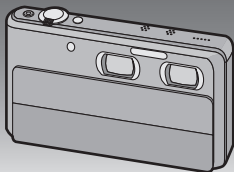


Panasonic®

Basic Operating Instructions Digital Camera

Model No. **DMC-3D1**

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 CD-ROM. Install it on your PC to read it.



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 APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**
- **USE ONLY THE RECOMMENDED ACCESSORIES.**
- **DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

THE SOCKET OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

■ Product identification marking

Product	Location
Digital Camera	Bottom
Battery charger	Bottom

■ About the battery pack

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

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

Warning

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

■ About the battery charger

CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
 - **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
 - **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
 - **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**
- The battery charger is in the standby condition when the AC power supply cord is connected. The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

■ Cautions for Use

- Always use a genuine Panasonic AV cable (DMW-AVC1; optional).
- Always use a genuine Panasonic HDMI mini cable (RP-CDHM15, RP-CDHM30; optional).

Part numbers: RP-CDHM15 (1.5 m), RP-CDHM30 (3.0 m)

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

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. Then reinsert the battery and turn this unit on.

Do not use this unit near radio transmitters or high-voltage lines.

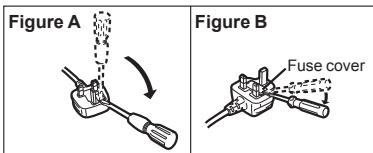
- If you record near radio transmitters or high-voltage lines, the recorded pictures and/or sound may be adversely affected.

■ How to replace the Fuse

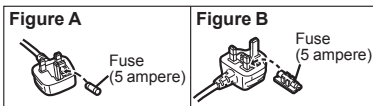
The location of the fuse differ according to the type of AC cable (figures A and B). Confirm the AC cable fitted and follow the instructions below.

Illustrations may differ from actual AC cable.

- 1 Open the fuse cover with a screwdriver.



- 2 Replace the fuse and close or attach the fuse cover.



-If you see this symbol-

Information on Disposal in other Countries outside the European Union

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

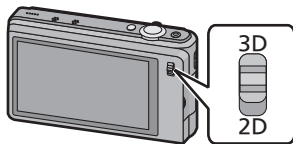


Contents

Information for Your Safety	2
Main features of the camera	7
Care of the camera	8
Standard Accessories	9
Names and Functions of Main Parts	10
How to Use the Touch Panel	11
Charging the Battery	12
• Charging	12
• Approximate operating time and number of recordable pictures	13
About the Built-in Memory/the Card	14
Inserting and Removing the Card (optional)/the Battery	15
Setting Date/Time (Clock Set)	16
• Changing the Clock Setting	16
Taking 3D pictures	17
Recording 3D motion pictures	18
Selecting a 2D Recording Mode	20
Taking Pictures Using the Automatic Function (Intelligent Auto Mode)	21
Recording 2D Motion Pictures	22
Playing Back Pictures ([Normal Play])	23
Deleting Pictures	24
Setting the Menu	25
About the supplied software	26
• Installing supplied software	27
Reading the Operating Instructions (PDF format)	28
Specifications	30

Main features of the camera

This unit has two lenses built-in so that you can enjoy making a variety of different recordings. You can switch between the following functions using the 3D/2D switch.



When the 3D/2D switch is set to [3D]

- You can easily record 3D pictures and 3D motion pictures.
- When you connect this unit to a television that supports 3D, you can view the 3D images you have recorded using the unit. (On the unit, 3D images are played back in 2D.)

When the 3D/2D switch is set to [2D]

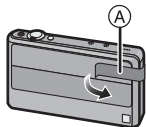
- You can record conventional 2D pictures and 2D motion pictures.
- In Wide & Zoom Dual-Shooting, you can simultaneously record images with differing angles of view.
- The camera records a picture with the right lens during recording of a motion picture with the left lens.

Care of the camera

Remove the lens cover seal (A) before use.

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

- The lens, LCD monitor, or external case may be damaged if used in following conditions.
It may also malfunction or image may not be recorded.
 - Drop or hit the camera.
 - Sit down with the camera in your trousers pocket or forcefully insert it into a full or tight bag, etc.
 - Attach any items such as accessories to the strap attached to the camera.
 - Press hard on the lens or the LCD monitor.



This camera is not dust/splash/water proof.

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

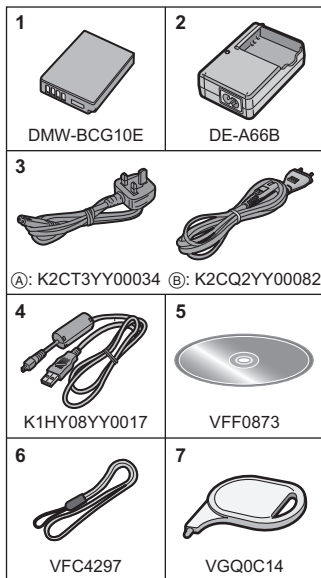
- Liquid, sand and other foreign material may get into the space around the lens, buttons, etc. Be particularly careful since it may not just cause malfunctions, but it may become unrepairable.
 - Places with a lot of sand or dust.
 - Places where water can come into contact with this unit such as when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



Standard Accessories

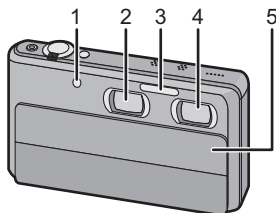
Check that all the accessories are supplied before using the camera.
Product numbers correct as of October 2011. These may be subject to change.

- 1 Battery Pack
(Indicated as **battery pack** or **battery** in the text)
Charge the battery before use.
 - 2 Battery Charger
(Indicated as **battery charger** or **charger** in the text)
 - 3 AC Cable
 - 4 USB Connection Cable
 - 5 CD-ROM
 - Software:
Use it to install the software to your PC.
 - Operating Instructions
 - 6 Hand Strap
 - 7 Stylus Pen
- SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as **card** in the text.
 - **The card is optional.**
You can record or play back pictures on the built-in memory when you are not using a card.
 - Consult the dealer or your nearest Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)

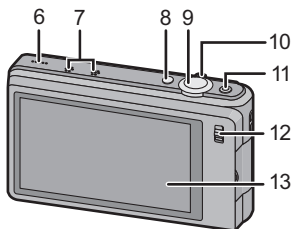


Names and Functions of Main Parts

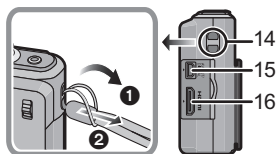
- 1 Self-timer indicator
AF Assist Lamp
- 2 Right lens
- 3 Flash
- 4 Left lens
- 5 Lens cover



- 6 Speaker
 - Do not cover the speaker with your fingers.
- 7 Microphone
- 8 Power button
- 9 Shutter button
- 10 Zoom lever
- 11 Motion picture button
- 12 3D/2D switch
- 13 Touch panel/LCD monitor

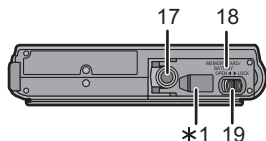


- 14 Strap eyelet
 - Be sure to attach the strap when using the camera to ensure that you will not drop it.
- 15 [AV OUT/DIGITAL] socket
- 16 [HDMI] socket





- 17 Tripod receptacle
- 18 Card/Battery door
- 19 Release lever

*1 This unit does not support an AC adaptor or DC coupler.



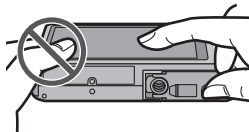
How to Use the Touch Panel

This touch panel is a type that detects pressure.

Touch the screen To touch and release the touch panel.	Drag A movement without releasing the touch panel.
 <p>Use this to perform tasks such as selecting icons or images displayed on the touch panel.</p> <ul style="list-style-type: none">It may not operate properly when multiple icons are touched simultaneously, so try to touch the centre of the icon.	 <p>This is used when performing tasks such as moving to the next image by dragging horizontally, or changing the range of the displayed image. This can also be used to perform tasks such as switching the screen by operating the slide bar.</p>

Note

- If you use a commercially available liquid crystal protection sheet, please follow the instructions that accompany the sheet. (Some liquid crystal protection sheets may impair visibility or operability.)
- Apply a little extra pressure** when touching if you have a commercially available protection sheet affixed or if you feel it is not responding well.
- Touch panel will not operate properly when the hand holding this unit is pressing on the touch panel.
- Do not press using anything with a sharp tip or anything hard, except for the supplied stylus pen.
- Do not operate with your fingernails.
- Do not scratch or press the LCD monitor too hard.
- Wipe the LCD monitor with dry soft cloth when it gets dirty with finger prints and others.



Charging the Battery

■ About batteries that you can use with this unit

The battery that can be used with this unit is DMW-BCG10E.

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

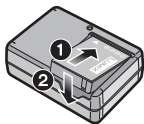
- Use the dedicated charger and battery.

Charging

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

1

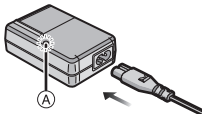
Attach the battery paying attention to the direction of the battery.



2

Connect the AC cable.

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



■ About the [CHARGE] indicator

The [CHARGE] indicator turns on:

The [CHARGE] indicator is turned on during charging.

The [CHARGE] indicator turns off:

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

• When the [CHARGE] indicator flashes

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

■ Charging time

Charging time	Approx. 130 min
----------------------	------------------------

Approximate operating time and number of recordable pictures

	When recording in 3D	When recording in 2D
Number of recordable pictures	Approx. 200 pictures	Approx. 200 pictures
Recording time	Approx. 100 min	Approx. 100 min

Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Temperature: 23 °C/Humidity: 50%RH when LCD monitor is on.
- Using a Panasonic SD Memory Card (32 MB).
- Using the supplied battery.
- Starting recording 30 seconds after the camera is turned on. (When the Optical Image Stabiliser function is set to [On].)
- **Recording once every 30 seconds** with full flash every second recording.
- Changing the zoom magnification from Tele to Wide or vice versa in every recording.
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

Playback time	Approx. 160 min
----------------------	------------------------

About the Built-in Memory/the Card

Built-in Memory

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

Card

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

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

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

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

e.g.:

CLASS 



- Please confirm the latest information on the following website.

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

(This Site is English only.)



Note

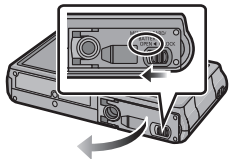
- Keep the Memory Card out of reach of children to prevent swallowing.

Inserting and Removing the Card (optional)/the Battery

- Check that this unit is turned off.
- We recommend using a Panasonic card.

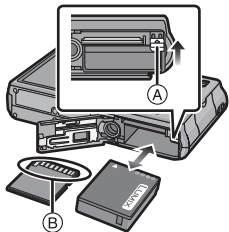
1 Slide the release lever in the direction of the arrow and open the card/battery door.

- Always use genuine Panasonic batteries (DMW-BCG10E).
- If you use other batteries, we cannot guarantee the quality of this product.



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

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



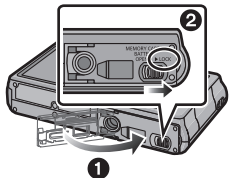
Card: Push it securely all the way until you hear a “click” while being careful about the direction in which you insert it.

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

(B): Do not touch the connection terminals of the card.

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

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

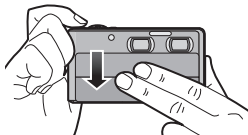


Setting Date/Time (Clock Set)

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

1 Turn the camera on.

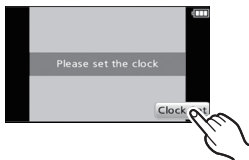
- Lower the lens cover.
- When turning off the power, raise the lens cover.




2 Touch [Language Set].

3 Select the language, and then touch [Set].

4 Touch [Clock Set].



5 Touch the items you wish to set (Year/Month/Day/Hours/Minutes), and set using [▲]/[▼].

- Touch [] to cancel the date and time settings without setting a date and time.

6 Touch [Set] to set.

7 Touch [Set] in the confirmation screen.

Changing the Clock Setting

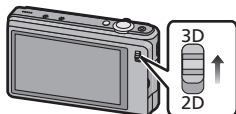
Select [Clock Set] in the [Rec] or [Setup] menu.

- The clock can be reset as shown in steps 5 and 6.

Taking 3D pictures

With the two lenses built into this unit, you can record 3D pictures.

1 Set the 3D/2D switch to [3D].

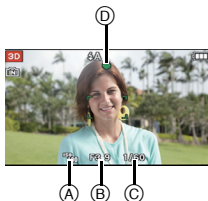


2 Aim the AF area at the point you want to focus on.

3 Press the shutter button halfway to focus.

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

- Be careful not to get too close to the subject.
- Make sure that your fingers are not over either of the lenses.
- The focus indication (D) (green) lights when the subject is focused.



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



- To achieve good a 3D effect, we recommend that you record with the distance to the subject set as follows. Outside this range, left-right distortion increases and may prevent the 3D effect being achieved at the edges of the image.
– Approx. 90 cm (Wide)/Approx. 3.4 m (Tele) to ∞

Pay attention to the following points when 3D picture recording.

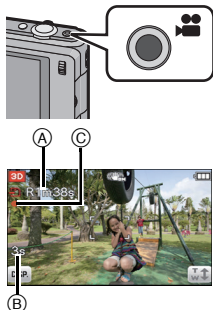
- Where possible, record with the unit in a horizontal state.
- Be careful not to get too close to the subject.
- Be careful not to shake the camera while in a vehicle or walking.

Recording 3D motion pictures

1 Set the 3D/2D switch to [3D].

2 Start recording by pressing the motion picture button.

- Ⓐ Available recording time
- Ⓑ Elapsed recording time
- Release the motion picture button right after you press it.
- The recording state indicator (red) Ⓒ will flash while recording motion pictures.
- **Be careful not to get too close to the subject.**
- **Make sure that your fingers are not over either of the lenses.**



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


- To achieve good a 3D effect, we recommend that you record with the distance to the subject set as follows. Outside this range, left-right distortion increases and may prevent the 3D effect being achieved at the edges of the image.
 - Approx. 90 cm (Wide)/Approx. 3.4 m (Tele) to ∞

Pay attention to the following points when 3D video recording.

- Where possible, record with the unit in a horizontal state.
- Be careful not to get too close to the subject.
- When moving the unit as you record, move it slowly.
- Try to hold the unit as steady as possible when recording while riding in a vehicle or walking.

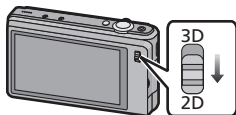


Note

- The maximum continuous recording time for 3D motion pictures is 29 minutes 59 seconds. If you are recording motion pictures in an environment where the ambient temperature is high or recording motion pictures continuously, [] may be displayed and the recording may stop.

Selecting a 2D Recording Mode

1 Set the 3D/2D switch to [2D].







2 In Recording Mode, touch [].



3 Touch the Recording Mode icon.





■ List of [Rec] Modes

	Normal Picture Mode
The subjects are recorded using your own settings.	
	Intelligent Auto Mode
The subjects are recorded using settings automatically selected by the camera.	
	Wide & Zoom Dual-Shooting
Images with different angles of view are simultaneously recorded.	
	Scene Mode
This allows you to take pictures that match the scene being recorded.	

Taking Pictures Using the Automatic Function (Intelligent Auto Mode)

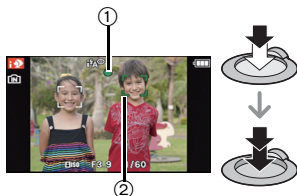
The camera will set the most appropriate settings to match the subject and the recording conditions so we recommend this mode for beginners or those who want to leave the settings to the camera and take pictures easily.

- 1 Set the 3D/2D switch to [2D].**
- 2 In Recording Mode, touch [].**
- 3 Touch [].**

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

① Focus indication

- The AF area ② is displayed around the subject's face by the Face Detection function. In other cases, it is displayed at the point on the subject which is in focus.

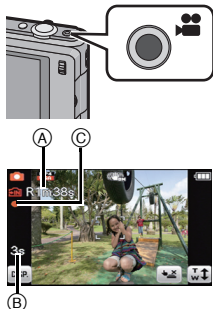


Recording 2D Motion Pictures

1 Set the 3D/2D switch to [2D].


2 Start recording by pressing the motion picture button.

- (A) Available recording time
- (B) Elapsed recording time
- A 2D image is recorded using the left lens.
- You can record motion pictures fitting each Recording Mode.
- Release the motion picture button right after you press it.
- The recording state indicator (red) (C) will flash while recording motion pictures.



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

Note

- Maximum time to record motion pictures continuously with [FSH] in [AVCHD] is 29 minutes 59 seconds.
 - Maximum time to record motion pictures continuously with [MP4] is 29 minutes 59 seconds or up to 4 GB.
- The maximum available recording time continuously is displayed on the screen.
- When the image quality setting is [FSH], the maximum continuous recording time for motion pictures is 29 minutes 59 seconds. If you are recording motion pictures in an environment where the ambient temperature is high or recording motion pictures continuously, [, B] may be displayed and the recording may stop.

Playing Back Pictures ([Normal Play])

To view 3D images, a television that supports 3D is required (This unit will play back in 2D).

For details, read the PDF.

1

In Recording Mode, touch [▶].

- The display switches to normal playback.



2

Drag the screen horizontally.

- After selecting the motion picture, touch [▶] to start playback.



Deleting Pictures

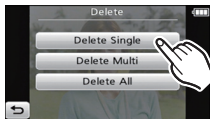
Once deleted, pictures cannot be recovered.

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

- 1** In Playback Mode, select the picture to delete and touch [].



- 2** Touch [Delete Single].
- Confirmation screen is displayed.
Picture is deleted by selecting [Yes].



Setting the Menu

Example: In the [Rec] menu, change [AF Mode] from [] (1-area-focusing) to [] (Face Detection)

1 Touch [MENU].



2 Touch the menu icon.



3 Touch the menu item.



4 Touch the Settings.

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



■ Close the menu

Touch [] several times or press the shutter button halfway.

About the supplied software

The supplied CD-ROM includes the following software.
Install the software on to your computer before use.

- **PHOTOfunSTUDIO 7.0 HD Edition (Windows XP/Vista/7)**

You can load 2D and 3D pictures, 3D motion pictures, and motion pictures recorded in [AVCHD] or [MP4] format on to your computer, and categorise and organise the loaded pictures by recording date, type of digital camera equipment, etc. Motion pictures recorded with [AVCHD] can be used to create normal, standard quality DVD videos.

You can also write pictures to DVD, combine multiple pictures to create a single panoramic picture, or create a slide show by adding your favourite audio and/or music. These pictures can then be saved onto a DVD.

- **QuickTime (Windows XP/Vista/7)**

This software is required for creating panorama pictures and for replay in "PHOTOfunSTUDIO 7.0 HD Edition".

You can also play back motion pictures (.MP4/.MOV extension) recorded on a digital camera.

- **LoiLoScope 30 day full trial version (Windows XP/Vista/7)**

LoiLoScope is a video editing software where that draws out the full power of your PC. Creating videos is as easy as organizing cards on top of a desk. Use your music, picture and video files to create videos to share with your friends and family by burning it to a DVD, uploading it to websites, or simply share your videos with your friends via e-mail.

– This will only install a shortcut to the trial version download site.

For more information on how to use LoiLoScope, read the LoiLoScope manual available for download at the link below.

Manual URL: <http://loilo.tv/product/20>

Installing supplied software

- Before inserting the CD-ROM, close all running applications.

- 1 Check the environment of your PC.**
 - **Operating environment of “PHOTOfunSTUDIO 7.0 HD Edition”**
 - OS:
Windows® XP (32bit) SP2/SP3,
Windows Vista® (32bit) or SP1/SP2,
Windows® 7 (32bit/64bit) or SP1
 - CPU:
Pentium® III 500 MHz or higher (Windows® XP),
Pentium® III 800 MHz or higher (Windows Vista®),
Pentium® III 1 GHz or higher (Windows® 7)
 - Display:
1024×768 pixels or more (1920×1080 pixels or more recommended)
 - RAM:
512 MB or more (Windows® XP/Windows Vista®),
1 GB or more (Windows® 7 32bit),
2 GB or more (Windows® 7 64bit)
 - Free hard disk space:
450 MB or more for installing software
 - Refer to the operating instructions of “PHOTOfunSTUDIO 7.0 HD Edition” (PDF) for further operating environment.

- 2 Insert the CD-ROM with the supplied software.**

- When you insert the supplied CD-ROM, 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.

Note

- The software compatible with your PC will be installed.
- “PHOTOfunSTUDIO 7.0 HD Edition” is not compatible with Mac.

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 CD-ROM. Install it on your PC to read it.

■ For Windows

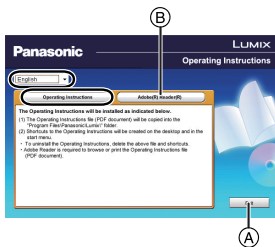
1 Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).

2 Click the [Operating Instructions].

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


(A) 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 CD-ROM 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>

■ To uninstall the Operating Instructions (PDF format)

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

■ For Mac

1

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

2

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

3

Double click the PDF file to open it.

Specifications

Digital Camera:

Information for your safety

Power Source:	DC 3.6 V
Power Consumption:	1.6 W (When recording in 3D) 1.6 W (When recording in 2D) 1.1 W (When playing back)

Camera effective pixels	12,100,000 pixels	
Image sensor	1/2.3" MOS sensor×2, total pixel number 12,800,000 pixels, Primary colour filter	
Lens	Optical 4×zoom lens×2, f=4.5 mm to 18 mm (35 mm film camera equivalent: 25 mm to 100 mm)/ F3.9 (Wide) to F5.7 (Tele)	
Image stabiliser	Optical method	
Digital zoom	Max. 4×	
Extra optical zoom	Max. 7.8× (When set to 3,000,000 pixels [3M] or less)	
Focus range	Normal	50 cm (Wide)/1 m (Tele) to ∞
	Macro/ Intelligent auto/ Motion Picture	5 cm (Wide)/1 m (Tele) to ∞
	Scene Mode	There may be differences in the above settings.
Shutter system	Electronic shutter+Mechanical shutter	

Burst recording	Burst speed (Number of recordable pictures) Approx. 2 pictures/second (Max. 100 pictures) Approx. 4 pictures/second (Max. 100 pictures) Approx. 8 pictures/second (Max. 12 pictures)
Minimum Illumination	Approx. 14 lx (when i-low light is used, the shutter speed is 1/25th of a second)
Shutter speed	8 seconds to 1/1300th of a second [Starry Sky] Mode: 15 seconds, 30 seconds
Exposure (AE)	Programme AE Exposure compensation (1/3 EV Step, -2 EV to +2 EV)
Metering mode	Multiple
LCD monitor	3.5" TFT LCD (16:9) (Approx. 460,000 dots) (field of view ratio about 100%) Touch panel
Flash range	Approx. 30 cm to 3.5 m (Wide, [ISO AUTO] is set)
Microphone	Stereo
Speaker	Monaural
Recording media	Built-in Memory (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/Proprietary 3D recording format (Side-by-side)
Audio compression format	3D motion pictures: Dolby Digital (2 ch) AVCHD: Dolby Digital (2 ch) MP4: AAC (2 ch)

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)
[HDMI]	MiniHDMI TypeC
Dimensions (excluding the projecting parts)	Approx. 108.0 mm (W)×58.5 mm (H)×24.1 mm (D)
Mass	Approx. 193 g (with card and battery) Approx. 171 g (excluding card and battery)
Operating temperature	0 °C to 40 °C
Operating humidity	10%RH to 80%RH

Battery Charger (Panasonic DE-A66B):

Information for your safety

Input:	110 V to 240 V ~ 50/60 Hz, 0.2 A
Output:	4.2 V === 0.65 A

Battery Pack (lithium-ion) (Panasonic DMW-BCG10E):

Information for your safety

Voltage/capacity:	3.6 V/895 mAh
--------------------------	---------------

This product incorporates the software licensed under BSD license.
For the software licensed under BSD license, please refer to the applicable license terms in the following.

A C-program for MT19937, with initialization improved 2002/1/26.
Coded by Takuji Nishimura and Makoto Matsumoto.

Before using, initialize the state by using `init_genrand(seed)` or `init_by_array(init_key, key_length)`.

Copyright (C) 1997 - 2002, Makoto Matsumoto and Takuji Nishimura, All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The names of its contributors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Any feedback is very welcome.

<http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/emt.html>

email: m-mat @ math.sci.hiroshima-u.ac.jp (remove space)

- SDXC Logo is a trademark of SD-3C, LLC.
- "AVCHD" and the "AVCHD" logo are trademarks of Panasonic Corporation and Sony Corporation.
- Manufactured under license from Dolby Laboratories.
Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
- HDAVI Control™ is a trademark of Panasonic Corporation.
- QuickTime and the QuickTime logo are trademarks or registered trademarks of Apple Inc., used under license therefrom.
- Mac and Mac OS are trademarks of Apple Inc., registered in the U.S. and other countries.
- Windows and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- This product uses "DynaFont" from DynaComware Corporation. DynaFont is a registered trademark of DynaComware Taiwan Inc.
- Other names of systems and products mentioned in these instructions are usually the registered trademarks or trademarks of the manufacturers who developed the system or product concerned.

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>.

AVCHD™

VIERA
Link

HDMI

DOLBY
DIGITAL
STEREO CREATOR



Panasonic Corporation

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

© Panasonic Corporation 2011