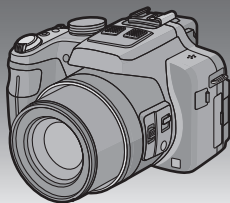


# Panasonic®

## Basic Owner's Manual Digital Camera

Model No. DMC-FZ150

# LUMIX



Before connecting, operating or adjusting this product,  
please read the instructions completely.



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



For Canadian assistance, please call: 1-800-99-LUMIX (1-800-995-8649) or  
send e-mail to: [lumixconciierge@ca.panasonic.com](mailto:lumixconciierge@ca.panasonic.com)

PC

VQT3S56

**Dear Customer,**  
**Thank you for choosing Panasonic!**

You have purchased one of the most sophisticated and reliable products on the market today. Used properly, we're sure it will bring you and your family years of enjoyment. Please take time to fill in the information on the below. The serial number is on the tag located on the underside of your camera. Be sure to **retain this manual** as your convenient camera information source.

Date of Purchase	Dealer Phone No.
Dealer Purchased From	Model No.
Dealer Address	Serial No.

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 this Owner's Manual.

**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.



A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

## 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

Product	Location
Digital Camera	Bottom
Battery charger	Bottom

This Class B digital apparatus complies with Canadian ICES-003.

## ■ About the battery pack

### **CAUTION**

Battery pack (Lithium ion battery pack)

- Use the specified unit to recharge the battery pack.
- Do not use the battery pack with equipment other than the specified unit.
- Do not get dirt, sand, liquids, or other foreign matter on the terminals.
- Do not touch the plug terminals (+ and -) with metal objects.
- Do not disassemble, remodel, heat or throw into fire.

If any electrolyte should come into contact with your hands or clothes, wash it off thoroughly with water.

If any electrolyte should come into contact with your eyes, never rub the eyes. Rinse eyes thoroughly with water, and then consult a doctor.

### **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 (140 °F) 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.**

## **Battery charger**

This battery charger operates on AC between 110 V and 240 V.

But

- In the U.S.A. and Canada, the battery charger must be connected to a 120 V AC power supply only.
- When connecting to an AC supply outside of the U.S.A. or Canada, use a plug adaptor to suit the AC outlet configuration.

## **■ Cautions for Use**

- Always use a genuine Panasonic AV cable (DMW-AVC1; optional).
- Always use a genuine Panasonic HDMI mini cable (RP-CDHM15, RP-CDHM30; optional).  
Part numbers: RP-CDHM15 (1.5 m) (5 feet), RP-CDHM30 (3.0 m) (10 feet)
- Do not use any other USB connection cables except the supplied one.
- Always use a genuine Panasonic remote shutter (DMW-RSL1; 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-AC8PP; 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.

**-If you see this symbol-**

**Information on Disposal in other Countries outside the European Union**

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



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## Care of the camera

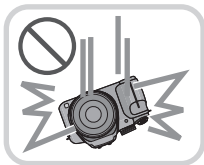
**Do not subject to strong vibration, shock, or pressure.**

- The lens, LCD monitor, or external case may be damaged if used in following conditions. It may also malfunction or image may not be recorded.
  - Dropping or hitting the camera.
  - Pressing hard on the lens or the LCD monitor.
- **When carrying or using the playback feature, ensure that the lens is in the stored position.**
- **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.**

**This camera is not dust/drip/water proof.**

**Avoid using the camera at location with a lot of dust, water, sand, etc.**

- Liquids, sand and other foreign material may get into the space around the lens, buttons, etc. Be particularly careful since it may not just cause malfunctions, but it may become unrepairable.
  - Places with a lot of sand or dust.
  - Places where water can come into contact with this unit such as when using it on a rainy day or on a beach.





# Standard Accessories

Check that all the accessories are supplied before using the camera.  
Product numbers correct as of September 2011. These may be subject to change.

- 1 Battery Pack  
(Indicated as **battery pack** or **battery** in the text)  
Charge the battery before use.
- 2 Battery Charger  
(Indicated as **battery charger** or **charger** in the text)
- 3 USB Connection Cable
- 4 CD-ROM
  - Software:  
Use it to install the software to your PC.
- 5 CD-ROM
  - Owner's Manual
- 6 Shoulder Strap
- 7 Lens Cap/Lens Cap String
- 8 Lens Hood

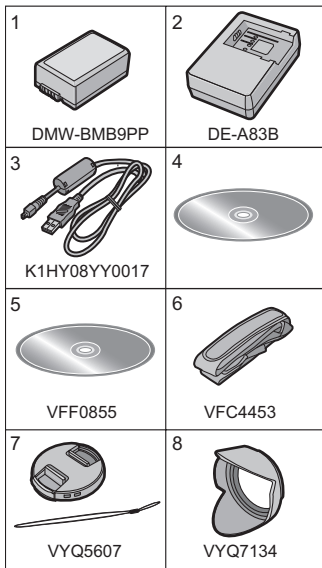
• SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as **card** in the text.

• **The card is optional.**

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

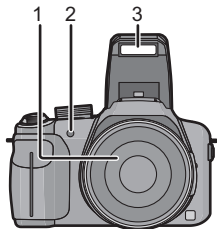
• For information about optional accessories, refer to the "Digital Camera Accessory System".

• If any accessories are lost, customers in Canada should contact 1 800 99-LUMIX (1-800-995-8649) for further information about obtaining replacement parts.

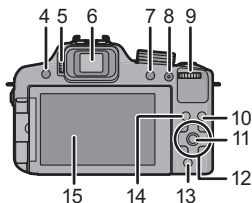


# Names and Functions of Components

- 1 Lens
- 2 Self-timer indicator  
AF Assist Lamp
- 3 Flash



- 4 Flash open button
- 5 Diopter adjustment dial
- 6 Viewfinder
- 7 [EVF/LCD] button
- 8 [AF/AE LOCK] button
- 9 Rear dial
- 10 Playback button
- 11 [MENU/SET] button



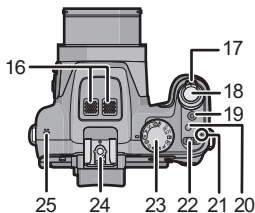
- 12 Cursor buttons
  - ▲/ Exposure compensation/  
Auto Bracket/Flash output adjustment
  - ◀/ Self-timer button
  - ▶/ ISO
  - ▼/ Function button

The following menus can be assigned.

[PHOTO STYLE]/[ASPECT RATIO]/[QUALITY]/[METERING MODE]/  
[WHITE BALANCE]/[I.DYNAMIC]/[GUIDE LINE]/[REC AREA]/  
[REMAINING DISP.]

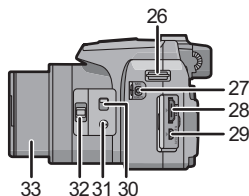
- 13 [Q.MENU] button/Delete button
- 14 [DISPLAY] button
- 15 LCD monitor

- 16 Stereo microphone
- 17 Zoom lever
- 18 Shutter button
- 19 Motion picture button
- 20 Burst Mode button
- 21 Power lamp
- 22 Camera ON/OFF switch
- 23 Mode dial
- 24 Hot Shoe
- 25 Speaker

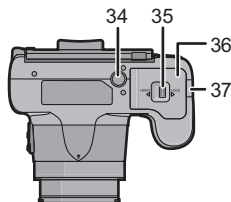


- Do not cover the speaker with your fingers.

- 26 Shoulder strap eyelet
- 27 [MIC/REMOTE] socket
- 28 [HDMI] socket
- 29 [AV OUT/DIGITAL] socket
- 30 Focus selector switch
- 31 [FOCUS] button
- 32 Side lever
- 33 Lens barrel



- 34 Tripod receptacle
- 35 Release lever
- 36 Card/Battery door
- 37 DC coupler cover



- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC6; For shop display purpose only) and AC adaptor (DMW-AC8PP; optional) are used.
- Always use a genuine Panasonic AC adaptor (DMW-AC8PP; optional).
- It is recommended to use a fully charged battery or AC adaptor when recording motion pictures.
- If while recording motion pictures using the AC adaptor and the power supply is cut off due to a power outage or if the AC adaptor is disconnected etc., the motion picture being recorded will not be recorded.

## Cursor buttons/[MENU/SET] button

This document expresses the up, down, left, and right of the cursor button as follows, or as ▲/▼/◀/▶.

**Cursor button:**

**Selection of items or setting of values etc., is performed.**

**[MENU/SET] button:**

**Confirmation of setting contents, etc., is performed.**

e.g.: When you press the ▼ (down) button



or

Press ▼

## Rear Dial

There are 2 ways to operate the rear dial, rotating left or right, and deciding by pressing.

**Rotating:**

**Selection of items or setting of values is performed during the various settings.**

**Pressing:**

**Operations that are the same as [MENU/SET] button, such as determine settings, etc., are performed during the various settings.**

• Rear dial is described as follows in this Owner's Manual.

e.g.: Rotating left or right



e.g.: Pressing the rear dial



## Charging the Battery

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

The battery that can be used with this unit is DMW-BMB9PP.

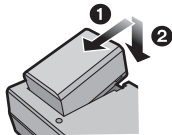
It has been found that counterfeit battery packs which look very similar to the genuine product are made available to purchase in some markets. Some of these battery packs are not adequately protected with internal protection to meet the requirements of appropriate safety standards. There is a possibility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

- Use the dedicated charger and battery.

## Charging

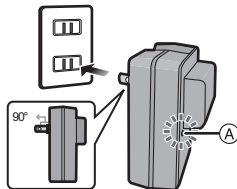
- The battery is not charged when the camera is shipped. Charge the battery before use.
- Charge the battery with the charger indoors.

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



- 2 Connect the charger to the electrical outlet.**

- The [CHARGE] indicator (A) lights up and charging begins.



## ■ About the [CHARGE] indicator

### The [CHARGE] indicator turns on:

The [CHARGE] indicator is turned on during charging.

### The [CHARGE] indicator turns off:

The [CHARGE] indicator will turn off once the charging has completed without any problem. (Disconnect the charger from the electrical socket and detach the battery after charging is completed.)

### • When the [CHARGE] indicator flashes

- The battery temperature is too high or too low. It is recommended to charge the battery again in an ambient temperature of between 10 °C and 30 °C (50 °F and 86 °F).
- The terminals of the charger or the battery are dirty. In this case, wipe them with a dry cloth.

## ■ Charging time

<b>Charging time</b>	<b>Approx. 155 min</b>
----------------------	------------------------

## Approximate operating time and number of recordable pictures

<b>Number of recordable pictures</b>	<b>Approx. 410 pictures</b>
<b>Recording time</b>	<b>Approx. 205 min</b>

### Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Program AE Mode
- Temperature: 23 °C (73.4 °F)/Humidity: 50%RH 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 [ON].)
- **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.

<b>Playback time</b>	<b>Approx. 330 min</b>
----------------------	------------------------

# About the Built-in Memory/the Card

## Built-in Memory

- **Memory size: Approx. 70 MB**
- The access time for the built-in memory may be longer than the access time for a card.

## Card

The following cards which conform to the SD video standard can be used with this unit.

(These cards are indicated as **card** in the text.)

	Remarks
SD Memory Card (8 MB to 2 GB)	<ul style="list-style-type: none"><li>• <b>Use a card with SD Speed Class* with “Class 4” or higher when recording motion pictures.</b></li><li>• SDHC Memory Card can be used with SDHC Memory Card or SDXC Memory Card compatible equipment.</li><li>• SDXC Memory Card can only be used with SDXC Memory Card compatible equipment.</li><li>• Check that the PC and other equipment are compatible when using the SDXC Memory Cards. <a href="http://panasonic.net/avc/sdcard/information/SDXC.html">http://panasonic.net/avc/sdcard/information/SDXC.html</a></li><li>• Only the cards with capacity listed left can be used.</li></ul>
SDHC Memory Card (4 GB to 32 GB)	
SDXC Memory Card (48 GB, 64 GB)	

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

e.g.:

CLASS 



- Please confirm the latest information on the following website.

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

(This Site is English only.)



### Note

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

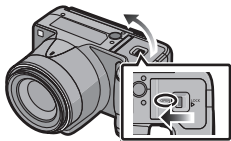


## Inserting and Removing the Card (optional)/the Battery

- Turn the power switch to [OFF] and confirm that the lens barrel is retracted.
- We recommend using a Panasonic card.

**1** Slide the release lever in the direction of the arrow and open the card/battery door.

- Always use genuine Panasonic batteries (DMW-BMB9PP).
- If you use other batteries, we cannot guarantee the quality of this product.

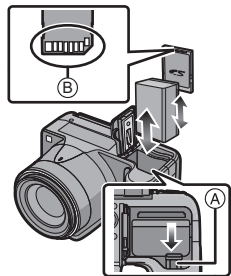


**2** **Battery:** Being careful about the battery orientation, insert all the way until you hear a locking sound and then check that it is locked by lever (A).

Pull the lever (A) in the direction of the arrow to remove the battery.

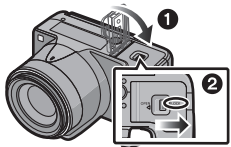
**Card:** Push it securely all the way until you hear a “click” while being careful about the direction in which you insert it.

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



**3** **1:** Close the card/battery door.

**2:** Slide the release lever in the direction of the arrow.

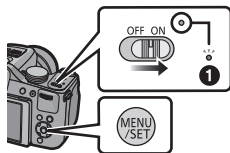


# Setting Date/Time (Clock Set)

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

## 1 Turn the camera on.

- The power lamp **1** lights when you turn this unit on.



## 2 Press [MENU/SET].



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



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

## 5 Press [MENU/SET].

## Changing the clock setting

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

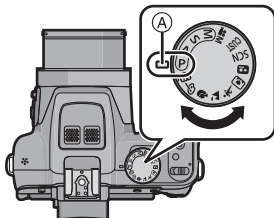
- It can be changed in steps **3** and **4** to set the clock.

## Selecting the Recording Mode

Switching the mode by rotating the mode dial.

Align a desired mode with part ①.

- Rotate the mode dial slowly and surely to adjust to each mode.



### ■ Basic



#### **P** Program AE Mode

The subjects are recorded using your own settings.






#### **iA** Intelligent Auto Mode

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

## ■ Advanced

<b>A</b>	<b>Aperture-Priority AE Mode</b>
The shutter speed is automatically determined by the aperture value you set.	
<b>S</b>	<b>Shutter-Priority AE 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.	
 M	<b>Creative Video Mode</b>
Record motion picture with manual settings.	
<b>CUST</b>	<b>Custom Mode</b>
Use this mode to take pictures with previously registered settings.	
<b>SCN</b>	<b>Scene Mode</b>
This allows you to take pictures that match the scene being recorded.	
	<b>Creative Control Mode</b>
Record while checking the image effect.	

## ■ Advanced Scene Mode

	<b>Portrait Mode</b>
Use this mode to take pictures of people.	
	<b>Scenery Mode</b>
Use this mode to take pictures of scenery.	
	<b>Sports Mode</b>
Use this mode to take pictures of sporting events, etc.	
	<b>Close-up Mode</b>
Use this mode to take pictures of a close-by subject.	
	<b>Night Portrait Mode</b>
Use this mode to take pictures of night scenes and people against night time scenery.	

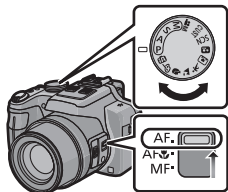
## Taking Pictures with Your Favorite Settings (Program AE Mode)

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

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

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

- Set the focus selector switch to [AF].

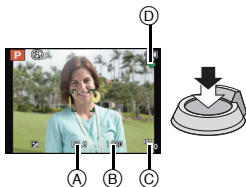


### 2 Aim the AF area at the point you want to focus on.

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

- (A) Aperture value
- (B) Shutter speed
- (C) ISO sensitivity

- The focus indication (D) (green) lights when the subject is focused.



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



## Program Shift

In Program AE Mode, you can change the preset aperture value and shutter speed without changing the exposure. This is called Program Shift. You can make the background more blurred by decreasing the aperture value or record a moving subject more dynamically by slowing the shutter speed when taking a picture in Program AE Mode.

**1** Press the shutter button halfway and display the aperture value and shutter speed value on the screen.

**2** While the values are displayed (about 10 seconds), perform the Program Shift by rotating the rear dial.



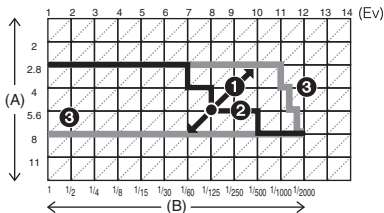
- The Program Shift indication (A) appears on the screen when Program Shift is activated.
- Program Shift is canceled if the camera is turned off or the rear dial is rotated until the Program Shift indication disappears.

### ■ Example of Program Shift

(A): Aperture value

(B): Shutter speed

- 1 Program Shift amount
- 2 Program Shift line chart
- 3 Program Shift limit

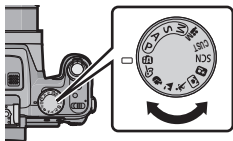


Applicable modes: **IA** P A S M **CUST** **SM** **SCN**    

## Taking Pictures Using the Automatic Function (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.

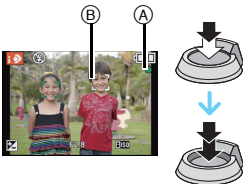
**1** Set the mode dial to [**IA**].



**2** Press the shutter button halfway to focus and then press it fully to take the picture.










(A) Focus indication

- The AF area (B) 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.



## Scene Detection

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

 →	 [i- PORTRAIT]	 [i- SCENERY]
	 [i- MACRO]	 [i- NIGHT PORTRAIT] <sup>*1</sup>
	 [i- NIGHT SCENERY]	 [iHANDHELD NITE] <sup>*2</sup>
	 [i- SUNSET]	 [i- BABY] <sup>*3</sup>

\*1 Only when [iA] is selected.

\*2 Only displayed when [iHANDHELD NITE] is set to [ON].

\*3 When [FACE RECOG.] is set to [ON], [iA] will be displayed for birthdays of registered faces already set only when the face of a person 3 years old or younger is detected.

- [iA] is set if none of the scenes are applicable, and the standard settings are set.
- When [iA], [iA] or [iA] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. **(Face Detection)**



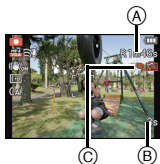
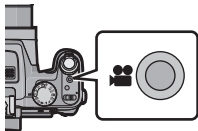
## Recording Motion Pictures

This unit can record motion pictures in either AVCHD or MP4 formats.

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

- (A) Available recording time
- (B) Elapsed recording time

- You can record motion pictures fitting each Recording Mode.
- Release the motion picture button right after you press it.
- The recording state indicator (red) © will flash while recording motion pictures.



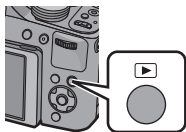
### 2 Stop the recording by pressing the motion picture button again.

#### Note

- Maximum time to record motion pictures continuously with [MP4] is 29 minutes 59 seconds or up to 4 GB.  
The maximum available recording time continuously is displayed on the screen.

## Playing Back Pictures ([NORMAL PLAY])

**1** Press [▶].



**2** Press ◀ or ▶.

- After selecting the motion picture, press ▶ to start playback.



## Deleting Pictures

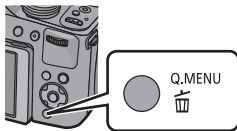
**Once deleted, pictures cannot be recovered.**

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

**1** Press [▶].

**2** Select the picture to be deleted, and then press [🗑].

- Confirmation screen is displayed.  
Picture is deleted by selecting [YES].



# Setting the Menu

Example: In the [REC] menu, change [AF MODE] from [ ] (1-area-focusing) to [ ] (Face Detection)\*

\* When the focus selector switch is set to [AF] in Program AE Mode.

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

**2** Press ▲/▼ or rotate the rear dial to select the menu item.



**3** Press ► or the rear dial.

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

**4** Press ▲/▼ or rotate the rear dial to select the settings.



**5** Press [MENU/SET] or the rear dial to set.

## ■ Close the menu

Press [MENU/SET] or press the shutter button halfway.

## ■ Switching to other menus

e.g.: Switching to the [SETUP] menu from [REC] Mode menu

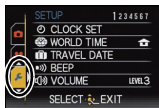
**1** Press [MENU/SET].

**2** Press ◀.

**3** Press ▼ or rotate the rear dial to select the [SETUP] menu icon [ ].

**4** Press ► or the rear dial.

- Select a menu item next and set it.





## Taking Pictures by Specifying the Aperture/Shutter Speed

### Aperture-Priority AE

Set the aperture value to a higher number when you want a sharp focus background. Set the aperture value to a lower number when you want a soft focus background.

**1** Set the mode dial to [ **A** ].

**2** Rotate the rear dial to set the aperture value.

**A** Aperture Value

- It will switch between aperture setting operation and Exposure Compensation operation every time the rear dial is pressed.



### Shutter-Priority AE

Set with a faster shutter speed when you want to take a sharp picture of a fast moving subject. Set to a slower shutter speed when you want to create a trail effect.

**1** Set the mode dial to [ **S** ].

**2** Rotate the rear dial to set the shutter speed.

**B** Shutter Speed

- It will switch between shutter speed setting operation and Exposure Compensation operation every time the rear dial is pressed.



## Manual Exposure Mode

Determine the exposure by manually setting the aperture value and the shutter speed.

The Manual Exposure Assistance appears on the lower portion of the screen to indicate the exposure.

**1** Set the mode dial to [M].

**2** Rotate the rear dial to set the aperture and shutter speed.

Ⓒ Manual Exposure Assistance

- It will switch between aperture setting operation and shutter speed setting operation every time the rear dial is pressed.



### Manual Exposure Assistance

	The exposure is adequate.
	Set to faster shutter speed or larger aperture value.
	Set to slower shutter speed or smaller aperture value.

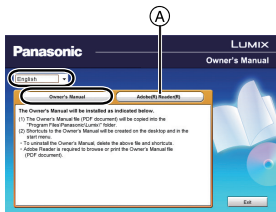
- The Manual Exposure Assistance is an approximation. We recommend checking the pictures on the playback screen.

# Reading the Owner's Manual (PDF format)

More detailed instructions on the operation of this camera are contained in "Owner's Manual 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 Owner's Manual (supplied).
- 2** Select the desired language and then click [Owner's Manual] to install.
- 3** Double click the "Owner's Manual" shortcut icon on the desktop.



### ■ When the Owner's Manual (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 Owner's Manual (PDF format).

Insert the CD-ROM containing the Owner's Manual (supplied), click  and then follow the messages on the screen to install.

(Compatible OS: Windows XP SP3/Windows Vista 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 Owner's Manual (PDF format)

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

### ■ For Mac

**1**

Turn the PC on and insert the CD-ROM containing the Owner's Manual (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 8.4 V
<b>Power Consumption:</b>	1.6 W (When recording with LCD Monitor) 1.4 W (When recording with Viewfinder) 1.0 W (When playing back with LCD Monitor) 0.9 W (When playing back with Viewfinder)

<b>Camera effective pixels</b>	12,100,000 pixels	
<b>Image sensor</b>	1/2.3" MOS sensor, total pixel number 12,800,000 pixels, Primary color filter	
<b>Lens</b> [NANO SURFACE COATING]	Optical 24× zoom, f = 4.5 mm to 108 mm (35 mm film camera equivalent: 25 mm to 600 mm) Wide: F2.8 to F8.0 (when recording motion pictures: F2.8 to F11) Tele: F5.2 to F8.0 (when recording motion pictures: F5.2 to F11)	
<b>Image Stabilizer</b>	Optical method	
<b>Digital zoom</b>	Max. 4×	
<b>Extended optical zoom</b>	Max. 46.9× (When set to 3,000,000 pixels [3M] or less)	
<b>Focus range</b>	AF	30 cm (0.99 feet) (Wide)/ 2 m (6.57 feet) (Tele) to ∞
	AF Macro/MF/ Intelligent Auto/ Motion Picture	1 cm (0.04 feet) (Wide)/ 1 m (3.28 feet) (Tele) to ∞
	Scene Mode	There may be differences in the above settings.

<b>Shutter system</b>	Electronic shutter+Mechanical shutter
<b>Burst recording</b>	Burst speed
<b>For mechanical shutter</b>	2 frames/sec, 5.5 frames/sec, 12 frames/sec
<b>For electronic shutter</b>	40 frames/sec, 60 frames/sec
<b>During motion picture recording</b>	2 frames/sec (Max. 40 frames/3.5 M), 5 frames/sec (Max. 40 frames/3.5 M), 10 frames/sec (Max. 40 frames/3.5 M)
<b>Minimum Illumination</b>	Approx. 9 lx (when i-low light is used, the shutter speed is 1/30th of a second)
<b>Shutter speed</b>	
<b>Still picture</b>	15 seconds to 1/2000th of a second [STARRY SKY] Mode: 15 seconds, 30 seconds
<b>Motion pictures</b>	1/30 to 1/20000th of a second Creative Video Mode (Manual Exposure/Manual Focus): 1/8 to 1/20000th of a second

<b>Exposure (AE)</b>	Program AE (P)/Aperture-Priority AE (A)/ Shutter-Priority AE (S)/Manual Exposure (M) Exposure compensation (1/3 EV Step, -3 EV to +3 EV)	
<b>Metering mode</b>	Multiple/Center weighted/Spot	
<b>LCD monitor</b>	3.0" TFT LCD (3:2) (Approx. 461,000 dots) (field of view ratio about 100%)	
<b>Viewfinder</b>	Color LCD Viewfinder (Approx. 202,000 dots) (field of view ratio about 100%) (with diopter adjustment -4 to +4 diopter)	
<b>Flash</b>	Built-in pop up flash	
	Flash range: Approx. 30 cm (0.99 feet) to 9.5 m (31.16 feet) (Wide, [ISO AUTO] is set)	
<b>Microphone</b>	Stereo	
<b>Speaker</b>	Monaural	
<b>Recording media</b>	Built-in Memory (Approx. 70 MB)/SD Memory Card/ SDHC Memory Card/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/QuickTime Motion JPEG	
<b>Audio compression</b>	AVCHD	AC3/2 ch
	MP4	AAC/2 ch
<b>Interface</b>		
<b>Digital</b>	"USB 2.0" (High Speed)	
<b>Analog video</b>	NTSC	
<b>Audio</b>	Audio line output (monaural)	

<b>Terminal</b>	
[MIC/REMOTE]	∅ 2.5 mm jack
[AV OUT/DIGITAL]	Dedicated jack (8 pin)
[HDMI]	MiniHDMI TypeC
<b>Dimensions</b> (excluding the projecting parts)	Approx. 124.3 mm (W)×81.7 mm (H)×95.2 mm (D) [4.89"(W)×3.20"(H)×3.74"(D)]
<b>Mass (weight)</b>	Approx. 528 g/1.16 lb (with card and battery) Approx. 484 g/1.06 lb (excluding card and battery)
<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-A83B):**

Information for your safety

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

#### **Equipment mobility:**

Movable

#### **Battery Pack (lithium-ion) (Panasonic DMW-BMB9PP):**

Information for your safety

<b>Voltage/capacity:</b>	7.2 V/895 mAh
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## Digital Camera Accessory System

Description	Accessory#
Lithium Ion Battery	DMW-BMB9
Flash	DMW-FL220, DMW-FL360, DMW-FL500
Remote Shutter	DMW-RSL1
Stereo Microphone	DMW-MS1
MC Protector	DMW-LMC52
ND Filter	DMW-LND52
PL Filter (Circular Type)	DMW-LPL52
Tele Conversion Lens*	DMW-LT55
Close-up Lens*	DMW-LC55
Lens Adapter	DMW-LA5
AV Cable	DMW-AVC1
HDMI mini Cable	RP-CDHM15, RP-CDHM30
Class 10 64 GB SDXC Memory Card	RP-SDU64GE1K
Class 10 32 GB SDHC Memory Card	RP-SDU32GU1K
Class 10 16 GB SDHC Memory Card	RP-SDU16GU1K
Class 10 8 GB SDHC Memory Card	RP-SDU08GU1K
Class 10 4 GB SDHC Memory Card	RP-SDU04GU1K
Class 4 16 GB SDHC Memory Card	RP-SDL16GU1K
Class 4 8 GB SDHC Memory Card	RP-SDL08GU1K
Class 4 4 GB SDHC Memory Card	RP-SDL04GU1K
Class 4 2 GB SD Memory Card	RP-SDL02GU1K

Product numbers correct as of September 2011. These may be subject to change.

- \* The lens adapter (optional) is necessary to attach a tele conversion lens or close-up lens.
- NOTE: Accessories and/or model numbers may vary between countries. Consult your local dealer.

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