

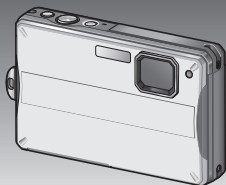
# Panasonic<sup>®</sup>

## Basic Operating Instructions

Digital Camera

Model No. **DMC-TS10**

LUMIX



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

**Please also refer to the Operating Instructions (PDF format) contained on the CD-ROM (supplied).**



You can learn about advanced operation methods and check the Troubleshooting.

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

VQT2X42  
M0710KZ0

To prevent water entering the camera, please be sure to read ' (Important) About the waterproof/dustproof and anti-shock performance of the camera' (→7) and 'Camera care and the waterproof performance' (→9) before using the camera underwater.

### 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 the 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. Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

#### **Carefully observe copyright laws.**

- Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_



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

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

#### **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-TS10

Responsible party: Panasonic Corporation of  
North America  
One Panasonic Way,  
Secaucus, NJ 07094

Support Contact: Panasonic Consumer  
Electronics Company  
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.



## WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,

- DO NOT LET WATER OR OTHER LIQUIDS DRIP OR SPLASH INSIDE THE UNIT.
- DO NOT EXPOSE ACCESSORIES (BATTERY PACK, BATTERY CHARGER, AC ADAPTOR, SD MEMORY CARD AND ETC.) TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THEM.
- 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.

### ■ Product identification marking

Product	Location
Digital camera	Bottom
Battery charger	Bottom

### ■ About the battery pack

#### CAUTION

Battery pack (Lithium ion battery pack)

- Use the specified unit to recharge the battery pack.
- Do not use the battery pack with equipment other than the specified unit.
- Do not get dirt, sand, liquids, or other foreign matter on the terminals.
- Do not touch the plug terminals (+ and -) with metal objects.
- Do not disassemble, remodel, heat or throw into fire.

If any electrolyte should come into contact with your hands or clothes, wash it off thoroughly with water.

If any electrolyte should come into contact with your eyes, never rub the eyes. Rinse eyes thoroughly with water, and then consult a doctor.

#### CAUTION

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

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

#### Warning

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

### ■ About the battery charger

#### CAUTION!

**DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**

#### Battery charger

This battery charger operates on AC between 110 V and 240 V. But

- In the U.S.A. and Canada, the battery charger must be connected to a 120 V AC power supply only.
- When connecting to an AC supply outside of the U.S.A. or Canada, use a plug adaptor to suit the AC outlet configuration.

### ■ Cautions for Use

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

**Keep the camera as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).**

- If you use the camera on top of or near a TV, the pictures and sound on the camera may be disrupted by electromagnetic wave radiation.
- Do not use the camera near cell phones because doing so may result in noise adversely affecting the pictures and 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 the camera, disturbing the pictures and sound.
- If the camera is adversely affected by electromagnetic equipment and stops functioning properly, turn the camera off and remove the battery or disconnect AC adaptor (DMW-AC5PP; optional). Then reinsert the battery or reconnect AC adaptor and turn the camera on.

**Do not use the camera near radio transmitters or high-voltage lines.**

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

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## (Important) About the waterproof/dustproof and anti-shock performance of the camera

- Observe the following precautions, and avoid using the camera in locations subject to high water pressure. The camera's waterproof and dustproof performance complies with IPX8 and IP6X. Provided the usage and storage precautions in this document are strictly observed, the camera can record underwater in a depth up to 3 m (10 feet), for a time up to 60 minutes.\*1
- The camera complies with MIL-STD 810F (Method 516.5-Shock). The camera has cleared a drop test from a height of 1.5 m (5 feet) onto 3 cm (0.10 feet) thick plywood. In most cases, the camera should not sustain any damage if dropped from a height of 1.5 m (5 feet) or less. (→35)\*2
- The supplied accessories are not waterproof (excluding the hand strap and silicone jacket).
  - \*1 This means that the camera can be used underwater for the specified time and specified pressure, in accordance with the handling method described by Panasonic. This is not a guarantee of no breakdowns, no malfunctions, or complete waterproofing under all conditions.
  - \*2 This is not a guarantee of no breakdowns, no malfunctions, or complete waterproofing under all conditions.

Observe the precautions described in the following section 'Handling the camera'. Avoid using the camera in water pressure that exceeds the guaranteed performance, or in environments with excessive dust or sand. The waterproof performance is not guaranteed if the camera is subjected to an impact, such as being hit or dropped. If the camera is subjected to an impact, it is recommended that you contact a Panasonic Service Center to have the camera inspected (subject to a fee) for its waterproof performance. Any malfunction caused by the customer's mishandling, such as water entering the camera, is not covered by the warranty.

## (Important) About the waterproof/dustproof and anti-shock performance of the camera (Continued)

### ■ Handling the camera

- Do not leave the camera for a long time in a cold environment where the temperature is very low (such as a ski resort) or very high at 40 °C (104 °F) or higher (in particular locations such as under strong sunlight, inside a hot vehicle, near a heater, on a ship, or on a beach). (The waterproof performance will deteriorate.)
- The inside of the camera is not waterproof. Do not open or close the card/battery door or terminal cover close to water by the sea, a lake or river, or with wet hands.
- The waterproof function of the camera is for sea water and fresh water only.
- Operation may not be possible or the sound may be low if snow or water freezes on the zoom button, Power button, speaker or microphone in a cold environment such as a ski resort.
- The lens and LCD monitor may cloud up due to changes in temperature and humidity. For details, read (→7) of the Operating Instructions (PDF format) contained on the CD-ROM.

### ■ About the [PRECAUTIONS] display

#### Check this information in advance to maintain the waterproof performance.

When the card/battery door is fully closed and the power is turned on for the first time after purchase, [PRECAUTIONS] is displayed.

#### ① Select [YES] with ◀, and then press [MENU/SET]

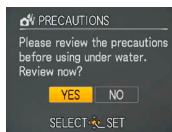
- When [NO] is selected, the clock setting screen is displayed.

#### ② Check the [PRECAUTIONS] on the screen

- ▶ : View the next screen
- ◀ : Return to the previous screen
- [MENU/SET] : Cancel

#### ③ After the final screen (11/11), press [MENU/SET] to finish

- When [NO] is selected on the first screen or [MENU/SET] is pressed to cancel partway through the screens, [PRECAUTIONS] is displayed every time the power is turned on.
- The information can also be checked from [PRECAUTIONS] in the [SETUP] menu.



## Camera care and the waterproof performance

To prevent water from entering the camera, be sure to observe the following before use.

### ■ Do not open or close the card/battery door or terminal cover in sandy or dusty locations, while close to water, or with wet hands.

When the camera is used in the locations described above, sand or dust may enter through the gaps of the card/battery door or terminal cover and adhere to the camera without you knowing. Make sure in advance that the levels of the battery and card memory are sufficient.

### ■ The use of the supplied silicone jacket is recommended to prevent the card/battery door or terminal cover from opening unexpectedly.

### ■ The performance of the camera's rubber seal starts to deteriorate after 1 year.

It is recommended that you contact a Panasonic Service Center at least once a year to have the rubber seal replaced (subject to a fee).

## Using the camera underwater

- Use this camera in a water depth of 3 m (10 feet) or less, in a water temperature range of 0 °C to 40 °C (32 °F to 104 °F), and do not use continuously underwater for longer than 60 minutes.
- Do not use in hot water exceeding 40 °C (104 °F) (such as a bath or hot springs).
- Do not open or close the card/battery door or terminal cover.
- Do not subject the camera to an impact underwater. (It may impair the waterproof performance and allow water to enter.)
- Do not dive into the water holding the camera. Do not use in locations subject to strong water flows, such as in rapids or under waterfalls. (The strong water pressure may cause a malfunction.)
- The camera sinks in water. Attach the camera securely to yourself, such as by wearing the hand strap around your wrist, to prevent you from dropping and losing the camera.
- If the camera is splashed by substances such as detergent, soap, hot spring water, bath powder, sun oil, sunscreen or chemicals, wipe off immediately.
- The card and battery are not waterproof. Do not handle them with wet hands. Further, do not insert a wet card or battery into the camera.

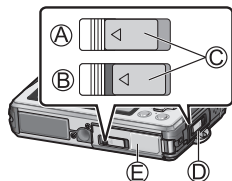
# Camera care and the waterproof performance (Continued)

## Opening and closing the card/battery door and terminal cover

At the time of purchase, the [LOCK] switches of the card/battery door and terminal cover are in the locked position.

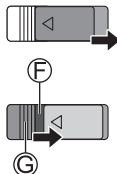
### ■ [LOCK] switch position

- Ⓐ: Locked position
  - Ⓑ: Unlocked position
- 
- Ⓒ: [LOCK] switch
  - Ⓓ: Terminal cover
  - Ⓔ: Card/Battery door



### ■ To open

- ① Slide the [LOCK] switch in the direction of the arrow until the red area (Ⓕ) is visible. The lock is unlocked.
- ② Slide the release lever (Ⓖ) to the [LOCK] switch side. The card/battery door and terminal cover open.



### ■ To close

- ① While the [LOCK] switch is unlocked, push the card/battery door and terminal cover closed until they click.
  - To prevent water from entering the camera, make sure that no foreign objects are trapped in the card/battery door and terminal cover, such as liquid, sand, hair or dust.
  - If the door or cover is closed while the [LOCK] switch is locked, it may cause damage or let water enter the camera.
- ② Lock the [LOCK] switch by sliding it in the direction of the arrow until the red area is no longer visible.
  - If the camera is used while a door or cover is not closed properly, it may open.

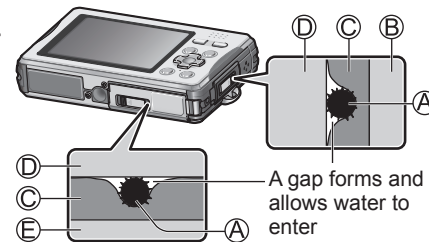


## Causes of water entering the camera

When the camera is used in the following conditions, a gap may be formed between the camera and the card/battery door or terminal cover, allowing water to enter and causing a malfunction.

- When the rubber seal has deteriorated
- When the [LOCK] switch of the card/battery door or terminal cover is not locked
- When foreign objects such as lint, hair or sand are adhered to the inner side of the card/battery door or terminal cover (rubber seal or rubber seal contact area) and are trapped

- Ⓐ: Foreign object
- 
- Ⓑ: Terminal cover
  - Ⓒ: Rubber seal
  - Ⓓ: Rubber seal contact area
  - Ⓔ: Card/Battery door



# Camera care and the waterproof performance (Continued)

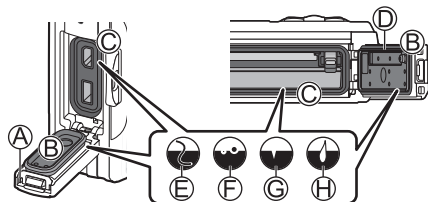
## Cleaning the rubber seals

When a foreign object (such as hair, sand, dust or liquid) adheres to the rubber seal or rubber seal contact area, water may enter within a few seconds and cause a malfunction.

- When cleaning, make sure that no foreign objects get inside the camera.
- Be especially careful when removing very small or wet sand particles.

### ① Make sure that there are no foreign objects adhered to the inner side of the card/battery door or terminal cover ( B rubber seal or C rubber seal contact area)

- (A): Terminal cover
- (B): Rubber seal
- (C): Rubber seal contact area
- (D): Card/ Battery door

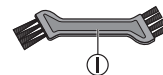


- (E): Hair or lint
- (F): Sand or dust
- (G): Crack or deformation
- (H): Liquid

- When the rubber seal attached to the inner side of the card/ battery door or terminal cover is cracked or deformed, contact a Panasonic Service Center.

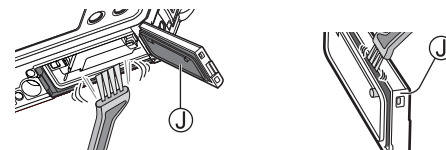
### ② Remove adhered foreign objects with the supplied brush

- ①: Brush (supplied)

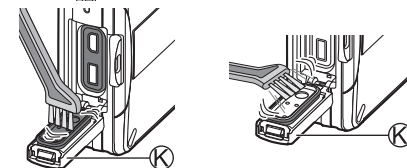


Long brush	Short brush
Use to remove substances such as fine or dry sand.	Use to remove large foreign objects, and substances such as wet sand.

- (J): Card/ Battery door



- (K): Terminal cover

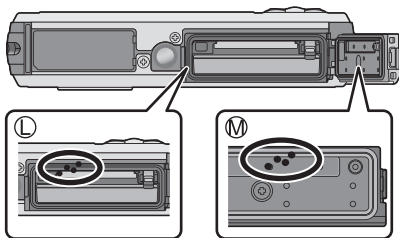


- Handling the brush
  - Before using the brush, make sure that no foreign objects are adhered to it.
  - After using the brush, clean it by removing any adhered foreign objects.

# Camera care and the waterproof performance (Continued)

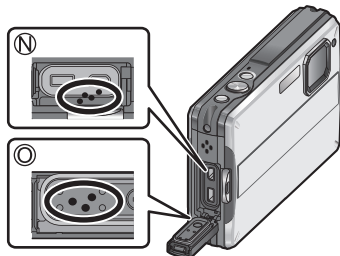
## ■ Example of foreign objects on the inner side of the card/battery door

- Ⓐ: Rubber seal contact area (around the card/battery compartment)
- Ⓜ: Rubber seal area (around the card/battery door)



## ■ Example of foreign objects on the inner side of the terminal cover

- Ⓝ: Rubber seal contact area (around the connection socket)
- Ⓞ: Rubber seal area (around the terminal cover)



- If liquid is adhered, wipe it off with a soft and dry cloth.
- Foreign objects may also adhere to the grooves on the side of a rubber seal or at its corners. Clean with a brush.

## Care after using the camera at a beach or in the sea or a river

Perform the following care procedure within 60 minutes of using the camera at a beach or in the sea or a river, etc.

- 1 **Rinse with water while the card/battery door and terminal cover are closed, or if the camera was used in the sea, soak in a shallow container filled with fresh water for approx. 10 minutes**



- Ⓐ: Locked position

- If the silicone jacket is attached, be sure to remove it before rinsing the camera.
- Leaving foreign objects or saline substances adhered to the camera may cause damage, discoloration, corrosion, abnormal odors, or deterioration.

- 2 **Hold the camera with the speaker (terminal cover side) facing down, and gently shake it several times to drain the water**

- If water accumulates in the speaker, the sound volume may drop or distort.
- To prevent the camera from being dropped, wear the hand strap securely.



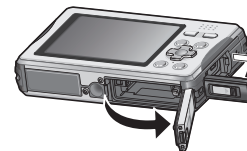
- 3 **Wipe off the water droplets, and let the camera dry by standing it for a while on a dry cloth in a well ventilated and shaded area**

- Do not use a device such as a hair dryer to dry the camera.



- 4 **Make sure that there are no water droplets on the camera, and then open the door and cover**

- 5 **If water droplets or sand remain adhered to the inner side of the card/battery door or terminal cover, remove them with a brush (supplied) or a soft and dry cloth**





## Camera care and the waterproof performance (Continued)

### ■ About the water drainage structure

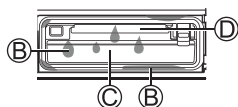
The camera has a water drainage structure. Water that enters gaps such as those around the Power button or zoom button flows to the outside. For this reason, bubbles may appear when the camera is soaked in water, but this is not a malfunction.



- Water may accumulate around the card/battery compartment or the connection sockets after using the camera underwater or soaking it in fresh water. If the card/battery door is opened while the camera is not completely dry, water droplets may adhere to the card or battery. If this happens, be sure to wipe with a soft and dry cloth.
- Do not open or close the card/battery door or terminal cover while there are water droplets on the camera. The water droplets may get inside the camera and cause condensation or a malfunction.

- Example of water droplets around the card/ battery compartment

Ⓑ: Water droplets  
Ⓒ: Battery  
Ⓓ: Card



- If water droplets or dirt are adhered to the camera, wipe them off with a soft and dry cloth.
- After using the camera underwater, do not leave it for more than 60 minutes without performing the care procedure. The waterproof performance may deteriorate.
- If the buttons such as **(A)** button or Power button do not move smoothly, it may be because there are adhered foreign objects. Continuing to use the camera in such a state may result in a malfunction where the camera becomes inoperable. Shake the camera well in fresh water to wash off any foreign objects. Then, confirm that buttons move smoothly.
- Water, sand and other foreign objects easily enter the speaker, so after using the camera, be sure to rinse with water and then shake it gently several times to remove any water droplets.
- Do not dry the camera with hot air, such as from a hair dryer. Deformation may deteriorate the waterproof performance.
- Do not use soap, neutral detergents, or chemicals such as benzene, thinner, alcohol or cleansers.

## Standard accessories

Check that all the accessories are supplied before using the camera. Part numbers are as of July 2010.

- Battery pack**  
DMW-BCH7PP

- Charge the battery before use.

Battery pack is indicated as battery pack or battery in the text.



- Battery charger**  
DE-A75B

Battery charger is indicated as battery charger or charger in the text.



- Battery case**  
VGQ0J54



- Silicone jacket**  
VMG1951
- The silicone jacket is placed under the main unit.



- Brush**  
VYC1013



- Hand strap**  
VFC4393



- USB connection cable**  
K1HA08AD0001



- AV cable**  
K1HA08CD0027

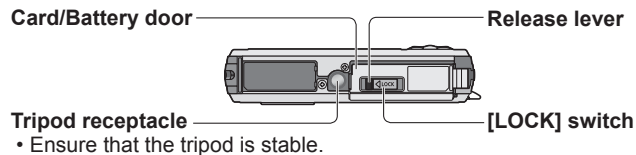
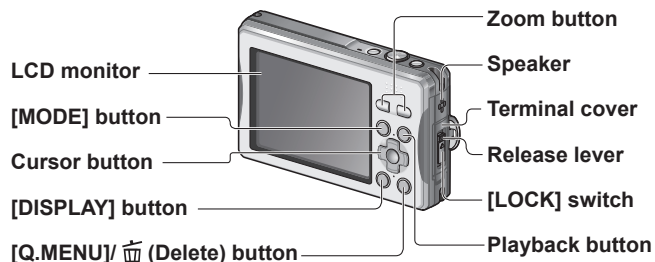
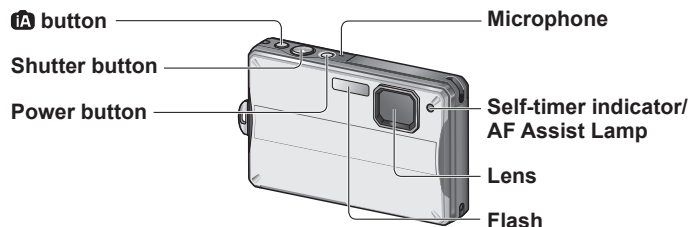


- CD-ROM**  
VFF0683
- Software:  
Use it to install the software on your PC.
- Operating Instructions



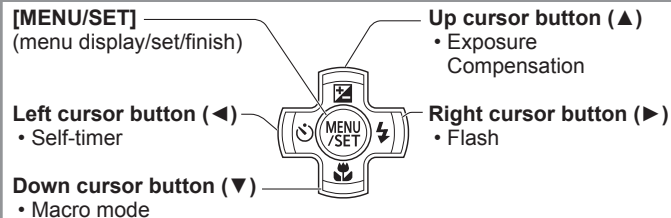
- The supplied accessories are not waterproof (excluding the hand strap and silicone jacket).
- Keep the Brush out of reach of children to prevent swallowing.
- Cards are optional. You can record or play back pictures on the built-in memory when you are not using a card.
- If any accessories are lost, 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.

## Names of parts



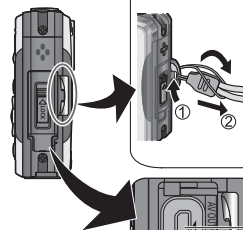
The illustrations and screens in this manual may differ from the actual product.

### Cursor button

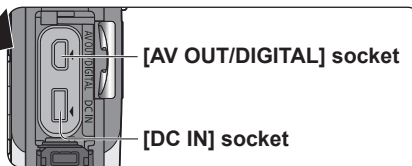


● In this manual, the button that is used is shaded or indicated by ▲ ▼ ◀ ▶.

### Hand strap eyelet



We recommend using the supplied hand strap to avoid dropping the camera. The camera sinks in water. Attach the camera securely to yourself, such as by wearing the strap around your wrist, to prevent you from dropping and losing the camera.



- Always use a genuine Panasonic AC adaptor (DMW-AC5PP: optional).
- If while recording motion pictures using the AC adaptor the power supply is cut off due to a power cut or if the AC adaptor is disconnected etc., the motion picture being recorded will not be recorded.

## Charging the battery

### ■ About batteries that you can use with this unit

The battery that can be used with this unit is DMW-BCH7PP.

It has been found that counterfeit battery packs which look very similar to the genuine products 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 recommend that a genuine Panasonic battery pack is used.

- Use the dedicated charger and battery.
- The camera has a function for distinguishing batteries which can be used safely. The dedicated battery (DMW-BCH7PP) supports this function. The only batteries suitable for use with this unit are genuine Panasonic products and batteries manufactured by other companies and certified by Panasonic. (Batteries which do not support this function cannot be used). Panasonic cannot in any way guarantee the quality, performance or safety of batteries which have been manufactured by other companies and are not genuine Panasonic products.
- The battery is not charged when the camera is shipped. Charge the battery and set the clock before use.
- Charge the battery with the charger indoors (10 °C to 30 °C) (50 °F to 86 °F).

### 1 Insert the battery terminals and attach the battery to the charger

Ensure [LUMIX] faces outwards.

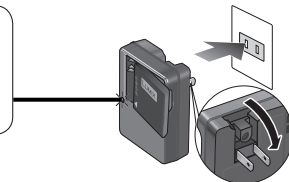


### 2 Connect the charger to the electrical outlet

#### Charging light ([CHARGE])

**On:** Charging in progress  
(approx. 110 min. if fully depleted)

**Off:** Charging complete



### 3 Detach the battery after charging is completed

#### ■ Guidelines for the number of recordable pictures and recording time

Number of recordable pictures	Approx. 300 pictures
Recording time	Approx. 150 min
Playback time	Approx. 260 min

#### Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- [NORMAL PICTURE] Mode
- Temperature: 23 °C (73.4 °F)/Humidity: 50 %RH when LCD monitor is on.\*
- Using a Panasonic SD Memory Card (32 MB).
- Using the supplied battery.
- Starting recording 30 seconds after the camera is turned on. (When the Optical Image Stabilizer function is set to [AUTO].)
- Recording once every 30 seconds with full flash every second recording.
- Perform a zoom operation every recording (W end → T end, or T end → W end)
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.
  - \* The number of recordable pictures and the recording time are reduced in the following cases.
    - In cold environments or at low temperatures
    - When using [AUTO POWER LCD] or [POWER LCD]

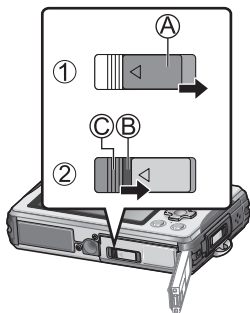
# Inserting and removing the card (optional)/the battery

Check that no foreign objects have adhered to the camera.

## 1 Turn off the power and open the card/battery door

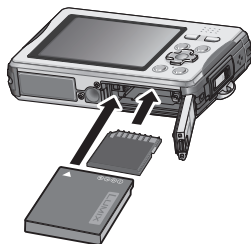
Opening and closing the card/battery door and terminal cover (→10)

- ① Slide the [LOCK] switch (A) in the direction of the arrow until the red area (B) is visible  
The lock is unlocked.
- ② Slide the release lever (C) to the [LOCK] switch side  
The card/battery door opens.



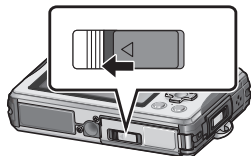
## 2 Insert the battery and card, making sure that their orientation is correct

- Battery: Insert all the way firmly until a locking sound is heard, and check that the lever is hooked over the battery.
- Card: Insert all the way firmly until it clicks.



## 3 Close the card/battery door properly

- ① While the [LOCK] switch is unlocked, push the card/battery door closed until it clicks
- ② Lock the [LOCK] switch by sliding it in the direction of the arrow until the red area is no longer visible



### ■ To remove

- To remove battery:  
move lever in direction of arrow.



- To remove card:  
press down in center.



- Always use genuine Panasonic batteries (DMW-BCH7PP).
- If you use other batteries, we cannot guarantee the quality of this product.
- The card may be damaged if it is not fully inserted.

## Picture save destination (cards and built-in memory)

### ■ Built-in memory (approx. 40 MB)

- The built-in memory can be used as a temporary storage device when the card being used becomes full.
- The access time for the built-in memory may be longer than the access time for a card.

### ■ Compatible memory cards (optional)

The following SD standard-based cards (Panasonic brand recommended)

Type of Card	Capacity	Notes
SD Memory Cards	8 MB – 2 GB	<ul style="list-style-type: none"> <li>• Can be used with devices compatible with the respective formats.</li> <li>• Before using SDXC Memory Cards, check that your computer and other devices support this type of card. <a href="http://panasonic.net/avc/sdcard/information/SDXC.html">http://panasonic.net/avc/sdcard/information/SDXC.html</a></li> <li>• Cards in capacities not listed at left are not supported.</li> </ul>
SDHC Memory Cards	4 GB – 32 GB	
SDXC Memory Cards	48 GB, 64 GB	

- Latest information:  
<http://panasonic.jp/support/global/cs/dsc/>  
(This Site is English only.)
- Keep the Memory Card out of reach of children to prevent swallowing.

## Setting the Clock

The Clock is not set when the camera is shipped.

- 1 Press the Power button (A)  
[PRECAUTIONS] is displayed.
- 2 Press ◀ to select [YES], and then press [MENU/SET] (B)
- 3 Press ◀▶ to check the waterproof precautions, and at the final screen (11/11), press [MENU/SET]
- 4 Press [MENU/SET]
- 5 Press ◀▶ to select the items (year, month, day, hour, minute, display order or time display format), and press ▲▼ to set  
• To cancel → Press ⏪.
- 6 Press [MENU/SET]
- 7 Confirm the setting and press [MENU/SET]  
• To return to the previous screen, press ⏪.  
• Turn on the power again and check the time display.



## Setting the menu

Refer to the procedure example below when operating the [SETUP] menu, [REC] menu and [PLAYBACK] menu.

Example: Setting [LCD MODE] from [OFF] to [A\*] in the [NORMAL PICTURE] Mode

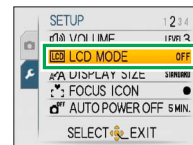
- 1 Press [MENU/SET] to display the menu

Switching to the [SETUP] menu

- 1 Press ◀.
- 2 Press ▼ to select the [SETUP] menu icon [ ].
- 3 Press ▶.  
• Select a menu item next and set it.

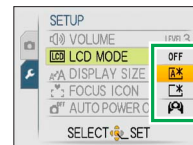
- 2 Press ▲▼ to select [LCD MODE] and then press ▶

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



- 3 Press ▲▼ to select [A\*] and then press [MENU/SET] to set

- 4 Press [MENU/SET] to close the menu



### ■ To change time setting

Select [CLOCK SET] from [REC] or [SETUP] menu, perform 5 and 6.

# Taking pictures with automatic settings

[INTELLIGENT AUTO] Mode

Recording Mode: **iA**

Optimum settings are made automatically from information such as 'face,' 'movement,' 'brightness,' and 'distance' just by pointing the camera at the subject, meaning that clear pictures can be taken without the need to make settings manually.

## 1 Press the Power button (A)

The power is turned on.

## 2 Press **iA** button (B)

## 3 Take pictures

Ⓢ: Shutter button



Press halfway  
(press lightly and focus)










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



- If jitter becomes noticeable, use both hands, keep your arms close to your body, and stand with your feet at shoulder width.
- **Focus display (D)**  
(In focus: lit / Not in focus: flashing)
- The AF area (E) 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.
- Focus: Max. W: 10 cm (0.33 feet)  
Max. T: 50 cm (1.64 feet) and above



## Automatic Scene Detection

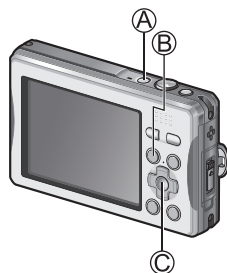
Camera identifies scene when pointed at subject, and makes optimum settings automatically. The type of scene detected is indicated by a blue icon for two seconds.



 [i PORTRAIT]: People are detected	 [i NIGHT PORTRAIT]: People and night scenery are detected (Only when <b>iA</b> is selected)
 [i SCENERY]: Scenery is detected	 [i NIGHT SCENERY]: Night scenery is detected
 [i MACRO]: A close-up shot is detected	 [i SUNSET]: A sunset is detected
 Reads subject movement to avoid blurring when scene does not correspond to any of the above.	

If the camera automatically identifies the scene and determines that people appear as subjects in the picture ( or ) , Face Detection is activated, and the focus and exposure are adjusted for the recognized faces. (Note that underwater, faces may be detected more slowly, or they may not be detected at all.)

## Selecting the Recording Mode

- 1 Press the Power button (A)  
The power is turned on.
- 2 Press the [MODE] button (B)
- 3 Press ▲ or ▼ to select the Recording Mode
- 4 Press [MENU/SET] (C)



	<b>[NORMAL PICTURE] Mode</b> Take pictures with your own settings.
MS	<b>[MY SCENE MODE]</b> Take pictures in commonly used Scene Modes.
SCN	<b>[SCENE MODE]</b> Take pictures according to scene.
	<b>[MOTION PICTURE] Mode</b> Take motion pictures.

## Taking motion pictures [MOTION PICTURE] Mode

Recording Mode: 

Record motion picture with audio as follows. (Note that recording without audio is not possible.)

- 1 Press the [MODE] button
- 2 Press ▲ or ▼ to select [MOTION PICTURE] Mode
- 3 Press [MENU/SET]

- 4 Start recording



- 5 End recording



Remaining recording time (approx.)



Elapsed recording time

- The focus and zoom will remain as they were at the beginning of recording.
- Immediately release the shutter button after pressing it all the way.
- When there is no space left to store the motion picture, recording automatically ends.
- Motion pictures can be recorded continuously up to 2 GB. To record more than 2 GB, press the shutter button again. (Remaining time for continuous recording is displayed on the screen.)

## Viewing your pictures [NORMAL PLAY]

Playback Mode:

1 Press the Playback button (A)



2 Press to select the picture



- To play back a motion picture, select an image with or , and then press to start playback.

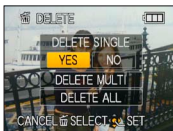
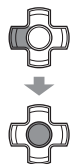
## Deleting pictures

Playback Mode:

Deleted pictures cannot be recovered.

1 Press the (Delete) button (A) to delete the displayed picture

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



## Reading the Operating Instructions

(PDF format)

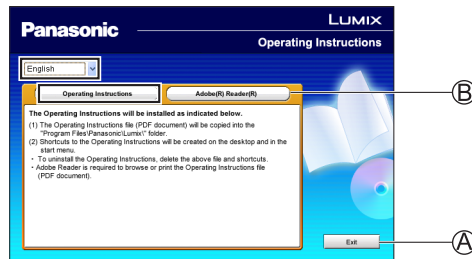
- You have practiced the basic operations introduced in these Operating Instructions and want to progress to advanced operations.
  - You want to check the Troubleshooting.
- In these kinds of situations refer to the Operating Instructions (PDF format) contained on the CD-ROM (supplied).

### ■ For Windows

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

2 Click the [Operating Instructions]

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



(A) To return to the install menu.

(B) See next page.


4 Double click the 'Operating Instructions' shortcut icon on the desktop



## Reading the Operating Instructions

(PDF format) (Continued)

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

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format). Insert the CD-ROM containing the Operating Instructions (supplied), click  and then follow the messages on the screen to install.

Compatible OS: Windows 2000 SP4/Windows XP SP2 or SP3/Windows Vista SP1 or SP2/Windows 7

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

### ■To uninstall the Operating Instructions (PDF format)

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

- When the contents in the Program Files folder cannot be displayed, click the [Show the contents of this folder] to display them.

### ■For Macintosh


- 1 Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied)**
- 2 Open the 'Manual' folder in the CD-ROM and then copy the PDF file with the desired language inside the folder**
- 3 Double click the PDF file to open it**

## Specifications

Digital Camera: Information for your safety

<b>Power Source</b>	DC 5.1 V
<b>Power Consumption</b>	When recording: 1.0 W When playing back: 0.6 W
<b>Camera effective pixels</b>	14,100,000 pixels
<b>Image sensor</b>	1/2.33" CCD, total pixel number 14,500,000 pixels Primary color filter
<b>Lens</b>	Optical 4 x zoom f=6.3 mm to 25.2 mm (35 mm film camera equivalent: 35 mm to 140 mm)/ F3.5 (Max. W) to F5.9 (Max. T)
<b>Digital Zoom</b>	Max. 4 x
<b>Extended Optical Zoom</b>	Max. 8.4 x
<b>Focus range</b>	
<b>Normal</b>	50 cm (1.64 feet) to ∞
<b>Macro/ Intelligent Auto</b>	10 cm (0.33 feet) (Wide)/ 50 cm (1.64 feet) (Tele) to ∞
<b>Scene Mode</b>	There may be difference in above settings.
<b>Shutter system</b>	Electronic shutter + Mechanical shutter
<b>Burst recording</b>	
<b>Burst speed</b>	1.5 pictures/second
<b>Number of recordable pictures</b>	Until card/built-in memory is full

## Specifications (Continued)

<b>Hi-speed burst</b>	
<b>Burst speed</b>	Approx. 4.6 pictures/second
<b>Number of recordable pictures</b>	Approx. 15 pictures (When using the built-in memory, immediately after formatting) Max. 100 pictures (When using a card, it may differ depending on the type of card and the recording conditions)
<b>Shutter speed</b>	8 to 1/1600 th [STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds
<b>Exposure (AE)</b>	AUTO (Program AE) Exposure Compensation (1/3 EV Step, -2 EV to +2 EV)
<b>Metering Mode</b>	Multiple
<b>LCD monitor</b>	2.7" TFT LCD (4:3) (Approx. 230,400 dots) (field of view ratio about 100 %)
<b>Flash</b>	Flash range: (ISO  ISO ) Approx. 30 cm (0.99 feet) to 4.9 m (16.08 feet) (Wide)
<b>Microphone</b>	Monaural
<b>Speaker</b>	Monaural
<b>Recording media</b>	Built-in Memory (Approx. 40 MB)/SD Memory Card/SDHC Memory Card/SDXC Memory Card
<b>Recording file format</b>	
<b>Still picture</b>	JPEG (based on Design rule for Camera File system, based on Exif 2.3 standard)/DPOF corresponding
<b>Motion pictures</b>	QuickTime Motion JPEG (motion pictures with audio)
<b>Interface</b>	
<b>Digital</b>	USB 2.0 (Full Speed)
<b>Analog video/audio</b>	NTSC Composite, Audio line output (Monaural)
<b>Terminal</b>	AV OUT/DIGITAL: Dedicated jack (8 pin) DC IN: Dedicated jack (2 pin)

<b>Dimensions</b>	Approx. 100.3 mm (W) x 63.5 mm (H) x 21.6 mm (D) [3.95" (W) x 2.50" (H) x 0.85" (D)] (excluding the projection part)
<b>Mass</b>	With card and battery: Approx. 172 g (0.38 lb) Excluding card and battery: Approx. 152 g (0.34 lb)
<b>Operating temperature</b>	-10 °C*1 to 40 °C (14 °F to 104 °F) *1 The performance of the battery (number of recordable pictures/operating time) and the LCD monitor (ghost images appearance, etc.) may drop temporarily when using the camera between -10 °C (14 °F) and 0 °C (32 °F) (in cold environments such as a ski resort).
<b>Operating humidity</b>	10 %RH to 80 %RH
<b>Waterproof performance</b>	Equivalent to IEC 60529 'IPX8' (Usable for 60 minutes in water depth of 3 m (10 feet))
<b>Anti-shock performance</b>	The camera's test method complies with MIL-STD 810F (Method 516.5-Shock)*2. *2 'MIL-STD 810F (Method 516.5-Shock)' is the test method standard of the U.S. Defense Department, which specifies performing drop tests from a height of 122 cm (4.00 feet), at 26 orientations (8 corners, 12 ridges, 6 faces) using 5 sets of devices, and passing the 26 orientation drops within 5 devices. (If failure occurs during the test, a new set is used to pass the drop orientation test within a total of 5 devices) • Panasonic's test method is based on MIL-STD 810F (Method 516.5-Shock) that is described above, with the drop height changed from 122 cm (4.00 feet) to 150 cm (5 feet). The camera cleared a test of being dropped onto 3 cm (0.10 feet) thick plywood. (Disregarding exterior changes such as paint peeling or deformation in the dropping impact areas.) <b>This is not a guarantee of no breakdowns or malfunctions under all conditions.</b>
<b>Dustproof performance</b>	Equivalent to IEC 60529 'IP6X'
<b>Language select</b>	[ENGLISH]/[ESPAÑOL]

## Specifications (Continued)

### Battery charger

(Panasonic DE-A75B): Information for your safety

<b>Input</b>	110 V to 240 V ~ 50/60Hz, 0.2 A
<b>Output</b>	4.2 V $\equiv$ 0.65 A (Battery charging)
<b>Recommended recharging temperature</b>	10 °C* to 30 °C (50 °F to 86 °F) * The battery cannot be recharged when the temperature is below 0 °C (32 °F). (The charging light blinks when the battery cannot be recharged.)

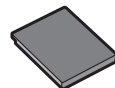
### Equipment mobility: Movable

#### Battery pack (lithium-ion)

(Panasonic DMW-BCH7PP): Information for your safety

<b>Voltage/capacity</b>	3.7 V / 695 mAh
<b>Operating temperature</b>	-10 °C to 40 °C (14 °F to 104 °F) (When using the camera) 10 °C to 30 °C (50 °F to 86 °F) (Recommended recharging temperature)

## Optional accessories



Product name: Battery pack  
Product no.: DMW-BCH7PP

- Performance identical to supplied battery pack.
- Recommended for taking on holiday, etc.



Product name: AC adaptor  
Product no.: DMW-AC5PP



Product name: SDXC Memory Card  
Product no.: 48 GB: RP-SDW48GU1K  
64 GB: RP-SDW64GU1K

Product name: SDHC Memory Card  
Product no.: 4 GB: RP-SDW04GU1K  
4 GB: RP-SDP04GU1K  
4 GB: RP-SDR04GU1A  
8 GB: RP-SDW08GU1K  
8 GB: RP-SDP08GU1K  
8 GB: RP-SDR08GU1A  
16 GB: RP-SDW16GU1K  
16 GB: RP-SDP16GU1K  
32 GB: RP-SDW32GU1K

Product name: SD Memory Card  
Product no.: 2 GB: RP-SDP02GU1K  
2 GB: RP-SDR02GU1A

- Product numbers are correct as of July 2010. 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.

- Digital Camera Model # \_\_\_\_\_
- Items Ordered \_\_\_\_\_

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

3. Method of payment (check one)

- Check of Money Order enclosed (NO C.O.D. SHIPMENTS)  
 VISA Credit Card # \_\_\_\_\_  
 MasterCard Expiration Date \_\_\_\_\_  
 Discover Customer Signature \_\_\_\_\_

Make Check or Money Order to: PANASONIC ACCESSORIES

(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 SERVICE AND TECHNOLOGY COMPANY  
 ACCESSORY ORDER OFFICE  
 20421 84th Avenue South Kent, WA. 98032

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

**Panasonic Consumer Electronics Company,**  
**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 Electronics Company (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
CCD	6 months	90 days
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](mailto:panacare@us.panasonic.com)**

When shipping the unit, carefully pack, include all accessories, and send it prepaid, adequately insured and preferably in the original carton. If Lithium Ion batteries are shipped by air the package must be labeled "Contains Lithium Ion Battery (No lithium metal)". Damaged batteries are prohibited from shipment by US Mail. Batteries must be securely packed in a manner to prevent short-circuiting and a package cannot contain more than 3 Lithium Ion batteries. 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.**

# MEMO

## **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](mailto: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 Service and Technology Company

20421 84th Avenue South, Kent, WA 98032

(We accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

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

As of November 2009



- SDXC Logo is a trademark of SD-3C, LLC.
- QuickTime and the QuickTime logo are trademarks or registered trademarks of Apple Inc., used under license therefrom.
- Other names, company names, and product names printed in these instructions are trademarks or registered trademarks of the companies concerned.

**-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.

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

One Panasonic Way, Secaucus, NJ 07094

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