

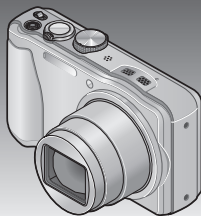
Panasonic®

Basic Operating Instructions

Digital Camera

Model No. **DMC-TZ30**
DMC-TZ27

LUMIX



Before use, please read these instructions completely.



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



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

Model number suffix “EB” denotes UK model.

EB

VQT4B83-1
M0212KZ1042

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.
- 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

■ About the battery pack

CAUTION

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
 - When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.
-
- Do not heat or expose to flame.
 - Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.

Warning

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

■ About the 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.

■ 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.

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Cd

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- When operation or other information is more or less the same between models, DMC-TZ30 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-TZ30**

DMC-TZ27

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>.

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 mould, or damage the camera.
- If condensation does occur, turn off the camera and wait about two hours before using it. Once the camera adjusts to the surrounding temperature, fogginess 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-BCG10E • Charge the battery before use. Battery pack is indicated as battery pack or battery in the text. 	DMC-TZ30 <input type="checkbox"/> DVD VFF0975  • Software: Use it to install the software on your PC. • Map data • Operating Instructions for advanced features DVD is indicated as disc in the text.
<input type="checkbox"/> AC adaptor VSK0775 	DMC-TZ27 <input type="checkbox"/> CD-ROM VFF1000 • Software: Use it to install the software on your PC. • Operating Instructions 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.
- Consult the dealer or your nearest Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)
- Please dispose of all packaging appropriately.
- Keep small parts in a safe place out of the reach of children.
- The illustrations and screens in this manual may differ from the actual product.

Standard accessories

■ Optional Accessories

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-SDA32GE1K/RP-SDU32GE1K
Class 10 16 GB SDHC Memory Card	RP-SDA16GE1K/RP-SDU16GE1K
Class 10 8 GB SDHC Memory Card	RP-SDA08GE1K/RP-SDU08GE1K
Class 10 4 GB SDHC Memory Card	RP-SDU04GE1K
Class 6 32 GB SDHC Memory Card	RP-SDQ32GE1K
Class 6 16 GB SDHC Memory Card	RP-SDQ16GE1K
Class 6 8 GB SDHC Memory Card	RP-SDQ08GE1K
Class 6 4 GB SDHC Memory Card	RP-SDQ04GE1K
Class 4 16 GB SDHC Memory Card	RP-SDN16GE1A
Class 4 8 GB SDHC Memory Card	RP-SDN08GE1A
Class 4 4 GB SDHC Memory Card	RP-SDN04GE1A
Class 4 2 GB SD Memory Card	RP-SDN02GE1A

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

Sales and Support Information

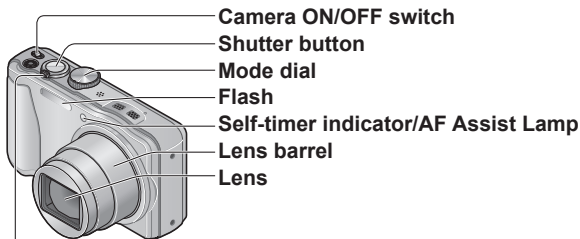
Customer Communications Centre

- For customers within the UK: 0844 844 3899
- For customers within Ireland: 01 289 8333
- For further support on your product, please visit our website:
www.panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Communications Centre
Monday–Thursday 9:00 a.m.–5:30 p.m.,
Friday 9:30 a.m.–5:30 p.m. (Excluding public holidays)
- Or go on line through our Internet Accessory ordering application at
www.pas-europe.com.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products. Take a browse on our website for further details.

Names and Functions of Main Parts



Zoom lever

DMC-TZ30

GPS status indicator

[EXPOSURE] button

DMC-TZ30

[MAP] button

LCD monitor

Cursor buttons

[MENU/SET] button

[DISP.] button

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

DMC-TZ30

Built-in GPS antenna

Microphone

Speaker

Motion picture button

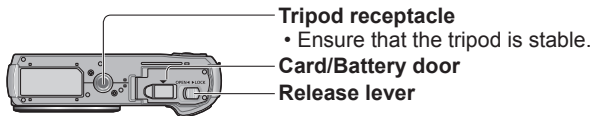
REC/PLAY switch

[HDMI] socket

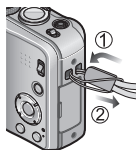
[AV OUT/DIGITAL] socket

• This socket is also used when charging the battery.

Charging lamp



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



Touch operations

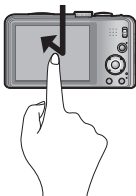
This camera's touch screen senses pressure that is applied to the screen.

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.

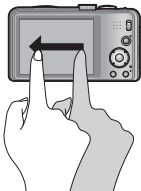
- Touch an icon near its centre. If multiple icons are touched simultaneously, the camera may not operate normally.



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.

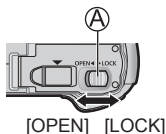


- If the type of sheet to protect LCD screens that are available on the market is to be used, observe the precautions that are contained with the sheet. (Some types of protective sheets may impair the screen's visual recognition and ease of operation.)
- If the camera is used with a protective sheet 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 ballpoint 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

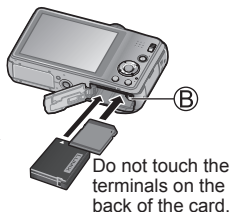
To charge the battery, insert it into the camera.

- 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.



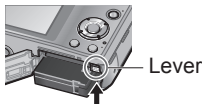
- 3 Close the card/battery door**

Slide the release lever to the [LOCK] position.

■ To remove

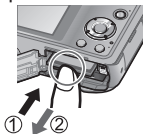
- **To remove battery:**

Move lever in direction of arrow.



- **To remove card:**

Push the card until it clicks, then pull the card out.



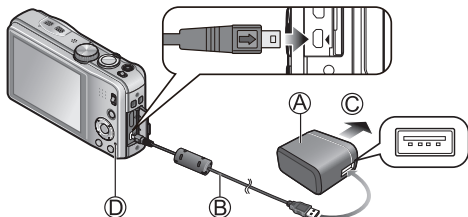
- Always use genuine Panasonic batteries (DMW-BCG10E).
- If you use other batteries, we cannot guarantee the quality of this product.
- Keep the Memory Card out of reach of children to prevent swallowing.
- We recommend using a Panasonic Memory card.

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.
- The AC adaptor (supplied) and the USB connection cable (supplied) are dedicated accessories of this camera. Do not use them for other devices.

■ 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-BCG10E.

Setting the clock

The clock is not set when the camera is shipped.

Set REC/PLAY switch to  before turning the camera on.
Disconnect the unit from the AC adaptor (supplied).

- 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-TZ30
Go to step **6**.

DMC-TZ27
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

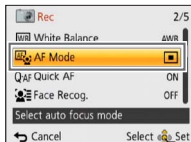
Use cursor button to select [Rec] and press [MENU/SET].

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



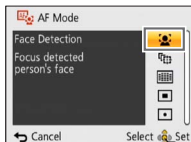
2 Press   to select [AF Mode] and then press [MENU/SET]

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




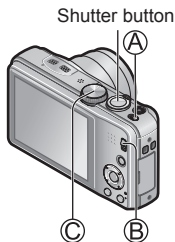
3 Press   to select  and then press [MENU/SET] to set

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 which 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

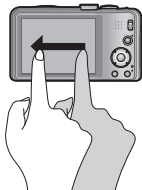
Taking motion pictures



- 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.
- Motion pictures can be recorded continuously for up to 29 minutes 59 seconds. Also, motion picture recorded continuously in [MP4] is up to 4 GB. In this case, you can continuously record a motion picture in [FHD] for up to approx. 27 minutes 12 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-TZ30**, [PSH], [GFS] **DMC-TZ30** or [FSH])**
- Motion pictures cannot be recorded in the built-in memory. **DMC-TZ30**
- You can record a motion picture to the built-in memory only in [MP4] using the [VGA] setting. **DMC-TZ27**

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



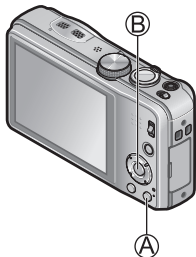
- To play back a motion picture, touch  or press  after selecting a picture.
- You can print pictures by connecting a camera to your computer or printer, or by giving an SD card to a shop assistant at a photo shop.

Deleting pictures

Deleted pictures cannot be recovered.

1 Press  /  (A) to delete the displayed picture

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



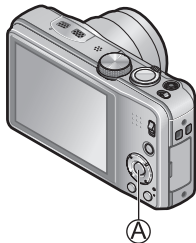
GPS and map functions DMC-TZ30

Before using the camera, be sure to read "Licence Agreement for Place Name and Map Data" (Operating Instructions 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.

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]

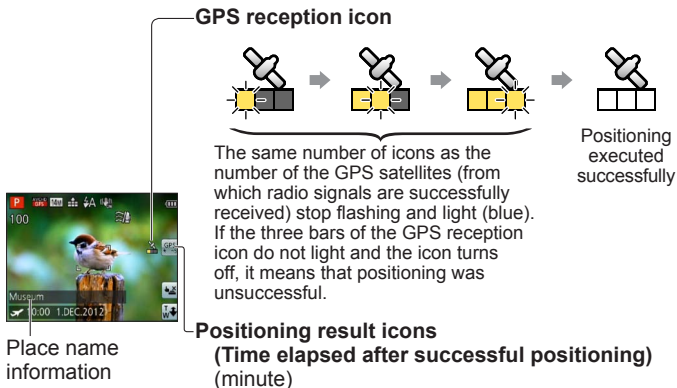
• A message appears on the screen. After confirming the message, press [MENU/SET].


■ When [GPS Setting] is [ON], the GPS function works even if the camera is turned 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 positioning is successful, camera will search the place name information (name of place and landmark) inside its internal database and display it.



: Positioning failed. No location information/ place name information available.

- 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” (Operating Instructions 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.

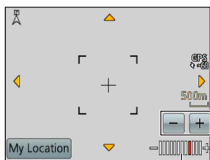
- If you copy the map data stored on the supplied DVD to a memory card, you can display more detailed maps. For details, refer to “Using the map data on the DVD (supplied)” (Operating Instructions for advanced features).

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 Operating Instructions

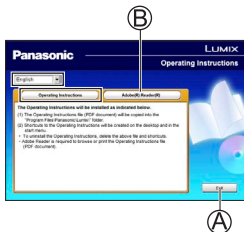
(PDF format)

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

To read the supplied DVD, use a DVD drive with single-sided dual layer support. **DMC-TZ30**

■ For Windows

- 1** Turn the PC on and insert the disc containing the Operating Instructions (supplied)
- 2** Click the “Operating Instructions”
- 3** Select the desired language and then click “Operating Instructions” to install
Ⓐ To return to the install menu.
- 4** Double click the “Operating Instructions” shortcut icon on the desktop



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

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format).

Insert the disc containing the Operating Instructions (supplied), click Ⓑ and then follow the messages on the screen to install.

Compatible OS: Windows XP SP3 / Windows Vista SP2 / Windows 7

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

Installing supplied software

This software allows you to acquire pictures to the PC, and also categorise 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	
	Windows XP	Pentium III 500 MHz or higher
	Windows Vista	800 MHz or higher
CPU	Windows 7	1 GHz or higher
	1024 × 768 pixels or more (1920 × 1080 pixels or more recommended)	
Display		
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-TZ30**
- 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 colour 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 Stabiliser	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 1/25th of a second)
Shutter speed	15 seconds to 1/2000th of a second
Exposure (AE)	Programme 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-TZ30 (Approx. 12 MB) DMC-TZ27 (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) Data from the PC can not be written to the camera using the USB connection cable.
Analogue video	NTSC / PAL Composite (Switched by menu)
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	DMC-TZ30 With card and battery: Approx. 206 g (0.454 lb) Excluding card and battery: Approx. 184 g (0.406 lb) DMC-TZ27 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

AC adaptor

(Panasonic VSK0775): 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-BCG10E): Information for your safety

Voltage / capacity	3.6 V / 895 mAh
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HDMI

VIERA Link

AVCHD™ Progressive

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Pursuant to at the directive 2004/108/EC, article 9(2)
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany



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

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