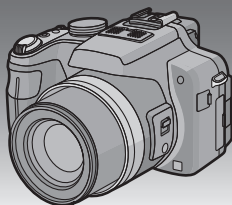# Panasonic®

Basic Operating Instructions
Digital Camera

Model No. DMC-FZ100

LUMIX

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

SD XC

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

PC   VQT2U39

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.
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.

Model No.

Serial No.

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**

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

Contents

Standard Accessories

Check that all the accessories are supplied before using the camera.
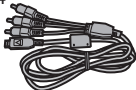Product numbers correct as of July 2010. These may be subject to change.

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 AV Cable
5 CD-ROM
  • Software:
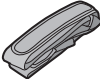   Use it to install the software to your PC.
6 CD-ROM
  • Operating Instructions
7 Shoulder Strap
8 Lens Cap/Lens Cap String
9 Lens Hood

• 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.

1	2
DMW-BMB9PP	DE-A83B
3	4
K1HA14AD0003	K1HA14CD0004
5	6
	VFF0639
7	8
VFC4453	VYQ5607
9	
VYQ5606	

Names of the Components

1 Lens
2 Flash
3 Self-Timer indicator
  AF assist lamp
4 Lens hood attachment part
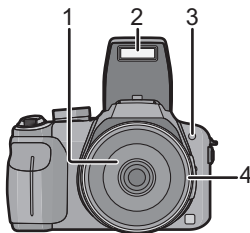
5 [Q.MENU] button/Delete button
6 [DISPLAY] button
7 LCD monitor
8 Flash open button
9 Diopter adjustment dial
10 Viewfinder
11 [EVF/LCD] button
12 [AF/AE LOCK] button
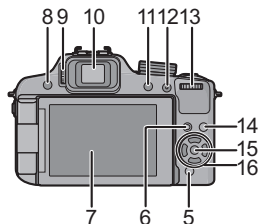
13 Rear dial

Rear dial is described as follows in these operating instructions.

e.g.: Rotating left or right	e.g.: Pressing the rear dial

14 Playback button
15 [MENU/SET] button

16 Cursor buttons

◄/ Self-Timer button

▼/ Function button
Assign [REC] Mode menu to ▼ button. It is convenient to register [REC] Mode menu that is used often.
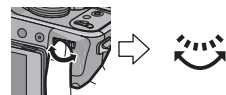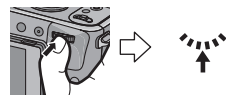[FILM MODE]/[ASPECT RATIO]/[QUALITY]/[METERING MODE]/ [WHITE BALANCE]/[I.EXPOSURE]/[GUIDE LINE]/[🎥 REC AREA]/ [REMAINING DISP.]

►/ ISO

▲/ Exposure compensation/
Auto Bracket/Flash output adjustment

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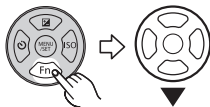
or **Press ▼**

---

17 Stereo microphone
18 Zoom lever
19 Shutter button
20 Motion picture button
21 Burst Mode button
22 Power lamp
23 Camera ON/OFF switch
24 Mode dial
25 Hot Shoe
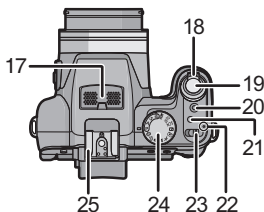
26 [MIC/REMOTE] terminal door
27 Shoulder strap eyelet
28 [MIC/REMOTE] socket
29 [HDMI] socket
30 [AV OUT/DIGITAL] socket
31 Terminal door
32 [FOCUS] button
33 Focus selector switch
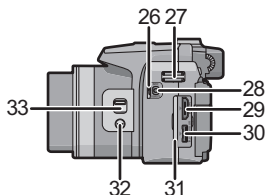
34 Speaker
35 Lens barrel
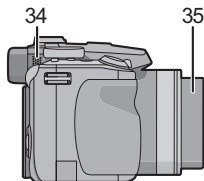
36 Release lever
37 Tripod receptacle
  • When you use a tripod, make sure the tripod is stable when the camera is attached to it.
38 Card/Battery door
39 DC coupler cover
  • When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC6; optional) and AC adaptor (DMW-AC8PP; optional) are used.
  • Always use a genuine Panasonic AC adaptor (DMW-AC8PP; optional).
  • We recommend you use a battery with sufficient battery power or the AC adaptor when recording motion pictures.
  • If while recording motion pictures using the AC adaptor 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.
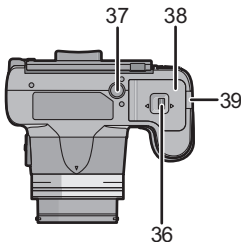
Charging the Battery

■ **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.
• The camera has a function for distinguishing batteries which can be used safely. The dedicated battery (DMW-BMB9PP) supports this function. The only batteries suitable for use with this unit are genuine Panasonic products and batteries manufactured by other companies and certified by Panasonic. (Batteries which do not support this function cannot be used). Panasonic cannot in any way guarantee the quality, performance or safety of batteries which have been manufactured by other companies and are not genuine Panasonic products.

■ **Charging**
• The battery is not charged when the camera is shipped. Charge the battery before use.
• Charge the battery with the charger indoors.
• It is recommended to charge the battery in a temperature between 10 °C to 30 °C (50 °F to 86 °F). (The battery temperature should also be the same.)

1 **Attach the battery paying attention to the direction of the battery.**
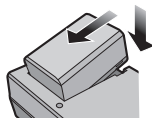
2 Connect the charger to the electrical outlet.

• Disconnect the charger from the electrical socket and detach the battery after charging is completed.
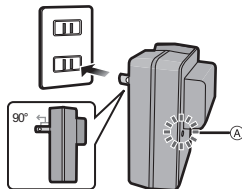
■ About the [CHARGE] indicator

The [CHARGE] indicator turns on: The [CHARGE] indicator Ⓐ is turned on and charging will start.

The [CHARGE] indicator turns off: The [CHARGE] indicator Ⓐ of the charger will turn off once the charging has completed without any problem.

• **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 ºC to 30 ºC (50 ºF to 86 ºF).
  – The terminals of the charger or the battery are dirty. In this case, wipe them with a dry cloth.

■ **Charging**

Charging time	Approx. 155 min

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

Number of recordable pictures	Approx. 410 pictures	(By CIPA standard in Program AE Mode)
Recording time	Approx. 205 min	

Recording conditions by CIPA standard
• CIPA is an abbreviation of [Camera & Imaging Products Association].
• 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 [AUTO].)
• **Recording once every 30 seconds** with full flash every second recording.
• Rotating the zoom lever from Tele to Wide or vice versa in every recording.
• Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

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

Playback time	Approx. 330 min

About the Built-in Memory/the Card

Built-in Memory

• **Memory size: Approx. 40 MB**
• The built-in memory can be used as a temporary storage device when the card being used becomes full.
• The access time for the built-in memory may be longer than the access time for a card.

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.)

Type of card which can be used with this unit	Remarks
SD Memory Card (8 MB to 2 GB)	• SDHC Memory Card can be used with SDHC Memory Card or SDXC Memory Card compatible equipment.
SDHC Memory Card (4 GB to 32 GB)	• SDXC Memory Card can only be used with SDXC Memory Card compatible equipment.
SDXC Memory Card (48 GB, 64 GB)	• Check that the PC and other equipment are compatible when using the SDXC Memory Cards. **http://panasonic.net/avc/sdcard/information/SDXC.html**

• Only cards bearing the SDHC logo (indicating that the card conforms to SD video standards) may be used as 4 GB to 32 GB cards.
• Only cards bearing the SDXC logo (indicating that the card conforms to SD video standards) may be used as 48 GB, 64 GB cards.
• Use a card with SD Speed Class✳ with "Class 4" or higher when recording motion pictures in [AVCHD]. Also, use a card with SD Speed Class with "Class 6" or higher when recording motion pictures in [MOTION JPEG].
  ✳ SD Speed Class is the speed standard regarding continuous writing.
• 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.
• Close the flash.
• 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.**
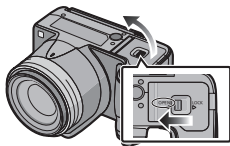
2 **Battery: Insert until it is locked by the lever Ⓐ being careful about the direction you insert it. Pull the lever Ⓐ in the direction of the arrow to remove the battery.**

   Card: Push it fully until it clicks being careful about the direction you insert it. To remove the card, push the card until it clicks, then pull the card out upright.
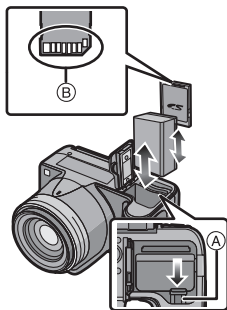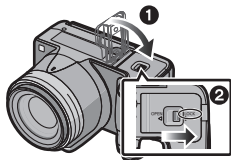
   Ⓑ: Do not touch the connection terminals of the card.
   • The card may be damaged if it is not fully inserted.

3 **❶:Close the card/battery door.**

   ❷: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.

Ⓐ [MENU/SET] button
Ⓑ Cursor buttons
• The lens barrel extends.
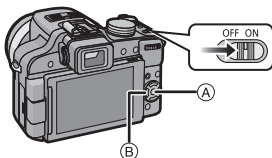
2 Press [MENU/SET].

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

• You can cancel without setting the clock by pressing [🗑].
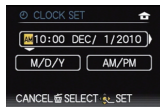
4 Press [MENU/SET] to set.

5 Press [MENU/SET].

• Press [🗑] to return to the settings screen.

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.

Setting the Menu

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

Example: To change the [AF MODE] from [■] (1-area-focusing) to [👤] (Face detection) in program AE mode with the focus selector switch set to [AF].

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

e.g.: Switching to the [SETUP] 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.

Selecting the [REC] Mode

1 Turn the camera on.

- The power lamp ❷ lights when you turn this unit on ❶.
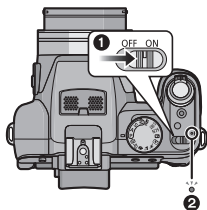
2 Switching the mode by rotating the mode dial.

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

■ Basic

> **[iA] Intelligent Auto Mode**
>
> The subjects are recorded using settings automatically selected by the camera.
>
> **[P] Program AE Mode**
>
> The subjects are recorded using your own settings.

■ **Advanced**

A **Aperture-Priority AE Mode**

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

S **Shutter-Priority AE Mode**

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

M **Manual Exposure Mode**

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

🎞M **Creative Motion Picture Mode**

Record motion picture with manual settings.

CUST **Custom Mode**

Use this mode to take pictures with previously registered settings.

SCN **Scene Mode**

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

⊘ **My Color Mode**

Use this mode to check coloring effects, select a color mode from among twelve color modes, and then take pictures.

■ **Advanced Scene Mode**

⚘ **Portrait Mode**

Use this mode to take pictures of people.

▨ **Scenery Mode**

Use this mode to take pictures of scenery.

⚡ **Sports Mode**

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

❀ **Close-up Mode**

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

★⚘ **Night Portrait Mode**

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

Taking pictures using the automatic function

**([iA]: Intelligent Auto Mode)**

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

1 Set the mode dial to [[iA]].

2 Hold this unit gently with both hands, keep your arms still at your side and stand with your feet slightly apart.

3 Press the shutter button halfway to focus.

- The focus indication ① (green) lights when the subject is focused.
- The AF area ② is displayed around the subject's face by the Face Detection function. In other cases, it is displayed at the point on the subject which is in focus.
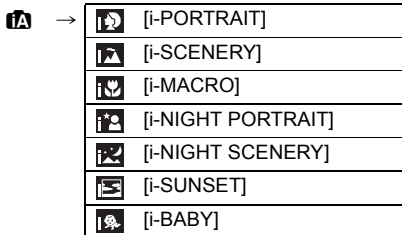- The focus range is 1 cm (0.04 feet) (Wide)/ 1 m (3.28 feet) (Tele) to ∞.
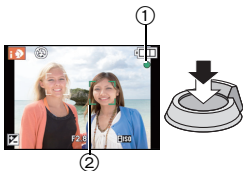
4 Press the shutter button fully (push it in further), and take the picture.

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]	• Only when [i⚡A] is selected
	🌆	[i-NIGHT SCENERY]	
	🌅	[i-SUNSET]	
	👶	[i-BABY]	

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

AF Tracking Function

It is possible to set the focus to the specified subject.

1 **Press [FOCUS].**
   • [⟦ᴵᴵ⟧] is displayed in the upper left of the screen.
   • AF Tracking frame is displayed in the center of the screen.
   • Press [FOCUS] again to cancel.

2 **Bring the subject to the AF Tracking frame, and press [AF/AE LOCK] to lock the subject.**
   • AF tracking frame will turn yellow.
   • An optimum scene for the specified subject will be chosen.
   • Press [FOCUS] to cancel.
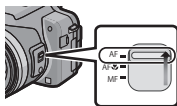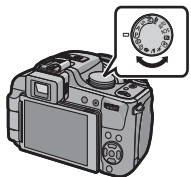
Taking pictures with your favorite settings
(**P**: Program AE Mode)

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.**

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

4 **Press the halfway pressed shutter button fully to take a 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.

- Press the shutter button halfway and then use the rear dial to activate program shift while the aperture value and the shutter speed are displayed on the screen (about 10 seconds).
- The program shift indication Ⓐ 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
❶ Program shift amount
❷ Program shift line chart
❸ Program shift limit

[REC] Mode: P A S CUST ⊞M SCN 🐥 🏔 🏃 🌷 ⚘ 🐾
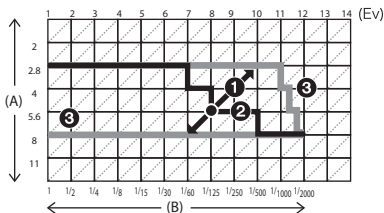
Compensating the Exposure

Use this function when you cannot achieve appropriate exposure due to the difference in brightness between the subject and the background.

1 **Press ▲ [☒] until [EXPOSURE] appears, compensate the exposure with ◄/►.**

• Select [0 EV] to return to the original exposure.

2 **Press [MENU/SET] to finish.**

• You can also press the shutter button halfway to finish.

■ **Operate with the rear dial**

1 **Press the rear dial to select [☒], and then rotate the rear dial to compensate the exposure.**

Ⓐ Exposure compensation value

2 **Press the shutter button halfway to finish.**

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 [Ⓐ].**

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

3 **Take a picture.**

[Ⓢ] Shutter-Priority AE

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

1 **Set the mode dial to [Ⓢ].**

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

3 **Take a picture.**

Taking picture by setting the exposure manually

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

1 Set the mode dial to [M].

• The Manual Exposure Assistance Ⓐ appears for about 10 seconds.

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

Ⓑ Aperture Value
Ⓒ Shutter Speed
• It will switch between aperture setting operation and shutter speed setting operation every time the rear dial is pressed.

3 Press the shutter button halfway.

• The Manual Exposure Assistance Ⓐ appears for about 10 seconds.
• Set the aperture value and the shutter speed again when the exposure is not adequate.

4 Take the picture.

∎ 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.

Taking Pictures using Burst Mode

Pictures are taken continuously while the shutter button is pressed.
Select the ones you really like from the pictures you have taken.
Burst speed can be selected to match the recording conditions or subjects.
Pictures recorded in burst mode will be recorded as a burst picture group.

1 Press [⚄] (Burst Mode) button to display the Burst setting menu.

2 Press ◀/▶ to select the Burst speed and then press [MENU/SET].

| **Burst speed**	
[②]:	2 pictures/second
[⑤]:	5 pictures/second
[⑪]:	11 pictures/second
[⑩]:	40 pictures/second
[⑩]:	60 pictures/second

3 Take a picture.

Recording Motion Picture

This can record full high definition motion pictures compatible with the AVCHD format or motion pictures recorded in Motion JPEG.
Audio will be recorded in stereo.
• Close the flash. (It is recommended that you close the flash when recording motion pictures. However, leaving the flash open will not result in a significant difference in sound quality.)
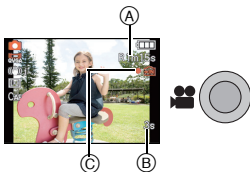
1   Select the mode.
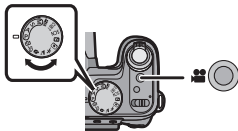
2   Start recording by pressing the motion picture button.

- Ⓐ   Available recording time
- Ⓑ   Elapsed recording time
- Release the motion picture button right after you press it.
- The recording state indicator (red) Ⓒ will flash while recording motion pictures.

3   Stop the recording by pressing the motion picture button again.

• If the built-in memory or the card becomes full in the middle of recording, the camera stops recording automatically.

🖉 Note

• Motion picture recorded continuously in [MOTION JPEG] or [HIGH SPEED MOVIE] in Scene Mode is up to 2 GB. Only the maximum recordable time for 2 GB is displayed on the screen.
• Maximum time to record motion pictures continuously with [AVCHD] is 13 hours 3 minutes 20 seconds. Screen will only display up to 13 hours 3 minutes 20 seconds. However, the recording may stop before that depending on the remaining battery level.

Playing back Pictures ([NORMAL PLAY])

1 **Press [▶].**

2 **Press ◄/► to select the picture.**

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

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

DELETE SINGLE
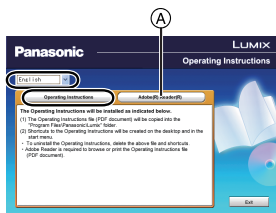YES NO
DELETE MULTI
DELETE ALL

Reading the Operating Instructions (PDF format)

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

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

■ **For Windows**

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

2 Select the desired language and then click [Operating Instructions] to install.

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

Ⓐ

Panasonic   LUMIX

Operating Instructions

English

Operating Instructions   Adobe(R)Reader(R)

The Operating Instructions will be installed as indicated below.
(1) The Operating Instructions file (PDF document) will be copied into the "Program Files/Panasonic/Lumix" folder.
(2) Shortcuts to the Operating Instructions will be created on the desktop and in the start menu.
- To uninstall the Operating Instructions, delete the above file and shortcuts.
- Adobe Reader is required to browse or print the Operating Instructions file (PDF document).

Exit

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

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format).
Insert the CD-ROM containing the Operating Instructions (supplied), click Ⓐ and then follow the messages on the screen to install.
(Compatible OS: Windows 2000 SP4/Windows XP SP2 or SP3/Windows Vista SP1 or SP2/Windows 7)

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

■ To uninstall the Operating Instructions (PDF format)

Delete the PDF file from the "Program Files\Panasonic\Lumix\" folder.
• When the contents in the Program Files folder cannot be displayed, click the [Show the contents of this folder] to display them.

■ For Macintosh

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

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

3 **Double click the PDF file to open it.**

Specifications

Digital Camera: Information for your safety

Power Source:	DC 8.4 V
Power Consumption:	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)

Camera effective pixels:	14,100,000 pixels
Image sensor:	1/2.33″ MOS sensor, total pixel number 15,100,000 pixels, Primary color filter
Lens:	Optical 24× zoom f = 4.5 mm to 108 mm 35 mm film camera conversion: 25 mm to 600 mm (4:3), 27 mm to 654 mm (still pictures 16:9), 31 mm to 735 mm (motion pictures, still pictures during motion pictures 16:9), 26 mm to 624 mm (3:2), 30 mm to 709 mm (1:1), 38 mm to 900 mm (burst 60 frames/sec 4:3), 31 mm to 735 mm (burst 60 frames/sec 16:9), 35 mm to 832 mm (burst 60 frames/sec 3:2), 44 mm to 1,060 mm (burst 60 frames/sec 1:1) Wide end: F2.8 to F8.0 (when recording motion pictures: F2.8 to F11) Tele end: F5.2 to F8.0 (when recording motion pictures: F5.2 to F11)
Digital Zoom:	Max. 4×
Extended optical zoom:	Max. 50.6×

Focus range:	AF: 30 cm (0.99 feet) (Wide)/2 m (6.57 feet) (Tele) to ∞ AF Macro/MF/Intelligent Auto: 1 cm (0.04 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞ Scene Mode: There may be differences in the above settings.
Shutter system:	Electronic shutter+Mechanical shutter
Burst recording	Burst speed (Burst number/maximum recordable pixels)
For mechanical shutter:	2 frames/sec (Max. 100 frames/14 M), 5 frames/sec (Max. 100 frames/14 M), 11 frames/sec (Max. 15 frames/14 M)
For electronic shutter:	40 frames/sec (Max. 50 frames/5 M), 60 frames/sec (Max. 60 frames/3.5 M)
During motion picture recording:	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)
Minimum illuminance:	Approx. 12 lx (when i-low light is used)
Shutter speed **Still picture:**	60 seconds to 1/2000th of a second [STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds
Motion pictures:	1/30 to 1/20000th of a second Creative Motion Picture Mode (Manual Exposure/Manual Focus): 1/8 to 1/20000th of a second
Exposure (AE):	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)
Metering mode:	Multiple/Center weighted/Spot

LCD monitor:	3.0″ TFT LCD (3:2)
	(Approx. 461,000 dots) (field of view ratio about 100%)
Viewfinder:	Color LCD Viewfinder (Approx. 202,000 dots)
	(field of view ratio about 100%)
	(with diopter adjustment −4 to +4 diopter)
Flash:	Built-in pop up flash
	Flash range: [ISO AUTO]
	Approx. 30 cm (0.99 feet) to 9.5 m (31.16 feet) (Wide)
	AUTO, AUTO/Red-eye reduction, Forced flash ON
	(Forced ON/Red-eye reduction), Slow sync./Red-eye
	reduction, Forced flash OFF
Microphone:	Stereo
Speaker:	Monaural
Recording media:	Built-in Memory (Approx. 40 MB)/SD Memory Card/SDHC
	Memory Card/SDXC Memory Card

Recording file format

Still Picture:	JPEG (based on "Design rule for Camera File system",
	based on "Exif 2.3" standard)/RAW, DPOF corresponding

Motion pictures with audio:	AVCHD/QuickTime Motion JPEG

Interface

Digital:	"USB 2.0" (High Speed)
Analog video/ audio:	NTSC
	Audio line output (stereo)

Terminal

[MIC/REMOTE]:	φ 2.5 mm jack
[AV OUT/DIGITAL]:	Dedicated jack (14 pin)
[HDMI]:	MiniHDMI TypeC

Dimensions:	Approx. 124.3 mm (W)×81.2 mm (H)×95.2 mm (D) [4.89″ (W)×3.20″(H)×3.74″ (D)] (excluding the projecting parts)
Mass (weight):	Approx. 540 g/1.19 lb (with card and battery) Approx. 496 g/1.09 lb (excluding card and battery)
Operating temperature:	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity:	10%RH to 80%RH

Battery Charger (Panasonic DE-A83B): Information for your safety

| **Input:** | ∼ 110 V to 240 V 50/60 Hz, 0.15 A |
| **Output:** | === 8.4 V 0.43 A |
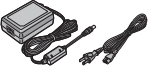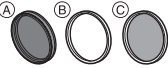
Equipment mobility: Movable

Battery Pack (lithium-ion) (Panasonic DMW-BMB9PP): Information for your safety

| **Voltage/capacity:** | 7.2 V/895 mAh |

Digital Camera Accessory System

Accessory#	Illustration	Description
DMW-BMB9PP		Battery Pack
DMW-AC8PP		AC Adaptor[*1]
DMW-DCC6		DC Coupler[*1]
Ⓐ: DMW-LPL52 Ⓑ: DMW-LMC52 Ⓒ: DMW-LND52	Ⓐ Ⓑ Ⓒ	Ⓐ: PL Filter Ⓑ: MC Protector Ⓒ: ND Filter
DMW-LT55		Tele Conversion Lens[*2]
DMW-LC55		Close-up Lens[*2]
DMW-LA5		Lens Adaptor[*2]
RP-CDHM15 RP-CDHM30		HDMI mini Cable

Accessory#	Illustration	Description
DMW-FL220 DMW-FL360 DMW-FL500		Flash
DMW-RSL1		Remote Shutter
DMW-MS1		Stereo Microphone
RP-SDW64GU1K RP-SDW48GU1K RP-SDW32GU1K RP-SDW16GU1K RP-SDW08GU1K RP-SDW04GU1K		Class 10 64 GB SDXC Memory Card Class 10 48 GB SDXC Memory Card Class 10 32 GB SDHC Memory Card Class 10 16 GB SDHC Memory Card Class 10 8 GB SDHC Memory Card Class 10 4 GB SDHC Memory Card
RP-SDP16GU1K RP-SDP08GU1K RP-SDP04GU1K RP-SDP02GU1K		Class 4 16 GB SDHC Memory Card Class 4 8 GB SDHC Memory Card Class 4 4 GB SDHC Memory Card Class 4 2 GB SD Memory Card
RP-SDR08GU1A RP-SDR04GU1A RP-SDR02GU1A		Class 2 8 GB SDHC Memory Card Class 2 4 GB SDHC Memory Card Class 2 2 GB SD Memory Card

Product numbers correct as of July 2010. These may be subject to change.
∗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 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.

AVCHD ™   **HDMI**

VIERA Link ™   **DOLBY DIGITAL STEREO CREATOR**   QuickTime

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