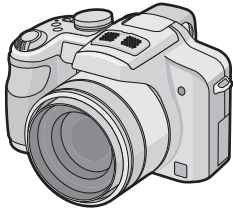


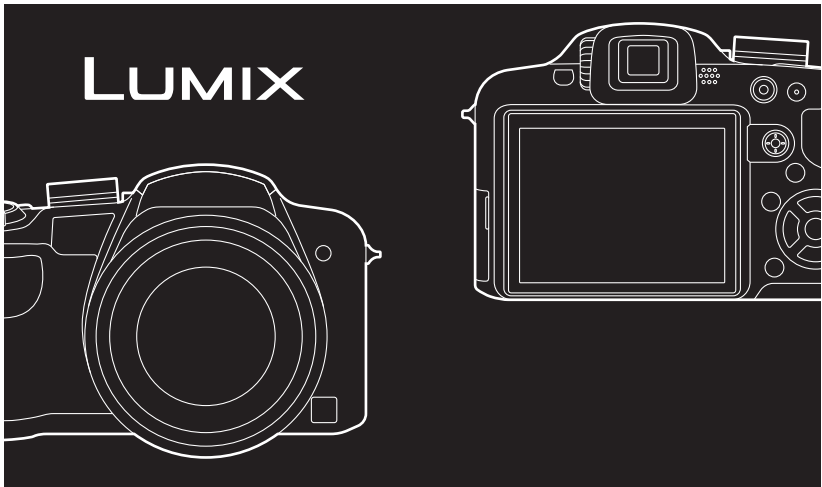
# Panasonic®



## Basic Operating Instructions

Digital Camera

Model No. **DMC-FZ38**



Before use, please read these instructions completely.



Please also refer to **Operating Instructions (PDF format)** recorded on the CD-ROM containing the **Operating Instructions (supplied)**. You can learn about advanced operation methods and check the Troubleshooting.



Web Site: <http://www.panasonic-europe.com>

## Dear Customer,

We would like to take this opportunity to thank you for purchasing this Panasonic Digital Camera. Please read these Operating Instructions carefully and keep them handy for future reference. Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

### 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.

## Information for Your Safety

### WARNING:

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,**

- **DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**
- **USE ONLY THE RECOMMENDED ACCESSORIES.**
- **DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

THE SOCKET OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

Product Identification Marking is located on the bottom of units.

### ■ About the battery pack

#### CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.



#### Warning

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

## Caution for AC mains lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

### CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below. If in any doubt please consult a qualified electrician.

## ■ IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:  
Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:  
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.  
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

**WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  $\perp$  OR COLOURED GREEN OR GREEN/YELLOW.**

**THIS PLUG IS NOT WATERPROOF-KEEP DRY.**

## ■ Before use

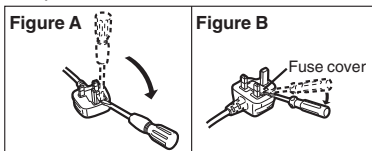
Remove the connector cover.

## ■ How to replace the fuse

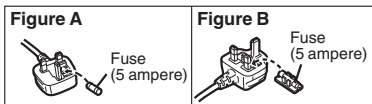
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



## ■ About the battery charger

### CAUTION!

- DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.
- DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.
- DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.
- DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.

- The battery charger is in the standby condition when the AC power supply cord is connected. The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

## ■ Cautions for Use

- When using an AC adaptor, use the AC cable supplied with the AC adaptor.
- Do not use any other AV cables except the supplied one.
- Do not use any other cables except a genuine Panasonic HDMI mini cable (RP-CDHM15, RP-CDHM30; optional).  
Part numbers: RP-CDHM15 (1.5 m) (5 feet), RP-CDHM30 (3.0 m) (10 feet)
- Do not use any other USB connection cables except the supplied one.

### **Keep the camera as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).**

- If you use the camera on top of or near a TV, the pictures and sound on the camera may be disrupted by electromagnetic wave radiation.
- Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and 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 the camera, disturbing the pictures and sound.
- If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn the camera off and remove the battery or disconnect AC adaptor (DMW-AC7E; optional). Then reinsert the battery or reconnect AC adaptor and turn the camera on.

### **Do not use the camera near radio transmitters or high-voltage lines.**

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

## ■ Care of the camera

- **Do not strongly shake or bump the camera by dropping or hitting it. Do not subject to strong pressure.**  
The camera may malfunction, recording pictures may become impossible, or the lens, the LCD monitor or the external case may be damaged.
- **Do not touch the lens or the sockets with dirty hands. Also, be careful not to allow liquids, sand and other foreign matter to get into the space around the lens, buttons etc.**
- Retract the lens before carrying the camera or playing back pictures.
- **Be particularly careful in the following places as they may cause this unit to malfunction.**
  - Places with a lot of sand or dust.
  - Places where water can come into contact with this unit such as when using it on a rainy day or on a beach.
- **This camera is not waterproof. If water or seawater splashes on the camera, use a dry cloth to wipe the camera body carefully.**  
**If the unit does not operate normally, please contact the dealer where you purchased the camera or the repair service centre.**

## ■ About Condensation (When the lens or the Viewfinder is fogged up)

- Condensation occurs when the ambient temperature or humidity changes. Be careful of condensation since it causes lens stains, fungus and camera malfunction.
- If condensation occurs, turn the camera off and leave it for about 2 hours. The fog will disappear naturally when the temperature of the camera becomes close to the ambient temperature.

## ■ About cards that can be used in this unit

You can use an SD Memory Card and an SDHC Memory Card.

- When the term **card** is used in these operating instructions this refers to the following types of Memory Cards.
  - SD Memory Card (8 MB to 2 GB)
  - SDHC Memory Card (4 GB to 32 GB)

More specific information about memory cards that can be used with this unit.

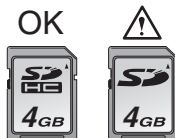
- You can only use an SDHC Memory Card if using cards with 4 GB or more capacity.
- A 4 GB (or more) Memory Card without an SDHC logo is not based on the SD Standard and will not work in this product.

Please confirm the latest information on the following website.

<http://panasonic.jp/support/global/cs/dsc/>

(This Site is English only.)

- Keep the Memory Card out of reach of children to prevent swallowing.



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



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



### For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

### [Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



### Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Cd

# Contents

Information for Your Safety.....	2
----------------------------------	---

## Before Use

Accessories .....	8
Names of the Components .....	9

## Preparation

Charging the Battery.....	12
• Approximate operating time and number of recordable pictures.....	13
Inserting and Removing the Card (optional)/the Battery .....	15
Setting Date/Time (Clock Set) .....	16
• Changing the clock setting.....	16
Setting the Menu.....	17
• Setting menu items .....	17

## Basic

Selecting the [REC] Mode .....	19
Taking pictures using the automatic function	
( <b>IA</b> ): Intelligent Auto Mode).....	21
• Scene detection .....	22
• AF Tracking Function.....	22
Taking pictures with your favourite settings	
( <b>P</b> ): Programme AE Mode).....	23
• Focusing .....	23
Recording Motion Picture .....	24
Playing back Pictures ([NORMAL PLAY]).....	26
Deleting Pictures.....	27
• To delete a single picture.....	27
• To delete multiple pictures (up to 50) or all the pictures.....	27

## Others

Reading the Operating Instructions (PDF format) .....	28
Specifications.....	29

## Sales and Support Information

### Customer Care Centre

- For customers within the UK:  
0844 844 3852
- For customers within the Republic of  
Ireland: 01 289 8333
- Visit our website for product information
- E-mail: [customer.care@panasonic.co.uk](mailto:customer.care@panasonic.co.uk)

### Technical Support for AV Software

- For customers within the UK: 0844 844 3869
- For customers within the Republic of Ireland:  
01 289 8333

### Direct Sales at Panasonic UK

- For customers: 0844 844 3856
- Order accessory and consumable items for  
your product with ease and confidence by  
phoning our Customer Care Centre  
Monday – Thursday 9.00 a.m. – 5.30 p.m.,  
Friday 9.30 a.m. – 5.30 p.m.  
(Excluding public holidays)
- Or go on line through our Internet Accessory  
ordering application at  
[www.panasonic.co.uk](http://www.panasonic.co.uk).
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution  
facilities are provided directly by Panasonic  
UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct  
shopping for a wide range of finished  
products, take a browse on our website for  
further details.

*Interested in purchasing an extended  
guarantee?*

*Please call 0870 240 6284 or visit our website  
[www.panasonic.co.uk/guarantee](http://www.panasonic.co.uk/guarantee).*

## Accessories

Check that all the accessories are included before using the camera.  
Product numbers correct as of July 2009. These may be subject to change.

- 1 Battery Pack  
(Indicated as **battery pack** or **battery** in the text)  
Charge the battery before use.
- 2 Battery Charger  
(Indicated as **battery charger** or **charger** in the text)
- 3 AC Mains Lead
- 4 USB Connection Cable
- 5 AV Cable
- 6 CD-ROM
  - Software:  
Use it to install the software to your PC.
- 7 CD-ROM
  - Operating Instructions
- 8 Shoulder Strap
- 9 Lens Cap/Lens Cap String
- 10 Lens Hood
- 11 Hood Adaptor

• SD Memory Card and SDHC Memory Card are indicated as **card** in the text.

• **The card is optional.**

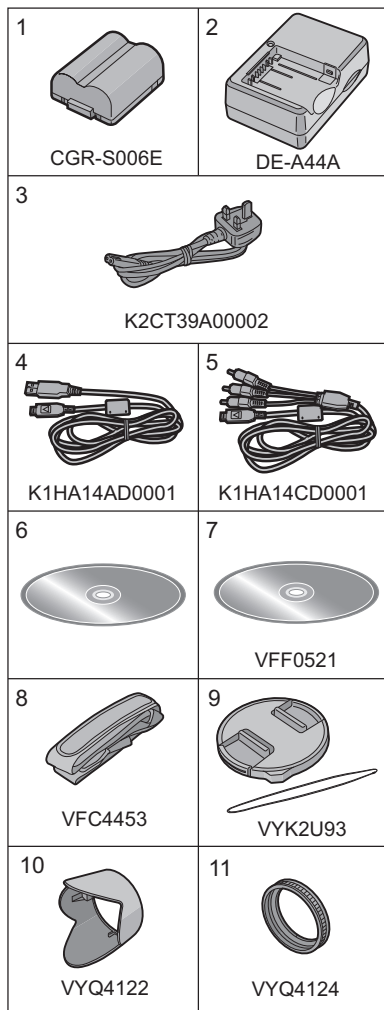
**You can record or play back pictures on the built-in memory when you are not using a card.**

• Consult the dealer or your nearest Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)

■ **Optional Accessories**

- Battery Pack: CGR-S006E
- AC Adaptor: DMW-AC7EB
- PL Filter/MC Protector/ND Filter:  
DMW-LPL46/DMW-LMC46/DMW-LND46
- Tele Conversion Lens\*: DMW-LT55
- Close-up Lens\*: DMW-LC55
- Lens Adapter: DMW-LA3
- HDMI mini cable:  
RP-CDHM15/RP-CDHM30
- SDHC Memory Card:  
32 GB: RP-SDW32GE1K  
16 GB: RP-SDW16GE1K/RP-SDP16GE1K  
12 GB: RP-SDP12GE1K  
8 GB: RP-SDW08GE1K/RP-SDP08GE1K/  
RP-SDR08GE1A  
4 GB: RP-SDW04GE1K/RP-SDP04GE1K/  
RP-SDR04GE1A
- SD Memory Card:  
2 GB: RP-SDP02GE1K/RP-SDR02GE1A
- CardBus PC Card Adapter:  
BN-SDPC3E

\* The lens adaptor (DMW-LA3; optional) is necessary to attach a tele conversion lens or close-up lens.

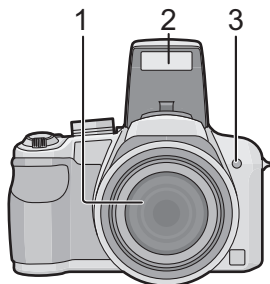


Some optional accessories may not be available in some countries.

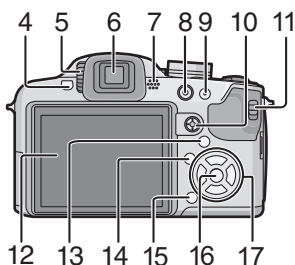


## Names of the Components

- 1 Lens
- 2 Flash
- 3 Self-timer indicator  
AF assist lamp

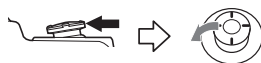


- 4 Flash open button
- 5 Diopter adjustment dial
- 6 Viewfinder
- 7 Speaker
- 8 Motion picture button
- 9 [AF/AE LOCK] button
- 10 Joystick



The joystick is operated in two different ways: it can be moved in the up, down, left and right directions to perform an operation, or it can be pressed to select. In these operating instructions, it is pictured as shown in the figure below or described with ▲/▼/◀/▶.

Example: When the joystick is moved toward ◀ (left)  
Place your finger on the right side of the joystick, and move the joystick toward the left.



or **Move** ◀

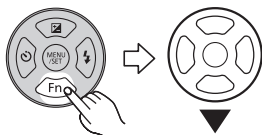
Push the joystick straight in.



or **Press**

- 11 [REC]/[PLAYBACK] selector switch
- 12 LCD monitor
- 13 [EVF/LCD] button
- 14 [DISPLAY] button
- 15 Delete button/  
Single or Burst Mode button
- 16 [MENU/SET] button
- 17 Cursor buttons
  - ◀/ Self-timer button
  - ▼/ Function button
    - Assign [REC] Mode menu to ▼ button. It is convenient to register [REC] Mode menu that is used often.
    - [REVIEW]/[SENSITIVITY]/[WHITE BALANCE]/[METERING MODE]/[AF MODE]/[I.EXPOSURE]
  - ▶/ Flash setting button
  - ▲/ Exposure compensation/  
Auto Bracket/Colour Bracket/Flash output adjustment

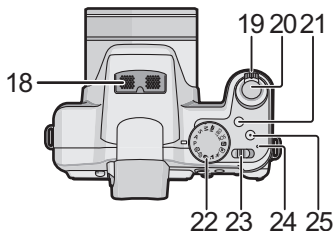
In these operating instructions, the cursor buttons are described as shown in the figure below or described with ▲/▼/◀/▶.  
e.g.: When you press the ▼ (down) button



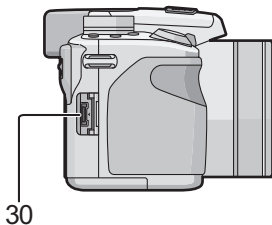
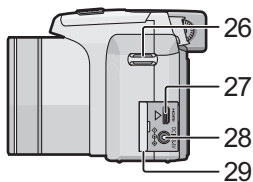
or

**Press ▼**

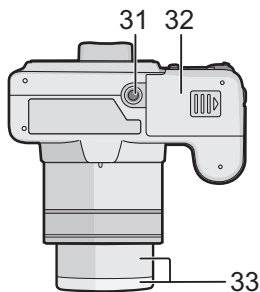
- 18 Stereo microphone
- 19 Zoom lever
- 20 Shutter button
- 21 [FOCUS] button
- 22 Mode dial
- 23 Camera ON/OFF switch
- 24 Power lamp
- 25 [AF/AF-LOCK/MF] button



- 26 Shoulder strap eyelet
- Be sure to attach the shoulder strap when using the camera to ensure that you will not drop it.
- 27 [HDMI] socket
- 28 [DC IN] socket
- Always use a genuine Panasonic AC adaptor (DMW-AC7E; optional).
  - This camera cannot charge the battery even when the AC adaptor (DMW-AC7E; optional) is connected to it.
- 29 Terminal door
- 30 [DIGITAL/AV OUT] socket



- 31 Tripod receptacle
- When you use a tripod, make sure the tripod is stable when the camera is attached to it.
- 32 Card/Battery door
- 33 Lens barrel



## Charging the Battery

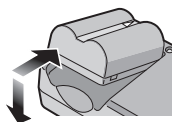
### ■ About batteries that you can use with this unit

The battery that can be used with this unit is CGR-S006E.

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.

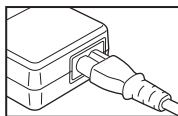
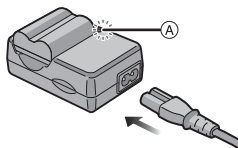
- Use the dedicated charger and battery. The quality, performance and safety of third party batteries other than those that are genuine are not guaranteed.
- The battery is not charged when the camera is shipped. Charge the battery before use.
- Charge the battery with the charger indoors.
- Charge the battery in a temperature between 10 °C to 35 °C (50 °F to 95 °F). (The battery temperature should also be the same.)

- 1 **Attach the battery with attention to the direction of the battery.**

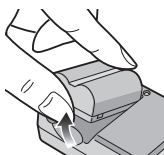


- 2 **Connect the AC mains lead.**

- The AC mains lead does not fit entirely into the AC input terminal. A gap will remain as shown on the right.
- Charging starts when the [CHARGE] indicator **A** lights green.
- Charging is complete when the [CHARGE] indicator **A** turns off.



- 3 **Detach the battery after charging is completed.**



## ■ Charging

<b>Charging time</b>	<b>Approx. 120 min</b>
----------------------	------------------------

- The indicated charging time is for when the battery has been discharged completely. The charging time may vary depending on how the battery has been used. The charging time for the battery in hot/cold environments or a battery that has not been used for long time may be longer than normal.

### Note

- After charging is completed, be sure to disconnect the power supply device from the electrical outlet.
- The battery may be warm after use, during charging, immediately after charging etc. The camera also becomes warm during use. This is not a malfunction.
- The battery will become discharged if left for a long period of time after being charged.
- The battery can be recharged even when it still has some charge left, but it is not recommended that the battery charge be frequently topped up while the battery is fully charged. (Since characteristic swelling may occur.)
- **Do not leave any metal items (such as clips) near the contact areas of the power plug. Otherwise, a fire and/or electric shocks may be caused by short-circuiting or the resulting heat generated.**

## Approximate operating time and number of recordable pictures

### ■ Recording still pictures (When using the LCD monitor/Viewfinder)

<b>Number of recordable pictures</b>	<b>Approx. 470 pictures</b>	(By CIPA standard in Programme AE Mode)
<b>Recording time</b>	<b>Approx. 235 min</b>	

### Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Temperature: 23 °C (73.4 °F)/Humidity: 50% when LCD monitor is on.
- Using a Panasonic SD Memory Card (32 MB).
- Using the supplied battery.
- Starting recording 30 seconds after the camera is turned on. (When the optical image stabilizer function is set to [AUTO].)
- **Recording once every 30 seconds** with full flash every second recording.
- Rotating the zoom lever from Tele to Wide or vice versa in every recording.
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

**The number of recordable pictures varies depending on the recording interval time. If the recording interval time becomes longer, the number of recordable pictures decreases.**

**[e.g. When recording once every 2 minutes, the number of recordable pictures decreases to about 117.]**

### ■ Playback (When using the LCD monitor/Viewfinder)

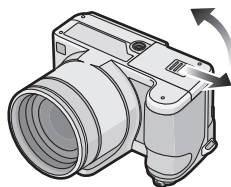
<b>Playback time</b>	<b>Approx. 480 min</b>
----------------------	------------------------

## Inserting and Removing the Card (optional)/the Battery

- Check that this unit is turned off.
- Close the flash.
- We recommend using a Panasonic card.

### 1 Slide the card/battery door to open it.

- Always use genuine Panasonic batteries (CGR-S006E).
- If you use other batteries, we cannot guarantee the quality of this product.

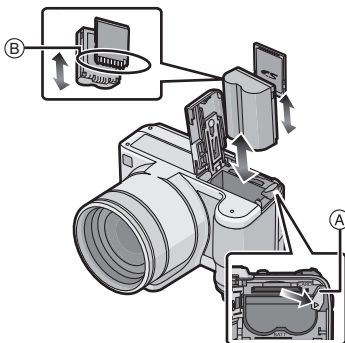


### 2 Battery: Insert until it is locked by the lever (A) being careful about the direction you insert it. Pull the lever (A) in the direction of the arrow to remove the battery.

**Card:** Push it fully until it clicks being careful about the direction you insert it. To remove the card, push the card until it clicks, then pull the card out upright.

(B): Do not touch the connection terminals of the card.

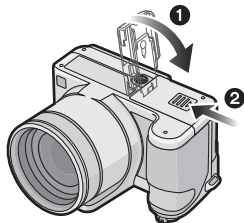
- The card may be damaged if it is not fully inserted.



### 3 ①: Close the card/battery door.

②: Slide the card/battery door to the end and then close it firmly.

- If the card/battery door cannot be completely closed, remove the card, check its direction and then insert it again.



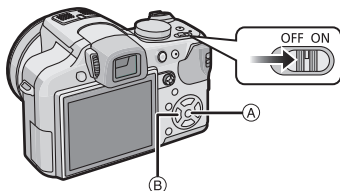
## Setting Date/Time (Clock Set)

- The clock is not set when the camera is shipped.

### 1 Turn the camera on.

- The [PLEASE SET THE CLOCK] message appears. (This message does not appear in [PLAYBACK] Mode.)

- (A) [MENU/SET] button
- (B) Cursor buttons

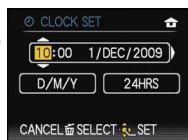


### 2 Press [MENU/SET].



### 3 Press ◀/▶ to select the items (year, month, day, hour, minute, display sequence or time display format), and press ▲/▼ to set.

🗑️: Cancel without setting the clock.



### 4 Press [MENU/SET] to set.

- After completing the clock settings, turn the camera off. Then turn the camera back on, switch to Recording Mode, and check that the display reflects the settings that were performed.
- When [MENU/SET] has been pressed to complete the settings without the clock having been set, set the clock correctly by following the “Changing the clock setting” procedure below.

## Changing the clock setting

Select [CLOCK SET] in the [REC] or [SETUP] menu, and press ▶.

- It can be changed in steps 3 and 4 to set the clock.
- Once a charged battery has been installed for 24 hours, the clock setting is maintained for 3 months using the built-in clock battery even without the battery.



## Setting the Menu

This camera offers menu selections that allow you to customize its operation to maximise your picture taking experience.

In particular, the [SETUP] menu contains some important settings relating to the camera's clock and power. Check the settings of this menu before proceeding to use the camera.

### Setting menu items

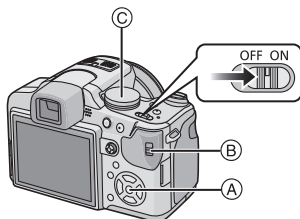
This section describes how to select the Programme AE Mode settings, and the same setting can be used for the [PLAYBACK] menu and [SETUP] menu as well.

Example: Setting [AF MODE] from [□] to [⊙] in the Programme AE Mode

• ▲/▼/◀/▶ in the steps can be operated with the joystick too.

#### 1 Turn the camera on.

- (A) [MENU/SET] button
- (B) [REC]/[PLAYBACK] selector switch
- (C) Mode dial



#### 2 Slide the [REC]/[PLAYBACK] selector switch to [O].

- When selecting the [PLAYBACK] Mode menu settings, set the [REC]/[PLAYBACK] selector switch to [▶], and proceed to step 4.

#### 3 Set the mode dial to [P].

#### 4 Press [MENU/SET] to display the menu.

- You can switch menu screens from any menu item by rotating the zoom lever.



## Switching to the [SETUP] menu

**1** Press **◀**.

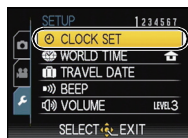


**2** Press **▼** to select the [SETUP] menu icon [🔧].



**3** Press **▶**.

- Select a menu item next and set it.



**5** Press **▲/▼** to select [AF MODE].

- Select the item at the very bottom, and press **▼** to move to the second screen.



**6** Press **▶**.

- Depending on the item, its setting may not appear or it may be displayed in a different way.



**7** Press **▲/▼** to select [👤].



**8** Press [MENU/SET] to set.



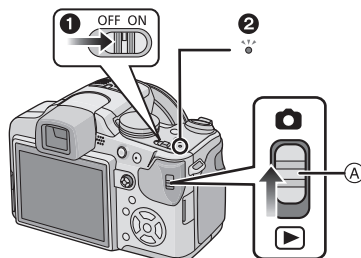
**9** Press [MENU/SET] to close the menu.

## Mode switching

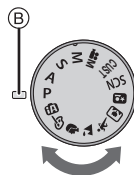
## Selecting the [REC] Mode

**1** Turn the camera on.

- (A) [REC]/[PLAYBACK] selector switch
- The power lamp (2) lights when you turn this unit on (1).

**2** Slide the [REC]/[PLAYBACK] selector switch to [REC].**3** Switching the mode by rotating the mode dial.

- Align a desired mode with part (B).
- Rotate the mode dial slowly and surely to adjust to each mode. (The mode dial rotates 360°)



## ■ Basic

**iA** Intelligent auto mode

The subjects are recorded using settings automatically selected by the camera.

**P** Programme AE mode

The subjects are recorded using your own settings.

## ■ Advanced

### Aperture-priority AE mode

The shutter speed is automatically determined by the aperture value you set.

### Shutter-priority AE mode

The aperture value is automatically determined by the shutter speed you set.

### Manual exposure mode

The exposure is adjusted by the aperture value and the shutter speed which are manually adjusted.

### Creative motion picture mode

Record motion picture with manual settings.

### Custom mode

Use this mode to take pictures with previously registered settings.

### Scene mode

This allows you to take pictures that match the scene being recorded.

### My colour mode

Easily check the colour of light, brightness, and vividness of colour when the picture is taken.

## ■ Advanced Scene Mode

### Portrait mode

Use this mode to take pictures of people.

### Scenery mode

Use this mode to take pictures of scenery.

### Sports mode

Use this mode to take pictures of sporting events, etc.

### Close-up mode

Use this mode to take pictures of a close-by subject.

### Night portrait mode

Use this mode to take pictures of night scenes and people against night time scenery.

[REC] Mode: **[IA]**

## Taking pictures using the automatic function

**[IA]**: Intelligent Auto Mode

The camera will set the most appropriate settings to match the subject and the recording conditions so we recommend this mode for beginners or those who want to leave the settings to the camera and take pictures easily.

• The following functions are activated automatically.

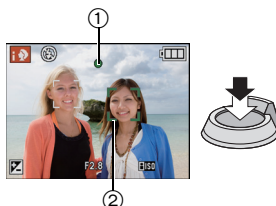
- Scene detection/[STABILIZER]/[INTELLIGENT ISO]/Face detection/Quick AF/[I.EXPOSURE] (Intelligent Exposure)/Digital Red-eye Correction/Backlight Compensation

**1** Slide the [REC]/[PLAYBACK] selector switch to **[📷]**.

**2** Set the mode dial to **[IA]**.

**3** Press the shutter button halfway to focus.

- The focus indication ① (green) lights when the subject is focused.
- The AF area ② is displayed around the subject's face by the face detection function. In other cases, it is displayed at the point on the subject which is in focus.
- The focus range is 1 cm (0.04 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞.
- The maximum close-up distance (the shortest distance at which the subject can be taken) differs depending on the zoom magnification.









**4** Press the shutter button fully (push it in further), and take the picture.









- The access indication lights red when pictures are being recorded on the built-in memory (or the card).
- **Do not turn this unit off, remove its battery or card, or disconnect the AC adaptor (DMW-AC7E; optional) when the access indication is lit [when pictures are being written, read or deleted, or the built-in memory or the card is being formatted]. Furthermore, do not subject the camera to vibration, impact or static electricity. The card or the data on the card may be damaged, and this unit may no longer operate normally.**  
If operation fails due to vibration, impact or static electricity, perform the operation again.



## Scene detection

When the camera identifies the optimum scene, the icon of the scene concerned is displayed in blue for 2 seconds, after which its colour changes to the usual red.


<b>iA</b> →		[i- <b>P</b> ORTRAIT]	
		[i- <b>S</b> CENERY]	
		[i- <b>M</b> ACRO]	
		[i- <b>N</b> IGHT PORTRAIT]	• Only when [ <b>⚡A</b> ] is selected
		[i- <b>N</b> IGHT SCENERY]	
		[i- <b>B</b> ABY]*	

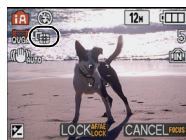
- [**iA**] is set if none of the scenes are applicable, and the standard settings are set.
- When [, [, or [] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. (**Face detection**)
- If a tripod is used, for instance, and the camera has judged that camera shake is minimal when the Scene Mode has been identified as [, the shutter speed will be set to a maximum of 8 seconds. Take care not to move the camera while taking pictures.
- When [FACE RECOG.] is set to [ON], and the face similar to the registered face is detected, [R] is displayed in the top right of [, [, and [].
- \* When [FACE RECOG.] is set to [ON], [] will be displayed for birthdays of registered faces already set only when the face of a person 3 years old or younger is detected.

## AF Tracking Function

It is possible to set the focus to the specified subject. Focus will keep following the subject automatically even if it moves.

### 1 Press [FOCUS].

- [] is displayed in the upper left of the screen.
- AF Tracking frame is displayed in the centre of the screen.
- Press [FOCUS] again to cancel.



FOCUS

### 2 Bring the subject to the AF tracking frame, and press [AF/AE LOCK] to lock the subject

- AF tracking frame will turn yellow.
- An optimum scene for the specified subject will be chosen.
- Press [FOCUS] to cancel.



AF/AE LOCK

[REC] Mode: **P**

## Taking pictures with your favourite settings

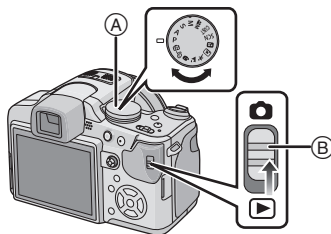
**(P): Programme AE Mode**

The camera automatically sets the shutter speed and the aperture value according to the brightness of the subject.

You can take pictures with greater freedom by changing various settings in [REC] menu.

### 1 Slide the [REC]/[PLAYBACK] selector switch to **[O]**.

- (A) Mode dial
- (B) [REC]/[PLAYBACK] selector switch



### 2 Set the mode dial to **[P]**.

### 3 Aim the AF area at the point you want to focus on.

### 4 Press the shutter button halfway to focus.

- The focus range is 30 cm (0.99 feet) (Wide)/2 m (6.57 feet) (Tele) to ∞.



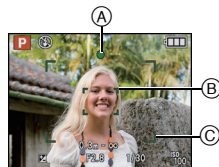
### 5 Press the halfway pressed shutter button fully to take a picture.

- The access indication lights red when pictures are being recorded on the built-in memory (or the card).



## Focusing

Aim the AF area at the subject, and then press the shutter button halfway.



Focus	When the subject is focused	When the subject is not focused
Focus indication	On	Blinks
AF area	White → Green	White → Red
Sound	Beeps 2 times	Beeps 4 times

- (A) Focus indication
- (B) AF area (normal)
- (C) AF area (when using the digital zoom or when it is dark)

[REC] mode: **P A S M**

## Recording Motion Picture

This can record high definition motion pictures compatible with the AVCHD format or motion pictures recorded in Motion JPEG.

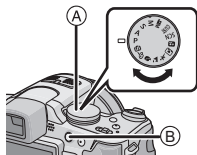
Audio will be recorded in stereo.

- Close the flash. (It is recommended that you close the flash when recording motion pictures. However, leaving the flash open will not result in a significant difference in sound quality.)

**1** Slide the [REC]/[PLAYBACK] selector switch to .

**2** Select the mode.

- (A) Mode dial
- (B) Motion picture button



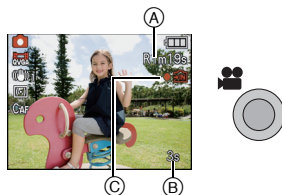
### ■ Modes that can be recorded for motion picture

Item	Settings/Note
<b>Intelligent auto mode</b>	The camera will set the most appropriate settings to match the subject and the recording conditions, so you can leave the settings to the camera and take motion pictures easily.
<b>P/A/S/M</b> mode	Record motion pictures by automatically setting aperture and shutter speed.
<b>Creative motion picture mode</b>	Record motion pictures by manually setting aperture and shutter speed.
<b>Custom mode</b>	Record motion pictures with selected custom mode settings.
<b>Scene mode</b>	Record motion pictures that match the scene being recorded.
<b>[PORTRAIT]</b>	Record motion pictures with settings suitable for portraits.
<b>[SCENERY]</b>	Record motion pictures with settings suitable for scenery.
<b>[SPORTS]</b>	It will be a normal motion picture recording during the motion picture recording.
<b>[CLOSE-UP]</b>	Record motion pictures with settings suitable for close-ups.
<b>[NIGHT PORTRAIT]</b>	Record clear motion pictures with low light setting [] inside dim rooms or at dusk.
<b>My colour mode</b>	Record motion pictures in My colour mode setting.



### 3 Start recording by pressing the motion picture button.

- (A) Available recording time
- (B) Elapsed recording time
- The audio is also recorded simultaneously from the built-in microphone on this unit. (Motion pictures cannot be recorded without audio.)



- The recording state indicator (red) (C) will flash while recording motion pictures.
- Focus can be achieved during recording by pressing [FOCUS].

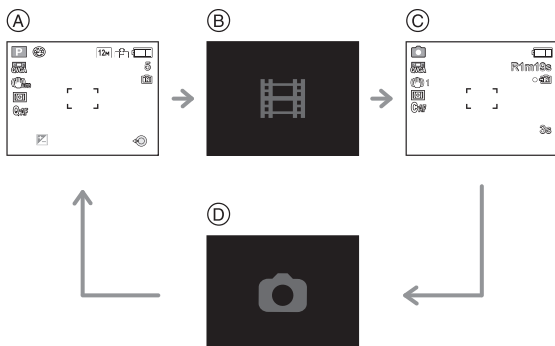
### 4 Stop the recording by pressing the motion picture button again.

- Sound will go off when pressing the motion picture button indicating start/stop of motion picture recording. Sound volume can be set in [BEEP LEVEL].
- If the built-in memory or the card becomes full in the middle of recording, the camera stops recording automatically.

#### Note

- The screen will change as following when the motion picture button is pressed in steps 3 and 4.

- (A) Still picture recording screen
- (B) Motion picture mode setting<sup>\*1</sup>
- (C) Motion picture recording screen
- (D) Still picture mode setting<sup>\*2</sup>




\*1 The screen that is displayed during motion picture mode setting is different depending on the setting of the [REC MODE].

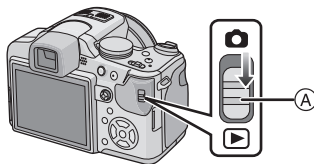
\*2 [CAM] will not be displayed in the Creative Motion Picture Mode.

[PLAYBACK] Mode: 

## Playing back Pictures ([NORMAL PLAY])



### 1 Slide the [REC]/[PLAYBACK] selector switch **A** to .

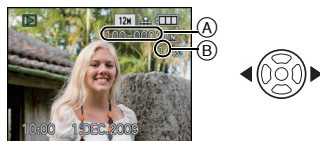
- Normal playback is set automatically in the following cases.
  - When the mode was switched from the [REC] to [PLAYBACK].
  - When the camera was turned on while the [REC]/[PLAYBACK] selector switch was at .





### 2 Press to select the picture.





- A** File number
- B** Picture number


- : Play back the previous picture
- : Play back the next picture



### ■ Fast forwarding/Fast rewinding Press and hold during playback.

- : Fast rewind
- : Fast forward

- The file number **A** and the picture number **B** only change one by one. Release   when the number of the desired picture appears to play back the picture.
- If you keep pressing  , the number of pictures forwarded/rewound increases.

[PLAYBACK] Mode: 

## Deleting Pictures


**Once deleted, pictures cannot be recovered.**

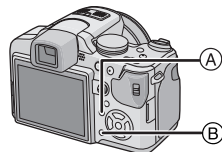
- Pictures on the built-in memory or the card, which is being played back will be deleted.


### To delete a single picture

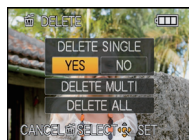
**1** Select the picture to be deleted, and then press .

(A) [DISPLAY] button

(B)  button



**2** Press  to select [YES] and then press [MENU/SET].




### To delete multiple pictures (up to 50) or all the pictures

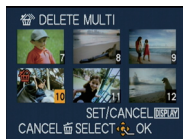
**1** Press .

**2** Press / to select [DELETE MULTI] or [DELETE ALL] and then press [MENU/SET].

- [DELETE ALL] → step 5.

**3** Press /// to select the picture, and then press [DISPLAY] to set. (Repeat this step.)

-  appears on the selected pictures. If [DISPLAY] is pressed again, the setting is cancelled.



**4** Press [MENU/SET].

**5** Press  to select [YES] and then press [MENU/SET] to set.

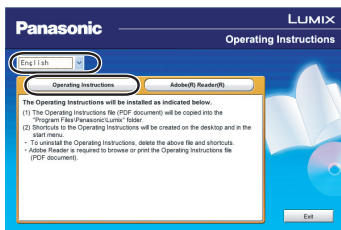
## Reading the Operating Instructions (PDF format)

- You have practised the basic operations introduced in these operating instructions and want to progress to advanced operations.
- You want to check the Troubleshooting.

In these kinds of situations refer to Operating Instructions (PDF format) recorded on the CD-ROM containing the Operating Instructions (supplied).

### ■ 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://www.adobe.com/products/acrobat/readstep2\\_allversions.html](http://www.adobe.com/products/acrobat/readstep2_allversions.html)

### If using Windows 2000 SP4/Windows XP SP2 or SP3/Windows Vista and SP1

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

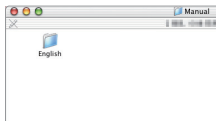
### ■ To uninstall the Operating Instructions (PDF format)

Delete the PDF file from the “Program Files\Panasonic\Lumix\” folder.

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

### ■ For Macintosh

- 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.



## Specifications

<b>Digital Camera:</b>	Information for your safety
<b>Power Source:</b>	DC 8.4 V
<b>Power Consumption:</b>	1.3 W (When recording with LCD Monitor) 1.3 W (When recording with Viewfinder) 0.6 W (When playing back with LCD Monitor) 0.6 W (When playing back with Viewfinder)
<b>Camera effective pixels:</b>	12,100,000 pixels
<b>Image sensor:</b>	1/2.33" CCD, total pixel number 12,700,000 pixels, Primary colour filter
<b>Lens:</b>	Optical 18× zoom, f=4.8 mm to 86.4 mm (35 mm film camera equivalent: 27 mm to 486 mm) Wide: F2.8 to F8.0 (when recording motion pictures: F2.8 to F8.0) Tele: F4.4 to F8.0 (when recording motion pictures: F4.4 to F13)
<b>Digital zoom:</b>	Max. 4×
<b>Extra optical zoom:</b> (Except for the maximum picture size for each aspect ratio)	Max. 35.2×
<b>Focus:</b>	Auto focus/AF Macro/Macro zoom/Manual focus Face detection/AF Tracking/11-area-focusing/1-area-focusing (High speed)/1-area-focusing/Spot-focusing
<b>Focus range:</b>	AF: 30 cm (0.99 feet) (Wide)/2 m (6.57 feet) (Tele) to ∞ AF Macro/MF/Intelligent auto: 1 cm (0.04 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞ However, 2 m (6.57 feet) to ∞ for 4× to 10× zoom 1 m (3.28 feet) to ∞ for 11× to 18× zoom Scene Mode: There may be differences in the above settings.
<b>Shutter system:</b>	Electronic shutter+Mechanical shutter
<b>Burst recording</b>	
<b>Burst speed:</b>	Approx. 2.3 pictures/second
<b>Number of recordable pictures:</b>	Max. 5 pictures (Standard), max. 3 pictures (Fine)
<b>Hi-speed burst</b>	
<b>Burst speed:</b>	Approx. 10 pictures/second (Speed priority) Approx. 6 pictures/second (Image priority) (3M (4:3), 2.5M (3:2) or 2M (16:9) is selected as the picture size.)
<b>Number of recordable pictures:</b>	15 to 100 (differs depending on the type of Card and the recording conditions)

**ISO sensitivity  
(Standard Output  
Sensitivity)**

**Still picture:** AUTO/80/100/200/400/800/1600  
[HIGH SENS.] Mode: 1600 to 6400

**Motion pictures:** AUTO/400/800/1600/3200/6400

**Shutter speed**

**Still picture:** Wide: 60 seconds to 1/2000th of a second  
Tele: 60 seconds to 1/1300th of a second  
[STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds

**Motion pictures:** 1/30 to 1/20000th of a second  
Creative Motion Picture Mode  
(Manual exposure/Manual focus): 1/8 to 1/20000th of a second

**White balance:**

Auto white balance/Daylight/Cloudy/Shade/Flash/Incandescent lights/White set1/White set2/White balance K set

**Exposure (AE):**

Programme AE (P)/Aperture-priority AE (A)/Shutter-priority AE (S)/Manual exposure (M)  
Exposure compensation (1/3 EV Step, -2 EV to +2 EV)

**Metering mode:**

Multiple/Centre weighted/Spot

**LCD monitor:**

2.7" TFT LCD  
(Approx. 230,000 dots) (field of view ratio about 100%)

**Viewfinder:**

Colour LCD Viewfinder (Approx. 201,000 dots)  
(field of view ratio about 100%)  
(with diopter adjustment -4 to +4 diopter)

**Flash:**

Built-in pop up flash  
Flash range: [ISO AUTO]  
Approx. 30 cm (0.99 feet) to 8.5 m (27.9 feet) (Wide)  
AUTO, AUTO/Red-eye reduction, Forced flash ON (Forced ON/  
Red-eye reduction), Slow sync./Red-eye reduction, Forced  
flash OFF

**Microphone:**

Stereo

**Speaker:**

Monaural

**Recording media:**

Built-in Memory (Approx. 40 MB)/SD Memory Card/SDHC  
Memory Card

**Picture size**

**Still picture:** When the aspect ratio setting is [4:3]  
4000×3000 pixels, 3264×2448 pixels, 2560×1920 pixels,  
2048×1536 pixels, 1600×1200 pixels, 640×480 pixels  
When the aspect ratio setting is [3:2]  
4000×2672 pixels, 3264×2176 pixels, 2560×1712 pixels,  
2048×1360 pixels  
When the aspect ratio setting is [16:9]  
4000×2248 pixels, 3264×1840 pixels, 2560×1440 pixels,  
1920×1080 pixels

- Motion pictures:** [AVCHD Lite] (With audio)  
 When set to [SH]: 1280×720 pixels  
 (50p recording\*/17 Mbps, only when card is used) /  
 When set to [H]: 1280×720 pixels  
 (50p recording\*/13 Mbps, only when card is used) /  
 When set to [L]: 1280×720 pixels  
 (50p recording\*/9 Mbps, only when card is used)  
 \* CCD output is at 25 fps  
 [MOTION JPEG] (With audio)  
 When set to [HD]: 1280×720 pixels  
 (30 frames / sec., only when card is used) /  
 When set to [WVGA]: 848×480 pixels  
 (30 frames / sec., only when card is used) /  
 When set to [VGA]: 640×480 pixels  
 (30 frames / sec., only when card is used) /  
 When set to [QVGA]: 320×240 pixels (30 frames / sec.)
- Motion pictures can be recorded continuously for up to 29 minutes 59 seconds. Also, motion picture recorded continuously in [MOTION JPEG] is up to 2 GB. (Example: [8m 20s] with [MOTION JPEG]) Remaining time for continuous recording is displayed on the screen.

**Quality:** Fine/Standard/RAW/RAW+JPEG

**Recording file format**

**Still Picture:** JPEG (based on "Design rule for Camera File system", based on "Exif 2.21" standard)/RAW, DPOF corresponding

**Motion pictures with audio:**

AVCHD Lite/QuickTime Motion JPEG

**Interface**

**Digital:**

"USB 2.0" (High Speed)

\*Data from the PC can not be written to the camera using the USB connection cable.

**Analogue video/audio:** NTSC/PAL Composite (Switched by menu)  
 Audio line output (stereo)

**Terminal**

**[DIGITAL/AV OUT]:** Dedicated jack (14 pin)

**[DC IN]:** Type 3 jack

**[HDMI]:** MiniHDMI TypeC

**Dimensions:**

Approx. 117.6 mm (W)×75.8 mm (H)×88.9 mm (D)  
 [4 5/8" (W)×3"(H)×3 1/2" (D)] (excluding the projecting parts)

**Mass:**

Approx. 367 g/12.94 oz (excluding card and battery)  
 Approx. 414 g/14.60 oz (with card and battery)

**Operating temperature:** 0 °C to 40 °C (32 °F to 104 °F)

**Operating humidity:** 10% to 80%

**Battery Charger (Panasonic DE-A44A):**

Information for your safety

**Input:** 110 V to 240 V ~ 50/60 Hz, 0.15 A

**Output:** CHARGE 8.4 V --- 0.43 A

**Battery Pack (lithium-ion) (Panasonic CGR-S006E):**

Information for your safety

**Voltage/capacity (Minimum):**

7.2 V/695 mAh

- SDHC Logo is a trademark.
- The "AVCHD", "AVCHD Lite" and the "AVCHD", "AVCHD Lite" logo are trademarks of Panasonic Corporation and Sony Corporation.
- Manufactured under license from Dolby Laboratories.  
Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI Logo and the High-Definition Multimedia Interface are the registered trademarks or trademarks of HDMI Licensing LLC.
- HDAVI Control™ is a trademark of Panasonic Corporation.
- QuickTime and the QuickTime logo are trademarks or registered trademarks of Apple Inc., used under license therefrom.
- Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.
- Other names, company names, and product names printed in these instructions are trademarks or registered trademarks of the companies 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>.

**AVCHD** Lite™

**DOLBY**  
DIGITAL  
STEREO CREATOR

**HDMI**™  
HIGH-DEFINITION MULTIMEDIA INTERFACE



**VIERA**  
Link

EU



**B**

VQT2E88

F0709HY0 ( 7000 Ⓐ)

Ⓒ

**Panasonic Corporation**

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

Pursuant to at the directive 2004/108/EC, article 9(2)  
Panasonic Testing Centre  
Panasonic Marketing Europe GmbH  
Winsbergring 15, 22525 Hamburg, Germany

© Panasonic Corporation 2009

