

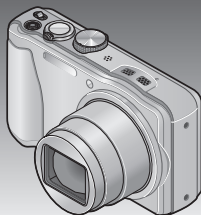
Panasonic®

Basic Owner's Manual

Digital Camera

Model No. **DMC-ZS20**
DMC-ZS19

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 disc. Install it on your PC to read it.



For USA and Puerto Rico assistance, please call: 1-800-211-PANA(7262) or, contact us via the web at: <http://www.panasonic.com/contactinfo>

P

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M0112KZ0

**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 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 unit to rain, moisture, dripping or splashing.
- Do not place objects filled with liquids, such as vases, on this unit.
- 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

FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, follow the attached installation instructions and use only shielded interface cables with ferrite core when connecting to computer or peripheral devices.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Declaration of Conformity

Trade Name: Panasonic

Model No.: DMC-ZS20 / DMC-ZS19

Responsible Party: Panasonic Corporation of

North America

One Panasonic Way,
Secaucus, NJ 07094

Support Contact: Panasonic Consumer
Marketing Company of
North America

1-800-211-PANA (7262)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

 **Panasonic**
DMC-ZS20 **Panasonic**
DMC-ZS19

■ 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 type recommended by the manufacturer.
- When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

- Do not heat or expose to flame.
- Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.

Warning

Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C (140 °F) or incinerate.

■ 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.

AC adaptor

This AC adaptor operates on AC between 110V and 240V.

But

- In the U.S.A. and Canada, the AC adaptor must be connected to a 120V 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 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) (4.9 feet), RP-CDHM30 (3.0 m) (9.8 feet)
- Always use a genuine Panasonic AV cable (DMW-AVC1: optional).

Keep this unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).

- If you use this unit on top of or near a TV, the pictures and/or sound on this unit may be disrupted by electromagnetic wave radiation.
- Do not use this unit near cell phones because doing so may result in noise adversely affecting the pictures and/or sound.
- Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by microprocessors may adversely affect this unit, disturbing the pictures and/or sound.
- If this unit is adversely affected by electromagnetic equipment and stops functioning properly, turn this unit off and remove the battery or disconnect AC adaptor (supplied). 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.

For information about the software used for this product, press [MENU/SET] and select [Setup] to display [Version Disp.] before pressing [MENU/SET] again.

This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard ("AVC Video") and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC.
See <http://www.mpegla.com>.

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- When operation or other information is more or less the same between models, DMC-ZS20 is used as examples for the instructions provided in this manual.
- The operations, procedures, or functions that differ among models are indicated separately, together with the relevant model number.

(Example) **DMC-ZS20**
DMC-ZS19

Before use

■ Camera handling






- Keep the camera away from excessive vibration, force, or pressure.
- The camera is not dust resistant, splash resistant, or waterproof. Avoid using the camera in places with excessive dust or sand, or where water can come into contact with the camera.

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

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

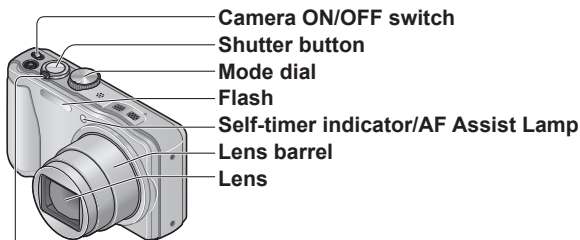
Standard accessories

Check that all the accessories are supplied before using the camera. Part numbers are as of January 2012.

<input type="checkbox"/> Battery pack DMW-BCG10PP • Charge the battery before use. Battery pack is indicated as battery pack or battery in the text. 	DMC-ZS20 <input type="checkbox"/> DVD VFF0974 • Software: Use it to install the software on your PC. • Map data • Owner's Manual for advanced features DVD is indicated as disc in the text. 
<input type="checkbox"/> AC adaptor VSK0768 	DMC-ZS19 <input type="checkbox"/> CD-ROM VFF0999 • Software: Use it to install the software on your PC. • Owner's Manual for advanced features CD-ROM is indicated as disc in the text.
<input type="checkbox"/> Hand strap VFC4297 	
<input type="checkbox"/> USB connection cable K1HY08YY0025 	

- SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as card in the text.
- Memory cards are 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 should contact Panasonic's parts department at 1 800 833-9626 for further information about obtaining replacement parts.
- Please dispose of all packaging appropriately.
- Keep small parts in a safe place out of the reach of children.
- The illustrations and screens in this manual may differ from the actual product.

Names and Functions of Main Parts



Zoom lever

DMC-ZS20

GPS status indicator

[EXPOSURE] button

DMC-ZS20

[MAP] button

LCD monitor

Cursor buttons

[DISP.] button

[Q.MENU]/[] / [↶] (Delete/Cancel) button

DMC-ZS20

Built-in GPS antenna

Microphone

Speaker

Motion picture button

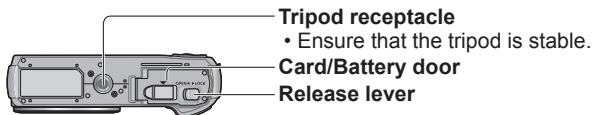
REC/PLAY switch

[HDMI] socket

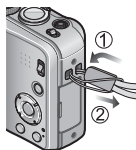
[AV OUT/DIGITAL] socket

[MENU/SET] button

Charging lamp



We recommend using the supplied hand strap to avoid dropping the camera.



Touch operations

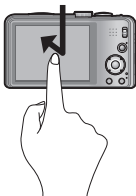
This camera's touch screen senses pressure that is applied to the screen.

Touch

To "touch" is to press the touch screen and then pull the finger back again.

Touching is used to select icons or pictures, among other actions.

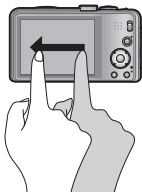
- Touch an icon near its center. If multiple icons are touched simultaneously, the camera may not operate normally.



Drag

To "drag" is to touch and slide your finger across the touch screen surface.

Dragging (sliding your finger across the screen) is used to scroll the pictures or change the range of the pictures displayed.

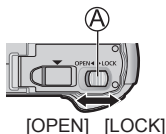


- If the type of sheet made to protect LCD screens that are available in the market is to be used, observe the precautions that are contained with the sheet. (Some types of protective sheets may impair the screen's appearance and ease of operation.)
- If the camera is used with a protective sheet available on the market attached to its screen or if the screen is not very responsive, touch the screen with a little more pressure.
- If your hand is pressed against the touch screen when holding the camera, the touch screen will not work properly.
- Do not press on the LCD monitor with hard pointed tips, such as ball point pens.
- Do not press the touch screen with your fingernails.
- Clean the LCD monitor with a soft, dry cloth if there are fingerprints or other kinds of dirt on it.

Inserting and removing the card (optional)/ the battery

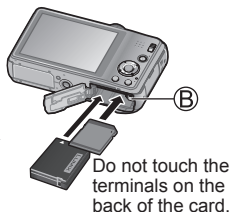
To charge the battery, insert it into the camera.

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



- 2** Insert the battery and card, making sure that their orientation is correct

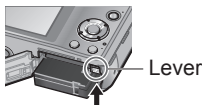
- Battery: Insert all the way firmly until a locking sound is heard, and check that it is locked by lever (B).
- Card: Insert all the way firmly until it clicks.



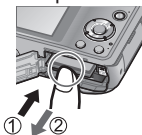
- 3** Close the card/battery door
Slide the release lever to the [LOCK] position.

■ To remove

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



- **To remove card:**
Push the card until it clicks, then pull the card out.



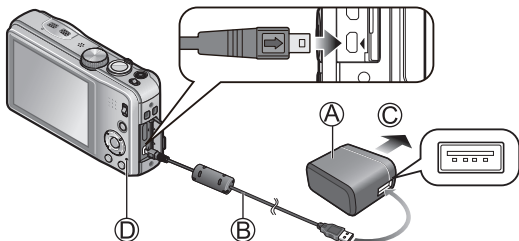
- Always use genuine Panasonic batteries (DMW-BCG10PP).
- If you use other batteries, we cannot guarantee the quality of this product.
- Keep the Memory Card out of reach of children to prevent swallowing.
- We recommend using a Panasonic Memory card.

Charging the battery

- The battery is not charged when the camera is shipped. Charge the battery before use.
- Charge the battery with the AC adaptor (supplied) indoors (10 °C to 30 °C (50 °F to 86 °F)).
- Always use the dedicated AC adaptor (supplied), USB connection cable (supplied), and battery.

- To charge the battery, insert it into the camera.
- Make sure that the camera is turned off.

- 1** Connect the AC adaptor (A) (supplied) and the camera using the USB connection cable (B) (supplied), and plug the AC adaptor (A) (supplied) into the electrical outlet



© To the electrical outlet

- Do not use any other USB connection cables except the supplied one. Doing so may cause malfunction of the camera.
- Do not use any other AC adaptors except the supplied one.

■ Charging lamp (D)

On: Charging in progress (approx. 260 min. if fully depleted)

Off: Charging stops

■ About batteries that you can use with this unit

The battery that can be used with this unit is DMW-BCG10PP.

Setting the clock

The clock is not set when the camera is shipped.

Set REC/PLAY switch to  before turning the camera on.

- 1 Turn the camera on (A)**
- 2 Press [MENU/SET] (B)**
- 3 Press ◀▶ to select the items (year, month, day, hour, minute, display order or time display format), and press ▲▼ to set**
- 4 Press [MENU/SET] to set**
- 5 Confirm the setting and press [MENU/SET]**
 - To return to the previous screen, press [⏪ / ⏩].

DMC-ZS20
Go to step **6**.

DMC-ZS19
The clock setting procedure is completed with step **5**.
- 6 Press ◀ to select [Yes] and press [MENU/SET] if automatically correcting time of day using the GPS function**
 - To manually set date and time →select [No].
 - When you select automatic time adjustment using the GPS function, [GPS Setting] is set to [ON].



Setting the clock

7 When [Please set the home area] is displayed, press [MENU/SET]

8 Press ◀▶ to set your home area and press [MENU/SET]

The current time and home area are set.



■ To change the time setting

Select [Clock Set] from [Rec] or [Setup] menu, perform **3** and **4**.

Setting the menu

Refer to the following procedures to operate the menus.

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

1 Press [MENU/SET] to display the menu 

Switching to the [Rec] menu

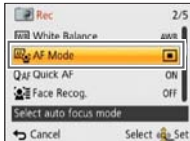
Use cursor button to select [Rec] and press [MENU/SET].

- The menu type can also be selected by touch operations.



2 Press   to select [AF Mode] and then press [MENU/SET]

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




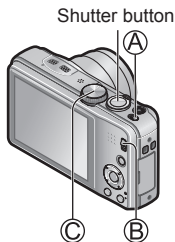
3 Press   to select  and then press [MENU/SET] to set

4 Press  /  several times to close the menu






Taking pictures

- 1 Turn the camera on (A)
- 2 Slide the REC/PLAY switch (B) to 
- 3 Set to the desired recording mode (C)



■ Recording mode

 iA	Take pictures with automatic settings.
P	The subjects are recorded using your own settings.
A	The shutter speed is automatically determined by the aperture value you set.
S	The aperture value is automatically determined by the shutter speed you set.
M	The exposure is adjusted by the aperture value and the shutter speed that are manually adjusted.
C1 C2	Use this mode to take pictures with previously registered setting.
 ED	Record 3D still pictures.
SCN	Take pictures according to the scene.
	Take pictures while confirming the picture effect.

4 Take a picture



Press halfway
(press lightly and focus)




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

Taking motion pictures

Recording mode: **TA P A S M C1 C2** ED **SCN** 


You can record motion pictures with audio (stereo). Zoom can also be used during recording.

- 1** Slide the REC/PLAY switch (A) to 
- 2** Press the motion picture button (B) to start recording
- 3** Press the motion picture button (B) again to end recording



Remaining recording time (approx.)

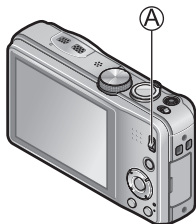
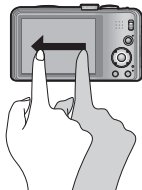
Elapsed recording time



- We recommend you use a battery with sufficient battery power when recording motion pictures.
- Immediately release the motion picture button after pressing it all the way.
- You can continuously record a motion picture in [MP4] for up to 29 minutes 59 seconds or approx. 4 GB. In this case, you can continuously record a motion picture in [FHD] for up to approx. 27 minutes 12 seconds.
- If [Rec Quality] of [AVCHD] motion pictures is set to [GPH] **DMC-ZS20**, [PSH], [GFS] **DMC-ZS20** or [FSH], you can continuously record a motion picture for up to 29 minutes 59 seconds.
- If the surrounding temperature is high, or a motion picture is recorded continuously,  is displayed and recording may be stopped halfway through to protect the camera. (Only when [Rec Quality] is set to [GPH] **DMC-ZS20**, [PSH], [GFS] **DMC-ZS20** or [FSH])
- You can record a motion picture to the built-in memory only in [MP4] using the [VGA] setting. **DMC-ZS19**

Viewing your pictures [Normal Play]

1 Slide the REC/PLAY switch (A) to 

2 Drag your finger across the screen, and select the picture to be played back




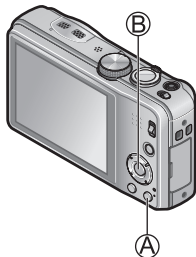
- To play back a motion picture, touch  or press  after selecting a picture.
- You can print pictures by connecting a camera to your computer or printer, or by giving an SD card to a shop assistant at a photo shop.

Deleting pictures

Deleted pictures cannot be recovered.

1 Press  /  (A) to delete the displayed picture

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



GPS and map functions DMC-ZS20

Before using the camera, be sure to read “License Agreement for Place Name and Map Data” (Owner’s Manual for advanced features).

This camera can record the location information of a place where a picture was taken on the pictures. The camera can also automatically adjust the time or display a place where a picture was taken on a map during playback.

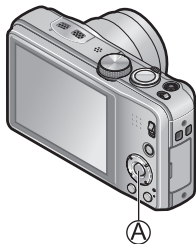
Your Panasonic Lumix digital still camera is GPS-equipped which can automatically record the precise location coordinates of where the photo was taken. The specific physical address of this location can easily be derived from this information.

If you upload such “geotagged” photos to the Internet, a social networking site or any other electronic media, the precise location of where the photo was taken will remain embedded in the photo and can be viewed by others.

Therefore, when taking digital still photos, care should be taken in determining whether you wish to have the GPS feature enabled or disabled.

Using the GPS function to execute positioning

- 1** Press [MENU/SET] (A)
- 2** Use cursor button to select [GPS] menu and press [MENU/SET]
- 3** Use cursor button to select [GPS Setting] and press [MENU/SET]
- 4** Use cursor button to select [ON] and press [MENU/SET]

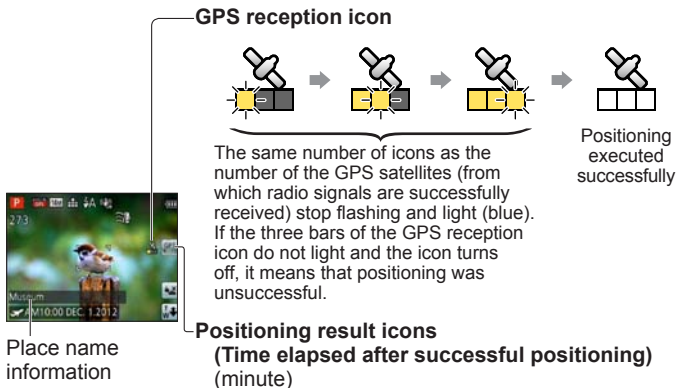



- A message appears on the screen. After confirming the message, press [MENU/SET].

- **When [GPS Setting] is [ON], the GPS function works even if the camera's power is off.**
 - Electromagnetic waves from the camera can affect instruments and meters. During takeoff and landing of airplanes or in other restricted areas, set [GPS Setting] to [OFF] or set [Airplane Mode] to [ON], and then turn off the camera.
 - When [GPS Setting] is [ON] and [Airplane Mode] is [OFF], power will drain from the battery even if the camera is turned OFF.

■ Displaying the status and result of positioning

The icons that indicate the status and result of positioning will appear on the LCD monitor. When the camera successfully executes positioning, it records the current location and displays the place name information on the screen.



: No positioning information has been acquired.

- Positioning will take time in environments where it is difficult to receive the signals from the GPS satellites. For details, refer to “Using the GPS function to record the location of a picture” (Owner’s Manual for advanced features).
- Even if GPS reception is good, it will take approx. 2 to 3 minutes to successfully execute positioning under the following conditions; when positioning is executed for the first time, or when positioning is executed after the camera is turned off with the [GPS Setting] set to [OFF] or [Airplane Mode] set to [ON], and then turned on again.

Confirming the place where you took a picture using a map

You can display a map showing the location where a picture was taken or your current location.

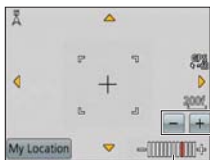
- If you copy the map data stored on the supplied DVD to a memory card, you can display more detailed maps. For details, refer to “Using the map data on the DVD (supplied)” (Owner’s Manual for advanced features).

1 Display the pictures in playback mode

- The GPS is displayed during playback for pictures that are recorded with location and place name information.



2 Press [MAP] button (A)



A map of the place where you took the picture will appear.

Touch the +/- button to enlarge or reduce the map size.
(You can also enlarge or reduce the map size using the zoom lever.)

Map scale level
(The levels that can be displayed vary depending on the region)

- You can drag the screen or press the cursor button to operate the display location of a map.
- When you press the [] / [] button, it will return to the previous display.

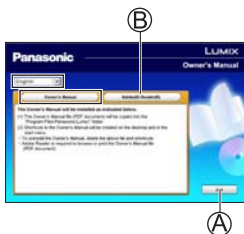
Reading the Owner's Manual (PDF format)

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

To read the supplied DVD, use a DVD drive with single-sided dual layer recording support. **DMC-ZS20**

■ For Windows

- 1** Turn the PC on and insert the disc containing the Owner's Manual (supplied)
- 2** Click the "Owner's Manual"
- 3** Select the desired language and then click "Owner's Manual" to install
Ⓐ To return to the install menu.
- 4** 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 disc containing the Owner's Manual (supplied), click **B** 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 Website.
<http://get.adobe.com/reader/otherversions/>

Installing supplied software

This software allows you to acquire pictures to the PC, and also categorize these acquired pictures by their recording date or the model name of the camera used.

- Before inserting the disc, close all running applications.

1 Check the environment of your PC

Operating environment of PHOTOfunSTUDIO 8.1 PE

OS	Windows XP (32 bit) SP3 Windows Vista (32 bit) SP2 Windows 7 (32 bit/64 bit) and SP1	
CPU	Windows XP	Pentium III 500 MHz or higher
	Windows Vista	800 MHz or higher
	Windows 7	1 GHz or higher
Display	1024 × 768 pixels or more (1920 × 1080 pixels or more recommended)	
RAM	Windows XP	512 MB or more
	Windows Vista	
	Windows 7	1 GB or more (32 bit) 2 GB or more (64 bit)
Free hard disk space	450 MB or more for installing software	

- Refer to the Operating Instructions of “PHOTOfunSTUDIO” (PDF) for further information about the operating environment.

2 Insert the disc with the supplied software

When you insert the supplied disc, the install menu will start.

3 Click on the [Applications] on the install menu

4 Click on the [Recommended Installation]

- Proceed with installation according to messages appearing on the screen.
- The software compatible with your PC will be installed.
 - PHOTOfunSTUDIO (Windows XP/Vista/7)
 - LoiLoScope 30-day full-trial version (Windows XP/Vista/7)
(This will only install a shortcut to the trial version download site.)
 - LUMIX Map Tool (Windows XP/Vista/7, Mac OS X) **DMC-ZS20**
- PHOTOfunSTUDIO is not compatible with Mac.

Specifications

Digital Camera: Information for your safety

Power Source	DC 5.1 V
Power Consumption	When recording: 1.4 W When playing back: 1.1 W
Camera effective pixels	14,100,000 pixels
Image sensor	1/2.33" MOS sensor, total pixel number 15,300,000 pixels Primary color filter
Lens [NANO SURFACE COATING]	Optical 20 x zoom f=4.3 mm to 86.0 mm (35 mm film camera equivalent: 24 mm to 480 mm) / F3.3 (Max. W) to F6.4 (Max. T)
Image Stabilizer	Optical method
Focus range	
P / A / S / M	50 cm (1.6 feet) (Wide) / 2 m (6.6 feet) (Tele) to ∞
Macro / Intelligent Auto / Motion picture	3 cm (0.098 feet) (Wide) / 1 m (3.3 feet) (Tele) to ∞ (5 × to 7 × is 2 m (6.6 feet) to ∞)
Scene Mode	There may be difference in above settings.
Shutter system	Electronic shutter + Mechanical shutter
Minimum Illumination	Approx. 10 lx (when i-Low light is used, the shutter speed is 1/30th of a second)
Shutter speed	15 seconds to 1/2000th of a second
Exposure (AE)	Program AE (P) / Aperture-priority AE (A) / Shutter-priority AE (S) / Manual exposure (M)
Metering Mode	[Multi Metering] / [Center Weighted] / [Spot]

Specifications

LCD monitor	3.0" TFT LCD (4:3) (Approx. 460,800 dots) (field of view ratio about 100%) / Touch screen
Microphone	Stereo
Speaker	Monaural
Recording media	Built-in Memory DMC-ZS20 (Approx. 12 MB) DMC-ZS19 (Approx. 70 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 / DPOF corresponding) / MPO
Motion pictures	AVCHD / MP4 / QuickTime Motion JPEG
Audio compression format	AVCHD: Dolby Digital (2 ch) MP4: AAC (2 ch)
Interface	
Digital	USB 2.0 (High Speed)
Analog video	NTSC Composite
Audio	Audio line output (Monaural)
Terminal	HDMI: MiniHDMI TypeC AV OUT/DIGITAL: Dedicated jack (8 pin)
Dimensions	Approx. 104.9 mm (W) x 58.9 mm (H) x 28.2 mm (D) [4.13" (W) x 2.32" (H) x 1.11" (D)] (excluding the projection part)
Mass (Weight)	DMC-ZS20 With card and battery: Approx. 206 g (0.454 lb) Excluding card and battery: Approx. 184 g (0.406 lb) DMC-ZS19 With card and battery: Approx. 202 g (0.445 lb) Excluding card and battery: Approx. 180 g (0.397 lb)

Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity	10%RH to 80%RH
Language select	[ENGLISH] / [ESPAÑOL]

AC adaptor

(Panasonic VSK0768): 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-BCG10PP): Information for your safety

Voltage / capacity	3.6 V / 895 mAh
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Digital Camera Accessory System

Description	Accessory#
Battery Pack	DMW-BCG10
AV Cable	DMW-AVC1
HDMI mini cable	RP-CDHM15, RP-CDHM30
Marine Case	DMW-MCTZ30
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 are correct as of January 2012. These may be subject to change.
- Accessories and/or model numbers may vary between countries. Consult your local dealer.

Digital Camera Accessory Order Form

Please photocopy this form when placing an order.

1. Digital Camera Model # _____
2. Items Ordered

Accessory #	Description	Price Each	Quantity	Total Price
Shipping & Handling				\$6.95
Subtotal				
Your State & Local Sales Tax				
Total				

3. Method of payment (check one)

- American Express
 VISA Credit Card # _____
 MasterCard Expiration Date _____
 Discover Customer Signature _____

(Please do not send cash)

4. Shipping information (UPS delivery requires complete street address)

Ship To:

Mr.

Mrs.

Ms.

First Last Phone#: _____
Day () _____
Street Address Night () _____

City State Zip

TO OBTAIN ANY OF OUR DIGITAL CAMERA ACCESSORIES YOU CAN DO ANY OF THE FOLLOWING:

VISIT YOUR LOCAL PANASONIC DEALER

OR

CALL PANASONIC'S ACCESSORY ORDER LINE AT 1-800-332-5368
[6 AM-6 PM M-F, PACIFIC TIME]

OR

MAIL THIS ORDER TO: PANASONIC NATIONAL PARTS CENTER
20421 84th Ave S., Kent, WA 98032

Limited Warranty (ONLY FOR U.S.A. AND PUERTO RICO)

Panasonic Consumer Marketing Company of North America,
Division of Panasonic Corporation of North America
One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Digital Still Camera Products Limited Warranty

Limited Warranty Coverage (For USA and Puerto Rico Only)

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Marketing Company of North America (referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, (b) replace it with a new or a refurbished equivalent value product, or (c) refund your purchase price. The decision to repair, replace or refund will be made by the warrantor.

Product or Part Name	Parts	Labor
Digital Still Camera	1 year	1 year
SD Memory Cards, Rechargeable Battery Pack (defective exchange)	90 days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. This Limited Warranty excludes both parts and labor for non-rechargeable batteries, antennas, and cosmetic parts (cabinet). This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is".

Mail-In Service

For assistance in the U.S.A. and Puerto Rico in obtaining repairs, please ship the product prepaid to:

Panasonic Exchange Center
4900 George McVay Drive
Suite B
McAllen, TX 78503
panacare@us.panasonic.com

When shipping the unit, carefully pack, include all supplied accessories listed in the Owner's Manual, and send it prepaid, adequately insured and packed well in a carton box. When shipping Lithium Ion batteries please visit our Web Site at www.panasonic.com/BatteryHandling as Panasonic is committed to providing the most up to date information. Include a letter detailing the complaint, a return address and provide a daytime phone number where you can be reached. A valid registered receipt is required under the Limited Warranty.

IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD, THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a Factory Service Center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER “LIMITED WARRANTY COVERAGE”.

THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.

(As examples, this excludes damages for lost time, travel to and from the servicer, loss of or damage to media or images, data or other memory or recorded content. The items listed are not exclusive, but for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

Customer Services Directory (United States and Puerto Rico)

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Service Center; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/help>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262)

Monday-Friday 9am-9pm, Saturday-Sunday 10am-7pm EST

For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Accessory Purchases (United States and Puerto Rico)

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pstc.panasonic.com>

Or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only)

(Monday-Friday 9am-9pm EST)

Panasonic National Parts Center

20421 84th Ave S., Kent, WA 98032

(We accept Visa, MasterCard, Discover Card, American Express)

For hearing or speech impaired TTY users, TTY: 1-866-605-1277

As of January 2012

HDMI

VIERA Link™

AVCHD™

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DOLBY

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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.

**Panasonic Consumer Marketing Company of North America,
Division of Panasonic Corporation of North America**

One Panasonic Way, Secaucus, NJ 07094

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