

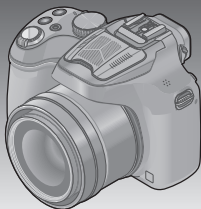
# Panasonic®

## Basic Operating Instructions

### Digital Camera

Model No. **DMC-FZ72**

**LUMIX**



Please read these instructions carefully before using this product, and save this manual for future use.



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



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

Model number suffix "EB" denotes UK model.

**EB**

VQT5B69  
M0713KZ0

## 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 unit to rain, moisture, dripping or splashing.
- Use only the recommended accessories.
- Do not remove covers.
- Do not repair this unit by yourself. Refer servicing to qualified service personnel.

The socket outlet shall be installed near the equipment and shall be easily accessible.

## ■ Product identification marking

| Product         | Location |
|-----------------|----------|
| Digital camera  | Bottom   |
| Battery charger | Bottom   |

## ■ About the battery pack

### 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.
- 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.

## **Warning**

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

### **■ About the battery charger**

#### **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.

- 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 Mains Lead supplied with the AC adaptor.
- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
- Use a “High Speed HDMI mini cable” with the HDMI logo.  
Cables that do not comply with the HDMI standards will not work.  
“High Speed HDMI mini cable” (Type C-Type A plug, up to 3 m (9.8 feet) long)
- Always use a genuine Panasonic AV cable (DMW-AVC1: optional).

#### **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 (DMW-AC8E: optional). 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.

## 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.

### ■ Before use

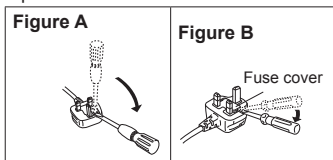
Remove the connector cover.

### ■ How to replace the fuse

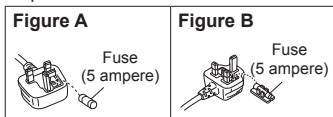
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

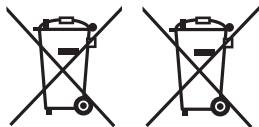


2. Replace the fuse and close or attach the fuse cover.



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These symbols indicate separate collection of waste electrical and electronic equipment or waste batteries.

More detailed information is contained in "Operating Instructions for advanced features (PDF format)".

## Care of the camera

### ■ Camera handling



**Keep the camera away from excessive vibration, force, or pressure.**

- Avoid using the camera under the following conditions, which may damage the lens, LCD monitor, viewfinder, or camera body. This may also cause the camera to malfunction or prevent recording.

- Dropping or hitting the camera against a hard surface
- Pushing with excessive force on the lens, LCD monitor, or viewfinder



- **When camera is not in use or when using the playback feature, ensure that the lens is in the stored position, with lens cap on.**

- **There are times when rattling sounds or vibrations will come from the camera, but these are due to the motion of the aperture, the zoom and the motor and do not indicate a defect.**



**The camera is not dust resistant, splash resistant, or waterproof.**

**Avoid using the camera in places with excessive dust or sand, or where water can come into contact with the camera.**

- Avoid using the camera under the following conditions, which present a risk that sand, water, or foreign material may enter the camera through the lens or openings around buttons. Be especially careful because these conditions may damage the camera, and such damage may not be repairable.

- In extremely dusty or sandy places
- In the rain or by the shore, where the camera may be exposed to water

### ■ Condensation (When the lens, the LCD monitor, or viewfinder, is fogged up)

- Condensation may occur when the camera is exposed to sudden changes of temperature or humidity. Avoid these conditions, which may make the lens, LCD monitor, or viewfinder, dirty, cause mould, or damage the camera.
- If condensation does occur, turn off the camera and wait about two hours before using it. Once the camera adjusts to the surrounding temperature, the fogging will clear naturally.

## Standard accessories

Check that all the accessories are supplied before using the camera. Part numbers are as of July 2013. These may be subject to change.

|                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> <b>Battery pack</b><br>DMW-BMB9E<br>• Charge the battery before use.<br>Battery pack is indicated as battery pack or battery in the text.<br> | <input type="checkbox"/> <b>USB connection cable</b><br>K1HY08YY0031<br>                                                                                             |
| <input type="checkbox"/> <b>Battery Charger</b><br>DE-A84A<br><br>Battery charger is indicated as battery charger or charger in the text.<br>                          | <input type="checkbox"/> <b>Lens Cap/ Lens Cap String</b><br>VYQ8752<br>                                                                                             |
| <input type="checkbox"/> <b>AC Mains Lead</b><br>K2CT3YY00034<br>                                                                                                      | <input type="checkbox"/> <b>CD-ROM</b><br>VFF1233<br>• Software:<br>Use it to install the software on your PC.<br>• Operating Instructions for advanced features<br> |
| <input type="checkbox"/> <b>Shoulder Strap</b><br>VFC4453<br>                                                                                                          |                                                                                                                                                                                                                                                       |

- SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as card in the text.
- **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 Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)
- Please dispose of all packaging appropriately.
- Keep small parts in a safe place out of the reach of children.
- The illustrations and screens in this manual may differ from the actual product.
- A lens hood is not supplied with this unit.
- **SILKYPIX Developer Studio is not provided on the supplied CD-ROM. Download this software from the website and install it on your computer to use. (→23)**

### ■ Optional Accessories

|                           |                                             |
|---------------------------|---------------------------------------------|
| Battery pack              | DMW-BMB9                                    |
| DC coupler*1              | DMW-DCC6                                    |
| AC adaptor*1              | DMW-AC8                                     |
| Flash                     | DMW-FL220, DMW-FL360, DMW-FL360L, DMW-FL500 |
| MC protector              | DMW-LMCH55                                  |
| ND filter                 | DMW-LNDH55                                  |
| PL filter (Circular Type) | DMW-LPL55                                   |
| AV Cable                  | DMW-AVC1                                    |
| USB connection cable      | DMW-USBC1                                   |
| Lens adaptor              | DMW-LA8                                     |
| Tele Conversion Lens*2    | DMW-LT55                                    |
| Close-up Lens*2           | DMW-LC55                                    |

\*1 The AC adaptor (optional) can only be used with the designated Panasonic DC coupler (optional). The AC adaptor (optional) cannot be used by itself.

\*2 The lens adaptor (optional) is necessary to attach a tele conversion lens or close-up lens.

- Some optional accessories may not be available in some countries.

## Sales and Support Information

### Customer Communications Centre

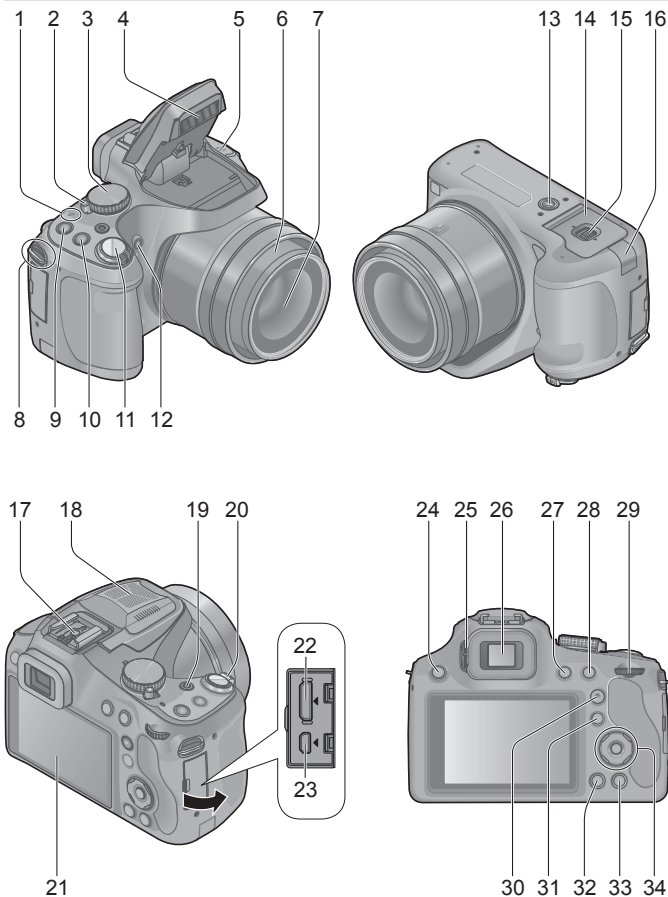
- For customers within the U.K.: 0844 844 3899
- For customers within Ireland: 01289 8333
- Monday - Friday 9:00am - 5:00pm (Excluding public holidays).
- For further support on your product, please visit our website:  
[www.panasonic.co.uk](http://www.panasonic.co.uk)

### Direct Sales at Panasonic U.K.

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Communications Centre Monday - Friday 9:00am - 5:00pm (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 U.K.
- 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 and Functions of Main Parts



## Names and Functions of Main Parts

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- |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Power lamp                                                                                                                                                                                                                                                                      | 17 Hot shoe <ul style="list-style-type: none"><li>• Do not attach other than the external flash on the hot shoe.</li></ul>                                                                                                                                                                                                                                                                                                                                                                            |
| 2 Camera [ON/OFF] switch                                                                                                                                                                                                                                                          | 18 Stereo microphone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3 Mode dial                                                                                                                                                                                                                                                                       | 19 Motion picture button                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4 Flash                                                                                                                                                                                                                                                                           | 20 Zoom lever                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5 Speaker <ul style="list-style-type: none"><li>• Be careful not to cover the speaker with your finger. Doing so may make sound difficult to hear.</li></ul>                                                                                                                      | 21 LCD monitor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6 Lens barrel                                                                                                                                                                                                                                                                     | 22 [HDMI] socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7 Lens                                                                                                                                                                                                                                                                            | 23 [AV OUT/DIGITAL] socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 8 Shoulder strap eyelet                                                                                                                                                                                                                                                           | 24 [  ] (Flash open) button                                                                                                                                                                                                                                                                                                                                                                                          |
| 9 [FOCUS] button                                                                                                                                                                                                                                                                  | 25 Diopter adjustment dial                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 10 [  ] (Burst Mode) button                                                                                                                                                                      | 26 Viewfinder ([LVF]) <ul style="list-style-type: none"><li>• In this manual, “viewfinder” is used to indicate the LVF.</li></ul>                                                                                                                                                                                                                                                                                                                                                                     |
| 11 Shutter button                                                                                                                                                                                                                                                                 | 27 [LVF] button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 12 Self-timer indicator/<br>AF Assist Lamp                                                                                                                                                                                                                                        | 28 [AF/AE LOCK (Fn1)] button                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 13 Tripod mount <ul style="list-style-type: none"><li>• Do not attach to a tripod with a 5.5 mm (0.22 inch) or longer screw. Doing so may damage this unit.</li></ul>                                                                                                             | 29 Rear dial                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 14 Card/Battery door                                                                                                                                                                                                                                                              | 30 [AF/AF-LOCK/MF] button                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 15 Release lever                                                                                                                                                                                                                                                                  | 31 [  ] (Playback) button <ul style="list-style-type: none"><li>• Use this to select the recording mode or playback mode.</li></ul>                                                                                                                                                                                                                                                                                  |
| 16 DC coupler cover <ul style="list-style-type: none"><li>• When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC6: optional) and AC adaptor (DMW-AC8E: optional) are used.</li><li>• Always use a genuine Panasonic AC adaptor (DMW-AC8E: optional).</li></ul> | 32 [DISP.] button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                   | 33 [  ] (  Q.MENU)<br>(Delete/Cancel/Quick menu) button                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                   | 34 Cursor button / [MENU/SET] button <ul style="list-style-type: none"><li>• In this manual, the button that is to be used is indicated by    .</li></ul> |

## Attaching the lens cap/shoulder strap

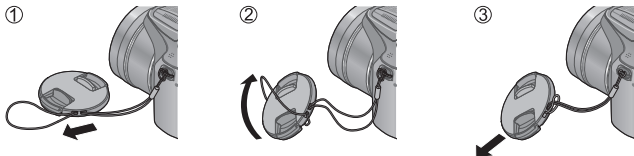
### ■ Attaching the Lens Cap

- When you turn the camera off or carry the camera, attach the lens cap to protect the surface of the lens.

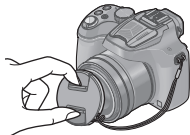
#### 1 Pass the string through the hole on the camera

#### 2 Pass the same string through the hole on the lens cap

- Pass the lens cap through the loop of the string and tighten it.



#### 3 Attach the lens cap



### ■ Attaching the Shoulder Strap

- We recommend attaching the shoulder strap when using the camera to prevent it from dropping.

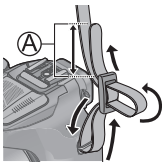
#### 1 Pass the shoulder strap through the hole at the shoulder strap eyelet

- Attach the shoulder strap so that the "LUMIX" Logo is on the outside.

#### 2 Pass the shoulder strap through the stopper and fasten the shoulder strap

- Ⓐ Pull the shoulder strap 2 cm (0.066 feet) or more.

- Attach the shoulder strap to the other side of the camera being careful not to twist it.



- Make sure that the shoulder strap does not come loose.

## Charging the battery

- Use the dedicated charger and battery.
- The battery is not charged when the camera is shipped. Charge the battery before use.
- We recommend charging in a location where the ambient temperature is between 10 °C and 30 °C (50 °F to 86 °F).

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

Ensure [LUMIX] faces outwards.

### 2 Connect the charger to the electrical outlet

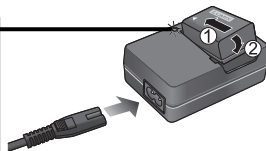
#### Charging light ([CHARGE])

**On:** Charging in progress  
(approx. 155 min. if fully depleted)

**Off:** Charging complete

#### If light is flashing:

- Charging may take longer than normal if battery temperature is too high or too low (charging may not be completed).
- Battery/charger connector is dirty. Clean with a dry cloth.



- The battery becomes warm after using it and during and after charging. The camera also becomes warm during use. This is not a malfunction.
- You cannot charge the battery of this unit using a USB connection cable.

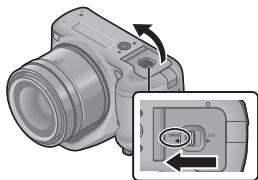
#### ■ About batteries that you can use with this unit

The battery that can be used with this unit is DMW-BMB9E.

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

- Turn this unit off and confirm that the lens barrel is retracted.

**1** Slide the release lever to the [OPEN] position and open the card/battery door

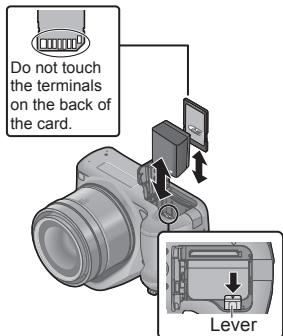


**2** **Battery:**  
Being careful about the battery orientation, insert all the way and then check that it is locked by lever

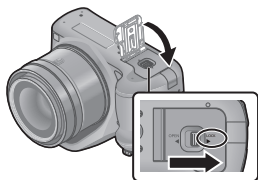
- Pull the lever in the direction of the arrow to remove the battery.

**Card:**  
Push it securely all the way until you hear a “click” while being careful about the direction in which you insert it

- To remove the card, push the card until it clicks, then pull the card out upright.



**3** Close the card/battery door and slide the release lever to the [LOCK] position



- Always use genuine Panasonic batteries (DMW-BMB9E).
- If you use other batteries, we cannot guarantee the quality of this product.
- Keep the Memory Card out of reach of children to prevent swallowing.
- We recommend using a Panasonic card.

## Sequence of operations

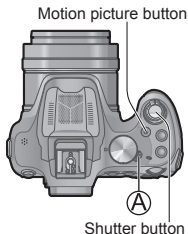
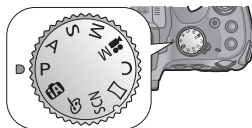
Before using the camera, remove the lens cap.

### 1 Turn the camera on (A)

- The clock is not set when the camera is shipped. Set the date and time before using the camera.

### 2 Set to the desired recording mode

Rotate the mode dial slowly to select the desired mode.

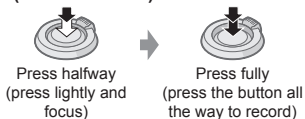


### ■ Recording mode

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| <b>iA</b>  | Take pictures with automatic settings.                                  |
| <b>P</b>   | Take pictures with automatic shutter speed and aperture value settings. |
| <b>A</b>   | Determine aperture, then record pictures.                               |
| <b>S</b>   | Determine shutter speed, then record pictures.                          |
| <b>M</b>   | Determine aperture and shutter speed, then record pictures.             |
| <b>M</b>   | Record motion picture with manual settings.                             |
| <b>C</b>   | Record pictures using pre-registered settings.                          |
| <b>□</b>   | Record panorama pictures.                                               |
| <b>SCN</b> | Take pictures using Scene modes.                                        |
| <b>🌀</b>   | Take pictures by selecting your preferred picture effect.               |

### 3 Take pictures

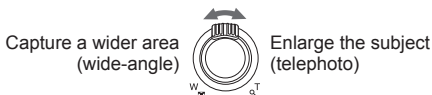
#### ■ Taking still pictures (Shutter button)



#### ■ Recording motion pictures (Motion picture button)



#### ■ Use the zoom lever to adjust the range of the picture to be captured



#### ■ Viewing your Pictures

- ① Press the Playback button (A)



- ② Press ◀▶ to select a picture to be displayed

##### • Ending Playback

Press the Playback button (A) or the motion picture button again, or press the shutter button halfway.

#### ■ Deleting Pictures

- ① Press [🗑️] (Q.MENU) button to delete the displayed picture

- A confirmation screen is displayed. When you select [Yes], the selected picture is deleted.

#### ■ About recording motion pictures

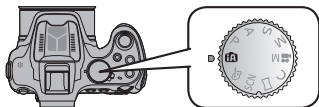
- You can continuously record a motion picture in [MP4] for up to 29 minutes 59 seconds or approx. 4 GB. (Since recording in [MP4] with [FHD] creates larger files, the recording time for such motion pictures will be shorter than 29 minutes 59 seconds.)
- You can continuously record [AVCHD] motion pictures for up to 29 minutes 59 seconds.
- You can record a motion picture to the built-in memory only in [MP4] using the [VGA] setting.

# Taking pictures with automatic settings

## [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.

### 1 Set to [IA] ([Intelligent Auto] Mode)



### 2 Take a picture



  
Press halfway  
(press lightly and focus)



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



#### Focus display

(When focus is aligned: illuminated  
When focus is not aligned: flashing)

#### AF area

- The AF area 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.

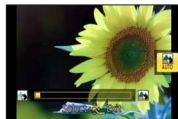
### ■ Defocusing the background

You can easily set the blurriness of the background while checking the screen.

### 1 Press the rear dial to display

### 2 Press ◀▶ or rotate the rear dial to adjust

- Press [ Q.MENU] button to reset the setting to the default state (AUTO).
- To adjust automatically, reset the setting to the default state (AUTO).



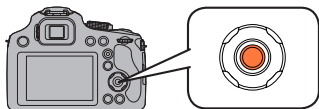
### 3 Press [MENU/SET] or the rear dial to finalise the setting



## Recording using [Intelligent Auto Plus] Mode

When [Intelligent Auto Plus] (iA+) mode is selected, you can easily adjust the brightness and colouring, in addition to the background defocusing, without compromising the user-friendly operation of the [Intelligent Auto] Mode.

### 1 Press [MENU/SET] when in [Intelligent Auto] Mode



### 2 Press ► to select [iA+] and then press [MENU/SET]



## ■ Adjusting brightness, colouring, and background defocusing

### 1 Press the rear dial to display the options

### 2 Press ▲ ▼ to select the item

- []: Adjust the brightness.
- []: Adjust the background blur.
- []: Adjust the colour balance.



### 3 Press ◀▶ or rotate the rear dial to adjust

- Press [] (Q.MENU) button to reset the setting to the default state (AUTO).
- To adjust automatically, reset the setting to the default state (AUTO).

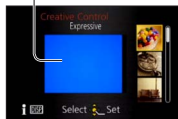
### 4 Press [MENU/SET] or the rear dial to set

## Taking Pictures with different picture effects [Creative Control] Mode

You can select your own settings from various effects and take pictures while confirming these effects on the LCD monitor.

- 1 Set mode dial to [🎨]**
- 2 Press ▲▼ to select an effect, and then press [MENU/SET]**
  - A brief description of selected picture effect appears when you press [DISP.] button.

Preview screen



### ■ Adjust the effect to fit your preferences

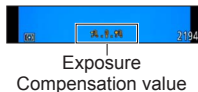
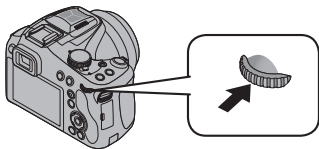
- 1 Press the rear dial to display the options**
- 2 Press ▲▼ to select the item**
  - The items that can be adjusted differ depending on the selected picture effect.
  - [🔍]: Adjust the brightness.
  - [🌫]: Adjust the background blur.
  - [🎚]: Adjust the setting conditions of the selected effect, etc.
- 3 Press ◀▶ or rotate the rear dial to adjust**
  - Press [🔄] (Q.MENU) button to reset the setting to the default state (AUTO).
  - To adjust automatically, reset the setting to the default state (AUTO).
- 4 Press [MENU/SET] or the rear dial to set**

## Using the rear dial

You can use the rear dial to compensate the exposure or adjust the aperture value and shutter speed. The items that can be adjusted differ according to the recording mode.

### Compensating the exposure

#### 1 Press the rear dial to set Exposure Compensation to a selected state



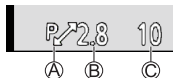
#### 2 Rotate the rear dial to compensate the exposure

- If the picture is too dark, adjust the exposure to the “+” direction.
- If the picture is too bright, adjust the exposure to the “-” direction.

### Setting the aperture value/shutter speed

#### 1 Press the rear dial to select the items to set

- Items that can be set will switch every time the rear dial is pressed.
  - Ⓐ Programme Shift (Recording mode: P)
    - To adjust the setting, display the aperture value and shutter speed by pressing the shutter button halfway.
  - Ⓑ Aperture Value (Recording mode: A / M)
  - Ⓒ Shutter Speed (Recording mode: S / M)



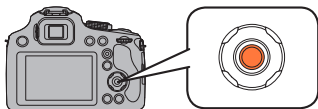
#### 2 Rotate the rear dial to set

## Setting the menu

Refer to the following procedures to operate the menus.

**Example: Setting [AF Mode] from  to  in the [Program AE] Mode**

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



### 2 Press ▲ ▼ to select [AF Mode] 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 and then press [MENU/SET] to set

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



## Switching to other menus

**Example: Switching to the [Setup] menu from [Rec] menu**

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

### 2 Press ◀

### 3 Press ▼ to select the [Setup] menu icon

### 4 Press ►

- Select a menu item next and set it.

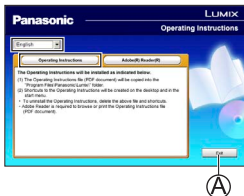


## Reading the Operating Instructions (PDF format)

More detailed instructions on the operation of this camera are contained in “Operating Instructions for advanced features (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 Click the [Operating Instructions]
- 3 Select the desired language and then click [Operating Instructions] to install  
Ⓐ To return to the install menu.
- 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).

- You can download and install a version of Adobe Reader that you can use with your OS from the following website.  
<http://get.adobe.com/reader/otherversions/>

### ■ 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

# Keeping the pictures on your PC

## Installing supplied software

The supplied CD-ROM contains the following software.

Install the software on your computer to use.

For details about operating environment and usage, please read “Operating Instructions for advanced features” (PDF format) or the manuals for each software.

- PHOTOfunSTUDIO / LoiLoScope are not compatible with Mac.

|                                           |                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PHOTOfunSTUDIO<br>9.2 AE                  | Pictures can be captured to a PC, and can be viewed, organised, printed, etc. Also, still pictures can be corrected and motion pictures can be edited. <ul style="list-style-type: none"><li>• Compatible OS: Windows 8 / 7 / Vista / XP</li></ul>                                                                                                                                 |
| LoiLoScope (30-day<br>full-trial version) | You can edit motion pictures easily. This will only install a shortcut to the trial version download site.<br>For details about using LoiLoScope, please download and see the manual from the following site.<br><a href="http://loilo.tv/product/20/">http://loilo.tv/product/20/</a> <ul style="list-style-type: none"><li>• Compatible OS: Windows 8 / 7 / Vista / XP</li></ul> |

### Preparations:

- Check your PC's specifications and operating environment for each software.
- Before inserting the CD-ROM (supplied), close all running applications.

### ■ For Windows

#### 1 Insert the supplied CD-ROM with the supplied software

- The installation menu runs.

#### 2 Click [Applications] on the install menu

#### 3 Click [Recommended Installation]

- Continue the installation procedure following the instructions displayed on the screen.

- The software compatible with your PC will be installed.

## Downloading SILKYPIX Developer Studio

This software develops and edits RAW file pictures. Edited pictures can be saved in a file format such as JPEG or TIFF that can be displayed on a PC, etc.

### ■ Download procedure

Download SILKYPIX Developer Studio from the following site and install it on your computer to use. (This software is not provided on the supplied CD-ROM.)  
<http://www.isl.co.jp/SILKYPIX/english/p/>

- Compatible OS: Windows 8 / 7 / Vista / XP  
Mac OS X (10.4 - 10.8)
- For details on how to use the SILKYPIX Developer Studio, refer to the “Help” or the Ichikawa Soft Laboratory’s support website.
- To download the software, the unit must be connected to the Internet.
- It may take time to download the software in some communication environments.

## Copying still pictures and motion pictures

- 1 Turn on the camera and a computer, and then connect the camera to the computer using the USB connection cable (supplied)**
  - Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional). Doing so may cause damage to this unit.
  - Check the plug direction and insert straight in. (If the cable is inserted in the wrong direction, the plug could become deformed and cause faulty operation)
- 2 Press ▲▼ on the camera to select [PC], and press [MENU/SET]**
- 3 Copy the pictures to the computer**
  - For Windows  
Use “PHOTOfunSTUDIO” to copy pictures to your computer.
  - For Mac  
Copy the picture files in the “DCIM” folder to your computer (except AVCHD motion pictures).
- 4 Cancel the connection and disconnect the USB connection cable (supplied)**

## Specifications

### Digital Camera: Information for your safety

|                                                          |                                                                                                                                                                          |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power Source</b>                                      | DC 8.4 V                                                                                                                                                                 |
| <b>Power Consumption</b>                                 | When recording with LCD Monitor: 1.6 W<br>When recording with Viewfinder: 1.5 W<br>When playing back with LCD Monitor: 1.0 W<br>When playing back with Viewfinder: 0.7 W |
| <b>Camera effective pixels</b>                           | 16,100,000 pixels                                                                                                                                                        |
| <b>Image sensor</b>                                      | 1/2.3" MOS sensor,<br>total pixel number 16,800,000 pixels<br>Primary colour filter                                                                                      |
| <b>Lens</b>                                              | Optical 60 x zoom<br>f=3.58 mm to 215 mm<br>(35 mm film camera equivalent: 20 mm to 1200 mm)/<br>Max. Wide: F2.8 to F8.0<br>Max. Tele: F5.9 to F8.0                      |
| <b>Image Stabiliser</b>                                  | Optical method                                                                                                                                                           |
| <b>Focus range</b>                                       |                                                                                                                                                                          |
| <b>AF</b>                                                | 30 cm (0.98 feet) (Max. Wide) /<br>1.5 m (4.9 feet) (Max. Tele) to ∞                                                                                                     |
| <b>AF Macro / MF / Intelligent Auto / Motion picture</b> | 1 cm (0.033 feet) (Max. Wide) /<br>1.5 m (4.9 feet) (Max. Tele) to ∞                                                                                                     |
| <b>Scene Mode</b>                                        | The focus ranges listed above may vary depending on the selected Scene Mode.                                                                                             |
| <b>Shutter system</b>                                    | Electronic shutter + Mechanical shutter                                                                                                                                  |
| <b>Minimum Illumination</b>                              | Approx. 9 lx (when i-Low light is used, the shutter speed is 1/25th of a second)                                                                                         |
| <b>Shutter speed</b>                                     | 8 seconds to 1/2000th of a second<br>[Starry Sky] Mode:<br>15 seconds, 30 seconds, 60 seconds                                                                            |



|                                 |                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure (AE)</b>            | Programme AE (P) / Aperture-Priority AE (A) / Shutter-Priority AE (S) / Manual Exposure (M)                                    |
| <b>Metering Mode</b>            | [Multi Metering] / [Center Weighted] / [Spot]                                                                                  |
| <b>LCD monitor</b>              | 3.0" TFT LCD (3:2) (Approx. 460,800 dots)<br>(field of view ratio about 100%)                                                  |
| <b>Viewfinder</b>               | Colour LCD Viewfinder (Approx. 201,600 dots)<br>(field of view ratio about 100%)<br>(with diopter adjustment -4 to +4 diopter) |
| <b>Flash</b>                    | Built-in pop up flash                                                                                                          |
| <b>Microphone</b>               | Stereo                                                                                                                         |
| <b>Speaker</b>                  | Monaural                                                                                                                       |
| <b>Recording media</b>          | Built-in Memory (Approx. 200 MB) /<br>SD Memory Card / SDHC Memory Card /<br>SDXC Memory Card                                  |
| <b>Recording file format</b>    |                                                                                                                                |
| <b>Still picture</b>            | RAW / JPEG (based on Design rule for Camera File system, based on Exif 2.3 standard / DPOF corresponding) / MPO                |
| <b>Motion pictures</b>          | AVCHD / MP4                                                                                                                    |
| <b>Audio compression format</b> | AVCHD: Dolby® Digital (2 ch)<br>MP4: AAC (2 ch)                                                                                |
| <b>Interface</b>                |                                                                                                                                |
| <b>Digital</b>                  | USB 2.0 (High Speed)<br>Data from the PC can not be written to the camera using the USB connection cable.                      |
| <b>Analogue video</b>           | NTSC / PAL Composite (Switched by menu)                                                                                        |
| <b>Audio</b>                    | Audio line output (Monaural)                                                                                                   |
| <b>Terminal</b>                 | HDMI: MiniHDMI Type C<br>AV OUT/DIGITAL: Dedicated jack (8 pin)                                                                |
| <b>Dimensions</b>               | Approx. 130.2 mm (W) x 97.0 mm (H) x 118.2 mm (D)<br>[5.13" (W) x 3.82" (H) x 4.65" (D)]<br>(excluding the projection part)    |

## Specifications

|                              |                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Mass</b>                  | With card and battery: Approx. 606 g (1.34 lb)<br>Excluding card and battery: Approx. 562 g (1.24 lb) |
| <b>Operating temperature</b> | 0 °C to 40 °C (32 °F to 104 °F)                                                                       |
| <b>Operating humidity</b>    | 10%RH to 80%RH                                                                                        |

### Battery Charger

(Panasonic DE-A84A): Information for your safety

|               |                                      |
|---------------|--------------------------------------|
| <b>Input</b>  | AC~ 110 V to 240 V, 50/60 Hz, 0.15 A |
| <b>Output</b> | DC=== 8.4 V, 0.43 A                  |

### Battery pack (lithium-ion)

(Panasonic DMW-BMB9E): Information for your safety

|                           |                 |
|---------------------------|-----------------|
| <b>Voltage / capacity</b> | 7.2 V / 895 mAh |
|---------------------------|-----------------|

Specifications are subject to change without notice.

# HDMI

# AVCHD™

# DOLBY DIGITAL



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Manufactured by: Panasonic Corporation  
Kadoma, Osaka, Japan  
Importer: Panasonic Marketing Europe GmbH  
Panasonic Testing Centre  
Winsbergring 15, 22525 Hamburg, Germany



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