to rain, moisture, dripping or splashing.
- Do not place objects filled with liquids, such as vases, on this unit.
- Use only the recommended accessories.
- Do not remove covers.
- Do not repair this unit by yourself. Refer servicing to qualified service personnel.

CAUTION!

To reduce the risk of fire, electric shock or product damage,

- Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.
- Do not obstruct this unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.
- Do not place sources of naked flames, such as lighted candles, on this unit.

Install this unit so that the AC adaptor can be unplugged from the socket outlet immediately if any problem occurs.

■ Concerning the battery

Warning

Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C or incinerate.

CAUTION

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

Use only the recommended accessories.

- Always use a genuine Panasonic HDMI mini cable (RP-CDHM15, RP-CDHM30: optional).

■ Product identification marking

Product	Location
Digital Video Camera	Bottom
AC adaptor	Bottom

-If you see this symbol-

Information on Disposal in other Countries outside the European Union



This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

■ Cautions for use

For Australia and New Zealand

In the event of abnormal operation (e.g. if the unit emits smoke or an unusual smell), immediately stop operating the unit and consult the Panasonic Customer Care Centre on 132600.

Keep this unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).

- If you use this unit on top of or near a TV, the pictures and/or sound on this unit may be disrupted by electromagnetic wave radiation.
- Do not use this unit near cell phones because doing so may result in noise adversely affecting the pictures and/or sound.
- Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by microprocessors may adversely affect this unit, disturbing the pictures and/or sound.
- If this unit is adversely affected by electromagnetic equipment and stops functioning properly, turn this unit off and remove the battery or disconnect AC adaptor. Then reinsert the battery or reconnect AC adaptor and turn this unit on.

Do not use this unit near radio transmitters or high-voltage lines.

- If you record near radio transmitters or high-voltage lines, the recorded pictures and/or sound may be adversely affected.

About connecting to a PC

- Do not use any other USB cables except the supplied one.

■ About the recording format for recording motion pictures

- The unit is an MP4 format (MPEG-4 AVC file standard) camera for recording high-definition motion pictures.
- AVCHD and MPEG2 motion pictures are different formats, and are not therefore supported by the unit.

■ Indemnity about recorded content

Panasonic does not accept any responsibility for damages directly or indirectly due to any type of problems that result in loss of recording or edited content, and does not guarantee any content if recording or editing does not work properly. Likewise, the above also applies in a case where any type of repair is made to the unit.

■ About Condensation (When the lens or the LCD monitor is fogged up)

Condensation occurs when the ambient temperature or humidity changes. Be careful of condensation since it causes lens or LCD monitor stains, fungus and camera malfunction.

■ Cards that you can use with this unit

SD Memory Card, SDHC Memory Card and SDXC Memory Card

- 4 GB or more Memory Cards that do not have the SDHC logo or 48 GB or more Memory Cards that do not have the SDXC logo are not based on SD Memory Card Specifications.
- Refer to page 12 for more details on SD cards.

■ For the purposes of these operating instructions

- SD Memory Card, SDHC Memory Card and SDXC Memory Card are referred to as the "SD card".
- Functions that can be used for motion picture recording/motion picture playback are indicated by **VIDEO** in these operating instructions.
- Functions that can be used for still picture recording/still picture playback are indicated by **PHOTO** in these operating instructions.
- Pages for reference are indicated by an arrow, for example: → 00

Contents

Information for Your Safety	2
Accessories	6
Optional accessories.....	7

Preparation

Power supply	8
Inserting/removing the battery.....	8
Charging the battery	9
Charging and recording time.....	11
Recording to a card	12
Cards that you can use with this unit.....	12
Inserting/removing an SD card.....	13
Turning the unit on/off	14
Selecting a mode	14
Setting date and time	15

Basic

Intelligent Auto mode	16
Recording motion pictures	16
Recording still pictures	17
Motion picture/Still picture playback	18
Watching Video/Pictures on your TV	19
Using the menu screen	20
Language selection	20
Using the Zoom	21
Formatting	21
Deleting scenes/still pictures	22

Others

Specifications	23
About copyright	26
Reading the Operating Instructions (PDF format)	27

Accessories

Check the accessories before using this unit.

Keep the accessories out of reach of children to prevent swallowing.

Product numbers correct as of Jan. 2012. These may be subject to change.

Battery pack

VW-VBL090



AC adaptor

VSK0784

(GC)



(GA/GW)



(GN)



AV cable

K2KYYYY00203



USB cable

K2KYYYY00202



CD-ROM

Software



CD-ROM

Operating Instructions

VFF0982



Optional accessories

Some optional accessories may not be available in some countries.

(GC) Battery charger (VW-BC10EB)
(GA/GW) Battery charger (VW-BC10E)
(GN) Battery charger (VW-BC10GN)
Battery pack (lithium/VW-VBL090)
Battery pack (lithium/VW-VBK180)
Battery pack (lithium/VW-VBK360)
HDMI mini cable (RP-CDHM15, RP-CDHM30)
Video DC light (VW-LDC103E)*
Light bulb for video DC light (VZ-LL10E)
Shoe adaptor (VW-SK12E)
(GC) Accessory kit (VW-ACK180EB)
(GA/GW) Accessory kit (VW-ACK180E)
(GN) Accessory kit (VW-ACK180GN)

* (GC)

To use the VW-LDC103E, the shoe adaptor/VW-SK12E and the battery pack/VW-VBG130, VW-VBG260 are required. To charge the battery pack/VW-VBG130, VW-VBG260, the AC adaptor/VW-AD21EB-K, VW-AD20EB-K is required.

(GA/GW)

To use the VW-LDC103E, the shoe adaptor/VW-SK12E and the battery pack/VW-VBG130, VW-VBG260 are required. To charge the battery pack/VW-VBG130, VW-VBG260, the AC adaptor/VW-AD21E-K, VW-AD20E-K is required.

(GN)

To use the VW-LDC103E, the shoe adaptor/VW-SK12E and the battery pack/VW-VBG130, VW-VBG260 are required. To charge the battery pack/VW-VBG130, VW-VBG260, the AC adaptor/VW-AD21GN-K, VW-AD20GN-K is required.

Power supply

■ About batteries that you can use with this unit

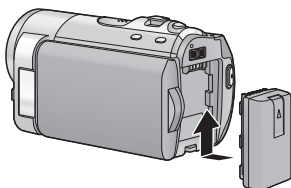
The battery that can be used with this unit is VW-VBL090/VW-VBK180/VW-VBK360.

It has been found that counterfeit battery packs which look very similar to the genuine product are made available to purchase in some markets. Some of these battery packs are not adequately protected with internal protection to meet the requirements of appropriate safety standards. There is a possibility that these battery packs may lead to fire or explosion. Please be advised that we are not liable for any accident or failure occurring as a result of use of a counterfeit battery pack. To ensure that safe products are used we would recommend that a genuine Panasonic battery pack is used.

Inserting/removing the battery

- Press the power button to turn off the unit. (→ 14)

Install the battery by inserting it in the direction shown in the figure.

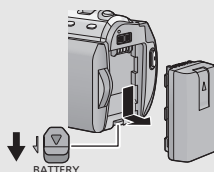


Insert the battery until it clicks and locks.

Removing the battery

Be sure to hold down the power button until the status indicator goes off. Then remove the battery while supporting the unit to prevent it from dropping.

Move the battery release lever in the direction indicated by the arrow and remove the battery when unlocked.



Charging the battery

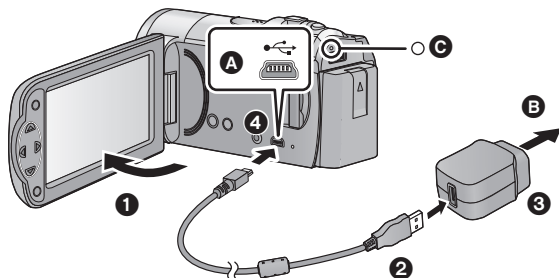
When this unit is purchased, the battery is not charged. Charge the battery fully before using this unit for the first time.

■ Charging with an AC adaptor.

The unit is in the standby condition when the AC adaptor is connected. The primary circuit is always “live” as long as the AC adaptor is connected to an electrical outlet.

Important:

- Be sure to use the supplied AC adaptor and USB cable. Do not use parts supplied with other equipment.
- The AC adaptor and USB cable are for use with this unit only. Do not use them with other equipment. Similarly, do not use AC adaptors and USB cables from other equipment with this unit.
- (GC)
The battery can also be charged using a battery charger (VW-BC10EB: optional).
- (GA/GW)
The battery can also be charged using a battery charger (VW-BC10E: optional).
- (GN)
The battery can also be charged using a battery charger (VW-BC10GN: optional).
- The battery cannot be charged when the power is on. Press the power button to turn off the power. (→ 14)
- It is recommended to charge the battery in a temperature between 10 °C and 30 °C. (The battery temperature should also be the same.)



A USB terminal

B To the AC outlet

- Insert the plugs as far as they will go.

1 Open the LCD monitor.

2 Connect the USB cable to the AC adaptor.

- Check that the plug portion of the AC adaptor is not loose or misaligned.
- Do not use any other AC adaptors except the supplied one.
- Do not use any other USB cables except the supplied one. (Operation is not guaranteed with any other USB cables.)

3 Plug the AC adaptor into the AC outlet.

4 Connect the USB cable to the unit.

- The status indicator **C** will flash red with approx. 2 seconds period (off for approx. 1 second, on for approx. 1 second), indicating that charging has begun. It will turn off when the charging is completed.

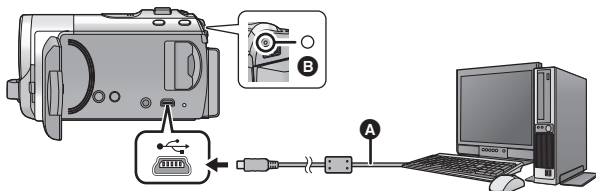
■ Connecting to the AC outlet

If you turn on the unit while connecting with the AC adaptor, you can use the unit with power supplied from the outlet.

When recording for a long time, keep the AC adaptor connected and use it together with the battery.

■ Connecting to a PC and charging.

Charge the unit if you do not have the AC adaptor handy.



A USB cable (supplied)

- Insert the plugs as far as they will go.
- Press the power button and turn the power off. (→ 14)

1 Turn the power of the PC on.

2 Connect the USB cable

- The status indicator **B** will flash red with approx. 2 seconds period (off for approx. 1 second, on for approx. 1 second), indicating that charging has begun.
It will turn off when the charging is completed.
- Do not use any other USB cables except the supplied one. (Operation is not guaranteed with any other USB cables.)
- Always connect directly to a PC.
- You cannot charge when the status indicator flashes rapidly, or when it does not light at all.
Charge using the AC adaptor. (→ 9)
- It will take 2 or 3 times longer to charge compared to when using the AC adaptor.

- If you do not intend to use the unit for an extended period, disconnect the USB cable from the unit for safety.
- Charging may not be possible depending on the operating environment of the PC being used (such as custom-made PC).
- Charging will stop when turning the power of the PC off or forcing it into sleep mode. Charging will start again when turning the power of the PC on again, or waking from sleep mode.
- The unit will be charged if it is connected to a Panasonic Blu-ray disc recorder or DVD recorder with a USB cable, even if the power is turned off.
- We recommend using Panasonic batteries (→ 6, 7).
- If you use other batteries, we cannot guarantee the quality of this product.
- Do not heat or expose to flame.
- Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.

Charging and recording time

■ Charging/Recording time

- Temperature: 25 °C/humidity: 60%RH
- Time in the parenthesis is charging time when this unit is connected to a PC, Panasonic Blu-ray disc recorder, or DVD recorder.

Battery model number [Voltage/Capacity (minimum)]	Charging time	Recording mode	Maximum continuously recordable time	Actual recordable time
Supplied battery/ VW-VBL090 (optional) [3.6 V/895 mAh]	2 h 10 min (3 h)	[1280×720/50p]	1 h 25 min	40 min
		[iFrame]/ [640×480/50p]	1 h 40 min	50 min


- These times are approximations.
- **The indicated charging time is for when the battery has been discharged completely. Charging time and recordable time vary depending on the usage conditions such as high/low temperature.**

- The actual recordable time refers to the recordable time when repeatedly starting/stopping recording, turning the unit on/off, moving the zoom lever etc.
- The batteries heat up after use or charging. This is not a malfunction.

Battery capacity indication

The display changes as the battery capacity reduces.



When the charge runs out,  flashes red.

Recording to a card

This unit (an SDXC compatible device) is compatible with SD Memory Cards, SDHC Memory Cards and SDXC Memory Cards. When using an SDHC Memory Card/SDXC Memory Card with other equipment, check the equipment is compatible with these Memory Cards.

Cards that you can use with this unit

Use SD cards conforming to Class 4 or higher of the SD Speed Class Rating* for motion picture recording.

Card type	Capacity
SD Memory Card	512 MB/1 GB/2 GB
SDHC Memory Card	4 GB/6 GB/8 GB/12 GB/16 GB/24 GB/32 GB
SDXC Memory Card	48 GB/64 GB

* SD Speed Class Rating is the speed standard regarding continuous writing.
Check via the label on the card, etc.

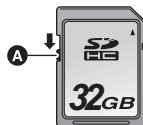


- Please confirm the latest information about SD Memory Cards/SDHC Memory Cards/SDXC Memory Cards that can be used for motion picture recording on the following website.

http://panasonic.jp/support/global/cs/e_cam

(This website is in English only.)

- Operation of the SD Card 256 MB or less is not guaranteed. Also, the SD Card 32 MB or less cannot be used for the motion picture recording.
- 4 GB or more Memory Cards that do not have the SDHC logo or 48 GB or more Memory Cards that do not have the SDXC logo are not based on SD Memory Card Specifications.
- The operation of Memory cards exceeding 64 GB cannot be guaranteed.
- When the write-protect switch **A** on SD card is locked, no recording, deletion or editing will be possible on the card.
- Keep the memory card out of reach of children to prevent swallowing.

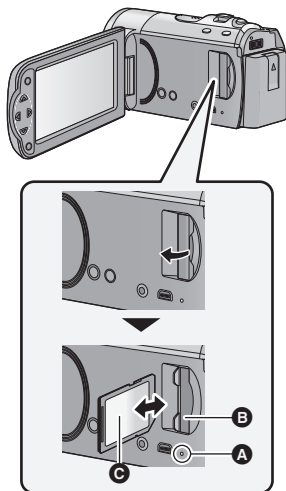


Inserting/removing an SD card

When using an SD card not from Panasonic, or one previously used on other equipment, for the first time on this unit, format the SD card. (→ 21) When the SD card is formatted, all of the recorded data is deleted. Once the data is deleted, it cannot be restored.

Caution:

Check that the access lamp has gone off.



Access lamp [ACCESS] A

- When this unit is accessing the SD card, the access lamp lights up.

1 Open the LCD monitor.

2 Open the SD card cover and insert (remove) the SD card into (from) the card slot B.

- Face the label side C in the direction shown in the illustration and press it straight in as far as it will go.
- Press the centre of the SD card and then pull it straight out.

3 Securely close the SD card cover.

- Securely close it until it clicks.

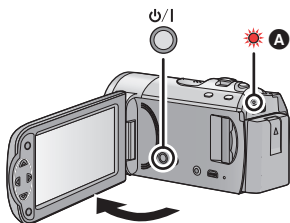
- Do not touch the terminals on the back of the SD card.
- Do not apply strong shocks, bend, or drop the SD card.
- Electrical noise, static electricity or the failure of this unit or the SD card may damage or erase the data stored on the SD card.
- When the card access lamp is lit, do not:
 - Remove the SD card
 - Turn the unit off
 - Insert and remove the USB cable
 - Expose the unit to vibrations or shockPerforming the above while the lamp is on may result in damage to data/SD card or this unit.
- Do not expose the terminals of the SD card to water, dirt or dust.
- Do not place SD cards in the following areas:
 - In direct sunlight
 - In very dusty or humid areas
 - Near a heater
 - Locations susceptible to significant difference in temperature (condensation can occur.)
 - Where static electricity or electromagnetic waves occur
- To protect SD cards, return them to their cases when you are not using them.
- About disposing of or giving away the SD card.
(Refer to the Operating Instructions (PDF format))

Turning the unit on/off

You can turn the unit on and off using the power button or by opening and closing the LCD monitor.

Turning the unit on and off with the power button

Open the LCD monitor and press the power button to turn on the unit.



To turn off the unit



Hold down the power button until the status indicator goes off.

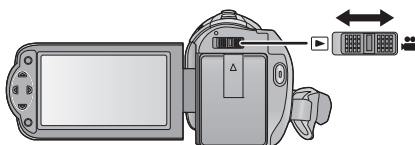
A The status indicator lights on.



The unit is turned on when the LCD monitor is opened, and unit is turned off when it is closed.

Selecting a mode

Change the mode to recording or playback.

Operate the mode switch to change the mode to  or .



	Recording Mode (→ 16, 17)
	Playback Mode (→ 18)


Setting date and time

When the unit is turned on for the first time, a message asking you to set the date and time will appear.

Select [YES] and perform Steps 2 to 3 below to set the date and time.

◇ Change the mode to  .

1 Select the menu. (→ 20)

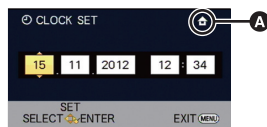
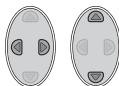
 : [SETUP] → [CLOCK SET]

2 Select the date or time using ◀/▶ and set the desired value using ▲/▼.

A Displaying the World time setting:

 [HOME]/  [DESTINATION]

- The year can be set between 2000 and 2039.
- The 24-hour system is used to display the time.



3 Press the ENTER button.

- A message prompting for World Time setting may be displayed. Perform the World Time setting by pressing the ENTER button.
- Press the MENU button to complete the setting.

-
- The date and time function is driven by a built-in lithium battery.
 - If the time display becomes [- -], the built-in lithium battery needs to be charged. To recharge the built-in lithium battery, connect the AC adaptor or attach the battery to this unit. Leave the unit as it is for approx. 24 hours and the battery will maintain the date and time for approx. 4 months. (The battery is still being recharged even if the unit is off.)

For Australia and New Zealand

WARNING

THE LITHIUM BATTERY IN THIS UNIT MUST ONLY BE REPLACED BY QUALIFIED PERSONNEL. IF THIS IS NECESSARY, CONTACT THE PANASONIC CUSTOMER CARE CENTRE ON 132600 FOR YOUR NEAREST AUTHORIZED SERVICE CENTRE.

Intelligent Auto mode

The modes (appropriate for the condition) are set just by pointing the unit to what you want to record.

IA/MANUAL



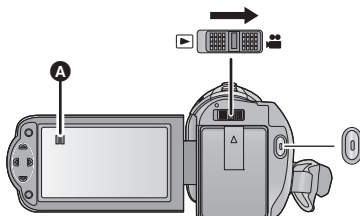
Intelligent auto/Manual button
Press this button to switch Intelligent Auto Mode/Manual Mode.

Recording motion pictures

- Open the lens cover before turning on the unit.



- 1 Change the mode to and open the LCD monitor.
- 2 Press the recording start/stop button to start recording.




- A** When you begin recording, changes to .

- 3 Press the recording start/stop button again to pause recording.

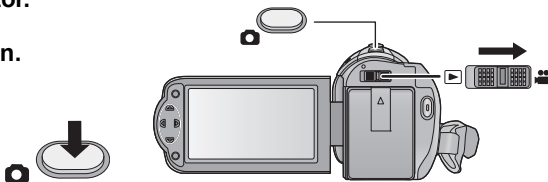
Recording still pictures

- Open the lens cover before turning on the unit.

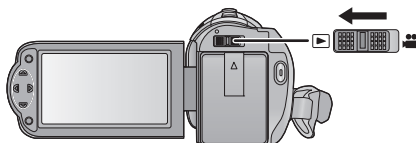


- 1** Change the mode to  and open the LCD monitor.

- 2** Press the  button.



Motion picture/Still picture playback

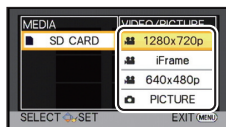





1 Change the mode to .

2 Select the play mode select icon **A** using $\Delta/\nabla/\leftarrow/\rightarrow$ and press the ENTER button.

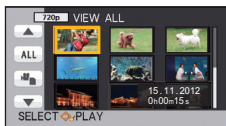




3 Select the [VIDEO/PICTURE] you wish to play back, then press the ENTER button.



- Press the MENU button.
- When a video item is selected, an icon will appear on the thumbnail display. (, , )

4 Select the scene or the still picture to be played back using $\Delta/\nabla/\leftarrow/\rightarrow$, then press the ENTER button.



- When you select / and press the ENTER button, the next (previous) page is displayed.

5 Select the operation icon using ▲/▼/◀/▶.

B Operation icon

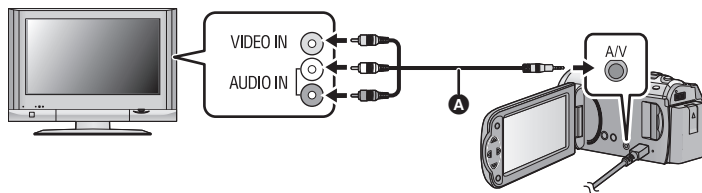
- Press the ENTER button to display/not-display the operation icon.



Motion picture playback	Still picture playback
<p>▶/II: Playback/Pause</p> <p>◀◀: Rewind playback</p> <p>▶▶: Fast forward playback</p> <p>■: Stops the playback and shows the thumbnails.</p>	<p>▶/II: Slide show (playback of the still pictures in numerical order) start/pause.</p> <p>◀II: Plays back the previous picture.</p> <p>II▶: Plays back the next picture.</p> <p>■: Stops the playback and shows the thumbnails.</p>

Watching Video/Pictures on your TV

1 Connect this unit to a TV.



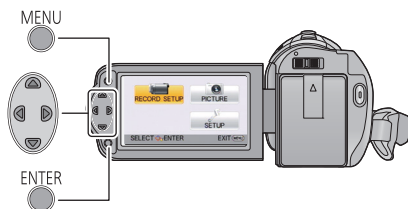
A AV cable (supplied)

- Check that the plugs are inserted as far as they go.
- Do not use any other AV cables except the supplied one.

2 Select the video input on the TV.

3 Change the mode to to play back.

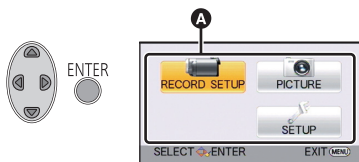
Using the menu screen



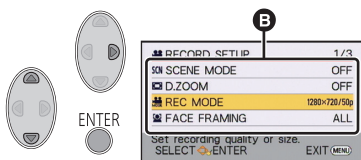
1 Press the MENU button.



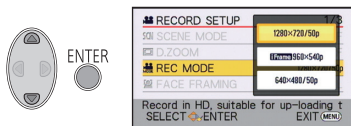
2 Press ▲/▼/◀/▶ to select the top menu **A**, then press the ENTER button.



3 Select the submenu **B** using ▲/▼ and press ▶ or press the ENTER button.



4 Select the desired item using ▲/▼, and press the ENTER button to set.



To get back to the previous screen

Press ◀ of the cursor button.

To exit the menu screen

Press the MENU button.

About the information display

Descriptions of the selected submenu and items displayed in Steps 3 and 4, and messages to confirm settings are displayed.

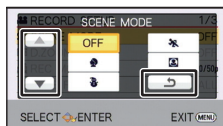
About the operation icons



Select and then press the ENTER button to switch the menu and thumbnail display page.



Select and then press the ENTER button to return to the previous screen in cases such as menu setting, etc.



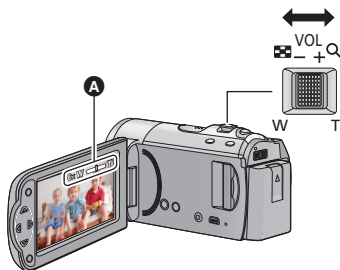
Language selection

You can select the language on the screen display and the menu screen.

MENU : [SETUP] → [LANGUAGE]

Using the Zoom

◇ Change the mode to  .



Zoom lever

T side:

Close-up recording (zoom in)

W side:

Wide-angle recording (zoom out)

- The zoom speed varies depending on the range over which the zoom lever is moved.


A Zoom bar

The zoom bar is displayed during the zoom operation.

Formatting


Please be aware that if a medium is formatted, then all the data recorded on the medium will be erased and cannot be restored. Back up important data on a PC, disc etc.

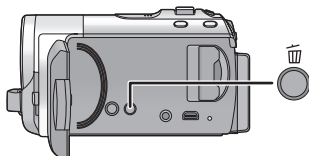
Select the menu.

 : [SETUP] → [FORMAT CARD]


Deleting scenes/still pictures

Deleted scenes/still pictures cannot be restored, so perform appropriate confirmation of the contents before proceeding with deletion.

◇ Change the mode to  .



To delete the scene or still picture being played back

Press the  button while scenes or still pictures to be deleted are being played back.

Specifications

Digital Video Camera

Information for your safety

Power source:	DC 5.0 V (When using AC adaptor) DC 3.6 V (When using battery)
Power consumption:	Recording; 2.7 W Charging; 5.3 W

Motion picture recording format:

MPEG-4 AVC file format compliant (.MP4)

Motion picture compression:

MPEG-4 AVC/H.264

Audio compression:

AAC/2 ch

Recording mode and transfer rate:

[1280×720/50p]; Average 15 Mbps (VBR)

[iFrame]; Maximum 28 Mbps (VBR)

[640×480/50p]; Average 6 Mbps (VBR)

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

Still picture recording format:

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

Refer to the operating instructions (PDF format) for the number of recordable pictures.

Recording media:

SD Memory Card (FAT12 and FAT16 system compliant)

SDHC Memory Card (FAT32 system compliant)

SDXC Memory Card (exFAT system compliant)

Refer to page 12 for details on SD cards usable in this unit.

Image sensor:

1/5.8 type (1/5.8") 1MOS image sensor

Total; 1500 K

Effective pixels;

Motion picture/Still picture; 560 K to 440 K (16:9)

Lens:

Auto Iris, 63× Optical Zoom, F1.9 to F5.7

Focal length;

1.5 mm to 94.5 mm

Macro (Full range AF)

35 mm equivalent;

Motion picture/Still picture; 31.6 mm to 2262 mm (16:9), 31.6 mm to 2254 mm (4:3)

Minimum focus distance;

Approx. 2 cm (Wide)/Approx. 1.5 m (Tele)

Zoom:

70× Enhanced optical zoom, 100×/3500× Digital Zoom

Image stabilizer function:

Optical (Active mode)

Monitor:

6.7 cm (2.7") wide LCD monitor (Approx. 230 K dots)

Microphone:

Stereo

Speaker:

1 round speaker, dynamic type

White balance adjustment:

Auto tracking white balance system

Standard illumination:

1,400 lx

Minimum required illumination:

Approx. 4 lx (1/25 with Low Light mode in the Scene Mode)

Approx. 1 lx with the Colour Night View function

AV connector video output level:

1.0 Vp-p, 75 Ω, PAL system

HDMI mini connector video output level:

HDMI™ 720p/576p

AV connector audio output level (Line):

316 mV, 600 Ω, 2 ch

HDMI mini connector audio output level:

Linear PCM

USB:

Reader function

SD card; Read only (No copyright protection support)

Hi-Speed USB (USB 2.0), USB terminal Type Mini B

Battery charging function (Charges from USB terminal when the main unit is off)

Dimensions:

55 mm (W)×64.5 mm (H)×109.5 mm (D)

(including projecting parts)

Mass:

Approx. 212 g

[without battery (supplied) and an SD card (optional)]

Mass in operation:

Approx. 239 g

[with battery (supplied) and an SD card (optional)]

Operating temperature:

0 °C to 40 °C

Operating humidity:

10%RH to 80%RH

Battery operation time:

See page 11

AC adaptor

Information for your safety

Power source:	AC 110 V to 240 V, 50/60 Hz
Power consumption:	7 W
DC output:	DC 5.0 V, 1.0 A

(GC)

Dimensions:

49.7 mm (W)×49.0 mm (H)×80.9 mm (D)

Mass:

Approx. 64 g

(GA/GW)

Dimensions:

48.9 mm (W)×32.8 mm (H)×95.1 mm (D)

Mass:

Approx. 58 g

(GN)

Dimensions:

48.9 mm (W)×40.5 mm (H)×76.0 mm (D)

Mass:

Approx. 56 g

About copyright

■ Carefully observe copyright laws

Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

■ Licenses

- SDXC Logo is a trademark of SD-3C, LLC.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
- Microsoft®, Windows® and Windows Vista® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- iMovie, Mac and Mac OS are trademarks of Apple Inc. registered in the U.S. and other countries.
- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned.

This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard ("AVC Video") and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See <http://www.mpegla.com>.

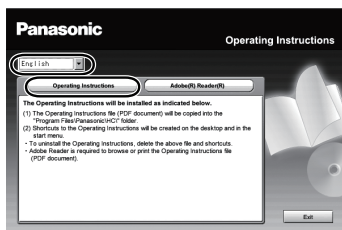
Reading the Operating Instructions (PDF format)

More detailed instructions on the operation of this unit are contained in "Operating Instructions (PDF format)" in the supplied CD-ROM. Install it on your PC to read it.

■ For Windows

1 Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).

2 Select the desired language and then click [Operating Instructions] to install.
(Example: When an English language OS)



3 Double click the "Operating Instructions" shortcut icon on the desktop.

■ When the Operating Instructions (PDF format) will not open

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format).

Download and install a version of Adobe Reader that you can use with your OS from the following Web Site.

<http://get.adobe.com/reader/othersversions>

If using the following OS

- Windows XP SP3
- Windows Vista SP2
- Windows 7

Insert the CD-ROM containing the Operating Instructions (supplied), click [Adobe(R) Reader(R)] and then follow the messages on the screen to install.

■ To uninstall the Operating Instructions (PDF format)

Delete the PDF file from the "Program Files\Panasonic\HC\" folder.

- When the contents in the Program Files folder cannot be displayed, click the [Show the contents of this folder] to display them.

■ For Mac

1 Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).

2 Open the "Manual" folder in the CD-ROM and then copy the PDF file with the desired language inside the folder.

3 Double click the PDF file to open it.

Panasonic Corporation

Web site: <http://panasonic.net>

© Panasonic Corporation 2012

VQT4C40

F0112AS0