Panasonic®

Basic Operating Instructions
Digital Camera
Model No. DMC-SZ8

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

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

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GN

VQT5G71-1
F0114YD1034

More detailed operating instructions are available in "Operating Instructions for advanced features (PDF format)". To read it, download it from the website.
http://panasonic.jp/support/dsc/oi/index.html?model=DMC-SZ8&dest=GN
• Click the desired language.

✳ You will need Adobe Reader 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. (As of January 2014)
http://www.adobe.com/products/acrobat/readstep2.html

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

■ About the AC adaptor (supplied)
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 unit is in the standby condition when the AC adaptor is connected. The primary circuit is always "live" as long as the AC adaptor is connected to an electrical outlet.

■ About the battery pack
CAUTION
• Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
• When disposing of 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.

Cautions for Use

• Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
• Do not use any other AC adaptors except the supplied one.
• Always use a genuine Panasonic AV cable (DMW-AVC1: optional).
• **Always use genuine Panasonic batteries (DMW-BCL7E).**
• **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.

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 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. 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.

• **Before cleaning the camera, remove the battery or disconnect the power plug from the outlet.**
• **Do not press the monitor with excessive force.**
• **Do not press the lens with excessive force.**
• **Do not spray the camera with insecticides or volatile chemicals.**
• **Do not keep rubber or plastic products in contact with the camera for a long period of time.**
• **Do not use solvents such as benzine, thinner, alcohol, kitchen detergents, etc., to clean the camera, since it may deteriorate the external case or the coating may peel off.**
• **Do not leave the camera with the lens facing the sun, as rays of light from the sun may cause it to malfunction.**

• **Always use the supplied cords and cables.**
• **Do not extend the cords or the cables.**
• **During access (image writing, reading and deleting, formatting etc.), do not turn this unit off, remove the battery, card or disconnect the AC adaptor (supplied). Furthermore, do not subject the camera to vibration, impact or static electricity.**
• The data on the built-in memory or the card may be damaged or lost due to electromagnetic waves, static electricity or breakdown of the camera or the card. We recommend storing important data on a PC etc.
• Do not format the card on your PC or other equipment. Format it on the camera only to ensure proper operation.

• **The battery is not charged when the camera is shipped. Charge the battery before use.**
• **Charge the battery only when it is inserted in the camera.**
• **Do not remove or damage the external label on the battery.**
• **The battery is a rechargeable lithium ion battery. If the temperature is too high or too low, the operating time of the battery will become shorter.**
• The battery becomes warm after using and during and after charging. The camera also becomes warm during use. This is not a malfunction.
• **Do not leave any metal items (such as clips) near the contact areas of the power plug or near the batteries.**
• Store the battery in a cool and dry place with a relatively stable temperature: (Recommended temperature: 15 °C to 25 °C, Recommended humidity: 40%RH to 60%RH)
• **Do not store the battery for a long time while fully charged.** When storing the battery for a long period of time, we recommend charging it once a year. Remove the battery from the camera and store it again after it has completely discharged.

-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.
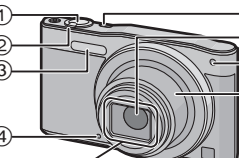
Accessories
Check that all the accessories are supplied before using the camera.
Product numbers correct as of January 2014. These may be subject to change.

Battery Pack (DMW-BCL7E)	AC Adaptor (VSK0776)
USB Connection Cable (K1HY08YY0037)	
Hand Strap (VFC4737-A)	

• Consult the dealer or Panasonic if you lose the supplied accessories. (You can purchase the accessories separately.)

Names of Main Parts
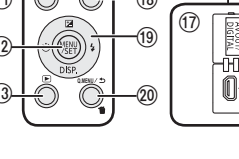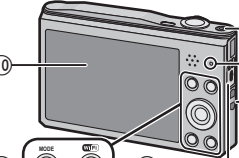
① Shutter button
② Zoom lever
③ Flash
④ Microphone
⑤ Camera [ON/OFF] button
⑥ Lens
⑦ Self-timer indicator/ AF Assist Lamp
⑧ Lens barrel
⑨ Lens barrier
⑩ Monitor
⑪ [MODE] button
⑫ [MENU/SET] button
⑬ [▶] (Playback) button
⑭ Motion picture button
⑮ Charging lamp Wi-Fi® connection lamp
⑯ Strap eyelet
⑰ [AV OUT/DIGITAL] socket
⑱ [Wi-Fi] button
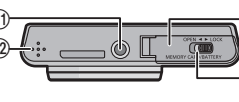⑲ Cursor buttons ▲ [☑]/▼ (DISP.)/◄ [⏱]/▶ [♢]
⑳ [Q.MENU] button [🗑] (Delete) button [↰] (Cancel) button
㉑ Tripod mount
㉒ Speaker
㉓ Card/Battery door
㉔ Release lever
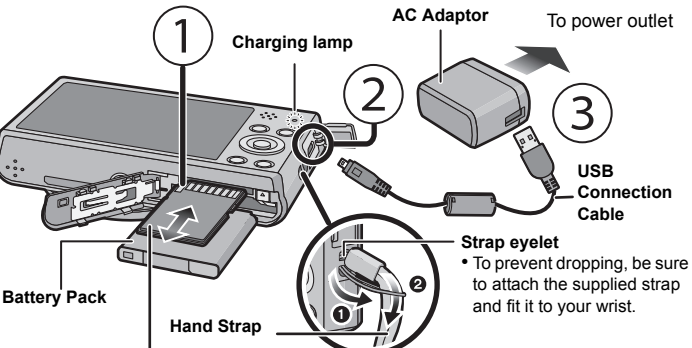
Preparations

AC Adaptor
To power outlet
① Charging lamp
②
③
USB Connection Cable
Strap eyelet
• To prevent dropping, be sure to attach the supplied strap and fit it to your wrist.
Battery Pack
Hand Strap

SD Memory Card (optional)
• The following cards, which conform to the SD standard, can be used with this unit. (These cards are indicated as **card** in the text.)
  SD Memory Card (8 MB to 2 GB)
  SDHC Memory Card (4 GB to 32 GB)
  SDXC Memory Card (48 GB, 64 GB)

Charging time	Approx. 150 min

• When charging is complete, the charging lamp will go off - then you may disconnect the camera from the power outlet or computer.

Tips for taking good pictures

Hold the camera gently with both hands, keep your arms still at your side and stand with your feet slightly apart.
• Be careful not to put your fingers on the flash, AF assist lamp, microphone, speaker or lens etc.
• If you use the zoom, the lens barrel will be extended. This may cause the camera to tilt. We recommend fixing the camera on a tripod or other support.

Ⓐ Tripod mount
A tripod with a screw length of 5.5 mm or more may damage this unit if attached.
It may not be possible to attach certain types of tripods properly.

Flash   Lens
AF Assist Lamp
Microphone
Speaker

Selecting the Recording Mode

1. Press [MODE].
2. Press ▲/▼/◄/► to select the Recording Mode.
3. Press [MENU/SET].

■ List of Recording Modes

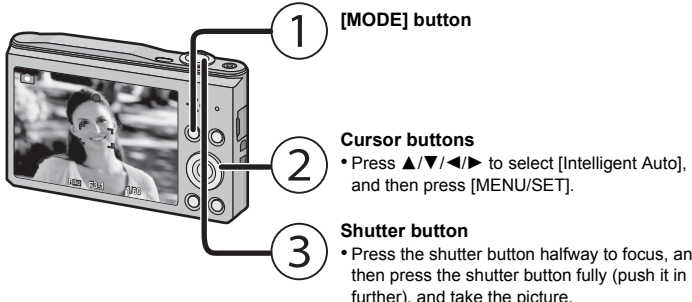|	
ⒾⒶ Intelligent Auto Mode	The subjects are recorded using settings automatically selected by the camera.
◻ Normal Picture Mode	The subjects are recorded using your own settings.
✎ Creative Control Mode	Record while checking the image effect. This mode allows you to select any of the 15 image effects including [Old Days], [High Key], and [Dynamic Monochrome].
▱ Panorama Shot Mode	This mode allows you to take panorama pictures. This mode allows you to select any of the 13 image effects including [Old Days], [High Key], and [Dynamic Monochrome].
SCN Scene Mode	This mode allows you to take pictures that match the scene being recorded. This mode allows you to select any of the 15 scenes including [Portrait], [Scenery], and [Starry Sky].

• When the mode has been switched from Playback Mode to Recording Mode, the previously set Recording Mode will be set.

Changing Functions and Settings

Functions and settings can be changed using ▲/▼/◄/► and [MENU/SET]. (Some functions and settings will not be available for selection depending on the Recording Mode.)

▲ [☑]	The exposure compensation setting screen is displayed. Each time it is pressed, the display on the monitor is switched.
▼ (DISP.)	Recordable pictures / Recordable time / Guideline
	• The guideline is used for balancing the composition. (This is not displayed during playback)
◄ (⏱)	The Self-Timer setting screen is displayed. [⏱₁₀]([10sec.])/[⏱₂]([2sec.])/[OFF]
► (♢)	The flash setting screen is displayed. [ɟA]([Auto])/[ɟ⊙A]([Auto/Red-Eye])/[ɟ]([Forced Flash On])/ [ɟS⊙]([Slow Sync./Red-Eye])/[⊙]([Forced Flash Off])
	The menu screen is displayed. This operation is also available during playback.

Taking pictures using the automatic function (Intelligent Auto Mode)

We recommend this mode for beginners or those who want to leave the settings to the camera and record casually.

① [MODE] button
② Cursor buttons
• Press ▲/▼/◄/► to select [Intelligent Auto], and then press [MENU/SET].
③ Shutter button
• Press the shutter button halfway to focus, and then 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 colour changes to the usual red.

ⒾⒶ			
	[i-Portrait]		[i-Scenery]
	[i-Macro]		[i-Night Portrait]✳
	[i-Night Scenery]		[i-Sunset]

✳ Only displayed when the flash is set to [ɟ♢A].

Using the Zoom

To make subjects appear further away use (Wide):
Rotate the zoom lever towards Wide.

To make subjects appear closer use (Tele):
Rotate the zoom lever towards Tele.

Optical Zoom
Zooms in without deteriorating the image quality.
Maximum magnification: 12×

Extra Optical Zoom (EZ)
This function works when any of the picture sizes indicated with [🖼] is selected.
You can zoom in further than you can with the Optical Zoom without deteriorating the image quality.
Maximum magnification: 27×
(This includes the optical zoom magnification. The magnification level differs depending on [Picture Size] setting.)

Intelligent Zoom
Enabled when [i.Zoom] in the [Rec] menu is set to [ON].
You can zoom in up to twice the original zoom magnification while minimising the deterioration of the image quality.

Digital Zoom
This function works when [Digital Zoom] in the [Rec] menu is set to [ON].
Although the image quality deteriorates every time you zoom in further, you can zoom in up to four times the original zoom magnification.

Selecting the Recording Mode

1. Press [MODE].
2. Press ▲/▼/◄/► to select the Recording Mode.
3. Press [MENU/SET].
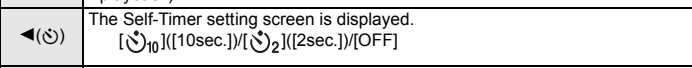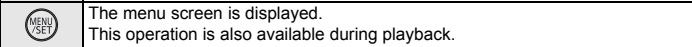
Menus convenient for taking pictures

■ [Picture Size]
A picture taken with the camera is saved as picture data of up to approximately 16 million pixels.
The smaller the number of pixels is, the greater the number of recordable pictures will be.

Save location	16M (4:3)	3M (4:3)	0.3M (4:3)
Built-in Memory (Approx. 80 MB)	9	80	370
Card (2 GB)	190	1950	8500

■ [Sensitivity]
This allows the Sensitivity to light (ISO sensitivity) to be set. Setting to a higher figure enables pictures to be taken even in dark places without the resulting pictures coming out dark.

	[100] ⟵⟶ [1600]	
Recording location (recommended)	When it is light (outdoors)	When it is dark
Shutter speed	Slow	Fast
Noise	Less	Increased
Jitter of the subject	Increased	Less

■ [AF Mode]
This allows the focusing method that suits the positions and number of the subjects to be selected.

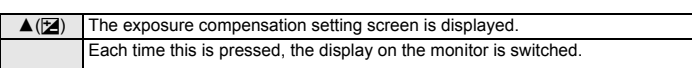| Settings		Description of settings
[☺]	([Face Detection])	The camera automatically detects the person's face. (max. 12 areas)
[▦▦]	([9-Area])	Up to 9 points for each AF area can be focused.
[▫]	([1-Area])	The camera focuses on the subject in the AF area on the centre of the screen.
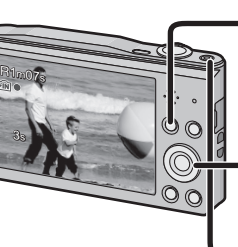
■ [Date Stamp]
You can take a picture with date and time of recording.

Settings	Description of settings
[W/O TIME]	Stamp the year, month, and day.
[WITH TIME]	Stamp the year, month, day, hour, and minutes.
[OFF]	—

Recording Motion Pictures

This unit can record motion pictures in QuickTime Motion JPEG format.

① [MODE] button
② Cursor buttons
• Press ▲/▼/◄/► to select the Recording Mode, and then press [MENU/SET].
• You can record motion pictures fitting each Recording Mode.
(Motion pictures cannot be recorded in Panorama Shot Mode.)
③ Motion picture button
• The recording state indicator (red) will flash while recording motion pictures.
• Stop the recording by pressing the motion picture button again.

■ About the recording quality setting
The recording quality for motion pictures can be changed in [Rec Quality] of the [Motion Picture] menu.

Settings	Picture size	fps	Aspect ratio
[HD]	1280×720	30	16:9
[VGA]	640×480		4:3
[QVGA]	320×240		

• When recording to the built-in memory, [Rec Quality] is fixed to [QVGA].
• Motion pictures can be recorded continuously up to 2 GB.
The maximum available recording time for up to 2 GB only is displayed on the screen.

■ About zooming while recording motion pictures
• The Extra Optical Zoom and Intelligent Zoom cannot be used during the motion picture recording.
• If you use Extra Optical Zoom or Intelligent Zoom, the angle of view may change drastically when you start or finish recording a motion picture.

Playback

① **[▶] (Playback) button**
• Use this to play back pictures.

② **Cursor buttons**
• ◀/▶ : to select the picture

[🗑] (Delete) button
• [🗑]: to delete the displayed picture

Setting the Menu

The camera comes with menus that allow you to choose the settings for taking pictures and playing them back just as you like and menus that enable you to have more fun with the camera and use it more easily.

1 Press [MENU/SET].
2 Press ▲/▼/◀/▶ to select menu and then press [MENU/SET].

Menu	Description of settings
[Rec]	The menu lets you set the Colouring, Sensitivity or Number of pixels, etc. of pictures you are recording.
[Motion Picture]	This menu lets you set the setting for motion pictures such as recording quality.
[Playback]	This menu lets you make changes to the pictures taken. For example, you can set protection for the pictures taken, or crop them.
[Setup]	This menu lets you perform the clock settings, beep tone settings and other settings which make it easier for you to operate the camera.
[Wi-Fi]	This menu lets you make the settings necessary to connect to Wi-Fi or use the Wi-Fi function.

3 Press ▲/▼ to select the menu item and then press [MENU/SET].
• It will switch to the next page when you reach the bottom. (It will also switch by rotating the zoom lever)
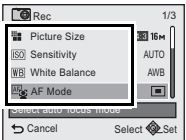
4 Press ▲/▼ to select the setting and then press [MENU/SET].
• Depending on the menu item, its setting may not appear or it may be displayed in a different way.

■ **Close the menu**
Press [↩] repeatedly until the screen returns to the recording/playback screen.
• In recording mode, the menu screen can also be exited by pressing the shutter button halfway.
• There are functions that cannot be set or used depending on the modes or menu settings being used on the camera due to the specifications.

What you can do with the Wi-Fi® function

The camera is not capable of connecting to a wireless network via public wireless LAN.

Controlling with a Smartphone/Tablet

Recording images remotely with a smartphone
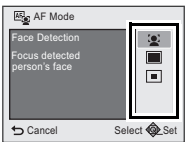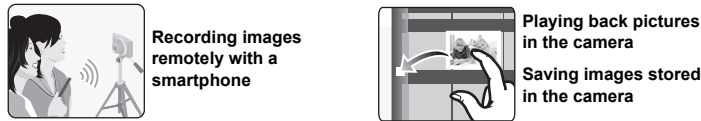
Playing back pictures in the camera
Saving images stored in the camera

Install the dedicated smartphone/tablet app "Panasonic Image App"* on your smartphone/tablet.
• OS
App for Android™: Android 2.3.3 or higher
→ Search the Google Play™ Store for "Panasonic Image App" or "LUMIX", and install the app.
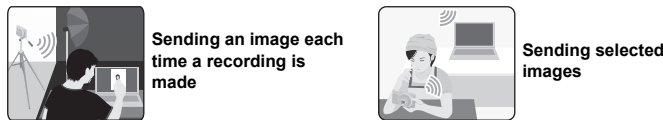App for iOS: iOS 5.0 or higher:
→ Search the App Store℠ for "Panasonic Image App" or "LUMIX", and install the app.
• Use the latest version.
• Some smartphones/tablets may not work correctly. For information on the "Image App", refer to the support site below.
http://panasonic.jp/support/global/cs/dsc/
※ In this manual, the app is referred to as "Image App".

When sending images to PC

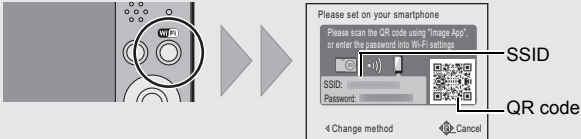Sending an image each time a recording is made

Sending selected images

Connecting to a smartphone/tablet

Using the QR code to set up a connection
(If you are using an iOS device [iPhone/iPod touch/iPad])

1 Press and hold [Wi-Fi], and release it after the Wi-Fi connection lamp lights up.
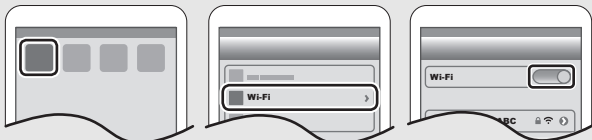• The QR code will be displayed on the camera screen.

SSID
QR code

• If you press and hold [Wi-Fi] for too long, this unit may turn off. When this occurs, turn on this unit again.

2 Start "Image App" on your smartphone/tablet.
3 Select [QR code], and then select [OK].
4 Using "Image App", scan the QR code displayed on the screen of the camera.
5 Install the profile of "IMAGE APP".
• A message will be displayed on the browser.
• If the smartphone/tablet is locked with a passcode, enter the passcode to unlock the smartphone/tablet.

IMAGE APP

6 Press the home button to close the browser.
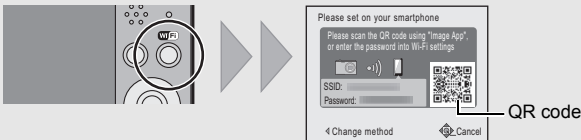**7** Turn on the Wi-Fi function in the setting menu of the smartphone/tablet.

8 Select the SSID displayed on the screen of the camera.
9 Return to the home screen, and then start "Image App".
• Steps **2** through **6** are not required from the second time on.

Using the QR code to set up a connection
(If you are using an Android device)

1 Press and hold [Wi-Fi], and release it after the Wi-Fi connection lamp lights up.
• The QR code will be displayed on the camera screen.
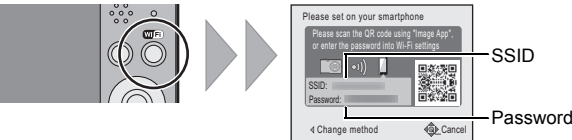
QR code

• If you press and hold [Wi-Fi] for too long, this unit may turn off. When this occurs, turn on this unit again.

2 On the smartphone/tablet, start "Image App".
3 Select [QR code].
4 Using "Image App", scan the QR code displayed on the screen of the camera.

■ **Entering a password to set up a connection**
1 Press and hold [Wi-Fi].
• The Password will be displayed on the camera screen.

SSID
Password

2 Turn on the Wi-Fi function in the setting menu of the smartphone/tablet.
3 Select the SSID displayed on the screen of the camera.
4 Enter the password displayed on the screen of the camera.
• If you are using an Android device, marking the box for password display will allow the device to display the password as you enter it.

Wi-Fi

5 On the smartphone/tablet, start "Image App".
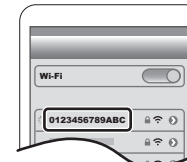
Controlling the camera with the smartphone/tablet

■ **Recording images with the smartphone/tablet (remote recording)**
1 Connect to a smartphone/tablet.
2 Select [⟲] on the screen of "Image App".
• The recorded images are saved in the camera.
• Motion pictures cannot be recorded.

■ **Playing back the camera's images on the smartphone/tablet**
1 Connect to a smartphone/tablet.
2 Select [▶] on the screen of "Image App".
• Images in the camera are displayed on the screen of the smartphone/tablet.
3 Touch an image to enlarge it.
• Motion pictures can be played back.

■ **Saving the camera's images in the smartphone/tablet**
1 Connect to a smartphone/tablet.
2 Select [▶] on the screen of "Image App".

3 Press and hold an image, and drag it to save it on the smartphone/tablet.
• Motion pictures cannot be saved.

■ **Sending location information to the camera from a smartphone/tablet**
You can acquire location information from a smartphone/tablet, and write it on images afterwards.
• Read the [Help] in the "Image App" menu for further details on how to operate.

Setting up a connection to a PC via a wireless access point

Creating a destination folder for images

To send pictures to a PC, you need to create a destination folder on the PC in advance.
• Create a PC user account [account name (up to 254 characters) and password (up to 32 characters)] consisting of alphanumeric characters.
An attempt to create a receive folder may fail if the account includes non-alphanumeric characters.

(For Windows)
Supported OS: Windows® XP/Windows Vista®/Windows® 7/Windows® 8/Windows® 8.1
Example: Windows 7

1 Select a destination folder, then right-click.
2 Select [Properties], then enable sharing of the folder.
• For details, refer to the operating instructions of your PC or Help on the OS.

(For Mac)
Supported OS: OS X v10.5 to v10.9
Example: OS X v10.8

1 Select a destination folder, then click the following items:
[File] → [Get Info]
2 Enable sharing of the folder.
• For details, refer to the operating instructions of your PC or Help on the OS.

Sending images to the PC

You can send pictures and motion pictures recorded with this unit to a PC.
The connection methods described in this manual are examples. For details on other connection methods, refer to "Operating Instructions for advanced features (PDF format)".

Preparations:
• If the workgroup of the destination PC has been changed from the standard setting, you also need to change the setting of this unit in [PC Connection].
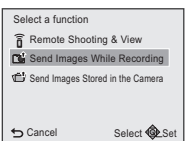
1 Press [Wi-Fi].

2 Press ▲/▼/◀/▶ to select [New Connection], and then press [MENU/SET].
3 Press ▲/▼ to select the sending method.

Sending an image each time you record it ([Send Images While Recording])
Available file format: JPEG

Sending selected images ([Send Images Stored in the Camera])
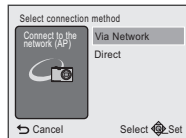Available file format: JPEG/Motion JPEG

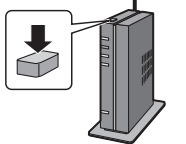**4** Press ▲/▼ to select [PC], and then press [MENU/SET].

5 Select the connection method.

Example: Selecting [WPS (Push-Button)] to set up a connection
❶ Select [Via Network].
❷ Select [WPS (Push-Button)].

❸ Press and hold the WPS button of the wireless access point until it switches to WPS mode. (Example)

6 On the camera, perform the operation that matches your purpose.

[Send Images While Recording]
❶ Select the PC you want to connect to and the destination folder.
❷ Take a picture with the camera.

[Send Images Stored in the Camera]
❶ Select the PC you want to connect to and the destination folder.
❷ Select [SINGLE] or [MULTI], and then select the images you want to send.
• When the PC you want to connect to is not displayed, select [Manual Input], and enter the computer name of the PC (NetBIOS name for Apple Mac computers).

• Folders sorted by the sent date are created in the specified folder, and pictures are saved in those folders.
• If the screen for a user account and password entry appears, enter the one you set on your PC.
• When the computer name (NetBIOS name for Apple Mac computers) contains a space (blank character), etc., it may not be recognised correctly. If a connection attempt fails, we recommend that you change the computer name (or NetBIOS name) to the one consisting of only alphanumeric characters, with a maximum of 15 characters.

Transferring images to a PC by using the USB connection cable (supplied)

1 Connect the computer and camera with the USB connection cable (supplied).

[AV OUT/DIGITAL] socket
• This socket is also used when charging the battery.

PC

USB Connection Cable
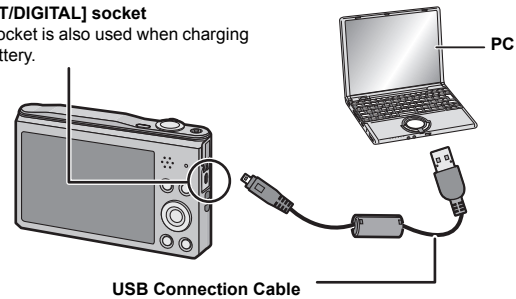
2 Press ▲/▼ to select [PC], and then press [MENU/SET].
3 Drag and drop files and folders in the camera to the PC.
• When the image transfer is complete, disconnect the USB connection cable safely.

■ **Playback and editing on a PC**
Software for image playback or editing is not supplied with this product.
• **To play back or edit still pictures, use standard software.**
• **To play back motion pictures, use the standard software.**

Troubleshooting

If the problem is not resolved, **it may be improved by selecting [Reset] on the [Setup] menu.**

The charging lamp blinks.
• This phenomenon occurs when charging in a location where the temperature is very high or very low.
→ Reconnect the USB connection cable (supplied) in a location where the ambient temperature (and the temperature of battery) is in a 10 °C to 30 °C range, and try charging again.

When recording pictures or half-pressing the shutter button, reddish stripes may appear on the monitor. Alternatively, part or all of the monitor may turn a reddish colour.

• This is a characteristic of CCDs, and it appears when the subject has a bright part. Some unevenness may occur in the surrounding areas, but this is not a malfunction.
It is recorded in motion pictures but is not recorded on still pictures.
• It is recommended that when you take pictures you take care not to expose the screen to sunlight or any other source of strong light.

A Wi-Fi connection cannot be established.
Radio waves get disconnected.
Wireless access point is not displayed.

(General tips for using a Wi-Fi connection)
• Try [Reset Wi-Fi Settings] in the [Setup] menu.
• Use within the communication range of the device to be connected.
• Is any device, such as microwave oven, cordless phone, etc., that uses 2.4 GHz frequency operated nearby?
→ Radio waves may get interrupted when used simultaneously. Use them sufficiently away from the device.
• When the battery indicator is flashing red, the connection with other equipment may not start or the connection may be disrupted.
(A message such as [Communication error] is displayed.)

(About a wireless access point)
• Check if the wireless access point to connect is in operating state.
• The camera may not display or connect to a wireless access point depending on the radio wave condition.
— Move this unit closer to the wireless access point.
— Remove the obstacles between this unit and the wireless access point.
— Change the direction of this unit.
— Change the location and orientation of the wireless access point.
— Perform the [From List].
• It may not display even if the radio waves exist depending on the setting of the wireless access point.
→ Check the settings of the wireless access point.
→ When the network SSID of the wireless access point is set not to broadcast, the wireless access point may not be detected. Enter the network SSID to start the connection or enable the SSID broadcast of the wireless access point.
• Connection types and security setting methods are different depending on the wireless access point. (Refer to the operating instructions of the wireless access point.)
• Is the 5 GHz/2.4 GHz switchable wireless access point connected to other equipment using the 5 GHz band?
→ The use of a wireless access point that can use 5 GHz/2.4 GHz simultaneously is recommended. It cannot be used simultaneously with this camera if it is not compatible.

It takes long time every time to connect to a smartphone/tablet.
• It may take longer time to connect depending on the Wi-Fi connection setting of the smartphone/tablet, but it is not a malfunction.

Transmission of the image fails midway.
• Is the size of the image too large?
→ Reduce the size of the still picture, then transmit.
→ Image cannot be transmitted when the battery indicator is flashing red.

Please refer to "Operating Instructions for advanced features (PDF format)" for details.

Specifications

Specifications are subject to change without notice.
Digital Camera: Information for your safety

Power Source:	DC 5 V
Power Consumption:	1.4 W (When recording)
	0.8 W (When playing back)
Camera effective pixels	16,000,000 pixels
Image sensor	1/2.33″ CCD sensor, total pixel number 16,600,000 pixels, Primary colour filter
Lens	Optical 12× zoom, f=4.3 mm to 51.6 mm (35 mm film camera equivalent: 24 mm to 288 mm)/F3.1 (Wide) to F6.3 (Tele)
Image stabiliser	Optical method
Focus range	Normal/Intelligent auto/Motion picture	3 cm (Wide)/1.5 m (Tele) to ∞
	Scene Mode	There may be differences in the above settings.

Shutter system	Electronic shutter+Mechanical shutter
Shutter speed	8 seconds to 1/2000th of a second [Starry Sky] Mode: 15 seconds, 30 seconds, 60 seconds
Exposure (AE)	Auto (Programme AE)
Metering mode	Multiple
Monitor	3.0″ TFT LCD (4:3) (Approx. 460,000 dots) (field of view ratio about 100%)
Microphone	Monaural
Speaker	Monaural
Recording media	Built-in Memory (Approx. 80 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)
Motion pictures	QuickTime Motion JPEG
Interface	
Digital	"USB 2.0" (High Speed)
Analogue video	NTSC/PAL Composite (Switched by menu)
Audio	Audio line output (monaural)
Terminal	
[AV OUT/DIGITAL]	Dedicated jack (8 pin)
Dimensions (excluding the projecting parts)	Approx. 99.8 mm (W)×60.4 mm (H)×26.5 mm (D)
Mass	Approx. 159 g (with card and battery) Approx. 144 g (excluding card and battery)
Operating temperature	0 °C to 40 °C
Operating humidity	10%RH to 80%RH

Wireless transmitter

Compliance standard	IEEE 802.11b/g/n (standard wireless LAN protocol)
Frequency range used (central frequency)	2412 MHz to 2462 MHz (1 to 11ch)
Encryption method	Wi-Fi compliant WPA™/WPA2™
Access method	Infrastructure mode

AC Adaptor (Panasonic VSK0776):
Information for your safety

Input:	∼110 V to 240 V, 50/60 Hz, 0.2 A
Output:	⎓5 V, 800 mA

Battery Pack (lithium-ion) (Panasonic DMW-BCL7E):
Information for your safety

Voltage/capacity:	3.6 V/690 mAh

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