

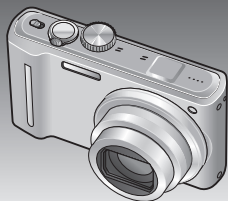
# Panasonic®

## Basic Operating Instructions

Digital Camera

Model No. **DMC-TZ10**

LUMIX



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>

Model number suffix "EB" denotes UK model.

**EB**

VQT2L71

## 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.

## 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  OR COLOURED GREEN OR GREEN/YELLOW.**

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

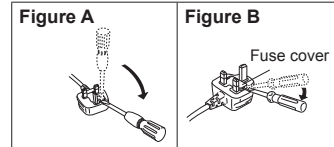
### Before use

Remove the connector cover.

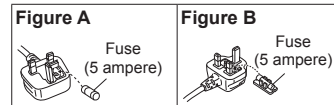
### How to replace the fuse

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.

- Open the fuse cover with a screwdriver.



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



## ■ 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.

## ■ 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 USB connection cables except the supplied one.
- Do not use any other cables except a genuine Panasonic HDMI mini cable (RP-CDHM15/RP-CDHM30; optional).

### 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-AC5E; 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.

## 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.



Cd

### 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.

# Contents

## Information for Your Safety .....2



### Before use

#### Standard accessories .....8

#### Names of parts.....10

Cursor button .....11



### Preparations

#### Charging battery.....12

#### Inserting and removing the card

#### (optional)/the battery .....14

Picture save destination  
(cards and built-in memory) .....15

#### Setting the clock.....16

About GPS .....17

#### Setting the menu .....18



### Basics

#### Selecting the [REC] mode.....19

#### Taking pictures with automatic settings

#### [INTELLIGENT AUTO] Mode ....20

AF Tracking .....21

#### Taking motion pictures .....22

#### Viewing your pictures

#### [NORMAL PLAY] .....23

#### Deleting pictures .....23



### Others

#### Reading the Operating

#### Instructions (PDF format) .....24

#### Specifications .....26

This product is licensed under the AVC patent portfolio license for the personal and noncommercial 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>.

# Standard accessories

Check that all the accessories are included before using the camera. Part numbers are as of January 2010.

## Battery Pack

DMW-BCG10E

- Charge the battery before use.

Battery Pack is indicated as battery pack or battery in the text.



## AC Mains Lead

K2CT39A00002



## Hand Strap

VFC4297



## Battery Charger

DE-A66A

Battery Charger is indicated as battery charger or charger in the text.



## USB Connection Cable

K1HA14AD0003



## AV Cable

K1HA14CD0004



## Battery Carrying Case

VGQ0E45

- Cards are 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 servicer if you lose the supplied accessories. (You can purchase the accessories separately.)
- Please dispose of all packaging appropriately.



## CD-ROM

VFF0577

- Software: Use it to install the software on your PC.
- Operating Instructions



## ■ Optional Accessories

- Lithium Ion Battery: DMW-BCG10E
- AC Adaptor: DMW-AC5EB
- SDXC Memory Card
  - 48 GB RP-SDW48GE1K
  - 64 GB RP-SDW64GE1K
- SDHC Memory Card
  - 4 GB RP-SDW04GE1K
  - 4 GB RP-SDP04GE1K
  - 4 GB RP-SDR04GE1A
  - 8 GB RP-SDW08GE1K
  - 8 GB RP-SDP08GE1K

- 8 GB RP-SDR08GE1A
- 16 GB RP-SDW16GE1K
- 16 GB RP-SDP16GE1K
- 24 GB RP-SDP24GE1K
- 32 GB RP-SDW32GE1K
- 32 GB RP-SDP32GE1K
- SD Memory Card
  - 2 GB RP-SDP02GE1K
  - 2 GB RP-SDR02GE1A
- Some optional accessories may not be available in some countries.

## 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 [www.panasonic.co.uk](http://www.panasonic.co.uk)
- E-mail: [customer.care@panasonic.co.uk](mailto:customer.care@panasonic.co.uk)

### Technical Support for AV Software

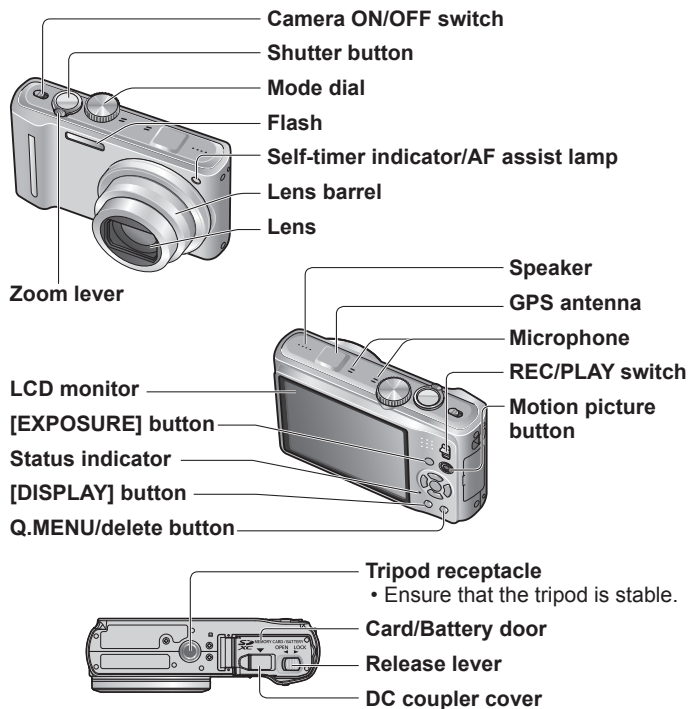
- For customers within the UK: 0844 844 3869
- For customers within the Republic of Ireland: 01 289 8333

### Direct Sales at Panasonic UK

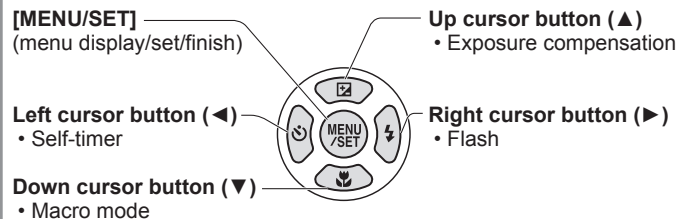
- For customers: 0844 844 3856
- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday–Thursday 9.00 a.m.–5.30 p.m., Friday 9.30 a.m.–5.30 p.m. (Excluding public holidays)
- Or go on line through our Internet Accessory ordering application at [www.pas-europe.com](http://www.pas-europe.com)
- 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.

# Names of parts

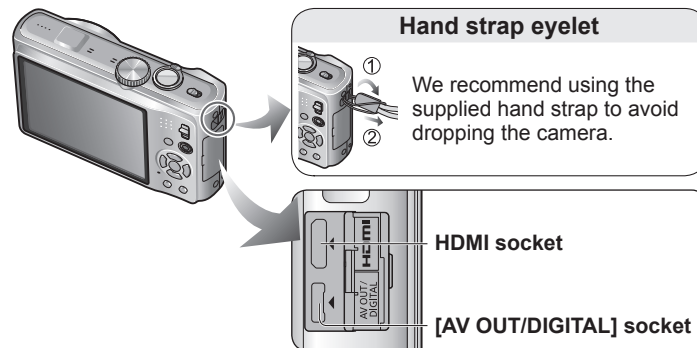
The illustrations and screens in this manual may differ from the actual product.



## Cursor button



● In this manual, the button that is used is shaded or indicated by ▲ ▼ ◀ ▶.



- Always use a genuine Panasonic AC adaptor (DMW-AC5E; optional).
- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC5; optional) and AC adaptor (DMW-AC5E; optional) are used.

- We recommend you use a battery with sufficient battery power or the AC adaptor when recording motion pictures.
- If while recording motion pictures using the AC adaptor the power supply is cut off due to a power cut or if the AC adaptor is disconnected etc., the motion picture being recorded will not be recorded.

## Charging battery

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

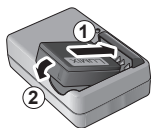
The battery that can be used with this unit is DMW-BCG10E.

It has been found that counterfeit battery packs which look very similar to the genuine products 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 camera has a function for distinguishing batteries which can be used safely. The dedicated battery (DMW-BCG10E) supports this function. The only batteries suitable for use with this unit are genuine Panasonic products and batteries manufactured by other companies and certified by Panasonic. (Batteries which do not support this function cannot be used). Panasonic cannot in any way guarantee the quality, performance or safety of batteries which have been manufactured by other companies and are not genuine Panasonic products.
- The battery is not charged when the camera is shipped. Charge the battery and set the clock before use.
- Charge the battery with the charger indoors (10 °C - 35 °C).

### 1 Insert the battery terminals and attach the battery to the charger

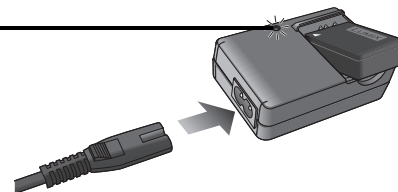
Ensure [LUMIX] faces outwards.



### 2 Connect the charger to the electrical outlet

#### Charging light ([CHARGE])

- On: Charging in progress (approx. 130 min. if fully depleted)
- Off: Charging complete



### 3 Detach the battery after charging is completed

#### ■ Guidelines for number of recordable pictures and recording time

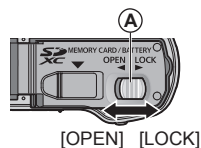
Number of recordable pictures	Approx. 300 pictures
Recording time	Approx. 150 min
Playback time	Approx. 300 min

#### Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
  - [PROGRAM AE] Mode
  - [GPS SETTING] is set to [OFF]
  - Temperature: 23 °C/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 decreases when [LCD MODE] is used.

# Inserting and removing the card (optional)/the battery

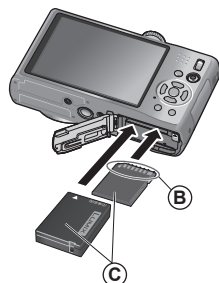
**1** Set the camera ON/OFF switch to OFF and slide the release lever (A) to [OPEN] before opening the lid



**2** Completely insert battery and card

- Battery: Push in until the lever is locked
- Memory card: Push in until it clicks

- (B) Do not touch terminal
- (C) Check orientation

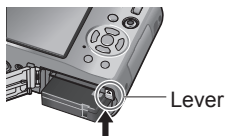


**3** Close lid

Slide to the [LOCK] position.

## ■ To remove

- **To remove battery:** move lever in direction of arrow.



- **To remove card:** press down in centre.



- Always use genuine Panasonic batteries (DMW-BCG10E).
- If you use other batteries, we cannot guarantee the quality of this product.
- The card may be damaged if it is not fully inserted.

## Picture save destination (cards and built-in memory)

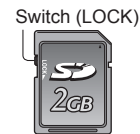
### ■ Built-in memory (approx. 15 MB)

- The built-in memory can be used as a temporary storage device when the card being used becomes full.
- The access time for the built-in memory may be longer than the access time for a card.

### ■ Compatible memory cards (optional)

The following SD standard-based cards (Panasonic brand recommended)

Type of Card	Capacity	Notes
SD memory cards	8 MB – 2 GB	<ul style="list-style-type: none"> <li>• Can be used with devices compatible with the respective formats.</li> <li>• Before using SDXC memory cards, check that your computer and other devices support this type of card. <a href="http://panasonic.net/avc/sdcard/information/SDXC.html">http://panasonic.net/avc/sdcard/information/SDXC.html</a></li> <li>• Cards in capacities not listed at left are not supported.</li> </ul>
SDHC memory cards	4 GB – 32 GB	
SDXC memory cards	48 GB – 64 GB	



- If the write-protect switch is set to 'LOCK', the card cannot be used to record or delete pictures, and it cannot be formatted.
- Latest information: <http://panasonic.jp/support/global/cs/dsc/> (This Site is English only.)

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



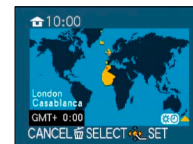
## Setting the clock

The clock is not set when the camera is shipped.

- 1 Turn on the power (A)
- 2 Press [MENU/SET] (B) while the message is displayed
- 3 Press ◀▶ to select the items (year, month, day, hour, minute, display order or time display format), and press ▲▼ to set
  - To cancel → Press ⏏.
- 4 Press [MENU/SET]
- 5 Confirm the setting and press [MENU/SET]
  - To return to the previous screen, press ⏏.



- 6 Press ▲▼ to select [YES] and press [MENU/SET] if automatically correcting time of day
  - To manually set date and time →select [NO].
- 7 When [PLEASE SET THE HOME AREA] is displayed, press [MENU/SET]
- 8 Press ◀▶ to set your home area and press [MENU/SET]
  - The current time and home area are set.
  - [GPS SETTING] turns [ON].
  - Turn on power again and check time display.



### ■ To change time setting

Select [CLOCK SET] from [REC] or [SETUP] menu, perform 3 and 4.

## About GPS

When GPS is used, the camera performs the following functions.

- Records location name information and the latitude and longitude for the positioned location on the recorded pictures
- Corrects automatically to the current time

### ■ The GPS function can be used even when the camera's power is off.

When [GPS SETTING] is [ON], the GPS function works to check your current position periodically even if the camera's power is OFF.

- When turning off the camera's power in an airplane, hospital or other restricted area, set [GPS SETTING] to ⏏ or [OFF].
- When [GPS SETTING] is [ON], power will drain from the battery even if the camera's power is OFF.


## Setting the menu


Refer to the following procedures to operate menus such as the [SETUP] menu, [REC] menu, [TRAVEL MODE] menu and [PLAYBACK] menu.

**Example: Setting [GPS SETTING] from [OFF] to [ON] in the [PROGRAM AE] Mode**

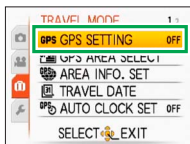
- 1 Press [MENU/SET] to display the menu 

**Switching to the [TRAVEL MODE] menu**

- 1 Press ◀.
- 2 Press ▼ to select the [TRAVEL MODE] menu icon .
- 3 Press ▶.
  - Select a menu item next and set it.



- 2 Press ▲▼ to select [GPS SETTING] and then press ▶
  - Depending on the item, its setting may not appear or it may be displayed in a different way.




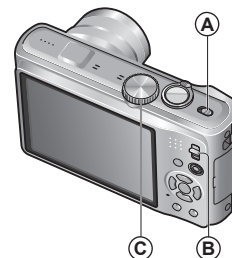
- 3 Press ▲▼ to select [ON] and then press [MENU/SET] to set





- 4 Press [MENU/SET] to close the menu

## Selecting the [REC] mode

- 1 Turn on the power (A)
- 2 Slide the [REC/PLAY] switch (B) to 
- 3 Switching the mode by rotating the mode dial (C)





 <b>[INTELLIGENT AUTO] Mode</b>	Take pictures with automatic settings.
<b>P</b> <b>[PROGRAM AE] Mode</b>	The subjects are recorded using your own settings.
<b>A</b> <b>[APERTURE-PRIORITY] Mode</b>	The shutter speed is automatically determined by the aperture value you set.
<b>S</b> <b>[SHUTTER-PRIORITY] Mode</b>	The aperture value is automatically determined by the shutter speed you set.
<b>M</b> <b>[MANUAL EXPOSURE] Mode</b>	The exposure is adjusted by the aperture value and the shutter speed which are manually adjusted.
<b>CUST</b> <b>[CUSTOM] Mode</b>	Use this mode to take pictures with previously registered setting.
<b>MS1</b> <b>[MY SCN MODE]</b>	
<b>MS2</b> <b>[SCENE MODE]</b>	Take pictures in frequently-used scene modes.
<b>SCN</b> <b>[SCENE MODE]</b>	Take pictures according to scene.
 <b>[CLIPBOARD] Mode</b>	Take pictures as memos.

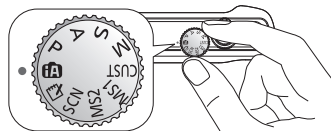
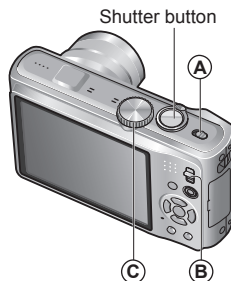
# Taking pictures with automatic settings

[INTELLIGENT AUTO] Mode

Recording mode: 

Optimum settings are made automatically from information such as 'face,' 'movement,' 'brightness,' and 'distance' just by pointing the camera at the subject, meaning that clear pictures can be taken without the need to make settings manually.

- 1 Turn on the power (A)
- 2 Slide the [REC/PLAY] switch (B) to 
- 3 Set the mode dial (C) to 



- 4 Take pictures



Press halfway  
(press lightly and focus)












Press fully  
(press the button all the way to record)



- If jitter becomes noticeable, use both hands, keep your arms close to your body, and stand with your feet at shoulder width.
- **Focus display (D)**  
(In focus: lit / Not in focus: flashing)
- The AF area (E) 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.



## Automatic scene detection

Camera identifies scene when pointed at subject, and makes optimum settings automatically. The type of scene detected is indicated by a blue icon for two seconds.

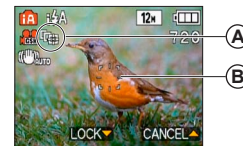
	Recognises people [i PORTRAIT]
	Recognises babies [i BABY] (When babies (under 3 years) that are registered with the face recognition function are recognised)
	Recognises landscapes [i SCENERY]
	Recognises night scenes and people in them [i NIGHT PORTRAIT] (Only when  is selected)
	Recognises night scenes [i NIGHT SCENERY]
	Recognises close-ups [i MACRO]
	Recognises sunsets [i SUNSET]
	Reads subject movement to avoid blurring when scene does not correspond to any of the above.



If the camera automatically identifies the scene and determines that people appear as subjects in the picture ( or ) , face detection is activated, and the focus and exposure are adjusted for the recognised faces.

## AF Tracking

Even if a subject where the focus was locked (AF Lock) moves, the camera can continue to keep it in focus.

- 1 Press 
  - (A) AF tracking icon
  - (B) AF tracking frame
  - Press  again to cancel.



- 2 Align the AF tracking frame with the subject, and then press  to lock
  - The optimum scene is detected for the subject where the focus was locked (AF Lock).
  - AF Lock successful: Yellow
  - AF Lock failed: Red (flash)
  - Press  to cancel.

## Taking motion pictures

Recording mode:

Enables motion pictures to be recorded with (stereo) audio. (Recording with muted sound is not possible.) Zoom can also be used during recording.

**1** Slide the [REC/PLAY] switch to

**2** Set the mode dial to any except

**3** Start recording

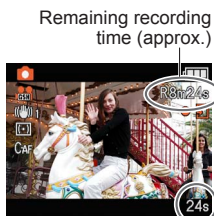


Press

**4** End recording



Press



Elapsed recording time

- Immediately release the motion picture button after pressing it all the way.
- When there is no space left to store the motion picture, recording automatically ends.
- 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. To record more than 29 minutes 59 seconds or 2 GB, press the motion picture button again. (Remaining time for continuous recording is displayed on the screen.)

## Viewing your pictures [NORMAL PLAY]

Playback mode:

**1** Slide the [REC/PLAY] switch **(A)** to

**2** Press to select the picture



- To play back a motion picture, select an image with or , and then press to start playback.



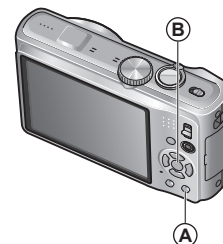
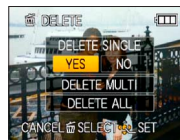
## Deleting pictures

Playback mode:

Deleted pictures cannot be recovered.

**1** Press **(A)** to delete displayed picture

**2** Press to select [YES] and then press [MENU/SET] **(B)**



# Reading the Operating Instructions

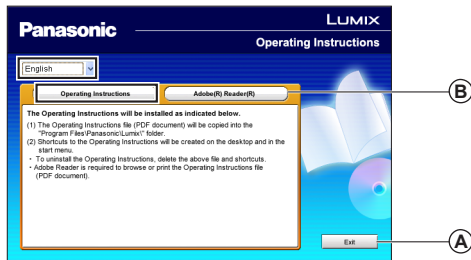
(PDF format)

- 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 Click the [Operating Instructions]
- 3 Select the desired language and then click [Operating Instructions] to install



- A To return to the install menu.  
B See next page.

- 4 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). Insert the CD-ROM containing the Operating Instructions (supplied), click (B) and then follow the messages on the screen to install. Compatible OS: Windows 2000 SP4/Windows XP SP2 or SP3/Windows Vista SP1 or SP2/Windows 7

- You can 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/otherversions>

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

Delete the PDF file from the 'Program Files\Panasonic\Lumix\1' 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

## Digital Camera: Information for your safety

<b>Power Source</b>	DC 5.1 V
<b>Power Consumption</b>	When recording: 1.3 W When playing back: 0.6 W
<b>Camera effective pixels</b>	12,100,000 pixels
<b>Image sensor</b>	1/2.33" CCD, total pixel number 14,500,000 pixels Primary colour filter
<b>Lens</b>	Optical 12 x zoom f=4.1 mm to 49.2 mm (35 mm film camera equivalent: 25 mm to 300 mm)/ F3.3 to F4.9
<b>Digital zoom</b>	Max. 4 x
<b>Extra optical zoom</b>	Max. 23.4 x
<b>Focus range</b>	
<b>P/A/S/M</b>	50 cm (1.64 feet) (Wide)/ 2 m (6.56 feet) (Tele) to ∞
<b>Macro/ Intelligent Auto/ Clipboard/ Motion picture</b>	3 cm (0.10 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞ (5 × to 8 × is 2 m (6.56 feet) to ∞)
<b>Scene mode</b>	There may be difference in above settings.
<b>Shutter system</b>	Electronic shutter + Mechanical shutter
<b>Burst recording</b>	
<b>Burst speed</b>	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)
<b>Number of recordable pictures</b>	Approx. 15 pictures (When using the built-in memory, immediately after formatting) Max. 100 pictures (When using a card, it may differ depending on the type of card and the recording conditions)
<b>Shutter speed</b>	60 to 1/2000 th [STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds
<b>Exposure (AE)</b>	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)
<b>Metering mode</b>	Multiple/Centre weighted/Spot
<b>LCD monitor</b>	3.0" TFT LCD (Approx. 460,800 dots) (field of view ratio about 100 %)
<b>Flash</b>	Flash range: (ISO AUTO) Approx. 60 cm (1.97 feet) to 5.3 m (17.4 feet) (Wide)
<b>Microphone</b>	Stereo
<b>Speaker</b>	Monaural
<b>Recording media</b>	Built-in Memory (Approx. 15 MB)/SD Memory Card/ SDHC Memory Card/SDXC Memory Card
<b>Recording file format</b>	
<b>Still Picture</b>	JPEG (based on Design rule for Camera File system, based on Exif 2.21 standard)/DPOF corresponding
<b>Still pictures with audio</b>	JPEG (based on Design rule for Camera File system, based on Exif 2.21 standard) + QuickTime
<b>Motion pictures</b>	AVCHD Lite/ QuickTime Motion JPEG (motion pictures with audio)

## Specifications (Continued)

## MEMO

<b>Interface</b>	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 Composit (Switched by menu), Audio line output (stereo)
<b>Terminal</b>	HDMI: HDMI mini cable (type C) AV OUT/DIGITAL: Dedicated jack (14 pin)
<b>Dimensions</b>	Approx. 103.3 mm (W) x 59.6 mm (H) x 32.6 mm (D) [4.07" (W) x 2.35" (H) x 1.28" (D)] (excluding the projection part)
<b>Mass</b>	With card and battery: Approx. 218 g (0.480 lb) Excluding card and battery: Approx. 196 g (0.432 lb)
<b>Operating temperature</b>	0 °C to 40 °C
<b>Operating humidity</b>	10 % to 80 %
<b>GPS</b>	Reception frequency: 1575.42 MHz (C/A code) Geographical coordinate system: WGS84

### Battery charger

(Panasonic DE-A66A): Information for your safety

<b>Input</b>	110 V to 240 V 50/60Hz, 0.2 A
<b>Output</b>	4.2 V === 0.65 A (Battery charging)

### Battery Pack (lithium-ion)

(Panasonic DMW-BCG10E): Information for your safety

<b>Voltage/capacity</b>	3.6 V/895 mAh
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**MEMO**

**MEMO**



# HDMI

# VIERA Link

# AVCHD Lite™

# DOLBY

DIGITAL  
STEREO CREATOR



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# B

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

Pursuant to at the directive 2004/108/EC, article 9(2)  
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