Basic Operating Instructions
Digital Camera
Model No. DMC-ZS7

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

Please also refer to Operating Instructions (PDF format) recorded on the CD-ROM containing the Operating Instructions (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
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.

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.

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 incinerate.

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.
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.

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.

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.
**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.

---

**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.
- Do not use any other cables except a genuine Panasonic HDMI mini cable (RP-CDHM15/RP-CDHM30; optional).

**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.
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-ZS7
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.

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.
• Do not use any other cables except a genuine Panasonic HDMI mini cable (RP-CDHM15/RP-CDHM30; optional).

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.
## Contents

### Information for Your Safety
- **2**

### Before use
- **Standard accessories**
  - 7
- **Names of parts**
  - 8
  - Cursor button
  - 9

### Preparations
- **Charging battery**
  - 10
- **Inserting and removing the card (optional)/the battery**
  - 12
  - Picture save destination (cards and built-in memory)
  - 13
- **Setting the Clock**
  - 14
  - About GPS
  - 15
- **Setting the menu**
  - 16

### Basics
- **Selecting the [REC] mode**
  - 17
- **Taking pictures with automatic settings**
  - [INTELLIGENT AUTO] Mode
  - 18
  - AF Tracking
  - 19
- **Taking motion pictures**
  - 20
- **Viewing your pictures**
  - [NORMAL PLAY]
  - 21
- **Deleting pictures**
  - 21

### Others
- **Reading the Operating Instructions (PDF format)**
  - 22
- **Specifications**
  - 24
- **Optional accessories**
  - 27
- **Digital Camera Accessory**
  - 28
- **Order Form**
  - 28
- **Limited Warranty (ONLY FOR U.S.A. AND PUERTO RICO)**
  - 29

---

### Standard accessories

Check that all the accessories are included before using the camera. Part numbers are as of January 2010.

#### Battery Pack
- **DMW-BCG10PP**
  - 10
  - Charge the battery before use.
  - Battery Pack is indicated as battery pack or battery in the text.

#### Battery Charger
- **DE-A65B**

#### Hand Strap
- **VFC4297**

#### USB Connection Cable
- **K1HA14AD0003**

#### AV Cable
- **K1HA14CD0004**

#### CD-ROM
- **VFF0576**
  - Software:
  - Use it to install the software on your PC.
  - Operating Instructions

- **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.**

---

This product is licensed under the AVC patent portfolio license for the personal and noncommercial 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.
Contents

Information for Your Safety .......2

Before use

Standard accessories ..........7
Names of parts..................8
Cursor button .................9

Preparations

Charging battery.............10
Inserting and removing the card (optional)/the battery ........12
Picture save destination (cards and built-in memory) ....13
Setting the Clock ..........14
About GPS ..................15
Setting the menu .............16

Basics

Selecting the [REC] mode ....17
Taking pictures with automatic settings
[INTELLIGENT AUTO] Mode ....18
AF Tracking ..................19
Taking motion pictures .......20
Viewing your pictures [NORMAL PLAY] .................21
Deleting pictures .............21

Others

Reading the Operating Instructions (PDF format) ....22
Specifications ................24
Optional accessories ..........27
Digital Camera Accessory
Order Form ..................28
Limited Warranty (ONLY FOR U.S.A. AND PUERTO RICO) ....29

Standard accessories

Check that all the accessories are included before using the camera. Part numbers are as of January 2010.

☐ Battery Pack DMW-BCG10PP
  • Charge the battery before use.
  Battery Pack is indicated as battery pack or battery in the text.
☐ Battery Charger DE-A65B
  Battery Charger is indicated as battery charger or charger in the text.
☐ Hand Strap VFC4297
☐ USB Connection Cable K1HA14AD0003
☐ AV Cable K1HA14CD0004
☐ CD-ROM VFF0576
  • Software:
    Use it to install the software on your PC.
  • Operating Instructions

• 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.

This product is licensed under the AVC patent portfolio license for the personal and noncommercial 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.
Names of parts

- Camera ON/OFF switch
- Shutter button
- Mode dial
- Flash
- Self-timer indicator/AF Assist Lamp
- Lens barrel
- Lens
- Zoom lever
- LCD monitor
- [EXPOSURE] button
- Status indicator
- [DISPLAY] button
- Q.MENU/Delete button
- Speaker
- GPS antenna
- Microphone
- REC/PLAY switch
- Motion picture button
- Tripod receptacle
  • Ensure that the tripod is stable.
- Card/Battery door
- Release lever
- DC coupler cover

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

**Cursor button**

- Up cursor button (▲)
  • Exposure Compensation
- Left cursor button (◄)
  • Self-timer
- Right cursor button (►)
  • Flash
- Down cursor button (▼)
  • Macro Mode

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.

**HDMI socket**

- [AV OUT/DIGITAL] socket

- We recommend you use a battery with sufficient battery power or the AC adaptor when recording motion pictures.
- 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.

- Always use a genuine Panasonic AC adaptor (DMW-AC5PP: optional).
- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC5; optional) and AC adaptor (DMW-AC5PP; optional) are used.
Names of parts

Camera ON/OFF switch
Shutter button
Mode dial
Flash
Self-timer indicator/AF Assist Lamp
Lens barrel
Lens
Zoom lever

LCD monitor
[EXPOSURE] button
Status indicator
[DISPLAY] button
Q.MENU/Delete button

Tripod receptacle
• Ensure that the tripod is stable.

Card/Battery door
Release lever
DC coupler cover

Cursor button

[MENU/SET]
(menu display/set/finish)

Up cursor button (▲)
• Exposure Compensation

Left cursor button (◄)
• Self-timer

Right cursor button (►)
• Flash

Down cursor button (▼)
• Macro Mode

Hand strap eyelet

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

HDMI socket

[AV OUT/DIGITAL] socket

Always use a genuine Panasonic AC adaptor (DMW-AC5PP; optional).
When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC5; optional) and AC adaptor (DMW-AC5PP; optional) are used.

We recommend you use a battery with sufficient battery power or the AC adaptor when recording motion pictures.
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.

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

About batteries that you can use with this unit
The battery that can be used with this unit is DMW-BCG10PP.

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-BCG10PP) 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 - 35 °C (50 °F - 95 °F)).

2 Connect the charger to the electrical outlet
Charging light ([CHARGE])
On: Charging in progress (approx. 130 min. if fully depleted)
Off: Charging complete

3 Detach the battery after charging is completed

Guidelines for number of recordable pictures and recording time

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

Recording conditions by CIPA standard
• CIPA is an abbreviation of [Camera & Imaging Products Association].
• [PROGRAM AE] Mode.
• [GPS SETTING] is set to [OFF].
• Temperature: 23 °C (73.4 °F)/Humidity: 50% 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.
• Rotating the zoom lever 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.

* The number of recordable pictures decreases when [LCD MODE] is used.
Charging battery

■ About batteries that you can use with this unit

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

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-BCG10PP) 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 - 35 °C (50 °F - 95 °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. 130 min. if fully depleted)
Off: Charging complete

3 Detach the battery after charging is completed

■ Guidelines for number of recordable pictures and recording time

<table>
<thead>
<tr>
<th>Number of recordable pictures</th>
<th>Approx. 300 pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording time</td>
<td>Approx. 150 min</td>
</tr>
<tr>
<td>Playback time</td>
<td>Approx. 300 min</td>
</tr>
</tbody>
</table>

Recording conditions by CIPA standard

- CIPA is an abbreviation of [Camera & Imaging Products Association].
- [GPS SETTING] is set to [OFF].
- Temperature: 23 °C (73.4 °F)/Humidity: 50% 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.
- Rotating the zoom lever 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.

* The number of recordable pictures decreases when [LCD MODE] is used.
Inserting and removing the card (optional)/the battery

1 Set the camera ON/OFF switch to OFF and slide the release lever (A) to [OPEN] before opening the lid

2 Completely insert battery and card
   - Battery: Push in until the lever is locked.
   - Memory card: Push in until it clicks.
   B: Do not touch terminal.
   C: Check orientation.

3 Close lid
   Slide to the [LOCK] position.

   ■ To remove
     - To remove battery: move lever in direction of arrow.
     - To remove card: press down in center.

   ● Always use genuine Panasonic batteries (DMW-BCG10PP).
   ● If you use other batteries, we cannot guarantee the quality of this product.
   ● The card may be damaged if it is not fully inserted.

   B: Lever

   [OPEN] [LOCK]

   A

   [OPEN] [LOCK]

   A

   B

   B

   C

   C

   Picture save destination (cards and built-in memory)

   ■ Built-in memory (approx. 15 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 | • Can be used with devices compatible with the respective formats. |
     | SDHC memory cards     | 4 GB – 32 GB | • Before using SDXC memory cards, check that your computer and other devices support this type of card. |
     | SDXC memory cards     | 48 GB – 64 GB | • Can be used with devices compatible with the respective formats. |

     ● If the write-protect switch is set to ‘LOCK’, the card cannot be used to record or delete pictures, and it cannot be formatted.

     ● 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.
Inserting and removing the card (optional)/the battery

1 Set the camera ON/OFF switch to OFF and slide the release lever (A) to [OPEN] before opening the lid

2 Completely insert battery and card
   • Battery: Push in until the lever is locked.
   • Memory card: Push in until it clicks.
   B Do not touch terminal.
   C Check orientation.

3 Close lid
   Slide to the [LOCK] position.

To remove
   • To remove battery: move lever in direction of arrow.
   • To remove card: press down in center.

Always use genuine Panasonic batteries (DMW-BCG10PP).
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. 15 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)

<table>
<thead>
<tr>
<th>Type of Card</th>
<th>Capacity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD memory cards</td>
<td>8 MB – 2 GB</td>
<td>• Can be used with devices compatible with the respective formats.</td>
</tr>
<tr>
<td>SDHC memory cards</td>
<td>4 GB – 32 GB</td>
<td>• 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></td>
</tr>
<tr>
<td>SDXC memory cards</td>
<td>48 GB – 64 GB</td>
<td></td>
</tr>
</tbody>
</table>

If the write-protect switch is set to ‘LOCK’, the card cannot be used to record or delete pictures, and it cannot be formatted.

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 Turn on the power (A)

2 Press [MENU/SET] (B) while the message is displayed

3 Press ◄► to select the items (year, month, day, hour, minute, display order or time display format), and press ▲▼ to set
  • To cancel → Press ▼.

4 Press [MENU/SET]

5 Confirm the setting and press [MENU/SET]
  • To return to the previous screen, press ◄.

6 Press ▲▼ to select [YES] and press [MENU/SET] if automatically correcting time of day
  • To manually set date and time → select [NO].

7 When [PLEASE SET THE HOME AREA] is displayed, press [MENU/SET]

8 Press ◄► to set your home area and press [MENU/SET]
  The current time and home area are set.
  • [GPS SETTING] turns [ON].
  • Turn on the power again and check time display.

To change time setting

About GPS

When GPS is used, the camera performs the following functions:
  • Records location name information and the latitude and longitude for the positioned location on the recorded pictures.
  • Corrects automatically to the current time.

The GPS function can be used even when the camera’s power is off.
When [GPS SETTING] is [ON], the GPS function works to check your current position periodically even if the camera’s power is OFF.
  • When turning off the camera’s power in an airplane, hospital or other restricted area, set [GPS SETTING] to ◄ or [OFF].
  • When [GPS SETTING] is [ON], power will drain from the battery even if the camera’s power is OFF.
Setting the Clock

The Clock is not set when the camera is shipped.

1. **Turn on the power (A)**

2. **Press [MENU/SET] (B) while the message is displayed**

3. **Press ►► to select the items (year, month, day, hour, minute, display order or time display format), and press ▲▼ to set**
   - To cancel → Press  

4. **Press [MENU/SET]**

5. **Confirm the setting and press [MENU/SET]**
   - To return to the previous screen, press  

6. **Press ▲▼ to select [YES] and press [MENU/SET] if automatically correcting time of day**
   - To manually set date and time → select [NO].

7. **When [PLEASE SET THE HOME AREA] is displayed, press [MENU/SET]**

8. **Press ◄► to set your home area and press [MENU/SET]**
   The current time and home area are set.
   - [GPS SETTING] turns [ON].
   - Turn on the power again and check time display.

- **To change time setting**

About GPS

When GPS is used, the camera performs the following functions:
- Records location name information and the latitude and longitude for the positioned location on the recorded pictures.
- Corrects automatically to the current time.

- **The GPS function can be used even when the camera’s power is off.**
  When [GPS SETTING] is [ON], the GPS function works to check your current position periodically even if the camera’s power is OFF.
  - When turning off the camera’s power in an airplane, hospital or other restricted area, set [GPS SETTING] to ◄ or [OFF].
  - When [GPS SETTING] is [ON], power will drain from the battery even if the camera’s power is OFF.
Setting the menu

Refer to the following procedures to operate menus such as the [SETUP] menu, [REC] menu, [TRAVEL MODE] menu and [PLAYBACK] menu.


Press [MENU/SET] to display the menu

<table>
<thead>
<tr>
<th>Switching to the [TRAVEL MODE] menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Press ◄.</td>
</tr>
<tr>
<td>2 Press ▼ to select the [TRAVEL MODE] menu icon [ ].</td>
</tr>
<tr>
<td>3 Press ►.</td>
</tr>
<tr>
<td>• Select a menu item next and set it.</td>
</tr>
</tbody>
</table>

Press ▲▼ to select [GPS SETTING] and then press ►

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

Press ▲▼ to select [ON] and then press [MENU/SET] to set

Press [MENU/SET] to close the menu

Selecting the [REC] mode

1. Turn on the power (A)
2. Slide the [REC/PLAY] switch (B) to  
3. Switching the mode by rotating the mode dial(C)

<table>
<thead>
<tr>
<th>[INTELLIGENT AUTO] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take pictures with automatic settings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[PROGRAM AE] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>The subjects are recorded using your own settings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[APERTURE-PRIORITY] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>The shutter speed is automatically determined by the aperture value you set.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[SHUTTER-PRIORITY] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aperture value is automatically determined by the shutter speed you set.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[MANUAL EXPOSURE] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>The exposure is adjusted by the aperture value and the shutter speed which are manually adjusted.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[CUSTOM] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use this mode to take pictures with previously registered setting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[MY SCN MODE]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take pictures in frequently-used Scene Modes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[SCENE MODE]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take pictures according to scene.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[CLIPBOARD] Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take pictures as memos.</td>
</tr>
</tbody>
</table>
Setting the menu

Refer to the following procedures to operate menus such as the [SETUP] menu, [REC] menu, [TRAVEL MODE] menu and [PLAYBACK] menu.


Press [MENU/SET] to display the menu

Switching to the [TRAVEL MODE] menu

1 Press ◄.
2 Press ▼ to select the [TRAVEL MODE] menu icon [ ].
3 Press ►.
   • Select a menu item next and set it.

Press ▲▼ to select [GPS SETTING] and then press ►
   • Depending on the item, its setting may not appear or it may be displayed in a different way.

Press ▲▼ to select [ON] and then press [MENU/SET] to set

Press [MENU/SET] to close the menu

Selecting the [REC] mode

1 Turn on the power (A)
2 Slide the [REC/PLAY] switch (B) to
3 Switching the mode by rotating the mode dial(C)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[INTELLIGENT AUTO]</td>
<td>Take pictures with automatic settings.</td>
</tr>
<tr>
<td>[PROGRAM AE]</td>
<td>The subjects are recorded using your own settings.</td>
</tr>
<tr>
<td>[APERTURE-PRIORITY]</td>
<td>The shutter speed is automatically determined by the aperture value you set.</td>
</tr>
<tr>
<td>[SHUTTER-PRIORITY]</td>
<td>The aperture value is automatically determined by the shutter speed you set.</td>
</tr>
<tr>
<td>[MANUAL EXPOSURE]</td>
<td>The exposure is adjusted by the aperture value and the shutter speed which are manually adjusted.</td>
</tr>
<tr>
<td>[CUSTOM]</td>
<td>Use this mode to take pictures with previously registered setting.</td>
</tr>
<tr>
<td>[MY SCN MODE]</td>
<td>Take pictures in frequently-used Scene Modes.</td>
</tr>
<tr>
<td>[SCENE MODE]</td>
<td>Take pictures according to scene.</td>
</tr>
<tr>
<td>[CLIPBOARD]</td>
<td>Take pictures as memos.</td>
</tr>
</tbody>
</table>
Taking pictures with automatic settings

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. Turn on the power (A)
2. Slide the [REC/PLAY] switch (B) to (REC)
3. Set the mode dial (C) to (IA)

Take pictures

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.

[INTELLIGENT AUTO] Mode

Recording Mode: (IA)

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.

Recognizes people [i PORTRAIT]
Recognizes babies [i BABY] (When babies (under 3 years) that are registered with the Face Recognition function are recognized)
Recognizes landscapes [i SCENERY]
Recognizes night scenes and people in them [i NIGHT PORTRAIT] (Only when (IA) is selected)
Recognizes night scenes [i NIGHT SCENERY]
Recognizes close-ups [i MACRO]
Recognizes sunsets [i SUNSET]

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 (i PORTRAIT) or (NIGHT PORTRAIT), Face Detection is activated, and the focus and exposure are adjusted for the recognized faces.

AF Tracking

Even if a subject, where the focus was locked (AF Lock) moves, the camera can continue to keep it in focus.

1. Press ▲
   A) AF Tracking icon
   B) AF Tracking frame
   • Press ▲ again to cancel.

2. Align the AF Tracking frame with the subject, and then press ▼ to lock
   • The optimum scene is detected for the subject where the focus was locked (AF Lock).
   • AF Lock successful: Yellow
   • AF Lock failed: Red (flash)
   • Press ▲ to cancel.
Taking pictures with automatic settings

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. Turn on the power (A)**

**2. Slide the [REC/PLAY] switch (B) to  

**3. Set the mode dial (C) to iA**

**4. Take pictures**

- 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.

**[INTELLIGENT AUTO] Mode**

**Recording Mode: [i]**

- **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.
  - Recognizes people [i PORTRAIT]
  - Recognizes babies [i BABY] (When babies (under 3 years) that are registered with the Face Recognition function are recognized)
  - Recognizes landscapes [i SCENERY]
  - Recognizes night scenes and people in them [i NIGHT PORTRAIT] (Only when [i] is selected)
  - Recognizes night scenes [i NIGHT SCENERY]
  - Recognizes close-ups [i MACRO]
  - Recognizes sunsets [i SUNSET]
  - 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.

**AF Tracking**

Even if a subject, where the focus was locked (AF Lock) moves, the camera can continue to keep it in focus.

**1. Press ▲**

- A AF Tracking icon
- B AF Tracking frame
  - Press ▲ again to cancel.

**2. Align the AF Tracking frame with the subject, and then press ▼ to lock**

- The optimum scene is detected for the subject where the focus was locked (AF Lock).
- AF Lock successful: Yellow
- AF Lock failed: Red (flash)
- Press ▲ to cancel.
Taking motion pictures
Recording Mode: \[ \text{A P A S M H S A} \]

Enables motion pictures to be recorded with (stereo) audio. (Recording with muted sound is not possible.) Zoom can also be used during recording.

1. Slide the [REC/PLAY] switch to \( \square \)
2. Set the mode dial to any except \( \triangleleft \)
3. Start recording

   \( \square \)

   Press

4. End recording

   \( \square \)

   Press

   Remaining recording time (approx.)

   Elapsed recording time

- Immediately release the motion picture button after pressing it all the way.
- When there is no space left to store the motion picture, recording automatically ends.
- AVCHD Lite motion pictures can be recorded continuously for up to 13 hours, 3 minutes and 20 seconds. Also, a maximum of approx. 2 GB of continuous motion picture can be recorded in Motion JPEG format. (Even if there is more than 2 GB of available space on the card, the available recording time will be calculated for a maximum of 2 GB.)

Viewing your pictures [NORMAL PLAY]
Playback Mode: \( \triangleright \)

1. Slide the [REC/PLAY] switch (\( \text{A} \)) to \( \triangleright \)
2. Press \( \downarrow \uparrow \) to select the picture

   To play back a motion picture, select an image with \( \leftarrow \) or \( \rightarrow \), and then press \( \uparrow \) to start playback.

Deleting pictures
Playback Mode: \( \triangleright \)

Deleted pictures cannot be recovered.

1. Press \( \text{A} \) (\( \text{A} \)) to delete displayed picture
2. Press \( \downarrow \) to select [YES] and then press [MENU/SET] (\( \text{B} \))
Taking motion pictures
Recording Mode: PAASMKN

Enables motion pictures to be recorded with (stereo) audio. (Recording with muted sound is not possible.) Zoom can also be used during recording.

1 Slide the [REC/PLAY] switch to 

2 Set the mode dial to any except 

3 Start recording

4 End recording

Press

Press

Remaining recording time (approx.)

Elapsed recording time

● Immediately release the motion picture button after pressing it all the way.
● When there is no space left to store the motion picture, recording automatically ends.
● AVCHD Lite motion pictures can be recorded continuously for up to 13 hours, 3 minutes and 20 seconds. Also, a maximum of approx. 2 GB of continuous motion picture can be recorded in Motion JPEG format. (Even if there is more than 2 GB of available space on the card, the available recording time will be calculated for a maximum of 2 GB.)

Viewing your pictures [NORMAL PLAY]
Playback Mode: 

1 Slide the [REC/PLAY] switch (A) to

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 (A) to delete displayed picture

2 Press ◄ to select [YES] and then press [MENU/SET] (B)
Reading the Operating Instructions
(PDF format)

• You have practised 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 Operating Instructions (PDF format) recorded on the CD-ROM containing the Operating Instructions (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

■ 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 B 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
Reading the Operating Instructions
(PDF format)

• You have practised 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 Operating Instructions (PDF format) recorded on the CD-ROM containing the Operating Instructions (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

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 B 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

Double click the ‘Operating Instructions’ shortcut icon on the desktop
## Specifications

**Digital Camera: Information for your safety**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Source</strong></td>
<td>DC 5.1 V</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>When recording: 1.3 W&lt;br&gt;When playing back: 0.6 W</td>
</tr>
<tr>
<td><strong>Camera effective pixels</strong></td>
<td>12,100,000 pixels</td>
</tr>
<tr>
<td><strong>Image sensor</strong></td>
<td>1/2.33&quot; CCD, total pixel number 14,500,000 pixels</td>
</tr>
<tr>
<td><strong>Lens</strong></td>
<td>Optical 12 x zoom&lt;br&gt;f=4.1 mm to 49.2 mm (35 mm film camera equivalent: 25 mm to 300 mm)/&lt;br&gt;F3.3 to F4.9</td>
</tr>
<tr>
<td><strong>Digital Zoom</strong></td>
<td>Max. 4 x</td>
</tr>
<tr>
<td><strong>Extended Optical Zoom</strong></td>
<td>Max. 23.4 x</td>
</tr>
<tr>
<td><strong>Focus range</strong></td>
<td>50 cm (1.64 feet) (Wide)/&lt;br&gt;2 m (6.56 feet) (Tele) to ∞</td>
</tr>
<tr>
<td><strong>Macro/Intelligent Auto/Clipboard/Motion picture</strong></td>
<td>3 cm (0.10 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞&lt;br&gt;(5 × to 8 × is 2 m (6.56 feet) to ∞)</td>
</tr>
<tr>
<td><strong>Scene Mode</strong></td>
<td>There may be difference in above settings.</td>
</tr>
<tr>
<td><strong>Shutter system</strong></td>
<td>Electronic shutter + Mechanical shutter</td>
</tr>
<tr>
<td><strong>Burst recording</strong></td>
<td>2.3 pictures/second&lt;br&gt;Max. 5 pictures (Standard), max. 3 pictures (Fine)</td>
</tr>
<tr>
<td><strong>Hi-speed burst</strong></td>
<td>Approx. 10 pictures/second (Speed priority)&lt;br&gt;Approx. 6 pictures/second (Image priority)</td>
</tr>
<tr>
<td><strong>Burst speed</strong></td>
<td>Approx. 15 pictures (When using the built-in memory, immediately after formatting)&lt;br&gt;Max. 100 pictures (When using a card, it may differ depending on the type of card and the recording conditions)</td>
</tr>
<tr>
<td><strong>Number of recordable pictures</strong></td>
<td>60 to 1/2000 th&lt;br&gt;[STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds</td>
</tr>
<tr>
<td><strong>Exposure (AE)</strong></td>
<td>Program AE (P)/Aperture-priority AE (A)/Shutter-priority AE (S)/Manual exposure (M)</td>
</tr>
<tr>
<td><strong>Exposure Compensation</strong></td>
<td>(1/3 EV Step, -2 EV to +2 EV)</td>
</tr>
<tr>
<td><strong>Metering mode</strong></td>
<td>Multiple/Center weighted/Spot</td>
</tr>
<tr>
<td><strong>LCD monitor</strong></td>
<td>3.0&quot; TFT LCD (Approx. 460,800 dots)&lt;br&gt;(field of view ratio about 100 %)</td>
</tr>
<tr>
<td><strong>Flash</strong></td>
<td>Flash range: (ISO AUTO) Approx. 60 cm (1.97 feet)&lt;br&gt;to 5.3 m (17.4 feet) (Wide)</td>
</tr>
<tr>
<td><strong>Microphone</strong></td>
<td>Stereo</td>
</tr>
<tr>
<td><strong>Speaker</strong></td>
<td>Monaural</td>
</tr>
<tr>
<td><strong>Recording media</strong></td>
<td>Built-in Memory (Approx. 15 MB)/SD Memory Card/SDHC Memory Card</td>
</tr>
<tr>
<td><strong>Recording file format</strong></td>
<td>Still Picture&lt;br&gt;JPEG (based on Design rule for Camera File system, based on Exif 2.21 standard)/DPOF corresponding</td>
</tr>
<tr>
<td><strong>Still pictures with audio</strong></td>
<td>JPEG (based on Design rule for Camera File system, based on Exif 2.21 standard) + QuickTime</td>
</tr>
<tr>
<td><strong>Motion pictures</strong></td>
<td>AVCHD Lite/&lt;br&gt;QuickTime Motion JPEG&lt;br&gt;(motion pictures with audio)</td>
</tr>
</tbody>
</table>
### Specifications

**Digital Camera: Information for your safety**

<table>
<thead>
<tr>
<th>Power Source</th>
<th>DC 5.1 V</th>
</tr>
</thead>
</table>
| Power Consumption | When recording: 1.3 W  
When playing back: 0.6 W |
| Camera effective pixels | 12,100,000 pixels |
| Image sensor | 1/2.33" CCD, total pixel number 14,500,000 pixels  
Primary color filter |
| Lens | Optical 12 x zoom  
f=4.1 mm to 49.2 mm (35 mm film camera equivalent: 25 mm to 300 mm)/  
F3.3 to F4.9 |
| Digital Zoom | Max. 4 x |
| Extended Optical Zoom | Max. 23.4 x |
| Focus range | P/A/S/M  
50 cm (1.64 feet) (Wide)/  
2 m (6.56 feet) (Tele) to ∞ |
| Macro/Intelligent Auto/Clipboard/Motion picture | 3 cm (0.10 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞  
(5 x to 8 x is 2 m (6.56 feet) to ∞) |
| Scene Mode | There may be difference in above settings. |
| Shutter system | Electronic shutter + Mechanical shutter |
| Burst recording | 2.3 pictures/second  
Max. 5 pictures (Standard), max. 3 pictures (Fine) |

**Hi-speed burst**

| Burst speed | Approx. 10 pictures/second (Speed priority)  
Approx. 6 pictures/second (Image priority) |
| Number of recordable pictures | 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) |
| Shutter speed | 60 to 1/2000 th  
[STARRY SKY] Mode: 15 seconds, 30 seconds, 60 seconds |
| Exposure (AE) | Program AE (P)/Aperture-priority AE (A)/  
Shutter-priority AE (S)/Manual exposure (M)  
Exposure Compensation  
(1/3 EV Step, -2 EV to +2 EV) |
| Metering mode | Multiple/Center weighted/Spot |
| LCD monitor | 3.0" TFT LCD (Approx. 460,800 dots)  
(field of view ratio about 100 %) |
| Flash | Flash range: (ISO AUTO) Approx. 60 cm (1.97 feet) to 5.3 m (17.4 feet) (Wide) |
| Microphone | Stereo |
| Speaker | Monaural |
| Recording media | Built-in Memory (Approx. 15 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 2.21 standard)/DPOF corresponding |
| Still pictures with audio | JPEG (based on Design rule for Camera File system, based on Exif 2.21 standard) + QuickTime |
| Motion pictures | AVCHD Lite/QuickTime Motion JPEG  
(motion pictures with audio) |
**Specifications (Continued)**

| Interface          | Digital: USB 2.0 (High Speed)  
|                   | Analog video/audio: NTSC Composit, Audio line output (stereo) |
| Terminal          | HDMI: HDMI mini cable (type C)  
|                   | AV OUT/DIGITAL: Dedicated jack (14 pin) |
| Dimensions        | Approx. 103.3 mm (W) x 59.6 mm (H) x 32.6 mm (D)  
|                   | [4.07” (W) x 2.35” (H) x 1.28” (D)]  
|                   | (excluding the projection part) |
| Mass              | With card and battery: Approx. 218 g (0.480 lb)  
|                   | Excluding card and battery: Approx. 196 g (0.432 lb) |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Operating humidity | 10 % to 80 % |
| GPS               | Reception frequency: 1575.42 MHz (C/A code)  
|                   | Geographical coordinate system: WGS84 |
| Language select   | [ENGLISH]/[ESPAÑOL] |

**Optional accessories**

| Product name: Battery Pack  
| Product no.: DMW-BCG10PP |
| Performance identical to supplied battery pack.  
| Recommended for taking on holiday, etc. |

| Product name: AC adaptor  
| Product no.: DMW-AC5PP |
| Purchase the AC adaptor and DC coupler as a set. They cannot be used individually with this camera. |

| Product name: HDMI mini cable  
| Product no.: RP-CDHM15/RP-CDHM30 |
| Product name: Marine Case  
| Product no.: DMW-MCTZ10 |
| Product name: DC coupler  
| Product no.: DMW-DCC5 |

**Battery charger (Panasonic DE-A65B): Information for your safety**

| Input | 110 V to 240 V 50/60Hz, 0.2 A |
| Output| 4.2 V → 0.65 A (Battery charging) |

**Equipment mobility: Movable**

**Battery Pack (lithium-ion) (Panasonic DMW-BCG10PP): Information for your safety**

| Voltage/capacity | 3.6 V/895 mAh |

---

- Product numbers are correct as of January 2010. These may be subject to change.
- Accessories and/or model numbers may vary between countries. Consult your local dealer.
Specifications (Continued)

| Interface   | Digital: USB 2.0 (High Speed)  |
|            | Analog video/audio: NTSC Composit, |
|            | Audio line output (stereo) |
| Terminal   | HDMI: HDMI mini cable (type C)  |
|            | AV OUT/DIGITAL: Dedicated jack (14 pin) |
| Dimensions | Approx. 103.3 mm (W) x 59.6 mm (H) x 32.6 mm (D)  |
|            | [4.07” (W) x 2.35” (H) x 1.28” (D)] (excluding the projection part) |
| Mass       | With card and battery: Approx. 218 g (0.480 lb)  |
|            | Excluding card and battery: Approx. 196 g (0.432 lb) |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Operating humidity | 10 % to 80 % |
| GPS        | Reception frequency: 1575.42 MHz (C/A code)  |
|            | Geographical coordinate system: WGS84 |
| Language select | [ENGLISH]/[ESPAÑOL] |

Battery charger
(Panasonic DE-A65B): Information for your safety

- Input: 110 V to 240 V 50/60Hz, 0.2 A
- Output: 4.2 V === 0.65 A (Battery charging)

Equipment mobility: Movable
Battery Pack (lithium-ion)
(Panasonic DMW-BCG10PP): Information for your safety

- Voltage/capacity: 3.6 V/895 mAh

Optional accessories

Product name: Battery Pack
Product no.: DMW-BCG10PP
- Performance identical to supplied battery pack.
- Recommended for taking on holiday, etc.

Product name: AC adaptor
Product no.: DMW-AC5PP
- Purchase the AC adaptor and DC coupler as a set. They cannot be used individually with this camera.

Product name: HDMI mini cable
Product no.: RP-CDHM15/RP-CDHM30

Product name: Marine Case
Product no.: DMW-MCTZ10

Product name: DC coupler
Product no.: DMW-DCC5

Product name: SDXC Memory Card
Product no.: 48 GB: RP-SDW48GU1K
64 GB: RP-SDW64GU1K
8 GB: RP-SDW08GU1K

Product name: SDHC Memory Card
Product no.: 4 GB: RP-SDW04GU1K
8 GB: RP-SDP08GU1K
16 GB: RP-SDW16GU1K
32 GB: RP-SDW32GU1K
4 GB: RP-SDP04GU1K
8 GB: RP-SDP08GU1K
16 GB: RP-SDP16GU1K
32 GB: RP-SDP32GU1K
4 GB: RP-SDR04GU1A
8 GB: RP-SDR08GU1A
16 GB: RP-SDR16GU1A
32 GB: RP-SDR32GU1A

Product name: SD Memory Card
Product no.: 2 GB: RP-SDP02GU1K
8 GB: RP-SDP08GU1K
16 GB: RP-SDP16GU1K
32 GB: RP-SDP32GU1K
4 GB: RP-SDR04GU1A
8 GB: RP-SDR08GU1A
16 GB: RP-SDR16GU1A
32 GB: RP-SDR32GU1A

- Product numbers are correct as of January 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.

1. Digital Camera Model #

2. Items Ordered

<table>
<thead>
<tr>
<th>Accessory #</th>
<th>Description</th>
<th>Price Each</th>
<th>Quantity</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
[8 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.

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”.

<table>
<thead>
<tr>
<th>Product or Part Name</th>
<th>Parts</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Still Camera</td>
<td>1 year</td>
<td>1 year</td>
</tr>
<tr>
<td>CCD</td>
<td>6 months</td>
<td>90 days</td>
</tr>
<tr>
<td>SD Memory Cards, Rechargeable Battery Pack (defective exchange)</td>
<td>90 days</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Digital Camera Accessory Order Form

Please photocopy this form when placing an order.

1. Digital Camera Model # ________________________
2. Items Ordered

<table>
<thead>
<tr>
<th>Accessory #</th>
<th>Description</th>
<th>Price Each</th>
<th>Quantity</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 (_____) _______ Night (_____) _______

Street Address ___________________________________

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.

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”.

<table>
<thead>
<tr>
<th>Product or Part Name</th>
<th>Parts</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Still Camera</td>
<td>1 year</td>
<td>1 year</td>
</tr>
<tr>
<td>CCD</td>
<td>6 months</td>
<td>90 days</td>
</tr>
<tr>
<td>SD Memory Cards, Rechargeable Battery Pack (defective exchange)</td>
<td>90 days</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Mail-In Service
For assistance in the U.S.A. and Puerto Rico in obtaining repairs, please ship the product prepaid to:

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

When shipping the unit, carefully pack, include all 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.

30 VQT2L60 (ENG)

(ENG) VQT2L60 31
Mail-In Service
For assistance in the U.S.A. and Puerto Rico in obtaining repairs, please ship the product prepaid to:

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

When shipping the unit, carefully pack, include all 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 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.